NOMADS IN TRANSITION:

MORTUARY ARCHAEOLOGY IN THE LOWLANDS OF EDOM (JORDAN)

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by

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University of California, San Diego

2011

DEDICATION

This dissertation is dedicated to my parents: My mother, Robin Beherec, and my father, Remy Beherec. You never told me what to do with my life, but encouraged all things as long as they were honorable. If I have constructed anything, it is because you laid the foundation. Without you, this dissertation would never have been imagined.

This dissertation is also dedicated to my subjects, the people of Edom and of Wadi Fidan 40. We disturbed your bodies' rest. I hope to have given you something once lost—a voice in this world—albeit "one grown faint, perhaps from too much silence" (*Inferno* 1.63; Musa 1995: 5).

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PUBLICATIONS

2004	"The Devil, the Terror, and the Horror: The Whateley Twins Further Debts to Folklore and Fiction." *Lovecraft Studies* 44: 23-25.
2005	Thomas E. Levy, Mohammad Najjar, Adolfo Muniz, Sarah Malena, Elizabeth Monroe, Marc Beherec, Neil G. Smith, Thomas Higham, Stefan Münger, and Kenneth Maes. "Excavations at the Wadi Fidan 40 Iron Age Cemetery." *Annual of the Department of Antiquities of Jordan* 49: 443-487.
2008	"H. P. Lovecraft and the Archaeology of 'Roman' Arizona: The Calalus Hoax." *Lovecraft Annual* 2: 192-202.
2009	"The Racist and La Raza: H. P. Lovecraft's Aztec Mythos." Pp. 25-37 in *Fantasy and Native America.* Edited by Amy H. Sturgis and David Oberhelman. Altadena, CA: Mythpoeic Press. To be reprinted in 2012 in *Short Story Criticism.*
2010	"Kitab al-Jilwah." Vol. 3, pp. 1168-1179 in *Milestone Documents of World*

Religions. Edited by David M. Fahey. Dallas: Schlager Group.

2011 "Bay Tree Spring: From Make-Work Well to Sacred Spring." *Arti-Facts: The Newsletter of the Idyllwild Area Historical Society* (Winter/Spring): 1, 3-4.

In press Marc A. Beherec, Thomas E. Levy, and Mohammad Najjar. "Wadi Fidan 40 and Mortuary Archaeology in the Edom Lowlands." In Levy, T. E., M. Najjar, and E. Ben-Yosef, ed. *New Insights into the Iron Age Archaeology of Edom, Southern Jordan- Surveys, Excavations and Research from the Edom Lowlands Regional Archaeology Project (ELRAP). Annual of the American Schools of Oriental Research.*

TECHNICAL REPORTS FILED

2006 Marc A. Beherec and Erez Ben-Yosef. Khirbat en-Nahas, Area M Excavation Report. Report on file, Levantine Archaeology Research Laboratory, University of California, San Diego.

2008 Michael Oberndorf and Marc A. Beherec. *Santa Rosa Fuels Reduction Cultural Resources Inventory.* Report on file, Supervisor's Office, San Bernardino National Forest.

2009 *A Monumental Structure and Copper Metallurgy in the Iron Age: Excavations at Khirbat en-Nahas, Area R, 2009, Final Report.* Report on file, Levantine Archaeology Research Laboratory, University of California, San Diego.

CONFERENCE PAPERS PRESENTED

2006 "The Racist and La Raza: H. P. Lovecraft's Aztec Mythos." Annual Convention of the Mythpoeic Society, MythCon XXXVII, Norman, Oklahoma.

2006 Marc A. Beherec, Muhammad Najjar, and Thomas Levy. "Relations of the Iron Age Dead: Wadi Fidan 40 and Both Sides of the Jordan." International Conference for the History and Archaeology of Jordan X, Washington, D. C.

2007 "Social Structure and Religion at Wadi Fidan District 40 (Jordan)." American Schools of Oriental Research Annual Convention, San Diego, California.

2008 "Envisioning the Dead: The Anthropomorphic Standing Stones of WFD 40 and Their Near Eastern Context." American Schools of Oriental Research Annual Convention, Boston, Massachusetts.

2008 "Serpent City, Copper City: Rethinking Nelson Glueck's Biblical Identification of Khirbat en-Nahas (Jordan)." Society for Biblical Literature Annual Convention, Boston, Massachusetts.

2009 "The Meaning of Melekh: Archaeology, Anthropology, and the Reading of Genesis 36." Theoretical Archaeology Group Meeting, Stanford University, California.

ABSTRACT OF THE DISSERTATION

Nomads in Transition: Mortuary Archaeology in the Lowlands of Edom (Jordan).

by

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Doctor of Philosophy in Anthropology

University of California, San Diego, 2011

Professor Thomas Levy, Chair

This dissertation examines the appearance of Edomite identity as reflected in the mortuary archaeology of Southern Jordan in the Iron Age (*ca.* 1200-500 B.C.E.). This study contributes to the collective understanding of social structure among a nomadic people as it grows in complexity on the edges of the Egyptian and Assyrian empires. In Chapter 1, the historical records relating to Edom are described, in order to identify the people studied. This is followed by an analysis of the region's archaeology, which is shown to represent a nomadic people. Traditionally recognized markers of ethnic identity are also discussed. In Chapter 2, mortuary archaeology is considered, first theoretically, and then with specific reference to the Near East. Finally, the limited corpus of archaeological material, excluding Wadi Fidan 40, from Edom is discussed. This includes published data from the major Edomite archaeological sites, as well as unpublished data from the Edom Lowlands Archaeology Project expeditions. Chapter 3

follows with a study of power in pastoral society and an analysis of the importance of graves and shrines in organizing such a society. Chapter 4 presents the previouslyunpublished complete corpus of mortuary data from Wadi Fidan 40. Chapter 5 examines the standing stones and surface architecture at Wadi Fidan 40 in the context of the burial monuments of the self-identifying groups found in the Levant at the time. Chapter 6 examines the economic and social significance of the objects of personal adornment worn by the deceased at Wadi Fidan 40. Finally, in Chapter 7 the dissertation is summed up. This analysis of the cemetery at Wadi Fidan 40 presents a nomadic population in transition, one which displays competition between families and which draws on close ties to Arabia in order to obtain portable displayable wealth in order to cement leadership in a changing society.

CHAPTER 1: THE HISTORY AND ARCHAEOLOGY OF EDOM AND EDOMITE ETHNICITY

INTRODUCTION

To understand the mortuary analyses presented in this dissertation, it is important to review the cultural and historical context in which Iron Age (*ca.* 1200-500 BCE) mortuary behavior took place in southern Jordan. This chapter examines the basics of ethnicity as understood in anthropological archaeology. Foundational to this is Frederik Barth's (1969) analysis of ethnicity. Barth understands ethnicity to be defined by opposition. Barth notes that material culture is often not indicative of ethnicity. However, his work has been useful to archaeologists because differences in material culture can be seen as reflections of differences between self- and other-identifying groups.

Following is a description of the specifics of this cultural area. In current archaeological literature, Edom is usually understood to be a narrow band restricted to southern Jordan. This dissertation examines historical records and their bearing on the location of ancient Edom, which may have stretched over a wider territory than has been previously suggested. This is important because, if an Edomite ethnicity is to be sought, one must know *where* to seek it. The history of Edom is considered. Of particular note is the fact that the Biblical record suggests that the state of Edom consisted of multiple ethnic groups. It remains unclear to what extent, and when, these groups were assimilated into a dominant Edomite ethnicity. The history of the archaeology of Edom is also examined, with particular emphasis on the new research of Thomas E. Levy and the Edom Lowlands Archaeology Project. The ELRAP established that large populations

and monumental structures appear in Edom by the tenth century BCE. This overturns the established consensus, based on the work of Crystal-M. Bennett, that Edom only came to be populated during the seventh to sixth centuries BCE and due to Assyrian contact. Finally, proposed archaeological signatures of Edomite ethnicity are critically examined. These include the Edomite script and pottery, which, despite criticisms and caveats, remain the best archaeological evidence for Edomite cultural identity.

ARCHAEOLOGY AND THE STUDY OF ETHNICITY

Virtually from its beginnings as a discipline archaeology has been deeply involved in answering questions regarding movements of peoples and associating material culture with ancient identities (Jones 1997). This has especially been the case in the ancient Near East, which was seen by Western scholars as the cradle of their own civilization (e.g., Childe 1928, 1952). These scholars have traditionally followed what has been called the direct-historical approach (Heizer 1941), which seeks to follow historical records back into antiquity. These attempts have been criticized, particularly as one travels further into the undocumented past (Lyman and O'Brien 2001). These studies closely equated material culture with ethnicity, understanding that material culture changed but viewing ethnic groups as static. Unsurprisingly, these studies sought to trace modern national groups in the archaeological record, often for political ends.

The modern anthropological study of ethnic groups can be dated to 1969, with the appearance of Barth's *Ethnic Groups and Boundaries.* Barth recognized that ethnic groups are not static, nor do they operate in independence. On the contrary, these self-identifying groups identified themselves based on their interactions with one another. They are not objectively defined; rather, ethnicities are by definition subjective. Barth

(1969, 1994) recognized that these aspects of self-identity are independent of biological affinity, language, and often even material culture. For Barth, it is not so much what defines the group as what separates it from other groups which ultimately defines the group and is therefore the matter for study. Barth also recognized that ethnicities are fluid and change with changing conditions.

Ethnicities take on particular importance in states. Ethnic groups give subaltern peoples a cause to rally around. Ethnic myths also often give subaltern peoples a hope of a future state of their own. Ethnic lines harden along the peripheries of large states and often form the basis for the creation of secondary states (Emberling 1997). However, one must also reject the tendency to see ethnicities as exclusively subaltern. Often, ruling classes use their ethnicity itself both as a justification for dominance and as a means of organizing the elites (Smith 2004). Perhaps the best example of this is the Inca state. Leaders on the imperial level were of the Incan ethnic group. Conquered groups were required by the Inca to wear the distinctive garb of their own ethnicities. As we shall see, Edom and Israel, among other ethnic groups and nations, formed on the periphery of Egypt at a time when the latter had declined in power.

Recognizing ethnic groups in the archaeological record is itself a difficulty. However, ethnic differences can be recognized archaeologically. For example, Ian Hodder (1985) parsed the differences between ethnic markers and age-group and sex markers among pastoralists and settled agriculturalists in Kenya, noting that ceramics and wooden stools are markedly different in different self-identifying ethnic areas. Most studies, such as Hodder's, examine artifacts' style. However, other traits might also be examined as ethnic markers, such as food preparation or serving techniques (Joffe 1999),

what is and what is not consumed (Faust 2006), and most importantly for this study, the disposal of the dead (Bloch-Smith 1992). It is to be expected that those traits which were taken to be the most important ethnic markers will also show the most redundancy (Emberling 1997).

Considerable effort has been expended to identify the enthnogenesis of ethnic groups in the Southern Levant in the Iron Age after the recession of Egyptian power. Philistines (Dothan 1982), Israelites (Bloch-Smith 1992, 2003; Faust 2006; Levy and Holl 2002), and Edomites (Levy 2004, 2008) are among the ethnicities that emerged during this time. As Emberling (1997) notes, the best starting-point for identifying ethnicities is textual or oral records, and in order to identify Edomites in the archaeological record we first turn to texts.

GEOGRAPHY OF THE LAND OF EDOM

Archaeology involves reading the physical landscape like a book. The archaeological record is inextricably tied to the places where past human activity occurred. It is vital therefore to set out the geographic boundaries of any archaeological study at the outset, and in a study of Iron Age Edom that involves a discussion of the boundaries of the land of Edom. This is particularly the case since understanding archaeological manifestations of Edomite ethnicity means examining the archaeology of the specific land where the Edomites dwelt.

The history of Edom is inextricably bound with an ill-defined place called Seir. Seir might be considered here first. Although the term came to be synonymous with Edom (as in 2 Chr. 20), Seir appears to have once been a part of Edom and only later equated with Edom itself. Seir is said to be a hill country with its boundary near “El

Paran near the desert" (Gen. 14: 6). Edom is said to have taken it from the Horites (Deuteronomy 2: 12), but the Simeonites are also said to have driven fleeing Amelekites there and slaughtered them (1 Chr. 4: 42-43). Bartlett (1989) points out the close relationship between Esau and the Negev and suggests that Seir and Esau's names are linked. He suggests that Seir was in the lowlands of the Negev, taking its name from the "hairy" brush there in the same way that Edom, the mountainous area Transjordan, was named for its red rocks. Part of the reason Bartlett is so insistent that Edom crossed the Arabah, however, is due to his manifestly erroneous belief that the Timna mentioned in Edomite genealogies is the same as the mining district in the southwest Arabah (Bartlett 1989: 88), a serious flaw in otherwise sound scholarship. Other scholars have long suggested that the Sharrah Mountains of southern Jordan are Seir (e.g. Burckhardt 1822: xiv; see the discussion in Knauf 1992b). On the basis of placenames and the (now known to be mistaken) belief of the mid-1990s that settlement in Edom began along the Wadi Hasa, Knauf argued that Seir was to be found in the northern Edomite plateau (Knauf 1992a, Knauf-Belleri 1995).

The earliest records relating to Edom and Seir come from Egypt and refer to a lands rather than peoples. An Amarna letter mentions Seir, though this is perhaps more likely the Judean Seir (Knauf 1992b). Ramesses III claims to have "destroyed the Seirites among the tribes of the Shasu" (Giveon 1971). In Papyrus Anastasi VI, a border official reports allowing the Shasu of Idum to pass by his fortress into Egypt. Ward and Martin (1964) have argued that it seems unlikely that foreigners would migrate for water, and that we should understand the Egyptian Idum to be somewhere in the Negev or even

the Sinai. Topographic notations describing the land of the Shasu include references to landmarks on both sides of the Wadi Arabah (Ward 1992).

Just as the exact placement of Seir is unknown, the very boundaries of the land of Edom are a matter of debate. The waxing and waning of Edom's power impacted its historical borders, and it is only to be expected that the later Edom was a much larger entity than the Edom of the tenth century. This dispute goes back to the infancy of the scientific archaeology of Edom, with more traditional scholars such as George Livingston Robinson (1930) argued the western border lay far into modern Israel (Fig. 1.1), while the radical archaeologist Nelson Glueck (1936) putting the western border at the Arabah. The latter view is that most common among archaeologists today. It is supported by Piotr Bienkowski (Fig. 1.2), though his mentor, Crystal-M. Bennett, followed the more traditional model of Edom (Fig. 1.3). Itzhaq Beit-Arieh has sought to reconcile these two views, suggesting that, while the land of Edom properly so-called lay east of the Arabah, in the Babylonian period it extended its borders into the Negev (Fig. 1.4). This dissertation cannot answer such historical and political questions, though of course to understand the remains left by the people of Edom it is important to know where these people were active. It is therefore worth briefly considering the evidence related to the borders of Edom.



Figure 1.1: George Livingston Robinson's (1930: xxv) map of Edom.

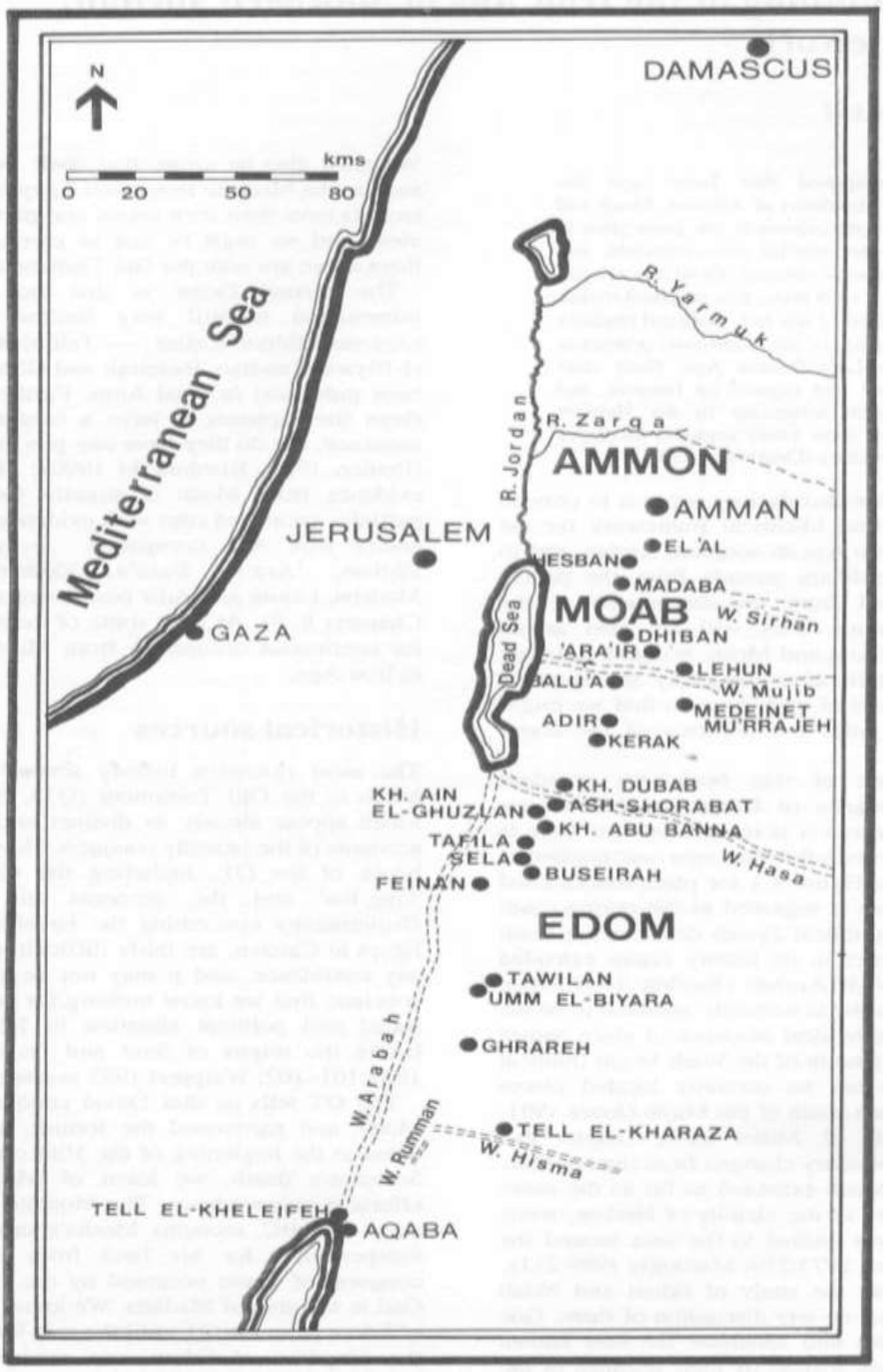


Figure 1.2: Piotr Bienkowski's (1992: 2) map of Edom.



Figure 1.3: Crystal-M. Bennet's (1978: 164) map of Edom.

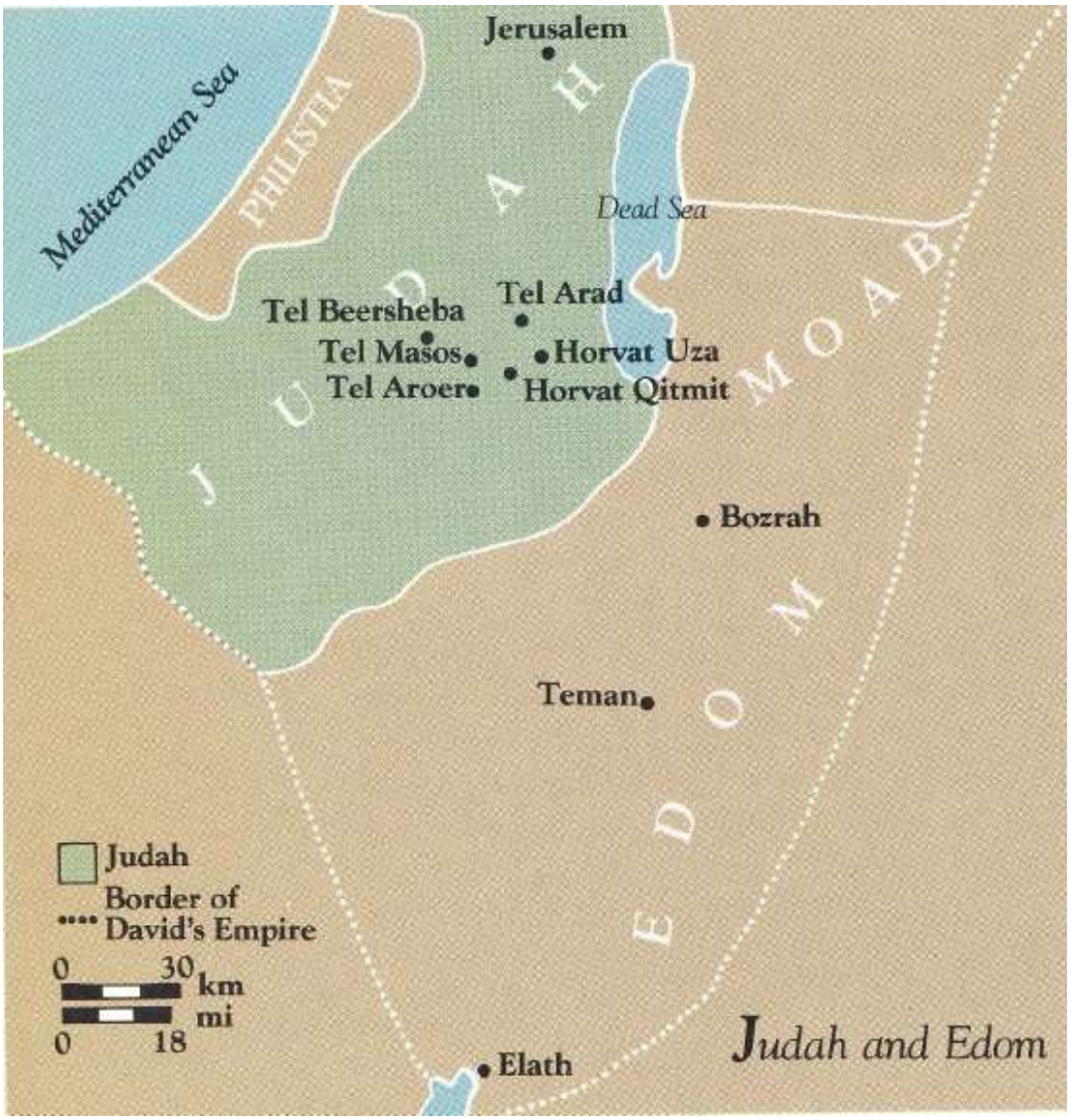


Figure 1.4: Itzaq Beit-Arieh's (1988: 30) map of Judah and Edom. He accepts the equation of Tawilan with the Biblcial Teman, an association rejected by most scholars after it was criticized by de Vaux (1969).

The northern border of Edom is the least debated. This is understood to be the Brook Zered, identified as Wadi Hasa. It is here that the Israelites are said to have entered Moab (Deuteronomy 2: 13). This would seem a logical natural boundary, though the wadi is not always the seemingly impassible barrier that it appears at the Dead Sea, the place closest to Israel and most likely to have been observed by Hebrew scribes. Furthermore, Bartlett (1965) has shown that several of the kings of Edom mentioned in

Genesis 36 and 1 Chronicles 1 are mentioned in connection with places which appear to lie in Jordan's central plateau, in land generally believed to have been a part of Moab. Bartlett suggests that these king lists are preserved accounts of contemporary local rulers. What he does not suggest but which must be considered is that these chiefs were considered to dwell in an ill-understood land of Edom which was roughly parallel to the Egyptian notion of Shasu-land and encompassed much of the land east of the Jordan. Whatever the case, it must be considered that the rule of the state of Edom, or the boundary of the cultural unit of Edom, might have at times extended beyond the Wadi Hasa.

The eastern border of Edom is generally believed to follow the natural barrier of the desert (e.g., Bienkowski 1992b; Edelman 1995; Hart 1989). Robinson (1930: 179) notes, "a line following in general the course of the modern Hajj, or Pilgrim route from Damascus to Mecca, would approximately bound Edom's territory on the east." This is a likely route for the Israelites to have been understood to have followed in order to skirt the land of Edom, but it is also an important trade route Edom would have wished to control. Regrettably, little archaeological work has been conducted along this route, and the extent of Edom's influence here is unknown.

The southern border of Edom is the least known. If the Israelites truly avoided the territory of Edom in the Exodus, then we should posit a geographical unit which does not extend far to the south. Those who limit the state of Edom to the southern Transjordanian plateau tend to draw Edom's southern boundary around Ras en-Naqb (Bienkowski 1992b; Edelman 1995). However, the Biblical authors seem to have been believed to have passed south as far as the Red Sea to avoid Edom. Furthermore, the Red

Sea coast town of Elath was understood to have changed hands between Israel and Edom but is described as lying within the land of Edom (1 Kings 9:26; Glueck 1938b). However, Edom's land – or at least its influence – may have extended still further south.

The territory of Edom proposed with the furthest southern extent includes the desert as far south as the oasis of el-'Ula – ancient Dedan (e.g., Knauf 1992a: 51). Dedan is mentioned in relation to Edom in the Prophetic literature, often as a place of refuge for Edom (Jer. 49: 8 Ezek. 25: 13). Bennett was the first to claim "in the list of kings [of Edom in Genesis 36] that the last one mentioned is in Dedan" (Bennett 1986: 77), though it is not clear why she thought this. It is possible that she equated Iram (actually the last city named in the list of chiefs of Edom) with the mythical Irem, said to lay somewhere in Arabia Deserta, and decided they and Dedan were one and the same. Dedan has been associated with the oasis of el-'Ula since Eduard Glaser made the connection in 1890. A fourth century governor of Dedan was named Galti-Qos, possibly meaning "Qos is My Terror" (Albright 1953: 6). However, his predecessor seems to have been Ammonite (Albright 1953: 4, n. 5), and even if Galti-Qos was an Edomite, this must be taken in the context of the Persian administrative system.

However, even if a Dedan was under the control of Edom, the Edomite Dedan may not have been el-'Ula. In his *Onomasticon,* a work which seeks to situate all the named sites in Scripture as they were known in his lifetime, Eusebius of Cesarea distinguishes between a Dedan in Arabia and a Daidan in Edom. Eusebius describes Daidan as "in Phainon [Feinan], about 4 milestones north" (80; Freeman-Grenville 2003: 48). F.-M. Abel identifies Khirbat en-Nahas is Eusebius' Daidan. Abel was familiar with Glueck's latest work and integrated the results of his "Explorations in Eastern

Palestine, II" (1935) into the second volume (1938) of his *Géographie de la Palestine.* Examining Glueck's maps, he claimed that Khirbat en-Nahas is "sans doute" (Abel 1933-1938: II.304) the site Eusebius (80; Freeman-Grenville 2003: 48) calls Daidan. Chapman (2003: 125) accepts this designation. But Abel's claims do not fit the topography of the area well. It seems unlikely that Eusebius would measure the distance from Feinan to Khirbat en-Nahas in milestones, given the broken nature of the landscape between the two sites. There are three more likely places which Eusebius may be describing.

One place which lies north of Feinan is Khirbat Hamra Ifdan (WFD 120), a site northwest of Khirbat Feinan which Abel rejects. Abel correctly notes that Khirbat Hamra Ifdan is further than four miles from Feinan. (It should be noted that a Roman mile, at about 4,851 English feet, is significantly shorter than the English mile of 5,280 feet (Smith 1875: 762)). However, it is actually not much further, and the distance of four miles may be explained if Eusebius begins his measurement at Feinan's outskirts. Khirbat Hamra Ifdan lies in the Wadi Fidan, directly downstream and in the same Wadi system as Wadi Feinan, alongside what is today a desert road between the two sites. Although best-known for the impressive Bronze Age copper manufactory at the site (Levy et al. 2002), the site has substantial remains that are likely Roman, including a large caravanserai. It lies above the Ain Fidan, a plentiful water supply, making it an important stop along the road the Feinan.

Another possibility is the site of Khirbat Ghweybe, a major Iron Age site north of Feinan. It fits Eusebius' description perfectly in terms of distance and direction, and is a large Iron Age site which could have been pointed out in the Byzantine era as the ruins of

Daidan. The site lies along the Wadi Ghweybe, so it too lies along an easily traveled route, though Roman milestones have yet to be reported here.

The most likely placement for Eusebius' Daidan, as proposed by Elitzur (2004: 239-245), is Dana, about twelve kilometers northeast of Khirbat Feinan. Because Khirbat Feinan lies in a bend of the Wadi Feinan, the track twists north both downstream towards Khirbat Hamra Ifdan and upstream towards Dana, but Dana lies more directly north. Khirbat Hamra Fidan is closer to Khirbat Feinan, but Dana is closer to Daidan in its spelling, and Elitzur (2004) argues that this is retention of the ancient place name. This site is perhaps also to be preferred because, like the Biblical Daidan, Dana is used to refer to an entire region, the Wadi Dana. Regardless, the Dedan associated with Edom may have lain much closer to Buseirah than is the oasis of el-'Ula.

The western border of Edom is the most contentious. As has been mentioned, early scholars tended to believe that Edom extended into what is now southern Israel. This is due no doubt in part to the fact that Idumaea, as we shall see, was known to have been found there, and the early scholars equated Edom and Idumaea, or at least assumed that the latter was encompassed by the former. (For example, Laborde (1838: 288) uses the two terms interchangeably, and this is not unusual among those scholars who were classically educated.)

The most decisive arguments that Edom extended west of the Arabah are based on passages of the Bible related to the Exodus and the division of the Land of Israel. During the Exodus, the Israelites are said to have sent envoys to the King of Edom from Kadesh Barnea, which was on the borders of Edom's territory (Numbers 20: 14). The accounts given of the limits of the land of Judah claim that its southern boundary was at

the desert of Zin, which was also the boundary with Edom (Joshua 15: 1). The only landmark given is the Ascent of Scorpions (Numbers 24: 4; Joshua 15: 3). This must have been an important road up from the Arabah, and may have been identical to the Roman road to ‘En Hazeva (Harel 1959). It remains unclear when these passages were written and, if they represent a reality, what point in time they describe. This may have been the state of things after Amalek became a part of Edom.

As early as the eighteenth century, however, this view was challenged, and scholars began to suggest that Edom’s territory was restricted to the east of the Arabah. The most notable of the early advocated of this opinion was Edward Robinson (1849: 380), who believed that, if Edom possessed lands west of the Arabah, then the Israelites would have had to have entered them during the Exodus. Though George Livingston Robinson (1930: 178) accuses Edward Robinson of inconsistency, pointing out that he had earlier subscribed to the more traditional notion of Edom’s western border (Robinson 1833: 261), this is not the case. Edward Robinson in both places argues that Edom only later conquered what would be Idumaea, due to pressures from the Nabateans.

Even more extreme are the ideas of Zecharia Kallai. Following Benjamin Mazar (1975: 135-153), Kallai (1986: 117) argues that the copper working areas of Feinan were actually part of Judah (Fig. 1.5). He buttresses his belief with Glueck’s identification of Khirbat en-Nahas with Ir-Nahash, a city mentioned in the lists of cities accorded to the Kenites (Glueck 1940a: 83), an idea that contradicts Glueck’s own argument for where the borders of Edom lie.

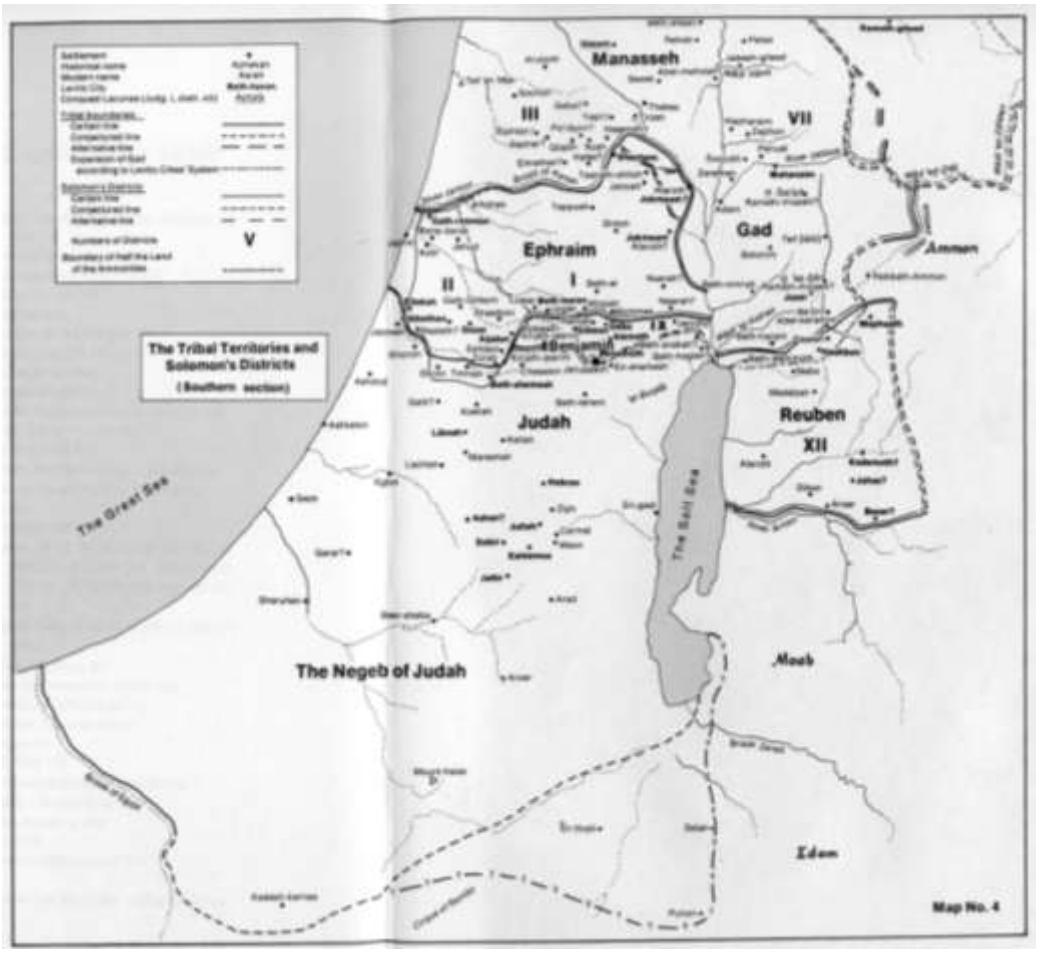


Figure 1.1: Zecharia Kallai's (1986: Map 4) map of Edom during Solomon's reign.

Nelson Glueck (1934-1935)'s ideas are perhaps the most important for the field of archaeology. He forcefully argued that the Wadi Arabah marked the western boundary of Edom. Part of the reasoning for this – and the reason it has been so widely accepted among archaeologists who would limit Edom to the plateauland of Transjordan – is that the Arabah makes a logical natural barrier, a suggestion which Robinson (1930: 178) considered "superficial." However, central place theory would suggest that such scholars as Bienkowski (1992a) and Hart (1989) are justified in limiting the region of Buseirah's hegemony to a more tightly constrained region around the capital, with such natural barriers as the edges of the plateau as significant boundaries.

Glueck's argument was based even more on archaeology, however. He recognized what he believed were a series of fortresses guarding the borders of the Transjordanian states, including Edom. However, his assertions in this respect have not stood up to scrutiny. The most important of these fortresses to our discussion is that of Khirbet Hamra Ifdan in the Wadi Fidan. Here, Glueck described a large fortress and Iron Age pottery (Glueck 1934-1935). However, Russell Adams (1992) has shown that Glueck was mistaken in his study of this site. Glueck apparently collected Iron Age pottery at a site which he believed was the Khirbat Hamra Ifdan described by Fritz Frank (1934), and relied upon Frank's description of the architecture at the site. In reality, however, Khirbat Hamra Ifdan, which was excavated by Thomas Levy, Russell Adams, Muhammad Najjar, and the Jabal Hamrat Fidan Project, is primarily an Early Bronze Age site (Adams 2000; Levy et al. 2002; Muniz 2007). The site which Glueck actually visited, as shown both by his itinerary and in his photographs, and where he collected Iron Age pottery, has been identified and is little more than a watchtower. It is known to the Edom Lowlands Regional Archaeological Project as Wadi Fidan 77, Rujm Hamrat Fidan, or Khirbat Glueck.

Looking for fortified borders to define ancient political boundaries has continued in archaeology. Lars Eric Axelsson (1987) claims that Edom at this time extended so far across the Arabah that the desert fortresses of the central Negev are in fact Judah's border with Edom. Aharoni (1967b: 390) already hinted at this interpretation decades before, though he was far more convinced that the fortresses were meant to defend roads rather than borders (Aharoni 1967a: 11). He argues Horvat 'Uzza is the Biblical Ramat-Negeb, that it overlooks the road known as the Way of Edom, and "governed the way up,

blocked the entrance to the Arad Negeb, and was the first point open to Edomite attack" (Aharoni 1981: 147). Laura M. Zucconi (2007: 241) argues that the fortresses at Tel Arad, Tel Aroer, Tel Ira, Tel Malhata, Horvat Anim, Horvat Radum, Horvat Tov, and Horvat Uza, made up the border between Edom and Judah. Nevertheless, most archaeologists today would follow Nelson Glueck (1936), in placing the western border of Edom at the Wadi Arabah. Seeking the ancestral culture of Edom here, in mountainous southern Jordan, is the safest route, since scholarly consensus makes it the Edomite heartland, though other alternatives cannot be ignored.

By the Hellenistic era, Edom was known as Idumaea. By this point the other Transjordanian states – Ammon, Aramaea, and Moab – collapsed. The political unit known as Idumaea had lost its holdings in Transjordan so completely and thoroughly that its name was transferred to its landholdings in the northern Negev (Fig. 1.6). Or, alternatively, the political unit that existed during the Hellenistic period and named itself after Edom never held land east of the Arabah. Most of Edom's traditional lands were by this point in Nabatean hands, who invaded from the east and south through a process that is still not well understood (Kasher 1988).



Figure 1.6: Roman Palestine in the First Century C.E., showing Idumaea (Williamson and Smallwood 1981: 485).

THE ARCHAEOLOGY OF EDOM

Our knowledge of the archaeology of Edom has grown up in three overlapping phases. The first was the earliest archaeological investigation of the area, dominated by the work of Nelson Glueck, who dated the Edomite presence to the beginnings of the Iron Age. The second phase included excavations and surveys, particularly of the large Edomite sites in the plateau such as Busayra, Umm el-Biyara, and Tawilan, and was lead

primarily by Crystal-M. Bennet and Stephen Hart. This period saw the redating of the emergence of Edom to the seventh century B.C.E. This phase also saw the investigation of sites with Edomite components in the southern Negev led by Yitzaq ben-Ariyeh. The most recent phase of investigation has been lead by Thomas Levy and Muhammad Najjar, focusing on the lowlands of Edom, in the region of Feinan. This most recent phase pushes archaeology in the land of Edom back into the Iron Age IIA and earlier.

Nelson Glueck was the first to develop an archaeological synthesis of the Iron Age in southern Jordan using modern methods. Other early visitors to southern Jordan, such as John Louis Burckhardt (1822) and Alois Musil (1908), had geographical, rather than archaeological, methodologies. Others, such as Fritz Frank (1934), were knowledgeable in Roman ceramics, but could only report Iron Age pottery as not Roman. Still other archaeologists, such as George Horsfield, Agnes Conway Horsfield, and Robert G. Head, who worked in the area with the Department of Antiquities, focused on the Nabateans, left few writings, and never attempted a systematic study of the region's archaeology. It was Glueck who, in extensive surveys and limited excavations, first defined Edomite material culture.

Glueck's synthesis was based primarily upon his major surveys in southern Jordan and the Negev (Glueck 1933-1934, 1934, 1934-1935, 1937-1939, 1940a, 1967b). In addition, Glueck excavated Tell el-Khalifeh on the Red Sea coast, accepting it to be the Biblical Ezion-Geber, a site which the Bible says traded hands between Edom and Israel (Glueck 1938b, 1940b, 1967; Pratico 1985, 1993). He also conducted small test excavations at Umm el-Biyara, situated on the massif overlooking Petra, with Agnes Conway Horsfield and R. G. Head (Glueck 1931: 77, 1934). Glueck accepted the former

Miss Conway's and George Horsfield identification of the site with the Biblical Edomite stronghold Sela' (Glueck 1934-1935: 82; Horsfield and Conway 1930: 379). Glueck argued that Edomite settlement began in the Late Bronze age, and that a settled kingdom – indeed, a civilization – existed there by the Iron I. He argued that the Biblical texts referring to kings who reigned in Edom before there was any in Israel, and kings who opposed the immigrating Israelites, were historically accurate. Glueck believed in an occupation gap in southern Jordan during the Persian period until the Hellenistic period.

Glueck's interpretations of Edomite archaeology were challenged starting in the 1960s with work by Crystal-M. Bennett. Bennett lead the first major excavations at Umm el-Biyara, which was excavated because scholarly consensus held it to be the Biblical Sela' (Bennett 1986: 76-77; cf. also Harding 1967: 119; Morton 1956: 27). There, she uncovered a small agricultural settlement with unmortared architecture. This followed with work at Tawilan, another site near Petra identified by Nelson Glueck as either (because of its centralized location when contrasted that of Buseirah) the bona fide Biblical Bozra (Glueck 1934: 14), or, following Phythian-Adams (1934), as the Biblical Teman (1935: 83; cf. also Bennet and Bienkowski 1995: 16). Finally, she excavated Buseirah, now beyond doubt the principal (and perhaps only true) Edomite city, the Biblical Bozra. Her data was published in a series of preliminary reports and articles (Umm el-Biyara: Bennett 1966; Tawilan: Bennett 1971, 1984; Buseirah: Bennett 1973, 1974, 1975, 1977, 1983; Puech 1977) and finally collected in final publications by Bienkowski (Tawilan: Bennett and Bienkowski 1995; Buseirah: Bienkowski 2002; Umm

el-Biyara: Bienkowski 2011[1]). Though she initially expected to find "archaeological proof of biblical narratives" (Bennett 1986: 75), epigraphic evidence found at the three sites – including a scarab at Tawilan, a seal impression at Umm el-Biyara, and scarabs and ostraca at Buseirah – led her to believe that Edom's flourit was between the end of the eighth and the seventh centuries B.C.E. under Assyrian domination.

Other investigators followed Bennett's conclusions. James Sauer, who worked mostly in northern Transjordan, incorporated his findings with Bennett's in his critique of Glueck (Sauer 1986). MacDonald, who identified a number of Iron I sites in the Wadi el-Hasa (MacDonald 1988), conceded they were most likely Iron II following criticism by Bienkowski (Bienkowski 1992b, 1995c; Bienkowski and Adams 1999; MacDonald 1992a, 2000). Stephen Hart refined Bennett's and Oakshott's pottery typologies (Hart 1995). He carried out surveys on the Edomite plateau (Hart 1986a, 1986b, 1987a, 1989; Hart and Falkner 1985) and excavated Khirbet al-Megheitah, Khirbet Ishra, and Ghareh (Hart 1987b, 1988, 1989). Edomite Iron II pottery has occasionally been found in other surveys and excavations, such as the excavation at Udhruh, which has also uncovered some Edomite walls (Killick 1987). Edomite pottery was also found alongside Nabatean at Khirbat Muhaydhrat, a rectangular structure overlooking a spring near Udhruh (Abudanh 2004: 63). Edomite pottery was also found on the surface in the Um Salm area and in excavation at the Tell el Kharaza rock shelter (Jobling 1989). Manfred Linder and his colleagues, in surveys around Petra and Sabra, recognized a number of Edomite sites (Lindner 1987, 1992a, 1997, Linder and Farjat 1987, Lindner et al. 1990, Lindner et

[1] The final report on Umm el-Biyara was released in summer 2011. Regrettably, that was too late to integrate those findings into this dissertation.

al. 1988, Lindner et al. 1996a, Lindner et al. 1996b, Lindner et al 1988). These include what he took to be fortresses, estates, and cult sites at Khirbat al-Mu'allaq, Umm el-Ala, Ba'ja III, Sela', Jabal al-Qseir, Deraj I and III, Kutle II and III. These studies have added detail to Bennett's findings and suggest a settled population concerned with security, but they all following Bennett in dating this settlement explosion to the Iron IIC.

However, even at this time, there were some dissenting voices. Manfred Weippert argues for a "gradual increase in settlement density, observable well before the florescence in Iron Age II C" (Weippert 1982: 156), based on Iron I sherds found at the large sites of Khirbet Abu Banna and Khirbet Mashmil. Though Bienkowski revisited Abu Banna and criticized his findings, Bienkowski did not rule out the possibility of some Iron I settlement there (Bienkowski 1995c). Agreeing with Weippert, Israel Finkelstein argued that some published sherds from sites across Edom, including some found in the reports of Bennett's excavated sites and Hart's and Lindner's surveys published to that point, bore strong resemblances to Cisjordanian Iron I sherds (Finkelstein 1992a). Bienkowski (1992a) claims that he relied too much on what appeared to be collared-rimed jars but were in actuality later pot forms common to Edomite sites. Larry Herr (2001) has since more fully explored the topic of collared-rim jars in Transjordanian sites, showing the history of this pot form is much different than in Cisjordan. However, Finkelstein (1992d) rejects his claims and instead calls for better excavations of stratified sites.

The third phase of research was initiated by Itzaq Beit-Arieh's work in the Negev. Aharoni previously argued that Edom invaded and occupied Judah during the Babylonian period (Aharoni 1968, 1981), suggesting that Edom destroyed Arad Stratum VII in

596/595 B.C.E. (Aharoni 1981: 150). Edomite pottery was also found in the Negev before Beit-Arieh began his work, first at Tel Malhata, where the excavator, Moshe Kochavi (1993), identifies one quarter of the pottery in a sixth century destruction level as Edomite. Kochavi also suggests that the names ʻAznael and Danael found in inscriptions at that site are Edomite. Eilat Mazar (1985: 264) documented a cluster of sites in the Negev with traditionally Edomite pottery, including Tel ʻIra, Tel Masos, Aroer, Tel Haror, Tel Seraʼ, and Kadesh Barnea. She believed they were brought to these sites by Arab traders.

It was Beit-Arieh, however, who excavated large quantities of painted pottery and cult vessels similar to those known at Buseirah at what appears to be a sanctuary at Horvat Qitmit and argued that this was proof of Edomite settlement in the Negev in the seventh century (Beit-Arieh 1987, 1988, 1995, 1999). Beit-Arieh (1999) argues the shrine at Horvat Qitmit served an Edomite settlement at Tel Malhata. Later excavations at En Haseva revealed painted pottery in *fassiva* which the excavators believe were connected to a shrine at the site (Cohen and Yisrael 1995a, b). These sites have been taken as evidence of a large Edomite population in the Negev, which Beit-Arieh argues was seized from Judah "around 600 B.C." (Beit-Arieh 1989; see also Beit-Arieh 1995).

This understanding of an expansion of Edomite political power into the Negev is not accepted by all scholars. Following Mazar (1985), Finkelstein (1992b) has agued that Edomite pottery found its way into the region as a result of trade. He argues that Horvat Qitmit and En Haseva were Edomite shrines alongside important trade routes. Looking at pottery attributed to multiple ethnicities (including Edomite) in Beer Sheba, Singer-Avitz (1999) follows him in this. Bienkowski and van der Steen (2001) adopt this model

in their "New Framework" for understanding Edomite society. Thus, while it is accepted that Edomites traversed the region in the Iron II and even had wayside shrines, their political control over the area is disputed.

The most recent phase of archaeological research in Edom focuses on the Edom lowlands and is lead by Thomas Levy. The first surveys of this area seeking anything other than Roman sites since Nelson Glueck's were conducted in limited areas by amateur archaeologist Thomas Raikes (1980, 1985), followed by Burton MacDonald (1992b, 2004) and Andreas Hauptmann (Hauptmann 1986; Hauptmann and Weisgerber 1992). These were followed by limited excavations by Russell Adams and Hermann Genz (Adams 1991; Adams and Genz 1995) and by Volkmar Fritz (1994, 1996, 2002). However, while these excavations noted the existence of a population in the Faynan area at a time much earlier than for the Edomite highlands, its place in relation to the social network of the Southern Levant remained obscure. The work of Thomas Levy and his colleagues, including both surveys and large-exposure excavations, has examined the changing social map of the Edomite Lowlands in deep time from the Neolithic to the Iron Age. The Iron Age material will be examined in this dissertation.

Levy's team has revealed extensive Iron Age land use in the Wadi Fidan, Wadi al-Ghuwayb and Wadi al-Jariya (Levy et al. 2001, 2003). What these surveys have not found is extensive Iron Age settlement, and Levy and his colleagues have suggested that this is because pastoral nomadism was the primary means of production (Levy 2004; Levy and Holl 2002; Levy et al. 2005a, 2005b). This also reveals the cross purposes to which recent scholars have been working. Most archaeologists working in Jordan today

equate Edom, settlement, and civilization. This will be discussed further in the chapter on pastoralism.

Sites excavated by Levy's team have confirmed this picture of a substantial pastoral population and large amounts of copper production beginning at a very early period. The first large Iron Age site excavated was Wadi Fidan 40. As will be more fully discussed elsewhere in this dissertation, Wadi Fidan 40 has been known since the Raikes' surveys of the 1980s, but test excavations of this site by Adams (1991) did not properly date the site. Broader excavations lead by Levy and Muhammad Najjar (initially with Adams) proved the site to be Iron Age in date, and suggest a large pastoral population existed in the Edomite lowlands in the Iron IIA (Levy et al. 1999, 2005a). Excavations at nearby Wadi Fidan 77 by Levy and Smith show at least small structures in the vicinity (Levy et al. 2008; Smith 2009). More important in showing a settled industrial population are the excavations at Khirbat en-Nahas, where massive industrial deposits and both elite and non-elite structures, discussed more fully below, have been uncovered.

The beginnings of a new South Jordan Iron Age II Survey and Excavation Project (SJIAP), directed by Charlotte M. Whiting, have also been announced. Whiting (2007) has been extremely critical of traditional understandings of the term Edomite. Preliminary results of some excavations of this project have been released (Whiting et al. 2008), but the data so far published has not substantially altered our understanding of southern Jordanian lifeways in the Iron Age II.

EDOM IN HISTORY AND ARCHAEOLOGY

The history of the Edomite kingdom could easily be the topic of a dissertation; indeed it has been the topic of several. Modern critical histories of Edom begin with the

work of Frants Buhl (1890), whose interpretation followed a very literal reading of the Biblical texts. After Glueck's (1935; 1940) seminal surveys, authors such as Irvine (1958) and Moon (1971) followed him in arguing for such a literal reading of the Bible as history. Following the excavations of Crystal M. Bennett, however, most archaeologists agreed that there was no kingdom in Edom prior to the Iron IIB (Bienkowski 1992b) and Bartlett (1989), the Biblical scholar who has examined Edom most extensively in recent years, has interpreted the textual evidence according to these new understandings, as has Crowell (2004). With the excavations of the Edom Lowlands Archaeological Project, the time has come for a new, comprehensive history of Edom that integrates all of what is now known from the historical texts and archaeology – but this is beyond the scope of this dissertation. The following basic framework of Edomite history and archaeology is offered in order to aid in understanding the ethnic and cultural make-up of the people of the Faynan district in the tenth and ninth centuries.

EDOM IN THE LATE BRONZE AGE AND THE IRON AGE TRANSITION

Very little can be said about Edom during the Late Bronze Age or the transition to the Iron Age. As one observer notes, "It should not be assumed, however, that southern Jordan was empty. The area was probably inhabited by nomads who were caravaneers and lived by herding, and who left no trace" (Strange 2008: 288) – or, perhaps, no trace that has yet been recognized. During this period, Cisjordan, the Jordan Valley, and the highland of what would become Ammon was under Egyptian domination. Southern Jordan and the eastern Negev were no doubt part of the Egyptian sphere of influence, though there seems to have been little actual Egyptian activity in the area.

Our knowledge of Edom in the Late Bronze Age, given the lack of archaeological remains yet identified, comes almost exclusively from Egyptian documents. These documents refer to a group called the Shasu or Shosu, which appears to be a term for pastoral nomads found across the Levant, in Libya, and possibly even in Nubia. The Egyptian records referring to Shasu, from earliest times through the Hellenistic and Roman eras, have been assembled and discussed by Raphael Giveon (1974).

Most of these documents show an ambivalent or negative view of the Shasu on the part of the Egyptians. For example, a battle with the Shasu is depicted in a desert area near fortified settlements, apparently somewhere in the southern Lenvant, in a relief of Seti I at Karnak (Breasted [1906] 1962: iii. sec. 85, fig. 1-2; pictured in Schwaller de Lubicz 1999: 555; Pritchard 1954: 107-109, figs. 326-329). Over the battle itself, an inscription tells us that Amun "has extended the boundaries of Egypt as far as the heavens on every side" and that the "rebels, they know not how they shall [flee]; the vanquished of the Shasu . . . [becoming like] that which exists not" (Breasted [1906] 1962: iii. sec. 86). The battle is part of an Egyptian offense to put down a rebellion in its provinces, and it appears that Seti I's troops fought the Shasu in the area between modern Qantara and Gaza – that is, from the northern Sinai, across the Negev and up to southern Palestine (Kitchen 1972). In a later New Kingdom Pharaoh's relief, next to an image of Ramesses II slaying a Libyan in the Abu Simbel Temple, a boast tells of defeating and relocating Nubians, people of Retenu, people of Kharu, and Shasu. Unlike his predecessors, it has been suggested that Ramesses II may have even penetrated the land of the Shasu east of the Jordan (Kitchen 1964). Ward and Martin (1964) are even convinced that the Balu'a stele from what would become Moab is not a local ruler

imitating Egyptian form, but rather a victory stele of Ramesses II himself (Fig. 1.7). In one of the last New Kingdom inscriptions mentioning the Shasu, Ramesses III, claims to have "destroyed the Seirites among the tribes of the Shasu" (Giveon 1971). The Shasu's very lifestyle of forced movement was the antithesis of the ideal of the settled Egyptian who traveled at his leisure (Fischer-Elfert 2005).



Figure 1.7: The Balu'a Stele, depicting either a local Late Bronze leader imitating Egyptian art, or, as some claim, Ramessess II. Reproduced from Giveon (1974).

Other documents suggest a more symbiotic relationship with the Shasu, no doubt describing what went on outside of war time. A letter dating from the time of Merneptah, the Papyrus Anastasi VI – also called the "Letter of a Frontier Official" (Breasted [1906]

1962: iii secs. 636-637) or "The Report of a Frontier Official (Pritchard 1969: 259) – both describes the Shasu and is the first surviving recorded use of the word Edom. This document, like Anastasi I, was apparently used as a model for students to copy when learning to write hieroglyphs. Unfortunately, unlike Anastasi I, Anastasi VI is extremely fragmentary and we do not have multiple copies of the text. Nevertheless, it is important enough to be worth quoting in full. Pritchard, who refers to Shasu as Bedouin, translates the document thus:

> The Scribe Inena communicating to his lord, the Scribe of the Treasury Qa-g[abu], . . . : – In life, prosperity, health! This is a letter [to] let [my lord] know: An[other communication to] my lord, to wit:
> [I] have carried out every commission laid upon me, in good shape and strong as metal. I have not been lax.
> Another communication to my [lord], to [wit: We] have finished letting the Bedouin tribes of Edom pass the Fortress of Mer-ne-Ptah Hotep-hir-Maat—life, prosperity, health!—which is (in) Tjeku, to the pools of Per-Atum [of] Mer-[ne]-Ptah Hotep-hir-Maat, which are (in) Tjeku, to keep them alive and to keep their cattle alive, through the great *ka* of Pharaoh—life, prosperity, health!—the good sun of every land, in the year 8, 5 [intercalary] days, [the Birth of] Seth. I have had them brought in a copy of the *report* to the [place where] my lord is, *as well as* the other names of days when the Fortress of Mer-ne-Ptah Hotep-hir-Maat—life, prosperity, health!—which is (in) [Tj]ek[u], may be passed . . .
>
> (Pritchard 1965: 259)

This writing suggests of course that pastoral nomads called Shasu were taking their oviaries from Edom into Egyptian territory. Tjeku may be Succoth (Kitchen 1992), though this is not beyond dispute (Pritchard 1965). If the document is dated about 1215 BCE the time of year would be about mid-June (Pritchard 1965); in the last quarter of the thirteenth century it would be late June (Redford 1992: 228, n. 70). The phrase “to keep them alive and to keep their cattle alive” uses a phraseology which is “regularly used to indicate preservation and sustenance in time of famine” (Breasted [1906] 1962: iii sec.

638 n. b). It seems therefore that these nomads were allowed to bring their flocks past a fortress during a midsummer famine. This document is especially relevant as it virtually identifies the land of the Shasu as the same as Edom.

Giveon (1971) has compared the Egyptian reliefs in order to determine whether the Shasu had a distinctive, possibly ethnic, dress. He has done this by comparing individuals labeled as Shasu on Egyptian pictographs to each other and to individuals not labeled specifically, but described as Shasu in associated inscriptions. The three features Giveon identifies as characteristic of Shasu are tasseled kilts, beards, and distinctive headpieces (Fig. 1.8).



Figure 1.2: Egyptian carving of a Shasu man. Reproduced from Giveon (1974).

But Giveon's work comes with many caveats, and has been further criticized by Ward (1972). Ward notes that the Shasu are only depicted and clearly labeled a few times in Egyptian art. These are almost always scenes either during battle or of defeated Shasu. Shasu women are never shown in these reliefs. In only three instances are Shasu directly labeled with text; in other cases Giveon was forced to deduce pair texts with

associated images, making the associations likely but not beyond doubt. Still more importantly, and as Giveon points out, tasseled kilts and beards are not reserved for any one people by Egyptian artists. This leaves the headpiece, which Giveon believes changes through time. In the Amarna period, these headpieces appear as simple head bands holding back long hair (Figure 1.8), while later reliefs depict them as wearing more impressive headpieces (similar to that of the central figure of the Balu'a Stele, Figure 7). The headband can also be seen on a number of different peoples in the Amarna age; it is not a specifically Shasu trait. The more elaborate headpiece may also have been worn by other peoples, although Giveon feels they were reserved for the Shasu alone. Suffice it to say, even were we to find a pristine Shasu burial in characteristic attire, the Shasu cannot be recognized archaeologically from these artistic representations.

Levy, Adams, and Muniz (2004) have suggested that the people of Wadi Fidan 40 are the Shasu mentioned in Egyptian texts. However, as Giveon notes, "The last Egyptian documents dealing with the Shosu as an active factor in history are from the time of Ramses III" (Giveon 1969-1970: 51), though there are hints that groups identified as Shasu contined to exist into the late period. A group known as the "Shosu of Aphroditopolis" are mentioned in a Chronicle of Prince Osorkon from the time of Shoshenk III (ca. 820 B.C.E.), and a document from the twenty-sixth Dynasty, the last dynasty to rule Egpyt before the Persian conquest, refers to the "estates of the Shosu of the South," apparently in the Saite stronghold of the western Nile delta (Giveon 1969-1970: 52). However, the Shasu of Edom no longer appear in Egyptian documents after the end of the Late Bronze Age, when the Egyptians lost interest in the area beyond the delta as they coped with the turmoil of the Third Intermediate Period. Nevertheless, there

can be little doubt that the inhabitants of Transjordan and the Negev in the Iron Age were the descendants of the Late Bronze Age pastoral inhabitants.

Archaeologically, little can be said about Edom during the transition from the Late Bronze Age to the Iron Age. A Midianite potsherd – often associated with the Late Bronze Age activity at the copper mines in Timna (Rothenberg and Glass 1983) – was recovered at Tawilan in a mixed context (Herr and Najjar 2008: 313). But similar potsherds have been found at Khirbat en-Nahas and are clearly from the Iron Age (Smith and Levy 2008). A cooking potsherd from the earliest Iron Age was recovered at Tawilan, again without a clear context (Herr and Najjar 2008: 313). As we shall see, until very recently scholarly consensus was that southern Jordan was entirely unsettled, if not unpeopled, at this period.

The most important excavated site for the beginnings of Edomite culture today is Khirbat en-Nahas. Although first probed by the German Mining Museum (Fritz 1994, 1996, 2000), this large metal producing site was first excavated with large exposures by the Edom Lowlands Archaeology Project (Levy 2004; Levy et al. 2004; Levy et al. 2005b; Levy et al. 2008). Here, excavations have uncovered a fortress with a four-chamber gate (Area F), massive metal deposits associated with courtyard houses (especially in Areas S and M), and elite courtyard structures (Areas R, T). Here, Edomite painted pottery, as well as a few sherds of Midianite pottery, has been found in deposits with firm radiocarbon dates from the tenth and ninth centuries (Levy et al. 2004, 2008; Smith and Levy 2008; Smith 2009). These excavations show the evidence of a socially complex settled population in the Edomite Lowlands using Edomite pottery two centuries earlier than what was the established framework (Bienkowski 1992b) would allow. It is

worth turning at this point again to literary sources in order to understand the archaeological data.

EDOM AND THE BIBLE

Our understanding of the ethnic identity of Edom is informed largely by the Bible, but while Edomites are generally understood to be a single ethnic group, independent of but related to its neighbors, a closer reading of the texts provides a more varied picture of inhabitants of a land called Edom and a self-identifying group known by that name. The definition of the term itself seems to have been in flux, as Edomites and their neighbors were forced to identify and reidentify themselves according to changing political and social realities. Any analysis of ancient Edom must take into account that the term Edom may have applied at different times to different groups of peoples – and different groupings of customs. Archaeology can help illustrate how these groups and their customs were (or were not) integrated into those of greater Edom and came to be understood as Edomite.

The Biblical history of the kingdom of Edom can be summed up in a short paragraph or Table 1.1. Edom's apical ancestor, also known as Edom or Seir, was mistreated by his brother yet nevertheless became a wealthy stockowner (Genesis 25-32). At some point after the Edomites conquered Seir from the Horites (Deuteronomy 2: 12), they developed a monarchy before there was a king in Israel (Genesis 36). If we assume a 25-year reign for each of the kings listed in the king's list of Genesis 36 and assume that that is a complete list which ends with the reign of Saul, then this would have been about 1175 B.C.E. (Cresson 1963; Moon 1971). This would suggest that during virtually all of the period that Israel believed they had judges Edom had kings. Saul won many

battles against Edom (1 Sam. 14: 47), and the Edomites were finally conquered by David, who established garrisons in their land (2 Sm. 8: 14, I Chr. 18: 11-13). When David died, Hadad of the royal house of Edom seized the opportunity to revolt (2 Kings 11: 14-16). Edom then drops from history, to be heard from next in the reign of Jehoshaphat; it is unclear whether we are to believe Edom is independent or ruled by Judah at this time. Under Jehoshaphat a deputy king reigns in Edom and assists Judah and Israel in a campaign against Moab (1 Kings 22: 47), but men of Seir also attack Judah only to be wiped out by their erstwhile allies, Moab and Ammon (2 Chr. 20: 1-30). Under Joram Edom successfully revolts and is thereafter independent (II Kings 8: 20-22; II Chr. 21: 8-10). Nevertheless, when Amaziah attacks Edom, he manages to takethe Edomite stronghold Sela', renaming it Jothkeel after slaughtering its defenders (2 Kings 14: 7; 2 Chr. 25:14-16). A king reigned in Edom as late as the fourth year of Zedekiah (Jeremiah 27:2) – that is, ca. 594 B.C.E.

Table 1.1: Major incidents of Edomite and Seirite history described in the Bible.

Verse	**Events**
Genesis 14: 6	Kedorlaomer, king of Elam, and his allies invade Seir
Genesis 25-32	Adventures of Esau and Jacob
Deuteronomy 2: 12	Edom conquers Seir from the Horites
Exodus 15: 15	The *'alûphi* of Edom tremble at the passage of Israel through the Red Sea
Numbers 20: 14-21	The king of Edom refuses the Israelites passage through his territory and deploys troops against them.
Genesis 36	Kings of Edom before there was any king in Israel
I Samuel 14: 47	Saul fights against Edom.
I Chr. 4: 12	Simeonites slaughter fleeing Amalekites at Mt. Seir.
II Sam. 8: 14 I Chr. 18: 11-13	David conquers Edom, establishing garrisons throughout.

Table 1.1: Major incidents of Edomite and Seirite history described in the Bible, continued.

I Kings 11: 14-16.	Hadad, of the royal house of Edom, revolts against Solomon.
II Chr. 20: 1-30.	Edom, Moab, and Ammon attack Israel under Jehoshaphat but turn on each other and are annihilated.
I Kings 22: 47	Edom is ruled by a deputy king under Jehoshaphat.
II Kings 3	The United Campaign against Moab: the King of Edom assists Jehoshaphat in an attack on Moab; his eldest son is killed(?) in sacrifice by Mesha, king of Moab.
II Kings 8: 20-22; II Chr. 21: 8-10	Edom revolts against Joram, afterwards independent.
2 Kings 14: 7; 2 Chr. 25:14-16	Edom is attacked by Amaziah, king of Judah, who takes and renames the Edomite stronghold Sela'.
Psalms 137: 7	Edom rejoices at the destruction of the Temple
Jer. 40:11	Edom takes in Judahite refugees.
Jer. 27	Edom conspires against Nebuchadnezzar.

PEOPLES OF EDOM

According to the Bible, the apical ancestor of the Edomites is Esau "who is Edom" (Genesis 36: 19), brother of the Israelites' corresponding ancestor, Jacob. Descriptions of the apical ancestors can easily be opposed structurally into Levi-Strauss' raw and cooked analogies (Lévi-Strauss 1969; Table 1.2); it is clear that one important interest of the Biblical authors was to define Israel in contrast to Edom (Faust 2006; Levy 2008), regardless of whether there is any truth behind these statements. Biblical genealogies list Horites as inhabitants of Edom alongside the sons of Esau (Genesis 36: 20-30). The Deuteronomist understood the Horites as a conquered (indeed, destroyed) people, first inhabitants of the land promised by YHWH to the Edomites just as Canaan was given to the descendants of Jacob (Deut. 2: 12). However, the author of the Genesis lists describes them as "inhabitants of the land" (Genesis 36: 20) with their own chiefs alongside the chiefs of Edom.

Table 1.2: Structural interpretation of the Edom/Israel dichotomy.

Israel	**Edom**	**Passage**
Secondary	Primitive	Gen. 25: 26-27
Clever	Simple	Gen. 25: 26
Tent	Field	Gen. 25: 27
Smooth	Hairy	Gen. 27: 11
Pastoralist	Hunter	Gen. 25: 27; 27: 3, 17
Woman-loved	Man-loved	Gen. 25: 28
Liminal (Yakov=Fights-with-God)	Earthy	Gen. 32: 28
Eats cooked food	Eats semi-raw food (red lentils being undercooked)	Gen. 25: 30

These lists of the population of Edom further complicate the issue. For example, the wives of Esau, married deliberately in order to spite his ethnocentric parents, are said to be Seirites, Hittites, Hivites, Ishmaelites, and even a woman named Judith who, though said to be a Hittite, has a name meaning Judahite (Genesis 26: 34-35, 36: 2-3). The lists of the chiefs of Edom found in Genesis 36: 15-19 numbers the Amalekites among the tribes of Edom, despite the fact that the Bible usually depicts as this group as independent; indeed, the Balaam prophecy curses the Amalekites independently of Edom, calling Amalek "the first of the nations" (Numbers 25: 20). John Bartlett suggests (Bartlett 1992: 14), "there is little here to suggest that the writer [of Genesis 36] was drawing upon genuinely Edomite material and much that suggests he was preparing a list of names appropriate to the Edom that he knew, with contacts ranging from southern Judah to Midian." Bartlett of course throws his net too wide – an important part of his own evidence is the mistaken belief that Esau's wife Timna's name survives in the mining district by that name (Bartlett 1989: 88), a name which is actually modern. However, the inclusion of what would seem to be independent ethnic groups in such lists

may in fact represent the changing fortunes of the Edomite state, as different self-identifying groups – be they clans, tribes, or ethnicities – joined Edom and were incorporated into the state according to the logic of kinship. Regardless, the archaeologist seeking to understand Edomite ethnicity must first understand that the land of Edom itself is most likely to have been a palimpsest of interacting and interlocking self-defining groups who in turn may have left identifiable archaeological signatures.

Ernst Axel Knauf developed what was a compelling model, arguing that nomadic, Qos-worshiping "sons of Esau" from the south penetrated Horite settlements near the Wadi Hasa (Knauf 1992a, Knauf-Belleri 1995). Knauf actually reverses the process described in Deuteronomy, declaring Horites to be "Canaanite agriculture newcomers, whereas Esau may represent the indigenous nomads who assumed a leading role within the later Edomite state" (Knauf 1992a: 49). This model is based on Knauf's reconstruction of historical geography, based on the kin lists of Genesis 36 and the scholarly consensus in the mid-1990s (based on Burton MacDonald and J. Maxwell Miller's archaeological surveys) that "the settlements [of Edom] start in a narrow strip along Edom's northern border" (Knauf 1992a: 48) and expand from that center. Settlements with possible Late Bronze and Early Iron I pottery were reported along the Wadi Hasa, in both southern Moab and northern Edom, by Miller's Kerak Plateau Survey (Miller 1991) and MacDonald's Wadi el-Hasa Survey (MacDonald 1992a). Based on what he believed were topographic place name survivals, Knauf believed these to be the original settlements of the Horite tribe Shobal (Knauf-Belleri 1995: 103).

However, later archaeological investigations have shown that Knauf's ideas need reworking. This is particularly because there is now no reason to assume that Edomite

(or Moabite) settlement began in the Wadi Hasa region. Investigations by Piotr Bienkowski and his associates show that two of these sites in the purported Horite heartland had Iron Age pottery but lacked any clear locus of Iron Age activity (Bienkowski 1995c), while the other two yielded Iron II deposits but no Late Bronze or Iron I material (Bienkowski et al. 1997; Bienkowski and Adams 1999). The only Esauide clan that Knauf located on a map is Zerah, "its name having survived as Udhruh" (Knauf 1992a: 49; cf. Knauf-Belleri 1995: 103, 107), but Udhruh's excavators reported only an Iron II settlement (Killick 1983: 178), dating to the time of settlement in the rest of Edom. They note no Iron I or Late Bronze pottery that could have been left by these nomads. Thus, the evidence no longer supports the conception that Edomite settlement began at the Wadi Hasa, and the sites mentioned in Genesis 36 remain elusive.

Furthermore, Knauf was operating with the knowledge from radiocarbon dates that copper production began very early in the Feinan region, but believed on the basis of pottery that this production was controlled from the west (Knauf 1992a: 49). Indeed, he and C. L. Lenzen labeled copper working at Khirbat en-Nahas from before the end of the eighth century "pre-Edomite" (Knauf and Lenzen 1987: 85), and suggests that "the Edomites took over the copper mining area of Feinan in order to exploit it industrially at the same time that they founded towns and villages in the region" (Knauf and Lenzen 1987: 87). Archaeological studies conducted since then by Thomas Levy, Muhammad Najjar, and their associates have shown that, not only does metalworking exist in the tenth century in the Feinan region (Levy et al. 2004; Levy et al. 2008), but those carrying out the smelting used painted pottery very similar to that dubbed "Edomite" (Smith and Levy 2008). The archaeologist searching for the genesis of Edomite ethnicity, therefore,

must turn to the Feinan region and the lowlands of Edom as the first place in the traditional territory of Edom showing extensive use, settlement, and Edomite pottery production.

What it means to be Edomite remains an open question. As Levy (2004: 253) has suggested, "while text and archaeology must be critically interwoven to obtain the most robust picture of what happened in the past, archaeology provides the most objective lens for clarifying the identity and life-ways of those people who inhabited a given region in antiquity as well as those groups who interacted with them." Several questions remain open. To what extent was the Edomite state a unified ethnic state? If Edom can be considered an ethnic state, at what point did it coalesce as such, and to what extent at different times did the ethnic state extend its boundaries, and how did it incorporate the ethnic groups which already existed in those newly-conquered lands? Archaeology can provide answers, albeit not always completely satisfactory ones, to questions such as these.

EDOM IN THE IRON IIB AND UNDER ASSYRIA

Before the work of Thomas Levy and the Edom Lowlands Regional Archaeology Project, accepted wisdom was that the Iron IIB was the heyday of Edom; it still seems to have been such on the Edomite plateau. This was largely due to the revisionary archaeological work of Crystal-M. Bennett and her colleagues at Umm el-Biyara, Tawilan, and Buseirah. At those sites, occupation seemed largely limited to periods during which pottery was most like that of the Iron IIB in Cisjordan. More damningly, however, Bennet found only one Iron Age settlement horizon at each site, each of which with similar material culture. Among the finds at Umm el-Biyara was a seal impression

of Qos-Gabri, a king mentioned in Assyrian royal inscriptions of the seventh century. "The seal impression of Qos-Gabr is still the only clear evidence from any site for the absolute date of pottery from Edom" (Bienkowski 1992c: 99), or so it was in the mid-1990s.

Edom is mentioned (as Udumu) at least seven times in six Assyrian documents (Table 1.3). The Assyrian documents take the form of tribute lists and political propaganda outlining Assyrian victories, usually with Edom being one in long lists of victims. According to these documents, Edom was forced to give tribute to Assyria. Of course, as Weippert (1987) points out, at this early date Assyrian activity across Transjordan was limited to raiding, but clearly Edom possessed a population organized enough to pay Assyrian tribute. By the seventh century the Assyrians were far more invested in Transjordan. What the Edomites gave to placate Adad-Nirari is unkown, but when Tiglath-Pileser III conquered the land he was paid in minas of silver. This may suggest that Edom was poorer than, for example, Ammon and Moab, which paid in minas of gold, but of about equal wealth as Judah, which paid ten minas of silver. Alternatively, Edom and Judah may have both been considered peripheral enough to Assyria that they could escape such burdensome taxes.

Three kings are mentioned by name in the Assyrian texts. Kaushmalaku reigned during the time of Tiglath-Pileser III, Aiarammu reigned under Sennacherib, and Qaushgabri reigned during the time of Esarhaddon. The text mentioning Kaushmalaku is the first unambiguous evidence of an individual the Assyrians considered a king. However, it is likely that by the reign of Adad-Nirari III in the late ninth century BCE, Edom had what Assyria considered a king; at any rate, it was cephalous enough have a

leader who could pay tribute. Unfortunately, little can be said about the nature of Edomite kingship from the Assyrian records. The only recorded duty of an Edom was to pay tribute to Assyria! One can infer from this that he had the ability to levy taxes, but it is unclear how he did so or with whose consent and whether he could raise taxes for other purposes. Assyrian concern that Edom might join rebellious parties suggests that Edom had a strong enough army to be dangerous or at least unpleasant in battle, and the king of Ashdod considered the king of Edom in the end of the eighth century to be powerful enough to be worth courting for aid in his rebellion. It is by no means certain that the king's title was hereditary or universally recognized within Edom, however. The Assyrian texts also do not tell us the precise boundaries of the territory he ruled, or any other details of Edom's geography.

Table 1.3: Events of Edomite history in Assyrian records.

Document	Assyrian king	Edomite king	Events
Stone slab found at Calah (ANET 281)	Adad-Nirari III (r. 810-783)		Edom conquered, tribute imposed.
Building inscription in clay describing military campaigns in Syria and Palestine (ANET 282)	Tiglath-Pileser III (r. 744-727)	Kaushmalaku	Edom's king appears in a list of those who pay tribute to Assyria.
Nimrud letter XV (Saggs 1955: 134-135)	Tiglath-Pileser III or Sargon II (744-705)?		Edom sends troops to aid Assyria
Broken Prism A (ANET 287).	Sargon II (r. 721-705)		Aziru, king of Ashdod, attempts but fails to turn Edom's king against Sargon.
Sargon Geography 45-50 (Horowitz 1993)	Sargon II or Sennacherib (721-681)		Edom said to be on the borders of the empire of Sargon of Akkad (2334-2279 BCE)

Table 1.3: Events of Edomite history in Assyrian records, continued.

Prism of Sennacherib (ANET 287)	Sennacherib (704-681)	Aiarammu	Edom's king pays tribute to Assyria during Hezekiah's revolt.
Prism A (ANET 291)	Esarhaddon (r. 680-669)	Qaushgabri	Edom's is among 22 kings of Hatti mobilized to bring building materials to Nineveh.
BrM text K tribute list (ANET 301).	Sargon II or Esarhaddon?		Edom pays tribute to Assyria in *minas* of silver.
Rassam Cylinder (ANET 294).	Ashurbanipal (668-633)		Edom's presumably one of the 22 kings who give tribute to Ashurbanipal in a show of loyalty during Egypt's rebellion.
Rassam Cylinder (ANET 298)	Ashurbanipal (668-633)		Assyria defeats the armies of Uate', king of Arabia, in numerous lands including Moab and Edom.

Bennett argued Edom rose to its greatest level as a sedentary state due to Assyrian involvement and emulation. Weippert (1987) agrees, arguing on the basis of Cold War parallels that the security of minor states can only be guaranteed by the strength of major states. Even the pottery of Edom was imitated from Assyrian palace ware (Bennett 1978, 1982). Bienkowski (1995a) points out that the elite architecture of Buseirah seems derived from Assyrian prototypes. However, the degree of physical Assyrian presence is less assured. Bennett's conviction that Assyrian fortresses would be found up and down the King's Highway has thus far not been borne out, and colonies like those of Upper Tigirs and Syrian sites such as Kavusan Hoyuk (Gulriz 2010) remain unknown in Edom. Bienkowski (2000) takes what he terms a "minimalist" view of actual Assyrian involvement in Edom and Transjordan as a whole. Suffice it to say that, if we look to

these material remains to seek to define material correlates for Edomite ethnicity, we risk being mislead by emulation of Assyrian material culture.

EDOM IN THE BABYLONIAN PERIOD

After the conquest of Assyria by the Babylonians, Edom is generally considered to have fallen within the latest Mesopotamian power's sphere. Edom in the later periods is far outside the purview of this dissertation. However, a basic understanding of these periods is necessary both in interpreting the Biblical material, most of which took its final form at this time, and in determining how much one can rely on later manifestations of Edomite ethnicity to understand earliest Edom.

Edom is largely absent from Neo-Babylonian texts. The one (albeit reconstructed) mention of direct contact with Edom is in the chronicles of Nabonidus, the king who for a span of about ten years moved the capital to the oasis of Teima in modern Saudi Arabia. On his way to Teima Nabonidus battled against the peoples between Babylon and Teima, including "the city of Edom" (Beaulieu 1989: 165-169). It is generally assumed that this city must be Buseirah (e.g. Weippert 1987), but it seems to have in actuality been the same site assaulted by Amaziah: Sela'.

In the mountains near Sela', Hamad Qatamine discovered a Neo-Babylonian relief, which was studies by Stephanie Dalley and Anne Goguel (1997). Although some cuneiform writing remains on the relief, nothing has yet been read. Because of incongraphical similarities between this relief and known reliefs of Nabonidus, and of course Nabonidus' known interest in Transjordan and Arabia, the Sela' relief is generally believed to have been constructed by that monarch to celebrate his victory. The

placement of the relief further supports the supposition that this Sela' is indeed the Biblical Sela' and an important site of Edomite settlement (Hart 1986a).

The Babylonian period is often seen as a period of Edomite predation upon a weakened Judah. It is often considered to be the time when Edom began its migration into the Negev, where it would come to be Idumaea. Indeed, the Psalms and prophetic writings even suggest Edom took part in the destruction of the Temple (Glazier-McDonald 1995; Myers 1971), though Bartlett (1982) argues this is only due to post-Temple politics. The discovery of a collection of ostraca at Tel Arad seems to support this idea of a conquering Edom. The most dramatic of these is Arad Ostracon 24 (apparently from Stratum VI), in which "50" – apparently a detachment of soldiers – are sent to Ramat-Negeb and thence to Elisha' "Lest Edom should come there" (Aharoni 1981: 46; cf. also Aharoni 1968: 17, 1970: 20). Much has also been made of Arad Ostracon 40, found in what appears to have been a Stratum VIII perfume manufactory (Aharoni 1981: 74). In this ostracon, an official speaks of handing over something from Edom to Malkiyahu, the governor of the fortress at Arad. Aharoni believes the text ends with a reference to "the evil that Edo[m has done]" (Aharoni 1981: 71; cf. also Aharoni 1970: 30). However, he acknowledges "From the word 'Edom', only the *aleph* is certain" (Aharoni 1981: 74), and it is unclear what "evil" was wrought. All that can be said for certain from Ostracon 40 is that something was conveyed from Edom to Arad.

A more beneficent relationship may have actually existed between Judah and Edom in much of the Babylonian period. Less celebrated than the descriptions of violence is Ostracon 12, in which Malikyahu – apparently the same Malkiyahu who appears in Osctracon 40 – orders one [Elia]shib to deliver oil and flour to Qosanal

(Aharoni 1981: 26). Qosanal is an individual well attested to at Period IV Tell el-Kheleifeh – a time during which the site appears to have been under Edomite control. Qosanal's seal impression frequently appears on pottery from what has been interpreted to be a central storehouse (Albright 1938; Glueck 1938a: 16-17; 1938b: 12; 1971: 234, 237-240; DiVito 1993: 53-55). He appears to have been an important Edomite official, in charge of supplies at Tell el-Kheleifeh. Thus, Ostracon 12 appears to record the transference of oil and flour from an official of one state to another – or perhaps from one Babylonian official to another. A further ostracon, Ostracon 26, appears to include a name bearing the theophoric element Qos. However, Aharoni (1981: 26) notes that qoph is merely "the most likely completion for the first letter" as this line survives. The line as it exists is broken at both ends, the fragment reading "היוסוק" (qwswyh). Aharoni believes this to be the remains of two names, one Edomite and one Judean. However, this cannot be accepted out of hand. And even if this is a theophoic Qos name, it is impossible to assert that this is necessarily a subject of Edom; Qos names appear as Temple servants in the Persian period (see below).

For the archaeology of Edomite ethnicity, the Babylonian period is especially important for the shrines at Qitmit and the fossae at Haseva, both of which, their excavators believe, are the sites of Edomite shrines the Negev. These sites have what is accepted to be Edomite pottery, though of course whether this means they were part of the state of Edom is disputed and disputable. What is not disputed is that Edomites had at least some share in the activities there. If they are the remains of Edomite shrines, they are of course the best evidence for Edomite religious practice yet uncovered. Interpreting the remains is a different issue, however. For example, Herr and Najjar (2008: 328) give

a detailed physical description of the Edomite god Qos based upon the pottery figurines at Qitmit and Hazeva – the very same artifacts that the sites' excavators interpret as votive figures of worshippers (Beit-Arieh 1987; Cohen and Yisrael 1995b)! Tellingly, most of the ritual paraphernalia known from these shrines is absent from the land east of the Arabah, and Bienkowski and Sedman (2001: 318) argue that this is because the sites were produced by cultures endemic to the Negev "and there is no need to look for outside influences." It is possible, however, that the discrepancy is due to chronological reasons or the simple fact that no shrines have yet been discovered east of the Arabah. Religion in border regions is often substantially different from that in a country's heartland due to the drastic differences in social pressures at interfaces with different, and possibly hostile, groups. Data from more Edomite cultic sites in Transjordan are necessary before much can be said about "Edomite" rather than local religious practice.

The most interesting question about the Babylonian period is, if Edom was able to invade the Negev, then what was happening in the Edomite highlands? Strangely, this period is either devoid of remains or is unrecognized archaeologically. Earlier investigators have credited the Assyrians with both the creation and the perpetuation of the state of Edom. The fact that Edom across the Arabah was recognized due to the similarity with Transjordanian Edom, however, suggests a great conservatism in Edomite ware – indeed, it suggests that Babylonian Edom has thus far simply gone unrecognized.

EDOM IN THE PERSIAN PERIOD

With the fall of Babylon the Great, except for a brief period under Egyptian domination when the Pharaoh Necho enforced his prerogative in the Levant, Edom passed into the power of another eastern authority, Persia. For our purposes, again, Edom

in the Persian period is primarily important as a link in the chain of Edomite identity. Little can be said about the nature of society in Edom during this time.

That some utilization of the Edomite plateau existed is shown by the cuneiform contract found at Tawilan and now to be seen in the museum at Petra. This document was drawn up during the reign of one of the Darii and brought to Tawilan from the Hauran. The tablet was found in post-abandonment fill (Dalley 1995), and nothing can be said of settlement at Tawilan at the time. Three Persian period sherds were found at Buseirah (Bienkowski 2002: 350-351, 2008: 339), and Persian ostraca are known from Tell el-Khaleifeh (DiVito 1993; Glueck 1971). "Sons of Barkos" are named among the Temple servants returning from Babylonia (Ezra 2: 53; Nehemiah 7: 55), though this may suggest that theophoric names including the element Qos may not have been, or may no longer have been, considered exclusively Edomite. The poverty of sites suggests that Edom was again a pastoral society (LaBianca 1985, 1990). It is likely that during this period Nabatean Arab groups began their migration into what had been the Edomite heartland, as the Edomites themselves moved west (Twaissi 2007).

LATE MANIFESTATIONS OF EDOMITE IDENTITY

In considering the earliest years of ancient Edom, it is necessary to consider the end of Edom also. This is important to the history of research in the area, because material relating to Edom in later periods has often colored archaeologists' interpretations of earlier periods (Whiting 2007). Indeed, it is because of the Classical documents that it was known to consider Qos an Edomite god, for example. Unlike the Ammonites and the Moabites, who ceased to exist as nations by the end of the Persian era, Edom persisted until the Roman period. Our richest source of information on the Idumaeans comes

actually from the Roman period, with the writings of the Jewish general and historian, Josephus, though other writers also help shed light on the matter.

While it remains unclear how monolithic Edomite society was in the Iron Age, "in the Hellenistic era they were recognized in every respect as an 'ethnos' (Kasher 1988: xvi). It is clear that worship of Qos was widespread in Idumaea, and his worship was conducted by a hereditary priestly line (Josephus, *Antiquities,* 15.253-254; Marcus and Wikgren1963: 118-121). At the beginning of the Hasmonian period, the majority of Idumaeans converted to Judaism. Nevertheless, even at the time of Herod the worship of Qos persisted. Indeed, one of the aims of the intrigues of Costobor (whose name even bears the theophoric element Qos and was of the priestly family) seems to have been the reinstatement of the priesthood (Ronen 1988). That Edomite identity was a cohesive thing that could be recognized and even exported is shown by the existence of a detachment of Idumaean military settlers in Egypt, which maintained a sanctuary to Qos administered by their secular military leader who was also a priest (Rapaport 1969).

An ostracon recording an Idumaean marriage contract found at Maresha displays the cultural continuity in the region in the midst of Hellenistic assimilation. The ostracon is dated internally, using the Selucid system, to 176 BCE written in Aramaic script, the characteristic Edomite script apparently long having fallen into disuse. Three men are named: The bridegroom QWSRM (Qos is exalted), his father QWSYD (Qos-loved), the bride's father who is also named QWSYD, and the bride's father's father, QWSYHB (Qos gave). There is a strong desire even at this late date to maintain masculine names incorporating the theophoric element Qos. However, the woman named in the marriage contract, Arisnoe, bears a common Greek name. The contract dictates the rights of male

heirs (though what they shall inherit is broken off in the text), and states the value of the clothing and utensils Arisnoe brings to the match, presumably to defend her rights. Thus the dating and language of the document, and even the woman's name, show willingness to acculturate, while the men's names show a desire to maintain the society's religious foundations.

It is likely that a certain proportion of the population remained in the lands east of the Jordan during the Nabatean period. That Qos was still worshiped under his old name in the Petra region is shown by inscriptions found on altars there (Kasher 1988: 9, n. 21). Nabatean worship is known for its "omnipresent syncretism" (Lindner and Zangenberg 1993: 150), which lead to the introduction of foreign deities which were then so completely subsumed into Nabatean worship that they were represented only with Nabatean iconography. The main Nabatean god was Dushara. He is often understood to be the lord of the Shara, that is, the mountains of southern Jordan near Petra, which we have seen was associated by many early scholars with the Seir of the Bible. As such one suspects Dushara took on the attributes and obligations of Qos. But his worship was carried out wherever the Nabateans operated. He had particularly important shrines at Petra and the Syrian Bostra; in the latter place he was even commonly depicted on coins, either as a standing stone or anthropomorphically as a bearded man (Kindler 1983: 58-61, 79-87).

The Idumaean period is particularly important because shrines of that period have been used as parallels for understanding the Iron Age remains of the Negev. For example, enclosures at the Idumaean sites at Marisa, Machpelah, and Mamre – the latter two apparently built by Herod (Netzer 2006) – are seen as paralleling the enclosures at

‘En Hazeva and Horvat Qitmit. The Herodian shrines at the Tomb of the Patriarchs at Machpelah and at the Oaks of Mamre are more important. Little is known of Machpelah, which cannot be adequately archaeologically explored (Ofer 1993) but Mamre yielded both a statue of Dionysius (a god associated with Dushara, Glueck 1965: 86; although Dushara is also associated with Zeus, Bennett 1980) and an altar bearing the name Qos (Magen 1993). However, the temenos or sacred enclosure is part of the stock-and-trade of Hellenistic religious architecture. Furthermore, open-air shrines surrounded by walls are also known at non-Edomite Iron Age sites, such as at Tell el-Mazar Mound A (Yassine 1984b). It cannot be said to be a specifically Edomite feature.

The tripartide building at Qitmit is also said to be paralleled by a tripartide building at Marisa (Beit-Arieh 1987: 20). If this were true, then it would be an important correlate for recognizing Trinitarian Edomite worship. But too much may be made of Marisa. Although it is geographically found in Idumaea, that site is known historically to have been settled by Phonecians, and at any rate the enclosure there may be a public building of another sort (Avi-Yonah 1993). Moreover, the fact that the building at Qitmit seems to have been used for domestic as well as religious purposes – a fact which puzzled the excavators – suggests that it may have served the same purpose as similar buildings at the Yezidi shrine of Sheikh ‘Adi in Kurdistan – that is, temporary abodes for religious officials, inhabited only during times of pilgrimage, where followers pay obeisance and limited worship is conducted (Edmonds 1967).

This short history of Edom’s millennium is meant to provide a background to understanding the emergence and change of Edomite ethnicity. A clear line cannot be traced from the Late Bronze Age Shasu to Hellenistic Idumaea. Indeed, some have

argued that there is no such line to trace (Bartlett 1999). As a comparison, it should be remembered that the most outwardly conservative or even reactionary Egyptian art was used by the Nubian and the Libyan Saite dynasties – that is, those who could trace no clear historical link to rulership, but who wished to legitimize their reigns with reference to the great Old Kingdom pharaohs. There are clear reasons for individuals living in the Hellenistic Negev to wish the close link of Edomite brotherhood with Judeans while at the same time retaining independence.

ARCHAEOLOGICAL MANIFESTATIONS OF EDOMITE IDENTITY

Before turning to the ethnicity of those entombed at Wadi Fidan 40, it is important to consider previous approaches to material correlates for Edomite identity. Tracing Edomite presence in the Negev, Beit-Arieh observed, "In my opinion, the findings from sites excavated by Crystal Bennett and others in Edomite territory provide only two salient criteria by which the Edomite culture may be identified. These are the pottery and the script" (Beit-Arieh 1995: 33). We have already discussed attempts to seek Edomite architecture – which have are either based on parallels with much later Idumaean parallels, or allege that all Edomite public architecture is a cheap copy of Assyrian originals (Bienkowski 1995a). The script and the pottery remain the most often utilized archaeological correlates for Edomite presence, though Levy (2008) has also put forward metalworking as an important aspect of Edomite ethnogenesis.

We turn first to the script, the most direct means of analyzing self-identification. Iron Age Edomite script has been reconstructed from inscriptions, chiefly ostraca, found in both southern Jordan and the Negev. Eliezer ben Yehuda (1921) believed that the Edomite language was fossilized in Proverbs 30: 1-31: 9 and Isaiah 21: 11-12, which he

argued only made sense if viewed as a tongue foreign but related to Hebrew and Aramaic. But it is only from archaeologically located inscriptions that we definitely know the Edomite language. Felice Israel (1979), W. Randall Garr (1985), and David S. Vanderhooft (1995), have shown that the available Edomite texts testify to a distinctive cursive Edomite script. This script has also been tabulated by Herr (1980) (Fig. 1.9). Breaking with other scholars, however, Vanderhooft emphasizes that the available data do not yet make it possible to determine whether Edomites spoke a distinct dialect, arguing "there are no significant linguistic differences between texts that are demonstrably Edomite and texts written in the contemporary Hebrew of Cisjordan" (Vanderhooft 1995: 157). An interesting contrast can be made with Ammonite and Moabite, which are also closely related to Hebrew, but known to be more distinct dialects. Of course, the evidence is incomplete – Edomite inscriptions found to date are short and fragmentary, while texts such as the Mesha stele of Moab and the Amman Citadel inscription of Ammon allow a much greater understanding of those languages (Jackson 1983; Garr 1985). However, the similarity between the four languages, with Hebrew and Edomite being perhaps the closest, perhaps testifies to the special relationship Edom had with Israel.

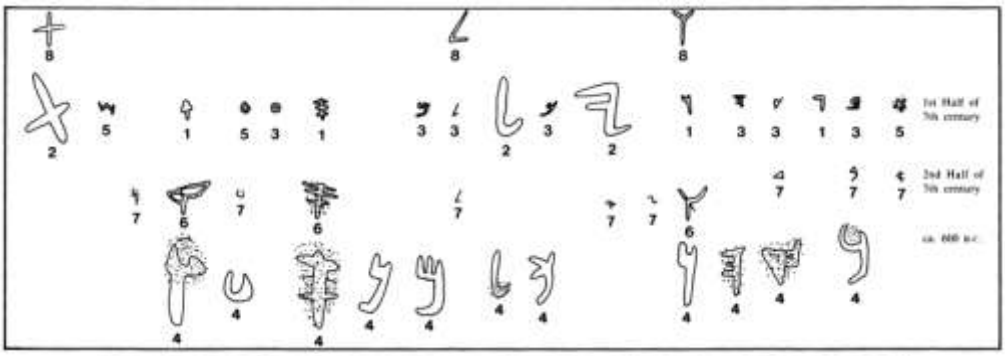


Fig. 3.
Composite typological script chart of the Edomite seals from the late 8th century to ca. 600 B.C. The dates given are those attribute seals in the author's 1978 study. The numbers associated with each letter refer to the following seals (corresponding to those in Herr 1978):
1. *qwsg.. mlk...*: Bennett 1966: pl. 22.
2. *lytm*: Moscati 1951: pl. XI: 8.
3. *lmlklbᶜ ᶜbd hmlk*: Bennett 1974: pl. 6.
4. *lqwsᶜnl ᶜbd hmlk*: Glueck 1941: 16.
5. *šmᶜʾl*: Harding 1937: 255.
6. *lqwsʾ*: Biran and Cohen 1976: pl. 28.
7. *lbᶜzrʾl ᶜbd ybᶜl*: Driver 1945: pl. 18.
8. *ltw*: Puech 1977: pl. VI: B.

Figure 1.9: Edomite script, as tabulated by Larry Herr (1980: 31).

The scripts are functional and the most useful material tends to be names, which themselves shed light on Edomite identity. An overwhelming majority of these inscriptions include theophoric names related to the deity Qos, who was apparently worshipped at least as early as the seventh century (Porter 2004; Bienkowski and van der Steen 2001). This may be due in part to the circular method of identifying Edomite script by using Qos names (Vanderhooft 1995). However, the preponderance of such theophoric names suggests a group which identified itself along religious lines. At Tell Arad, Aharoni was able to tabulate the increase in names containing the theophoric element –yahu through time, with a drastic change from Stratum IX to VIII which he

attributes to the reforms of Josiah (Table 1.4). Unfortunately, the lack of stratified excavations which have yielded inscriptions in Edom makes this impossible for that nation. It is even possible that the preponderance of Qos names is a deliberate reaction to the naming practices of Israel and Samaria, with –el names dominating the latter.

Table 1.4: Theophoric names bearing the name –yahu through time. After Aharoni (1981: 141).

Stratum	VI	VII	VIII	IX	X
-yahu names	14	22	13	2	2
Other names	9	17	21	3	11

More abundant, and therefore more frequently used than Edomite script as a marker of ethnic identity, is pottery. Edomite pottery as such was first described by Nelson Glueck based on his surveys in Transjordan. Sherds from Khirbat en-Nahas were part of his type sample (Fig. 1.10; Glueck 1934-1935: 123-137). Glueck's definition has since been reconsidered – some "Edomite" pottery has since been found to originate in Arabia and has been dubbed Midianite (Rothenberg and Glass 1983), and the excavations at Tawlian, Umm el-Biyara, and Busayra have allowed further refinement of the typology (Oakeshott 1983). However, John P. Zeitler, in his analysis of "'Edomite' Pottery from the Petra Region," argues, "'Edomite' pottery is nothing more than an antiquarian collective name for Iron II pottery from the Edomite uplands of Jordan and similar types from parts of the Negev" (Zeitler 1992: 167). Such a harsh rejection of the term is not warranted, but the term must be carefully applied.

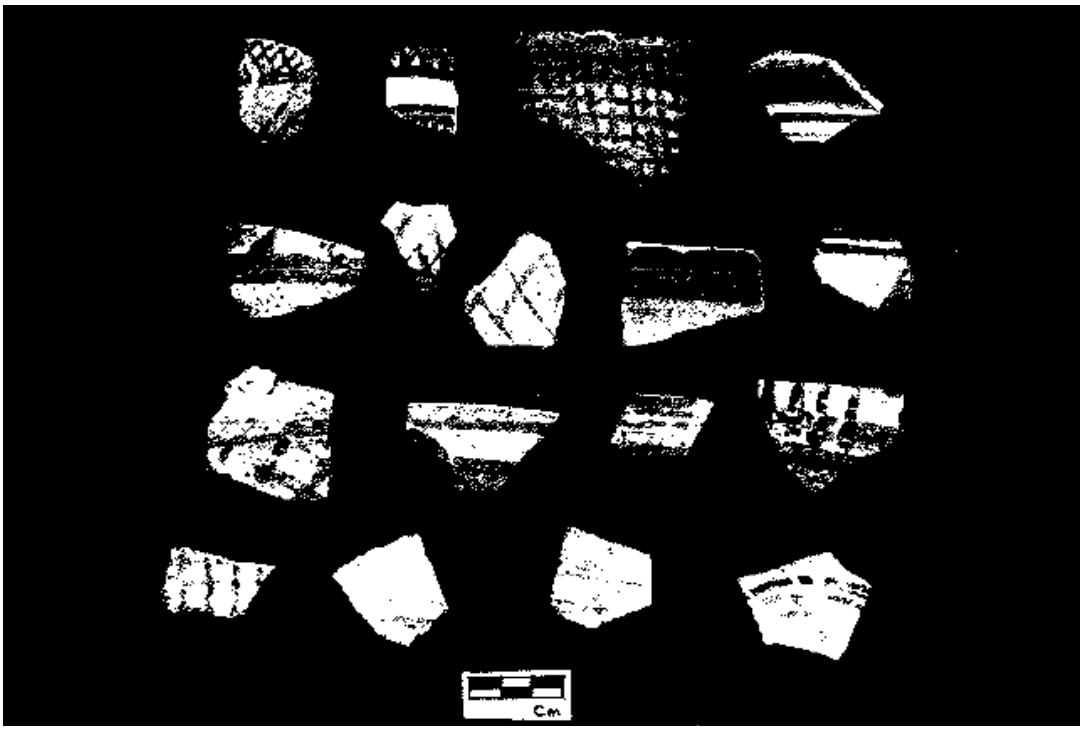


Figure 1.10: An early photo of what Glueck defined as "Edomite sherds from Tawilan. The two center sherds in the top row are respectively from Kh. Shedeiyid and Kh. Nahas" (Glueck 1934: 5).

An example of this is the pottery which has been taken to be the most characteristically Edomite, the Edomite painted ware (Figs. 1.11-1.13). According to Zeitler, "The painted pottery has often been used as an argument for Neo-Assyrian influence in Edom (Bennett 1982: 187) or thought to be an imitation of Neo-Assyrian palace ware (Glueck 1967a: 28; Pratico 1985: 25)" (Zeitler 1992: 172). However, it is unclear why Zeitler makes these claims. In reality, Bennett (1982: 187) notes, "The bi-chrome and band painted pottery, which occurs on so many sites in Ammon, Moab and Edom and is to be found occasionally in the Jordan Valley, seems to be indigenous, though it is important to point out that at Buseirah this pottery only occurs in the neo-Assyrian period." Glueck (1967a: 10-15) notes numerous examples of this painted ware in Transjordan (particularly Edom) and Timna, and suggests that it has its origins in Late

Bronze Palestine (Glueck 1967a: 13). The work of Smith and Levy (2008) shows this pottery is not only developed from indigenous Late Bronze forms, but first appears in the lowlands of Edom. It can properly be called Edomite pottery.

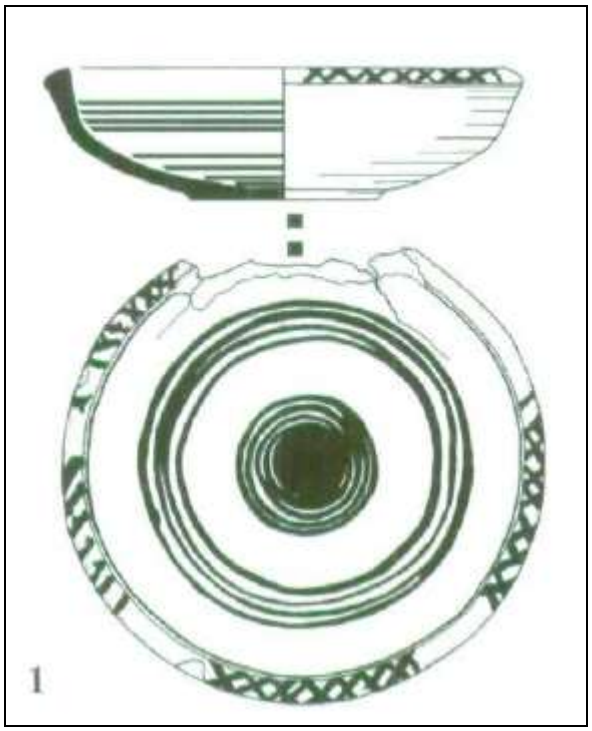


Figure 1.11: Edomite painted bowl from Khirbat en-Nahas (Smith and Levy 2008).

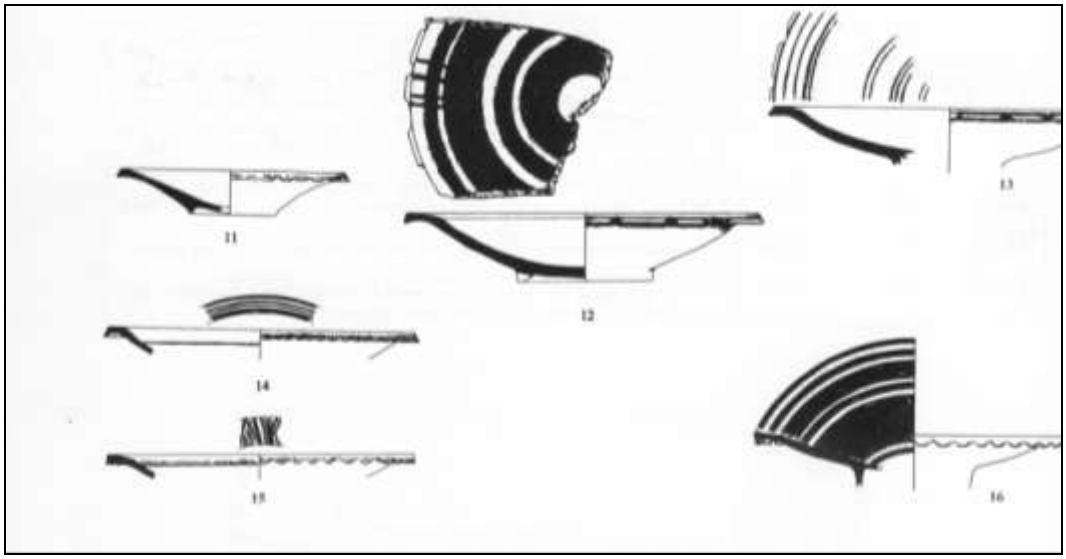


Figure 1.12: Edomite painted bowls from Buseirah (Bienkowski 2002).



Figure 1.13: Edomited painted ware from Buseirah (Bienkowski 2002: dustjacket).

Glueck (1967a; 1971: 240-242) and Bennett (1982), and, following Glueck, Pratico (1985, 1993), do isolate pottery certain forms as probable results of Assyrian influence (Fig. 1.14), and Knauf (1992a: 53) argues that Edomite pottery forms and decoration are Assyrian-inspired and appear suddenly as the result of elite workshops. This is especially important, not only because Edomite monumental architecture seems to be an imitation of Assyrian forms (Bienkowski 1995a), but even more so since up to this point the pottery used to recognize Edomite ethnicity in the Negev may be Assyrian-influenced. It remains for further research to determine what are true Edomite ceramics and what are elite imitations of Assyrian forms. The Khirbat en-Nahas corpus may help answer these questions; since it is pre-Assyrian, it is relatively 'pure.'

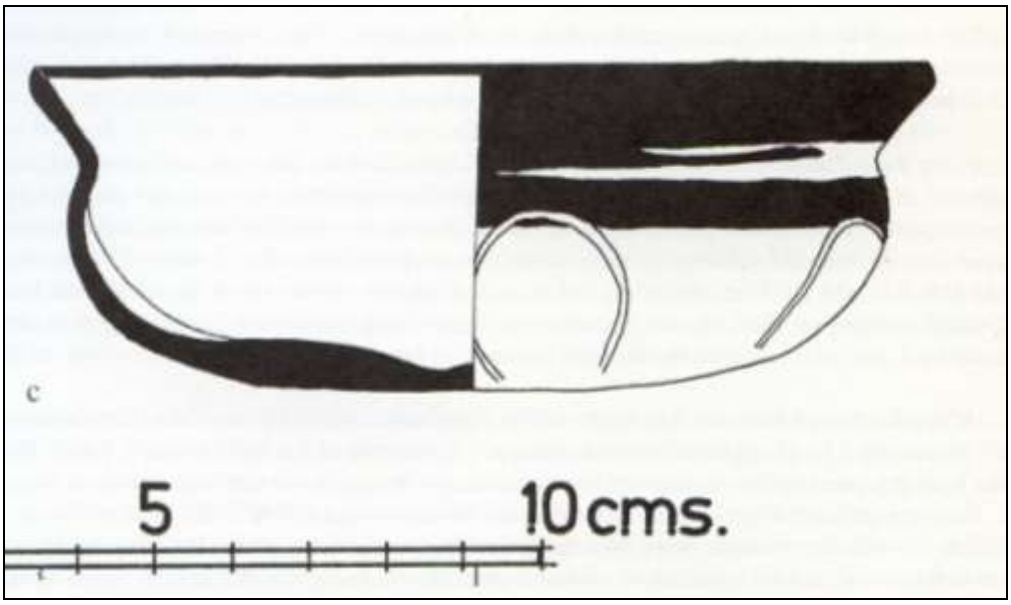


Figure 1.14: A typical dimpled bowl, viewed as evidence of Assyrian influence on Edomite pottery (Bennett 1972: 167).

As we shall see, WFD 40 offers primarily negative evidence regarding Edomite pottery. While outside the scope of this paper, and addressed more thoroughly by Smith (2009; Smith and Levy 2008), it is important, especially in what may be the beginnings of Edomite identity, to gage the importance of pottery to ethnic or regional identity. Bienkowski suggests, "A better description [for 'Edomite' pottery] would be 'Buseirah painted ware', since that is where it is most common" (Bienkowski 1992b: 7). Indeed, it might best be seen as the pottery of Buseirah hegemony, as it appears to spread with the solidification of Buseirah's power. In addition, he argues that "Edomite" pottery and script may be regional, rather than ethnic, indicators (Bienkowski 1995a: 139). The ceramic assemblages of Southern Jordan are noted more for their complexity than for uniformity (Bienkowski and van der Steen 2001: 26), with sites like Umm el-Biyara nearly lacking such painted ware entirely. More intensive regional studies correlated against absolute dating are necessary to determine what pottery might be attributed to

specific ethnic groups throughout the southern Levant and to determine whether distinct groups, such as the Horites and the sons of Esau, merged to form an ethnic nation.

Levy (2008) has argued that metalworking played an important role in the emergence of Edomite and Israelite identities. He cites the prohibition against cast-metal gods in Exodus 34:17 and the claim of 1 Samuel 13:19 that Israel (unlike Philistia) had no metalworkers, and contrasts them against the massive amounts of slag testifying to copper production and the one figurine mould, possibly for a metal goddess statuette, found at Khirbat en-Nahas. Knauf and Lenzen (1987: 87), writing before the large-scale IA excavations in Faynan presented here and elsewhere, but having taken part in the German Mining Museum soundings in the region, suggested that this industrial technology was the famous "wisdom" of Edom mentioned in the Hebrew Bible (Jeremiah 49: 7; Obadiah 8). However, copper was a familiar metal to the ancient Israelites, having been used in the region since the Chalcolithic.

Levy's claims are more applicable to iron working than copper working. The claim in 1 Samuel 13:19 is probably ahistorical. It is not clear what metal is worked in this passage, but it appears to describe ironworkers, not all metalworkers, and not copperworkers. But archaeology does not suggest that the Philistines were any richer in iron than other peoples at this time, and Iron was not widely exploited anywhere in the Levant. But what iron was used was typically not used for the purpose of tools and weapons, which are what interests the Bible author (Waldbaum 1980: 84-85). Taken contextually, the passage "serves not only to portray the restrictions imposed by Philistine rule but also to emphasize the importance of divine help in the Israelite victory described below" (McCarter 1980: 238), in the narration of the Battle of Michmash Pass.

The message is not Israelite cultural separateness; it is Israelite military inferiority, and it is likely an anachronistic gloss meant both to demonize the Philistines and to glorify the God of Israel, a gloss dating from a time when military use of iron was widespread rather than an accurate description of Israelite military weakness. And as Bloch-Smith (2003: 418) notes, "The 'archetypical' Iron I 'Israelite' village of Khirbet Raddana had a bronze smelting or casting workshop. Bronze slag-encrusted crucibles, tuyeres of various sizes, plus an iron blade and bronze daggers, armor scale, needles, javelin points, plow points, a small arrowhead, and spearheads dispel the image of the highland fighter lacking metal weapons dependant on the Philistine enemy to sharpen his plow point." Nevertheless, the passage does show a certain attitude towards ironworking as an alien trait. And while metalworking was practiced in monarchical Israel, it may have been considered a stereotypically non-Israelite or non-Judahite trait. Iron especially was seen as a barbaric, though at times useful, material (Sawyer 1983). This metal is found in lowland and coastal cemeteries, including Wadi Fidan 40, but is conspicuously absent in Iron Age cemeteries of the Judahite highlands (Bloch-Smith 1992).

There is little evidence for copper being worked into final objects at Khirbat en-Nahas. The one mould from Khirbat en-Nahas may in fact be for ceramic images. One ceramic horse fragment and one human figurine fragment were found at Khirbat en-Nahas (see Chapter 1, this volume), and ceramic images are not uncommon in ancient Edom. But the ubiquity of copper smelting in the Faynan region could scarcely *not* have shaped Edom's emergent culture. While metalworking in and of itself cannot be seen as an exclusively Edomite trait, future investigations will hopefully reveal particular

Edomite metalworking techniques or technology in addition to particular ethnic uses and forms of metal objects.

CONCLUSIONS

Studies since Frederik Barth's (1969) *Ethnic Groups and Boundaries* have recognized that ethnic groups are defined by their exclusivity. Ethnic groups are created through opposition to other groups (and often to the state), and can therefore be recognized by these differences. Archaeologically, ethnicity is particularly visible in pottery, both through decorations and through pot forms. Pot forms are especially important because they indicate the use of the pot, which in turn reflects ethnic cooking and consumption practices. Seeking ethnicity archaeologically is facilitated with the presence of records.

We have seen that the idea of Edomite ethnicity must be defined with regard to time and space. It is now clear that, contrary to what had been assumed since the work of Crystal-M. Bennett, the activity of a complex society began in Edom by the tenth century at the latest. This activity was not discontinuous – copperworking in the Edom Lowlands, at least on a large scale, ceased by the end of the eighth century, when the Assyrians began to show interest in Transjordan and the Edomite plateau began to be densely settled.

Our best data for archaeological correlates for Edomite ethnicity come from the Iron IIB/C and the Hellenistic period. But as we have seen the characteristics of Edomite ethnicity found during these two time periods, separated by centuries in time and primarily occupying different parts of the Levant – the Edomite plateau and Lowlands for the Iron Age and the northern Negev for the Hellenistic period – cannot easily be applied

to each other. There may be a genetic relationship between the two, but this is a matter that must be proven rather than assumed.

For the Iron Age, which is the crux of this thesis, three important aspects of material culture have been offered as evidence for Edomite ethnicity. The first is a distinctive script, which often contains theophoric names including the element Qos. More important is the pottery, particularly characteristic painted ware found at Khirbat en-Nahas at least as early as the tenth century B.C.E., and which spread across Edom and into the Negev during the period of Buseirah's hegemony. Most recently, Levy has suggested metalworking as an important element in Edom's ethnicity. How this will be examined archaeologically still must be worked out.

As we shall see, as important as it is to understand previous work on the archaeology of Edomite ethnicity, the archaeology of Wadi Fidan 40 does not conform to traditionally Edomite material culture. Very little pottery was found there, and what was found is not Edomite painted ware. The site's one inscription cannot be called writing, and in any event Edomite writing has not been shown to exist before the seventh century. Although the people of Wadi Fidan 40 can scarcely not have had contact with the metalworkers at Khirbat en-Nahas, at present it cannot be shown that they worked metal themselves. The few metal objects found in their graves do not immediately suggest that metal was an important factor in their ethnogenesis.

The people of Wadi Fidan 40, in the Edomite lowlands, contemporary with Khirbat en-Nahas, seem to be a pastoral people, like the pastoral Qos-worshippers Knauf postulates. Closer examination of their material culture will allow us to make future comparisons with excavated Edomite burials. But first it is necessary to understand

something of the structure of pastoral societies, and something more about the anthropology of mortuary practices.

CHAPTER 2: MORTUARY ANTHROPOLOGICAL ARCHAEOLOGY

INTRODUCTION

This dissertation will examine how funerary ritual bound society together and reified societal norms in three interrelated aspects: Social structure, gender relations, and ethnic identity. These societal elements are in large part to be understood within the context of the theoretical understandings of processual or New Archeology, whose proponents reexamined mortuary archaeology beginning in the 1970s. However, one must also not lose sight of the criticisms of later archaeologists, who have rightly called for moderation in many of processual archaeology's more optimistic claims. This chapter will provide the archaeological theory behind this analysis of the remains found at Wadi Fidan 40, followed by a discussion of Levantine burial practices known from other sites. But first, it is important to understand importance of anthropological analysis of burial.

Anthropological studies of burial in the Levant are relatively uncommon. The history of research in the region tends to be dominated by historical archaeologists. This analysis examines the archaeological record through cross-cultural analysis using anthropological theories. This will reveal information about how this society uses mortuary ritual to function. It will also disclose evidence for social hierarchy in addition to possible indicators of social identities such as age, sex, and ethnic groups.

This chapter will also collect in one place all the data on burials in Edom for the first time, and compare burial types with other sites in the Levant. Levantine burial practices were studied most thoroughly by Elizabeth Bloch-Smith (1992). This chapter

considers her work, which defined burial patterns for geographical and cultural areas in the Levant, focusing on the emergence of identity in the Judean highlands, which she and others term Judahite identity, in the Iron Age. It then applies her insights to all the published descriptions of excavated Iron Age graves in southern Jordan. Descriptions of the burials at two of these sites, Wadi Fidan 4 and Wadi Fidan 45, have never before been published. These burials consist of only a few graves at five sites. This sets the stage for understanding the burial practices at Wadi Fidan 40, an unprecedented burial sample, presented complete for the first time in Chapter 4.

ANTHROPOLOGY AND THE STUDY OF BURIAL

There is a certain eroticism in grief. In its broadest sense, eroticism is a desire "to establish ever greater unities and to preserve them thus – in short, to bind together" (Freud 1949: 18). It is for this reason that death rituals, and by extension mortuary archaeology, are an important aspect of the study of anthropology. Deaths bring about a binding together of society, a gathering of individuals which reconstitutes a social order which is always volatile and always threatens to fall apart.

It is not simply because death is "the supreme and final crisis of life" (Malinowski 1954: 47) for the individual—it is that with each death, as with each birth, the social order must begin anew. As William A. Lessa and Evon Z. Vogt (1958: 372) have pointed out, "the death of a spouse or close relative disturbs an individual's social relations, often necessitating deliberate changes in family relations, economic activities, emotional exchange, and many other areas where the life pattern of the deceased formerly impinged on the lives of the survivor." The social existence of the widow and the widow's son must be reaffirmed in society.

This is also true of the social structure. "Moving to a higher level of abstraction – the societal rather than the individual – the death of any member of the interacting group is likely to create points of stress which will pervade the entire social structure" (Lessa and Vogt 1958: 372). "A small community bereft of a member, especially if he be important, is severely mutilated," Malinowski (1954: 52) notes, but it is no natural thing for a man to declare, "Le roi est mort – vive le roi!" For the social structure to be maintained, be it in a small band which may disperse with the death of its leader, or a chiefdom or kingdom which may descend into civil war, it is necessary to reaffirm the social structure and societal mores with the deaths of its members. Among the Ashanti, performing a particular funerary ritual affirmed one's legal rights in the eyes of the state. Having performed a particular role in the funerary ceremonies was considered legal proof of one's rights in court (Rattray1927). The mortuary ritual thus defines who is within and who is outside the group and establishes one's role in society (Hertz 1960; Metcalf and Huntington 1991).

EXAMPLE: THE CAHUILLA MORTUARY RITUAL

A good example of this eroticism and world renewal can be found in the mortuary rites of the Palm Springs Cahuilla of south-central California, documented by William Duncan Strong (1929: 120-130). The Palm Springs Cahuilla are generally classed as part of the Pass Cahuilla group, one cultural and linguistic group among the Cahuilla living in the south-central part of the state. Upon the death of a member of one of these village-based groups, members of the family group quickly cremated the deceased and destroyed his or her personal property. Messengers were dispatched to announce the death not only to other Cahuilla groups but also to other self-identifying cultural groups

with distinct languages, including nearby Serrano, Luiseño, and Gabrieliño groups. The leaders of these groups responded by sending strands of shell beads—each group's *paha* or ceremonial leader presented his beads to the *paha* of a nearer group, until the closest *pahas* delivered the chains of shell beads to the *paha* of the deceased's group (Strong 1929: 98-99). The beads were strung on a cord the length of which was measured to a tattoo on the *net's*, or chief's, arm (Strong 1929: 107). That these exchanges were meant primarily to cement ties less with other Cahuilla than with western, more foreign, and often more powerful, groups, is suggested by the fact that the eastern Desert Cahuilla groups, who were isolated from these non-Cahuilla cultures by the Mountain and Pass Cahuilla, were not included in this exchange. These acts bound together disparate linguistic and cultural groups, helping to keep relations friendly.

Similar rites were also carried out by neighboring groups, including the Kumeyaay (formerly known as the Diegueño) and the Yuma, who came from very different linguistic stock than the Cahuilla. Of the the ritual varies in terms of the language used and the names of gods evoked, but materially appears nearly identical. For example, the only differences noted by Edward H. Davis (1921) in the Kumeyaay and Luiseño cremations was that the Kumayaay gathered some of the ashes of the deceased in a funerary urn or *olla* before burying them (DuBois 1907), while in some cases among the Luiseño, family members of the deceased ground some of the calcinated bones in a mortar and consumed them before burying the remaining ashes.

At irregular intervals a secondary funeral, the image burning ceremony, was held. Sometimes this was as often as once every year to two years, but time was required for the mourners and their village both to come to terms with their passing of the deceased

and to gather the means for a large festival. During the course of this festival, an image made of each individual who died since the last mourning ceremony was constructed (Fig. 2.1). Our knowledge of Cahuilla death images is limited, but three death images were commissioned from a Kumeyaay leader by Davis (1919) for the Museum of the American Indian, and their construction gives us some idea of Cahuilla practices. The Kumeyaay image was constructed mainly of specially gathered basketry materials. Eyes and teeth were made from imported shell. The hair used was collected from the same mourners at the time of the deceased's original cremation. In the course of the festival, the image was treated as the deceased, danced with, and then cremated in private by close relatives (Fig. 2.1). This ritual made an important psychic break on the part of the mourners, who are expected to have accepted the passage of the deceased to the next word (Hertz Among the Luiseño, it is actually required that the songs be accompanied by laughter (Davis 19: 110), which made a clean break between the past and the present.

Those villages that had been notified of the deaths were in turn invited to the image burning ceremony. The beads collected from neighboring villages by the heralds announcing the deaths were divided up by the *paha* among visiting dignitaries (Strong 1929: 130). This both cemented ties with neighboring groups and reaffirmed the importance of the *paha* as mediator.



Figure 2.3: Jim McCarty, also known as Kwalsh or Qualsch, a Kumayaay from Campo, with the images he created of three of his deceased relations. From left to right, his son Cinon Mataweér, Celestina (Cinon's wife), and Josécito (Cinon's son). The images were commissioned in 1908 by Edward Davis on behalf of the Museum of the American Indian Heye Foundation but constructed according to traditional practice (Davis 1919: pl. 2).

The passing of the individual was also In the course of the ritual, myths were told in song to reaffirm the cosmos. It was necessary to have members of both the Cahuilla moieties present to sing these songs, because each moiety had parts only it could sing. This often involved bringing individuals from different villages together (Strong 1929: 109-110, 125). For a woman, a song telling the story of the Moon Maiden was sung. This song told of how this woman, the epitome of Cahuilla womanhood (Bean 1992),

taught humans (and particularly children) culture before fleeing the harassment of the creator god Mukat. The Moon Maiden was also directly responsible for establishing the social structure, for it was she who designated the first *net* and established the moieties (Strong 1929: 109). In the case of a man's death, the story of creation was sung (Strong 1929: 130). This narration described not only the appearance of the creator Mukat *ex nihilo* and his creation of the world, but also the introduction of death into the world and the murder of the creator by the first people. The story also told of the cremation of the creator and his secondary funeral, followed by his return, both as the food plants growing from his ashes and as a spirit who instructs a shaman as to their proper use (Patencio 1943: 1-32; Seiler 1970: 38-63; Strong 1929: 130-143). In this way, myth reinforced ritual and both served to maintain the social order.

THE NEW ARCHEOLOGY AND MORTUARY ANALYSIS

In his textbook *The Archaeologist at Work,* Robert F. Heizer observed:

> More detail concerning the life of the people can be obtained from burials than from any other type of feature found by the archaeologist, except data incident to such major catastrophes as the destruction of Pompeii. The reason is simple: Burials are almost the only major class of archaeological features that one can expect to find in the original complete condition, not worn down by use, and exactly as the people left them.
>
> (Heizer 1959: 84)

Heizer astutely notes the importance of burials to archaeologists before the revolutions of the New Archeology. Burials were seen as time-capsules, receptacles for artifacts that could be analyzed by the archaeologist. Burials often provided complete pots that were only found in fragments in excavations, in addition to other artifacts that allowed archaeologists to better understand the findings of stratified occupation sites.

Part of this reluctance to more deeply investigate mortuary remains no doubt lay in the belief of prominent anthropologists that such investigations were futile. In an examination of Californian burial practices, Alfred Kroeber (1927) observed that burial practices were highly varied and did not closely conform to the culture areas he defined based on language groups and other cultural practices. Kroeber came to the conclusion that burial practices were too affect-laden to properly analyze in the same way as other mortuary traits. Individuals overcome by grief, Kroeber argued, did not follow particular cultural standards.

Theorists of the New Archeology sought to revitalize mortuary research by applying anthropological theory. Ward Goodenough's (1965) role theory was a particularly important influence on this school of thought. These studies looked to find archaeological correlates for societal roles known from ethnographic examples. One of the pioneering studies was Lewis Binford's (1971) "Mortuary Practices: Their Study and Their Potential." Binford (1971: 17) noted that, keeping in mind role theory, "We would therefore expect to discover a near identity between the number of social positions within a social organization and the number of symbols designating such units (see Service 1962)" (Binford 1971: 17). These symbols might indicate age, sex, relative rank, and membership within societal segments such as age or ethnic groups. Burial of the dead would be impacted by the relationships the living have with the dead, and, therefore, the larger the network of social relations the deceased is involved with, the greater the social output invested in his disposal. Thus, a king would obviously have a greater array and quantity of signifiers associated with his burial, following a "generally accepted correlation between forms of subsistence production and societal complexity" (Binford

1971: 18). Interestingly for our purposes, Binford found that pastoralists have less indication of social hierarchy than even hunter gatherers. It is perhaps no coincidence that the greatest variation came from the category, settled agriculturalists, of which he had the largest number of examples. As subsequent analysis has shown, Binford was far too optimistic about finding specific roles, such as particular kinship relations, archaeologically (Parker Pearson 1999: 28-29). However, the legitimacy of seeking social roles archaeologically through burials is further established by the work of Arthur Saxe.

One of the most important contributions of the New Archeology to mortuary analysis is Saxe's (1970) dissertation, *Social Dimensions of Mortuary Practices*. In this dissertation, Saxe sought to understand how societal roles were represented in the archaeological record by contrasting ethnographic accounts of the highly egalitarian Bontoc Igorot of Luzon, Philippines, the relatively egalitarian Kapauku, and the Ashanti kingdom. Saxe found that these societies met his hypotheses for treatment of the dead, in that corpses were treated differently based on social position. In more egalitarian societies, burial treatment was based primarily upon age and sex categories, though some achieved statuses were also reflected in grave goods, burial place, or positioning of the corpse. In more ranked societies such as the Ashanti kingdom, certain statuses superseded all others. An often overlooked contribution of Saxe's dissertation is his insistence that the archaeologist studying mortuary customs will almost never have a complete sample, because societal role was often expressed in burial place. Thus, cemeteries are usually for a specific kin group, but generally exclude not only non-kin but also members of the kin group who have special statuses, ranging from criminal to

king, which trump their ascribed role (Saxe 1971: 41). This dissertation was followed by articles applying his hypotheses to Mesolithic Sudan (Saxe 1971) and, with Patricia L. Gall, to the Temuan of Malaysia (Saxe and Gall 1977). The latter further established that cemeteries tend to appear with increased social hierarchy and competition for scarce resources.

Joseph Tainter (1975) and R. H. Cordy (Tainter and Cordy 1977) added to Saxe's model the understanding that the ranking of status must be based upon the amount of work expended in a burial. Saxe argued that the archaeologist must observe idiosyncratic mortuary practices in order to determine special statuses in societies. However, Tainter and Cordy observed that the *most* idiosyncratic practices are often the *least* significant. In their own sample, they noted that only two individuals were buried with animal bones. But this practice, though it was unusual, did not appear to indicate any particular social position. The amount of human power put into the tomb and grave goods, however, is an unambiguous measure of resource investment which can be easily ranked. Thus, a built stone tomb requires more investment of time and labor than a simple shaft, and suggests a higher position of the individual so honored in the society. Similarly, an individual buried with intricately worked materials would appear to be of higher status than an individual buried with plainer ones. Labor expenditure gives an objective measurement of wealth investment, which in turn can usually be applied to hierarchy.

However, modern ethnoarchaeological study suggests that Tainter's conclusions must not be drawn too far. In a study of contemporary British mortuary practices, Michael Parker Pearson (1982) found that there was very little difference in mortuary practice between rich and poor in London. Wealthy families were no more likely to bury

their dead with extravagance than were poorer families. In large part, this was likely due to Anglican understandings that the corpse is matter to be disposed of, not to be provided for. Nevertheless, role theory remains an appropriate means to analyze some, but not all, burials. Catholics are more likely to bury than Anglicans, who are more likely to cremate. The greatest anomalies among British burials are graves of showmen and Gypsies, who expend the most wealth in monuments and yet come from the lowest stratum of society. These individuals are often of great wealth and sometimes societal power, but of low class.

Furthermore, the more incremental the difference in labor investment between burials, the less likely that status differences are involved. For example, there is a clear difference between monumental tombs and simple pit burials which indicates status differences between those buried in these ways. However, ethnographically Bedouin women are buried significantly deeper than men (Burckhardt 1831: 1.280-281). This is not due to status differences, but rather to a desire to prevent violation of the corpse.

Studies since the 1970s have sought both to apply these New Archeological insights of role theory, which were primarily developed through ethnographic examples, to archaeological contexts (Brown 1995; Chapman 2005). These studies have in turn clarified what can and cannot be learned from the archaeological record. Many of these studies have argued for a particularistic stance that is against the tenor of the New Archeology's scientific cross-cultural perspective (Meskell 2001).

In studies of Great Plains Indians, John O'Shea (1981, 1984) found that, while status was accurately represented in burials, other aspects of an individual's social persona were not. In all three groups he studied, kin-based social groupings known to

exist ethnographically were invisible archaeologically. Distinct ethnic groups also tended to bury their dead in identical fashions. O'Shea argues that while vertical social subdivisions are readily observable, horizontal subdivisions may not be recognizable archaeologically.

Furthermore, O'Shea notes that much of the ritual of death is often invisible. In the Cahuilla example above, burned bones and burnt shell would be all that remained of the human remains and death images. Remnants of extensive feasting and the shell exchange might be found, but could not be linked to the death ritual itself. As another example, an estimated 15,000 tons of flowers and other materials were left at the temporary shrines at Kensington and Buckingham Palaces following Princess Diana's death on August 31, 1997. This represents a costly investment of energy from a Tainterian perspective. However, in addition to being perishable items (mostly flowers and paper notes), the materials were not left at the gravesite. The shrines met a different form of emotional and social need. Rather than memorializing a public figure in a way designed to reinforce the social organization, they democratized a subject of public grief who had been accorded private burial (Doss 2008). These memorials were also not dedicated to an individual representing the establishment; indeed, the deaths of individuals more central to the establishment are generally met with much different memorializations.

An example of the invisibility of the maintenance of the death-cult can be seen among Catholics in the Basque town of Murélaga in Northern Spain studied by William Douglass (1969). Here, each land-holding family possessed a *sepulturie* in the local church. When Douglass conducted his fieldwork in the 1960s the *sepulturie* was a

symbolic burial plot, but previously it where the family dead were laid to rest. With the death of anyone in the household, the female head of the household leaves bread offerings at the *sepulturie* throughout the proscribed year of mourning; formerly a lesser bread offering was made weekly. On other religious occasions, including every week's mass, the woman burns candles here. Ownership of the *sepulturie* was tied to ownership of a farm; when the farm was sold, the *sepulturie* passed with it. Thus, a woman might be performing rituals over the tomb of the family of a pervious land owner. Moreover, in general burials are no longer conducted in churches in Murélaga, but as of the 1960s these rituals were still being conducted. Thus, a woman might religiously leave bread at the tomb of an individual long-dead and unrelated to her, even if she is leaving bread offerings related to the mourning of a person buried elsewhere that very year.

In an analysis of Neolithic burials in Britain and Sweden, Michael Shanks and Christopher Tilley (1982) note that burial practices are not mere reflections of the social order. Indeed, at times "they also invert and misrepresent" (Shanks and Tilley 1982: 152) asymmetrical power structures. Social actors deliberately choose how to represent the social order in burials. Although Shanks and Tilley (1982: 133) argue their perspective is inappropriate in market economies, formal educational systems, or state apparati, Parker Pearson's (1982) study is understood in a new way with this theoretical understanding—individuals with resources who lack social standing use their resources to a construct the appearance of artificially high social standing. Burial practices are not a mere reflection of the social order, they are a means of deliberately altering the social order.

EXAMPLE: HEROD THE GREAT

A good example that shows us the mechanisms of using death in order to maintain authority in a complex society, to which the tools of the New Archeology can be applied, is the burial of King Herod the Great of Judea. Herod's power was tenuous. He came to power in large part because his family, who were Idumaeans, ingratiated themselves with the previous Hasmonean dynasty. In the midst of power struggles in the Levant following the Augustus' rise to power, Herod sought the aid of Rome, and the Roman senate elected him King of the Jews. However, his ethnic origins meant that Herod was could not hold the title *ethnarch* formerly held by the Hasmoneans. Through judicious use of power, which included killing off those of his own family who might seek the throne, Herod retained his title for more than thirty-five years. Herod's death left a kingdom that had been taken by force using outside aid, many of the logical heirs to which had been killed by the monarch himself.

Josephus tells us that Herod divided his lands, with the majority of kingdom, including Judea, Samaria, and Idumaea, going to his son, Archelaus. This, however, contradicted a previous will, which would have given the kingdom to his brother, Antipas. Immediately in taking power Archelaus faced opposition both from within the royal family and from groups opposed to the Herodian line. Archelaus sought to solidify his control both militarily and symbolically. The former involved immediately taking control of the army and seeking confirmation of his power from Rome. Symbolically, Archelaus used his father's funeral and burial to stress his authority. We are told Archelaus took responsibility for the preparations himself. Josephus describes Herod's funerary procession in detail:

> The king's funeral next occupied attention. Archelaus, omitting nothing that could contribute to its magnificence, brought forth all the royal ornaments to accompany the procession in honour of the deceased. The bier was of solid gold, studded with precious stones, and had a covering of purple, embroidered with various colours; on this lay the body enveloped in a purple robe, a diadem encircling the head and surmounted by a crown of gold, the scepter beside his right hand. Around the bier were Herod's sons and a large group of his relations; these were followed by the guards, the Thracian contingent, Germans and Gauls, all equipped as for war. The remainder of the troops marched in front, armed and in an orderly array, led by their commanders and subordinate officers; behind these came five hundred of Herod's servants and freedman, carrying spices. The body was thus conveyed for a distance of two hundred furlongs to Herodion, where, in accordance with the directions of the deceased, it was interred. So ended Herod's reign.
>
> (*Jewish War* 1.670-673, Thackeray 1961: 2.318-321; cf. the parallel description in *Antiquities* 17.196-199, Marcus and Wikgren 1963: 8.462-463)

The language of the funerary procession is clear: Herod is to be magnified, and there must be continuity in the reign of his heir. Most of Herod's sons and the royal family march united in the procession, as did the army, dressed as if for war. Their ranks included both local soldiers and foreign troops. Among the latter were the contingent of Gaulish mercenaries who went over to Rome when Cleopatra was defeated and whom Rome awarded to Judea. The prominence of foreign troops showed Archelaus' support from afar, and his willingness to use foreign troops against local uprisings. This was also a deliberate combination of Hellenistic militarism with Jewish prayer (Rocca 2008: 352). The funeral and a *cenotaphium* modeled on Augustus' mausoleum erected in Jerusalem opposite today's Damascus Gate were deliberate symbolic invocations of Roman power and culture (Rocca 2008: 354). The troops' full military garb stressed Archelaus' preparation for any war of succession.

But Archelaus also incorporated "all the royal ornaments" into the procession. These were the signs of power that he himself would wear, and their presence in the funerary procession is a symbol of the continuity of the dynasty from the reign of Herod to the reign of Archelaus. They do not appear to have been offerings to, or buried with, the deceased king, and would not have been recovered in his burial.

Although the location Herod's mausoleum has been known for some time (Netzer 2006), it was only in 2007 that Ehud Netzer discovered what appears to be the sarcophagus of Herod at Herodion. The results have not been published scientifically, but preliminary data have been published in popular coverage of the find, primarily in the pages of *National Geographic Magazine* (Mueller 2008; see also Rocca 2008). Although the tomb was looted in antiquity, the sumptuous nature of its architecture – the mausoleum once stood an estimated eighty feet high, and the sarcophagus was finely carved of pink limestone – were a massive display of conspicuous consumption. The sheer manpower to build the edifice is proof of Herod's ability to command in his life and put vast resources to a symbolic end.

But the remains of the tomb also testify to resistance. Herod was so resented in his life that, Josephus tells us, as he lay dying he ordered the most prominent men of Judea held in the hippodrome, to be slaughtered upon news of his death. The reasoning was that this would force the nation to mourn. The story may be apocryphal, but that the common people resented Herod was proven with the ferocity of his tomb's destruction, apparently by rebels during the two Jewish Revolts. The sarcophagus itself was smashed into over one hundred pieces with hammers. As Netzer observed, "They weren't just looting. This was revenge" (qtd. in Mueller 2008: 55)

Archelaus' effort was not entirely successful – he did successfully claim power, but only after putting down a religious revolt and then suing in Rome against both his brother and a delegation of his people – but the pomp and circumstance of the funeral he orchestrated illustrates the importance of the power Herod held in life (Saxe 1970). The sheer manpower demonstrates his importance (Tainter 1975; Tainter and Cordy 1977). The need for a cenotaph in Jerusalem both shows pandering to Roman sensibilities and the need for monumentality in the capital itself, not just at the place of burial. Finally, the very savagery of the desecration of Herod's burial testifies to his importance in society and is itself a ritual act.

IRON AGE BURIAL IN THE LEVANT

The most important study of Iron Age burial in the Levant to appear in recent years is nevertheless almost two decades old. Elizabeth Bloch-Smith's (1992) *Judahite Burial Practices and Beliefs About the Dead* examined the emergence of Judahite identity as reflected in mortuary patterns. Although focused on the Judean highlands, her analysis also examined surrounding regions of modern Israel and Jordan.

The Iron I through the tenth century in Israel is notable for its lack of burials. The lack of known burials is particularly noticeable in the northern kingdom of Israel and the central highlands of Judah. Kletter (2002) has argued that this lack of burials is due to the fact that the hierarchy in settlements at this time was not to a pronounced enough degree that graves would be outfitted lavishly (Kletter 2002). Elizabeth Bloch-Smith (2004) has argued that preservation biases are a more likely reason for the fact that so few burials have been uncovered from this period. It is rare that a substantial cross-section of any population is found archaeologically. Faust (2004) notes that it is also likely that

cultural concerns regarding egalitarianism lead to burials lacking expensive grave goods or monuments, making them difficult to identify. Finally, graves have probably been misdated because they lacked temporally diagnostic artifacts, just as Wadi Fidan 40 was initially misdated. Tomb types from earlier periods, or even tombs themselves, may also have been reused.

Bloch-Smith (1992) classified burials in the Levant according to the structure of the space into which the body was placed. Based largely on Rivka Gonen's (1992) research on Late Bronze burials, Bloch-Smith defined eight burial types in the Iron Age: Simple or pit burials, jar burials, anthropoid coffin burials, bathtub coffin burials, cave burials, cremation burials, bench tomb burials, and cist burials. These are not entirely without overlap, and it must be kept in mind that typologies encourage one to think in static and absolute terms and discourage the observer from looking for changes through time and intermediate forms (Bradbury 2010). However, these categories have proven useful in describing graves and tombs and in plotting their relative frequency across the landscape.

Simple or pit burials are burials in holes excavated from the earth or in stone without any other architecture housing the corpse. Bloch-Smith (1992) has pointed out that these in some instances might be simplified versions of cist burials, especially when they extend into bedrock. This burial type includes graves which required varying amounts of labor, ranging from a simple pit carved dug into the earth, which requires the least amount of labor organization of any of the graves seen in the Levant, to more elaborate shafts extending into bedrock and therefore require more intensive labor organization.

Important pit graves in Jordan include those at Raghadan Palace and at Tell es-Sa'idiyeh. The pit burials at Tell es-Sa'idiyeh are found alongside numerous forms of cist burials but are outfitted with poorer grave offerings, suggesting that they house the dead of lower status (Bloch-Smith 1992; Pritchard 1980; Tubb 1986, 1988; Tubb et al. 1997). The shaft at Raghadan Palace, on the contrary, was a deep construction cut into bedrock which required a great deal of labor power and presumably wealth to construct. This burial is discussed further under the anthropoid coffin section of this paper, as the group of people which used this particular grave also had the resources to employ these complex coffins (Yassine 1975).

Jar burials, as the name implies, are burials in which the deceased was entombed within one or more ceramic jars. When the individual is small enough, such as in the case of infant burials, the deceased is usually entombed within a single jar which is covered with a bowl. When adults are buried in this fashion, the tops of two storage jars are generally removed and placed mouth to mouth, with the deceased to be placed within them (Bloch-Smith 1992). Jar burials are commonly associated with cist and pit burials, and are particularly common at the site of Tell es-Sa'idiyeh (Pritchard 1980; Tubb 1986, 1988; Tubb et al. 1997).

One form of jar burial, double pithos burial, is of particular interest because of the variety of ethnicities with which it has been associated in the archaeological literature. Tubb (1990: 33) has noted that individuals buried in double pithos burials at Tell es-Sa'idiyeh appear to be a distinct ethnic group at the site, and he believed these burials to be associated with . It is notable that these graves appear to have been selectively robbed in antiquity. However, as Green (2008: 84) notes, double pithos burial "has been

incorporated into many migration and ethnicity-based theories. Interpretations include Sea Peoples from the Aegean sphere (Tubb [1988c]; 1995), Anatolians or Hittites (Kempinski 1979; Negbi 1991; Gonen 1992, 30; Negbi 1998; Holladay 2001; Gilmour 2002, 117-18), transhumant migrations from the Transjordan plateau (van der Steen 1996, 68), and Egyptian emissaries (Wengrow 1996, 319)." Green finds none of these explanations satisfactory, and notes that none take into account the large number of double pithos burials at Mari. The selective robbery of these graves he ascribes to their unusual wealth. This burial type may contain a variety of economic and social implications.

Anthropoid, wooden, or stone coffin burials are, just as the name implies, burials within receptacles of various substances. None of these are particularly common. The most common surviving examples of coffin burials are the anthropoid coffins, terracotta coffins molded in the shape of humans, apparently imitating Egyptian sarcophagi, and often containing the remains of multiple individuals. An impressive collection of about forty of these coffins presently in the Israel Museum was illicitly excavated and obtained by Moshe Dayan from the cemetery at Deir el-Balah in the Gaza Strip (Beit-Arieh 1985; Dothan 1972, 1973). Petrographic analysis showed that these coffins were made locally (Perlman et al. 1973). Egyptian funerary stelae were looted from the site at the same time (Ventura 1987).

Anthropoid coffins were long associated with Philistine burial practices, but further research has shown the connection between Philistines and anthropoid coffins to be far from clear. Trude Dothan (1982: 252-288) focused on anthropoid coffins in her study of Philistine burial practices, and even attempted to draw icongraphic correlations

between the coffins and Egyptian wall paintings and sculptures of Sea Peoples (Fig. 2.2). However, these coffins are almost exclusively actually found at inland sites. Most of Dothan's examples were from the southern highlands of Judah, and these artifacts are found as in the Jordan Valley and around Amman (Bloch-Smith 1992; Yassine 1975). These coffins are also very commonly associated with Egyptian artifacts, and some even bear hieroglyphic inscriptions, and such coffins are known not only from Israel and Jordan but also from Egypt itself. Furthermore, known Philistine sites have very few of these coffins (Ben-Shlomo 2008). Dothan notes the coffins' Egyptian origins, but the case for their being a Philistine ethnic marker is weak.

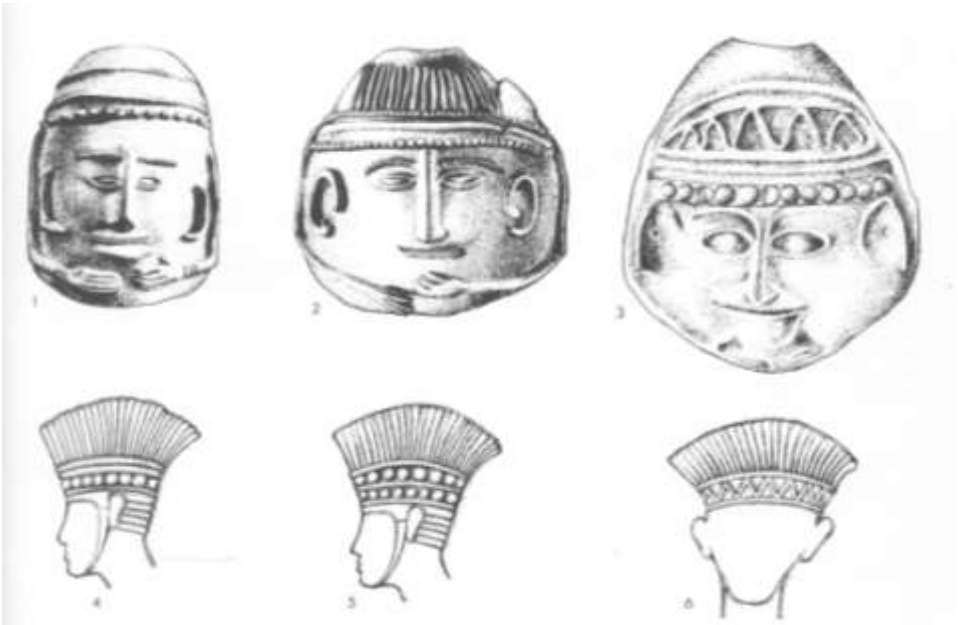


Figure 2.2: Dothan's (1982: 275) comparison of anthropomorphic coffins from the Beth-Shean Northern Cemetery, above, and Sea People headdresses in the Ramesside Medinat Habu reliefs, below.

Anthropoid coffins developed in the context of changing Egyptian mortuary practices. During the Third Intermediate Period, tombs in Egypt were much smaller and less ostentatious than in previous eras. Both private tombs and royal tombs followed this

trend, wherein more emphasis was placed on the coffin and grave goods than on the tomb structure. Kings were also likely to be buried in temple precincts rather than a royal necropolis. This change in attitude from the elaborate tombs of the past was due in part to decreased resources during that turbulent time. The Third Intermediate was known for warring minor kings rather than a central state. But the period was also known for state-sanctioned tomb robbery. Beginning in the late New Kingdom, at the same time as royal officials were reburying the dead from robbed tombs, contemporary documents suggest these same officials were robbing tombs themselves in order to pay for Pharaoh's expensive wars (Snape 2011: 247).

Anthropoid coffin burials, when they are found, are often found with jar and cist burials. Though these are very different burial strategies, with the exception of pit burials, these burial forms reflect a common desire to protect the corpse, and may have been linked together in the minds of the Bronze and Iron Age peoples who used them. They first appear in Israel and Jordan in the Bronze Age but continue well into the Iron II, and, like cist tombs, they are associated with Egyptian influence and because they are often found alongside cist tomb burials (Bloch-Smith 1992; Gonen 1992; Yassine 1975).

Khair Yassine (1975) has attempted to seriate the anthropomorphic coffins from the Late Bronze Age into the Iron Age, but his success seems limited. He has isolated what he considers to be four types of coffin, but since these types are often found at only one or two sites, it seems inadvisable to attribute their variation to development through time. Also, what he takes to be later developments of the anthropoid coffin type might more realistically be seen as mere simplifications of the more difficult to form types he considers to be earlier (Bloch-Smith 1992).

Examples of tenth to seventh century anthropoid coffins were found at Raghdan Palace in Amman. Here, five coffins of reddish baked clay with crushed ceramic temper were found together at the bottom of a cistern-like shaft cut into bedrock, with its opening blocked off with stone. Two of these coffins had anthropomorphic features, molded with human facial features and arms extended at their sides. One of the coffins in this tomb was so badly damaged that it could not be typed, while the other two were shaped like anthropoid coffins and possessed the lug handles common to anthropoid coffins, but did not have any anthropomorphic features (Yassine 1974). All of the surviving coffins may have been simplifications of the more labor intensive forms which included arms crossed over the front of the coffin (Bloch-Smith 1992). All of these coffins contained the remains of multiple individuals, and this, coupled with the range of dates attributed to the associated pottery, suggests that both the tomb and the coffins were used numerous times (Yassine 1974).

Bathtub coffin or larnax burials in the literature these are frequently referred to as larnax burials (e. g. Yassine 1984), but Bloch-Smith (1992) and others propose that the Levantine artifacts be referred to as bathtub coffins, presumably in order to avoid confusion with Mediterranean artifacts which are more correctly described with the term larnax. As the name implies, these are ceramic coffins shaped like a deep bathtub with one rounded and one flat end and are about one meter long. These coffins have clear predecessors in Assyria, and are not seen before the beginnings of Assyrian sway in the region (Bloch-Smith 1992; Zorn 1993). At the same time as these bathtub coffins were in use, jars similar to Mesopotamian-style burial jars are also found at Hazor, probably indicating Assyrian influence (Zorn 1997). An important site of bathtub coffin burials in

Jordan is Tell el Mazar Cemetery A, where they are buried in pits alongside graves with various forms of cist and simple and jar burials (Yassine 1984).

However, bathtub coffins are rare even in graves in the Assyrian heartland. German excavations at Assur 1903-1914 excavated about 1,370 tombs and graves dating from the third millennium to the Parthian period, including six royal tombs. The data from these excavations are currently being prepared for publication by the Assur-Project of the Deutsche Orient-Gesellschaft and the Vorderasiatisches Museum (Pedde 2010). The Assur-Project of the Deutsche Orient-Gesellschaft and the Vorderasiatisches Museum is currently preparing the data of all these tombs for publication (Pedde 2010). Burials in Assur include "simple earth graves and sherd graves, brick graves and tub burials" as well as "composite graves." "It looks like if people just took what they had: one half of a broken sarcophagus and a big pot for example." (Pedde 2010: 915). One large cemetery, including numerous Neo-Assyrian graves, was found between Assur's outer and inner city walls. These date from a time when the inner wall had gone into disuse, and some of these graves are actually dug into this wall. But more than 900 burials—about two-thirds of the sample—are found in private homes, often concentrated in a single room of a house.

Information about the Assyrian diaspora was gathered at Kavusan Hoyuk, located on the upper Tigris River in southeastern Turkey. The site was a rural settlement of about 1.5 ha lying in an outlying province of the Assyrian empire, an area integrated into Assyria since the mid-tenth century. The site was densely occupied in the Neo-Assyrian period, and is currently being excavated (Gulriz 2010). Between 2005 and 2007 forty-three graves were excavated. Of these, twenty-two were cremations, mostly in jars, five

were jar burials, and sixteen were simple inhumations. Cremations tended to be deposited in jars but without other grave goods. There were only two exceptions to this rule. One of the exceptions was a cremation urn with a bronze arrowhead. The other was a child in an urn dating to the eighth century including a bronze ring with a gold-coated ball, a bronze bracelet, a gold earring, and a Late Hittite (14^{th} to 13^{th} century) bronze hemispherical stamp seal. The jar burials were infants and a very young child. One of these jar burials included beads and pendants of colored stone, faience, and bone, including one pendant in the shape of a duck's head. Impressive grave goods were only found in children's graves. Only one adult male was identified among the burials; women were most common followed by children.

Cremation burials have long been argued to be a Philistine burial type, based upon their preponderance in territories known to be Philistine and their frequent association with Cypro-Phonecian vessels. However, even this has been challenged. Bienkowski (1982) has argued that, while cremation burials appear at Philistine sites, they appear after the Philistines had been settled in the land for some time, and therefore are too late for one to assume that cremation was brought as a foreign influence. He also notes the Mesopotamian examples of cremation to show that cremation is not necessarily alien to the Near East. Cremation burials take the form of cremation strata—either the remains of pyres or within cave tombs—or are found within urns (Fig. 2.3). The inadequately published cremation strata in the tombs at Jebel Hussein near Madaba seem to be the only examples from Jordan in the twelfth through the eighth centuries (Bloch-Smith 1992).

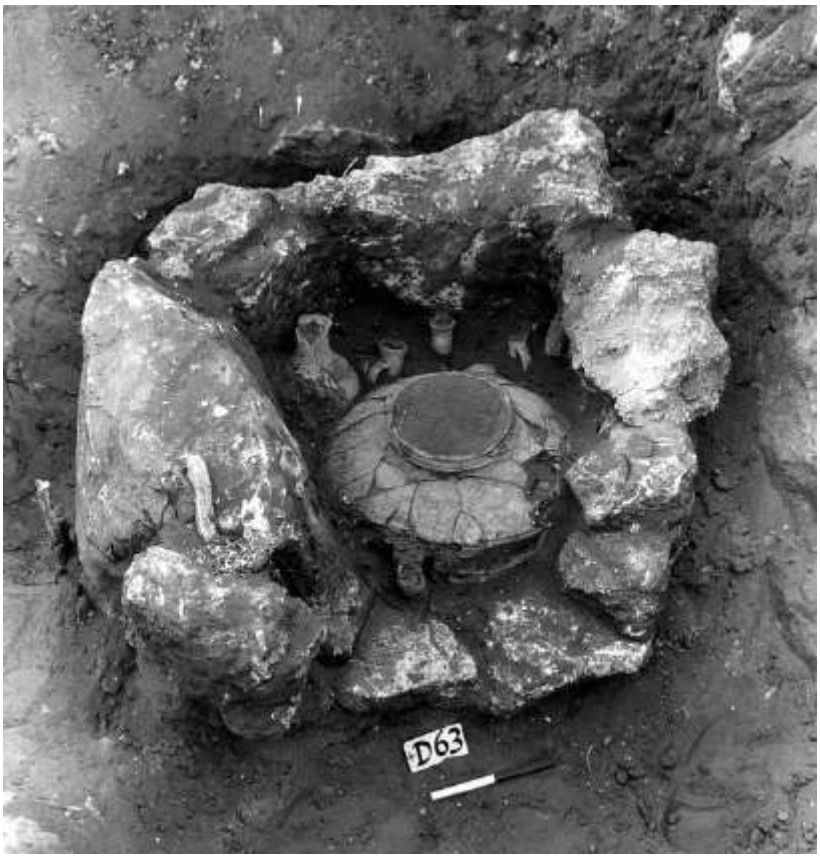


Figure 2.3: Cremation burial D63 at Azor. The cremation was placed inside a large pot, and other pots were left as grave offerings around the larger vessel. The cist-like stone structure was built around the top of the vessel, after most of the pit had been backfilled (Ben-Shlomo 2008: 39).

Cave burials are inhumations within natural or artificial caves. The deceased are sometimes buried within the cave, and at other times are merely placed within the cave which is then closed up. Communal burials within caves are particularly common throughout the Iron Age in northern Jordan (Yassine 1983) and are also common in Israel (Bloch-Smith 1992). For obvious reasons, this burial type is especially common in karstic areas, where caves are common and rock is relatively easily carved.

An example of a burial cave excavated in Jordan is that discovered at the village of Sahem, in the extreme north of Jordan, just 5.5 kilometers south of the Yarmuk River and the Syrian border. This rich tomb was most likely used during the transitional period

at the very end of the Late Bronze Age or the very beginning of the Early Iron Age, and was possibly being used throughout the transition between these periods. It was cut into the soft rock into an L-shape, with the broader part of the L—and the entrance—being to the south. The narrow back of the tomb was blocked off with a flint wall, but the majority of the finds, and almost all of the skeletal material, were discovered in the broad antechamber. Red soil covered the entirety of the tomb below its collapsed roof. This rich tomb was found in disarray, but the artifacts recovered included pottery from the Late Bronze to Early Iron transition; Eighteenth and Nineteenth Dynasty scarabs (and one, apparently heirloom, Twelfth or Thirteenth Dynasty scarab); female and bull figurines; toggle pins; buttons; bronze and gold earrings, rings, and anklets; beads and pendants; and bronze arrowheads and knives. Unfortunately, as is all too common with area burials, the skeletal material was scant and could not be radiocarbon dated (Fischer 1997). Bench tombs appear to have developed out of cave burials.

Bench tomb burials are inhumations within tombs cut into the bedrock which contain benches also cut into the rock upon which the deceased are laid (Fig. 2.4). Early attempts to seriate these burials seemed promising, however later research has developed these typologies into more and more complicated seriations (Bloch-Smith 1992: 249), and work at sites such as Tel Halif (Biran and Gophna 1970) has shown that a number of these independent types once believed to develop into one another were in fact used contemporaneously (Borowski 1992). This particular burial type is especially important because it has come to be considered the national burial type of Israel and Judah. This burial type first appeared in the Shephelah between the regions of Tell Aitun and Tell Halif in the eleventh and twelfth centuries, and spread throughout Judah by the Iron II. It

became particularly common around Jerusalem (Mazar 1976). This burial form extended into some areas of northern Jordan, particularly around Amman, but was never as prevalent nor as exclusive there as it was in Judah (Bloch-Smith 1992). Among the most impressive bench tombs are those in the Khirbat Qom cemetery excavated by William Dever (1995: 422), the more than thirty such graves at Gibeon (Eshel 1987), finely carved Ketef Hinnom Cave 24 in which was found the silver amulets bearing the priestly blessing (Barkay 1992), and the Silwan necropolis near Jerusalem (Ussishkin 1993), which will be discussed further below. This burial type is often taken as indicative of Judahite cultural and political identity, to the extent that Irit Yezerski (1999) has argued that the borders of Judah in the last two centuries of its existence as an independent kingdom can be drawn using hewn burial caves as a proxy. Bloch-Smith (1992) argues that the adoption of bench tombs throughout Judah to the exclusion of other burial forms suggests that during the Iron Age this became the "official Judahite form of burial" (Bloch-Smith 1992: 137), perhaps even to the extent of being a state-sanctioned practice.

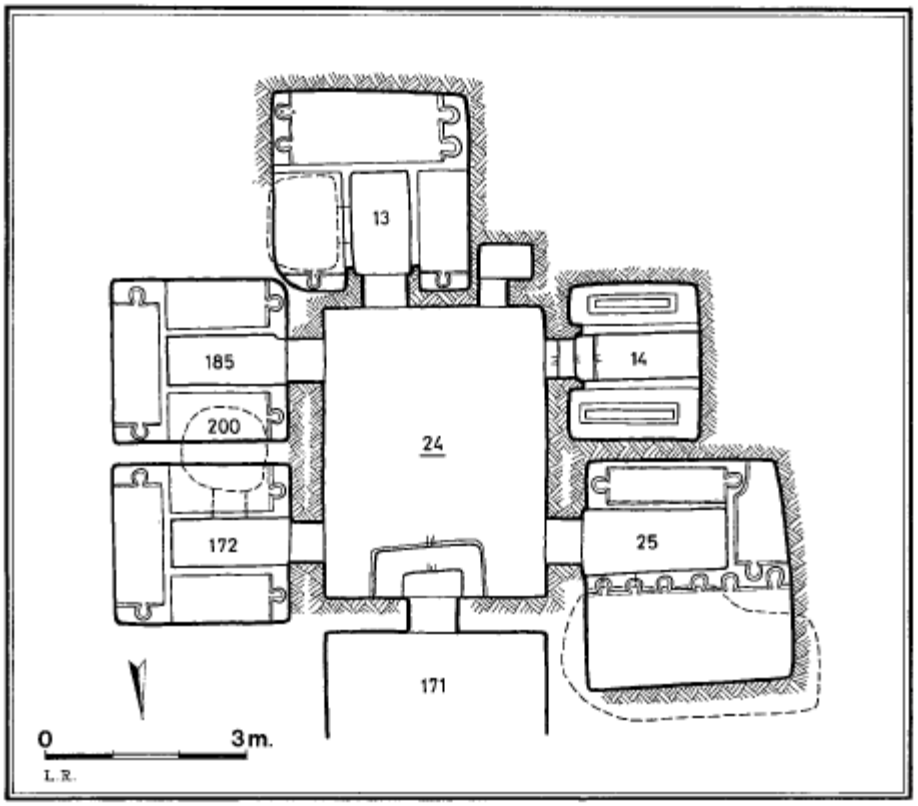


Figure 2.4: A reconstruction of Ketef Hinnom Cave 24, a bench tomb near Jerusalem. Note the elaborate benches, some of which include carved headrests (Barkay 1992: 143).

Bench tombs and cave tombs allow for the living to continue physical contact with the dead, and they were the sites of postmortem rituals. These burials were often richly provisioned with foodstuffs or food vessels. At the Dothan tomb, storage jars were placed below a window to the tomb, allowing for the replenishment of refreshments (Cooley 1983). The Bible refers to food offerings made to the dead (Deuteronomy 26:14), and this food may have been left in the tomb itself. Furthermore, inscriptions in these tombs suggest rituals took place there. At a bench tomb at Khirbat Beit Lei, where the remains of three individuals were found in place on their benches (Haas 1963), images of three individuals, one apparently playing a lyre, were carved on the walls. Two boats were also carved on the walls, as were a number of inscriptions, some of them

petitioning Yahweh (Naveh 1963). At Khirbat el-Qom, Dever (1970; Zevit 1984) found an inscription mentioning Yahweh and Asherah and including the image of a hand.

Cist burials are any type of burial in which the deceased is laid within a partial or complete enclosure of mudbrick or stone. This type of burial is especially important to a study of the cemetery at Wadi Fidan 40, which is almost exclusively made up of this kind of burial architecture.

Cist tomb burial in Israel and Jordan is usually seen as a result of Egyptian influence dating from the Bronze Age. Indeed, Rivka Gonen has called all individual burials "a profound victory of the Egyptian way of life" (1992: 28). Containing the body within the cist allows for greater preservation of the entombed, which also suggests Egyptian influence on how these people viewed their dead. The appearance of scarabs and sometimes bitumen also suggest Egyptian links with the dead. Egyptian influence on the symbolic material culture is hardly surprising, given the enormous amount of continuing contact between Egypt and the Levant (Redford 1992). They may also be part of a desert tradition that spans from Egypt into Canaan and Edom which maintained their customs through peer polity interaction (Renfrew and Bahn 1991) rather than simply imitating Egypt. This was merely one of a number of Egyptian-style burials which range from jar burials to cave burials to elaborate tombs, and it seems odd that the people of WFD 40 would select such a singular form of tomb based on its Egyptian connotations unless there were other reasons to use it.

There is no single pattern to the orientation of cist graves, but when they occur, all cists within a cemetery tend to be oriented the same direction. Thus, all the cists at Akzib were oriented north-south (Bloch-Smith 1992), while most of the burials—including cists

—at Tell Es-Sa'idiyeh were oriented east-west, possibly in imitation of Egypt (Pritchard 1980).

The side of Tell es-Sa'idiyeh includes both a large town on the tell, within view of Tell el-Mazar and Tell Deir`Alla, and an extensive cemetery which have been excavated simultaneously, and which were utilized at the transition from the Late Bronze into the Early Iron Age. Of course, the fertility of the Jordan valley here marks these settled sites in direct contrast to such sites as WFD 40, located in a desert which must primarily have been utilized by nomads, but the burials at this site suggest a cultural affinity to those at Wadi Fidan (Pritchard 1980, 1985; Tubb 1986, 1988; Tubb et al. 1997).

At this site, numerous cist graves were discovered alongside jar and pit burials. These cists range from true tombs, like Tomb 101, which incorporated part of a Bronze Age wall and probably a wooden roof, to cists of mudbrick (Fig. 2.5) or megalithic stones (Fig. 2.6), to partially lined cists of stone, some with stone lining only one side of the burial pit (Pritchard 1980). Bloch-Smith counts what she sees as fourteen variations of the cist type here:

> fully or partially stone-lined pits, fully or partially mudbrick-lined pits, a rectangular grave with an inner clay kerb, mudbrick- and stone-lined pits, a pit partially lined with stones and sherds, a burial on two mudbrick slabs, mudbrick lined pits with mudbrick floors, a pit with a mudbrick and stone covering, brick-lined and covered pits, mudbrick-walled tombs, a partially stone-built tomb, brick-built tombs, stone- and budbrick-built tombs, and mudbrick-walled and roofed tombs.
>
> (Bloch-Smith 1992: 159)

John D. M. Green (2006: 2.428-431), who is preparing the unpublished material for publication, divides these into four main types: deep mudbrick lined cists, shallow mudbrick lined cists, boulder lined cists, and stone built cists. Of these, the last is most

like the design of the cists at Wadi Fidan 40 (Green, personal communication, 22 July 2011) , but as we shall see in Chapter 7, even this cist bears significant differences from those of Wadi Fidan.



Figure 2.5: Mud brick-lined cist Grave 389 at Tell es-Sa'idiyeh. Note the disturbed nature of the human remains (Tubb and Dorrell 1991: 80).

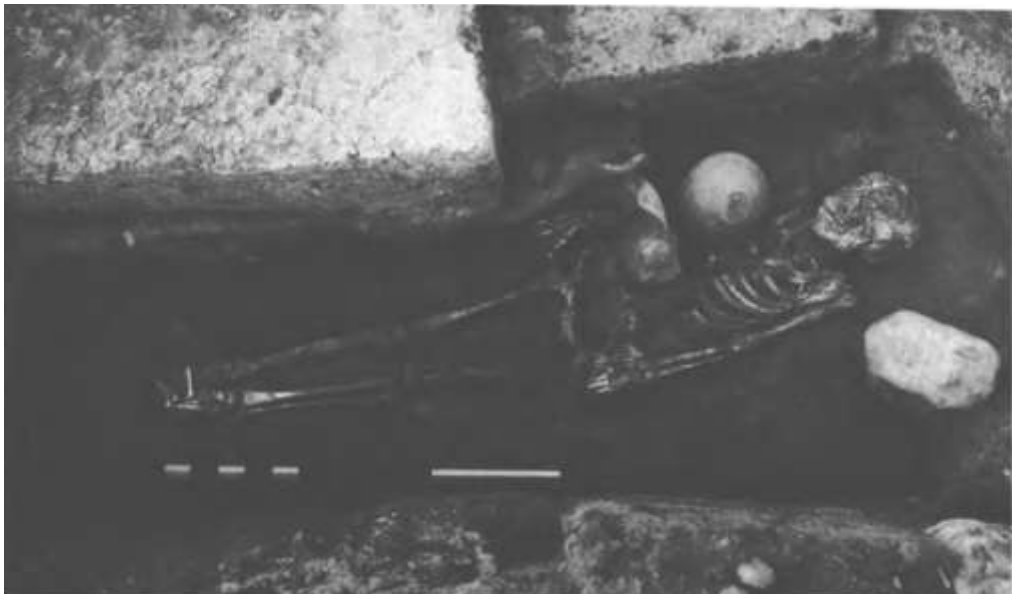


Figure 2.6: Grave 371 at Tell es-Sa'idiyeh, a cist grave lined with megalithic stones (Tubb and Dorrell 1990: 32).

The burials of Tell es-Sa'idiyeh seem to represent a number of ethnic groups, as one might expect from a cosmopolitan town of the Late Bronze and Iron Ages. Two of these burials (102 and 107) were even preserved by being covered with bitumen in an apparent imitation of Egyptian style. Other graves show traces of bitumen, and a number of other tombs also have Egyptian goods such as scarabs, testifying to the fact that these inland groups, like their coastal neighbors, seem to have had contact with Egypt's cultural sphere (Green 2006, 2008, 2010, in press; Pritchard 1980; Tubb 1986, 1988a, 1988b, 1990, 1995; Tubb and Dorrell 1991, 1993, 1994; Tubb et al. 1996, 1997).

At the large cemetery at Tell Azor, mudbrick cist graves were the uniform burial pattern among the Phase V, earliest Iron Age I, burials. Burials at the site diversified in later Phases (including within the later Iron Age I) to include pit burials, cremation burials, and jar burials. David Ben-Shlomo (2008) calls these cists "brick-case tombs." They were constructed to tightly fit the bodies of the deceased individuals (Fig. 2.7). In the Iron IIB, as bench tombs become more common in Judah, multiple interment cist tombs become standardized at Azor. Similar multi-individual cist tombs are found at other Philistine sits, such as Tel Zeror (Ohata 1967, 1970). It is likely that, as Ben-Shlomo implies, as ethnic lines hardened they were more clearly displayed in burial patterns. The corporate nature of these burials may have accentuated the sense of belongingness to particular kin, ethnic, and cultural group.



Figure 2.7: Two of the mud brick cist graves at Azor (D75 and D76), representing David Ben-Shlomo's "brick-case tombs" (Ben-Shlomo 2008: 36).

But cists are probably not ethnic markers. They are found over a broad period of time, ranging from the Early Bronze cists at sites such as Bab edh-Dhra (Ortner and Frohlich 2008) to Roman burials at Faynan which strongly resemble their Iron Age predecessors in the region (Fig. 2.8; Findlater et al. 1998). Their appearance across the Levant over such a broad period of time suggests a functional purpose. Diana Kirkbride (1969a, b) notes that cist burial is common among desert peoples as a means of preventing animals from scavenging from the entombed corpse. Archibald Forder, who spent thirteen years at the turn of the twentieth century in Karak, notes that cist graves were used at that time in part to save the lives of the prematurely buried. He observed that "The earth is kept off the body by means of slabs of stone laid crossways on other

stones" (Forder 1909: 215). Because of the quick onset of decay in such an environment, a corpse was often buried on the day of its death, sometimes resulting in premature burial. Forder cites anecdotes to show that the simple cists used by the Karak Arabs at times saved lives. Finally, cist burial serves the functional purpose of preventing the ground from collapsing as the entombed decays. Most burials within the United States are entombed within burial vaults which even Veterans Administration reports liken to the stone-lined cists of prehistoric peoples. These modern cists primarily serve the practical purpose of preventing graves from sinking and therefore maintaining cemetery grounds (Heimbuch et al. 1980).



Figure 2.8: Grave 113, a cist grave in the Roman cemetery at Faynan, after the removal of the capstones. The cist is lined with sandstone slabs and remarkably similar in its construction to the graves at Wadi Fidan 40 (Findlater et al. 1998: 73).

Bloch-Smith (1992) seems to define cist graves as graves with any lining at all, including capstones, which would seem to be at variance with authors such as Tubb et al. (1997). This was probably less important for her analysis, which was primarily focused on Judahite bench tombs, but the distinction is a major one for a study of the graves east of the Jordan. Though there is much to be said for including these amongst cist graves,

as, like any other partial cist, they seem to be variations on the idea of an enclosure for the dead, these graves probably deserve their own type—**capped pit graves.**

A site with examples of capped pit graves is Horvat Ritma in the Negev. An unspecified number of rectangular graves were dug into the loess and covered with capstones "set flush with the surrounding terrain" (Meshel 1977: 112). The burials were associated with a square fortress dated by the excavator to the eleventh to tenth centuries. Negev and Israelite ware, including red burnished bowls, were discovered at the settlement, but the graves themselves were all looted and, when found, were used as grain silos by local Bedouin. Only and potsherds and bone fragments were discovered in the graves.

As useful as these typologies are both in describing burials and in attempting to discern societal changes, ethnic groups, and movements of peoples from them, these typologies are not without their problems. In many cases, tombs do not fall neatly into one of these categories, and often these categories are so broad that they might be better broken into a number of different categories or focus on what were most likely features which were not of the greatest importance to the people who buried their dead themselves. This is particularly the case with the most important typology for the purposes of the study of cist graves, which are of course the most important prevalent class of graves found at Wadi Fidan 40 (Levy et al. 1999).

Some burials, such as some of those at the cemetery at Tell es-Sa'idiyeh, are difficult to classify and point to problems with these typologies. For example, many of the graves at Tell es-Sa'idiyeh consist of partial stone or mud brick cists, or even graves partially lined with stones and potsherds. In addition, some simple burials are covered

with large sherds, which seem reminiscent of either capstones or of store jar burials. Since jar burials, cist burials, and pit burials are common in this cemetery (Pritchard 1980; Tubb 1986, 1988; Tubb et al. 1997), it is difficult to determine how the ancient people would have classified these burials in relation to each other, and it is even more difficult to determine if each of these burial patters was used by an individual ethnic or social group.

Secondary burial deserves special notice, given its prevalence at Wadi Fidan 40. Secondary burial is common in the Levant. In cave and bench tombs, as the flesh decayed on older occupants their bones were pushed aside to make room for new interments. But cists were also reused. For example, at Tell es-Sa'idiyeh, as at Wadi Fidan 40, the deceased were apparently allowed to decompose and their bones were then removed and buried in the fill of the grave, a practice Jonathan Tubb noted at Tell es-Sa'idiyeh and termed "derived secondary" burial (Tubb 1988: 61).

Secondary burial is often associated with nomadism, but probably wrongly. Thomas Levy and David Alon (1987) explored this subject in connection with the Chalcolithic cemeteries at Shiqmim. They noted that previous models of Chalcolithic society, which posited independent "cemetery zones" to which seasonally nomadic populations from "settlement zones" brought their dead have been exploded by more recent surveys. These surveys show settlements connected with cemeteries in desert areas as well as cemeteries associated with settlements in coastal areas. Moreover, as they point out, secondary burials are ethnographically commonly associated with settled populations. Their argument drawn from Madagascar that secondary burials are associated with sexuality may be too culturally specific to apply to the Chalcolithic or

Iron Age Levant, but the variety of the human experience must be kept in mind when analyzing archaeological remains.

The Chalcolithic burials seem to have a different mortuary ritual than Iron Age secondary burials. Levy and Alon (1987) suggest that the cists at Shiqmim, which are close to the surface, were likely never covered and were instead used for the preparation of human remains for secondary burial. They also suggest that a tabular fan-scraper found in Cist 35 was used for scraping flesh from the bones (Levy and Alon 1987: 335). Tabular scrapers are common instruments in Chalcolithic and Early Bronze Age mortuary contexts (Rosen 1997), and in some instances may have been important for such secondary burial practices. Eight scrapers were found associated with six graves at Wadi Fidan 40 (Graves 30, 55-2004, 67, 223, 368, 710), but these are believed to be associated with the Early Bronze artifacts found at the site. It is believed that the secondary remains at Wadi Fidan 40 were reburied after graves were looted in antiquity or are connected to reuse of mortuary architecture after natural decomposition.

GRAVE GOODS

Perhaps more important for social identification are the grave goods buried with the interred are buried. As will be discussed in Chapter 6, interpreting the social meaning of these grave goods, especially items of personal adornment, is difficult, but grave goods are particularly strong markers of wealth.

At Ashkelon, Jill L. Baker (2006) has identified what she terms a "funeral kit" among Late Bronze burials. She argues that these artifacts do not reflect the social or economic status of the interred, but rather are left catholically as a result of beliefs about the afterlife. The kit includes a set repertoire of pottery vessels, apparently intended for

funerary feasting, in addition to toggle pins and scarabs. However, her data suggest that the kit is not as ubiquitous as she suggests, and scarabs and toggle pins in particular are not universally found at the cemetery. Furthermore, this kit is observed only at Ashkelon; it does not appear to be a phenomenon of the wider Levant.

Bloch-Smith (1992: 144) records variances between grave goods found in the Judahite highlands and those found in other, lowland areas. The grave goods found in these two areas scarcely differ, and even change in the same ways over time. For example, toggle pins are common in both lowland and highland burials of the twelfth and eleventh centuries, but disappear in both areas in the tenth through sixth centuries. Two of the major differences she observed between lowland and highland burials in the tenth to sixth century can no longer be said to be in evidence. Bloch-Smith reported that scarabs and blades or arrowheads were found only in highland burials during this period. However, both were found at Wadi Fidan 40.

As Bloch-Smith (1992: 81-86) notes, beads and amulets are particularly important in burial contexts in the Levant. She cites the unusually impressive example of two silver scrolls bearing variants of the priestly benediction, epigraphically dated to the mid-seventh century found, in Ketef Hinnom Cave 24 (Barkay 1986: 29-30; Barkay 1992). An analysis of these items at Wadi Fidan 40 and their cultural meanings will be found in Chapter 6.

MONUMENTALITY

Possibly the most important problem with these forms of classification is that they deal primarily with the way the body of the deceased is encased rather than with how the individual or group is visibly memorialized. Cave burials and bench tomb burials leave a

noticeable mark on the landscape which can be pointed out in the case of land disputes and, like any shrine, serve as a perpetual reminder to the living. The other types of burials described here, however, are categorized by attributes which cannot be observed and noted by posterity as easily. Cremation burials outside of urns often document a single event in time rather than a perpetual memorial. Cist graves, anthropomorphic coffins, bathtub coffins, cremation burials in urns, and jar burials are all described based upon attributes visible only after excavation, and pit burials are defined based on the *lack* of other attributes.

Returning to the example of modern grave liners, great time and expense is lavished in constructing subterranean edifices that the general public does not know exist and which play no part in the public discourse surrounding memorialization. Some of these are so elaborate that they consist of two-storied boxes with interior intermediate lids, and sometimes two liners are stacked upon each other, to allow multiple individuals of the same family to be buried in the same grave. There is a great deal of variety in these liners even in national cemeteries which tightly control above-ground markers. In modern society, these liners primarily serve the practical purpose of preventing grave-sinking and thereby maintaining cemetery grounds, and are primarily functional (Heimbuch et al. 1980). These vaults cross-cut social identities in a way that above-ground markers do not.

Memoralization of the dead is an important way of establishing land claims by the living. Specialized places of interment tend to appear with increased competition over resources (Saxe 1970; Saxe and Gall 1977). Colin Renfrew (1976) has argued that the sudden appearance of megalithic tombs in Europe might be explained as territorial

markers and centers of ritual activity. While not entirely refuting Renfrew's claims, Ian Hodder (1984) has noted that such an explanation is insufficient. Particular historical conditions must also be taken into account.

A tomb need not necessarily be the actual tomb of an ancestor for it to play a role in both cementing land rights and serving as a center for ritual activity. In Geometric Greece (*ca.* 900-700 BCE), intensification of land use led to both the discovery of Bronze Age tombs and increased competition over land. As these earlier tombs were discovered, they were said to be those of ancestors or culture heroes, strengthening the land claims of their discoverers (Snodgrass 1980). Gunnar Lehmann (2003: 122) has suggested similar processes may have been at work in Iron Age Judah, "where tombs of ancestors, judges, and patriarchs were revered."

In the same way, tombs fictively ascribed to culture heroes serve to cement society as a whole. The magnificent tomb of Cyrus of Persia came to be associated instead with Bathsheba, the mother of King Solomon. It was converted into a Muslim shrine, still active in the early twentieth century, and surrounded by a Muslim cemetery postdating Cyrus by millennia (Byron 1937: 190). Similarly, by the early twentieth century a synagogue grew up at a tomb in Sheikh Jarrah in the Kedron Valley believed to be that of Second Temple period high priest Simon the Just (described in Sirach 50). Inscriptions, however, show this to be the tomb of a Roman woman named Julia Sabina (Hanauer 1907: 54). The meeting place over this grave became the center of a political dispute when the Jerusalem municipality decided to build a new parking lot near the site, an act local Palestinians claimed was meant to increase Jewish control over East Jerusalem (Hasson 2010). Both these tombs gained their force as being those of culture

heroes and became centers of worship, and therefore become foci of the societal cohesion worship brings. They both also might be used as justification for possession of the surrounding land.

Grave markers are among the most important means of establishing group identity at cemeteries. Regrettably, they seldom survive due to erosion and human activity. According to the preliminary reports (Green 2006, 2008, 2010, in press; Pritchard 1980; Tubb 1986, 1988a, 1988b, 1990, 1995; Tubb and Dorrell 1991, 1993, 1994; Tubb et al. 1996, 1997), some of the graves excavated by the British Museum at Tell es-Sa'idiyeh were marked with stones, but no further detail has yet been provided. A total of five Egyptian funerary stelae have been reported in the Levant, four of them from Deir el-Balah (Ventura 1987). Phoenician stelae, largely cubic stone blocks but sometimes inscribed with Phoenician letters or symbolic motifs appear at Tyre-Al-Bass, in modern Lebanon, least by the ninth century (Aubet 2010). Grave markers in the form of ancestor images appear in funerary contexts in both North and South Arabia even earlier (Schiettecatte 2010). These artifacts will be examined in greater detail in relation to the Wadi Fidan 40 cemetery in Chapter 5.

One of the most impressive claims of mortuary ritual in antiquity is Yassine's (1983) assertion that, at Tell el Mazar some tombs may have been located within a temple complex which remained a center of cult. In addition, the fifty centimeters of ash, potsherds, and animal bones overlying the graves suggest that rituals may have taken place over them. He tells us these were shaft tombs, so the bodies of the dead could not have been accessed during the rituals themselves. However, this article is difficult to correlate with his later site report (Yassine 1984a). In the former, he tells us the shaft

grave he has in mind dates to the eighth century, while in the latter work he tells us that the graves date mainly to the Iron IIC, placing it in the fifth century. According to the later report, the sanctuary itself seems to have been abandoned in the tenth century. Yassine still suggests that this spot was picked for the burials because it was known as a holy spot, but it is unclear if the rituals continued to be practiced at this spot over the dead.

BURIAL IN IRON AGE EDOM

To understand how Edomite ethnicity is expressed in mortuary practices, an examination of burial data Edom as a whole is necessary. However, such a study is crippled by the lack of comparative examples. Excavated burials at Iron Age sites in Edom are rare, and in general poorly published. Furthermore, those burials found at the important Edomite sites of Busayra and Tawilan usually postdate the sites' primary period of settlement, and in many cases are not even Iron Age in date. Nevertheless, it is important to consider the burials at these sites, as well as the lesser known Iron Age burial at Tell el-Kheleifeh and the as-yet unpublished tomb burials at Wadi Fidan 4 and those looted at Wadi Fidan 45, and the cemeteries and graves in the region known ony from surface examination before considering the cemetery at Wadi Fidan 40.

At Busayra, generally equated with Biblical Bosrah and therefore the most important city in ancient Edom, two burials were reported. One of these consisted of multiple individuals. Excavation notebooks reveal Burial 20.4.4 in Area A consisted of a "small human: also bones for three skeletons and three skulls, upper limbs, lower limbs, trunk, wrist, molar teeth, and wisdom teeth" (qtd. in Bienkowski 2002: 93), laid to rest next to Wall 83, cutting through a plaster floor. It clearly postdates the use of the Iron

Age buildings of Area A, though its exact date is uncertain. It may or may not be "Edomite."

A second burial at Buseirah is more likely Iron Age in date, but was even less thoroughly recorded. Sedman (2002: 415) notes "Crystal Bennett's personal notebook dated 4 July 1972 contained the following entry: 'Tunnel is a burial with earrings'. This context was numbered as E.1.3 cave, but was not properly recorded." Photographs were taken showing bones in a cave, but the Square E1 notebooks contain no data regarding a cave or burial (Bienkowski 2002: 42). Seven copper or copper alloy objects were recovered from the burial, including one 'mulberry'-type earring, one 'boat-shaped' earring with applied balls, and fragments of what are probably other earrings. The more complete earrings have parallels at eighth to fifth century sites in Cisjordan (Sedman 2002: 414-416).

Numerous burials were uncovered at Tawilan; indeed, of Bennett's six excavation areas, four (I, II, IV, and VI) yielded interments. However, most and perhaps all of these burials post-date the Edomite occupation of the site, and many were not adequately recorded. In Area I, "some child burials" were found. Details are lacking, though the two which were photographed were "below topsoil and large stones, which might imply a late burial contemporary with those [post-abandonment burials] in Area II" (Bennett and Bienkowski 1995: 19). A skeleton was found buried with Nabatean potsherds in Pit 5.2 in the Area IV test trench, and a child's skeleton, also associated with Nabatean or Roman potsherds, was found in locus VI.1.7 of Area VI (Bennett and Bienkowski 1995: 51). Most interesting, however, are the burials of Area II.

In Tawilan Area II, two groupings of burials were excavated. The excavation report notes that thirty-six burials were excavated. It appears from Table 3.1 (Petocz 1995: 34) that the bones of a child and an adult in the fill of pit F.44 and two burial pits, 4.6 and 4.7, in Trench 4 are excluded from this total. Full details are only provided on twenty-nine of the burials. These twenty-nine can be divided into two distinct groups. Twenty-seven are clustered into Group 1, all of which were oriented with their heads to the west, lying on the right sides, some covered with capstones. Some of these burials included metal bracelets and beads, apparently including stone beads, cowry beads, and *Conus spp.* beads, though complete information has not been published on grave goods. These burials clearly post-date the site occupation, given that many of them damage architecture in the area. They are interred in post-occupational fill of Phase iv that included the famous Tawilan cuneiform tablet. Burial XXVI included a cooking pot, identified by Bennett as Roman, though this was vandalized before it was collected or photographed. The burials are sealed by Mamluke activity in Phase vi (Bennett and Bienkowski 1995: 327-329; Petocz 1995: 32-33; Reece 1995: 93, 95). In short, the Group 1 burials date from sometime between abandonment and the Mamluke period, and are likely Roman.

Area II also contained a second group of burials, the story of which is less straight-forward. Group 2 consists of two burials, lying face-upwards with heads to the southwest, buried beneath capstones. These were buried to the south of Room B of the Area's Northern Complex, the older of the Area's two building complexes. No grave goods were found with Burial XXIII, an adult. Burial XXV was found with fragments of a bronze earring and part of a cosmetic palette. An oil lamp fragment, an Iron Age rim

sherd and a Hellenistic sherd were said to have been found in the burial pit. Years after the grave was excavated, a cache of eighteen gold rings and earrings and 334 or 336 carnelian beads inside a bronze bowl covered with a coarse ware sherd was found under a stone near Burial XXV (Bennett 1984: 4; Petocz 1995: 33-35). Initial analysis of the by Rachel Maxwell-Hyslop (1984) indicated that the hoard as a whole was not out of keeping with a 6^{th}-5^{th} century date. However, subsequent analysis of the jewelry by Jack Ogden (1995) suggested that the hoard contained pieces that all appeared to stylistically belong to the tenth century BCE, and that some of the pieces may have even been produced in the same workshop. Dani Petocz, area supervisor of the 1982 excavation team, believed the hoard was not associated with Burial XXV. He argued that it was located outside of the burial pit, and suggested that, even if an association is accepted with Burial XXV, "the jewellery has been dated to the 10th-9th centuries BC, much earlier than the late Iron II/ Persian context of Phase V in which it is found" (Petocz 1995: 35) and therefore must be heirlooms. However, the presence of this early jewelry, coupled with the possible longevity of some Edomite pottery forms recently established by Smith and Levy (2008; this volume – Chapter 4), may necessitate a rethinking of the dating of Burial XXV and the Northern Complex. Whatever the case, and intriguing as the Group 2 burials are, their problematic dating makes them of little value to a study of Edomite burial.

At Tell el-Kheleifeh, Glueck (1940:9) uncovered what he described as a "mastabah-like" grave "sunk partly into the floor-level of the dry moat" between the two offset-inset fortification walls. Glueck believed it to be a single burial. A millstone, a mortar, and a cosmetic palette fragment, were recovered. In addition, beside the skull

fragments, "two three-handled jars, the only ones of the type recovered in the excavations. Inside one of them was a delicate little bowl, containing bones of a small bird, a small animal, and a small fish" (Glueck 1940: 10). Glueck thought that the burial only shortly postdated the fortress, even suggesting that the entombed was the fortress' builder. Unfortunately, however, the burial was only preliminarily published, and its pottery was not presented. Furthermore, the fact that Tell el-Kheleifeh cannot be said to be an exclusively Edomite site makes this burial of limited use to this study.

Wadi Fidan 45 is a small cemetery near Wadi Fidan 40. When first recorded in 1998, it was described as a "Series of five tombs" that could not be dated (Levy et al. 2001: 175). The site, extending over an area of ca. 75 m^2. consists of a tumulus that appears to cover a grave and five cists arranged along the cliff-face on the eastern end of the same landform on which Wadi Fidan 40 is located. The site has a commanding view of the Ain Fidan and Wadi Fidan. Unfortunately, the site was looted sometime before 2009.

During the 2009 ELRAP field season, the looters' backdirt was sieved and the site more adequately surveyed. No other excavations were conducted at the site. The cists all appeared to be completely emptied, but the tumulus may yield further data if excavated. Cist 1 measured 0.76 m long, 0.54 m wide, and 0.38 m deep and was constructed of six sandstone side slabs. It was oriented roughly east-west. Cist 2 measured 1.20 m. long and 0.93 m. wide, and 0.21 m. deep. Three side slabs remained in place, and three sandstone slabs, apparently capstone fragments, were observed in the looters' backdirt. The exposed portion of Cist 3 measured 0.58 m. long by 0.54 m. wide by 0.12 meters deep, but it may have been incompletely exposed. Cist 4 was almost entirely eroded

away, but one sandstone side slab remained in place measuring 0.47 meters long, 0.19 meters wide, and 0.08 meters deep. Finally, Cist 5 was also heavily eroded, but may have been incompletely exposed. What was visible measured 0.21 m. long, 0.07 m. wide, and 0.04 meters deep.

The looters' backdirt from all these cists was sieved. The only artifacts found were two stone flakes in the backdirt next to Cist 1 and iron fragments that may be part of a bracelet in the backdirt beside Cist 2.

The tumulus was made up of a ring of stones, two to three stones wide. measuring roughly 3 m. in diameter (Fig. 2.9). The east side, facing the wadi, is only one stone high, but the west side, away from the wadi, is three stones high. One flint core was found next to the west side of the tumulus. Thirty-two beads were recovered from the backdirt around the tumulus, including thirteen ostrich eggshell disc beads, a flint blade-flake drilled to make a pendant, a red stone cylinder disc and a red stone bead fragment that could not be identified as to shape, three blue and white agate beads (two short barrels and the third too small a fragment to identify), a cowry with the back removed, a univalve cut along its axis to form a disc bead, a white and green cupric disc bead, a yellow apatite short cylinder bead, and a red stone short cylinder bead. Six blue glass short barrel beads were also recovered at the site. Two copper beads were found, one of them formed by beating a single copper sheet into a tubular form and the other being too corroded to describe. A small amount of bone and one tooth fragment were also recovered.



Figure 2.9: The Wadi Fidan 45 tumulus, facing east.

Wadi Fidan 4 is primarily an Early Bronze I village and metal-working site located on the south bank of Wadi Fidan, opposite Wadi Fidan 40. Wadi Fidan 4 was believed by its first excavators to be the town connected with the Wadi Fidan 40 cemetery (Adams and Genz 1995). When first excavated by the German Mining Museum and the Department of Antiquities of Jordan, lead by Russell Adams and Hermann Genz (1995), the site was believed to be Chalcolithic, but later studies show it to be Early Bronze (Levy et al. 2001). Three tumuli were noted at the site, noticeably later in date than the occupation phase (Adams and Genz 1995: 8). Salvage excavations during 2003 lead by Levy and Najjar for the joint University of California, San Diego-Department of Antiquities of Jordan team revealed that these tumuli were indeed Iron Age tombs. UCSD excavated one of these tombs at the beginning of the season, while

the DOAJ excavated the other two later. None of these materials has been published, and only the results of the excavation of Tomb 1 are presently available to the authors.

Tomb 1 at Wadi Fidan 4 consisted of a (ca. 25 m^2) cairn immediately beneath which were revealed the capstones of a cist grave (Fig. 2.10). Within this grave were a total of eight individuals. The first skeleton (Locus 605) was an adult buried in an extended position with its head to the south; no grave goods were found in association with this burial. The second (Locus 663) was a disarticulated, somewhat fragmentary burial, also without grave goods. The third individual (Locus 701) was an articulated adult burial in a semi-flexed position with its head to the north, and found wearing two copper or bronze anklets (EDM 50680, 50681)—one on each leg—and associated with a small, probably Egyptian figurine pendant pierced through the ears (Fig. 2.11, 2.12; EDM 50700; Münger, in press), three univalve shell beads cut along their axes, and one shell pierced opposite its natural opening (EDM 40031, 50700, 50747), five cowries with their backs removed (EDM 50747, 50748, 50749, 50750, 50751, 50768). The fourth burial consists of a semi-flexed adult oriented to the north, lying on the left side facing east (Fig. 2.10; Locus 720). Next to this adult was found the poorly-preserved remains of a juvenile in a flexed position at the adult's midsection with head pointing north, facing the adult, and, between this juvenile and the cist wall, a younger infant in an extended position (Fig. 2.10; Locus 721), associated with a cowry with the back removed (EDM 50863). Beneath the cranium of the juvenile were found a copper or copper alloy earring (Fig. 2.13; EDM 50808) and what appears to be a necklace consisting of an Egyptian seal (Fig. 2.14, 2.15; EDM 50809), a pearl fragment, twenty carnelian axe- or adze-shaped beads, one dark red jasper axe- or adze-shaped bead (Fig. 2.16), one dark brown bedded

stone bead, one red-orange carnelian bead, four cowry beads and three other shell beads, two white alabaster beads, one opaque yellow, probably apatite bead, and seventeen very delicate, tiny (less than three millimeters, with most being less than two millimeters in circumference) white, probably shell beads (EDM 50810). The axe- or adze-shaped beads have parallels in a single broken bead from Wadi Fidan 40, Grave 14 (Fig. 6.89), a bead from Wadi Fidan 40, Grave 343 (EDM 70060), and Tell el Ajjul, Tomb 1152 (Fig. 6.91; Petrie 1932: Pl. XXV). The seventh individual (Locus 736) is an adult, apparently oriented with the head to the north in a semiflexed position but poorly preserved, found with only two cowries with the backs removed (EDM 51086, 51088) and two opaque white alabaster beads (EDM 50888). The eighth skeleton is an adult (Locus 758), again oriented with the head to the north in a semiflexed position. This last skeleton was found in association with a scarab (Figs. 2.17-2.18; EDM 40046), three cowries with the backs removed, three univalve shells cut along their axes to form disc beads, one small gray siltstone bead (EDM 51101, 51123, 51167), a carnelian bead, two yellow apatite beads, a small white stone bead (EDM 51185), a carnelian short barrel bead (EDM 51202-A), a copper or copper alloy earring (Fig. 2.19; EDM 40043), and fragments of two iron bracelets, one of which was found on each wrist (EDM 51124, 51168). In short, the first burial encountered and one small infant were found lying extended, while the rest of the burials, when their positions could be ascertained, were semi-flexed. All the individuals except the first were buried with heads to the north; the topmost individual's head was pointed south. Grave goods ranged from nothing to include shell and stone beads, copper anklets, iron bracelets, a copper leech earring, an Egyptian seal, a scarab, and a figurine.

The seal dates from the LBIIA to the Iron IA, while the scarab dates to about the tenth century (Münger in press).



Figure 2.10: Wadi Fidan 4, Tomb 1, individuals 4, 5, and 6.

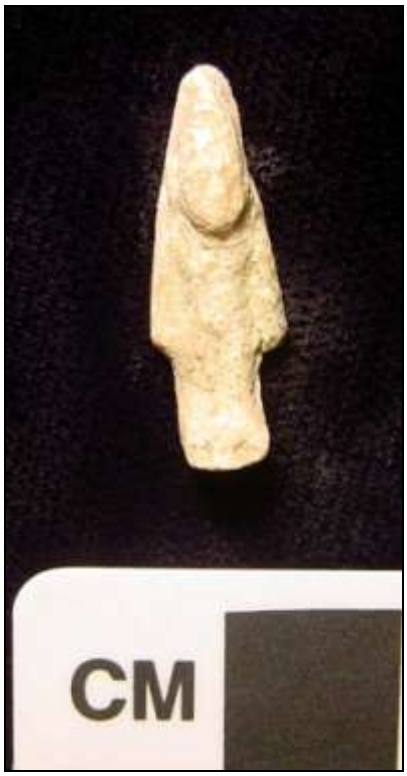


Figure 2.11: The figurine from Wadi Fidan 4, Tomb 1, Locus 701 (EDM 50700).



Figure 2.12: The figurine from Wadi Fidan 4, Tomb 1, Locus 701 (EDM 50700), side view.



Figure 2.13: The copper or copper alloy earring from Wadi Fidan 4, Tomb 1, Locus 720 (EDM 50808).



Figure 2.14: The Egyptian seal from Wadi Fidan 4, Tomb 1, Locus 720 (EDM 50809).



Figure 2.15: Opposite side of the Egyptian seal from Wadi Fidan 4, Tomb 1, Locus 720 (EDM 50809).

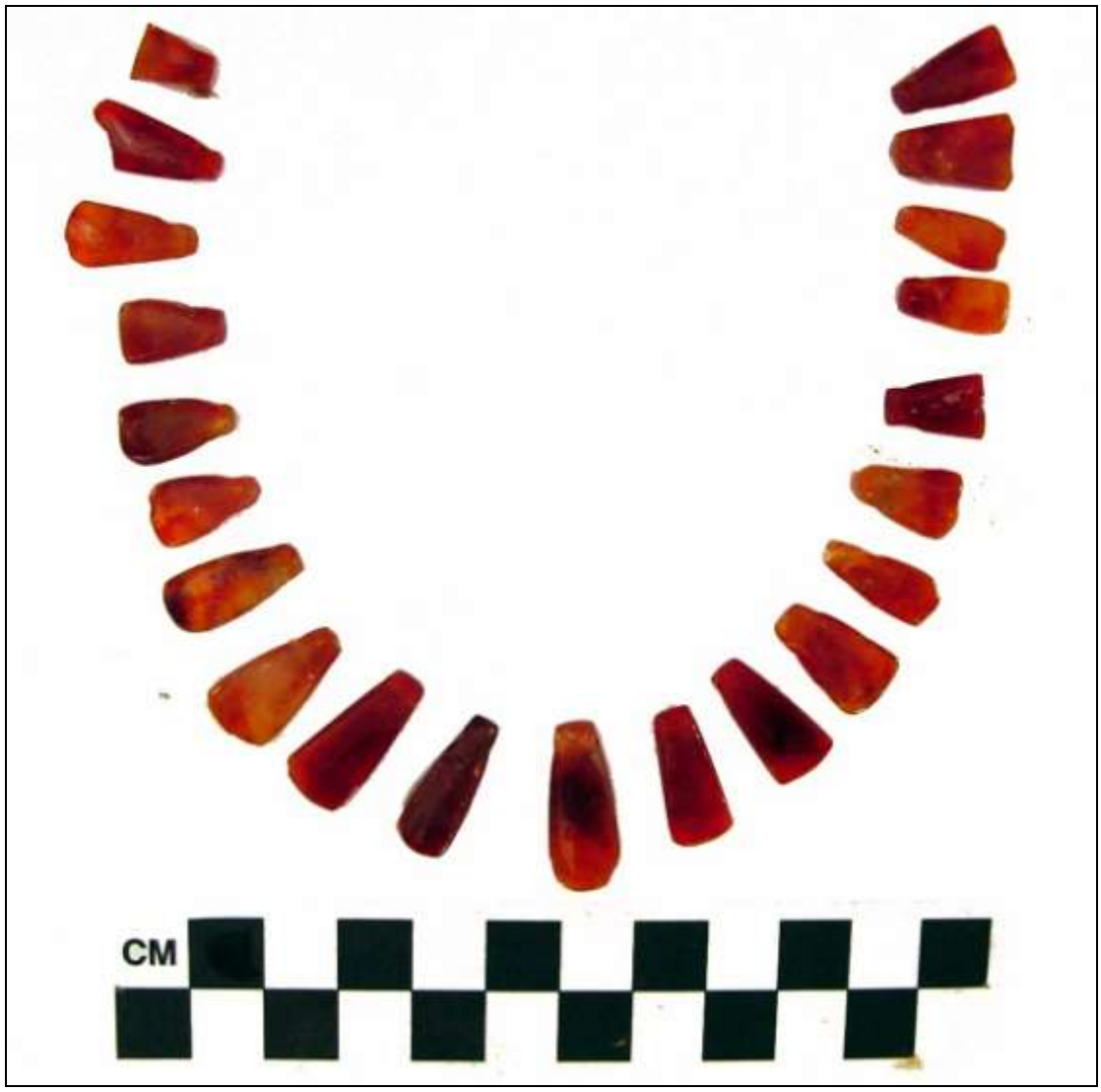


Figure 2.16: The carnelian and jasper adze-shaped beads from Wadi Fidan 4, Tomb 1, Locus 720 (EDM 50810).

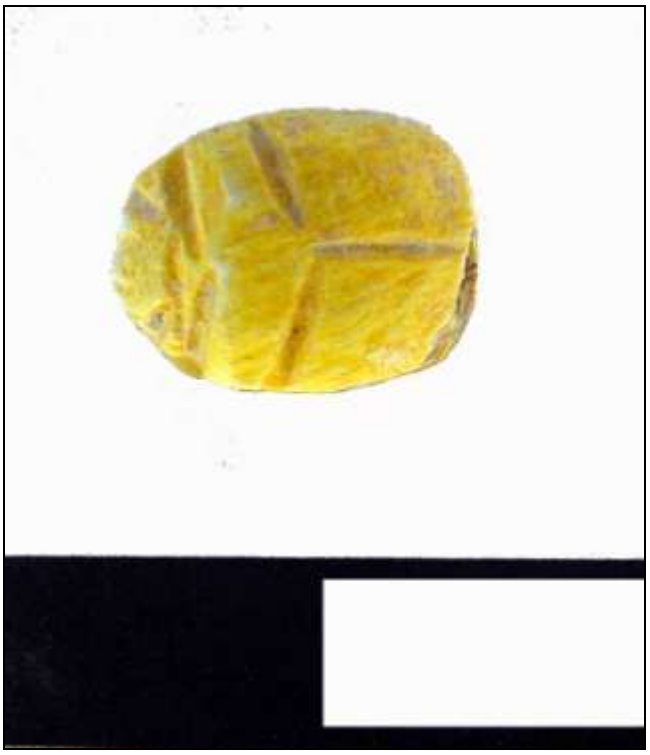


Figure 2.17: The scarab from Wadi Fidan 4, Tomb 1, Locus 758 (EDM 40046).



Figure 2.18: The scarab from Wadi Fidan 4, Tomb 1, Locus 758 (EDM 40046).



Figure 2.19: The copper leech earring from Wadi Fidan 4, Tomb 1, Locus 758 (EDM 40043).

Other burials and cemeteries are known only from survey. The Wadi el-Hasa Survey recorded five sites with graves and Iron Age pottery (WHS sites 10, 42, 86, 604, 644). The Southern Ghors/Northeast Arabah Survey documented nineteen sites with graves and Iron Age pottery (SGNAS sites 5, 49, 62, 69, 72, 79, 108, 111, 124, 127, 160, 161, 162, 168, 171, 187, 188, 192, and 196). Thirty-three sites with both Iron Age pottery and graves or possible graves were documented by the Tafila-Busayra Archaeological Survey, including the important site Sela' (TBAS sites 021, 036, 049, 052, 056, 059, 062, 063, 068, 072, 073, 075, 079, 085, 089, 121, 125, 134 (Sela'), 142, 145, 146, 158, 160, 161, 167, 169, 173, 175, 176, 177, 217, 248, and 260; MacDonald et

al. 2004). The ELRAP has added more graves to these totals (Fig. 2.20). Eight cemeteries or graves with Iron Age pottery were documented by the Wadi al-Jariya Survey (WJS 24, 35, 60, 61, 515, 520, 521, 524), five in the Wadi al-Gwaybe Survey (WAG 562, 564, 582, 590, 639), and nine in the Wadi Fidan (WFD 4, 10, 15b, 40, 45, 54, 62, 89, 123). Unfortunately, it was seldom clear whether the graves at any of these sites were cotemporaneous with the pottery, and in many cases little detail was recorded on the graves.



Figure 2.4: Graves and cemeteries recorded by the Edom Lowlands Regional Archaeology Project.

In summary, there are few excavated Iron Age burials in Edom to which to compare Wadi Fidan 40, and none that are unarguably Edomite. Though none of these burials are included in her analysis, they all follow what Elizabeth Bloch-Smith (1992) defines as an Iron Age lowland/coastal Levantine burial pattern, in mostly individual cist

graves rather than the communual rock-hewn graves of the Judahite highlands. While Busayra and Tawilan each have burials, these cannot be firmly dated to the Iron Age. Tell el-Kheleifeh has one documented burial in a mudbrick tomb which seems to date to the later Iron Age habitation at the site and may or may not belong to an Edomite individual. Wadi Fidan 4 and 45 both visible from and very close to Wadi Fidan 40, provide the best comparative material both in terms of date and in similarity of the material culture.

CONCLUSIONS

Burial is one of the anthropological archaeologist's greatest tools for analyzing the idealized structure of past human societies. Vertical rank is particularly visible archaeologically. A formal cemetery itself tends to be a sign of social stratification, and individuals buried with great wealth (including items which required large amounts of labor to construct) are idealized as particularly important in the society. When children are buried with such items, the wealth out of proportion to life accomplishments suggests inborn, ascribed status.

Horizontal distinctions are more difficult to see archaeologically. The more obvious to determine are gender distinctions. Age-set distinctions are also visible, but obscure other aspects of horizontal differentiation, such as ethnic distinctions. Nevertheless, grave goods, particularly items of personal adornment and those which reflect foodways, can be analyzed to examine these differences. This will be discussed in further length in Chapter 6.

Burial practices in the Levant consist of eight basic variants, identified by Bloch-Smith (1992). Five have been associated with national or ethnic groups. These include

one form of jar burial—the double pithos burial—anthropoid coffin burials, bathtub coffin burials, cremation burials, and bench tomb burials. Bench tombs tend to be identified with Judahite cultural identity, and this is largely supported by their locations in the Judahite highlands. However, these tombs are also found in other karstic regions, such as around Amman. Cremation burials are often associated with the Philistines, though they are rare even among Philistine burials and Bienkowski (1982) has shown that these cremations have many Near Eastern predecessors. Anthropoid coffin burials were long associated with the Philistines, but these are imitations of Egyptian practices and are not closely associated with the Philistine region. Bathtub coffin burials appear after Assyrian domination of the region. Neither anthropomorphic nor bathtub coffins are indicative of foreigners, as these artifacts were likely used both by foreigners and by elites emulating foreign burial practices. Finally, the double pithos burial has been associated with numerous ethnic groups, but none has withstood scrutiny. There is no one to one association between burial disposition and ethnic identity.

The practice of burial in cist graves—possibly imported from Egypt during the Bronze Age, but practically endemic to the southern Levant by this time—is seen at a number of sites, with its closest parallels at settlement sites in the Jordan Valley. This burial architecture has not yet been associated with any particular ethnic group in the Levant. Its use is likely practical in addition to cultural. However, it is seen in opposition to Judahite bench tomb burial. Cist burial is one of the numerous lowland/Cisjordanian burial types noted by Bloch-Smith, and does not allow for continued access to the human remains. This does not mean that ritual activity did not take place at the tomb, but that it would have been a different type of ritual activity.

A proper analysis of Edomite burial practices is limited at this time due to the lack of excavated burials. All or nearly all of the burials at Tawilan postdate the Edomite occupation. The few graves at Buseirah are underdocumented. The grave at Tell el-Kheleifeh appears to be Iron Age but may not be Edomite. The graves at Wadi Fidan 4 and Wadi Fidan 45, being both Iron Age and relatively well documented, provide the best comparative material, but are so close to Wadi Fidan 40 spatially that they no doubt represent the same subset of the Edomite population as Wadi Fidan 40 itself. Thus, while burial patterns in Iron Age Fidan can now be adequately described, a presentation of the totality of Edomite burial practices awaits further investigation.

CHAPTER 3: SOCIAL STRUCTURE, INEQUALITY, AND PASTORALISM

INTRODUCTION

Anthropological archaeology relies in large part upon cross-cultural analogy to understand the past. This is not to say that modern societies can be said to be direct reflections, and still less continuations, of past societies. However, these analogies, when applied with caution, can enrich our understanding of the archaeological record. In the case of Edom, as we have seen in Chapter 1, an understanding of the workings of pastoral nomadic societies is critical to understanding the region's ancient inhabitants. Because of its nature as a large mortuary site with cultic features, saints' shrines used by pastoral peoples are considered here. Analogies can then be carefully drawn between the pilgrimage patterns of pastoral peoples and the remains at Wadi Fidan 40.

THE FAYNAN REGION

Archaeologist George Livingston Robinson (1930: 188) described the Faynan region in his characterization of the land of Edom as follows:

> Perhaps the most striking feature of this entire [Arabah] valley is a long low ridge of reddish porphyry rocks, or as Hull [1908: 130[2]] describes it, 'of red and gray granite with dikes of porphyry,' known as Samarat al-Fiddân. It extends north and south, on the eastern side of the plain, and rises to the maximum height of eight hundred feet above the bottom of the valley. Behind this ridge, whose presence just here is difficult to account for, lies a sort of Arabian Shephelah, unbroken plain, or tableland, where the Arabs of the district frequently pitch their tents. Great sand dunes, in

[2] Robinson misquotes and miscites Hull. The actual quotation reads, "The more ancient rocks which lie at the base of the Moabite and Edomite escarpment never reach the surface along the W. side of the Wady el-Arabah. These consist of red granite and gneiss, various metamorphic schists, seamed by dykes of basalt, diorite, and porphyry" (Hull 1908: 131). Hull does not describe the Faynan region.

> the vicinity of this ridge, form the watershed of the valley. The saddle . . . is called by the Arabs ar-Rishi, or as-Sathi, 'the roof.'

Although this was written in the first third of the twentieth century, this is probably much as the Faynan region appeared in the Iron Age. It is this red ridge, also known as the Jabal Hamrat Fidan, which gave the name to the former Jabal Hamrat Fidan Project. The work of this Project, and its successor, the Edom Lowlands Regional Archaeology Project, has shown that much the same land use pattern existed in the Iron Age, where environmental conditions make pastoralism a logical choice.

The climate in Fidan today is such that dry farming is not a viable option. Average annual rainfall is about 63 mm per year. Most precipitation falls between December and March. Nevertheless, the area contains abundant springs, such as Ain al-Fidan, near Wadi Fidan 40. These springs provide both water for ovicaprids and for garden cultivation and arboriculture (Palmer 2007a).

But this area is itself at the intersection of two environmental zones—the Arabian Desert and the Edomite highlands. Rainfall on the Edomite and Moabite plateaux is much heavier, at over 250 mm per year around Karak (Palmer et al. 2007a: 27). Located at this ecotone, apparently without human competition, the nomads could make use of both environmental zones.

These environmental conditions are suited to what Anatoly Khazanov calls "Near Eastern type" pastoral nomadism, involving camel and goat herding. In the Arabian Desert regions, these environmental conditions lead to unstable migratory patterns, designed to make the most use out of pasturage. For example, Musil (1928: 146-147) describes the importance of look-outs watching for lightening in the desert. When it is

seen in years of want, and elders judge it a sign of sufficient rainfall, the herds must be quickly be moved to make use of the transient grass that will spring up but quickly wither. The rainfall in the desert regions of the Near East cannot be easily predicted, and therefore migration patterns are unstable. But the springs in the Faynan region provide for reliable water, allowing also for goat herding.

Pastoral nomadism is a mode of production which relies upon animal husbandry, and the raising of these animals in turn requires transhumance. This mode of production brings about a way-of-life which is dependent upon settled peoples for whatever goods cannot be obtained from the animals raised, and also spawns a particular archaeological signature that is difficult to trace. However, modern pastoral nomadism in the Faynan region is seldom pure. In pure pastoral nomadism, the majority of the population is involved in migrations, and plant cultivation is not a major part of the economy (Khazanov 1994a). At Faynan, plant cultivation, goat husbandry, and tourism combine to create the local economy. In the past, goat and camel husbandry and copper production were the economic mainstays.

ARCHAEOLOGY AND PASTORAL NOMADISM

Much has been made of the purported nomadic history of the Iron Age peoples of the southern Levant. The ancient Israelites particularly had an established history that their ancestors were pastoral nomads who ranged from Mesopotamia to Canaan before settling in Egypt (Homan 2002), though the reality of these traditions has often been challenged (Hiebert 2009). As we have seen in Chapter 1, the scanty evidence of Edom's history is also tied in to Israel's allegedly nomadic past, and Egyptian records describe pastoralists in the land of Edom.

Finkelstein (1995) has even argued that the most characteristic southern Levantine house form, the courtyard house, derives from the Bedouin tent. These structures—rooms, often numbering four surrounding a central court—have been found across Israel and now at Khirbat en-Nahas, and Finkelstein argues that their groundplans are based on Bedouin encampments. However, these courtyard structures not necessarily evolved from Bedouin camps, which often are not organized in this fashion. Indeed, in a study of aerial photos of pre-1948 camps in the Negev, "the 118 tent-camps (with a total number of 605 tents), which we have observed are all arranged in rows, and not a single one displays an enclosed pattern" (Yekutieli 2007: 134).

Detecting nomads in the archaeological record is a challenge, and whether or not it is even possible is a matter of debate. Steve Rosen (1992) has argued that human beings leave remains behind in all circumstances. Finkelstein and Perevolotsky (1990; Finkelstein 1992, 1995), meanwhile, have argued that the Negev and Sinai Bedouin of the nineteenth century are evidence that vast numbers of nomads can occupy an area and leave no identifiable trace. Wadi Fidan 40 is evidence that a medium ground is in fact true—nomads do in fact leave traces, but traces which are difficult to date.

Finkelstein (1995: 15-21) has identified a cluster of features which he labels the "material culture of desert dwellers" as opposed to "evidence for the activity of out-of-the-desert foreign powers who invested in the desert because of economic, political, military, or religious interests." Mines, forts, and monasteries are three features he places in the second category. Features he classes as genuinely of the desert include hunting installations, cemeteries, cult places, rock drawings and inscriptions, and finally, at times settlements.

Unfortunately, Finkelstein's is a false dichotomy. First, it presumes that desert dwellers are not integrated into the same cultural systems that include mines, forts, and monasteries. In actuality, pastoral nomads cannot live independently of the same cultures that produce these outposts, and they often take part in the production and continuation of these nodes. But also, each of these features of "desert dwellers" is also constructed by sedentary people.

For example, one of the archaeological forms considered particularly characteristic of pastoral nomads is the desert kite, the hunting installations mentioned by Finkelstein. Named by pilots who believed they looked like children's kites from the air, these constructions of stone lines and enclosures were used to trap wild animals, particularly gazelles, in such a way that they might be easily killed in the context of a group hunt.

Alois Musil describes their use among the Rwala Bedouin:

> In al-Manazer the gazelles are driven into extensive enclosures. A wall about one and a half meters high, shaped like a figure eight, is built of stone without mortar. The lower loop is only half finished. Where the two loops meet, a narrow opening, *tenijje* (or *zejz*), is left. At several places portions of the wall enclosing the upper loop are a little lower than the rest of the wall. At each of these places a hole two or three meters deep is dug outside the enclosure. The flock of gazelles is cautiously driven into the lower uncompleted loop. This is soon accomplished, because the two walls are about a thousand paces distant one from the other. The gazelles at first advance quietly, but later on, becoming scared, they run along the two walls and try to penetrate as rapidly as possible through the narrow opening into the upper and completely closed loop. As soon as they run through, the narrow opening is blocked up and a greyhound, *sluke*, attacks the gazelles. The frightened animals run round the wall, jump across it where it is lowest, and fall into the pits that have been dug outside. It is said that the gazelles even dream of the narrow opening, *zejz*, through which they rush to certain destruction.
>
> (Musil 1928: 26-27)

However, Burkhardt describes their use by sedentary peoples:

> On the Eastern frontiers of Syria are several places allotted for the hunting of gazelles . . . An open space in the plain, of about one mile and half square, is enclosed on three sides by a wall of loose stones, too high for the gazelles to leap over. In different parts of this wall gaps are purposely left, and near each gap a deep ditch is made on the outside. The enclosed space is situated near some rivulet or spring to which in summer the gazelles resort. When the hunting is to begin, many peasants assemble and watch till they see a herd of gazelles advancing from a distance towards the enclose, into which they drive them; the gazelles, frightened by the shouts of these people, and the discharge of fire-arms, endeavour to leap over the wall, but can only effect this at the gaps, where they fall into the ditch outside, and are easily taken, sometimes by hundreds. The chief of the herd always leaps first, and others follow him one by one. The gazelles thus taken are immediately killed, and their flesh sold to the Arabs and neighbouring *Fellahs.*
>
> (Burckhardt 1831: 220-221)

Burkhardt describes structures built by sedentary townspeople in the Black Desert, the very area Finkelstein mentions the existence of nomads' kites. And in Burckhardt's example, the *fellahin* actually sell the resulting meat to nomads. Even if these features were found and recorded, it is unlikely that they could be dated or properly ascribed to nomadic or settled groups.

Work by Carol Palmer and her associates (Palmer et al. 2007b) in the Faynan region shows that the local Bedouin leave behind a wide variety of material remains. These include cleared spaces for tents (often with material such as gravel hauled in from elsewhere and scattered to make tent floors) which leave tent outlines in stone, stone-lined hearths and ash dumps, stone animal pens, stone platforms used in making *laban,* storage structures, and open-air mosques which are merely spaces demarcated by stones. Similar findings were made by E. B. Banning and Ilse Köhler-Rollefson (1992) in the Beidha region. The trouble with all of these features is that they are ephemeral. If they

are located in surveys, they are unlikely to be recorded, as they will often remain as only partial lines of stones. Finally, they are difficult to date, since these features typically lack any diagnostic artifacts often even the means for chemical dating.

PASTORALISM AND THE MEANS OF PRODUCTION

Pastoral nomadism, by definition, is an economic system. However, pastoral nomadism is not an independent mode of production; that is, it is imbedded in the framework of sedentary peoples. However, the particular kind of society in which a pastoralist finds himself is dictated by the means of production, for example, whether he is a goat or camel pastoralist, and in what particular environment he plies his trade.

Land use patterns and therefore land ownership and usufruct are determined by the nomadic lifestyle. Flocks tend to be individually owned, while land rights are communal. Grazing lands often overlap and wax and wane as herd sizes change, and usufruct often extends to otherwise off-limits, cultivated lands in off-seasons. But what are jealously guarded are not borders, but points and lines. Resources in the landscape such as wells, springs, and cisterns are particularly important, and "A tribe's summer wells mark the core of its territory" (Barfield 1993: 66). Ownership of routes is also important. For example, each major tribe in the Fars region of Iran has a traditional migratory route known as the *il-rah*, or "tribal road." However, different tribes might use the same lands during migrations along these routes (Barth 1961: 5).

Land ownership hardens when land rights are encroached upon, and among pastoral nomads this is often in connection with sedentary peoples. Often, these land rights become of particular importance when the nomads themselves begin to settle (Meir 1997). But in parallel to the occurrences in Faynan, nomads often assert their rights to

lands when sedentary peoples wish either to pass through, as in pilgrims' or goods' caravans, or to extract natural resources (Stewart 1986). Development of copper resources, for example, in a desert used by nomadic groups can suddenly lead to claims of exclusive land rights and the right to provide or control the provision of labor to such projects.

Pastoral nomadism by its nature is a specialization and therefore is dependent on other parts of the system for it to persist. As Burckhardt (1831: 239) notes, "It is the want of corn that obliges all Bedouins to keep up any intercourse with those who cultivate the soil; and it is a mistake to imagine that the Bedouins can ever be independent of the cultivators." Ernest Gellner (1969: 2) has also noted anthropologists' mistaken tendency to see among nomadism a sort of "'island' tribalism as the condition which has preceded the emergence of more complex, centralised and effective government." As nomadism branches out into camel herding, this is especially the case, because the best camel foraging involves penetration of the deep desert, which in turn takes the herders away from areas where other means of subsistence can be practiced. The fact that nomads' rely on sedentary populations has been made especially firmly in Anatoly Khazanov's (1984, 1994) Nomads and the Outside World. In many respects, his argument is that there is in fact no outside world—although they often scorn and sometimes rule the sedentary world, nomads are reliant upon their interactions with sedentaries for their very existence.

NOMADS AND TRADE

Pastoral nomads therefore rely on trade. In large part of course this is trade in the products produced by the animals they raise. In addition, pastoral nomads, because of

their very transhumance, are often in locations where they can take advantage of resources to supplement their herding. One side-job of the Bedouin of Syria often mentioned by Burckhardt (1831) is charcoal making and selling. The charcoal supply for the smelting operations in Faynan has long been a curious problem (Hauptmann 1986: 418). Archaeobotanical studies of charcoal taken from slag at Khirbat en-Nahas suggest Tamariscus spp., Acacia tortillis, the palm Phoenix dactylifera, and some Juniperus phoenicea were most common as fuels. Surprisingly, the oaks and junipers of the Edomite plateau were not cut for fuel. This may be because the charcoal was supplied by desert and lowland pastoralists, who gathered the wood from plants they encountered to the south.

This reliance on trade and the outside world often causes the outside world to extend into the Bedouin encampments. Peddlers are known to accompany the Rwala year-round, sometimes traveling from encampment to encampment and at other times remaining with one large tribe (Musil 1928: 125). In Musil's day, a gun mechanic and blacksmith was to be found in every camp (Musil 1928: 132). Similar tradesmen were found among the Berbers studied by Gellner (1969: 28). But these outsiders were just that, outsiders; they were forbidden to marry into the Rwala (Musil 1928: 136) or the Berbers (Gellner 1969: 28). Complete tribes of "tinkers and smiths" lived among the Basseri studied by Barth (1961: 91-92). These were recognized as an independent ethnic group with their own material culture, and were designated Kowli if they ranged freely without political patrons or Ghorbati if they were attached to Baaseri tribes. Nevertheless, they followed their own migratory pattern, sometimes with the pastoralists and sometimes independently continuing to city markets. These non-pastoral nomads can

attain a particular power among both nomadic and non-nomadic groups by serving as mediators in politics and ideas as well as products.

Pastoral nomads play a crucial role in trade, which is itself necessary to the nomad's existence. As Burckhardt (1831: 239) noted, "It is the want of corn that obliges all Bedouins to keep up any intercourse with those who cultivate the soil; and it is a mistake to imagine that the Bedouins can ever be independent of the cultivators." Bedouin especially often fulfill the role of bridge between sedentary groups, moving prestige goods and luxury items through their rangelands (Khazanov 2001: 7).

Trade is of particular importance in the history of ancient Edom. It has been argued that Edom's rise came about because of Assyria's involvement in the Arabian spice trade (Finkelstein and Silberman 2001: 268). It seems certain that this trade was important during the life of the state (Bienkowski and van der Steen 2001). However, the use of the camel in desert trade in the region might now be dated to considerably earlier than the neo-Assyrian expansion. Finkelstein (1988) has made the argument that the rise of twelfth and eleventh century sites in the Negev is the result of their involvement in trade utilizing camels. Camel bones have now been reported at Khirbat en-Nahas (Muniz and Levy in press), alongside ceramic fenestrated stands which likely served as braziers (Levy et al. in press). As we shall see, the pastoral society which buried their dead at Wadi Fidan 40 also had close ties to Arabia, and used stones from Arabia as markers of status and possibly ethnicity.

POWER IN PASTORAL SOCIETY

Power in a pastoral society is linked to these contacts with the outside world. It is often by controlling contact with, and mediating disputes with, the sedentary world that individuals come to power in the nomadic world. Kent Flannery (1999), working with Barth's (1961) ethnography of the Basseri, notes that modern pastoral chiefs often obtain their power and legitimacy from a reputation for piety and an ability to negotiate and mediate rather than through force or large-scale redistributions of wealth.

The basic unit of a pastoral society is the tribe. Emanuel Marx (2006: 59-60) notes that to a Bedouin of the southern Sinai, a tribe might be any of three overlapping (but not identical) units: a group which has usufruct rights in a particular territory, a political organization consisting of an alliance among "numerous patrilineal descent groups" (some of whose kinship is fictive; Marx 2006: 59), or an administrative unit headed by a chief and a headman. These headmen are created both by external and internal sanction. External forces, either sedentary peoples which lay claim to the nomads' lands or who merely deal with the nomadic groups, will support particularly influential headmen who prove their abilities as go-betweens with the nomads. In the case of the Negev Bedouin, operating under Israeli law, "Here the Bedouin reconstituted tribes around men recognized as chiefs by the authorities. . . . The tribesmen were also keen to join tribes, for thus they became part of a recognized political framework, and this gave them some sense of security" (Marx 1967: 40). However, there are often shadow headmen who lead the tribe in the second definition of the term, and it is they who make the arrangements for annual tribal pilgrimages to saints' shrines (Marx 2006: 60), which will be discussed

more fully below. Thus, power can be divided between the headman recognized by outside authority and the headman who negotiates internal politics.

Pastoral societies are often virulently egalitarian—or give that impression to both members and outsiders (Lancaster 1981: 73). This egalitarianism is supported by the unstable nature of pastoralism, which makes accumulating property difficult. Environmental instability and raiding combine to prevent the accumulation of large herds for long periods. Social leveling mechanisms also work to limit inequality. For example, according to Diodorus Siculus (Bibliotheca Historica XIX.94-97), the Nabateans "have a law neither to sow corn nor to plant any fruit-bearing plant, nor to use wine nor to build a house; and whoever is found acting in a contrary way is adjudged the punishment of death. This law they hold because they judge that those who possess these things will be easily compelled by powerful men to do what is ordered them because of their enjoyment of these things." According to Jeremiah (35), the Kenite Rechabites, whose ancestral land was in the Negev (Judges 1:16), had nearly identical rules against drinking wine, building houses, and planting or owning fields or vineyards. By snubbing these lures to settle, nomads maintained their way-of-life.

Power in pastoral societies, as in all human societies, is often expressed according to gender roles. These societies tend to be both patrilineal and patrilocal. Women tend to retain kinship ties to her natal family rather than adopting those of her marriage family. However, women often maintain a certain power in the society, in part because the dangerous nature of pastoral nomadism, with its raids and extensive travel in harsh regions, necessitates reliance upon women both when men are away and when they die. If a father dies when the child is particularly young, he or she might be raised as a

member of the mother's clan, a practice which is common in Kurdistan (Edmonds 1967: 35).

Gender roles are also written upon the body in a way that might be read by archaeologists. Burckhardt (1831) frequently notes that men adorn their women to display their own wealth. But Musil observes that women themselves often buy their trinkets; "they save up camel's hair for a long time and often steal grain in order to buy" ornamentation (Musil 1928: 124). These body ornaments are not only sexualized; they are also eroticized. "The weight of her body moves the rings above her ankles," one Arab poet, Muhammad al-Kazi, quoted by Musil (1928: 111), states. Another observes his beloved "is dressed in clothes of costly stuff, / Which cling to her ivory calf" (Muhammad ibn Mhelhel, quoted in Musil 1928: 154). Still another's beloved praises a woman for the fact that "The rings above her ankles tinkle like a pilgrims' procession" (Cen'an al Tajjar, quoted in Musil 1928: 174). In Musil's day, "The small rings worn above the ankles are usually of glass, but the wealthier women have them made of copper or even of silver, ornamented with fine chains from which hang tiny bells (Musil 1928: 175).

These ornaments constitute women's wealth. These are the goods she carries with her from her natal to her married encampments (Sciama 1998). How they are worn is often a way that women assert their own creativity and interpret ethnic lines, at times choosing which ethnic group with which to identify (Klumpp and Kratz 1993; Kratz and Pido 2000). Also, while herds may or may not be inherited by a woman, these imperishable goods are usually indisputably hers, and can be relied upon in the case of the death of a spouse or divorce.

Musil actually computed the price of men's and women's garb, and found that, even including such things as a strand of coral beads, a copper nostril ring, and a finger ring, the average woman spent less than fifty cents more than the average man ($9.72 vs. $9.225; Musil 1928: 122, 125). That is, her adornments cost only approximately 5.4% more than his. The primary differences relate to their social functions: His clothing is meant for the active lifestyle of a raider and trader, while her clothing is more utilitarian for competing socially with women and manipulating men. From an archaeological perspective, it is important to note that most of a man's garb would deteriorate quickly, but a woman's garb includes material such as beads which would survive in the archaeological record. This should be borne in mind while interpreting the finds at Wadi Fidan 40.

But much of this egalitarianism is both a matter of present conditions in a globalizing world and an attempt by modern anthropologists to rectify what was seen as excessive depictions of Oriental despots. Nomads in the modern world have been progressively marginalized politically, often by paternalistic states which deny them their traditional lands and their self determination (Khazanov 1998).

Hierarchies do develop, and often there is a desire to make these positions hereditary. Nomadic states can develop, which often form when a pastoral people conquers sedentary peoples, usually in order to extract the fruit of the land (Khazanov 1994a, 2005). Or, as in North Africa, nomadic states may form when particular lineages obtain control over some resource, such as arable land (Barfield 1993). Nomadic chiefdoms resemble sedentary chiefdoms, though often less theocratic and less peaceful

(Khazanov 1994a: 165-166). These chiefdoms often exist alongside sedentary states, with whom the chiefs negotiate.

Perhaps one of the most important positions in pastoral society to contribute to societal complexity is that of war leader. Studies of nomadic groups usually focus on the powers of the sheikh, which tend to be limited, but each of the Bedouin tribes encountered by Burckhardt, a war leader who could not be the same individual as the sheikh was also found. Burckhardt, the most important war leader was the agyd, whose hereditary function was both religious and secular. The position, generally passed from father to son; "and the Arabs submit to the command of an agyd, whom they know to be deficient both in bravery and judgment, rather than yield to the orders of their sheikh during the actual expedition" (Burckhardt 1831: 296). Even a child might serve as agyd. Such an individual "is considered by the Arabs as a kind of augur or saint" (Burckhardt 1831: 297) whose military prowess is due to supernatural power rather than experience; indeed, "He often decides the operations of war by his dreams, or visions, or forebodings" (Burckhardt 1831: 297). Those with war process had the possibility of becoming "a kind of second, or inferior agydship in the tribe" (Burckhardt 1831: 300), however. Winning over the agyd of each tribe was a mainstay in the policy of the First Saudi State, "because where so many agyds are united, it is supposed that operations will always succeed" (Burckhardt 1831: 302). At the very least, having these war leaders subservient to the Saudis kept them from opposing these new rulers. Such hereditary war leaders might obtain wider powers, though Burckhardt notes that the agyds he encountered were for that reason excluded from holding other offices, and particularly that of sheikh.

EXAMPLE: TAGADDÁ

With this background of how power works in nomadic societies, it is worth considering as an example the Northern African society of Tagaddá, as it is described by the fourteenth century Moroccan Muslim traveler Ibn Battuta:

> . . . We pushed on rapidly with our journey until we reached Tagaddá. The houses at Tagaddá are built of red stone, and its water runs by the copper mines, so that both its colour and taste are affected. There are no grain crops there except a little wheat, which is consumed by merchants and strangers. The inhabitants of Tagaddá have no occupation except trade. They travel to Egypt every year, and import quantities of all the fine fabrics to be had there and of other Egyptian wares. They live in luxury and ease, and vie with one another in regard to the number of their slaves and serving-women. . . .
>
> The copper mine is in the outskirts of Tagaddá. They dig the ore out of the ground, bring it to the town, and cast it in their houses. This work is done by their male and female slaves. When they obtain the red copper, they make it into bars a span and a half in length, some thin and others thick. The thick bars are sold at the rate of four hundred for a *mithqál* of gold, and the thin at the rate of six or seven hundred to the *mithqál*. They serve also as their medium of exchange; with the thin bars they buy meat and firewood, with the thick, slaves, male and female, millet, butter, and wheat. The copper is exported from Tagaddá to the town of Kúbar, in the regions of the heathens, to Zagháy, and to the country of Barnú, which is forty days' journey from Tagaddá. . . .
>
> During my stay at Tagaddá I wished to meet the sultan, who is a Berber called Izár, and was then at a place a day's journey from the town. So I hired a guide, and set out thither. He was informed of my coming and came to see me, riding a horse without a saddle, as is their custom. In place of a saddle he had a gorgeous saddle-cloth, and he was wearing a cloak, trousers, and turban, all in blue. With him were his sister's sons, who are the heirs to his kingdom. We rose at his approach, and shook his hand, then he asked about me and my arrival, and was told my story. He had me lodged in one of the tents of the Yanátibún, who are like the *wusfán* in our country, and he sent me a sheep roasted on a spit and wooden bowl of cows' milk. Near us was the tent of his mother and his sister; they came to visit us and saluted us, and his mother used to send us milk after the time of evening-prayer, which is their milking time. They drink it at that time and again in early morning, but of cereal foods they neither eat nor know. I stayed with them six days, and every day received from the sultan two roasted rams, one in the morning and one in the

> evening. He also presented me with a she-camel and with ten *mithqáls* of gold, and I took leave of him and returned to Tagaddá.
>
> -- Ibn Battuta (Gibb 1957: 335-337)

Ibn Battuta's description can be taken as a model of how complex nomadic societies often work (Sáenz 1991). Sultan Izár cemented his authority—perhaps inherited from his mother, as Izár's sister's sons would inherit from him—through his control of copper production and trade. Although Ibn Battuta claims that trade is the people's only way of life, he clearly describes the importance of pastoralism in the community. While Sultan Izár maintains his own nomadic lifestyle, which itself might be a symbol of his power, he must also control the labor of sedentary people. Although many of Ibn Battuta's early commentators believed it was salt, not copper, which Tagaddá mined (Gibb 1957: 322, n. 35), recent archaeological work, including lead-isotope analysis of artifacts, has shown that north African copper was an important element of early Islamic trade (Fenn 2006). We should keep Sultan Izár in mind as we consider the question of complex society in the region of Faynan, copper producing region of the Southern Levant.

ISLAMIC SAINTS AND THE LOVED DEAD

Returning to Flannery's (1999) assessment of chiefdoms in the Near East, piety needs to be considered. Both respect shown to pious intermediaries in life. Furthermore, veneration of the dead plays an important role in Near Eastern nomadic society. Annual pilgrimages to important shrines in the Near East—usually the tombs of saints and surrounded by cemeteries—are important tribal events that prove legitimacy to individuals' tribal rights and are brokered by sheikhs who thereby cement their own power. In Chapter 7 it will be argued that

Wadi Fidan 40, a large cemetery with shrines and evidence of repeated visitations, similar role.

In nomadic Muslim societies, religion is often an important component in obtaining power. Although nomads do not operate in a closed system and often rely upon settled peoples for ideological ingenuity, nomads use these ideologies to consolidate power and negotiate their positions in relation to the outside world (Khazanov 1994b). Gellner's saints of the Atlas obtain additional power through two means—either by leading a reform to seek a "purer" religion, or when "an exceptionally gifted or successful holy man from the tribes may acquire a reputation beyond the limits of the habitual arbitration area of his line" (Gellner 1969: 10) and therefore comes to lead a religious order. The Sauds described by Burckhardt (1831) also obtained much of their power by allying with the Wahabi Salafis. Government in chiefdoms in general tends to be theocratic, though nomadic chiefdoms tend to be free of such theocratic rule (Khazanov 1994: 165). Nevertheless, piety and other connections to esoteric powers (such as the Said's connection to Muhammad through his bloodline) can be useful in establishing the sort of credibility necessary to a nomadic chieftain.

One of the most important archaeological features associated with pastoral nomadism, and one that has been studied extensively by Emanuel Marx (1985, 2006, 2007), is the saint's shrine. This shrine is not only one of the most conspicuous archaeological signatures left behind by pastoralists, but is also the focus of the annual pilgrimage conducted by many pastoral communities, particularly in the Islamic world. They are especially important among Near Eastern nomadic groups as the one time in the

year when all the components of the tribe come together. The importance of these shrines is testified to by their number. Tewfik Canaan (1927) conducted one of the most substantial early studies of the *Mohammedan Saints and Sanctuaries in Palestine*, focusing on 235 shrines he visited personally and 348 "about which exact material was available" (vi), though he admits his sample is only a partial one.

These shrines can take several forms. Springs often become shrines, though these are more likely to be haunted by evil spirits (Canaan 1920). Trees also often become the sites of shrines. But the tombs of the saints remain the most important and the most common. These sometimes become places of pilgrimage, and often form the center of graveyards.

Shrines, and the pilgrimages with which they are associated, are often shared with settled peoples. Thus, the shrine of Nabi Musa in the Negev serves to unite the pastoral and settled segments of a semipastoral society (Abu-Rabia 2007). Burial close to the sanctified dead remains important to many, and control over who is buried near these shrines is an important contributor to social inequality. Of the saints' shrines studied by Canaan (1927: 7), 63% were located in association with graves. E. S. Stevens, whose husband was a member of the British government in Iraq and who therefore had access to official documents, relates the relative cost of burial in relation to proximity to the grave of Ali:

> There is a fixed tariff for graves according to the sanctity of the site. The Ministry of Owkaf in Baghdad keep account of the monies so paid, which are spent solely for 'the upkeep of the shrines.' To be buried in the public cemetery, the Wadi es Salam or Valley of Peace, is comparatively cheap—six rupees, four annas (about eight shillings)—in a private cemetery twenty-five rupees. But in the mosque and its precincts interment is dearer, costing from 750 rupees, in the Rawaq, or inner

> courtyard, downwards according to the situation. The revenue from the selling of graves from 1921 to 1922 was over fifty-seven thousand rupees. The most profitable month was April; the smallest takings were in July. In Karbala the fees amounted to nearly twenty-two thousand rupees, the most popular months for burial being October and November.
>
> (Stevens 1923: 29-30)

Shrines are common but not universal in the Levant. According to Musil (1928: 418), "Worship of the saints has never been known among the Rwala and presumably never will be." However, this exception helps prove the rule. According to Musil (1928: 418), they do not worship at the shrines of saints in the settled or semisedentary lands because, "In their opinion [they] commemorate the saints of the settlers and breeders of goats and sheep . . . not of the Bedouins. They say: 'They are not of our kin . . . therefore we do not honor them or go on pilgrimage to them.'" These shrines serve social functions to the sedentary and semisedentary people, including a claim on the land. These claims are recognized by the Rwala, who understand that they are excluded. Musil goes on to describe Rwala veneration of their own graves, but the practice may be weak because their claims on specific tracts of land are less important than those of sedentary and semisedentary people.

The alleged tombs of saints, or at least the tombs of the partial relics of saints, form the centers of the most important shrines. Sometimes, as in the case of Moses at Nabi Musa or Aaron at Jabal Haroun, it is extremely unlikely that the saint is the actual occupant of the tomb. An actual body is not necessary for a shrine to function. In Tunisia, multiple shrines dedicated to a single saint often exist, with various explanations as to which was the original burial place of a particular saint and which contain portions of his remains brought at a later date (van Binsbergen 1985). At Beit al-Malahi, north of

Beer Sheba, a shrine has become a place of local pilgrimage, where sacrifices are conducted and votive offerings are left at what appears to be a tomb. However, the tomb here is empty. The site is located within a house and had already become a place of pilgrimage during the time the house was inhabited, between the 1930s and 1948. It obtained its aura of sanctity not from any known individual buried at the site, but rather due to ghostly disturbances which were determined to be the result of an unknown internment (Yekutieli 2007). Finally, "In South Sinai the Bedouin have gone a step further: they insist that no one is buried in a *maqam"* (Marx 1985: 124)! The one place at which a saint's body will not be found is his tomb, for even if he had been buried there at some time, the bodies of the sanctified quickly turn to air.

That the nomads themselves recognize the necessity of the shrine rather than the body is reflected in a popular Palestinian folktale of the nineteenth century. In the story, collected by J. E. Hanauer (173-175), a young assistant shrine keeper takes leave of his master to make the Hajj. It is not long before his donkey dies and is buried beside the path. Seeing the deep grief of the young man mourning beside the grave, fellow pilgrims assume the grave must be that of an unusually holy man, and erect a shrine over the place. The place becomes a popular site of pilgrimage, and the the young apprentice, who becomes the shrine's keeper, is reunited with his master when the latter makes a pilgrimage to this new shrine. The new shrine's keeper takes advantage of the chance to ask his former master about the occupant of the tomb he guarded—a trifle that seems not to have interested him in the years he served as apprentice at the very same shrine. "Well, if you must know," the older man tells him, "he is the father of your donkey" (Hanauer 175).

The legends that surround these shrines are important symbolically, and in some cases are associated with alleged common ancestors or patrons. However, these beliefs are not recoverable archaeologically. It is the social function of these shrines, rather than who happens to be (or not be) buried within them, that make these places important.

Shrines in the Bedouin areas are commonly sources of pilgrimage. These pilgrimages both unite the tribe and reinforce individuals' claims to tribal territories and resources. Kazakh identity is tied to their most important shrine, and "The Yasawi Shrine is thus representative of all the sacred space of the Kazakhs" (Privatsky 2001: 51). Sinai Bedouin who have been absent from their ancestral lands for periods of time working as wage laborers in cities will use the pilgrimage as a way to reassert rights to land and employment in their tribal lands (Marx 2007). As we have seen, the pilgrimage is organized by a sheikh—in modern Egypt and the Negev, this is sometimes a different sheikh than that recognized by the authorities, who is often the sort of person who mediates disputes which the authorities should not know about (Marx 2006: 60).

Shrine areas are often protected by social sanctions. "It is quite a common sight to see tents, sacks of corn, ploughs, &c., left near these places; no one would risk the wrath of the spirit by removing any of these deposits," notes Arthur Forder (1902: 222), a nineteenth century missionary working in Karak. Furthermore, powerful feuding families try to bury their dead as close to the saints' shrines as possible, in order to prevent them from being disinterred by their enemies (Canaan 1927). In north western Tunisia, all segments of a society are expected to attend twice-annual festivals at major saints' shrines. During this period, safe conduct is guaranteed and inter-segment feuds are held in abeyance. At the same time, the pilgrimage brings these factions to the homes

of shrine keepers, who are pacifists outside the realm of kin factions and who are respected as mediators (van Binsbergen 1985).

These shrines are also important claims to land. Canaan (1927) notes that not only did towns have their patrons, but they also had smaller shrines in their fields, even if those were at a distance from dwellings. A saint could even expand his territory by laying claim to a site such as a tree. Tunisian tribes lay clam to lands that are named with the names of supposed ancestors, though in reality those who dwell in these places are not biologically related. Tunisian Tribal segmentality is also often represented physically on the landscape. Van Binsbergen (1985) has shown that minor shrines, found in peripheral areas of tribal land, are visited by and central to clans or small segments within the population, while the large shrines are visited by the whole of a tribe and are physically more centrally located.

EXAMPLE: JABAL HAROUN

One shrine is worth describing in detail as an example of the whole of this phenomenon. Jabal Haroun—Mount Aaron—is located in the mountains near Petra (Fig. 3.1). Today, a small shrine covers the site (Fig. 3.2). The site is an important landmark—the white shrine is visible for miles around, in Petra and nearby Wadi Musa. After several visits which found the shrine closed and locked, the author visited and entered the shrine on November 1, 2006, and many of the details of the shrine recorded here have never to his knowledge been published. A structure made to look like a tomb is located immediately inside the door of the building. This cenotaph bears an Arabic inscription and Hebrew graffiti and was constructed from Byzantine architectural elements remaining from the church (Figs. 3.3-3.4). According to most visitors this

cenotaph is usually covered with green, red, or white fabric (Miettunen 2008: 36; al-Salameen and Falahat 2009), but it was naked during this visit. The multicolored marble floor appears to be the remains of the previous church's floor (Fig. 3.5). A *mirhab* points the way to Mecca, but the place is not used for Friday prayers—indeed, Friday is the one day the shrine will definitely be locked up, the guardian having his day off.

A black stone is built into the wall of the shrine at about chest height opposite the *mirhab* (Fig. 3.6). The stone is venerated; the stone is kissed and the forehead touched to it for luck. According to the shrine's guardian, this stone "may be from Mecca." It is possible, if unlikely, that it is even part of the famous Black Stone set into the wall of the Ka'ba, Islam's holiest shrine, and venerated by pilgrims on the *hajj*. The Black Stone at Mecca has broken several times in recorded history, and as it exists now is an amalgamation of about twelve to fifteen pieces held together with pitch or a pitch-like mortar and a silver band (Burckhardt 1822: i.249-250; al-Qu'aiti 2007: 390). At least six fragments said to be from the Black Stone are built into the walls of three separate sixteenth century edifices, including the mosque housing the tomb of Suleiman the Magnificent, in Istanbul (Woreczko and Worcezko 2010). It is also possible that the stone was originally set in the wall to evoke thoughts of the Black Stone and over time has come to be regarded as part of the Black Stone itself. A similar phenomenon can be seen in the Church of the Holy Sepulchre. Here, the first shrine one encounters upon entering the building is the Stone of Unction, which is kept fragrant with the daily anointing of perfumed oil. Pilgrims and even inhabitants of Jerusalem often believe this to be the actual stone on which Christ's body was anointed for burial (John 19: 38-40; e.g. Atajanyan and Madoyan 2003: 40-41). In reality, this stone was placed in the

church in 1810, replacing one presumably damaged in the fire of 1808. The first stone of unction was placed in the church in the twelfth century, not as a pious fraud, but rather to commemorate the event in the passion (Murphy-O'Connor 1998: 52). The black stone at Jabal Haroun may have a similar history of commemoration—and forgetting. Other legends, however, state that this stone was originally set by Moses over the spring at Ain Mussa, or that it served as a seat for the prophet Aaron, and it is also known as the Mirror of the Prophet Haroun (Miettunen 2008: 36; al-Salameen and Falahat 2009). However, the material origins of the stone are immaterial. The stone, like the alleged presence of the saint's body, imparts a certain power to the shrine that it would otherwise lack. But since it is venerated the same way as the Black Stone at Mecca, it ritually invokes memory of that stone, and thereby draws the worshipper into closer communion with traditional Muslim practice. This is especially important at a site where, some argue, the worship is heterodox (al-Salameen and Falahat 2009).

The tomb itself is alleged to be below the building, accessed via a staircase from the main level, in a vault that is now sealed. Miettunen (2008: 36) notes the presence of hanging iron gates in the vault. In 2006, the guardian of the shrine informed the present author that the vault was sealed by the Hashemite Kingdom of Jordan sometime in the last few decades; previously a metal grille, part of which remains, is said to have separated the pilgrim from the tomb. According to Hon. Charles Leonard Irby and Commander James Mangles (1852: 134), at the time of their visit in 1817 or 1818 this space was occupied by a cenotaph or raised tomb covered by a cloth. Candles are lit on a shelf built into this wall today (Fig. 3.7). It is of course impossible to verify that anyone is genuinely entombed here.



Figure 3.1: Jabal Haroun, with the whitewashed shrine at its summit (red circle), from the ascent below.



Figure 3.2: The shrine atop Jabal Haroun, from the ascent below.



Figure 3.3: The cenotaph in the shrine at Jabal Haroun. Note the Arabic inscription that makes up its face.



Figure 3.4: Side view of the cenotaph. Note the use of mismatched elements taken from the ruins of the earlier church.



Figure 3.5: The multicolored marble tile floor, including cross elements, probably left over from the church that once occupied the spot.



Figure 3.6: The guardian of the shrine stands next to the polished black stone built into the wall of the shrine at Jabal Haroun.



Figure 3.5: The alleged tomb of Aaron itself, below the shrine. Note the remnants of the metal grille that once sealed off the area to the left. According to the shrine's keeper, the Hashemite Kingdom of Jordan sealed the entrance with concrete.

The site has long been alleged to be the burial place of the prophet Aaron, sacred to Jews, Christians, and Muslims alike. The site poorly fits the Biblical descriptions of Aaron's death and burial place (Numbers 20:22-29; Deuteronomy 10:6, 32:48-51; MacDonald 2010: 211; Robinson 1930: 256-262), and when exactly this tradition became established is unknown. Inscriptions at the site state that the present shrine was built in the fourteenth or fifteenth century of the common era (MacDonald 2010: 215). The ruins of a Christian monastery and a caravanserai are present on a flat below the peak

on which the main shrine is located (Fig. 3.8). These were recently excavated by the Finnish Jabal Haround Project, which is in the process of publishing its findings (vol. 1: Fiema and Frösén 2008; vols. 2 and 3 in preparation). Remnants of a church over the site now occupied by the shrine itself were also once visible. A tomb of Aaron in the vicinity of Petra is mentioned in Crusader sources, Jewish pilgrims' accounts, and in Byzantine works dating back to the fourth century (Miettunen 2008; Peterman and Schick 1996), including Eusebius' *Onomasticon* (176; Freeman-Grenville 2003: 98). Josephus also mentions a tomb of Aaron in this vicinity (*Antiquities* 4.4.7; Thackeray 1956: 516-517). The site might therefore have been the site of Jewish veneration as early as the Idumaean period. Striking in the distance when viewed from the shrine is Ed Deir, the Monastery, which is an isolated façade atop one of the mountains near Petra and is the largest of Petra's stone-carved facades (Fig. 3.9). Rock art in the form of life-sized pecked footprints are found on the ascent to the shrine (Fig. 3.10). Burton MacDonald states that these are left by pilgrims. But these carvings are found alongside other rock art. Miettunen (2008: 38) suggests that this rock art represents Bedouin brands. However, the fact that these footprints are found at other Nabatean sites around Petra but unreported at other Christian sites away from Petra suggests that all of these motifs, including the footprints, are in fact Nabatean. They are most likely Nabatean. Nabatean remains have been found beneath the monastic complex and on the shrine summit (Frösén et al. 2004: 112), and the massive cistern at the site is Nabatean (Mikkola et al. 2008: 99-100). The place was probably a Nabatean holy place before it was a Jewish one, and at one time it may have been an Edomite holy place. It may also have been a multireligious or

multiethnic holy place, as sites like the Tomb of the Patriarchs (Machpelah) are today and have been apparently since the Hellenistic, Idumaen era (Ofer 1993).



Figure 3.6: The monastic complex on the flat below the peak of Jabal Haroun after excavation by the Finnish Jabal Haroun Project, seen from the ascent to the shrine.



Figure 3.7: The view towards Petra from the roof of the shrine atop Jabal Haroun. Note Ed Deir, the largest facade of Petra, in the distance (red circle). The unusually large, isolated façade was probably carved in order to be seen from the peak at Jabal Haorun, the highest in the Petra region.



Figure 3.8: Rock art in the form of the outline of life-sized feet on the ascent to Jabal Haroun.

The site remains an important pilgrimage place for the surrounding Bedouin and semisedentary Bdul, who live in the caves around Petra. The site was even more important in the recent past. Formerly, there were two times of pilgrimage, in the spring and in the autumn. Different tribes made the pilgrimage at different times, in order not to conflict in their observances. Those who have successfully sought Haroun's intercession in the previous year often made sacrifices on the mount at this time (Crawford 1930: 286). Indeed, Burckhardt used the excuse of such a vow as a subterfuge to convince his Bedouin guides to enable him to get near Petra (Burckhardt 1822: 420, 430). Stone cairns were heaped over the blood spilt at some of these sacrificial points which were not on the summit itself. Today cairns are still erected along the path to Jabal Haroun, but they no longer signify that a sacrifice took place at the spot. Jabal Haroun was one of the spots considered too holy to rob (Forder 1902: 222). In Burckhardt's day the site needed no guard, and expensive ritual vessels, including a great copper vat large enough for boiling a camel, were left unattended at the site (Burckhardt 1822: 431). This vat is said to have been given to the saint from among the spoils of war (al-Salameen and Falahat 2009). The shrine's caretaker often used the blood of sacrifice to redden the door of the shrine. This caretaker also scheduled annual pilgrimages to the shrine to ensure that rival groups would not meet on the mount, and was paid with portions of sacrifices made in Haroun's name even if they did not take place at the shrine itself (Crawford 1930: 286, 288). He makes himself vital to the pilgrimage and is paid for his services with portions of the sacrifices. Moreover, the effects of the shrine extend far beyond the site itself. Individuals from the tribes who took part in these pilgrimages considered the place so sacred that they buried their dead facing Jabal Haroun rather than Mecca (Crawford

1930). The site remains the site of an important local festival in Aaron's honor, but ironically the activities of the centuries of nomads are observable as a void in the record—their most visible addition to the site is the clearance of stones in the old monastery's courtyard to make room for tents (Peterman and Schick 1996: 473). The presence of the holy tomb is important as a node of connection with the spiritual world through an individual who can provide consequences for cultural violations, though he is not any alleged apical ancestor.

CONCLUSIONS

As we saw in Chapter 1, the society which utilized Wadi Fidan 40 is characterized by nomadic settlement patterns. The people in the Faynan region chose this life way as a rational response to the aridity of the land. Nevertheless, the region offered the possibility for limited agriculture, shown in the use of the WF 4 field system, and arboriculture, testified to by the pomegranates in the graves themselves. The Faynan region lies close to the intersection between the Arabian Desert zone, which dominates its climate, and the Jordanian tableland. Abundant springs allowed for ovicaprid herding, but the proximity of the desert also allowed for interaction with deep-desert camel herders. The people of Wadi Fidan 40 most likely maintained a mixed economy which included limited horticulture, pastoralism, and possibly copper working.

Detecting pastoral nomads in the archaeological record is difficult. Unfortunately, the material culture more closely associated with the nomads' way of life tends to be ephemeral and also difficult to date. Bedouin encampments leave archaeological traces, but these often go unnoticed, and even if recorded in survey can often only be poorly dated. Campsites are often used because of the presence of forage,

water, and wood. These vital items often reappear in the same places over millennia, and campsites are therefore often reused, adding to complications in dating.

Locating pastoralists archaeologically is therefore usually based on anomalies. For example, the presence of large cemeteries such as Wadi Fidan 40, or hunting installations like kites, in desert zones which evidence of settlements is typically taken as evidence of pastoral nomads. Caution must be exercised in drawing this conclusion, however, since these may in fact be traces left by settled peoples who work in desert areas.

Pastoral societies tend to be patrilineal and patrilocal, and power tends to be egalitarian. Often the societies themselves have leveling mechanisms in order to maintain egalitarianism. However, this egalitarianism is often overemphasized in modern anthropological literature. Hereditary roles can and do become established, including the establishment of hereditary lines of war leaders and sheikhs. In some instances, entire clans take on specific roles, or external groups which specialize in specific crafts are integrated into the fabric of the system. Control over the group might start with control over these specialized groups, or control over the group's access to vital resources such as grazing land and wells.

The cohesion of the nomadic group in the modern Near East is often maintained by festivals physically located at locales alleged to be the graves of holy people. These annual observances also allow the leadership to solidify its power, because it is sheikhs—in the modern world, often sheikhs who obtain their power by negotiating outside the sphere of the state—who organize these observances. These places are among the most archaeologically obvious sites used by nomads.

This concludes the background for this dissertation. We have now considered the archaeology and history of Edom, including potential ethnic markers (Chapter 1). Anthropological theory for mortuary analysis and Levantine burial practices have been described, with special emphasis on the archaeology of Edom (Chapter 2). This chapter examines pastoral nomadism, and proposes the special nature of nomads' shrines can be used analogously to understand the activities testified to in the archaeological record at Wadi Fidan 40, the largest Iron Age mortuary site, and arguably the only cemetery, excavated to date in southern Jordan. We now consider that important site.

CHAPTER 4: THE WADI FIDAN 40 MORTUARY COMPLEX

INTRODUCTION

Wadi Fidan 40 is the largest excavated Iron Age mortuary site in Southern Jordan and among the largest cemeteries excavated in the Levant. The excavated sample consists of 173 surface mortuary features and which overlay 34 capped pit burials, one pit double burial, and 245 cist graves. It is estimated that as many as 1,380 burials may exist at the site. Each grave was often reused multiple times, and physical anthropological analysis is presently under way to determine the exact number of individuals excavated. The quantity of burials is extremely unusual for a site so remote from known villages, and is more in keeping with the cemeteries of tell sites such as Tell es-Sai'diyeh and Tell el-Mazar.

The following chapter includes the first complete description of the cemetery. Portions of this material have been published elsewhere (Levy et al. 1999; Levy et al. 2004), but the following includes the first release of the data for all excavation seasons. After a description of the cemetery as a whole, and of previous research, descriptions of each individual grave and its contents are presented to the greatest detail consulting all of the available notes allows.

As we shall see, the mortuary architecture was largely homogenous and consisted almost entirely of stone-lined cists, although slight variations were observed. Surface features consisted primarily of stone circles and standing stones, which will be considered at length in Chatper 5. Grave goods consisted primarily of items of personal adornment. These will be considered in Chapter 6. This chapter will describe the burials themselves, the dispositions of the bodies, and the subsurface mortuary architecture, and

will provide the background data used in subsequent chapters. As the large cemetery site of a pastoral people with surface ritual features, this site yields important data on the lives of those living during the Iron Age in the geographical area of Edom, which will be analyzed in subsequent chapters.

WADI FIDAN 40: A HISTORY OF RESEARCH

Wadi Fidan 40 is a large site, measuring approximately 3,450 square meters, which has been referenced since 1980. However, only very limited observations and field work were carried out at the site until 1997, when the University of California, San Diego's Jabal Hamrat Fidan/Edom Lowlands Archaeology Project was initiated. The site has been designated by at least four different site numbers by the various investigators who have worked there (Table 4.1).

Table 4.1: Site Designations and Primary Publications relating to WFD 40.

Project	Site Designation	Estimated age	Major publications
Raikes' survey	Wadi Fidan Gorge Site D	Neolithic or later, or "palaeolithic onwards"	Raikes 1980, 1985
Southern Ghors and Northeast 'Araba Archaeological Survey	SGNAS Site 14	Chalcolithic/ Early Bronze	MacDonald et al. 1988; MacDonald 1992
Wadi Fidan Project (excavation)	Wadi Fidan Site 009	Chalcolithic/Early Bronze	Adams 1992
Jabal Hamrat Fidan Project/Edom Lowlands Regional Archaeology Project (excavations)	Wadi Fidan District (WFD) Site 40	Iron	Levy et al. 1999; Levy et al. 2004; Levy et al. 2005a

The site was first documented by T. D. Raikes in his survey of the Wadi Fidan. His pioneering but nonprofessional survey documented a number of large sites in the Wadi and noted some features of their lithics. He designated WFD 40 as Wadi Fidan

Gorge Site D, and presented sketchmaps of a few of the stone circles and pavements at the site. He believed that these structures represented the floors of small edifices with light superstructures (Raikes 1980); he suggested that the unpaved stone circles were "perhaps fireplaces" (Raikes 1985: 98).

The site was next documented by Burton MacDonald and the Southern Ghors and Northeast 'Araba Archaeological Survey. This survey designated the site SGNAS site number 14. SGNAS noted several looted graves, particularly in the western portion of the site, as well as a "medium" lithic and a "low" sherd scatter. They list Chalcolithic/EB, EB IVB, and undated material as present (MacDonald 1992: 250-251).

First excavations at the site were carried out by Russell Adams and the Wadi Fidan Archaeological Project. Adams designated the site Wadi Fidan 009. This project excavated a total of six graves and examined other looted graves. The project found no datable material in the graves excavated, but did find iron bracelet fragments in backfill from looted graves. Adams was the first to note that at least two different surface structures existed at the site, one being cairns, and the other being stone circles with pavements. Believing that it was the cairns which were robbed because they were "more obviously graves," Adams argued that these were of a different period from the rest of the graves at the site. Adams drew parallels between the graves of Shiq Mim (which had stone circles, but lacked the ubiquitous cists of WFD 40), and probably also followed MacDonald et al. (1988) in arguing that the paved graves, including the six excavated, were Chalcolithic to Early Bronze.

In 1997, Adams returned to the site for more wide-scale excavations, this time as a codirector with Thomas E. Levy and Muhammad Najjar, working with the Jabal

Hamrat Fidan Archaeological Project. The project initially hypothesized that the cemetery was Early Bronze, and was likely related to the Early Bronze village across the Wadi, which they designated Wadi Fidan District site number 4. Adams' site number 009 was changed to 40, and it is this designation by which the site has been known since. However, it was believed that site 40 was the cemetery used by the inhabitants of site 4. Site notes often refer to the site as the "Wadi Fidan 4 cemetery," and even publications make this mistake (e.g., Levy et al. 2001: 163). Three areas of the site were excavated, designated A, under the supervision of Russell Pietroviak, B, under the supervision of Michael Homan, and C, under the supervision of . Excavations determined that not only was the site not the cemetery of WFD 4, but was in fact Iron Age. These excavations also obtained the first radiocarbon dates for the site.

In 2003, the Jordan Valley Authority planned the construction of a dam across the Wadi Fidan – a dam which would have destroyed WFD 40 in addition to the important Bronze Age village WFD 4 and about twenty other sites (Levy 2003). In response, Levy, Najjar, and Adams returned to WFD 4 and WFD 40, leading the Jabal Hamrat Fidan Project. The project excavated a previously unexcavated area of the WFD 40, designated Area E. Neil Smith supervised the excavations, which uncovered mostly looted tombs and which remain unpublished. The dam project was abandoned in its preliminary, planning phases.

In 2004, Levy and Najjar returned to the site, this time leading the Edom Lowlands Regional Archaeology Project. 1997's Areas A, B, and C were reexcavated, uncovering both previously observed graves and graves which lacked any surface structures. Area A was supervised by Adolfo Muniz with the assistance of Marc

Beherec, Area B was supervised by Sarah Malena with the assistance of Lynne Munroe-Dunne, and Area C was supervised by Elizabeth Monroe with the assistance of Rebecca Landham.

In 2009, a small excavation was conducted at the site. This excavation was intended to gather soil samples and skeletal material to conduct chemical testing in order to determine levels of heavy metal pollutants in the human remains. This excavation also provided footage for the National Geographic/Nova special *In Search of King Solomon's Mines*. This excavation was supervised by Marc Beherec, assisted by Kathleen Benallack and Kyle Knabb.

EXCAVATION TECHNIQUES

Excavation was conducted slightly differently from season to season as a digital archaeology system was adopted and a larger surface area of the cemetery was sampled. In the initial excavations of 1989 and 1997, grave architecture visible on the surface was targeted for excavation. These graves, visible as stone circles, were numbered and excavated. In the process, graves not visible on the surface were often discovered. As a result, the 2003 and 2004 excavations, while also primarily targeting surface architecture, also excavated increasingly large areas of the cemetery without visible surface features. These often yielded subsurface graves which either had no surface architecture or whose surface architecture was destroyed.

Between the 1997 and 2003 seasons, the Jabal Hamrat Fidan Project adopted a digital archaeological system. This system allows recording artifacts and features in three dimensional space to approximately centimeter accuracy using an electronic distance meter to gather data which are then imported into ArcGIS (Levy and Smith

2007). In the process, however, little regard was given to the excavation benchmarks that had already been established. As a result, there is approximately one meter difference in the east-west lines between the 1997 and 2003-2004 grids. This lead to confusion in the field. The 1997 map could not be appropriately compared to actual surface features.

The method of numbering of graves changed also over time. In 1997, three fifteen meter-wide by twenty-five meter-long areas were designated A through C from west to east. Rula Shafiq numbered all graves in all areas. Numbers 1 through 9 were skipped in order to avoid overlap with Russell Adams' grave numbers, although Adams claimed to have only excavated six graves in 1989 (Adams 1991: 181). Shafiq assigned numbers first to surface grave architecture. When excavation yielded multiple burials beneath surface architecture, the convention was to suffix one or more of these with a letter. Thus, the large circle designated Grave 38 was found to overlie eight secondary burials, seven cists, three capstone-covered pits, and one primary pit burial. It was therefore broken into graves 38A through 38S. However, in some instances, an entirely new grave number was assigned when multiple cists were encountered beneath surface architecture. For example, when Grave 22 was excavated a small shallow cist was encountered containing a secondary burial; this was designated Grave 69. Usually secondary burials were not given independent grave numbers. The area outside surface architecture was not sampled for subsurface features.

In 2003, a new fifteen by twenty-five meter excavation area was opened fifty meters to the east of Area C and designated Area E. Over time it grew to include a five by five meter probe between the two areas. Graves here were numbered beginning with

200 based primarily on surface architecture. Cists without surface architecture were given independent grave numbers. No secondary burials were given grave numbers.

In 2004, Areas A, B, and C were again excavated. Graves identified but left unexcavated during the 1997 field season were first targeted. However, in some cases the map was unclear, and graves excavated in 2004 were designated with the same numbers as those excavated in 1997. The 2004 excavations also examined areas without visible surface architecture in order to Numbering of new graves in Area A began with 300, in Area B with 500, and in area C with 700. In Area A, secondary burials were in general given a letter suffix, while in Areas B and C they were given a new grave number. In the following analysis, these secondary burials are considered with the grave cists below, in order to ensure comparability between the 1997, 2003, and 2004 data.

ANCIENT DNA AND BIOLOGICAL AFFINITY

Before proceeding to cultural markers, an aside on the biological affinity of those in the cemetery is in order. As an undergraduate senior thesis project, Annabelle Teng conducted an experimental ancient DNA (aDNA) study entitled *Origins of the Skeletal Remains of the Wadi Fidan 40,* seeking biological affinity between samples from WFD40 graves and living populations (Table 4.2; Teng 2005). Such studies seemed especially promising given recent research which seems to show specific genetic markers on the Y-chromosome shared by members of the Jewish community, and especially by those who bear patronyms which suggest descent from the priestly classes (Behar et al. 2003; Hammer et al. 2000; Skorecki et al. 1997; Thomas et al. 1998). Nine teeth from eight graves were selected for analysis based on visible preservation of the hard tissue. These were first tested for nuclear DNA from the sex chromosome. Only three samples (AHT-

1, AHT-6, and AHT-7) yielded analyzable DNA. These sampled were examined for base pairs showing the presence of the amelogenin gene. If two bands, 106kb and 112kb, are both present a male is indicated, while if only band 106kb is present a female is indicated. Only band 106kb was visible in sample AHT-1, but since this individual appeared morphologically to be male, it was assumed that this was due to decomposition of the DNA. Samples AHT-6 and AHT-7 both appeared to show the presence of both bands, suggesting that these individuals were male, but the bands were faint and the findings could not be confirmed with a second amplification.

Table 4.2: **Summary of nuclear DNA results from tooth samples excavated at Wadi Fidan 40 analyzed by Teng (2005).** In some cases, it was unclear which individual in a grave yielded the relevant sample; in these instances, the data from both individuals is provided. Age and sex designations are a result of bone and morphological characterizations with the exception of AHT-9, the sex of which was determined primarily based upon grave goods. AHT-5 and AHT-6 are presumably from the same individual, however, two teeth were excavated separately, thus are treated separately.

Sample	Grave	Individual	Age Category	Estimated Age at Death	Sex (as determined morphologically)	Sex (as suggested by aDNA)
AHT-1	59-2004		Young Adult	24-34 years	Male	Female
AHT-2	335	One of the following:				Unknown
		A	Young/Middle Adult	20-49 years	Female	
		B	Adult, Other	20-50+ years	Unknown	
AHT-3	356	A	Young Adult	18-25 years	Male	Unknown
AHT-4	514	One of the following:				Unknown
		A	Adult, Other	20-50+ years	Unknown	
		B	Adolescent	12-18 years	Unknown	
AHT-5	531	A	Middle Adult	35-50 years	Unknown	Unknown
AHT-6	531	A	Middle Adult	35-50 years	Unknown	Male
AHT-7	533	B	Juvenile	7-10 years	Unknown	Male
AHT-8	540		Young Adult	20-30 years	Male	Unknown
AHT-9	706	A	Adolescent/Young Adult	15-25 years	Female	Unknown

More promising was mitochondrial DNA which, due to its greater abundance in each cell, was better represented. A greater amount of mitochondrial DNA was in fact gathered and replicated. However, the extreme variation of her results is probably the result of contamination. A minimum of four haplogroups, and possibly as many as nine, were represented in the nine samples. Even the two teeth from Grave 531, which presumably came from the same individual, yielded DNA from different haplogroups

(Table 4.3). Although none of these haplogroups were inconsistent with a Near Eastern origin (Quintana-Murci et al.2004), Teng rightly suggested that such wide genetic variety would be uncommon within a single population, especially one in the Iron Age Levant. She suggested contamination would be a much more likely source for this variation.

Table 4.3: **Summary of all plausible Hypervariable Region I (HVRI) motifs found by sequencing in each sample. Modified from Teng (2005).**

Sample	Grave	HVRI motif	Haplogroup
AHT-1	59-2004	16290-16319-16362	A
		16319-16362	U2
		16325	C
AHT-2	335	16223	M
AHT-3	356	16223-16298	C
AHT-4	514	16223-16290-16319-16362	A
		16192	U5b
AHT-5	531	16145-16223	N1b
		16223-16292	W
		16172-16223	L1b
		16197-16223	G
		16223-16325	C
AHT-6	531	16051-16129-16294	U2
		16294-16311	L1c
		16292-16294-16296-16304-16311	T
AHT-7	533	16290-16319	A
		16294-16304	T
AHT-8	540	16256	L3d, U
		16362	A, D, G, L3b, or M
AHT-9	706	16292	W
		16362	A, D, G, L3b, or M

WADI FIDAN 40 AND ITS BURIALS

Wadi Fidan 40 lies on a Pleistocene conglomerate terrace, on a hill overlooking the Wadi Fidan where it debouches into the Wadi Arabah. This hill is part of the Jabal Hamrat Fidan mountain range at the edge of the Edomite lowlands. It has a dominating presence over the landscape, and its cemetery marks a clear claim to the route through the

Wadi Fidan. Graves were dug through the loose, poorly sorted gravels, cobbles, and boulders, often cutting into the poorly cemented conglomerate bedrock. The cobbles and boulders were then utilized in building some of the grave architecture, likely with the addition of stones from the wadi below.

Wadi Fidan 40 extends over an area of at least 3,450 square meters and, if one assumes ten graves per five by five meter square – a not unusual number – as many as 1,380 graves (Figure 8.3). Its size is an anomaly in the Levant. The Iron I in Israel is notable for its lack of burials (Kletter 2002). Though this is no doubt due in part to preservation biases (Bloch-Smith 2004), it may also be due in part to cultural concerns regarding egalitarianism (Faust 2004). In southern Jordan, it is particularly remarkable given that the period is believed by many to be a time when the Edomite state did not exist, and when Edom itself was almost abandoned (Bienkowski 1992).

SURFACE ARCHITECTURE

The most common surface architecture at Wadi Fidan 40 consisted of circles of dolerite cobbles, set upright in the earth (Table 4.4). Dolerite cobbles are seen in the wadi below and eroding out of the hillside; gathering them and collecting them from the fill of the graves themselves would have been a simple task. One hundred eighty-six grave circles were thus counted in the excavated portions of the cemetery (Table 4.4), and more existed which were not documented. Double concentric circles were noted in six cases, and three concentric circles were observed over Grave 211. Surface pavements (or remnants thereof) were found within more than forty of the grave circles. Sometimes, however, more elaborate constructions were made, such as the rectangle of Grave 80, the rectangle-and-circle associated with Grave 703, or the elaborate double circle with

standing stone and recessed, paved pit, possibly for libations, of Grave 712. Adams (1991) and Levy, Najjar, and Rafiq (1999) at one time speculated that these differences in grave construction might be temporal markers, though further evidence to support this has not yet materialized. It also cannot be said how much of this surface architecture dates to the original interments, and how much built up as the site was revisited over time. However, many of the graves featuring elaborate surface architecture were discovered to have been looted in antiquity, and were apparently reconsecrated.

Table 4.4: Surface Wadi Fidan 40 surface architecture.

Grave No.	Area	Season	Circle diameter (m)	Paving stones present?
5	A	2004	1.65	
9	A	2004	2.10	
10	B	2004	1.45	
11	B	1997	1.60	
12	B	1997	2.35	
13	B	1997	2.37	
14	B	1997	2.65*	
17	B	1997	2.00*	
18	B	1997	2.05	
20	A	1997	1.45	
22	A	1997	1.80	
23	A	1997	1.55	
26	C	1997	2.00	
27	C	1997	2.30	
28	C	1997	2.60	
29	C	1997	2.20	
30	C	1997	0.95	Present
31	C	1997	2.95	Present
33	B	1997	1.20	Present
34	B	1997	1.80	Present
35	B	1997	1.00	Present
38	B	1997	4.10	Present
39	C	1997	1.10*	Present
40	B	1997	1.25*	
43	B	1997	1.80	Present
46	B	1997	2.30	
47	B	2004	1.85	
49	A	1997	1.10	
54	C	1997	2.19	
55	A	1997	1.25	Present

Table 4.4: Surface Wadi Fidan 40 surface architecture, continued.

56	A	1997	1.60*	Present
55-2004	A	2004	1.50	Present
59	A	2004	1.95	
60	A	1997	2.50	Present
61	A	1997	1.35	Present
66	C	1997	1.90	Present
67	C	1997	1.75	
68	A	1997	1.20	Present
72	A	1997	1.40	Present
74	A	1997	1.00	Present
75	C	1997	2.30	Present
80	A	1997	0.85**	Present
80-2004	A	2004	1.85	
82	A	2004	2.60	
83	A	2004	1.50	
84	A	2004	1.70	
87	A	1997	1.50	
90	A	2004	1.50	Present
91	A	2004	1.90	
92	A	1997	2.20	Present
94	C	1997	1.50	
97	A	1997	1.45	Present
200	E	2003	2.00	Present
201	E	2003	1.95	Present
202	E	2003	0.70	
203	E	2003	0.80	
205	E	2003	0.65	Present
206	E	2003	1.90	
207	E	2003	1.25	
208	E	2003	1.60	Present
209	E	2003	2.20	
210	E	2003	1.47	Present
211	E	2003	1.35***	
212	E	2003	2.10	
213	E	2003	1.90	Present
216	E	2003	2.60	Present
217	E	2003	1.45	Present
218	E	2003	2.45	Present
219	E	2003	2.40	Present
220	E	2003	1.50	
221	E	2003	1.70	
222	E	2003	1.75	
223	E	2003	2.40	
224	E	2003	2.10	
225	E	2003	1.60	
226	E	2003	1.75	Present

Table 4.4: Surface Wadi Fidan 40 surface architecture, continued.

227	E	2003	1.45	
228	E	2003	1.85	Present
230	E	2003	1.70	
231	E	2003	1.70	
233	E	2003	0.90	Present
234	E	2003	2.25*	
235	E	2003	1.60	
237	E	2003	2.40	
238	E	2003	2.40	
240	E	2003	2.15**	Present
241	E	2003	1.95	
242	E	2003	0.95	
243	E	2003	1.90	
246	E	2003	2.60	Present
247	E	2003	2.75**	Present
248	E	2003	None	Present
259	E	2003	1.25	Present
260	E	2003	None	Present
261	E	2003	None	Present
300	A	2004	1.05	
301	A	2004	1.10	
302	A	2004	1.00	
303	A	2004	0.95	Present
304	A	2004	1.75	
306	A	2004	1.15	Present
307	A	2004	1.80	
309	A	2004	1.20	
311	A	2004	2.40	Present
317	A	2004	1.55	
318	A	2004	1.40	
319	A	2004	1.60	Present
331	A	2004	2.20	
334	A	2004	2.70	
336	A	2004	1.60	
338	A	2004	2.00	
339	A	2004	2.10	
342	A	2004	2.00	
345	A	2004	1.50	
356	A	2004	1.50	
357	A	2004	1.50	
358	A	2004	1.65	
359	A	2004	1.00	Present
361	A	2004	1.35	
362	A	2004	1.50	
363	A	2004	1.55	
365	A	2004	0.75	

Table 4.4: Surface Wadi Fidan 40 surface architecture, continued.

371	A	2004	1.40	
500	B	2004	1.70	
501	B	2004	1.65	
502	B	2004	1.95	
504	B	2004	1.85	
505	B	2004	1.75	Present
506	B	2004	1.40	Present
507	B	2004	1.65	Present
508	B	2004	1.85	Present
514	B	2004	1.65	Present
515	B	2004	2.20	
516	B	2004	1.30	Present
521	B	2004	1.10	Present
522	B	2004	1.10	Present
523	B	2004	1.20	Present
526	B	2004	1.55	
540	B	2004	1.50	
701	C	2004	3.50	
702	C	2004	0.60	
703	C	2004	1.50**	Present
704	C	2004	0.90	Present
705	C	2004	1.70	
706	C	2004	1.95	
707	C	2004	1.25	
708	C	2004	0.40**	Present
709	C	2004	0.55	
710	C	2004	2.80	
712	C	2004	2.25**	Present
713	C	2004	1.85	Present
714	C	2004	2.30	
715	C	2004	1.70	
716	C	2004	0.85	Present
717	C	2004	1.05	Present
718	C	2004	1.20	Present
720	C	2004	1.35	
721	C	2004	1.20	Present
722	C	2004	1.45	
724	C	2004	1.70	
726	C	2004	1.30	
730	C	2004	1.30	Present
732	C	2004	1.20	
733	C	2004	1.10	Present
734	C	2004	1.10	
735	C	2004	1.15	Present
736	C	2004	2.05**	
737	C	2004	1.10	

Table 4.4: Surface Wadi Fidan 40 surface architecture, continued.

738	C	2004	0.85	
739	C	2004	1.20	
740	C	2004	0.50	Present
741	C	2004	1.00	
2009	A	2009	1.73	

*Exterior measurement two concentric circles.
**Maximum measurement of a rectangular feature.
***Exterior measurement of three concentric circles.

The grave circles themselves are groups of standing stones, however independent standing stones were also observed (Fig. 4.1). Standing stones appear in Raikes' (1980) sketches, and are noted explicitly by Adams (1991) and Levy et al. (1999). The earliest noted standing stones were chosen because they were longer than they were wide and thick. Many were shaped by grinding or pecking. Since these can only be recognized definitively *in situ*, few of them were recognized and described. Standing stones will be considered more fully in Chapter 5.

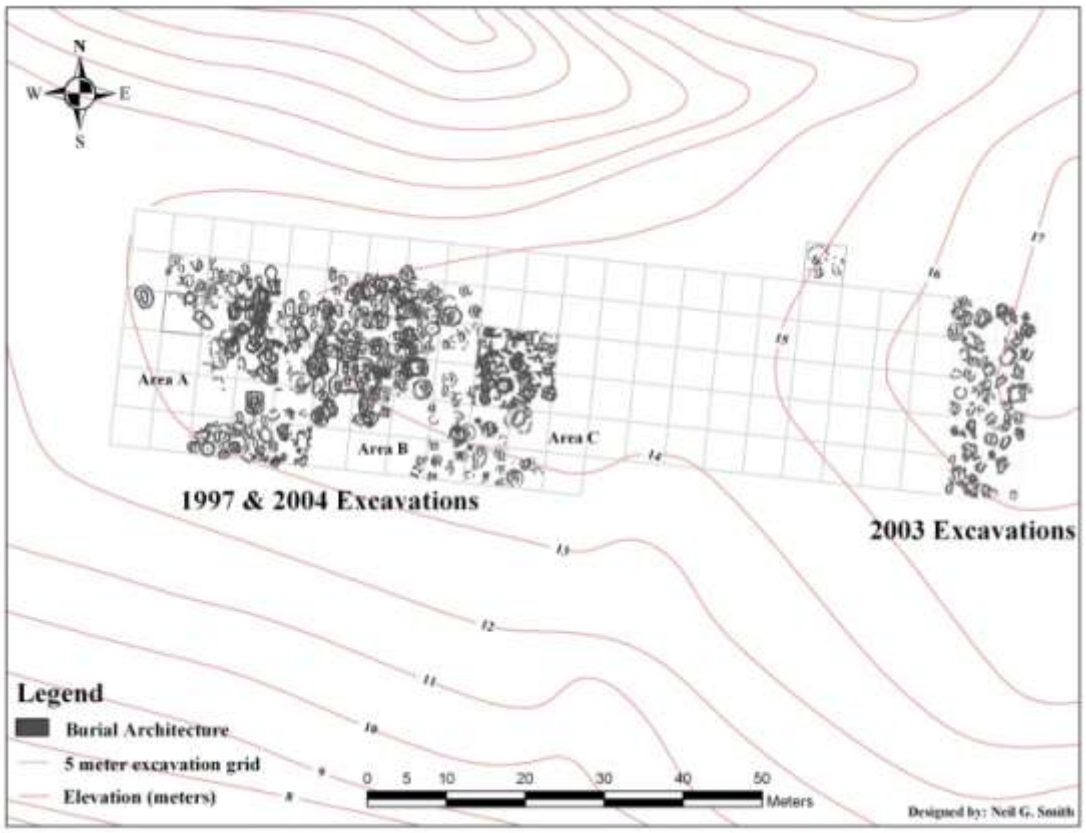


Figure 4.1: Excavated graves of Wadi Fidan 40.

SUBSURFACE ARCHITECTURE

The ideal type of burial, represented by two hundred forty-five excavated examples, was within stone cists (Table 4.5). To construct a cist grave, a hole was dug in the fill and conglomerate to an average depth of 1.01 meters. The walls of the resulting pit were then lined with large flat slabs of red Nubian sandstone, averaging roughly sixty centimeters by forty centimeters by ten to fifteen centimeters, creating a stone cist with an average length of 1.09 meters, width of 0.47 meters, and depth of 0.45 meters. However, cists ranged in length from 0.26 meters to 2.06 meters, in width from 0.20 to 1.01 meters, and in depth from 0.20 meters to 0.76 meters. The average capstone depth below surface was 0.43 meters. Although sandstone boulders are found in Wadi Fidan,

the quantity of sandstone used suggests that it was cut further up the wadi and carried to the site. The floors of fifteen cists were paved of flat stones, though most cist floors consisted of conglomerate bedrock. Cobbles—usually dolerite—were laid across the top of the side slabs as capstone support stones. Stone slabs, usually of sandstone and of about the same dimensions as the side slabs, were placed on top of these to serve as capstones. The capstones were in turn often covered with a coating of mud plaster.

There are three main types of cist at Wadi Fidan 40—trapezoidal cists, L-shaped cists, and rectangular cists (Table 4.5). Rectangular cists, which made up 32 of the cists in the cemetery, were with one possible exception constructed to hold children or secondary burials. Trapezoidal cists, which tend to be wider in the north than in the south, make up 154 of the graves. L-shaped cists, which constitute thirteen of the graves, have an extension at a right angle to the base. The L-shaped and trapezoidal cists were constructed in order to hold the bent legs of a semiflexed individual. Trapezoidal cists have an advantage over L-shaped cists in that they can more easily be reused—L-shaped cists when originally constructed were tailored to the measurements of the interred. When L-shaped cists were reused the leg niche was often ignored or used for the secondary remains of the original occupant. Insufficient data were collected on 47 of the cists to determine their shape. No photographs were taken of these cists, and their shape could not be determined from such notes as exist. No chronological distinctions could be made between the three kinds of cists. Indeed, in the case of Grave 337 and Grave 348, two graves were covered by an unbroken line of capstones and are believed therefore to be cotemporaneous. Grave 337 is a trapezoidal cist, and Grave 348 is an L-shaped cist. All three cist types were probably used at the same time.

Table 4.5: Wadi Fidan 40 cist architecture.

Grave No.	Area	Season	Capstone depth below surface (m.)	Cist length (m.)	Cist width (m.)	Cist depth (m.)	Total depth below surface (m.)	Cist shape*	Number of surviving capstones	Cist floor paved ?
5-2004	A	2004	0.42	1.08	0.84	0.59	1.11	R	2	
10-2004	B	2004	0.84	1.05	0.40	0.64	1.51	U	0	
12	B	1997	0.82	1.56	0.30	0.31	1.26	T	4	
13	B	1997	0.78	1.34	0.50	0.55	1.59	T	4	
14	B	1997	0.47	1.35	0.55	0.65	1.19	T	3	
17	B	1997	0.59	1.20	0.50	0.50	1.07	T	0	
18	B	1997	0.63	1.25	0.40	0.45	1.14	U	2	
20	A	1997	N/A	1.40	0.60	0.43	N/A	T	0	
21	A	1997	N/A	N/A	N/A	N/A	N/A	U	0	
22	A	1997	0.47	1.10	0.38	0.45	1.55	T	4	
23	A	1997	1.06	1.25	0.54	0.45	1.51	T	3	
25	A	1997	0.57	1.18	0.65	0.57	1.20	T	3	
26B	C	1997	0.69	1.04	0.58	0.30	1.27	T	3	
27	C	1997	0.16	1.30	0.65	0.55	0.61	T	4	
28	C	1997	0.20	1.22	0.59	0.49	0.69	T	1	
29	C	1997	0.37	1.30	0.61	0.50	0.87	L	3	
30	C	1997	0.33	1.02	0.36	0.50	0.91	T	3	
31	C	1997	0.37	1.29	0.49	0.39	1.03	T	6	
31A	C	1997	0.37	0.71	0.33	0.39	1.03	R	4	
33	B	1997	0.37	1.27	0.65	0.50	1.02	T	3	
34	B	1997	0.45	1.40	0.60	0.35	0.93	T	5	
35A	B	1997	0.21	0.48	0.30	0.30	0.51	R	2	
35B	B	1997	0.21	0.82	0.34	0.36	0.63	R	0	
38A	B	1997	0.82	1.63	0.65	0.34	1.41	U	4	
38C	B	1997	0.78	1.30	0.64	0.45	1.26	T	3	
38I	B	1997	0.79	0.26	0.33	0.36	0.98	U	0	
38J	B	1997	0.79	0.50	0.22	0.30	1.04	R	2	
38M	B	1997	0.60	1.10	0.50	0.47	1.07	T	0	
38Q	B	1997	0.93	0.78	0.37	0.48	1.41	T	2	
38S	B	1997	0.75	1.17	0.56	0.40	1.41	L	3	
39	B	1997	0.60	1.23	0.55	0.46	1.17	T	4	
40	B	1997	0.42	1.20	0.40	0.34	0.97	R	4	
43	B	1997	0.39	1.60	0.65	0.50	1.06	T	5	Y
46	B	1997	0.45	1.37	0.60	0.50	1.13	U	4	
47-2004	B	2004	0.39	1.30	0.45	0.40	0.79	T	0	
49	A	1997	0.63	1.00	0.40	0.35	1.05	U	5	
53	A	1997	0.64	1.07	0.35	0.29	1.14	T	4	
54	C	1997	N/A	1.55	0.65	0.34	N/A	T	4	
55	A	1997	0.81	1.05	0.50	0.48	1.29	U	6	
58	A	1997	0.49	1.30	0.45	0.56	1.14	T	3	
59-2004	A	2004	0.63	1.61	0.52	0.54	1.33	T	4	
60	A	1997	0.41	1.25	0.40	0.55	1.03	U	5	
61	A	1997	N/A	1.10	0.46	0.36	N/A	U	5	
63	C	1997	N/A	0.78	0.46	0.22	N/A	R	1	
66	C	1997	0.22	0.42	0.22	0.29	0.64	U	3	
67	C	1997	0.35	1.38	0.58	0.52	1.05	U	4	
69	A	1997	N/A	0.30	0.20	0.25	N/A	U	1	
74	A	1997	0.31	0.55	0.20	0.38	0.83	R	4	

Table 4.5: Wadi Fidan 40 cist architecture, continued.

80	A	1997	0.15	0.60	0.30	0.29	0.49	U	3	
80-2004	A	2004	0.30	1.28	0.44	0.54	0.97	T	4	
83-2004	A	2004	0.67	0.66	0.23	0.50	1.17	R	2	
84-2004	A	2004	0.58	1.20	0.60	0.53	1.24	T	4	
87	A	1997	0.39	1.26	0.45	0.45	0.64	T	5	
91-2004	A	2004	0.55	1.25	0.35	0.56	1.24	T	4	
92	A	1997	0.72	1.15	0.33	0.62	1.38	T	4	
93	A	1997	0.41	0.30	0.30	0.41	0.82	U	0	
94	C	1997	0.37	1.21	0.64	0.26	0.95	L	4	
95	C	1997	0.60	1.32	0.60	0.51	1.11	T	3	
95A	C	1997	0.59	1.20	0.44	0.52	1.11	T	3	
96	A	1997	0.70	1.25	0.55	0.55	1.28	T	4	
97	A	1997	0.50	1.25	0.50	0.67	1.17	T	3	
100	C	1997	0.33	1.26	0.58	0.49	1.22	U	3	Y
101	C	1997	0.67	1.38	0.49	0.43	1.16	T	3	
102	A	1997	0.64	1.20	0.40	0.60	1.34	T	4	
107	A	1997	0.26	1.40	0.45	0.46	0.84	T	5	
109	A	1997	0.30	1.03	0.35	0.43	0.86	R	4	
110	A	1997	0.25	1.40	0.60	0.30	0.41	R	0	
200	E	2003	0.58	1.46	0.72	0.57	1.18	T	3	
201	E	2003	0.67	1.42	0.53	0.50	1.27	R	4	Y
202	E	2003	0.29	0.60	0.30	0.22	0.69	R	0	
203	E	2003	0.49	0.93	0.47	0.45	1.05	R	3	
205	E	2003	0.34	0.80	0.44	0.29	0.74	T	0	
206	E	2003	0.64	1.43	0.49	0.53	1.17	U	1	
207	E	2003	0.66	1.20	0.46	0.45	1.24	T	3	
208	E	2003	0.66	1.30	0.54	0.45	1.13	L	4	
209	E	2003	0.55	1.45	0.65	0.38	1.27	T	4	
210	E	2003	0.51	1.32	0.48	0.38	1.06	T	5	
211	E	2003	0.71	1.29	0.66	0.51	1.33	T	3	
212	E	2003	N/A	1.63	0.52	0.50	N/A	U	1	
213	E	2003	0.60	1.80	0.60	0.50	1.30	U	6	
216	E	2003	0.70	1.05	0.60	0.43	1.20	U	4	Y
217	E	2003	0.73	1.42	0.55	0.50	1.39	T	3	
218	E	2003	0.62	1.32	0.56	0.48	1.32	T	4	Y
220	E	2003	0.34	0.84	0.40	0.41	0.90	T	3	
221	E	2003	0.50	1.31	0.60	0.55	1.21	U	3	
222	E	2003	1.08	1.23	0.50	0.48	1.69	U	3	
223	E	2003	0.51	1.55	0.45	0.50	1.28	U	5	
224	E	2003	0.35	1.02	0.38	0.42	0.90	U	3	
225	E	2003	0.41	1.33	0.53	0.50	1.10	T	5	
226	E	2003	1.18	1.43	0.55	0.50	1.90	T	3	
227	E	2003	0.67	1.39	0.62	0.46	1.26	T	4	
228	E	2003	0.46	1.30	0.60	0.49	1.28	T	2	
229	E	2003	0.39	0.74	0.45	0.35	0.84	R	0	
230	E	2003	0.10	0.76	0.50	0.47	0.76	T	4	
231	E	2003	0.30	N/A	0.47	0.40	1.00	U	5	
233	E	2003	0.34	0.46	0.40	0.30	0.79	T	2	Y
234	E	2003	0.53	1.65	0.68	0.53	1.24	T	4	
235	E	2003	0.54	1.36	0.52	0.49	1.11	T	4	Y
237	E	2003	0.73	1.46	0.67	0.48	1.26	T	4	Y
238	E	2003	0.18	1.56	0.63	0.45	0.73	T	3	

Table 4.5: Wadi Fidan 40 cist architecture, continued.

239	E	2003	0.27	1.45	0.41	0.40	1.46	U	4	
240	E	2003	0.52	1.30	0.69	0.68	1.28	T	4	
241	E	2003	0.65	1.46	0.54	0.55	1.26	T	5	
242	E	2003	0.43	1.50	0.49	0.45	1.02	U	2	
243	E	2003	0.54	1.10	0.56	0.35	1.13	U	4	
244	E	2003	0.44	1.40	0.62	0.47	0.92	T	3	
245	E	2003	0.58	0.57	0.28	0.35	0.73	R	0	
246	E	2003	0.19	1.40	0.48	0.40	0.97	T	4	
247	E	2003	1.23	1.60	0.48	0.34	1.80	T	4	
248	E	2003	0.30	0.40	0.21	0.20	0.72	R	1	
249	E	2003	0.19	1.42	0.68	0.38	0.86	T	3	
251	E	2003	0.13	1.20	0.79	0.33	0.72	T	3	
252	E	2003	0.29	1.10	0.50	0.34	0.84	T	3	
253	E	2003	0.20	1.25	0.53	0.45	0.87	T	3	
254	E	2003	0.22	1.20	0.56	0.43	0.87	T	5	
255	E	2003	0.05	0.83	0.35	0.32	0.65	R	0	
257	E	2003	0.17	1.00	0.45	0.37	1.04	T	3	
258	E	2003	0.26	1.35	0.49	0.51	1.01	U	2	
259	E	2003	0.42	0.94	0.42	0.32	0.84	T	3	
260	E	2003	0.25	0.85	0.33	0.45	0.94	T	3	
261	E	2003	0.22	1.30	0.59	0.37	0.98	T	5	
262	E	2003	0.14	0.53	0.40	0.24	0.50	U	1	
263	E	2003	0.20	1.40	0.50	0.37	0.87	U	4	
306	A	2004	0.09	0.63	0.25	0.38	0.62	T	2	
307	A	2004	0.47	1.11	0.43	0.63	1.12	L	5	
308	A	2004	0.18	1.00	0.60	0.35	0.81	L	5	
311	A	2004	0.59	1.25	0.50	0.60	1.31	U	2	
316	A	2004	0.14	0.75	0.35	0.56	0.71	T	0	
318	A	2004	0.09	1.21	0.36	0.40	0.75	U	4	
322	A	2004	0.13	N/A	0.57	0.56	0.92	U	4	
323	A	2004	0.19	1.30	0.45	0.48	0.84	T	4	
324	A	2004	0.37	0.62	0.35	0.21	0.94	R	2	
326	A	2004	0.04	0.64	0.34	0.35	0.52	R	3	
328	A	2004	0.10	0.77	0.27	0.36	0.46	T	3	
329	A	2004	0.36	1.10	0.56	0.44	0.98	T	4	
330	A	2004	0.08	0.67	0.34	0.32	0.60	R	3	
331	A	2004	0.48	1.15	0.50	0.49	1.17	L	5	
334	A	2004	0.16	1.05	0.30	0.45	0.85	U	4	
335	A	2004	0.27	0.86	0.47	0.49	0.87	T	4	
336	A	2004	0.13	0.65	0.26	0.43	0.68	R	3	
337	A	2004	0.29	1.30	0.56	0.53	1.02	T	3	
338	A	2004	0.40	1.19	0.46	0.48	0.88	T	3	
339	A	2004	0.28	1.27	0.37	0.46	0.84	U	3	
340	A	2004	0.30	1.15	0.42	0.33	0.77	L	3	
342	A	2004	0.27	1.10	0.65	0.47	1.04	U	2	
343	A	2004	0.28	1.39	0.65	0.64	1.29	T	2	
344	A	2004	0.77	0.65	0.23	0.51	1.52	T	4	
345	A	2004	0.77	1.00	0.35	0.55	1.52	T	3	
346	A	2004	0.18	1.39	0.50	0.47	0.80	T	3	
348	A	2004	0.47	1.23	0.40	0.45	1.05	L	4	
350	A	2004	0.35	0.78	0.39	0.41	0.53	T	2	
351	A	2004	0.17	1.15	0.50	0.41	0.80	T	3	
352	A	2004	0.41	0.81	0.54	0.44	0.85	T	1	
353	A	2004	0.18	0.76	0.36	0.38	0.69	U	3	
354	A	2004	0.11	0.71	0.33	0.55	0.66	U	0	
356	A	2004	0.54	1.03	0.39	0.45	1.13	R	3	

Table 4.5: Wadi Fidan 40 cist architecture, continued.

357	A	2004	0.32	0.88	0.35	0.45	0.95	R	3	
358	A	2004	0.37	0.91	0.43	0.76	1.23	L	4	
360	A	2004	0.43	1.07	0.48	0.46	0.98	T	3	
361	A	2004	0.32	0.73	0.28	0.34	0.66	T	3	
362	A	2004	0.63	1.20	0.39	0.50	1.27	T	4	
366	A	2004	0.11	1.30	0.50	0.46	0.60	U	4	
367	A	2004	0.41	0.95	0.55	0.42	0.94	T	4	
368	A	2004	0.32	1.19	0.51	0.41	0.73	L	3	
370	A	2004	0.29	1.30	0.52	0.36	0.95	T	4	
371	A	2004	0.53	1.19	0.43	0.47	1.12	T	4	
501	B	2004	0.48	1.13	0.44	0.42	1.02	T	3	
502	B	2004	0.62	1.10	0.40	0.48	1.32	T	3	
504	B	2004	0.62	1.40	0.50	0.60	1.30	L	4	
505	B	2004	0.19	1.10	0.55	0.62	0.92	T	4	
506	B	2004	0.38	N/A	0.35	0.34	0.82	R	1	
507	B	2004	0.30	0.89	0.56	0.52	0.91	T	4	
508	B	2004	0.48	1.25	0.42	0.50	1.02	T	3	
510	B	2004	0.37	0.78	0.35	0.45	0.90	T	4	
512	B	2004	0.28	1.20	0.55	0.58	0.95	T	4	
514	B	2004	0.53	1.15	0.60	0.51	1.18	T	2	
515	B	2004	0.76	0.75	0.20	0.22	1.22	T	0	
516	B	2004	0.22	0.90	0.40	0.62	1.04	R	3	Y
517	B	2004	0.34	1.20	0.55	0.56	1.06	T	5	
518	B	2004	0.38	1.09	0.50	0.42	0.95	T	2	
519	B	2004	0.79	1.10	0.50	0.44	1.30	T	1	
520	B	2004	0.27	1.30	0.60	0.47	0.89	T	3	
521	B	2004	0.39	0.65	0.25	0.29	0.53	R	1	Y
522	B	2004	0.33	0.95	0.40	0.46	0.90	T	2	
523	B	2004	0.12	1.10	0.50	0.48	0.73	T	2	
524	B	2004	0.33	1.20	0.55	0.50	0.97	T	4	Y
525	B	2004	0.41	0.65	0.25	0.34	0.85	T	3	
526	B	2004	0.38	0.90	0.55	0.61	1.08	T	2	
527	B	2004	0.22	0.50	0.30	0.43	0.75	T	3	
528	B	2004	0.50	1.25	0.60	0.47	1.05	T	3	
529	B	2004	0.08	0.35	0.25	0.38	0.46	U	0	
530	B	2004	0.34	0.98	0.35	0.57	0.96	T	3	
531	B	2004	0.43	1.20	0.50	0.41	1.01	T	3	
532	B	2004	0.29	1.15	0.55	0.51	0.91	T	4	
533	B	2004	0.20	0.95	0.45	0.43	0.88	T	0	
534	B	2004	0.20	0.85	0.45	0.34	0.70	U	4	
535	B	2004	0.71	0.80	0.40	0.51	1.55	T	1	
536	B	2004	0.06	0.75	0.35	0.33	0.60	T	5	
537	B	2004	0.38	0.60	0.45	0.49	0.95	T	3	
539	B	2004	0.28	0.85	0.40	0.44	0.51	T	0	
540	B	2004	0.27	1.25	0.50	0.51	1.00	T	4	
541	B	2004	0.29	0.65	0.20	0.34	0.65	T	2	
542	B	2004	0.10	1.25	0.60	0.56	0.76	T	2	
543	B	2004	0.32	1.00	0.53	0.29	0.71	T	3	
544	B	2004	0.45	1.52	0.65	0.48	1.06	T	4	
545	B	2004	0.44	0.97	0.74	0.41	0.99	T	1	
546	B	2004	0.26	1.20	0.45	0.48	0.74	T	1	
547	B	2004	0.36	1.35	0.48	0.47	0.98	T	4	
549	B	2004	0.31	1.25	0.50	0.55	0.96	T	3	
550	B	2004	0.56	0.95	0.65	0.47	1.20	T	3	
551	B	2004	0.08	0.99	0.32	0.40	0.45	T	3	
552	B	2004	0.26	0.60	0.30	0.30	0.65	R	1	

Table 4.5: Wadi Fidan 40 cist architecture, continued.

554	B	2004	0.50	0.45	0.35	0.48	0.98	U	0	
701	C	2004	0.73	1.09	0.47	0.47	1.58	T	4	Y
702	C	2004	0.75	N/A	0.56	0.41	1.47	U	2	
703	C	2004	0.82	N/A	0.45	0.53	1.45	U	2	
704	C	2004	0.41	1.05	0.61	0.38	1.17	T	3	
705	C	2004	0.41	N/A	0.48	0.31	1.11	T	2	
706	C	2004	0.53	1.32	0.52	0.38	1.23	T	4	
707	C	2004	0.13	1.35	0.62	0.50	0.86	T	5	
708	C	2004	0.96	1.11	0.37	0.45	1.59	U	2	
710	C	2004	0.28	2.06	1.01	0.61	1.01	R	0	Y
711	C	2004	0.21	0.67	0.33	0.43	0.60	R	2	
712	C	2004	0.95	1.05	0.46	0.45	1.40	T	0	
714	C	2004	0.54	1.25	0.56	0.47	1.17	T	5	
715	C	2004	0.23	1.21	0.41	0.57	0.95	T	2	
718	C	2004	1.29	0.97	0.66	0.37	1.71	L	4	
719	C	2004	0.13	1.32	0.48	0.46	0.76	T	3	
720	C	2004	0.37	N/A	0.38	0.46	1.20	T	3	Y
722	C	2004	0.42	1.12	0.44	0.43	0.99	T	3	
723	C	2004	0.23	0.59	0.26	0.32	0.55	T	0	
724	C	2004	0.60	1.30	0.35	0.45	1.25	T	3	
725	C	2004	0.21	0.75	0.28	0.43	0.67	R	2	
726	C	2004	0.46	0.95	0.50	0.38	0.93	T	3	
728	C	2004	0.14	1.15	0.31	0.42	0.77	T	3	
730	C	2004	0.29	N/A	0.48	0.44	0.77	T	3	
731	C	2004	0.14	N/A	0.38	0.41	0.77	T	3	
732	C	2004	0.10	0.95	0.46	0.45	0.71	T	3	
734	C	2004	0.47	1.26	0.60	0.41	1.01	T	2	
735	C	2004	0.60	N/A	0.43	0.45	1.15	T	2	
736	C	2004	0.67	1.24	0.51	0.42	1.27	T	3	Y
737	C	2004	0.49	N/A	0.38	0.55	1.15	T	3	
738	C	2004	0.55	N/A	N/A	0.37	1.17	T	2	
739	C	2004	0.47	N/A	0.36	0.49	1.01	T	3	
740	C	2004	0.60	0.69	0.35	0.37	1.04	R	2	

*L=L-shaped, R=Rectangular, T=Trapezoidal, U=Unrecorded

The cists are striking for their uniformity. The majority are trapezoidal-shaped, wider in the north than in the south. By contrast, among the published graves at the large Late Bronze and Iron Age cemetery Tell es-Sa'idiyeh, Elizabeth Bloch-Smith (1992: 159) counted fourteen variations of mud brick and stone cists, ranging from pits partially lined with stones and sherds to completely stone-lined cists not dissimilar to those at Wadi Fidan 40. The uniformity of burial architecture suggests a single population utilized the cemetery over a period of time.

The second most common disposal method for primary burials, consisting of thirty-four excavated examples, was a pit covered with capstones (Table 4.6). These pits are dug into the conglomerate bedrock and then covered with stone slabs of the same sort as were found over the cist graves. Just one burial, containing two individuals, was a simple inhumation without capstones. These would seem to support Bloch-Smith's (1992) theory that pits are a simplified form of cist burial.

Table 4.6: Wadi Fidan 40 pit burials with capstones. Measurments in meters.

Grave No.	Area	Season	Capstone depth below surface	Burial length	Burial width	Burial depth below surface	Number of capstones
9-2004	A	2004	0.50	1.18	0.52	1.06	4
26A	C	1997	0.86	1.39	0.54	1.22	3
55-2004	A	2004	0.56	0.43	0.29	1.14	4
38B	B	1997	0.82	0.57	0.49	1.12	2
38N	B	1997	0.45	0.60	0.54	0.61	2
68*	A	1997	0.46	1.26	0.46	1.01	4
71	A	1997	0.47	1.20	0.50	1.05	4
72*	A	1997	0.51	1.40	1.00	1.15	4
75	C	1997	0.63	1.00	0.60	1.24	10
82-2004	A	2004	0.43	0.49	0.36	0.58	4
90-2004	A	2004	0.54	1.24	1.15	1.14	4
99	C	1997	0.23	0.27	0.17	0.60	1
105	A	1997	0.64	0.63	0.53	1.14	2
300	A	2004	0.47	0.50	0.28	0.95	3
301	A	2004	0.31	0.91	0.79	0.80	2
317	A	2004	1.15	1.00	0.45	1.91	2
319	A	2004	0.41	1.01	0.88	0.96	3
320	A	2004	0.25	1.03	0.57	0.87	4
321	A	2004	0.44	0.82	0.38	0.99	4
325	A	2004	0.34	0.80	0.40	0.70	3
327	A	2004	0.11	0.52	0.30	0.28	3
341	A	2004	0.52	0.63	0.41	0.82	1
355	A	2004	0.38	0.68	0.44	0.84	3
359	A	2004	0.35	0.79	0.52	0.81	2
363	A	2004	0.51	1.50	1.06	1.14	4
364	A	2004	0.19	0.41	0.28	0.51	2
555	B	2004	0.38	1.30	0.44	0.72	2
713	C	2004	0.43	1.40	0.43	1.51	4
716	C	2004	0.44	0.40	0.30	0.91	2
717	C	2004	0.65	0.45	0.32	0.90	2
721	C	2004	0.79	0.59	0.46	1.10	3
733	C	2004	0.62	0.80	0.33	1.04	2

Table 4.6: Wadi Fidan 40 pit burials with capstones, continued.

741	C	2004	0.63	0.67	0.21	1.06	2
2009	A	2009	0.70	1.10	0.50	1.05	5

*Graves 68 and 72 were partially lined with stones.

Cists were generally constructed to hold an individual's flexed or semiflexed remains, though the stones forming the end of some cists were later removed to allow the placement of extended burials. Of the one hundred ten interments which were intact enough for such examination, ninety-seven were semiflexed or flexed and just thirteen were extended (Table 4.7). One additional individual (in Grave 200) was lain with legs extended and upper body hunched over, as though in an attempt at an extended burial. Extended burials nonetheless are found across and in each area of the site. At Wadi Fidan 40, extended burials seem to be a later development which at times necessitated the modification of reused cists. All of the dated graves at Wadi Fidan 40—Graves 59, 92, and 701, which were radiocarbon dated, and 91, which included a tenth-century stamp seal (Levy et al. 2005: 39-40)—were extended burials in cists with the stones at one end removed (Figure 8.21). This suggests that the last phase of use at the cemetery has been used to date the whole. Interestingly, of the adult burials at WFD 4, Tomb 1 only the topmost is extended, suggesting the custom changed with time in the Wadi Fidan, and that only at the end of the cemetery's life were the dead buried in this fashion.

The cists, and burials both in and without cists, are almost invariably oriented more or less to the south, with a minority oriented to the north. Of the one hundred forty-six burials which were intact enough to determine orientation, one hundred sixteen were oriented to the south, while twenty-six were oriented to the north. The infant of 38O was oriented to the west, and the infant in 226 was oriented with head to the east. The latter

was, however, in a cist oriented north-south, and may have once lain at the feet of a second inhabitant. One cist, that of Grave 262, was constructed oriented east-west. Extended burials were placed oriented to the north and south in roughly equal numbers. This tendency to orient all of the graves of a cemetery in a particular fashion is common in the Levant during this period (Bloch-Smith 1992). The burials were in general placed to face the west. Seventy-seven burials faced west, while thirteen faced east. Seven, all extended, lay face-up. There was no clear correlation between whether the interred was oriented north or south and whether that individual faced east or west.

Wadi Fidan 40 and Wadi Fidan 4 are notable for the uniformity of their subsurface architecture, and it is tempting to use cist graves as an ethnic marker. Bloch-Smith (1992) has shown that these graves, however, are found across the lowlands of Israel and Transjordan. But cist graves also serve utilitarian purposes. They serve to deter if not prevent humans and other animals from digging up the dead (Kirkbride 1969a, b). Like their modern counterparts used in most United States cemeteries, concrete vaults, they also serve to stabilize the ground surface and its associated architecture, which would otherwise collapse as the interred decompose (Heimbuch et al. 1980). Such surface architecture is also of particular importance in the construction of identity, in that it remains visible on the surface as the site is revisited, and can be the focus of cult.

SECONDARY BURIALS

Secondary burials are also very common in the cemetery (Table 4.7). In some cases, a cist was constructed for a secondary burial (Figure 8.7), possibly for an individual not originally interred in the cemetery. But secondary burials usually result

from reuse of the cists. In some cases, the original internment was pushed to the end of the cist or laid over the legs of the new primary burial. In other instances, it is believed that the previous internment was removed from the cist and, after a new individual was interred and the capstones put in place, it was deposited above the capstones – a practice Jonathan Tubb noted at Tell es-Sa'idiyeh and termed "derived secondary" burial (Tubb 1995: 141). However, it is impossible to say at this point whether secondary burials in the grave shafts as "derived secondary" burials or perhaps individuals taken from graves at other sites and reburied with kin at Wadi Fidan 40. Secondary burials in shafts were sometimes very carefully arranged (Figure 8.8), but in most instances the treatment of the disarticulated remains, either within or without cists, could not be differentiated from the work of tomb robbers.

The precise minimum number of individuals remains unclear at present. The remains are under analysis by Melanie Beasley, however, and her analysis should clarify this and also reaffirm or correct age at death and sex of these individuals.

Looting is a danger Wadi Fidan 40 faces today (Levy 2003), and disturbance of graves was also dealt with by the population in antiquity. Two hundred five of the burials showed evidence of disturbance. This ranged from misplaced or missing capstones to, more commonly, partial or complete skeletal disarticulation and even destruction of the human remains. The looted graves were backfilled in antiquity, and often filled with stones. Some were then sealed with surface pavements in an apparent reconsecration of the violated grave. Sometimes, as in the case of Grave 210, the pavement appeared to cover the entire looted pit, extending out of the surface grave circle. Many of the burials with secondary remains in both tomb shafts and cists are

likely the result of remains being scattered by the looting process itself. Whether these graves were looted by external groups or for some reason disturbed by the population using the cemetery cannot be determined.

Table 4.7: Individuals at Wadi Fidan 40.

Grave	Area	Season	Age	Sex	Disposition	Orientation	Facing
5	A	2004			Fragmentary	N-S*	
9	A	2004	20-30	M	Extended	S	Up
10	B	2004	20-50+ years		Fragmentary	N-S*	
10B	B	2004	2-4 years		Secondary above capstones		
12	B	1997			Fragmentary	N-S	
12B	B	1997			Secondary		
12C	B	1997			Secondary		
13	B	1997	Juvenile		Semiflexed	N	E
14	B	1997			Semiflexed	S	
17A	B	1997	adult		Fragmentary	S	
17B	B	1997	Juvenile		Semiflexed	S	
17C	B	1997	Adult		Secondary in fill		
17D	B	1997	Child		Secondary in fill		
20	A	1997			Fragmentary		
21	A	1997			Fragmentary	N-S*	
22	A	1997			Flexed	N	E
23	A	1997	Mature adult		Semiflexed	S	E
23B	A	1997			Secondary above capstones		
24	A	1997	Adult		Secondary		
25	A	1997	Adult	M	Flexed	S	
26A	C	1997			Semiflexed	S	W
26B	C	1997			Disturbed	N-S*	
27	C	1997			Flexed	N	
28	C	1997	Adult		Disturbed	N	
29	C	1997	Adult	F?	Disturbed	S	
30	C	1997			Disturbed	S	
31	C	1997	Adult	M	Flexed	S	E
31A	C	1997			Secondary	S	W

Table 4.7: Individuals at Wadi Fidan 40, continued.

33	B	1997	Mature adult	F	Flexed	S	W
34	B	1997	Adult	F	Semiflexed	N	W
35A	B	1997			Flexed	N	
35B	B	1997	Infant		Secondary	S	
38A	B	1997	Mature adult	M	Extended	S	Up
38B	B	1997	Infant		Semiflexed	S	W
38C	B	1997	Adult		Fragmentary	S	
38I	B	1997	Infant		Scattered		
38J	B	1997	Adult		Secondary	SW	
38K	B	1997	Adult		Secondary		
38M	B	1997	Adult		Only legs	N-S*	
38N	B	1997			Secondary		
38O	B	1997	Infant		Semiflexed	W	SW
38Q	B	1997			Fragmentary	N-S*	
38S	B	1997	Adult		Disturbed	S	
39A	B	1997	Infant		Semiflexed	N	
39B	B	1997	Adult		Disturbed	S?	
40A	B	1997	Adult		Flexed	S	
40B	B	1997	Adult		Secondary		
43	B	1997	Adult	F	Extended	N	
46A	B	1997			Semiflexed	S	
46B	B	1997			Disarticulated	N	
47	B	2004	15-25 years		Fragmentary	N-S*	
47B	B	2004	20-50+ years		Fragmentary, in cist		
47C	B	2004	20-50+ years		Fragmentary, above capstones		
49	A	1997			Secondary	N-S	
53	A	1997			Secondary	N-S	
54	C	1997	Adoles-cent		Extended	N	E
55	A	2004			Flexed	S	W
55	A	1997			Semiflexed	S	E
56	A	1997			Semiflexed	S	
58	A	1997			Disarticulated	S	
59	A	2004	24-34	M	Extended	N	Up
60	A	1997	Juvenile		Fragmentary	S	

Table 4.7: Individuals at Wadi Fidan 40, continued.

66	C	1997	Infant		Flexed	N	W
67A	C	1997	Adult		Flexed	N	W
67B	C	1997	Adult		Secondary	S	
68	A	1997	Adult		Disarticulated	N-S*	
69	A	1997	Infant		Flexed	NW-SSE	
71A	A	1997	Juvenile, about 4		Partial articulation	N-S	
71B	A	1997	Juvenile, about 4		Semiflexed	S	W
72	A	1997	Adult		Semiflexed	S	W
74	A	1997	Adult		Secondary	N-S*	
75	C	1997	Adult	M	Flexed	SW	
80-2004	A	2004	30-34	F	Semiflexed	S	W
80	A	1997	Infant		Semiflexed	SE	
82	A	2004			Fragmentary	N-S*	
83A	A	2004	35-50	M	Secondary, in cist	N-S*	
83B	A	2004	25-35	M	Secondary, in cist		
84	A	2004	39-49	F	Semiflexed	S	W
87	A	1997	Mature adult	F	Semiflexed	S	W
90	A	2004	Adult		Semiflexed	S	W
91	A	2004	40-50		Extended	S	Up
92	A	1997	Mature adult	F	Extended	N	W
93	A	1997	Adult		Secondary	E-W	
94A	C	1997	Adult	M	Flexed	SW	NW
94B	C	1997	Adult		Secondary		
95	C	1997	Adolescent		Disturbed	NE-SW*	
95a	C	1997	Adolescent		Disturbed	NE-SW*	
96	A	1997	Adult		Secondary	S	
97	A	1997	18 months		Semiflexed	S	E
99	C	1997	Infant		Semiflexed	S	W
100	C	1997	Adult		Disturbed	N-S*	
101	C	1997	Adult		Disturbed	N-S*	
101B	C	1997	Subadult		Fragmentary		
102	A	1997	Adult	F	Flexed	S	W

Table 4.7: Individuals at Wadi Fidan 40, continued.

102B	A	1997	Adult		Secondary		
105	A	1997	Infant		Semiflexed	N	W
107	A	1997	Adult		Secondary	N-S*	
109	A	1997	Juvenile		Semiflexed	S	W
110	A	1997	Adult	F	Extended	NNW	Up
200	E	2003	Adoles-cent		Upper body bent forward, lower body extended	N	S
201	E	2003			Fragmentary	N-S*	
201B	E	2003			Secondary, in south end of cist		
202	E	2003	Infant		Semiflexed	S	
203	E	2003			Flexed	S	W
205	E	2003			Fragmentary	NE-SW*	
206	E	2003			Fragmentary	NE-SW*	
207	E	2003			Fragmentary	N-S*	
207B	E	2003			Secondary, above capstones		
208	E	2003			Fragmentary	N-S*	
209	E	2003			Fragmentary	N-S*	
210	E	2003			Fragmentary	S	
211	E	2003			Semiflexed	S	W
211B	E	2003			Secondary, above capstones		
212	E	2003			Empty, recently robbed	N-S*	
213	E	2003			Disturbed	N-S*	
216	E	2003			Fragmentary	N-S*	
217	E	2003	Adult		Flexed	S	W
217B	E	2003			Secondary, above capstones		
218	E	2003			Fragmentary	S	
219	E	2003			Fragmentary, secondary?		
220	E	2003			Disturbed	N-S*	

Table 4.7: Individuals at Wadi Fidan 40, continued.

220B	E	2003			Secondary, above capstones		
221	E	2003			Fragmentary	NNE-SSW*	
222	E	2003			Disturbed	S	
223	E	2003			Fragmentary	N-S*	
224	E	2003			Fragmentary	N-S*	
225	E	2003	Adult	M	Fragmentary	S	
226	E	2003			Flexed	E (cist N-S)	S
226B	E	2003			Secondary above capstones		
227	E	2003			Fragmentary	N-S*	
227B	E	2003			Secondary, above capstones		
228	E	2003			Fragmentary	N-S*	
229	E	2003			Secondary, in cist	N-S*	
230	E	2003			Flexed	S	W
231	E	2003			Flexed	S	
233	E	2003	Infant		Extended	N	W
234	E	2003			Semiflexed	S	
235	E	2003			Fragmentary	N-S*	
237	E	2003			Fragmentary	N-S*	
238	E	2003			Disturbed	NE-SW*	
238B	E	2003			Secondary, in fill		
239	E	2003			Fragmentary	N-S*	
240	E	2003			Fragmentary	SW	
240B	E	2003			Secondary, above northern capstone		
241	E	2003			Flexed	S	W
241B	E	2004			Secondary above southern and eastern capstones	E	
242	E	2003			Fragmentary	N-S*	
243	E	2003			Fragmentary	N-S*	

Table 4.7: Individuals at Wadi Fidan 40, continued.

244	E	2003			Fragmentary	N-S*	
244B	E	2003			Secondary, in plaster above northern capstone		
245	E	2003			Fragmentary	N-S*	
246	E	2003			Fragmentary	N-S*	
246B	E	2003	Infant		In southern area of cist		
247	E	2003			Fragmentary	N-S*	
248	E	2003	Infant		Flexed	S	W
249	E	2003			Fragmentary	N-S*	
251	E	2003			Disturbed	S	
252	E	2003			Disturbed	S	
253	E	2003			Fragmentary	N-S*	
254	E	2003			Fragmentary	N-S*	
255	E	2003			Fragmentary	N-S*	
256	E	2003			Fragmentary	N-S*	
257	E	2003			Disturbed	S	
257B	E	2003			Secondary burial, above and northeast of capstones		
258	E	2003			Fragmentary	N-S*	
259	E	2003			Fragmentary	N-S*	
260	E	2003			Fragmentary	N-S*	
261	E	2003			Fragmentary	N-S*	
262	E	2003			Fragmentary	E-W*	
263	E	2003			Fragmentary	NE-SW*	
263B	E	2003			Secondary, above northwest corner of capstones		
300	A	2004	20-50+ years		Fragmentary	N-S*	
301	A	2004	20-50+ years		Fragmentary secondary above 341		
302	A	2004			Fragmentary secondary, no cist		

Table 4.7: Individuals at Wadi Fidan 40, continued.

304	A	2004	20-50+ years		Fragmentary secondary, no cist		
305	A	2004	20-50+ years		Secondary above 323		
305B	A	2004	3-12 years		Secondary above 323		
306	A	2004	0-9 months		Extended	S	W
306B	A	2004	25-50+ years		Fragmentary, in cist		
306C	A	2004	Subadult		Fragmentary, in cist		
307	A	2004	35-50+ years		Semiflexed	S	W
308	A	2004	0-4 years		Extended	S	Up
311A	A	2004	35-50 years		Fragmentary	N-S*	
311B	A	2004	24-29 years		Fragmentary secondary, above capstones		
316	A	2004	10-15 years		Fragmentary	S	
317	A	2004	6-9 months		Fragmentary	NE-SW*	
317B	A	2004	3-5 years		Fragmentary		
317C	A	2004	3-5 years		Fragmentary		
317D	A	2004	1-3 years		Fragmentary		
318	A	2004	23-29 years	F	Extended	S	
318B	A	2004	≤0 months		At waist, possibly in the womb		
319	A	2004	20-50+ years		Secondary above capstones	N-S*	

Table 4.7: Individuals at Wadi Fidan 40, continued.

319B	A	2004	20-50+ years		Secondary below capstones		
319C	A	2004	6-10 years		Secondary below capstones		
319D	A	2004	1-4 years		Secondary below capstones		
320	A	2004	20-50+ years		Flexed	S	W
321	A	2004	3-6 years		Extended	S	W
322	A	2004	3-6 years		Fragmentary	N-S*	
323	A	2004	20-50+ years	F		S	
324	A	2004	6 months.-2 years		Semiflexed	S	E
325	A	2004	0-6 months		Fragmentary	NW-SE*	
326	A	2004	0-6 months		Fragmentary	N	
327	A	2004	6-12 years		Secondary	S	W
328	A	2004	3-6 years		Fragmentary	N-S*	
329	A	2004	20-50+ years		Semiflexed	S	W
329B	A	2004	≤0 months		In cist		
330	A	2004	3-6 years		Flexed	S	W
331	A	2004	35-50+ years		Semiflexed	S	W
334	A	2004	20-49 years		Fragmentary	N-S*	
335	A	2004	20-49 years		Hyperflexed	S	W
335B	A	2004	20-50+ years		Secondary inside cist		

Table 4.7: Individuals at Wadi Fidan 40, continued.

336	A	2004	6-10 years		Flexed	S	W
336B	A	2004	1-4 years		Fragmentary, secondary		
336C	A	2004	Adult		Fragmentary, secondary		
337	A	2004	20-35 years		Semiflexed	S	W
338	A	2004	20-50+ years		Semiflexed	S	W
338B	A	2004	20-50+ years		Secondary above capstones		
339	A	2004	20-49 years		Disturbed	S	
340	A	2004	37-47 years		Flexed	S	W
340B	A	2004	15-25 years		Fragmentary secondary inside cist		
341	A	2004	6-18 years months		Fragmentary	S	
342	A	2004	20-50+ years		Fragmentary	N-S*	
342B	A	2004	20-50+ years		Fragmentary		
343	A	2004	18-25 years		Flexed	S	W
343B	A	2004	20-50+ years		Fragmentary secondary inside cist		
344	A	2004	2-4 years		Flexed	S	W
345	A	2004	1-3 years		Semiflexed	N	W
346	A	2004	20-50+ years		Fragmentary	N-S*	
347	A	2004			Unexcavated	N-S*	
348	A	2004	35-50 years		Semiflexed	S	W
349	A	2004	5-7 years		Secondary, no cist		

Table 4.7: Individuals at Wadi Fidan 40, continued.

349B	A	2004	12-15 years		Secondary, no cist		
350	A	2004	20-50+ years		Fragmentary	S	
351	A	2004	20-50+ years		Fragmentary	N-S*	
352	A	2004	20-50+ years		Fragmentary	N-S*	
353	A	2004	12-16 years		Fragmentary	N-S*	
354	A	2004	Young adult		Fragmentary	N-S*	
355	A	2004	9-12 months		Flexed	S	W
356	A	2004	18-25 years	M	Semiflexed	N	E
356B	A	2004	20-50+ years		Secondary, in cist		
356C	A	2004	20-50+ years		Secondary, over capstones		
357	A	2004	25-35 years	M	Secondary, in cist	S	W
358	A	2004	40-49 years	F	Flexed	S	W
359	A	2004	1-3 years		Semiflexed	S	W
360	A	2004	20-50+ years		Flexed	S	W
361	A	2004	6-12 months		Fragmentary	S	
362	A	2004	20-49 years		Fragmentary	N-S*	
362B	A	2004	Subadult		Fragmentary, in cist		
363	A	2004	40-49 years	M	Flexed	SE	W
363B	A	2004	20-50+ years		Secondary, above capstones		
364	A	2004	20-50+ years	M	Fragmentary	NE-SW*	

Table 4.7: Individuals at Wadi Fidan 40, continued.

365	A	2004			Secondary, above capstones of unexcavated grave		
367	A	2004	12-18 years		Flexed	S	W
368	A	2004			Fragmentary	N-S*	
370	A	2004	20-50+ years		Fragmentary	N-S*	
371	A	2004	6-10 years	F	Semiflexed	S	E
500	B	2004	20-49 years		Fragmentary, above capstones (cist not excavated)		
501	B	2004	20-50+ years		Semiflexed	S	W
502	B	2004	20-50+ years		Fragmentary	NW-SE*	
503	B	2004	20-50+ years		Fragmentary secondary burial above capstones of Grave 512		
504	B	2004	20-50+ years		Fragmentary, in cist		
504B	B	2004	20-50+ years		Fragmentary, in cist		
504C	B	2004	20-50+ years		Fragmentary, in cist		
504D	B	2004	10-15 years		Fragmentary, in cist		
505	B	2004	35-50 years	M	Fragmentary	NE-SW*	
506	B	2004	20-35 years		Fragmentary	N-S*	
507	B	2004	35-50+ years		Flexed	S	E

Table 4.7: Individuals at Wadi Fidan 40, continued.

507B	B	2004	5-8 years		Fragmentary secondary at north end of cist		
508	B	2004	20-50+ years		Fragmentary	N-S*	
508B	B	2004			Fragmentary secondary above capstones		
509	B	2004	3-6 years		Fragmentary secondary, no cist		
510	B	2004	6-10 years		Flexed	S	W
511	B	2004	20-35 years		Fragmentary secondary, mixed with 513 and 513B, no cist		
512	B	2004	35-50+ years	F	Fragmentary	NW-SE*	
512B	B	2004			Fragmentary secondary above capstones		
513	B	2004	25-35 years		Fragmentary secondary, mixed with 513B and 511, no cist		
513B	B	2004	14-15 years		Fragmentary secondary, mixed with 513 and 511, no cist		
514	B	2004	20-50+ years		Fragmentary	N-S*	
514B	B	2004	12-18 years		Fragmentary in cist		
515	B	2004	20-50+ years		Fragmentary	N-S*	
516	B	2004			Tiny fragments	N-S*	

Table 4.7: Individuals at Wadi Fidan 40, continued.

517	B	2004	30-40 years	M	Flexed	S	W
517B	B	2004	20-30 years	F	Fragmentary secondary in northwest portion of cist		
518	B	2004	20-50+ years		Fragmentary	N-S*	
518B	B	2004	<18 years		Fragmentary in cist		
519	B	2004	20-50+ years		Fragmentary	N-S*	
520	B	2004	20-50+ years	M	Fragmentary	N-S*	
520B	B	2004	1-3 years		Fragmentary in cist		
521	B	2004	20-50+ years		Fragmentary	N-S*	
522	B	2004	20-50+ years		Semiflexed	S	W
522B	B	2004	20-50+ years		Fragmentary secondary in cist above primary		
523	B	2004	20-50+ years	F	Semiflexed	S	W
523B	B	2004	20-50+ years		Secondary, below 523 in north part of cist		
524	B	2004	15-25 years		Fragmentary	NW-SE*	
524B	B	2004	20-50+ years	M	Fragmentary, in cist		
524C	B	2004	20-50+ years		Fragmentary, in cist		
525	B	2004	3-6 years		Semiflexed	S	W
526	B	2004	13-16 years		Fragmentary	N-S*	

Table 4.7: Individuals at Wadi Fidan 40, continued.

526B	B	2004	9 months-3 years		Fragmentary, in cist		
527	B	2004	20-50+ years		Fragmentary	N-S*	
528	B	2004	2-6 years		Fragmentary	N-S*	
528B	B	2004	20-50+ years		Fragmentary, in cist		
528C	B	2004	20-50+ years		Fragmentary, in cist		
529	B	2004	≤0 months		Flexed	S	W
530	B	2004	20-50+ years	M	Fragmentary	N-S*	
530B	B	2004	35-50+ years		Fragmentary, in cist		
531	B	2004	35-50 years		Fragmentary	N-S*	
531B	B	2004	20-50+ years		Fragmentary, in cist		
531C	B	2004	15-23 years		Fragmentary, in cist		
532	B	2004			Fragmentary	N-S*	
533	B	2004	2-5 years		Fragmentary	NW-SE*	
533B	B	2004	7-10 years		Fragmentary, in cist		
533C	B	2004	7-12 years		Fragmentary, in cist		
533D	B	2004	20-50+ years	F	Fragmentary, in cist		
534A	B	2004	20-35 years		Secondary in cist	N-S*	
534B	B	2004	<18 years		Secondary in cist		
535	B	2004	4-7 years		Fragmentary	N-S*	
535B	B	2004	20-35 years		Fragmentary, in cist		
535C	B	2004	35-50+ years		Fragmentary, in cist		

Table 4.7: Individuals at Wadi Fidan 40, continued.

536	B	2004	20-50+ years		Fragmentary	N-S*	
536B	B	2004	2-5 years		Fragmentary, in cist		
537	B	2004	20-50 years		Fragmentary	N-S*	
538	B	2004			Fragmentary secondary, above 530		
539	B	2004	35-50 years	F	Flexed	S	W
539B	B	2004			Fragmentary, in cist		
540	B	2004	20-30 years	M	Flexed	S	W
541	B	2004	4-7 years		Semiflexed	S	W
542	B	2004	20-50+ years		Fragmentary	NW-SE*	
542B	B	2004	20-50+ years		Fragmentary in cist		
542C	B	2004	20-50 years	M	Secondary above capstones		
543	B	2004	35-50+ years	F	Semiflexed	S	W
544	B	2004	9-16 years		Flexed	N	E
545	B	2004	20-35 years		Flexed	S	W
546	B	2004	20-50+ years		Fragmentary	N-S*	
546B	B	2004	20-50+ years		Fragmentary, in cist		
547	B	2004	50+ years	M	Fragmentary	N-S*	
547B	B	2004	20-50+ years		Fragmentary, in cist		
548	B	2004	20-35 years		Secondary, above 549 capstones		
549	B	2004	29-39 years	M	Flexed	S	W

Table 4.7: Individuals at Wadi Fidan 40, continued.

549B	B	2004	20-50+ years		Secondary, partially articulated, at feet of 549		
549C	B	2004	7-10 years		Fragmentary, in cist		
549D	B	2004	20-50+ years		Fragmentary secondary at capstones		
550	B	2004	20-50+ years		Semiflexed	S	W
550B	B	2004	8-11 years		Fragmentary, in cist		
551	B	2004	20-35 years		Fragmentary	N-S*	
552	B	2004	1-3 years		Semiflexed	S	W
553	B	2004			Empty, partially destroyed grave	N-S*	
533E	B	2004	20-50+ years		Fragmentary, in cist		
554	B	2004	6-12 months		Fragmentary	NE-SW	
555	B	2004	20-50+ years	M	Secondary above capstones of unexcavated grave		
700	C	2004	15-25 years		Fragmentary secondary on pavement		
701	C	2004	31-41 years	M	Extended	N	Up
701B	C	2004	6 months-2 years		Secondary, pushed to feet of 701	N	
702	C	2004	20-50+ years		Fragmentary	N-S*	
703	C	2004	5-16 years		Fragmentary	NE-SW*	
704	C	2004	15-24 years		Flexed	S	W

Table 4.7: Individuals at Wadi Fidan 40, continued.

705	C	2004	20-50+ years		Fragmentary, disturbed	NW-SE*	
705B	C	2004	18 months-4 years		Fragmentary, in cist		
706	C	2004	15-25 years	F	Flexed	S	W
706B	C	2004	32-42 years	F	Secondary, at feet of 706		
707	C	2004	14-20 years		Fragmentary	N-S*	
708	C	2004	7-14 years		Fragmentary	N-S*	
709	C	2004			No human remains or cist; surface architecture possibly related to 717		
710	C	2004	20-50+ years	M	Secondary, in cist	Skulls in south	
710B	C	2004	20-50+ years	F	Secondary, in cist	Skulls in south	
710C	C	2004	Subadult		Secondary, in cist	Skulls in south	
710D	C	2004	20-50+ years		Secondary, in cist	Skulls in south	
711	C	2004	20-50+ years		Secondary, in cist	N-S*	
711B	C	2004	6-10 years		Secondary, in cist		
712	C	2004	20-50+ years		Fragmentary	N-S*	
712B	C	2004	0-4 years		Fragmentary		
713	C	2004	20-35 years	M	Flexed	S	W
714	C	2004	37-49 years	M	Flexed	N	W
714B	C	2004	30-40 years	M	Secondary, at feet of 714		

Table 4.7: Individuals at Wadi Fidan 40, continued.

715	C	2004	20-50+ years		Fragmentary	NE-SW*	
716	C	2004	20-50+ years		Fragmentary	N-S*	
717	C	2004	3-5 years		Flexed	S	W
717B	C	2004	35-50+ years		Fragmentary secondary, in cist		
718	C	2004	20-50+ years	F	Flexed	N	W
718B	C	2004	20-50+ years		Fragmentary secondary in cist		
718C	C	2004	2-4 years		Secondary above capstones		
719	C	2004	20-50 years		Fragmentary	N-S*	
720	C	2004	20-50+ years		Fragmentary	NW-SE*	
720B	C	2004	20-50+ years		Fragmentary		
721	C	2004	20-50+ years		Flexed	S	W
722	C	2004	20-50 years	M	Fragmentary	N-S*	
723	C	2004	3-6 years		Fragmentary	N-S*	
724	C	2004	20-50+ years	M	Fragmentary	NW-SE*	
724B	C	2004	20-50+ years	F	Fragmentary		
725	C	2004	5-8 years		Flexed	S	W
725B	C	2004	0-12 months		In cist		
726	C	2004	20-50+ years		Fragmentary	N-S*	
727	C	2004			Secondary, fragmentary, no cist		

Table 4.7: Individuals at Wadi Fidan 40, continued.

728	C	2004	15-25 years		Fragmentary	N-S*	
729	C	2004	20-50+ years		Secondary above capstones of 704		
730	C	2004			Fragmentary	N-S*	
731	C	2004	20-35 years	F	Fragmentary	N-S*	
732	C	2004	35-50 years	F	Hyperflexed	N	W
733	C	2004	3-5 years		Flexed	S	W
734	C	2004	20-50+ years		Fragmentary	N-S*	
735	C	2004	5-8 years		Fragmentary	NW-SE*	
735B	C	2004	20-50+ years		Fragmentary		
736	C	2004	20-50 years		Fragmentary	N-S*	
736B	C	2004			Fragmentary secondary, above capstones		
737	C	2004	50+ years	F	Fragmentary	N-S*	
737B	C	2004	30-40 years		Fragmentary, in cist		
738	C	2004	6-8 years		Fragmentary	NW-SE*	
738B	C	2004			Fragmentary secondary above capstones		
739	C	2004			Fragmentary	NW-SE*	
740	C	2004	2-4 years		Flexed	N	E
741	C	2004	6-12 months		Fragmentary	N	
2009	A	2009	Adult		Semiflexed	S	W

*Indicates orientation of architecture, given when burial orientation could not be determined.

INDIVIDUAL GRAVE DESCRIPTIONS

Following are individual descriptions of each grave excavated at Wadi Fdian 40. These descriptions were compiled from the following sources. Both handwritten and digital copies were used, because often details differed. When details differed, the handwritten version was usually judged to be more accurate because the differences could usually be traced to data entry errors. The most useful of the following documents were the Daily Journals and Grave Sheets.

- Final Reports, both handwritten and digital, composed by the area supervisors.
- Daily Journals kept by each area supervisor and by Rula Shafiq.
- Grave Sheets, both handwritten and digital.
- Skeleton Sheets, both handwritten and digital.
- Master Locus Lists for each area.
- Locus Descriptions for each area, both handwritten and digital.
- Digital (and for the 1997 season, slide) site and artifact photographs.
- Daily Spatial Data Collection Records for the 2003 and 2004 field seasons.
- Incoming Basket Lists for the 1997 season.
- Bead Analysis for the 1997 season, both handwritten and digital.
- Paper and digital maps.
- GIS data.

4.1: 1997 EXCAVATIONS: AREA A GRAVE DESCRIPTIONS

GRAVE 20

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: None.
Artifacts below capstones: None.
Other artifacts: None.
Disturbances: Recently looted. Grave circle partially destroyed.

Table 4.8: Grave 20 loci.

Locus	Description
466	Grave



Figure 4.2: Grave 20.

Grave 20 was encountered in square K-11 as it had been left by recent looters (Table 4.8; L. 446). Ten cobbles remained in place from a stone circle marking the grave on the surface. The circle measured 1.45 meters in diameter. A shaft dug by the grave

robbers extended from the surface to the cist. The capstones were removed and missing. The cist was slightly trapezoidal, wider in the north than in the south, measuring 1.40 meters long, 0.60 meters wide, and 0.43 meters deep and constructed of seven side slabs (Fig. 4.2). Three cap support stones remained. A small amount of bone but no artifacts were collected from the cist.

GRAVE 21

Surface architecture: Stone circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 2 beads in looters' backdirt (ostrich eggshell, amazonite).
Disturbances: Looted in recent times. Shaft left open to cist level. Cist exposed. Human remains broken and scattered.

Table 4.9: Grave 21 loci.

Locus	Description
452	Cist and looter's backdirt

Grave 21 was encountered on the border of square K-11 and square K-12 as it had been left by recent looters (Table 4.9). The grave had been visible on the surface as a stone circle comprised of fifteen stones measuring 2.00 meters in diameter. A shaft dug by the looters extended from the surface to the cist, the capstones of which had been removed. The cist was not measured, but was said to be rectangular (which may also mean trapezoidal) and on a north-south axis. The backdirt left by the looters was sieved (L. 452), and human bone, copper slag (B. 1910), one ostrich eggshell cylinder disc bead (B. 1927) and one amazonite pendant (B. 1912) were recovered.

GRAVE 22

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to north, on left side facing east.
Gender: Male.
Age: Adult.
Other burials: None.
Artifacts in cist: Wooden bowl, seeds, textile and leather shroud, 1 bead (ostrich eggshell).
Other artifacts: 63 beads in fill and looter's backdirt (ostrich eggshell, dentalium, cupric, carnelian).
Disturbances: Fill disturbed in recent times.

Table 4.10: Grave 22 loci.

Locus	Description
459	Robbers' backdirt
524	Stone circle
467	Fill
494	Capstones
483	Cist fill
485	Fill behind north cist side slab



Figure 4.3: Grave 22 burial. Note the wooden bowl behind the skull.

Grave 22 was visible on the surface of square K-10 as a partial stone circle of thirteen stones measuring 1.80 meters in diameter (Table 4.10; L. 524). The grave had been disturbed in modern times by looters who dug small hole in the fill within the stone circle, leaving a pile of backdirt partially covering the southern side of the grave circle (L. 459). This disturbance does not appear to have been very intensive, and the illegal excavation did not reach capstone level. The notes record that about seventy to eighty beads (B. 1989) and a piece of copper ore (B. 1943) were recovered in the robbers' backdirt, however, only seventeen ostrich eggshell cylinder discs (B. 1989) were recorded in photographs and the Bead Analysis. The seventy to eighty number seems to include artifacts recovered in the fill (L. 467)—a curved shell piece with two parallel holes drilled through it (B. 1977), forty-four ostrich eggshell cylinder discs, one

dentalium, and one cupric drilled pebble, and one apparently carnelian short barrel bead (B. 1952, 1989, 2003, 2018). Many cobbles were also encountered in this fill. In the northeast part of the grave circle, the cist of Grave 69 was also encountered. According to the supervisor's notes for June 25, 1997, the northeast part of the grave circle for Grave 22 "juts out—similar to a niche," creating the space in which Grave 69 was dug. At a depth of 0.47 meters, four capstones were encountered. These sealed a cist measuring 1.10 meters long, 0.38 meters wide, and 0.45 meters deep and constructed of six side slabs and nine cap support stones. The cist was trapezoidal, wider in the north than in the south. An unusually large red sandstone slab was used in the northern end of the cist. The northwest side slabs were removed and the area behind probed, but only sterile soil was encountered. The skeleton was oriented with head to the north, with the upper body in the wider part of the cist and lay in a semiflexed position on the left side facing east (Fig. 4.3). The legs were tightly flexed, with the feet pulled up behind the individual. The right arm was flexed, with the hand at about the mid chest region; the left arm was also tightly flexed with the hand in the chest area. The hands were together, with the right hand covering the left. Behind the head of the deceased was a wooden bowl measuring twenty-four centimeters in diameter and about ten centimeters tall, touching the side slabs of the cist (B. 2048). The bowl had a lug handle and holes for pegs along the rim (Fig. 4.4). Two kinds of seeds, possibly carbonized, were recovered from the bowl, according to the area supervisor's report, "a flat watermelon type seed and a more oval type of seed;" the supervisor's notes state that the second seed type was long and rounded and looked like an olive seed. In addition, leather shroud fragments (B. 2046) were recovered, and the supervisor's notes for July 3 note that the skeleton was

wrapped in textile and leather shroud material. Textile material was especially well preserved around the right arm area. One ostrich eggshell cylinder disc bead was recovered from the cist (B. 2043). Notes mention other beads coming from this grave which could not be accounted for. Two beads, apparently ostrich eggshell disc beads, are mentioned in the Bead Analysis (B. 1958). The Grave Sheet notes four baskets (B. 1951, 1953, 1972, 2045) which it says are beads which could not be accounted for in any of the paperwork.



Figure 4.4: Close-up of Grave 22 wooden bowl in situ.

GRAVE 23

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Adolescent.
Other burials: Secondary burial above capstones.
Artifacts in cist: Pomegranates, textile and leather shroud, 1 bead (carnelian).
Other artifacts: 2 beads in fill (carnelian, univalve shell).

Disturbances: Recent looting extending into cist.

Table 4.11: Grave 23 loci.

Locus	Description
451	Fill
457	Fill
519	Capstones
464	Cist



Figure 4.5: Grave 23 burial.

Grave 23 was visible on the surface of square J-12 as a stone circle constructed of seventeen cobbles and measuring 1.55 meters in diameter (Table 4.11). The grave had been recently looted. The looters excavated down to the capstone level and removed the middle capstone. This excavation was widened (L. 451, 457) in order to expose and remove the remaining capstones. One carnelian short barrel bead and one univalve shell with the apex cut off to make a bead were recovered from the fill (B. 1926). A secondary burial was excavated above the northern capstones, and many large stones were

encountered in the remaining fill of the eastern half of the grave. Three capstones were encountered in place at a depth of 1.06 meters (L. 519). The cist measured 1.25 meters long, 0.54 meters wide, and 0.45 meters deep and was constructed of eight side slabs and twenty-one cap support stones in two to three courses (L. 464). Perhaps because they were covered by fill, most of the skeleton, that of an adolescent, and a number of artifacts remained undisturbed (Fig. 4.5). The skull rolled out of position to rest on its top in the southern part of the grave. Hair was found in the skull region. This hair was mostly dark with reddish ends, leading to speculation that it had been dyed with henna, though this discoloration is probably rather due to decomposition. Two strings were also reportedly found in the head area; Shafiq theorized these were used to tie the shroud. According to the area supervisor, the left hand may have been placed beneath the head, but Shafiq notes both hands were in the chest area. A pomegranate (B. 1966) was found at the north end of the grave, next to the east wall and near the femur, and other seeds believed to belong to a pomegranate were also found (B. 1969). Textile and leather shroud material was found in several places—in the pelvic area, in the knee region, and in the area of the left shoulder—particularly beneath the skeleton. One carnelian short barrel or barrel disc bead (B. 1974) was recovered from the cist. The Grave Sheet notes mention some beads which were found in this grave but which could not be accounted for. One amazonite bead is described in the Bead Analysis but could not be found in the artifact photos (B. 1961). Three other baskets said to contain beads could not otherwise be traced in the paperwork or artifact photos (B. 1935, 1967, 1975).

GRAVE 24

Surface architecture: Stone circle.
Subsurface architecture: Capstones over pit or cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult.
Other burials: Secondary burial above capstones.
Artifacts in cist or pit: None.
Other artifacts: 2-3 beads (cupric) recovered from looters' backdirt.
Disturbances: Looted in recent times. Shaft left open to cist, cist exposed, human remains broken and scattered.

Table 4.12: Grave 24 loci.

Locus	Description
454	Robbers' backdirt
522	Fill beneath stone circle and secondary burial



Figure 4.6: Grave 24.

Grave 24 was visible on the surface of square J-12 as a well-preserved, nine-tenths complete stone circle constructed of fifteen dolerite cobbles and measuring 1.60

meters in diameter (Table 4.12). Recent looters excavated the grave to capstone level, removed the capstones, and looted what lay below (Fig. 4.6). It was the opinion of the area supervisor that these looters destroyed most of the cist, though it is also possible that this was a pit covered by casptones. The southeast portion of the grave circle was removed while excavating nearby Grave 92, and a secondary burial was encountered (L. 522). The looters' backdirt pile was sieved, and adult bone fragments in addition to two cupric short barrel bead (B. 1916, 1924) and two fragments of what may or may not be a the same third cupric short barrel bead (B. 1924, 1930) were recovered (L. 454).

GRAVE 25

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to the south, on left side facing west.
Gender: Male.
Age: Adult.
Other burials: None.
Artifacts in cist: Shroud material, 6 beads (tubular shell & pierced bivalve).
Other artifacts: 2 beads in looters' backdirt (amazonite, agate), 1 bead in fill (cupric).
Disturbances: Recent looting extending into cist. Stone circle mostly destroyed.

Table 4.13: Grave 25 loci.

Locus	Description
453	Looters' backfill
550	Fill
559	Capstones
562	Cist and cist fill



Figure 4.7: Grave 25 burial.

Although no surface architecture was recorded for Grave 25, it was visible in square I-11 due to a looter's pit which may have destroyed such surface architecture (Table 4.13). One agate short cylinder bead (B. 1922) and one amazonite drilled pebble (B. 1914) were recovered from the looters' backfill (L. 453). A dolerite cobble which appears to be a circle stone is visible at ground surface level northwest of the cist in site photographs. The pit was excavated down to cist level. Rather than expose and remove the capstones, however, the robbers excavated northwest of the cist and then removed the northwestern side slabs and, probably, cap support stones. Archaeological excavation was conducted to salvage what remained of the burial and grave goods. A cupric short barrel bead (B. 3617) was found in the fill (L. 550). At a depth of 0.57 meters, three capstones were encountered (L. 559). These sealed a cist measuring 1.18 meters long, 0.65 meters wide, and 0.57 meters deep and constructed of nine side slabs ad ten cap

support stones (L. 562). The cist was trapezoidal, wider in the north than in the south, in order to accommodate the flexed legs of the deceased. The skull was displaced by looters and found in the northern end of the cist. Most of the burial, however, remained undisturbed (Fig. 4.7). The deceased was originally interred in a semiflexed position with head to the south, laying on the left side and facing west. Five tubular shell cylinder beads (B. 3637, 3646), a bivalve shell pierced in order to serve as a pendant large shell (B. 3642), and shroud material (B. 3643) were recovered from the cist, as were unidentified organic material (B. 3656) and a pupa (B. 3641).

GRAVE 49

Surface architecture: Partial stone circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: 2 secondary burials above capstones.
Artifacts in cist: 1 bead (bone).
Other artifacts: None.
Disturbances: Looting in antiquity extending into cist; cist full of sediment and burial destroyed.

Table 4.14: Grave 49 loci.

Locus	Description
456	Topsoil
468	Fill
509	Capstones
510	Cist and cist fill



Figure 4.8: Grave 49.

Grave 49 was visible on the surface of square J-10 as a poorly-preserved grave circle missing many stones (Table 4.14). The circle was composed of twelve cobbles and measuring 1.10 meters in diameter. Many stones were missing from the circle (L. 456). The supervisor's final report claimed, "The northern part of the circle is shared with the southern part of Grave 58's circle." However, it seems more accurate to claim that the circle of Grave 49 was partially damaged by the construction of Grave 58. Many cobbles were found in the fill, particularly in the northeast of the grave, extending down to capstone level (Fig. 4.8; L. 468). Two secondary burials were also encountered in the fill. One of these was extremely fragmentary, in the northern part of the grave (Fig. 4.9). Both secondary burials were very poorly preserved, and nothing can be said of the number, age, or sex, of the individuals. At a depth of 0.63 meters, five capstones were encountered (L. 509). These sealed a cist measuring 1.00 meters long, 0.40 meters wide,

and 0.35 meters deep and constructed of eight side slabs and nine cap support stones. The cist was oriented on a northwest-southeast axis. One of the capstones was displaced, and the cist was full of sediment; stones were also encountered in the cist (L. 510). The bones within the cist were fragmented and scattered. A biconical bead with one cone about four times the length of the other (B. 2122) was recovered from the cist. This bead has been classified as bone, but may be an echinoid spine. A snail shell (B. 2121) was also recovered from the cist.



Figure 4.9: Grave 49 secondary burial.

GRAVE 52

Table 4.15: Grave 52 loci.

Locus	Description
455	Fill



Figure 4.10: Grave 52.

Grave 52 was identified on the surface of the northeast quadrant of square J-10 (Table 4.15). A small amount of fill was excavated to define the grave (Fig. 4.10; L. 455), but it was otherwise left unexcavated.

GRAVE 53

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: Marine shell fragments, 1 bead (cowry) in fill.
Disturbances: Looted in antiquity. Cist disturbed and full of sediment, skeleton smashed.

Table 4.16: Grave 53 loci.

Locus	Description
525	Stone circle
476	Fill
526	Capstones
484	Cist fill
496	Stones in cist
497	Cist fill



Figure 4.11: Grave 53 cist.

Grave 53 was visible on the surface of square J-11 as a partial stone circle consisting of twenty-two stones and measuring 1.45 meters in diameter (Table 4.16; L. 525). Most of these stones lay flat, suggesting disturbance and making it difficult to differentiate which stones were not truly part of the circle. Marine shell fragments (B. 1982, 1994) and a cowry with the back removed to serve as ornamentation (B. 1997)

were found in the fill (L. 476). At a depth of 0.64 meters, four capstones were encountered in place (L. 526). The area supervisor's report notes "a large standing stone at the north end of the grave" rising "25 cm above the cap stones." This appears to be identical to the sandstone slab, like those slabs used as capstones, visible set on end in the cist in site photographs and therefore not a true standing stone (Figure 4.11). The cist measured 1.07 meters long, 0.35 meters wide, and 0.29 meters deep and was constructed of eight side slabs and twenty-one cap support stones in up to two courses. The cist was full of sediment (L. 484), and five large cobbles were encountered in the cist (L. 496). These cobbles were laid flat, possibly intentionally, like a pavement stretching from one end of the cist to the other. Beneath these stones, scattered across the bottom of the cist were the poorly preserved human remains (L. 497). No artifacts were found in the cist.

GRAVE 55

Surface architecture: Partial stone circle surrounding pavement.
Subsurface architecture: Cist.
Main burial: Semiflexed, head to south, on left facing west.
Gender: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Leather shroud fragments.
Other artifacts: None.
Disturbances: Stone circle and pavement partially destroyed; cist full of sediment.

Table 4.17: Grave 55 loci.

Locus	Description
479	Fill
504	Capstones
502	Cist fill



Figure 4.12: Grave 55 surface architecture.

Grave 55 was visible on the surface of the border between square I-11 and J-11 as a half-complete stone circle composed of eight stones and measuring 1.25 meters in diameter (Table 4.17). A pavement composed of seventeen was preserved within this half-circle. The surface architecture all survived in the east side of the grave (Fig. 4.12). Many cobbles were encountered in the fill. A secondary burial was also recovered to the east of the cist (L. 479). At a depth of 0.81 meters, six capstones were encountered (L. 504). These were covered in a layer of mud plaster (Fig. 4.13). The capstones sealed a cist measuring 1.05 meters long, 0.50 meters wide, and 0.48 meters deep and constructed of six side slabs and eight cap support stones. Much of the cist was empty, though about five to ten centimeters of fill covered the skeleton. The individual lay in a semiflexed position with head to the south on the left side facing west. The left arm was bent at the

elbow. The right arm was bent at the elbow, with the hand pointing forward in front of the pelvis, touching the side slab. Some "intestinal stones" (B. 2072) were recovered from the human remains. Leather shroud fragments were recovered from the cist (B. 2080) and made the only surviving artifacts buried with the deceased.



Figure 4.13: Thick layer of mud plaster over the capstones of Grave 55.

GRAVE 56

Surface architecture: Two concentric stone circles.
Subsurface architecture: Partially stone lined pit.
Burial: Semiflexed, head to the south.
Gender: Female.
Age: Adult
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.18: Grave 56 loci.

Locus	Description
523	Stone circle
469	Fill
495	Cist side slabs
487	Partially stone-lined pit



Figure 4.14: Grave 56 subterranean architecture. Note the human remains extending beneath the stones.

Grave 56 was visible on the surface of square K-11 as two concentric and touching circles constructed of twenty dolerite cobbles and measuring 1.60 meters in diameter (Table 4.18; L. 523). Many cobbles were encountered in the fill (L. 469). At a depth of 0.77 meters below the surface, the subterranean architecture was encountered (L. 495). This did not consist of a cist typical of those at Wadi Fidan 40. No capstones were encountered. According to the area supervisor's report, the stone structure consisted of "a U-shape with the open end facing west." However, in site photographs these side stones appear to be lying flat rather than on end, and the supervisor's notes for July 11 note that the remains were found beneath these stones (L. 487; Fig. 4.14). The disturbed burial was found not within the structure, but underneath it, especially under its north and east sides. The excavated area measured 1.80 meters long, 1.50 meters wide, and 0.49 meters deep. Judging from the unusual grave description and the site photos, it seems most likely that this was a pit covered by disturbed capstones. The adult female entombed lay semiflexed, with skull to the south. No artifacts were recovered in association with this grave.

GRAVE 58

Surface architecture: Complete stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: Disorganized human remains above capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Capstone missing, skeleton smashed.

Table 4.19: Grave 58 loci.

Locus	Description
471	Stone circle
475	Fill
492	Capstones
493	Cist and cist fill



Figure 4.15: Grave 58 surface architecture.

Grave 58 was visible on the surface of square J-10 as a stone circle consisting of forty stones and measuring 2.00 meters in diameter (Fig. 4.15; Table 4.19; L. 471). The supervisor's report states "The southern part of the grave circle is shared with the northern part of grave 49's grave circle;" however, it seems more accurate to say that the surface architecture of Grave 58 encroaches upon that of Grave 49. The supervisor's notes report that the circle was very poorly preserved in places, "maybe because grave 58 boarders [*sic*] many other graves—52 to the North east, 53 to the north west, & 49 to the south." A number of bones were found in a disorganized state above the northern

capstones (L. 475). At a depth of 0.49 meters, three capstones were encountered (L. 492). The northern end of the cist was covered only by cobbles, suggesting disturbance in antiquity. The cist measured 1.30 meters long, 0.45 meters wide, and 0.56 meters deep and was constructed of eight side slabs and ten cap support stones. The cist was full of sediment, and a layer of cobbles covered the skeletal remains in the northern half of the cist (L. 493). The remains were disarticulated and disturbed, almost entirely in the north half of the cist, and showed considerable sun bleaching. However, Shafiq notes that the feet were "together in anatomical alignment" at the north end of the grave. No artifacts were recovered in association with this grave.

GRAVE 60

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Juvenile.
Other burials: Cist of Grave 93 located above cist of Grave 60.
Artifacts in cist: 1 potsherd.
Other artifacts: 2 beads in fill (ostrich eggshell).
Disturbances: Surface architecture partially destroyed.

Table 4.20: Grave 60 loci.

Locus	Description
566	Stone circle
472	Fill
507	Capstones
521	Cist and cist fill



Figure 4.9: Grave 60 cist.

Grave 60 was visible on the surface of the border of squares K-10 and L-10 as a stone circle measuring 2.50 meters in diameter and composed of twenty-nine stones (Table 4.20; L. 566). Many gaps appear in the circle, under which Grave 71 and Grave 105, and possibly Grave 102, were also encountered. Grave 93 was located immediately above the northeast corner of the cist of Grave 60. Two ostrich eggshell cylinder discs were found in the fill (B. 2028; L. 472). At a depth of 0.41 meters, five capstones were encountered (L. 507). No mud plaster covered the capstones. The capstones covered a cist measuring 1.25 meters long, 0.40 meters wide, and 0.55 meters deep, constructed of eight side slabs and twenty-one cap support stones. The cist was wider in the north than in the south, in order to accommodate the flexed legs of the deceased and was somewhat

pentagonal (Fig. 4.16). The supervisor's report notes that Grave 60 is "directly in a row with Grave 102," southeast of Grave 60. The western side slabs marked the eastern boundary of Grave 71. The cist was full of sediment, leading to poor preservation of the human remains (L. 521). The interred was a juvenile, laid in a semiflexed position, with head to the south, on the left side facing west. A single pot base sherd (B. 2126), determined in the field to date to the Early Bronze I, was found in the cist.

GRAVE 61

Surface architecture: Stone circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Stone circle partially destroyed; looted in antiquity; cist full of sediment and human remains smashed.

Table 4.21: Grave 61 loci.

Locus	Description
473	Stone circle and fill
506	Capstones
511	Cist and cist fill



Figure 4.10: Grave 61 surface architecture.

Grave 61 was visible on the surface of the boundary between squares K-11 and L-11 immediately north of Grave 60 as a partially compete stone circle consisting of eight stones and measuring 1.35 meters in diameter (Fig. 4.17; Table 4.21; L. 473). The north side of the circle was disorganized and probably disturbed. Twelve apparent paving stones were also observed, outside of the circle. At an unrecorded depth, five capstones were encountered (L. 506). The capstones and cist were not directly under the center of the circle; rather, the western side of the cist was underneath the eastern side of the grave circle. The capstones sealed a cist measuring 1.10 meters long, 0.46 meters wide, and 0.36 meters deep. The cist was full of hard mud plaster-like sediment, and the human remains within were broken and scattered throughout the cist (L. 511). No artifacts were recovered in association with this grave.

GRAVE 62

Grave 62 was defined in Area A immediately southeast of Grave 23, but was never excavated.

GRAVE 64

Grave 64 was visible on the surface as a stone circle surrounding a pavement. However, no loci were designated in the grave, and it was never excavated.

GRAVE 68

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Partially stone-lined pit.
Main burial: Secondary, fragmentary.
Gender: Unknown.
Age: Adult.
Other burials: Secondary adult burial above capstones.
Artifacts below capstones: None.
Other artifacts: Five beads (univalve shell).
Disturbances: None observed.

Table 4.22: Grave 68 loci.

Locus	Description
481	Stone circle and pavement
490	Fill
498	Capstones
520	Fill beneath capstones



Figure 4.18: Grave 68 surface architecture.

Grave 68 was visible on the surface of square I-10 as a complete stone circle consisting of eleven stones and measuring 1.20 meters in diameter surrounding a pavement consisting of thirty-two flat cobbles (Fig. 4.18; Table 4.22; L. 481). Five univalve shells with their spirals cut off to form beads (B. 2041) were encountered in the fill beneath the pavement (L. 490). A secondary burial consisting of the stacked partial remains of an adult was also found in the fill. At a depth of 0.46 meters, four capstones were encountered (L. 498). Some plaster was observed on the capstones, but it did not completely seal them, so sediment seeped beneath the capstones through these cracks. Beneath these capstones was a pit with four stones lining the northwest side measuring 1.26 meters long, 0.46 meters wide, and 1.01 meters below the surface (L. 520). The area supervisor suggested that Grave 68 "most likely was intended to be a pit burial with the side slabs being used only to help support the capstones in an area where the sediments

are quite soft & sandy," though he also pointed out that the grave appears to have been dug directly into the conglomerate bedrock. The construction of this grave is very similar to the construction of Grave 72. In the center of the pit was a pile of disarticulated human remains which the excavator believed was a secondary burial, rather than a disturbed primary burial. Shell may have been recovered from the cist.

GRAVE 69

Surface architecture: Stone circle shared with Grave 22.
Subsurface architecture: Cist.
Main burial: Semiflexed, head to southeast, on stomach.
Gender: Unknown.
Age: Infant, less than two years.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.23: Grave 69 loci.

Locus	Description
524	Stone circle, shared with Grave 22
467	Fill, shared with Grave 22
477	Cist



Figure 4.19: Grave 69 cist and burial.

Grave 69 was visible on the surface of square K-10 by the stone circle it shared with Grave 22 (L. 524). According to the supervisor's notes for June 25, 1997, the northeast part of the grave circle for Grave 22 "juts out—similar to a niche," creating the space in which Grave 69 was dug. The final report notes that Grave 69 was partially under the circle itself, about halfway in elevation between the surface and the capstones of Grave 22, although the exact depth was not recorded. One large white capstone covered the cist, which was constructed of four dolerite side slabs and measured 0.30 meters long, 0.20 meters wide, and 0.25 meters deep, aligned along a northwest-southeast axis (L. 477). Within were entombed the remains of an infant, laying semiflexed on the stomach with head to the southeast (Fig. 4.19). The left arm was bent at the elbow, with the hand placed on the infant's back; the right arm was beneath the infant in the chest

area. The legs were flexed at the knee and the hip. No grave goods were found in association with this burial.

GRAVE 71

Surface architecture: Stone circle (shared with Graves 60, 105, and 107).
Subsurface architecture: Capstones over pit.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Juvenile.
Other burials: Secondary juvenile burial laid over main burial.
Artifacts beneath capstones: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.24: Grave 71 loci.

Locus	Description
566	Stone circle (shared with Grave 60)
489	Fill (shared with Grave 60)
508	Capstones
513	Fill beneath capstones

Grave 71 was found beneath the same stone circle that surrounded Grave 60 (L. 566), but to the west of that grave (Table 4.24). Grave 71 was immediately to the west of Grave 60. Grave 105 was also found beneath this grave circle. The grave was bounded to the east by the west side slab of Grave 60. At a depth of 0.47 meters below the surface, four capstones were encountered (L. 508). The capstones were arranged in a northeast-southwest alignment rather than the northwest-southeast alignment of Grave 60 and typical of the cemetery. The capstones covered a pit measuring approximately 1.20 meters long, 0.50 meters wide, and extending 0.44 meters below the capstones (L. 513). Within were entombed the remains of two individuals. One, 71A, was a secondary burial of a juvenile; the disarticulated remains were placed on top of individual 71B. Individual 71B was also a juvenile, but this individual was articulated, laying semiflexed with head

to the south, on the left side facing west. No cultural remains were found in association with either individual.

GRAVE 72

Surface architecture: Stone circle surrounding partial pavement.
Subsurface architecture: Partially stone-lined pit.
Main burial: Semiflexed, head to southeast, on left side facing west.
Gender: Unknown.
Age: Adult.
Other burials: None.
Artifacts beneath capstones: 1 bead (bone).
Other artifacts: None.
Disturbances: None observed.

Table 4.25: Grave 72 loci.

Locus	Description
486	Stone circle
599	Fill
543	Capstones
544	Partially stone-lined pit



Figure 4.20: Grave 72 burial in partially stone-lined pit.

Grave 72 was visible on the surface of square I-11 as a complete stone circle measuring 1.40 meters in diameter (Table 4.25; L. 486). The circle surrounded thirteen paving stones, but these did not form a complete pavement. Beneath 0.51 meters of sediment (L. 599), four capstones were encountered (L. 543). The edges were sealed with smaller cobbles and some mud plaster, but not all the gaps between the capstones were filled. Beneath the capstones was a pit which, like Grave 68, was lined along its northwest side with three sandstone slabs (Fig. 4.20). The alignment of the pit was unusual for the cemetery, being nearly east-west. (It was observed to run along a northwest/southeast axis of 302 degrees.) The pit measured about 1.40 meters long, 1.00 meters wide, and 0.46 meters deep below the capstones (L. 544). The pit was full of sediment, and the human remains were covered by about twenty to thirty centimeters of sediment. The deceased was laid inside in a semiflexed position with head to the southeast laying on the left side facing west. The arms were bent at the elbows and extended in front of the individual. One cylindrical bead (B. 2196) was recovered from the cist. This bead is classified as bone, but it may in fact be an echinoid spine.

GRAVE 74

Surface architecture: Stone circle.
Subsurface architecture: Rectangular cist.
Main burial: Secondary.
Gender: Unknown.
Age: Adult.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.26: Grave 74 loci.

Locus	Description
503	Stone circle
512	Fill
558	Capstones
563	Cist and cist fill



Figure 4.21: Grave 74 secondary burial in cist.

Grave 74 was visible on the surface of square I-11 as a partial stone circle composed of eight stones and measuring 1.00 meters in diameter (Table 4.26; L. 503). Nine paving stones were also reported. The grave is immediately north of Grave 68 and

southwest of Grave 55. No artifacts were discovered in the fill (L. 512). At a depth of 0.31 meters, four dolerite capstones were encountered (L. 558). These sealed a cist measuring 0.55 meters long, 0.20 meters wide, and 0.38 meters deep and constructed with six side slabs and three cap support stones. The cist was full of hard-packed sediment (L. 563). Within were interred the poorly preserved secondary remains of an adult. The area supervisor noted, "The pelvis femur and some other long bones were placed neatly in pairs next to each other with more remains below the pelvis;" Fig. 4.21). No artifacts were recovered from the cist.

GRAVE 80

Surface architecture: Rectangular stone feature.
Subsurface architecture: Cist.
Burial: Semiflexed, head to south, on left side facing east.
Gender: Unknown.
Age: Infant.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.27: Grave 80 loci.

Locus	Description
460	Rectangular stone feature
491	Fill
505	Capstones
502	Cist and cist fill



Figure 4.22: Grave 80 and adjacent platform. Note the standing stone near the scale.

Grave 80 was visible on the surface of the boundary of squares J-10, K-10, J-11, and K-11 as what was described as a rectangular feature on a northwest-southeast axis (Table 4.27; L. 460). This feature measured 0.85 meters long, and while width was not recorded, it appears on the map as about half that wide. The feature was ringed with eleven stones, and the interior was paved with nine stones. In the middle of the feature was a standing stone. The only measurement recorded for this stone was 0.11 meters in height; this seems to be height above present ground surface. The stone was held in place with mud plaster. Adjacent to the rectangular feature was what was described as a platform measuring 0.75 meters long and 0.50 meters wide. Site photographs show what appear to be two graves with stone circles surrounding pavements (Fig. 4.22). No artifacts were recovered from the fill (L. 491). At a depth of 0.15 meters, three capstones were encountered (L. 505). These were not all laying flat; at least one of the stones was

laying at an angle. These sealed a cist measuring 0.60 meters long, 0.30 meters wide, and 0.29 meters deep and constructed of seven side slabs and one cap support stone on a northwest-southeast axis (L. 502). Inside were entombed the poorly-preserved remains of an infant laying in a semiflexed position with head to the southeast.

GRAVE 87

Surface architecture: Stone circle.
Subsurface architecture: Stone alignments, trapezoidal cist.
Burial: Semiflexed, head to south, on left side facing west.
Gender: Female.
Age: Mature adult.
Other burials: None.
Artifacts in cist: 177 beads (stone).
Other artifacts: None.
Disturbances: None observed.

Table 4.28: Grave 87 loci.

Locus	Description
515	Fill
535	Stone alignments
537	Capstones
540	Cist and cist fill



Figure 4.11: Grave 87 capstones and subsurface stone alignments.

Grave 87 was visible on the surface of square J-9 as a stone circle measuring 1.50 meters in diameter and constructed of eleven stones (Table 4.28). Beneath a shallow layer of fill (L. 515), subsurface stone alignments were also present (Fig. 4.23; L. 535). The supervisor's report notes, "This grave had a partial grave stone circle under the circle;" it is not clear what is being described, though this could be a reference to the low stone alignments which framed the cist. One alignment was placed parallel to, and 0.15 meters from, the cist's western wall, approximately 0.10 meters below the surface and 0.20 meters above the cist. A second alignment met this first alignment at a right angle and proceeded across the south end of the cist. A third alignment extended parallel to the cist on the east side, about 0.10 meters east of the cist, and possibly at the elevation of the cist. No such alignments existed north of the cist. At a depth of 0.39 meters, five capstones were encountered (L. 537). These sealed a cist measuring 1.26 meters long,

0.45 meters wide, and 0.45 meters deep and constructed of eight side slabs and six cap support stones. The cist was trapezoidal, wider at the north than at the south in order to accommodate the flexed legs of the deceased (Fig. 4.23; L. 540). Cracks between the capstones allowed the entry of sediment, and the human remains were encased in hard-packed sediment which filled the cist. Entombed within the cist were the remains of a mature adult female, lying semiflexed, with head to the south, on the left side facing west. Both arms were bent at the elbows, and hands were parallel to the upper chest. One hundred seventy-seven beads were recovered from the cist. These included five beads found in the sieve (B. 2180, 2182). At least one hundred seventy-two of the beads formed an elaborate choker at the neck (Fig. 4.24; B. 3640). The beads were all of an unidentified coarse stone.



Figure 4.24: Grave 87 cist and human remains.



Figure 4.25: Grave 87 skull and necklace, after removal of postcranial skeleton.

GRAVE 92

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist with south end removed.
Main burial: Extended, head to north, on back.
Gender: Female.
Age: Mature adult.
Other burials: Secondary burial over capstones; foot bones from previous primary burial in cist.
Artifacts in cist: 1 scarab, pomegranates, 1 wooden bowl, 2 copper anklets, 1 iron bracelet, 38 beads (glass, agate, calcite, carnelian, cowry, univalve, shell).
Other artifacts: None.
Disturbances: Southwestern side slab collapsed onto burial.

Table 4.29: Grave 92 loci.

Locus	Description
517	Stone circle and pavement
518	Fill
522	Fill beneath Grave 24 stone circle
528	Capstones
531	Cist and cist fill



Figure 4.26: Grave 92 capstones. Note also what remains of the stone circle.

Grave 92 was visible on the surface of square J-12 as a nearly complete stone circle consisting of twenty stones and measuring 2.20 meters in diameter (Table 4.29). The stones used to construct this circle were unusually large (Fig. 4.26; L. 517). Five flat stones within the circle appeared to be the remnants of a pavement. A secondary burial was also recovered from the fill beneath the circle stones of Grave 24 (L. 522), which had to be removed in order to completely uncover the cist of Grave 92. Other bones were also recovered from the fill over the Grave 92 capstones (L. 528). At a depth of 0.72 meters below the surface, four capstones were encountered (Fig. 4.25; L. 528). These were completely sealed with a layer of hard mud plaster. Because of this seal, the cist was mostly free of sediment. The cist measured 1.15 meters long, 0.33 meters wide, and

0.62 meters deep and was constructed of seven remaining side slabs and fourteen cap support stones. The cist was trapezoidal, wider in the north than in the south. However, the south end stone of the cist was removed in order to accommodate an extended burial. This made the cist less stable, and the southeastern side slab collapsed into the cist. The burial itself measured 1.31 meters long (L. 531). The deceased was a mature adult female, buried with head to the north (Fig. 4.27). The legs were extended, with the lower left leg crossed over the lower right leg (Fig. 4.28). The arms were bent at the elbows, with the left arm across the abdomen and the right arm pointing upwards, resting against the wall of the cist (Fig. 4.29). This was the only individual found with an arm pointing upwards, and this may be a sign of a premature burial. An iron bracelet was found about mid-shaft of the left forearm (Fig. 4.29; B. 2134). One copper anklet was found on each leg in the region of the upper ankle or lower calf; these anklets touched as the individual was laid (Fig. 4.28; B. 2134). Twenty-eight agate, carnelian, and calcite beads, three of them still on a string, were also found in the ankle region (B. 2137). Five other calcite bead fragments, apparently from five different beads, were found near the feet (B. 2144). After the skull was removed shell beads, including ten cowry shells with the tops cut off and three pierced univalve marine shells (B. 2149, 2164) were discovered next to the right shoulder, apparently having once been strung together on a necklace (Fig. 4.30). A scarab was found next to these shell beads beside the right scapula (B. 2152). A glass short barrel bead (B. 2155) and a large shell disc bead which was identified in the field both as a spindle whorl and as a pendant (B. 2154) were also found among these beads surrounding the neck. The remains of a wooden bowl lay over the chest and lower skull of the individual (Fig. 4.31). The rim of the bowl showed holes and pegs, similar to other

bowls found in the cemetery. Five pomegranates were also recovered from about this area (B. 2133), perhaps having fallen from the decayed bowl. Other artifacts recovered included shroud and textiles, especially around the pelvis and femur (B. 2135), a copper object (B. 2166), and 50-60 seeds (B. 2157). A metal earring fragment is also mentioned in the notes; this is probably the copper object. A second individual's foot bones were also recovered from the cist, below and to the east of the original burial. These feet were in the north end of the cist, suggesting that the original occupant was buried in a semiflexed position with head to the south, the most common burial position at Wadi Fidan 40. Organic material which, according to the supervisor's notes for July 17, "may be lung, intestine, or plant" was found near the upper right rib cage.



Figure 4.27: Grave 92 burial.



Figure 4.28: Grave 92 anklets.



Figure 4.29: Grave 92. Note the extended forearm.



Figure 4.30: Grave 92 necklace remnants, including scarab, next to left scapula, after skull and fill have been removed.



Figure 4.31: Grave 92 burial. Note the wooden bowl fragment over the lower skull and the pomegranates.

GRAVE 93

Surface architecture: Stone circle (shared with Grave 60).
Subsurface architecture: Partial cist.
Main burial: Secondary.
Gender: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 2 potsherds.
Other artifacts: None.
Disturbances: Part of cist missing and possibly destroyed.

Table 4.30: Grave 93 loci.

Locus	Description
566	Stone circle (shared with Grave 60)
489	Fill (shared with Grave 60)
514	Cist

Grave 93 lacked an individual surface mortuary feature, but shared a stone circle with Grave 60 (Table 4.30; L. 566). Grave 93 was located immediately above the northeast corner of the cist of Grave 60. At a depth of 0.41 meters, the cist was encountered (L. 514). No capstone covered the cist, which measured 0.30 meters long, 0.30 meters wide, and 0.41 meters deep and was constructed of two or three side slabs. The western end of the cist lacked any side slab. Notes say both that the cist was square and that it was oriented in an almost east-west direction rather than a north-south direction more common in the cemetery. Human remains seem to have been deposited in the cist secondarily. Two potsherds were found in the cist (B. 2096), but no other artifacts were recovered.

GRAVE 96

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult.
Other burials: Secondary burial above capstones.
Artifacts in cist: Mother of pearl fragment.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed. Capstone missing, cist full of sediment, human remains broken and scattered.

Table 4.31: Grave 96 loci.

Locus	Description
478	Fill
545	Capstones
548	Cist and cist fill



Figure 4.32: Grave 96 cist.

Grave 96 was invisible on the surface of square K-11 (Table 4.31). It was discovered about 0.10 to 0.20 meters south of Grave 20. A secondary burial was encountered about 0.40 meters above the capstones (Fig. 4.33; L. 478). At a depth of 0.70 meters, four capstones were encountered (L. 545). A gap in the middle north was filled with three large cobbles that served as capstones. The cist measured 1.25 meters long, 0.55 meters wide, and 0.55 meters deep, and was constructed of nine side slabs and eight cap support stones (Fig. 4.32; L. 548). The cist was wider in the north than in the south. The cist was full of sediment, and the human remains were broken and poorly preserved, though the remains of the skull were found in the north end of the cist. One mother of pearl fragment made up the only artifact recovered from the cist (B. 3616).



Figure 4.33: Secondary burial above capstones, Grave 96.

GRAVE 97

Surface architecture: Stone circle and cairn.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on right side facing east.
Gender: Unknown.
Age: Juvenile.
Other burials: None.
Artifacts in cist: Wooden bowl, seeds, ungulate bone, copper bracelet, 3 beads (cowries, cupric).
Other artifacts: None.
Disturbances: Some circle stones missing.

Table 4.32: Grave 97 loci.

Locus	Description
527	Stone circle
530	Fill
546	Capstones
549	Cist and cist fill



Figure 4.34: Grave 97 surface architecture.

Grave 97 was visible on the surface of square J-12 as a partially complete stone circle composed of nine stones (Table 4.32; Fig. 4.34; L. 527). Although many stones in the circle were missing, enough were present to mark out the circumference; the diameter measured 1.45 meters. Inside the circle were fourteen cobbles, some of which may have formed a pavement or a cairn. Beneath 0.50 meters of sediment (L. 530), three capstones were encountered (L. 546). Gaps between the stones were filled with cobbles, and a hard mud plaster layer sealed some of the gaps (Fig. 4.35). The cist measured 1.25 meters long, 0.50 meters wide, and 0.67 meters deep and was constructed of seven side slabs and five cap support stones. The cist is wider at the north than at the south, and bends slightly to the west about halfway along its length. The cist was about half full of sediment (L. 549). The burial, which measured only 0.61 meters long, took up only the northern end of the cist (Fig. 4.36). The individual was a juvenile, laid in a semiflexed position with head to the south, on the right side facing east (Fig. 4.37). In front of the face a wooden bowl was placed (B. 3619). An ungulate bone, probably a gazelle's, showing a cut mark was found inside the bowl, as were other organic materials, probably seeds (B. 3608). A copper bracelet was found mid-shaft on the individual's right forearm. Two cowry shells with the tops cut off (B. 3607, 3632) and one cupric short barrel bead (B. 3645) were found in the cist. These included a cowry shell was found north of the jaw, apparently once forming a necklace. The digitized Grave Sheet suggests that other shells and beads were also recovered from the grave (B. 3612), but no other records of these were found. Some shroud fragments, possibly leather, were also reported (B. 3650). Some adult bones were also found in the cist, further suggesting that the cist was originally constructed for an adult.



Figure 4.35: Grave 97 capstones.



Figure 4.36: Grave 97 burial.



Figure 4.37: Grave 97 burial, close-up. Note the copper bracelet on the right arm, the wooden bowl with ungulate bone, and the cowry at the neck.

GRAVE 102

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Female.
Age: Adult.
Other burials: Adult secondary burial in cist over legs of main burial.
Artifacts in cist: Wood fragments, shroud fragments, 1 bead (citrine).
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.33: Grave 102 loci.

Locus	Description
472	Fill
552	Capstones
565	Cist and cist fill



Figure 4.38: Grave 102, main and secondary burials.

Grave 102 was invisible on the surface of the boundary between squares K-10 and L-10 (Table 4.33). However, its capstones were in line with those of Grave 60, and were only about 0.20 meters south of that grave (Fig. 4.39). At a depth of 0.64 meters below the surface (L. 472), four capstones were encountered (L. 552). These sealed a cist measuring 1.20 meters long, 0.40 meters wide, and 0.60 meters deep and was constructed of eleven side slabs and seventeen cap support stones in two courses. The cist was trapezoidal, wider in the north than in the south. About five to seven centimeters of fine loose sediment covered the burials (L. 565). The primary burial (individual 102A), an adult female, lay in a semiflexed position with head to the south, lying on the left side facing west. Covering this individual's legs and lower abdomen were the broken secondary remains of another individual, an adult of unknown gender (Fig. 4.38; individual 102B). Wood fragments were found in the stomach area (B. 2665), though the area supervisor suggested, "The wood may have been part of a bowl that was destroyed when the skeleton for 102b was moved." Shroud fragments (B. 2673) were recovered, and one citrine bicone or barrel bead was found sieving cist sediments (B. 3676).



Figure 4.39: Graves 60, 102, and 107.

GRAVE 105

Surface architecture: Stone circle (shared with Grave 60, Grave 71, and 107).
Subsurface architecture: Capstones over pit.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Infant.
Other burials: None.
Artifacts beneath capstones: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.34: Grave 105 loci.

Locus	Description
566	Stone circle (shared with Grave 60)
489	Fill (shared with Grave 60)
554	Capstones
564	Fill beneath capstones



Figure 4.40: Grave 105 burial.

Grave 105 was visible on the surface of squares K-10 and L-10 as the same stone circle covering Grave 60 and Grave 71 (Table 4.34; L. 566). At a depth of 0.64 meters

(L. 489), two capstones were encountered (L. 554). These covered a pit measuring about 0.63 meters long, 0.53 meters wide, and 0.50 meters deep below the capstones (L. 564). Within were entombed the remains of an infant laying with head to the south, on the left side facing west, apparently semiflexed in position (Fig. 4.40). The pit was full of sediment, and the skeleton was found starting about twenty centimeters below this sediment. No artifacts were recovered in association with this burial.

GRAVE 106



Figure 4.41: Grave 106 surface architecture.

Grave 106 was identified on the surface as a stone circle (Fig. 4.41). However, it was not measured or otherwise recorded and was left unexcavated.

GRAVE 107

Surface architecture: Stone circle (shared with Grave 60, 71, and 105).
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed (probably with head to the south, on the left side facing west).
Gender: Unknown.
Age: Adult.
Other burials: Secondary burial near surface.
Artifacts in cist: 6 beads (ostrich eggshell, amazonite).
Other artifacts: 1 bead in fill (ostrich eggshell).
Disturbances: Looted in antiquity. Human remains broken and scattered, cist full of sediment.

Table 4.35: Grave 107 loci.

Locus	Description
566	Stone circle (shared with Grave 60)
542	Fill
553	Capstones
557	Cist and cist fill



Figure 4.42: Grave 107 human remains.

Grave 107 was located in square K-10 beneath the southern side of the stone circle of Grave 60 (Table 4.35; L. 566). No unique surface mortuary features were observed. A secondary burial was encountered close to the surface as stones were removed (L. 542). An apparently ostrich eggshell bead was found in the fill (B. 2179). What was described as "2-3 courses of stones on the southern end of the grave"—probably a rock pile—was removed above the capstones. At a depth of 0.26 meters, five capstones were encountered (L. 553). These sealed a cist measuring 1.40 meters long, 0.45 meters wide, and 0.46 meters deep, constructed of eight side slabs and ten cap support stones. The cist was trapezoidal, wider in the north than in the south. The cist was full of sediment (L. 557). The human remains within the cist were fragmentary and scattered. However, skull fragments were recovered in the south, and what appear to be articulated foot bones were located in the northeast of the cist (Fig. 4.42). The individual appears therefore to have been laid with head to the south, on the left side facing west—the most common disposition in the cemetery. Four ostrich eggshell beads (B. 3647, 3663), one irregular amazonite short barrel bead and one amazonite drilled pebble (B. 3677) and snail shell fragments (B. 3675) were recovered from the cist.

GRAVE 109

Surface architecture: None.
Subsurface architecture: Rectangular cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Juvenile.
Other burials: Secondary above capstones.
Artifacts in cist: None.
Other artifacts: Potsherds, 1 bead (ostrich eggshell) in association with secondary burial.
Disturbances: Surface architecture destroyed.

Table 4.36: Grave 109 loci.

Locus	Description
547	Fill
560	Capstones
561	Cist



Figure 4.43: Grave 109 capstones.

Grave 109 was invisible on the surface of square J-11 (Table 4.37). Some potsherds (B. 3610, 3636) and an ostrich eggshell bead (B. 3611) were recovered from the fill, in association with a secondary burial that was encountered immediately above the capstone level at the northeast corner of the grave (L. 547). Some of the remains of the secondary burial were found between the cracks of the capstones. At a depth of 0.30 meters, four capstones were encountered (L. 560; Fig. 4.42). These were covered with a

layer of mud plaster, though some gaps were still visible between the capstones. The capstones sealed a rectangular cist measuring 1.03 meters long, 0.35 meters wide, and 0.43 meters deep, constructed of seven side slabs and eight cap support stones. The cist was partially filled with sediment, and entombed within the cist were the remains of a juvenile, laid in a semiflexed position, with head to the south, laying on the left side facing west (Fig. 4.44; L. 561). The arms were bent at the elbow, pointing west, and the legs were bent at the knees. No artifacts were found in the cist.



Figure 4.44: Grave 109 human remains.

GRAVE 110

Surface architecture: None.
Subsurface architecture: Rectangular cist.
Main burial: Semiflexed, with head to north, on right side facing west.
Gender: Female.
Age: Adult.
Other burials: None.
Artifacts in cist: Wood, 1 bead (ostrich eggshell).
Other artifacts: None.
Disturbances: Looted in recent times. Surface architecture destroyed, upper body smashed.

Table 4.37: Grave 110 loci.

Locus	Description
556	Robber's backdirt, fill, and cist



Figure 4.45: Grave 110 burial.

Grave 110 was visible on the surface of square G-11 due to disturbance by recent looting (Table 4.37). Robbers excavated the grave down to cist level, destroying any surface architecture, and removed the capstones. The skull was fragmented, either due to recent or ancient disturbance. The cist was encountered at a depth of 0.25 meters, and was constructed of seven side slabs and one surviving cap support stone (L. 556). The cist was rectangular and measured 1.40 meters long, 0.60 meters wide, and 0.41 meters deep. The deceased lay with head to the north, semiflexed, on the right side facing west (Fig. 4.45). The left arm was bent at the elbow pointing west, possibly grasping the right arm, though this arm was fragmentary. One ostrich eggshell cylinder disc bead (B. 3661) and wood (B. 2623, 3662) were recovered from the cist.

4.2: 1997 EXCAVATIONS: AREA B GRAVE DESCRIPTIONS

GRAVE 10

Surface architecture: Unknown.
Subsurface architecture: Unknown.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts below capstones: None.
Other artifacts: 1 bead in robbers' backdirt (ostrich eggshell).
Disturbances: Robbed in recent times

Table 4.38: Grave 10 loci.

Locus	Description
606	Robbers' backdirt

Grave 10 was visible on the surface of the northeastern corner of square M-12 due to a recent robber's pit and backdirt pile. The backdirt was sieved, and bone fragments, snail shells (B. 2208) and a single ostrich eggshell disc bead (B. 2215) were recovered. No other data were recorded.

GRAVE 11

Surface architecture: Stone circle.
Subsurface architecture: Cist(?).
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary above capstones.
Artifacts in cist: None
Other artifacts: 12 beads in looters' backdirt and fill (agate, ostrich eggshell, shell) and six beads in association with secondary burial (ostrich eggshell, cupric).
Disturbances: Looted in recent times.

Table 4.39: Grave 11 loci.

Locus	Description
615	Fill and looters' backdirt
625	Secondary burial in fill above capstones

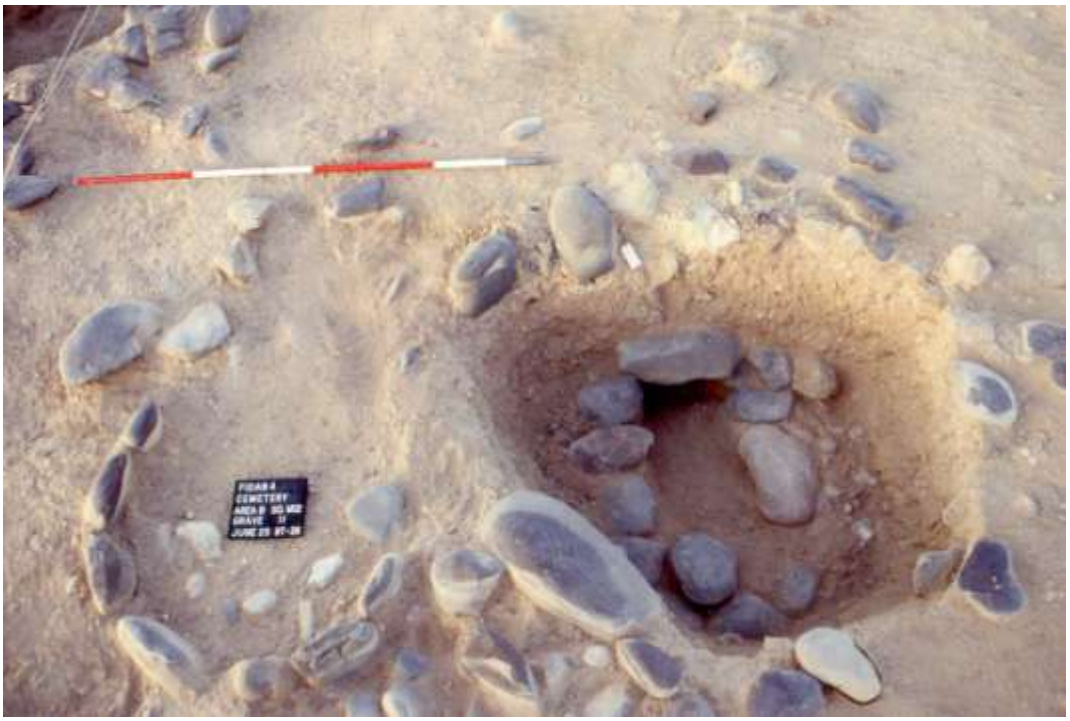


Figure 4.46: Grave 11.

Grave 11 was visible on the surface of the northeastern corner of square M-12 as a stone circle composed of six remaining cobbles, about two-fifths complete, measuring 1.58 meters in diameter (Table 4.39; Fig. 4.45). The grave had been looted recently—a shaft which remained open was dug from the surface to the base of the grave. All but one of the capstones were removed and the burial was looted. The looters' backdirt and the fill from the surface to the cist were excavated as one locus and sieved (L. 615). Twelve beads were recovered, including one agate long cylinder bead (B. 2270), eight ostrich eggshell cylinder discs (B. 2262, 2270, 2281), two tubular shell short cylinder beads (B. 2281), and one shell cylinder disc bead (B. 2262). A secondary burial west of Grave 11 was discovered in the process (L. 625), and six beads, including four ostrich eggshell cylinder discs (B. 2341, 2354) and one cupric cylinder disc (B. 2315) and one cupric short barrel bead (B. 2341) were recovered in association with that burial. A few cobbles

were encountered in the remaining fill. The remaining capstone was encountered at a depth of 0.47 meters. The capstones sealed a burial dug at a depth of 0.75 meters below the surface. No details are recorded of the subsurface architecture, but the site photograph shows what appears to be a partially destroyed cist constructed of side slabs and cap support stones.

GRAVE 12

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Juvenile.
Other burials: 2 secondary burials over capstones.
Artifacts in cist: 2 copper rings, wooden bowl fragment, leather shroud fragment, 173 beads and pendants (hematite, carnelian, glass, rock crystal, agate, ostrich eggshell, siltstone, apatite, faience, cupric, olivine, cowrie).
Other artifacts: 118 beads in looters' backdirt and fill (alabaster, carnelian, flint, agate, ostrich eggshell, shell, blue stone, aventurine, sandstone, amazonite, limestone, quartzite, cupric).
Disturbances: Looted recently. Shaft left open to capstones. Human remains broken and scattered in cist.

Table 4.40: Grave 12 loci.

Locus	Description
653	Stone circle
604	Robbers' backdirt
609	Fill
618	Fill
624	Secondary burial in fill in northeast baulk
631	Secondary burial in fill in north baulk
654	Capstones
623	Cist and cist fill



Figure 4.47: Grave 12, as encountered after looting.

Grave 12 was visible on the surface of the north-central portion of square M-11 as a stone circle, about three-quarters complete, composed of fifteen stones and measuring 2.35 meters in diameter (Table 4.40). The grave had been recently looted, and a pit was open down to the capstones of the cist (Fig. 4.47). The looters' backdirt was sieved, and sixty-two beads were recovered. These included thirty-six alabaster short cylinders and short barrels (B. 2218, 2238), one carnelian drilled pebble and one carnelian drilled flake (B. 2238), one grey flint barrel disc bead (B. 2238), one agate truncated convex bicone (B. 2238), one agate short cylinder (B. 2231), one aventurine short barrel (B. 2231), six alabaster cylinder discs (B. 2231, 2238), three ostrich eggshell cylinder disc (B. 2218, 2238), one shell short cylinder (B. 2231), a blue stone short barrel bead (B. 2218) and a blue stone short cylinder bead (B. 2232), a lenticular translucent silicate bead (B. 2227), an irregular sandstone pendant (B. 2233), one amazonite barrel disc (B. 2236), one

amazonite pear-shaped disc (B. 2238), one amazonite cylinder disc (B. 2238), one amazonite short barrel (B. 2230), two amazonite drilled pebbles (B. 2238, 2230), one amazonite pendant fragment and one small amazonite chip which may be part of this pendant (B. 2238). Fifty-six more beads were recovered from the fill above the capstones (L. 609). These included one limestone drilled pebble, one quartzite drilled pebble, three aventurine short barrels, one pear-shaped alabaster disc, forty-two alabaster short cylinder beads, one malachite short cylinder, one lenticular malachite bead, four amazonite pendants, one triangular amazonite disc, one elliptical amazonite bead, and one flat amazonite piece with two parallel holes. One amazonite fragment and two cupric fragments which do not come from any of the other pieces were also recovered (B. 2244, 2253). Two secondary burials were encountered in the fill, one in the north baulk and one in the northeast baulk extending under the capstones (Fig. 4.48). Both secondary burials were of indeterminate age and sex. At a depth of 0.82 meters, four capstones were encountered. While capstones covered the cist, they were disturbed, and it was unclear whether they had been replaced by the recent robbers or whether those looters gave up at this point. One of the middle capstone appeared to be rotated twenty degrees. Mud plaster remained on two of these capstones. The capstones sealed a cist measuring 1.56 meters long, 0.30 meters wide, and 0.31 meters deep and constructed of nine side slabs and eight cap support stones. The cist was wider at the north than at the south. Gaps were observed between the capstones through which the cist could be accessed. The cist was full of sediment, including cobbles. The remains within the cist were broken and scattered. The broken skull was found in the south end of the cist, but it lay next to the pelvis. In the middle of the grave, a metal ring (most likely copper or a

copper alloy) was found on a finger or toe bone (B. 2320). Nearby, a large black glass bead with white decoration was recovered (Fig. 4.49; B. 2322). According to the supervisor's report, another metal ring was found in the sieved sediment "from the foot area"—probably from the north end of the cist (B. 2323). Wooden bowl fragments (B. 2318, 2300, 2350, 2357, 2326)—including a rimsherd with three surviving peg holes (B. 2318)—leaf fragments (B. 2306), seeds (B. 2304, 2324), leather shroud fragments (B. 2307, 2351, 2356)—including some preserving stitching—were recovered from the cist. Also recovered from the cist were one hundred twenty-four carnelian short truncated convex bicone beads, four carnelian bicone disc beads, two carnelian barrel disc beads, one carnelian short pear-shaped bead, twelve carnelian short barrel beads, five rock crystal short barrel beads (B. 2399), two alabaster short cylinder beads, one purple glass short barrel, two agate cylinder discs, one agate short cylinder, one agate truncated convex bicone disc, one ostrich eggshell cylinder disc, one siltstone cylinder disc, one apetite short barrel, two faience cylinder discs, one faience truncated concave bicone, three amazonite pendants, two amazonite drilled pebbles, two aventurine barrel disc beads, one blue cupric oblate disc bead, one siltstone long cylinder, one olivine standard cylinder, and one cowry with the back removed. A finely worked hematite pendant was also found (B. 2303, 2311, 2321, 2339).



Figure 4.48: Grave 12. Note the secondary burial in the northeast corner.



Figure 4.49: Grave 12 artifacts. Note the glass bead immediately below the scale and the ring around the bone, probably a toe bone, below the photoboard.

GRAVE 13

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to north, on back with knees pointed east.
Sex: Unknown.
Age: Juvenile.
Other burials: Two secondary burials above capstones.
Artifacts in cist: Wooden pin, wooden bowl, leather and textile shroud fragments.
Other artifacts: 2 beads in fill (ostrich eggshell, flint).
Disturbances: Looted in antiquity. Surface architecture partially disturbed. Capstone displaced, skull smashed.

Table 4.41: Grave 13 loci.

Locus	Description
607	Looters' backdirt
655	Stone circle
610	Fill
619	Mud plaster
656	Capstones
621	Cist and cist fill



Figure 4.50: Grave 13, cist fill as found. Note the mingled skull and bowl fragments.

Grave 13 was visible on the surface of the south central area of square M-11 as a stone circle, about seven-eighths complete, composed of fourteen cobbles measuring 2.37 meters in diameter (Table 4.41; L. 655). The grave had been looted in recent times, and a pit remained open that extended almost to the level of the capstones. Human bone and two beads, including an ostrich eggshell cylinder disc (B. 2226) and a flint short barrel (B. 2238), were recovered from the looters' backdirt (L. 607). Several cobbles were uncovered in the remaining fill in the south end of the grave. According to the notes, two secondary burials were encountered in the northern part of the grave, one in the northeast and one in the northwest, extending beyond the grave circle (L. 610). At a depth of 0.78 meters, four capstones were uncovered (L. 656). These were sealed with a layer of hard mud plaster (L. 619). However, the second capstone from the south was displaced, set on

end in the cist, having been pushed into the cist by looters. The cist measured 1.34 meters long, 0.50 meters wide, and 0.55 meters deep and was constructed of eight side slabs and eight cap support stones. The cist was trapezoidal, slightly wider at the north than at the south. The remains of the juvenile within the cist were still largely intact, though the skull was fragmented and mixed with shards of a wooden bowl (Fig. 4.50). The individual lay semiflexed with head to the south (L. 621). The individual lay on the back, but the legs were slightly bent with the knees pointed west. The arms were bent at the elbows, with the hands placed in the pelvic area (Fig. 4.51). A wooden pin (B. 2292) was found beneath the skull fragments, and more of the wooden bowl was found beneath the left arm (B. 2287). Leather (B. 2288) and textile (B. 2291) shroud fragments were also recovered from the cist. The supervisor's notes suggest that the shroud fragments were once wrapped around the body, and fragments were particularly visible over the left arm. However, these textile and leather materials were found throughout the cist.



Figure 4.51: Grave 13, after removal of upper layer of cist fill.

GRAVE 14

Surface architecture: Two partially surviving concentric touching stone circles.
Subsurface architecture: Cist.
Main burial: Semiflexed, head to south, on right side facing west.
Sex: Unknown.
Age: Adolescent.
Other burials: Small amount of bone found in looters' backdirt.
Artifacts in cist: Leather shroud remains, 889 beads including necklace, bracelets, and anklets (carnelian, rock crystal, cupric, possibly wood, agate, bone, cowry shell, ostrich eggshell, apatite, shell, hematite, tan stone, seed).
Other artifacts: 11 beads in looters' backdirt and fill (ostrich eggshell, aventurine, limestone, agate, flint, shell).
Disturbances: Looted in recent times; shaft left open extending to capstones.

Table 4.42: Grave 14 loci.

Locus	Description
601	Looters' backdirt
657	Stone circle
616	Fill
658	Capstones
628	Cist and cist fill



Figure 4.52: Grave 14 as found.

Grave 14 was visible on the surface of the southeastern quadrant of square L-11 as two concentric stone circles which were only partially preserved (Table 4.42). These were best preserved in the south, though a few stones also remained in the north. A total of ten stones remained in the southwest, five in each of the concentric circles (L. 657). The exterior circle's diameter appears to have been 2.60 meters. The grave was robbed in recent times, and a shaft was left open extending from the surface to the capstones (Fig. 4.53). Many of the grave's circle stones appear to have been displaced because of this looting; some of these were found collapsed into the looters' shaft. Human bone and seven beads were recovered from the looters' backdirt (L. 601). The beads included two aventurine drilled pebbles, one aventurine cylinder disc, two agate cylinder discs, one shell cylinder disc, and one flint cylinder disc (B. 2229). Four beads were recovered in

the remaining fill above the capstones (L. 616). These included two ostrich eggshell disc beads (B. 2276), one limestone cylinder disc (B. 2338), and one shell tubular short barrel bead (B. 2299). At a depth of 0.47 meters, three capstones were encountered (L. 658). Mud plaster remained sealing the southern two capstones. The cist measured 1.35 meters long, 0.55 meters wide, and 0.65 meters deep and was constructed of ten side slabs and eight cap support stones. The cist narrowed at the north because the walls bent inward, but the cist was not trapezoidal. Within the cist were interred the remains of an adolescent, likely female, laying semiflexed with head to the south on the right side facing west (L. 628). The legs were bent with the elbow, and while the left leg was on top, the legs were crossed at the ankles such that the left foot was beneath the right foot. The right arm was bent at the elbow with the hand near the face, while the left arm was also bent at the elbow with the hand beneath the right arm. Twenty-three carnelian short barrel beads formed a bracelet around the midshaft of the right forearm (B. 2377). Thirty-six truncated convex bicone and short barrel beads, thirty-three of carnelian and three of rock crystal, were found near the ankles, possibly around one ankle (B. 2386). One hundred nine beads were found in the region of the left wrist, including one hundred seven carnelian short barrel beads, one carnelian cylinder disc bead, one cupric short barrel bead, and one possibly wood short cylinder bead (Fig. 4.54; B. 2391, 2393). One hundred fifty-seven beads were found in the chest area and probably formed a necklace, including a carnelian truncated bicone bead, a carnelian standard cylinder bead, three carnelian short barrel beads, three agate cylinder disc beads, and one hundred forty-eight tiny bone beads (B. 2396). Two cowry shell beads are visible in site photos in the waist area (B. 2378). Five hundred sixty-two other beads were also recovered from the cist,

including three hundred thirty-five tiny bone or ostrich eggshell cylinder disc beads, sixty-four larger ostrich eggshell cylinder disc beads, one rock crystal short convex truncated bicone, one agate small segmented bead, one apatite short barrel bead, one shell cylinder disc bead, one hematite short cylinder bead, two tan stone short cylinder beads, one drilled seed, one cupric cylinder disc bead, one hundred ten short convex truncated bicone beads, thirty-six carnelian short barrel beads, three carnelian short pear-shaped beads, one carnelian cylinder bead, one carnelian barrel disc bead, two carnelian convex bicone disc beads, and one carnelian trapezoidal pendant (B. 2353, 2374, 2378, 2383, 2400). Leather shroud remains were found all around the skeleton (B. 2379, 2390, 2397). A seed was also recovered from the cist (B. 2376).



Figure 4.12: Grave 14 burial.



Figure 4.13: Grave 14 burial, close-up. Note the cowry shells near the pelvis and the carnelian beads near the forearms.

GRAVE 15

Table 4.43: Grave 15 loci.

Locus	Description
650	Looters' backdirt

Grave 15 was visible on the surface of the southwest quadrant of square L-11 as a stone circle measuring 1.7 meters in diameter (Table 4.43). A 0.53 meter deep looter's hole remained open in the grave. The backdirt from this looting was sieved and a small amount of bone was collected, but no other excavations were conducted in this grave.

GRAVE 17

Surface architecture: Two partial concentric touching stone circles.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on back facing up.
Sex: Unknown.
Age: Juvenile.
Other burials: Stacked secondary burial of commingled remains of child and adult in fill above capstones. Partial skeleton in cist.
Artifacts in cist: None.
Other artifacts: 6 beads (ostrich eggshell) in looters' backdirt.
Disturbances: Looted in recent times. Surface architecture partially destroyed; shaft open into cist.

Table 4.44: Grave 17 loci.

Locus	Description
603	Looters' backdirt
660	Stone circle
617	Fill
620	Secondary burials in western baulk
622	Cist



Figure 4.55: Grave 17 burial.

Grave 17 was visible on the surface of the southwest quadrant of square L-12 and northwest quadrant of square L-11 as two concentric and touching stone circles (Table 4.44). The exterior circle survived only in the southeast of the grave, though the interior circle survived along the southern rim of the grave. Three stones remained of the exterior circle, and five stones remained of the interior circle. It is estimated that the circle was 2.00 meters in diameter. The grave was looted in recent times, and the looters' shaft was left open, extending down to the open cist. Bone fragments and six ostrich eggshell beads (B. 2213, 2223) were recovered from the looters' backdirt (L. 603). In the remaining fill above the cist, bone fragments and one seed (B. 2271) were recovered. A secondary burial consisting of the neatly-stacked commingled partial remains of a child and an adult (individuals 17C, 17D) was found in the western baulk of the excavation (Fig. 4.56; L. 620). Two shell beads, one a long cylinder (B. 2395) and one a long truncated bicone (B. 2405) and a seed fragment (B. 2275) were recovered in association with this secondary burial. The cist was encountered without capstones. It measured 1.20 meters long, 0.50 meters wide, and 0.50 meters deep and was constructed of seven side slabs and ten cap support stones. The cist was trapezoidal in shape, wider at the north than at the south. Entombed within the cist were the still articulated remains of a juvenile laying with head to the south (Fig. 4.55; individual 17A). The individual lay on the back with the legs bent at the knees. The feet were together and one knee pointed west and the other east in an unnatural position, suggesting that the knees may have once pointed up and the legs fallen apart with the course of decomposition. The supervisor's notes point out that what appeared to be mud plaster was found on the floor of the cist, and that the foot bones were embedded in this material. The supervisor suggested that

the body may have been deliberately laid in wet plaster; it is further possible that this may have been in order to fix the feet in position. The left arm was extended at the individual's side, while the right arm was bent at the elbow with the hand at about the right shoulder. Fragments of a poorly preserved adult skeleton (individual 17B) which the area supervisor believed represented an earlier primary burial were also found in the cist. These remains were encountered beneath the juvenile skeleton, with the skull in the south. According to the supervisor, "Skulls are very close together." Only the skull and leg bones survived. No data is available on the relationship between the mud plaster in the cist and the second individual. No artifacts were found in the cist.



Figure 4.56: Grave 14, stacked secondary burial above capstones.

GRAVE 18

Surface architecture: Partial stone circle
Subsurface architecture: Cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary in fill above cist.
Artifacts in cist: 7 beads (ostrich eggshell).
Other artifacts: 7 beads in fill (amazonite, cupric, ostrich eggshell, bone).
Disturbances: Looted in recent times. Surface architecture largely destroyed, shaft left open into cist.

Table 4.45: Grave 18 loci.

Locus	Description
605	Looters' backdirt
612	Fill
630	Secondary burial in south baulk
632	Cist and cist fill



Figure 4.57: Grave 18.

Grave 18 was visible on the surface of the center of square M-12 as a partially preserved stone circle, of which five stones remained, all in the southern area of the grave. The circle is believed to have been approximately 2.05 meters in diameter. The grave is very close to that of Grave 11, though no stones remained of either circle between the two graves. Grave 18 was looted in recent times, and a shaft remained open from the surface to the interior of the cist (Fig. 4.57). The looters' backdirt was sieved

(L. 605), and bone fragments and seven beads were found. These included four ostrich eggshell cylinder discs, one bone short cylinder, one amazonite drilled pebble, and one cupric short barrel (B. 2211, 2225). A secondary burial was observed in the southern baulk. Another secondary burial was encountered in the fill between Grave 18 and Grave 11 (L. 625), but this was closer to Grave 11 than Grave 18 and was considered with that grave. The two capstones which remained in place were encountered at a depth of 0.63 meters below the surface. The cist measured 1.25 meters long, 0.40 meters wide, and 0.45 meters deep and was constructed of nine side slabs and thirteen cap support stones. Only a few very poorly preserved bone fragments survived. Seven ostrich eggshell cylinder disc beads were also recovered from the cist (B. 2373, 2392, 2401, 2416).

GRAVE 33

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Female.
Age: Mature adult.
Other burials: Secondary in fill above capstones.
Artifacts in cist: Wooden bowl, 5 beads (amazonite).
Other artifacts: Flint awl, 1 bead in fill (ostrich eggshell).
Disturbances: Surface pavement partially destroyed.

Table 4.46: Grave 33 loci.

Locus	Description
676	Stone circle
636	Fill
643	Secondary burial
677	Capstones
664	Cist and cist fill



Figure 4.58: Grave 33 surface architecture.

Grave 33 was visible on the surface of the northwest quadrant of square M-9 as a stone circle consisting of eight stones measuring 1.20 meters in diameter (Table 4.46; L. 676). These surrounded a pavement, preserved in about half the circle, constructed of ten flat dolerite cobbles (Fig. 4.58). Near the grave a flint awl was found (B. 2606). Some human bone fragments and one ostrich eggshell bead (B. 2415) were recovered from the grave fill (L. 636). A poorly preserved secondary burial was encountered in the fill over the north end of the cist (L. 643). At a depth of 0.37 meters, three capstones were encountered (L. 677). These were covered with mud plaster and sealed a cist measuring 1.27 meters long, 0.65 meters wide, and 0.50 meters deep. The cist was trapezoidal, wider in the north than in the south. Within were entombed the semiflexed remains of a mature female adult, head to the south, lying on the left side facing west (Fig. 4.59; L. 664). The left arm was extended with the hand beneath the left leg, while the right arm

was bent at the elbow with the hand pointing forward. West of the individual, partially covering the midshaft of the left humerus, were the fragments of a wooden bowl (Fig. 4.59). This vessel was about ten centimeters in diameter and apparently placed upside-down (B. 2500); other wood fragments recovered from the cist may be related to this vessel (B. 2495). Five amazonite beads, four of them drilled pebbles and one a cylinder disc, were also found in the cist (B. 2499).



Figure 4.59: Grave 33 burial. Note the wooden vessel fragments next to the left arm.

GRAVE 34

Surface architecture: Partial stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to north, on right side facing west.
Sex: Female.
Age: Adult.
Other burials: Fragmentary human remains in fill.
Artifacts in cist: 1 seed.
Other artifacts: None.
Disturbances: Probably looted in antiquity. Surface architecture partially destroyed. Small boulders in cist.

Table 4.47: Grave 34 loci.

Locus	Description
678	Stone circle
645	Fill
668	Capstones
666	Cist and cist fill



Figure 4.60: Grave 34 burial.

Grave 34 was visible on the surface of the middle of square L-9 as a circle of eleven stones measuring 1.80 meters in diameter (Table 4.47; L. 678). These surrounded a partially preserved pavement constructed of four flat stones. Human and faunal bone fragments were found in the fill (L. 645). At a depth of 0.37 meters, five capstones were encountered (L. 668). These covered a cist measuring 1.40 meters long, 0.60 meters wide, and 0.35 meters deep. The cist was trapezoidal, wider at the north than in the south. Within the cist were entombed the semiflexed remains of an adult female, head to the north, on the right side facing west (Fig. 4.60; L. 666). The left arm was bent at the elbow, with the hand in the facial region. A small boulder lay to the west of the skeleton, just south of the skull, covering the left forearm. The skull appeared to be slightly misplaced, and the mandible was observed behind the skull. The displacement of the skull suggests that the boulder appears to have been dumped or fallen into the grave after some decomposition had occurred. Another, but much smaller stone was observed just west of the skeleton in the pelvic region. One seed was recovered from the cist (B. 3362).

GRAVE 35A

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Rectangular cist.
Main burial: Flexed, head to south, on left side facing west.
Sex: Unknown.
Age: Infant.
Other burials: Fragments of human remains in fill.
Artifacts in cist: 6 beads (ostrich eggshell).
Other artifacts: None.
Disturbances: None observed.

Table 4.48: Grave 35A loci.

Locus	Description
679	Stone circle
647	Fill
680	Capstones
667	Cist and cist fill



Figure 4.61: Grave 35A, with cobble covering the human remains.

Grave 35A was visible on the surface of the middle of square M-9 as a stone circle composed of eight cobbles measuring 1.00 meters in diameter (Table 4.48). The surrounded a partially preserved pavement consisting of seven stones. This surface architecture also stood over Grave 35B. Some bone fragments were found in the fill which covered both cists. At a depth of 0.21 meters, two capstones were encountered.

These sealed a cist measuring 0.48 meters long, 0.30 meters wide, and 0.30 meters deep. The cist was constructed of six side slabs but without cap support stones. The cist shared its eastern wall with that of Grave 35B. A cobble was found in the middle of the cist lying over the bones (Fig. 4.61). Entombed within the cist were the flexed remains of an infant, laying with head to the south on the left side facing west (Fig. 4.62). Six ostrich eggshell cylinder disc beads were found in the cist (B. 3315, 3345).



Figure 4.62: Grave 35A burial. To the left is the Grave 35B cist.

GRAVE 35B

Surface architecture: Stone circle surrounding pavement, shared with Grave 35A.
Subsurface architecture: Rectangular cist without capstones.
Main burial: Secondary.
Sex: Unknown.
Age: Adult.
Other burials: Human remains fragments in fill.
Artifacts in cist: 2 beads (ostrich eggshell).
Other artifacts: None.
Disturbances: Probably looted in antiquity. Surface architecture partially destroyed. No capstones, human remains broken and disorganized.

Table 4.49: Grave 35B loci.

Locus	Description
679	Stone circle
647	Fill
659	Cist and cist fill



Figure 4.63: Grave 35B burial. Grave 35A cist to left.

Grave 35B was visible on the surface of the middle of square M-9 as a stone circle composed of eight cobbles measuring 1.00 meters in diameter (Table 4.49). The surrounded a partially preserved pavement consisting of seven stones (L. 679). This surface architecture also stood over Grave 35A. Some bone fragments were found in the fill which covered both cists (L. 647). The cist of Grave 35B was encountered at a depth of 0.21 meters below the surface. No capstones covered the cist, which measured 0.82 meters long, 0.34 meters wide, and 0.36 meters deep, constructed of five side slabs and without cap support stones. The cist shared its western wall with that of Grave 35A.

Within the cist were entombed the broken and scattered remains of an individual, apparently secondarily deposited (Fig. 4.63; L. 659). The skull was located in the south of the cist. Two ostrich eggshell cylinder disc beads were recovered from the cist (B. 3303).

GRAVE 37

Surface architecture: Stone circle.

Table 4.50: Grave 37 loci.

Locus	Description
629	Fill

Grave 37 was visible in the southwest quadrant of square M-9 as a stone circle measuring 1.50 meters in diameter (Table 4.50). A small amount of fill was excavated from the upper levels of this grave, in order to clarify the surface architecture, but no other excavation was conducted.

GRAVE 38

Surface architecture: Three concentric stone circles.
Subsurface architecture: Multiple cists and capstone-covered pits (see below).
Artifacts: 2 beads in fill (cupric, quartzite). 1 bead with 38D (cupric).

Table 4.51: Grave 38 loci.

Locus	Description
681	Stone circle
627	Fill
635	Secondary burial Grave 38D
634	Secondary burial Grave 38E
633	Secondary burial Grave 38F
640	Secondary burial Grave 38G
669	Secondary burial Grave 38H
665	Secondary burial Grave 38K
674	Secondary burial Grave 38L
695	Secondary burial Grave 38R



Figure 4.64: Grave 38.

Grave 38 was visible on the surface of square M-10, extending also into squares M-9 and L-10, as a stone circle measuring 4.60 meters in diameter east-west and 4.20 meters in diameter north-south (Fig. 4.64; Table 4.51; L. 681). The circle was constructed of one hundred twenty-five stones in three concentric rings. One cupric short barrel bead (B. 3336) and one quartzite irregular pendant (B. 3351) and snail shells (B. 2371, 2480) were recovered in the fill, which was excavated as one locus (L. 627). Many stones were found within the grave circle close to the surface. At the surface was one very large stone measuring 0.90 meters long, 0.50 meters wide, and 0.38 meters thick. However, these formed no apparent pattern. Nine cists, one pit covered with capstones, one primary pit burial without associated architecture, and eight secondary burials were excavated in this large funerary complex. Secondary burials without associated architecture will be considered here, while primary burials and burials with associated

architecture will be described independently. Grave 38D is the poorly preserved secondary burial of a juvenile, found in the north-central part of the Grave 38 complex, at a depth of 0.65 meters below the surface (L. 635). One cupric drilled pebble bead was found in association with Grave 38D (B. 2389). Grave 38E is an extremely poorly preserved secondary burial of an individual of unknown age and sex in the south southwest of the grave feature and at a depth of 0.83 meters (L. 634). Grave 38F is a poorly preserved secondary burial of indeterminate age and sex which was encountered in the north northwest of the mortuary complex at a depth of 0.79 meters (L. 633). Grave 38G is a poorly preserved and very fragmentary secondary burial encountered at a depth of 0.70 meters (L. 640). Grave 38H is a secondary burial immediately southeast of Grave 38C (see below), very fragmentary and taking up a space of only ten cubic centimeters (L. 669). Grave 38K was that of an incomplete, disarticulated adult. One or more potsherds were uncovered among the remains (L. 665). Grave 38K was encountered in the southern part of the grave complex and is believed to have extended into the fill of Grave 39. Grave 38L is a secondary burial in a very poor state of preservation which took up just five cubic centimeters of space in the southeastern part of the mortuary structure and at a depth of 0.79 meters below the surface (L. 674). Grave 38R is a very poorly preserved secondary burial of an individual of unknown age and sex that was encountered less than five centimeters below the surface in the eastern side of the grave (L. 695). Of course, many of these secondary burials were so fragmentary that they would scarcely be commented upon in any other grave. With the exception of the single bead found with Grave 38D, no artifacts were recovered in association with any of the secondary burials.

GRAVE 38A

Surface architecture: See Grave 38.
Subsurface architecture: Cist, probably with end stone removed.
Burial: Extended, head to south, on back.
Sex: Male.
Age: Adult.
Artifacts in cist: Shroud fragments.
Disturbances: Looted in antiquity. No capstones, cist full of sediment.

Table 4.52: Grave 38A loci.

Locus	Description
681	Stone circle
627	Fill
682	Capstones
649	Cist and cist fill

Grave 38A was visible on the surface of square M-10 as the surface architecture described above (Table 4.52). At a depth of 0.82 meters, four capstones were encountered in the west central area of the grave circle. These were sealed with a layer of mud plaster, and charcoal was found both under and embedded in this plaster. The capstones sealed a cist measuring 1.63 meters long, 0.65 meters wide, and 0.34 meters deep, and constructed of eight side slabs and four cap support stones. Entombed within the cist were the extended remains of an adult male, with head to the south. The hands met on the left shoulder. The skull appeared to be deliberately modified, being unusually elongated. The sediment was hard packed from the mid-torso south. This grave is unusual because of the large size of the surface grave circle, the extended posture of the burial, and the length of the cist to accommodate an extended burial. However, if the cist is that appearing in the south side of site photos of Grave 38, which it seems to be, then the north end of the cist was removed in order to accommodate the extended burial. Two snail shells (B. 2446) and shroud fragments (B. 2447, 2461) were found in this cist.

GRAVE 38B

Surface architecture: Stone circle.
Subsurface architecture: Capstones over pit.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Infant.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.53: Grave 38B loci.

Locus	Description
681	Stone circle
627	Fill
683	Capstones
641	Pit and burial



Figure 4.65: Grave 38B burial.

Grave 38B was located beneath the large surface feature designated Grave 38 (Table 4.53; see above). At a depth of 0.82 meters, two capstones were encountered in the northwest of the circle (L. 683). These covered a pit measuring about 0.57 meters

long, 0.49 meters wide, and 0.37 meters deep beneath the capstones. Within the pit was entombed the semiflexed skeleton of on infant, laying with head to the south, on the left side facing west (L. 641). The arms were bent at the elbow, with the right hand toward the mid-chest and the left arm paralleling the right (Fig. 4.65). The head of the individual was about 0.20 meters from the side slab of the cist of Grave 38A. No grave goods were encountered in association with the burial.

GRAVE 38C

Surface architecture: See Grave 38.
Subsurface architecture: Bent cist, wider in north than south.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: Grave 38N secondary above capstones.
Artifacts in cist: Mother of pearl, 38 beads (sandstone, cupric, dentallium).
Other artifacts: None.
Disturbances: Robbed in antiquity. Center capstone pushed into cist, cist full of sediment, human remains broken and scattered.

Table 4.54: Grave 38C loci.

Locus	Description
681	Stone circle
627	Fill
670	Grave 38N burial
684	Capstones
642	Cist and cist fill



Figure 4.66: Grave 38C burial.

Grave 38C was located beneath the large surface feature designated Grave 38 (Table 4.54; see above). Grave 38C is located beneath the secondary capstone-covered burial Grave 38N in the north central part of the circle (L. 670). At a depth of 0.78 meters, three capstones were encountered (L. 684). The middle capstone was pushed into the cist. These sealed a cist measuring 1.30 meters long, 0.64 meters wide, and 0.45 meters deep. The Grave Recording Sheet notes that the cist was constructed of five side slabs but without surviving cap support stones, though eleven cap support stones and more than five side slabs are visible in site photos. The west wall of the cist bent outwards in the middle, making the northern end much wider than the southern end. The cist was full of hard sediment (L. 642). Within were entombed fragmentary and scattered remains of an adult (Fig. 4.66). Also recovered from this cist were mother of pearl

fragments (B. 3374, 3391) and thirty-six beads. The beads included twenty-seven dentalium beads (B. 3360), one sandstone drilled pebble (B. 3360), two cupric short barrel beads, three cupric short cylinder beads, one cupric ovoid bead, one cupric cylinder bead, and a cupric lump which may be a bead fragment (B. 3360, 3370, 3389).

GRAVE 38I

Surface architecture: See Grave 38.
Subsurface architecture: Cist without capstones.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Infant.
Artifacts in cist: None.
Disturbances: None observed.

Table 4.55: Grave 38I loci.

Locus	Description
681	Stone circle
627	Fill
644	Cist and cist fill

Grave 38I was located in the southern area beneath the large feature designated Grave 38 (see above), according to the final report "just above and north of cist 38J." At a depth of 0.79 meters, a cist without capstones was encountered (Table 4.55). This cist measured 0.26 meters long, 0.33 meters wide, and 0.36 meters deep, and was constructed of either three or four side slabs without cap support stones. Plaster held the stones in place, and this same plaster seems to have connected to Grave 38J. Grave 38I also appeared to be contemporaneous with secondary burial Grave 38G. Within the cist were the scattered remains of an infant, very poorly preserved (L. 644). No artifacts were recovered from this cist.

GRAVE 38J

Surface architecture: See Grave 38.
Subsurface architecture: Rectangular cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Young adult.
Artifacts in cist: None.
Disturbances: End of cist possibly destroyed. Human remains broken and scattered.

Table 4.56: Grave 38J loci.

Locus	Description
681	Stone circle
627	Fill
694	Capstones
644	Cist and cist fill



Figure 4.67: Grave 38J cist and burial.

Grave 38J was located in the southern area beneath the grave structure designated Grave 38 (see above), just south of Grave 38I (Table 4.56). At a depth of 0.79 meters,

two capstones were encountered (L. 694). These sealed a cist measuring 0.50 meters long, 0.22 meters wide, and 0.30 meters deep and constructed of four side slabs without cap support stones. One end of the cist was open or constructed of mud plaster (Fig. 4.67); the Grave Recording Sheet notes, "Primary Burial 38I upon removal had plaster taken that would later have supported 38J." Entombed within the cist were the fragmentary and scattered remains of a young adult (L. 644).

GRAVE 38M

Surface architecture: See Grave 38.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 47 beads (dentallium).
Other artifacts: None.
Disturbances: Looted in antiquity; no capstones, human remains broken and scattered.

Table 4.57: Grave 38M loci.

Locus	Description
681	Stone circle
627	Fill
675	Cist and cist fill



Figure 4.68: Grave 38M cist and burial.

Grave 38M was located beneath the grave structure designated Grave 38 (see above). At a depth of 0.60 meters, the cist without capstones was encountered (Table 4.57). The cist measured 1.10 meters long, 0.50 meters wide, and 0.47 meters deep and was constructed of six side slabs and nine cap support stones (Fig. 4.68). Entombed within were the broken, poorly preserved remains of an adult (L. 675). Shell (B. 3387) and forty-seven dentallium beads were also recovered from the cist (B. 3341, 3388, 3401, 3417).

GRAVE 38N

Surface architecture: See Grave 38.
Subsurface architecture: Capstones over pit.
Main burial: Secondary.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts below capstones: None.
Other artifacts: None.
Disturbances: Human remains fragmentary.

Table 4.58: Grave 38N loci.

Locus	Description
681	Stone circle
627	Fill
670	Grave 38N burial
684	Capstones
642	Cist and cist fill

Grave 38N was encountered beneath the feature designated Grave 38 (see above) and immediately above the capstones of Grave 38C (Table 4.58). At a depth of 0.45 meters, two capstones were encountered. These covered a pit measuring about 0.60 meters long, 0.54 meters wide, and 0.14 meters deep beneath the capstones. Within were entombed fragmentary poorly preserved human remains. No artifacts were recovered from this burial.

GRAVE 38O

Surface architecture: See Grave 38.
Subsurface architecture: None.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Infant.
Other burials: None.
Artifacts with main burial: None.
Other artifacts: None.
Disturbances: Skeleton incomplete.

Table 4.59: Grave 38O loci.

Locus	Description
681	Stone circle
627	Fill
671	Human remains

Grave 38O was the semiflexed but incomplete primary burial of an infant. The individual was encountered at a depth of 0.44 meters below the surface, and lay immediately north of cist 38C, apparently having been interred in a pit. The individual lay with head to the south, on the left side facing west. The burial took up a space measuring about 0.20 meters long, 0.15 meters wide, and 0.15 meters deep.

GRAVE 38P

Surface architecture: See Grave 38.
Subsurface architecture: Cist.

Table 4.60: Grave 38P loci.

Locus	Description
681	Stone circle
627	Fill
672	Cist

Grave 38P was observed in the northern baulk of the fill excavated beneath the surface feature designated Grave 38 (see above). It was clear that this was a cist grave discernable as a hole 0.74 meters below the surface (Table 4.60; L. 672). However, it was not excavated.

GRAVE 38Q

Surface architecture: See Grave 38.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Artifacts in cist: None.

Disturbances: Looted in antiquity. Southern capstones missing, cist full of sediment, human remains broken and scattered.

Table 4.61: Grave 38Q loci.

Locus	Description
681	Stone circle
627	Fill
698	Capstones
673	Cist and cist fill



Figure 4.69: Grave 38Q capstones.

Grave 38Q was located beneath the surface feature designated Grave 38 (see above), in the eastern part of the grave complex (Table 4.61). At a depth of 0.93 meters,

two capstones were uncovered (L. 698). These covered only the north end of the cist (Fig. 4.69). The cist measured 0.78 meters long, 0.37 meters wide, and 0.48 meters deep. The cist appeared trapezoidal, wider in the north than in the south. The cist contained only fragmentary, scattered human remains (L. 673).

GRAVE 38S

Surface architecture: See Grave 38.
Subsurface architecture: L-shaped cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Artifacts in cist: None.
Disturbances: Looted in antiquity. Capstone missing, human remains broken and scattered.

Table 4.62: Grave 38S loci.

Locus	Description
681	Stone circle
627	Fill
697	Capstones
696	Cist and cist fill



Figure 4.70: Grave 38S cist and burial.

Grave 38S was located beneath the surface feature designated Grave 38 (see above). At a depth of 0.75 meters, three capstones were encountered (Table 4.62; L. 697). A gap suggests that a fourth capstone, which would have been the second capstone from the north, was removed in antiquity. These sealed a cist measuring 1.17 meters long, 0.56 meters wide, and 0.40 meters deep and constructed of six or seven side slabs and at least two cap support stones. The west wall of the cist bent outwards about midway down its length, making an L-shaped cist significantly wider in the north than in the south (Fig. 4.70). Within were the broken and scattered human remains of an adult (L. 696).

GRAVE 39

Surface architecture: Two concentric stone circles surrounding partial pavement and standing stone.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on right side facing east.
Sex: Unknown.
Age: Infant.
Other burials: Secondary above capstones. Fragmentary secondary, pushed to side in cist.
Artifacts in cist: 1 bead (ostrich eggshell).
Other artifacts: Mother of pearl, partially perforated stone, 19 beads (ostrich eggshell, agattype carnelian) in fill.
Disturbances: None observed.

Table 4.63: Grave 39 loci.

Locus	Description
685	Stone circle
652	Fill
686	Capstones
692	Cist and cist fill



Figure 4.71: Grave 39 cist and burials. The primary infant burial is at the top of the photo; the secondary adult burial is at the center of the photo.

Grave 39 was visible on the surface of the south-central area of square L-10 as a feature consisting of two concentric stone circles surrounding a remnant pavement and a standing stone (Table 4.63; L. 685). The feature was constructed of nine cobbles and measured 1.10 meters in diameter. Two flat cobbles were observed inside the circle stones, believed to be the remnants of a pavement. A standing stone stood in the middle of the feature, rising 0.25 meters above the surviving paving stones. The stone itself measured 0.28 meters by 0.22 meters by 0.12 meters. A partially perforated stone (B. 3304), mother of pearl (B. 3311) and nineteen beads were recovered from the fill (L. 652). The beads included eighteen ostrich eggshell cylinder discs (B. 2455, 2465, 3312), and a broken, probably lenticular, silicate bead (B. 2478). This bead was initially believed to be amber, but is most likely agattype carnelian. A secondary burial was

observed in the north baulk. At a depth of 0.60 meters, four capstones were encountered (L. 686). These sealed a cist measuring 1.23 meters long, 0.55 meters wide, and 0.46 meters deep. The cist was trapezoidal, wider in the north than in the south. Two individuals were encountered within the cist (Fig. 4.71; L. 692). The broken and scattered remains of an adult were encountered in the north side of the cist (individual 38B). In the south end of the cist, the primary burial of an infant was uncovered (individual 38A). This individual lay semiflexed, with head to the south, on the right side facing east, with the face in the southeastern corner of the cist. One ostrich eggshell cylinder disc bead was recovered in the cist (B. 3369).

GRAVE 40

Surface architecture: Two concentric stone circles.
Subsurface architecture: Rectangular cist.
Main burial: Semiflexed, head to south, on the left side facing west.
Sex: Unknown.
Age: Adult.
Other burials: Secondary burial above capstones; secondary burial inside north end of cist.
Artifacts in cist: 8 beads (amazonite, aventurine, siltstone).
Other artifacts: 3 beads (amazonite) in fill.
Disturbances: Looted in antiquity. Dolerite cobble in cist, cist full of sediment.

Table 4.64: Grave 40 loci.

Locus	Description
687	Stone circle
651	Fill
663	Secondary burial in fill
688	Capstones
693	Cist and cist fill



Figure 4.72: Grave 40 cist and burials. Note skull of secondary burial at right of photo, below legs of primary burial.

Grave 40 was visible in the northeast quadrant of square L-10 as a two concentric stone circles composed of eleven cobbles, the exterior of which measured 1.25 meters in diameter (Table 4.64; L. 687). Three amazonite pendants and one amazonite drilled pebble (B. 2456, 2459, 2474) and human bone fragments and a seed were found in the fill (L. 651). A secondary burial, consisting mainly of leg bones, was excavated in the northeast area of the grave (L. 663). At a depth of 0.42 meters, four capstones were encountered (L. 688). One of these capstones was unusually small and did not cover the full width of the cist. The cist measured 1.20 meters long, 0.40 meters wide, and 0.34 meters deep, and was constructed of seven side slabs and at least eight cap support stones. The cist was rectangular. The cist was full of sediment, and a large dolerite cobble was encountered on end in the cist. This stone was separated from the burial by a shallow level of silt (Fig. 4.72). Entombed within the cist was the primary inhumation of an adult of indeterminate sex, individual 40A. The individual lay semiflexed with head

to the south, on the left side facing west. A partial and fragmentary secondary burial, individual 40B, was found to the north of the primary burial. Six amazonite pendants (B. 3386, 3421), one aventurine pendant (B. 3421), and one siltstone short barrel bead (B. 3421) were recovered from the cist (L. 693).

GRAVE 43

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist with paved floor and southern side slab removed.
Main burial: Extended, on back, head to north.
Sex: Female.
Age: Adult.
Other burials: None.
Artifacts in cist: 3 beads (flint, ostrich eggshell, shell).
Other artifacts: 2 beads (flint, aventurine) in fill.
Disturbances: None observed.

Table 4.65: Grave 43 loci.

Locus	Description
689	Stone circle
648	Fill
690	Capstones
691	Cist and cist fill



Figure 4.73: Grave 43 burial.

Grave 43 was visible on the surface of the southwest quadrant of square L-9 as a stone circle consisting of thirteen cobbles and measuring 1.80 meters in diameter (Table 4.65; L. 689). Four cobbles were observed in the middle of the circle, but there is no indication these were a pavement. One flint barrel disc bead (B. 2467) and one aventurine barrel disc bead (B. 3350) were recovered in the fill (L. 648). At a depth of 0.39 meters, five capstones were encountered (L. 690). These were sealed by a layer of mud plaster, and cobbles were placed in gaps between the capstones. The capstones sealed a cist measuring 1.60 meters long, 0.65 meters wide, and 0.50 meters deep, and was constructed of seven side slabs and at least thirteen cap support stones. The cist is trapezoidal, wider in the north than in the south, but the southern side slab may have been removed in order to accommodate the burial. The floor of the cist was paved with large slabs of Nubian sandstone. Entombed within the cist was an adult female, head to the north, lying extended on the back facing up, the head lolled slightly to the individual's

right (Fig. 4.73; L. 691). The left arm was bent slightly at the elbow with the hand in the groin region, and the right arm was extended at the individual's side. Although the right leg was bowed outwards slightly, the feet were placed together. The supervisor's report contradicts itself, stating both that the individual lay extended and that "The knees were very bent, the right patella in the pelvis area." Given the contradiction, the fact that this position is physically impossible, and the fact that site photographs show an extended skeleton that in every other way conforms to the supervisor's descriptions, it is possible that one or both patellae were misplaced and recovered from the pelvic area. Three beads were recovered from within the cist, including one tubular shell short barrel bead, one ostrich eggshell barrel disc bead (B. 3372), and one flint barrel disc bead (B. 3402).

GRAVE 46

Surface architecture: Stone circle.
Subsurface architecture: Cist.
Main burial: Semiflexed, head to south.
Sex: Unknown.
Age: Adult.
Other burials: Fragmentary remains pushed to north end of cist.
Artifacts in cist: 6 beads (citrine, alabaster, cupric, amazonite, ostrich eggshell).
Other artifacts: None.
Disturbances: Circle missing some stones.

Table 4.66: Grave 46 loci.

Locus	Description
689	Stone circle
648	Fill
690	Capstones
691	Cist and cist fill



Figure 4.74: Grave 46 capstones.

Grave 46 was visible on the surface of the southeast quadrant of square L-9 as a partially-preserved stone circle (Table 4.66; L. 689). Seven stones remained making up about two-fifths of the circumference. Most of these were found in the northeast of the circle, though one stone remained in the southwest. The circle is estimated to have been about 2.30 meters in diameter. At a depth of 0.45 meters (L. 648), four capstones were encountered, covered in a layer of mud plaster (Fig. 4.74; L. 690). The plaster was particularly thick on the north and south ends of the grave. The capstones sealed a cist measuring 1.37 meters long, 0.60 meters wide, and 0.50 meters deep and constructed of seven side slabs and nine cap support stones. The primary interment, individual 46A, was laid in a semiflexed position with head to the south (L. 691). Individual 46B was represented by fragmentary remains piled in the northern end of the cist. Six beads were recovered from the cist. These included a citrine barrel disc bead (B. 2414), a citrine truncated convex bicone (B. 2414), an alabaster short barrel (B. 2414), two ostrich

eggshell disc beads (B. 2414), one cupric barrel disc bead (B. 2414) and one amazonite pendant (B. 2425).

GRAVE 47

Surface architecture: Stone circle.
Other artifacts: 6 beads in fill (agate, amazonite).

Table 4.67: Grave 47 loci.

Locus	Description
646	Fill

Grave 47 was visible on the surface of the west central portion of square L-12 as a stone circle, about 2.10 meters in diameter (Table 4.67). Only the topsoil of this grave was excavated, in order to delineate the surface architecture (L. 646). Six beads were recovered from this surface cleaning, including five agate disc beads (B. 2434, 2443) and one amazonite pendant (B. 2434).

4.3: 1997 EXCAVATIONS: AREA C GRAVE DESCRIPTIONS

GRAVE 26A

Surface architecture: Three concentric and touching stone circles.
Subsurface architecture: Capstone covered pit surrounded by cap support stones.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Adult.
Other burials: Small bone fragments in fill.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in recent times; looter's pit left open.

Table 4.68: Grave 26A loci.

Locus	Description
767	Stone circle
750	Looters' backdirt
770, 773, 781	Fill
760	Cist



Figure 4.75: Grave 26 surface architecture and looters' pit.

Grave 26A was visible on the surface of square N-10 as three concentric and touching stone circles, shared with Grave 26B, composed of thirty-six dolerite cobbles and about 2.02 meters in diameter (Table 4.68; L. 767). The grave was located beneath the stone circle's edge. Grave 26 was looted in recent times, and a hole was left open (Fig. 4.75; L. 750). However, the recent looters do not seem to have reached the capstone level. The remaining fill was excavated, and small bone fragments were recovered (L. 770, 783, 781). Stones were also encountered in the fill. At a depth of 0.86 meters, three capstones were encountered beneath the eastern side of the grave circle.

These covered a pit measuring 1.39 meters long, 0.54 meters wide, and 0.36 meters deep, ringed with at least six cap support stones. The pit was trapezoidal, wider in the north than in the south. The pit was full of sediment, including large stones. Entombed were the broken remains of an individual lying in a semiflexed position with head to the south on the left side facing west (Fig. 4.76; L. 760). The arms were bent at the elbow, with the hands at the left shoulder.



Figure 4.76: Grave 26A pit and burial.

GRAVE 26B

Surface architecture: Three concentric and touching stone circles.
Subsurface architecture: Cist, wider in north than in south.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Bone fragments in fill.
Grave goods: 1 bead (ostrich eggshell).
Other artifacts: None.
Disturbances: Looted in recent times with hole left open in grave. Looted in antiquity; capstones missing, cist filled with sediment, human remains broken.

Table 4.69: Grave 26B loci.

Locus	Description
767	Stone circle
770	Fill
780	Cist and cist fill



Figure 4.14: Grave 26B cist.

Grave 26B was visible on the surface of square N-10 as the same three concentric and touching stone circles, composed of thirty-six dolerite cobbles and about 2.02 meters in diameter, that stood over Grave 26A (Fig. 4.75; Table 4.69; L. 767). The grave was

located beneath the stone circle's edge. Grave 26 was looted in recent times, and the hole was left open. However, the looters do not seem to have reached the capstone level. Small bone fragments were recovered in the fill (L. 770). Stones were also encountered in the fill, and large stones were found over the capstones. At a depth of 0.69 meters, three apparently intact capstones were encountered beneath the western side of the grave circle. Smaller stones were used to seal gaps between the capstones. However, the northern end of the cist lacked capstones. The cist measured 1.04 meters long, 0.58 meters wide, and 0.30 meters deep and was composed of eight side slabs and at least ten cap support stones. The west wall bent inward halfway down its length, such that the northern end of the cist was wider than the southern end. The cist was full of sediment, and the human remains were badly broken and scattered throughout the cist (Fig. 4.77; L. 780). One ostrich eggshell cylinder disc bead was recovered from the cist (B. 2553).

GRAVE 27

Surface architecture: Partial circle surrounding partial pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to north, on right side facing west.
Sex: Unknown.
Age: Adolescent.
Other burials: Secondary burial to west of grave cist.
Artifacts in cist: 1 potsherd.
Other artifacts: 1 bead from fill (ostrich eggshell).
Disturbances: Surface architecture partially destroyed, shallow recent looters' pit in fill, capstones sunk into cist.

Table 4.70: Grave 27 loci.

Locus	Description
788	Fill
785	Secondary burial west of cist
789	Capstones
790	Cist and cist fill
799	Bedrock



Figure 4.78: Grave 27 surface architecture.

Grave 27 was visible on the surface of square O-12 as a partial stone circle, about three-quarters complete, composed of sixteen cobbles and measuring 2.30 meters in diameter (Table 4.70; Fig. 4.78). Eight flat dolerite cobbles formed a relict pavement in the eastern side of the circle, and a few less organized cobbles found elsewhere within the circle may represent other paving stones. A shallow looter's pit was visible inside the circle on the south side. Four levels of cobbles were noted in the fill. One ostrich eggshell cylinder disc bead was recovered from the fill (L. 788; B. 2555). Other beads may have been found; notes state that beads from the fill were "virtually all" found in the southern end of the grave. At a depth of 0.17 meters, four capstones were encountered (L. 789). Plaster covered the capstones, which had partially sunken into the cist, and smaller stones were used to seal the gaps between the capstone slabs. The cist was constructed in the conglomerate bedrock and measured 1.30 meters long, 0.65 meters

wide, and 0.55 meters deep and was constructed of fourteen side slabs, apparently without cap support stones. The cist was trapezoidal, wider in the south than in the north. The stones used as side slabs in this cist were unusually small and poorly fitted. The cist was full of sediment. Within the cist were the semiflexed remains of an adolescent laying with head to the north, on the right side facing west (Fig. 4.79). The arms were bent at the elbows, with the hands just south of the jaw. A potsherd, identified in the field by Russell Adams as an Early Bronze rimsherd, was recovered from the cist near the skull (B. 2588). An adult secondary burial was encountered to the west of the cist (L. 785). This cist was removed and the matrix beneath was excavated to a depth of 0.20 meters, but only sterile soil and bedrock were encountered (L. 799).



Figure 4.79: Grave 27 cist and burial.

GRAVE 28

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Head to north, possibly on back facing up.
Sex: Unknown.
Age: Adult.
Other burials: Secondary burial in fill.
Artifacts in cist: Shroud, 1 bead (aventurine).
Other artifacts: None.
Disturbances: Looted in recent times, shaft left open to cist, human remains broken and scattered.

Table 4.71: Grave 28 loci.

Locus	Description
752	Looters' backdirt
762, 768	Fill
769	Cist
778	Cist fill
782	Shroud



Figure 4.80: Grave 28 cist and burial.

Grave 28 was visible on the surface of square N-12 due to recent looting activity (Table 4.71). This digging left a crater extending to the level of the open cist (L. 752). Remnants of a stone circle remain, but it was badly damaged by the looting. The circle also appears to have been disturbed by the construction of the Grave 63 stone circle. Small bone fragments and one secondary burial were encountered in the remaining fill (L. 762, 768). One capstone remained in place at a depth of 0.20 meters. Some mud plaster was observed on this capstone. The cist measured 1.22 meters long, 0.59 meters wide, and 0.49 meters deep and was constructed of nine side slabs and at least eleven cap support stones (L. 769). The cist was trapezoidal, slightly wider in the north than in the south. The skeleton was badly broken, and the skull was smashed. However, part of the upper body remained in situ, including the vertebral column, clavicae, humeri, scapulae, and some ribs (Fig. 4.80). These showed that the individual had been laid with head to the north, possibly lying on the back facing up (L. 778). The final report notes that the individual was flexed, though it is unclear how this could be determined from the remaining skeleton. One aventurine short barrel bead was recovered from the cist (B. 2557), and possible shroud material and seeds were found beneath the cervical vertebrae (L. 782; B. 2557, 2593). Some of the bones were reportedly darkened, and the supervisor believed this was due to staining from decomposing shroud.

GRAVE 29

Surface architecture: Stone circle.
Subsurface architecture: L-shaped cist.
Main burial: Head to south, on left side facing west.
Sex: Female.
Age: Adult.
Artifacts in cist: Shroud, wood, at least 214 beads, possibly as many as 1,008 (ostrich eggshell, cupric, aventurine, carnelian, shell, bone).

Other artifacts: None.
Disturbances: Recent looting down to cist level, sediment in cist, rodent activity in cist.

Table 4.72: Grave 29 loci.

Locus	Description
751	Looters' backdirt
753	Topsoil
756, 757, 758, 761	Fill
766	Capstones
775	Cist
772	Cist fill



Figure 4.81: Grave 29. Note the femur.

Grave 29 was visible on the surface of square N-11 as a stone circle composed of thirteen remaining stones and measuring 2.23 meters in diameter (Table 4.72). A few flat stones of a relict pavement were observed inside the circle in the north. The grave was robbed in recent times, and a hole was left open extending down to the level of the capstones (L. 751). The remaining fill was excavated (L. 756, 757, 758, 761). At a depth of 0.37 meters, three surviving capstones were encountered (L. 766). Only one appears

to have been in place; others were upright in the cist, which was full of sediment and cobbles. The capstones may have even been deliberately broken by the robbers. Some mud plaster remained on the surviving capstone. The cist measured 1.30 meters long, 0.61 meters wide, and 0.50 meters deep and was constructed with thirteen side slabs, possibly with only two cap support stones. The cist was L-shaped (Fig. 4.81). The west wall bent outwards at about one-third of its length from the north, creating a space for the legs of the interred. The skeleton, that of an adult and probably female, was badly disturbed, but from what remains it is clear that the individual lay with head to the south, on the left side facing west. It is unclear how many beads exactly were recovered from this grave. Levy et al. (2004: 81) state that 1,008 beads were recovered from this grave. At least two hundred fourteen beads were recovered from the cist, including one hundred eighty-five ostrich eggshell cylinder disc beads, one cupric short barrel bead, one bone or echinoderm spine long cylinder bead, two aventurine short barrel beads, twenty-three carnelian short barrel beads (B. 2559), and two univalve shells with the tops cut off to form beads (B. 2259). These were photographed along with a tag that reads "1008 beads." The univalve shell beads in the photograph are probably identical to the two shell beads which were the only beads from this grave available for analysis in 2007, which were actually collected as a different basket (B. 2611). The digitized Bead Analysis does not include the cist or cist fill loci. The handwritten bead analysis, however, records a total of 700 beads from two baskets not represented in among photographed beads (B. 2543, 2548) but does not record any of the beads from the basket photographed (B. 2559). These beads described in the handwritten analysis include six hundred ninety-three ostrich eggshell or bone beads, ten shell beads, one possibly glass

bead, two cowry shell beads, twenty-nine carnelian beads, three "waxy yellow" beads—probably apetite—three black volcanic beads, and two beads made from "??" These and the photographed beads yield a total of 914 beads. The digitized Grave Recording Sheet and the handwritten Skeletal Recording Sheet both note 901 beads. Also recovered were what appeared to be wood fragments (B. 2548, 2559), seeds (B. 2559, 2542, 2548), and shroud material (B. 2559, 2554). The seeds were associated with grass and appear to be the remains of a rodent burrow. The sediment beneath the skeleton was dark, in the supervisor's opinion due to shroud decomposition.

GRAVE 30

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed, but skull is at south end facing west.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 scraper, 129 beads (ostrich eggshell).
Other artifacts: 1 bead in fill (ostrich eggshell).
Disturbances: Looted in antiquity. Human remains broken and poorly represented.

Table 4.73: Grave 30 loci.

Locus	Description
807	Fill
821	Cist
815	Cist fill



Figure 4.82: Grave 30 cist and human remains.

Grave 30 was visible on the surface of square O-10 as a stone circle 0.95 meters in diameter composed of eight cobbles surrounding a well-laid pavement of nineteen stones (Table 4.73). The northwest corner of the surface structure appeared to intersect another grave structure. The fill was unusually free of human remains. One large capstone-like slab was encountered in the fill. One ostrich eggshell disc bead was also recovered from the fill (B. 2648). At a depth of 0.33 meters, three Nubian sandstone capstones were encountered. These sealed a cist measuring 1.02 meters long, 0.36 meters wide, and 0.50 meters deep and was constructed of nine side slabs and at least three cap support stones. The cist was slightly wider in the north than in the south. Part of the skull survived at the south end of the cist, facing east (Fig. 4.82). However, little else of the skeleton survived other than two teeth found in the middle of the cist; the tomb

appears to have been robbed in antiquity. One hundred twenty-nine ostrich eggshell cylinder disc beads (B. 2707, 2716), and a scraper (B. 2703) were recovered from the cist.

GRAVE 31

Surface architecture: None.
Subsurface architecture: Cist, wider at north than south.
Burial: Semiflexed, head to south, on left side facing west.
Sex: Male.
Age: Adult.
Other burials: Human remains in fill; skull of previous internment south of main burial, on left side facing west.
Artifacts in cist: 12 beads (citrine, cupric, agate, ostrich eggshell)
Other artifacts: Potsherds, 6 beads in fill (citrine, amazonite, ostrich eggshell).
Disturbances: Surface architecture destroyed.

Table 4.74: Grave 31 loci.

Locus	Description
801	Fill
818	Cist and cist fill



Figure 4.83: Grave 31 burial.

Grave 31 was invisible on the surface of square P-10. It was uncovered during the excavation of what came to be called Grave 31A, the capstones being in a line north of those of that grave (Table 4.74; Fig. 4.84). Many bone fragments were encountered in the fill (L. 801), as were animal teeth, and potsherds (B. 2656). Six beads were recovered in the fill, including three ostrich eggshell disc beads (2626, 2656, 2662), one probably amazonite short barrel bead (B. 2656), one amazonite short barrel bead (2662), and one citrine short barrel(?) bead (B. 2671). What were described as "side grave markers" were uncovered beneath the surface, above the capstone level. At a depth of 0.33 meters, six capstones were encountered. These were covered with mud plaster. These sealed a cist measuring 1.29 meters long, 0.49 meters wide, and 0.39 meters deep. The west wall of

the cist bent outward about midway down its length in order to make the cist wider in the north than in the south. Within the cist were entombed the remains of a male adult in a semiflexed position, with head to the south, lying on the left side facing west (L. 818). The right arm was bent at the elbow, with the hand forward, though the position of the left arm was unclear (Fig. 4.83). Large cranial fragments of a second individual were also found in the cist immediately south of the main burial's skull. Twelve beads were recovered from the cist, including seven ostrich eggshell disc beads (B. 2704, 2727), two citrine short barrel beads, one cupric short barrel, one cupric drilled pebble, and one agate barrel disc (B. 2731).



Figure 4.84: Grave 31A (foreground, beside photoboard) and Grave 31 (beside scale).

GRAVE 31A

Surface architecture: Stone circle surrounding pavement and standing stone.
Subsurface architecture: Rectangular cist.
Main burial: Secondary, skull at the south on the left side facing west.
Sex: Unknown.
Age: Unknown.
Other burials: Bone fragments in fill.
Artifacts in cist: 2 beads (shell, ostrich eggshell).
Other artifacts: Unworked standing stone in pavement.
Disturbances: Apparent sun bleaching to bones.

Table 4.75: Grave 31A loci.

Locus	Description
801	Fill
824	Cist and cist fill



Figure 4.85: Grave 31A burial.

Grave 31A was visible on the surface of square P-10 as a stone circle composed of ten cobbles and measuring 1.45 meters in diameter (Table 4.75). This circle surrounded a pavement of eighteen stones. In the middle of the pavement was a standing stone, which rose 0.18 meters above the flagstones. The stone itself measured 0.26 meters long, 0.12 meters wide, and 0.07 meters thick. The fill was hard-packed, and many fragments of bone were encountered in the fill and visible in the baulk (L. 801). At a depth of 0.37 meters, three capstones were encountered (Fig. 4.84). These sealed a rectangular cist measuring 0.71 meters long, 0.33 meters wide, and 0.39 meters deep. The bones appeared deliberately laid in a secondary deposit, with the skull at the south end of the grave laying on the left side facing west (Fig. 4.85; L. 824). Long bones including a tibia and a humerus were placed parallel to the east wall, and other bones appeared piled in a mass in the rest of the cist. The bones appeared to be sun-bleached to the area supervisor. Two beads were recovered from the cist, including a short barrel shell bead (B. 2710) and an ostrich eggshell disc bead (B. 2713).

GRAVE 54

Surface architecture: Stone circle surrounding cobble feature.
Subsurface architecture: Trapezoidal cist with southern side slab removed.
Main burial: Extended, head to north, on back, head turned to face east.
Sex: Unknown.
Age: 15-21.
Artifacts in cist: Two metal toe rings, one metal finger ring, shroud, wood.
Other artifacts: None.
Disturbances: None observed.

Table 4.76: Grave 54 loci.

Locus	Description
763	Fill
776	Human remains



Figure 4.86: Grave 54 surface architecture.

Grave 54 was visible on the surface of square N-10 as a stone circle composed of ten cobbles and measuring 2.19 meters in diameter (Table 4.76). Many dolerite cobbles, which may have been part of a cairn or a pavement, were visible in the middle of the circle (Fig. 4.86). More such cobbles were encountered in the fill, in what appeared to be three distinct levels, but they were progressively fewer with depth (L. 763). The fill in the central area of the grave was softer than the rest of the grave. At an unrecorded depth, four capstones, partially covered with mud plaster, were encountered. These sealed a cist measuring 1.55 meters long, 0.65 meters wide, and 0.34 meters deep constructed of nine side slabs and an undocumented number of cap support stones. The cist was trapezoidal, wider in the north than in the south. The southernmost side slab appears to have been removed in order to accommodate an extended burial. The cist was mostly empty of sediment. Entombed within the cist was the extended burial of an

adolescent of fifteen to twenty-one years of unknown sex. The skeleton lay on the back, with the head to the north (Fig. 4.87). The head was turned facing the east, though it is unclear if this was intentional or the result of decomposition. The arms were bent at the elbows, with each hand in the respective arm's shoulder region. The left leg was straight, but the right leg was slightly bent, with the knee across the right leg. However, the right femur was broken, and the distal end disarticulated and likely not as it was laid in the cist. The supervisor's notes state that this leg was "broken by a rock falling in grave previously," and this may be excavation damage. An iron ring was found on the left hand (B. 2542). A copper or copper alloy ring was found on the third toe of the left foot (Fig. 4.88; B. 2543), and another copper or alloy ring was found on the second toe of the right foot (Fig. 4.89; B. 2544). Wood (B. 2546), and shroud material (B. 2546) were recovered from the cist. What were identified by the area supervisor as grape seeds were found in the sieve (B. 2546).



Figure 4.87: Grave 54 burial.



Figure 4.88: Grave 54 feet. Note the toe ring on the left foot.



Figure 4.89: Grave 54, right foot. Note the toe ring.

GRAVE 63

Surface architecture: Partial stone circle.
Subsurface architecture: Rectangular cist.
Main burial: Secondary.
Sex: Unknown.
Age: Unknown.
Other burials: Bone fragments in fill.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture largely destroyed, cist partially destroyed (possibly due to excavation damage).

Table 4.77: Grave 63 loci.

Locus	Description
779	Cist and cist fill



Figure 4.90: Grave 63 burial.

Grave 63 was visible on the surface of square N-12 as a badly disturbed grave circle of which only four stones remained (Table 4.77). The circle is believed to have spanned a diameter of 1.10 meters. Two possible paving stones survived. A number of cobbles were encountered in the fill, as were many bone fragments. At an unrecorded depth, one capstone was encountered. The cist encroached upon, and was somewhat higher than the cist of Grave 28. The cist measured 0.78 meters long, 0.46 meters wide, and 0.22 meters deep, and was constructed of at least six remaining side slabs. Other slabs seemed to be missing, as gaps appeared in the west and south walls of the cist, though this may be due to excavation damage, as the supervisor admits the "Whole grave [was] badly excavated due to inexperience & awkward nature of this specific grave."

The cist was rectangular. Within the cist was a partial secondary burial in poorly preserved condition (L. 779). The skull lay in the south end of the cist on its left side, facing south (Fig. 4.90). Other remains were very fragmentary.

GRAVE 66

Surface architecture: Cobble feature.
Subsurface architecture: Cist.
Main burial: Flexed or semiflexed, head to south, facing west.
Sex: Unknown.
Age: Infant.
Other burials: Secondary burial in baulk.
Artifacts in cist: Copper ring fragment, 2 beads (shell).
Other artifacts: 3 beads (ostrich eggshell) in fill.
Disturbances: Surface architecture destroyed, cist full of sediment.

Table 4.78: Grave 66 loci.

Locus	Description
783	Surface cobble feature
787	Fill
792	Cist and cist fill



Figure 4.91: Grave 66 surface architecture.

Grave 66 was visible on the surface of square O-9 as a cobble feature consisting of a cluster of dolerite cobbles laying flat 1.90 meters in diameter that were interpreted to be the remnants of a disturbed stone circle or pavement (Table 4.78; Fig. 4.91). Five dolerite cobbles lay flat together, and other cobbles lay around these. Three ostrich eggshell beads were recovered in the fill (B. 2586, 2611), as were some beetle casings (B. 2573). A secondary burial was visible in the baulk but left unexcavated. At a depth of 0.22 meters, three small capstones, one of them dolerite, were encountered. These sealed a cist measuring 0.42 meters long, 0.22 meters wide, and 0.29 meters deep, and constructed of six side slabs. The cist was full of sediment. Entombed within the cist were the flexed or semiflexed remains of an infant, probably less than one year of age, laying with head to the south, on the left side facing west. Two shell short cylinder beads and a copper ring fragment were collected from the cist (B. 2598).

GRAVE 67

Surface architecture: Partial stone circle.
Subsurface architecture: Cist.
Main burial: Flexed, head to south, on left side facing west.
Sex: Unknown.
Age: Adult.
Other burials: 2 secondary burials in fill; partial secondary adult skeleton in cist.
Artifacts in cist: 12 beads (agate, amazonite), associated with main burial.
Other artifacts: Mother of pearl, flint scraper, shell bracelet fragment, 20 beads (amazonite, alabaster, agate, flint) in fill; mother of pearl associated with secondary burial.
Disturbances: Surface architecture partially destroyed.

Table 4.79: Grave 67 loci.

Locus	Description
784	Grave circle
786	Fill
796	Secondary burial above cist
803	Primary burial
808	Secondary burial in cist



Figure 4.92: Grave 67 surface architecture.

Grave 67 was visible on the surface of square P-9 as a stone circle composed of fifteen stones measuring 1.74 meters in diameter (Table 4.79; L. 784). The six stones forming the circle's northern rim were the only ones on edge and possibly the only ones in place (Fig. 4.92). Cobbles were encountered in the fill (L. 786). Many bone fragments were collected from the fill, and two secondary burials were visible in the eastern baulk. One of these, in the southeast baulk, was deemed too fragile to excavate, while the other, in the northeast baulk, was partially excavated and numbered 67A (L. 796). This individual appeared to be an adult, and the bones seemed to be in a compact area,

suggesting intentional burial. A possible ivory or shell bracelet fragment (B. 2567), a flint scraper on a flake (B. 2614), mother of pearl (B. 2586), and nineteen irregular amazonite short barrel beads and drilled pebbles, one flint cylinder disc bead, nine alabaster short cylinder and barrel beads, three alabaster disc beads, one alabaster long barrel bead, and four agate short cylinder and short barrel beads (B. 2397, 2557, 2567, 2586) were recovered from the fill. Mother of pearl (B. 2605) was recovered from individual 67A (L. 796). At a depth of 0.35 meters, four capstones were encountered. The cist measured 1.38 meters long, 0.58 meters wide, and 0.52 meters deep and was constructed of seven side slabs. The fill within the cist was compact and hard like mud brick. A primary burial of an adult of unknown sex lay within the cist with head to the south, lying on the left side facing west (L. 803). A fragmented secondary burial of an adult of unknown sex was encountered in the north end of the cist (L. 808). Two agate cylinder discs (B. 2632, 2658), eight amazonite drilled pebbles, roughly short barrels (B.2639, 2645, 2658), two rough agate short barrel beads (B. 2658) were recovered in association with the primary burial.

GRAVE 75

Surface architecture: Stone circle.
Subsurface architecture: Capstone covered pit.
Main burial: Head to south, on left side facing west.
Sex: Male.
Age: Adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.80: Grave 75 loci.

Locus	Description
797	Stone circle and pavement
798	Top of capstones
804	Cist and cist fill

Grave 75 was visible on the surface of square N-11 as a stone circle consisting of ten cobbles 2.30 meters in diameter (Table 4.80). Just below the surface, a pavement of twenty-two dolerite cobbles was uncovered. More cobbles were encountered at two levels in the fill. The fill became more solid and compact not far above the capstones. At a depth of 0.63 meters, ten capstones were encountered. Beneath these stones was a pit measuring about 1.00 meters long, 0.60 meters wide, and 0.32 meters deep. Within the pit were entombed the remains of an adult male, twenty years of age or older, with head to the south, lying on the left side facing west. The remains were very poorly preserved, and the sediment beneath the capstones was slightly less compact than that above the capstones. No artifacts were recovered in association with this grave.

GRAVE 94

Surface architecture: Stone circle.
Subsurface architecture: L-shaped cist.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Male.
Age: Adult.
Other burials: Longbone fragments on surface and in ashy fill; fragmentary secondary burial in cist.
Artifacts in cist: 172 beads (onyx, citrine, ostrich eggshell) associated with primary in cist; 51 beads (ostrich eggshell, shell) associated with secondary in cist.
Other artifacts: 7 beads associated with secondary above capstones (ostrich eggshell, amazonite, cupric, carnelian).
Disturbances: None observed.

Table 4.81: Grave 94 loci.

Locus	Description
793	Ashy fill.
809	Human remains, primary burial
823	Human remains, secondary burial



Figure 4.93: Grave 94 cist and burial.

Grave 94 was invisible on the surface of square Q-10, but fifteen cobbles forming a stone circle 1.49 meters in diameter were located just below the surface between Grave 100 and Grave 101 (Table 4.81). Long bone fragments were collected from the surface

and many other large bone fragments were also encountered close to the surface (L. 793, individual 94C). This fill was very ashy, and the area supervisor speculated these were the remains of a cremation. Seven beads including two ostrich eggshell cylinder discs (B. 2637, 2693), one cupric short barrel bead (B. 2637), two amazonite rough short barrel or cylinder beads (B. 2647, 2693), one rectangular amazonite bead (B. 2680), and a carnelian disc bead (B. 2682) were recovered from the fill in association with these remains. The sediment immediately above the capstones was hard-packed. At a depth of 0.37 meters, four capstones were encountered. Smaller cobbles filled the gaps between the capstone slabs. The capstone sealed a cist measuring 1.21 meters long, 0.64 meters wide, and 0.26 meters deep and constructed of between seven and twelve side slabs and at least eight cap support stones. The cist was constructed on a southwest-northeast axis. The cist was L-shaped, with a projection in the northwest. The sediment within the cist was similar to dried mud plaster, and began a short distance beneath the capstones. Within were entombed the remains of a male adult, lying in a semiflexed position with head to the south, on the left side facing west (Fig. 4.93; L. 809). A fragmentary secondary burial of an adult of unknown sex lay in the northwest niche and to the north of the primary skeleton (L. 823). A mother of pearl pendant (B. 2653) and one hundred seventy-two beads, including one black and white onyx bead, two citrine beads, and one hundred sixty-nine ostrich eggshell beads (B. 2653, 2666, 2674), were associated with the primary burial. At least fifty ostrich eggshell beads and one shell bead (B. 2700, 2709, 2724) and a copper prill (B. 2709) were associated with the secondary burial within the cist.

GRAVE 95

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adolescent.
Artifacts in cist: Spatula pendant, mother of pearl, 8 beads (ostrich eggshell).
Other artifacts: 8 beads in fill (alabaster, amazonite, ostrich eggshell).
Disturbances: Final report notes grave was robbed.

Table 4.82: Grave 95 loci.

Locus	Description
800	Stone circle
813	Fill and ash deposit
820	Cist and cist fill



Figure 4.94: Graves 95 (left) and 95A (right).

Grave 95 was visible on the surface of square Q-10, passing into square R-10, as a stone circle constructed of fourteen cobbles and measuring 1.87 meters in diameter which it shared with Grave 95A (Table 4.82). The southern part of the circle was just below the surface. The Grave Recording Sheet suggests that seven or eight circle stones were

believed to be missing. Three potsherds were recovered cleaning the stone circle (B. 2625). The final report notes that this grave was robbed, but gives no details as to the extent of the disturbance, nor does it indicate whether there was evidence of recent looting or whether the grave was robbed in antiquity. A circular ash deposit associated with what the supervisor's notes describe as a "Very small stone structure which seems to be too small to be a grave" measuring 0.53 meters long and 0.34 meters wide was excavated northwest of the stone circle. Tiny fragments of burnt bone were found in the ash, and speculation in the field was that this may have represented a cremation or a place for burnt offerings. Mud plaster was found beneath the feature, and a large flat stone was found beneath that (L. 813). Five ostrich eggshell disc beads, two amazonite drilled pebble, and one banded alabaster short barrel were found in this locus (B. 2661, 2662, 2680). Beneath the fill, two parallel lines of capstones covered two parallel cists which shared a central wall (Fig. 4.94). Mud plaster covered parts of the capstones. The eastern cist was designated Grave 95, while the western cist was designated 95A. Three capstones covered Grave 95 at a depth of 0.60 meters below the surface. These sealed a rectangular cist measuring 1.32 meters long, 0.60 meters wide, and 0.51 meters deep. The Grave Recording Sheet notes that the cist was constructed with eighteen side slabs, though such a high number seems unlikely given what is seen in the site photo, and at least fourteen cap support stones are visible in the site photo though the Grave Recording Sheet records none. The cist was full of sediment, which became more hard-packed lower in the cist. The remaining skeletal remains, those of an adolescent of unknown sex, were fragmentary and disarticulated, found mostly in the northern part of the cist.

Mother of pearl (B. 2712), a bone spatula pendant (B. 2721), and eight ostrich eggshell cylinder disc beads (B. 2706, 2730) were recovered from the cist.

GRAVE 95A

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Head to south; fragmentary, disturbed.
Sex: Unknown.
Age: Adolescent.
Artifacts in cist: 5 beads (alabaster, amazonite, shell, ostrich eggshell).
Other artifacts: 8 beads in fill (alabaster, amazonite, ostrich eggshell).
Disturbances: Final report notes grave was robbed.

Table 4.83: Grave 95A loci.

Locus	Description
800	Stone circle
813	Fill
825	Cist and cist fill

Grave 95A was visible on the surface of square Q-10, passing into square R-10, as a stone circle constructed of fourteen cobbles and measuring 1.87 meters in diameter which it shared with Grave 95 (Table 4.83). The southern part of the circle was just below the surface. The Grave Recording Sheet suggests that seven or eight circle stones were believed to be missing. The final report notes that this grave was robbed, but gives no details as to the extent of the disturbance, nor does it indicate whether there was evidence of recent looting or whether the grave was robbed in antiquity. A circular ash deposit was excavated northwest of the stone circle, with tiny fragments of burnt bone; speculation in the field was that this may have represented a cremation or a place for burnt offerings. Five ostrich eggshell disc beads, two amazonite drilled pebble, and one alabaster short barrel were found in this locus (B. 2661, 2662, 2680). Beneath the fill, two parallel lines of capstones covered two parallel cists which shared a central wall.

Mud plaster covered parts of the capstones. The eastern cist was designated Grave 95, while the western cist was designated 95A (Fig. 4.94). Three capstones covered Grave 95A at a depth of 0.59 meters below the surface. These sealed a cist measuring 1.20 meters long, 0.44 meters wide, and 0.52 meters deep. The Grave Recording Sheet notes that the cist was constructed with thirteen side slabs, though such a high number seems unlikely given what is seen in the site photo, and at least eight cap support stones are visible in the site photo though the Grave Recording Sheet records none. The cist was trapezoidal, wider in the north than in the south, and the south wall was tilted at an acute angle to the wall 95A shared with 95. The cist was full of sediment, which became more hard-packed lower in the cist. The remaining skeletal remains, those of an adolescent of unknown sex, were fragmentary and disarticulated, found mostly in the northern part of the cist. The northern end of the cist had "clear foot bones," perhaps articulated ones. Five beads were recovered in the cist, including one alabaster short cylinder, two ostrich eggshell cylinder discs, one shell short cylinder, and one small amazonite drilled pebble (B. 2706).

GRAVE 99

Surface architecture: None discernable.
Subsurface architecture: Capstones over pit.
Main burial: Flexed, head to south, on left side facing west.
Sex: Unknown.
Age: Infant.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.84: Grave 99 loci.

Locus	Description
811	Fill
815	Burial



Figure 4.95: Grave 99 subsurface architecture.

Grave 99 was invisible on the surface of square P-11, but was encountered, according to the final report, "when east side of visible large circular structure removed & top soil also removed" (Table 4.84; L. 811). It is unclear which structure this refers to. A "jumble" of rocks was encountered in the area, including large flat stone slabs at the same elevation as the capstones which may be the "very close but unexcavated" graves mentioned in the final report (Fig. 4.95). At a depth of 0.23 meters below the surface, two capstones were encountered. The burial was placed in a pit measuring about 0.27 meters long, 0.17 meters wide, and about 0.35 meters below the capstones (L. 815). The interred was an infant of unknown sex, laying flexed with head to the south on the left side facing west (Fig. 4.96). No artifacts were encountered in association with the burial.



Figure 4.96: Grave 99 burial.

GRAVE 100

Surface architecture: Stone circle.
Subsurface architecture: Cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Artifacts in cist: Potsherd, 4 beads (ostrich eggshell, shell).
Other artifacts: 3 beads in fill (amazonite).
Disturbances: Looted in antiquity, human remains broken and scattered.

Table 4.85: Grave 100 loci.

Locus	Description
800	Stone circle
812	Fill
822	Cist and cist fill



Figure 4.97: Grave 100 capstones.

Grave 100 was visible after removing a small amount of fill from above its stone circle in square Q-11 (Table 4.85). The grave was marked with a stone circle, about seven-eighths complete, measuring about 1.50 meters in diameter and constructed of eighteen cobbles. Small bone fragments and three amazonite beads (B. 2663) were recovered from the fill. At a depth of 0.33 meters below the circle, three capstones were encountered (Fig. 4.97). The north end of the cist was covered only by a disorganized pile of cobbles; capstones appear to have been removed here in antiquity. The cist measured 1.26 meters long, 0.58 meters wide, and 0.49 meters deep and was constructed of thirteen side slabs and twelve cap support stones. The floor of the cist was paved with seven sandstone slabs, according to the final report "slightly more ornate" than the paved floor of Area B's Grave 47. The Grave Recording Sheet points out that this cist was, "Quite precise and distinctly built;" it was perhaps of higher quality than other cists in

Area C, though no photos appear to have been taken below the capstone level. The cist was full of sediment, including stones. The burial was extremely fragmented and scattered throughout the cist. A potsherd (B. 2717) and four beads, two ostrich eggshell disc beads and two small shell beads, were recovered from the cist (B. 2723).

GRAVE 101

Surface architecture: Two concentric and touching stone circles.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed. Two individuals.
Sex: Unknown.
Age: Adults.
Other burials: Human remains in fill.
Artifacts in cist: Groundstone, shroud, 16 beads (alabaster, amazonite, carnelian).
Other artifacts: 14 beads (shell, amazonite, carnelian, ostrich eggshell), flake, bracelet fragments, potsherds in fill.
Disturbances: Looted in antiquity, human remains broken and scattered.

Table 4.86: Grave 101 loci.

Locus	Description
810	Fill
814	Fill
819	Cist and cist fill



Figure 4.98: Grave 101 cist and human remains.

Grave 101 was visible near the surface of square Q-10 as two concentric and touching stone circles consisting of twenty-four stones and measuring 1.79 meters in diameter (Table 4.86). Both circles were only partially preserved, and the outer circle is particularly fragmentary. Part of the circle appears to be shared with, or interrupted by, Grave 94's stone circle to the north. The fill was darker than in most graves in Area C. A very large amount of fragmented bone was encountered in the fill, as were five shell cylinder beads (L. 814, B. 2664, 2672), two ostrich eggshell disc beads, one amazonite disc bead, and two amazonite drilled pebbles beads (L. 814, B. 2672), one carnelian disc bead, one amazonite disc bead (L. 814, B. 2677), two amazonite short barrel beads

(Locus 814, B. 2689), potsherds (Locus 810: B. 2664, 2664; Locus 814: B. 2672), a flake recorded as an arrowhead (B. 2672), and two bracelet fragments (B. 2672). Three capstones were encountered, but none of these were in place. The cist measured 1.38 meters long, 0.49 meters wide, and 0.43 meters deep and was constructed of eight side slabs and seventeen cap support stones. The cist was full of loose sediment, including cobbles. The extremely fragmentary remains of at least two individuals were found scattered throughout the cist (Fig. 4.98). A small rounded groundstone (B. 2714) and possible shroud material (B. 2720) were recovered from the cist. Sixteen beads, including nine alabaster rough cylinder beads, four irregular amazonite beads, an amazonite cylinder bead, and three carnelian barrel beads were also recovered (B. 2705, 2711, 2714, 2720).

4.4: 2003 EXCAVATIONS: AREA E GRAVE DESCRIPTIONS

GRAVE 200

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Upper body flexed, head to north, facing west.
Sex: Unknown.
Age: Adolescent.
Other burials: None.
Artifacts in cist: Leather and textile shroud, 7 beads (flint).
Other artifacts: None.
Disturbances: None observed.

Table 4.87: Grave 200 loci.

Locus	Description
1500	Stone circle and fill
1529	Capstones
1536	Cist
1538	Human remains



Figure 4.99: Grave 200 surface architecture.

Grave 200 was visible on the surface of square AB-9 as a complete and very regular stone circle measuring 2.00 meters in diameter and constructed of twenty-one dolerite cobbles (Fig. 4.99; Table 4.87; L. 1500). About five possible paving stones survived. A small piece of copper ore was recovered just above the capstones in the southwest part of the grave shaft (EDM 80023). At a depth of 0.58 meters, three capstones were encountered (L. 1529). The skeleton could be seen between gaps in the capstones. These sealed a cist composed of six side slabs and eight cap support stones measuring 1.46 meters long, 0.72 meters wide, and 0.57 meters deep (L. 1536). The cist was trapezoidal, wider in the north. Within were entombed the remains of a male aged twelve to seventeen years lying in a semiflexed position (L. 1538). Very unusually for this cemetery, the individual lay with legs only slightly bent (Fig. 4.100). However, the

individual's back hunched in order to fit the cist. His upper body was oriented to the north, which was the wider end of the cist. His body was twisted with head towards the east in such a way that his skull faced west. The grave sheet noted that the arms were "almost crossed on chest." Preservation was such that the supervisor's journal notes "Lots of flies" were attracted to the grave. The body was covered with leather and textile shrouds, with the leather covering the textile (Figs. 4.101, 4.102). Two different textiles were observed. The outermost was brown and had a very tight weave, while beneath this was a black textile with a looser weave. The leather showed some signs of having a fur lining. Although the Digital Grave Database and supervisor's journal note that the shrouds were wrapped about the head and torso, the supervisor's journal also notes that a sample was taken from the lower right hip region, and photographs show shroud wrapping the tibia (EDM 80171). Seven small translucent grey stone cylinder disc beads, probably flint, were also collected with the grave (EDM 40030).



Figure 4.100: Grave 200 burial.



Figure 4.101: Grave 200, leather shroud covering upper body.



Figure 4.102: Grave 200, textile shroud covering skull after removal of leather.

GRAVE 201

Surface architecture: Stone circle.
Subsurface architecture: Rectangular cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 1 bead in fill (amazonite).
Disturbances: Looted in antiquity. Surface architecture largely destroyed, capstone missing, cist full of sediment, human remains broken and scattered.

Table 4.88: Grave 201 loci.

Locus	Description
1501	Stone circle and fill
1537	Rocky fill
1544	Capstones
1572	Cist
1573	Rock pile
1593	Human remains



Figure 4.103: Grave 201 cist.

Grave 201 was visible on the surface of square AC-10 as an irregular stone circle constructed of twenty-four dolerite cobbles measuring about 1.96 meters in diameter (Table 4.88; L. 1501). Many of the stones were observed lying flat, apparently disturbed, and many cobbles were encountered in the fill of the grave. One small well-shaped green amazonite short barrel, almost cylinder disc bead was found in the fill (L. 1537; EDM 80226). At a depth of 0.67 meters, three capstones were encountered (L. 1544). A space at the north end of the grave was probably once covered by a capstone; this is probably the sandstone slab encountered on end in the fill and partially visible on the surface. The capstones sealed a cist measuring 1.42 meters long, 0.53 meters wide, and 0.50 meters deep and constructed of eight side slabs and fourteen cap support stones (L. 1572). The floor of the cist was paved with large, flat stones (Fig. 4.103). A pile of stones, initially

believed to be a pavement, was found in the cist above the human remains (L. 1573). Within the cist, concentrated in pockets in the north, south, and middle of the cist, were the extremely fragmentary and scanty remains of a burial (L. 1593). The bones lay directly on the bottom pavement.

GRAVE 202

Surface architecture: Partial stone circle.
Subsurface architecture: Rectangular cist.
Main burial: Head to south, on left side facing west.
Sex: Unknown.
Age: Infant.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 1 bead in fill (citrine).
Disturbances: Surface architecture disordered.

Table 4.89: Grave 202 loci.

Locus	Description
1503	Stone circle and fill
1729	Cist
1730	Human remains



Figure 4.104: Grave 202 cist.

Grave 202 was visible on the surface of square AB-9 as an irregular circle of six small dolerite boulders measuring 0.70 meters in diameter (Table 4.89; L. 1503). One rough short-barrel yellow-orange, probably citrine, stone bead was recovered from the fill (L. 1729; EDM 40005). At a depth of 0.29 meters, a rectangular cist without capstones was encountered. The cist measured 0.60 meters long, 0.30 meters wide, and 0.22 meters deep an constructed of six dolerite side slabs with at least one cap support stone (Fig. 4.104). Entombed within were the poorly preserved remains of an infant, interred with skull to the south, apparently on the left side facing west. The fill within the cist was a hard packed sediment like mud plaster (L. 1730).

GRAVE 203

Surface architecture: Poorly defined stone circle.
Subsurface architecture: Rectangular cist.
Burial: Semiflexed, head to south, facing west.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Bone toe ring, 3 beads (alabaster, citrine).
Other artifacts: Anthropomorphic stone, 5 beads (amazonite, ostrich eggshell, citrine) in fill.
Disturbances: Surface architecture disturbed, part of skeleton smashed and scattered in cist.

Table 4.90: Grave 203 loci.

Locus	Description
1502	Stone circle and fill
1676	Capstones
1687	Cist
1744	Human remains



Figure 4.105: Grave 203 cist and burial. Grave 243 is visible immediately to the northwest.

Grave 203 was visible on the surface of square AB-10 as a poorly-defined circle of dolerite cobbles measuring about 0.60 meters in diameter (Table 4.90). Four dolerite cobbles laying flat on the surface may be the remains of a pavement. What appeared to be the small nature of this circle caused the area supervisor to initially believe it to be a child's grave, though the circle's size appears to be more the result of disturbance than design. The fill contained many cobbles, a large stone with anthropomorphic features (EDM 80518), and five beads. The beads included one ostrich eggshell cylinder disc (EDM 80548), three amazonite beads (one a short cylinder bead and the other two drilled pebbles roughly resembling short cylinders) and one yellow-orange, roughly shaped, probably citrine short barrel bead (EDM 80511). At a depth of 0.49 meters, three capstones were encountered. The capstones were partially covered by either the stone circle or the cist of Grave 202. The cist of Grave 203 was rectangular, constructed with six side slabs and twelve cap support stones, but narrowed slightly to the south. The cist measured 0.93 meters long, 0.47 meters wide, and 0.45 meters deep. Entombed within was a primary burial interred in a semiflexed position with head to the south, on the left side facing west (Fig. 4.105). Much of the skeleton was broken and scattered in the cist. One carnelian short cylinder bead was found in the cist (EDM 80803). Three beads were found in association with the human remains, including two white alabaster short cylinder beads, and one translucent yellow-orange, probably citrine, drilled pebble that resembles a short cylinder (EDM 80850). One bone toe ring was also recovered from the grave (EDM 80968).

GRAVE 204

Surface architecture: Stone circle.

Table 4.91: Grave 204 loci.

Locus	Description
1504	Stone circle



Figure 4.106: Grave 204 surface architecture.

This grave was visible on the surface of square AB-10 as an irregular stone circle constructed of dolerite and sandstone cobbles (Table 4.91; Fig. 4.106). It was not excavated.

GRAVE 205

Surface architecture: Cobbles.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.

Table 4.92: Grave 205 loci.

Locus	Description
1505	Stone feature and fill
1750	Cist fill



Figure 4.107: Grave 205 cist.

Grave 205 was visible on the surface of square AC-10 as an irregular cluster of six small dolerite boulders measuring 0.65 meters in diameter (Table 4.92; L. 1505).

Cobbles were encountered in the fill, especially in the northern part of the grave. At a depth of 0.34 meters, a cluster of flat dolerite cobbles was encountered. These were initially believed to make up a pavement, but further excavation showed that, while a few were over the cist, the majority, eleven, were in place cap support stones. No capstones were encountered. The cist was constructed of six side slabs and measured 0.80 meters long, 0.44 meters wide, and 0.29 meters deep. Within the cist were the fragmentary and disturbed remains (Fig. 4.107; L. 1750). No artifacts were recovered in association with the grave.

GRAVE 206

Surface architecture: Partial stone circle.
Subsurface architecture: Cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Grave circle partially destroyed, capstones disturbed, cist full of sediment, human remains broken and scattered.

Table 4.93: Grave 206 loci.

Locus	Description
1506	Stone circle and fill
1558	Capstones
1559	Cist



Figure 4.108: Grave 206 surface architecture.

Grave 206 was visible on the surface border of squares AC-10 and AC-11 as a stone circle with thirteen extant stones measuring 1.90 meters in diameter (Table 4.93; L. 1506). The circle was best preserved as a tight stone formation on the northwestern one-third of its circumference (Fig. 4.108). Many cobbles were encountered in the fill of the grave. At a depth of 0.64 meters one large capstone was observed in place (L. 1558). A sandstone slab that appears to be another capstone is visible in excavation photos standing on edge, and a number of cobbles were observed in the fill above and about the level of the capstones (Fig. 4.109). The computerized grave sheet mentions a standing stone being found in this grave, but no other information could be found regarding this stone. It is presumed that the grave sheet stone is this upturned capstone. The cist measured 1.43 meters long, 0.49 meters wide, and 0.53 meters deep, and was constructed

of seven side slabs and fifteen cap support stones. The burial within was badly disturbed, with only a few bone fragments being collected (L. 1559).



Figure 4.109: Grave 206 capstone. Note second capstone on edge.

GRAVE 207

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial above capstones.
Artifacts in cist: Potsherd, 3 beads (amazonite, carnelian).
Other artifacts: None.
Disturbances: Surface architecture partially destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.94: Grave 207 loci.

Locus	Description
1507	Stone circle and fill
1554	Rock pile
1556	Capstones
1560	Cist and cist fill
1606	Human remains



Figure 4.110: Grave 207 cist and human remains.

Grave 207 was visible on the surface of square AC-11 as a partial stone circle, about half complete, consisting of about seven dolerite cobbles set on edge in the east of the grave about 1.25 meters in diameter (Table 4.94; L. 1507). A number of other cobbles on the surface likely were once part of the circle. A large number of cobbles were encountered in the fill (L. 1554). A cluster of bones believed to be a secondary burial were collected just above the capstones. At a depth of 0.66 meters, three capstones were encountered (L. 1556). These sealed a cist constructed roughly along a north-south axis of eight side slabs and at least eleven cap support stones, measuring 1.20 meters long, 0.46 meters wide, and 0.45 meters deep (L. 1560). Scattered throughout the cist were fragmentary human remains (Fig. 4.110; L. 1606). Some of the vertebrae and some

foot or hand bones were articulated, suggesting that the inhumation was a primary burial. A potsherd was found in the cist (EDM 80158). A red, translucent carnelian short barrel bead, a light green amazonite cylinder disc bead, and a dark green drilled triangular amazonite pebble were recovered in association with the remains, as was a dark red carnelian piece which may have been a broken bead (EDM 80357).

GRAVE 208

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: L-shaped cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 bead (citrine).
Other artifacts: None.
Disturbances: Robbed in antiquity. Capstone missing, cist full of sediment, human remains broken and scattered.

Table 4.95: Grave 208 loci.

Locus	Description
1508	Stone circle and fill
1530	Pavement and fill
1541	Rock pile
1543	Capstones
1552	Cist and cist fill



Figure 4.111: Grave 208 stone circle and pavement.

Grave 208 was visible on the surface of the southeastern corner of square AC-11 as a mostly complete stone circle, lacking only a few disintegrated stones, constructed of seventeen dolerite cobbles and measuring 1.60 meters in diameter (Table 4.95; L. 1508). Beneath a thin layer of sediment, a nearly complete stone pavement consisting of twenty-five dolerite cobbles was encountered (L. 1530). This pavement lacked only a few cobbles in its southwest quadrant (Fig. 4.111). Many cobbles were encountered in the fill, especially over the southern end of the cist (L. 1541). No capstones covered this end of the cist, though the north was covered by four capstones at a depth of 0.66 meters (Fig. 4.112; L. 1543). Mud plaster was observed covering the capstones, and some of these cobbles were stuck in this mud plaster layer. More cobbles were encountered in the fill

of the cist, which also contained very fragmentary and poorly preserved human remains. The cist measured 1.30 meters long, 0.54 meters wide, and 0.45 meters deep. The cist was L-shaped, with the projection for the legs being in the northwest. One translucent yellow-orange stone barrel disc bead, probably citrine, was found in the cist (L. 1552; EDM 80167).



Figure 4.112: Grave 208 capstones. Note uncovered south end of cist.

GRAVE 209

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Potsherd, 7 beads (ostrich eggshell).
Other artifacts: 15 beads (agate, ostrich eggshell) at about capstone level.
Disturbances: Robbed in antiquity. Surface architecture partially destroyed, human remains broken and scattered.

Table 4.96: Grave 209 loci.

Locus	Description
1509	Stone circle and fill
1548	Capstones
1620	Cist
1630	Human remains



Figure 4.113: Grave 209 cist.

Grave 209 was visible on the surface on the border of squares AB-11 and AC-11 as a partially preserved circle consisting of nine remaining dolerite cobbles measuring about 2.20 meters in diameter (Table 4.96; L. 1509). A number of cobbles and a dolerite boulder were encountered in the fill. At a depth of 0.55 meters, four capstones were encountered (L. 1548). Fourteen ostrich eggshell cylinder discs (EDM 80186, 80304, 80255, 80265, 80305, 80325, 80326, 80254, 80256) and one white agate short cylinder bead (EDM 80254) were found at the capstone level. The capstones sealed a cist which

measured 1.45 meters long, 0.65 meters wide, and 0.38 meters deep, constructed of eight side slabs and ten cap support stones. The cist was slightly trapezoidal, wider in the north than in the south (Fig. 4.113; L. 1620). Excavation notes remark that there appeared to be a space, unexcavated, on the other side of the northern side slab; the area supervisor's journal notes, "In the southern end of the cist there appears to be a stone blocking entrance to another portion of the cist which is under the baulk of the grave and a capstone that only has its northern portion exposed." It is possible that this grave shared a side slab with another cist. Fragmentary human remains were scattered throughout the cist of Grave 209, with skull fragments found at both ends of the cist (L. 1630). Seven ostrich eggshell cylinder disc beads were recovered from the cist (L. 1620; EDM: 40017, 80358, 80361, 80390, 80391), with two of them found in close association with the human remains (L. 1630; EDM 80401). A potsherd was also recovered from the cist (EDM 80389).

GRAVE 210

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 bead (amazonite), 1 worked shell.
Other artifacts: None.
Disturbances: Stone circle partially destroyed, human remains broken and scattered.

Table 4.97: Grave 210 loci.

Locus	Description
1510	Stone circle and fill
1547	Pavement
1557	Rock pile
1593	Capstones
1607	Cist and cist fill



Figure 4.114: Grave 210 stone circle and pavement.

Grave 210 was visible on the surface of the northwestern corner of square AB-11 as a three-quarters complete partial stone circle composed of nine dolerite cobbles and measuring 1.47 meters in diameter (Table 4.97; L. 1510). Just below the surface, a pavement of eight dolerite cobbles was encountered, filling the surface partial circle (L. 1547). An additional twelve cobbles formed a pavement at the same level immediately southwest of where it was projected the grave circle once continued. The cobbles seemed to form one continuous pavement (Fig. 4.114). Many cobbles were found in the fill extending from immediately beneath the pavement down to capstone level (L. 1557). At a depth of 0.51 meters, four capstones were encountered (L. 1593). The capstones were covered with a layer of mud plaster. They sealed a cist constructed of eight side slabs and ten cap support stones roughly on a north-south axis. The cist measured 1.32 meters

long, 0.48 meters wide, and 0.38 meters deep. The cist was slightly trapezoidal, wider at the north than at the south. Fragmentary human remains were scattered throughout the interior of the cist (Fig. 4.115; L. 1607). Skull fragments were found at both ends of the cist, but the majority of the skull was in the southern end of the cist, and the fragmentary remains were found in such a way that the skeleton appears to have been oriented with head to the south. One amazonite drilled pebble (EDM 80424) and one worked shell fragment were found in the cist. The worked shell fragment is triangular but was probably once lenticular, and has one perforation and in another place has a drill mark extending about halfway through the artifact (EDM 80425).



Figure 4.115: Grave 210 cist and human remains.

GRAVE 211

Surface architecture: Stone circle, in some places three stones wide.
Subsurface architecture: Trapezoidal cist.
Main burial: Head to south, on left side facing west.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbance: Upper body smashed and scattered throughout cist.

Table 4.98: Grave 211 loci.

Locus	Description
1511	Stone circle and fill
1549	Rock pile
1594	Capstones
1604	Cist and cist fill
1608	Human remains



Figure 4.116: Grave 211 cist and burial.

Grave 211 was visible on the surface of the eastern boundary of square AB-12 as a mostly-complete stone circle constructed of dolerite cobbles measuring 1.35 meters in

diameter (Table 4.98; L. 1511). In the north, the circle was three stones wide, and it is believed that the stone circle was once three stones thick along its circumference. The interior circle remains complete around its circumference and consists of thirteen dolerite cobbles, though some of these are lying flat in the south. Many cobbles were found in the fill (L. 1549). At a depth of 0.71 meters, three capstones were encountered (L. 1594). In the middle of the grave a gap was visible where another capstone probably once was. A flat dolerite cobble is visible in the gap in excavation photos. The capstones sealed a cist composed of eight side slabs and eight cap support stones measuring 1.29 meters long, 0.66 meters wide, and 0.51 meters deep. A few cobbles were found in the fill of the cist above the skeleton (L. 1604). Although the remains within were disturbed, with the upper skeleton very fragmented, articulation of the lower vertebrae, pelvis, and leg and foot bones was evident, showing that the individual had been laid in a flexed position, with head to the south, on the left side facing west (L. 1608). The legs were pulled up in front of the individual rather than semiflexed beneath the individual (Fig. 4.116). The skull and upper skeleton appeared to the excavator (the present author) to have been deliberately smashed and scattered throughout the cist.

GRAVE 212

Surface architecture: Stone circle.
Subsurface architecture: Cist.
Main burial: Unknown.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbance: Robbed in modern times, shaft left open to cist.

Table 4.99: Grave 212 loci.

Locus	Description
1512	Stone circle and robber's pit



Figure 4.117: Grave 212.

Grave 212 was found as it was left after having been robbed in modern times (Table 4.99; Fig. 4.117). The grave was visible on the surface of square AB-12 as a complete stone circle measuring 1.62 meters in diameter and composed of twenty-two dolerite cobbles (L. 1512). A robber's shaft remained open extending from the surface to the cist. The cist measured 1.63 meters long, 0.62 meters wide, and approximately 0.50 meters deep, though the depth was never appropriately measured.

GRAVE 213

Surface architecture: Partial stone circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 bead (amazonite).
Other artifacts: None.
Disturbances: Looted in antiquity. Stone circle partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.100: Grave 213 loci.

Locus	Description
1513	Stone circle and fill
1533	Pavement or cobble pile
1535	Capstones
1545	Cist and cist fill
1546	Human remains



Figure 4.118: Grave 213 surface architecture.

Grave 213 was visible on the surface of square AC-12 as a stone circle composed of eighteen dolerite cobbles and measuring about 1.90 meters in diameter (Table 4.100; L. 1513). Nine stones appeared in place, constituting about three quarters of a circle; the northwest quadrant was somewhat disorganized and appeared disturbed (Fig. 4.118). The supervisor's journal notes that a possible standing stone was observed either in the middle of the grave circle or within the northeast quadrant of the grave, but this could not be confirmed with site photographs. A large number of cobbles were found within the stone circle just below the surface, and these were described as a pavement, but their disorganized nature and the many cobbles in the fill suggest that they should not be taken as such (L. 1533). At a depth of 0.60 meters, six capstones were encountered (L. 1535). A gap in the capstones was filled with cobbles, and it is unclear whether some of these

cobbles were counted among the capstones (Fig. 4.119). These sealed a cist measuring 1.80 meters long, 0.60 meters wide, and 0.50 meters deep. Within the cist were disturbed human remains. The skeleton was disarticulated and broken and embedded in the hard packed fill of the cist. The paper Grave Recording Sheet notes that the "skeleton was obviously moved to one side." One nicely worked dark green amazonite short cylinder bead was recovered from the cist (EDM 80115).



Figure 4.119: Grave 213 capstones.

GRAVE 214

Surface architecture: Partial stone circle.
Disturbances: Apparent disturbance of stone circle, unknown subsurface disturbances.

Table 4.101: Grave 214 loci.

Locus	Description
1514	Stone circle



Figure 4.120: Grave 214 surface architecture.

Grave 214 was recognized on the surface of the border between squares AC-12 and AC-13 as a somewhat disorganized mass of dolerite cobbles that appeared to be a disturbed stone circle (Table 4.101; L. 1514). Three flat cobbles were set on edge at various points along the projected circumference giving this impression (Fig. 4.120). This grave was however never excavated.

GRAVE 215

Surface architecture: Disorganized cobbles.
Disturbances: Apparent disturbance of surface features, unknown subsurface disturbances.

Table 4.102: Grave 215 loci.

Locus	Description
1515	Cobbles



Figure 4.121: Grave 215 surface architecture.

Grave 215 was recognized on the surface of square AB-13 as a disorganized collection of cobbles that appeared to be a disturbed surface feature (Fig. 4.121; L. 1515). This grave was never excavated.

GRAVE 216

Surface architecture: Cobble feature.
Subsurface architecture: Cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 6 beads (amazonite, agate, ostrich eggshell).
Other artifacts: None.
Disturbances: Broken and disturbed skeleton, likely disturbance to surface architecture.

Table 4.103: Grave 216 loci.

Locus	Description
1516	Stone circle and fill
1579	Rock pile
1588	Capstones
1610	Cist and cist fill
1598	Human remains



Figure 4.122: Grave 216 after surface clearance.

Grave 216 was visible on the surface of square AB-13 as a disorganized cluster of dolerite cobbles (Table 4.103; L. 1516). Excavation revealed just below the surface a much larger cluster of cobbles, including four flat dolerite cobbles set on edge which appeared to be the remnants of a grave circle about 2.60 meters in diameter (L. 1579). This large cobble feature was described as a pavement, though the disorganized nature of the stones, many of which are not flat, and the rocky nature of the fill down to capstone

level suggests that it is not a true pavement (Fig. 4.122). Just above the capstones, a semicircular stone feature constructed of cobbles laid diagonally on top of one another was encountered (Fig. 4.123). It is not clear of the entirety of this feature was excavated, or if it continued to the northeast and southeast outside the excavated shaft. No artifacts were found in association with this feature. Four capstones were encountered at a depth of 0.70 meters (L. 1588). The capstones were visibly disturbed and some may have been missing or out of place. The cist measured 1.05 meters long, 0.60 meters wide, and 0.43 meters deep and was constructed of eight side slabs and twelve cap support stones (L. 1610). The floor of the cist was paved with ten well-laid large flat stones. The human remains within the cist were badly broken and moved to either end, and the cist was full of compact mud plaster-like sediment and small stones (Fig. 4.124; L. 1598). Two ostrich eggshell cylinder discs (EDM 80296) and one truncated double bicone silicate, probably agate, bead (EDM 80294) were found in the cist. Three small green amazonite drilled pebbles, one roughly rectangular, one roughly triangular, were also found in the cist, closely associated with the human remains (EDM 80321).



Figure 4.123: Grave 216 subsurface semicircular stone feature.



Figure 4.124: Grave 216 cist and human remains.

GRAVE 217

Surface architecture: Partial stone circle surrounding partial pavement and cairn.
Subsurface architecture: Bulbous cist.
Main burial: Flexed, head to south, on left side facing west.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial above capstones.
Artifacts in cist: Vegetal mat.
Other artifacts: 1 bead (amazonite) about capstone level.
Disturbances: None observed.

Table 4.104: Grave 217 loci.

Locus	Description
1517	Stone circle and fill
1540	Pavement and fill
1550	Capstones
1570	Cist and cist fill
1596	Human remains



Figure 4.125: Grave 217 surface feature.

Grave 217 was visible on the surface of square AB-12 as a roughly three-quarters complete stone circle measuring 1.45 meters in diameter (Table 4.104; L. 1517). Within the circle were a number of cobbles. In the southwest corner six flat stones, including a large rectangular limestone slab, were likely part of a pavement (Fig. 4.125; L. 1540). The rest of the stones were not placed in an orderly fashion and may represent the remnants of a cairn; these extend west roughly to Grave 220, and the supervisor's journal notes that the rock pile is "contemporary" with or "runs south from G.217 through" Grave 227. At a depth of 0.73 meters, three capstones were encountered (L. 1550). Smaller stones were used as chinking between the capstones, and mud plaster sealed these gaps. A secondary burial was recovered above the capstones. One light green amazonite short barrel bead was recovered from the capstone level (EDM 80139). The capstones sealed a cist measuring 1.42 meters long, 0.55 meters wide, and 0.50 meters deep and constructed of seven side slabs and fifteen to eighteen cap support stones (L. 1570). Entombed within was a flexed individual with head oriented to the south, lying on the left side facing west (L. 1596). The legs were pulled up in front of the individual such that the femurs made an approximately forty-five degree angle to the spine, but this may be due to the individual's height, as the individual's legs appeared to be too long to fit into the cist parallel to the northern wall as was most common in this cemetery (Fig. 4.126). Space was also observed between the top of the skull and the south wall of the cist, again suggesting that the cist was constructed for a different, probably shorter, individual. The right arm was bent at the elbow and at the wrist, such that the hand pointed to the right knee. The left arm was extended beneath the individual; the left hand was visible extending beyond the flexed left leg next to the feet. Wrapped around the

upper body and lower skull of the individual was a woven vegetal mat (EDM 80343). Fragments of this mat are also visible in the orbits of the skull in site photos, suggesting the mat once covered the head (Fig. 4.127). One green amazonite drilled pebble was also found in association with the human remains (EDM 80404).



Figure 4.126: Grave 217 burial.



Figure 4.127: Grave 217 burial close-up. Note the vegetal mat and the space between the skull and the cist's end.

GRAVE 218

Surface architecture: Partial stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 2 beads (amazonite, alabaster).
Other artifacts: 3 beads at about capstone level (amazonite, cupric).
Disturbances: Looted in antiquity. Cist full of sediment, human remains broken and scattered.

Table 4.105: Grave 218 loci.

Locus	Description
1581	Stone circle, pavement, and fill
1574	Rock pile
1591	Capstones
1609	Cist and cist fill
1611	Human remains



Figure 4.128: Grave 218 cist and skull.

Grave 218 was visible on the surface of square AB-12 as a partial stone circle of ten stones measuring 2.45 meters in maximum diameter (Table 4.105; L. 1581). The circle is actually ovoid, with the minimum diameter being 1.80 meters. Eleven paving stones were reported on the surface. Many dolerite cobbles were encountered in the fill (L. 1574). One triangular green amazonite bead with notched sides (EDM 80275) and two cupric short cylinder beads (EDM 80295) were recovered from the level of the capstones. At a depth of 0.62 meters, four capstones were encountered (L. 1591). These sealed a cist measuring 1.32 meters long, 0.56 meters wide, and 0.48 meters deep and constructed of seven side slabs and fourteen cap support stones. The cist was trapezoidal, wider in the north than in the south as though to accommodate the flexed legs of the

deceased. The cist was paved with two stones which covered the cist floor; the larger of these measured 1.10 meters long and 0.52 meters wide at its widest (L. 1609). Within the grave were scattered human remains (L. 1611). The skull was encountered in the southern end of the grave, but was clearly out of place, as it lay with the top of the skull pointing into the cist with the bottom of the skull pointing to the south cist wall (Fig. 4.128). Two beads were found in the cist. One bead was green amazonite cylinder disc, while the other was a short cylinder made of banded alabaster (EDM 80324).

GRAVE 219

Surface architecture: Stone circle and cobble feature.
Artifacts: 2 beads (amazonite, shell) in fill.

Table 4.106: Grave 219 loci.

Locus	Description
1531	Stone circle
1532	Pavement or cobble feature
1534	Rock pile
1542	Stone slab (capstone?)



Figure 4.129: The feature designated Grave 219.

The feature designated Grave 219 is either a cult feature not related to a specific grave beneath it or was not excavated to the level of the burial (Table 4.106). It was visible on the surface of square AC-12 as a large oval, measuring 2.40 meters in maximum diameter and 1.95 meters in minimum diameter, composed of twenty-six dolerite cobbles (L. 1531). These surrounded forty-five cobbles and boulders, most of them laying flat but not forming a continuous pavement (L. 1532). More such cobbles were encountered immediately below the first level of stones (Fig. 4.129; L. 1534). A large stone slab, believed by the excavators to be a capstone, was found in the fill (L. 1542), but the Grave Recording Sheet notes, "It is possible there is no cist at all." One well-worked green amazonite short barrel bead (EDM 80064) was recovered north of this stone. The excavators seemed confused whether this was a capstone or the only remaining side slab of a cist. One white tubular shell bead, likely utilizing a natural hole,

was found in association with this slab (EDM 80131). Excavation to the west of this stone encountered ash. Only a small amount of human remains was recovered.

GRAVE 220

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial above capstones.
Artifacts in cist: None.
Other artifacts: 1 bead in fill (agate).
Disturbances: Looted in antiquity. Surface architecture disturbed. Capstone displaced, cist full of sediment, human remains broken and scattered.

Table 4.107: Grave 220 loci.

Locus	Description
1539	Stone circle and fill
1561	Human remains above capstones
1551	Capstones
1595	Human remains and cist fill



Figure 4.130: Grave 220 cist.

Grave 220 was visible on the surface of square AB-12 as a stone circle consisting of nineteen cobbles measuring 1.50 meters in diameter (Table 4.107; L. 1539). The circle was fragmentary and the stones were lying flat rather than on edge, suggesting possible disturbance. One red and white agate cylinder disc bead was recovered from the fill (EDM 80111). A secondary burial, including a femur and a large skull fragment, was recovered in the fill just above the capstones (L. 1561). At a depth of 0.34 meters below the surface, three capstones were encountered (L. 1551). At least one more capstone appeared to be missing over the middle of the cist. The cist measured 0.84 meters long, 0.40 meters wide, and 0.41 meters deep, and was constructed of six side slabs and five cap support stones (Fig. 4.130). The cist was trapezoidal, wider in the north than in the

south. The human remains within the cist were fragmentary and likely disturbed (L. 1595).

GRAVE 221

Surface architecture: Partial stone circle and pavement.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 2 beads (ostrich eggshell, carnelian), 1 worked stone found about capstone level.
Disturbances: Looted in antiquity. Surface architecture disturbed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.108: Grave 221 loci.

Locus	Description
1562	Stone circle
1563	Rock pile and fill
1584	Rock pile and fill
1615	Capstones
1601	Cist and cist fill
1603	Human remains



Figure 4.131: Grave 221 capstones.

Grave 221 was visible on the surface of square AB-11 as a partial stone circle measuring 1.73 meters in diameter and composed of eleven cobbles (Table 4.108; L. 1562). The circle was best preserved and most recognizable by five dolerite cobbles standing on edge in the northwest quadrant. Three flat cobbles in the northwest next to these stones appear to be the remnants of a pavement (L. 1563). Many cobbles were encountered in the fill (L. 1584). At a depth of 0.50 meters, three capstones were encountered (L. 1615). These appear to include one which was clearly out of place, standing on edge in the fill and partially extending down into the cist (Fig. 4.131). Other cobbles were visible in this gap between the in-place capstones. One red translucent short cylinder carnelian bead with white opaque clouds (EDM 80327) and one ostrich eggshell cylinder disc bead (EDM 80111) were recovered from the capstone level, as was one small (less than two centimeter long) limestone which may be artificially rounded

(EDM 80329). The cist measured 1.31 meters long, 0.60 meters wide, and 0.55 meters deep (L. 1601). The cist was full of cobbles and sediment, in which were found scattered and fragmentary human remains (L. 1603).

GRAVE 222

Surface architecture: Stone circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 bead (amazonite).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture disturbed, human remains broken and scattered.

Table 4.109: Grave 222 loci.

Locus	Description
1564	Stone circle and fill
1565	Rock pile
1583	Rock pile
1518	Cist



Figure 4.132: Grave 222 surface architecture.

Grave 222 was visible on the surface of square AB-11 as a stone circle constructed of fifteen cobbles 1.75 meters in diameter (Table 4.109). Although the circle was roughly three-quarters complete, the cobbles were laying flat, suggesting disturbance (Fig. 4.132; L. 1564). A large number of cobbles were encountered in the fill just below the surface (L. 1565), and another pile was encountered just above the capstones (L. 1583). A layer of mud plaster sealed the capstones, but the plaster was not uniformly distributed and in places had holes, again suggesting disturbance. At a depth of 1.69 meters, three capstones were encountered. The cist measured 1.23 meters long, 0.50 meters wide, and 0.48 meters deep and was constructed of six side slabs and ten cap support stones. At least four more cobbles were set just outside the ring of cap support stones. The paper Grave Recording Sheet notes "Cyst slightly curves towards E oriented

SSW." The word bent is crossed out. This may have been an L-shaped cist, or one that widens one end. Most of the bones of the deceased were still in the cist, but they were no longer articulated or in place (L. 1518). One lumpy green amazonite drilled pebble with reddish inclusions was recovered from the cist (EDM 80366). One piece of miscellaneous metal was recovered in association with this grave.

GRAVE 223

Surface architecture: Stone circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 bracelet fragment, 1 bead (amazonite).
Other artifacts: Anthropomorphic stone, 4 beads (amazonite) in fill, scraper, hammerstone, 1 bead (amazonite) about capstone level.
Disturbances: Looted in antiquity. Capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.110: Grave 223 loci.

Locus	Description
1571	Stone circle
1576	Rock pile
1586	Rock pile
1587	Capstones
1597	Cist and cist fill
1602	Human remains



Figure 4.133: Grave 223 surface architecture and stone pile.

Grave 223 was visible on the surface of square AB-13 as a complete stone circle of twenty-three dolerite cobbles set on edge measuring 2.40 meters in maximum diameter, somewhat ovoid and measuring 1.95 meters in minimum diameter (Table 4.110; L. 1571). Within this circle a large number of cobbles and small boulders were visible just below the surface (L. 1576; Fig. 4.133). Among these was an unworked small dolerite boulder standing upright in the northern part of the circle, but it is unclear whether this is in its original position (Fig. 4.134). Cobbles and boulders continued down to the capstone level (L. 1586). Four amazonite short barrel beads were recovered from this rocky fill (EDM 80212, 80270). This rock pile was sectioned, but no organization to the pile was visible in the section. Judging from site photographs, anthropomorphic stone EDM 80552 appears to have inadvertently been removed from this fill. This stone was unrecognized when first removed, and later reported as a surface find near the grave.

However, site photographs clearly show it appearing in a pile of stones taken from Grave 223 (Fig. 4.135). One drilled amazonite pebble (EDM 80271), one tabular scraper (EDM 80273) and one hammerstone (EDM 80272) were collected in the fill at about capstone level. Five capstones were encountered at a depth of 0.51 meters (Fig. 4.136; L. 1587). The capstones were clearly disturbed, and one was found on edge extending into the cist. The cist measured 1.55 meters long, 0.45 meters wide, and 0.50 meters deep and was constructed with six side slabs and five cap support stones (L. 1597). The human remains within were badly disturbed and fragmented; very few bones were collected (L. 1602). One drilled limestone piece, probably a pendant or bracelet fragment (EDM 40034), and one amazonite drilled pebble (EDM 80309) were recovered from the human remains.



Figure 4.134: Grave 223 rocky fill.



Figure 4.135: Grave 223, stones in fill just above capstones. Note the anthropomorphic stone to the left of the grave (white arrow).



Figure 4.136: Grave 223 capstones.

GRAVE 224

Surface architecture: Partial stone circle.
Subsurface architecture: Cist with incised capstone.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: Worked stone capstone, 4 beads about capstone level (amazonite, siltstone).
Disturbances: Capstones disturbed, cist full of sediment, human remains broken and scattered.

Table 4.111: Grave 224 loci.

Locus	Description
1580	Grave
1581	Rock pile
1715	Capstones
1720	Cist and cist fill

Grave 224 was visible on the surface of square AB-13 as a stone circle consisting of an unknown number of stones and measuring 2.10 meters in diameter (Table 4.111; L. 1580). At a depth of 0.35 meters, three capstones were encountered (L. 1715). Notes state that the capstones were disturbed, but do not state what disturbances were visible. One of these capstones was unusual in that it was made of chalk (or a similar soft, white stone) and was marked by a deep incision running across its width, giving it a phallic appearance (EDM 80779). This was recorded in the field as a standing stone, apparently for lack of a better description. The area supervisor's journal notes, "One of the capstones looks to have been a white carved standing stone but most of it is generic." The electronic Grave Database adds, "The standing stone does not have to be a standing stone…" There is no reason given in the notes to believe this stone served as anything

other than a capstone. Four beads were also recovered at about capstone level, including two light brown siltstone cylinder discs (EDM 80845, 80884), one amazonite barrel disc (EDM 80884), and one amazonite short cylinder (EDM 80742). The cist measured 1.02 meters long, 0.38 meters wide, and 0.42 meters deep and was constructed of eight side slabs and three cap support stones. The skeletal remains were poorly preserved and were found mostly in the northern end of the cist (L. 1720).

GRAVE 225

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Male.
Age: Adult.
Other burials:
Artifacts in cist: 4 beads (ostrich eggshell, agate).
Other artifacts: 1 bead (amazonite) in fill, 7 beads about capstone level (ostrich eggshell, amazonite, shell, siltstone, agate).
Disturbances: Looted in antiquity. Cist full of sediment, human remains broken and scattered in cist.

Table 4.112: Grave 225 loci.

Locus	Description
1568	Stone circle and fill
1582	Rock pile
1592	Capstones
1628	Cist fill and human remains



Figure 4.137: Grave 225 cist and human remains.

Grave 225 was visible on the surface of square AB-11 as a stone circle consisting of eleven cobbles measuring 1.60 meters in diameter (Table 4.112; L. 1568). Many stones were encountered in the grave fill, including what appeared to be a capstone found vertical (L. 1582). One green amazonite drilled pebble (EDM 80228), which the notes erroneously state was constructed of "band copper," was recovered from the fill. At a depth of 0.41 meters, capstones—between three and five in number—were encountered (L. 1592). Seven beads were encountered at about the capstone level, including two ostrich eggshell cylinder discs (EDM 40045), one shell short cylinder, one siltstone cylinder disc, and three orange agate beads, one a barrel disc and two cylinder discs (EDM 80347). The capstones covered a cist measuring 1.33 meters long, 0.53 meters wide, and 0.50 meters deep and constructed of seven side slabs and twelve cap support

stones. The cist was trapezoidal in shape, wider in the north than in the south. The remains of a male were broken and scattered throughout the cist (Fig. 4.137; L. 1628). Many stones were encountered in the cist, especially in its southern portion. The skull was recovered from the south end of the cist, but it was not in its original position, as it was sitting on the proximal side. Two ostrich eggshell cylinder disc beads (EDM 80381, 80415), one orange-white agate cylinder disc bead (EDM 80415), and fragments of another orange-white agate cylinder disc bead (EDM 80381)—the latter two very similar to the ones found at capstone level—were recovered from the cist.

GRAVE 226

Surface architecture: Rock pile over stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Oriented east, on left side facing south.
Sex: Unknown.
Age: Infant.
Other burial: Secondary burial above capstones.
Artifacts in cist: 2 beads (agate).
Other artifacts: 1 bead from fill (agate); 1 bead associated with secondary burial (amazonite); 1 bead about capstone level (amazonite)
Disturbances: Capstones displaced, cist full of sediment.

Table 4.113: Grave 226 loci.

Locus	Description
1567	Grave
1617	Surface rock pile
1619	Pavement and fill
1622	Lower pavement and fill
1626	Secondary burial above capstones
1681	Capstones
1682	Cist and cist fill
1629	Human remains in cist



Figure 4.138: Grave 226 surface cobble pile.



Figure 4.139: Grave 226 stone circle and upper pavement.

Grave 226 (L. 1567) was visible on the surface of square AB-10 as a pile of cobbles (L. 1617) with a stone circle visible beneath (Fig. 4.138; Table 4.113). Removal of the cobble pile revealed an intact pavement (Fig. 4.139; L. 1619). The circle measured 1.76 meters in diameter and was constructed of thirty-one stones. The pavement filled the entire area within the circle and was constructed of twenty-three flat dolerite cobbles. A second layer of flat dolerite cobbles was encountered about 0.30 meters below the first pavement, and the area supervisor believed this to be a deliberately laid pavement, though one less well constructed than the one above (L. 1622). One well-worked red and orange-white banded agate short barrel bead was recovered from the fill at about or below this level (EDM 80427). One stone slab believed to be a misplaced capstone was encountered just below this second cobble layer. A secondary burial was encountered in the fill below this, in the western baulk of the excavation (Fig. 4.140; L. 1626). One amazonite, roughly triangular drilled pebble was recovered from this secondary burial (EDM 80382). At a depth of 1.18 meters, three capstones were encountered (L. 1681). A space showed where at least one additional capstone appears to have been removed. One rough amazonite long cylinder bead was recovered from about capstone level (EDM 80593). The cist measured 1.43 meters long, 0.55 meters wide, and 0.50 meters deep and was constructed of seven side slabs and around ten cap support stones. The cist was full of sediment, including silt and cobbles, but was mostly empty of human remains (L. 1682). The southernmost two capstones remained in place (Fig. 4.141). Beneath the second capstone from the south, an infant skeleton was found, lying in a semiflexed position with head oriented to the east, on the left side facing south (Figs. 4.142; L. 1629). The skeleton lay in the fill about ten centimeters above the floor of the cist (Fig.

4.142). The infant was also covered with fill, which extended to the capstone above. Two white, probably agate, short cylinder beads were recovered from the cist (EDM 80550).



Figure 4.140: Grave 226 secondary burial in baulk above capstones.



Figure 4.141: Grave 226 burial and cist.



Figure 4.142: Grave 226 burial close-up.



Figure 4.143: Grave 226 capstones and cist after further fill removal.

GRAVE 227

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Female.
Age: Adult.
Other burials: 2 secondary burials above capstones (1 adult, 1 infant).
Artifacts in cist: Bone ring, textile, vegetal matter, 14 beads (amazonite, agate, citrine, onyx), potsherd.
Other artifacts: 11 beads in fill (garnet, aventurine, amazonite, carnelian, agate), most associated with adult secondary burial.
Disturbances: Looted in antiquity. Human remains broken and scattered within cist.

Table 4.114: Grave 227 loci.

Locus	Description
1545	Stone circle and fill
1613	Rock pile
1636	Human remains above capstones
1640	Capstones
1646	Human remains within cist



Figure 4.144: Grave 227 cist and human remains.

Grave 227 was visible on the surface of square AB-12 as a stone circle constructed of fifteen cobbles and measuring 1.43 meters in diameter (Table 4.114; L. 1545). Many cobbles were encountered in the fill (L. 1613). Eleven beads, including two agate short cylinder beads (EDM 80222), one garnet short truncated cone bead with natural facets (EDM 80426), six amazonite drilled pebbles (EDM 80383, 80384, 80385), one green translucent crystalline (probably aventurine) cylinder disc (EDM 80384), and one orange carnelian barrel disc bead (EDM 80383) were recovered from this rocky fill. Two secondary burials were encountered in the fill of the grave, both just above the capstones (L. 1636). The notes state that one of these was associated with seven beads, presumably some of the seven recorded from the rocky fill. The other was an infant, found in the northeast corner of the excavation. Four capstones were encountered at a depth of 0.67 meters (L. 1640). The capstones were sealed with mud plaster, and small cobbles were used to fill gaps between the larger slabs. The cist measured 1.39 meters long, 0.62 meters wide, and 0.46 meters deep and was constructed with eight side slabs and eight cap support stones. The cist was trapezoidal, wider in the north than in the south. Little fill was in the cist. The human remains were for the most part in excellent condition but were broken and scattered in the cist, mainly in the northern end (Fig. 4.144; L. 1646). Cranial elements from what might be a second individual were observed in the south end of the cist. Remnants of a decayed textile were observed in the cist, two samples of which were collected. Some other vegetal fragments were also noted and collected—the area supervisor suggested they may be palm fragments, and they may also be remnants of a woven mat similar to that of Grave 217. Four seeds were recovered

from the cist. Fourteen beads were found in the cist. Eleven were amazonite beads and pendants (EDM 80400, 80450, 80458, 80463, 80482, 80483). One red and white agate barrel disc bead (EDM 80464), and one translucent yellow, probably citrine, drilled pebble (EDM 80482) were also found. Excavation notes also mention a glass bead, but it is actually stone, a translucent dark brown silicate (agate or onyx) long barrel bead (EDM 80481). One stone, probably chalk or limestone, ring was also recovered from the cist (EDM 80455), as was one bracelet fragment of the same material. One ceramic handle fragment (EDM 80480) and a piece of chalk (EDM 80501) were also recovered from the cist.

GRAVE 228

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts within cist: 1 bead (citrine).
Other artifacts: None.
Disturbances: Capstones displaced, cist full of sediment, human remains broken and scattered within cist.

Table 4.115: Grave 228 loci.

Locus	Description
1577	Stone circle and fill
1578	Pavement
1590	Rock pile
1633	Capstones
1634	Cist and cist fill



Figure 4.145: Grave 228 cist and human remains.

Grave 228 was visible on the surface of square AC-11 as a stone circle constructed of thirty-two cobbles and measuring 1.85 meters in diameter (Table 4.115; L. 1577). A pavement was noted in the stone circle, but no details were recorded about it (L. 1578). Many cobbles were encountered in the fill (L. 1590). At a depth of 0.46 meters below the surface, two capstones were encountered (L. 1633). Others were most likely missing. The cist measured 1.30 meters long, 0.60 meters wide, and 0.49 meters deep and was constructed of eight side slabs and six cap support stones. The cist was trapezoidal, wider in the north than in the south. The human remains were broken and scattered throughout the fill of the cist (Fig. 4.145; L. 1634). One yellow translucent silicate, probably citrine, short barrel bead was found in the cist (EDM 80400).

GRAVE 229

Surface architecture: None.
Subsurface architecture: Rectangular cist without capstones.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 29 beads (cupric, ostrich eggshell).
Other artifacts: None.
Disturbances: No capstones, no surface architecture, human remains broken and scattered in cist.

Table 4.116: Grave 229 loci.

Locus	Description
1585	Cist and cist fill
1600	Human remains



Figure 4.146: Grave 229 cist.

Grave 229 was invisible on the surface of square AC-11 (Table 4.116). It was discovered during the excavation of Grave 207 in close association with, possibly intrusive to, that grave. At a depth of 0.39 meters below the surface, the cist was encountered (L. 1585). No capstones were present. The rectangular cist measured 0.74 meters long, 0.45 meters wide, and 0.35 meters deep and was constructed of six side slabs and less than five cap support stones (Fig. 4.146). Fragmentary adult human remains were recovered scattered around the cist (L. 1600). Twenty-seven ostrich eggshell cylinder disc beads (EDM 80257, 80302) and two malachite beads, one a short cylinder and one a cylinder disc (EDM 80275), were recovered from the cist and human remains.

GRAVE 230

Surface architecture: Cobble feature.
Subsurface architecture: Trapezoidal cist.
Burial: Semiflexed, oriented south, on left side facing west.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 3 beads (amazonite, ostrich eggshell).
Other artifacts: None.
Disturbances: Surface architecture partially destroyed.

Table 4.117: Grave 230 loci.

Locus	Description
1616	Stone circle and fill
1623	Capstones
1632	Cist
1631	Human remains and fill



Figure 4.147: Grave 230 surface architecture and capstones.

Grave 230 was visible on the surface of square AC-13 as a cluster of dolerite cobbles, lying flat 1.70 meters in diameter (Fig. 4.147; Table 4.117; L. 1616). Some of these are probably the remnants of mortuary architecture. At a depth of 0.10 meters, four capstones were encountered (L. 1623). Smaller cobbles were used to seal gaps between the capstones. These sealed a cist measuring 0.76 meters long, 0.50 meters wide, and 0.47 meters deep constructed of nine side slabs and six cap support stones (L. 1632). The cist was wider in the north than in the south. The west wall of the cist bent inwards about halfway down its length in order to make the southern end narrower. Entombed within the cist was a semiflexed individual with head oriented to the south, lying on the left side facing west (Fig. 4.148; L. 1631). The legs were bent at the knees. Three beads were recovered from the cist, one an amazonite drilled pebble (EDM 80379), one an amazonite

short cylinder (EDM 80405), and one an ostrich eggshell cylinder disc (EDM 80379). One of these amazonite beads was visible in site photos at the north end of the cist next to a side slab (EDM 80379).



Figure 4.148: Grave 230 cist and human remains.

GRAVE 231

Surface architecture: Rock pile covering stone circle.
Subsurface architecture: Cist.
Main burial: Flexed or semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Spatula pendant.
Other artifacts: Mother of pearl near surface, stone pendant about capstone level.
Disturbances: Looted in antiquity, capstones displaced, cist full of sediment.

Table 4.118: Grave 231 loci.

Locus	Description
1638	Stone circle and fill
1639	Rock pile
1649	Capstones
1656	Human remains and cist fill



Figure 4.149: Grave 231 capstones.

Grave 231 was visible on the surface of the border between squares AB-10 and AC-10 as a rock pile covering a partial stone circle constructed of eighteen stones and measuring 1.68 meters in diameter (Table 4.118; L. 1638). Small fragments of mother of pearl were recovered near the surface (EDM 80284). Many more cobbles were encountered in the grave fill (L. 1639). At a depth of 0.30 meters, two capstones were encountered, covering the northern and southern ends of the cist (L. 1649). The space

between, believed to be large enough for two capstones, was uncovered (Fig. 4.149). A stone or possibly fossil shell pendant was recovered at about capstone level (EDM 80448). The cist was constructed of at least five side slabs and five cap support stones, though the cist was not completely excavated so exact data are lacking. The cist measured 0.47 meters wide, 0.40 meters deep, and an estimated 1.10 meters long. The remains within the cist were poorly preserved, but the remaining skull fragments and leg bones suggest that the individual lay in a flexed or semiflexed position with head oriented south on the left side facing west (L. 1656). More cobbles were encountered in the cist, particularly in the northern end. One spatula pendant was recovered from the cist (EDM 80677).

GRAVE 232

Surface architecture: Stone circle and cobble feature.
Subsurface architecture: None.

Table 4.119: Grave 232 loci.

Locus	Description
1612	Fill

A surface feature on the border of squares AB-13 and AC-13 was designated Grave 232 (Table 4.119; L. 1612). This feature consisted of a cobble mass surrounded by a large grave circle designated by dolerite and limestone cobbles. The feature was ovoid, measuring about 2.5 meters north to south and 1.6 meters east to west. However, excavation to a depth of 0.75 meters revealed no subsurface mortuary architecture and very few bone fragments. The final report noted that one potsherd and one bead were

recovered from this excavation, but there is no other indication that any artifacts were found.

GRAVE 233

Surface architecture: None.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Extended, facing up.
Sex: Unknown.
Age: Infant.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.120: Grave 233 loci.

Locus	Description
1614	Cist
1621	Human remains
1635	Pavement



Figure 4.150: Grave 233 capstones.

Grave 233 was invisible on the surface of square AC-12. At a depth of 0.34 meters two sandstone capstones were encountered (Table 4.120). Smaller stones were used to seal the edges of the capstones (Fig. 4.150). These sealed a cist measuring 0.46 meters long, 0.40 meters wide, and 0.30 meters deep constructed of five dolerite side slabs and ten cap support stones (L. 1614). After removal of the burial and the west wall of the cist, the floor was found to be paved with five cobbles (Fig. 4.152; L. 1635). The Grave Database states that the infant buried within the cist was oriented to the north in an extended position facing up, though in site photos the individual and appears to be lying on the left side facing east (Fig. 4.151; L. 1621).



Figure 4.151: Grave 233 cist and human remains.



Figure 4.152: Grave 233 paved cist floor.

GRAVE 234

Surface architecture: Double stone circle.
Subsurface architecture: Trapezoidal cist
Main burial: Semiflexed, oriented south, on left side facing west.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 bead (amazonite).
Other artifacts: None.
Disturbances: Looted in antiquity; human remains broken and scattered in cist.

Table 4.121: Grave 234 loci.

Locus	Description
1641	Stone circle and fill
1659	Capstones
1662	Cist and cist fill
1666	Human remains



Figure 4.153: Grave 234 cist.

Grave 234 was visible on the surface of square AC-13 as a stone circle composed of thirty-six cobbles measuring 2.25 meters in diameter (Table 4.121; L. 1641). The Grave Database observes that it was "nicely shaped" and "double lined." At a depth of 0.53 meters four capstones were encountered (L. 1659). These sealed a cist measuring 1.65 meters long, 0.68 meters wide, and 0.53 meters deep constructed of eight side slabs and eleven cap support stones (L. 1662). The cist was wider in the north than in the south in order to accommodate the flexed legs of the deceased (Fig. 4.153). The individual within was laid in a semiflexed position with head to the south on the left side facing west, though apparently only the legs remained in situ (L. 1666). One amazonite short cylinder bead was recovered in the cist (EDM 80497).

GRAVE 235

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 2 beads (amazonite).
Other artifacts: Anthropomorphic stone in fill, 1 bead near surface (ceramic?).
Disturbances: Looted in antiquity. Human remains broken and scattered in cist, ash lens in cist

Table 4.122: Grave 235 loci.

Locus	Description
1642	Stone circle and fill
1660	Capstones
1663	Cist and cist fill
1667	Human remains
1675	Ash lens
1683	Pavement



Figure 4.154: Grave 235 cist.

Grave 235 was visible on the surface of square AC-13 as a stone circle constructed of twenty-three stones and measuring 1.61 meters in diameter (Table 4.122; L. 1642). One, possibly ceramic, fragmentary cylinder disc bead was recovered very close to the surface (EDM 80084). Many stones were encountered in the fill of the grave. Among these, in the north end of the excavation, was an anthropomorphic stone (EDM 80456). At a depth of 0.54 meters, four capstones were encountered (L. 1660). These sealed a cist measuring 1.36 meters long, 0.52 meters wide, and 0.49 meters deep constructed of seven side slabs and nine cap support stones. The cist was wider in the north than in the south; about three quarters down the cist from the north end the west wall bends inwards slightly in order to make the southern end narrower. The floor of the cist was paved with seventeen flat stones (Fig. 4.154; L. 1683). The human remains within the cist were badly broken and scattered around the cist (L. 1667), mixed in the fill which included cobbles (L. 1675). Two amazonite beads, one a drilled pebble and the other a short cylinder (EDM 80568), were recovered in the cist. An ash lens was recorded in the cist, but no description was recorded (L. 1663).

GRAVE 236

Table 4.123: Grave 236 loci.

Locus	Description
1624	Grave
1627	Pavement

No data beyond locus descriptions are available on this Grave, which was probably unexcavated (Table 4.123).

GRAVE 237

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None
Artifacts in cist: 57 beads and ornaments.
Other artifacts: 5 beads in fill (alabaster), animal bones in fill.
Disturbances: Looted in antiquity. Northern capstones displaced. Human remains broken and scattered in cist.

Table 4.124: Grave 237 loci.

Locus	Description
1625	Grave
1643	Fill
1645	Cist and cist fill
1661	Human remains



Figure 4.155: Grave 237 cist and human remains.

Grave 237 was visible on the surface of square AC-13 as a stone circle composed of forty-one cobbles measuring 2.40 meters in diameter (Table 4.124; L. 1625). Many cobbles were encountered in the fill over the northern end of the cist (L. 1643). Five alabaster short cylinder beads were recovered in the fill (EDM 80406). Bones, believed by the area supervisor to be animal bones, were recovered from the baulk of the excavation over the capstones. At a depth of 0.73 meters, four capstones were encountered. Gaps between the capstones were closed with smaller cobbles. The northern end of the cist was not covered by capstones. The cist measured 1.46 meters long, 0.67 meters wide, and 0.48 meters deep and constructed of eight side slabs and fourteen cap support stones. Four more stones were observed ringing the capstones; there may have been more such stones which remained unexcavated. The cist was trapezoidal, wider in the north than in the south. The floor of the cist was paved with eight large stone slabs, with smaller stones used to fill the gaps between these slabs (Fig. 4.156). Incorporated into the northwest corner of the pavement were a blue dolerite cobble and an unusually red sandstone slab. The cist was full of sediment, and the northern end of the cist especially contained many cobbles (L. 1645). The human remains were badly broken and scattered throughout the cist (Fig. 4.155; L. 1661). Fifty-three beads and four ornamental objects were collected from the grave. These included beads in three main clusters in the cist: One cluster in the northwest corner of large white beads and four long beads, a cluster in the northwest corner of fourteen ostrich egg shell beads, and a cluster in the southeastern area of the grave consisting of sixteen small red stone beads. Other beads were scattered throughout the cist. The clusters of similar beads suggest three different ornamental objects, though their original placement cannot be determined.



Figure 4.156: Grave 237 cist with paved floor.

GRAVE 238

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial above capstones.
Artifacts in cist: 5 beads (amazonite).
Other artifacts: None.
Disturbances: Looted in antiquity, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.125: Grave 238 loci.

Locus	Description
1637	Stone circle and fill
1647	Capstones
1648	Cist and cist fill
1655	Human remains



Figure 4.157: Grave 238 cist.

Grave 238 was visible on the surface of square AC-12 as a half-complete circle consisting of an unknown number of stones and measuring 2.42 meters in diameter (Table 4.125; L. 1637). A secondary burial with sun-bleached bones was encountered in the fill above the cist. At a depth of 0.18 meters three capstones were encountered (L. 1647). Smaller stones sealed gaps between the capstones, and a layer of mud plaster covered the capstones. The southeastern capstone was at an angle, extending into the cist. The cist measured 1.56 meters long, 0.63 meters wide, and 0.45 meters deep and was constructed with seven side slabs and thirteen cap support stones (Fig. 4.157; L. 1648). Although most of the cists in the cemetery were oriented SSW-NNE, this cist was oriented more closely to the E-W axis than was normal. The stones were offset in the southwest end, making the cist appear to be slightly bent. The skeleton within the cist appears to have been fragmentary and disturbed, though skull fragments were observed in

the southwest end (L. 1655). Five amazonite beads were found in the cist (EDM 80449, 80457, 80484).

GRAVE 239

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 2 beads in fill (amazonite, alabaster).
Disturbances: Looted in antiquity; surface architecture destroyed; human bones broken and scattered in cist.

Table 4.126: Grave 239 loci.

Locus	Description
1644	Grave and grave fill
1650	Capstones
1651	Cist and cist fill



Figure 4.158: Grave 239 capstones.

Grave 239 was invisible on the surface of square AC-12 (Table 4.126; L. 1644). The paper Grave Recording Sheet notes twenty-five flag stones, but these appear to have been found in the fill. Two beads, one amazonite short barrel bead (EDM 80569) and one ovoid alabaster disc bead (EDM 80570) were recovered from the fill. At a depth of 0.27 meters below the surface, four capstones were encountered (Fig. 4.158; L. 1650). These sealed a cist measuring 1.45 meters long, 0.41 meters wide, and 0.40 meters deep, constructed of eight side slabs and fifteen cap support stones. Although empty space was visible between cracks in the capstones, the skeleton was extremely fragmentary and poorly preserved (L. 1651). Little skeletal material was present; what was encountered was found at either end of the cist.

GRAVE 240

Surface architecture: Pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial above capstones.
Artifacts in cist: 23 beads (Agate, alabaster, aventurine, carnelian, citrine, cupric)
Other artifacts: 1 bead about capstone level (agate).
Disturbances: Looted in antiquity. Capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.127: Grave 240 loci.

Locus	Description
1657	Grave
1658	Pavement
1668	Capstones
1670	Cist and cist fill
1672	Human remains
1686	Human remains



Figure 4.159: Grave 240 capstones. Note the gap, filled with cobbles, between the first and second capstones, as numbered from the north.

Grave 240 was visible on the surface of square AC-9 as a complex stone feature (Table 4.127; L. 1657). It was never photographed and descriptions are unclear, but it appears to have consisted of a rectangular, partially paved structure. A total of fifty-one paving stones were recorded, twenty of them said to be over the "main cist" and thirty-one east of two vertical stones (L. 1658). It is unclear whether the latter were standing stones or merely displaced, upended stones. The feature measured 2.16 meters across. A secondary burial was encountered in the fill above the middle capstone. At a depth of 0.52 meters below the surface, four capstones were encountered (Fig. 4.159; L. 1668). An ash lens was observed just west of, and at the same depth as, the capstones. A gap filled with cobbles in the north central part of the grave showed where a fifth capstone was probably once located. Small stones were used to close the gaps between the

remaining capstones. One agate short barrel bead was found at about capstone level (EDM 80571). The cist measured 1.30 meters long, 0.69 meters wide, and 0.68 meters deep. Many cobbles were found in the fill, especially beneath the gap between the capstones (L. 1670). The skeleton was disturbed, but the skull was found in the south end of the cist, sitting upright facing south (Fig. 4.160; L. 1672, 1686). Just to the north of the skull, many beads were encountered, including a seven centimeter long univalve spiral shell bead (EDM 80667). The beads found in the cist included three of citrine, nine of a cupric mineral like turquoise, seven of agate, one of aventurine, two of carnelian, and four of alabaster (EDM 80074, 80646, 80657). All the beads were relatively roughly-shaped, particularly those made of the cupric material. Twenty-three of the beads were clustered near the skull (EDM 80646). A cluster of wood fragments found near the skull may be the remains of a vessel (EDM 80693).



Figure 4.160: Grave 240 cist. Note skull in south end.

GRAVE 241

Surface architecture: Partial circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary above capstones.
Artifacts in cist: 1 bead (amazonite).
Other artifacts: 1 bead (alabaster) associated with secondary burial, 2 beads in fill (ostrich eggshell, agate).
Disturbances: Stone circle partially destroyed.

Table 4.128: Grave 241 loci.

Locus	Description
1653	Stone circle and fill
1654	Rock pile and fill
1664	Human remains above capstones
1673	Capstones
1679	Cist
1680	Human remains



Figure 4.161: Grave 241, secondary burials above capstones.

Grave 241 was visible on the surface of square W-14 as a partial stone circle composed of dolerite cobbles and measuring 1.96 meters in diameter (Table 4.128; L. 1653). Only the three cobbles in the southeast portion of the grave circle are on edge; others lying flat are apparently disturbed. Two beads, one ostrich eggshell cylinder disc (EDM 80479) and one agate short barrel (EDM 80478) were found not far below the surface. A small pile of dolerite cobbles was recorded just below the surface in the middle of the grave (L. 1654). One or two secondary burials were recovered from the fill in the southern and eastern parts of the grave (Fig. 4.161; L. 1664). One alabaster bead was found in association with these remains (EDM 80557). Two beads, one of amazonite and one of chalk, were found in the fill (EDM 80569, 80570). At a depth of 0.65 meters, five capstones were encountered (L. 1673). Gaps between the capstones were sealed

with cobbles and mud plaster. The capstones sealed a cist measuring 1.46 meters long, 0.54 meters wide, and 0.55 meters deep and constructed of eight side slabs and seventeen cap support stones in up to two courses. The cist was trapezoidal, wider at the north than at the south in order to accommodate the flexed legs of the interred (L. 1679). Most of the upper part of the cist was empty. The individual within was an adult male who lay semiflexed, with head to the south, on the left side facing west (Fig. 4.162; L. 1680). The left arm was a slight distance in front of the body, bent at the elbow, apparently pointing towards the face. The right arm was bent at the elbow with the hand in front of the individual at about the elbow of the left arm. One ovoid amazonite bead was found in association with the human remains in the cist (EDM 80642).



Figure 4.162: Grave 241 burial.

GRAVE 242

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 8 beads (flint, cupric).
Other artifacts: Flint blade, 1 bead (amazonite) at about capstone level.
Disturbances: Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.129: Grave 242 loci.

Locus	Description
1669	Grave
1684	Capstones
1691	Cist

Grave 242 was invisible on the surface of square AC-9 (Table 4.129). The grave was recognized when a rock pile was encountered covering capstones (L. 1669). Two capstones were reported at a depth of 0.43 meters below the surface (L. 1684). One capstone was set vertically in the cist; it is unclear if this a third capstone or one of the two reported. One amazonite drilled pebble bead and one flint blade were recovered in close association at about the capstone level (EDM 80592). The cist measured 1.50 meters long, 0.49 meters wide, and 0.45 meters deep and was constructed of eight side slabs and eighteen cap support stones. Bone fragments were found scattered throughout the cist (L. 1691). Eight beads, one of them of a poor-grade cupric stone and the other seven translucent grey flint cylinder disc beads, were found clustered together in the cist (EDM 80670).

GRAVE 243

Surface architecture: Stone circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 3 beads (ostrich eggshell, amazonite).
Other artifacts: 1 bead (ostrich eggshell).
Disturbances: Looted in antiquity. Capstones disturbed, cist full of sediment, human remains broken and scattered.

Table 4.130: Grave 243 loci.

Locus	Description
1685	Stone circle and fill
1693	Capstones
1694	Cist and cist fill



Figure 4.163: Grave 243 capstones. Note that at least one capstone is missing.

Grave 243 was visible near the surface of square AB-10 as a circle of twelve stones measuring 1.88 meters in diameter (Table 4.130; L. 1685). It was encountered while excavating Grave 203. One ostrich eggshell cylinder disc bead was found in the

fill (EDM 80594). A small number of cobbles were encountered in the fill. At a depth of 0.54 meters, four capstones were encountered (L. 1693). At least one capstone appeared to be missing (Fig. 4.163). The capstones sealed a cist measuring 1.10 meters long, 0.56 meters wide, and 0.35 meters deep and constructed of seven side slabs and about three cap support stones. The individual within the cist was badly fragmented, scattered throughout the cist, and covered with fill (L. 1694). Two ostrich eggshell beads (EDM 80732, 80733) and one amazonite drilled pebble (EDM 80690) were recovered from the cist.

GRAVE 244

Surface architecture: Stone cluster.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial above cist.
Artifacts in cist: 1 bead (alabaster), marine shell fragments.
Other artifacts: None.
Disturbances: Looted in antiquity, surface architecture disturbed, capstones disturbed, human remains fragmentary and scattered.

Table 4.131: Grave 244 loci.

Locus	Description
1677	Grave and fill
1678	Rock pile
1703	Cist and cist fill



Figure 4.164: Grave 244 human remains.

Grave 244 was visible on the surface of square AB-10 as a small cluster of stones, probably a disturbed grave circle (Table 4.131). Two stones stood vertically at the north end of the grave and one stone stood vertically in the center of the grave. According to the Digital Grave Database, the central stone "has the same shape as the sculptured standing stones." Three large flat stones surrounded the latter. A secondary burial encased in plaster was recovered above the northern end of the cist. At a depth of 0.44 meters below the surface, three capstones were encountered. One of was broken and on edge in a cobble pile extending down into the cist. The cist measured 1.40 meters long, 0.62 meters wide, and 0.47 meters deep and was constructed with eight side slabs and nine cap support stones. The cist was trapezoidal, wider in the north than in the south. Gravel and mud plaster was encountered in the cist. A number of cobbles and part of the

broken capstone were also encountered. Mixed in the lower levels of this fill, a low density of fragmentary human remains was recovered (Fig. 4.164). The skull fragments were in the southern end of the grave. One alabaster bead (EDM 80823) and marine shell fragments (EDM 80718, 80784, 80788) were recovered from the cist.

GRAVE 245

Surface architecture: None.
Subsurface architecture: Cist without capstones.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 1 bead (ostrich eggshell).
Other artifacts: None.
Disturbances: Surface architecture destroyed, no capstones, cist full of sediment, human remains broken and scattered.

Table 4.132: Grave 245 loci.

Locus	Description
1688	Cist and cist fill



Figure 4.165: Grave 245 cist.

Grave 245 was invisible on the surface of square AB-10. It was found to the north of Grave 240. At a depth of 0.58 meters below the surface, the cist was encountered. No capstones covered the cist. The cist measured 0.57 meters long, 0.28 meters wide, and 0.35 meters deep and was constructed of six side slabs (Fig. 4.165). Within the cist was mud plaster or plaster-like sediment with very few bone fragments (L. 1688). One ostrich eggshell bead was recovered from the cist (EDM 80596).

GRAVE 246

Surface architecture: Double stone circle.
Subsurface architecture: Cist, narrower at north.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.

Artifacts in cist: 26 beads (amazonite, carnelian, agate).
Other artifacts: 1 bead in fill (ostrich eggshell), 1 bead about capstone level (amazonite).
Disturbances: Looted in antiquity. Surface architecture largely destroyed, cist full of sediment and human remains broken, scattered in cist.

Table 4.132: Grave 246 loci.

Locus	Description
1689	Stone circle/structure and fill
1690	Capstones
1692	Cist and cist fill
1704	Human remains in cist
1740	Human remains in cist



Figure 4.166: Grave 246 circle feature and capstones.

Grave 246 was visible on the surface of square W-14 as a linear structure two stones wide to the northeast of the grave, curving and apparently following the grave's east side (Fig. 4.166; Table 4.132; L. 1689). It is unclear whether this is a genuine mortuary structure or perhaps an unconnected surface feature. If it encircled the grave, it

is estimated to have extended 2.60 meters in diameter. A number of stones were found in the fill above the grave, possibly part of a pavement. One ostrich eggshell cylinder disc bead was recovered in the fill (EDM 80655). At a depth of 0.19 meters below surface, four capstones were encountered (L. 1690). These were at about the same elevation as the capstones in Grave 241. One amazonite short cylinder bead was found at about capstone level (EDM 80668). The capstones sealed a cist measuring 1.40 meters long, 0.48 meters wide, and 0.40 meters deep, constructed of nine side slabs and eleven cap support stones. The northern end of the cist is angled at about 45 degrees. Soft sandstone was found at the bottom of the north end of the cist. The cist was filled with mud plaster, in which were encased the fragmentary remains scattered throughout the cist (L. 1692). Although the Digital Grave Database notes an articulated tibia and fibula, a site photo shows a tibia and fibula touching each other but at an oblique angle, clearly not articulated (Fig. 4.167). A skull, humerus, sacrum, and various other bones were recovered in the same area at the northern end of the cist, and shattered long bones were recovered at the south end of the cist (L. 1704, 1740). Twenty-six well-made beads were found in the cist, twenty-four of them in close association (EDM 80798, 80838). These included twenty-four amazonite beads, one carnelian bead, and one agate bead.



Figure 4.167: Grave 246 cist and human remains.

GRAVE 247

Surface architecture: Paved structure.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 5 beads (flint, amazonite, cupric, jet), bone or shell fragment.
Other artifacts: 2 worked stones, 1 potsherd associated with surface architecture.
Disturbances: Looted in antiquity. Capstones disturbed, cist full of sediment, human remains broken and scattered in cist.

Table 4.133: Grave 247 loci.

Locus	Description
1566	Pavement
1671	Fill
1699	Cist and cist fill
1760	Pavement



Figure 4.168: Grave 247 pavement and wall.

Grave 247 was visible on the surface of square AB-13 as a large paved feature (L. 1566). This structure measured 2.76 meters long (on an east-west axis) and 2.10 meters wide (on a north-south axis). Two possibly worked stones, one a rectangular piece identified in the field as a token (EDM 80240) and one possibly partially perforated piece (EDM 80291), were recovered incorporated into this feature. A potsherd was also recovered in association with this feature (EDM 80416). Next to this feature stood a wall-like structure, considered part of the same locus (Fig. 4.168). The area supervisor suggested that the pavement and wall were a later development that obliterated any surface architecture actually connected with Grave 247. At a depth of 1.23 meters below surface, four capstones were encountered. All the capstones appeared disturbed. The cist measured 1.60 meters long, 0.48 meters wide, and 0.34 meters deep. The cist was full of

sediment, and the human remains were badly broken and scattered throughout the cist (Fig. 4.169). For unknown reasons, the exteriors of the skull fragments were colored dark red. Five beads and a colored stone were recovered from the cist. One of the beads was a translucent grey flint cylinder disc (EDM 80719), two were poorly worked cupric stones (EDM 80710, 80720), and one was a nicely rounded amazonite ovular short cylinder bead (EDM 80706). One of the beads was fragmentary, of a soft black stone like jet (EDM 80709). What was called in the field a lambis shell bracelet fragment but what might actually be a bone fragment was also recovered from the cist (EDM 80708).



Figure 4.169: Grave 247 cist.

GRAVE 248

Surface architecture: Pavement.
Subsurface architecture: Rectangular cist.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Infant.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.134: Grave 248 loci.

Locus	Description
1695	Grave
1696	Pavement
1701	Capstones
1707	Cist and cist fill
1708	Human remains



Figure 4.170: Grave 248 pavement.

Grave 248 was visible on the surface of square AC-13 as a disorganized cobble pile (Table 4.134; L. 1695). One anthropomorphic stone was apparently associated with this feature, though it was found on the surface days before the grave itself was excavated and was not collected as though it were associated with a grave (EDM 80022). A pavement beneath this cobble pile and topsoil probably marks the original ground surface (L. 1696). This pavement was constructed of forty cobbles and measured about 1.6 meters long (north/south) and 1.2 meters wide (east/west) (Fig. 4.170). At a depth of 0.30 meters below the surface, a single sandstone capstone was encountered (L. 1701). This capped a rectangular cist measuring 0.40 meters long, 0.21 meters wide, and 0.20 meters deep and constructed of six side slabs and four cap support stones (Fig. 4.171; L. 1707). Within the cist was an infant lying semiflexed with head to the south, on the left side facing west (Fig. 4.172; L. 1708).



Figure 4.171: Grave 248 capstone.



Figure 4.172: Grave 248 cist and burial.

GRAVE 249

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.135: Grave 249 loci.

Locus	Description
1697	Capstones
1712	Human remains



Figure 4.173: Grave 249 cist. Note the skull.

Grave 249 was invisible on the surface of square AC-10 (Table 4.135). At a depth of 0.19 meters, three capstones were encountered (L. 1697). One of these was out of place, on edge and extending down into the cist. The cist measured 1.42 meters long, 0.68 meters wide, and 0.38 meters deep, and was constructed of seven side slabs and twenty cap support stones. Seven more stones were placed in a ring around the capstones. The cist was trapezoidal, wider at the north than at the south. The cist was full of sediment, and the human remains were broken and scattered throughout the cist (Fig. 4.173; L. 1712).

GRAVE 250

Table 4.136: Grave 250 loci.

Locus	Description
1698	Grave

Grave 250 was identified on the surface but not excavated (Table 4.136). No other data exist on this grave.

GRAVE 251

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 2 beads (amazonite, shell).
Other artifacts: 3 beads in fill (amazonite).
Disturbances: Looted in antiquity. Surface architecture destroyed, cist full of sediment, human remains broken and scattered.

Table 4.137: Grave 251 loci.

Locus	Description
1700	Grave
1710	Cist and cist fill
1711	Human remains



Figure 4.174: Grave 251 human remains.

Grave 251 was invisible on the surface of square AB-9 (Table 4.137). Three amazonite beads—two short barrels (EDM 80665, 80772) and one short cylinder (EDM 80673)—were recovered in the fill before the grave was identified. It was recognized when a disorganized group of dolerite cobbles was encountered in the fill immediately above the capstones. At a depth of 0.13 meters below the surface, three capstones were encountered. These covered a cist measuring 1.20 meters long, 0.79 meters wide, and 0.33 meters deep and constructed of eight side slabs and sixteen cap support stones in two courses. The cist was wider at the north than at the south. The cist was full of sediment, and the human remains were broken and scattered throughout the cist (Fig. 4.174). Two beads—one amazonite short barrel bead, and one shell cylinder disc bead—were recovered from the cist (EDM 40041).

GRAVE 252

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: "Semi-preserved," skull in south.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 14 beads (coral, flint, ostrich eggshell).
Other artifacts: Copper fragment, 3 beads (cupric, amazonite, flint) in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.138: Grave 252 loci.

Locus	Description
1702	Grave
1716	Capstones
1717	Cist and cist fill
1741	Human remains



Figure 4.175: Grave 252 capstones.

Grave 252 was invisible on the surface of square AB-9 (Table 4.138; L. 1702). The grave was recognized when a disorganized mass of dolerite cobbles was encountered (L. 1716). Three beads—a flint cylinder disc, a malachite or cupric drilled pebble (EDM 80734) and an amazonite drilled pebble (EDM 80698) were found in the fill. Two of the beads were closely associated with a corroded copper fragment (EDM 80734). At a depth of 0.29 meters, three capstones were encountered. The middle capstone appeared disturbed, as it was at an angle and partially extended into the cist (Fig. 4.175; L. 1717). The cist measured 1.10 meters long, 0.50 meters wide, and 0.34 meters deep and was constructed of eight side slabs and nine cap support stones. The cist was full of sediment, but the skeleton was "semi-preserved," with the skull in the south (L. 1741). Two red-orange, probably coral, short cylinder beads were found in the cist fill above the skeleton

(EDM 80804). One grey flint and two ostrich eggshell cylinder disc beads were recovered from about the human remains (EDM 40040). Nine other beads were also recovered from the cist, including one red-orange, rough textured, probably coral short cylinder bead and eight ostrich eggshell cylinder discs (EDM 80815).

GRAVE 253

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Lambis shell bracelet fragment, 8 beads (copper, amazonite, ostrich eggshell, siltstone).
Other artifacts: Anthropomorphic stone, lambis shell bracelet fragment, 2 beads (dentallium, citrine) at about capstone level.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.139: Grave 253 loci.

Locus	Description
1705	Capstones
1706	Cist and cist fill
1726	Human remains



Figure 4.176: Grave 253 capstones. Note the anthropomorphic stone next to the north arrow.

Grave 253 was invisible on the surface of square AB-13 (Table 4.139). It was recognized when a disorganized pile of dolerite cobbles was encountered. These cobbles extended down to the capstone level. Adjacent to the capstones in the east, an anthropomorphic stone was found in the fill lying face down (Fig. 4.176; EDM 80717). This stone and the cobbles found in the fill are believed to be part of a surface feature destroyed by looters in antiquity. At about capstone level, a bracelet fragment and a citrine bead (EDM 40035) as well as a dentalium bead (EDM 40037) were recovered. At a depth of 0.20 meters, three capstones were encountered. The middle capstone was clearly displaced; it was at a higher elevation than the other capstones and dolerite cobbles were visible in the fill beneath it. One rough citrine bead was recovered at about capstone level (EDM 40036). The cist measured 1.25 meters long, 0.53 meters wide, and

0.45 meters wide and was constructed of eight side slabs and twenty-six cap support stones in two courses. The cist was trapezoidal in shape, wider in the north than in the south. The cist was full of sediment, and about ten centimeters into this sediment a layer of dolerite cobbles was encountered (Fig. 4.177). The broken and disarticulated skeleton lay beneath this pile. A shell bracelet fragment (EDM 80761) and eight beads were recovered from the cist. Six amazonite beads—one a drilled pebble and the other a short barrel (EDM 80759), the others an oval pendant and an elliptical bead (EDM 80743)—and one siltstone cylinder disc bead (EDM 80759), as well as one ostrich eggshell cylinder disc bead (EDM 80736) and one copper bead (EDM 80743) were recovered from the cist above the skeleton. One amazonite elliptical drilled pebble was associated with the skeleton (EDM 80773).



Figure 4.177: Grave 253 cist. Note the cobbles and, next to north arrow, the bracelet fragment.

GRAVE 254

Surface architecture: Cobble pile.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial in fill.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface feature destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.140: Grave 254 loci.

Locus	Description
1722	Grave
1723	Human remains above capstones
1739	Capstones
1745	Cist and cist fill



Figure 4.178: Grave 254 capstones.

Grave 254 was visible on the surface of square AB-10 only as a disorganized mass of cobbles which extended into the fill down nearly to the level of the capstones, especially in the northern part of the grave (Table 4.140). A secondary burial and fragments of mud plaster were also encountered towards the bottom of this rock pile. At a depth of 0.22 meters, five capstones were encountered. One of the capstones was small and appeared to be half of a broken, more typical capstone (Fig. 4.178). Smaller stones were used to seal the edges of these capstones. The cist measured 1.20 meters long, 0.56 meters wide, and 0.43 meters deep and was constructed of eight side slabs and eighteen cap support stones. The cist was trapezoidal in shape, wider in the north than in the south. The Digital Grave Database comments on the irregularity of the size and quality of stones used in the construction of the cist. The cist was full of sediment, and the skeleton was broken and scattered about the bottom of the cist (Fig. 4.179).



Figure 4.179: Grave 254 cist and human remains.

GRAVE 255

Surface architecture: None.
Subsurface architecture: Rectangular cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 1 bead (ostrich eggshell) in fill.
Disturbances: Surface architecture destroyed, human remains fragmentary and scattered in cist.

Table 4.141: Grave 255 loci.

Locus	Description
1718	Capstones
1719	Cist and cist fill

Grave 255 was invisible on the surface of square AB-11 (Table 4.141). One ostrich eggshell cylinder disc bead was recovered from the fill before the grave was recognized (EDM 80654). The Digital Grave Database notes, "there was just one middle stone or mark stone in the middle of the cist," presumably at the surface over, rather than in, the cist. At a depth of 0.05 meters below the surface, the cist, lacking a capstone, was encountered. The cist measured 0.83 meters long, 0.35 meters wide, and 0.32 meters deep and was constructed with seven side slabs and nine cap support stones. Fragmentary human remains were found scattered throughout the fill of the cist.

GRAVE 256

Surface architecture: None.
Subsurface architecture: Rectangular cist.
Main burial: Unknown.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.

Other artifacts: 1 bead in fill (amazonite).
Disturbances: Surface architecture destroyed.

Table 4.142: Grave 256 loci.

Locus	Description
1721	Grave

No grave records exist for Grave 256 (Table 4.142). It was apparently invisible on the surface of square AB-10. One amazonite short cylinder bead was recovered from the fill before the grave was recognized (EDM 80729). Digital site photos show a small cist composed of six dolerite side slabs with one large cobble in the center of the cist (Fig. 4.180). No other details of the grave were recorded.



Figure 4.180: Grave 256 cist.

GRAVE 257

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial in fill.
Artifacts in cist: Ivory or shell pins, ivory or shell bracelet fragments, 4 beads (amazonite, alabaster, shell).
Other artifacts: Mother of pearl, 9 beads (amazonite, ostrich eggshell) in fill; 14 beads with secondary burials (ostrich eggshell, carnelian).
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.143: Grave 257 loci.

Locus	Description
1722	Grave and fill
1723	Secondary burial above capstones
1739	Capstones
1745	Cist
1753	Human remains



Figure 4.181: Grave 257 cist.

Grave 257 was invisible on the surface of square AB-10 (Table 4.143). One ostrich eggshell cylinder disc bead was recovered in the fill before the grave was identified (EDM 80735). The grave was recognized when a disorganized cluster of cobbles was encountered in the fill extending down to the capstones (L. 1722). Eight beads were recovered from this fill, including an amazonite cylinder disc, an unusually finely-worked amazonite long barrel bead, six ostrich eggshell cylinder discs, along with an apparently unworked piece of mother of shell (EDM 80758). A secondary burial was encountered in the northeast of the grave fill (L. 1723). Fourteen beads were found in association with this secondary burial, one a carnelian drilled pebble and the rest ostrich eggshell cylinder discs (EDM 80793, 80846). At a depth of 0.17 meters, three capstones were encountered (L. 1739). All three appeared to be disturbed. The cist measured 1.00 meters long, 0.45 meters wide, and 0.37 meters deep and was constructed of eight side

slabs and eleven cap support stones. The east wall bent outwards towards the north end in order to make the cist wider in the north than in the south. The cist was full of sediment (L. 1745). The skeleton was broken, and most of the skeleton was encountered in the north end of the cist (L. 1753). Skull fragments were recovered from the south end of the cist, however (Fig. 4.181). Three beads, including a small tubular shell bead, an amazonite cylinder disc bead, and a white alabaster cylinder disc bead were recovered in association with the remains in the cist (EDM 80882), as was what are probably the remains of another alabaster disc bead (EDM 80894). Fourteen ivory, bone, or shell pins or pin fragments, and four bracelet fragments were also found with the human remains (EDM 80897).

GRAVE 258

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Wood fragments, 3 beads (amazonite).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones missing, cist full of sediment, human remains broken and scattered in cist.

Table 4.144: Grave 258 loci.

Locus	Description
1724	Capstones
1733	Cist and cist fill



Figure 4.182: Grave 258 capstones.

Grave 258 was invisible on the surface of square AB-10 (Table 4.144). At a depth of 0.26 meters, two capstones were encountered, as was what appears to be a broken fragment of a third (Fig. 4.182). A gap between the two capstones appeared large enough for two or three more capstones (L. 1724). This space was filled with cobbles, which extended into the cist. The cist measured 1.35 meters long, 0.49 meters wide, and 0.51 meters deep, and was constructed of eight side slabs and at least thirteen cap support stones. The skeleton was broken and scattered throughout the cist (L. 1733). A number of wood fragments, some up to five centimeters long and possibly the remains of a vessel, were recovered from the north end of the cist. Three amazonite beads, two cylinder discs and one less regular cylinder disc, were recovered from the cist (EDM 80816, 80827).

GRAVE 259

Surface architecture: Cobble feature.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.145: Grave 259 loci.

Locus	Description
1725	Grave and fill
1731	Cobble feature and stone circle and fill
1736	Capstones
1747	Cist and cist fill



Figure 4.183: Grave 259 subsurface cobble feature.

Grave 259 was visible on the surface of square AB-9 as a disorganized group of cobbles (Table 4.145; L. 1725). About 0.20 meters below the surface, a more organized cobble feature might mark the original ground surface (Fig. 4.183; L. 1731). This consisted of a roughly circular collection of cobbles. Eleven dolerite cobbles appear to form a grave circle, while a group of thirteen others cover the surface of the grave, though they do not form an even pavement. At a depth of 0.42 meters below the present surface, three capstones were encountered (L. 1736). These covered a cist measuring 0.94 meters long, 0.42 meters wide, and 0.32 meters deep. The cist was trapezoidal, wider in the north than in the south. The cist was full of sediment, and four large cobbles took up much of the space within the cist (Fig. 4.184; L. 1747). Very few bones were recovered from the cist.



Figure 4.184: Grave 259 cist.

GRAVE 260

Surface architecture: None.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Anthropomorphic stone, 9 beads (carnelian, amazonite, citrine).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.146: Grave 260 loci.

Locus	Description
1728	Capstones
1732	Cist and cist fill
1761	Cist pavement



Figure 4.185: Grave 260 capstones. Note the displaced capstone, standing vertical.

Grave 260 was invisible on the surface of square AB-11 (Table 4.146). It was recognized when a disorganized cobble pile was encountered in the fill. At a depth of 0.25 meters, three capstones were encountered (L. 1728). Only two of these were in place; the third was standing upright in the cist (Fig. 4.185). The two in situ capstones were carefully sealed with mud plaster and smaller cobbles placed around the edges. The cist measured 0.85 meters long, 0.33 meters wide, and 0.45 meters deep and was constructed of eight side slabs and eleven cap support stones. The cist was trapezoidal, wider in the north than in the south (L. 1732). The floor of the cist was paved with eighteen well-laid stones (L. 1761). An anthropomorphic stone was recovered in the north end of the cist (Fig. 4.186; EDM 80801). The stone lay with head to the north, on the left side facing east. An unusually finely carved carnelian long barrel bead was found next to the stone (EDM 80775). However, the stone was found at an angle in the fill rather than on the pavement, and is not believed to have been intentionally placed in the cist (Fig. 4.187). Two short cylinder amazonite beads and one rectangular amazonite pendant were also recovered at about this level (EDM 80775, 80820). One citrine truncated double bicone bead (EDM 80802) and four more amazonite beads, including three roughly-shaped and irregular cylinder or barrel discs and one rectangular pendant with rounded edges (EDM 80812, 80817) were also recovered from the cist.



Figure 4.186: Grave 260, anthropomorphic stone in cist.



Figure 4.187: Grave 260, anthropomorphic stone in cist.

GRAVE 261

Surface architecture: None.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.147: Grave 261 loci.

Locus	Description
1734	Capstones
1738	Cist and cist fill
1762	Cist pavement



Figure 4.188: Grave 261 human remains.

Grave 261 was visible on the surface of square AC-9 by a disorganized group of cobble stones (Table 4.147). More cobbles were encountered in the fill, and a cobble pile was found over the northern part of the cist. An ash layer with large pieces of charcoal was observed over the capstones and extending to the west of the grave. At a depth of 0.22 meters, five capstones were encountered (L. 1734). These sealed a cist measuring 1.30 meters long, 0.59 meters wide, and 0.37 meters deep and constructed of eight side slabs and eleven cap support stones. The cist was trapezoidal, wider in the north than in the south. The floor of the cist was paved with twenty-one flat stones (L. 1762). The cist was full of sediment, and the human remains were broken and scattered throughout the cist (Fig. 4.188; L. 1738).

GRAVE 262

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.148: Grave 262 loci.

Locus	Description
1737	Capstones
1748	Cist and cist fill

Grave 262 was invisible on the surface of square AC-10 (Table 4.148). At a depth of 0.14 meters, a single capstone was encountered (L. 1737). This sealed a cist

measured 0.53 meters long, 0.40 meters wide, and 0.24 meters deep and constructed of six side slabs without cap support stones. Small angular pieces of granite surrounded the capstone. Unusually for Wadi Fidan 40, the cist was both roughly circular and oriented on an east-west axis. The shape may be due in part to a partial collapse of the west side of the cist. Preservation of the skeletal material was very poor (L. 1748).

GRAVE 263

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: Secondary burial above capstones.
Artifacts in cist: None.
Other artifacts: 76 beads about capstone level (flint).
Disturbances: Looted in antiquity. Surface architecture disturbed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.149: Grave 263 loci.

Locus	Description
1743	Capstones
1746	Human remains
1749	Cist and cist fill



Figure 4.189: Grave 263 capstones.

Grave 263 was invisible on the surface of square AC-10. At a depth of 0.20 meters, four capstones were encountered (Table 4.149; L. 1743). A gap in the middle of the cist showed where a fifth capstone once rested; this gap was filled with two large cobbles (Fig. 4.189). Secondarily deposited human remains were recovered above the capstones (L. 1746). Seventy-six small beads were found in a cluster next to the capstones, and scattered bone was also collected from about the capstones, especially over the northwestern part of the capstone locus. Seventy-one beads, all of them flint cylinder discs, were recovered from about the capstone level (EDM 80813). The capstones sealed a cist measuring 1.40 meters long, 0.50 meters wide, and 0.37 meters deep and constructed of eight side slabs and thirteen cap support stones. The north end of the cist was completely full of sediment, while the top level of the southern part of the

cist was empty. More cobblestones were found in the upper level of the north part of the cist. Small bone fragments were scattered throughout the cist (L. 1749).

4.5: 2004 EXCAVATIONS: AREA A GRAVE DESCRIPTIONS

GRAVE 5-2004

Surface architecture: Partial grave circle.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: Peach pit, flint blade flake in fill.
Disturbances: Looted in antiquity, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.150: Grave 5-2004 loci.

Locus	Description
2007	Topsoil
2015	Fill
2038	Capstones
3102	Cist
3101	Cist fill



Figure 4.190: Grave 5-2004 capstones.

Grave 5-2004 was located in the southwest quadrant of square J-8 (Table 4.150). It was visible on the surface and is believed to be identical to the grave numbered 5 but unexcavated in 1997 (L. 2007). It was marked by a partial grave circle of eleven stones, measuring 1.65 meters by 1.76 meters in maximum extent. A probable peach pit (EDM 86053), snail shells, and a flint blade flake were recovered from the fill (L. 2015). After removal of fill, capstones were reached at a depth of about 0.42 meters. Two sandstone capstones were observed in situ (L. 2038). An additional capstone protruded from the cist, suggesting disturbance in antiquity (Fig. 4.190). The capstones were supported with eight cobbles, six of dolomite and two of sandstone. Cist fill removal revealed a cist constructed of six slabs, four of dolerite and two of sandstone (L. 3102). The interior of the cist measured 1.08 meters by 0.84 meters by 0.59 meters. A large number of bone fragments were observed throughout the cist, few of which were in recoverable condition

(L. 3101). One apparently unworked dolerite stone was collected from the cist as a possible standing stone (EDM 87042).

GRAVE 9-2004

Surface architecture: Partial grave circle.
Subsurface architecture: Capstones over pit.
Main burial: Extended, on back, facing up.
Sex: Male.
Age: Adult, 19-40.
Other burials: None.
Artifacts beneath capstones: Iron blade, baby gazelle.
Other artifacts: None.
Disturbances: Surface architecture partially destroyed.

Table 4.151: Grave 9-2004 loci.

Locus	Description
2006	Topsoil
2073	Grave exterior
2014	Fill
2127	Capstones
2134	Fill beneath capstones
2147	Human remains
2180	Ungulate skeleton



Figure 4.191: Grave 9-2004 capstones.

Grave 9-2004 was located in the eastern half of square I-8, partially overlapping square J-8 (Table 4.151; Levy et al. 2005: 451). It was roughly halfway between the northern and southern boundaries of I-8. This grave is believed to be identical to the Grave 9 mapped but unexcavated in 1997. Grave numbers 1 through 9 were set aside to avoid overlap with the numbering of graves excavated by Russell Adams in 1989, although he acknowledges excavating only six graves (Adams 1991: 181). Grave 9-2004 was observed on the surface as a group of four stones which appear to be part of what was once a grave circle, measuring about 2.6 meters in diameter (L. 2073). Several more irregularly placed stones were noted on the surface and seem to be related to this feature. After excavating 0.50 meters of topsoil and fill (L. 2006, 2014), four sandstone capstones were encountered (Fig. 4.191; L. 2127). Unusually for this cemetery, these capstones extended beneath the cist of Grave 316, showing one of the few cases of one burial superimposed over another. Beneath the capstones, compact sediments were encountered (L. 2134), covering a primary individual burial. This burial, later identified as a male, was found on his back in an extended position (Fig. 4.192; L. 2147). The burial measured 1.18 meters long by 0.52 meters wide. Ungulate remains, identified by ELRAP faunal analyst Dr. Adolfo Muniz as possibly a gazelle, were found in the pelvic region (L. 2180). The gazelle may have been a hunting trophy, as Muniz suggested in his notes, or it may have been a pet, since young gazelles are easily tamed and were common pets ethnographically (Stevens 1923: 305). Following the removal of the burial, three small iron fragments, apparently pieces of a single blade, were recovered in the area beneath the cranium (EDM 86776, 86798). Total depth of the burial below surface was 1.06 meters.



Figure 4.192: Grave 9-2004 burial, after the removal of the ungulate bones.

GRAVE 52-2004

Surface architecture: Partial stone circle and pavement.

Table 4.152: Grave 52-2004 loci.

Locus	Description
2128	Topsoil and grave exterior



Figure 4.193: Grave 52-2004 surface architecture.

Grave 52-2004 was identified on the surface as a partial stone circle consisting of three cobbles surrounding a cobble feature that appears to be a pavement (Fig. 4.193; Table 4.152; L. 2128). The feature was believed to be identical to that identified as Grave 52 in the 1997 field season. This grave was left unexcavated in 2004, and no more details were recorded regarding it.

GRAVE 55-2004

Surface architecture: Partial grave circle.
Subsurface architecture: Capstones over pit.
Main burial: Flexed, oriented south.
Sex: Female.
Age: 30-55.
Other burials: Bone fragments in fill, infant remains in pit with main burial.
Artifacts in cist: None.
Other artifacts: Tabular scraper in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.153: Grave 55-2004 loci.

Locus	Description
2181	Topsoil and grave exterior
2227	Pavement
3028	Fill
3043	Capstones
3052	Fill beneath capstones
3058	Human remains



Figure 4.194: Grave 55-2004 stone circle.

Grave 55-2004 was initially believed to be identical to the grave mapped and numbered 55 in the 1997 field season, and was therefore denoted Grave 55 in the field (Table 4.153). However, subsequent consultation of the 1997 field notes revealed that the grave numbered 55 in 1997 was excavated in that year. This grave is therefore referred to here as Grave 55-2004. The grave was demarcated on the surface by a partial stone circle of seven stones roughly 1.50 meters in diameter in the southeast quadrant of

square I-11 (Fig. 4.194; L. 2180). Several paving stones were also observed following the removal of topsoil (L. 2227). Some bone fragments, a white flint tabular scraper (EDM 89153), and a cowry shell with the back removed (EDM 86737), were encountered in the fill (L. 3028). At a depth of about 0.56 meters, four sandstone capstones were encountered (L. 3043). Beneath the capstones a sediment-filled pit was encountered (L. 3052). Excavation revealed a primary burial in a flexed position of an individual with head oriented south in the cist fill, measuring 0.43 meters long and 0.29 meters wide (Fig. 4.195; L. 3058). Osteological analysis identified the individual as a female, believed due to tooth wear to be aged about 30 to 55. An abscess was noted on her left first premolar. Parturition pits indicate she delivered at least one child. Also reported from pit locus 3052, though apparently erroneously attributed to neighboring Grave 336, was fragmentary individual 336B, an infant aged one to four years. Individual 336C, an adult represented by a parietal fragment, may be identical to individual 55-2004. No artifacts are associated with this burial. Total depth of the burial was about 1.14 meters.



Figure 4.195: Grave 55-2004 burial.

GRAVE 59-2004

Surface architecture: Complete stone circle of 18 dolerite cobbles surrounding a pile of 34 cobbles.
Subsurface architecture: Bent cist with southern end slab removed.
Main burial: Extended, on back, head to north.
Sex: Male.
Age: 24-34.
Other burials: None.
Artifacts in cist: Wooden vessel containing pomegranates, worked wood, leather and textile shrouds.
Other artifacts: 1 potsherd in fill.
Disturbances: Recent looters' trenches in fill, capstones apparently displaced.

Table 4.154: Grave 59-2004 loci.

Locus	Description
2119	Topsoil and grave exterior
2137	Fill
2152	Capstones
2171	Cist
2163	Cist fill
2172	Human remains



Figure 4.196: Grave 59-2004 capstones. The capstones are all granite, which is unusual for Wadi Fidan 40.

Grave 59-2004 is located in about the center of the northwest quadrant of square J-11 (Table 4.154; Levy et al. 2005: 451). It was visible on the surface as a complete stone circle of 18 dolerite cobbles about 1.95 meters in diameter surrounding a pile of 34 rounded cobbles (L. 2119). An excavation believed to be a looter's trench running east-west was visible just to the north of the grave, and a second looter's trench was visible to the southeast. One potsherd was recovered from the fill (EDM 86811). After removal of the cairn, and after excavation of 0.63 meters of top soil and fill (L. 2137), four granite capstones were encountered (Fig. 4.196; L. 2152). Mud plaster was observed sealing the edges of the capstones, though Adolfo Muniz's supervisor notes suggest that "one [capstone] appears to be shifted". The capstones topped a rectangular cist with fifteen cap support stones and seven side slabs (L. 2171). No side slab was observed to the

south; it is believed that the cist was initially constructed to hold a flexed burial but that the southern slab was removed in order to accommodate an extended burial. The cist measured 1.61 meters long, 0.52 meters wide, and 0.54 meters deep, at a total depth beneath the ground surface of 1.33 meters (L. 2163). Within the cist, an individual primary extended burial was encountered (L. 2172). The individual was interred on his back, oriented to the north (Fig. 4.197). The extended posture, placement on the back, and the orientation to the north are all unusual for this cemetery. Subsequent osteological analysis revealed a well-healed, egg-shaped depression fracture measuring 25.92 mm by 20.31 mm above the left eye (Fig. 4.198). In addition, the twelfth thoracic vertebra shows evidence of a well-healed compression fracture and of osteoporosis. The right fibula has a boney growth on its proximal end, and carries were noted on the central upper incisors. The individual is a male, aged between 21 and 46 years of age, but most likely to be 29 years of age. Preservation of the skeleton and his associated grave goods was excellent. A teapot-like wooden vessel with a spout and a lug handle carved from a single block of wood, containing four pomegranates, was placed in the chest region (Levy et al. 2005: 469). Three more pomegranates were found next to the left pelvis, making a total of seven pomegranates recovered (EDM 89451, 89452, 89453, 89454, 89455). The seeds from these pomegranates provided seven of the nine radiocarbon dates from Wadi Fidan 40. Fragments of leather (EDM 89198, 89199) and textile shrouds were found on the body, particularly the lower body (Fig. 4.199; EDM 89206). A piece of worked wood, probably a pin, was also recovered in the thoracic region (Fig. 4.200; EDM 86433).



Figure 4.197: Grave 59-2004 burial.



Figure 4.198: Grave 59-2004 primary burial skull. Note the depression fracture above the left orbit.



Figure 4.199: Grave 59-2004 burial textile on the lower legs.



Figure 4.200: Grave 59-2004 wooden artifact, probably a pin, in the thoracic region.

GRAVE 76-2004

Table 4.155: Grave 76-2004 loci.

Locus	Description
2062	Grave

A grave sheet notes that Grave 76-2004 was observed in square K-9 (Table 4.155). This grave was mapped but left unexcavated in the 2004 field season. It is believed to be identical to the grave mapped as Grave 76 but left unexcavated in the 1997 field season.

GRAVE 80-2004

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, facing west.
Sex: Female.
Age: 21-50.
Other burials: Secondary above capstones.
Artifacts in cist: 1 bead (onyx).
Other artifacts: 1 potsherd about capstone level.
Disturbances: Stone circle partially destroyed.

Table 4.156: Grave 80-2004 loci.

Locus	Description
2076	Grave circle exterior
2003, 2011, 2034	Fill
2052, 2053	Capstones
2067	Cranial fragments above capstones
2068	Human remains above capstones
2074	Cist
2075	Cist fill
2105	Human remains



Figure 4.201: Grave 80-2004 burial.

Grave 80-2004 is situated in the central area of square I-8 (Table 4.156). The grave is marked by a partial stone circle of eight stones measuring 1.85 meters in diameter. During fieldwork in 2004, this grave was believed to be identical to the grave mapped and numbered 80 in 1997. It was believed that Grave 80 was not excavated during that field season. However, subsequent consultation of the excavation notes revealed that the grave numbered 80 in 1997 was excavated. Excavation of Grave 80-2004 revealed that the cist was not immediately below the grave circle; instead, the cist was located slightly to the northeast of the grave circle. Several fill loci were therefore excavated before the capstones were uncovered (L. 2003, 2011, 2034). A secondary burial was encountered in the fill (L. 2067, 2068). Capstones were encountered about 0.30 meters below the ground surface (L. 2052, 2053). One potsherd was recovered from

about capstone level (EDM 86316). The cist was marked by four sandstone capstones sealed around the edges with a thick layer of mudplaster. These capped a rectangular cist constructed of 13 dolerite and sandstone cap support stones and an unspecified number (but at least six) of side slabs, measuring 1.28 meters long, 0.44 meters wide, and 0.54 meters deep, with the floor being a total of 0.97 meters below the ground surface (L. 2074). Little sediment was in the cist (L. 2075). A single individual was interred within the cist (L. 2105), situated in a semiflexed posture with head to the south, facing west, lying on the left side (Fig. 4.201). Osteological analysis revealed that this is a female, probably aged about 30, but more definitively 21-50 years of age. One small onyx semicircular bead was recovered from the cist in the sieve (EDM 89023).

GRAVE 82-2004

Surface architecture: Partial stone circle.
Subsurface architecture: Capstone covered pit.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: Secondary burial in fill.
Artifacts in cist: None.
Other artifacts: Potsherd, 1 bead (cupric) in fill.
Disturbances: Looted in antiquity. Stone circle partially destroyed, capstones displaced, sediment in cist, human remains broken and scattered.

Table 4.157: Grave 82-2004 loci.

Locus	Description
2009	Topsoil and grave exterior
2017	Fill
2061	Rock pile intrusive to fill
2071	Cluster of human remains beside rock pile
2086	Capstones
2087	Fragmentary disarticulated human remains

Grave 82-2004 was located in the northwestern section of square K-8 (Table 4.157; L. 2009). This grave was believed to be identical to the grave mapped and denoted 82 but unexcavated in 1997. It was marked by a partial circle of 20 dolerite and sandstone cobbles measuring about 2.6 meters surrounding a rock pile of five large stones. The circle was well-defined in the west but poorly defined and possibly disturbed in the east. One cupric drilled pebble bead (EDM 86152) and one potsherd (EDM 86140) were found in the upper level of fill. Sixteen large stones were found in the lower fill (L. 2017), including broken sandstone slabs believed to have been capstone fragments (L. 2061). Large amounts of human remains of an adult of unknown sex were located next to this disorganized rock pile, extending into the northeast baulk of the excavation (L. 2071). Cranial and long bone fragments remain embedded in the excavation wall. These remains were just above capstone level. Capstones were reached at a depth of 0.43 meters (L. 2086). Mud plaster was seen in different areas at the top of the capstone locus, however, the capstones appeared to have been disturbed in antiquity. A gap between the capstones suggested that one capstone was missing. The pit beneath the capstones measured 0.49 meters long, 0.36 meters wide, and at a total depth of 0.58 meters below the surface. A fragmentary, disarticulated human skeleton seems to have been found beneath these capstones, though it is unclear from the notes whether this grave was completely excavated (L. 2087). The osteological notes report one as the minimum number of individuals, and note that the remains consist of a few long bone remains, skull fragments, and various fragments from an adult of unknown sex.

GRAVE 83-2004

Surface architecture: Stone circle.
Subsurface architecture: Rectangular V-shaped cist.
Main burial: Secondary.
Sex: Male.
Age: Adult.
Other burials: Secondary above capstones.
Artifacts in cist: None.
Other artifacts: Potsherds, lithic flakes in fill.
Disturbances: None observed.

Table 4.158: Grave 83-2004 loci.

Locus	Description
2077	Grave circle
2010	Topsoil
2018	Fill
2027	Pavement
2028	Fill
2032	Human remains above capstones
2091	Secondary burial above capstones
2039	Capstones
2096	Cist
2086	Cist fill



Figure 4.202: Grave 83-2004, mud plaster-covered capstones.

Grave 83-2004 is located in the southwest quadrant of square K-8 (Table 4.158). The grave was recognizable on the surface by a complete stone circle consisting of 16 dolerite and sandstone cobbles 1.5 meters in diameter (L. 2077). Beneath a shallow deposit of sediment (L. 2010, 2018) a pavement was encountered (L. 2027), beneath which was more fill (L. 2028). Three potsherds were recovered at about the level of the pavement (EDM 86199, 86202, 83236), and another two were recovered from the fill below (EDM 86060, 89019). A secondary burial associated with three ceramic sherds (EDM 86062, 86063, 86065) and lithic flakes was observed in the fill in the north part of the grave; only part of this was excavated (L. 2032; 2091). After excavating 0.67 meters of fill, two large capstones tightly sealed with mud plaster were encountered (Fig. 4.202; L. 2039). Small cavities were observed beneath this mud plaster. These stones capped a small rectangular cist measuring 0.66 meters long, 0.23 meters wide, and 0.50 meters deep consisting of five side slabs arranged with a V-shaped base (L. 2096). An articulated os coxa and femur could be seen protruding from the fill (Fig. 4.203; L. 2086). According to the osteological analysis forms, that the remains of two individuals were commingled in the cist; however, given the small size of the cist and since no data exists in these forms for the secondary burial above the capstones, it is possible that the burials within and without the cist were accidentally analyzed together. About 75% of individual 83A was recovered, while a few postcranial fragments from a second individual, 83B, were recovered, suggesting that secondary burial within the cist was intended to be an individual burial. 83A is an adult male, unusually large, 23-57, probably 35 years of age. 83B is also an adult male, 21-46, probably 29 years of age, smaller than 83A, represented

by ox coxa, sacrum, and femoral fragments. Other finds included bits of small flaked bone and a ceramic bowl or cup handle, though these probably were not intentionally deposited as grave goods.



Figure 4.203: Grave 83-2004 burial.

GRAVE 84-2004

Surface architecture: Partial stone circle of eight stones, all standing in the north.
Pavement presumably once at surface.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed with head to the south, facing west.
Sex: Female.
Age: 38-55.
Other burials: Secondary burial above capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Grave circle partially destroyed.

Table 4.159: Grave 84-2004 loci.

Locus	Description
2078	Grave circle
2008	Topsoil
2079	Capstones
2098	Cist
2088	Cist fill
2104	Human remains



Figure 4.204: Grave 84-2004 burial.

Grave 84-2004 was located in the southeast corner of Square J-8 (Table 4.159). It was recognized on the surface by eight dolerite stones which formed a partial stone circle projected to be 1.7 meters in diameter (L. 2078). These were visible in the north, but not in the south, of the grave. Excavation of top soil and fill (L. 2008) revealed four sandstone capstones at a depth of 0.58 meters (L. 2079). The four capstones were

partially sealed with mud plaster. A secondary burial was observed twenty to thirty centimeters above the central capstone, extending into the eastern baulk of the excavation. It may have been placed not far above the mud brick on the capstone. The capstones sealed a trapezoidal cist measuring 1.20 meters long, 0.60 meters wide, and 0.53 meters deep, for a total depth of 1.24 meters below the surface (L. 2098). The cist was constructed of eight cap support stones and an unspecified number of side slabs. Beneath a shallow layer of sediment (L. 2088), a primary burial was uncovered, laid in a semiflexed position with head to the south, lying on the left side facing west (Fig. 4.204; L. 2104). Osteological analysis showed that this is a female, aged 38 to 55. Pathological conditions included premortem tooth loss and degenerative joint disease.

GRAVE 90-2004

Surface architecture: Stone circle surrounding a pavement.
Subsurface architecture: Capstones over pit.
Burial: Semiflexed, head to south, facing west.
Sex: Unknown
Age: Adult.
Other burials: Bone fragments above capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Voids in fill suggest hasty reburial, but no clear evidence of disturbance.

Table 4.160: Grave 90-2004 loci.

Locus	Description
2081	Grave circle
2004	Topsoil
2012	Pavement
2026	Fill
2035	Capstones
2112	Pit
2113	Pit fill
2122	Human Remains



Figure 4.205: Grave 90-2004 burial.

Grave 90-2004 was visible on the surface of the southwest corner of square I-8 as a complete stone circle measuring 1.5 meters in diameter comprised of 14 dolerite cobbles (Table 4.160; L. 2081). Beneath a shallow level of sediment (L. 2005), a pavement was encountered (L. 2012). Small bone fragments were found in the fill beneath the pavement (L. 2026), especially in the northwest area of the grave, apparently close to the capstones. Voids were also found beneath some of the larger cobbles found in the fill, suggesting the grave was hastily refilled. About 0.54 meters below the ground surface, four capstones were encountered (L. 2035). No mud plaster was observed on these capstones. The capstones rested on six cap support stones and covered a pit measuring 1.24 meters long, 1.15 meters wide, and 0.48 meters deep, for a total burial depth of 1.14 meters (L. 2112), full of sediment (L. 2113). The interred was found in a

semiflexed position with head to the south, facing west (L. 2122). The arms were bent at the elbows with the hands in the facial region, apparently placed beneath the head (Fig. 4.205). Preservation was poor, and osteological analysis was limited. The remains appear to be an adult of unknown sex.

GRAVE 91-2004

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist with south end removed.
Burial: Extended, on back, head to south.
Sex: Unknown.
Age: 27-66.
Other burials: Bone fragments in fill.
Artifacts in cist: 1 stamp seal, 3 beads (cupric).
Other artifacts: None.
Disturbances: None observed.

Table 4.161: Grave 91-2004 loci.

Locus	Description
2082	Grave circle
2005	Topsoil
2013	Fill
2036	Capstones
3002	Human remains
9190	Cist
3050	Cist fill
3087	Human remains



Figure 4.206: Grave 91-2004 burial.

Grave 91-2004 was visible on the surface in the middle of the south side of square I-8 as a complete stone circle of 20 dolerite stones, 1.9 meters in diameter (Table 4.161; L. 2082; Levy et al. 2005: 451). It was believed to be identical to the grave mapped and numbered 91 but not excavated in 1997. A very small amount of skeletal material from an individual of unknown age and sex was secondarily deposited in the fill, especially in the northwest part of the grave (L. 2005, 2013). A seed, identified in the field as acacia, was also recovered from the fill (B. 3124). After excavating 0.55 meters of fill, four sandstone capstones were uncovered (L. 2036). Notes indicate that a void suggested one capstone was removed in antiquity. The stones capped a cist constructed of ten side slabs (L. 9190). The individual appeared to lie in a cist originally constructed for a semiflexed burial but deliberately altered in order to accommodate an extended burial, as no side slab was present in the north end of the cist (Fig. 4.206). The cist measured 1.25 meters long

after its alteration, 0.35 meters wide, and 0.56 meters deep, placing the burial a total of 1.24 meters below the surface. Beneath the sediment (L. 3050), a primary individual burial was encountered (L. 3087). The individual was buried in an extended position, lying on the back with the head pointing south. The individual's arms were crossed over the chest. A stamp seal (EDM 86873), identified by Stefan Münger as a typical tenth century Egyptian confection (Levy et al. 2005: 39-40), was discovered in the sieve from the left chest area below the right hand. A single cupric short truncated bicone bead was recovered from the sieve from sediments just below the groin (EDM 86893). Two more cupric beads, one another short truncated bicone and one a barrel disc bead, were also recovered from the human remains (EDM 89165). The individual was an adult, aged 27 to 66; sex could not be determined.

GRAVE 300

Surface architecture: Partial grave circle.
Subsurface architecture: Capstones covering pit.
Burial: Fragmentary, secondary?
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts below capstones: None.
Other artifacts: None.
Disturbances: Capstones poorly fitted and possibly disturbed, human remains fragmentary.

Table 4.162: Grave 300 loci.

Locus	Description
2092	Grave circle
2000	Topsoil
2019	Fill
2041	Capstones
2106	Burial pit
2107	Cist fill



Figure 4.207: Grave 300 capstones.

Grave 300 was visible on the surface of the southeastern quadrant of square I-8 as a partial stone circle of eight cobbles, projected to be 1.05 meters in diameter (Table 4.162; L. 2092). Grave 300 was the first grave noted in Area A which did not appear to have been mapped or numbered in the 1997 field season. After excavating 0.47 meters of fill (L. 2000, 2019), three capstones were uncovered (L. 2041). The capstones were poorly fitted and may be disturbed (Fig. 4.207). The capstones covered a pit measuring 0.50 meters long, 0.28 meters wide, a total of 0.95 meters below the surface (L. 2106). The fragmentary remains of an adult of unknown sex were recovered from what was either a secondary or a disturbed burial in this pit (L. 2107).

GRAVE 301

Surface architecture: Stone circle of six stones, including one large stone in the west.
Subsurface architecture: Capstones over pit.
Burial: Fragmentary.
Sex: Unknown.
Age: Adult.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.163: Grave 301 loci.

Locus	Description
2020	Topsoil
2093	Grave circle
2027	Pavement
2028	Fill
2037	Capstones
2118	Fill beneath capstones



Figure 4.208: Grave 301 capstone.

Grave 301 was visible on the surface in the southeast corner of I-8 as a partial circle of six cobbles, measuring 1.08 meters in diameter (Table 4.163; L. 2093). Beneath a shallow topsoil level (L. 2020), a stone pavement of flat dolerite cobbles was encountered (L. 2027). Beneath another level of fill (L. 2028), two capstones were encountered 0.31 meters below the surface (Fig. 4.208; L. 2037). Beneath these, an oblong pit was encountered in the conglomerate, containing scanty and very fragmentary human remains of an adult (L. 2118). The pit measured approximately 0.91 meters long and 0.79 meters wide. Total burial depth below the surface was 0.80 meters.

GRAVE 302

Surface architecture: Partial stone circle, poorly defined.
Subsurface architecture: Pavement.
Burial: Secondary, fragmentary.
Sex: Unknown.
Age: Unknown.
Artifacts: None.
Disturbances: None observed.

Table 4.164: Grave 302 loci.

Locus	Description
2080	Grave circle
2021	Fill
2049	Human remains



Figure 4.209: Grave 302 secondary burial.

Grave 302 was designated by a grave before excavation, but was excluded from the final report as such by the area supervisor (Table 4.164). It is a partial secondary burial unconnected with any other grave, and would not normally have been designated with a grave number. It was visible on the surface of the southeastern section of square J-8 as a partial, poorly defined circle comprised of eight dolerite and sandstone cobbles, measuring about one meter in diameter (L. 2080). These appear to the south, west, and east, with no clear stones to the north. About twenty centimeters below the surface (L. 2021), five poorly preserved longbone fragments were encountered, secondarily deposited (Fig. 4.209; L. 2049). Below these, a row of paving stones extending into the eastern wall was observed. Other then these stones, no other stone features or formations were encountered. The grave was excavated to a depth of about a meter below the surface, into the conglomerate, but no other human remains or artifacts were recovered.

GRAVE 303

Surface architecture: Partial stone circle.
Subsurface architecture: Capstones, unknown.
Burial: Unexcavated.
Disturbances: Surface architecture partially destroyed, displaced capstone in fill.

Table 4.165: Grave 303 loci.

Locus	Description
2022	Fill and grave exterior
2041	Rock pile
2042	Fill

Grave 303 was visible on the surface by a horseshoe-shaped formation of ten stones, measuring 0.95 meters in diameter, in the middle of the southern edge of square J-8 (Table 4.165; L. 2022). Several large stones resembling the flat dolerite cobbles used as paving stones at the site were removed from the fill (L. 2041). A large capstone was found in the fill of the northern section of the grave near the surface, believed to be from a nearby looted grave. Two capstones were observed beneath a further level of sediment (L. 2042), but the grave was not excavated beyond this point.

GRAVE 304

Surface architecture: Stone circle.
Subsurface architecture: Unknown.
Burial: Disturbed.

Table 4.166: Grave 304 loci.

Locus	Description
2023	Fill
2057	Rocky fill
9252	Capstones



Figure 4.210: Grave 304 capstones.

Grave 304 is located in the northeastern quadrant of square J-8 (Table 4.166). It is marked by a complete stone circle constructed of twenty dolerite and sandstone cobbles measuring 1.49 meters in diameter (L. 2023). Five large stones were also found in the middle of the grave. The very fragmentary remains of an adult of unknown sex were recovered from the fill. Capstones and flat dolerite cobbles resembling those used at the site for paving stones were found in the fill (L. 2057). The grave was excavated to the capstones, which showed signs of disturbance. Only the southernmost capstone was in place (Fig. 4.210). Excavations ceased without excavating below the level of this capstone (L. 9252).

GRAVE 305/323

Surface architecture: Stone circle, pavement.
Subsurface architecture: Cist.
Main burial: Semiflexed, oriented south, facing west.
Sex: Unknown.
Age: Adult, 20-50.
Other burials: Commingled secondary burial of adult and juvenile above captones.
Artifacts in cist: None.
Other artifacts: 1 bead in fill (cupric).
Disturbances: Surface architecture partially destroyed, capstone missing, human remains broken and scattered in cist.

Table 4.167: Grave 305/323 loci.

Locus	Description
2154	Grave
2001, 2045	Topsoil
2024, 2016, 2109	Fill
2069	Secondary burial
2070	Secondary burial
2156	Capstones
2164	Cist
2165	Cist fill
2219	Human remains



Figure 4.211: Grave 305/323 cist and human remains.

Graves 305 and 323 were initially believed to be separate features (Table 4.167). Excavation showed them to be one mortuary complex (L. 2154), though the grave number 305 was applied to secondary burials in this complex, while the number 323 was applied to the cist. The complex was located in the northwest corner of square J-8. Grave 305 was described as a partial, poorly defined circle of nine stones (L. 2001), while Grave 323 was described as a complete circle of sixteen stones 1.49 meters in diameter surrounding a pavement of either four or eight dolerite cobbles (L. 2045). A small dolerite stone was also described as being found in the center of this pavement, though it does not appear to have been a standing stone, and no photograph of description has been found. One fragmentary cupric bead of unknown type was found in the fill (EDM 89034). A shallow level of sediment overlay the subsurface architecture (L. 2024, 2016, 2109). Human remains were found at a depth of about twenty-five centimeters in the southeastern area of the grave (L. 2069, 2070). These remains extended into the

southern baulk. Osteological analysis showed them to be the partially commingled remains of an adult (individual 305A) and a juvenile (305B). Four paving stones were found at a depth of about 40 centimeters. Four dolerite capstones encountered at a depth of about 0.19 meters were identified as Grave 323 (L. 2156). These capstones were all in the northern half of the grave; the southern half appeared to be missing capstones and included large cobbles tossed into the grave. The capstones capped a cist measuring 1.30 meters long, 0.45 meters wide, and 0.48 meters deep, constructed with sixteen cap support stones (L. 2164) . The cist was full of sediment (L. 2165). Within the cist was a disturbed and broken skeleton (Fig. 4.211; L. 2219). Those bones which were articulated, mostly below the waist, showed that the burial was semiflexed, with head oriented towards the south, laying on the left side facing west. Two flakes were the only artifacts found within the grave. The remains were of an adult of unknown sex, aged 20 to 50.

GRAVE 306

Surface architecture: Partial stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Main burial: Flexed, oriented south facing west.
Sex: Unknown.
Age: Neonate (0-9 months).
Other burials: Commingled adult and subadult secondary.
Artifacts in cist: 1 bead (amazonite), numerous lambis shell bracelet fragments.
Disturbances: Capstones displaced, cist full of sediment.

Table 4.168: Grave 306 loci.

Locus	Description
2001	Top soil
2080	Grave circle
2025	Fill
2033	Pavement
2040	Capstones
2123	Fill beneath capstones
2141	Cist
2184	Human remains



Figure 4.212: Grave 306 human remains.

Grave 306 was located adjacent to Grave 83 in the southeast corner of square K-8 (Table 4.168). The grave was marked on the surface by a partial stone circle 1.15 meters in diameter consisting of eight dolerite cobbles (L. 2080). Beneath a shallow level of fill (L. 2025), a pavement of nine stones was found (L. 2033). The commingled remains of a subadult (individual 306B) and an adult of unknown sex (306C) were recovered from the fill; it is unclear if these remains were above or below the capstones. At less than ten

centimeters below the surface, two sandstone capstones sealed with mud plaster were encountered (L. 2040). These may have been directly below the pavement. The capstones appeared displaced, and a level of fill (L. 2123) was removed before the cist was encountered. The cist was trapezoidal, wider at the north than at the south, constructed sandstone and dolerite, with ten support stones and four side slabs. The cist was filled with compact sediments (L. 2141). This cist measured 0.63 meters long, 0.25 meters wide, and 0.38 meters deep, putting the burial a total of 0.62 meters below the surface. One amazonite cylinder disc bead fragment was found in the cist (EDM 86386). Numerous fragments of what appear to be multiple lambis shell bracelets were also recovered from the grave (EDM 89171). Within the cist were entombed the remains of a neonate (zero to nine months) interred in a flexed position, with the cranium pointed towards the south, lying on the left side facing west (Fig. 4.212; L. 2184). The right arm was extended, while the left arm was flexed. Bedouin workers suggested that adjacent Grave 83 and Grave 306 represented a father and son.

GRAVE 307

Surface architecture: Partial stone circle.
Subsurface architecture: L-shaped cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: Secondary burial above capstones.
Artifacts in cist: 1 bead (alabaster).
Other artifacts: 2 potsherds in fill.
Disturbances: Looted in antiquity. Cist full of sediment, human remains broken and scattered in cist.

Table 4.169: Grave 307 loci.

Locus	Description
2047	Grave circle
2048	Fill
2100	Capstones
2110	Cist
2111	Cist fill



Figure 4.213: Grave 307 human remains. Note long bone fragment in eastern baulk (left) and skull fragments in southern cist.

Grave 307 is situated in the southwest quadrant of square J-8, immediately northwest of Graves 83 and 306 (Table 4.169). It is represented on the surface by a partial stone circle consisting of eight dolerite and sandstone cobbles 1.80 meters in diameter (L. 2047). The circle was poorly defined, especially in the southeastern area of the grave. Two potsherds were recovered from the upper levels (L. 2048; EDM 89212). Remains of a secondary burial were observed protruding from the northeast baulk, including long bones and cranial fragments. Four capstones sealed with mud plaster and

three smaller chinking stones were encountered 0.47 meters below the surface (L. 2100). The L-shaped cist, with protrusion to the west, was constructed with eight cap support stones and eleven side slabs and measured 1.11 meters long, 0.43 meters wide, and 0.63 meters deep (L. 2110). The skeleton was disturbed in antiquity and broken to pieces, but appeared to have been placed in a semiflexed position with head oriented south, facing west (Fig. 4.213; L. 2111). One alabaster short barrel bead was found in the cist (EDM 86272).

GRAVE 308

Surface architecture: None.
Subsurface architecture: L-shaped cist.
Burial: Semiflexed, head to south, facing west.
Sex: Unknown.
Age: Child, 0-5.
Other burials: 2 adult teeth, possibly other adult bone fragments, found in cist.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.170: Grave 308 loci.

Locus	Description
2090, 2117	Grave exterior
2050	Fill
2051	Capstones
2129	Cist
2130	Cist fill



Figure 4.214: Grave 308 burial.

Grave 308 is located in the northern section of square I-8 (Table 4.170; L. 2090, 2117). To its southwest is Grave 80-2004 and to the southeast is Grave 9-2004. The grave was invisible on the surface, but was identified while removing fill outside these graves (L. 2050). About 0.18 meters below the surface, five capstones, four of sandstone and one of dolerite, covered with mud plaster were encountered (L. 2051). These capped an L-shaped cist constructed to accommodate the flexed legs of an interred adult (L. 2129). The cist was constructed with eight support stones and seven side slabs and measured 1.00 meters long, 0.60 meters wide, and 0.35 meters deep. The interred was a young child, much smaller than what the cist was built to hold (Fig. 2.114; L. 2130). The human remains recovered were poorly preserved. The child was laid in a semiflexed position with the head oriented towards the south, lying on the left side facing west. Excavation revealed small bone fragments, and large amounts of snail shells throughout the fill. Two teeth from an adult were also encountered in the cist.

GRAVE 309

Table 4.171: Grave 309 loci.

Locus	Description
2055	Topsoil
2056	Fill

Grave 309 was identified as a partial stone circle measuring 1.20 meters in diameter in square I-9 (Table 4.171; L. 2055). A small amount of sediment was excavated to reveal the surface architecture (L. 2056), but the grave was not otherwise excavated.

GRAVE 310

Table 4.172: Grave 310 loci.

Locus	Description
2058	Topsoil
2059	Fill

Grave 310 was identified in square I-9 (Table 4.172). A small amount of topsoil and fill was excavated from the upper levels of the grave to define the surface architecture (L. 2058, 2059), but the grave was not otherwise excavated.

GRAVE 311

Surface architecture: Partial stone circle.
Subsurface architecture: Rock pile or pavement, cist.
Burial: Fragmentary.
Sex: Unknown.
Age: 35-50+.
Other burials: Secondary adult male burial over capstones.
Artifacts in cist: None.
Other artifacts: 3 beads (ostrich eggshell, amazonite, citrine) in fill.
Disturbances: Looted in antiquity. Capstones displaced, human remains scattered and broken.

Table 4.173: Grave 311 loci.

Locus	Description
2185	Stone circle exterior
2193	Topsoil
3035	Rock pile or pavement
3048	Secondary burial 311B
3047	Capstones
3053	Cist exterior
3054	Cist fill



Figure 4.215: Grave 311 capstones.

Grave 311 is located in the northeast quadrant of square K-10 (Table 4.173). The grave was marked on the surface by a partial stone circle comprised of sixteen cobbles measuring 2.40 meters in diameter (L. 2185). About a meter west of the grave, a north-south line of large stones was encountered in the western part of the square (L. 2182), but this stone alignment was not obviously associated with the grave. One ostrich eggshell cylinder disc bead (EDM 86445), one chalcedony truncated convex bicone bead (EDM 86775) and one amazonite short cylinder bead (EDM 89100) were found in the upper

level of fill (L. 2185, 2193). Supervisor notes suggest that this circle surrounded another, smaller circle that was accidentally destroyed before being properly studied. A number of stones, including a slab that appears to have once been a capstone, were encountered in the fill; these seem to have initially been misidentified in the field as a pavement (L. 3035). An intrusive semicircular installation of stones and an associated large quantity of human remains, individual 311B, were encountered in the fill (L. 3048). They were concentrated over the second capstone and the southeast cist support stones, extending into the northeast baulk. These were identified as the remains of a young adult (aged 24-29), probably male. One bead was said to have been found with this secondary burial, presumably one of the three beads found in the upper fill. Much of this secondary burial remains unexcavated. Five capstones of both sandstone and dolerite were encountered at a depth of 0.59 meters, covered with a layer of mud plaster (Fig. 4.215; L. 3047). Removal of the capstones revealed a highly decomposed and fragmented skeleton, 311A (L. 3054). The bones were fragmented and scattered throughout the cist. These were identified based on tooth wear as the remains of a middle or old adult, aged 35 to 50+. No artifacts were recovered from the cist, which measured 1.25 meters long, 0.50 meters wide, and 0.60 meters deep (L. 3053).

GRAVE 312

Table 4.174: Grave 312 loci.

Locus	Description
2064	Grave

Grave 312 was identified in square K-9 but left unexcavated (Table 4.174; L. 2064).

GRAVE 313

Table 4.175: Grave 313 loci.

Locus	Description
2060	Grave

Grave 313 was identified in square K-9 but left unexcavated (L. 2060).

GRAVE 314

Surface architecture: Partial stone circle.
Artifacts: 1 bead (carnelian) in fill.

Table 4.176: Grave 314 loci.

Locus	Description
2063	Grave circle
2108	Fill

Grave 314 is located in the southeastern quadrant of square K-9 (Table 4.176). It was marked on the surface by a partial stone circle of nine dolerite cobbles about 0.82 meters in diameter. One carnelian truncated convex bicone bead was found high in the fill before the grave was identified (EDM 86101). Beneath a shallow level of fill (L. 2108), two capstones were encountered. Grave 314 was excavated to capstone level in the 2004 field season, but it was left unexcavated below capstone level.

GRAVE 315

Other burials: Adult secondary in fill.

Table 4.177: Grave 315 loci.

Locus	Description
2066	Grave

Grave 315 was identified in square K-9 as a stone circle about 0.90 meters in diameter (Table 4.177). The very poorly preserved and fragmentary remains of an adult

of unknown sex were collected in the fill of this grave (L. 2066). Excavation ceased without reaching capstone level.

GRAVE 316

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, originally semiflexed?
Sex: Unknown.
Age: 10-15.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones missing, human remains broken and scattered in cist.

Table 4.178: Grave 316 loci.

Locus	Description
2072	Fill
2083, 2094	Grave
2084, 2095	Cist
2085	Cist fill
2097	Human remains



Figure 4.216: Grave 316 human remains.

Grave 316 is located in the center of square I-8 (Table 4.178; L. 2072). It is surrounded by Graves 308 to the north, Grave 9-2004 to the east, and Grave 80-2004 to the west. The grave was invisible on the surface, but discovered during the removal of fill to expose Grave 9-2004 (L. 2083, 2094). The cist was uncovered 0.14 meters below the surface, and this cist in part covered over the cist of Grave 9-2004, one the cemetery's few cases of one burial superimposed over another. There were no capstones associated with this grave, indicating it had been disturbed in antiquity. The rectangular cist was constructed with twelve support stones and measured 0.75 meters long by 0.35 meters wide by 0.56 meters deep (L. 2084, 2095). The cist was full of sediment (L. 2085). A fragmentary skeleton was found in the cist (L. 2097). It is unclear whether the burial was secondary or whether its fragmentary nature was part of its disturbance in antiquity. The cranium was located in the southern section of the grave, with long bones to the north,

suggesting it may have been laid out as a semiflexed primary burial (Fig. 4.216). The remains were of a subadult, aged ten to fifteen (but most likely twelve). The cist also included several bones from an adjacent cist, though which is not specified in the site notes. No finds were associated with this grave.

GRAVE 317

Surface architecture: Partial stone circle.
Subsurface architecture: Capstones covering pit.
Main burial: Secondary, four individuals.
Sex: Unknown.
Age: Four children (one 6-9 months, two 3-5 years, one 1-3 years).
Other burials: Further secondary remains over capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture partially destroyed, capstones apparently displaced.

Table 4.179: Grave 317 loci.

Locus	Description
2103	Grave
2191	Capstones
3003, 3004	Fill beneath capstones
3032	Human remains



Figure 4.217: Grave 317 human remains.

Grave 317 is located in square I-8, flanked by Grave 90 to its southwest and Grave 80-2004 to the northeast (Table 4.179). The grave is marked by a partial seven stone circle uncovered while excavating fill surrounding these graves (L. 2103). A large amount of human bone was observed in the northeast part of the grave, including ribs, cranial fragments, and long bones. The long bones were vertical in the grave. At a depth of about 1.15 meters below the surface, two capstones were encountered, one of which appeared disturbed (L. 2191). These covered a pit cut in the conglomerate measuring 1.00 meters long, 0.45 meters wide, and 1.91 meters deep below the surface (L. 3003, 3004). Excavation into the fill yielded the commingled remains of multiple individuals with no articulation of any remains (L. 3032). Remains collected included individual 317A, six to nine month old child, individuals 317B and 317C, both three to five year

olds, and individual 317D, a one to three year old (Fig. 4.217). Some bleached white material, probably intrusive, was also recovered.

GRAVE 318

Surface architecture: Partial stone circle.
Subsurface architecture: Cist.
Main burial: Semiflexed, head to south, facing west and child in pelvic area.
Sex: Unknown, probably female with child.
Age: 24-29 years.
Other burials: Fetus or infant in pelvic area.
Artifacts in cist: None.
Other artifacts: Worked carnelian in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.180: Grave 318 loci.

Locus	Description
2132	Grave circle and fill
2133	Capstones
2159	Cist
2160	Cist fill
2186	Human remains



Figure 4.218: Grave 318 cist and burial.

Grave 318 is located in the central eastern part of square K-8 (Table 4.180). It was represented by a partial circle of eight stones, with a maximum diameter of 1.41 meters (L. 2132). A piece of worked carnelian was recovered in the fill (EDM 86315). Less than ten centimeters below the surface, four granite capstones were encountered (L 2133). These capped a cist with five side slabs and ten cap support stones, measuring 1.21 meters long, 0.36 meters wide, and 0.40 meters deep (L. 2159). The northern end is said to have lacked a side slab, but may have been angled and incompletely excavated before being photographed (Fig. 4.218). The remains in this grave were partially articulated, though apparently disturbed (L. 2186). Individual 318A, a 24 to 29-year-old, was interred in a semiflexed fashion with head to the south, facing west. In the pelvic area, a full-term fetus, individual 318B, was uncovered. It is therefore believed that 318A is a female, though this could not be proven osteologically. No other artifacts were encountered in the cist fill (L. 2160).

GRAVE 319

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Capstones over pit.
Main burial: Secondary.
Sex: Unknown.
Age: 4 individuals: 2 adults, 1 juvenile aged 3-12 years, 1 child aged 1-5 years.
Other burials: None.
Artifacts beneath capstones: None.
Other artifacts: 2 hammerstones, 1 worked stone in fill.
Disturbances: None.

Table 4.181: Grave 319 loci.

Locus	Description
2135	Grave circle
2138	Topsoil
2139	Fill
2143	Pavement
2157	Fill
2168	Ashy fill
2173	Capstones
2188	Fill beneath capstones
2189	Gravelly fill beneath capstones
3000	Human remains



Figure 4.219: Grave 319 circle and pavement.

Grave 319 was located on the border of I-11 and K-11, in the northern part of these two squares (Table 4.181). The grave was visible on the surface as a circle 1.60 meters in diameter composed of eighteen dolerite cobbles found either just below or barely rising above the topsoil (L. 2135). Beneath a shallow layer of fill (L. 2138, 2139), a pavement of twenty-five flat dolerite cobbles was found within the circle (Fig. 4.219; L.

2143). Two flint hammerstones were found in the upper level of fill near or at the surface (EDM 89156, 89157). One circular flat stone was also found in the fill (EDM 86367). About fifteen centimeters below the paving stones, an ashy fill was encountered (L. 2168). This ashy sediment extended down to the capstones, which were encountered 0.41 meters below the surface (L. 2173). Beneath the three capstones, a circular pit was encountered cut into the conglomerate, 1.01 meters long, 0.88 meters wide, and a total of 0.96 meters below the surface. Beneath the capstones were encountered first the silt common in the cemetery (L. 2188) and then a gravelly sediment (L. 2189). Within this pit were interred the remains of at least four individuals (L. 3000). These remains were tightly packed in a rectangular prism, as though they were contained within a container which has decomposed (Fig. 4.220). Most of the remains belong to individual 319B, probably an adult, of which 14% of the individual remains. Less than 5% of individual 319A, another adult, is represented. Other individuals more fragmentarily represented include 319C, a juvenile aged three to twelve, and 319D, an infant aged one to five years.



Figure 4.220: Grave 319 burial.

GRAVE 320

Surface architecture: None.
Subsurface architecture: Capstones covering pit.
Main burial: Semiflexed, oriented south, facing west.
Sex: Unknown.
Age: Adult or young adult.
Other burials: None.
Artifacts beneath capstones: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.182: Grave 320 loci.

Locus	Description
2148	Grave
2149	Capstones
2170	Fill beneath capstones
2188	Human remains



Figure 4.221: Grave 320 burial.

Grave 320 was located in the north central section of square J-8 (Table 4.182; L. 2148). The grave was invisible on the surface, but was identified following fill removal within the square. At a depth of 0.25 meters, four sandstone capstones were encountered (L. 2149). Removal of the capstones yielded a trapezoidal pit, wider in the north than in the south, cut into the conglomerate measuring 1.03 meters long, 0.57 meters wide, and at a total depth of 0.87 meters, with twelve cap support stones. In the sediment within (L. 2170) was a primary semiflexed burial oriented to the south lying on the left side facing west, though only the upper portion of the skeleton was observed in situ (Fig. 4.221; L. 2188). The remains were poorly preserved and can only be said to belong to an adult or young adult. No artifacts were associated with this burial.

GRAVE 321

Surface architecture: None.
Subsurface architecture: Cist.
Burial: Semiflexed, oriented south, on left side, facing west.
Sex: Unknown.
Age: Juvenile, 3 to 12.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.183: Grave 321 loci.

Locus	Description
2150	Grave
2151	Capstones
2161	Support stones
2162	Fill beneath capstones



Figure 4.222: Grave 321 burial.

Grave 321 is located in the northeastern quadrant of square J-8 (Table 4.183; L. 2150). It was invisible on the surface, but recognized after the removal of fill in the square. Four sandstone capstones were encountered 0.44 meters below the surface,

placed on four cap support stones—two in the east, and two in the west (L. 2151). These support stones formed a sort of cist, though no other side slabs framed the pit (L. 2161). The pit measured 0.82 meters long, 0.38 meters wide, and at a total of 0.99 meters below the surface. Within the pit was entombed a juvenile aged three to twelve years but most likely aged three to six years (L. 2162). The individual was semiflexed, lying on the left side facing west, with the head oriented south (Fig. 4.222).

GRAVE 322

Surface architecture: None.
Subsurface architecture: Cist-like cap support stones.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Juvenile, 3-12.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.184: Grave 322 loci.

Locus	Description
2155	Grave
2153	Capstones
2166	Cist
2167	Cist fill



Figure 4.223: Grave 322 capstones.

Grave 322 was invisible on the surface but encountered while removing fill in the northwest quadrant of square J-8 (Table 4.184; L. 2155). At a depth of 0.13 centimeters, four sandstone capstones were encountered (Fig. 4.223; L. 2153). These capped nine support stones of a cist the length of which was never completely excavated (L 2166). The excavated length was 0.68 meters long, while the width of the cist was 0.57 meters and the depth 0.56 meters. The very fragmentary remains of a juvenile aged three to twelve years, but most likely aged three to six years, were found in the cist (L. 2167).

GRAVE 323

See **Grave 305**.

GRAVE 324

Surface architecture: None.
Subsurface architecture: Rectangular cist.
Burial: Semiflexed, head to south, facing west.
Sex: Unknown.
Age: Six months to two years.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.185: Grave 324 loci.

Locus	Description
2175, 2195	Grave
2176, 2192	Capstones
2196	Cist
2197	Cist fill
3018	Human remains



Figure 4.224: Grave 324 burial.

Grave 324 is located in square J-11 just northeast of Grave 59-2004 (Table 4.185; L. 2174, 2195). It was invisible on the surface, but was uncovered while excavating fill around the latter grave. Adolfo Muniz suggested in his notes for July 18, 2004, that Grave 324 "is possibly part of the graves associated with the 1997 grave 21 or gv 59." At a depth of 0.37 centimeters, two sandstone capstones were encountered (L. 2176, 2192). These capped a small rectangular cist constructed of five flat dolerite cobbles in the south, west, and east, and a sixth sandstone slab in the north (L. 2196). The cist measured 0.62 meters long, 0.35 meters wide, and 0.21 meters deep, full of compact silt and snail shells (L. 2197). Within the cist was interred the remains of a child of six months to two years, with head to the south, buried semiflexed and laying on the left side, facing west (Fig. 4.224; L. 3018). A few bone fragments from an older individual were also located beneath the burial.

GRAVE 325

Surface architecture: None.
Subsurface architecture: Capstones over pit.
Main burial: Unrecorded.
Sex: Unknown.
Age: Infant.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.186: Grave 325 loci.

Locus	Description
2184	Grave
3066	Fill

Grave 325 is located overlapping the boundary between I-11 and I-12 in the west sides of these squares (Table 4.186; L. 2184). Immediately to the east of this grave is a large recently looted area. Two dolerite and one limestone capstones were encountered 0.34 meters below the surface. These covered a pit measuring 0.80 meters by 0.40 meters at a depth of 0.70 meters below the surface. Three cap support stones surrounded the pit. No side slabs were observed in the southeast area of the cist. The Grave Sheet notes that the disturbed primary burial of an infant was excavated in the cist (L. 3066), but no skeletal form, photographs, or other notes were located.

GRAVE 326

Surface architecture: None.
Subsurface architecture: Rectangular cist
Main burial: Semiflexed, head oriented south, on left side, facing west.
Sex: Unknown.
Age: Neonate.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.187: Grave 326 loci.

Locus	Description
2190	Capstones
3001	Cist
3002	Cist fill
3031	Human remains



Figure 4.225: Grave 326 burial.

Grave 326 was invisible on the surface, but at a depth of less than five centimeters three sandstone capstones were encountered (Table 4.187; L. 2190). These capped a rectangular cist constructed of five granite and sandstone slabs and a dolerite cobble (L. 3001). The cist measured 0.64 meters long by 0.34 meters wide by 0.35 meters deep and was full of sediment (L. 3002). The grave was found to hold the remains of a neonate, buried in a semiflexed position with head to the south, lying on the left side facing west (Fig. 4.225; L. 3031).

GRAVE 327

Surface architecture: None.
Subsurface architecture: Capstone covered pit.
Main burial: Secondary, head to south.
Sex: Unknown.
Age: Juvenile.
Other burials: None.

Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.188: Grave 327 loci.

Locus	Description
3013	Grave
3017	Cist fill
3033	Human remains



Figure 4.226: Grave 327 burial.

Grave 327 was located overlapping squares J-10 and J-11 (Table 4.188; L. 3013). It was invisible on the surface and lacked capstones. At a depth of about 0.11 meters, a rectangular pit surrounded by seven dolerite cap support stones was encountered, measuring 0.52 meters long, 0.30 meters wide, and 0.28 meters below the surface. Within this grave were found the skull and some long bones of a juvenile, secondarily

deposited (L. 3033). The skull was positioned in the south of the grave, facing west.

Large numbers of snail shells were encountered in the cist fill (Fig. 4.226; L. 3017).

GRAVE 328

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: 3-6.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.189: Grave 328 loci.

Locus	Description
3016	Grave
3012	Capstones
3020	Cist
3021	Cist fill
3034	Human remains



Figure 4.227: Grave 328 burial.

Grave 328 was located near Grave 327 in square J-11 (Table 4.189; L. 3016). It was invisible on the surface. At a depth of about ten centimeters three capstones were encountered (L. 3012). These were set on nine cap support stones and a cist composed of seven side slabs, measuring 0.77 meters long, 0.27 meters wide, and 0.36 meters deep (L. 3020). The cist was full of sediment (L. 3021). Within were entombed the fragmentary remains of a juvenile, probably aged three to six years (Fig. 4.227; L. 3034).

GRAVE 329

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, facing west.
Sex: Unknown, adult probably female.

Age: Adult and neonate.
Other burials: None.
Artifacts in cist: 2 beads (amazonite), lambis shell bracelet fragments, bird bones, goat tooth.
Other artifacts: Potsherds in fill.
Disturbances: Surface architecture destroyed, cist full of sediment, skull broken and displaced to center of grave.

Table 4.190: Grave 329 loci.

Locus	Description
2218	Grave
2211	Capstones
3059	Cist
3060	Cist fill
3083	Human remains



Figure 4.228: Grave 329 burial.

Grave 329 was located in square J-11, southwest of Grave 59-2004, near Grave 330 but at a higher elevation (Table 4.190; L. 2118). It was invisible on the surface. Five fragments of the same potsherd were recovered from the fill before the grave was

recognized (EDM 86669). Four capstones—three sandstone and one dolerite—were encountered at a depth of 0.36 meters (L. 2211). These were sealed with mud plaster. These capped a cist constructed of ten cap support stones and an unrecorded number of side slabs (L. 3059). The length may have never been completely excavated. What was excavated measured 1.10 meters long, 0.56 meters wide, and 0.44 meters deep. The cist was full of sediment (L. 3060). The interred, an adult of unknown sex, was laid in a semiflexed position, with head to the south, lying on the left side facing west (Fig. 4.228). The grave was heavily disturbed and the skull broken and moved to the center of the grave. Two amazonite drilled pebble beads were recovered from the cist (EDM 86859, 89158). One of these was recovered from sieved sediments from near the skull (EDM 89158). Fragments of a lambis shell bracelet along with other possibly related shell fragments were recovered (EDM 86857, 86886, 86917, 86963). Bird bones and a goat tooth fragment were also recovered from the cist. Also within the cist fill, fragments of a neonate skeleton, individual 329B, were recovered.

GRAVE 330

Surface architecture: None.
Subsurface architecture: Ovoid cist.
Burial: Flexed, head to south, on left side facing west.
Sex: Unknown.
Age: 3-6 years.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.191: Grave 330 loci.

Locus	Description
3015	Grave
3014	Capstones
3022	Cist
3023	Cist fill
3029	Human remains



Figure 4.229: Grave 330 burial.

Grave 330 was located in square J-11, southwest of Grave 59-2004 (Table 4.191). Burial records suggest that it was invisible on the surface, but supervisor notes state that it was marked on the surface by a complete stone circle consisting of dolerite cobbles (L. 3015). Less than ten centimeters below the surface, three red sandstone capstones were encountered (L. 3014). These capped a cist oriented along a northwest-southeast axis composed of nine small boulders which also supported the cap stones (L. 3022). A single stone made up the floor of the cist. The cist measured 0.67 meters long, 0.34 meters

wide, and 0.32 meters deep. The cist was full of sediment (L. 3023). The entombed was a juvenile, probably aged three to six years laid in a flexed position on the left side facing west with head pointed south (Fig. 4.229; L. 3029). All the individual's teeth display pitting related to hypoplasia, and cribia orbitalia was also evident.

GRAVE 331

Surface architecture: Stone circle.
Subsurface architecture: L-shaped cist.
Main burial: Semiflexed, head to south, facing west.
Sex: Unknown.
Other burials: None.
Age: Middle to old adult.
Artifacts in cist: Pendant (bone).
Other artifacts: None.
Disturbances: Capstone displaced, cist full of sediment, skull broken.

Table 4.192: Grave 331 loci.

Locus	Description
3001	Grave
3002	Fill
3024	Capstones
3040	Cist
3041	Cist fill
3042	Human remains



Figure 4.230: Grave 331 burial.

Grave 331 was located in I-10 (Table 4.192). It was visible on the surface as a complete stone circle of eighteen cobbles measuring 2.15 meters in diameter (L. 3001). Beneath 0.48 meters of fill (L. 3002), four capstones covered in a thick layer of mud plaster were encountered (L. 3024). A large gap between the middle capstones suggests the tomb was looted in antiquity; this missing capstone was later found within the grave, apparently crushing the cranium. The capstones sealed a cist constructed of eighteen cap support stones and seven side slabs measuring 1.15 meters long, 0.50 meters wide, and 0.49 meters deep (L. 3040). The cist was full of sediment (L. 3042). Entombed within the L-shaped cist were the semiflexed, poorly preserved remains of an individual with head to the south, laying on the left side facing west (Fig. 4.230; L. 3042). The individual is believed to be a middle to older adult based on tooth wear. A roughly triangular bone pendant was recovered in the cist (EDM 86860).

GRAVE 332

This number appears to have been skipped in assigning grave numbers.

GRAVE 333

This number appears to have been skipped in assigning grave numbers.

GRAVE 334

Surface architecture: Stone circle.
Subsurface architecture: Cist or capstone-covered pit.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Young to middle adult.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Human remains broken and scattered.

Table 4.193: Grave 334 loci.

Locus	Description
3043	Grave circle
3089	Fill
3105	Capstones
3113	Cist
3114	Cist fill

Grave 334 is located in the center of square I-10 (Table 4.193). The grave was visible on the surface as a complete stone circle of nineteen cobbles measuring 2.70 meters in diameter (L. 3043). The fill over the capstones was hard and compact (L. 3089). At a depth of 0.16 meters below the surface, four capstones were encountered (L. 3105). These were supported by ten cap support stones. It is unclear whether the burial consisted of a cist with an unspecified number of side slabs or a pit (L. 3113). The receptacle measured 1. 05 meters long, 0.30 meters wide, and 0.45 meters deep. The

remains were fragmentary and very poorly preserved, but are of a young to middle adult (L. 3114).

GRAVE 335

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Hyperflexed, head to south, facing west.
Sex: Unknown.
Age: 21-59, most likely 35.
Other burials: Small amount of adult bone fragments found in cist above main burial.
Artifacts in cist: Bone spatula pendant, unidentified organic material, potsherd.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.194: Grave 335 loci.

Locus	Description
3045	Cist
3046	Cist fill
3061	Human remains



Figure 4.231: Grave 335 burial.

Grave 335 is located in the middle of the southern portion of square J-11 near Grave 59-2004 but was invisible on the surface (Table 4.194). Four sandstone capstones were encountered at a depth of 0.27 meters from the surface. These sealed a cist constructed of seven cap support stones and five side slabs. The cist measured 0.86 meters long, 0.47 meters wide, and 0.49 meters deep (L. 3045). The excavator was of the opinion that the side slabs to the east and west were shared with neighboring graves, as apparent hollows appeared between the stones. It is unclear if this hypothesis was tested, but no cists were excavated adjacent to that of Grave 335. Small, poorly preserved bone fragments of individual 335B, probably an adult, were encountered in the cist fill (L. 3046). Beneath this fill, an articulated, hyperflexed skeleton with legs drawn up to the chest, was encountered (Fig. 4.231; L. 3061). Organic material of an unknown nature was collected from the abdominal cavity. Further organic material, believed by the excavator to be a pomegranate, as recovered beneath the cranium. Finally, a bone spatula was collected next to this organic material in the neck region (Fig. 4.232; EDM 86855). Osteological analysis showed the interred to be an adult, aged 21 to 59 but most likely 35. The clavicle showed signs of osteoporosis, possibly connected with tuberculosis, a common complaint among the Negev Bedouin today (Marx 1967: 27). One potsherd was found in the cist (EDM 89142).



Figure 4.232: Grave 335 pendant in situ, after removal of overlying bones.

GRAVE 336

Surface architecture: Partial stone circle.
Subsurface architecture: Rectangular cist.
Main burial: Semiflexed, head to south, facing west.
Sex: Unknown.
Age: Juvenile, three to twelve years (most likely six to ten years).
Other burials: None.
Artifacts in cist: 2 beads (cupric, shell), 1 potsherd.
Other artifacts: Possibly worked quartzite about capstone level.
Disturbances: Stone circle partially destroyed.

Table 4.195: Grave 336 loci.

Locus	Description
3036	Grave
3037	Capstones
3077	Cist
3078	Cist fill
3079	Human remains



Figure 4.233: Grave 336 burial.

Grave 336 was marked by a partial stone circle, of which the five eastern stones remained, projected to have measured 1.60 meters in diameter (Table 4.195; L. 3036). These stones were visible just below the surface, but the feature was not recognized as a grave until the three capstones were revealed just 0.13 meters below the surface (L 3037). Large amounts of mud plaster sealed the capstones, and one rounded and possibly worked piece of quartzite was recovered at about capstone level (EDM 86767). The cist was constructed of seven cap support stones set on six side slabs, the latter flat dolerite cobbles (L. 3077). The cist measured 0.65 meters long, 0.26 meters wide, and 0.43 meters deep. The cist was full of sediment (L. 3078). The interred, 336A, was found to be a juvenile, most likely six to ten years old, in a semiflexed position on the left side with head to the south, facing west (Fig. 4.233; L. 3079). A small dolerite stone fell into

the cist at some point in antiquity, shattering the skull. Also recorded as coming from the grave were individuals 336B and 336C. However, these individuals were said to have come from locus 3052, which is in Grave 55-2004, a neighboring grave. They are treated under that heading. One malachite drilled pebble or poorly preserved bead (EDM 89160), one shell short cylinder bead (EDM 89161), and one potsherd (EDM 89159) from the cist were found in the sieve.

GRAVE 337

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Semiflexed, on left side, head to south, facing west.
Sex: Unknown.
Age: Adult.
Other burials: Small bone fragments in upper cist fill.
Artifacts in cist: Lithic flake, 1 bead (ostrich eggshell).
Other artifacts: 1 potsherd just above capstones.
Disturbances: Surface architecture destroyed.

Table 4.196: Grave 337 loci.

Locus	Description
3067	Capstones
3069	Cist
3071	Cist fill
3096	Human remains



Figure 4.234: Grave 337 and 348 capstones.

Grave 337, located in square J-11, was not observed on the surface, but three capstones were discovered during the clearing of fill in the area to the west of Grave 59-2004 (Table 4.196). One potsherd was recovered just above the capstones (EDM 86894). These capstones continued in an unbroken line of seven capstones (Fig. 4.234). After the capstones were removed, the northern three capstones were found to cover a cist designated Grave 337 (L. 3067), while the cist covered by the southern four capstones was designated Grave 348 (L. 9148). Large amounts of mud plaster were found around and in between six sandstone capstones. The unbroken line of capstones more than likely represents two simultaneous graves. Three of the capstones covered cist 337, which measured 1.30 meters long, 0.56 meters wide, and 0.53 meters deep, and was constructed with eleven cap support stones and eight side slabs (L. 3069). The cist was trapezoidal, wider in the north than in the south. A few bone fragments, one ostrich eggshell cylinder

disc bead (EDM 86854), and one lithic flake were recovered from the upper levels of the compact cist fill, which extended to the capstone level (L. 3071). Beneath this, an adult of unknown sex was uncovered, lying in a semiflexed position with head to the south, on the left side, facing west (Fig. 4.235; L. 3096). The supervisor's final report (handwritten version) noted that the grave "was observed to be highly disturbed," but the disturbances were not documented.



Figure 4.235: Grave 337 burial.

GRAVE 338

Surface architecture: Partial stone circle, pavement.
Subsurface architecture: Paving, trapezoidal cist.
Burial: Semiflexed, laying on the left side, head to the south, facing west.
Sex: Unknown.
Age: 50-60.
Other burials: Secondary burial beneath pavement within stone circle.

Artifacts in cist: Leather shroud.
Other artifacts: None.
Disturbances: Stone circle partially destroyed.

Table 4.197: Grave 338 loci.

Locus	Description
3049	Stone circle
3065	Platform or pavement feature
3072	Secondary burial 338B
3051	Fill
3074	Capstones
3086	Cist
3085	Cist fill
3084	Human remains



Figure 4.236: Grave 338 surface architecture. Note the platform at the top left of the photo Note also the large sandstone stones of Grave 339 circle at the bottom of the photo.

Grave 338 is located in square I-12 (Table 4.197). It was recognized by a stone semicircle 2.00 meters in diameter that was observed just below the surface of the topsoil

(L. 3049). The circle is interrupted by the circle of Grave 339 to the west, which appears to have been constructed later. A small platform or pavement feature constructed of flat dolerite cobbles was observed in the northeast part of the stone circle (Fig. 4.236; L. 3065). Beneath this feature was a secondary burial of an adult of unknown sex, individual 338B (L. 3072). Beneath 0.40 meters of fill (L. 3051), three sandstone capstones were encountered (L. 3074). These covered a cist constructed of twelve cap support stones and seven side slabs measuring 1.19 meters long, 0.46 meters wide, and 0.48 meters deep (L. 3086). The cist was trapezoidal, wider in the north than in the south. Interred within the cist were the semiflexed remains of an adult aged 50 to 60, laying with head to the south on the left side facing west (Fig. 4.237; L. 3084). The cist was mostly empty, though a shallow level of sediment covered the skeleton (L. 3085). Fragments of leather, what were described in the field as leather shroud fragments, were found about the pelvis and thoracic vertebrae (Fig. 4.238; EDM 86892, 86930). No other grave goods were recovered.



Figure 4.237: Grave 338 burial.



Figure 4.238: Grave 338 burial lower body. Note the dark leather shroud fragments.

GRAVE 339

Surface architecture: Partial stone circle
Subsurface architecture: Cist
Main burial: Disturbed, head to south.
Sex: Male.
Age: Young to middle adult.
Other burials: None.
Artifacts in cist: 2 beads (agate, carnelian).
Other artifacts: None.
Disturbances: Looted in antiquity. Stone circle partially destroyed, capstone missing, cist full of sediment, human remains scattered.

Table 4.198: Grave 339 loci.

Locus	Description
3062	Grave exterior
3103	Fill
3126	Capstones
3128	Cist
3127	Cist fill
3129	Human remains



Figure 4.239: Grave 339 capstones.

Grave 339 is located in square I-12 (Table 4.198). It was marked by a partial stone circle of twelve stones, measuring 2.10 meters in diameter (L. 3062). At a depth of 0.28 meters from the surface (L. 3103), three sandstone capstones were uncovered (Fig. 4.239; L. 3126). The excavator believed two of the capstones were disturbed, and one capstone appeared to be missing. Beneath the capstones a cist was encountered constructed of twelve cap support stones and six side slabs and measuring 1.27 meters long, 0.37 meters wide, and 0.46 meters deep (L. 3128). Within the compact fill (L. 3127) the disturbed burial of a young to middle adult male was encountered with head to the south (L. 3129). Most of the bones were disarticulated and disturbed. One agate short barrel bead, one carnelian cylinder disc bead, and a human tooth fragment erroneously labeled a bead were found in the north part of the cist (EDM 70099).

GRAVE 340

Surface architecture: None.
Subsurface architecture: L-shaped cist.
Main burial: Semiflexed, head to south, facing west.
Sex: Male.
Age: Adult, about 42.
Other burials: Fragmentary remains of adolescent in cist.
Artifacts in cist: 3 beads (agate, ostrich eggshell, flint).
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.199: Grave 340 loci.

Locus	Description
3073	Grave
3082	Fill
3121	Capstones
9242	Cist
9243	Cist fill
9144	Human remains



Figure 4.240: Grave 340 burial.

Grave 340 was invisible on the surface of square J-12 (L. 3073), but was recognized when capstones were encountered at a depth of 0.30 meters below the surface (Table 4.199; L. 3082). One potsherd was recovered from the fill before the grave was recognized (EDM 86944). The three sandstone capstones (L. 3121) sealed an L-shaped cist measuring 1.15 meters long, 0.42 meters wide, and 0.33 meters deep constructed of eight or nine side slabs and at least eleven cap support stones (L. 9242). Sediment covered the skeleton (L. 9243). Entombed within the cist were the remains of a male adult, probably about 42 years of age, semiflexed, laying on his left side facing west with head to the south (Fig. 4.240; L. 9144). The arms were bent at the elbows, with the hands placed in the facial region, possibly covering the face. Three beads—one agate chamfered cylinder disc bead, one flint cylinder disc bead, and one ostrich eggshell

cylinder disc bead—were found clustered near his skull (EDM 70222). Also found in the cist were scanty fragments of a second individual, 340B, an older adolescent or subadult.

GRAVE 341

Surface architecture: None.
Subsurface architecture: Capstones over pit.
Main burial: Poorly preserved, head to south.
Sex: Unknown.
Age: Infant, 6-18 months.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.200: Grave 341 loci.

Locus	Description
3063	Grave
3055	Capstones
3056	Fill beneath capstones

Grave 341 was located in square I-8 near Graves 300 and 301 (Table 4.200). It was invisible on the surface (L. 3063), but recognized when a capstone were encountered 0.52 meters below the surface (L. 3055). This capstone covered an oval pit, difficult to delineate but possibly measuring 0.63 meters long by 0.41 meters wide (L. 3056). The burial was a total of 0.82 meters below the surface. Osteological analysis revealed it to be an infant, aged 6-18 months based on tooth development. The head was to the south, but the burial was so poorly preserved that its position could not be determined.

GRAVE 342

Surface architecture: Partial stone circle.
Subsurface architecture: Cist.
Main burial: Details not recorded.
Sex: Unknown.
Age: Adult.
Other burials: Fragmentary secondary burial in cist.
Artifacts in cist: 1 bead (amazonite).

Other artifacts: None.
Disturbances: Looted in antiquity. Capstone displaced, cist full of sediment.

Table 4.201: Grave 342 loci.

Locus	Description
3080	Grave circle
3081	Fill
3092	Capstones
3108	Cist
3104	Cist fill
3109	Human remains
3141	Secondary burial



Figure 4.241: Grave 342 capstones.

Grave 342 was recognized on the surface of square I-12 as a partial stone circle of twelve stones measuring 2.00 meters in diameter (Table 4.201; L. 3080). This grave was considered part of a series of four graves, also including Grave 339, Grave 338, and Grave 355, aligned roughly along an east-west axis. Two potsherds were recovered high in the fill (EDM 86740, 86777). Beneath 0.27 meters of sediment (L. 3081), three

sandstone capstones were encountered (L. 3092). These were sealed with mud plaster. A fourth, disturbed capstone was observed jutting out of the cist in the north central part of the grave. Rock collapse was encountered inside this part of the cist (Fig. 4.241). The cist measured 1.10 meters long, 0.65 meters wide, and 0.47 meters deep (L. 3104), and was constructed with ten cap support stones and an unspecified number of side slabs. An adult of unknown sex was encountered in the grave, but details were not recorded (L. 3109). Fragmentary remains of a secondary burial, 342B, were also recovered inside the cist (L. 3141). A roughly square drilled amazonite pebble bead or pendant was also recovered from the cist (EDM 89172).

GRAVE 343

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, facing west.
Sex: Unknown.
Age: Young adult, 18-25.
Other burials: Secondary burial of adult pushed to side of cist.
Artifacts in cist: 1 trapezoidal pendant (carnelian), mother of pearl, 2 potsherds.
Other artifacts: None.
Disturbances: Surface architecture destroyed, cist full of sediment, upper body broken and scattered.

Table 4.202: Grave 343 loci.

Locus	Description
3095	Capstones
3100	Cist
3099	Cist fill
3098	Human remains



Figure 4.242: Grave 343 burial.

Grave 343 was invisible on the surface of square K-11 (Table 4.202). At least two capstones were encountered at a depth of 0.28 meters (L. 3095). The southern part of the grave may have been uncovered; in any event, the southern part of the skeleton was crushed by rock collapse. The cist measured 1.39 meters long, 0.65 meters wide, and 0.64 meters deep and was constructed of twelve cap support stones and eight side slabs (L. 3100). The cist was full of sediment (L. 3099). The lower half of the skeleton was articulated and indicated that the individual was semiflexed, lying on the left side, with head to the south, facing west (Fig. 4.242; L. 3098). Also in the cist were the fragmentary remains of individual 343B, also an adult, 25 years old or older, of unknown sex. The photographs suggest that these remains were pushed to the east and near the pelvic area of individual 343A. Two potsherds (EDM 89170), a mother of pearl fragment (EDM 89173), and one carnelian trapezoidal pendant (EDM 70060), very like those from Wadi Fidan 4 Tomb 1, were in the cist.

GRAVE 344

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Infant, 2-4 years.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.203: Grave 344 loci.

Locus	Description
3093	Grave
3090	Capstones
3110	Cist
3111	Cist fill
3112	Human remains



Figure 4.243: Grave 344 capstones.

Grave 344 was invisible on the surface of the northeastern quadrant of square J-11 (L. 3093), just north of Grave 319 (Table 4.203). There is some disagreement in the notes regarding capstones (L. 3090), said to have been encountered at a depth of 0.77

meters below the surface. Site photographs show at least two capstones (Fig. 4.243), but the Grave Sheet records four capstones, three of limestone and one of dolerite, an unusually large number for so small a cist. The supervisor's handwritten grave descriptions state that the capstones were missing. These stones, if any, covered a cist measuring 0.65 meters long, 0.23 meters wide, and 0.51 meters deep, constructed of five dolerite and one sandstone side slabs and four cap support stones (L. 3110). Some sediment covered the burial (L. 3111). Within the cist, an infant, aged about two to four years, was lying in a semiflexed position with head to the south, on the left side facing west (Fig. 4.244; L. 3112).



Figure 4.244: Grave 344 burial.

GRAVE 345

Surface architecture: None.
Subsurface architecture: Trapezoidal cist with south end removed.
Main burial: Semiflexed, head to north, facing west.
Sex: Unknown.
Age: Infant, 1-3 years.
Other burials: None.
Artifacts in cist: Ceramic bowl, 2 copper earrings, 22 beads (fine-grained grey stone, pearl, cowry, univalve shells, shell, ostrich eggshell).
Other artifacts: None.
Disturbances: Surface architecture destroyed, cist full of sediment and cobbles.

Table 4.204: Grave 345 loci.

Locus	Description
3097	Capstones
3107	Cist
3106	Cist fill
3119	Human remains



Figure 4.245: Grave 345 capstones.

Grave 345 was invisible on the surface of square J-8 (Table 4.204; Levy et al. 2005: 453). At a depth of 0.77 meters below the surface three capstones were encountered (Fig. 4.245; L. 3097). The cist was full of sediment, including cobbles (Fig. 4.247; L. 3106). These capped a cist constructed of six cap support stones and at least six side slabs (L. 3107). The southern part of the grave had no side slab, and a slab seems to have been removed from the southernmost part of the west side (Fig. 4.248, 4.249). The cist measured 1.00 meters long, 0.35 meters wide, and 0.55 meters deep. The cist was trapezoidal, wider at the north than at the south. Within the north half of the cist were encountered the remains of an infant, aged one to three years (L. 3119). Unusually for this cemetery, the child was laid on its right side with head to north, facing west. Immediately behind the skull was a ceramic bowl with an abnormally thick and misshapen base (Fig. 4.250; EDM 86981; Levy et al. 2005: 468). This, alongside a juglet found in Grave 544, was one of only two complete ceramic vessels recovered from the cemetery. Also found in the cist were twenty-four beads (EDM 89200). These included one fine-grained grey stone truncated convex bicone, one possible drilled pearl, one cowry with the top removed to facilitate sewing or stringing, four univalve shells with the tips removed to facilitate stringing, four tubular shell long cylinder beads, seven ostrich eggshell barrel discs, and four ostrich eggshell cylinder discs. Two unworked conical snail shells were also found. Two copper earrings were also recovered from the cist (EDM 70004, 86994).



Figure 4.246: Grave 345 cist fill.



Figure 4.249: Grave 345 burial. Note the bowl beside the skull.



Figure 4.250: Grave 345 after removal of bowl and further excavation.

GRAVE 346

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: Limestone or shell bracelet fragment, 1 bead (amazonite).
Other artifacts: 1 bead in fill (ostrich eggshell).
Disturbances: Looted in antiquity. Surface architecture destroyed, capstone displaced, cist full of sediment, skeleton broken and scattered.

Table 4.205: Grave 346 loci.

Locus	Description
3115	Grave
3116	Capstones
3137	Cist
3140	Cist fill



Figure 4.251: Grave 346 burial.

Grave 346 was invisible on the surface of square K-11 (L. 3115). One ostrich eggshell cylinder disc bead was recovered from the fill before the grave was recognized (EDM 86977). The grave was recognized when capstones were encountered about 0.18 meters below the surface (L. 3116). Three capstones were in place, while a fourth, in the middle of the grave, appeared to be missing. The capstones sealed a cist constructed of eight cap support stones and eight side slabs (L. 3137). The cist measures 1.39 meters long, 0.50 meters wide, and 0.47 meters deep. The cist was trapezoidal, wider in the north than in the south. A few fragments of bone were encountered in the cist fill, and the notes state that a crushed skeleton with practically no preservation was uncovered (Fig. 4.251; L. 3140). Collapse was noted especially in the south end of the cist. One

irregular amazonite short barrel bead was recovered from the cist (EDM 70045), as was a limestone or shell bracelet fragment (EDM 89335).

GRAVE 347

Surface architecture: None.

Table 4.206: Grave 347 loci.

Locus	Description
3049	Grave
3050	Capstones

This grave was invisible on the surface of square K-11 (Table 4.206; L. 3049). The grave was identified when two large capstones were uncovered (L. 3050). The grave was not excavated past this point, according to the handwritten grave descriptions because it was visibly disturbed.

GRAVE 348

Surface architecture: None.
Subsurface architecture: L-shaped cist.
Burial: Semiflexed, head to south, facing west.
Sex: Male.
Age: Middle adult, 35-50.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.207: Grave 348 loci.

Locus	Description
9148	Capstones
3131	Cist
3132	Cist fill
3133	Human remains



Figure 4.252: Grave 348 burial.

Grave 348 was invisible on the surface of square J-11 (Table 4.207). The grave was recognized when an unbroken line of seven capstones was uncovered to the west of Grave 59-2004 (Fig. 4.234). After the capstones were removed, the northern three capstones were found to cover a cist designated Grave 337 (L. 3067), while the cist covered by the southern four capstones was designated Grave 348 (L. 9148). Capstones were encountered 0.47 meters below the surface. Four capstones covered a cist constructed of eleven cap support stones and seven side slabs (L. 3131). The cist measured 1.23 meters long, 0.40 wide and 0.45 deep. The cist was L-shaped, with the protrusion being in the northwest. Hard plaster-like sediment covered the southern two-thirds of the human remains (L. 3132). Entombed within the narrow cist were the remains of an adult male, aged 35 to 50, in a semiflexed position with head to the south, laying on the left side facing west (Fig. 4.252; L. 3133). The arms were flexed with the hands in the facial region.

GRAVE 349

Surface architecture: None.
Subsurface architecture: None.
Main burial: Double, semiflexed, side-by-side.
Sex: Unknown.
Age: Child, 5-7 years, and adolescent, 12-15 years.
Other burials: None.
Artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.208: Grave 349 loci.

Locus	Description
3120	Grave
3124	Human remains, individual 349A
3139	Human remains, individual 349B

Grave 349 was invisible on the surface of square I-11 (Table 4.208; L. 3120). The grave was recognized when the remains of two semiflexed individuals were encountered laying side-by-side. There was no subsurface architecture. Regretfully no other data were recorded about them in the field. Osteological analysis revealed that one individual, 349A (L. 3124), was a child of about five to seven years, while the other, 349B (L. 3139), was an adolescent of about twelve to fifteen.

GRAVE 350

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, secondary?
Sex: Unknown.
Age: Adult, possibly also child.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, capstones missing, human remains broken.

Table 4.209: Grave 350 loci.

Locus	Description
3138	Grave
3122	Cist
3123	Cist fill



Figure 4.253: Grave 350 cist.

Grave 350 is located in square I-12 between Graves 340 and 342 (Table 4.209; L. 3138). Eleven mostly dolerite cobbles stood on end, typical of those used for cap support stones, made up the cist, which lacked a capstone (Fig. 4.253; L. 3122). The cist measured 0.78 meters long, 0.39 meters wide, and 0.41 meters deep. The cist was trapezoidal, wider in the north than in the south. Very little skeletal material was recovered of the poorly preserved remains (L. 3123). Excavation notes state that Grave 350 consisted of a primary infant burial with head to the south, but osteological analysis of Locus 3123 revealed only very fragmentary adult skeletal matter. The final, handwritten report states that the burial was a primary burial of an adult with head

oriented to the south. It is impossible to determine whether this was a secondary adult burial or whether a child's remains were mislabeled in the field. This grave was observed at a higher level than neighboring Grave 340 and Grave 342.

GRAVE 351

Surface architecture: None.
Subsurface architecture: Cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 1 bead (ostrich eggshell).
Other artifacts: 1 potsherd in fill.
Disturbances: Surface architecture destroyed, capstones displaced, cist full of sediment, human remains fragmentary.

Table 4.210: Grave 351 loci.

Locus	Description
9149	Grave
9150	Capstones
9188	Cist
9189	Cist fill



Figure 4.254: Grave 351 capstones.

Grave 351 was invisible at the surface of square J-12 (Table 4.210; L. 9149). One potsherd was recovered in the fill before the grave was recognized (EDM 86998). Three capstones were encountered 0.17 meters below the surface (L. 9150). These capped a cist measuring 1.15 meters by 0.50 meters by 0.41 meters deep, composed of thirteen cap support stones and an unspecified number of side slabs (L. 9188). The cist is wider at the northern end, possibly to accommodate flexed legs. Very poorly preserved bone fragments of an adult were found at the bottom of the cist in the cist fill (L. 9189). One ostrich eggshell cylinder disc bead was recovered from the cist fill (EDM 70147).

GRAVE 352

Surface architecture: None.
Subsurface architecture: Trapezoidal cist or partially stone-lined pit.
Burial: Secondary, fragmentary.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.211: Grave 352 loci.

Locus	Description
3136	Grave
3134	Cist
3135	Cist fill
9147	Human remains



Figure 4.255: Grave 352 human remains.

Grave 352 was invisible on the surface of square K-11 (Table 4.211; L. 3136). One sandstone capstone was encountered 0.41 meters below the surface. This capstone

sealed either a cist or a partially stone-lined pit (L. 3134). The cist may not have been completely excavated. The cist was trapezoidal, wider in the north than in the south, and was constructed with at least two side slabs and at least three cap support stones. The excavated portion of the cist measured 0.81 meters long by 0.54 meters wide by 0.44 meters deep. The cist was full of sediment (L. 3135). Within were the fragmentary and very poorly preserved remains of an adult, apparently secondarily deposited (Fig. 4.255; L. 9147).

GRAVE 353

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adolescent, 12-16.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, cist full of sediment, human remains fragmentary.

Table 4.212: Grave 353 loci.

Locus	Description
9145	Grave exterior
9146	Capstones
9186	Cist
9187	Cist fill



Figure 4.256: Grave 353 capstones.

Grave 353 was invisible on the surface of square I-11 (Table 4.212; L. 9145). At a depth of 0.18 centimeters, three sandstone capstones were encountered (Fig. 4.256; L. 9146). These sealed a cist measuring 0.76 meters long, 0.36 meters wide, and 0.38 meters deep, oriented on a north-south axis (L. 9186). The cist was constructed with eight cap support stones and an unspecified number of side slabs. The cist was full of very compact sediment. Within were the very poorly preserved remains of an adolescent, aged 12 to 16 (L. 9187). Skull fragments were observed in the north end of the grave.

GRAVE 354

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: None.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, capstones missing, no human remains encountered.

Table 4.213: Grave 354 loci.

Locus	Description
9151	Grave exterior
9251	Cist
9152	Cist fill

Grave 354 was invisible on the surface of the southwestern quadrant of square K-11 (Table 4.213; L. 9151). At a depth of 0.11 meters below the surface, a ring of nine cap support stones forming a cist measuring 0.71 meters long, 0.33 meters wide, and 0.55 meters deep was encountered (L. 9251). No capstones remained, and no human remains were recovered from the cist (L. 9152).

GRAVE 355

Surface architecture: None.
Subsurface architecture: Capstones over pit.
Burial: Flexed, head to south, facing west.
Sex: Unknown.
Age: Infant, 9 to 12 months.
Other burials: None.
Artifacts beneath capstones: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.214: Grave 355 loci.

Locus	Description
9153	Grave exterior
9154	Capstones
9176	Fill beneath capstones



Figure 4.257: Grave 355 burial.

Grave 355 was invisible from the surface of square I-12 (Table 4.214; L. 9153). At a depth of 0.38 meters three sandstone capstones were encountered (L. 9154). These sealed an oval pit measuring about 0.68 meters long and 0.44 meters wide, and 0.28 meters below the capstones, a total of 0.84 meters below the surface. Within this pit were the very poorly preserved remains of an infant, aged 9 to 12 months, lying in the fetal position on the left side with head to the south, facing west (L. 9176). Only the cranium and legs were preserved (Fig. 4.257).

GRAVE 356

Surface architecture: Stone circle.
Subsurface architecture: Rectangular cist.
Main burial: Semiflexed, head to the north, on left side facing east.
Sex: Male.
Age: 18-22 years (most likely 22).
Other burials: Secondary in fill, fragments of secondary in csit.
Artifacts in cist: Leather shroud, copper metal.
Other artifacts: Potsherd in fill.
Disturbances: None observed.

Table 4.215: Grave 356 loci.

Locus	Description
9155	Grave circle
9165	Fill
9222	Rock pile
9230	Capstones
9232	Cist
9233	Cist fill
9234	Human remains



Figure 4.258: Grave 356 burial.

Grave 356 was recognized on the surface of square H-12 as a complete stone circle 1.47 meters in diameter constructed of thirteen dolerite and sandstone cobbles (Table 4.215). A number of large cobbles, called a rock pile, were encountered in the fill. A secondary burial, individual 356C, was found in the eastern baulk and incompletely excavated. One potsherd (EDM 70247) was recovered from the fill. At a depth of 0.54 meters, three capstones were encountered. The supervisor's final report (handwritten

version) makes unclear references to a fourth capstone which was not removed, but site photographs and other notes do not elucidate these comments. The capstones sealed a rectangular cist constructed of ten cap support stones and six side slabs measuring 1.03 meters long, 0.39 meters wide, and 0.45 meters deep. Entombed within this cist were the excellently preserved remains of a male adult, individual 356A, aged 18 to 25 (but most likely 22). He lay semiflexed with head to the north on the left side, facing east (Fig. 4.258). The right arm was flexed, with the hand placed near the face, while the left arm was extended. Organic material, possibly the remains of a shroud, and what appears to be a small piece of copper metal (though not a discernable object) were visible in the abdominal area (Fig. 4.259; EDM 70367). Osteological analysis showed the individual suffered from periodontal disease, and that his sternum shows healed fracture with signs of infection. leather shroud frags found with individual. A few bone fragments from the lower body of another individual, 356B, probably an adult, were encountered in the northwest corner of the grave cist (Fig. 4.260).



Figure 4.259: Grave 356, close-up of abdominal cavity of primary burial. Note copper object and dark organic remains.



Figure 4.260: Upper body of individual 356A. Note secondary remains of individual 356B in northwest cist corner.

GRAVE 357

Surface architecture: Partial stone circle.
Subsurface architecture: Rectangular cist.
Main burial: Secondary.
Sex: Unknown.
Age: Adult, 21-46.
Other burials: None.
Artifacts in cist: None.
Other artifacts: Copper prill in fill.
Disturbances: None observed.

Table 4.216: Grave 357 loci.

Locus	Description
9157	Stone circle
9158	Fill
9185	Capstones
9221	Cist
9208	Cist fill
9203	Human remains



Figure 4.261: Grave 357 capstones.

Grave 357 was visible on the surface of square H-12 as a partial stone circle, 1.48 meters in diameter, constructed of eleven cobbles (Table 4.216; L. 9157). One prill was recovered in the fill (EDM 70205). Beneath 0.32 meters of fill (L. 9158), three red sandstone capstones sealed with mud plaster were encountered (Fig. 4.261; L. 9185). Small chinking stones were found between the larger stones. These sealed a rectangular cist measuring 0.88 meters long, 0.35 meters wide, and 0.45 meters deep constructed of six side slabs and eight cap support stones (L. 9221). Beneath a small amount of sediment (L. 9208), the cist contained the secondarily interred remains of an adult, aged 21-46 (L. 9203). The remains were carefully arranged, with the skull in the south facing south and the long bones framing a jumble of skeletal remains to the north of the skull (Fig. 4.262).



Figure 4.262: Grave 357 burial.

GRAVE 358

Surface architecture: Partial stone circle
Subsurface architecture: L-shaped cist
Main burial: Semiflexed, on left side, head to south, facing west.
Sex: Female.
Age: 40-49, most likely 45.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Stone circle partially destroyed.

Table 4.217: Grave 358 loci.

Locus	Description
9159	Grave circle
9160	Fill
9182	Rock pile
9214	Capstones



Figure 4.263: Grave 358 burial.

Grave 358 was visible on the surface of square H-12 as a partial stone circle measuring 1.64 meters in diameter constructed of twelve cobbles (Table 4.217; L. 9159).

0.37 meters of fill were excavated (L. 9160), including a pile of cobbles (L. 9182). Below this, four capstones were encountered. The capstones were sealed with mud plaster, in which was encased a projectile point fragment manufactured on a blade (EDM 70223). The capstones sealed a cist measuring 0.91 meters long, 0.43 meters wide, and 0.76 meters deep constructed of eight side slabs and at least nine cap support stones (L. 9214). The cist was L-shaped, with a projection in the northwest to accommodate the flexed legs of the deceased (Fig. 4.263). Entombed within the cist were the remains of a female, aged 40 to 49, but most likely 45. She lay in a semiflexed position with her head to the south, lying on the left side facing west.

GRAVE 359

Surface architecture: Stone circle surrounding pavement and standing stone.
Subsurface architecture: Capstones covering pit.
Main burial: Semiflexed, head to south, on left side facing west.
Sex: Unknown.
Age: Infant, 1-3 years.
Artifacts below capstones: Potsherd.
Other artifacts: None.
Disturbances: None observed.

Table 4.218: Grave 359 loci.

Locus	Description
9163	Stone circle
9164	Standing stone
9165	Fill
9170	Capstones
9175	Fill beneath capstones
9222	Human remains
9223	Fill beneath human remains



Figure 4.264: Grave 359 surface architecture.

Grave 359 was visible on the surface of square H-12 as a complete stone circle measuring 1.00 meters in diameter constructed of thirteen dolerite cobbles (Fig. 4.264; Table 4.218; L. 9163). These surrounded a pavement constructed of about twenty flat dolerite cobbles. In the middle of this pavement rose a standing stone measuring 20 centimeters high, eight centimeters wide, and six centimeters thick (L. 9164; EDM 70093). The stone appeared unworked, and had sunk into the fill below over time (Fig. 4.265). Beneath the pavement, about 0.35 meters of fill (L. 9165) were excavated before sandstone capstones were encountered (L. 9170). The handwritten supervisor's report mentions two capstones, while the Grave Sheet records four. These stones sealed a pit cut into the conglomerate measuring 0.79 meters long, 0.52 meters wide, and 0.37 meters below the capstone. One potsherd was found in the upper fill of the pit (EDM 89190). In

the pit were interred the remains of an infant, aged one to three years old. The child was laid in a semiflexed position with head to the south, lying on the left side facing west (Fig. 4.266). The pit extended outside the grave circle.



Figure 4.265: Grave 359 standing stone close-up.



Figure 4.266: Grave 359 burial.

GRAVE 360

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 1 potsherd.
Other artifacts: None.
Disturbances: Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.219: Grave 360 loci.

Locus	Description
9199	Grave
9196	Capstones
9200	Cist fill
9224	Human remains



Figure 4.267: Grave 360 human remains.

Grave 360 was located in square I-12 but was invisible on the surface (Table 4.219; L. 9199). Sediment was hard-packed sediment with many stones. At a depth of 0.43 meters, three capstones, one of sandstone in the northwest, one of sandstone in the southeast, and one of dolerite in between these, were encountered (L. 9196). Mud plaster sealed the edges of these stones, and two large dolerite cobbles were also used as chinking. These sealed a cist constructed seven cobbles and side slabs and eight cap support stones measuring 1.07 meters long, 0.48 meters wide, and 0.46 meters deep. The cist was full of sediment (L. 9200) and trapezoidal, wider in the north than in the south (Fig. 4.267). Within were the remains of a fragmentary adult. It is unclear whether these remains were secondarily deposited or disturbed in antiquity, though given the size of the grave and the fact that it was constructed in a trapezoidal way similar to cists constructed to accommodate the deceased's flexed legs, the latter seems more likely (L. 9224). The handwritten supervisor's report states that the skull was in the south. One potsherd was collected from the human remains locus (EDM 89222).

GRAVE 361

Surface architecture: Partial stone circle.
Subsurface architecture: L-shaped cist.
Burial: Semiflexed, head to south, on left, facing west.
Sex: Unknown.
Age: Subadult.
Other burials: None.
Artifacts in cist: Flagging tape.
Other artifacts: None.
Disturbances: Stone circle partially destroyed, capstones displaced, cist full of sediment, human remains broken, flagging tape found in fill.

Table 4.220: Grave 361 loci.

Locus	Description
9171	Grave
9166	Rock pile
9167	Fill
9193	Capstones
9212	Cist
9202	Cist fill
9231	Human remains



Figure 4.268: Grave 361 burial. Note the skull in the southeast corner of cist.

Grave 361 was marked on the surface by a partial stone circle measuring 0.82 meters in diameter constructed of seven dolerite and limestone cobbles in the western area of square H-12 (Table 4.220; L. 9171). Excavation revealed many cobbles within the fill (L. 9166, 9167). Three capstones were encountered at a depth of 0.32 meters, two of sandstone and one of granite (L. 9193). One of these was on its end, clearly out of place. These sealed a cist measuring 0.73 meters long, 0.28 meters wide, and 0.34 meters

deep and was constructed with eight side slabs of dolerite and sandstone and nine cap support stones (L. 9212). The cist was full of sediment (L. 9202). Within the cist were very poorly preserved remains oriented with head to the south, lying on the left side facing west, in a semiflexed position (L. 9231). The individual only took up about half the cist, while the skull was very far removed from the body (Fig. 4.268). Osteological analysis suggested that the interred was a subadult, aged six to twelve months. The fact that the radius was unfused suggested that the deceased was a subadult, while the teeth indicated a six to twelve month-old. However, these estimates are likely due in part to the poor preservation of the interred. Photographs show what appears to be an older subadult, one which may be older than one year. Flagging tape was recovered beneath the capstones. The flagging tape may have been brought down by rodent activity, or the grave may have been recently robbed.

GRAVE 362

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Young/middle adult and subadult of less than 15 years.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Stone circle partially destroyed, capstones displaced, cist full of cobbles and sediment, human remains broken and scattered in cist.

Table 4.221: Grave 362 loci.

Locus	Description
9168	Grave exterior
9169	Fill
9184	Rocky fill
9197	Capstones
9215	Cist
9216	Cist fill
9217	Rocky fill in cist
9218	Rocky fill
9237	Human remains



Figure 4.269: Grave 362 cist.

Grave 362 was visible on the surface of square H-12 as a partial stone circle composed of nine cobbles 1.5 meters in diameter (Table 4.221; L. 9168). A small rock pile was encountered in the fill (L. 9169, 9184), and in the west side of the excavated shaft, a hole into an adjacent cist was visible. At a depth of 0.62 meters, three capstones, two of dolerite and one of sandstone, were encountered (L. 9197). Between these, a space where a fourth capstone clearly rested was observed. The cist measured 1.20 meters long, 0.39 meters wide, and 0.50 meters deep, and was constructed with at least

ten cap support stone s and an unspecified number of side slabs (Fig. 4.269; L. 9215). The cist was trapezoidal, wider in the north than in the south. The cist was full of sediment, including large cobbles (L. 9216, 9217, 9218). The skeletal material was poorly preserved and badly fragmented, scattered throughout the cist (L. 9237). Skull fragments were observed in the south end of the cist, crushed by a large dolerite cist stone. Remains of at least two individuals were identified from this grave: 362A, a young or middle adult, and 362B, a subadult of less than fifteen years.

GRAVE 363

Surface architecture: Partial stone circle.
Subsurface architecture: Capstones over pit.
Burial: Semiflexed, on left side, head oriented south, facing west.
Sex: Male.
Age: Adult, 27-66.
Other burials: Adult secondary burial above capstones.
Artifacts in cist: 3 beads (amazonite, citrine).
Other artifacts: None.
Disturbances: Stone circle partially destroyed.

Table 4.222: Grave 363 loci.

Locus	Description
9172	Stone circle
9173	Rock pile
9174	Human remains
9221	Human remains
9213	Capstones
9238	Fill beneath capstones
9239	Human remains



Figure 4.270: Grave 363 burial.

Grave 363 was visible on the surface of square H-12 as a partial stone circle of five cobbles (Table 4.222; L. 9172). In addition, a small pile of rocks covered the surface. Beneath the top level of stones, six or seven stones were encountered. Although this was initially described as a pavement, excavation seems to have shown that it was in fact what has been described as a rock pile; that is, a disordered mass of cobbles tossed into the grave during burial (L. 9173). Rocky, moist sediment was encountered from the surface to the capstones. Above the capstones, the partial remains of individual 363B, a poorly preserved and very fragmentary adult, were found (L. 9221). At a depth of 0.51 meters below the surface, capstones were encountered (L. 9213). Beneath the capstones an oval pit cut into the conglomerate was encountered. The pit measured 1.50 meters long, 1.06 meters wide, and 0.50 meters deep. Beneath a layer of sediment (L. 9238), the primary burial of individual 363A, a male adult aged 27 to 66 (but most likely 46), was

encountered (Fig. 4.270; L. 9239). His remains show signs of periodontal disease, and also evidence of trauma in the form of three cranial depression fractures, one on the left parietal, and two on right parietal. Possibly connected to these injuries was a hole of unknown origin which was observed on his left parietal. This individual was buried in a semiflexed position on his left side facing west, with his head oriented towards the south. Three beads were found under the mandible, one amazonite short barrel, one amazonite standard barrel, and one citrine oblate bead (EDM 70355).

GRAVE 364

Surface architecture: None.
Subsurface architecture: Capstones over pit.
Main burial: Secondary.
Sex: Unknown.
Age: Adult.
Other burials: None.
Artifacts in pit: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, capstones displaced, human remains broken and scattered.

Table 4.223: Grave 364 loci.

Locus	Description
9183	Grave
9178	Pit
9179	Pit fill
9183	Human remains

Grave 364 was invisible on the surface of square I-12 (L. 9183), but was encountered during the excavation of Grave 338 and Grave 360 (Table 4.223). It appears to have been cut into the fill of these graves. The area supervisor's handwritten report notes, "This is probably a secondary burial associated with graves 338 and 360." Excavation notes observe that two displaced capstones in the vicinity were determined to belong to this grave. At a depth of 0.19 meters below the surface, the burial was

encountered. The only sign of a possible cist were the displaced capstones and one small flat sandstone slab found in the west baulk (L. 9178). The burial was covered in sediment (L. 9179) and measured just 0.41 meters long, 0.28 meters wide, and 0.51 meters deep. The burial consisted of the fragmentary, apparently both secondarily deposited and disturbed, remains of an adult of unknown sex (L. 9183).

GRAVE 365

Surface architecture: Partial stone circle.
Artifacts: None.
Disturbances: Surface architecture partially destroyed.

Table 4.224: Grave 365 loci.

Locus	Description
9181	Grave
9180	Capstones

Grave 365 was identified on the surface by a poorly-defined partial stone circle 0.76 meters in diameter composed of ten cobbles in square H-12. It lay between Grave 357 and Grave 358. A large amount of bone was found in the fill, especially in the eastern part of the grave. Capstones were uncovered in the grave, but the grave was not excavated below this point.

GRAVE 366

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: 5 beads? (Shell, alabaster.)
Other artifacts: None.
Disturbances: Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.225: Grave 366 loci.

Locus	Description
9191	Grave
9192	Capstones
9235	Cist
9236	Cist fill



Figure 4.271: Grave 366 capstones.

Grave 366 was located on the border of squares J-8 and J-9 (Table 4.225). It was invisible on the surface (L. 9191). At a depth of 0.11 meters, three capstones were encountered (L. 9192). A gap was observed between them where a fourth was clearly once laid (Fig. 4.271). These sealed a cist constructed of six side slabs of both dolerite and sandstone and thirteen cap support stones: six of dolerite, four of limestone, and three of sandstone (L. 9235). It appears that two side slabs that were once present were removed, though it is unclear if these were missing from the east or the west wall of the cist. The cist measured 1.30 meters long, 0.50 meters wide, and 0.46 meters deep. Within the grave were the extremely fragmentary remains of a human skeleton of

unknown age and sex (L. 9236). A cluster of five beads, including two shell cylinder discs, two shell barrel discs, and one alabaster barrel disc, were said to have been recovered from the grave (EDM 89355). However, the locus was not recorded and the square number, I-11, is far from Grave 366. The location of the find was not recorded with the electronic distance meter.

GRAVE 367

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Flexed, on left side, head to south, facing west.
Sex: Unknown.
Age: Adolescent, 12 to 18 years.
Other burials: None.
Artifacts in cist: 23 beads and pendants (ostrich eggshell, shell).
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.226: Grave 367 loci.

Locus	Description
9198	Grave
9194	Capstones
9210	Cist
9211	Cist fill
9209	Human remains



Figure 4.272: Grave 367 burial.

Grave 367, located in the northwest corner of square I-12, was invisible on the surface (Table 4.226; L. 9198). At a depth of 0.41 meters, four capstones were encountered (L. 9194). These sealed a cist measuring 0.95 meters long, 0.55 meters wide, and 0.42 meters deep (L. 9210). The cist was constructed of at least six side slabs of dolerite and sandstone and at least nine cap support stones. The cist was trapezoidal, wider in the north than in the south. The cist was full of sediment (L. 9211). Within the cist were interred the remains of an adolescent, aged twelve to eighteen years (L. 9209). The individual was buried in a flexed position, with legs pulled up to the chest but arms extended down the sides (Fig. 4.272). The hands were placed on top of the feet. The head oriented was to the south, with the individual laid on the left side facing west. Twenty-three beads were found in association with the individual. These included twenty-two barrel disc ostrich eggshell beads (EDM 70216, 70256, 89091) and one poorly preserved shell pendant fragment (EDM 70256).

GRAVE 368

Surface architecture: None.
Subsurface architecture: L-shaped cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Potsherd.
Other artifacts: 3 flint blade scrapers in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.227: Grave 368 loci.

Locus	Description
9226	Cist
9225	Cist fill
9244	Human remains



Figure 4.273: Grave 368 cist.

Grave 368 was located in square J-8, but was invisible on the surface (Table 4.227). Three flint scraper blades were recovered from the fill before the grave was

recognized (EDM 70273). At a depth of 0.32 meters, three capstones were encountered. A pile of cobbles seemed to suggest disturbance at the capstone level. Beneath was a cist constructed of ten cap support stones and seven side slabs (L. 9226). Either there was no slab in the north, possibly suggesting one had been removed, or the niche of the cist was not completely excavated. The cist was full of sediment (L. 9225). The L-shaped cist measured 1.19 meters long, 0.51 meters wide, and 0.42 meters deep, and was constructed along a north-south axis (Fig. 4.273). The burial was poorly preserved and badly fragmented, apparently as a result of looting in antiquity (L. 9244). One potsherd was recovered from the human remains locus (EDM 70331).

GRAVE 369

Table 4.228: Grave 369 loci.

Locus	Description
9193	Capstones

No data are available on Grave 369 beyond the capstone locus number (L. 9193). The grave appears to have been identified at the capstone level and left unexcavated.

GRAVE 370

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Sex: Unknown.
Age: Young adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.229: Grave 370 loci.

Locus	Description
9207	Capstones
9240	Cist
9241	Cist fill



Figure 4.274: Grave 370 capstones.

Grave 370 was invisible on the surface of square J-9 (Table 4.229). At a depth of 0.29 meters, four capstones, three of sandstone and one of dolerite, were encountered (Fig. 4.274; L. 9207). Mud plaster was observed on the cap support stones, but not on the capstones themselves. Beneath the capstones was a cist constructed of sixteen cap support stones (ten of dolerite, two of limestone, and four of sandstone), and five side slabs (L. 9240). There was no side slab in the north, and the east and west appeared to also be missing side slabs, as though the cist were extended at some point. The cist widens at the north end, probably to accommodate flexed legs. The cist measures 1.30 meters long, 0.52 meters wide, and 0.36 meters deep. The cist was full of gravelly sand.

Within the cist were the very fragmentary and poorly preserved remains determined based on tooth wear to be a young adult (L. 9241). Mild wear was observed on a canine and premolar, but a third molar shows no wear.

GRAVE 371

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Head to south, on right side facing east.
Sex: Unknown.
Age: Child, 6 to 8 years.
Other burials: Adult human remains also found in cist.
Artifacts in cist: Copper bracelet, three copper earrings, copper spiral pendant, leather and textile shroud fragments.
Other artifacts: Potsherd, 16 beads (ostrich eggshell) in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.230: Grave 371 loci.

Locus	Description
9219	Grave
9220	Fill
9223	Rock pile
9242	Capstones
9246	Cist
9245	Cist fill
9243	Human remains



Figure 4.275: Grave 371 capstones.

Grave 371 was the only grave excavated in square K-12 (Table 4.230; Levy et al. 2004: 453). It was visible on the surface of the south-central part of the square as a partial stone circle of seven stones 1.40 meters in diameter (L. 9219). Sixteen ostrich eggshell cylinder disc beads (EDM 86112) were recovered high in the fill (L. 9220), as was a potsherd (EDM 86102). A disorganized mass of stones was encountered in the fill (L. 9223). At a depth of 0.53 meters, four capstones were encountered sealed with mud plaster (Fig. 4.275; L. 9242). These sealed a cist measuring 1.19 meters long, 0.43 meters wide, and 0.47 meters deep (L. 9246). The cist was trapezoidal, wider at the north than at the south. Only a shallow layer of fill covered the human remains (Fig. 4.276; L. 9245). Within the cist were entombed the remains of a child aged about six to eight years old (L. 9243). The individual displayed carries to the deciduous teeth and periodontitis.

The individual was laid in a semiflexed position with head oriented south, laying on the right side facing east (Fig. 4.277). The hands appear to have been crossed over the chest: the right hand was at the left shoulder, and the left hand was underneath the skeleton. A copper bracelet was found on the right forearm (Fig. 4.278; EDM 70369). Four copper earrings were recovered from around the cranium (EDM 70387, 70390, 70391, 70392). Leather (EDM 70371) and textile (EDM 70368) shroud fragments were recovered from beneath the mandible and around the thorax. Sieving the fill beneath the skeleton yielded a copper ornament with a dual spiral motif (EDM 89220) and a cut cowry shell (EDM 70388). Scattered bone fragments of a second individual, 371B, were found beneath individual 371A. These bones included ribs, leg bones, a patella, and foot bones of an adult.



Figure 4.276: Grave 371 burial before removal of cist fill.



Figure 4.277: Grave 371 after excavation.



Figure 4.278: Grave 371 upper body. Note the copper bracelet on the right forearm.

4.6: 2004 EXCAVATIONS: AREA B GRAVE DESCRIPTIONS

GRAVE 10-2004
Surface architecture: Stone circle.
Subsurface architecture: Cist missing endstones.
Burial: Disturbed, fragmentary.
Gender: Unknown.
Age: Adult.
Other burials: Secondary above capstones.
Artifacts in cist: 2 beads (amazonite, limestone).
Other artifacts: Unidentified ferrous metal, 5 beads (amazonite, cupric, ostrich eggshell, aventurine) in fill and looters' backdirt.
Disturbances: Looted in antiquity and recently. Looter's pit left open in fill. Capstones disturbed, cist full of sediment, human remains broken.

Table 4.231: Grave 10-2004 loci.

Locus	Description
9306	Stone circle
9305	Looter's pit
9314	Fill
9317	Capstones
9335	Cist
9322	Cist fill



Figure 4.279: Grave 10-2004 capstones.

Grave 10-2004, in square M-13, was believed to be identical to the grave mapped and numbered 10 in 1997 (Table 4.231). However, subsequent consultation of the 1997 notes showed that that grave was in fact excavated. Grave 10-2004 was visible on the surface as a mostly complete stone circle of fifteen dolerite cobbles measuring 1.45 meters in diameter (L. 9306). Area supervisor Sarah Malena estimated that it may have originally been constructed of about twenty such cobbles. The grave appears to have been looted sometime between the 1997 and 2004 field seasons. A depression in the south central part of the grave circle appears to have been dug during that period, and stones and loose sediment were tossed into the pit (L. 9305). Five beads were recovered from the loose backdirt, including one aventurine barrel disc bead (EDM 72056), two cupric, possibly malachite, short cylinder beads (EDM 72058, 72069), one ostrich eggshell cylinder disc (EDM 72049) and one amazonite cylinder disc bead (EDM 72057). In the loose fill in this pit and the apparently undisturbed fill below, the fragmentary remains of individual 10B, an infant two to four years old, were recovered (L. 9314). Some unidentified apparently ferrous modern metal (EDM 89181)—possibly a nail—was also recovered here. The illegal probe does not appear to have reached capstone level. At a depth of about 0.84 meters below the stone circle surface, a pile of dolerite cobbles was encountered, and beneath this were found the capstones. Four capstones were encountered, one of dolerite in the north and three of sandstone (L. 9317). The two middle stones were not lying flat and therefore appeared to be disturbed (Fig. 4.279). The capstones sealed a cist constructed of five side slabs (L. 9335). Four were dolerite cobbles, two in the north and two in the west, and one was a sandstone side slab in the east. There are no slabs in the south part of the cist (Fig. 4.280). The cist is dug

into the conglomerate bedrock. The cist measured about 1.05 meters long, 0.40 meters wide, and 0.64 meters deep. Within the cist were encountered the remains of individual 10A, an adult, represented only by partially articulated ribs and vertebrae (L. 9322). These suggest that the interred may have been placed on the right side, facing west, with head oriented north. Two beads were recovered from the cist, including a roughly triangular amazonite drilled pebble (EDM 72160) and an irregularly shaped, probably limestone, short barrel bead (EDM 72130).



Figure 4.280: Grave 10-2004 burial.

GRAVE 47-2004

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: 2 disturbed, fragmentary individuals.
Gender: Unknown.
Age: Adolescent or adult and adult.
Other burials: Secondary adult and child burials in fill.
Artifacts in cist: Potsherd, 22 beads (ostrich eggshell, agate, alabaster).
Other artifacts: Potsherd, 4 beads in fill (alabaster), 38 beads associated with secondary burial (ostrich eggshell, alabaster, cupric).
Disturbances: Robbed recently and in antiquity. Small looter's trench open. Capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.232: Grave 47-2004 loci.

Locus	Description
2217	Cleanup of robber's pit
2232	Fill
2234	Grave 509 secondary burial
9347	Cist
9315	Cist fill



Figure 4.281: Grave 47-2004 surface architecture.

Grave 47-2004, in square M-12, is believed to be identical to the grave denoted 47 in 1997 but left unexcavated (Table 4.232). It is a mortuary structure that also contained several secondary burials. An incomplete stone circle of nine cobbles measuring about 2.10 meters in diameter marked the grave on the surface (Fig. 4.281). In the 2004 field season, a depression was observed within the grave circle, suggesting looting or an incomplete excavation (L. 2217). One alabaster short cylinder bead was collected from this looter's fill (EDM 87076), and three more alabaster beads, one a cylinder disc (EDM 87114) and the others short cylinders (EDM 87115, 89011), were recovered from the fill below (L. 2232). A potsherd (EDM 89210) was also recovered from this fill. Also in the fill, individual 47C was encountered, represented by a few long bone and cranial fragments of an adult. In the northern part of the grave, another secondary burial, 509, was encountered (L. 2234). Individual 509 was represented by the poorly preserved remains of a child aged three to six years old, associated with a few dolerite cobbles which were not considered to be a grave structure (Fig. 4.282). Thirty-eight beads were found in association with this individual, including twelve ostrich eggshell cylinder discs, twenty-four alabaster cylinder discs, one alabaster long cylinder, and one cupric cylinder disc (EDM 87124). Secondary burials 511 and 513 were closely associated below and to the north of Grave 509, but are more closely associated with Grave 537 (*q.v.*). At a depth of 0.39 meters, the cist was encountered (L. 9347). No capstones were in place, though one red sandstone capstone stood vertically in the cist protruding into the fill above, and another is mentioned in the grave sheet. The cist measured 1.30 meters long, 0.45 meters wide, and 0.40 meters deep and was constructed of nine side slabs, one of dolerite and the others of limestone, and eight cap support stones. The cist was

trapezoidal, wider in the north than in the south. Within the cist were the fragmentary and greatly disturbed human remains of individual 47A, an adolescent or young adult, and 47B, an adult who seems to have been older than 47A based on tooth wear (L. 9315). A mostly intact skull and a large skull fragment were observed in the southern part of the grave (Fig. 4.283). Twenty-two beads were recovered in the cist. These included one red and white agate long-barrel bead (EDM 72102), five ostrich eggshell cylinder discs (EDM 72094, 72105, 72167, 72195, 89182), eight alabaster short cylinder beads (EDM 72089,72091, 72092, 72093, 72104, 72156, 72157, 72164), and eight alabaster cylinder discs (72086, 72105, 72112, 72122, 89182). One piece of pottery was also recovered in the cist (EDM 72103).

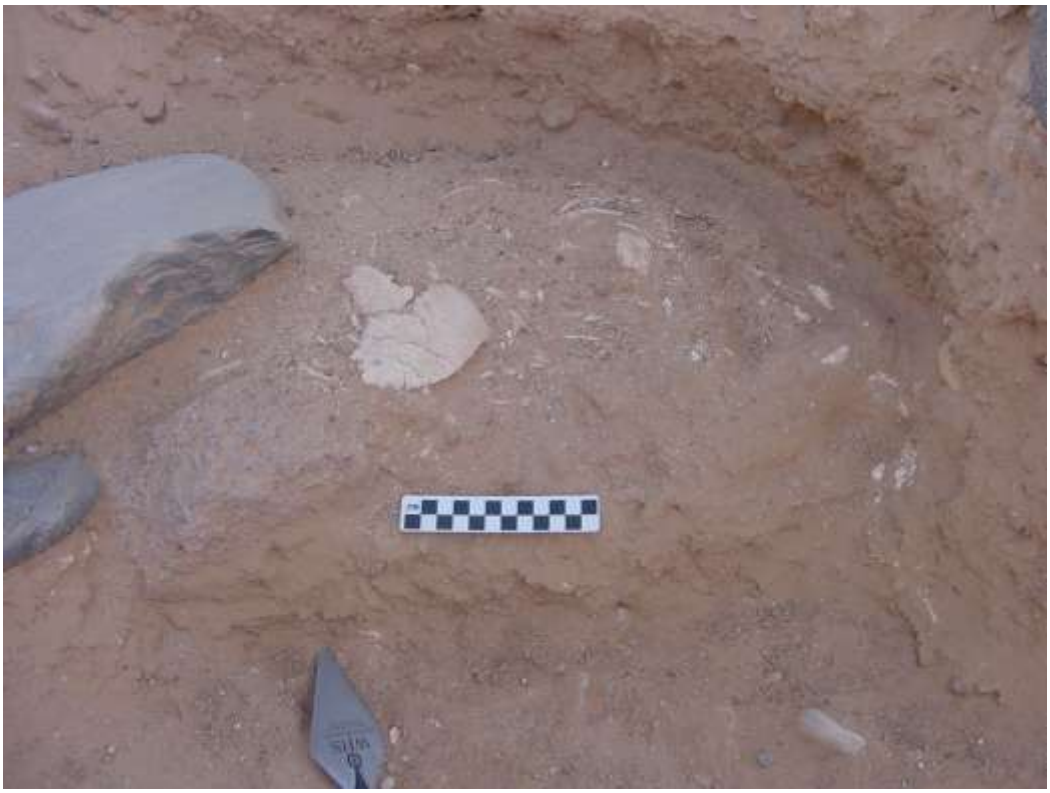


Figure 4.282: Grave 47-2004, individual 509 secondary burial.



Figure 4.283: Grave 47-2004 human remains.

GRAVE 500

Surface architecture: Stone circle.
Artifacts: 9 beads from fill (ostrich eggshell, shell, cupric), 6 beads at top of cist (ostrich eggshell).
Disturbances: Stone circle partially destroyed, capstones appeared displaced.

Table 4.233: Grave 500 loci.

Locus	Description
2220	Stone circle
2221	Fill
2265	Mud plaster



Figure 4.284: Grave 500 surface architecture.

Grave 500 was visible on the surface of square L-11 as a nearly complete stone circle of sixteen cobbles 1.70 meters in diameter (Table 4.233; L. 2220). The circle has a double course of flat stones resembling paving in the south, while stones in the north are set vertically on end (Fig. 4.284). Many dolerite cobbles were encountered in the fill (L. 2221). Nine beads were recovered from the fill. These included seven ostrich eggshell disc beads (EDM 87126, 87144, 87145, 87223, 87242, 89012), one shell barrel disc bead (EDM 87152), and one cupric barrel disc bead (EDM 87220). Beneath the fill thick mud plaster was encountered (L. 2265). This extended down to the capstones, which were encountered at a depth of 0.54 meters. Two capstones and dolerite cobbles which appear to be cap support stones were visible, but the cist top was not completely cleared (Fig. 4.285). At least one capstone appeared to be missing. The cist extended into the northern baulk, and capstones appeared to be missing. A few bone fragments were

collected from the area of the open cist top, belonging to a young or middle adult of unknown gender. Six ostrich eggshell beads were collected from this area (EDM 87285, 87287, 87318). One dolerite cobble, interpreted as a standing stone, was recorded (EDM 87257). However, it is not obviously worked and was found lying flat, so its use as a standing stone cannot be confirmed. Excavation ceased at this level without further exposing the cist.



Figure 4.285: Grave 500 subsurface architecture.

GRAVE 501

Surface architecture: Partial stone circle
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Adult.
Other burials: Very fragmentary bones in fill.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture partially destroyed, capstones displaced, cist full of sediment.

Table 4.234: Grave 501 loci.

Locus	Description
2215	Stone circle
2212, 2258, 2259	Fill
2241	Rocky fill
2248	Capstones
2317	Cist
2250	Cist fill
2307	Human remains



Figure 4.286: Grave 501 burial.

Grave 501 was noted on the surface of square L-11 as a partial stone circle of about ten dolerite cobbles 1.65 meters wide, though only two of these stood vertically and the others were lying flat (Table 4.234; L. 2215). In places, this circle appeared to be two courses deep. The fill between the surface and the capstone locus contained a great deal of stone debris which became denser as the capstone locus was neared (L. 2212, 2258,

2259, 2241). As the cist continued underneath the stone circle, the fill excavation boundaries had to be extended to the north and south of the original excavation. Bone fragments were observed in the fill, but apparently were too scanty for analysis. At a depth of 0.48 meters three capstones were encountered, one of sandstone, one of dolerite, and one of limestone (L. 2248). One of the central capstones was missing. Beneath these capstones was a cist measuring 1.13 meters long, 0.44 meters wide, and 0.42 meters deep (L. 2317). The cist was constructed of six or seven sandstone and limestone side slabs and eleven dolomite, sandstone, and limestone cap support stones. The cist was trapezoidal, wider in the north than in the south, and was full of sediment (L. 2250). Within the cist was interred the poorly preserved remains of an adult in a semiflexed position with head oriented to the south, lying on the left side facing west (Fig. 4.286; L. 2307). Osteological analysis showed that the individual displayed signs of two well-healed depressed cranial fractures, one 29.95 mm in diameter to left parietal towards the back near the suture, and the other 13.36 mm in diameter to right parietal towards the back near the suture. After the excavation of the burial, a probe was dug another ten centimeters below the cist, but only sterile soil was encountered.

GRAVE 502

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown
Age: Adult?
Other burials: None.
Artifacts in cist: None.
Other artifacts: 3 beads (ostrich eggshell) in fill.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.235: Grave 502 loci.

Locus	Description
2218	Stone circle
2219	Fill
2253	Mud plaster
2262	Capstones
2309	Cist
2264	Cist fill



Figure 4.287: Grave 502 burial.

Grave 502 was observed on the surface as a nearly complete stone circle of twenty-four cobbles, usually two courses deep, lying on their sides rather than set upright and measuring 1.95 meters in diameter (Table 5.235; L. 2218). The fill immediately below the surface contained stones throughout (L. 2219). Three ostrich eggshell cylinder disc beads were collected from within this fill (EDM 87111). Beneath this fill a thick layer of mud plaster covered the capstones (L. 2253), which were encountered at a depth of 0.62 meters below surface. Three sandstone capstones were encountered, but at least one capstone appeared to be missing (L. 2262). The cist measured 1.10 meters long, 0.40

meters wide, and 0.48 meters deep and was constructed of six limestone and sandstone side slabs and nine dolerite, sandstone, and limestone cap support stones. The cist was trapezoidal, wider at the north than at the south (L. 2309). The cist was full of hard packed debris and stones, apparently including mud plaster (L. 2264). The human remains entombed within were fragmentary and greatly disturbed, concentrated mostly in the northwestern part of the cist (Fig. 4.287). Osteological analysis showed only that the interred was most likely an adult. Some organic material, possibly seeds, was collected from the south end of the cist (EDM 87402).

GRAVE 503

See **GRAVE 512**.

GRAVE 504

Surface architecture: Partial stone circle.
Subsurface architecture: L-shaped cist.
Burial: Fragmentary, disturbed.
Gender: Unknown
Age: Three adults, one subadult aged ten to fifteen.
Other burials: None.
Artifacts in cist: Unidentified organic material.
Other artifacts: 1 bead (ostrich eggshell) in fill.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.236: Grave 504 loci.

Locus	Description
2214	Stone circle
2213	Fill
2239	Rock pile
2247	Capstones
2249	Cist fill
2308	Cist



Figure 4.288: Grave 504 human remains.

Grave 504 was visible on the surface as a partial stone circle in square N-11 (Table 4.236; L. 2214). It was observed "in line" with Grave 544 and Grave 707. Three dolerite cobbles were observed standing vertically on the north and west sides of the grave, though other stones lying on their sides may have been part of the surface architecture. The stone circle is estimated to have been about 1.85 meters in diameter. Stones were encountered in the grave fill (L. 2213), becoming denser with depth, and a disorganized pile of about twenty-four cobbles was found above the capstones (L. 2239). At least one bead was recovered from this rock pile (EDM 72199). At a depth of about 0.62 meters, two capstones were encountered in the north and south of the grave (L.2247). Between these, dolerite and sandstone cobbles were piled above the cist fill. The cist measured 1.40 meters long, 0.50 meters wide, and 0.60 meters deep and was

constructed of eleven dolerite, sandstone, and limestone cap support stones and nine sandstone, limestone, and dolerite side slabs (L. 2308). No side slab was observed in the northwest, which the area supervisor noted may have been incompletely excavated. The remains of at least four individuals, badly broken and poorly preserved, were observed throughout the cist. These individuals included three adults and a subadult, aged ten to fifteen years (Fig. 4.288; L. 2249). Organic material of an unknown nature was collected from the cist fill (EDM 87461).

GRAVE 505

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Male.
Age: Middle adult, 35-50.
Other burials: None.
Artifacts in cist: 1 bead (shell), organic material.
Other artifacts: None.
Disturbances: Surface architecture partially destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.237: Grave 505 loci.

Locus	Description
2222	Stone circle
2223	Fill
2261	Capstones
2322	Cist
2278	Cist fill



Figure 4.289: Grave 505 surface architecture.

Grave 505 was visible on the surface of square L-12 as a partial stone circle composed of seven dolerite cobbles (Table 4.237; L. 2222). The circle was more complete on the southeast side (Fig. 4.289). A few stones in the north laying flat were encountered after the first removal of topsoil. Based on these, the circle was estimated to have a diameter of 1.75 meters. In the northwest, supervisor notes mention a "lower ring" of five stones that were not dolerite. Few stones were encountered in the fill (L. 2223), and capstones were encountered at a depth of only 0.19 meters. Four red sandstone slabs made up the capstones, and smaller cobbles were used as chinking (L. 2261). Fill slipped through cracks in the capstones during excavation, and it was initially believed that the grave was intact. However, removal of the capstones revealed a heavily disturbed cist, with broken human remains scattered throughout (L. 2278). The first

fifteen centimeters of the cist were empty, but the rest was full of sediment, dolerite cobles, and fragmentary human remains. The cist was constructed of nine dolerite side slabs, atop which were twenty-four cap support stones in as many as three courses. Mud plaster appears to have been used as mortar. The cist measured 1.10 meters long, 0.55 meters wide, and 0.62 meters deep. The cist was trapezoidal, wider in the north than in the south (L. 2322). Osteological analysis of the human remains revealed that the grave was of a middle adult male, aged 35 to 50 years (Fig. 4.290). Unidentified organic material (EDM 87479) was retrieved from the northern part of the cist, and one lenticular shell bead (EDM 87593) was also collected from the cist fill. A probe beneath the cist yielded only sterile conglomerate.



Figure 4.290: Grave 505 human remains.

GRAVE 506

Surface architecture: Partial stone circle, possible standing stone.
Subsurface architecture: Rectangular cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Young adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.238: Grave 506 loci.

Locus	Description
2224	Stone circle
2225, 2257, 2260	Fill
2240	Rocky fill
2287	Capstone
2288	Cist
2274	Cist fill



Figure 4.291: Grave 506 surface architecture. Note the large stone, probably artificially smoothed, in the center of the photograph.

Grave 506 was visible on the surface of square M-12 as a stone circle composed of seven dolerite cobbles 1.40 meters in diameter (Table 4.238; L. 2224). Excavation notes state that the circle was mostly complete, but that stones were missing in the east, though photographs show the whole to be disorganized. In the middle of the surface feature was a large dolerite cobble (EDM 87135), measuring 0.70 meters high, 0.33 meters wide, and 0.30 meters thick. The area supervisor believed this to be a standing stone left upside-down on the grave surface. Site photographs suggest that the stone may have been artificially smoothed, but the stone was left in the field and never properly photographed or analyzed (Fig. 4.291). The grave fill was densely packed with dolerite cobbles (L. 2225, 2257, 2260), especially as excavation approached the cist (L. 2260). Only one limestone capstone was encountered in situ covering the north end of the cist (L. 2287), at a depth of 0.38 meters; the rest of the cist was covered only by the dolerite cobbles of the fill. The cist was constructed of at least five dolerite side slabs and a sixth sandstone side slab in the south (L. 2288), though the northern end of the cist does not appear to have been completely excavated. The area that was excavated, though the area supervisor noted was "not clear" that this was the size of the complete cist, was 0.55 meters long, 0.35 meters wide, and 0.34 meters deep (Fig. 4.292). At least two cap support stones were observed in situ, though most of these seem to have been disturbed in antiquity. Within the cist were secondarily deposited and fragmentary human remains judged from tooth wear to be those of a young adult of unknown sex (L. 2274).



Figure 4.292: Grave 506 cist.

GRAVE 507

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on right side facing east
Gender: Female.
Age: Adult.
Other burials: Fragmentary juvenile skeleton at feet of main burial.
Artifacts in cist: 2 potsherds, 1 bead (mother of pearl). Spatula pendant associated with secondary burial.
Other artifacts: Potsherd, 1 bead (amazonite), in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.239: Grave 507 loci.

Locus	Description
2226	Stone circle
2227	Fill
2266	Mud plaster
2281	Capstones
2375	Cist
2283	Cist fill
2306	Human remains



Figure 4.293: Grave 507 burial.

Grave 507 was located north of Grave 508 in the northeastern portion of square M-11 (Table 4.239). The grave was visible on the surface by a partial grave circle constructed of dolerite cobbles, though only three or four stones, a few in the north and a few in the south, remained in place (L. 2266). A grave identified as the 1997 season's Grave 29 lay to the east of this grave. Based on the remaining stones, the grave circle is estimated to have been about 1.65 meters in diameter. A number of dolerite cobbles were encountered in the fill, believed by the excavator to be paving stones. One nicely worked amazonite short barrel bead was encountered in the fill (EDM 87110), as was a small potsherd (EDM 87193). At a depth of 0.30 meters, four capstones, three of sandstone and one of dolerite, were encountered (L. 2281). These were surrounded and partially covered by a thick layer of mud plaster and remnants of mud plaster (L. 2266). Although the capstones appeared to be intact, hard fill and stone were found in the cist, suggesting some disturbance in antiquity (L. 2283). The cist was constructed of eight side slabs of

sandstone and dolerite and sixteen cap support stones and measured 0.89 meters long, 0.56 meters wide, and 0.52 meters deep (L. 2375). The cist was trapezoidal, wider in the north than in the south. Interred within the cist were the remains of an adult, individual 507A. Skull morphology suggests this was an adult female. The individual was laid in a semiflexed position, with head oriented to the south (L. 2306). Unusually for the cemetery, she lay on the right side facing east (Fig. 4.293). The very fragmentary remains of a juvenile, individual 507B, aged five to eight years, were recovered at the feet of individual 507A. Two potsherds were found in the cist fill (EDM 87451, 87519). A mother of pearl eye-shaped bead (EDM 87620) was also recovered from the cist fill. Associated with the secondary burial was a spatula (EDM 87761), similar to that of Grave 523.

GRAVE 508

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult.
Other burials: Fragmentary human remains in fill.
Artifacts in cist: None.
Other artifacts: Potsherds, carnelian fragment in fill.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, human remains broken and scattered in cist.

Table 4.240: Gave 508 loci.

Locus	Description
2228	Stone circle
2229, 2267	Fill
2350	Capstones
9311	Cist
2353	Cist fill



Figure 4.294: Grave 508 cist.

Grave 508 borders the southern edge of Grave 507 in square M-11 (Table 4.240). It was visible on the surface as a partial stone circle of dolerite cobbles of which five remained in place and vertical in both north and south (L. 2228). Based on these stones, the grave circle is estimated to have originally been 1.85 meters in diameter. Scattered bone fragments from at least one individual, 508B, were encountered in the fill, especially on top of the capstones, though these were too fragmentary and scattered to be called a true secondary burial. Seven potsherds, including a base (EDM 87248), rim (EDM 87250) and body sherds (EDM 87177, 87267, 87299) were found in the fill above the capstones (L. 2229, 2267), as was a carnelian fragment (EDM 87119). Capstones were encountered at a depth of 0.48 meters (L. 2350), beneath a fill that included a number of dolerite cobbles. Three sandstone capstones were in place, while a fourth, central capstone appeared to be missing, the gap filled with dolerite cobbles. The cist was constructed of nine sandstone and dolerite side slabs and seventeen cap support stones in two courses and measured 1.25 meters long, 0.42 meters wide, and 0.50 meters

deep (L. 9311). The west wall bends slightly at the northern end in order to make the north end wider (Fig. 4.294). Fill within the cist included many dolerite cobbles and a sandstone slab believed to be the missing capstone (Fig. 4.295). Within were the very fragmentary and poorly preserved remains of an adult in hard packed mud plaster sediment (L. 2353).



Figure 4.295: Grave 508 cist fill.

GRAVE 509

See **GRAVE 47-2004**.

GRAVE 510

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Burial: Semiflexed, head to south, facing west.
Gender: Unknown.
Age: Juvenile, 6 to 10.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 2 potsherds in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.241: Grave 510 loci.

Locus	Description
2236	Stone circle
2237	Pavement
2268	Fill
2270	Capstones
2362	Cist
2289	Cist fill
2294	Human remains



Figure 4.296: Grave 510 surface architecture.

Grave 510 was visible on the surface of square N-10 as a nearly complete circle measuring 1.10 meters in diameter and constructed of seven dolerite cobbles (L. 2236) which surrounded a stone pavement constructed of ten flat dolerite stones (Fig. 4.296; Table 4.241; L. 2237). Two potsherds were recovered in the fill (EDM 87319). Beneath about 0.37 meters of fill (L. 2268), four capstones, completely covered in mud plaster, were encountered (L. 2270). These sealed a cist constructed of six dolerite and sandstone side slabs and eight cap support stones measuring 0.78 meters long, 0.35 meters wide, and 0.45 deep (L. 2362). The cist was trapezoidal, wider at the north than at the south. The cist was partially filled with sediment (L 2289). Within were interred the remains of a juvenile, aged six to ten years (L. 2294). The individual was laid with head oriented to the south, on the left side, facing west (Fig. 4.297). No grave goods were recovered.



Figure 4.297: Grave 510 burial.

GRAVE 511

See **GRAVE 537**.

GRAVE 512

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Female.
Age: Middle to old adult (50+).
Other burials: Adult secondary burial above capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.242: Grave 512 loci.

Locus	Description
2204	Fill in square before grave was visible
2209	Secondary burial above capstones
2256	Capstones
2373	Cist
2329	Cist fill



Figure 4.298: Grave 512 secondary burial (Grave 503).

Grave 512 was invisible on the surface of square L-11, although a large number of dolerite cobbles were encountered in the fill the grave extending down to the capstones (Table 4.242). At a depth of 0.28 meters, capstones of Grave 512 were encountered. On top of these capstones were secondarily interred the fragmentary remains of an adult, designated Grave 503 (L. 2209). These remains were found apparently deliberately bundled, perhaps in a container which has not survived (Fig. 4.298). The long bones were oriented east-west. No grave goods were encountered with this secondary burial. Four sandstone capstones sealed the cist, with smaller stones used as chinking (L. 2256). A fifth capstone in the middle appeared to be missing, with dolerite cobbles noted in the gap (Fig. 4.299). The cist measured 1.20 meters long, 0.55 meters wide, and 0.58 meters deep (L. 2373). It was constructed with eleven sandstone, dolerite, and limestone side slabs as well as forty-one cap support stones of the same materials (but mostly dolerite cobbles) in up to three courses (Fig. 4.300). The lower portion of the cist contained the

disturbed and fragmentary remains of a female middle to old adult with an abscess to the maxilla (Fig. 4.301; L. 2329). No grave goods were recovered. A probe was cut into the cist floor which yielded a pierced stone (EDM 87891), though the hole appears to be natural.



Figure 4.299: Grave 512 capstones. Note the gap filled with dolerite cobbles.



Figure 4.300: Grave 512 cist wall. Note the multiple courses.



Figure 4.301: Grave 512 cist fill.

GRAVE 513

See **GRAVE 537**.

GRAVE 514

Surface architecture: Rock alignment covering a partial dual stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Young adult, about 24, and juvenile, less than 17.
Other burials: None.
Artifacts in cist: 2 beads (carnelian, agate).
Other artifacts: None.
Disturbances: Looted in antiquity. Stone circle partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.243: Grave 514 loci.

Locus	Description
2252	Rock alignment
2279	Stone circle
2280	Fill
2341	Capstones
2384	Cist
2345	Cist fill



Figure 4.302: Grave 514 rock alignment.

Grave 514 is located on the boundary of squares M-10 and N-10 and was visible on the surface as a rock alignment (Fig. 4.302; Table 4.243; L. 2252). This alignment was never sufficiently described, but it was constructed of large flat dolerite cobbles arranged next to one another in a roughly north-south line. The alignment measured about four meters long and half a meter wide. This covered incomplete dual stone circles measuring an estimated 1.85 meters in total diameter (Fig. 4.303; L. 2279). The outside circle is constructed of five stones. The inner circle is composed of six. The circles are constructed of small boulders laid flat touching end to end. Outer and inner circles also touch. The circles are only partially preserved, present only in the northwest side of the grave. The fill of the grave was very rocky; many dolerite cobbles and two sandstone slabs typically used as capstones or side slabs were encountered standing vertical in the fill (L. 2280). Two sandstone capstones were encountered in place at the south end of the cist, while displaced capstones and dolerite cobbles intruded into the north end of the cist

(L. 2341). The cist was constructed of nine dolerite, sandstone, and limestone side slabs and eleven granite, dolerite, sandstone, and limestone cap support stones, and measured 1.15 meters long, 0.60 meters wide, and 0.51 meters deep. The cist was trapezoidal, wider in the north than in the south (Fig. 4.304; L. 2384). Many cobbles, including about twelve large stones and what are believed to be two capstones, were encountered in the fill. Interred within the cist were the badly fragmented and poorly preserved remains of an adult, individual 514A, of about 24 years of age and an adolescent, individual 514B, of less than 17 years (L. 2345). Two beads, one carnelian short barrel (EDM 87908) and one agate short truncated convex bicone (EDM 87899), were recovered from the cist.



Figure 4.303: Grave 514 stone circle.



Figure 4.304: Grave 514 cist.

GRAVE 515

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult (probably young adult).
Other burials: None.
Artifacts in cist: Limestone bracelet fragment, pendant (agate).
Other artifacts: Potsherd, limestone bracelet fragment, 3 beads (carnelian, amazonite, ostrich eggshell) in fill.
Disturbances: Looted in antiquity. Stone circle partially destroyed, capstones missing, cist full of sediment, human remains broken and scattered in cist.

Table 4.244: Grave 515 loci.

Locus	Description
2284	Stone circle
2285	Fill
2327	Rocky fill
9361	Cist
9357	Cist fill



Figure 4.305: Grave 515 cist.

Grave 515 was visible just below the surface of squares M-9 and M-10 as a stone circle of just three or four dolerite cobbles on the north side of the grave, lying flat (Table 4.244; L. 2284). The circle was estimated to originally have been about 1.70 meters in diameter based on these stones. The fill above the cist contained many dolerite cobbles (L. 2285), especially as excavation approached the capstones (L. 2327). One potsherd (EDM 87121), one ostrich eggshell cylinder disc bead (EDM 87718) and one carnelian short barrel bead (EDM 87122) were encountered in the upper fill, and one amazonite short barrel bead (EDM 72251) and one limestone bracelet fragment (EDM 72261) were recovered in the lower, rocky fill. No capstones were encountered. The cist was encountered 0.76 meters below the surface (L. 9361). The cist was found to be incomplete, missing stones from its northern end, though the area supervisor's notes for July 31, 2004, make it clear that the worker "did not listen well to instruction" and moved stones without authorization from the fill (Fig. 4.305). "Possible that large/flat standing

stone removed from north end of cist before cist clarified." The southern end of the cist consist of two sandstone side slabs in the west and one each in the south and east, with three cap support stones of limestone, dolerite, and sandstone still in place. The cist was projected to measure 0.75 meters long, 0.20 meters wide, and 0.22 meters deep. In the lower levels of the cist, extending into the pit south of the remaining cist stones, the very fragmentary remains of an adult, probably a young adult, were found embedded in hard mud plaster or mud plaster-like sediment (L. 9357). Another limestone bracelet fragment, apparently from the same bracelet as the fragment found in the fill, was found in the cist (EDM 72293). An unusual agate pendant with three parallel perforations was also found in the cist (EDM 72292).

GRAVE 516

Surface architecture: Partial stone circle.
Subsurface architecture: Rectangular cist with paved floor.
Main burial: None.
Other burials: Adult bone fragments above capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Stone circle partially destroyed, human remains missing.

Table 4.245: Grave 516 loci.

Locus	Description
2297	Stone circle
2298	Fill
2324	Rocky fill
2330	Capstones
2358	Cist
2333	Cist fill
2396	Cist pavement
2398	Sterile soil beneath pavement



Figure 4.306: Grave 516 capstones.

Grave 516 was visible on the surface of square M-9 as a partial stone circle, of which only two dolerite cobbles were in place (Table 4.245; L. 2297). Several more cobbles lay flat in the area, however, and these two were clearly deliberately placed on end and at angles to each other which suggest that the circle originally stood at about 1.05 meters in diameter. A few long bone fragments of adult size were collected from the fill above the cist (L. 2298). Beneath a rocky fill (L. 2324), just 0.22 meters below the surface, four red sandstone capstones were encountered (Fig. 4.306). Three capstones covered the cist and a fourth lay on top of these three (L. 2330). No artifacts or human remains were encountered in the cist, which was full of sediment (L. 2358). The cist was constructed of six dolerite and limestone side slabs and eleven dolerite and limestone cap support stones and measured 0.90 meters long, 0.40 meters wide, and 0.62 meters deep (L. 2333). The cist was paved with a single large dolomite stone, measuring 0.65 meters

long and 0.45 meters wide, which covered approximately the northern three quarters of the cist floor and extended beneath the cist side slabs (Fig. 4.307; L. 2396). This stone was removed and collected (EDM 87990). The underside of the paving stone was found to display a "manganese flower," the black mineral imprint reminiscent of a fossil leaf typical of the copper-bearing dolomite in the region but unusual in rocks used at the cemetery. Some of this manganese was collected as mistakenly collected as organic material (EDM 87990). A probe was dug about ten centimeters beneath this stone, but only sterile soil was encountered (L. 2398). Part of the cist was removed in order to remove this stone, and human remains were observed to the north of the cist but were not collected. Wood was collected from the southwest portion of the cist, but this seemed to be root material (EDM 87900, 87984).



Figure 4.307: Grave 516 cist.

GRAVE 517

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head oriented south, on left side facing west.
Gender: Male primary.
Age: Primary: 28-38, most likely 35.
Other burials: Secondary over legs and pelvis of primary, probable female 19 to 29 years.
Artifacts in cist: 1 bead (agate).
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.246: Grave 517 loci.

Locus	Description
2290	Mud plaster
2293	Capstones
2361	Cist
2300	Human remains



Figure 4.308: Grave 517 capstones.

Grave 517 was invisible on the surface of square M-10 where it is located (Table 4.246; Levy et al. 2005: 459). At a depth of 0.34 centimeters capstones were encountered, covered by a thick layer of mud plaster (L. 2290). A few dolerite cobbles were encountered lying flat around the grave at about the level of the capstones; Area Supervisor Sarah Malena referred to these as a "lower ring," but its attributes were not recorded and it is not clear from the site photos that this is indeed a mortuary structure rather than coincident subsurface cobbles. Beneath the mud plaster five sandstone capstones were encountered, with smaller stones serving as chinking (L. 2293; Fig. 4.308). The cist was constructed of eight sandstone and dolerite side slabs and nine sandstone, limestone, and dolerite cap support stones and measured 1.20 meters long, 0.55 meters wide, and 0.56 meters deep. The cist was trapezoidal, wider at the north than at the south (L. 2361). Entombed within were the remains of two individuals (Fig. 4.309; L. 2300). The primary burial was that of an adult male, individual 517A, aged 28 to 38 but probably 35. He lay semiflexed with his head oriented to the south on his left side, facing west (Fig. 4.310). His arms were crossed over his chest and his legs were flexed beneath him. Osteological analysis showed that his skull displayed evidence of well-healed depression fracture to his left lateral parietal, measuring 47.33 millimeters by 19.89 millimeters. In his pelvic area were the fragmented remains of a secondary burial, individual 517B. These included cranial fragments, long bone fragments, vertebrae, and other remains, but did not represent a complete skeleton. Osteological analysis 517B to be aged 19 to 29 and most likely female. One oblate stone bead (EDM 87547), probably agate, was collected from the human remains locus.



Figure 4.309: Grave 517 burials. Note the secondary burial over the legs of the primary burial.



Figure 4.310: Grave 517, primary burial, after further excavation and removal of the secondary burial.

GRAVE 518

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: 2 individuals, fragmentary, disturbed.
Gender: Unknown.
Age: One adult, one child.
Artifacts in cist: 1 potsherd, 40 beads (ostrich eggshell, cupric).
Other artifacts: 1 potsherd, 3 beads (ostrich eggshell) in fill; 1 potsherd, organic material, 9 beads (carnelian, agate, ostrich eggshell) from disturbed area atop cist.
Disturbances: Looted in antiquity, surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.247: Grave 518 loci.

Locus	Description
2303	Fill
2295	Capstones
2343	Cist
2302	Cist fill



Figure 4.311: Grave 518 cist.

Grave 518 was invisible on the surface of square L-11 where it was located (Table 4.247). It was located immediately to the west of Grave 519, and the area supervisor believed the two to be related. One potsherd (EDM 87438) and three ostrich eggshell cylinder disc beads were recovered from the fill before the grave was recognized (EDM 87365, 87366, 87433). At a depth of 0.38 meters, two red sandstone capstones were encountered, but these only covered the southern part of the cist (L. 2295). The cist was trapezoidal, wider at the north than at the south (L. 2343). A pile of flat dolerite cobbles covered the northern portion of the cist just above the level of the capstones and continued down into the cist. A potsherd (EDM 87485), organic material (EDM 87512, 87463), and charcoal (EDM 87627), along with nine beads, were collected from this disturbed area just above and inside the north part of the cist (L. 2303). The beads included one triangular carnelian bead (EDM 89085), one agate short barrel bead (EDM 89084), and seven ostrich eggshell disc beads (EDM 87462, 87476, 87483, 87486). The cist was a trapezoidal structure measuring 1.09 meters long, 0.50 meters wide, and 0.42 meters deep (Fig. 4.311; L. 2343). It was constructed of five side slabs, all but one of sandstone, the last of limestone. One side slab appeared to be missing in the west side of the cist. The remains of two individuals, 518A, an adult, and 518B, a child, were recovered from the cist in a very fragmentary and poorly preserved state (L. 2302). Forty beads were recovered from the cist, including thirty-seven ostrich eggshell disc beads (EDM 87511, 87518, 87531, 87540, 87545, 87546, 87577, 87591, 87600, 87628, 87637, 87650, 87689, 87690, 87704, 87705, 87706, 87707, 87708, 87709, 87710, 87711, 87713, 87724, 87728, 89107, 89136, 89150), one cupric short barrel bead (EDM 87712), and two cupric short cylinder beads (EDM 87532, 89136). One potsherd was also recovered

from the cist (EDM 87485). The human remains, like the artifacts, were concentrated in the north end of the cist.

GRAVE 519

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult, 21+.
Other burials: Teeth from a second individual in cist.
Artifacts in cist: 1 bead (ostrich eggshell).
Other artifacts: 33 beads in fill (citrine, amazonite, alabaster, shell, coral, ostrich eggshell).
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.248: Grave 519 loci.

Locus	Description
2301	Fill
2296	Capstones
2334	Cist
2304	Fill



Figure 4.312: Grave 519 human remains.

Grave 519 is located just east of grave 518 and appears to be related (Table 4.248). It was invisible on the surface of square L-11, where it was located. A large orange citrine truncated convex bicone bead (EDM 87456), one alabaster barrel disc bead (EDM 87345), one amazonite short barrel bead (EDM 87218), two marine shell cylinder disc beads (EDM 87436), one irregular red coral or stone disc bead (EDM 87406) and twenty-seven ostrich eggshell cylinder disc bead (EDM 87371, 87398, 87400, 87405, 87411, 87414, 87415, 87592) were found in the fill above the grave before the grave was recognized (L. 2301). Only the southernmost capstone was in place, at a depth of 0.79 meters, though some mud plaster and cobbles were observed around the edges of this limestone capstone (L. 2296). A number of cobbles were encountered in the cist at capstone level and below. The cist was constructed of eight side slabs and sixteen cap support stones and measured 1.10 meters long, 0.50 meters wide, and 0.44 meters deep (L. 2334). The cist was trapezoidal, wider at the north than at the south. The very fragmentary and poorly preserved remains of an adult, aged 21 or over, were scattered throughout the cist (Fig. 4.312; L. 2304). Some teeth of a second individual were also recovered. One ostrich eggshell cylinder disc bead was recovered from the cist fill (EDM 87487).

GRAVE 520

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: 2 individuals, fragmentary, disturbed.
Gender: Male, unknown.
Age: Adult, at least 25, and infant.
Other burials: None.

Artifacts in cist: 1 bead (ostrich eggshell).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of cobbles and sediment, human remains broken and scattered in cist.

Table 4.249: Grave 520 loci.

Locus	Description
2299	Capstones
2376	Cist
2320	Cist fill
2328	Human remains



Figure 4.313: Grave 520 capstones and rock pile over capstones.

Grave 520 was invisible on the surface of square M-10 where it was located (Table 4.249). Piled atop the capstones were dolerite cobbles and a sandstone slab

believed to have originally been a capstone (Fig. 4.313). Two capstones were in place, at a depth of 0.27 meters below the surface (L. 2299). The cist measured 1.30 meters long, 0.60 meters wide, and 0.47 meters deep, and was constructed of nine side slabs and fifteen capstones, almost all of dolerite. The cist was trapezoidal, wider in the north than in the south (L. 2376). Inside the cist was compact mud plaster fill containing numerous cobbles (L. 2320) and the shattered human remains of two individuals (Fig. 4.314; L. 2328). Osteological analysis suggests that one of these individuals, 520A, is an adult of at least 25 years and, based on the prominence of the glabella, is most likely male. The very fragmentary remains of an infant aged one to three years, individual 520B, were also recovered. One ostrich eggshell cylinder disc bead was recovered from the human remains locus (EDM 89155).



Figure 4.314: Grave 520 cist fill. Note human remains and cobbles.

GRAVE 521

Surface architecture: Partial stone circle surrounding pavement.
Subsurface architecture: Rectangular cist.
Burial: Secondary.
Gender: Unknown
Age: Adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 4 beads (ostrich eggshell) in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.250: Grave 521 loci.

Locus	Description
2310	Stone circle
2311	Pavement
2312	Fill
2360	Cist
2316	Cist fill



Figure 4.315: Grave 521 human remains.

Grave 521 was marked by a small dolomite rock ring consisting of only two in situ cobbles (L. 2310) and a pavement of four to five flat dolerite cobbles in square N-12 (Table 4.250; L. 2311). The circle is estimated to have once measured 0.95 meters in diameter. Four ostrich eggshell cylinder disc beads were recovered from the fill (L. 2312; EDM 87536). At a depth of 0.39 meters below the surface—only about ten centimeters below the paving stones—the decomposed remains of a single capstone were encountered. This sealed a rectangular cist constructed of five sandstone and dolerite side slabs and six cap support stones, measuring 0.65 meters long, 0.25 meters wide, and 0.29 meters deep (L. 2360). Within the cist were the secondarily interred remains of an adult of unknown sex (Fig. 4.315; L. 2316).

GRAVE 522

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Semiflexed, oriented south, on left side facing west.
Gender: Unknown.
Age: Unknown.
Other burials: Fragmentary human remains above capstones. Secondary remains in upper levels of north end of cist.
Artifacts in cist: 9 beads (ostrich eggshell).
Other artifacts: 2 beads (agate, ostrich eggshell), mother of pearl, recovered from fill.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.251: Grave 522 loci.

Locus	Description
2313	Stone circle
2305, 2321	Fill
2319	Rocky fill
2359	Capstones
2341	Cist
2323	Cist fill
2383	Human remains



Figure 4.316: Grave 522 burial.

Grave 522 was visible on the surface of square N-12 as a partially stone circle of about five cobbles measuring about 1.10 meters in diameter (Table 4.251; L. 2313). In the fill at least fourteen dolerite cobbles were encountered. Some scattered human remains, one ostrich eggshell cylinder disc bead (EDM 87567) and one agate truncated convex bicone bead (EDM 87907), and mother of pearl (EDM 87589, 87614) were collected from this fill (L. 2305, 2321, 2319). At a depth of 0.33 meters below the surface, two red sandstone capstones were encountered in place at either end of the cist; the center of the cist was uncovered (L. 2359). The cist measured 0.95 meters long, 0.40 meters wide, and 0.46 meters deep and was constructed of seven sandstone, dolerite, and limestone side slabs and eight cap support stones (L. 2341). The cist was trapezoidal, wider at the north than at the south. No side slab as observed at the cist's southern end. The fill within the cist included many dolerite cobbles and possible capstone fragments

and was dense with mud plaster (L. 2323). In the upper levels of the cist, fragmentary human remains of an adult, individual 522B, were secondarily interred, particularly in the northern part of the cist. Beneath these were the partially articulated remains of a primary burial, individual 522A, another adult (L. 2383). This burial was fragmentary and partially disturbed, but it was evident from the remains that this was a primary burial of an individual laid in a semiflexed position with head oriented to the south, on the left side facing west (Fig. 4.316). In the cist fill above the articulated remains nine ostrich eggshell cylinder disc beads were recovered (EDM 87651, 87679, 89138, 89146), and wood was collected from the human remains locus (EDM 72128).

GRAVE 523

Surface architecture: Disorganized rocks probably once a circle.
Subsurface architecture: Trapezoidal cist.
Burial: Semiflexed, head to south, on left side facing west.
Gender: Female.
Age: Young to middle adult, 25-50 years.
Other burials: Bone fragments in fill, fragmentary secondary adult burial beneath primary.
Artifacts in cist: Bone spatula pendant (associated with secondary burial), mother of pearl, carnelian flake, 47 beads (ostrich eggshell, citrine).
Other artifacts: Mother of pearl, 37 beads (ostrich eggshell, cupric, flint), prill, carnelian flake in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.252: Grave 523 loci.

Locus	Description
2314	Rock pile
2315	Fill
2325	Capstones
2377	Cist
2326	Cist fill
2342	Human remains



Figure 4.317: Grave 523 burial.

Grave 523 was visible on the surface of square N-12 as a mass of dolerite cobbles believed to have once represented a stone circle measuring 1.20 meters in diameter (Table 4.252; L. 2314). More cobbles were encountered in the fill beneath this. Mother of pearl (EDM 87528), a black short truncated convex cone silicate bead (EDM 87477) and twenty-two ostrich eggshell cylinder disc beads were recovered in the fill very close to the surface before the grave was designated (EDM 87161, 87179, 87180, 87196, 87435, 87477, 87484, 87526, 87527, 87590, 87596, 87597, 87601). Thirteen ostrich eggshell disc beads (EDM 87548, 87615, 87616, 87619, 87630, 87838, 89139), one cupric short barrel bead (EDM 87629), one small carnelian flake (EDM 87617), and one small copper prill (EDM 89134) were recovered from the lower fill (L. 2315). At a depth of just 0.12 meters below the surface, the two intact capstones were encountered (L.

2325). Cobbles filled the gap between these capstones, and cobbles continued down into the cist itself. The cist measured 1.10 meters long, 0.50 meters wide, and 0.48 meters deep and constructed of seven side slabs, all but one of sandstone, and twelve cap support stones (L. 2377). The cist is trapezoidal, narrow at the south and widening at the north end to accommodate the flexed legs. Beneath the fill (L. 2326) an articulated burial was encountered, individual 523A, a young to middle adult female of 25 to 50 years (L. 2342). She lay semiflexed with her head to the south, on her right side facing west (Fig. 4.317). Her right arm was extended with her hand placed near her heels, while her left arm was flexed with her hand near her face. Beneath this individual, a secondary burial was encountered. This second individual, 523B, was fragmentary but much of the skeleton was represented, suggesting this was originally the latter individual's grave. 523B is an adult of at least 23 but most likely a middle to older adult. Thirty-seven ostrich eggshell disc beads were found in the cist (EDM 87548, 87615, 87616, 87617, 87619, 87629, 87630, 87638, 87652, 87653, 87660, 87661, 87662, 87665, 87666, 87667, 87668, 87673, 87680, 87686, 87687, 87699, 87714, 87726, 87781, 89139, 89140, 89147); according to the notes all or most were associated with individual 523A. Eight additional ostrich eggshell cylinder disc beads and two citrine short barrel beads were found in the cist associated with individual 523A. A spatula pendant (EDM 87758) was recovered in association with individual 523B. A carnelian flake was also recovered from the cist (EDM 89135). A charcoal sample was also recovered from the grave, just to the southwest of the head of individual 523A (EDM 87745).

GRAVE 524

Surface architecture: None.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Fragmentary, disturbed.
Gender: Unknown, male, and unknown.
Age: Adolescent, 15-25; adult; and adult.
Other burials: None.
Artifacts in cist: 16 beads (amazonite, flint, ostrich eggshell, shell).
Other artifacts: 1 bead (ostrich eggshell) in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstone missing, cist full of sediment, human remains broken and scattered in cist.

Table 4.253: Grave 524 loci.

Locus	Description
9382	Fill
2318	Capstones
2386	Cist
2331	Cist fill
2380	Cist pavement



Figure 4.318: Grave 524 cist.

Grave 524 was invisible on the surface of square N-12 (Table 4.253). One ostrich eggshell bead was recovered from the fill above the grave before it was recognized (EDM 87401). Human bone and one bead were encountered in the fill excavated to delineate the capstones after they were first observed (L. 9382; EDM 72391). At a depth of 0.33 meters three capstones, one of sandstone and two of dolerite, were encountered (L. 2318). A fourth capstone appeared to be missing, and the cap was filled with dolerite cobbles. The capstones sealed a cist measuring 1.20 meters long, 0.55 meters wide, and 0.50 meters deep constructed of eight dolerite and two sandstone side slabs (L. 2386). Unusually, the floor of this cist was paved with about thirteen sandstone and dolerite cobbles (Fig. 4.318; L. 2380). The cist was oriented on a north-south axis and was wider at the north end. Within the cist were the very fragmentary remains of three individuals: individual 524A, an adolescent or young adult aged fifteen to twenty-five; individual 524B, an adult male; and individual 524C, an adult of unknown gender. These were found strewn about the cist in compact mud plaster mixed with cobbles (L. 2331). Sixteen beads were collected from the cist fill. These included seven ostrich eggshell cylinder discs (EDM 87688, 87769, 87770, 89149), six tubular shell beads (EDM 89152) one amazonite short barrel bead (EDM 87889), one grey-black flint cylinder disc bead (EDM 87886), and one flint barrel disc bead (EDM 89162), and one shell cylinder disc (EDM 87868).

GRAVE 525

Surface architecture: None.
Subsurface architecture: Rock alignments, trapezoidal cist.
Burial: Oriented south, laying on the left side facing west.
Gender: Unknown.
Age: Child, 3 to 6 years.

Other burials: Bone fragments embedded in plaster on capstones.
Artifacts in cist: 9 beads (ostrich eggshell).
Other artifacts: 25 beads in fill (ostrich eggshell), 7 beads embedded in plaster at capstone level (ostrich eggshell, cupric).
Disturbances: Surface architecture destroyed.

Table 4.254: Grave 525 loci.

Locus	Description
2332	Mud plaster
2337	Capstones
2351	Cist
2340	Cist fill
2344	Human remains



Figure 4.319: Grave 525 capstones and subsurface stone alignments.

Grave 525 was invisible on the surface (Table 4.254). Twenty-five ostrich eggshell beads were recovered from the fill before the grave was recognized (EDM 87571, 87573, 87576). However, at a little above capstone level stone alignments were visible around the grave. These alignments were not adequately described, but

photographs appear to show one line of stones running roughly north-south and another roughly northwest-southeast (Fig. 4.319). The balk may conceal another line south of the grave making a rough triangle. A thick layer of mud plaster encased the capstones; this plaster was especially thick over the central stone (L. 2332). Human bone and seven beads were embedded in this plaster. The beads included six ostrich eggshell cylinder discs (EDM 87715, 87717, 87727, 89145) and one cupric short barrel bead (EDM 87716). At a depth of 0.41 meters below the surface, three capstones were encountered, two of sandstone and one of limestone (L. 2337). Smaller cobbles were used as chinking between the stones. The cist measured 0.65 meters long, 0.25 meters wide, and 0.34 meters deep and was constructed of six side slabs and nine cap support stones (L. 2351). Two ostrich eggshell cylinder disc beads were recovered in the fill of the cist above the human remains (EDM 87763, 87763). The cist was full of sediment (L. 2340). Entombed within the cist were the remains of a child aged three to six, exhibiting signs of cribia orbitalia, with head oriented towards the south, laying on the left side facing west (Fig. 4.320; L. 2344). Seven ostrich eggshell cylinder discs were recovered from the human remains locus (EDM 87771, 87773, 87780, 89148).



Figure 4.320: Grave 525 burial.

GRAVE 526

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: 526A about 15 years; 526B 9 months to 5 years.
Other burials: Fragmentary remains in fill.
Artifacts in cist: 1 bead (ostrich eggshell), potsherd.
Other artifacts: 1 bead (cupric) in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist and fill.

Table 4.255: Grave 526 loci.

Locus	Description
2339	Fill
2338	Rock pile
2356	Fill
9324	Cist
2366	Cist fill



Figure 4.321: Grave 526 cist.

Grave 526 was invisible on the surface of square M-12 (Table 4.255). An ostrich eggshell cylinder disc bead was found in the fill (EDM 87795). While excavating the fill of the square (L. 2339), several capstones mixed with dolerite cobbles were observed and a grave was designated based on these (L. 2338). However, removal of these capstones revealed that they were out of place, and further excavation of fill (L. 2356) was necessary before, at a depth of 0.38 meters, two sandstone capstones were observed in place over the southern half of the cist. The cist was trapezoidal, wider at the north than at the south (L. 9324). The rock pile including the displaced capstones was found to be above the northern, open end of the cist, probably indicating a looter's pit. Scattered human remains were recovered from between this rock pile and the grave cist, as was a cupric short cylinder bead (EDM 87762). The cist itself was trapezoidal, widening at the

north end (Fig. 4.321). It measured 0.90 meters long, 0.55 meters wide, and 0.61 meters deep, and was constructed of ten side slabs and seventeen cap support stones. A small amount of very fragmentary human remains were recovered. Sediment within the cist was fine silt with patches of hard mud plaster, the latter especially in the northern end of the cist, and included many large dolerite cobbles (L. 2366). The bones were also partially encased in this hard plaster. The cist was constructed of ten limestone and sandstone side slabs and seventeen cap support stones, the latter mostly of dolerite. Osteological analysis determined that the remains associated with this grave were from two individuals: 526A, who was about 15 years of age, and 526B, a child of 9 months to 5 years. An ostrich eggshell cylinder disc bead (EDM 87994) and a potsherd (EDM 87860) were recovered from the cist.

GRAVE 527

Surface architecture: Cobble feature (perhaps once a circle or pavement).
Subsurface architecture: Trapezoidal cist.
Burial: Secondary.
Gender: Unknown.
Age: Probably over 21.
Other burials: None.
Artifacts in cist: Potsherd.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.256: Grave 527 loci.

Locus	Description
2335	Stone circle
2336	Capstones
2378	Fill below capstones but above cist, Grave 527, Grave 541, Grave 555
9349	Cist
2397	Cist fill



Figure 4.322: Grave 527 burial.

Grave 527 was visible on the surface of square M-11 as a cluster of dolerite cobbles believed to have been part of a stone circle (Table 4.256; L. 2335). Some were lying flat, perhaps indicative of a pavement. At a depth of 0.22 meters below surface, five capstones were encountered (L. 2336). Dolerite cobbles were observed between two groups of capstones, which appeared to be consistent with the looting pattern at Wadi Fidan 40. It was not until the capstones were all removed that it was recognized that these belonged to different graves, and further excavation was required to reach cist level (L. 2378). The three northernmost of these capstones, one of red sandstone, one of limestone, and one of dolerite, were associated with Grave 527, the rest with Grave 541. Grave 555 was located immediately south of Grave 541. The capstones associated with Grave 527 capped a trapezoidal cist, slightly wider in the north than in the south,

measuring 0.50 meters long, 0.30 meters wide, and 0.43 meters deep constructed of six side slabs of sandstone, granite, and dolerite as well as ten cap support stones of dolerite and limestone (L. 9349). Interred within were the poorly preserved, apparently secondarily deposited, human remains (L. 2397). Age and gender could not be determined because of the poor preservation, but wear to the first molar suggests the interred was over twenty-one years of age. The skull was found in the southern end of the cist, with the other bones placed north of it (Fig. 4.322). A potsherd (EDM 72098) and charcoal (EDM 72227) were collected from the cist.

GRAVE 528

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed, three individuals.
Gender: 528A: unknown; 528B: probably male; 528C: probably female.
Age: 528A: 2 to 6 years; 528B: adult; 528C: adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.257: Grave 528 loci.

Locus	Description
2347	Stone circle
2348	Fill
2367	Capstones
9307	Cist
2371	Cist fill



Figure 4.323: Grave 528 surface architecture.

Grave 528 was visible on the surface of square L-12 as a stone circle constructed of smaller than average cobbles and measuring about 1.20 meters in diameter (Fig. 4.323; Table 4.257; L. 2347). The area supervisor believed the circle was reconstructed after the grave was looted. Three capstones, two of red sandstone and one of dolerite (L. 2367), were encountered beneath the fill (L. 2348), at a depth of 0.50 meters below the surface. These sealed a cist measuring 1.25 meters long, 0.60 meters wide, and 0.47 meters deep constructed of seven sandstone side slabs and ten sandstone, dolerite, and limestone cap support stones (L. 9307). There was a gap in the west wall of the cist where one stone appeared to be missing. The cist is trapezoidal, with a widening at the north, apparently to. The grave does not taper, however, but abruptly opens with a jog in the west wall. The cist contained hard packed mud plaster fill, imbedded in which were the fragmentary remains of at least three individuals (Fig. 4.324; L. 2371): 528A, a two to six year old

adult, 528B, a large adult, probably male, and 528C, another adult, probably female. Individuals 528B and 528C displayed signs of cribia orbitalia, and mandibular and maxillary canines belonging either to 528B or 528C displayed enamel hypoplasia.



Figure 4.324: Grave 528 cist.

GRAVE 529

Surface architecture: None.
Subsurface architecture: Partial cist.
Burial: Possibly semiflexed with the head to the south, facing west.
Gender: Unknown.
Age: Neonate.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed, part of cist destroyed.

Table 4.258: Grave 529 loci.

Locus	Description
2354	Cist
2355	Cist fill
2349	Human remains



Figure 4.325: Grave 529 burial.

Grave 529 was invisible on the surface of square L-12 (Table 4.258). At a depth of 0.08 meters below the surface, a partial cist was encountered consisting of three dolerite cobbles (L. 2355). These marked the south end of the cist; it is presumed that a northern end of the cist was not preserved. What remained measured 0.35 meters long, 0.25 meters wide, and 0.38 meters deep. The cist was full of sediment (L. 2355). Entombed within were the remains of a neonate, possibly a premature stillborn infant (L. 2349). It was unclear in the field whether articulation was present. However, photographs show that the leg bones are consistent with an individual laying in a flexed or semiflexed position with head to the south, on the left side facing west (Fig. 4.325).

GRAVE 530

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Possibly semiflexed, head to the south, on the right side facing east.
Gender: 530A: male; 530B: unknown.
Age: 530A: adult; 530B: adult older than 530A.
Other burials: Secondary burial above capstones.
Artifacts in cist: 9 beads (amazonite, cupric).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.259: Grave 530 loci.

Locus	Description
2374	Fill
2392	Secondary burial (Grave 538)
2365	Capstones
9343	Cist
2370	Cist fill



Figure 4.326: Grave 530 cist fill. Note secondary burial 538 to north of and above cist.

Grave 530 was invisible on the surface of square L-12 and was first observed when capstones were encountered over the southern end of the grave (Table 4.259). While excavating fill to delineate the northern limits of Grave 530 (L. 2374), a secondary burial was uncovered over the rock debris covering Grave 530 (Fig. 4.326; L. 2392). This secondary burial, designated Grave 538, was extremely fragmentary and could not be analyzed osteologically; it is likely that these remains came from the looted cist of Grave 530. No finds were associated with 538. The three remaining capstones of Grave 530 were located at a depth of 0.34 meters below the surface, all of them of red sandstone with some mud plaster still in place (L. 2365). The northern end of the cist was covered with a pile of dolerite stone debris that protruded into the cist. The cist measured 0.98 meters long, 0.35 meters wide, and 0.57 meters deep, and was constructed of nine sandstone, dolerite, and limestone side slabs and thirteen sandstone and limestone cap support stones (L. 9343). The human remains were extremely fragmentary, though the north end of the cist held what appeared to be articulated legs, suggesting the individual was laid in a semiflexed position with head pointed south, on the right side facing west (Fig. 4.327; L.2370). Remains of two individuals were identified during osteological analysis: 530A, a male adult, and 530B, a second adult of unknown gender who appeared on the basis of tooth attrition to be older than 530A. Nine beads were recovered from the cist, including one long lenticular amazonite bead (EDM 72196), one short barrel amazonite bead (EDM 72226), and seven malachite or other cupric stone beads or their discernable fragments. The latter included two short cylinder beads (EDM 72200, 72201), three short barrel beads (EDM 72185, 72201, 87941), one fragment of what

appears to be a cylinder bead (EDM 72183), one fragment of what may be a short barrel bead (EDM 72226).



Figure 4.327: Grave 530 human remains.

GRAVE 531

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Male.
Age: Adult.
Other burials: Fragments of secondary adult and young adult or adolescent remains in cist.
Artifacts in cist: Potsherd, copper ore.
Other artifacts: 33 beads (cupric, ostrich eggshell), potsherd in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.260: Grave 531 loci.

Locus	Description
2368	Fill
2391	Capstones
9336	Cist
2395	Cist fill



Figure 4.328: Grave 531 capstones.

Grave 531 was recognized after the excavation of overlying fill (Table 4.260; L. 2368). Two cupric cylinder disc beads (EDM 87412) and thirty-one ostrich eggshell cylinder disc beads were recovered from this fill (EDM 87367, 87375, 87376, 87377, 87413). The grave was recognized due to a pile of about eight dolerite cobbles, which appeared to include disturbed or collapsed circle and paving stones. One potsherd was collected from this locus (EDM 87906). Capstones were also visible in the section viewed from square L-11. To the east of the grave was a small rock feature at about the level of the capstones, associated with a large number of fragmentary human remains. This feature may or may not have been associated with the grave but which was treated as part of the capstone locus (Fig. 4.239). At a depth of 0.43 meters below the surface, three capstones, one of sandstone and the other of limestone, remained in place (Fig. 4.238; L. 2391). These covered the southern end of the cist, while dolerite cobbles protruded from the north end. The cist was constructed of eight dolerite and sandstone

side slabs and nine cap support stones and measured 1.20 meters long, 0.50 meters wide, and 0.41 meters deep (L. 9336). The cist was trapezoidal, widening at the north end. Cobbles and fill were also encountered in the cist, and the north end of the cist was hard packed with mud plaster (L. 2395). Scattered throughout the cist were the fragmentary remains of three individuals (Fig. 4.240). The majority of the remains belonged to individual 531A, at least 70% of whose body was collected and who was therefore probably the last individual interred in the cist. Individual 531A was a middle adult of unknown gender. A few skull fragments of individual 531B, an adult of unknown gender, were also recovered, as were the partial remains of individual 531C, an adolescent or young adult 15 to 23 years of age, probably a male. A small amount of sun-bleached remains were also recovered and judged to probably be the result of contamination from surface loci. Finds in the cist also included copper ore, shell, and a single potsherd (EDM 87906).



Figure 4.239: Circular stone feature east of grave cist.



Figure 4.340: Grave 531 human remains.

GRAVE 532

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: None.
Artifacts in cist: Worked bone or ivory, 14 beads (ostrich eggshell, aventurine, flint).
Other artifacts: 2 beads (ostrich eggshell) in fill.
Disturbances: Robbed in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.261: Grave 532 loci.

Locus	Description
2352	Capstones
2385	Cist
2357	Cist fill



Figure 4.341: Grave 532 cist fill.

Grave 532 was invisible on the surface (Table 4.261). Two ostrich eggshell cylinder disc beads were recovered from the fill before the grave was recognized (EDM 87464, 87507). Three sandstone capstones were discovered at a depth of 0.29 meters (L. 2352). In the middle of the grave, a gap between capstones was filled with dolerite cobbles and what appeared to be a broken capstone. The cist measured 1.15 meters long, 0.55 meters wide, and 0.51 meters deep (L. 2385). It was constructed of nine side slabs, all but three of them dolerite, and twelve cap support stones, most of the dolerite. The cist was trapezoidal, widening at the north. The fill within the cist was highly disturbed; human remains were broken and displaced but mostly found in the southern end of the cist (Fig. 4.341; L. 2357). For unknown reasons the skeletal finds were never analyzed; they are presumed lost. Finds were concentrated in the southern half of the cist and included fourteen beads and a fragment of either worked bone or ivory (EDM 87890). The beads included twelve ostrich eggshell cylinder discs (EDM 87818, 87829, 87847, 87848, 87885, 89154, 89163), one aventurine cylinder disc (EDM 89163), and one blue stone pear-shaped disc (EDM 87832).

GRAVE 533

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: 533A: unknown; 533B: unknown; 533C: unknown; 533D: probably female; 533E: unknown.
Age: 533A: infant, 2-5; 533B: juvenile, 7-10; 533C: subadult, 7-12; 533D: adult; 533E: adult.
Other burials: None.
Artifacts in cist: Potsherd.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.262: Grave 533 loci.

Locus	Description
2363	Rocky fill
2379	Cist
2369	Cist fill



Figure 4.342: Grave 533 human remains.

Grave 533 was invisible on the surface of square L-12 (Table 4.262). However, a cobble pile was encountered in the fill and a grave was designated because the pattern of looting was recognized (L. 2363). No capstones were in place, though one probable capstone was recognized in the fill. At a depth of 0.20 meters below surface the cist was encountered. The cist measured 0.95 meters long, 0.45 meters wide, and 0.43 meters deep (L. 2379). It was constructed of six dolerite and sandstone side slabs and fourteen cap support stones, all but one of dolerite. The cist was trapezoidal widening slightly at the north. The cist contained mud plaster in which were embedded highly disturbed and

fragmentary human remains (Fig. 4.342; L. 2369). Osteological analysis showed that at least five individuals were represented by these remains. Individual 533A was a two to five year old infant with signs of enamel hypoplasias on one permanent lower incisor. 533B was a seven to ten year old juvenile. 533C was a subadult, seven to twelve years of age. 533D was an adult, probably female, while 533E was another adult of unknown sex. The cist also contained shell, flint, and a single potsherd (EDM 87966). Notes suggest a bead may have been found in the field but lost.

GRAVE 534

Surface architecture: None.
Subsurface architecture: Partial cist.
Main burial: Secondary.
Gender: Unknown.
Age: Two individuals. 534A: young adult; 534B: subadult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: Potsherds in fill.
Disturbances: Surface architecture destroyed.

Table 4.263: Grave 534 loci.

Locus	Description
2364	Fill
2387	Cist
2372	Human remains



Figure 4.343: Grave 534 burial.

Grave 534 was invisible on the surface of square L-12, but was recognized because of rocky fill which included three sandstone slabs, possibly once capstones (Table 4.263; L. 2364). Potsherds were recovered from this fill (EDM 87867, 89344). At a depth of 0.20 meters, a partial cist was encountered (L. 2387). This cist as found consisted only of two dolerite side slabs. The area supervisor believed that the rock pile in the fill consisted of the remnants of the cist, and notes, "North stone fell in when Atulla excavating." It is unclear what other architectural features once existed. Interior measurements of the cist were 0.85 meters long, 0.45 meters wide, and 0.34 meters deep. Within were secondarily interred the remains of two individuals (Fig. 4.343; L. 2372). Individual 534A was a young adult, the mandible of whom was recovered from the south

end of the grave. Individual 534B was a subadult, the mandible of whom was recovered from the north side of the grave.

GRAVE 535

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: 3 individuals, unknown.
Age: 1 juvenile, 2 adults.
Other burials: None.
Other artifacts: 2 potsherds, 1 pendant (amazonite) in fill.
Artifacts in cist: 1 bead (ostrich eggshell).
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.264: Grave 535 loci.

Locus	Description
9323	Fill
9325	Rocky fill
9334	Capstones
9376	Cist
9338	Cist fill



Figure 4.344: Grave 535 human remains.

Grave 535 was invisible on the surface of square N-12 (Table 4.264). Two potsherds (EDM 87466, 87480) and one amazonite elliptical pendant were recovered from the fill above the grave before the grave was recognized (L. 9323; EDM 87049). It was recognized when rocky fill including dolerite cobbles and sandstone slabs believed to have once been capstones were encountered (L. 9325). Wood was collected in this rocky fill (EDM 72153). At a depth of 0.71 meters from the surface, one capstone was encountered (L 9334). Two more probable capstones were found in the cist fill. The cist measured 0.80 meters long, 0.40 meters wide, and 0.51 meters deep (L 9376). The cist was constructed six side slabs and ten cap support stones. The cist was trapezoidal, wider at the north than in the south. Inside the cist was fill and fragmentary human remains (L. 9338). Sediment was somewhat darker and wetter as excavation proceeded towards the bottom of the cist, with clayey sediment in the middle of the cist. The supervisor's notes state that "some" articulation was observed in the upper levels of the cist fill in the north end of the cist. In the lower levels of the cist, articulated leg bones were reportedly observed, apparently in the north end of the cist, though articulation is not clearly evident in site photographs (Fig. 4.344, 4.345). Osteological analysis determined that at least three individuals were represented by the human remains collected. Individual 535A was a juvenile, aged four to seven years, while 535B and 535C were adults, one a young adult, one an old adult, both of indeterminate sex. Some of these remains were gathered from below the level of the side slabs, suggesting the cist cut into an earlier burial. Wood was collected from inside the cist (EDM: 72291, 72294), as was one ostrich eggshell cylinder disc bead (EDM 72260).



Figure 4.345: Grave 535 human remains, close-up.

GRAVE 536

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Secondary.
Gender: Unknown.
Age: 536A: adult, 21+ years; 536B: child, 2-5 years.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.265: Grave 536 loci.

Locus	Description
2202	Topsoil
2388	Capstones
9310	Cist
2390	Cist fill



Figure 4.346: Grave 536 capstones.

Grave 536 was invisible on the surface of square N-11 (Table 4.265; L. 2202). At a depth of 0.06 meters, five capstones, three of dolerite and two of sandstone, were encountered (Fig. 4.346; L. 2388). These capped a cist measuring 0.75 meters long, 0.35 meters wide, and 0.33 meters deep, constructed of eight side slabs, most of them dolerite, and nine dolerite cap support stones (L. 9310). The cist was slightly trapezoidal, with the wider end towards the north. The northern side slab was also the southern side slab of Grave 545. Within the cist were very fragmentary remains of individual 536A, an adult of over twenty-one years, and 536B, a child of two to five years (L. 2390). The remains were concentrated in the middle of the cist in what the area supervisor believed was a deliberate, tightly arranged secondary burial, with the skull of 536A being particularly conspicuous (Fig. 4.347). No grave goods were recovered.



Figure 4.347: Grave 536 human remains.

GRAVE 537

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Young to middle adult.
Other burials: 3 individuals in 2 secondary burials above capstones (511: adult; 513: adult, juvenile).
Artifacts in cist: 3 beads (ostrich eggshell, agate).
Other artifacts: 2 beads in fill (ostrich eggshell), 14 beads associated with 511 (ostrich eggshell, flint, coral, alabaster, 7 beads associated with 513 (amazonite, carnelian, citrine).
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.266: Grave 537 loci.

Locus	Description
2254	Fill above 2243
2243	Secondary burial 511
2276	Secondary burial 513
2389	Fill
2394	Capstones
9312	Cist
9300	Cist fill



Figure 4.348: Grave 537 secondary burial (individual 511).

Grave 537 was invisible on the surface of square M-12 (Table 4.266). Two ostrich eggshell beads were recovered from the fill before the grave was recognized (L. 2254; EDM 87284, 87286). While excavating around Grave 509, two secondary burials were encountered to the north, which were found to lie on the capstones of Grave 537. The first encountered was designated Grave 511 (L. 2243). It lacked any mortuary structure, but a few dolerite cobbles were found around it. The bones appeared to be in a

bundle (Fig. 4.348). Long bones were on the top, oriented north-south. Osteological analysis showed these to be the remains of an adult, aged 25 to 55. The two beads were collected above this grave (EDM 87284; EDM 87286). This burial was more closely associated with fourteen other beads, including one alabaster cylinder disc, one probably coral short barrel disc, two grey flint barrel discs, and ten ostrich-egg shell beads (EDM 87164). To the north and below, a second secondary burial was uncovered, designated Grave 513 (L. 2276). This was initially excavated as part of Grave 511, but differences in bone color, preservation, and bead type lead the excavators to recognize it as independent. Differences in tooth wear, which was moderate to heavy in individual 511, confirmed this difference. Grave 513 was found to contain the commingled remains of two individuals, a fourteen to fifteen year old and a 25 to 35 year old. These individuals were found with seven beads: two carnelian and two amazonite short barrel (EDM 87262, 87306) and one amazonite pear-shaped barrel beads (EDM 87300) and two citrine short barrel beads carnelian (EDM 87263, 87323). These beads were initially recorded as belonging to Grave 511. Beneath these secondary burials of three individuals, more fill was excavated (L. 2389), and at a total depth of 0.38 meters below the surface, three capstones, two of sand stone and one of limestone, were encountered (L. 2394). A gap in the middle of the capstones was full of dolerite cobbles which continued into the cist and indicated the grave had been disturbed. The cist measured 0.60 meters long, 0.45 meters wide, and 0.49 meters deep. It was constructed of eight sandstone and limestone side slabs and twelve dolerite, limestone, and sandstone cap support stones. The cist was trapezoidal, slightly wider at the north as though to accommodate the flexed legs of an individual oriented with head to the south (Fig. 4.349; L. 9312). Within the cist were the

fragmentary remains of a young to middle adult, mixed with cobbles and fill (L. 9300). Two ostrich eggshell cylinder disc beads (EDM 72006, 89167), one agate cylinder disc bead (EDM 72014), and a single rim sherd (EDM 72048) were recovered from the cist.



Figure 4.349: Grave 537 cist.

GRAVE 538

See **GRAVE 530**.

GRAVE 539

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, on left side, head to south facing west.
Gender: Female.
Age: Middle to old adult.
Other burials: Fragmentary human remains in fill.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment.

Table 4.267: Grave 539 loci.

Locus	Description
9316	Rock pile in fill
9385	Cist
9332	Cist fill
9356	Human remains



Figure 4.350: Grave 539 burial.

Grave 539 was invisible on the surface of square M-12 but quickly became apparent as a pile of dolerite cobbles and what appeared to be disturbed capstones (Table 4.267; L. 9316). A few scattered human remains were found in this fill, but they were too scanty to analyze. No capstones were encountered in place. At a depth of 0.28 meters, a cist was encountered (L. 9385). The cist measured 0.85 meters long, 0.40

meters wide, and 0.44 meters deep. The cist was trapezoidal, wider at the north than at the south. The cist was full of sediment (L. 9332). Entombed within the cist were the poorly preserved remains of a female middle or old adult, semiflexed, with head to the south on the left side facing west (Fig. 4.350; L. 9356). A few skull fragments of a subadult, individual 539B, were also recovered. No grave goods were recovered.

GRAVE 540

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Male.
Age: Adult, 25 to 29.
Other burials: Secondary above capstones.
Artifacts in cist: Organic material.
Other artifacts: Mother of pearl, grinding slab in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.268: Grave 540 loci.

Locus	Description
2381	Fill
2393	Capstones
9308	Cist
2399	Human remains



Figure 4.351: Infant burial in eastern baulk of Grave 540.

Grave 540 was visible on the surface of square M-12 as a partial stone circle of five dolerite stones, measuring 1.50 meters in diameter, best preserved on the southern aspect (Table 4.268). A grinding slab was recovered in the fill of the grave (L. 2381; EDM 72134). Above the capstones, large amounts of human remains were collected, identified in the field as a probable male middle adult (Perimeter Artifact EDM 87956). Mother of pearl was also collected from the fill (EDM 87961), though not directly associated with this secondary material. An infant burial was visible in the eastern baulk, but was not completely excavated (Fig 4.351). At a depth of 0.27 meters, four red capstones were encountered, covered with intact mud plaster (L. 2393). Smaller cobbles were used as chinking. The cist measured 1.25 meters long, 0.50 meters wide, and 0.51 meters deep and was constructed of six side slabs, all but one of sandstone, and ten cap support stones of limestone, sandstone, and dolerite (L. 9308). Within the cist, very little

fill covered the primary burial (L. 2399). The remains were those of an adult male, aged 25 to 29, with head to the south. He appeared to have been laid on his left side, facing west (Fig. 4.352). The right arm was extended with hand in the pelvic region, while the left arm was flexed with the hand at the face. Legs were bent up underneath him, so that his heels touched his buttocks. His right upper leg was extended towards the west, while his left leg pointed down to the north. While this individual was semiflexed like most, he is unusual in having been placed with upper legs extended instead of flexed into a kneeling position. Organic material was collected from inside and around the pelvis (EDM 72031). No grave goods were recovered.



Figure 4.352: Grave 540 burial.

GRAVE 541

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, oriented south, on left side facing west.
Gender: Unknown.
Age: Juvenile, 4-7 years.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture partially destroyed.

Table 4.269: Grave 541 loci.

Locus	Description
2335	Stone circle
2336	Capstones
2378	Fill below capstones but above cist, Grave 527, Grave 541, Grave 555
9369	Cist
9330	Cist fill
9359	Human remains



Figure 4.353: Grave 541 burial.

Grave 541 was visible on the surface of square M-11 as a cluster of dolerite cobbles believed to have been part of a stone circle (Table 4.269; L. 2335). Some were

lying flat, perhaps indicative of a pavement. At a depth of 0.29 meters below surface, five capstones were encountered (L. 2336). It was not until they were all removed that it was recognized that these belonged to different graves. Two of these capstones were associated with Grave 541, the rest with Grave 527. Grave 541 was the northernmost of three closely associated cists, the third being Grave 555. A shallow layer of sediment was excavated before encountering the cist (L. 2378). This cist consisted of seven side slabs, all but one of dolerite, the northern stone being sandstone, and three dolerite cap support stones (L. 9369). The cist measured 0.65 meters long, 0.20 meters wide, and 0.34 meters deep, and was trapezoidal, slightly wider in the north than in the south. Beneath the cist was a single sandstone slab which the excavators believed to be the capstone of a cist below but which was unexcavated (Fig. 4.354). The cist was full of sediment (L. 9330). Within the cist were entombed the poorly preserved remains of a juvenile, aged four to seven, with head oriented south and legs flexed, on the left side facing west (Fig. 4.353; L. 9359). No grave goods were recovered.



Figure 4.354: Grave 541 cist. Note the sandstone slab, probably the capstone of an underlying cist, at the bottom of the Grave 541 cist.

GRAVE 542

Surface architecture: None.
Subsurface architecture: Trapezoidal ist.
Main burial: Fragmentary, disturbed. Semiflexed, head to south, on left side facing west.
Gender: Male.
Age: Young to middle adult.
Other burials: Human remains above cist (probably primary disturbed by looting), partial secondary within cist.
Artifacts in cist: 1 bead (cupric).
Other artifacts: 10 beads (cupric) in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist and fill.

Table 4.270: Grave 542 loci.

Locus	Description
9301	Fill
9303	Capstones
9320	Cist
9304	Cist fill



Figure 4.355: Grave 542 cist fill.

Grave 542 was not recognized on the surface of square N-12, though after capstones were encountered a single stone in the north was recognized as a likely grave circle stone (Table 4.270). At a depth of 0.10 meters from the surface (L. 9301), a capstone was encountered covering the northwest end of the cist (L. 9303). A second capstone was observed protruding into the fill. Most of the human remains associated with the burial were found above the disturbed southwest end of the cist. Ten blue cupric beads were recovered from this fill. These included six standard barrel beads (EDM 87998, 89197 [89197= 72023, 72011, 72012, 72007, 72009, 72032, and 72008]), three short barrel beads (EDM 89197), and one short truncated convex bicone bead (EDM 89197). The cist measured 1.25 meters long, 0.60 meters wide, and 0.56 meters deep and was constructed of eight sandstone and dolerite side slabs and twelve dolerite and

sandstone cap support stones (L. 9320). The cist was trapezoidal, wider at the north than the south. The east appeared to have one side slab missing. Inside the cist were disturbed human remains (L. 9304). The southeast end of the cist was largely devoid of finds, but a large amount of bone was recovered from the northwest end (Fig. 4.355). Articulated foot bones were found in the protected northwest end of the cist, showing that the individual was semiflexed, with head to the south, laying on the left side facing west. Three additional beads of the same kind as those found above the cist were recovered in the cist fill. Osteological analysis showed that at least two individuals were represented. Individual 542A, to whom belonged most of the skeletal matter collected, was a young to middle adult of unknown sex. 542B is another adult, more gracile than 542A. 542C was designated as the secondary material above the cist, but as these are of a young to middle adult it seems likely that this male is the same individual as 542A. One blue cupric short barrel bead, resembling those in the fill, was found in the cist (EDM 72022).

GRAVE 543

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Female.
Age: Middle to old adult.
Other burials: None.
Artifacts in cist: Marine shell, bone ring, 3 beads (amazonite, cupric).
Other artifacts: 1 potsherd, 3 beads (ostrich eggshell) in fill, 1 bead (ostrich eggshell) at capstone level.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment.

Table 4.271: Grave 543 loci.

Locus	Description
9313	Capstones
9386	Cist
9319	Cist fill
9354	Human remains



Figure 4.356: Grave 543 burial.

Grave 543 was invisible on the surface of square N-12 (Table 4.271). One potsherd (EDM 72021) and three ostrich eggshell cylinder disc beads were recovered from the fill before the grave was recognized (EDM 87067, 87159, 87160). The grave

was recognized and so designated when disturbed capstones and dolerite cobbles were encountered. Three sandstone capstones were encountered at a depth of 0.32 meters (L. 9313). One ostrich eggshell cylinder disc bead was recovered at capstone level (EDM 89183). Two other sandstone slabs, believed to have once been capstones, were also encountered. The cist was trapezoidal, slightly wider in the north than in the south (L. 9386). The cist was constructed of an unrecorded number of side slabs, most of them sandstone, and at least six cap support stones, and measured 1.00 meters long, 0.53 meters wide, and 0.29 meters deep. The cist was full of sediment (L. 9319). Within the cist were entombed the remains of a middle to older adult female, semiflexed, with head to the south, on the left side facing west (L. 9354). The arms were flexed with the hands near the face (Fig. 4.356). Below the mandible and between the wrists one valve of a large marine bivalve shell (EDM 72412) and fragments of a bone ring (EDM 72459) were found. In addition, one cupric short cylinder bead (EDM 72458) and two amazonite teardrop-shaped pendants (EDM 72457) were recovered in the cist.

GRAVE 544

Surface architecture: Rock pile.
Subsurface architecture: Trapezoidal cist with southern slab removed.
Main burial: Flexed, oriented north, on left side facing east.
Gender: Unknown.
Age: Adolescent, 9 to 16 years.
Other burials: None.
Artifacts in cist: Ceramic juglet, wood, 81 beads (ostrich eggshell, carnelian, calcite, flint, univalve shell).
Other artifacts: Wood, 1 bead (amazonite) in fill.
Disturbances: Surface architecture destroyed.

Table 4.272: Grave 544 loci.

Locus	Description
9318	Rock pile and fill
9368	Fill
9366	Capstones
9387	Cist
9374	Cist fill
9381	Human remains



Figure 4.357: Grave 544 cobble feature.

Grave 544 was invisible on the surface of square N-11 (Table 4.272; Levy et al. 2005: 459-460). Three pieces of wood were recovered from the fill before the grave was recognized (EDM 87014, 87015). However, the grave was recognized near the surface as a cluster of at least thirteen dolerite and sedimentary cobbles (Fig. 4.357; L. 9318). One very large dolerite cobble marked the north side of the rock feature and the northernmost capstone. The grave was observed to be "in line" with Grave 504 and Grave 707, with which it may be related. One amazonite cylinder disc bead was recovered from the upper

level of rocky fill below the rock pile (EDM 72119). The rock pile continued down to the capstones (L. 9368). At a depth of 0.45 meters below the surface, four capstones, three of red sandstone and one of limestone, were encountered (Fig. 4.358; L. 9366). These capstones were sealed with mud plaster, with smaller cobbles used for chinking. The cist measured 1.52 meters long, 0.65 meters wide, and 0.48 meters deep (L. 9387). The cist was constructed of an unspecified number of sandstone and dolerite side slabs and cap support stones. The cist was trapezoidal, widest at the north and tapering to the south. There was no side slab at the south end of the cist. The cist was filled to within ten centimeters of the capstones with sediment (L. 9374). Within the cist were interred the remains of an adolescent, aged nine to sixteen years, in a tightly flexed position (L. 9381). Unusually, the head was oriented north and the individual lay on the left side, facing east (Fig. 4.359). The arms were bent at the elbows. Placed next to the right elbow was a complete ceramic juglet (Levy et al. 2005: 468-469; EDM 72399). This, along with the ceramic bowl in Grave 345, was one of only two ceramic vessels found in the cemetery. In addition to the juglet, seventy-eight beads were recovered from the cist. Sixty-seven of these beads were found in close proximity in the neck region and are believed to represent a necklace. These include forty-two ostrich eggshell disc beads, eleven carnelian short barrel beads, two carnelian short truncated convex bicone beads, one black stone short barrel bead, four calcite short barrel beads, one calcite long barrel bead, one shell short barrel bead, and one oyster-like shell with the end removed in order to utilize the natural opening for stringing (EDM 72408). Other beads recovered from the cist include one grey fine grained stone cylinder disc bead (EDM 72391), seven ostrich eggshell disc beads (EDM 72281,72381, 72401, 72407, 72463, 89226), three

carnelian short barrel beads (EDM 72400, 72405, 73400), one conical, probably *Conus spp.* shell with the apex removed and the side opposite the natural opening pierced for stringing (EDM 72406), and one large conical shell with the side opposite the natural opening cut away (EDM 89347). Also, wood (EDM 72370, 72402) and charcoal (EDM 72386) were recovered from the neck and torso region, as were two kinds of unspecified organic materials. Dark sediment was observed below the interment, believed by the excavator to be the remnants of a decayed shroud.



Figure 4.358: Grave 544 capstones.



Figure 4.359: Grave 544 burial. Note juglet next to elbow.

GRAVE 545

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Flexed, head to south, on left side facing west.
Gender: Unknown.
Age: Young adult.
Other burials: Fragmentary remains in fill.
Artifacts in cist: None.
Other artifacts: Potsherd in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment.

Table 4.273: Grave 545 loci.

Locus	Description
9337	Fill
9345	Capstones
9383	Cist
9346	Cist fill
9363	Human remains



Figure 4.360: Grave 545 burial.

Grave 545 was invisible on the surface, and was first recognized when the edges of a cist were exposed in the south and dolerite cobbles piled over the cist were encountered in the north (Table 4.273). Charcoal (EDM 72203) and a ceramic handle (EDM 72218) were collected in the fill above the cist (L. 9337). Some scattered bone fragments were recovered from the fill, but too little remained to analyze. One capstone was encountered in place at a depth of 0.44 meters (L. 9345). The cist measured 0.97 meters long, 0.74 meters wide, and 0.41 meters deep and was constructed of six

sandstone and dolerite side slabs and at least eleven dolerite and sandstone cap support stones (L. 9383). The cist was trapezoidal, slightly wider at the north than at the south. The southern side slab of the cist also served as the northern side slab of the cist of Grave 536. The cist was full of sediment (L. 9346). Entombed within the cist were the tightly flexed remains of a young adult (L. 9363). The individual's left arm was bent with the hand near the face, while the right arm was extended with the hand next to the right ankle (Fig. 4.360).

GRAVE 546

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: 546A: probable female; 546B: indeterminable.
Age: Two young to middle adults.
Other burials: None.
Artifacts in cist: 2 beads (amazonite), shell.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.274: Grave 546 loci.

Locus	Description
9326	Fill
9367	Cist
9327	Cist fill



Figure 4.361: Grave 546 cist fill.

Grave 546 was invisible on the surface of square N-12 (Table 4.274). The grave was recognized during the excavation of Grave 540 and the north side of the cist was visible in the baulk of Grave 10, above the level of that grave's cist (L. 9326). Only the northernmost capstone was present, at a depth of 0.26 meters below the surface. The cist measured 1.20 meters long, 0.45 meters wide, and 0.48 meters deep and was constructed of ten side slabs, nine of dolerite and one of sandstone (L. 9367). Five cap support stones remained, four of dolerite and one of limestone. The cist was trapezoidal, tapering to the south. Within the cist were the extremely fragmentary remains of at least two individuals, encased in hard packed fill (Fig. 4.361; L. 9327). Both were young to middle adults and were similar in size and age. Individual 546A may be a female, judging by the small mastoid process, while 546B was of an undeterminable sex. One amazonite short

barrel bead (EDM 72224) and one irregular amazonite barrel disc bead or drilled pebble (EDM 72311) and shell were recovered from the cist.

GRAVE 547

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Male.
Age: Old adult.
Other burials: Fragmentary remains in fill, 2 carpals of second individual in cist.
Artifacts in cist: None.
Other artifacts: Possible worked stone in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.275: Grave 547 loci.

Locus	Description
9328	Fill
9331	Capstones
9377	Cist
9351	Cist fill



Figure 4.362: Grave 547 cist.

Grave 547 was invisible on the surface of square M-12 (Table 4.275). A possibly worked stone was recovered from the fill before the grave was recognized (EDM 87595). The cist was observed in the baulk of Grave 28 at a higher elevation than that grave's cist. Dolerite cobbles fitting the cemetery's looting pattern were encountered in the fill above the cist (L. 9328). Charcoal was also collected from the fill (EDM 72241). Scattered human remains were encountered in this fill, but they were too fragmentary to analyze. At a depth of 0.36 meters four red sandstone capstones were encountered, with cobbles used as chinking and mud plaster sealing the edges (L. 9331). The cist measured 1.35 meters long, 0.48 meters wide, and 0.47 meters deep and was constructed of seven side slabs, most of them sandstone (Fig. 4.362; L. 9377). The cist was trapezoidal, wider at the north than at the south. In the west was a gap about the size of an eighth side slab. Ten cap support stones, six of dolerite, three of limestone, and one of sandstone were also used in the construction of the cist. Scattered throughout the cist amidst cobbles and fill, most dense in the lower levels of the cist fill, were extremely fragmentary human remains (L. 9351). Most of these belonged to one adult male showing premortem tooth loss, individual 547A. Two carpals of a second individual, 547B, were also recovered. The notes suggest that at least five beads were recovered, but these could not be located.

GRAVE 548

See **Grave 549.**

GRAVE 549

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Flexed, head to south, on left side facing west.
Gender: Male.
Age: About 34.

Other burials: Secondary above capstones, secondary subadult in cist, partial primary adult in cist.
Artifacts in cist: Organic material.
Other artifacts: 3 beads in fill (amazonite, alabaster).
Disturbances: Surface architecture destroyed.

Table 4.276: Grave 549 loci.

Locus	Description
9321	Fill
9329	Secondary burial Grave 548
9333	Capstones
9379	Cist
9339	Cist fill
9355	Human remains



Figure 4.363: Grave 549 burial.

Grave 549 was invisible on the surface of square M-11 (Table 4.276). One amazonite trapezoidal pendant (EDM 87031) and one alabaster short cylinder bead

(EDM 87048) were found in the fill above the grave before it was recognized. The grave was recognized at about capstone level. One amazonite short cylinder bead was recovered from the fill above the capstones (L. 9321; EDM 72127). While clearing off the capstones, a secondary burial, designated Grave 548, was discovered above and to the east of the capstones (Fig. 4.365; L. 9329). The bones of this individual were in a pile with long bones at the top. The maxilla and mandible were also visible separate but towards top of the pile. This burial may not have been completely excavated, and what few remains were collected were too fragmentary to analyze. No finds were associated with this burial. Another individual, 549D, was represented by very fragmentary remains about the capstones. The three sandstone capstones were encountered at a depth of 0.31 meters below the surface, covered in a layer of mud plaster (L. 9333). Smaller cobbles were used as chinking stones. The cist was constructed of seven sandstone side slabs and thirteen cap support stones, most of them sandstone, and measured 1.25 meters long, 0.50 meters wide, and 0.55 meters deep (L. 9379). The cist was trapezoidal, narrower at the south than at the north. Fill in the cist did not reach the cap stone level, but the human remains were fully covered by silt (L. 9339). A primary burial of a male, individual 549A, aged about 34 years, were interred in a flexed position in the south end of the grave (L. 9355). His head was oriented north, and he lay on his left side facing west (Fig. 4.363). His left arm was bent at the elbow with his head resting in his hand. His right arm was bent with his hand about at his left knee. His left knee was pulled closer to his chest than his right knee. South of individual 549A were fragmentary remains of two individuals. Individual 549B was an adult represented by articulated feet and a fibula and was probably the primary burial which previously occupied the cist (Fig. 4.364).

Individual 549C was a subadult of less than fifteen years but most likely seven to nine years of age. Charcoal was collected from the cist fill above burial (EDM 72240) and from the level of the burial itself (EDM 72290). Organic material was collected from a spot immediately west of the skull of 549A (EDM 72244); the supervisor noted that these may have been fruit seeds.



Figure 4.364: Secondary remains of individual 549C and articulated leg bones of 549B south of burial 549A.



Figure 4.365: Secondary burial 548 above capstones of Grave 549.

GRAVE 550

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Probably semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Adult.
Other burials: Fragmentary juvenile in cist.
Artifacts in cist: 1 potsherd.
Other artifacts: 1 bead in fill (ostrich eggshell).
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.277: Grave 550 loci.

Locus	Description
9340	Fill
9350	Capstones
9360	Cist
9352	Cist fill



Figure 4.366: Grave 550 cist fill. Note articulated foot next to cist wall.

Grave 550 was invisible on the surface of square N-11 (Table 4.277). One ostrich eggshell disc bead was recovered from the fill above the grave before the grave was recognized (EDM 87005). It was recognized when a large number of dolerite cobbles were encountered in the fill (L. 9340). At a depth of 0.56 meters three sandstone capstones were encountered (L. 9350). A gap was observed where at least one more capstone is believed to have sealed the grave; this gap was filled with cobbles that continued into the cist. The cist itself measured 0.95 meters long, 0.65 meters wide, and 0.47 meters deep (L. 9360). It was constructed of nine side slabs—all but the southernmost was dolerite—and fifteen cap support stones. The support stones were mostly dolerite and were arranged in up to two courses. The cist was trapezoidal, wider at the north than at the south. The cist was full of sediment, in which were the fragmentary remains of two individuals (L. 9352). Individual 550A appears to be an

adult and presumably was the most recent occupant of the cist, as this individual's articulated foot was encountered in situ the north end of the cist (Fig. 4.366). Judging by this foot, this individual was probably laid in a semiflexed position with head to south, on the left side facing west. Commingled with the remains scattered through the cist were those of individual 550B, a juvenile aged eight to eleven. One potsherd was recovered from the cist (EDM 89201).

GRAVE 551

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, oriented south, on left side facing west.
Gender: Unknown.
Age: Young adult.
Other burials: None.
Artifacts in cist: 2 beads (dolerite).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.278: Grave 551 loci.

Locus	Description
9344	Fill
9348	Capstones
9378	Cist
9353	Cist fill
9365	Human remains



Figure 4.367: Grave 551 cist fill.

Grave 551 was invisible on the surface of square M-11 (Table 4.278). However, it was recognized when a pile of dolerite cobbles was encountered in the fill above the capstones (L. 9344). Three of these were large cobbles similar to those used in grave circles, and many others were flat small cobbles like those used in surface pavements. At a depth of 0.08 meters, three sandstone capstones were encountered (L. 9348). A space between the capstones appeared to have once been filled by at least one capstone; dolerite cobbles were in this gap and extended down into the cist. The cist measured 0.99 meters long, 0.32 meters wide, and 0.40 meters deep, and was constructed of seven sandstone and dolerite side slabs and at least twelve cap support stones in up to two courses (L. 9378). The cist was trapezoidal, slightly wider in the north than in the south. The cist was full of sediment, and two sandstone slabs, believed to have been capstones, were found in the cist, lying on top of the remains of a primary burial (Fig. 4.367; L. 9353).

Although the burial was fragmentary and disturbed, articulation was observed in the torso and legs showing that the individual, a young adult judging from tooth attrition, was semiflexed, laid on his left side, with head to the south, facing west (L.9365). Two very similar dolerite cylinder disc beads were recovered from the human remains locus (EDM 89200, 89213).

GRAVE 552

Surface architecture: None.
Subsurface architecture: Rectangular cist.
Main burial: Semiflexed, oriented south, on left side facing west.
Gender: Unknown.
Age: Infant, 1 to 3 years.
Other burials: Fragmentary remains above capstone.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.279: Grave 552 loci.

Locus	Description
9342	Fill
9362	Cist fill
9373	Human remains



Figure 4.368: Grave 552 burial.

Grave 552 was invisible on the surface of square M-12 (Table 4.279). A scatter of human remains was located in the fill above the grave, but this material was too fragmentary to analyze (L. 9342). At a depth of 0.26 meters one red sandstone capstone was encountered. This capped a rectangular cist measuring 0.60 meters long, 0.30 meters wide, and 0.30 meters deep and constructed of six dolerite and sandstone side slabs and six dolerite, sandstone, and limestone cap support stones. It shared one of its eastern side slabs with Grave 554, which was constructed next to it. These two graves were so closely related that they were initially believed to be one cist with an intrusive stone. The cist was full of sediment (L. 9362). Within the cist were entombed the remains of a semiflexed infant, aged one to three years, oriented with the head to the south, laying on the left side facing west (Fig. 4.368; L. 9373).

GRAVE 553

Surface architecture: None.
Subsurface architecture: Cist.
Main burial: None.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted recently. Surface architecture destroyed, cist partially destroyed, shaft left open to cist.

Table 4.280: Grave 553 loci.

Locus	Description
9371	Cist
9358	Cist fill



Figure 4.369: Grave 553 cist.

Grave 553 was an exposed, partially preserved cist (Table 4.280). It is unclear whether this grave was excavated in 1997, but it seems to have been a victim of the looting that occurred at the site between 1997 and 2004. The northern portion of the cist was completely removed; a pit extended down to the cist level here. The cist lay about

0.23 meters below the nearby ground level. What remained of the cist measured 0.74 meters long, 0.28 meters wide, and 0.27 meters deep, extending to a total depth of 0.50 below the surface, and was constructed of six side slabs, five of them of dolerite and one of sandstone (Fig. 4.369; L. 9371). No human remains or grave goods were recovered in the cist fill (L. 9358).

GRAVE 554

Surface architecture: None.
Subsurface architecture: Cist.
Burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: 6 months to 1 year.
Other burials: Fragmentary remains above capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.281: Grave 554 loci.

Locus	Description
9342	Fill
9372	Cist
9364	Cist fill



Figure 4.370: Grave 554 burial.

Grave 554 was invisible on the surface of square M-12 (Table 4.281). It was discovered in the excavation of Grave 552, with which it shared a side slab. These two graves were so closely related that they were initially believed to be one cist with an intrusive stone, and part of Grave 554 was excavated as 552. The cist's northern side slab was shared with Grave 552. A few fragments of bone were found in the fill above the grave, but these were too fragmentary to analyze (L. 9342). No capstones were encountered in place. The cist itself was encountered at a depth of 0.50 meters below the ground surface. The cist measured 0.45 meters long, 0.35 meters wide, and 0.48 meters deep and was constructed of three dolerite and sandstone side slabs (L. 9372). A gap existed in the northwest where a fourth side slab would have been expected. Within the grave were interred the remains of an infant, aged six to twelve months (L. 9364). The

individual was found laying semiflexed, with head oriented to the south, on the left side facing west (Fig. 4.370). No grave goods were found.

GRAVE 555

Surface architecture: None.
Subsurface architecture: None.
Main burial: Secondary.
Gender: Male.
Age: Adult.
Other burials: None.
Artifacts below capstones: None.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.282: Grave 555 loci.

Locus	Description
2335	Stone circle
2336	Capstones
2378	Fill below capstones but above cist, Grave 527, Grave 541, Grave 555
2336	Capstone
9375	Fill



Figure 4.371: Grave 555 capstones.

Grave 555 is a secondary burial associated in a shared mortuary structure with Graves 527 and Grave 541 (Table 4.282). The graves were visible on the surface of square M-11 as a cluster of dolerite cobbles believed to have been part of a stone circle (L. 2335). Some were lying flat, perhaps indicative of a pavement. One potsherd was recovered over Grave 555 (EDM 87437). At a depth of 0.22 meters below surface, five capstones were encountered (L. 2336). Dolerite cobbles were observed between two groups of capstones, which appeared to be consistent with the looting pattern at Wadi Fidan 40. It was not until the capstones were all removed that it was recognized that these belonged to different graves. The three northernmost of these capstones, one of red sandstone, one of limestone, and one of dolerite, were associated with Grave 527, the rest with Grave 541. Grave 555 was located immediately south of Grave 541. Beneath the fill beneath the capstones (L. 2378), at a depth of 0.38 meters, Grave 555 had two red sandstone capstones aligned east-west, with smaller cobbles used as chinking stones (Fig. 4.371; L. 2336). No cist was found beneath the capstones, though the burial was against the northern side slab of Grave 541 (L. 9375). The skull was in the west against Grave 541, and the other bones were to the east of this. The precise boundaries were not delineated (Fig. 4.372). A sandstone slab, believed to be a capstone for an unexcavated grave, lay below the burial. No grave goods were recovered.



Figure 4.372: Grave 555 burial.

4.7: 2004 EXCAVATIONS: AREA C GRAVE DESCRIPTIONS

GRAVE 45 (49?)

One amazonite tooth-like pendant was found cleaning backdirt from this previously excavated grave (EDM 89215). This grave was mentioned only twice in the notes, once as Grave 45, and once as Grave 49. Which 1997 grave this equates to in reality (if any) remains obscure.

GRAVE 700

Surface architecture: None.
Subsurface architecture: Paving stones.
Burial: Secondary.
Gender: Unknown.
Age: Adolescent or young adult, 15 to 25 years.
Other burials: None.

Artifacts: None.
Disturbances: Architecture mostly eroded.

Table 4.283: Grave 700 loci.

Locus	Description
2404	Human remains
2438	Pavement



Figure 4.373: Grave 700 human remains.

Grave 700 was invisible on the surface of square O-15 (Table 4.283). About five centimeters below the surface, a secondary burial was encountered (L. 2404). Bones collected include a mandible and a femur as well as phalanges and ribs (Fig. 4.373). A few dolerite cobbles around the remains may be the displaced remnants of mortuary architecture, and four small paving stones were found beneath the remains (L. 2438). Osteological analysis shows that the poorly preserved remains were those of an

adolescent or young adult aged fifteen to twenty-five years, but most likely eighteen years of age.

GRAVE 701

Surface architecture: Tumulus covering stone circle.
Subsurface architecture: Trapezoidal cist with pavement, with south end removed.
Main burial: Extended, on back, oriented north.
Gender: Male.
Age: 26-70, most likely 38.
Other burials: Fragmentary neonate beneath primary burial.
Artifacts in cist: Ovicaprid bones, pomegranate fragments, wood fragments, copper metal, 2 potsherds, bead (carnelian).
Other artifacts: Textile, anthropomorphic stone in fill.
Disturbances: Recent looter's trench in surface architecture. Rodent activity and modern shoelace in cist.

Table 4.284: Grave 701 loci.

Locus	Description
2408	Topsoil
2417	Tumulus
2455	Fill
2475	Capstones
2505	Cist
2479	Cist fill
2488	Human remains
2502	Pavement
2492	Probe beneath pavement



Figure 4.374: Grave 701 stone circle.

Grave 701 was visible on the surface in the western side of square P-8 as what was described in the reports as a large tumulus or mound constructed of a variety of local cobbles, measuring about 3.50 meters in diameter (Table 4.284; L. 2417). A shallow trench, believed to have been cut by looters, was observed in the top of the rock pile (L. 2408). Photographs show a double stone circle (Fig. 4.374). It is unclear how many cobbles of a rock pile were removed from the surface before these photographs were taken. The area supervisor's notes point out that this was the only construction of this type in Area C, though others were observed at the site. Textile was found near the surface (EDM 88045). A large number of cobbles encountered in the fill (L. 2455), and among this rubble was an anthropomorphic stone (EDM 88331). At a depth of 0.73 meters below the surface, four capstones, two of limestone, one of dolerite, and one of

sandstone, were encountered (Fig. 4.375; L. 2475). These were covered in mud plaster. These capstones covered the cist, the remaining architecture of which measured 1.09 meters long, 0.47 meters wide, and 0.47 meters deep. The burial was not measured, but the capstones covered an area 1.5 meters in length. This cist was constructed of eight side slabs of limestone and dolerite and nine dolerite, sandstone, and limestone cap support stones (L. 2505). It was originally trapezoidal, wider at the north than at the south. No stones were observed in the south end of the cist. The bottom of the cist was paved with twelve large flat dolerite cobbles which extended the length of the remaining cist (L. 2502)—the area where the burial extended beyond the end of the cist was not paved (Fig. 4.378). No finds were found in a small probe beneath the pavement (L. 2492). Within the cist was interred a primary extended burial, individual 701A (Fig. 4.376; L. 2488). He lay with head oriented north on his back. His face was turned to the east when found; it is impossible to say whether he was placed this way or whether the head fell in this position during decomposition. The individual's arms were bent at the elbows with his hands placed about at his shoulders. The individual's right leg was straight, while the left leg was bent slightly with the lower leg beneath the right leg. The individual displayed signs of degenerative joint disease of the temporal mandibular joint. To the west of the skull and above the right shoulder were a large number of wood fragments believed to have once been a vessel, a large number of ovicaprid bones, and fragments of pomegranates (Fig. 4.377). One of the radiocarbon dates from the cemetery came from one of the pomegranate seeds recovered here (EDM 88464; Levy et al. 2005: 482). The skull contained organic remains. Three rodent skulls were recovered from the fill around the skeleton (L. 2479), and a modern shoelace was also found in the cist,

suggesting a certain amount of post depositional disturbance. Beneath the primary burial towards the south of the cist fragments of a neonate, individual 701B, were recovered. The area supervisor suggested that the cist was disturbed in order to bury these remains with the primary skeleton, however this seems unlikely. The neonate remains were recovered from beneath the primary. In addition, if the cist were once completely constructed with side slabs which were removed in the south, this would have had to have occurred before the primary was interred, as the extended burial continues past the remains of the constructed cist. The grave skeleton sheet suggests that Grave 701A "might overlap" 701B. Alternatively, and perhaps most likely, the cist may have originally been completely faced with side slabs. Individual 701B was most likely once interred in this cist, possibly as the sole occupant or possibly with another inhumation. In order to bury individual 701A in an extended fashion, this cist may have been excavated, with the majority of the contents and the southern cist wall removed. One carnelian short barrel bead (EDM 89093), one cowry with the back removed (EDM 88451) was recovered from the cist, as was a piece of copper metal (EDM 89092), and two potsherds (EDM 88353, 88619). Some seeds collected from the cist are believed to be associated with the rodent disturbances (EDM 88348).



Figure 4.375: Grave 701 capstones.



Figure 4.376: Grave 701 burial.



Figure 4.377: Grave 701 burial, close-up of upper body. Note the ovicaprid bones beside the skull.



Figure 4.378: Grave 701 cist with paved floor.

GRAVE 702

Surface architecture: Partial stone circle.
Subsurface architecture: Cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: None.
Other artifacts: 1 potsherd, 9 beads (siltstone, ostrich eggshell, shell) in fill.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.285: Grave 702 loci.

Locus	Description
2411	Stone circle
2418, 2443	Rocky fill
2445	Rock pile
9653	Fill clean up before photos, small amount of bone



Figure 4.379: Grave 702 cist fill.

Grave 702 was visible on the surface of square O-12 as an incomplete circle of eight dolerite cobbles, best preserved along the north and west (Table 4.285; L. 2411). This circle was an estimated 0.60 meters wide. One potsherd (EDM 88116) and one

ostrich eggshell bead (EDM 88030) were found near the surface. A large number of cobbles and one limestone slab believed to have been a capstone were encountered in the fill (L. 2418, 2443). One fine-grained siltstone truncated convex bicone bead (EDM 88076) and seven tubular short barrel shell beads were recovered from this rocky fill (EDM 88077, 88125, 88137, 89007, 89014, 89020). At a depth of about 0.75 meters two limestone capstones were observed in place. The cist itself was badly disturbed and full of cobbles (L. 2445, 9653). According to the area supervisor, "The western part of the grave cist was gone;" however, part of the west wall of the cist appears to be represented by dolerite cobble side slabs visible in site photos (Fig. 4.379). The grave was apparently never completely excavated, though the cist appears to have been 0.56 meters wide and 0.41 meters deep. Very few human remains were recovered from the cist, and what was collected was poorly preserved and could not be analyzed. Potsherds were collected from the grave.

GRAVE 703

Surface architecture: Rectangular stone alignment, stone circle.
Subsurface architecture: Cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: 5-16 years.
Other burials: None.
Artifacts in cist: None.
Other artifacts: Anthropomorphic stone.
Disturbances: Looted in antiquity. Capstones displaced, human remains broken and scattered.

Table 4.286: Grave 703 loci.

Locus	Description
2413	Grave circle
2419	Fill
2426	Pavement
2431	Fill
2471	Capstones
2472	Cist fill



Figure 4.380: Grave 703 surface architecture.

Grave 703 was recognized on the surface of square O-8 by the only mortuary structure of its kind recorded at Wadi Fidan 40 (Levy et al. 2005: 463). This was a rectangular alignment of large cobbles of various stones measuring about four meters long and two meters wide (Fig. 4.380). Only a few scattered cobbles were visible in the western half of the structure. However, the eastern half contained the grave circle of Grave 703, a complete circle measuring 1.50 meters in diameter and constructed of

sixteen dolerite cobbles (L. 2413). Beneath a level of fill (L. 2419), a second, larger stone circle constructed of larger cobbles was also observed after clearing some of the fill. This larger circle circumscribes the circle visible on the surface, and was set at a lower elevation, passing beneath the rectangular installation. Paving stones between the two stone circles survive in the west, suggesting both may have predated the rectangular structure (Fig. 4.381). About one third of the area within the interior circle contained an intact pavement of five small and nine large flat dolerite cobbles (L. 2426). The fill below the level of this pavement, particularly in the region where no pavement survived, was dense with cobbles (L. 2431). Among these was an anthropomorphic stone (Figs. 4.382, 4.383; EDM 88194). At a depth of 0.82 meters below the surface, two limestone capstones were observed in place (L. 2471). The space between these was filled with cobbles which extended into the cist. Inexplicably, this cist was never completely excavated, so the cist was never properly measured, but what was excavated showed that the cist was 0.45 meters wide and 0.53 meters deep (Fig. 4.384). Scattered within the cist were the very fragmentary remains of an adolescent or juvenile.



Figure 4.381: Grave 703 stone circles and pavement.



Figure 4.382: Grave 703 anthropomorphic stone as found.



Figure 4.383: Grave 703, anthropomorphic stone as found.



Figure 4.384: Grave 703 cist, as excavated.

GRAVE 704

Surface architecture: Partial stone circle surrounding partial pavement.
Subsurface architecture: Trapezoidal cist.
Burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Adolescent or young adult, 15 to 24 years.
Other burials: Secondary above capstones.
Artifacts in cist: 3 beads (amazonite, ostrich eggshell).
Other artifacts: 1 bead with secondary (amazonite).
Disturbances: Surface architecture partially destroyed.

Table 4.287: Grave 704 loci.

Locus	Description
2414	Grave circle
2420	Fill
2421	Pavement
2440	Fill
2437	Capstones
9623	Cist
2575	Cist fill
2599	Human remains



Figure 4.385: Grave 704 surface architecture.

Grave 704 was visible on the surface border of squares O-8 and O-9 as a partial stone circle constructed of seven dolerite cobbles, measuring 0.90 meters in diameter (Table 4.287; L. 2414). Beneath a shallow layer of fill (L. 2420), this stone circle surrounded a partial pavement constructed of five cobbles (Fig. 4.385; L. 2421). Just above and slightly south of the capstones of Grave 704 a secondary burial was encountered and designated Grave 729 (L. 2440). A few fragments of long bones and a skull were recovered and found to be those of an adult of unknown sex. One well-shaped green amazonite short barrel bead was found associated with the secondary burial (Fig. 4.386; EDM 88822). At a depth of 0.41 meters, three limestone capstones were encountered (L. 2437). These were sealed with a layer of mud plaster. These sealed a trapezoidal cist, wider in the north than at the south (Fig. 4.387; L. 9623). The cist was constructed of limestone side slabs and limestone and dolerite cap support stones and measured 1.05 meters long, 0.61 meters wide, and 0.38 meters deep. The cist was full of sediment (L. 2575). Within were interred the remains of an adolescent or young adult, fifteen to twenty-four years of age (L. 2599). The individual was laid in a semiflexed position with head to the south, on the left side facing west. One amazonite short barrel bead (EDM 74017) and two ostrich eggshell cylinder disc beads (EDM 88956, 88982) were found with the individual.



Figure 4.386: Grave 704 secondary burial, individual 729. Note the amazonite bead associated with the remains, in the middle of the photograph.



Figure 4.387: Grave 704 cist.

GRAVE 705

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult.
Other burials: Fragmentary infant in cist.
Artifacts in cist: None.
Other artifacts: Steel snap, potsherd, 41 beads (ostrich eggshell, carnelian, aventurine, shell, amazonite, agate, alabaster) in fill.
Disturbances: Looted. Capstones displaced, cist full of sediment, human remains broken and scattered in cist. Recent artifact in fill.

Table 4.288: Grave 705 loci.

Locus	Description
2415	Grave circle
2428	Fill
2466	Fill
2464	Capstones
2465	Cist fill



Figure 4.388: Grave 705 cist.

Grave 705 was visible on the surface of square O-12 as an incomplete stone grave circle constructed of eight dolerite cobbles and measuring about 1.70 meters in diameter (Table 4.288). The fill contained a large number of cobbles and one large limestone slab which the area supervisor believed was too large for the cist of Grave 705. Many beads were found in the fill. A modern steel snap (EDM 89018), a potsherd (EDM 88405) and forty-one beads were found in this fill. These included one carnelian short barrel bead (EDM 88437), one aventurine barrel disc bead (EDM 88424), a tubular shell bead (EDM 89080), an amazonite drilled pebble in roughly cylinder disc shape (EDM 88379), four agate cylinder discs (EDM 88389, 88404, 88411), twenty-eight ostrich eggshell cylinder discs (EDM 88189, 88225, 88227, 88232, 88234, 88235, 88237, 88276, 88277, 88293, 88327, 88337, 88338, 88378, 88404, 88411, 88424, 89025, 89027, 89074), and five alabaster short cylinders (EDM 88102, 88105, 88166, 88409, 89013). At a depth of 0.41 meters, two limestone capstones were encountered. No capstones covered the northern end of the grave. The cist was trapezoidal, wider at the north than at the south (Fig. 4.388 The cist measured 0.48 meters long and 0.31 meters deep. The cist was not completely excavated so length could not be determined; the excavated portion measured 0.85 meters. The cist was constructed of dolerite side slabs and twelve dolerite cap support stones. The fragmentary remains of two individuals were recovered from the cist. One, individual 705A, was an adult of unknown age and sex. The other, individual 705B, was an infant aged eighteen months to four years, represented only by fragments.

GRAVE 706

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Semiflexed, oriented south, on left side facing west.
Gender: Female.
Age: 15-23 years, most likely 18.
Other burials: Human remains above capstones, adult female secondary burial in north end of cist.
Artifacts in cist: Lambis shell bracelet, marine shell, bead necklace, bead belt, 288 beads (amazonite, ostrich eggshell, cupric), bone spatula pendant.
Other artifacts: 2 beads associated with secondary over capstones (amazonite).
Disturbances: None observed.

Table 4.289: Grave 706 loci.

Locus	Description
2416	Stone circle
2430	Fill
2460	Capstones
2468	Cist
2469	Cist fill
2480	Human remains



Figure 4.389: Grave 706 capstones.

Grave 706 was visible on the surface of square O-12 as a partial stone circle constructed of twelve dolerite cobbles and measuring about 1.95 meters in diameter (Table 4.289; Levy et al. 2005: 463-464; L. 2416). The fill was the fine sandy silt typical in the cemetery but with no cobbles (L. 2430). At a depth of 0.53 meters, four capstones, three of limestone and one of sandstone, were encountered, covered by a layer of mud plaster (L. 2460). Some human bone, including hand bones, were recovered from a depression in the mud plaster. Two amazonite beads were found in association with these bones (EDM 88220, 88226). The capstones (Fig. 4.389) sealed a trapezoidal cist, widening in the north in order to accommodate the flexed legs of the deceased. The cist measured 1.32 meters long, 0.52 meters wide, and 0.38 meters deep. The cist was constructed of nine dolerite side slabs and twenty-one cap support stones in two courses—twelve in the top course and nine in the bottom course. The cobbles used as side slabs in the eastern side of the cist were smaller, and here mud plaster was used as mortar (EDM 88216). A shallow layer of sediment covered the human remains (L. 2469). Entombed within the cist were two individuals, one a primary burial and the other a secondary burial (L. 2480). Individual 706A was a female, aged fifteen to twenty-three but most likely eighteen, entombed in a semiflexed position on the left side with head to the south, facing west (Fig. 4.390). The arms were bent at the elbows, with the hands in the facial region. A lambis shell bracelet was found on the right wrist (EDM 88493). At the elbow was a large marine shell (EDM 88492). More mother of pearl, probably part of this shell, was found associated with the human remains (EDM 88384). Amazonite beads and a bone spatula-like pendant (broken in two; EDM 88375, 88494) were found in

the neck region (Fig. 4.391). Two hundred eight ostrich eggshell beads formed a belt in the pelvic region. Grave sheets note earrings, but no evidence of earrings can be found in the notes or in the lists of collected artifacts, and it is presumed that the semicircular spatula pendant fragment was mistaken for an earring (EDM 88375). At and above the legs of the primary burial were the remains of individual 706B (Fig. 4.392). This individual was female, aged 26 to 44, but was most likely 34. A number of beads found in the north end of the cist were believed by the excavators to be associated with this secondary burial.



Figure 4.390: Grave 706 burial.



Figure 4.391: Lambis shell bracelet on the arm of the burial of Grave 706 and amazonite beads at about the neck area.



Figure 4.392: Grave 706 primary burial lower body (after the removal of the upper body) and secondary burial.

GRAVE 707

Surface architecture: Disturbed cobble feature.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: 14-20 years, most likely under 16.
Other burials: None.
Artifacts in cist: Bone spatula pendant.
Other artifacts: 3 beads (amazonite, shell) in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.270: Grave 707 loci.

Locus	Description
2424	Cobble feature
2432, 2451, 2470	Fill
2441	Capstones
2450	Fill under disturbed capstones
2476	In place capstones
2518	Cist
2458	Cist fill



Figure 4.393: Grave 707 cist.

Grave 707 was visible on the surface of square O-11 as a disorganized mass of at least seven dolerite cobbles, 1.25 meters in diameter, some of which were on edge and some of which were found lying flat (Table 4.270; L. 2424). It is believed that these were once part of a stone circle or possibly a pavement. More cobbles were found in the fill and over the capstones, and one of the capstones was found standing vertical in the cist fill (L. 2441). The original excavation had to be extended several times, excavating additional fill loci over the capstones (L. 2432, 2450, 2451, 2470). One tubular shell bead (EDM 88108), one amazonite barrel disc bead (EDM 89015), and one amazonite short cylinder bead (EDM 88301) were found in the fill. At a depth of 0.13 meters below the surface, three or four capstones were encountered in place over the cist (L. 2476). These capped a cist measuring 1.35 meters long, 0.62 meters wide, and 0.50 meters deep (L. 2519). The cist was trapezoidal, wider at the north (Fig. 4.393). It was constructed of eight side slabs and eleven cap support stones, all of limestone. Little skeletal material was recovered from the cist fill (L. 2458). Although the notes state that the remains under the northern capstones were intact, no further details are provided regarding orientation or disposition of the deceased. Osteological analysis revealed the skeletal matter retrieved belonged to an individual of fourteen to twenty years of age, but most likely under sixteen years of age. A bone pendant fragment, consistent with a fragment from a spatula pendant, was recovered from the cist (EDM 89050).

GRAVE 708

Surface architecture: Dual stone circle, possible pavement.
Subsurface architecture: Cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: 7-14 years, most likely 11.
Other burials: Fragmentary human remains over capstones.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.271: Grave 708 loci.

Locus	Description
2425	Grave circle
2436, 2456	Fill
2483	Capstones
2484	Cist fill



Figure 4.394: Grave 708 surface architecture.

Grave 708 was visible on the surface of square Q-8 as two concentric stone circles 0.40 meters in total diameter, constructed so closely together that the dolerite cobbles that compose them touch (Table 4.271; L. 2425). The outer circle is composed of larger, more rounded cobbles, while the inner circle is composed of flat cobbles set on edge (Fig. 4.394). The supervisor's final report claims "There was no pavement visible within the small circle," but also says "there was almost wholly intact pavement within the inner circle." No pavement is visible in site photos. The original grave sheet completed in the field mentions only three paving stones, while the digitized grave sheet mentions that this pavement was only discovered as the fill locus was extended to the north (L. 2456). It is perhaps most likely that one of the stones is the apparently out-of-place stone in middle of the circle in the site photos, and that there were several flat cobbles encountered but no actual pavement. A large number of cobbles were encountered in the fill, and a large amount of bone was encountered scattered above the capstones (L. 2436, 2456). At a depth of 0.96 meters below the surface, either two or three limestone capstones were encountered over the cist (L. 2483). A gap in the middle indicated that at least one capstone was removed in antiquity. The cist measured 1.11 meters long, 0.37 meters wide, and 0.45 meters deep and was constructed of nine dolerite cobble side-slabs (possibly using mud plaster mortar) and nine dolerite and limestone cap support stones (Fig. 4.395). Within the cist were a small amount of scattered bones, identified as the remains of a juvenile, aged seven to fourteen (but most likely eleven), displaying evidence of cribia orbitalia (L. 2484). No grave goods were recovered.



Figure 4.395: Grave 708 cist.

GRAVE 709

Surface architecture: Disorganized cobbles.
Subsurface architecture: Single capstone.
Burial: None.
Artifacts: 15 beads (ostrich eggshell,

Table 4.272: Grave 709 loci.

Locus	Description
2427	Cobble feature
2434, 2452, 2473, 2477	Fill
2589	Capstone or limestone slab
2594	Fill under capstone or limestone slab



Figure 4.396: Grave 709 surface architecture.

A surface feature in square O-10 was erroneously given the designation Grave 709 (Table 4.272). A dolerite boulder, apparently unworked, was observed standing on end in conjunction with a few cobbles representing what appeared to be a stone circle (Fig. 4.396; L. 2427). If a circle existed, it was projected to be just 0.55 meters in diameter, which is very small but not unheard of at Wadi Fidan 40. Fifteen beads, including four tubular short cylinder shell beads (EDM 88167, 88176, 88221) and eleven ostrich eggshell cylinder discs (EDM 88139, 88150, 88180, 88183,88213, 88278, 88311) were recovered from the fill (L. 2434, 2452, 2473, 2477). Excavations were expanded several times in the quest for subsurface architecture. A single limestone slab believed to have been a capstone was encountered (Fig. 4.397; L. 2589), but excavation beneath yielded no human remains (L. 2594). This capstone was far to the north of the stone feature. Such out of place slabs are not uncommon in the cemetery, and it is unclear if

the slab and the feature are to be associated. It remains unclear whether this was a highly disturbed grave which was not sufficiently excavated to reach the burial level, whether this was a deliberately cobble feature perhaps related to ritual but not to burial, or whether these were merely an accidental association of some of the displaced cobbles resulting from the wide-scale looting at Wadi Fidan 40.



Figure 4.397: Grave 709 limestone slab.

GRAVE 710

Surface architecture: Cobble pile.
Subsurface architecture: Rectangular cist.
Main burial: Multiple, secondary, including possible primary.
Gender: One female, one male, two undetermined.
Age: Three adults, one subadult.
Other burials: None.
Artifacts in cist: 132 beads (cupric, amazonite, carnelian, agate, aventurine, alabaster, ceramic, ostrich eggshell), 4 potsherds, blade scraper.
Other artifacts: 2 potsherds in fill.
Disturbances: No capstones, human remains broken and scattered in cist.

Table 4.273: Grave 710 loci.

Locus	Description
2439	Cobble pile
2446	Fill
2447	Fill at top of cist
2454	Cist fill and human remains
2506	Pavement
2511	Sterile soil beneath pavement



Figure 4.398: Grave 710 surface feature.

Grave 710 was visible on the surface of square Q-9 as a large mass of cobbles and boulders (Fig. 4.398; Table 4.273; Levy et al. 2005: 464-465). An exterior circle of about twenty boulders and large cobbles, measuring 2.77 meters in diameter, was designated a "grave circle," the distinction appears to have been arbitrary (L. 2439). Two potsherds were recovered from the fill (L. 2446; EDM 88095, 88101). The top of the cist was recorded as 0.28 meters below the top of the cobble pile. No capstones were

observed over the cist; instead, the cist seems to have been filled with local sandy silt and then covered over with the rock pile (L. 2447). The cist was constructed by placing boulders adjacent to one another; it was not constructed of the stone slabs seen throughout most of the cemetery. It appears that boulders may have been piled atop one another to form the cist, and resembles cists such as that at Wadi Fidan 4 and Tel Zeror, but the cist walls were never appropriately cleaned, so details of the construction cannot be discussed (Figs. 4.399, 4.400). The rectangular cist measured 2.06 meters long, 1.01 meters wide, and 0.61 meters deep. The floor of the cist was paved with small limestone boulders and large limestone cobbles (Fig. 4.401; L. 2506). A probe dug beneath the southern end of the floor encountered only sterile soil before being stopped at a depth of about 0.20 meters when a large boulder was encountered (L. 2511). In the hard packed fill within the cist, human remains representing at least four individuals were encountered lying on the pavement (L. 2454). Analysis showed, however, that the postcranial remains could all be attributed to two adults, and likely belonged to individuals 710A and 710B, suggesting that this grave represents the burials of two individuals with two skulls. Little articulation was observed, though the partial articulation of the skull, vertebral elements, and ox coxae of individual 710B suggests that this grave included at least one primary burial; it is unclear if individual 710A was also originally a primary burial. The skulls were all observed in the north end of the grave, while most of the long bones were noted in the middle and north end of the grave. Some animal bones were also collected with the human remains. Unfortunately, the remains were not completely uncovered and photographed before removal began. Individual 710A was an adult, probably male based on cranial traits. Individual 710B was also an adult, probably a female judging by cranial

traits. The articulated vertebral elements and ox coxae with female supubic concavity were articulated with this skull. The skull of individual 710B displays three well-healed depressed cranial fracture on the left side of the parietal; one of these measures 33.44 mm, one measures 9.36 mm, and the third measures 9.09 mm. Individual 710C was represented by a subadult cranium, and individual 710D by an adult cranial vault. Preservation was sometimes poor, and the skulls of 710C and 710D did not survive extraction; they were analyzed in the field. On e hundred thirty-two beads were scattered throughout the cist, including one ostrich eggshell disc bead (EDM 89168), one ceramic short barrel bead (EDM 89095), two limestone beads, one alabaster bead, twenty-three aventurine beads, thirty-nine agate beads, twenty-two carnelian beads, thirteen amazonite beads, and twenty-nine cupric beads (EDM 88383, 88388, 88390, 88403, 88416, 88418, 88422, 88427, 88452, 88459, 88469, 88476, 88489, 88490, 88496, 89094). A scraper blade was recovered near one of the skulls (EDM 88440). Four potsherds were recovered from the cist (EDM 88312, 88367, 88453, 88470).

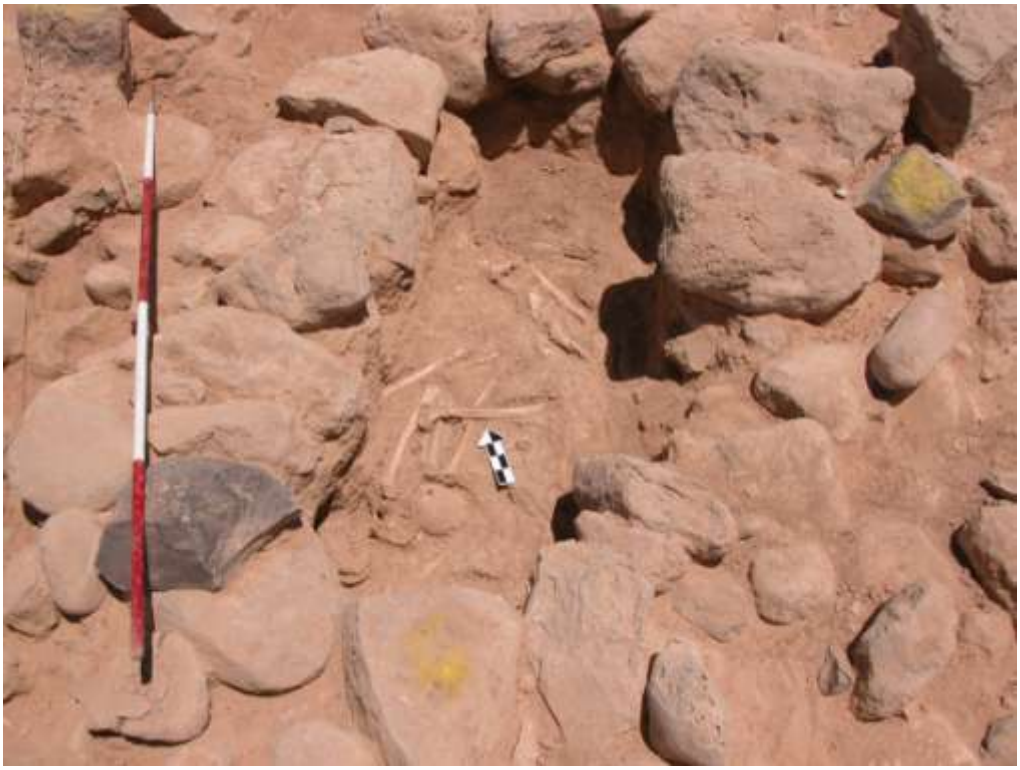


Figure 4.399: Grave 710 cist fill.



Figure 4.400: Grave 710 cist.



Figure 4.401: Grave 710 cist floor.

GRAVE 711

Surface architecture: None.
Subsurface architecture: Rectangular cist.
Burial: Secondary, double.
Gender: Unknown.
Age: One adult; one juvenile 6 to ten years.
Other burials: None.
Artifacts in cist: 1 bead (ostrich eggshell).
Other artifacts: 4 beads (alabaster, amazonite, ostrich eggshell) in fill.
Disturbances: Capstones displaced, cist full of sediment.

Table 4.274: Grave 711 loci.

Locus	Description
2490	Fill
2534	Capstones
2539	Cist
2536	Cist fill



Figure 4.402: Grave 711 cist.

Grave 711 was located within the western half of the rectangular structure associated with Grave 703, west of that grave's circle (Table 4.274). The supervisor's final report suggests Grave 711 was "probably intrusive into the structure;" apparently it had no distinct surface architecture. It was uncovered in close proximity to Grave 718; indeed, it was discovered while excavating the fill east of that grave (L. 2490). Four beads were recovered from the fill, including two alabaster short barrel beads (EDM 88516), an amazonite short barrel bead (EDM 88742) and an ostrich eggshell cylinder disc bead (EDM 88516). At a depth of 0.21 meters, two small limestone capstones were encountered (L. 2534). One of these appeared out of place, and it seems the cist was disturbed in antiquity. The capstones sealed a cist constructed of six limestone side slabs (Fig. 4.402; L. 2539). The one capstone in place was placed directly on top of the side slabs; no cap support stones were found. The cist was rectangular and measured 0.67

meters long, 0.33 meters wide, and 0.43 meters deep. The cist contained a small amount of poorly preserved human remains from at least two individuals, one, 711A, an adult whose teeth show blunting of cusps and dentin exposure, the other, 711B, a juvenile aged six to ten years (L. 2536). The small size of the cist and the nature of the remains suggest a secondary burial. One ostrich eggshell cylinder disc bead was found in the cist (EDM 88681).

GRAVE 712

Surface architecture: Standing stone, inscribed stone, double stone circle surrounding pavement.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: One adult, one infant.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 1 anthropomorphic stone and one inscribed stone in surface architecture, 1 anthropomorphic stone in fill, 2 potsherds in fill.
Disturbances: Capstones missing, few human remains encountered, human remains broken and scattered in cist.

Table 4.275: Grave 712 loci.

Locus	Description
2448	Grave circle
2449	Fill
2461	Fill
2474	Fill
2485	Pavement
2491	Fill
2540, 2550	Cist
2542	Cist fill



Figure 4.403: Grave 712, after limited excavation. Note the standing stone and exterior and interior grave circles.

Grave 712 was visible on the surface only as a projecting standing stone, but excavation immediately below the surface of square O-9, overlapping the border with square P-9, yielded what was probably originally surface architecture (Fig. 4.403; Table 4.275; Levy et al. 2005: 465-466). This architecture is unique among the documented graves at Wadi Fidan 40. This consisted of two concentric stone circles, the smaller of the two incorporating an incised stone, surrounding a small paved pit and an anthropomorphic standing stone (Fig. 4.404). Both stone circles were constructed of dolerite cobbles. Before excavation revealed the architecture, a shallow looter's pit was observed in the middle of the grave, above the inner circle, but it seems not to have disturbed any of the surface architecture. The exterior circle measured 2.37 meters in

diameter (L. 2448). Only the exterior circle was visible before excavation, but the inner circle and pavement became apparent after the removal of a shallow fill (L. 2449, 2461, 2474). One potsherd was recovered from this fill (EDM 88188). Five stones which are believed to be remnants of a pavement were located in the northeast between the two circles, suggesting that the surface between the two pavements was at one point paved. The inner "circle"—actually an oval—measured 1.28 meters in maximum diameter. A large standing stone was observed standing just inside the east end of the interior circle (EDM 88407). Within the inner circle was a pavement, set about fifteen centimeters below the level of the cemetery ground surface. The standing stone was found resting on this pavement within the inner circle. It was found to have sloping shoulders not unlike those of other anthropomorphic stones in the cemetery, and is believed to have been found upside down. It is believed to have originally stood "head"-up, between the two concentric circles in the east, and to have fallen over into the paved pit at some point in antiquity (Fig. 4.404). Opposite this stone, a stone incised with parallel lines was built into the inner stone circle, with the incised surface facing towards the inner paved area (Fig. 4.405; EDM 88473). The inner circle and pavement were found to lie immediately over the cist (Fig. 4.406). In the fill beneath the pavement (L. 2491), a small anthropomorphic stone, with a nose in relief, was recovered, laying face-up with the head oriented to the north (Figs. 4.407, 4.408; EDM 88517). A potsherd was also recovered from the fill above the cist (EDM 88460). The cist was encountered at a depth of 0.95 meters, but no capstones were in place. The cist was slightly trapezoidal and measured 1.05 meters long, 0.46 meters wide, and 0.45 meters deep (L. 2540, 2550). It was constructed of ten dolerite side slabs and thirteen dolerite cap support stones, in some

places in up to two courses (Fig. 4.409). Very little skeletal material was recovered from the cist; what was recovered was scattered throughout the cist fill and was identified as the remains of an adult (probably a young to middle adult) and a few fragments of an infant's bones (L. 2542).



Figure 4.404: Grave 712 architecture after excavation. Note the dual circles, standing stone, paved pit, and flagstones in the space between grave circles.



Figure 4.405: Grave 712 paved interior circle. Note the incised stone opposite the standing stone.



Figure 4.406: Grave 712 interior grave circle and paved pit, after the removal of the standing stone.



Figure 4.407: Grave 712 after removal of central pavement. Note the dual grave circles and, within the interior circle, the anthropomorphic stone.



Figure 4.408: Close-up of the second anthropomorphic stone, as found. Note the nose-like ridge.



Figure 4.409: Grave 712 after excavation.

GRAVE 713

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Capstones over pit.
Burial: Semiflexed, head to south, on right side facing east.
Gender: Male?
Age: 20-30.
Other burials: None.
Artifacts beneath capstones: 1 marine shell fragment.
Other artifacts: None.
Disturbances: Capstones partially collapsed.

Table 4.276: Grave 713 loci.

Locus	Description
2459	Stone circle
2463	Pavement
2478	Fill
2486	Displaced capstones
2487	Fill
2509	Capstones
2540	Burial shaft
2510	Fill beneath capstones
2541	Human remains



Figure 4.410: Grave 713 surface architecture.

Grave 713 was visible very near the surface of square O-10 as a complete stone circle of sixteen dolerite cobbles 1.85 meters in diameter (L. 2459) surrounding an apparently intact pavement of thirty-three dolerite cobbles (Fig. 4.410; Table 4.276; L. 2463). Cobbles were found in the fill beneath the pavement (L. 2478). Two limestone slabs, believed to have been displaced capstones (L. 2486). More cobbles were encountered in the fill beneath these slabs (L. 2487). A larger amount of cobbles were observed over the southern capstones, and the southernmost capstone appeared to have partially collapsed into the pit below. Four limestone capstones were encountered at a depth of 0.43 meters (L. 2509). These covered a pit burial ringed with nine limestone cap support stones but no true cist (L. 2540). The pit beneath these capstones measured 1.40 meters long, 0.43 meters wide, and 0.54 meters deep. The shaft was full of sediment (L.

2510). Entombed within were the semiflexed remains of a young adult, aged twenty-one to thirty, possibly a male (L. 2541). The individual was oriented with head to the south, laying on the right side facing east. The legs were together, flexed, on the right side with knees pointing east. The upper body appears to have been rotated facing up (Fig. 4.411). (It is possible that the knees were originally placed pointing up, but fell to the side with decomposition.) The left arm was extended to the individual's side, while the right arm was bent at the elbow, lying across the abdomen. Osteological analysis showed evidence of a well-healed depressed cranial vault fracture to the right occipital, measuring 14.83 mm in diameter. A small marine shell fragment was found in association with the burial (EDM 89205).



Figure 4.411: Grave 713 burial.

GRAVE 714

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Semiflexed, head to south, on left side facing west.
Gender: Male.
Age: 26-70 years, most likely 38.
Other burials: Secondary male 25-37, laid over legs of main burial. Articulated foot of secondary in primary position beneath main burial.
Artifacts in cist: 2 beads (amazonite, carnelian), wood.
Other artifacts: 1 bead (amazonite) in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.277: Grave 714 loci.

Locus	Description
2481	Stone circle
2482	Fill
2493	Capstones
2494	Cist
2495	Secondary burial
2514	Human remains
2525	Fill beneath burials



Figure 4.412: Grave 714 after removal of capstones but before further excavation. Note the secondary burial at the feet of the primary.

Grave 714 was visible on the surface of square O-10 as a partial stone circle of about twelve dolerite cobbles most complete in the east side of the grave, estimated to have been 2.30 meters in diameter (Table 4.277; Levy et al. 2005: 466; L. 2481). No cobbles found in the fill above the capstones (L. 2482). One amazonite short barrel bead was recovered from the fill (EDM 88410). At a depth of 0.54 meters, five limestone capstones were encountered, covered with a large amount of mud plaster (L. 2493). Smaller cobbles were used as chinking stones. These sealed a trapezoidal cist measuring 1.25 meters long, 0.56 meters wide, and 0.47 meters deep constructed of eight dolerite side slabs and fifteen cap support stones, in two courses in places (L. 2494). The cist was trapezoidal in shape, wider in the north in order to accommodate the flexed legs of the deceased. Entombed within the cist were the remains of two individuals, one a primary burial and the other a secondary burial (Fig. 4.412). The primary burial, individual 714A, was entombed with head to the south lying semiflexed on his left side, facing west (L. 2514). The right arm was bent at the elbow, with the hand to the west, while the left arm was also bent at the elbow but with the hand below and in front of the face. Osteological analysis showed this individual to be a male, aged 26 to 70, but most likely 38 years of age. His remains showed evidence of periodontal disease, traumatic lesions at different stages of healing on the anterior portion of two rib shafts, and compression fractures to his first lumbar vertebra. A green amazonite pendant, cut in order to give a fringed appearance, was found in the neck region of this individual (Fig. 4.413; EDM 88605). Over the legs of the primary burial were the secondary burial, individual 714B (L. 2514). This individual was more fragmentary, identified as a male aged 23 to 57 but most likely

35. One articulated foot of individual 714B was uncovered below those of 714A, suggesting that this individual was interred in the grave in a primary position before being displaced to bury 714A (L. 2525). A carnelian short barrel bead was recovered from the cist in the sieve (EDM 89133). Wood was also found in this grave.



Figure 4.413: Grave 714 primary burial skull. Note the amazonite pendant.

GRAVE 715

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 2 beads (ostrich eggshell).
Other artifacts: 17 beads (ostrich eggshell), 2 potsherds in fill.
Disturbances: Looted in antiquity. Capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.278: Grave 715 loci.

Locus	Description
2496	Stone circle
2497	Fill
2523	Capstones
2532	Cist
2526	Cist fill



Figure 4.414: Grave 715 cist.

Grave 715 was visible on the surface of square Q-8 as an apparently complete stone circle constructed of dolerite cobbles and measuring 1.70 meters in diameter (Table 4.278; L. 2496). Some cobbles were found in the fill (L. 2497). One flint bead (EDM 88302) and seventeen ostrich eggshell cylinder and barrel disc beads were recovered from the fill (EDM 88486, 88518, 88561, 88574), as were two potsherds (EDM 88591, 88604). At a depth of 0.23 meters below the surface—at about the base of the stones used to construct the stone circle—two capstones, one of limestone and the other of

sandstone, were encountered, covering the southern end of the grave (L. 2523). The northern end of the cist was uncovered. The cist was trapezoidal, wider at the north than at the south. The cist measured 1.21 meters long, 0.41 meters wide, and 0.57 meters deep, and was constructed of seven limestone and sandstone side slabs. Fifteen dolerite cobbles were used as cap support stones, in two to four courses (L. 2532). The capstones were surrounded by a ring of dolerite cobbles, thirteen of which were exposed, which continued into the baulk (Fig. 4.414). Within the cist were the fragmented and scattered remains of an adult of unknown sex (L. 2526). Two ostrich eggshell cylinder disc beads were also found in the cist (EDM 88660, 88676).

GRAVE 716

Surface architecture: Stone circle surrounding pavement and standing stone.
Subsurface architecture: Capstones over pit.
Burial: Secondary.
Gender: Unknown.
Age: Adult.
Other burials: None.
Artifacts below capstones: None.
Other artifacts: Flint blade, serrated flake, and flake fragment in fill.
Disturbances: Surface architecture partially destroyed.

Table 4.279: Grave 716 loci.

Locus	Description
2498	Stone circle
2499	Pavement
2515	Fill
2519	Capstones
2524	Fill beneath capstones and human remains



Figure 4.415: Grave 716 surface architecture.

Grave 716 was visible on the surface of square O-10 as a stone circle, about three-quarters complete and measuring 0.85 meters in diameter, constructed of nine dolerite cobbles set on end (Fig. 4.415; Table 4.279; L. 2498). The circle was most complete in the east, where it bordered Grave 717, which had similar surface architecture (Figs. 4.416, 4.417). The two graves were photographed but not excavated in 1997, and the two make good landmarks for examining the grid. In 1997, the graves fell within square Q-11, while in 2004, the graves fell within square O-10. This shows considerable variance in the grids between the two excavation seasons, complicating spatial analyses. An apparently intact pavement of fifteen dolerite cobbles was circumscribed by the circle of Grave 716, and the middle of this pavement was marked by a 0.12 meter high unworked standing stone (L. 2499). A flint blade (EDM 88594), a serrated flake (EDM 88603), a

flake fragment (EDM 88600), and a ballistic stone (EDM 88467) were found in the fill (L. 2515). At a depth of 0.44 meters below the surface, two limestone capstones were encountered (Fig. 4.418; L. 2519). These sealed a pit measuring 0.40 meters long , 0.30 meters wide, and about 0.38 meters deep (L. 2524). A very small amount of poorly preserved remains from an adult were collected from the pit, suggesting a partial secondary burial.



Figure 4.416: Graves 716 and 717 in 1997, when they were photographed but not excavated. Note the cracked stone beside the standing stone in the right foreground.



Figure 4.417: Grave 716 (foreground) and Grave 717 (background), photographed in 2004. Note the identical cracked stone (black arrow).



Figure 4.418: Grave 716 capstones.

GRAVE 717

Surface architecture: Stone circle surrounding pavement and standing stone.
Subsurface architecture: Capstones over pit.
Burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Juvenile, three to five years.
Other burials: Very fragmentary middle to old adult remains in pit.
Artifacts beneath capstones: None.
Other artifacts: Marine shell fragments, potsherd at about pavement level.
Disturbances: Surface architecture partially destroyed.

Table 4.280: Grave 717 loci.

Locus	Description
2500	Stone circle
2501	Pavement
2544, 2568	Fill
2564	Capstones
2573	Fill beneath capstones and human remains



Figure 4.419: Grave 717 surface architecture.

Grave 717 was visible on the surface of square O-10 as a stone circle, slightly more than three-quarters complete and measuring 1.05 meters in diameter, constructed of nine dolerite cobbles set on end (Fig. 4.419; Table 4.280; L. 2500). The circle was most complete in the west, where it bordered Grave 716, which had very similar surface architecture (Fig. 4.416, 4.417). A mostly intact pavement of nine dolerite cobbles was circumscribed by the circle, and the middle of this pavement was marked by a 0.30 meter high unworked standing stone (Fig. 4.419; L. 2501). Although this standing stone was recorded as measuring twice the height of that over Grave 716, photographs show it to appear to be slightly smaller. It is unclear if they were measured differently, or whether the stone standing over Grave 717 appeared sunken into the ground in site photographs. Marine shell fragments (EDM 88465, 88692) and a potsherd (EDM 88696) were found at about the level of this pavement. Beneath the fill (L. 2544, 2568), at a depth of 0.65 meters below the surface, three limestone capstones were encountered (L. 2564). These sealed a pit measuring 0.45 meters long, 0.32 meters wide, and about 0.18 meters deep. Entombed within were the primarily interred remains of a juvenile, aged three to five years (L. 2573). The individual lay with head to the south, on the left side, facing west, in a semiflexed posture (Fig. 4.420). Osteological analysis showed that the remains displayed enamel hypoplasias to all permanent incisors and canines, all of which are unerupted. A small number of bones from a second individual, 717B, the very fragmentary remains of a middle to old adult, were also collected. An ash lens was reported in the pit beneath the capstones, though it is unclear from the notes whether this was above or below the burial.



Figure 4.420: Grave 717 burial.

GRAVE 718

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: L-shaped cist.
Burial: Semiflexed, head to south, on left side facing west.
Gender: Female?
Age: Adult.
Other burials: Adult secondary over capstones, fragmentary infant remains in cist.
Grave goods: Bone bracelet, marine shell fragments.
Disturbances: None.

Table 4.281: Grave 718 loci.

Locus	Description
2507	Pavement
2508	Stone circle
2510, 2543, 2553	Fill
2531	Capstones
2570	Southern capstone
2579	Cist
2552	Cist fill
9601	Human remains



Figure 4.421: Grave 718 pavement.

Grave 718 was invisible on the surface of square N-8 (Table 4.281). However, after removal of the western wall of the rectangular stone alignment associated with Grave 703 and the removal of a shallow level of fill, a stone circle surrounding a pavement was encountered. The stone circle, measuring 1.20 meters in diameter and constructed of twelve dolerite cobbles, was partially covered by the stone structure associated with Grave 703 (L. 2508). A pavement constructed of twenty-two dolerite cobbles filled in the space within the stone circle (Fig. 4.421; L. 2507). In the fill of the grave, especially over the southern part of the cist, the fragmentary remains of individual 718B, an adult of unknown sex, were encountered. Grave 711, which lay east of the grave, was uncovered in close proximity while excavating the fill over Grave 718 (L. 2510, 2543, 2553). At a depth of 1.29 meters below the surface, or about 0.73 meters below the paved surface, four limestone capstones were encountered, covered with a

thick layer of mud plaster (L. 2531, 2570). These sealed an L-shaped cist measuring 0.97 meters long, 0.66 meters wide, and 0.37 meters deep (L. 2579). The cist was bent towards the west in the north in order to accommodate the flexed legs of the interred (L. 2552). Entombed within the cist, encased in hard mud plaster sediment, were the semiflexed remains of individual 718A, an adult, probably a female (L. 9601). The individual lay with head to the south, on the left side facing west (Fig. 4.422). A worked bone bracelet was found on one arm of the individual, though which was not recorded (EDM 74004, 88933). Shell fragments were also collected from the human remains locus (EDM 89216). Also recovered from the cist were the fragmentary remains of individual 718C, an infant about three years old.



Figure 4.422: Grave 718 burial.

GRAVE 719

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Young to middle adult.
Other burials: None.
Artifacts in cist: 1 bead (amazonite).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.282: Grave 719 loci.

Locus	Description
2513	Capstones
2565	Cist
2554	Cist fill



Figure 4.423: Grave 719 cist.

Grave 719 was invisible on the surface of square O-10 (Table 4.282). At a depth of 0.13 meters below the surface, three limestone capstones were encountered (L. 2513).

These sealed a trapezoidal cist, widest at the northern end (L. 2565). The cist measured 1.32 meters long, 0.48 meters wide, and 0.46 meters deep and was constructed of eleven dolerite and limestone and one granite side slabs and seventeen cap support stones in two courses (Fig. 4.423). Scattered throughout the fill of the cist were the fragmentary remains of a young to middle adult of unknown sex (L. 2554). One greenish white amazonite short cylinder bead was recovered from the cist (EDM 89164).

GRAVE 720

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist with paved floor.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Two adults.
Artifacts in cist: 2 beads (amazonite), potsherd.
Other artifacts: 2 beads (ostrich eggshell), 2 potsherds in fill.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered. Recent animal burrow in fill.

Table 4.283: Grave 720 loci.

Locus	Description
2516	Stone circle
2517	Fill
2535	Capstones
2537	Cist
2538	Cist fill
2555	Pavement
9660	Grave clean-up



Figure 4.424: Grave 720 cist. The void beside cist was believed to be an animal burrow.

Grave 720 was visible on the surface of square O-10 as four upright dolerite cobbles which are believed to have once been part of a stone circle to the southwest of the grave (Table 4.283; L. 2516). Based on these stones, the circle was projected to be 1.35 meters in diameter. Two ostrich eggshell cylinder disc beads were found in the upper fill (EDM 88653, 88654). A few cobbles were found in the fill of the grave (L. 2517). A void was observed in the southwestern part of the fill, southwest of the capstones and extending beneath the stone circle, believed by the area supervisor to be an animal burrow. Two potsherds were recovered from the fill (EDM 88599, 88606). At a depth of 0.37 meters below the surface, three capstones, two of limestone and one of dolerite, were encountered (L. 2535). The southern part of the cist was uncovered. The cist was trapezoidal, broader in the north than in the south (L. 2538). The cist was never

excavated to its maximum length, but what was excavated measured 0.97 meters long, 0.38 meters wide, and 0.46 meters deep. The cist was constructed of at least nine (probably ten or eleven total) dolerite and limestone side slabs and twelve dolerite cap support stones. The cist floor consisted of a well-laid pavement of which eight stones were visible (Fig. 4.424; L. 2555). Strewn about the hard-packed cist fill were the very poorly preserved and fragmentary remains of two individuals, both of them adults; no further analysis of these individuals was possible (L. 2538, 9660). Two roughly disc-shaped drilled amazonite beads were recovered from the cist (EDM 88725, 88765), as was a potsherd (EDM 88704).

GRAVE 721

Surface architecture: Partial stone circle surrounding pavement.
Subsurface architecture: Capstones over pit.
Burial: Semiflexed, head to south, on left side facing west.
Gender: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 1 potsherd in fill.
Disturbances: Surface architecture partially destroyed, capstones collapsed into cist, cist full of sediment.

Table 4.284: Grave 721 loci.

Locus	Description
2520	Stone circle.
2521	Pavement.
2528	Fill
2546	Rock pile
2551	Fill
2563	Capstones
2566	Fill beneath capstones
2577	Human remains



Figure 4.425: Grave 721 surface architecture.

Grave 721 was visible on the surface of square O-9 as a partial stone circle, about three-quarters complete, measuring 1.19 meters in diameter and constructed of seven dolerite cobbles (Table 4.284; L. 2520). Within the circle, nine large dolerite cobbles formed a pavement which appeared to be missing a few stones (Fig. 4.425; L. 2521). The fill beneath the pavement (L. 2528) yielded to a pile of cobbles (L. 2546). Less rocky fill lay below these cobbles and above the capstones (L. 2551). One potsherd was recovered beneath the rocky fill (EDM 88754). At a depth of 0.79 meters below the surface, three limestone capstones were encountered (L. 2563). Two of these appeared to have collapsed into the pit beneath. These capstones sealed a pit measuring about 0.59 meters long, and 0.46 meters wide, and 0.49 meters deep (L. 2566). The human remains were very poorly preserved, but appeared to be a primary semiflexed inhumation of an adult laying with head to the south on the left side facing west (Fig. 4.426; L. 2577). No

human remains were observed beneath the collapsed capstones, though it is unknown whether this is do to human disturbance or decomposition.



Figure 4.426: Grave 721 burial. Note the articulated long bones in the north.

GRAVE 722

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Male.
Age: Middle adult.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.285: Grave 722 loci.

Locus	Description
2527	Stone circle
2529	Fill
2545	Capstones
2558	Cist
2547	Cist fill



Figure 4.427: Grave 722 surface architecture.

Grave 722 was visible on the surface of square O-9 as a partial stone circle, about half preserved, of six dolerite cobbles measuring 1.45 meters in diameter (Fig. 4.427; Table 4.285; L. 2527). At a depth of 0.42 meters below the surface (L. 2529), two limestone capstones were encountered covering the north end of the cist (L. 2545). The south end was uncovered; apparently at least one capstone was displaced (Fig. 4.428). A third limestone slab was encountered on end in the cist, and a large number of cobbles were also encountered in the cist. The cist was trapezoidal, wider in the north, and measured 1.12 meters long, 0.44 meters wide, and 0.43 meters deep (L. 2558). The cist was constructed of seven side slabs, four of limestone, two of dolerite, and one of conglomerate (Fig. 4.429). The fragmentary remains of a middle adult, probably a male, were scattered throughout the cist (L. 2547). No grave goods were recovered.



Figure 4.428: Grave 722 capstones.



Figure 4.429: Grave 722 cist.

GRAVE 723

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, unknown.
Gender: Unknown.
Age: Juvenile, 3 to 12 years, most likely 3 to 6 years.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones missing, cist full of sediment, human remains poorly preserved.

Table 4.286: Grave 723 loci.

Locus	Description
2548	Cist
2549	Cist fill



Figure 4.430: Grave 723 cist.

Grave 723 was invisible on the surface of square O-8 (Table 4.286). One potsherd was recovered in the fill before the grave was recognized (EDM 88870). At a depth of 0.23 meters below the surface, a small cist constructed of four limestone side

slabs was encountered. No capstones were in place. The cist measured 0.59 meters long, 0.26 meters wide, and 0.32 meters deep, and was slightly trapezoidal (Fig. 4.430; L. 2548). Very few poorly preserved bones of a juvenile, aged three to twelve but most likely aged three to six, were recovered from the cist (L. 2549). Due to the poor preservation, is unclear whether these remains were primarily or secondarily interred. No grave goods were recovered.

GRAVE 724

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: One male, one female.
Age: Both adults.
Other burials: None.
Artifacts in cist: None.
Other artifacts: 1 bead in fill (flint).
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones missing, cist full of sediment, human remains broken and scattered in cist.

Table 4.287: Grave 724 loci.

Locus	Description
2556	Stone circle
2557	Fill
2574	Capstones
2576	Cist fill
9624	Cist



Figure 4.431: Grave 724 stone circle.

Grave 724 was visible on the surface of square O-8 as a partial stone circle, about four-fifths preserved, of ten dolerite cobbles, measuring 1.70 meters in diameter (Fig. 4.431; Table 4.287; L. 2556). One of these stones, located in the western part of the circle, bore lines that were interpreted as a possible pecked decoration, though examination in the laboratory could not confirm that these lines were not natural (Fig. 4.432; EDM 74245, 88773). Three potsherds were recovered high in the fill (EDM 88716, 88720). A large number of cobbles were encountered in the fill, and a pile of cobbles was observed sitting on top of the capstones (L. 2557). One translucent grey flint barrel disc bead was recovered from the fill (EDM 88814). At a depth of 0.60 meters below the surface, three capstones, two of sandstone and one of limestone, were encountered, covering the northern end of the cist (L. 2574). Cobbles seemed to fill a void where a final capstone should have sealed the south end of the cist. The cist itself

was trapezoidal, widening in the north (L. 9624). The cist was constructed of eight dolerite and one limestone side slabs and eleven cap support stones and measured 1.30 meters long, 0.35 meters wide, and 0.45 meters deep (Fig. 4.433). The fragmentary remains of two adults were recovered scattered in the hard-packed silt within the cist (L. 2576). Individual 724A is a male, and most of the postcranial elements were identified as most likely belonging to this individual. Individual 724B is a female.



Figure 4.432: Markings on circle stone identified in the field as a possible pecked decoration.



Figure 4.433: Grave 724 cist.

GRAVE 725

Surface architecture: None.
Subsurface architecture: Cist.
Burial: Semiflexed, head to south, facing west.
Gender: Unknown.
Age: Juvenile, 5 to 8 years.
Other burials: Fragmentary infant remains in cist.
Artifacts in cist: Mother of pearl ornament.
Other artifacts: None.
Disturbances: Surface architecture destroyed.

Table 4.288: Grave 725 loci.

Locus	Description
2559	Capstones
2580	Cist
2567	Cist fill
2578	Human remains



Figure 4.434: Grave 725 capstones.

Grave 725 was invisible on the surface of square O-8 (Table 4.288). One potsherd was recovered in the fill before the grave was recognized (EDM 88727). At a depth of 0.21 meters below the surface, two limestone capstones were encountered surrounded by dolerite cobbles (Fig. 4.434; L. 2559). These sealed a trapezoidal cist, widening at the north in order to accommodate the flexed legs of the deceased (Fig. 4.435; L. 2580). The cist was constructed of five dolerite and limestone side slabs and eleven cap support stones and measured 0.75 meters long, 0.28 meters wide, and 0.43 meters deep. The cist was full of sediment (L. 2567). Interred within the cist were the remains of a juvenile, aged five to eight years, in a semiflexed position, with head to the south, laying on the left side facing west (L. 2578). Some remains of a second individual, 725B, an infant of less than one year of age, were also recovered from within the cist. One mother of pearl bead or eye-shaped ornament was recovered from the cist (EDM 88799).



Figure 4.435: Grave 725 cist.

GRAVE 726

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 1 bead (alabaster).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, human remains broken and scattered in cist.

Table 4.289: Grave 726 loci.

Locus	Description
2561	Stone circle
2562	Fill
9602	Fill
2563	Capstones
9625	Cist
2587	Cist fill



Figure 4.436: Grave 726 surface architecture. Note the Grave 703 stone alignment in the background.

Grave 726 was visible on the surface of square O-8, immediately to the north of the rectangular structure associated with Grave 703, as an incomplete stone circle (Table 4.289; L. 2561). The circle appeared to be about half preserved, constructed of about five remaining dolerite cobbles. Another nine or more dolerite cobbles were scattered about and may be the remains of the rest of the circle (Fig. 4.436). A large number of cobbles were encountered in the fill (L. 2562, 9602). One potsherd was recovered from this fill (EDM 88800). At a depth of 0.46 meters below the surface, three capstones were encountered, two of dolerite and one of limestone (L. 2563). The dolerite capstones did not extend across the entire cist; they were resting on the fill within the cist rather than on the cap support stones on either side (Fig. 4.437). This resembles the practice observed in other cists of sealing a looted area with dolerite cobbles. At least one of the capstones was shaped much like an anthropomorphic stone (Fig. 4.438). Though it lacked

anthropomorphic features, the area supervisor suspected this one and perhaps both dolerite capstones were once in use as standing stones. The capstones were encountered at about the level of the bottom of the northern line of stones which made up the rectangular stone structure; however, there was no superimposition of the structure over the capstones. The cist was constructed of seven side slabs of limestone, dolerite, sandstone, and granite, and nine cap support stones, and measured 0.95 meters long, 0.50 meters wide, and 0.38 meters deep (Fig. 4.439; L. 9625). The fragmentary remains of an adult were recovered scattered around the cist (L. 2587). One alabaster cylinder disc bead was found associated with the grave (EDM 88899).



Figure 4.437: Grave 726 capstones.



Figure 4.438: Possibly worked capstone resembling the anthropomorphic stones of the cemetery.



Figure 4.439: Grave 726 cist.

GRAVE 727

Surface architecture: None.
Subsurface architecture: None.
Burial: Secondary.
Gender: Unknown.
Age: Unknown.
Artifacts: None.
Disturbances: Unknown.

Table 4.290: Grave 727 loci.

Locus	Description
9674	Human remains

Grave 727 was invisible on the surface of square O-10. It consisted of a secondary burial unassociated with any mortuary architecture (Table 4.290; L. 9274).

The remains were too fragmentary and poorly preserved to analyze.

GRAVE 728

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: 15-21 years.
Other burials: None.
Artifacts in cist: Organic material.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.291: Grave 728 loci.

Locus	Description
2568	Fill
2596	Fill
9606	Capstones
9620	Cist
9612	Cist fill



Figure 4.440: Grave 728 capstones.

Grave 728 was invisible in square O-9 (Table 4.291). It was located in close proximity to Grave 717, and was encountered when fill beside that grave was being excavated (L. 2568; L. 2596). One of the capstones was accidentally removed during the excavation of Grave 717. Three limestone capstones were encountered at a depth of 0.14 meters below the surface, located over the southern end of the cist (Fig. 4.440; L. 9606). However, the northernmost of these appeared to be displaced. The cist measured 1.15 meters long, 0.31 meters wide, and 0.42 meters deep, and was trapezoidal in form, wider in the north than in the south (L. 9620). The cist was constructed of either six or seven side slabs, one of granite, one of dolerite, one of sandstone, and the remainder of limestone. An unspecified number (at least ten) of cap support stones of the same materials were also built into the cist. Within, scattered about the cist, were the

fragmentary remains of an adolescent or young adult, aged fifteen to twenty-one years (Fig. 4.441; L. 9612). Organic material was collected from within the cist.



Figure 4.441: Grave 728 cist fill.

GRAVE 729

See **Grave 704.**

GRAVE 730

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown, probably not a child.
Other burials: Human remains above capstones.
Artifacts in cist: None.
Other artifacts: 21 beads (flint, limestone), mother of pearl associated with human remains above capstones.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.292: Grave 730 loci.

Locus	Description
2571	Stone circle
2572	Fill
2581	Pavement and mud brick installation
2585, 2597	Fill
9617	Capstones
9618	Cist
9819	Cist fill



Figure 4.442: Grave 730 surface architecture. Note the mud brick structure in the northern half of the grave circle.

Grave 730 was visible on the surface of square O-8 as a nearly-complete grave circle constructed of thirteen dolerite cobbles, measuring 1.28 meters in maximum diameter (Table 4.292). A small installation of pavement and mudbrick was encountered in the northern area of the grave circle (Fig. 4.442; L. 2581). A cluster of twenty-one flint and one limestone cylinder disc beads (EDM 88919, 88925), mother of pearl (EDM 88934), and bone was found in the northwest of the grave shaft, apparently extending

beneath the installation associated with Grave 703 (L. 2585, 2597). The grave sheet suggests that these remains may have been removed from the cist. At a depth of 0.29 meters, three limestone capstones were encountered covering the north part of the cist (L. 9617). The southern part of the cist was uncovered, suggesting at least one capstone was missing. The cist was never completely excavated, with its northern end left untouched. The northern end of the cist is located underneath the southern wall of the rectangular installation associated with Grave 703. What was excavated measured 0.96 meters long, 0.48 meters wide, and 0.44 meters deep (L. 9618). The cist was oriented roughly north-south, with the southern end somewhat narrower than the northern end (Fig. 4.443). The cist was constructed of seven visible side slabs and eleven visible cap support stones, all of them of limestone and dolerite. Human remains were scattered throughout the cist, but only a few fragments of long bones were recovered (L. 9619). Osteological analysis could determine nothing about the deceased other than the fact that it is unlikely that the entombed was a child.



Figure 4.443: Grave 730 cist.

GRAVE 731

Surface architecture: None.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Female.
Age: Young adult.
Other burials: None.
Artifacts in cist: 7 beads (cupric, amazonite, agate).
Other artifacts: 2 anthropomorphic stones in fill.
Disturbances: Looted in antiquity. Surface architecture destroyed, capstones displaced, cist full of sediment, human remains broken and scattered.

Table 4.293: Grave 731 loci.

Locus	Description
2457	Fill
2583	Capstones
9630	Cist
2584	Cist fill



Figure 4.444: Anthropomorphic stone in the fill above Grave 731.



Figure 4.445: Close-up of the anthropomorphic stone in situ.

Grave 731 was invisible on the surface of square P-8 (Table 4.293). However, two anthropomorphic stones were found in the fill above the capstones (EDM 88366, 88371; Figs. 4.444, 4.445). At a depth of 0.14 centimeters, three limestone capstones, one of which is said to have been out of place, were encountered (L. 2583). These covered a cist constructed of an unspecified number of limestone side slabs and dolerite cap support stones. The southern end of the cist was left unexcavated. The excavated portion measured 0.68 meters long, 0.38 meters wide, and 0.41 meters deep (L. 9630). The cist appeared to be trapezoidal, somewhat wider at the northern, excavated end than at the southern end (Fig. 4.446). Fragmentary remains were found scattered throughout the excavated portion of the cist and were determined to be those of a young adult, probably a female judging by the gracile mastoid process (L. 2584). Seven beads and pendants were found in the cist. These included one roughly shaped agate short barrel bead (EDM 74067), one light green cupric stone bead (EDM 74046), one amazonite cylinder disc bead (EDM 74067), one amazonite drilled pebble (EDM 74063), another roughly rectangular amazonite drilled pebble with notches cut in either end (EDM 74063), a rectangular amazonite pendant (EDM 74068), and an oval amazonite pendant with a notch in the distal end (EDM 74069).



Figure 4.446: Grave 731 cist, as excavated.

GRAVE 732

Surface architecture: Stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Flexed, head to north, on right side facing west.
Gender: Female.
Age: Middle to old adult, 35 to over fifty years.
Other burials: None.
Artifacts in cist: 1 bead (ostrich eggshell).
Other artifacts: None.
Disturbances: None observed.

Table 4.294: Grave 732 loci.

Locus	Description
2588	Stone circle
2590	Pavement
2591	Fill
2598	Capstones
9626	Cist
9607	Cist fill
9650	Human remains



Figure 4.447: Grave 732 surface architecture.

Grave 732 is visible on the surface of square O-8 as a stone circle measuring 1.20 meters in diameter (Fig. 4.447; Table 4.294; L. 2588). A grouping of flat cobbles, taken to be a pavement, was visible in the west side of the structure (L. 2590). At a depth of 0.10 meters below the surface (L. 2591), three limestone capstones were encountered (L. 2598). These sealed a cist constructed of eight dolerite and limestone side slabs and eleven dolerite and limestone cap support stones (L. 9626). The cist measured 0.95 meters long, 0.46 meters wide, and 0.45 meters deep. The cist was trapezoidal or even ovoid in shape, wider in the north. The cist was full of sediment (L. 9607). Entombed within the cist were the flexed remains of a middle or old adult, aged 35 to 50 or older, and probably female judging from the mastoid process (L. 9650). The individual's head was oriented to the north, and was laying on the right side facing west. The legs were pulled up in front of the individual, fetal position. The left arm was bent at the elbow,

with the hand in the facial region. A dolerite cobble was observed above the knees, where the elbow and knees nearly touched (Fig. 4.448). One ostrich eggshell cylinder disc bead was found in the cist (EDM 89184).



Figure 4.448: Grave 732 burial.

GRAVE 733

Surface architecture: Stone circle surrounding pavement and standing stone.
Subsurface architecture: Capstones over pit.
Burial: Semiflexed or flexed, head to south, on left side facing west.
Gender: Unknown.
Age: Juvenile, 3 to 5 years.
Artifacts beneath capstones: None.
Other artifacts: None.
Disturbances: None observed.

Table 4.295: Grave 733 loci.

Locus	Description
2592	Stone circle
2593	Pavement
2595, 9603, 9611	Fill
9604	Capstones
9605	Fill beneath capstones
9635	Human remains



Figure 4.449: Grave 733 surface architecture.

After clearing some fill, Grave 733 was visible in square P-8 as a stone circle 1.10 meters in diameter constructed of twelve flat dolerite cobbles set on edge (Table 4.295; L. 2593). This circle surrounded a pavement constructed of twenty-three flat dolerite cobbles. In the middle of this pavement stood an unworked standing stone, sunken somewhat into the earth, but that, when removed, measured sixteen centimeters long (Fig. 4.437). The stone circle of Grave 741 was located partially covered by this pavement,

and the area supervisor suggested that Grave 733 had cut into Grave 741. The excavation had to be broadened several times to excavate area not directly beneath the surface architecture (L. 2595, 9603, 9611). At a depth of 0.62 meters, two limestone capstones were encountered (L. 9604). These covered a sediment-filled pit measuring 0.80 meters long and 0.33 meters wide, and about 0.32 meters deep (L. 9605). Entombed within were the remains of a juvenile, aged three to five (L. 9635). The individual lay in a flexed or semiflexed position with head to the south, lying on the left side facing west (Fig. 4.438).



Figure 4.450: Grave 733 burial.

GRAVE 734

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult.
Other burials: None.
Artifacts in cist: 2 beads (ostrich eggshell, amazonite), 1 potsherd.

Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.296: Grave 734 loci.

Locus	Description
9608	Stone circle
9609	Fill
9627	Capstones
9649	Cist
9628	Cist fill



Figure 4.451: Grave 734 cist.

Grave 734 was visible on the surface of the border between squares O-11 and P-11 as a partially preserved stone circle (Table 4.296; L. 9608). What remained consisted of nine dolerite cobbles in the western half. The portion which remained was 1.10 meters in diameter, but the circle was clearly much larger. At a depth of 0.47 meters below the surface (L. 9609), two limestone capstones were encountered (L. 9627). A third stood

upright in the cist, and space for at least one more existed over the cist. The cist was trapezoidal, broadening in the north (L. 9649). The cist was constructed of six dolerite side slabs and thirteen dolerite and limestone cap support stones and measured 1.26 meters long, 0.60 meters wide, and 0.41 meters deep (Fig. 4.451). Within the cist were the fragmentary remains of an adult of unknown sex (L. 9628). One ostrich eggshell cylinder disc bead (EDM 74020), one amazonite drilled pebble (EDM 74032), and one potsherd (EDM 74026) were recovered from the cist.

GRAVE 735

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Juvenile or adult (unclear which was in cist).
Other burials: Secondary burial above capstones.
Artifacts in cist: None.
Other artifacts: Mother of pearl in fill.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.297: Grave 735 loci.

Locus	Description
9610	Stone circle
9613	Pavement
9614, 9637	Fill
9651	Capstones
9671	Cist
9658	Cist fill



Figure 4.452: Grave 735 stone circle and standing stones.

Grave 735 was visible on the surface of square P-8 as a partially complete stone circle constructed of six dolerite cobbles measuring 1.15 meters in diameter (Table 4.297; L. 9610). Nine paving stones were reportedly encountered within the stone circle (L. 9613). Two dolerite cobbles also stood on end in the northern part of the grave circle, though the area supervisor only considered them to be "possible" standing stones (Fig. 4.452). Two potsherds were recovered at about the pavement level (EDM 88962, 88963). A large number of cobbles were encountered in the fill (L. 9614, 9637). A marine shell fragment was recovered from the fill (EDM 74091). A concentration of human remains was found over the capstones in the northwest part of the grave. At a depth of 0.60 meters, two limestone capstones were encountered, both partially covered with mud plaster (L. 9651). An unknown number of capstones remained unexcavated. The cist was never completely excavated. The excavated portion measured 0.60 meters long, 0.43 meters wide, and 0.45 meters deep (Fig. 4.453; L. 9671). The cist appeared to

be trapezoidal, wider in the north than in the south. Scattered human remains were recovered from the cist (L. 9658). Unfortunately, the human remains from above and below the capstones were not appropriately labeled, and they were mixed in the laboratory. Osteological analysis showed that two individuals, 735A, a juvenile of five to eight years (but most likely seven years old), and 735B, an adult, were represented by the remains, but it was unclear which individual came from which location in the grave.



Figure 4.453: Excavated portion of the Grave 735 cist.

GRAVE 736

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist with paved floor.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Adult, 20 to 50 years.
Other burials: Secondary juvenile remains above capstones.
Artifacts in cist: 2 beads (shell).
Other artifacts: 1 bead in fill (citrine).

Disturbances: Looted in antiquity. Surface architecture partially destroyed, cist full of sediment, human remains broken and scattered in cist.

Table 4.298: Grave 736 loci.

Locus	Description
9615	Stone circle
9616	Fill
9629	Capstones
9672	Cist
9633	Cist fill
9661	Pavement



Figure 4.454: Grave 736 cist.

Grave 736 was visible on the surface of square P-8 as three touching alignments of limestone cobbles to the west of the grave believed to represent the remnants concentric stone circles, projected to measure 2.05 meters in maximum diameter (Table 4.298; L. 9615). One citrine short barrel bead was found near the surface (EDM 88033).

Some long bone fragments of a juvenile, individual 736B, were collected from the fill above the capstones (L. 9616). At a depth of 0.67 meters, three limestone capstones were encountered (L. 9629). These were covered with mud plaster. They sealed a cist measuring 1.24 meters long, 0.51 meters wide, and 0.42 meters deep constructed of ten limestone side slabs and twelve cap support stones (L. 9672). The cist was trapezoidal, widest in the north. The floor of the cist was paved with eight large limestone slabs (Fig. 4.454; L. 9661). The fragmented remains of a young to middle adult were scattered throughout the cist (L. 9633). One tubular shell short barrel bead (EDM 74055) and one shell short barrel bead (EDM 74129) were recovered from the cist. One inorganic insect burrow cast was recovered from the cist and inaccurately described as organic material (EDM 74072).

GRAVE 737

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: 2 secondary adults above capstones.
Artifacts in cist: 1 bead (alabaster).
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.299: Grave 737 loci.

Locus	Description
9621	Stone circle
9622, 9632	Fill
9631, 9634	Capstone
9675	Cist
9636	Cist fill



Figure 4.455: Grave 737 surface architecture.

Grave 737 was visible on the surface of square P-8 as a partial stone circle of four dolerite cobbles measuring 1.10 meters in diameter (Fig. 4.455; Table 4.299; L. 9621). The northern part of the grave was covered over by the stones of the tumulus of Grave 701; the area supervisor also believed that Grave 701 destroyed part of the stone circle (L. 9622, 9632). At a depth of 0.49 meters, two capstones were encountered in place (L. 9631, 9634). A further capstone was encountered in the cist (Fig. 4.456). Other capstones no doubt existed, but the cist was never completely excavated. The excavated portion of the cist measured 0.74 meters long, 0.38 meters wide and 0.55 meters deep (Fig. 4.457; L. 9675). The southern end of the cist was excavated. The cist was trapezoidal, widening at the north end, so 0.38 is not the cist's maximum width. Fragmented human remains were found scattered throughout the cist fill (L. 9636). However, all of the analyzed human remains were said to come from locus 9632, above

the capstones. These remains were from two individuals. One, 737A, was an older adult, older than 55 years, and probably female. The other, 737B, was an adult of thirty to forty years and of unknown sex whose remains were very poorly preserved. One banded alabaster stone short barrel bead was found in the cist (EDM 74056).



Figure 4.456: Grave 737 cist fill. Note the capstone in the cist.



Figure 4.457: Grave 737 cist as excavated.

GRAVE 738

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Main burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Other burials: Fragmentary juvenile secondary above capstones.
Artifacts in cist: None.
Other artifacts: 3 beads in fill (amazonite, alabaster).
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.300: Grave 738 loci.

Locus	Description
9638	Stone circle
9639	Fill
9665	Capstones
9667	Cist fill
9669	Cist



Figure 4.458: Grave 738 as excavated. Note the rock pile above the cist.

Grave 738 was visible on the surface of O-8 as a partial stone circle of about six or seven dolerite cobbles surviving in the east of the grave, measuring 0.85 meters in diameter (Table 4.300; L. 9638). Cobbles were encountered in the fill of the grave (L. 9639). Three beads were recovered from the fill, including two alabaster short barrel beads (EDM 74128) and one amazonite squarish bead (EDM 74168). At a depth of 0.55 meters, two limestone capstones were encountered (L. 9665). There were no doubt more, but this grave was never completely excavated (Fig. 4.446). A concentration of human remains, individual 738B, was encountered on the capstones. This was determined to be the remains of a juvenile, aged six to eight years, with dental caries and enamel hypoplasia. The small excavated area of the cist measured 0.38 meters long by 0.30 meters wide by 0.37 meters deep and was constructed with limestone side slabs (Fig.

4.458; L. 9667). A few human remains were found scattered within the cist, but they were too fragmentary to identify (L. 9669).

GRAVE 739

Surface architecture: Partial stone circle.
Subsurface architecture: Trapezoidal cist.
Burial: Fragmentary, disturbed.
Gender: Unknown.
Age: Unknown.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Looted in antiquity. Surface architecture partially destroyed, capstones displaced, cist full of sediment, human remains broken and scattered in cist.

Table 4.301: Grave 739 loci.

Locus	Description
9640	Stone circle
9641	Fill
9654	Capstones
9663	Cist fill
9670	Cist



Figure 4.459: Grave 739 as excavated. Note the capstone standing upright in the cist.

Grave 739 was visible just below the surface of square P-8 as a partial stone circle constructed of six dolerite cobbles and extant only in the north of the grave and projected to measure 1.20 meters in diameter (Table 4.301; L. 9640). A mass of dolerite cobbles was encountered at the same level, and many cobbles were encountered in the fill (L. 9641). At a depth of 0.47 meters, four limestone capstones were encountered (L. 9654). Three were in place, while a fourth was standing upright in the cist (Fig. 4.459). The cist was never completely excavated. The excavated portion was in the center of the cist, measuring 0.50 meters long, 0.36 wide, and 0.49 meters deep, and was constructed of limestone side slabs and cap support stones (L. 9670). Only two fragmented pieces of unanalyzable bone and no artifacts were recovered from the cist (L. 9663).

GRAVE 740

Surface architecture: Stone circle surrounding pavement.
Subsurface architecture: Rectangular cist.
Burial: Semiflexed, head to south, on right side facing east.
Gender: Unknown.
Age: Infant, 2 to 4.
Other burials: None.
Artifacts in cist: 3 beads (alabaster, amazonite, ostrich eggshell), marine shell.
Other artifacts: Mother of pearl in fill.
Disturbances: None observed.

Table 4.302: Grave 740 loci.

Locus	Description
9642	Stone circle
9643	Fill
9644	Pavement
9645, 9652	Fill
9656	Capstones
9673	Cist
9666	Cist fill
9668	Human remains



Figure 4.460: Grave 740 surface architecture.

Grave 740 was visible slightly below the surface of square P-10 as a complete stone circle constructed of nine flat dolerite cobbles set on edge measuring 0.50 meters in diameter (L. 9642). A shallow level of fill (L. 9643), in which some mother of pearl was recovered (EDM 74082), covered a pavement of about seven dolerite cobbles (Fig. 4.460; L. 9644). A marine shell was recovered at about the level of this pavement (EDM 74086). The excavation area was widened beyond the original grave structure in order to expose the capstones (L. 9645, 9652). At a depth of 0.60 meters, two limestone capstones were encountered (L. 9656). These sealed a rectangular cist measuring 0.69 meters long, 0.35 meters wide, and 0.37 meters deep, constructed of limestone side slabs and dolerite cap support stones (L. 9673). The cist was full of sediment (L. 9666). Entombed within the cist was an infant, aged two to four, found lying semiflexed on the right side, head to the south, facing east (Fig. 4.461; L. 9668). One alabaster short barrel bead (EDM 74186) and one ostrich eggshell barrel disc bead (EDM 74187), one amazonite trapezoidal drilled pebble (EDM 74120) and a marine snail shell (EDM 74194) were recovered from the cist.



Figure 4.461: Grave 740 burial.

GRAVE 741

Surface architecture: Stone circle.
Subsurface architecture: Capstones over pit.
Burial: Head to south, on left side facing west.
Gender: Unknown.
Age: Infant, six to twelve months.
Other burials: None.
Artifacts in cist: None.
Other artifacts: None.
Disturbances: Surface architecture mostly destroyed.

Table 4.303: Grave 741 loci.

Locus	Description
9646	Stone circle
9647, 9648	Fill
9657	Capstones
9662	Fill beneath capstones
9664	Human remains



Figure 4.462: Grave 741 surface architecture and capstones. Note the capstones extending beneath the surviving grave circle.

Grave 741 was initially invisible on the surface of square P-9 (Table 4.303). During the excavation of Grave 733, four dolerite cobbles that appeared to be the remnants of a stone circle measuring about 1.00 meters in diameter were discovered in the northwest of Grave 741 (L. 9646). Grave 733 appeared to have destroyed the rest of the surface architecture. The excavation area was expanded and the surface architecture removed to reveal the capstones (Fig. 4.462; L. 9647, 9648). At a depth of 0.63, two limestone capstones were encountered (L. 9657). These covered a sediment-filled pit (L. 9662) measuring 0.67 meters long, 0.21 meters wide, and about 0.32 meters deep, in which were interred the remains of an infant, aged six to twelve months. The child lay on the left side facing west, with head oriented to the south (Fig. 4.463; L. 9664). The remains were not well-preserved enough to determine whether the body was semiflexed.



Figure 4.463: Grave 741 burial.

GRAVE 742

Surface architecture: None.
Subsurface architecture: Unknown.
Artifacts: 5 beads (alabaster, flint, carnelian, amazonite) in looters' backdirt.

Table 4.304: Grave 742 loci.

Locus	Description
9655	Looters' backdirt

Grave 742 was visible in square Q-10 as a recently robbed grave (Table 4.304). No details of the grave, its surface features or its subsurface architecture, were recorded. Five beads were recovered from the looters' backdirt (L. 9655), including one alabaster short barrel bead, one flint barrel disc bead, one carnelian cylinder disc bead, one lenticular amazonite drilled pebble, and one amazonite cylinder disc (EDM 89214).

4.8: 2009 EXCAVATIONS: AREA A GRAVE DESCRIPTION

GRAVE 2009

Surface architecture: Partial grave circle best preserved in the south (downhill).
Subsurface architecture: Capstones over pit.
Burial: Semiflexed burial, oriented south, facing west.
Gender: Male.
Age: Adult.
Artifacts below capstones: None.
Other artifacts: Flint hammerstone in fill.
Disturbances: Grave circle partially destroyed.

Table 4.305: Grave 2009 loci.

Locus	Description
A09L001	Grave circle
A09L002	Fill
A09L003	Rock pile intrusive to fill
A09L004	Capstones
A09L005	Cist fill under capstones
A09L007	Human remains



Figure 4.464: Grave 2009 surface architecture and cluster of cobbles intrusive to fill.

In 2009, a single grave was excavated at Wadi Fidan 40 about two meters north of the 2004 Area A gridline (Table 4.305). Called Grave 2009, it consists of a pit cut into the conglomerate bedrock covered with capstones, marked on the surface by an incomplete grave circle of dolerite cobbles set on end and buried in the earth (L. A09L001). The grave circle was best preserved in the south, where four stones still stood upright. About six other stones, fallen on their sides, were also believed to have been incorporated into the grave circle at one time. The exterior of the circle measures about 1.47 m north-south and about 1.73 m east-west; the interior of the circle measures about 1.17 cm north-south. The fill consisted of sandy silt and gravel common to the cemetery (L. A09L002). A group consisting of about ten decomposing dolerite cobbles was encountered in the fill of the grave (Fig. 4.464; L. A09L003). Some of these were separated from each other by the soft, sandy sediment, suggesting they were tossed haphazardly into the grave while it was being backfilled. A flint hammerstone was found in the fill of the grave (EDM A09F0008). No bones were found in the fill. Five Nubian sandstone capstones were encountered at about 0.70 m. below present ground surface (L. A09L004). These were placed in a line, with long sides placed against each other (Fig. 4.465). A representative stone measured about 0.73 by 0.35 by 0.09 m. Smaller stones were used for chinking. The whole measured 1.63 m long by 0.42 m wide. Beneath the capstones, the grave was filled with sediment. Immediately beneath the capstones this was very powdery loose silt, which yielded to sandy silt and small gravel similar to the fill (L. A09L005). Beneath this the burial was encountered. The burial consisted of a semiflexed individual with head to the south, lying on the left side, facing west (Fig.

4.466). Knees were flexed in a kneeling position (L. A09L007). The right elbow was bent, with its hand to the west, while the left arm was extended, with hand towards the mid-femur. Based on cranial morphology, the individual appeared to be an adult male, though the fragmentary nature of the remains makes other analysis difficult. No cist existed; rather, the grave was cut into the conglomerate bedrock. The burial measured 1.10 meters from the crown to the bent legs, and 0.50 meters wide at the legs. The total depth was about 1.05 meters.



Figure 4.465: Grave 2009 capstones.



Figure 4.466: Grave 2009 burial.

CONCLUSIONS

The cemetery at Wadi Fidan 40 presents one of the largest mortuary assemblages yet excavated in Jordan. A total of 173 surface mortuary features were excavated, which overlay 34 capped pit burials, one pit double burial, and 245 cist graves. The most numerous of the finds included items of personal adornment, which will be considered in Chapter 6. However, the most visible artifacts, and those which played the most important part in post-burial rituals, are the standing stones and anthropomorphic stones which we now consider in Chapter 5.

CHAPTER 5: THE STANDING STONES AND RELATED MORTUARY INSTALLATIONS

INTRODUCTION

Among the finds from WFD 40 which perhaps shed the most light on the ritual and ethnicity at the site is the assemblage of standing stones found there. Standing stones are important foci of cult in much of the ancient Near East, including the Levant. They also serve as signs of remembrance for predominantly non-religious purposes (Graesser 1972).

As explained in Chapter 2, surface mortuary architecture is often more important in constructing identity than subsurface features. The reason for this is that surface features are revisited, constructed or deconstructed, maintained or unmaintained, and the focus of veneration or even of iconoclastic attack. Unfortunately surface mortuary architecture often does not survive. Grave markers have been found recently at several sites, however, which can be favorably compared to those at Wadi Fidan 40. These include the Jordan Valley site of Tell es-Sa'idiyeh, the Phoenician site Tyre al-Bas, and Arabian sites.

The standing stones of Wadi Fidan 40 and other sites allow for a critical examination of recurring ritual at the site. As described in Chapter 3, it is often pilgrimage and veneration of the dead which consolidates nomadic societies. Perpetuating the memory of the dead also perpetuates their influence. It is by calling on the revered dead that their status—and therefore the status of their descendants, either biological or ideological—is reaffirmed.

THE STANDING STONES OF WADI FIDAN 40

A total of nine standing stones and nineteen anthropomorphic stones have been recorded to date from WFD 40. These are differentiated from the site's grave circles (which are themselves, of course, rings of standing stones) by being anthropomorphic in nature or by being placed in such a way that there is clear intent to separate them from the circle stones. Strictly aniconic standing stones were first observed at the site by Raikes (1980); though he does not describe them they appear in his site sketch map. Aniconic stones were recorded again during the 1997 season (Levy et al. 1999). But it was not until the 2003 emergency dig season (Levy 2003) when anthropomorphic standing stones were first observed. The results of that season have not yet been published. The 2004 season yielded more such anthropomorphic stones. Some of the data from three of the stones recovered that season were published in the season's preliminary report (Levy et al. 2005: 471-474), though subsequent analysis has revealed inaccuracies in that publication. In addition, one worked chalk stone which may have been a standing stone and one incised stone (the latter in association with anthropomorphic stones) were found, both of which will also be discussed in this chapter.



Figure 5.1: The Grave 68 surface architecture, consisting of a stone circle surrounding a pavement. The stone circles themselves are standing stones of sorts, but are clearly differentiated from those described in this chapter.

The aniconic and anthropomorphic standing stones, as well as the incised stone, are all made of local dolerite (not *dolomite,* as was previously reported [Levy et al. 2005: 471]). This hard, dark grey to black metavolcanic stone erodes out of the conglomerate on the site and can also be found in the wadi below. It is the favored stone in all of the surface architecture at WFD 40, and makes a marked contrast to the buff silt and conglomerate and red sandstones which are found across the cemetery.

A complete catalog of these stones is as follows. This in turn is followed by a discussion of their significance.

ANICONIC STANDING STONES

The cemetery's aniconic standing stones are nearly all apparently unworked stones that were chosen because they were longer than they were wide. They were all placed in grave circles, in most cases in the middle of the circle. In all ten cases the stones were placed in paved areas. These pavements created a uniform surface which Since these can only be recognized when *in situ*, few of them were recognized and described. Only nine such stones over eight graves were thus recorded (Table 5.1).

Table 5.1: The aniconic standing stones from WFD 40.

EDM	Basket	Area	Grave	Locus	Age	Height (cm)	Width (cm)	Thickness (cm)
		A	80	460	Infant	11	Not recorded	Not recorded
		B	39	685	Infant	28	22	12
		C	31A		Unknown	26	12	7
70093	3123	A	359	9164	Infant	20	6	8
88589	6909	C	716	2715	Adult	12	9	5
88706	7014	C	717	2501	Juvenile	30	10	5
88912	7099	C	733	2595	3-5	16	7	7
88978		C	735	9613	Juvenile and adult remains collected; unclear which was primary burial	Not recorded	Not recorded	Not recorded
88979		C	735	9613	Juvenile and adult remains collected; unclear which was primary burial	Not recorded	Not recorded	Not recorded

1997 EXCAVATIONS: AREA A

GRAVE 80

The surface architecture of Grave 80 consisted of a rectangular stone feature, resembling the area's irregular stone circles, surrounding a pavement (Fig. 5.2). In the north-central area of this pavement rose a standing stone. The stone rose 0.11 meters above the pavement, but no other dimensions of the stone were recorded. The stone was held in place with mud plaster. It appears in site photographs to be considerably larger and to have sunk into the sediment. Next to the grave was what was described as a rectangular platform, but which appears in actuality to be a paved stone grave circle without a standing stone. The two grave circles appear to touch, making them appear to be twin graves like Grave 716 and Grave 717. Excavation revealed this grave to be a cist grave. Within were entombed the remains of an infant. No photographs exist, but the supervisor's notebook states that the infant was disarticulated, but Rula Shafiq's notebook and all other grave forms state or imply that the burial was articulated. The area supervisor's final report and all other documentation except Rula Shafiq's notebook state that the burial was semiflexed, with head to south, on the left side facing east. Shafiq's notebook says that the burial was oriented to the north, on the left side facing west. No grave goods were found in association with this grave.



Figure 5.2: Grave 80 surface architecture. Note standing stone (white arrow).

1997 EXCAVATIONS: AREA B

GRAVE 39

A standing stone was observed in the middle of the circle marking Grave 39. Two flat stones, possibly relict paving, were also found in this circle. No photographs exist of the surface architecture. The standing stone measured 28 centimeters by 22 centimeters by 12 centimeters, and was said to rise 0.25 meters above the surface. Mother of pearl and 19 beads were found in the fill. A fragmentary adult secondary burial was also encountered in the fill. The surface architecture stood over a trapezoidal cist. Another adult secondary burial—possibly remains from the same individual as was encountered in the fill—was pushed to the side of the cist. A primary burial of an infant was encountered in the cist, lying semiflexed, with head to the south, on the right side

facing east. One more ostrich eggshell bead was recovered in the cist, though it is unclear if the bead was associated with the secondary or the primary remains.

1997 EXCAVATIONS: AREA C

GRAVE 31A

The surface architecture of Grave 31 consisted of a complete stone circle 1.45 meters in diameter surrounding a pavement. A standing stone stood in the middle of this pavement, rising 0.18 centimeters above the pavement. No photographs exist of the surface architecture. The stone itself appeared unworked and measured 26 centimeters high, 12 centimeters wide, and 7 centimeters thick. The surface architecture stood over a rectangular cist containing a deliberately arranged secondary burial with the skull in the south end of the grave. Two beads were recovered from the cist, including a short barrel shell bead (B. 2710) and an ostrich eggshell disc bead (B. 2713).

2004 EXCAVATIONS: AREA A

GRAVE 359

The surface architecture of Grave 359 consisted of a stone circle surrounding a pavement, in the middle of which stood a standing stone (EDM 70093; Figs. 5.3, 5.4). The stone showed no sign of being worked (Figs. 5.5, 5.6, 5.7). Beneath the pavement was a capstone-covered pit containing the remains of an infant. The child was semiflexed, laying on its left side, facing west, with its head pointing south. No grave goods were recovered in association with this burial.



Figure 5.3: Grave 359 surface architecture.



Figure 5.4: Close-up of Grave 359 standing stone.



Figure 5.5: The Grave 359 standing stone (EDM 70093).



Figure 5.6: The Grave 359 standing stone (EDM 70093).



Figure 5.7: The Grave 359 standing stone (EDM 70093).

2004 EXCAVATIONS: AREA C

GRAVE 716

The surface architecture of Grave 716 consisted of a stone circle measuring 0.85 meters in diameter surrounding a pavement with a standing stone in the middle (EDM 88589). The architecture was similar to that of Grave 717, which it bordered. This pair of graves resembled Grave 80 and its twin, described earlier. It is clear from the shapes of the stones in site photographs that Grave 716 and Grave 717 are identical to the two graves observed and photographed in 1997, though due to discrepancies between the 1997 and 2004 grids they were recorded in square Q-11 in 1997 and O-10 in 2004 (Figs. 5.8, 5.9). The standing stone in Grave 716 measured 12 centimeters high, 9 centimeters wide, and 5 centimeters thick. The stone is not obviously worked (Fig. 5.10, 5.11, 5.12).

The surface architecture stood over a capstone-covered pit containing scanty secondarily deposited remains of an adult. No grave goods were found with the burial, though some lithics were found in the grave shaft.



Figure 5.8: Grave 716 and 717 in 1997, when they were photographed but not excavated. Note the cracked stone beside the standing stone in the right foreground.



Figure 5.9: The same graves in 2004. Note the identical cracked stone (black arrow).



Figure 5.10: The Grave 716 standing stone (EDM 88589).



Figure 5.11: The Grave 716 standing stone (EDM 88589).



Figure 5.12: The Grave 716 standing stone (EDM 88589).

GRAVE 717

Grave 717, like its neighbor Grave 716, was photographed in 1997 and later recorded and excavated in 2004 (Figs. 5.8, 5.9). Like Grave 716, the surface architecture of Grave 717 consisted of a standing stone in the middle of a pavement surrounded by a stone circle, this one measuring 1.05 meters in diameter (Fig. 5.13; EDM 88706). The standings stone measured 30 centimeters tall, 10 centimeters wide, and 5 centimeters thick. It was not obviously worked (Figs. 5.14, 5.15, 5.16). Beneath was a capstone-covered pit in which were entombed the semiflexed, primarily interred remains of a juvenile, aged three to five years, with head to the south, on the left side, facing west. A few adult bones were also collected in the grave. No grave goods were found in connection with this grave, although some mother of pearl fragments were recovered at the pavement level. Although Grave 716 and 717 were very similar in construction, Grave 717 seems to be the more important of these twin graves because a) the stone used for the central standings stone is nearly three times as high as that used in 716, b) the circle is about 20% larger in diameter, and c) Grave 717 contains a primary inhumation, while Grave 716 contains a secondary inhumation.



Figure 5.13: Grave 717 standing stone and surface architecture.



Figure 5.14: The Grave 717 standing stone (EDM 88706).



Figure 5.15: The Grave 717 standing stone (EDM 88706).



Figure 5.16: The Grave 717 standing stone (EDM 88706).

GRAVE 733

The surface architecture of Grave 733 consisted of a stone circle measuring 1.10 meters in diameter surrounding an intact pavement in the center of which stood a dolerite stone (Fig. 5.17; EDM 88912). The standings stone measured 16 centimeters tall, 7 centimeters wide, and 7 centimeters thick. The stone was not obviously worked, but was not collected and therefore was not photographed independently of its context. Beneath the surface architecture lay a capstone-covered pit in which was interred the primary burial of a juvenile, aged 3-5, in a flexed position oriented to the south, lying on the left side facing west. The surface architecture also partially covered the stone circle of Grave 741, also a juvenile. No grave goods were found associated with Grave 733.



Figure 5.17: Grave 733 surface architecture.

GRAVE 735

The surface architecture of Grave 735 consisted of a stone circle measuring 1.15 meters in diameter, surrounding a pavement. Roughly along a north-south line, two standing stones stood above this pavement, although when found they had sunk into the fill below (Figs. 5.18, 5.19). Unfortunately, the pavement was never photographed. Beneath the surface architecture was a trapezoidal cist on a north-south axis, wider at the north than at the south. The stones were not obviously worked, but were not collected for further study. Fragmentary and scattered human remains were found in both cist and fill, including remains from an adult and a juvenile, though the bags were not properly labeled in the field and it is impossible to say which remains were in the cist and which were in the fill. The grave appeared to have been looted in antiquity, and the cist was never completely excavated. A marine shell fragment was found in the fill, but no other artifacts were recovered in relation to this grave.



Figure 5.18: Grave 738 surface architecture.



Figure 5.19: The two standing stones of Grave 735.

THE ANTHROPOMORPHIC STONES

One of the more exciting finds of the 2003 and 2004 seasons was the presence of anthropomorphic stones in the cemetery. To my knowledge, similar stones have not yet been recorded for this period in the Levant. None were reported in the 1997 season, probably for two reasons. First, Area E is much more richly endowed with the stones than Areas A, B, or C. Indeed, no such stones were found in Area A in any season, and Area E has more such stones than were found in Areas B and C combined in 2004. Secondly, these stones are extremely hard to recognize. It is extremely likely that anthropomorphic stones have been discarded without being recognized at other digs in the Near East.

A total of twenty anthropomorphic standing stones were recovered at WFD 40 (Table 5.2). All of these stones, like the aniconic standing stones, were hard dark gray dolerite, the same stone that was most commonly used in grave circles at WFD 40. The stones seem to have been roughly shaped by pecking and then most of them were finished smooth, likely by rubbing them with a sand-covered cloth. It is perhaps notable that the lapidary techniques used in creating the anthropomorphic stones are similar to those used in bead production, carried out on a larger scale (see Chapter 6). The shape of the sculpture seems to have been dictated largely by the shape of the raw stone. This is evidenced especially by such examples as EDM 80552, which has a long scar along one side, which the artist did his best to prevent from being seen. Surface anthropomorphic stones were not recognized until after such artifacts had been found in excavation. Anthropomorphic stones EDM 80553, 80555, and 80556, and dubious standing stone

EDM 80554, were all collected in a single day from piles of stones removed from the surface after anthropomophic stones had been found in excavation. Despite being the largest of the finely-worked anthropomorphic stones, and the second largest anthropomorphic stone over all, EDM 80554 was not recognized when found in the excavation of Grave 223, was discarded, was collected as a surface find, and was only reunited with its proper context when I recognized it in site photographs while writing this dissertation.

Of the twenty, twelve of the stones were associated with graves. Two graves each had two stones, including Grave 712, which was associated with two anthropomorphic standing stones and the incised stone. Unfortunately, only one stone (EDM 88331) was found associated with a grave whose occupant could be both aged and sexed. This grave, Grave 701, belonged to a middle adult male. Three other graves included adults, while another included a juvenile or adolescent. In addition, one of the adult graves included the intrusive burial of an infant.

The data presented here is in most cases collected from analyses I made of the stones at the American Center for Oriental Research in 2007. In a few cases, the original stone could not be analyzed because it had already been placed in storage by the Department of Antiquities of Jordan and could not be located at the time of analyses. Measurements of those stones are presented based on scaled photographs.

Table 5.2: Contexts and metric data of the anthropomorphic stones of Wadi Fidan 40.

EDM	Area	Grave	Burial sex	Burial age	Context	'Nose'?	'Should-ers'?	Length (cm)	Width (cm)	Thickness (cm)
80518	E	203	N/A	Adult	Grave fill	Y	Y	42	18	17
80552	E	223	N/A	N/A	Rocky grave fill	Y	Y	70	28	24
80456	E	235	N/A	Adult	Rocky grave fill	Y	Y	50	19	19
80022	E	248	N/A	Infant	Rock pile over grave	N	Y	15*	10*	n/a
80717	E	253	N/A	N/A	Grave fill	Y	Y	43	21	17.5
80801	E	260	N/A	N/A	Grave cist	Y	Y	52	23	17
80553	E	0	N/A	N/A	Surface (none)	Y	Y	58	17	15
80555	E	0	N/A	N/A	Surface (none)	Y	Y	47	19	15
80556	E	0	N/A	N/A	Surface (none)	Y	Y	36.5	16	11
88006	B	0	N/A	N/A	Surface (none)	Y	Y	13*	14*	8*
88007	B	0	N/A	N/A	Surface (none)	Y	N	11*	9*	7*
88331	C	701	Male	30-40	Grave fill	N	Y	31.5	15.5	6
88194	C	703	N/A	Juvenile/ Adolescent	Grave fill	Y	Y	43	28	20
88366	C	731	Female	Young adult	Grave fill	Y	Y	38	25	9
88371	C	731	Female	Young adult	Grave fill	Y	Y	39	24	26.5
88407	C	712	N/A	20-50, Infant	Surface pavement	N	Y	81	37	16.5
88517	C	712	N/A	20-50, Infant	Grave fill	Y	N	28	12	8
70337	East of C	0	N/A	N/A	Surface (none)	Y	Y	41	28	19
86017	East of C	0	N/A	N/A	Surface (none)	Y	Y	29	23	13

*Indicates measurement of a fragment.

2003 EXCAVATIONS: AREA E

GRAVE 203

One anthropomorphic stone was recovered in association with Grave 203 (EDM 80518). This anthropomorphic stone closely resembles that of Grave 223 (EDM 80552) in appearance. It has a noticeable "nose" which begins about three centimeters below the crown and continues for about eight centimeters in length. Two large protuberances on either side indicate ears. Each is about eight centimeters below the crown. This is one of the largest and most finely sculpted of the anthropomorphic stones from Wadi Fidan 40.



Figure 5.20: The Grave 203 anthropomorphic stone (EDM 80518). Scale is 5 cm.



Figure 5.21: The Grave 203 anthropomorphic stone (EDM 80518).



Figure 5.22: The Grave 203 anthropomorphic stone (EDM 80518).

This standing stone was found in the rocky fill in the northern area of Grave 203. It was located very close to the boundary with Grave 202, an infant burial. The burial was disturbed by looting in ancient times, and little of the stone circle remained. Five amazonite, ostrich eggshell, and citrine beads were found in the fill, and three alabaster and citrine beads and a toe ring were found associated with the burial. The burial was broken and scattered in the cist, but the legs remained articulated, showing the interred lay in a semiflexed position, with head to the south, on the left side facing west.

GRAVE 223

The standing stone from Grave 223 strongly resembles that of Grave 203 (EDM 80518). Measuring 70 centimeters by 28 centimeters by 24 centimeters, it is the largest of the finely shaped stones and the second largest of all the stones (Fig. 5.23-5.26). The nose is about 12 centimeters long and 3.3 wide and rises to just under half a centimeter above stone. The nose starts about seven centimeters below the crown. The ears or shoulders are protrusions from the stone. The left is about seven centimeters long, five centimeters wide, and almost a centimeter above stone. It starts about 12.5 centimeters below the crown. The right protrusion is seven centimeters long, slightly under seven centimeters wide, and about 0.7 centimeters above the stone. The nose continues to almost six centimeters below ears. There is a deep natural scar 7.7 cm long on the left side; it is not clearly visible when looking face-on, but clearly visible from the stone's left, and there is a large divet in the front of the stone, a little below the scar on the left side (Fig. 5.26). About thirteen centimeters above the base, the sides angle into a rough

point, which was probably buried. The back is convex, and the scar on the stone suggest that this stone was chosen to be worked because of its natural shape.



Figure 5.23: The Grave 223 anthropomorphic stone (EDM 80552).



Figure 5.24: The Grave 223 anthropomorphic stone, back view (EDM 80552).



Figure 5.25: The Grave 223 anthropomorphic stone side view (EDM 80552).



Figure 5.26: The Grave 223 anthropomorphic stone (EDM 80552). Note the large, natural scar around which the artist has worked.

This stone was initially reported to have been found out of context on the surface of Area E. However, it is recognizable in photos of stones taken from the rocky fill of Grave 223. Grave 223 was visible on the surface of square AB-13 as a complete stone circle of twenty-three dolerite cobbles set on edge measuring 2.40 meters in maximum diameter, somewhat ovoid and measuring 1.95 meters in minimum diameter (L. 1571).

An apparently unworked small dolerite boulder was observed standing upright in the northern part of the circle. This stone was oriented such that it was oriented running north-south in a way reminiscent of the two standing stones over Grave 735 (Figs. 5.27, 5.28). However, within the circle were a large number of cobbles and boulders extending from just below the surface to the capstones, and it is unclear whether this stone is in its original position. The anthropomorphic stone was among these rocks, apparently in the northern half of the fill (Fig. 5.29). Four amazonite beads were found in the fill, and one amazonite bead and one bracelet fragment were found amid the broken and scattered human remains in the cist.



Figure 5.27: Grave 223 surface architecture and stone pile.



Figure 5.28: Grave 223 rocky fill.



Figure 5.29: Grave 223, stones in fill just above capstones. Note the anthropomorphic stone to left of grave (white arrow). The stone which had stood above the surface in the north is immediately north of the anthropomorphic stone.

GRAVE 224

One worked chalk stone (EDM 80779) was uncovered at Wadi Fidan 40 (Table 5.3). The area supervisor, Neil Smith, tentatively identified this artifact as a standing stone, though it appears from his notes that the stone actually served as a capstone to the cist. The stone was found in the fill of Grave 224 (L. 1715) beneath a rock pile (L. 1581), at about capstone level. This grave was looted in antiquity, and the bones were badly damaged and scattered. Four beads (two of siltstone and two of amazonite) were found in association with this grave at about capstone level.

Table 5.3: The worked chalk stone.

EDM	Basket	Area	Grave	Locus	Sex	Age	Context	Length (cm)	Width (cm)	Thickness (cm)
80779	2595	E	224	1715	n/a	n/a	Rocky fill	47	22	14

This stone is less anthropomorphic than phallomorphic (Figs. 5.30-5.33). The stone has one relatively flat side (Fig. 5.30) and one convex side longitudinally (Fig. 5.31). One end of the stone is rounded, while the other is flat. About ten centimeters below the rounded end, a groove runs across the width of the stone on the convex side. This groove was possibly meant to differentiate a head from a body on a stylized human being, but also gives the stone a strongly phallic appearance. Both sides of the stone are irregularly shaped, suggesting that it is unfinished or broken; one corner of the stone is certainly broken off. Natural bedding planes are visible running lengthwise up the stone, especially on its flat side.



Figure 5.30: The worked chalk stone (EDM 80779).



Figure 5.31: The worked chalk stone (EDM 80779).



Figure 5.32: The worked chalk stone (EDM 80779), side view.



Figure 5.33: The worked chalk stone (EDM 80779), side view.

GRAVE 235

The anthropomorphic stone associated with Grave 235 is a columnar standing stone, with broad, flat nose, measuring 50 centimeters by 19 centimeters by 19 centimeters (Figs. 5.31-5.37; EDM 80456). There are two knobs, one at the usual place for shoulders or ears, the other considerably lower, which are possible beginnings or failed attempts at carving these appendages. The nose is about nine centimeters long and two centimeters wide. The nose tapers to one centimeter wide at top, and strongly resembles the nose on EDM 70337. The left "shoulder," such as it is, is a small ridge, standing less than half a centimeter out of the rock and starts about 1.5 centimeters below the nose, or fourteen centimeters below the crown. It appears pecked on the right side and the top. The right protrusion is 17 centimeters below the crown. Like most of the standing stones, the artifact is thickest close to bottom, presumably making it easier to stand. The bottom at something of an angle, with front side being the longest side (the back side is 45 centimeters long), such that the piece appears to be a rough trapezoid or triangle when laid on its side.



Figure 5.34: The Grave 235 anthropomorphic stone (EDM 80456).



Figure 5.35: The Grave 235 anthropomorphic stone (EDM 80456), back view.



Figure 5.36: The Grave 235 anthropomorphic stone (EDM 80456), side view.



Figure 5.37: The Grave 235 anthropomorphic stone (EDM 80456), side view.

This artifact was found in the rocky fill of Grave 235. The grave was badly disturbed in antiquity, and only fragmentary remains survive. A collection of bones of an adult were concentrated in the north end of the trapezoidal cist, which was constructed on a north-south axis. The cist was furnished with a pavement, unusual in the cemetery. One, probably ceramic bead was found near the surface of the grave, and two amazonite beads were found in the cist. An ash lens was noted in the cist, possibly suggesting that fire was used in destroying perishable artifacts during the desecration of the grave.

GRAVE 248

The anthropomorphic stone associated with Grave 248 was the first such stone fragment discovered at Wadi Fidan 40 (Figs. 5.38-5.39; EDM 80022). Its finding prompted the close examination of stones which lead to the discovery of many other anthropomorphic stones on the surface and in discarded stone piles at Wadi Fidan 40. This is believed to be a fragment of a larger stone, though the possibility cannot be disregarded that the stone was displayed in its current state. It is also likely that the stone was in secondary use in Grave 248, after initially being carved for another grave and being damaged in the extensive looting at WFD 40. The remaining portion measures 15 centimeters by ten centimeters; the width was not measured. About 3.5 centimeters below the crown the stone is recessed about one centimeter and is then rounded, giving the impression of a head and shoulders. In other examples, noses tend to start before the shoulders, so it seems unlikely that a nose once existed and has been broken away. The shoulders start about four centimeters below the crown.



Figure 5.38: The Grave 248 anthropomorphic stone (EDM 80022).



Figure 5.39: The Grave 238 anthropomorphic stone (EDM 80022).

This stone was found in the midst of a disorganized cobble pile over grave 248. Beneath this cobble feature a paved surface constructed of forty cobbles was encountered. It is presumed that the anthropomorphic stone stood over this cobble feature. Beneath another level of fill, a rectangular cist holding the semiflexed body of an infant, laying with head to the south, on the left side facing west, was encountered. No other artifacts were recovered in association with this grave.

GRAVE 253

The anthropomorphic stone associated with Grave 253 possesses both a stylized nose and shoulders (EDM 80717). At a point about 12.5 centimeters below the crown, the stone was cut away, given the impression of a head and shoulders, with the shoulders extending about 1.5 centimeters from the main body of the stone. The back is flat. This stone closely resembles those of Grave 203 and Grave 223.



Figure 5.40: The Grave 253 anthropomorphic stone (EDM 80717).



Figure 5.41: The Grave 253 anthropomorphic stone (EDM 80717), back view.



Figure 5.42: The Grave 253 anthropomorphic stone (EDM 80717), back view.



Figure 5.43: The Grave 253 anthropomorphic stone (EDM 80717), side view.

This anthropomorphic stone was found within the rocky fill of Grave 253, which did not have any surviving surface architecture. The stone was located just to the east of the capstones, suggesting that it had been thrown into the grave along with other boulders at some point after the grave was robbed (Figs. 5.44-5.46). Also at about this level a dentallium bead, a citrine bead, and a bracelet fragment were recovered. The cobble pile continued into the trapezoidal cist, in which were found the broken and scattered human remains, along with another bracelet fragment, five amazonite beads, a siltstone bead, an ostrich eggshell bead, and a copper bead.



Figure 5.44: The Grave 535 anthropomorphic stone (next to the scale), as found, beside the disturbed capstones.



Figure 5.45: The Grave 535 anthropomorphic stone (next to the scale), as found, beside the disturbed capstones.



Figure 5.46: The Grave 535 anthropomorphic stone (next to the scale), as found, beside the disturbed capstones.

GRAVE 260

The anthropomorphic stone associated with Grave 260 is a torpedo-shaped stone which appears to have been made by grinding a minimum amount of material from naturally ellipsoid rock (Figs. 5.47-5.50; EDM 80801). It measures 52 centimeters by 23 centimeters by 17 centimeters. The nose starts about three centimeters below the crown. It is noticeably off-center, at the shoulders measuring about 6.5 centimeters from the left side and almost ten centimeters from the right. The nose is about 8.5 centimeters long, but damage to the top makes its precise length unknown. (Part of one side of the head, extending down to the nose, has flaked away.) The nose is about three centimeters wide and one centimeter in relief. The nose continues to almost six centimeters below the

shoulders. The shoulders are each slightly less than seven centimeters below the crown and protrude about seven centimeters from the sides of the stone. Starting about nine centimeters from the base of the stone, one side slants inwards, creating a triangular base which was probably buried. The back of the stone is flat.



Figure 5.47: The Grave 260 anthropomorphic stone (EDM 80801).



Figure 5.48: The Grave 260 anthropomorphic stone (EDM 80801), back view.



Figure 5.49: The Grave 260 anthropomorphic stone (EDM 80801), side view.



Figure 5.50: The Grave 260 anthropomorphic stone (EDM 80801), side view.

This stone was found beneath the remaining capstones in Grave 260 in Area E. This grave was very disturbed, and the human remains therein were violent broken and displaced throughout the cist. No surface architecture was observed, but a cobble pile was found in the fill. The stone was found within the cist, at the north end of the cist, with the head pointed to the north, on the left side facing east (Figs. 5.51, 5.52). However, a layer of fill separated it from the floor of the cist, and the stone was found at an angle, suggesting it may not have been intentionally laid in the cist (Fig. 5.53). Also found in the cist were nine beads (seven amazonite, one citrine, and one carnelian). The carnelian bead was found directly adjacent to the standing stone. The floor of the trapezoidal cist was nicely paved with stone.



Figure 5.51: The Grave 260 anthropomorphic stone as found (EDM 80801).



Figure 5.52: The Grave 260 anthropomorphic stone as found (EDM 80801).



Figure 5.53: The Grave 260 anthropomorphic stone as found (EDM 80801). Note the sediment beneath the stone, which is at an angle to, and significantly above, the paved floor.

NO GRAVE

80553

This is a columnar standing stone with very well-defined nose and shoulders (Figs. 5.54-5.57). It measures 58 centimeters by 17 centimeters by 15 centimeters. A ridge runs down the back, but front is very well smoothed and rounded. The nose starts four centimeters below the crown and is Nose is about 9.5 centimeters long, and a little over three centimeters wide at base. It rises to about one and a half centimeters in relief. The shoulders are slight bumps but are made more pronounced by the shaping of the head. The left shoulder projects about half a centimeter from the stone, and is almost five centimeters wide and three centimeters long. The right shoulder is about five centimeters

wide and a little over four centimeters long. It rises 1.5 centimeters at its most pronounced place. The nose is slightly damaged and extends about 1.5 cm below the shoulders. The left shoulder faces front more prominently than the right. Each shoulder starts about 11 cm below crown. This artifact was found out of context on the surface of Area E.



Figure 5.54: Area E surface anthropomorphic stone (EDM 80553).



Figure 5.55: Area E surface anthropomorphic stone (EDM 80553), back view.



Figure 5.56: Area E surface anthropomorphic stone (EDM 80553), side view.



Figure 5.57: Area E surface anthropomorphic stone (EDM 80553), side view.

80555

This is a columnar standing stone with very well-defined shoulders, but with a nose in somewhat lower relief (Figs. 5.58-5.61). It measures 47 centimeters by 19 centimeters by 15 centimeters. It was found out of context on the surface of Area E. The front of the stone is very flat, and a ridge runs down the back. Fifteen centimeters above the base of the stone, this flat surface turns inward, and the base is an irregular point 27 centimeters in circumference – presumably this point was buried. The nose starts about 4.5 centimeters below the crown. It is about five and half centimeters long and is 1-1/3 centimeters wide at the base. The nose rises to a sharp ridge, but stands just 0.2 centimeters above the stone. The nose continues about 0.5 cm below shoulders. The

shoulders are sloped, and begin about 7.5 centimeters below the crown. They seem to have been made by grinding away at the stone.



Figure 5.58: Area E surface anthropomorphic stone (EDM 80555).



Figure 5.59: Area E surface anthropomorphic stone (EDM 80555), back view.



Figure 5.60: Area E surface anthropomorphic stone (EDM 80555), side view.



Figure 5.61: Area E surface anthropomorphic stone (EDM 80555), side view.

80556

This is a very well-formed columnar standing stone with a nose and shoulders found on the surface of Area E (Fig. 5.62-5.66). It measures 36.5 centimeters by 16 centimeters by 11 centimeters. The nose is about seven centimeters long, starting at the forehead and in line with a ridge at the base of the stone. Presumably this was a natural ridge, worn away on the body of the anthropomorphic figure but retained and shaped to make the nose. The nose is about 1.5 centimeters wide at its base and rises about 0.5 centimeters in relief, but the nose is accentuated by the curvature of the rock. The nose continues to about 2.5 centimeters below the shoulders. The figure's shoulders are both about five centimeters below the crown, but the head slopes slightly to the right, making the right shoulder slightly closer to the top of head on right side. The shoulders protrude

about 0.5 centimeters from the sides of stone. The width at the shoulders is 21 centimeters but tapers to 10 centimeters 6.5 centimeters from the base of the figure. At this point, the base has been worked into a blunt peg-like dull projection, possibly to fit into the ground or a perishable stand (Fig. 5.66). The width of this bottom segment is about eight centimeters. However, the base is also almost a second head. The shaping appears to create two rude shoulders, the previously mentioned subtle ridge mirrors the nose. If this was intended to be the top then shaping was given up before much work was completed.



Figure 5.62: Area E surface anthropomorphic stone (EDM 80556).



Figure 5.63: Area E surface anthropomorphic stone (EDM 80556), back view.



Figure 5.64: Area E surface anthropomorphic stone (EDM 80556), side view.



Figure 5.65: Area E surface anthropomorphic stone (EDM 80556), side view.



Figure 5.66: Area E surface anthropomorphic stone (EDM 80556), upside down. Note the shaped, peg-like bottom.

This anthropomorphic stone was recorded on August 26, 2003, when it was found, as a surface find just to the southeast of the cobble feature designated Grave 232. Excavation to a depth of 0.75 meters revealed no subsurface mortuary architecture and very few bone fragments, and it is not believed that the feature was a grave. The anthropomorphic stone was also not observed when that feature was excavated, and discarded stones from across the excavation area were piled in this place. It is therefore treated here as a contextless surface find.

2004 EXCAVATIONS: AREA B

NO GRAVE

88006

This artifact is one of two anthropomorphic stones found in Area B unassociated with any grave (EDM 88006). The nose begins about six centimeters below the crown, and continues for a length of about 12.5 centimeters. The ears are uneven. The object's left ear is about 14 centimeters below the crown and extends about 1.3 centimeters above the surrounding stone. The right ear is about 12.5 centimeters below the crown. This ear is barely perceptible. It appears to primarily be the result of removal of stone material to round the top of the artifact's head. The stone was broken through the "neck," and is presumed to be only about one-quarter to one-third complete.



Figure 5.67: Area B surface anthropomorphic stone fragment (EDM 88006).



Figure 5.68: Area B surface anthropomorphic stone fragment (EDM 88006), back view.



Figure 5.69: Area B surface anthropomorphic stone fragment (EDM 88006), top view.



Figure 5.70: Area B surface anthropomorphic stone fragment (EDM 88006), side view.



Figure 5.71: Area B surface anthropomorphic stone fragment (EDM 88006), cross section.

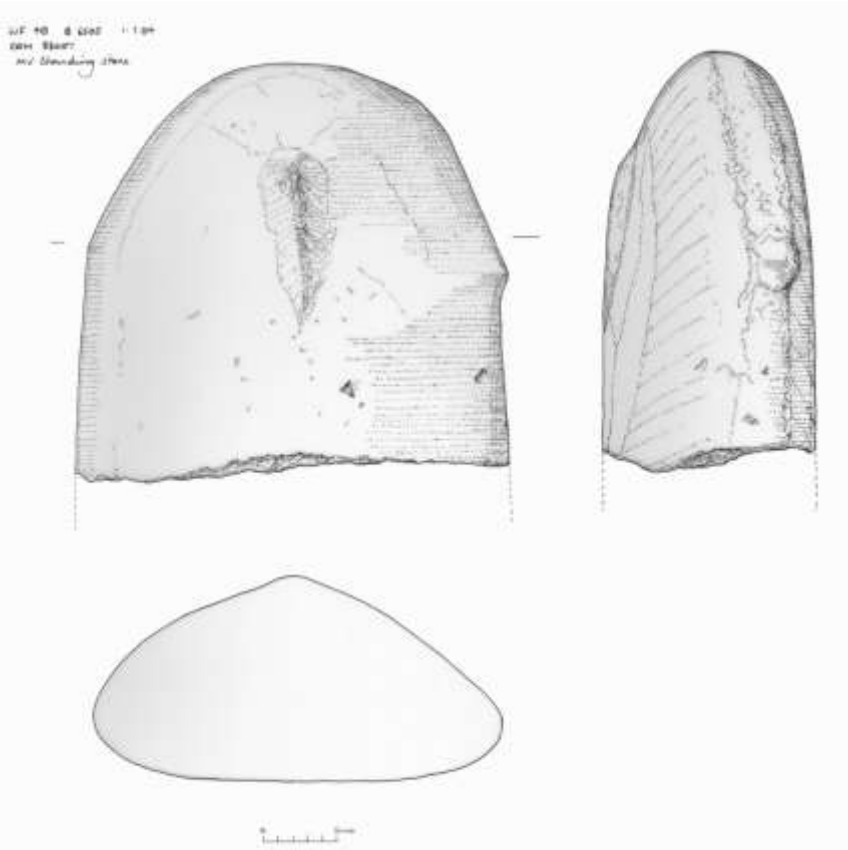


Figure 5.72: Area B surface anthropomorphic stone fragment (EDM 88006). Drawing by Caroline Hebron. EDM and Area incorrectly reported in note.

This anthropomorphic stone fragment was found on the surface of Area B. No other data were recorded regarding its context.

88007

This is one of two anthropomorphic stones from Area B not found in association with any grave. The anthropomorphism is recognizable as a nose measuring about 14 centimeters long, starting about nine centimeters below the crown. The back is flat, while the front is carefully worked, creating the impression of a nose by removing stone and creating depressions on either side suggestive of eyes. The artifact is reminiscent of the small anthropomorphic stone found in Grave 712 (EDM 88517), but more finely carved and larger. The stone was broken through the "neck," and is presumed to be only about one-quarter to one-third complete.



Figure 5.73: Area B surface anthropomorphic stone fragment (EDM 88007).



Figure 5.74: Area B surface anthropomorphic stone fragment (EDM 88007), back view.



Figure 5.75: Area B surface anthropomorphic stone fragment (EDM 88006), side view.



Figure 5.76: Area B surface anthropomorphic stone fragment (EDM 88006), side view.

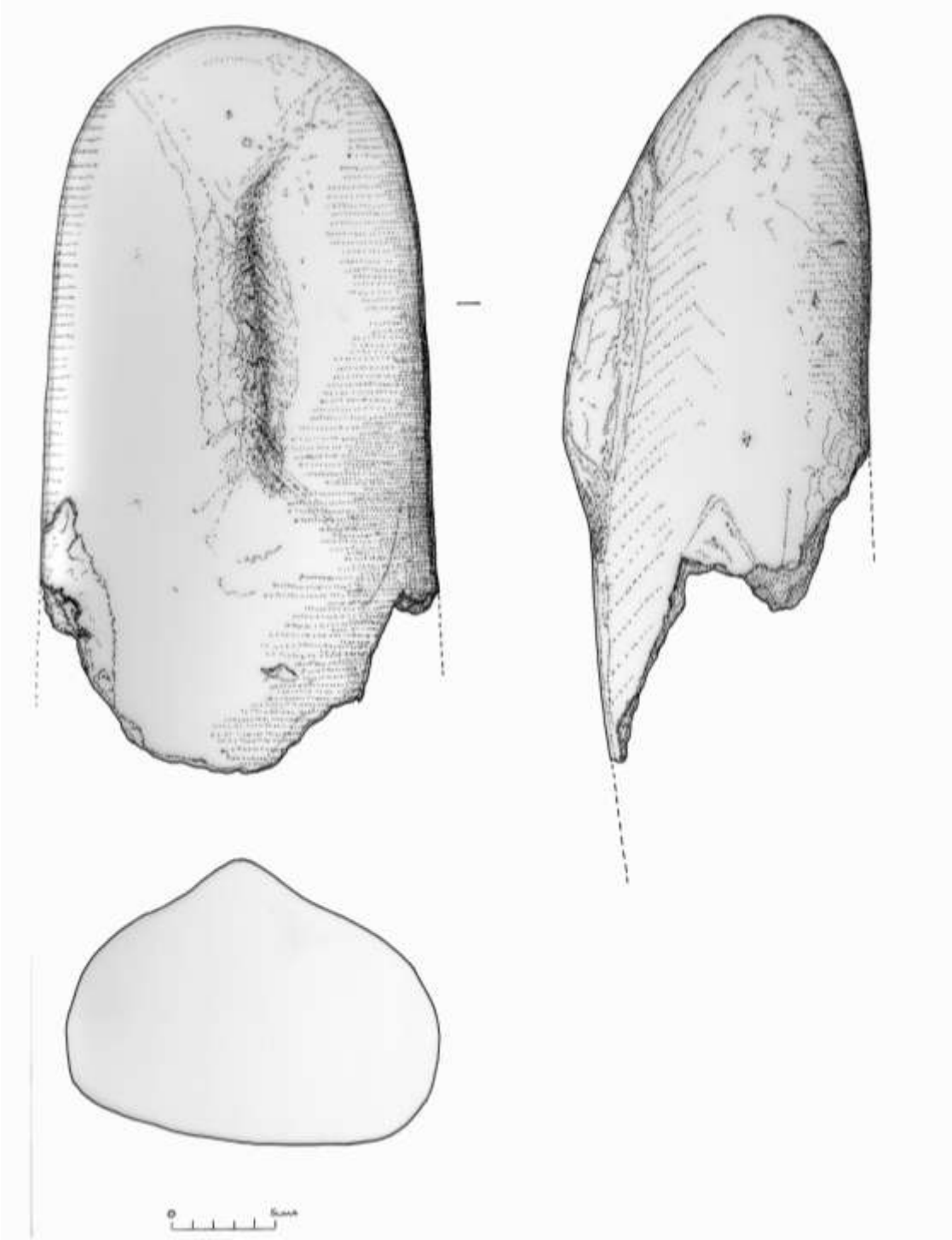


Figure 5.77: Area B surface anthropomorphic stone fragment (EDM 88007). Drawing by Caroline Hebron.

This anthropomorphic stone fragment was found on the surface of Area B. No other data were recorded regarding its context.

2004 EXCAVATIONS: AREA C

GRAVE 701

Unlike the other anthropomorphic stones presented here, that found in Grave 701 might not have been deliberately shaped (EDM 88331). The stone is relatively flat. About 6.5 centimeters below the crown, the piece contracts to give the appearance of shoulders. It is about 17 centimeters broad at about the shoulder point, and just eight centimeters broad near the crown. The base tapers to a rough point which may have been set in the earth (Figs. 5.78-5.81).



Figure 5.78: The Grave 701 anthropomorphic stone (EDM 88331).



Figure 5.79: The Grave 701 anthropomorphic stone (EDM 88331).



Figure 5.80: The Grave 701 anthropomorphic stone (EDM 88331), side view.

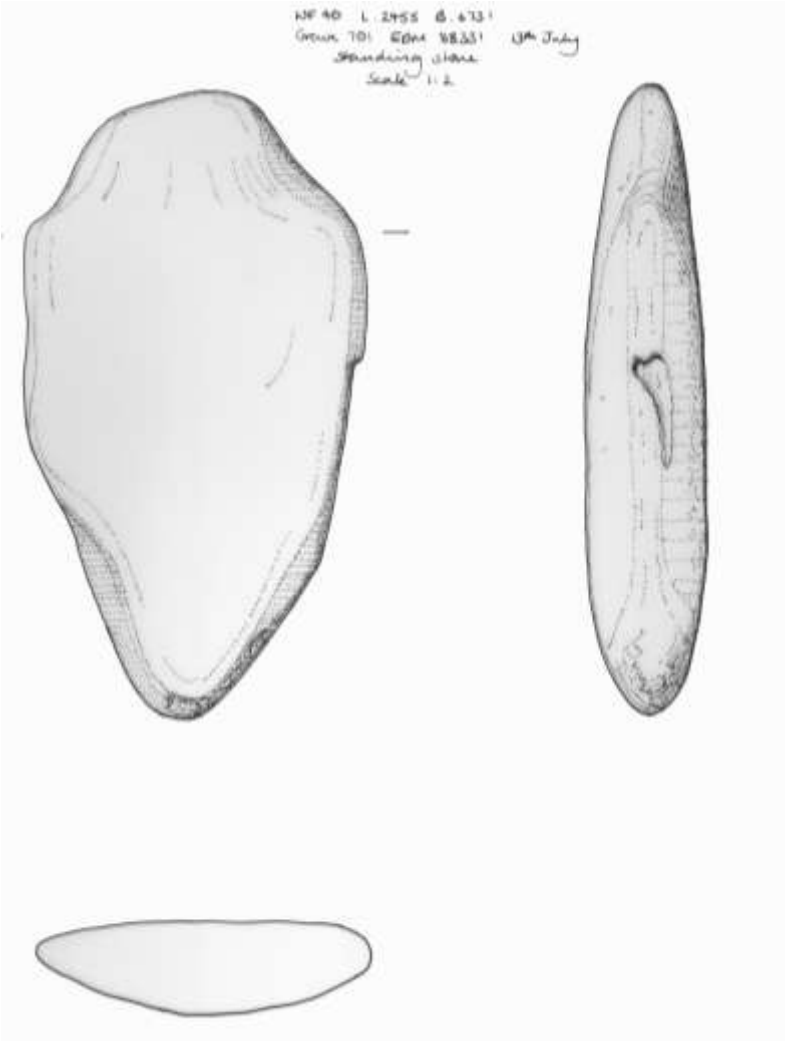


Figure 5.81: The Grave 701 anthropomorphic stone (EDM 88331). Drawing by Caroline Hebron.

This stone was found in the fill of a grave which was unusual in several respects. First, the grave was marked on the surface with unusually impressive surface architecture, including a tumulus and a double stone circle constructed of boulders (Fig. 4.363). A large number of cobbles were found within the fill, and the anthropomorphic stone was among these cobbles. The surface architecture stood over a trapezoidal cist. The southern end slab of the cist was removed in order to bury the deceased in an extended position with the head to the north—both an unusual orientation and an unusual

position for the cemetery. A shallow looter's trench was observed in the tumulus on the surface, but the capstones appeared in place. With the exception of the removal of the cist's endstone, which suggests reuse, no anthropogenic disturbances were observed in the grave below the tumulus level. The deceased is a male, 30-40 years of age. Some neonate remains were recovered from beneath the man's feet, but it is unclear whether this individual was deliberately buried with him or whether his grave disturbed the child's grave. To the west of the skull and above the right shoulder were a large number of wood fragments believed to have once been a vessel, a large number of ovicaprid bones, and fragments of pomegranates (Fig. 4.366). One of the radiocarbon dates from the cemetery came from one of the pomegranate seeds recovered here (Levy et al. 2005: 482). A carnelian bead and an unidentified piece of copper metal were also recovered from the grave.

GRAVE 703

A rounded anthropomorphic stone was recovered from Grave 703 (Figs. 5.82-5.86; EDM 88194). The stone has no artificial shoulders or ears, but a slight curvature of the rock 6.25 below the crown on the left, and 7.224 on the right may have been construed as representing such. The circumference of the stone here is about 40 centimeters. The stone is notably anthropomorphic because of the presence of a stylized nose. The remaining nose is 5.890 long, but is broken away at the top. The top part of face, extending across nose, is effaced almost to crown. The nose is 2.387 wide, and rises 0.487 above the surrounding rock. The front and back of the stone are both convex, making a roughly elliptical section (Figs. 5.85, 5.86). The stone's right side angles in to a

rough point 11 centimeters from the bottom; this was likely buried to give the stone stability.



Figure 5.82: The Grave 703 anthropomorphic stone (EDM 88194).



Figure 5.83: The Grave 703 anthropomorphic stone (EDM 88194), top view.



Figure 5.84: The Grave 703 anthropomorphic stone (EDM 88194), side view.



Figure 5.85: The Grave 703 anthropomorphic stone (EDM 88194), side view.

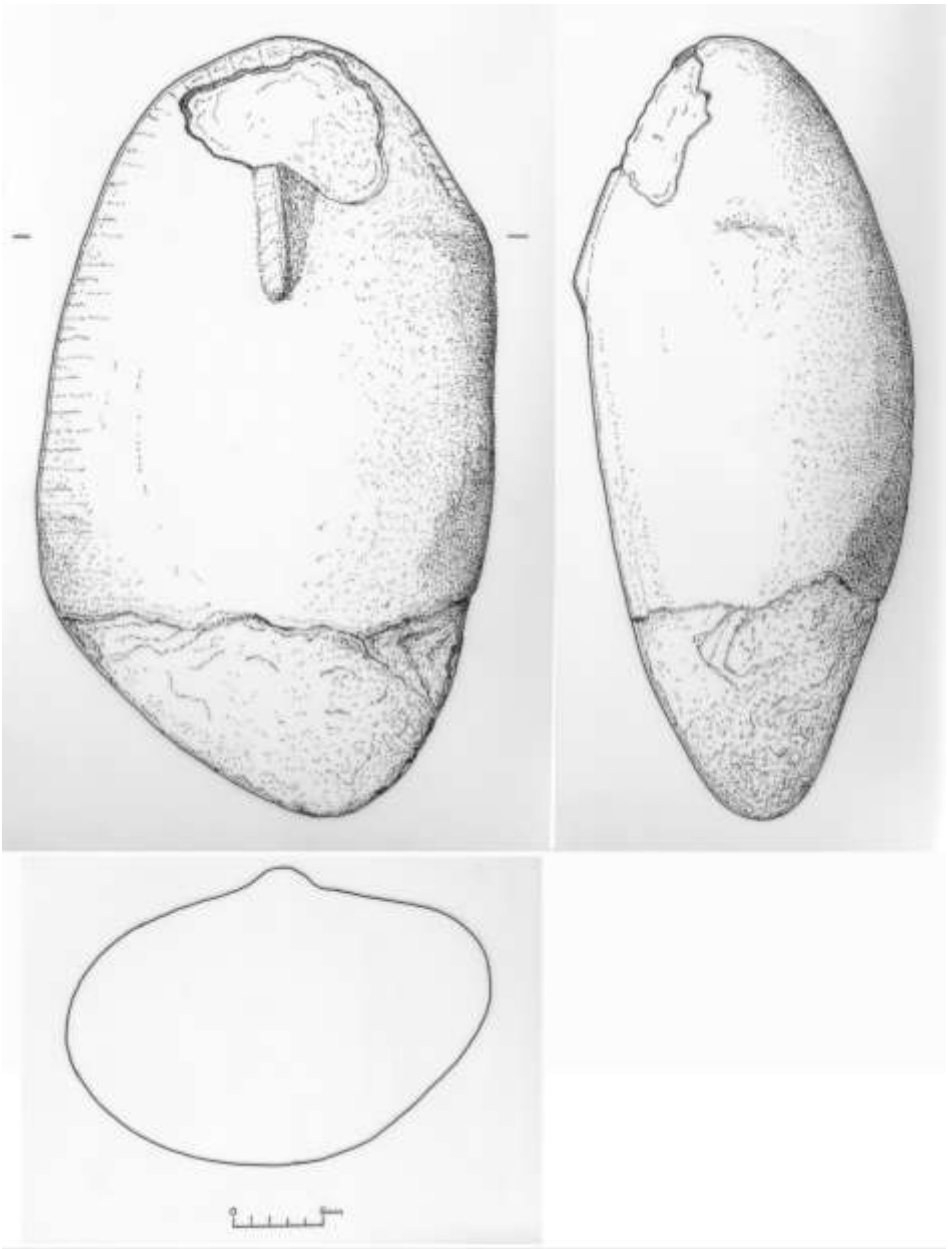


Figure 5.86: The Grave 703 anthropomorphic stone (EDM 88194). Drawing by Caroline Hebron.

Grave 703 was recognized on the surface of Area C by the only mortuary structure of its kind recorded at Wadi Fidan 40 (Levy et al. 2005: 463), a rectangular alignment of large cobbles of various stones measuring about four meters long and two meters wide (Fig. 4.369). Only a few scattered cobbles were visible in the western half of the structure. However, the eastern half contained the grave circle of Grave 703, a

complete circle measuring 1.50 meters in diameter and constructed of sixteen dolerite cobbles (L. 2413). Beneath a level of fill (L. 2419), a second, larger stone circle constructed of larger cobbles was also observed after clearing some of the fill. This larger circle circumscribes the circle visible on the surface, and was set at a lower elevation, passing beneath the rectangular installation. Paving stones between the two stone circles survive in the west, suggesting both may have predated the rectangular structure (Fig. 4.370). About one third of the area within the interior circle contained an intact pavement of five small and nine large flat dolerite cobbles (L. 2426). The fill below the level of this pavement, particularly in the region where no pavement survived, was dense with cobbles (L. 2431). Among these cobbles was the anthropomorphic stone (EDM 88194), apparently thrown into the grave either during the act of looting or by those who resealed the grave (Figs. 5.87-5.91). Excavation beneath these revealed two limestone capstones in place covering a cist. A gap between the capstones was filled with cobbles which extended into the cist and showed that the grave had been looted in antiquity, and fragmentary adolescent or juvenile remains were the only human remains recovered from the grave. No other artifacts were recovered from the grave, but the cist was not completely excavated.



Figure 5.87: The Grave 703 anthropomorphic stone as found, next to north arrow (EDM 88194). Note the relationship to other mortuary architecture.



Figure 5.88: The Grave 703 anthropomorphic stone as found, next to the north arrow (EDM 88194). Note the relationship to other mortuary architecture.



Figure 5.89: The Grave 703 anthropomorphic stone as found, next to north arrow (EDM 88194). Note the relationship to other cobbles and boulders thrown into the grave fill.



Figure 5.90: The Grave 703 anthropomorphic stone as found, in the center of the photograph (EDM 88194). Note the relationship to other cobbles and boulders thrown into the grave fill.



Figure 5.91: The Grave 703 anthropomorphic stone as found, next to the north arrow (EDM 88194). Note the relationship to other cobbles thrown into the grave fill.

GRAVE 712

Two anthropomorphic stones were found in association with Grave 712. One was associated with the surface architecture (EDM 88407), and one was buried in the fill (EDM 88517).

88407

The largest standing stone discovered was found upside-down as part of a complex surface installation connected with Grave 712. It measures 81 centimeters by 37 centimeters by 16.5 centimeters. It was weighed using an ordinary bathroom scale and found to weigh approximately 91 kilograms. It resembles Grave 701's EDM 88331 in shape (Figs. 5.92-5.94). Like that stone, it has shoulders but lacks a nose. Also like that stone, it may simply be a mostly unworked stone utilized because of its vaguely

anthropomorphic outline. The artifact has one flat side and one apparently natural convex side. A slight ridge runs down the back, thickening towards the base of the stone. The stone begins to taper inwards 32 centimeters before base. The image is slightly lopsided, with the right shoulder starting about 13 centimeters below the crown while the left shoulder is only 10.5 centimeters below the crown. The left shoulder is partially broken. The flat surface is flaking about midway down, with the flaking extending around the circumference of the figure onto the convex surface. Part of the convex surface appears pecked.



Figure 5.92: One of the Grave 712 anthropomorphic stones (EDM 88407).



Figure 5.93: One of the Grave 712 anthropomorphic stones (EDM 88407).



Figure 5.94: One of the Grave 712 anthropomorphic stones (EDM 88407), side view.

THE INCISED STONE

One incised stone was found (EDM 88473, Table 5.4; Figs. 5.95-5.97). It measures 50 centimeters wide, 38 centimeters tall, and 16 centimeters thick. The incisions consist of one deeply incised line running vertically across the stone's face on the viewer's right and two deeply incised lines forming a rough arc or semistraight line on the viewer's left. Three deeply incised lines and three much shallower, nearly invisible incised lines connect these two features. The other side of the rock is convex and has no incisions. Both sides of the rock are rounded. The arc is about 19 cm from the left of the stone. There is pitting to the incised surface, to the left and above the incisions.

Table 5.4: The incised stone.

EDM	Basket	Area	Grave	Locus	Sex	Age	Context	Length (cm)	Width (cm)	Thickness (cm)
88473	6842	C	712	2491	n/a	20-50, Infant	Grave fill	50	38	16

A more detailed description of the incisions is as follows: 10.905 centimeters from side of the stone which was at the viewer's right as it was found there is a relatively straight horizontal line, 23 centimeters long and 0.197 centimeters deep, ending in small depressions either side. The depression towards the artifact's bottom was 1.357 centimeters in diameter, while the depression at the top of the line was 0.914 centimeters in diameter. Three deeply incised lines extend at roughly right angles perpendicular to this line. One, 0.053 centimeters deep, starts 7.694 from the bottom of the line, and extends perpendicularly after 11.200 centimeters. The second deeply incised line, 0.166 deep, starts 11.423 centimeters up the line from the same point, and extends perpendicularly after10.982 centimeters. A small segment of the line is very faint,

extending 0.908 to the right of the line. The third deeply incised line, 0.176 centimeters deep, starts 16.148 centimeters up the line from the same point, and extends 15.429 to the left of the vertical line. This line actually crosses the vertical line, with a small tail extending 1.753 centimeters to the right of the line. A fourth, much shallower line, also crosses this vertical line, at a point 20.644 centimeters up the line from the same point. This line is only 0.052 centimeters deep, and extends 2.672 centimeters to the left of the line and 1.385 centimeters to its right. Each of these lines is subtly fainter as it extends away from the vertical line and towards the arc opposite. There are also two even shallower lines—too shallow to measure—also extending from this horizontal. The first, 12.893 centimeters long, is 4.468 centimeters from the top end of the left vertical line. The second, barely discernable line is 10.557 centimeters long and 6.162 centimeters from the top end of the same line. Other scratch marks between the deeply incised lines may or may not be accidental. Another deeply incised line, 0.110 centimeters deep, parallel to the horizontal, starts almost at the stone's edge and extends 6.657 centimeters, to just 3.600 cm above the start of the main vertical line. Finally, two deep lines form a rough unconnected arc 2.696 centimeters above the lowest extending vertical lines. One starts almost at the right edge of the stone and is 7.102 centimeters long. After a 3.421 centimeter gap, a second line extends 8.800 centimeters. There are numerous other scratches on this face of the rock, but they seem accidental and most are very shallow.



Figure 5.95: The incised stone (EDM 88473).



Figure 5.96: Close-up of the incisions on the incised stone (EDM 88473).



Figure 5.97: Negative image of the incisions on incised stone (EDM 88473).

The impression of an observer looking at the stone is a rectangular space divided into three segments. As Area A supervisor Adolfo Muniz pointed out, it is reminiscent of the stamp seal found in Grave 91, which Stefan Münger (in press) notes is not actual writing, but is probably meant to allude to the hieroglyphic name of the god Amun. It would be speculation based on speculation to suggest that the incised stone is also a reference to Amun. However, this hypothesis should be borne in mind as new finds are unearthed regarding religion and burial in this area at this time.

The incised stone (EDM 88473) and the large anthropomorphic standing stone (EDM 88407) were both found built into the surface architecture of Grave 712. Grave 712 was visible on the surface as a large stone circle circumscribing a smaller stone circle. A few flat stones which appear to be a relict pavement were found between the two stone circles. Excavation revealed a second pavement circumscribed by the interior circle. This pavement was at a lower level than the relict pavement between the two

circles. The anthropomorphic stone was found resting on the pavement on the east side of the interior circle. Since the features interpreted as shoulders were found pointing downwards, with the head resting on the pavement, it is believed that this stone was found upside down. It is believed that it once stood just outside the interior circle. The incised stone was built into the interior circle in the west, opposite the anthropomorphic stone, with the incised face pointing into the circle. It should be noted that the incised stone would not have been visible to an observer unless he or she were standing very close over the paved pit. Libations may have been poured over it into the pit, but again this is speculation.



Figure 5.98: Grave 712 before the interior pavement was uncovered.



Figure 5.15: Grave 712 surface architecture. Note the anthropomorphic stone (EDM 88407) appears to be upside down.



Figure 5.100: Grave 712 surface architecture, from above.



Figure 5.101: Grave 712 surface architecture. The large anthropomorphic stone (EDM 88473) is in the bottom left hand corner. The incised stone (EDM 88517) is in the upper center of the photo.



Figure 5.102: The incised stone, *in situ*.

88517

A second anthropomorphic stone, the smallest in the sample, was also found in association with Grave 712 (EDM 88517). This stone is convex, bulbing outwards on the face (Figs. 5.103-5.107). The anthropomorphic feature of this stone is a nose-like ridge that begins about four centimeters below the crown and continues for about nine centimeters. The artifact widens towards the base, such that it is only 11.25 centimeters wide in the nose region, but 15 centimeters wide near the base.



Figure 5.103: One of the Grave 712 anthropomorphic stones (EDM 88517).



Figure 5.104: One of the Grave 712 anthropomorphic stones (EDM 88517), back view.



Figure 5.105: One of the Grave 712 anthropomorphic stones (EDM 88517) , side view.



Figure 5.106: One of the Grave 712 anthropomorphic stones (EDM 88517), side view.

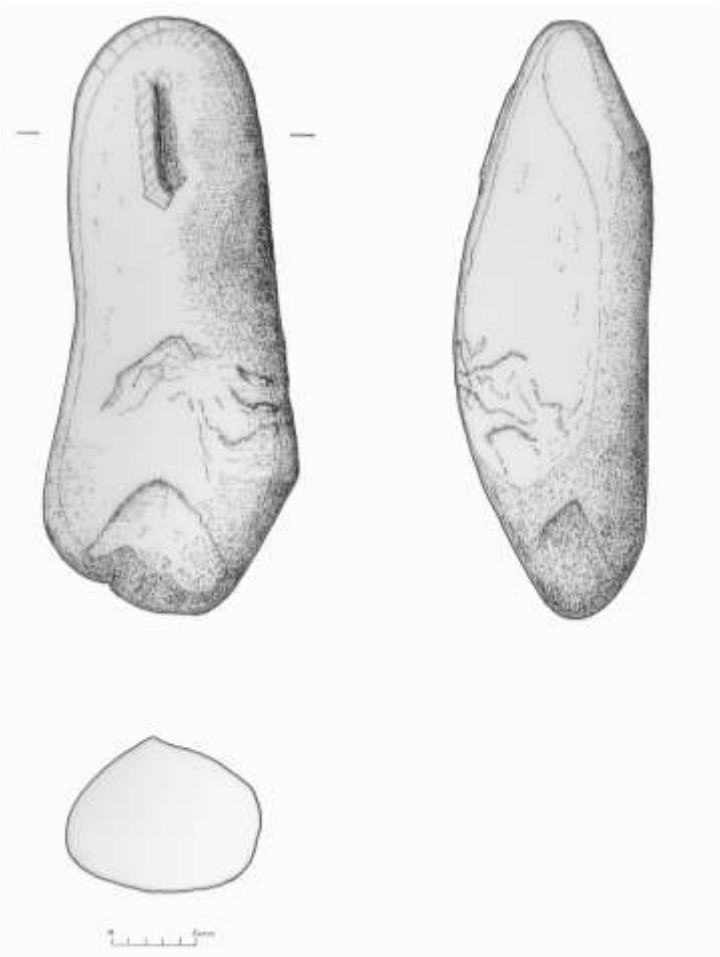


Figure 5.107: One of the Grave 712 anthropomorphic stones (EDM 88517). Drawing by Caroline Hebron.

This stone was found buried face-up beneath the pavement of Grave 712. It was buried with head oriented north (Figs. 5.108-5.110). It is possible that libations were poured into the pit, which would then gradually seep through the pavement and over this stone. Subsequent excavation showed that the pavement lay above a trapezoidal cist. The cist was looted in antiquity, and very little skeletal material was recovered from the cist. What remains were recovered were scattered throughout the cist fill. They were later identified as the remains of an adult (probably a young to middle adult) and a few fragments of an infant's bones. It is interesting that the smallest and the largest anthropomorphic stones in the sample were found in association with the same grave. The fact that both adult and infant bones were found in this grave may or may not be significant.



Figure 5.108: The smaller of the Grave 712 anthropomorphic stones (EDM 88517), as found.



Figure 5.109: The smaller of the Grave 712 anthropomorphic stones (EDM 88517), as found.



Figure 5.110: The smaller of the Grave 712 anthropomorphic stones (EDM 88517), as found.

GRAVE 731

Two anthropomorphic stones were recovered from Grave 731 (EDM 88366, 88371).

88366

The first anthropomorphic stone recovered in the fill of Grave 731 was recognizable due to its finely worked nose and prominent shoulders. The nose is 6.1 centimeters long, and at its widest is 2.2 centimeters wide. The nose bulbs slightly in the center; it is 1.6 centimeters wide at the top and 1.8 centimeters wide at the bottom. The left shoulder begins about eight centimeters below the crown and extends about 4.5 centimeters from the rest of the stone. The left shoulder is about seven centimeters below the crown and about four centimeters from the rest of the stone. The back of the stone is slightly concave, and the front is slightly rounded. Clear signs of pecking are visible on the face of the stone.



Figure 5.111: One of the Grave 731 anthropomorphic stones (EDM 88366).



Figure 5.112: One of the Grave 731 anthropomorphic stones (EDM 88366), back view.



Figure 5.113: One of the Grave 731 anthropomorphic stones (EDM 88366), side view.



Figure 5.114: One of the Grave 731 anthropomorphic stones (EDM 88366).



Figure 5.115: One of the Grave 731 anthropomorphic stones (EDM 88366), top view.

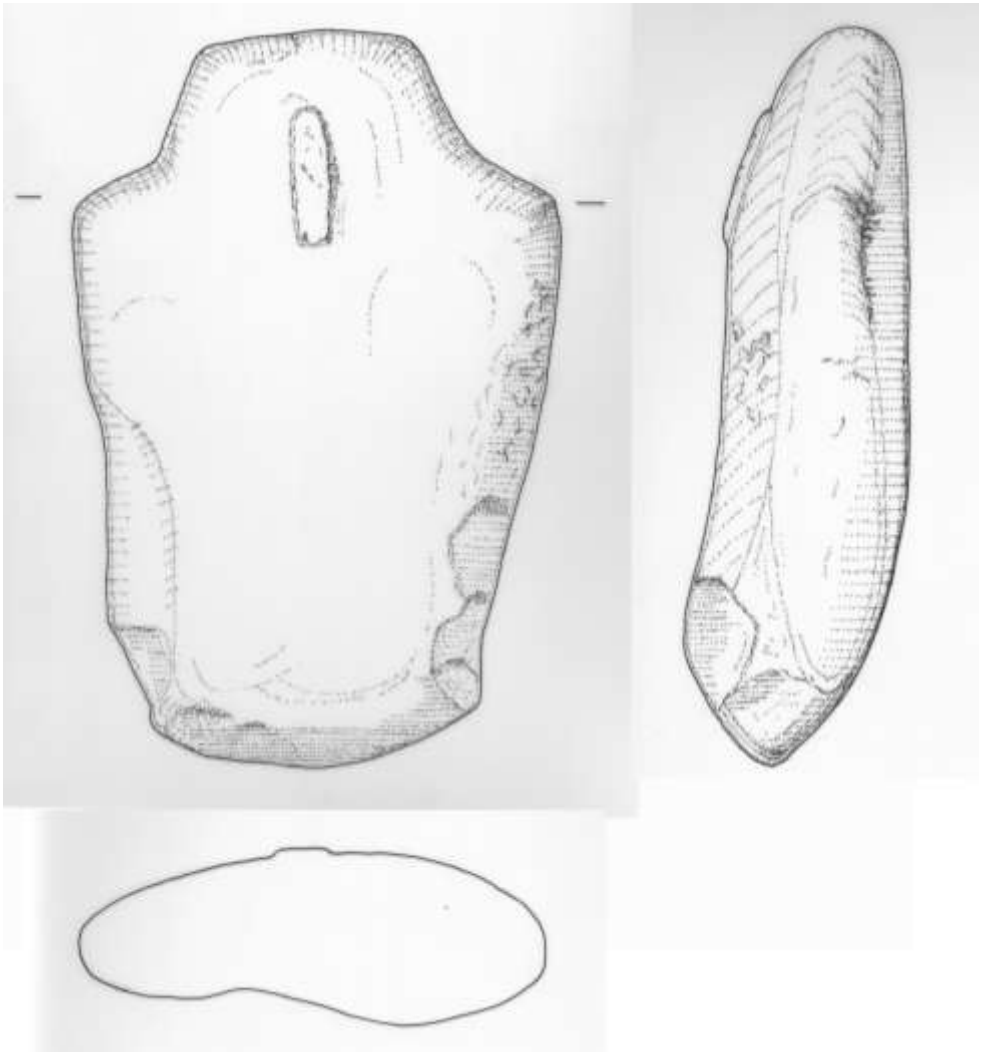


Figure 5.116: One of the Grave 731 anthropomorphic stones (EDM 88366). Drawing by Caroline Hebron.

88371

A second, more rounded anthropomorphic stone was also found in Grave 731 (EDM 88371). This rounded anthropomorphic stone resembles the two stones found east of Area C, EDM 86017 and 70337, though it is not as finely worked as the latter. It is a very rounded wadi boulder with nose and ears carved into narrower end (Figs. 5.117-5.123). The nose starts at the end of the slightly sloping forehead, about 2.25 cm below crown. The nose is about 8.205 cm long, 1.843 wide at the bottom, rising to 0.274 centimeters above the surrounding rock. The shoulders are actually made by carving depressions into the stone. The figure's right shoulder is about 0.364 deep, while the figure's left shoulder is about 0.835 centimeters deep. Because the stone is tapering at this point, the result appears to be shoulders—positive projections rather than negative space. At the shoulders, the stone is 21 centimeters across and 60 centimeters in circumference. At the cut place just above shoulders, the stone is just 53 centimeters in circumference. Both shoulders start about 11 centimeters below the crown. The nose extends about 4.186 cm below shoulders. The piece is at thickest just six centimeters from base. There is some slight battering near base.



Figure 5.117: One of the Grave 731 anthropomorphic stones (EDM 88371).



Figure 5.118: One of the Grave 731 anthropomorphic stones (EDM 88371), close-up of "face."



Figure 5.119: One of the Grave 731 anthropomorphic stones (EDM 88371), back view.



Figure 5.120: One of the Grave 731 anthropomorphic stones (EDM 88371), side view.



Figure 5.121: One of the Grave 731 anthropomorphic stones (EDM 88371), side view.



Figure 5.122: One of the Grave 731 anthropomorphic stones (EDM 88371), top view.

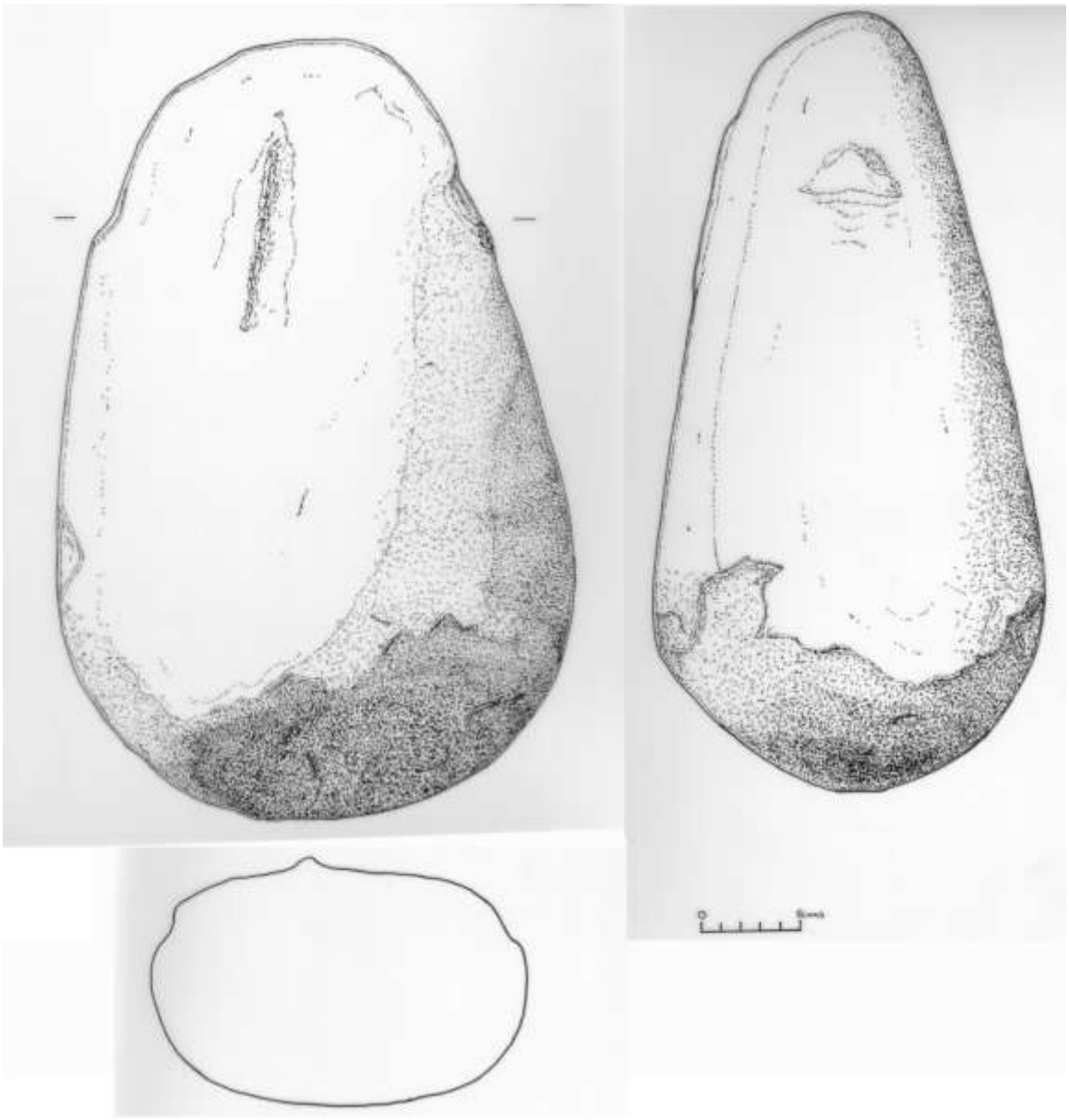


Figure 5.123: One of the Grave 731 anthropomorphic stones (EDM 88371). Drawing by Caroline Hebron.

These stones were both found in the rocky fill above the capstones of Grave 731. Grave 731 was invisible on the surface and showed clear signs of being looted in antiquity. Capstones were displaced and fragmentary remains were found scattered throughout the excavated portion of the trapezoidal cist. One of the anthropomorphic stones was found at about the level of the capstones (EDM 88366; Figs. 5.124-5.125).

The human remains were determined to be those of a young adult, probably a female judging by the gracile mastoid process. Seven beads and pendants (one agate, one cupric stone, and five amazonite) were found in the cist.



Figure 5.124: One of the Grave 731 anthropomorphic stones as found (EDM 88366), next to north arrow.



Figure 5.125: One of the Grave 731 anthropomorphic stones as found (EDM 88366).

2004 EXCAVATIONS: EAST OF AREA C

Two standing stones were recovered from the surface between Area C and Area E during the 2004 field season. Both were collected and recorded by the Area A staff. Neither was linked to a grave in the field.

70337

This anthropomorphic standing stone was found on the surface to the east of Area C (EDM 70337). It most closely resembles EDM 88371 and EDM 86017. It is ellipsoid, with its head carved at the narrower arc of the ellipse, and measures approximately 41 centimeters by 28 centimeters by 19 centimeters (Figs. 5.126-5.130). The nose is particularly well-defined, broad and flat, about eight centimeters long and two centimeters wide, rising to about one third of one centimeter above the rock. The nose starts about four centimeters below the crown and continues to about 2.5 centimeters below the shoulders. The shoulders start about ten centimeters below the crown and were formed by removing stone from above and just below them. The sides below the shoulders down to the base appear pecked.

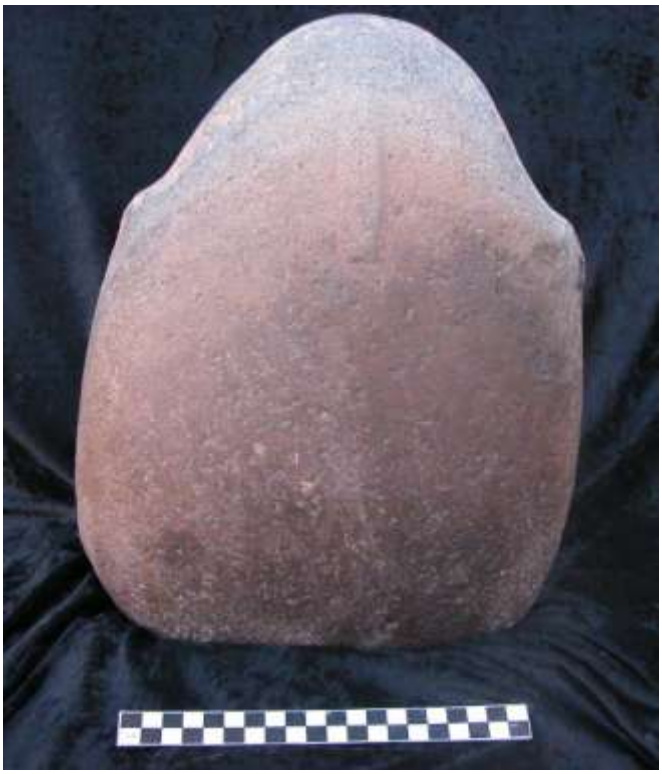


Figure 5.126: One of the anthropomorphic stones found east of Area C (EDM 70337).



Figure 5.127: One of the anthropomorphic stones found east of Area C (EDM 70337), side view.



Figure 5.128: One of the anthropomorphic stones found east of Area C (EDM 70337), side view.



Figure 5.129: One of the anthropomorphic stones found east of Area C (EDM 70337), top view.

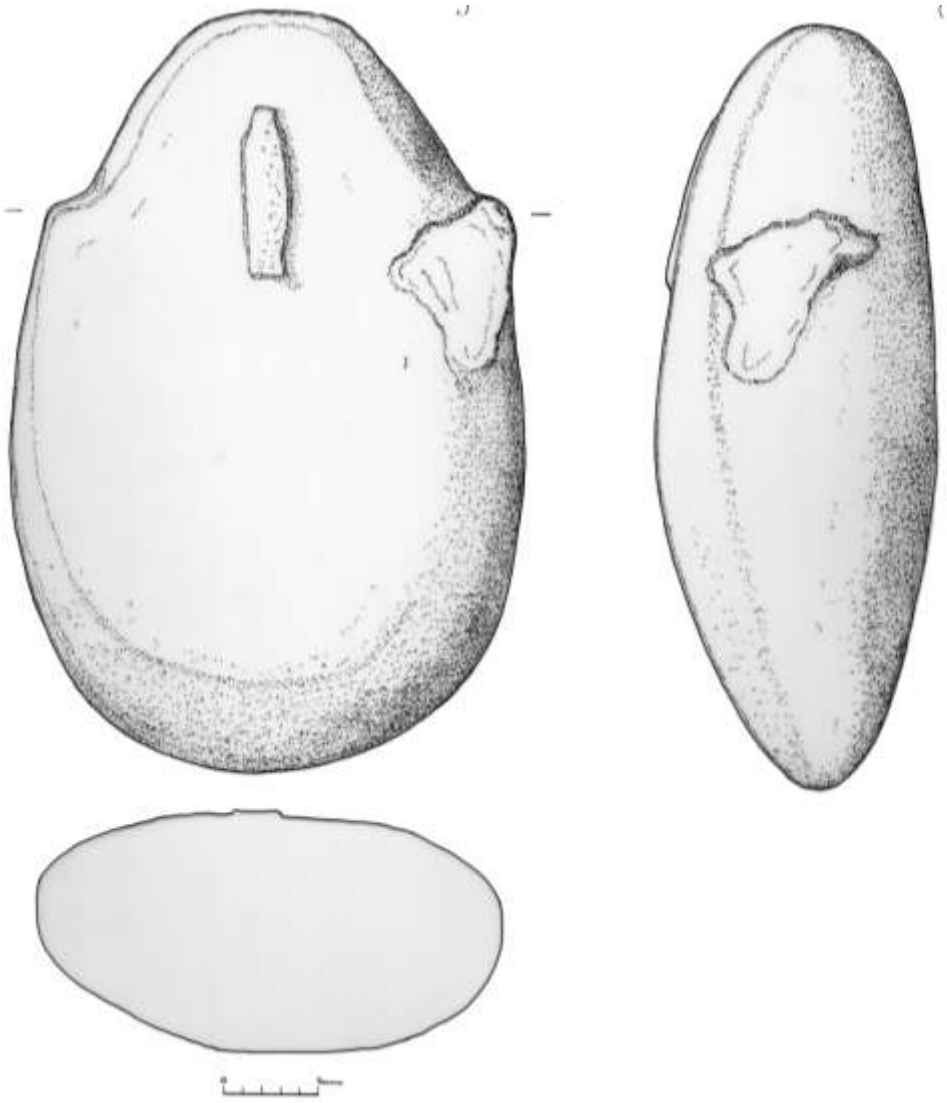


Figure 5.130: One of the anthropomorphic stones found east of Area C (EDM 70337). Drawing by Caroline Hebron.

86017

This irregularly-shaped standing stone was found on the surface east of Area C, and was recorded by Area A's staff (EDM 86017). Measuring 29 centimeters by 23 centimeters by 13 centimeters, it is nearly as broad as it is tall. It most closely resembles EDM 88371 and then EDM 70337, but is not as well worked as the latter, apparently like EDM 88371 conforming more closely to the natural shape of the stone (Figs. 5.131-

5.135). One ear starts about five, and the other about six, centimeters below the crown, giving the piece a lopsided appearance. The nose also starts about five centimeters below the crown and extends to about 12.5 centimeters below the crown.



Figure 5.131: One of the anthropomorphic stones found on the surface east of Area C (EDM 86017).

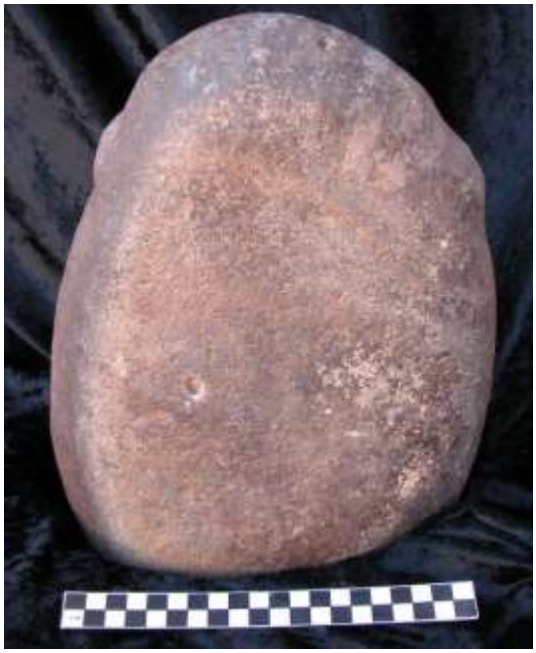


Figure 5.132: One of the anthropomorphic stones found on the surface east of Area C (EDM 86017), back view.



Figure 5.133: One of the anthropomorphic stones found on the surface east of Area C (EDM 86017), side view.



Figure 5.134: One of the anthropomorphic stones found on the surface east of Area C (EDM 86017), side view.

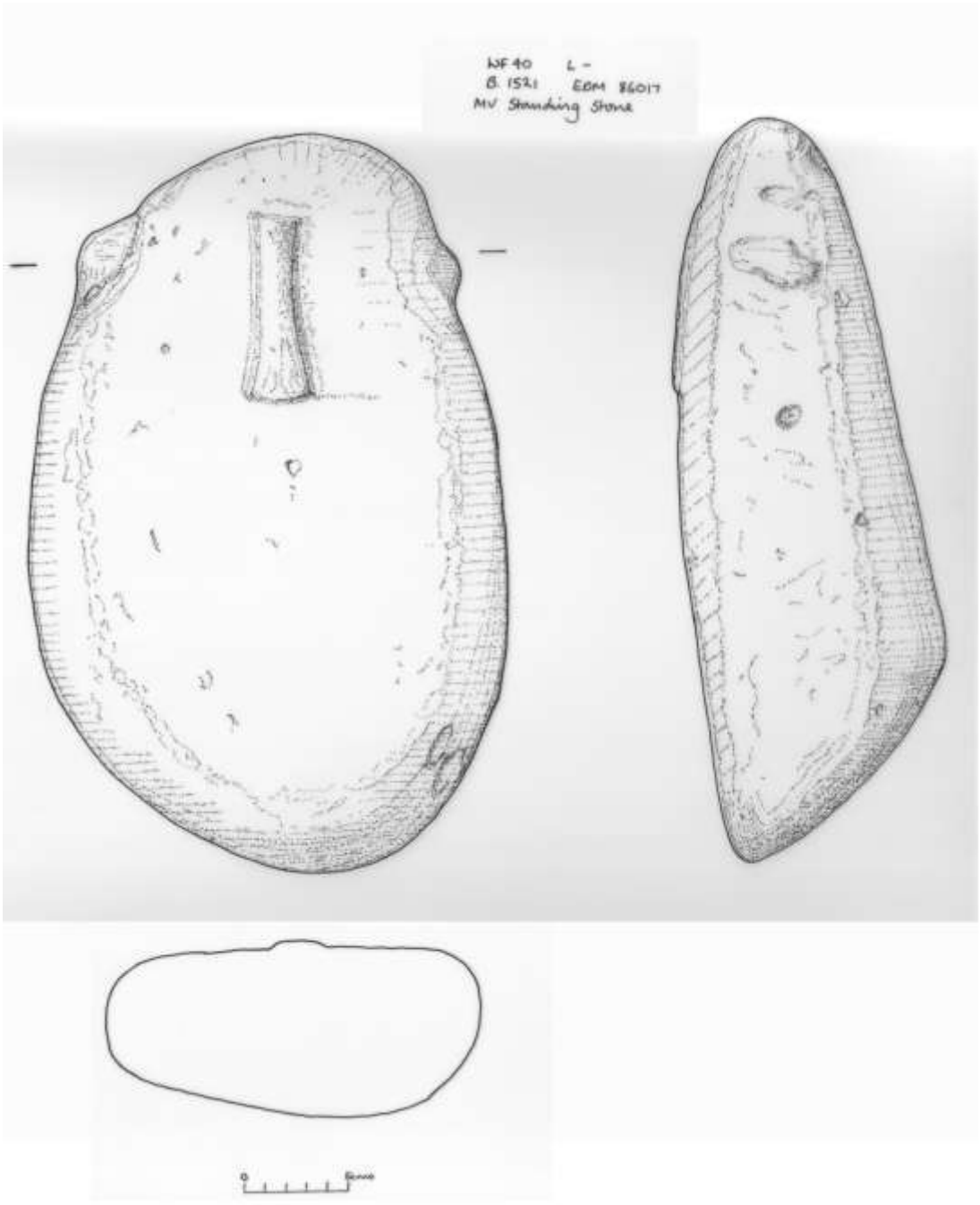


Figure 5.135: One of the anthropomorphic stones found on the surface east of Area C (EDM 86017). Drawing by Caroline Hebron.

DOUBTFUL "STANDING STONES"

In addition to the standing stones described above, eleven other stones appear in the field notes described as standing or anthropomorphic stones (Table 5.5). Some of these were also collected. Some were not completely documented, and therefore should not appear in this analysis. Others bear no anthropomorphic traits and were found in a context which does not allow them to be considered a standing stone. One example (EDM 80554), though described as anthropomorphic in the field, on closer examination does not appear to bear anthropomorphic features. Because of their doubtful natures, these stones are not included in this analysis. However, for the sake of completeness and to provide for posterity, they are described below.

Table 5.5: Stones reported as standing stones in field notes but found to be doubtful on analysis.

EDM	Basket	Area	Grave	Locus	Sex	Age	Context	Length (cm)	Width (cm)	Thickness (cm)
N/A	N/A	E	206	U*	Unk.	Unk.	U	U	U	U
N/A	N/A	E	213	1513	Unk.	Unk.	Surface feature	U	U	U
N/A	N/A	E	240	1657	Unk.	Unk.	Surface feature	U	U	U
N/A	N/A	E	240	1657	Unk.	Unk.	Surface feature	U	U	U
80554	2467	E	0	0	Unk.	Unk.	Surface (none)	42.5	21	9
87042	3087	A	5-2004	3121	Unk.	Adult	Cist fill			
87257	4682	B	500	2221	Unk.	Unk.	Grave fill	49	27	21
87135	4598	B	506	2225	Unk.	20-35	Fill	70	33	30
90549	n/a	B	511	2243	n/a	20-50	Human remains	n/a	n/a	n/a
N/A	2427	C	709	2427	No remains	No remains	Surface	47	34	5.5
N/A	N/A	C	726	2563	Unk.	Adult	Capstones	U	U	U

U=Unrecorded.

2003 FIELD SEASON: AREA E

GRAVE 206

The computerized grave sheet mentions a standing stone being found in this grave, but no other information could be found regarding this stone. A sandstone slab that appears to be another capstone is visible in excavation photos standing on edge, and a number of cobbles were observed in the fill above and about the level of the capstones (Fig. 4.108). Such upended capstones are often referred to as "standing stones" in the notes, and it is presumed that the grave sheet stone is this upturned capstone.

GRAVE 213

The supervisor's journal notes that a possible standing stone was observed either in the middle of the grave circle or within the northeast quadrant of the grave, but this could not be confirmed with site photographs (Fig. 5.136).



Figure 5.136: Grave 213 surface architecture.

GRAVE 240

Grave 240 was visible on the surface of square AC-9 as a complex stone feature (L. 1657). It was never photographed and descriptions are unclear, but it appears to have consisted of a rectangular, partially paved structure. A total of fifty-one paving stones were recorded, twenty of them said to be over the "main cist" and thirty-one east of two vertical stones (L. 1658). It is unclear whether these two stones were standing stones in the way the term is used in this chapter, were parts of mostly destroyed stone circle, or were merely displaced, upended stones.

GRAVE 244

Grave 244 was visible on the surface as a small cluster of stones, probably a disturbed grave circle. Two stones stood vertically at the north end of the grave and one stone stood vertically in what was presumed to be the center of the grave. According to the Digital Grave Database, the central stone "has the same shape as the sculptured standing stones." Three large flat stones surrounded this stone and may be pavement remnants. No other details were recorded regarding this stone, and no photographs were taken. There is therefore not enough information to determine whether this was a standing stone in the way the term is used in this chapter, whether this was part of the surface architecture and not an independent standing stone, or whether this was a stone inadvertently left on end by the grave's looters, although the first option seems most likely. Beneath this feature was a secondary burial and a trapezoidal cist containing a disturbed, fragmentary burial. Also recovered from the cist was an alabaster bead and marine shell fragments.

NO GRAVE

On August 26, 2004, the discarded stone piles at Wadi Fidan 40 were searched for anthropomorphic stones. Five stones were collected that day (80552, 80553, 80554, 80555, 80556). One of these was later united with Grave 223 (EDM 80518), while the other four remained without context. I judged one of these stones, though considered anthropomorphic in the field, to be too inconclusively worked to be classed among the anthropomorphic stones considered in this analysis (EDM 80554).

The stone was collected during the sweep of the project's discarded cobbles apparently because of its shoulder-like features and a low ridge reminiscent of the anthropomorphic stones' noses (Figs. 5.137-5.140). The stone is vaguely shaped; probably not intentionally worked. The nose-like ridge measures 7.785 cm long and about 2.197 wide, barely projecting above surrounding stone. It is clearly discernable 5.880 below the crown, but the stone is battered here and the ridge seems to continue subtly almost to the crown. The figure's right shoulder is about 5 cm below crown; the left shoulder starts 5.5 cm below crown but partially broken away. The surviving, right shoulder-like protrusion extends about 1.7 cm from side. The battered left shoulder-like protrusion extends about the same distance. Although the side with the "face" is rounded, the other side is mostly flat and is flaking away. The stone tapers at both sides. The bottom of the stone tapers inward in a fashion which would facilitate standing. The stone's width is at widest 16 centimeters below crown, where the base begins to taper inward. The width at shoulders is about 14 cm, and the circumference 36 centimeters at the widest, 23.5 centimeters immediately above shoulders.



Figure 5.137: The doubtfully anthropomorphic stone (EDM 80554).



Figure 5.138: The doubtfully anthropomorphic stone (EDM 80554).



Figure 5.139: The doubtfully anthropomorphic stone (EDM 80554).



Figure 5.140: The doubtfully anthropomorphic stone (EDM 80554).

2004 FIELD SEASON: AREA A

GRAVE 5-2004

An unworked dolerite cobble was recovered from the badly looted cist of this grave as a possible aniconic standing stone (EDM 70042). The stone is taller than it is wide and resembles the aniconic standing stones found in surface features, but as the stone is unworked and was not found standing there is no reason to class it as a standing stone. The stone was found associated with the broken and scattered remains of an adult in a cist full of sediment and other dolerite cobbles. It may have once served as a standing stone, but such cannot be assumed.



Figure 5.141: The stone collected from Grave 5-2004 (EDM 70042).



Figure 5.142: The stone collected from Grave 5-2004 (EDM 70042).



Figure 5.143: The stone collected from Grave 5-2004 (EDM 70042).

2004 FIELD SEASON: AREA B

GRAVE 500

One dolerite cobble, interpreted as a standing stone, was recorded in the fill of Grave 500 (EDM 87257). The stone measured 49 centimeters tall, 27 centimeters wide, and 21 centimeters thick. It was presumably collected as a standing stone because of a shoulder-like projection which mimics the shoulders of some of the anthropomorphic standing stones. However, it is not obviously worked and was found lying flat, so its use as a standing stone cannot be confirmed.



Figure 5.144: The stone collected from Grave 500 (EDM 87257).



Figure 5.145: The stone collected from Grave 500 (EDM 87257).

GRAVE 506

Grave 506 was visible on the surface of square M-12 as a stone circle composed of seven dolerite cobbles 1.40 meters in diameter (L. 2224). Excavation notes state that the circle was mostly complete, but that stones were missing in the east, though photographs show the whole feature to be disorganized. In the middle of the surface feature was a large dolerite cobble (EDM 87135), measuring 0.70 meters high, 0.33 meters wide, and 0.30 meters thick. The area supervisor believed this to be a standing stone left upside-down on the grave surface. Site photographs suggest that the stone may have been artificially smoothed, but the stone was left in the field and never properly photographed or analyzed (Fig. 5.146). It is very likely that this was a standing stone, but given that it does not appear to be in its original context it is not considered in this analysis.



Figure 5.146: Grave 506 surface architecture.

GRAVE 511

Grave 511 is a secondary burial associated with Grave 537. It has no independent grave architecture. The Grave Sheet for this grave records a standing stone, but records no measurements. The record number associated with this stone is actually a polygon, and probably actually refers to the human remains found in Grave 511 rather than to a standing stone. It is unlikely that an artifact exists, or that a standing stone was ever associated with this grave.

2004 EXCAVATIONS: AREA C

GRAVE 709

A surface feature in square O-10 was erroneously given the designation Grave 709. A dolerite boulder, apparently unworked, was observed standing on end in conjunction with a few cobbles representing what appeared to be a stone circle (Fig. 5.147-5.149; L. 2427). Excavations were expanded several times in the quest for subsurface architecture. Although one limestone slab resembling a capstone was encountered, no burial and no subsurface architecture were encountered. It remains unclear whether this was a highly disturbed grave which was not sufficiently excavated to reach the burial level, whether this was a deliberately cobble feature perhaps related to ritual but not to burial, or whether these were merely an accidental association of some of the displaced cobbles resulting from the wide-scale looting at Wadi Fidan 40.



Figure 5.147: Grave 709 surface architecture.



Figure 5.148: Grave 709 surface architecture after further excavation.



Figure 5.149: Grave 709 surface architecture from above.

GRAVE 724

A stone was collected from Grave 724 which appeared in the field to possibly carry the pecked depiction of a gazelle or even a hunting scene (Figs. 1.150, 1.151; Table 5.6; EDM 74245). When the stone was examined in 2007, most of the pale material which was interpreted as being the image appeared to in fact be accumulated sediment. Much of the gazelle was no longer visible on the stone.



Figure 5.150: The stone collected from Grave 724, believed to possibly bear the pecked carving of a gazelle (EDM 74245).



Figure 5.151: The stone collected from Grave 724, close-up of the possible pecked gazelle carving (EDM 74245).

Table 5.6: The stone reported as worked in the field, but found unlikely to be so on analysis.

EDM	Basket	Area	Grave	Locus	Sex	Age	Context	Length (cm)	Width (cm)	Thickness (cm)
74245	7252	C	724	2556	M, F	Adult	Stone circle	18	25	9

The stone was found built into the stone circle of Grave 724 (Figs. 5.152, 5.153). Several other stones in the surface architecture were photographed, presumably because they appeared in the field to bear images, but were not collected (Figs.1.154-1.156). The surface architecture lay over a trapezoidal cist which had been looted in antiquity and in which were interred the fragmentary remains of two adults, one male and one female.



Figure 5.152: Grave 724 surface architecture. The black arrow points to the collected stone (EDM 74245).



Figure 5.153: The stone collected from Grave 724, believed to possibly bear the pecked carving of a gazelle (EDM 74245), as found.



Figure 5.154: Another stone at Grave 724.



Figure 5.155: Another stone at Grave 724.



Figure 5.156: Another stone at Grave 724.

GRAVE 726

Three capstones were encountered in Grave 726, two of dolerite and one of limestone (L. 2563). The dolerite capstones did not extend across the entire cist; they were resting on the fill within the cist rather than on the cap support stones on either side. This resembles the practice observed in other cists of sealing a looted area with dolerite cobbles. At least one of the capstones was shaped much like an anthropomorphic stone (Fig. 5.157, 5.158). Though it lacked anthropomorphic features, the area supervisor suspected this one and perhaps both dolerite capstones were once in use as standing stones. The fragmentary remains of an adult were recovered scattered around the cist, and one alabaster cylinder disc bead was found associated with the grave (EDM 88899).



Figure 5.157: The dolerite capstones of Grave 726.



Figure 5.158: The dolerite capstone of Grave 726 which most resembled the anthropomorphic stones of Wadi Fidan 40.

DISCUSSION

STANDING STONES OF EDOM?

The religion of Edom remains little known. The Bible is largely silent on the issue of Edomite religion. From the Biblical evidence alone there is no reason to suppose that the Edomites did no worship Yahweh. According to Josephus the Edomites of Idumaea worshiped Qos until the second century, when John Hyrcanus I forced their conversion to Judaism (Josephus, *Antiquities*, 15.253-254; Marcus and Wikgren1963: 118-121). Epigraphic finds from Edom, the Negev, and Assyria suggest that Qos was a national deity broadly worshiped whose name appears in numerous theophoric names as early as the eighth century (Dearman 1995). However, it remains unclear when exactly Qos worship achieved its apparent ascendancy, and to what extent other gods or ancestors

were also worshiped in Edom. How worship was practiced, and how the Edomites envisioned and represented deities and divine beings, also remain unknown. To what extent standing stones would have played a role in Edomite worship is an important question archaeology might help answer.

Standing stones are surprisingly unreported in Edom and the Edomite Negev during the period of Busayra's hegemony. The available reports for most Edomite sites make no mention at all of standing stones. No standing stones were reported at the excavated sites Tawilan (Bennett and Bieknowski 1995), Barqa el-Hetiye (Fritz 2002), Khirbet al-Megheitah or Khirbet Ishra (Hart 1987), nor were any reported in the survey and test excavation at the two Ras al-Miyah fortresses (Ben-Yosef et al. 2009). Although a series of standing stones were found at Ghrareh, those in Room 1 are obviously pillars, and the excavator is no doubt correct in deducing based on their placement that the stones between Rooms 1 and 9 are "to demark space" (Hart 1988: 89) between two rooms which would otherwise be open. A possible altar at the site is some distance from either set of stones (Hart 1987). Finally, Stephen Hart's published survey reports do not mention standing stones (Hart 1986b; Hart and Falkner 1985).

The reports from Umm el-Ala (Es-Sadeh; Lindner 1992a; Lindner et al. 1988; Lindner et al. 1990), Ba'ja III (Lindner 1992a; Lindner and Farajat 1987), and Khirbat al-Mu'allaq (Lindner, Knauf, and Zeitler 1996) also do not note standing stones, and the surveys of the Sabra district do not even note any Iron Age sites (Lindner 1992b). Although the Dushara-throne in the cave there and the cut niches at Sela' (Lindner 1992a) may have served a similar purpose to standing stones, they are so like those at Petra that one suspects they are attributed to the site's Nabatean inhabitants. No true

standing stones have yet been reported at Sela' (Hart 1986a; Lindner 1992a). At Jabal al-Qseir no standing stones were observed, though there oddly shaped natural formations, possibly modified, were observed. One of these was labeled a high place (Lindner et al. 1996b: 147). However, these formations are broader than they are tall and were carved into the living rock rather than erected. They may have served as focal points or memorials with similar functions as standing stones, but they are distinct from standing stones.

A few standing stones were reported in the Jabal as-Suffaha district, which includes several Iron II sites, most notably the fortress Deraj III, the "estate" Kutle III, and the settlements Deraj I and Kutle II. However, most "are not of a cultic or sepulchral significance but the remains of stone and brushwood fences" (Lindner et al. 1998: 226). Some possible exceptions were standing stones associated with the Late Islamic site of Kutle E, which Lindner and his associates believe were equally prosaic in function (Lindner et al. 1998: 235, n. 9). Most interestingly, what may be a disturbed tomb, apparently once marked with a standing stone, worked from stone not from the vicinity, was found along the mountain ridge. A single Late Roman sherd was found nearby. Two Iron II sherds of the same vessel were found near another disturbed tomb. Both of these tombs were dug into undated house ruins (Lindner et al. 1998: 236). The reporters wisely do not attempt to date the tombs, which may belong to any or none of the mountain's three main occupation periods, Iron II, Nabataean to Byzantine, or Late Islamic. The Nabataean-Roman-Byzantine is perhaps to be favored, as the majority of the western slope dates to that period (Lindner et al. 1998: 238).

One round possible massebah was noted in the gate of the Stratum 5 fortress of En Hasevah (Cohen and Yisrael 1995: 229). Stratum 5 dates to a century or more before the possibly Edomite Stratum 4 with its associated structure interpreted by its excavators to be an Edomite shrine. Indeed, the inhabitants of the Stratum 4 city may have been responsible for felling this standing stone.

At Khirbat en-Nahas, a single standing stone was encountered during ELRAP's 2006 excavations which the excavators suggested may be cultic (Figure 5.159), though it probably should not be regarded as such. This stone was found outside the northern wall of the structure in Area F (locus 884). The Area F structure is believed primarily to have been utilitarian, involved in the metallurgical activities that dominated the site. Though the stone was found in a position making it appear to have been intentionally erected, it was found in an area of collapse. It is less likely that this was an altar or a utilitarian feature of unknown function than that it is merely a collapsed building stone.



Figure 5.159: The standing stone at Khirbat en-Nahas, Area F. Note the collapse behind the stone.

Bienkowski argues that the elite residence at Busayra may have imitated Assyrian palaces by exhibiting a standing stone in its courtyard. Citing Turner (1970), Bienkowski (2002: 199) claims, "The unplastered niche in the wall of the Busayra 'courtyard/reception room' may have been for the insertion of a stone slab, as in the principal reception suites of Neo-Assyrian residences and palaces." However, he oversimplifies Turner's argument. Turner notes the ubiquity of stelae in Neo-Assyrian palaces and the suggestions of some scholars that niches like that at Busayra—niches which are not found with standing stones—may have once held these objects. However, it is also possible that this is a form of "empty space" iconism. Standing stones are not in fact found within these niches, so the niche may take the place of a standing stone. This method of emphasizing the presence of the god through the absence of a symbol is not uncommon in the Ancient Near East (Mettinger 1995). By the Iron II, standing stones

may have been replaced in Edom by still more aniconic religious features. However, further investigation in Edom, including the excavation of religious architecture, is necessary before firm conclusions can be drawn.

Some standing stones are found in the Edomite cultic complexes in the Negev. At ‘En Hazeva, numerous ashlar stones were recovered. These, like all the cult objects, were found buried in a pit alongside deliberately broken vessels. However, the excavators suggested some may have been erected as standing stones while others were building stones (Fig. 5.160). At Horvat Qitmit a standing stone, believed to be cultic, was found in Complex B (Figs. 5.161-5.163). To its north was a small paved area. Two use phases were noted at Complex B, but the stone was first erected in the first use phase and continued unchanged in the second (Beit-Arieh 1995: 20-24). Two other lare stones were observed, one in each of the site’s low stone circular enclosures. In the southeastern end of the large enclose (L. 114), a 1.15 meter long and 0.70 meter long stone was found standing on its long end. The excavator suggested that the stone was broken and may have once stood higher (F91; Beit-Arieh 1995: 24). Next to the stone was a five meter long stone bench or altar (Fig. 5.164). In the northeastern side of the small circular stone enclosure (L. 60), a large stone, measuring 1.40 meters long and 0.70 meters wide was found next to another stone, 1.00 meters long and 0.85 meters high, which were both lying flat on their long sides (Beit-Arieh 1995: 25). These may have served as dual *masseboth.* At both ‘En Hazeva and Horvot Qitmit, these stones were roughly shaped and found in association with much more striking clay anthropomorphic vessels and statuettes.

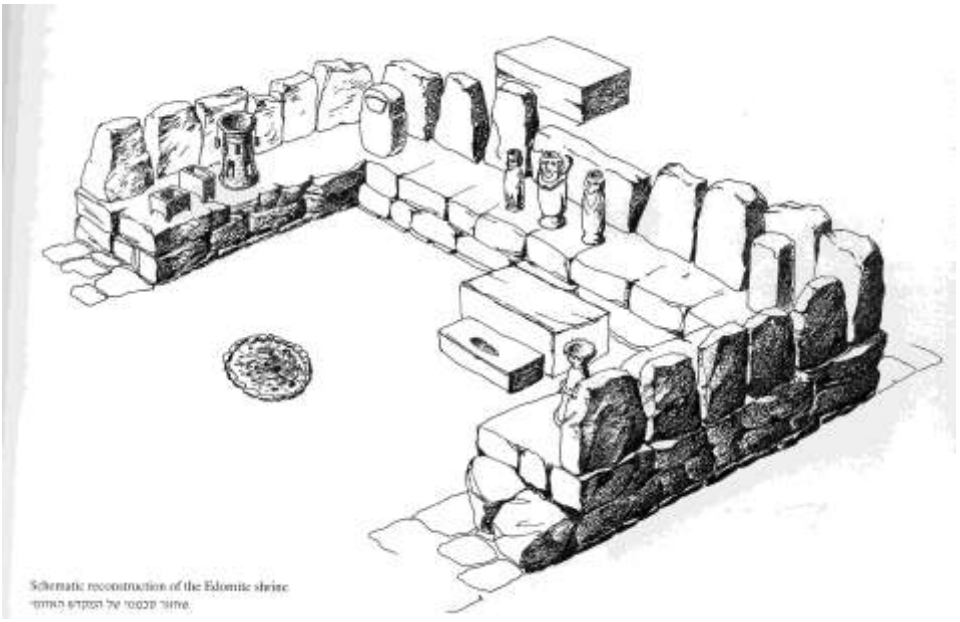


Figure 5.160: Suggested reconstruction of the cult place at 'En Hazeva (Cohen and Yisrael 1995).

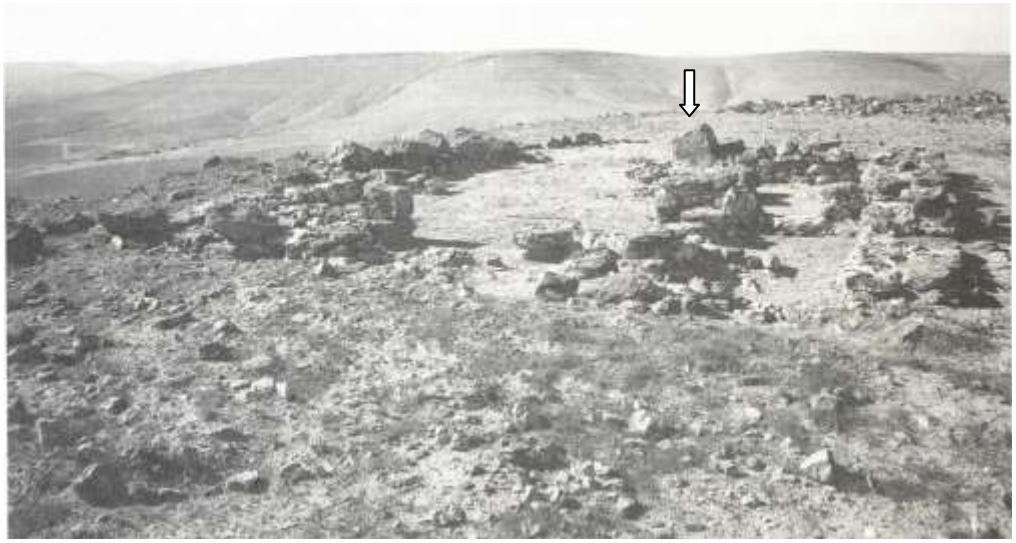


Figure 5.161: Complex B at Horvat Qitmit. Note the standing stone (arrow; Beit-Arieh 1995: 22).



Figure 5.162: The standing stone in Complex B at Horvat Qitmit (Beit-Arieh 1995: 23).

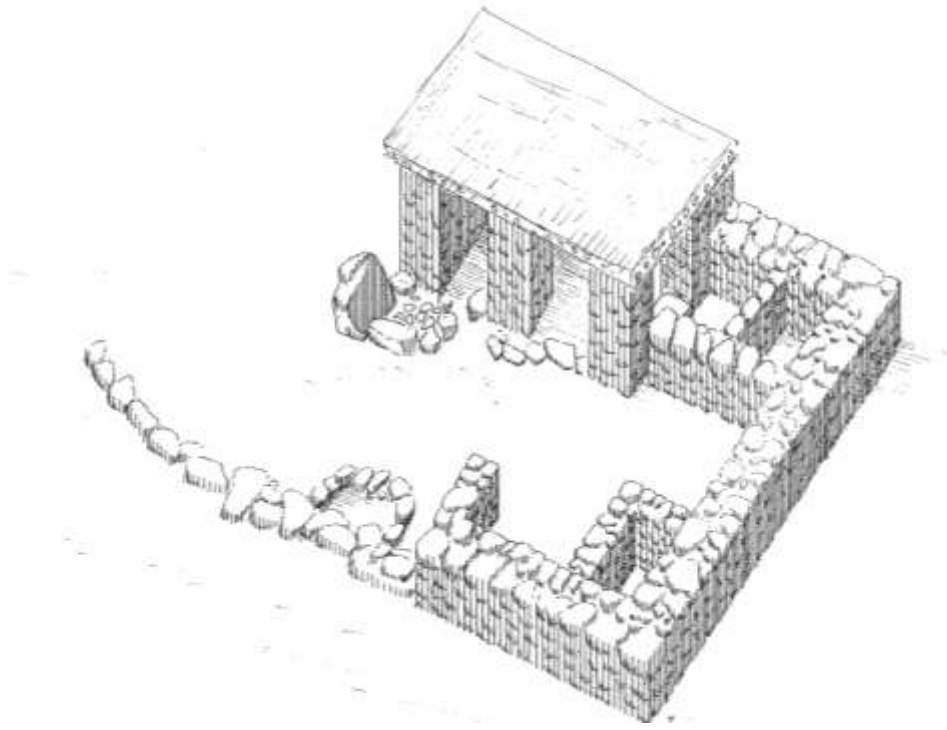


Figure 5.163: Reconstruction of Complex B (Beit-Arieh 1995: 305).



Figure 5.164: The bench and "large stone" at Horvat Qitmit (Beit-Arieh 1995: 25).

STANDING STONES AND ANCESTOR IMAGES IN THE ANCIENT NEAR EAST

Standing stones and ancestor images—and sometimes standing stones *as* ancestor images—are not uncommon in the ancient Near East. They appear both archaeologically and in texts these appear in the Levant and Egypt.

The use of standing stones dates back at least to the Late Bronze Age. At Ugarit, stelae were erected over graves and were so closely associated with the dead that the term *npsh*, spirit, was applied to the stones (Pope 1981: 161). A large number of stelae, some of them particularly nicely shaped stelae, were found at the so-called Stele Temple at Hazor (Fig. 5.165-5.166). Excavator Yigael Yadin suggested that they represent great kings (Yadin 1975: 43-48). Among these, and also elsewhere at Hazor, were what Pirhiya Beck (1990) has called "schematic statues;" vaguely human-shaped stone sculptures (Fig. 5.167). She notes the similarity between these and vaguely

anthropomorphic stones Theresa Howard Carter (1970) described from across the fertile crescent, descending into Meggido and southern Jordan. However, the very vagueness of these statues makes it impossible to attribute them to the same stylistic school or to ascribe to them the same intent.



Figure 5.165: Jean Perot (right) and Yigael Yadin beside some of the stelae in the Stele Temple at Hazor (Yadin 1974: 43).



Figure 5.166: The nicely-shaped hand stele, with half-moon or horn symbol, from the Stele Temple at Hazor (Yadin et al. 1958: pl. XXIX).



Figure 5.167: One of the "schematic statues" from the Stele Temple at Hazor (Yadin et al. 1958: pl. CLXII).

Standing stones (*masseboth*) are common objects in the Bible, and are used for a variety of purposes. Graesser (1972) discerns four different functions which standing stones might serve: memorial stones, which mark graves, legal stones which testify to agreements between individuals and borders, commemorative stones to celebrate an event, and cultic stones. The purposes of these stones overlap, however, and it can be argued that most or all of them have cultic significance. For example, a *massebah* is said to have been erected over the grave of Rachel, located on the boundary of the tribe of Benjamin (Gen. 35: 19-20). Beyond a mere tomb marker, this likely served not only as a memorial to the dead matriarch, but also as a shrine and as an important means of maintaining tribal land rights.

Archaeological samples of standing stones as funerary monuments are largely lacking in Israel, probably because such surface architecture tends to be destroyed through weathering and human action. At Tel Megadim individual cobble-sized kurkar stones placed at one or both ends of about three burials serve as Persian-period examples

(Wolff 2002: 133). The small size and inconspicuous nature of these stones also help indicate why they are seldom recognized in situ.

Ancestor images also appear to have been used in ancient Israel. The term *teraphim*, always in the plural, appears fifteen times in the Hebrew Bible in a variety of contexts (Gen. 31:19, 34, 35; Judges 17: 5; 18: 14, 17, 18, 20; 1 Sam. 15: 23; 19: 13, 16; 2 Kings 23: 24; Ezekiel 21: 26[21]; Hosea 3: 4, and Zechariah 10: 2). What these objects were exactly remains unclear, but some scholars have argued that they were ancestral cult images and that they could take anthropomorphic form (Lewis 1995). They apparently could be as large as a man, as when Ramah places *teraphim* in a bed to simulate David (1 Sam. 19:13) or small enough to be easily transported and hidden in a camel saddle (Gen. 31:34), as when Rachel steals the *teraphim* of her fathers.

Anthropomorphic grave markers spread over much of the Levant in the Iron Age. In the Phoenician world, stelae, some with stylized human figures and others with baetyls (Figs. 5.168-5.169). These were often set up in large fields where human remains have also been discovered (Fig. 5.170). Blocky stelae bearing Phoenician writing and symbolic designs, dating to the seventh to ninth centuries, have recently been uncovered at Tyre al-Bass (Aubet 2010). Some of these bear anthropomorphic images (Fig. 5.171; Aubet 2004: 23). The practice of erecting stelae, including anthropomorphic stelae, was clearly in evidence across the Phoenician cultural sphere, from Carthage to Byblos, by the seventh century (Moscati 1988; Ribichini 1988).

Ancestral images carved in stone are found at Iron Age burial sites in Arabia. Particularly fine examples were found at the necropolis of Timna in modern Yemen (Figs. 5.172, 5.173; Cleveland 1965). These are testified to in Jordan at Risqeh, near

Wadi Rum, where Diana Kirkbride uncovered a collection of such images—some intricately carved bas-relief figures (Figs. 5.174, 5.175), and others just eyes and noses. The more elaborate carvings were made in sandstone, a medium much easier to work than Wadi Fidan 40's dolerite and therefore subject to fewer limitations. Many of these statues were incorporated into cairns or, like those at Wadi Fidan 40, buried in cist graves, though Kirkbride believed they more properly predate the burials and belong to an older sanctuary (Kirkbride 1969a, b). Dating of the site remains obscure, though Thalmudic inscriptions found in two of the cairns show that at least some of the funerary architecture significantly postdates Wadi Fidan 40. Anthropomorphic Arabian funerary stelae appear at least as early as the eighth century, and possibly as early as the eleventh (Schiettecatte 2010).



Figure 5.168: Phoenician stele carved with a stylized human being. From Nora, fifth to sixth century B.C.E. (Moscati 1988: 316).



Figure 5.169: Phoenician stele carved with a baetyl. From Motya, sixth to fifth century B.C.E. (Moscati 1988: 317).



Figure 5.170: Stelae in the cemetery at Carthage (Moscati 1988: 309).



Figure 5.171: An anthropomorphic grave stele from the Phoenician cemetery at Tyre al-Bass (Aubet 2004: 23).



Figure 5.172: Eye-stele from the Timna necropolis in modern Yemen (Cleveland 1965: pl. 37).



Figure 5.173: Human effigy on a grave marker from the Timna necropolis in modern Yemen (Cleveland 1965: pl. 25).



Figure 5.174: Anthropomorphic stone from Risqeh, modern Jordan (Kirkbride 1969a: 120).



Figure 5.175: Anthropomorphic stone from Risqeh, modern Jordan (Kirkbride 1969a: 120).

It is very likely that both the Iron Age anthropomorphic stones at Wadi Fidan 40 and elsewhere in the Levant are the result of emulation of Egyptian funerary busts. Evidence for Egyptian emulation is everywhere in Phoenicia, and can be seen in the occasional (albeit rare) deposit of Egyptian artifacts in Wadi Fidan 40 graves, such as the scarab of Grave 92 (Levy et al. 1999: 299) and the stamp seal of Grave 91 (Levy et al. 2005: 227), in addition to the scarab, bifacial seal, and figurine from across the wadi at Wadi Fidan 4, Tomb 1. Funerary stelae are extremely rare in the Levant, but are found in the Late Bronze Age cemetery at Deir el-Balah (Ventura 1987). Although funerary stelae had fallen into relative disuse in Egypt during the tenth century, their use was never totally abandoned (Budge 1894: 220-221). Funerary busts are a not uncommon find both at tombs and in domestic contexts in Ramesside Egypt, where they served as a focus

for ancestor veneration, including the pouring of libations (Figure 5.176, Friedman 1994). But usually the busts (Fig. 5.177) are found in domestic contexts while stelae are found at in funerary contexts (Meskell 2003). The Wadi Fidan 40 anthropomorphic standing stones may have served a similar role of maintaining the memory of the deceased and carrying out ritual which reinforced her or his importance.



Figure 5.176: A New Kingdom Egyptian stele depicting a worshiper pouring libations before a funerary bust (Friedman 1994: 109).



Figure 5.177: A New Kingdom Egyptian funerary bust, from the worker's village at Deir el Medina (Friedman 1994: 108).

ICONOGRAPHIC ANALYSIS OF THE ANTHROPOMORPHIC STONES

As previously described, the anthropomorphic stones at Wadi Fidan 40 are identified by the presence of one or both of two features. The first indicator is a long ridge along one face, closer to one end of the stone than the other. The second is the presence of protuberances somewhat below the head that are deemed to be suggestive of shoulders or ears. Of the nineteen anthropomorphic stones, fourteen possessed both these features. Two only had the ridge, while three had the side protuberances but not the ridge.

Unlike anthropomorphic stones at other sites, the stones at Wadi Fidan 40 are not realistic representations of the human form. They are stylistic, and it must be admitted

that they may not be anthropomorphic at all. In large part this is due to the fact that hard dolerite was used, but the sandstone that was used in other cemeteries to carve stelae was abundantly available at Wadi Fidan 40. Any deviation from its use was deliberate, and would have set its users opposed to their neighbors.

What or who is represented by the images cannot be determined. It is presumed that they are the images of the dead. This may not be the case, but we have no idea how Qos or any other hypothetical Edomite deities would be depicted. Even in the Hellenistic period, when Qos was apparently worshipped alongside other gods by the Nabateans and Edomites, he appears to have been worshiped in the form of either baetyls or the Greek gods with which he was associated, not as an anthropomorphic entity with distinctive attributes. The dispute over whether figurines found in Edomite shrines are gods or worshippers, discussed in Chapter 1, is itself symbolic of the difficulty in identifying images found archaeologically.

THE DESTRUCTION OF THE WADI FIDAN 40 IMAGES

To understand the anthropomorphic stones of Wadi Fidan 40, we must consider them in the context in which they were found. At Wadi Fidan 40, this was where the images found their final resting places—toppled, sometimes broken; sometimes on the ground surface and other times tossed into graves with other stones.

Many ancestor images are by their natures intentionally temporary. In the modern world, photographs are used to help the grieving let go of the dead. Physically, these are often placed in prominent places soon after death, and are physically moved to less prominent ones as time passes and the psychic strain of the death ameliorates (Miller and Parrott 2007). The Cahuilla images discussed in Chapter 2 are another example. These

images are made publically during the annual mourning ritual. This ritual brings together both Cahuilla moieties and also neighboring groups, and reaffirms the status of ceremonial leaders, binding the grieving parties into the society and reestablishing the importance of hierarchy. They are then burnt in private, allowing the mourners to let go of the deceased (Strong 1929). Similar to these images, and much more thoroughly analyzed anthropologically, are the *malanggan* of New Ireland. These images are created in private to house the souls of the dead, and at the climax of the *malanggan* ceremony are ritually killed and left to decompose to aid the dead soul's transition. The ceremonies at which these events take place bring together the neighboring peoples to such a degree that, despite the fact that these images are only briefly seen during any particular ritual, there is a surprising amount of uniformity of imagery across space and time in their iconography (Küchler 2002).

It cannot be ruled out that the anthropomorphic stones of Wadi Fidan 40 were used in such ritual events. What we have is what Bruno Latour (2002) and other theorists have called *iconoclash,* the uncertainty in which the interpreter is immersed when faced with archaeologies of destruction. That almost all of the anthropomorphic stones were found buried in graves with secondary remains might indicate that the stones were carved and buried specifically as part of the same rituals which involved breaking the bones of the interred. The fact that broken bones are often laid in the same cists as primary burials—indeed, are often laid over the primary burials in a very intimate manner, as in the cases of Grave 102 (Fig. 4.37) and Grave 507 (Fig. 4.308)—suggests that the destruction of some of the human remains at Wadi Fidan 40 may have been as loving and

as respectful as the actions of the modern nun, who breaks a saint's bones for relics to distribute using a silver hammer.

The anthropological and archaeological theory of iconoclasm, given a significant push by the 2001 destruction of the Bamiyan Buddhas of Afghanistan, is still being worked out. But iconoclasm can take a variety of forms. In practice, iconoclasm can range from deliberate and complete destruction of all or certain images—like the complete destruction of the Bamiyan Buddhas—to the destruction of some part of an image—like the destruction only of eyes, a common way Muslims dealt with destroying what was considered idolatrous in an image at a time when heavy artillery was unavailable. Destruction of names, carried out by the ancient Egyptians, is another form of iconoclasm. Moreover, it is often difficult to determine whether iconoclasm is the motive behind destruction seen archaeologically. For example, the Buddhist monastic complex Tepe Kafiriat in Afghanistan and its fifth century frescos presently risk destruction not from iconoclastic motives but as the consequence of booming copper mining (Lawler 2011).

The history of Islam gives us an array of parallels for examining iconoclasm in the past. A major part of the Muslim mythos is that Abraham destroyed his ancestral images in a way that emphasized their lack of power (Quran 21: 51-70; Ali 2002: 655-657). Similarly, Muhammad destroyed his own tribe's images, both at the Kaba in Mecca and elsewhere. Most famous among the images he destroyed was the cubic stone Allat at the pilgrimage site of Tayef. The early Muslim historian Hisham al-Kabi in his *Book of Idols* describes these images (Faris 1952). Included among them are many anthropomorphic stones. Muhammad also destroyed the images of any group he came

across. At the same time, he chose a single stone, the black stone, and reemphasized its importance as a literal touchstone for Muslim pilgrims.

As the Muslims expanded north, they encountered Jews and Christians who themselves opposed much of what the Muslims abhorred in images of the divine, but the Muslims had already defined themselves in opposition to these groups. It was not until the iconoclastic crisis of the eighth century that what was developing into the Orthodox Church was forced to take an official position on the place of images in worship. Nevertheless, in contrast to western Christianity, neither eastern Christianity nor Judaism tended to use three-dimensional imagery in their worship spaces. These spaces often contained figurative art in their mosaics, however, and these were defaced at about the time of the Muslim invasion. Robert Schick (1995) has observed that the tesserae in these murals do not appear vandalized, but rather deliberately rearranged. He suggests that, to avoid the ire of their new overlords and perhaps to emphasize their special status as Abrahamic religions opposed to idolatry, the members of these congregations themselves altered the figurative art in their worship spaces into abstract, non-figurative works.

We have in Islamic history multiple forms of iconoclastic destruction. Muhammad, cloaking his novelty in reform, destroyed his own tribe's images. Muhammad also destroys the images of neighboring tribes, and later Muslims have continued this practice to the present day. The individual or the group may use this means to destroy challenges to his or its authority. We also see, as the Muslims expand, subject groups destroying their own images as a means of submission.

Moreover, it would sometimes be difficult to pick out the difference between the archaeological deposits left behind by iconoclasts and those left behind by the so-called idolaters. After destroying the Bamiyan Buddhas, Mullah Omar and his Taliban sacrificed a hundred cattle to atone for the length of time it took the Taliban—two weeks—to destroy the statues (Clements 2003: 71). The meat was distributed to the poor and needy. Such feasting in an archaeological context, which was indeed a form of worship, would have looked like worship of the gods represented by the images. It may look like feasting in honor of the images (since it would be nearly impossible to differentiate the time the images were destroyed from the time of the feast using current archaeological methods). Such archaeological traces may even look like the results of rites meant to atone for the destruction of the images!

There are indications that the anthropomorphic stones and the standing stones were meant to be durable cult objects. The aniconic stones remained standing, 3,000 years after their erection. Dolerite, the medium employed for both anthropomorphic and aniconic stones, is the toughest stone in the area, suggesting we should look to modern grave stones, engraved with human visages using the latest laser technology, rather than perishable images, as a parallel to the stones of Wadi Fidan 40. The three broken anthropomorphic stones were three of the thinnest stones, and therefore the easiest to break. Although only aniconic, or seemingly aniconic, stones were allowed to stand at Wadi Fidan 40, we shall see that it is less likely that they were allowed to stand because they were nonanthropomorphic than because these stood over graves that were not considered worth robbing.

CONCLUSION: RANK, RITUAL, AND THE STANDING STONES AT WADI FIDAN 40

The aniconic stones were also all placed over primary infant burials or secondary burials or, in one case, a grave which contained both secondary remains and the primary burial of an infant. All four of the primary burials were oriented to the south. Two were placed facing west (Graves 359, 717), one facing east (Grave 39), and it was not recorded which way one faced (Grave 31A).

The aniconic standing stones tended placed over graves which required less energy expenditure in their construction than either the graves associated with anthropomorphic stones or even the normal grave at Wadi Fidan 40. Four of the aniconic standing stones were over pit graves. Of the remaining three burials, one (Grave 39) was erected over a cist that was clearly reused, while two were erected over cists that were unusually small and therefore required less labor to construct than other cists (Grave 31A, Grave 80). The remaining cist was violated, with the surface pavement and standing stone apparently a re-consecration akin to a secondary burial (Grave 735). Thus, the one unifying feature of all of these graves is that they belonged either to individuals in society who would be expected to have lower rank or who are undergoing a secondary burial which may not warrant the energy expenditure of the first. Nevertheless, the many stones used to mark out these graves, which all include pavements, itself raised the energy expended in their construction, though not by much.

The anthropomorphic stones obviously required a greater expenditure of time and energy—and therefore resources—than the aniconic standing stones. Those which were found with graves also sometimes correlate with other signs of wealth. Only one

anthropomorphic stone was found with an infant burial (Grave 248). This grave was paved at the surface, but not in the orderly fashion within a stone circle as with the graves with nonanthropomorphic stones. However, the anthropomorphic stone associated with this grave was broken and found in the debris over the pavement; it may or may not have originally stood over the grave. Two of the graves each had two stones in association (Grave 712 and Grave 731). One stone was associated with the grave in the complex rectangular stone feature of Area C (Grave 703), and one stone was associated with that area's tumulus and large double circle (Grave 701). Three cists were paved (Grave 235, Grave 260, and Grave 701).

Because of the looting, it is difficult to link anthropomorphic stones to grave goods. However, Grave 253, although robbed, did contain a copper bead and a lambis shell bracelet fragment, both of which will be described in Chapter 6 as likely signs of high rank.

Only two of the graves were not obviously robbed (Grave 701 and Grave 248). These were also the only two with intact skeletons. One of these individuals lay semiflexed, with head to the south, on the left side facing west. The other lay in an extended position, with head to the north, facing up. However, he lay in an obviously reused cist. The southern end of the cist was removed. The anthropomorphic stone was found in the fill, and was likely not intended for this particular burial. Grave 701 was that of an adult male, and some infant bones were also recovered form that grave. The remains of an adult female were recovered from Grave 731, and adult remains were also recovered from Grave 203 and Grave 235.

Grave 712 is the only grave which seems to have mortuary architecture intact enough to describe ritual function. Here, an anthropomorphic stone apparently stood beside a paved pit, which itself was constructed over an open and looted cist. A smaller standing stone lay face-up in the fill beneath this paved pit. It is presumed that libations were poured into the pit, which would then percolate downwards, past the smaller anthropomorphic stone, towards the open cist. It is notable that the largest and the smallest anthropomorphic stones were found associated with this grave, though it is unclear whether there is a tie between this fact and the that this grave also contained both adult and infant bones. All the other anthropomorphic stones found in association with graves were found in the rocky fill of the graves. However, these were not carefully arranged as was the stone in the fill of Grave 712, and appeared to have been tossed into the graves haphazardly during their robberies.

The incised stone is reminiscent of Bedouin grave markers. For example, a grave in the active cemetery at WAG 520, not far from Khirbat en-Nahas displays three parallel lines deeply carved into the sandstone (Figs. 5.177-5.178). The Bedouin grave markers seem typical of identificatory markings used by traditionally non-literate societies. However, the incised stone at WFD 40 was built into the complex surface architecture of Grave 712. It was constructed in the side of the recessed pit, making it unnoticeable from a distance, and next to the much more conspicuous large anthropomorphic stone. It is more likely that the markings on the engraved stone were associated with the ritual which took place in conjunction with the funerary architecture, but the precise purpose of the stone remains unknown.



Figure 5.178: Bedouin grave in the cemetery at site WAG 520.



Figure 5.179: Close-up of the engraving on the grave marker at WAG 520.

The burials at Wadi Fidan 40 show evidence of burial groups using the site both to compete for rank and to maintain social cohesion. These groups reaffirmed the sanctity of the soil every time they used Wadi Fidan 40. The reuse of specific cists was a reuse of labor in that the labor invested in constructing cists was not lost. However, this reuse, and the intimate associations observed between the newly dead primary burials and the long-dead secondary burials—which often even saw the bones of the original inhabitants of a cist in physical contact with the fleshy deceased—also shows the perceived need to assert continuity between the present and the past. The anthropomorphic stones at the site testify to the need for constant memory of specific ancestors. Unfortunately, only one cult installation, that over Grave 712, appears to be relatively intact. However, from it we can deduce that recurring ritual took place at certain graves at the site, and most likely to reaffirm the importance of ancestors particularly important to ruling lines.

CHAPTER 6: INSIGHTS INTO ETHNICITY—ITEMS OF PERSONAL ADORNMENT

INTRODUCTION

We have now examined some aspects of the Iron Age burial sample at Wadi Fidan 40 (Chapter 4), with particular emphasis on the anthropomorphic and standing stones and the mortuary installations (Chapter 5). This chapter looks at the issue of social identity and ethnicity by using items of personal adornment as a proxy to identify such variables in the burial population.

First, the assemblage will be described. Although preliminary studies of portions of this material have already been published (Levy et al. 1999, 2004, 2005a), this is the first complete analysis of the entire sample from Wadi Fidan 40. Although beads make up the majority of finds at many Levantine sites, they are often ignored in archaeological analyses. Even sites such as Tell es-Sa'idiyeh, where objects of personal adornment made up the bulk of the finds, have only portions of their assemblage published only in preliminary form (Green, in press), as earlier publications focused on rarer but more visually impressive artifacts such as weaponry and metal vessels. In part, this neglect is due to the, at present, impossibility of seriating these objects, which often appear to be identical to objects made over millennia. Nevertheless, the lack of publication hampers inter-site analyses, and also makes the following chapter all the more important to future research.

The origins of the raw materials and the production techniques used in these items will be considered. This shows their relative value, which in turn evidences wealth. As we saw in Chapter 2, horizontal differentiation is much more difficult to discern than

vertical differentiation. Relative wealth is easily categorized, but ethnic association, while often expressed through wearable wealth, is often clouded by age and sex group associations. Although beads are usually made and traded by men, they are used by women as a means of asserting agency in expressing ethnic boundaries as well as age groups.

ANTHROPOLOGICAL THEORY AND PERSONAL ADORNMENT

The most common artifacts at Wadi Fidan 40 were articles of personal adornment. These adornments included shell, bone, stone, copper, and iron bracelets and anklets and iron, copper and stone rings. They also included beads and pendants, primarily of stone and shell, which were the most common items of personal adornment.

This chapter seeks to determine which individuals in the cemetery were buried with what particular ornaments. Tied to this is the question of rank. The perceived value of an item is influenced by a number of factors. First, the intrinsic value of its constituent parts is impacted by the materials' scarcity. Scarcity may be caused by rarity in nature or by social control over access to products. Furthermore, some ornaments require a much greater expenditure in labor for production or transport. For example, in the early modern period, glass beads were an object used in long distance trade, being easy to transport and, at their European sources, cheaply and easily made. In Africa, these beads were imbued with a new cultural meaning. But their travels are not yet over. Many of these beads are now returning to Europe, laden with additional cultural significance and made still more valuable with age and transportation. European-made beads presented as "African trade beads" back from Africa command a respect and therefore price among collectors other beads do not (Sciama 2001).

But rank is not the only factor expressed through ornamentation, and examining only the wealth of personal ornamentation can be misleading. Gender particularly is expressed through wearable ornaments. At Rujiazhuang in China, for example, excavated by Cecilia Braghin (2001), the early tenth century BCE tomb of Bo, a Count of the Yan State during the Zhou dynasty, is flanked by the tombs of his wife and his principal concubine. His importance over the women of his household is shown by the centrality of his tomb and the subordinate positions of their tombs. His tomb also contains more rich bronze ritual vessels. However, the personal ornamentation of both the Count's wife and his concubine are more rich and impressive than those of the Count himself in both material and quantity. The rank between the two women, however, is accurately represented by their personal ornamentation. The wife's grave is richer in beads, both in quantity and in quality of material. The wife was also buried with a wealthier assemblage of other grave goods. Thus, rank and gender are reflected in the Chinese burials, but grave goods are coded for gender and the entire suite of grave goods and burial position must be considered, not just the personal ornamentation. This is in keeping with what is known of ancient Egypt, where beads tended to be a female ornament (Vilímková 1969). Preliminary studies of the remains excavated in 1997 showed that at Wadi Fidan 40 women tended to be buried with the most beads.

Certain types of beads, however, fulfill particular religious and cultural roles. As Vilímková (1969: 29) notes: "From older finds and from paintings, it appears that single amulets were only worn by men. Several small amulets worn as pendants are more common for women, and they also wore a single cornelian bead known as a *seweret*, which was probably also a protective charm. Whether the *seweret* was simply a part of

the funeral furniture or an adornment worn in real life is unclear." Individuals of particular statuses might upset all expectations. In Late Dynastic Egypt, men generally do not wear much jewelry, but particularly high-status males might wear beaded belts more commonly worn by women (Vilímková 1969:40-41). In his special status Pharaoh even appears in wall reliefs wearing the same beaded jewelry as women; similarly, gods, like goddesses, might be portrayed wearing such otherwise feminine jewelry.

Age or age-set—perceived place in the culturally defined life-cycle—are another also important factors in determining adornment. Among the Kalabari, females tend to wear beads, while males tend not to. An important stage of life for a girl is known as "bead display," a time when she begins wearing a variety of beads. These beads increase in size during her life, and important roles are often require the use of particular beads. Thus, a woman will wear a different bead ensemble as a new mother than she will as a chief mourner (Eicher 2001: 100). The dead, too, might be buried wearing or in association with objects they might not possess in life.

Jewelry in the form of amulets and talismans are often direct demonstrations of ethnic, religious, and cultural identity—sometimes in defiance of other groups. For example, in Viking period England and Scandinavia, Mjölnir or Thor's hammer amulets are not unusually found in women's graves. Although the amulets are known from pre-Christian contexts, their appearances, their appearance in the archaeological record markedly increases with the appearance of Christianity and Christian cross amulets in those areas. It is believed that use of the Mjölnir amulet is a direct, reactionary response in opposition to the appearance of Christian crosses as markers of religious identity. Nevertheless, contact here was largely peaceful, and a soapstone mould found near

Trendgården in Denmark, with holes for both a cross and a Thor's hammer, shows the same metal workers would cast both objects (Fuglesang 1989: 17-18).

Ben-Shlomo (2008: 47) has argued that mouth coverings of gold or silver appear to be Philistine. Such objects appear to originate in the Aegean, and have been found at Azor, Tell Farah South, Meggido, Beth Shean, and Akko. However, they are also known from the Late Bronze Amman Airport grave and at Dan. They may have originated as an Aegean custom, but they were adopted more broadly.

Jewelry is often an important marker of ethnicity, but it is a language which is difficult for those outside the cultural milieu to decode. For example, hardening of ethnic boundaries and increased access to trade beads occurred conterminously with increased European influence in what is now central Kenya. Maasai pastoralists and Okiek hunter-gatherers both expressed their ethnic boundaries using beadwork. The Massai look down on the Okiek, whom they see as deviant Massai who have lost their animals and taken to the bush. Massai men may marry Okiek women (who might then pass as Massai), but Okiek men never marry Massai women. Both Massai and Okiek women wear beaded garments, in which are encoded details of age-set, social status, and ceremonial activity, but one must be conversant with the particular language of the group in order to read them. Furthermore, since the Okiek allow for a greater range of use of these items, the Massai view the Okiek use of the garments as deviant or sloppy (Klumpp and Kratz 1993; Kranz and Pido 2000).

In the Levant, basket earring pendants of the later Iron Age II are often associated with the Phoenicians. These earrings "are composed of a small, solid cast or hollow metal cube, with two parabolic wire handles springing crosswise from its four upper

corners" (Golani 2010: 753). These are also sometimes decorated above the cube and under the handles, often with a small pyramid of granules. They are most common in the eighth to sixth centuries, and are associated with the western expansion of Phonecians in the seventh to fifth centuries. However, Canaanite prototypes exist in the Iron Age I, and even this cannot be considered an ethnic trait.

Furthermore, it is difficult to determine what objects are buried with the dead as offerings and what is buried with the dead because they wore it in life. Cultural laws often determine what objects are inherited by whom and what is buried with the deceased. For example, among the Kapauku, one of Saxe's (1970) study cases, different cultural laws dictate the deposition of various articles of personal adornment. Certain amulets are considered too personal to be passed on and are buried with the deceased. A woman's most valuable property is her *ako* necklaces, manufactured of beads cut from *Conus spp.* shells. She has some right to decide who inherits smaller *ako* necklaces, but her most valuable possession, her large *ako* necklace which is akin in value to a man's land, must be inherited by her main heir regardless of that individual's actions towards her or her own desire (Popisil 1965: 183). As Saxes (1970) points out, an unusually rich grave may not be that of a woman with unusual wealth, but simply that of a woman who has no appropriate heir to inherit certain culturally charged objects.

Beads at Wadi Fidan 40 were found strung as necklaces, anklets, and bracelets. Other uses of beads are also likely. For example, beads may have been sewn onto garments. Graves in Egypt sometimes even included beaded shrouds (Vilímková 1969: 41, pl. 85) or dresses (Berman et al. 2003: 74). Some of the beads may have been used as hair adornments, such as are known in Egypt. Gold tubular wig beads, believed to

date to the Middle Kingdom, are at the Cleveland Museum of Art (Berman and Bohač 1999: 174), and a similar function may have been served by some of the Wadi Fidan 40 beads. Beads may have also adorned the anthropomorphic stones or been left as offerings. Beads were often found in the fill of graves, but looting appears to be the more likely explanation for this than ritual, since most of those graves with beads in the fill were looted in antiquity.

The following description will examine artifacts according to material culture, in approximate reverse order of the wealth which they represent. Metal objects, being the rarest and most labor intensive of the objects of personal adornment, are considered first. Next, bracelets, anklets, and rings of shell, bone, and limestone, which are interpreted as the less expensive equivalent of the same in metal, are considered.

Finally, beads and pendants of all sorts are described. These include stone and shell beads, beads of manmade materials, and even two Egyptian artifacts which were probably worn as amulets. In 1928, Horace C. Beck established the standard *Classfication and Nomenclature of Beads and Pendants* (reprinted 1973). Beck ([1928] 1973: 1), "To describe a bead fully it is necessary to state its form, perforation, colour, material, and decoration." Beck's nomenclature has been adopted by virtually all archaeologists as well as W. G. N. van der Sleen's (1973) *Handbook on Beads,* assembled for the Journées Internationales du Verre. However, archaeological studies seldom present what Beck considers a complete description, making comparisons sometimes difficult. The following examination tries to give as complete a description of the beads as possible. I analyzed the beads from the 2003 and 2004 excavations, as well as the beads from Area B of the 1997 excavations in Amman in 2007. The beads

excavated in 1997 from Areas A and C could not be located, but photographs were studied and that data presented. The sources of the materials from which these are made are considered. Finally, I present an analysis of the cultural meaning of what was buried with whom.

THE METAL OBJECTS

Metal items were the most unusual and probably most costly items at Wadi Fidan 40. Most unusual was iron, followed by copper. No other kinds of metal were represented at the cemetery. The fact that no silver or gold were found, and the paucity of metal of any kind in the cemetery, both point to the relative poverty of the cemetery's occupants.

IRON

Iron is probably the most valuable material found at Wadi Fidan 40. It is both the rarer of the two metals found at Wadi Fidan 40. Meteoric iron was used for some jewelry from the Predynastic period onwards, but was extremely scarce. Smelted iron appears in the Egyptian world by the second half of the second millennium B.C.E., after Hittite innovations in the area. Iron jewelry and an iron blade appeared most famously in the tomb of Tutankhamun, and began to spread across the Levant primarily in jewelry (Bloch-Smith 1992; Lucas and Harris 1962: 235-243; Ogden 2000: 166-168).

Iron was the rarer metal at Wadi Fidan 40. One apparently utilitarian iron object was found, three fragments of what appear to be an iron blade found beneath the skull of Grave 9-2004 (EDM 86776, 86798). An iron bracelet was found on the left arm of the individual in Grave 92 (Fig. 6.1; B. 2134), a mature adult female. An iron ring was found on the left hand of the individual in Grave 54, a 15-21 year old of indeterminate sex (Fig.

6.24; B. 2542). This ring is very similar in construction to a copper band ring from Grave 12. But unlike the copper ring, the exterior of the iron ring was decorated with a chevron design of parallel diagonal lines running along the outside face, and at least four upright parallel lines on junction of the metal. The chevron possibly once ran along entire outside face, but much of it is now gone due to corrosion. All of the iron objects at the cemetery were badly damaged and difficult to examine due to oxidation.

All three of these individuals were buried in an extended position, a position they shared with only ten other burials in the cemetery. The Grave 9-2004 individual lay in a pit covered with capstones but Grave 92 and Grave 54 were constructed of cists with the ends removed to accommodate their bodies. This unusual burial style may be a marker of status at Wadi Fidan 40. Both the individual of Grave 92 and that of Grave 54 were also buried with copper items.



Figure 6.1: The Grave 92 iron bracelet in situ on the left arm.

COPPER

Eleven graves contained copper metal. These copper objects were highly varied, including earrings, bracelets, anklets, rings, a bead, an ornamental object, and unidentified copper pieces. A great deal of work is required to produce raw copper and then shape it into form. However, innovations in copper production at about the time the cemetery was in use, described fully by Erez Ben-Yosef (2010), increased the efficiency of copper production. This subsequently decreased the value of copper across the Levant (Ogden 2000).

A small unidentified copper metal fragment was found associated with two beads in the fill of robbed Grave 252 (EDM 80735). Another unidentified copper piece was found at the waist of the 18-22 year old male in Grave 356 (Fig. 6.2; EDM 70367), between the individual's lumbar vertebrae and his extended arm and in association with an unidentified organic stain (Fig.6.3). Cowries are sometimes found here on other individuals, but vessels are also sometimes placed in this location; it is unclear if he was wearing the piece as a belt of if it was placed in front of him. This grave was also reused, and it is possible that this is a fragment of an object buried with the original occupant. An unidentified piece of copper metal, perhaps an earring fragment, was also found in Grave 701 (EDM 89092).



Figure 6.2: The unidentified copper object from Grave 356 (EDM 70367).



Figure 6.3: The unidentified copper object from Grave 356 in situ (red circle).

Earrings were found in two graves, Grave 345 and 371, both those of children. Two copper leech earrings were found with the child in Grave 345 (Fig. 6.4, 6.5; EDM 86994, 87004). Such earrings are common in the Levant in the tenth century; copper parallels were found in Wadi Fidan 4, Tomb 1, and gold earrings are known at Tawilan (Ogden 1995), Megiddo, and Tell el-Fara South (Maxwell-Hylsop 1971). The end of this cist was removed at some point, but child interred was laid in a semiflexed position, despite the fact that he or she only took up a fraction of the total length of the cist (Fig. 6.6). This child was also buried with a ceramic bowl.

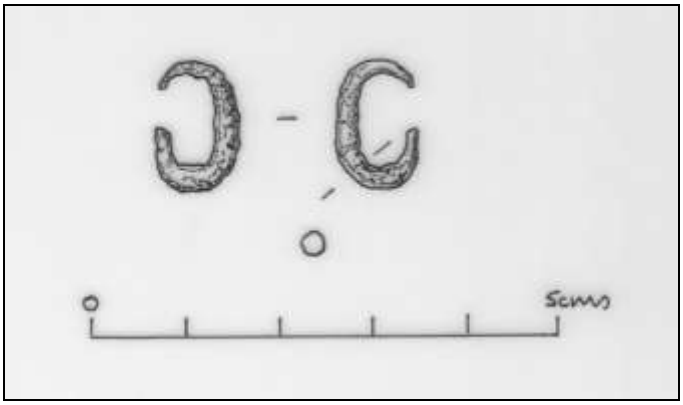


Figure 6.4: A copper leech earring from Grave 345 (EDM 86994). Drawing by Caroline Hebron.



Figure 6.5: A copper earring from Grave 345 (EDM 87004). Drawing by Caroline Hebron.



Figure 6.6: The Grave 345 burial. Note the removal of the end slabs of the cist.

Grave 371 included three copper earrings, a copper bracelet, and a copper ornament. Two of the earrings are solid tassel earrings (Figs. 6.7, 6.8; EDM 70387, 70390), and one of these is decorated with incisions parallel to its axis along its base (Fig. 6.8), similar to earrings from Tell el-Fara South (Fig. 6.9; Petrie 1930: 10-11, pl. XXXVII). The third earring is a leech earring like those of Grave 345 (EDM 70391), a common form in the southern Levant. These earrings are typical of the Early Iron Age in the Levant (Maxwell-Hyslop 1971: 224-231).



Figure 6.7: A copper earring from Grave 371 (EDM 70387).

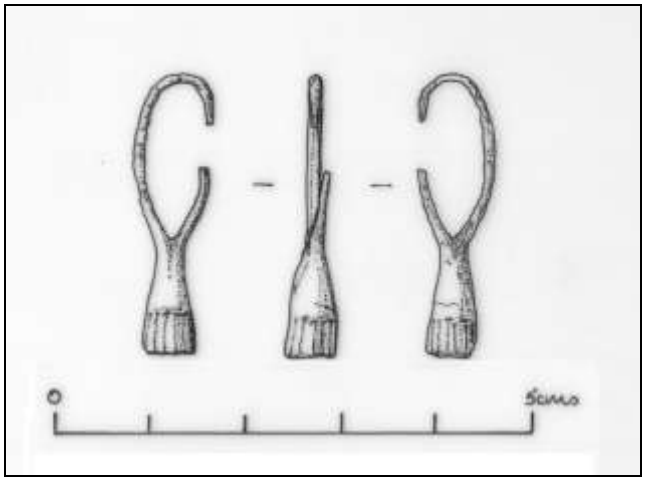


Figure 6.8: A copper earring from Grave 371 (EDM 70390).

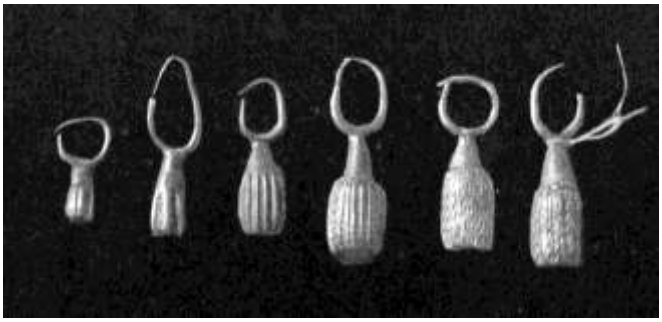


Figure 6.9: Earrings from Tell el-Farah South (Petrie 1930: pl. XXXVII).

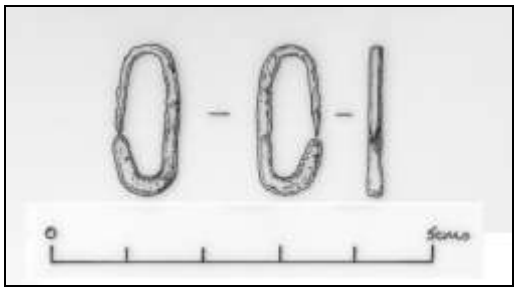


Figure 6.10: A copper earring from Grave 371 (EDM 70391).

A copper ornament with a dual spiral motif was also found in the grave (Fig. 6.11; EDM 89220). This was called a pendant in the initial publications (Levy et al. 2005), but its exact nature could not be determined, and it was perhaps more likely sewn onto clothing or otherwise mounted on perishable material than suspended as a pendant. It may have even served as the backing for an object that did not otherwise survive; such a dual spiral served as a backing to one of the ornaments in the Tawilan gold hoard (Fig. 6.12). Objects with similar dual spirals are common across the Near East—and, as Ogden (1995: 74) points out—"most parts of the world." Particularly fine examples are known from Iron Age Persia (e.g. Fig. 6.13; Maxwell-Hylsop 1971: 267, pl. 252). A bronze dual spiral attached to a figurine was found in the gatehouse at Khirbat en-Nahas (Fig. 6.14). The closest parallel to the Wadi Fidan 40 dual spiral, however, is probably the example from the Governor's Tomb at Tell el Ajjul (Fig. 6.15; Petrie 1933: 6, pl. IX). Like the Wadi Fidan 40 example, it was found beneath a skull, and may have been worn similarly. The Governor's Tomb is usually dated to the Late Bronze Age, but this was found with one of the last internments and is perhaps Early Iron in date.

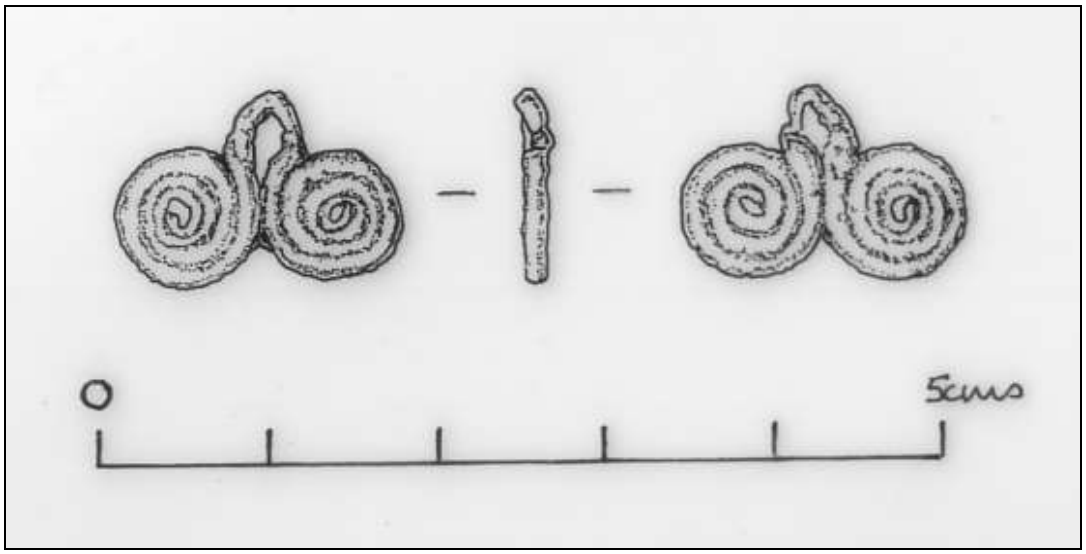


Figure 6.11: The dual spiral object from Grave 371 (EDM 89220).

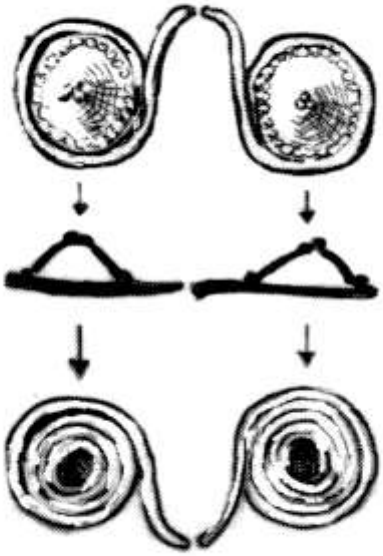


Figure 6.12: The dual spiral from the Tawilan hoard.



Figure 6.13: Silver dual spirals from the Tepe Nush-i-Jan hoard (Median, 6th century; Maxwell-Hyslop 1971: pl. 252).

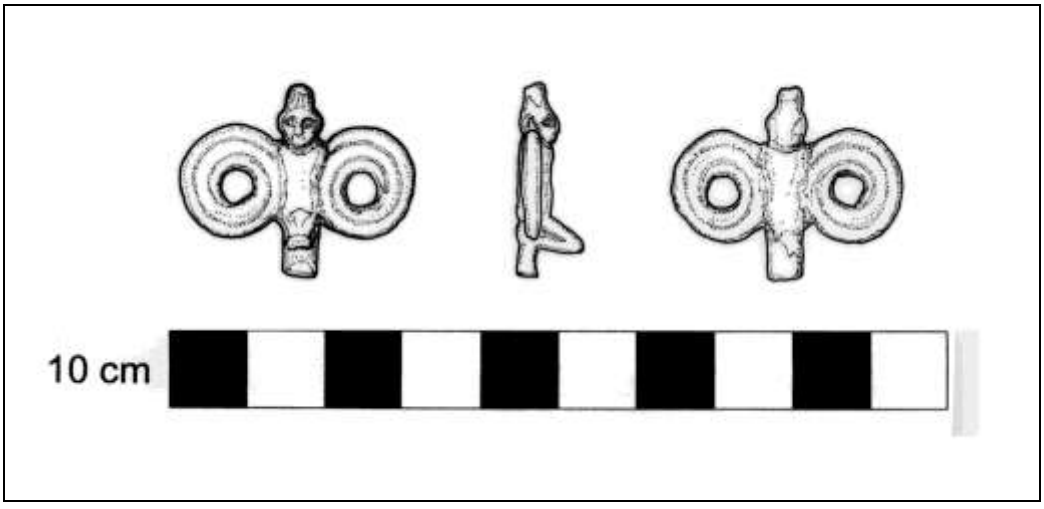


Figure 6.14: The dual spiral figurine pendant from Khirbat en-Nahas.



Figure 6.15: The dual spiral from Tell el Ajjul (Petrie 1933: IX).

A few copper bracelets were also found at Wadi Fidan 40. A copper bracelet was also found about midshaft of the right forearm of the entombed in Wadi Fidan 40's Grave 371 (Fig. 6.16, 6.17; EDM 70369), a child of about six to eight. A copper bracelet was also found in Grave 97, also with a juvenile (Fig. 6.18, 6.19; B. 3620). This bracelet was likewise found on the right forearm. This individual was also buried with a vessel, but in this case the vessel was wood (Fig. 8.37).

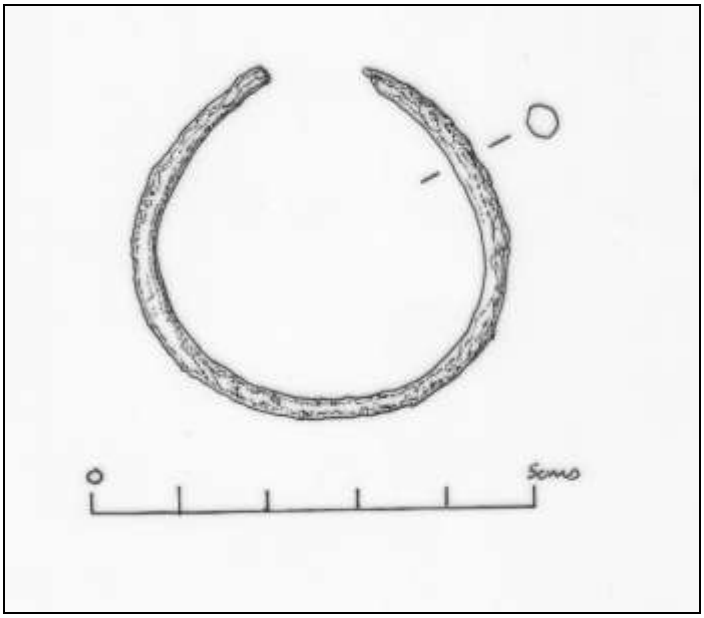


Figure 6.16: The copper bracelet from Grave 371 (EDM 70369). Drawing by Caroline Hebron.



Figure 6.17: The copper bracelet from Grave 371, *in situ,* on the right arm of the interred (EDM 70369).



Figure 6.18: The copper bracelet from Grave 97 (B. 3620).



Figure 6.19: The copper bracelet from Grave 97 (B. 3620), inside the grave's wooden bowl (B. 3619).



Figure 6.20: The burial of Grave 97. Note the copper bracelet on the right forearm.

In addition to the iron bracelet previously mentioned, a copper anklet was found at about the mid-calf of each leg of the individual in Grave 92 (B. 2134). These anklets touched as she was laid in the grave, with the left leg over the right (Figs. 6.21, 6.22).



Figure 6.21: The Grave 92 burial. Note the copper anklets around the mid-calf of each leg.



Figure 6.22: The copper anklets of Grave 92.

Copper rings were found in three graves. At least two of these were toe rings, and none could conclusively be called finer rings, but in most cases it could not be determined whether these were finger or toe rings. A copper or copper alloy ring was found on the third toe of the left foot (Fig. 6.23; B. 2543), and another copper or alloy ring was found on the second toe of the right foot (Fig. 6.24; B. 2544) of Grave 54, which also had the iron finger ring (Fig. 6.25). A copper ring fragment was found with the infant of Grave 66 (B. 2598), but might have belonged to the original occupant of that

grave cist. A secondary burial believed to have been removed from the cist was found above the capstones. Finally, two copper rings were found in Grave 12, the badly disturbed grave of a juvenile and one of the richest graves in the cemetery (B. 2320, 2323). It is impossible to say if these are finger or toe rings. Notes state that one of them came from sieved sediments "from the foot area." One ring was photographed encircling a bone; physical anthropologist Melanie Beasley states that this most likely a toe bone.

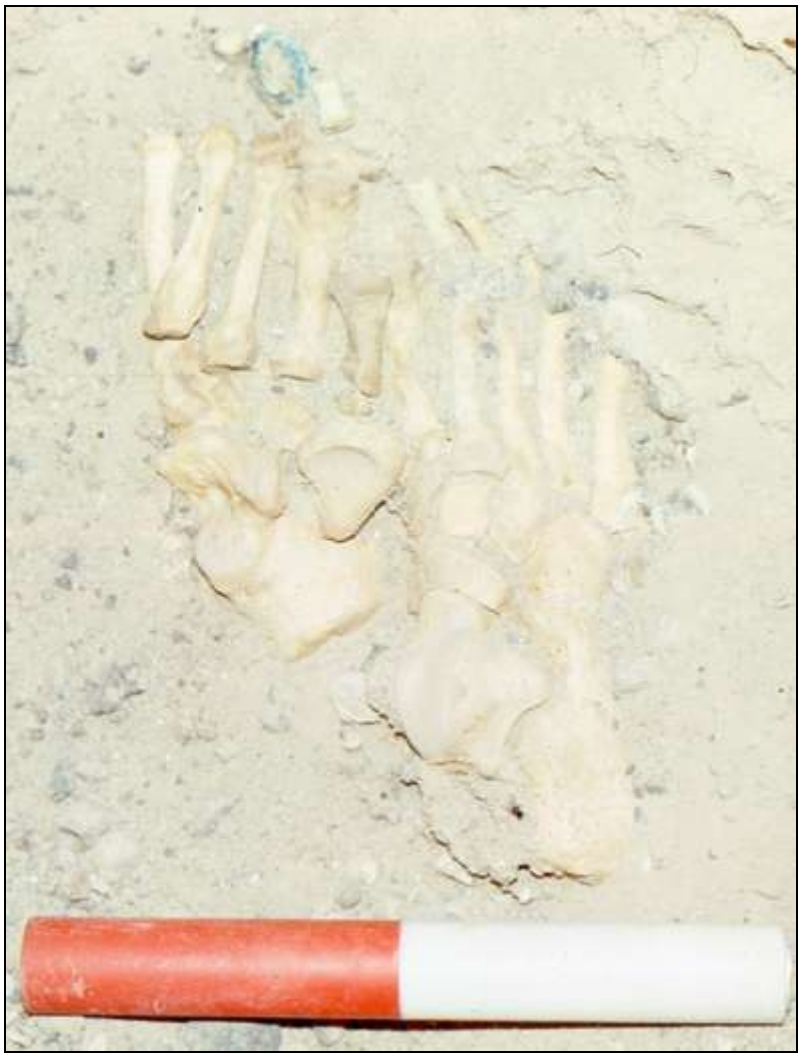


Figure 6.23: Grave 54 feet. Note the toe ring on the third toe of the left foot (B. 2543).



Figure 6.24: Grave 54, right foot, after the removal of the left foot. Note the toe ring on the second toe (B. 2544).



Figure 6.25: The copper toe rings (top, B. 2543, 2544) and iron finger ring (bottom, B. 2542) from Grave 54.

Despite the fact that beads were the most common artifact at Wadi Fidan 40, only one metal bead was recovered. One copper bead was found associated with stone and shell beads in the cist of Grave 253 (Fig. 6.26; EDM 80743). An anthropomorphic standing stone and bracelet fragment also suggest that this grave was unusually wealthy.



Figure 6.26: The copper bead (right) and two amazonite stone beads from Grave 253.

Metal items were the most unusual and probably most costly items at Wadi Fidan 40. Despite the large quantities of copper produced at contemporary 10th c. BCE Khirbat en-Nahas, there is little evidence that it was worked into final products for local use. To date, only one figurine mould was found at the site, and that was found in a specialized slag processing complex in Area S (Levy 2008). Ceramic figurine fragments were found in Area R and on the surface at the site, and the mould is likely for ceramic rather than metal working. From a World Systems perspective, some core power might be extracting the copper from the region and forming it into finished products elsewhere, only to return

a fraction of the final products to the region after greatly enhancing the material's value (Algaze 1993, 2001). Whether the metal working was done in the region or abroad, the lack of finished metal products being made in the region suggests that those final products that were found were especially valuable.

SHELL, BONE, STONE, AND FAIENCE RINGS, ANKLETS, AND BRACELETS

Other artifacts included artifacts made of stone, probably chalk or limestone, and what may be faience, bone, or shell. These artifacts were in general not available for study in 2007, and therefore little can be said about them with certainty. One stone or bone toe ring was recovered from Grave 203 (Fig. 6.27; EDM 80968). Another stone or bone ring was recovered from Grave 227 (Fig. 6.28; EDM 80455), a badly disturbed grave believed to be that of an adult female who was also buried with a stone bracelet. What appear to be bone ring fragments were found in Grave 543, that of a middle to old adult female. Unfortunately, it was not recorded which side of the body these rings were associated with, nor is it clear which, if any, are finger rings, and which are toe rings.



Figure 6.27: The stone or bone toe ring from Grave 203 (EDM 80968).



Figure 6.28: The stone ring from Grave 227 (EDM 80455).



Figure 6.29: Bone ring fragments from Gave 543 (EDM 72459).

Shell, stone, or bone bracelets were not uncommon in the cemetery. Unfortunately, only one complete and in situ example was found, a lambis shell bracelet on the right arm of a young adult woman buried in Grave 706 (Figs. 6.30-6.32; EDM 88493). Thirteen additional graves contained bracelet fragments (Graves 67, 101, 223, 231, 237, 247, 253, 257, 306, 329, 346, 515, and 718). These bracelets show great variety. Some of these seem to have encircled the entire wrist, while others are pierced and probably were tied to the wrist. Those of Grave 223, 231, 253, and 257 all appear to be stone and are pierced at one end in order to facilitate such tying (Figs. 6.33-6.36). Only that of Grave 253 appears to be complete, though an additional curved, possibly bone, piece which appears to be a bracelet fragment was also found in this grave, alongside many bone needles (Fig. 6.37). The stone artifacts, though referred to as

bracelets, may in fact be pendants, or they may have been tied on. None was found in situ. A bone bracelet with grooved incisions was found on one of the arms of the individual in Grave 718, though which arm was not recorded (Figs. 6.38, 6.39). Other stone or bone bracelet pieces are too fragmentary to say much about them (Figs. 6.40-6.43). Small shell fragments that appear to be of bracelets were found in Grave 237 and Grave 247 (Figs. 6.44, 6.45). Many bracelet fragments, perhaps from *Lambis spp.* shells, were found in Grave 306 and Grave 329 (Figs. 6.46, 6.47). Finally, what might be a faience bracelet was recovered from Grave 346 (Figs. 6.48, 6.49). Eight of the individuals were intact enough to determine age; all of these were adults. All three of the individuals who could be sexed were female.



Figure 6.30: Grave 706 burial. Note the shell bracelet.



Figure 6.31: The lambis shell bracelet from Grave 706 (EDM 88493).

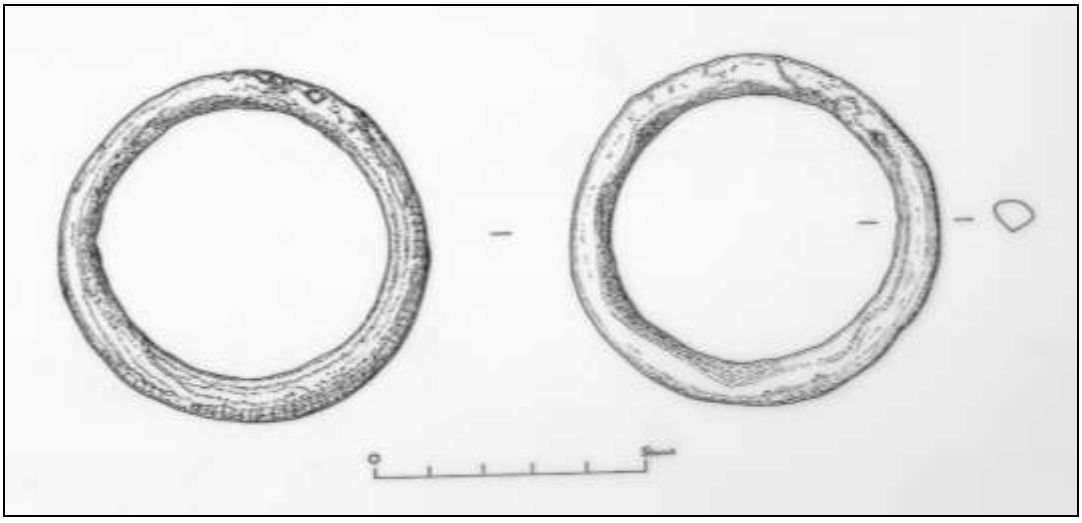


Figure 6.32: The lambis shell bracelet from Grave 706 (EDM 88493). Drawing by Caroline Hebron.



Figure 6.33: The limestone bracelet or pendant fragment from Grave 223 (EDM 40034).



Figure 6.34: The stone bracelet or pendant fragment from Grave 231 (EDM 80448).



Figure 6.35: The stone bracelet or pendant fragment from Grave 253 (EDM 40035).



Figure 6.36: The stone bracelet or pendant fragment from Grave 253 (EDM 80761).



Figure 6.37: Bone pins and possible bracelet fragments from Grave 257 (EDM 80897).



Figure 6.38: The bracelet from Grave 718 (EDM 74004), exterior.



Figure 6.39: The bracelet from Grave 718 (EDM 74004), interior.



Figure 6.40: Stone bracelet fragment found in the fill of Grave 515 (EDM 72261).



Figure 6.41: Stone bracelet fragment found in the cist of Grave 515 (EDM 72293).



Figure 6.42: Fragments of a stone or bone bracelet from Grave 67 (B. 2567).



Figure 6.43: Stone or bone bracelet fragments from Grave 101 (B. 2672).

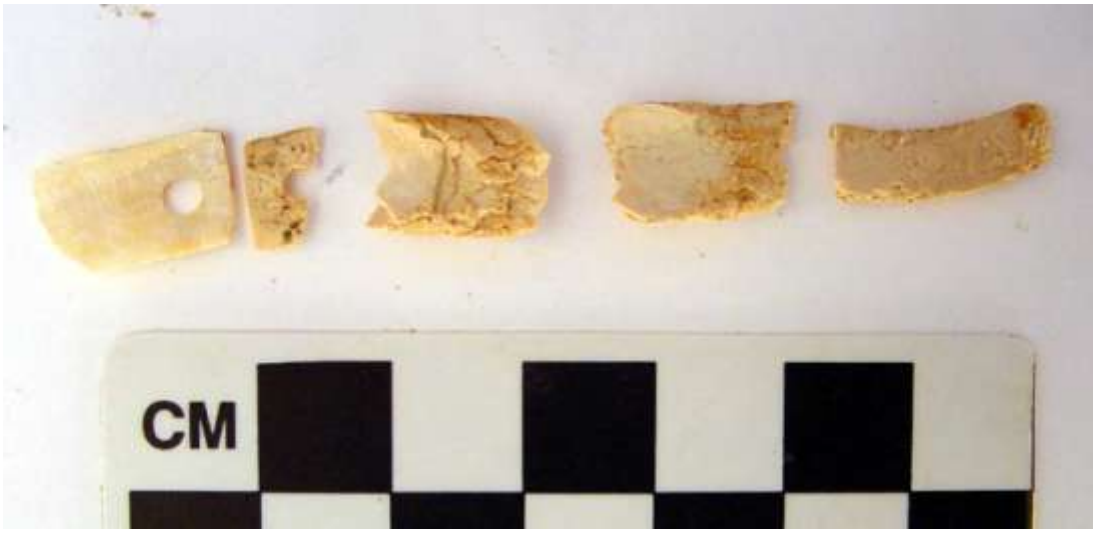


Figure 6.44: Shell bracelet fragments from Grave 237 (EDM 80696).



Figure 6.45: Shell, probable bracelet, fragment from Grave 247 (EDM 80708).



Figure 6.46: Bracelet fragments from Grave 306 (EDM 80758).



Figure 6.47: Some of the bracelet fragments from Grave 329 (EDM 80657). Other fragments were also found in this grave (EDM 86857, 86917, 86963).



Figure 6.48: The faience(?) bracelet from Grave 346 (EDM 89335), exterior.



Figure 6.49: The faience(?) bracelet from Grave 346 (EDM 89335), interior.

THE SCARAB AND SEAL

One scarab and one stamp seal were recovered at Wadi Fidan 40. The scarab was found next to the left scapula in Grave 92, amidst a collection of shell beads which will be discussed below (Fig. 6.50). It therefore appears to have been incorporated in a necklace. It was found next to a large shell bead, and apparently was strung in such a way that it could be spun, so either side might face outwards. The stamp seal was found in Grave 91, from sieved deposits around the chest region. Grave 92 contained an unusually rich mature adult female, with copper anklets, iron bracelet, carnelian beads, but besides the seal and a few stone beads, no artifacts were found in Grave 91. However, Grave 91, an adult which could not be sexed, like Grave 92 and all the

individuals buried with metal objects, was buried in an extended position, which may be a sign of high status or at least of a particular social position.



Figure 6.50: The Grave 92 scarab (white arrow), as found, beside the large shell bead, after the removal of the skull. Note the left shoulder blade in lower left corner and the modified cowries.

The social role of scarabs should be understood in order to consider the context of these finds. Scarabs were originally amulets, and only later developed into seals. Some scarabs bear no seal at all. "The Scarab was originally a purely religious object, the emblem of re-birth in the Other World and of the god of 'coming-into-being,' Khepera" (Hall 1913: xii-xiii). Scarabs apparently were first buried with the dead, and only later used by the living, when it began to be used as a seal. Scarabs most common, but derivatives include scaraboids, and cowroids, which are cowry-like seals or amulets (Hall 1913: vii-viii). The names of kings appearing on the amulets were invocations of the divine power (Hall 1913: xxi), and they were often recreated long after the monarchs named on the scarabs were dead. Hyksos scarabs imitated at least until the 19th Dynasty

in northern Egypt (Hall 1913: xv). Scarabs of the great tomb builders of the 6th dynasty were recreated during the New Kingdom (Dynasty 18-19) and even the Saite Period (Dynasty 26), contemporaneous with Persian rule in the Levant (Hall 1913: xii). Scarabs themselves are often tools of veneration of the dead, as reflected in the many scarabs of Thutmoses III, including one from Khirbat en Nahas (Münger in press).

The scarab dates to the Hyksos period, and may or may not be an invocation of the Semitic kings of Egypt (Figs. 6.51, 6.52). The Hyksos ruled at Avaris in the Nile delta, and the vast palace of their ruler Khayan , which is more Near Eastern than Egyptian in layout, and where communal feasting took place in a large central courtyard (Bietak 2010), testifies to their power.



Figure 6.51: The Grave 92 scarab, base.



Figure 6.52: The Grave 92 scarab, top.

The stamp from Grave 91 is not a legible artifact. As Adolfo Muniz has pointed out, the row of parallel lines is reminiscent of the engraved stone of Grave 712 (Figs. 6,53, 6.54). Stefan Münger (in press) notes that it has an unusual sheaf-shaped handle and has suggested that the engraving on the base is a schematic meant to allude to hieroglyphs of Amun. In addition, Münger notes that the Wadi Fidan 4 scarab reads, "Amun-Re," and the rectangular piece from that tomb reads, "Amun is my lord." Although the evidence is scanty, this suggests a great interest in Amun in the area, and may indicate worship of that god or of a god, perhaps Qos, syncretisticly associated with Amun. However, by the tenth century the worship of Amun had become so important that it would be more surprising *not* to find his name than to find it (Budge 1899: 103-107).



Figure 6.53: The Grave 91 stamp seal leaf-shaped handle.



Figure 6.54: The base of the Grave 91 stamp seal, with a symbol that may be meant to evoke Amun.

OTHER BEADS AND PENDANTS

Beads and pendants are the most common items of personal adornment in the cemetery. It appears that sometimes a single material of bead made up an item, but beads of multiple material types are often found in a single grave and were probably used in a single item of personal adornment (Fig. 6.55). The beads were apparently worn as necklaces, sometimes as elaborate chokers similar to those found in Egypt (Fig. 6.56). Other beads were worn as bracelets and anklets. Still others were worn as belts. Finally, we can neither confirm nor refute the probability that loose beads, or strands of beads that were not worn as jewelry, were left as offerings. The beads were constructed of stone,

ostrich eggshell, organic materials, and artificial materials (Table 6.1). Each of these materials will be considered independently.

Table 6.1: Beads and pendants of Wadi Fidan 40, by material.

Material	Count	Percentage of sample
Agate	152	2.91
Alabaster/Calcite	212	4.05
Amazonite	298	5.70
Apatite	5	0.10
Aventurine	42	0.80
Bivalve drilled shell	2	0.04
Bone	11	0.21
Carnelian	626	11.97
Citrine	30	0.57
Ceramic	2	0.04
Coral	5	0.10
Copper	1	0.02
Cowry	21	0.40
Cupric	118	2.26
Dentalium	226	4.25
Dolerite	2	0.04
?Faience	3	0.06
Flint	130	2.50
Garnet	1	0.02
Glass	5	0.10
Hematite	2	0.04
Jet	1	0.02
?Lapis lazuli	1	0.02
Limestone	185	3.54
Onyx	3	0.06
Ostrich eggshell	2,447	46.78
Pearl	1	0.02
Quartzite	2	0.04
Rock crystal	9	0.17
Sandstone	3	0.06
?Seed	1	0.02
Shell (worked, unidentified)	618	11.83
Siltstone	13	0.25
Univalve	28	0.52
?Wood	1	0.02
Total	5,230	100%



Figure 6.55: Beads found about the neck region in Grave 544 (EDM 72408) and probably a necklace, hypothetically restrung. Beads include carnelian, calcite, ostrich eggshell, and unidentified worked marine shell.



Figure 6.56: The elaborate choker of a single bead material, found in Grave 87. Shown after the removal of the postcranial skeleton.

ARTIFICIAL MATERIALS

Excluding metal, beads were identified as having been made from three artificial materials: Ceramic, faience, and glass. Such artificial materials both suggest construction by a settled population and imply invested energy. These artificial materials were very uncommon in the cemetery.

CERAMIC

Two beads were identified as ceramic (Table 6.2). One was glazed, while the other was very poorly fired and friable; it may in fact be frit.



Figure 6.57: The possibly ceramic bead from Grave 235 (EDM 80084).



Figure 6.58: The possibly ceramic bead from Grave 710 (EDM 89095).

Table 6.2: Ceramic beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Length	Thickness	Diameter	Shape	Perforation	Color	Descrip-tion
235	1521	80084	2083	0.681	0.205		Cylinder disc?	Plain?	White	Very poorly fired ceramic, very fine light tan to white clay. Two pieces; surviving dimensions of larger piece.
710	2454	89095	6850		0.382	0.619	Short barrel	Plain, 0.212	White	Ceramic bead with shiny white glaze, worn through in many patches. About 50-60% of glaze remains, otherwise 100% of bead preserved.

GLASS

Six glass beads were reported at the cemetery (Table 6.3). One of these, in Grave 29, appears in the handwritten Bead Analysis but was not available for study and no photographs exist. Of the remaining five, two were surface finds, two was found in Grave 12, and one was found in Grave 92. All the graves with glass beads were remarkable for the richness and diversity of their personal adornments.

Table 6.3: Glass beads from Wadi Fidan 40.

Grave	Locus	Basket	EDM	Sub.	Length	Width	Thick-ness	Dia-meter	Shape	Perforation	Color	Description
0	0	2514	86016				0.457	1.179	Short barrel	At angle, 0.332 cm.	Blue	Opaque turquoise blue glass bead. Knob where glass joins itself. At knob, bead is 1.172 wide
0	2211	4533	87046				0.633	0.884	Short barrel	Plain, 0.343 cm	Blue	Opaque turquoise blue glass bead. Very regular, but with slight collar around perforations.
12	623	2311		20	1.068	0.857	0.553		short barrel	plain, ellipse 0.432 x .284	Purple	Irregular, rounded, light purple, translucent glass bead with some tiny air bubbles.

Table 6.3: Glass beads from Wadi Fidan 40, continued.

12	623	2322					1.853	2.239	Oblate	Plain; 0.538 cm.	Black	Black bead with projections with white lines along them. Small air pockets visible on surface of bead and concoidal chipping.

At least three of the five glass beads analyzed were made by winding molten copper around a wire. The process is described by Petrie (1909: 125): "The thread of glass was wound upon a hot copper wire of the size of the hole required; and after piling on enough, and completing the pattern of colour, the wire contracted in cooling and could be withdrawn." One of these was translucent purple (Fig. 6.59; Grave 12, B. 2311), one translucent green (Figs. 6.60, 6.61; Grave 92, B. 2155), and one opaque turquoise blue (Figs. 5.62-6.63; surface, EDM 86016).

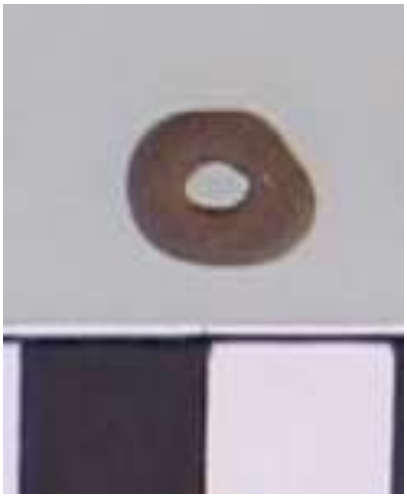


Figure 6.59: The purple glass bead from Grave 12 (B. 2311)



Figure 6.60: The green glass bead from Grave 92 (B. 2155).



Figure 6.61: The green glass bead from Grave 92 (B. 2155), side view. Note the seam where the molten glass was joined.



Figure 6.62: The blue glass bead found on the surface of Area A (EDM 86016).



Figure 6.63: The blue glass bead found on the surface of Area A (EDM 86016), side view.

A fourth bead, a surface find (Fig. 6.64; EDM 87046), was probably created in this way, but it is much more finely finished and smoothed, so the chaine de operatoire is not as obvious. This bead resembles those recovered from Wadi Fidan 45.



Figure 6.64: The blue glass bead found on the surface of Area B (EDM 87046).

The fifth bead, one of the Grave 12 beads, is the most ornate and complicated to form of all of the beads at Wadi Fidan 40 (Figs. 6.65-6.67). This is a black bead with projections with white lines along them. Three such lumps or projections are found along the outside of the bead. One's length runs parallel to perforation; 1.143 cm long and 0.843 wide, rising about 0.326 above the bead's surface. Two white lines run down its surface. Both are chipped, showing that the white extends beyond the surface into the glass about 0.085 c.m. A second such projection is found 1.234 cm along the surface, also with two parallel white lines along its length, with the length of the projection paralleling the bead's axis. This projection measures 1.099 long, 0.882 wide, and 0.283 thick. The bead's surface becomes somewhat irregular here. After this projection, a further 0.712 c.m. along the bead's surface, is the final projection. This last has two white lines that run perpendicular to the bead's axis. This projection is rougly a half sphere, 0.900 wide parallel to the bead's axis and 0.980 long perpendicular to bead's axis,

extending 0.278 c.m. above the surface of the bead. Small air pockets visible on surface of bead and the conchoidal nature of the chipping suggest this bead is glass. There is no reason to believe the white inclusions appear to be bone as preliminary publications claimed (Levy et al. 2004: 80).



Figure 6.65: The black bead found in Grave 12 (B. 2322).



Figure 6.66: The black glass bead from Grave 12 (B. 2322).



Figure 6.67: The black glass bead from Grave 12 (B. 2322).

FAIENCE

Faience is an artificial, glass-like substance made from Just three small beads in the sample were designated faience (Table 6.4), all of them from the same grave. Grave 12 is also among the wealthier graves. Faience was first created in Egypt and was extremely common there during the Third Intermediate Period (Andrews 1990; Nicholson with Peltenburg 2000), but by the tenth century is found as far away as China (Braghin 2001). The fact that so little faience was found at Wadi Fidan 40 may be an indicator both of the people's poverty and of their lack of direct contact or trade with Egypt.

Table 6.4: The faience beads from Wadi Fidan 40.

Grave	Locus	Basket	Subnumeral	Thickness	Diameter	Shape	Perforation	Color	Description
12	623	2311	21	0.226	0.759	Clinder disc	Pain, 0.186	Blue	Turquoise blue faience? Piece with vitreous surface, slightly rough.
12	623	2311	22	0.266	0.7	Clinder disc	Pain, medium large, 0.313	Green	Light green opaque faience(?) piece with vitreous, slightly rough surface.
12	623	2311	24	0.481	0.65	Trunated concave bicone	Plain, 0.205	Green	light green opaque faience(?) piece with somewhat vitreous surface

STONE

The most common beads and pendants at Wadi Fidan 40 were made of stone. The stone beads at Wadi Fidan 40 were made in a fashion consistent with that described by George Reisner for Egyptian methods. Although his description is based on beads found at the Twelfth Dynasty bead manufactory and associated cemetery at Kerma in the Sudan, the technique is common throughout Egypt in the Dynastic periods:

> . . . natural crystals and pebbles were broken up by percussion. Suitable pieces were then roughly shaped by rolling between stones or by bruising . . . The shaped pieces were then smoothed by rubbing, a process which leaves flat places on the visually curving surface, a state which may be seen in many of the finished beads from the cemetery. . . . The polished beads were bored after smoothing and before polishing . . . The boring operation was undertaken either from one side . . . or from two opposite sides. Apparently if the hole begun on one side gave difficulties, owing to the drill working into a slanting position or being diverted, another boring was begun on the opposite side to meet the first hole. . . . It has

> usually been assumed that such holes could be drilled with a copper drill or a hard vegetable stalk by using wet emery powder . . .
> (Reisner 1923: 93)

By the New Kingdom period, manufacture of stone beads was conducted in Egypt at a large scale. Images in tomb paintings show craftsmen with bows and drill rods. Some of these individuals operate three rods at once, drilling three holes simultaneously, a feat that has also been replicated experimentally (Stockys 1989).

None of the WFD 40 stone beads were glazed, although glazing stone beads was common in ancient Egypt. It is perhaps notable that this form of stone-working is similar to that employed in shaping the anthropomorphic stones described in Chapter 5.

Twenty classes of stone were identified as bead materials at Wadi Fidan 40: Agate, alabaster or calcite, amazonite, apatite, aventurine, carnelian, citrine, cupric minerals, dolerite, flint, garnet, hematite, jet, lapis lazuli, limestone, onyx, quartzite, rock crystal, sandstone, and siltstone. These will each be considered individually.

AGATE

Agate is a chalcedony, a microcrystalline quartz formed by concretion. It is a sought-after stone because its hardness prevents it from being easily damaged and it holds a good polish (Cipriani and Borelli 1986: 198). Agates are found at Wadi Fidan 40 in tan, red, brown, pink, and orange varieties, and are often speckled or banded white stones (Figs. 6.68-6.70). One hundred fifty-two such beads were recovered at Wadi Fidan 40, most of them small cylinder discs (Tables 6.5, 6.6).



Figure 6.68: Agate beads from Grave 710 (EDM 88459).



Figure 6.69: An agate bead from Grave 514 (EDM 87899).



Figure 6.70: Agate beads and one shell bead (bottom right) from Grave 237 (EDM 80669).

Table 6.5: Agate beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thickness	Diameter	Shape	Perforation	Color	Description
0	0		2239				0.994	1.574	Short barrel	Drilled both sides, slight cone	Tan, white	Banded stone bead, somewhat irregularly shaped.
0	608		2245				0.676	1.056	Short cylinder	Cone	White, brown	Very irregularly shaped -- one side rounded, the other chipped away and thinning to 0.202. Translucent, with white patina and clouds.
0	614		2257	4			0.448	1.009	Cylinder disc	Plain, medium large	White	Surface; somewhat irregularly rounded.
0	614		2265	1			0.402	1.294	Cylinder disc	Plain, medium large	White	
0	614		2265	2			0.467	1.068	Cylinder disc	Plain	White	Somewhat irregular as now found—one side with facets, the other flat, hole relatively small and somewhat off-center.

Table 6.5: Agate beads from Wadi Fidan 40, continued.

0	1615	80346	2292				0.545	1.077	Short cylinder	Plain, medium large	White	Nicely rounded white agate with tan bands.
0	2002	89000	2517				0.33	0.962	Short cylinder	Double cone	White	Ripply surface, completely shiny opaque white
11	615		2270	1			1.082	0.631	Long cylinder	Drilled both sides, making long cones	White	Beautiful banded white stone, perforation perpendicular to bands. Opaque.
12	604		2231	4			0.458	0.756	Short cylinder	Drilled both sides	Brown and white	Banded brown and white, slightly irregularly shaped, thins to 0.425 one side.
12	604		2238	3	0.998	0.926	0.54		Truncated convex bicone	Double cone, to 0.135	Grey	Translucent light grey stone with black and dark red (carnelian-like) bands. Surface not entirely smoothed; facets can still be seen.
12	623		2311	1			0.892	1.6	Short cylinder	Cone, medium large	White	Broken through perforation
12	623		2399	140			0.208	0.636	Truncated convex bicone disc	Cone one side; 0.392 to 0.220	Red, white	Dark red with much white
14	601		2229	3			0.103	0.409	Cylinder disc	Double cone	Red, white	Mottled red and white
14	601		2229	4			0.115	0.398	Cylinder disc	Double cone	Red, white	White with some red

Table 6.5: Agate beads from Wadi Fidan 40, continued.

14	628		2396	155			0.137	0.223	Cylinder disc	Plain, 0.102	Red-brown	Shiny; with a small bulbous protuberance. Broken through perforation.
14	628		2396	156			0.158	0.255	Cylinder disc	Plain, 0.139	Red-brown	
14	628		2396	157			0.185	0.33	Cylinder disc	Plain, 0.134	Red-brown	
14	628		2400	17			0.335	0.24	Small segmented bead	Tubular, 0.135	Red-brown	Reddish brown bead divided into two segments, one 0.162, the other 0.164 by a deep groove running transversely. Somewhat shiny. Very nicely worked. Ends may be broken along other grooves -- possibly once a longer segmented bead
47	646		2434	2			0.294	1.299	Cylinder disc	Plain, 0.434	White	Clean-cut, only slightly oblong bead
47	646		2434	3			0.288	1.279	Cylinder disc	Plain, 0.476	White	Slightly irregular or battered around edges

Table 6.5: Agate beads from Wadi Fidan 40, continued.

47	646		2434	4			0.246	1.116	Barrel disc	Plain, extra large, 0.578	White	Nicely rounded bead with extra-large hole, slightly wedge-shaped, thins to 0.175
47	646		2443	1			0.479	1.281	Cylinder disc	Teardrop shaped, plain	White	Banded bead, wedge-shaped, thins to 0.396
47	646		2443	2			0.278	1.204	Cylinder disc	Plain, large	White	Well rounded, wedge shaped, thins to 0.213
47	9315	72102	5177				1.442	1.002	Long barrel	Drilled both sides; slight dogleg at meeting place	Red	Red and white banded agate. Chip out of edge near one perforation. Imperfection in the stone lead to a chunk missing near the opposite perforation.
209	1548	80254	2214	3	0.877	0.837	0.333		Cylinder disc	Plain, medium large	White	Wedge-shaped, thins to 0.213. Triangluar with rounded corners. Some banding.
216	1592	80294	2245				0.259	0.513	Truncated double bicone disc	Double cone	Brown	Brown and orangish white opaque stone
218	1609	80324	2272	2			0.729	1.268	Short cylinder	Ovoid, plain, medium large	White	Banded stone

Table 6.5: Agate beads from Wadi Fidan 40, continued.

220	1539	80111	2103				0.107	0.448	Cylinder disc	Double cone	White	Opaque orangish white stone bead, nicely worked
225	1592	80347	2293	3			0.144	0.459	Barrel disc	Plain, medium large	Orange	Orange-white opaque stone, fine grained
225	1592	80347	2293	4			0.11	0.371	Cylinder disc	Plain, medium large	Orange	Orange-white opaque stone, fine grained
225	1592	80347	2293	5			0.124	0.425	Cylinder disc	Plain, medium large	Orange	Orange-white opaque stone, fine grained
225	1628	80415	2350				0.146	0.438	Cylinder disc	Plain, medium large	Pink	Pink-white stone piece. tag says 2 beads, only one in bag
226	1622	80427	2360				0.411	0.84	Short barrel	Two slight cones	Orange	Beautiful banded stone – orange, white, dark brown. Stripes are visible when stone is worn. Thins to 0.368
226	1629	80550	2463	1			0.528	1.182	Short cylinder	Double cone	White	White marble-like stone
226	1629	80550	2463	2			0.418	1.108	Short cylinder	Double cone	White	White marble-like stone
227	1525	80222	2187	1			1.002	1.374	Short barrel	Plain, medium large	White	Banded, very light, looks as though it should be translucent but is not, thins to 0.854
227	1525	80222	2187	2			0.937	1.301	Short barrel	Plain, medium large	White	Banded, with brown bands, thins to 0.883

Table 6.5: Agate beads from Wadi Fidan 40, continued.

227	1646	80464	2388				0.238	0.523	barrel disc	Double cone	Red	Nicely worked red and white piece, with one bluish patch
237	1625	80406	2341	1			0.569	1.21	Short cylinder	Ellipsoid, medium large	White	
237	1625	80406	2341	2	1.221	1.145	0.441		Short cylinder	Ellipsoid, medium large	White	Banded, roughly rounded
237	1625	80406	2341	3	1.109	1.099	0.836		Short cylinder	Ellipsoid, medium large	White	Banded, well rounded, thins to 0.541
237	1625	80406	2341	4			0.512	1.259	Short cylinder	Plain, medium large	White	
237	1625	80406	2341	5	1.475	1.283	0.477		Short cylinder	Plain, medium large	White	Rounded
237	1661	80486	2407	2			0.489	0.899	Short cylinder	Half-cone	Tan, white	White and tan banded stone
237	1661	80494	2413	1			0.607	1.274	Short cylinder	Drilled both sides, ellipsoid, medium large	White	Opaque white and light tan bedded rock. Beds run upright when ellipse of hole is taken into account. Somewhat powdery, but hardness over 3.
237	1661	80494	2413	2			0.539	1.089	Short cylinder	Drilled both sides	White	Opaque white stone with thin tan beds
237	1661	80494	2413	3	0.969	0.905	0.475		Short cylinder	Plain	White	Opaque white stone with thin tan beds. Squarish with rounded corners.
237	1661	80494	2413	4			0.499	1.104	Short cylinder	Plain	White	Opaque white stone

Table 6.5: Agate beads from Wadi Fidan 40, continued.

237	1661	80510	2427	1	1.149	1.07	0.715		Short cylinder	Ellipsoid, medium large	White	Bedded stone, thins to 0.448, rounded
237	1661	80591	2494	1			0.12	0.408	Cylinder disc	Double cone	Orange	Dark orange and white opaque stone, well-worked
237	1661	80591	2494	2			0.111	0.362	Cylinder disc	Double cone	Orange	Dark orange and white opaque stone, well-worked
237	1661	80591	2494	3			0.112	0.354	Cylinder disc	Double cone	Orange	Dark orange and white opaque stone, well-worked
237	1661	80591	2494	4			0.092	0.341	Cylinder disc	Double cone	Orange	Dark orange and white opaque stone, well-worked
237	1661	80591	2494	5			0.115	0.336	Cylinder disc	Double cone	Orange	Dark orange and white opaque stone, well-worked
237	1661	80591	2494	6			0.115	0.307	Cylinder disc	Double cone	Orange	Dark orange and white opaque stone, well-worked
237	1661	80656	2524				0.131	0.467	Cylinder disc	cone	Orange	Orangish-white stone with darker red and orange swirls
237	1661	80669	2535	2			0.111	0.407	Cylinder disc	Cone, flake scar	Red	Red and white mottled piece, well shaped

Table 6.5: Agate beads from Wadi Fidan 40, continued.

237	1661	80669	2535	3			0.094	0.363	Cylinder disc	Cone, flake scar	Red	Red and white mottled piece, well shaped
237	1661	80669	2535	4			0.099	0.413	Cylinder disc	Cone, flake scar	Red	Red and white mottled piece, well shaped
237	1661	80669	2535	5			0.139	0.405	Cylinder disc	Cone, flake scar	Red	Red and white mottled piece, well shaped
237	1661	80669	2535	6			0.104	0.363	Cylinder disc	Double cone	Red	Red and white mottled piece, well shaped
237	1661	80669	2535	7			0.114	0.332	Cylinder disc	Double cone	Red	Red and white mottled piece, well shaped
237	1661	80669	2535	8			0.131	0.372	Cylinder disc	Cone, flake scar	Red	Red and white mottled piece, well shaped
237	1661	80669	2535	9			0.119	0.347	Cylinder disc	Cone, flake scar	Red	Red and white mottled piece, well shaped
237	1661	80669	2535	10			0.121	0.458	Cylinder disc	Cone, flake scar	Orange	Orangish-white stone with darker red and orange speckles
237	1661	80705	2563	1			0.397	1.048	Short cylinder	Plain	White	Opaque white stone, some banding visible. Powdery on edges, but within cut section nice yellow-white.
237	1661	80705	2563	2			0.394	0.99	Short cylinder	Teardrop shaped, medium large	White	Opaque white stone. Powdery on edges, but within cut section nice yellow-white.

Table 6.5: Agate beads from Wadi Fidan 40, continued.

237	1661	80705	2563	3			0.705	0.908	Short cylinder	Plain, medium large	White	Opaque white somewhat powdery stone
237	1661	80707	2563	1	1.188	1.025	0.541		Short cylinder	Drilled both sides, each side ovoid	White	
237	1661	80707	2563	2			0.476	1.176	Short cylinder	Plain, medium large	White	
237	1661	80707	2563	3			0.419	1.077	Short cylinder	Ovoid, plain, medium large	White	
237	1661	80707	2563	4			0.493	1.119	Short cylinder	Ovoid, plain, medium large	White	Promiant striping across drilled surfaces, thins to 0.280
237	1661	80707	2563	5	1.072	0.97	0.309		Short cylinder	Drilled both sides	White	Irregularly shaped, roughly rounded
237	1661	80707	2563	6	1.185	1.106	0.528		Short cylinder	Drilled both sides, medium large	White	Rounded, irregularly shaped
237	1661	80707	2563	7	1.159	0.986	0.389		Short cylinder	Drilled both sides, medium large	White	
237	1661	80707	2563	8			0.467	1.041	Short cylinder	Drilled both sides, medium large	White	Roughly circular, banded
237	1661	80707	2563	9			0.42	1.049	Short cylinder	Drilled both sides, medium large	White	
237	1661	80707	2563	10			0.646	1.075	Short cylinder	Ovoid, plain, medium large	White	Semi-translucent, thins to 0.402
240	1668	80571	2481				0.882	0.907	Short barrel	cone	Orange	Banded orange and orangish-white stone, opaque. Thins to 0.642
240	1686	80646	2514	8			0.292	0.689	Barrel disc	Double cone	Orange	Pale translucent orange stone with many white clouds
240	1686	80646	2514	10			0.231	0.717	Truncated bicone disc	Double cone	Orange	Translucent, pale, many white clouds

Table 6.5: Agate beads from Wadi Fidan 40, continued.

240	1686	80646	2514	11			0.202	0.638	Barrel disc	Double cone	Orange	Pale translucent orange stone with white clouds
240	1686	80646	2514	12			0.177	0.639	Barrel disc	Double cone	Orange	Pale translucent orange with many white clouds
240	1686	80646	2514	13			0.186	0.615	Truncated cone disc	Double cone	Orange	Pale translucent orange stone with many white clouds
240	1686	80646	2514	14			0.296	0.647	Truncated bicone disc	Double cone	White	Opaque white and tan stone
240	1686	80646	2514	15			0.307	0.655	Short barrel	Drilled both sides	Tan	Opaque white and tan.Large hole drilled about 2/3 through the stone meets smaller hole.
241	1653	80478	2399				0.781	1.049	Short barrel	Drilled both ends	white	Fibrous bands
246	1704	80838	2680	2			0.821	0.984	Short barrel	Drilled both sides	white	Swirled white and dark brown to black agate, opaque. Thins to 0.613.
339	3129	70099	3128	1			0.691	0.88	Short barrel	Plain; 0.449	Purple, white	Banded agate bead, leans somewhat on axis
340	9144	70222	3169	1			0.209	0.582	Chamfered cylinder disc	Double cone; 0.250, 0.233 to 0.152	Purple, white	White with some purple and some brown
514	2345	87899	5079				0.643	1.005	Short truncated convex bicone	Double cone; 0.435, 0.270 to 0.207	Orange, white	Pale, largely covered by white, with dark orange lines

Table 6.5: Agate beads from Wadi Fidan 40, continued.

515	9357	72292	5283		2.847	1.444	0.517		Pendant	Three parallel perforations, each plain. Slight cones on either side. Proceeding left to right, with flat part of pendant down, 0.514 one side, 0.324 the other; 0.291one side, 0.276 the other; 0.400 one side, 0.379 the other.	White	Irregular, roughly kidney-shaped pendant with three parallel perforations. One side is flat, the other is somewhat lumpy. Perforations on two sides slightly higher than central perforation. Spacer bead? Cracked through perforation.
517	2300	87547	4853				0.842	1.34	Oblate	Double cone, 0.39, 0.397 to 0.188	White	White, opaque, highly-polished stone. Looks similar to a very clouded specimine of what I have called citirine.
518	2303	89084	4816				0.474	0.652	Short barrel	Drilled both sides, meeting place slightly off	Blue, orange	Banded stone, orange on top and bottom, white clouded with blue in middle, with dark red lines from top town 3/4 of stone. These lines are particularly close together on one end of the stone. Very finely polished.

Table 6.5: Agate beads from Wadi Fidan 40, continued.

522	2321	87907	5082				0.886	1.136	Truncated convex bicone	Double cone	White, yellow-brown	Looks somewhat like what I have called citrine in the past. Yellow-brown, relatively opaque, with white bands and swirls.
537	9300	72014	5134		1.18	1.08	0.425		Cylinder disc bead	Plain; 0.388 diameter	Grey	Grey-green slightly vitreous banded stone, somewhat ovoid disc bead. Tapers to 0.330 thick on one side.
703	2466	88389	6773				0.143	0.412	Cylinder disc	Cone, flake scar	Red	Marbled red and white
705	2466	88404	6785	4			0.113	0.322	Cylinder disc	Double cone	Orange	
705	2466	88404	6785	5			0.11	0.329	Cylinder disc	Double cone	Orange	
705	2466	88411	6792	5			0.104	0.351	Cylinder disc	Rough flake scars, plain, medium large	Orange	Small orange and white agate?
710	2454	88390	6774	3			0.272	0.452	Short barrel	Double cone	Red, white	Red and white mottled
710	2454	88390	6774	4			0.198	0.47	Barrel disc	Double cone	Red, white	Red and white mottled
710	2454	88390	6774	5			0.202	0.466	Barrel disc	Double cone	Red-orange	Opaque red-orange
710	2454	88390	6774	6			0.221	0.472	Barrel disc	Double cone, medium large	Red-orange	Opaque red-orange
710	2454	88403	6784				0.141	0.49	Cylinder disc	Cone, to 0.156	Orange-white	Finely worked orangish white stone with darker orange flecks

Table 6.5: Agate beads from Wadi Fidan 40, continued.

710	2454	88416	6795				0.172	0.419	Cylinder disc	Double cone	Orange-white	Nicely shaped dark red flecks and thin stripes
710	2454	88427	6801	41			0.354	0.639	Short barrel	Double cone	Orange	Opaque orange-white with red swirls, thins to 0.250 one side
710	2454	88427	6801	42			0.174	0.561	Truncated bicone disc		Orange	Opaque orange-white with dark red spots
710	2454	88427	6801	43			0.225	0.662	Barrel disc	Double cone	Orange	Opaque orange-white with dark red spots
710	2454	88427	6801	44			0.262	0.648	Barrel disc	Very slight cones	Orange	Opaque orange-white with dark red spots
710	2454	88427	6801	45			0.184	0.513	Barrel disc	Double cone	Orange	Opaque orange-white with dark red spots
710	2454	88427	6801	46			0.221	0.646	Barrel disc	Double cone	Orange	Opaque orange-white with dark red spots
710	2454	88427	6801	47			0.241	0.524	Barrel disc	Double cone, medium large	Orange	Opaque orange-white with dark red spots
710	2454	88427	6801	48			0.329	0.653	Short barrel	Double cone, medium large	Orange	Opaque orange-white with dark red spots
710	2454	88427	6801	49			0.175	0.403	Barrel disc	Plain, medium large	Orange	Opaque orange white
710	2454	88427	6801	50			0.235	0.517	Barrel disc	Double cone	Orange	Opaque orange-white with dark red swirls
710	2454	88427	6801	51			0.192	0.492	Barrel disc	Double cone	Orange	Opaque orange-white with dark red swirls
710	2454	88427	6801	52			0.274	0.475	Short barrel	Double cone	Orange	Opaque orange-white with dark red swirls

Table 6.5: Agate beads from Wadi Fidan 40, continued.

710	2454	88427	6801	53			0.153	0.504	Truncated bicone disc	Double cone	Orange	Opaque orange-white with dark red swirls
710	2454	88427	6801	54			0.175	0.556	Pear-shaped cone	Very slight cones	Orange	Opaque orange-white with dark red swirls
710	2454	88427	6801	55			0.251	0.535	Short barrel	Very slight cones	Orange	Opaque orange-white with dark red swirls
710	2454	88427	6801	56			0.22	0.481	Short barrel	Very slight cones	Orange	Opaque orange-white
710	2454	88427	6801	57			0.231	0.525	Barrel disc	Double cones	Orange	Opaque orange-white
710	2454	88427	6801	58			0.272	0.511	Short cylinder	Slight cones, medium large	Orange	Somewhat irregularly shaped, opaque orange-white
710	2454	88427	6801	59			0.303	0.509	Short barrel	Slight cones, medium large	Orange	Opaque orange-white with dark red swirls
710	2454	88427	6801	60			0.202	0.456	Barrel disc	Double cone	Orange	One flat side where the bead was unworked. Opaque orange with dark red patches
710	2454	88427	6801	61			0.19	0.641	Truncated bicone disc	Double cone	White	Opaque white, apparently covering red. One side somewhat irregular; flattish.
710	2454	88427	6801	62			0.332	0.666	Short truncated bicone	Double cone	White, red	Opaque white with patches of red. Thins on one side to .238.
710	2454	88459	6826	3			0.208	0.446	Cylinder disc	Double cone	Orange	Nicley worked orangish-white stone with many darker orange swirls

Table 6.5: Agate beads from Wadi Fidan 40, continued.

710	2454	8845 9	6826	4			0.14 4	0.45	Cylinder disc	Double cone	Orange	Nicley worked orangish-white stone with darker orange speckles
710	2454	8845 9	6826	5			0.18 8	0.432	Cylinder disc	Double cone	Orange	Nicley worked orangish-white stone with darker orange speckles
710	2454	8846 9	6838				0.34 7	0.792	Short barrel	Plain, 0.246	Orange -white	Orangish white with darker orange spots. Very well rounded, including in perforation (almost like bicone). Shiny.
710	2454	8847 6	6844	11			0.18 4	0.421	Barrel disc	Double cone	Orange	Opaque orange-white
710	2454	8847 6	6844	12			0.18 4	0.511	Barrel disc	Double cone	Orange	Opaque orange-white with dark red spots
710	2454	8847 6	6844	13			0.18 9	0.457	Barrel disc	Double cone	Orange	Opaque orange-white with dark red spots; somewhat irregular, thins to 0.119
710	2454	8849 0	6854				0.24 6	0.562	Cylinder disc	Double cone, to 0.166	Orange -white	Somewhat irregular disc of orange-white stone with some darker flecks of orange

Table 6.5: Agate beads from Wadi Fidan 40, continued.

710	2454	89094	6828	8			0.311	0.621	Short barrel	Double cone, medium large	Orange	Slight ridge on part of the circumferance – almost a short truncated convex bicone. Small notch in one side where a quartz crystal has broken. Opaque orange-white with dark red spots.
710	2454	89094	6828	9			0.193	0.457	Barrel disc	Double cone, medium large	Orange	Opaque orange-white, one dark red circular band
710	2454	89094	6828	10			0.217	0.449	Barrel disc	Double cone, medium large	Orange	Opaque orange-white, dark red specks
731	2584	74067	7194	2	1.376	1.215	0.711			Plain	Red, white	Roughly shaped. One side is well rounded, like a short barrel, the other is largely cortex, rectangular and roughly worked. Deep red and white shiny crystals evident. A failed attempt at a short barrel bead?

Table 6.6: Agate beads from Wadi Fidan 40 unavailable for examination in 2007 and viewed only in photographs.

Grave	Locus	Basket	Subnumeral	Shape	Color
25	453	1922		Short cylinder	White and brown
31	818	2731	5	Barrel disc	White
67	786	2557	12	Short cylinder	Reddish white
67	786	2586	4	Short barrel	Red and white
67	786	2586	5	Short barrel	Red and white
67	786	2586	6	Short barrel	Red and white
67	803	2632		Cylinder disc	Red and white
67	803	2658	3	Short barrel	Red and white
67	803	2658	4	Short barrel	Red and white
67	803	2658	5	Cylinder disc	Red and white
92	531	2136	1	Unclear	White

ALABASTER/CALCITE

Grouped together in this analysis are alabaster and calcite. Alabaster is in fact a kind of calcite. Calcite is not commonly used in modern jewelry because of its softness. The stone is easily scratched. Many of the Wadi Fidan 40 examples are badly eroded. The Wadi Fidan 40 calcite beads tend to be short cylinders with large perforations (Tables 6.7, 6.8). They appear to have been formed by creating rods which were then cut into these cylinders; saw marks are still visible on the sides of some of the beads. The beads are made from calcite from an unknown, possibly local, source. Many of the Wadi Fidan 40 beads are banded due to their sedimentary formation (Figs. 6.71-6.72). Two hundred twelve of these beads were identified at Wadi Fidan 40.



Figure 6.71: An alabaster bead from Grave 737 (EDM 74056).

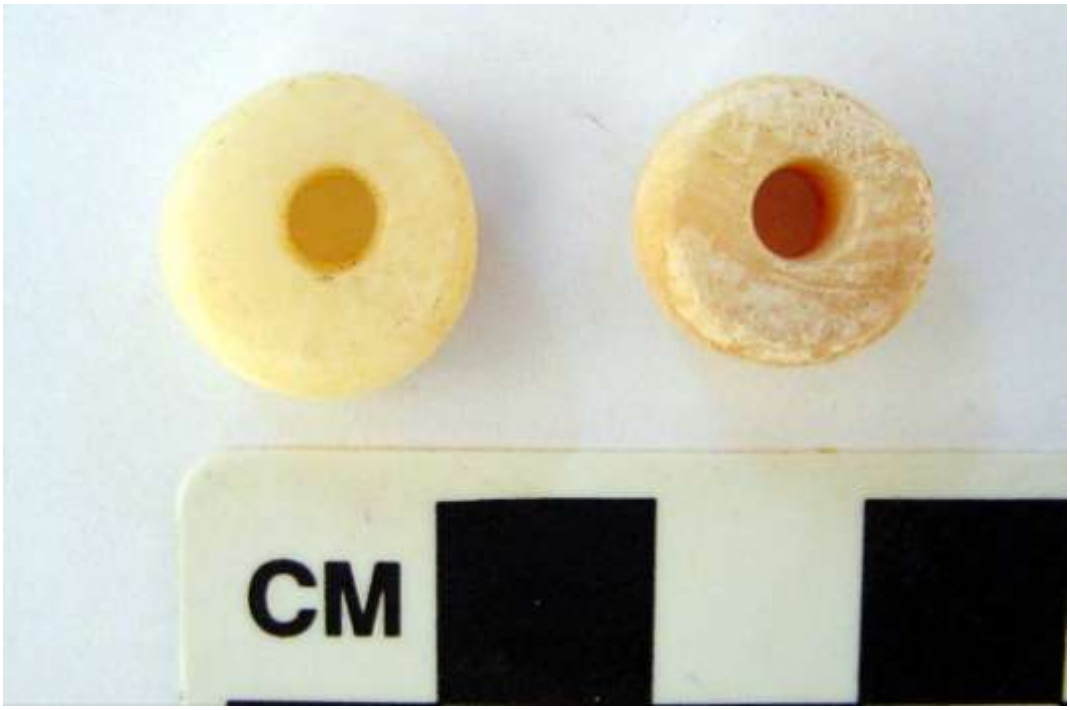


Figure 6.72: Alabaster beads from Grave 227 (EDM 80222). Note the apparent saw marks on the bead to the right.

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thick-ness	Diameter	Shape	Perforation	Description
0	611		2249				0.904	1.626	Short barrel	Double cone	White chalky stone, irregularly shaped
0	1522	80097	2093				0.269	1.122	Cylinder disc	Plain, medium large	
0	2201	87023	4517		1.145	0.919	0.523		Short cylinder	Double cone	Irregularly shaped, somewhat ovoid
0	0	A09F0048	A09L000	1			0.13	0.98	Broken	Drilled one end; 0.65	Striped white and brown bedded stone bead. Somewhat powdery. Broken through perforation. Apparenlty once squarish.
12	604		2218	1	1.752	1.445	1.136		Short barrel	Drilled both sides; slight dogleg at meeting; 0.365, 0.414	White powdery alabaster, irregularly shaped or very worn. Almost a rounded trapezoid.
12	604		2218	2			1.065	1.609	Short barrel	Drilled both sides; slight dogleg at meeting	Worn, pitted white powdery alabaster bead

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	604		2218	3	1.302	1.145	0.734		Short barrel	Double cone, slight dogleg at meeting	Worn or irregularly shaped white bead, some brown bands
12	604		2218	4	1.142	0.952	0.674		Short barrel	Double cone	Worn or irregularly shaped white alabaster bead, some brown bands
12	604		2218	5	1.146	1.045	0.618		Short cylinder	Double cone (slight)	Worn or irregularly shaped banded white and tan alabaster bead
12	604		2218	6			0.503	1.041	Short cylinder	Plain	Worn white alabaster bead
12	604		2218	7			0.269	1.153	Short cylinder	Plain, 0.431	Regularly shaped white alabaster bead
12	604		2218	8			0.525	1.055	Short cylinder	Plain	Slightly irregular white alabaster bead
12	604		2218	9			0.309	1.195	Short cylinder	Plain	Very regular white alabaster bead
12	604		2218	10			0.201	1.136	Cylinder disc	Plain	Very regular white bead
12	604		2218	11			0.281	1.119	Cylinder disc	Plain	Very regular white bead
12	604		2218	12			0.462	0.974	Short cylinder	Plain	Very regular white bead

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	604		2218	13			0.319	0.913	Short cylinder	Plain	Very regular white bead
12	604		2218	14			0.454	0.974	Short cylinder	Plain	
12	604		2218	15			0.26	1.123	Short cylinder	Plain	Worn white bead; wedge shaped, thins to 0.180
12	604		2218	16			0.441	1.042	Short cylinder	Plain	White bead; wedge shaped, thins to 0.347
12	604		2218	17			0.29	1.128	Short cylinder	Plain	Worn, wedge shaped, thins to 0.215
12	604		2218	18			0.481	0.948	Short cylinder	Plain	Worn white bead; wedge shaped, thins to 0.415
12	604		2218	19			0.438	1.018	Short cylinder	Plain	White alabaster bead
12	604		2218	20			0.421	1.012	Short cylinder	Plain	Worn white alabaster bead; wedge shaped—thins to 0.315
12	604		2218	21			0.332	0.96	Short cylinder	Plain	Worn white alabaster bead; wedge shaped—thins to 0.297
12	604		2218	22			0.358	0.949	Short cylinder		White alabaster; worn

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	604		2218	23			0.421	0.906	Short cylinder		Worn white alabaster bead; wedge shaped—thins to 0.311
12	604		2218	24			0.356	0.905	Short cylinder		Badly worn white alabaster
12	604		2218	25			0.599	1.113	Short cylinder		Worn white alabaster, broken through perforation
12	604		2231	1			0.341	0.851	Cylinder disc?	Plain, medium large?	Damaged brown & white banded stone; dimensions as survives, edges and faces gone
12	604		2238	9	1.624	1.332	0.838		Short cylinder?	Cone, 0.461 to 0.308	Irregular, worn alabaster bead, banded white and light tan and brown
12	604		2238	10	1.082	0.965	0.444		Cylinder disc	Plain, 0.331	Rounded bead, wedge-shaped, thins to 0.312
12	604		2238	11			0.258	1.144	Cylinder disc	Plain	Alabaster bead, wedge shaped, thins to 0.157

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	604		2238	12			0.382	1.057	Cylinder disc	Plain	Alabaster bead, slightly irregular
12	604		2238	13			0.4	1.017	Cylinder disc	Plain	Alabaster bead, slightly irregular
12	604		2238	14			0.349	1.001	Cylinder disc	Slight cone	Irregular, worn alabaster bead, banded white and light tan, missing one edge
12	604			2	1.362	1.177	0.761		Short barrel	Double cone; 0.467, 0.493 to 0.265	Banded yellow-white alabaster piece, flattened on two edges—barrel disc two sides which would normally be rounded on a barrel disc
12	604			3			0.278	1.109	Short cylinder	Plain; 0.367	White alabaster piece, relatively uniform color throughout
12	604			4			0.234	1.09	Short cylinder	Plain	White relatively uniform coloring

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	604			5			0.397	1.12	Short cylinder	Plain	White alabaster piece, relatively uniform color throughout. Somewhat wedge-shaped, thins to 0.286
12	604			6			0.386	0.953	Short cylinder	Plain	White, relatively uniform color throughout. Somewhat wedge-shaped, thins to 0.242
12	604			7			0.333	1.036	Short cylinder	Plain, 0.377	Banded yellow-white alabaster piece.
12	604			8			0.437	1.043	Short cylinder	Plain, 0.353	Banded yellow-white alabaster piece, one side snapped off.
12	604			9			0.376	0.99	Short cylinder	Plain	White alabaster piece, worn on eges
12	604			10			0.396	0.96	Short cylinder	Plain	White alabaster piece, worn on eges

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	604			11			0.338	0.938	Short cylinder	Plain	White, worn on eges; wedge-shaped, thins to 0.226
12	609		2244	11			0.425	1.197	Short cylinder	Plain	
12	609		2244	12			0.889	1.296	Short cylinder	Double cone	Banded, somewhat irregular, thins to 0.677
12	609		2244	13			0.25	1.152	Short cylinder	Plain, medium large	Regularly shaped, wedge, thins to 0.176
12	609		2244	14	1.511	1.356	0.685		Short cylinder	Drilled both sides	Very irregularly shaped, almost trapezoidal, banded, thins to 0.394
12	609		2244	15			0.281	1.034	Short cylinder	Plain, medium large	
12	609		2244	16			0.191	1.059	Short cylinder	Plain, medium large	Wedge, thins to 0.146, very regularly shaped
12	609		2244	17			0.337	1.195	Short cylinder	Plain, medium large	Wedge, thins to 0.266, very regularly shaped
12	609		2244	18			0.256	1.112	Short cylinder	Plain, medium large	Wedge, thins to 0.204
12	609		2244	19			0.302	1.176	Short cylinder	Plain, medium large	Very regularly shaped

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	609		2244	20			0.267	1.225	Short cylinder	Plain, medium large	Wedge, thins to 0.194
12	609		2244	21			0.285	1.347	Short cylinder	Plain, medium large	Wedge, thins to 0.208
12	609		2244	22			0.483	1.091	Short cylinder	Plain	Somewhat irregular, two flatish sides
12	609		2244	23			0.359	1.172	Short cylinder	Plain, medium large	Wedge, thins to 0.249
12	609		2244	24			1.066	0.466	Short cylinder	Plain, medium large	
12	609		2244	25			0.425	0.975	Short cylinder	Drilled both sides	Wedge, thins to 0.34
12	609		2244	26			0.351	0.952	Short cylinder	Drilled both sides	Slightly squared
12	609		2244	27			0.384	1.059	Short cylinder	Plain	
12	609		2244	28			0.475	1.111	Pear-shaped disc	Drilled both sides	One perforation is at angle, ovoid
12	609		2244	29			0.447	1.125	Short cylinder	Plain	Somewhat squared
12	609		2244	30	1.296	1.127	0.907		Short cylinder	Double cone	Banded, irregularly rounded, thins to 0.689
12	609		2244	31			0.644	1.074	Short cylinder	Plain	Somewhat squared, thins to 0.479
12	609		2244	32			0.613	1.287	Short cylinder	Drilled both sides, slight cones	Somewhat squared, thins to 0.488
12	609		2244	33			0.439	0.939	Short cylinder	Plain	Thins to 0.274

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	609		2244	34			0.383	1.314	Short cylinder	Drilled both sides, very slight cones	Edges very irregular
12	609		2244	35			0.562	1.034	Short cylinder	Plain	Thins to 0.423, edges irregular
12	609		2244	36			0.404	0.951	Short cylinder	Plain	Somewhat squared
12	609		2244	37			0.368	0.983	Short cylinder	Plain	Somewhat irregular
12	609		2244	38			0.369	0.989	Short cylinder	Plain	Somewhat irregular
12	609		2244	39			0.485	1.035	Short cylinder	Plain	Somewhat irregular, thins to 0.371
12	609		2244	40			0.353	0.975	Short cylinder	Drilled both sides	Somewhat irregular
12	609		2244	41			0.366	0.902	Short cylinder	Plain	Somewhat irregular
12	609		2244	42			0.406	1.153	Short cylinder	Double cone	Somewhat irregular, perforation somewhat off-center
12	609		2244	43			0.45	1.08	Short cylinder	Plain	Somewhat irregular
12	609		2244	44			0.503	1.166	Short cylinder	Ovoid, drilled both sides	Somewhat irregular, banded
12	609		2244	45			0.497	0.994	Short cylinder	Plain	Irregular, wedge thins to 0.361
12	609		2244	46			0.463	1.046	Short cylinder	Plain	Irregular

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

12	609		2244	47			0.363	0.98	Short cylinder	Plain	Irregular, wedge thins to 0.095
12	609		2244	48			0.439	0.95	Short cylinder	Plain	Irregular, thins to 0.234
12	609		2244	49			0.274	1.058	Short cylinder	Plain, medium large	Thins to 0.207, broken through perforation
12	609		2253	3	1.5	1.226	0.864		Short cylinder	Plain	Somewhat flattened cylinder, uniformly white
12	609		2253	4			0.259	1.16	Short cylinder		Wedge shaped, thins to 0.212
12	609		2253	5			0.562	1.131	Short cylinder		Wedge shaped, thins to 0.339
12	609		2253	6			0.517	1.068	Short cylinder		One flattened side; wedge-shaped, thins to 0.383
12	623		2303	3	1.198	1.141	0.589		Short cylinder	Double cone	Rounded alabaster bead, perforation off center. Major radius 0.704
12	623		2303	4			0.365	0.944	Short cylinder	Double cone	Alabaster bead, perforation at an angle
14	628		2393	10			0.241	0.609	Short barrel	Plain, cone one side 0.447 to 0.234, 0.228	Opaque blue-grey stone, well shaped

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

46	638		2414	2	1.174	1.101	0.529		Short barrel	Plain, at angle, 0.393	Light grey with white veins.Well rounded. Slightly wedge-shaped—thins to 0.439
47	2217	87076	4556				0.439	1.392	Short cylinder	Plain	
47	2232	87114	4581				0.276	1.261	Cylinder disc	Plain	Wedge-shaped, thins to 0.188
47	2232	87115	4582				0.496	1.445	Short cylinder	Plain, 0.469	
47	2232	89011	4583				0.421	1.412	Short cylinder	Plain	
47	9315	72086	5164				0.304	1.321	Cylinder disc	Plain	
47	9315	72089	5168				0.333	1.361	Short cylinder	Plain	
47	9315	72092	5170				0.696	1.349	Short cylinder	Plain	
47	9315	72093	5171				0.683	1.578	Short cylinder	Plain	Thins to 0.570, nice brown bands and swirls
47	9315	72104	5179				0.482	1.246	Short cylinder	Plain, elliptical	Wedge-shaped, thins to 0.361
47	9315	72105	5180	1			0.322	1.376	Cylinder disc	Plain	
47	9315	72112	5183				0.25	1.106	Cylinder disc	Plain	
47	9315	72122	5187		1.284	1.134	0.268		Cylinder disc	Plain	
47	9315	72156	5211				0.562	1.467	Short cylinder	Plain	
47	9315	72157	5212				0.367	1.271	Short cylinder	Plain	
47	9315	72164	5215				0.434	1.37	Short cylinder	Plain	
47	9315	89182	5169	1			0.293	1.34	Cylinder disc	Plain	From sieve
47	9315	89182	5169	2	1.37	1.207	0.403		Cylinder disc	Plain	Ellipsoid; from sieve

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

47	9315	89182	5169	3			0.318	1.266	Cylinder disc	Plain	From sieve
47	9315	89182	5169	4			0.317	1.064	Cylinder disc	Plain	From sieve
47	9316	72091	5169				0.52	1.538	Short cylinder	Plain	
203	1744	80850	2689		1.66	1.486	0.82		Short cylinder	Plain	Squarish with rounded sides
203	1744	80850	2689		1.372	1.275	0.821		Short cylinder	Plain, ellipsoid, medium large	Roughly rounded, some bands visible
237	1661	80487	2408				0.875	0.885	Standard cylinder	Plain, medium large	White cylinder with two transverse orange bands and one white one which extend through the rock. Thins to 0.666
237	1661	80510	2427	2	0.973	0.946	0.524		Short cylinder	Drilled both sides	Powdery, hardness 2
237	1661	80669	2535	11			0.202	0.453	Cylinder disc	Double cone	Light opaque grey
240	1686	80646	2514	3			0.45	1.01	Short cylinder	Ellipsoid, medium large	Powdery
240	1686	80646	2514	4			0.546	1.129	Short cylinder	Plain	Powdery, white beds visible
240	1686	80646	2514	5			0.374	1.002	Short chamfered cylinder	Plain	Powdery
240	1686	80646	2514	6			0.562	1.083	Short chamfered cylinder	Plain	Powdery, white beds visible
241	1644	80570	2479		1.827	1.397	0.445		Cylinder disc	Ovoid, plain, medium large	As survives

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

241	1664	80557	2470				0.694	1.491	Short cylinder	Plain, medium large	White powdery piece with tan bands; one side largely decomposed
244	1703	80823	2668				0.93	1.342	Short barrel	Drilled both sides, very slight cones	Powdery bedded white and brown
307	2111	86272	2674				0.193	0.836	Short barrel?	Plain; 0.351	Badly battered
366		89355	8655	5	0.615	0.695	0.196		Barrel disc	Plain, 0.260	Light grey alabaster bead, edges broken off
509	2234	87124	4590	1			0.428	1.309	Cylinder disc	Plain, medium large, 0.48	
509	2234	87124	4590	5	1.223	0.796	0.691		Long cylinder	Plain, medium large, somewhat ovoid	Alabaster cylinder, pierced lengthwise slightly off center. One face is at an angle, the other is chipped.
509	2234	87124	4590	6			0.498	1.575	Cylinder disc	Plain, medium large	Wedge, thins to 0.455
509	2234	87124	4590	7			0.622	1.4	Cylinder disc	Plain, medium large	Wedge, thins to 0.533
509	2234	87124	4590	8			0.346	1.536	Cylinder disc	Plain, medium large	
509	2234	87124	4590	9			0.382	1.263	Cylinder disc	Plain, medium large	Wedge, thins to 0.306

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

509	2234	87124	4590	10			0.267	1.353	Cylinder disc	Plain, medium large	
509	2234	87124	4590	11			0.378	1.213	Cylinder disc	Plain, medium large	
509	2234	87124	4590	12			0.283	1.446	Cylinder disc	Plain, medium large	
509	2234	87124	4590	13			0.348	1.365	Cylinder disc	Plain, medium large	
509	2234	87124	4590	14			0.368	1.258	Cylinder disc	Plain, medium large	
509	2234	87124	4590	15			0.205	1.328	Cylinder disc	Plain, medium large	Wedge, thins to 0.134
509	2234	87124	4590	16			0.303	1.315	Cylinder disc	Plain, medium large	
509	2234	87124	4590	17			0.301	1.316	Cylinder disc	Plain, medium large	
509	2234	87124	4590	18			0.297	1.326	Cylinder disc	Plain, medium large	Wedge, thins to 0.166
509	2234	87124	4590	19			0.294	1.321	Cylinder disc	Plain, medium large	
509	2234	87124	4590	20			0.249	1.274	Cylinder disc	Plain, medium large	
509	2234	87124	4590	21			0.264	1.336	Cylinder disc	Plain, medium large	
509	2234	87124	4590	22			0.438	1.307	Cylinder disc	Plain, medium large	Wedge, thins to 0.302
509	2234	87124	4590	23			0.267	1.176	Cylinder disc	Plain, medium large	
509	2234	87124	4590	24			0.312	1.191	Cylinder disc	Plain, medium large	
509	2234	87124	4590	25			0.386	1.255	Cylinder disc	Plain, medium large	Wedge, thins to 0.197
509	2234	87124	4590	26			0.488	1.065	Cylinder disc	Plain, medium large	
509	2234	87124	4590	27			0.206	1.036	Cylinder disc	Plain, extra large, 0.575	Egdes broken off; diameter is as survives

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

509	2234	87124	4590	28			0.224	1.031	Cylinder disc	Plain, extra large, 0.588	Edges broken off; diameter is as survives
511	2243	87164	4618	1			0.277	1.44	Cylinder disc	Plain	Wedge, thins to 0.158. Edge this side broken; diameter is as survives
519	2277	87345	4732				0.219	0.833	Barrel disc?	Plain, medium large	Soft grey stone, diameter as survives
544	9381	72408	5315				0.367	0.54	Short barrel	Plain	Rough, opaque black stone
544	9381	72408	5315				0.623	0.801	Short barrel	Plain, large 0.538	Rough, poor quality, mostly opaque crystiline bead, broken through perforation. No refit with other pieces this lot.
544	9381	72408	5315		0.764		0.614		Short barrel	Plain?	Rough, poor quality, mostly opaque crystiline, broken through perforation. Length is remaining diameter.

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

544	9381	72408	5315		0.554		0.452		Short barrel	Plain	Rough, poor quality, mostly opaque crystiline bead, broken through perforation; length is remaining diameter.
544	9381	72408	5315				0.537	0.818	Short barrel	Plain, large	Wedge-shaped, thins to 0.393
544	9381	72408	5315				0.577	0.758	Short barrel	Plain, large	Wedge-shaped, thins to 0.432
544	9381	72408	5315				1.138	0.85	Long barrel	Chamfered	Chipped around perforation one side
544	9381	72408	5315				0.723	0.769	Short barrel	Plain, large	Chipped around perforation one side, cracked
544	9381	72408	5315				0.537	0.831	Short barrel	Plain, large	Thins to 0.428 one side
549	2206	87048	4535				0.46	1.237	Short cylinder	Plain, medium large	
705	2428	88102	6559		1.632	1.427	0.799		Short cylinder	Drilled both sides — two nice round holes which do not perfectly meet; medium large	Imperfectly rounded
705	2428	88105	6562				0.677	1.154	Short barrel	Drilled both sides	

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

705	2428	88166	6609				0.705	1.368	Short cylinder	Drilled both sides	White and brown banded, irregularly rounded
705	2428	89013	6596	2			0.65	0.671	Short cylinder	Plain	Poorly shaped (or preserved) calcite cylinder
705	2466	88409	6790				0.739	1.522	Short cylinder	Drilled both sides, very slight cones	
710	2454	88489	6853				0.412	0.826	Short barrel	Plain	Thins to 0.271 one side
711	2490	88516	6874	1			0.757	1.054	Short barrel?	Double cone, very pronounced	Edges worn away; diameter as survives
711	2490	88516	6874	2			0.323	0.79	Short barrel?	Plain, medium large, 0.315	Edges worn away; diameter is as survives
726	2587	88899	7093				0.225	0.907	Cylinder disc	Plain, extra large, 0.500	Wedge, thins to 0.167. Hole slightly off center
737	9636	74056	7188				0.663	1.536	Short barrel?	Cone	Eroded brown and white banded alabaster bead; diameter is as survives

Table 6.7: Calcite/alabaster beads from Wadi Fidan 40, continued.

738	9639	74128	7224	1			0.9	1.081	Short barrel	Drilled both sides	White and brown banded bead, quite rounded
738	9639	74128	7224	2			0.814	1.121	Short barrel	Drilled both sides	White and brown banded bead. Thins to 0.654.
740	9666	74186	7248				0.558	0.834	Short barrel	Drilled both sides	
742	9655	89214	7231	1			1.169	1.538	Short barrel	Drilled both sides	Eroded brown and white banded bead; diameter as survives

Table 6.8: Calcite/alabaster beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	Basket	Subnumeral	Shape
67	786	2557	10	Short cylinder
67	786	2557	11	Short cylinder
67	786	2567	6	Short cylinder
67	786	2586	8	Short barrel
67	786	2586	9	Short barrel
67	786	2586	10	Short barrel
67	786	2586	11	Short barrel
67	786	2586	12	Short barrel
67	786	2586	13	Short barrel
67	786	2586	14	Cylinder disc
67	786	2586	15	Cylinder disc
67	786	2586	16	Cylinder disc
67	786	2586	17	Long barrel
92	531	2136	2	Short barrel
92	531	2136	3	Short barrel
92	531	2136	4	Short barrel
92	531	2136	5	Short barrel
92	531	2136	6	Short barrel
92	531	2136	7	Short barrel
92	531	2144	1	Short barrel
92	531	2144	2	Short barrel
92	531	2144	3	Short barrel
92	531	2144	4	Short barrel
92	531	2144	5	Short barrel

Table 6.8: Calcite/alabaster beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

95	813	2680	1	Short barrel
95A	825	2719	1	Short cylinder
101	819	2705	4	Short cylinder
101	819	2705	5	Short cylinder
101	819	2705	6	Short cylinder
101	819	2705	7	Short cylinder
101	819	2711		Short cylinder
101	819	2714	5	Short cylinder
101	819	2714	6	Short cylinder
101	819	2714	7	Short cylinder
101	819	2714	8	Short cylinder

AMAZONITE

The most interesting stone in the collection is amazonite. Amazonite is a green to blue microcline feldspar. In most cases the stone is easily recognizable due to its distinctive coloring and perpendicular cleavage planes. The stone was highly prized in Egypt. A term usually translated amazonite appears in lists of the six most valued stones of Egypt at the Ptolomaic temples of Edfou and Dendera. The term appears frequently in lists of gemstones. Amazonite was one of the stones considered suitable for creating a heart scarab, an amulet meant to ensure a beneficent afterlife. Amazonite is even used as a name for Thoth in the Book of the Dead (Harris 1961: 116).

Amazonite is a potassium-rich microcline feldspar with a characteristic green to blue color. As a feldspar, it has two cleavage planes at roughly 90 degree angles (Cipriani and Borelli 1986: 230). These cleavage planes and the stone's natural impurities make it very brittle and therefore difficult to work. A number of the amazonite pendants from Wadi Fidan 40 appear to have been broken through their perforations, probably during the perforation process itself. These stones nevertheless often show signs of careful reuse. "Horns" are present on the tops of some of these stones, where the brittle stone broke through its perforation and a new perforation was drilled immediately

below the old perforation (Fig. 6.73). In a few cases, the distal end of an amazonite pendant was notched, perhaps for decorative purposes (Figs. 6.74, 6.75).



Figure 6.73: Amazonite bead and pendants from Grave 706 (EDM 88519). Note the "horns" on the third piece from the right.



Figure 6.74: Amazonite pendant from Grave 714 (EDM 88605).



Figure 6.75: Amazonite pendant from Grave 731, notched in the distal end (EDM 74069).

Despite its high value in nearby Egypt, and despite the relative poverty of much of Wadi Fidan 40, sometimes largish pendants are found in some of the Wadi Fidan 40 graves (Figs. 6.76-6.80). Two hundred ninety-eight examples were recovered from the cemetery, or 5.7% of the sample (Tables 6.9, 6.10). Seventy-nine different graves contained amazonite. Although it consisted of less than 6% of the bead sample, more than 28% of the 280 cist and pit graves contained this stone. Even the tiniest pieces were also worked into beads (Figs. 6.76, 6.77, 6.80), and often large irregular pieces seem designed to make use of as much as the raw material as possible (Figs. 6.78, 6.79).



Figure 6.76: A small, unusually finely worked amazonite disc bead from Grave 544 (EDM 72199).



Figure 6.77: A small amazonite bead from Grave 731 (EDM 70468).



Figure 6.78: An unusually finely-worked amazonite bead, from Grave 257 (EDM 80758).



Figure 6.79: Large amazonite pendants from Grave 706, hypothetically restrung (EDM 89196).



Figure 6.80: Amazonite beads, alongside a carnelian and an agate bead, from Grave 246 (EDM 80838), hypothetically arranged.

It is also interesting to note where amazonite has *not* been reported. No examples of this stone were reported at Buseirah (Bienkowski 2002) or Tawilan (Bennet and Bienkowski 1995). None were found at Khirbat en-Nahas. The material was also noticeably avoided in some of the richer graves in the cemetery. Though unusually rich, Graves 14 and 92 both lack amazonite. Amazonite is a rare stone in the Levant as a whole.

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thickness	Diameter	Shape	Perforation	Description
0	0		2214				0.269	0.762	Short barrel	Very slight cones	Slightly irregular
0	614		2257	1	0.934	0.779	0.38		Drilled pebble	Plain	Surface find; irregular drilled pebble, perforated roughly in center
0	614		2257	2	0.67	0.548	0.19		Drilled pebble	Plain	Surface find; roughly triangluar pebble drilled in center; green with some blue patches
0	664		2499	1	0.499	0.435	0.198		Drilled pebble	Double cone	Drilled amazonite pebble, hole roughly in center, appears cylinder-disc like when worn
0	664		2499	2	0.559	0.448	0.179		Drilled pebble	Cone	Drilled amazonite pebble, hole roughly in center, appears cylinder-disc like when worn
0	664		2499	3	0.648	0.348	0.183		Drilled pebble	Cone	Drilled rectangular pebble, hole roughly in middle
0	664		2499	4	0.564	0.562	0.389		Drilled pebble	Double cone	Drilled pebble, squarish, hole roughly in middle. Lumpy, irregular exterior.
0	664		2499	5			0.151	0.426	Cylinder disc	Plain, medium large	Finely worked cylinder disc, medium large hole slightly off-center
0	1523	80740	2596		0.593	0.541	0.4		Short barrel	Double cone	Somewhat irregularly shaped
0	1735		2670		0.688	0.672	0.295		Short barrel	Very slight cones	Somewhat irregularly shaped, with a large quartz crystal in one side
0	2207	87047	4534		0.796	0.546	0.363		Drilled pebble	Double cone	Roughly rectangular with rounded corners, drilled in approximate center

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

10-2004	9305	72057	5149		0.61	0.509	0.121		Irregular cylinder disc bead—drilled pebble?	Plain perforation, diameter 0.159.	Light green with some white.
10-2004	9322	72160	5213		1.52	1.139	0.52		Roughly triangular drilled pebble	Plain perforation roughly in its center. Perforation diameter 0.343.	Piece is 0.314 cm thick in thinnest spot. Roughly uniformly light green with some white streaks and speckles.
12	604		2230	1	1.145	0.743	0.332			Drilled both sides; 0.300 one side, 0.318 the other, tapering to 0.178, but cones are not very obvious	Triangluar bead, with perforation near center. Width tapers to 0.416 cm one side.
12	604		2230	2	0.689	0.597	0.309		Short barrel	Double cone; 0.326 both sides tapering to 0.152	Roughly shaped—drilled pebble?
12	604		2236		0.703	0.656	0.295		Barrel disc	Plain, 0.192	Perforation slightly off center, somewhat oval
12	604		2238	5	1.562	1.44	0.722		Pendant	Double cone, to 0.246	Green with white stripes. Edge of not surviving pendant—apparently arc of ellipse.
12	604		2238	6	0.642	0.569	0.253		Pear-shaped disc	Plain, 0.174	Pale green with dark brown inclusions, roughly shaped
12	604		2238	7			0.298	0.606	Cylinder disc	Plain, 0.214	Nicley shaped, somewhat wedge-shaped; thins to 0.179

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

12	604		2238	8	0.623	0.453	0.182		Drilled pebble	Plain, 0.108	Tiny irregular drilled pebble with many brown streak inclusions—broken part of a larger whole?
12	604		2238	17	0.498	0.27	0.248				Small fragment, likely a part of the pendant fragment.
12	609		2244	1	2.961	1.632	1.004		Pendant		Ovoid, probably drilled at non-surviving end—fragments of what was a large pendant, of which only parts of the distal end survive
12	609		2244	2	2.138	0.975	0.694		Pendant	Two slight cones	Drilled in one arc of ellipse, major radius 1.725
12	609		2244	3	1.594	1.02	0.487		Triangular prism disc	Double cone	Triangluar, width decreases to 0.445, drilled in center
12	609		2244	4	1.15	0.818	0.4		Pendant	Double cone	Ovoid, drilled roughly in center, major radius 0.694
12	609		2253	1	1.667	0.96	0.561		Elliptical, rounded		Piercing off center to make pendant. Major radius 1.190
12	609		2253	2	1.676	0.931	0.325		Elliptical spacer with two perforations		Two parallel perforations, centers 0.938 apart, larger a double cone (0.387, 0.341 to 0.206), smaller plain (0.172); light green with white streaks
12	609		2253	9	0.402	0.309	0.282				Small amazonite fragment, not from amazonite pieces in this lot. Broken on one face -- clearly came from larger piece
12	623		2303	1	1.249	0.823	0.623		Pendant	Double cone to 0.191	Teardrop-shaped pendant, thins to 0.309 at perforation, which is at an angle. Major radius 0.907

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

12	623		2303	2	0.714	0.397	0.412		Pendant	Cone to 0.166	Green with many dark blue lines. Small teardrop shaped pendant, thins to 0.210 at perforation. Major radius 0.435
12	623		2311	23	1.1	1.095	0.907		Pendant	Double cone	Thins to 0.265 at perforation. Major radius 0.858. Somewhat lumpy pendant with one flat side
12	623		2399	132	0.488	0.426	0.217		Drilled pebble	Drilled both sides, cone remaining on one	Irregular piece, gives impression of barrel disc from side.
12	623		2399	133	1.437	0.82	0.428		Pendant?	Slight cones both sides; 0.292, 0.343 to 0.173	Fragment of an amazonite pendant. Broken on two sides, but two sides remain. Perforation is in angle of what may have been a triangle. Survivng major radius 0.736
12	623		2399	134	0.858	0.792	0.312		Drilled pebble	Slight cones both sides	Irregular drilled pebble
18	605		2211	1	0.998	0.907	0.361		Drilled pebble	Plain	Drilled amazonite pebble, roughly short barrel, with black clouds as well as white streaks
33	664		2499	1	0.499	0.435	0.198		Drilled pebble	Double cone	Drilled amazonite pebble, hole roughly in center, appears cylinder-disc like when worn
33	664		2499	2	0.559	0.448	0.179		Drilled pebble	Cone	Drilled amazonite pebble, hole roughly in center, appears cylinder-disc like when worn
33	664		2499	3	0.648	0.348	0.183		Drilled pebble	Cone	Drilled rectangular pebble, hole roughly in middle

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

33	664		2499	4	0.564	0.562	0.389		Drilled pebble	Double cone	Drilled amazonite pebble, squarish, hole roughly in middle. Lumpy and irregular on exterior.
33	664		2499	5			0.151	0.426	Cylinder disc	Plain, medium large	Finely worked amazonite cylinder disc, medium large hole slightly off-center
40	651		2456		2.61	1.394	0.574		Pendant	Plain, 0.182	Elliptical, flat. Perforation in arc of ellipse. Major radius 2.223
40	651		2459		2.046	0.789	0.346		Pendant	At angle	Very shiny— mica rich. Tapers to point distally. Notched proximally— failed perforation? Major radius 1.529
40	651		2474	1	1.355	0.785	0.578		Pendant	Plain, 0.261	Teardrop shaped pendant. "Horns" proximally are the remains of a failed perforation which broke the stone. 0.281 wide, 0.168 high. Major radius 0.818. Thins to 0.354 at perforation.
40	651		2474	2	1.073	0.993	0.596		Drilled pebble	Cone one side, 0.416 to 0.210. Keyhole shaped other side, apparently due to need to drill around quartz crystal. 0.486 x 0.254, tapering to 0.162.	Irregular, roughly short barrel bead. Two embedded quartz crystals in the amazonite on the thicker side. Thins to 0.323 at perforation.

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

40	693		3386		1.916	0.995	0.365		Pendant	Double cone	Roughly shaped; not quite elliptical. Likely a drilled pebble. Major radius 1.356.
40	693		3421	1	3.256	1.286	0.86		Pendant	Slight cone, at angle	Ovoid pendant, with perforation in rounder arc. Thins to 0.391 at perforation, width decreases to 0.739 distally. Major radius 2.692
40	693		3421	2	1.464	1	0.675		Pendant	Double cone	Cowbell-shaped pendant, with perforation in arc. Width decreases to 0.891 proximally, thickness to 0.428 at perforation. Major radius 1.143.
40	693		3421	3	1.581	1.614	0.397		Pendant	Double cone, at angle	Pendant with perforation in arc, broken distally. Width decreases to 1.137 proxmially, relatively flat Surviving major radius 1.176
40	693		3421	4	1.934	0.902	0.509		Pendant	Cone, at angle	Irregular, roughly kidney-shaped pendant. Likely a drilled pebble. Major radius 1.545
40	693		3421	5	1.61	1.013	0.29		Pendant	Cone	Elliptical pendant with stumpy ends, perforation in one arc. Major radius 1.095. Chamfered around edges on one side.
47	646		2434	1	1.295	0.776	0.426		Pendant	Cone, .332 to .228	Green, roughly elliptical with stumpy ends, like a rounded rectangle. Major radius 0.802
49-2004	9659	89215	7232		1.206	0.623	0.367		Pendant	Plain; 0.202 one side, 0.218 the other.	Green with white streaks. Tooth-like pendant, wider at perforation, tapering to 0.380 distally. Major radius 0.819.

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

201	1573	80226	2191				0.27	0.719	Short barrel	Double cone	Well-shaped
203	1503	80511	2428	2	0.725	0.637	0.368		Short cylinder	Double cone	Elliptical, well rounded
203	1503	80511	2428	3	0.705	0.627	0.367		Drilled pebble	Double cone	Irregularly shaped, roughly rounded
203	1503	80511	2428	4	0.874	0.75	0.364		Drilled pebble	Double cone	Irregularly shaped, roughly rounded. Some blue streaks, partial quartz crystal on one edge.
207	1602	80357	2299	2			0.262	0.567	Cylinder disc	Plain	Poor green stone with many inclusions
207	1602	80357	2299	3	0.525	0.376	0.28		Drilled pebble	Plain	Very dark green, roughly triangluar stone. Apparent failed perforation in edge of stone.
210	1607	80424	2357		0.598	0.446	0.307		Drilled pebble	Double cones	Light green, lumpy pebble, not obviously worked except for perforation. Scratches copper.
213	1545	80115	2107				0.43	0.958	Short cylinder	Plain, medium large	Nicely worked, thins to 0.352
216	1598	80321	2270	1	0.751	0.641	0.334		Drilled pebble	Double cone	Roughly rectangular irregular rounded drilled pebble
216	1598	80321	2270	2	0.805	0.657	0.218		Rectangular	Double cone	Flat, rectangular with rounded corners
216	1598	80321	2270	3	0.732	0.529	0.262		Drilled pebble	Very slight cones	Roughly triangluar drilled pebble
217	1550	80139	2122				0.621	1.187	Short barrel	Double cone	Somewhat irregularly shaped, relatively light colored
217	1596	80404	2339		0.855	0.677	0.338		Drilled pebble	Double cone	Rounded, drilled pebble, perforation off-center
218	1591	80275	2229		0.605	0.567	0.258		Triangular	Double cone	Roughly triangular, sides notched
218	1609	80324	2272	1			0.346	0.689	Cylinder disc	Drilled both sides	Perforation off-center, thins to 0.189, major radius 0.419
219	1532	80064	2067				0.604	1.039	Short barrel	Very slight double cone	

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

222	1587	80271	2225		0.842	0.508	0.36		Drilled pebble	Plain	Roughly kidney-shaped. Slight notch in flatish edge may be failed perforation.
222	1618	80366	2306		0.793	0.611	0.408		Drilled pebble	Plain	Lumpy drilled pebble. Many white speckles, red-black inclusions. Unusually dark green.
223	1571	80188	2161		0.817	0.676	0.365		Short barrel	Double cone	Rounded, somewhat elliptical, stone
223	1576	80212	2180	1			0.565	0.98	Short barrel	Two slight cones	Roughly rounded amazonite piece
223	1576	80212	2180	2	0.96	0.857	0.427		Short barrel	Two slight cones	Roughly rounded amazonite piece
223	1586	80270	2224	1			0.691	0.349	Short barrel	Slight double cone	Irregular, somewhat lumpy
223	1586	80270	2224	2			0.629	0.344	Short barrel	Double cone	Well-shaped, broken through perforation
223	1602	80309	2261		0.68	0.512	0.279		Drilled pebble	Double cone	Trapezoidal
224	1715	80884	2589				0.267	0.557	Short cylinder	Double cone	Somewhat irregularly shaped
224	1715	80742	2722	1	0.635	0.532	0.235		Barrel disc	Plain	Rounded corners
226	1626	80382	2319		0.673	0.527	0.242		Drilled pebble	Plain	Vaguely triangluar
226	1681	80593	2496				0.862	0.725	Long cylinder	slight Double cone	Thins to 0.744, somewhat unevenly rounded, with flat areas
227	1613	80383	2321	1	0.752	0.73	0.413		Drilled pebble	Double cone	Rounded, squarish drilled pebble
227	1613	80383	2321	2	0.725	0.581	0.394		Drilled pebble	Double cone	Rounded, roughly triangular drilled pebble
227	1613	80385	2322		0.594	0.539	0.459		Squarish	Double cone	Roughly squarish
227	1613	80385	2323	1	0.745	0.666	0.347		Drilled pebble	Double cone	Wedge-shaped
227	1613	80385	2323	2	0.821	0.614	0.257		Drilled pebble	Very slight cones	Vaguely kidney-shaped drilled pebble
227	1613	80384	2323	3	0.609	0.562	0.275		Drilled pebble	Double cone	Almost a short cylinder
227	1646	80482	2374		1.138	1.08	0.698		Short cylinder	Double cone	Light green with wavy white lines, somewhat irregularly shaped, with flat spots

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

227	1646	80482	2383	1	0.672	0.619	0.345		Short cylinder	Double cone	Somewhat irregularly shaped
227	1646	80482	2383	2	0.662	0.565	0.465		Drilled pebble	Double cone	Like a twisted cube
227	1646	80463	2383	3			0.274	0.669	Short cylinder	Plain	Darker green than most— almost forest green. Broken through perforation.
227	1646	80450	2387		1.413	1.223	0.796		Pendant	Double cone	Light green, roughly circular stone. Somewhat lumpy and irregularly shaped, with one side irregular convex and the other flat. Major radius 1.020
227	1646	80458	2403	1	1.549	1.425	1.075		Short barrel	Double cone, meet roughly	Roughly worked drilled pebble. Thins to 0.778
227	1646	80458	2403	2	0.722	0.588	0.385		Drilled pebble	Double cone, meet cleanly	Roughly worked drilled pebble, roughly cylinder disc
227	1646	80458	2403	3	0.889	0.874	0.46		Drilled pebble	Drilled at an angle, producing a half cone	Roughly worked, thins to 0.242, roughly cylider disc
227	1646	80483	2404	1	1.016	0.859	0.418		Ovoid	Very slight double cone, medium large	Rough oval
227	1646	80483	2404	2	0.723	0.69	0.372		Drilled pebble	One cone survives	Broken along transverse axis, somewhat lumpy
227	1646	80483	2404	3	0.627	0.482	0.257		Drilled pebble	Very slight double cone	Roughly triangluar
230	1623	80379	2316	1	0.674	0.507	0.323		Drilled pebble	Double cone	Rounded pebble
230	1632	80405	2340		1.139	1.061	0.502		Short cylinder	Double cone, medium large	Slightly flattened cylinder. Perforation is medium large, plain hole set in coned recesses
234	1662	80497	2416				0.257	0.609	Short barrel	Plain, at angle	Nicely worked

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

235	1667	80568	2478		0.658	0.643	0.476		Drilled pebble	Slight double cone	Roughly squarish
235	1667	80568	2478				0.434	0.773	Short cylinder	Plain, medium large	Thins to 0.329 one side. Nicely worked, highly polished
237	1661	80551	2464		0.686	0.508	0.251		Drilled pebble	Slight double cone	Vaguely ovoid
238	1648	80457	2373		1.347	0.9	0.514		Drilled pebble	Double cone	Roughly rectangular irregular rounded drilled pebble
238	1648	80449	2381				0.328	0.69	Short cylinder	Plain, at angle	Somewhat irregularly shaped
238	1655	80484	2405	1	0.779	0.717	0.403		Square	Double cone	Wedge-shaped, thins to 0.214
238	1655	80484	2405	2	0.799	0.576	0.256		Oval	Double cone	Drilled in center through flat part of piece
238	1655	80484	2405	3	0.732	0.586	0.503		Drilled pebble	Double cone	Irregular drilled pebble
241	1644	80569	2478		0.792	0.78	0.429		Square	double cone	Squarish; perforation off center. 0.475 to flat of square
241	1680	80642	2510		0.867	0.67	0.307		Ovoid	Double cone	Perforation in wider arc of oval; somewhat irregularly shaped
242	1684	80592	2495	1	0.594	0.395	0.223		Drilled pebble	Plain	Very dark green, may be broken distally. One side flat, ridge down other side. Black inclusions. Major radius as survives 0.452
246	1690	80668	2534				0.44	0.857	Short cylinder	Double cone	Nicely rounded
246	1704	80838	2643	1			0.56	0.882	Short cylinder	Double cone	
246	1704	80838	2643	2			0.552	1.042	Short truncated convex bicone	Very slight double cone	
246	1704	80838	2680	3	0.49	0.48	0.238		Drilled pebble	Double cone	Squarish stone
246	1704	80838	2680	4			0.52	1.054	Short barrel	Two slight cones	Nicely shaped
246	1704	80838	2680	5			0.509	1.015	Short barrel	Drilled both sides	
246	1704	80838	2680	6			0.705	1.018	Short barrel	Drilled both sides	

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

246	1704	80838	2680	7			0.561	1.033	Short barrel	Drilled both sides	
246	1704	80838	2680	8			0.617	1.141	Short barrel	Two slight cones	
246	1704	80838	2680	9			0.715	1.104	Short barrel	Double cone	
246	1704	80838	2680	10			0.539	0.963	Short barrel	Double cone	
246	1704	80838	2680	11			0.446	0.872	Short barrel	Plain, very slight cone	
246	1704	80838	2680	12			0.409	0.883	Short barrel	Drilled both sides	
246	1704	80838	2680	13			0.568	0.874	Short barrel	Drilled both sides	Dark green
246	1704	80838	2680	14	0.943	0.654	0.414		Oval	Double cone	Oval stone, drilled in the center
246	1704	80838	2680	15			0.51	1.129	Short barrel	Double cone	
246	1704	80838	2680	16	1.158	0.978	0.699		Short barrel	Double cone	Slightly elliptical
246	1704	80838	2680	17	0.974	0.882	0.651		Short barrel	Double cone	Slightly elliptical
246	1704	80838	2680	18			0.864	0.341	Barrel disc	Double cone	
246	1704	80838	2680	19			0.895	0.444	Barrel disc	Double cone	
246	1704	80838	2680	20			0.856	0.58	Short barrel	Very slight double cone	
246	1704	80838	2680	21			0.54	1.005	Short barrel	Double cone	
246	1704	80838	2680	22			0.629	0.972	Short barrel	Plain	
246	1704	80798	2680	23			0.796	0.336	Barrel disc	Double cone	Relatively light green stone
246	1704	80798	2680	24	1.141	0.922	0.416		Ovoid	Double cone	Roughly ovoid
247	1699	80706	2564		0.708	0.568	0.341		Oval	Double cone	Nicely rounded oval, virtually short cylinder
251	1524	80665	2531				1.076	1.524	Short barrel	Two slight cones, medium large	Nicely worked
251	1524	80673	2538		1.113	1.063	0.243		Short cylinder	Double cones	
251	1524	80772	2622				0.586	0.782	Short barrel	Very slight cones	Nicely rounded, perforation slightly off center
251	1732	40041	2651	1			0.423	0.923	Short barrel	Double cones	Nicely shaped, only slightly irregular

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

252	1702	80698	2558		0.87	0.799	0.47		Drilled pebble	Very slight cones	Roughly domed pebble—one side irregularly convex, the other flat
253	1706	70759	2611	1	0.779	0.676	0.335		Barrel disc	Double cone	Rough barrel disc, drilled pebble
253	1706	70759	2611	2	0.645	0.781	0.371		Drilled pebble	Double cone	Vaguely kidney-shaped drilled pebble, thins to 0.176 at perforation. Hole to bottom 0.443
253	1706	80743	2599	1	0.971	0.828	0.474		Ellptical	Very slight double cone	Drilled in center
253	1706	80743	2599	2	1.178	0.632	0.481		Pendant	Very slight double cone	Ridge down one side (invisible when worn). Drilled in arc of ellipse, major radius 0.917
253	1726	80773	2623		0.86	0.688	0.348		Drilled pebble	Double cone	Rounded, roughly rectangular pebble
256	1523	80729	2583		0.707	0.626	0.331		Short cylinder	Very slight cones	Nicely rounded
257	1722	80758	2610	1			1.871	1.343	Long barrel	Drilled both ends, slight cones	Thins to 1.644 one side. Barrel which tapers significantly towards ends, and bulbs outwards in middle considerably. Diameter 1.260 one side, as one side is somewhat flattened
257	1722	80758	2610	2	0.564	0.308	0.197		Cylinder disc	Plain	Length is what remains of diameter— sliver of well-formed cylinder disc
257	1753	80882	2720				0.247	0.574	Short cylinder	Plain	Nicely shaped beautiful green stone
258	1733	80827	2661	1	1.134	1.082	0.656		Short cylinder	Double cone	Irregularly rounded, thins to 0.51
258	1733	80816	2661	2	0.69	0.325	0.245		Short cylinder	Plain	Very finely worked, length is surviving diameter
258	1733	80816	2671		0.783	0.666	0.413		Drilled pebble	Double cone	Irregularly shaped drilled pebble, roughly ovoid

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

260	1728	80820	2631		0.539	0.518	0.291		Short cylinder	Plain, medium large	Nicely worked
260	1728	80820	2665	1	0.817	0.777	0.595		Drilled pebble	Double cone	Rounded pebble, wedge-like, thins to 0.256
260	1728	80782	2665	2	1.096	0.588	0.388		Rectangular	Very slight cones	Rectangular pebble, major radius 0.669.
260	1732	80817	2656	1	1.231	0.597	0.411		Rectangular	Very slight cones	Roughly rectangular pebble, drilled in center
260	1732	80812	2656	2	0.761	0.705	0.237		Cylinder disc	Double cone	Irregularly rounded
260	1732	80812	2656	3	0.721	0.579	0.343		Drilled pebble	Double cone	Rounded irregular pebble with one flat side—almost semicircular
260	1732	80812	2662		1.352	1.106	0.52		Semicircular	Double cone	Roughly worked, somewhat lumpy, one side rough and full of mica veins
306	2124	86386	2746				0.14	0.73	Cylinder disc	Plain, 0.295 surviving	Broken through perforation, light green
311	2185	89100	2806				0.338	0.549	Short cylinder	Plain	Green and white, with one large white quarz section; this to 0.251 opposite quartz
329	3059	86859	2971		0.677	0.843	0.398		Drilled pebble	Plain; 0.208	Irregularly shaped drilled pebble. Roughly triangluar; convex one side, concave the other. Thins to 0.217 at central perforation. Many brown striped inclusions.
329	3059	89158	8539		0.934	0.807	0.491		Drilled pebble	Plain; 0.156	Irregularly shaped drilled pebble. Roughly diamond-shaped. Two bulbous protrusions on one side. Thins to 0.303 at perforation. Many brown striped inclusions. From sieve.

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

342	3104	89172	3033		0.793	0.626	0.427		Pendant	Plain, 0.128	Roughly square drilled pebble. Narrows at perforation to 0.101. Some small crevices have red in them—pigment? Sieved from cist fill.
346	3140	70045	3088		0.804	0.705	0.454		Short barrel	Double cone; 0.325, 0.337 to 0.191	Thins to 0.374 one side; perforation at angle; imperfections on surface
363	9239	70355	3234	1			0.671	0.804	Standard barrel	Plain, 0.276 one side, 0.311 the other	Perforation meets cleanly
363	9239	70355	3234	2			0.88	1.516	Short barrel	Double cone; 0.839, 0.806 to 0.454	Highly polished; cones gracefully meld into rounded edges. Thins to 0.733 one side
507	2227	87110	4578				0.296	0.684	Short barrel	Double cone. Diameter of cone 0.346 on one side, 0.414 the other, tapering to 0.106	Light green with some white streaks and speckles. Nicely work; peforation slightly off-center. Somewhat wavy ends; only 0.237 thick in places.
513	2276	87306	4685				0.464	0.822	Short barrel	Double cone	Well shaped
513	2276	87262	4707		0.77	0.544	0.346		Short pear-shaped	Double cone	Irregular ellipse
513	2276	87300	4711				0.75	1.346	Short barrel	Double cone	Well shaped
515	2327	72251	5257		0.759	0.686	0.267		Short barrel	Drilled from both sides; 0.269 one side, 0.255 the other, tapering to 0.200	Pale green with white streaks, not quite circular bead
519	2204	87218	4647		1.354	1.22	0.774		Short barrel	Double cone	Ellipsoid, hole slightly off center, thins to 0.607

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

524	2331	87889	5074				0.499	1.091	Short barrel	Pronounced double cone	Somewhat rounded; some dark green spots evident
530	2370	72196	5226		0.728	0.687	0.339		Lenticular, tabular	Drilled both sides, 0.163 one side, 0.185 the other, meeting at slight dog leg	Pale green with white swirls, somewhat irregular in shape tabular bead.
530	2370	72226	5246	1			0.488	0.879	Short barrel	Drilled both sides, very slight cones, 0.412 one side, 0.396 th other, tapering to 0.186. Tapering to clean meeting.	Pale green with white streaks.
535	2207	87049	4537		1.678	0.627	0.403		Pendant	Plain	Elliptical pendant, with hole in one arc of ellipse. One side dramatically convex, tapers to 0.204, 0.166 at ends, other side slightly concave. Major radius 1.409
543	9354	72457	5317	1	1.875	0.966	0.49		Pendant	Slight cones each side; 0.437 one side; 0.472 the otherta pering to 0.243. Very slight cones remain.	Pale green with white streaks teardrop-shaped pendant bead. Tapers to 0.413 wide at top, 0.481 thick at bottom.

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

543	9354	72457	5317	2	1.495	0.908	0.736		Pendant	Drilled both sides, 0.423 one side 0.371 the other, tapering to 0.210. Very slight cones remain.	Very pale green to white teardrop-shaped pendant bead, irregularly formed. Tapers to 0.351 width at top (along perforation)
544	9318	72199	5228				0.231	0.664	Cylinder disc	Plain	Nicely worked
546	9327	72224	5244		1.091	1.018	0.707		Short barrel	Double cone perforation, 0.439, 0.403, tapering to 0.156	Pale green slightly ovoid bead, perforation slightly off center. Tapers to 0.441 thickon one end
546	9327	72311	5286		0.642	0.768	0.279		Irregular barrel disc or drilled pebble	Plain; 0.192 one side, 0.183 the other.	Pale green, irregular bead—vaguely ovoid.
549	2206	87031	4523		2.139	1.039	0.493		Pendant	Double cone	Trapezoidal pendant with rounded corners, pierced through width side. Major radius 1.710.
549	9321	72127	5189				0.576	0.749	Short cylinder	Plain	Salt layer on exterior
704	2599	74017	7163				0.816	1.201	Short barrel	Double cone	
705	2466	88379	6765		0.461	0.446	0.224		Drilled pebble	Double cone	Drilled pebble; rough cylinder disc.
706	2430	88220	6646				0.326	0.87	Short barrel	Plain, 0.229	Green with white streaks amazonite bead
706	2430	88226	6651		1.318	1.195	0.741		Short truncated bicone	Double cone, 0.429, 0.417 to 0.215	Green with white swirls; tapers to 0.596 on one end

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

706	2480	88497	6859	1			0.309	0.641	Barrel disc	Double cone; 0.323, 0.257 to 0.192	Green with white swirls. First of necklace weighing a total of 22 grams. Original bead EDM's: 88414, 88492 (2), 88415 (4), 89141, 88541 (2), 88519 (7), 88533, 88357, C to E. Measurements starting at C.
706	2480	88497	6859	2	1.592	0.706	0.42		Ovoid, with piercing at base of ovum, short elliptical prism	Double cone; 0.330, 0.375 to 0.196	Green with white swirls, pendant bead tapering to 0.399 width distally. Major radius 1.207
706	2480	88497	6859	3	1.024	0.875	0.291		Pendant	Double cone; 0.228, 0.228 to 0.172	Green with white swirls, relatively flat trapezoidal pendant with divet in bottom—possibly a failed attempt at a piercing which broke the stone. Width tapers to 0.677 distally, major radius 0.553
706	2480	88497	6859	4	0.975	0.475	0.421		Pendant	Double cone; 0.284, 0.325 to 0.129	Green with white swirls, roughly triangular pendant pierced in center. Width tapers to 0.417.
706	2480	88497	6859	5	1.813	0.7	0.552		Pendant	Double cone; 0.358, 0.327 to 0.230	Green with white streaks, elliptical pendant, with hole in one half-circle of ellipse, major radius 1.333
706	2480	88497	6859	6	1.756	1.161	0.98		Pendant	Double cone; 0.419 0.514 to 0.266	Teardrop-shaped, tapers to 0.415 thickness at perforation. Major radius 1.329

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

706	2480	88497	6859	7	1.423	1.314	0.404		Pendant	Double cone; 0.466, 0.462 to 0.164	Square; tapers to 0.301 thickness proximally. Part of a double cone perforation that broke the piece is visible proximally; 0.246 diameter remains. Major radius 0.879
706	2480	88497	6859	8	2.709	1.238	0.705		Pendant	Double cone; 0.434, 0.554 to 0.285	Elliptical pendant with hole in one arc of ellipse. Thins to 0.504 at perforation. Major radius 2.244
706	2480	88497	6859	9	1.615	0.936	0.938		Pendant	Double cone; 0.369, 0.370 to 0.181	Teardrop-shaped, thins to 0.427 at perforation. Major radius 1.244
706	2480	88497	6859	10	1.243	1.163	0.947		Short barrel	Drilled from both sides, 0.465 one side, 0.615 the other, bent meeting place 0.332	Irregular, squarish short barrel. Drilled from both sides, with one hole extra large. Drilling started off-center and parallel to the hole on the other side. A small divet on that side apparently made drilling at that point impractical. Dogleg at meeting point of holes.
706	2480	88497	6859	11	2.161	1.285	0.405		Pendant	Double cone; 0.329, 0.393 to 0.187	Rectangular, with rounded corners. Major radius 1.787
706	2480	88497	6859	12	1.97	1.246	0.491		Pendant	Double cone; 0.373, 0.379 to 0.206	Elliptical with hole in one arc of ellipse. Thins to 0.395 at perforation. Major radius 1.346
706	2480	88497	6859	13	1.384	0.731	0.411		Pendant	Double cone; 0.379, 0.331 to 0.148	Pendant, rectangular distally, slightly more rounded proximally. Major radius 1.063

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

706	2480	88497	6859	14	1.539	0.849	0.269		Pendant	Double cone; 0.345, 0.379 to 0.180	Pendant, rectangular proxmially, rounded distally. Divet in top appears to be tiny remnant of a double cone perforation which broke the stone. Distally, five tiny grooves have been cut in the rock, creating a fringe of four tiny rounded protrusions, each about 0.140 wide, 0.069 high. Major radius 1.152
706	2480	88497	6859	15	1.41	0.727	0.574		Pendant	Double cone; 0.327, 0.401	Rectangular, with rounded corners. Major radius 1.150. Thins to 0.310 at perforation, 0.418 distally
706	2480	88497	6859	16	1.308	0.71	0.429		Pendant	Double cone; 0.294, 0.260 to 0.170	Triangular, with point distal and base rounded. More blue-green than rest of stones in lot, and more blue-green than most in the cemeter. Thins to 0.285 at perforation; major radius 1.102
706	2480	88497	6859	17			0.426	1.049	Short barrel	Double cone; 0.439, 0.440 to 0.314	Hole off-center; major radius 0.663 Thins to 0.378 in major radius
706	2480	88497	6859	18	1.224	1.13	0.59		Oblate	Double cone. 0.355, 0.360 to 0.145	Hole at angle, such that it is slightly off-center on both sides. Somewhat irregular in shape, apparently due to a flaw in the rock—a slight divet.
707	2432	89015	6589				0.232	0.772	Barrel disc	Double cone	Roughly shaped
707	2470	88301	6711				0.275	0.637	Short cylinder	Plain	Well-shaped

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

710	2454	88383	6768	3	0.682	1.049	0.162		Spacer	Three parallel perforations in a rough line, all double cone.	Small roughly triangular piece with rounded corners and three perforations in a line across the wider part. One perforation is in the "corner" of the triange, the next is 0.282 from this, the last is 0.282 from that one and 0.305 from the end of the stone. The line of perforations is at about a 45 degree angle to the base of the triangle. Rich color and white clouds.
710	2454	88383	6768	4	0.561	0.423	0.267		Drilled pebble	Double cone	Irregular drilled pebble.
710	2454	88383	6768	5	0.456	0.455	0.234		Drilled pebble	Plain	Irregular drilled pebble.
710	2454	88383	6768	7	0.533	0.375	0.313		Drilled pebble	Plain	Irregular drilled pebble.
710	2454	88383	6768	8	0.779	0.446	0.251		Pendant	Plain	Irregular pendant-like drilled pebble, Major radius 0.581
710	2454	88427	6801	17	1.203	0.833	0.584		Drilled pebble	Cone	Lumpy pebble, major radius 1.019
710	2454	88452	6820		1.258	0.773	0.339		Spacer	Two parallel, drilled both sides	Light green with brown sediment-filled veins. Rounded pebble, roughly rectangular with protuberance one side extending 0.306 from main body, 0.489 wide. Perforations on either end of piece, 0.828 apart. One is drilled from different planes on either side, creating a 90 degree turn in the resulting hole, 0.224 one side, 0.235 the other. Other is drilled both sides, with very clean junction. 0.194, 0.180.

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

710	2454	88476	6844	1			0.75	0.823	Short barrel	Drilled both sides, medium large,clean meeting	thins to 0.624 one side
710	2454	88476	6844	2			0.578	0.788	Short barrel	Plain, medium large	Thins to 0.494 one side
710	2454	88476	6844	3			0.638	0.796	Short barrel	Plain, medium large	Thins to 0.578 one side
710	2454	88476	6844	4			0.541	0.778	Short barrel	Plain, medium large	Thins to 0.485
710	2454	88476	6844	5			0.491	0.813	Short barrel	Plain, medium large	Lighter green than other examples this lot. Thins to 0.404
710	2454	88496	6858		0.575	0.474	0.288		Drilled pebble	Double cone	Irregular drilled pebble with brown inclusions or filled cracks
711	2490	88742	6841				0.749	0.977	Short barrel	Double cone, very pronounced	
714	2482	88410	6791		0.787	0.757	0.472		Short barrel	Double cone; 0.315 each side to 0.163	Somewhat lumpy and irregular amazonite bead
714	2514	88605	6918		2.02	1.065	0.583		Pendant	Double cone; 0.390 each side to 0.169	At skeleton's neck, amazonite pendant, with two small triangluar cuts 0.280 and 0.137 deep cut into the end such that it presents a fringed appearance. Cleavage plane on one side looks almost like a fourth fringe which does not appear on the other side. Tapers to 0.635 wide at perforation, 0.301 thick. Major radius 1.755

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

720	2538	88725	7025		0.532	0.443	0.203		Drilled pebble	Cone	Drilled pebble, roughly triangular, rounded, appears like a barrel disc when worn
720	2538	88765	7049		0.912	0.666	0.275		Drilled pebble	Plain	Drilled pebble, roughly triangular, rounded
729	2569	88822	7080				0.803	1.246	Short barrel	Double cone	Decently polished
731	2584	74063	7190	1	1.601	0.965	0.383		Pendant	Double cone	Pendant, major radius 1.227. Rectangular with rounded corners, relatively flat. Small divets in top and bottom—attempts at drilling or decoration?
731	2584	74063	7190	2	0.691	0.532	0.378		Drilled pebble	Double cone	Drilled rouned pebble, thins to 0.241
731	2584	74067	7194	1			0.247	0.899	Cylinder disc	Plain, medium large	Well-shaped
731	2584	74068	7195		0.571	0.564	0.265		Drilled pebble	Two slight cones	Squarish drilled pebble with rounded corners.
731	2584	74069	7196		2.523	1.202	0.634		Pendant	Double cone	Roughly rectangular with rounded corners. Notch cut into bottom as decoration, about 0.176 long.
734	9628	74032	7170		0.614	0.466	0.297		Drilled pebble	Double cone	Irregular green-white drilled pebble
738	9639	74168	7243		1.021	1.002	0.294		Broken	Double cone	Roughly square bead-pendant with perforation in center. Top corners rounded, bottom right angles. Notch in bottom an apparent perforation attempt which broke the stone.
740	9645	74120	7221		0.977	0.806	0.469		Drilled pebble	Double cone	Rounded, roughly trapezoidal drilled pebble. Perforation is roughly in center.

Table 6.9: Amazonite beads and pendants from Wadi Fidan 40, continued.

742	9655	89214	7231	2	0.84	0.477	0.2		Drilled pebble	Double cone	Roughly lenticular, disc, but really a drilled pebble with rough edges. Piercing roughly in center.
742	9655	89214	7231	5	0.536		0.219		Cylinder disc	Plain?	Length is surviving diameter. Small piece of amazonite, with white vein running through its diameter. Broken at perforation

Table 6.10: Amazonite beads and pendants unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Subnumeral	Shape
21	452		1912		Drilled pebble
25	453		1914		Drilled pebble
31	801		2656	2	Short barrel
31	801		2662	1	Short barrel
67	786		2397	1	Short barrel
67	786		2397	2	Short barrel
67	786		2557	1	Short barrel
67	786		2557	2	Short barrel
67	786		2557	3	Short barrel
67	786		2557	4	Short barrel
67	786		2557	5	Short barrel
67	786		2557	6	Drilled pebble
67	786		2557	7	Drilled pebble
67	786		2557	8	Drilled pebble
67	786		2557	9	Drilled pebble
67	786		2567	1	Short barrel
67	786		2567	2	Drilled pebble
67	786		2567	3	Drilled pebble
67	786		2567	4	Drilled pebble
67	786		2567	5	Drilled pebble
67	786		2586	1	Short barrel
67	786		2586	2	Drilled pebble
67	786		2586	3	Drilled pebble
67	803		2639	1	Drilled pebble
67	803		2639	2	Drilled pebble
67	803		2639	3	Drilled pebble
67	803		2639	4	Drilled pebble
67	803		2639	5	Drilled pebble
67	803		2645		Drilled pebble
67	803		2658	1	Short barrel
67	803		2658	2	Drilled pebble
94	793		2637	1	Short barrel

Table 6.10: Amazonite beads and pendants unavailable for examination in 2007 and studied only from photographs, continued.

94	793		2647		Drilled pebble
94	793		2680		
94	793		2693	1	Drilled pebble
95	813		2661	1	Drilled pebble
95	813		2680	3	Drilled pebble
95A	825		2719	2	Drilled pebble
100	812		2663	1	Short cylinder
100	812		2663	2	Short barrel
100	812		2663	3	Pendant
101	814		2672	1	Drilled pebble
101	814		2672	2	Drilled pebble
101	814		2672	3	Cylinder disc
101	814		2677	1	Cylinder disc
101	814		2689	1	Short barrel
101	814		2689	2	Short barrel
101	819		2705	1	Cylinder disc
101	819		2705	2	Drilled pebble
101	819		2714	1	Drilled pebble
101	819		2714	2	Drilled pebble
101	819		2720		Drilled pebble
107	557		3677	1	?Barrel disc
107	557		3677	2	Drilled pebble
243	1694	80690	2551		Drilled pebble
253	1706	70759	2611	1	Drilled pebble
253	1706	70759	2611	2	Drilled pebble

Unlike the other minerals discussed here, amazonite has distinct and limited sources in the Near East. Two amazonite sources are known in the Eastern Desert of Egypt, one in the region of Jebel Migif and Wadi Higelig, and the other at Abu Rushaid. It is also known north of Tibesti in the in Libyan Mountains, though this source may not have been mined in the Iron Age (Aston et al. 2000: 15, 46). There may be Persian sources, but this has not been confirmed, and in Mesopotamia the stone saw little use by comparison to Egypt (Moorey 1994: 82-83). Amazonite has been used in the Levant since the Late Natufian (Bar-Yosef Mayer and Porat 2008), and it cannot be ruled out that ancient habitations were mined for the material used at Wadi Fidan 40. It is more likely, however, that the stone was imported from its source, either in worked or unworked

form. Given the relative paucity of Egyptian artifacts in the cemetery, and unlikelihood that such a large quantity of a highly prized stone could be extracted from Egypt, another source is more likely. No amazonite sources have yet been reported for Jordan, but the stone is found in the Arabian Peninsula, including at Wadi Tbeik (Fabiano et al. 2004). So much amazonite at Wadi Fidan 40 is likely a sign of connections to Arabia.

APATITE

Just two stones, one from Grave 12 and one from Grave 14, were identified in my analysis as apatite (Table 6.11). These are waxy yellow short barrel beads, of a similar material to one bead found in Wadi Fidan 4, Tomb 1. One of the beads appeared vitreous; it may in fact be glass, though it appeared at the time to be more stone-like. Three more waxy yellow beads were noted in the 1997 Bead Analysis among the finds from Grave 29, though these were not photographed and not available for analysis in 2007. Another waxy yellow stone was found in the Wadi Fidan 4 assemblage.

Table 6.11: Apatite beads from Wadi Fidan 40.

Grave	Locus	Basket	Subnumeral	Thickness	Diameter	Shape	Description
12	623	2311	25	0.57	0.815	Short barrel	Bright yellow glassy-looking piece, sharp edges where broken through perforation. Some air bubbles visible on exterior, which is poorly rounded. Actually opaque yellow glass? Vitreous.
14	628	2383	17	0.326	0.491	Short barrel	Half of a nicely shaped yellow-green apatite? piece, shiny in section but patinated on most of exterior. Broken through perforation.

AVENTURINE OR PERIDOT

Aventurine is green quartz, and peridot is a gem-quality olivine. These two stones are very different, but are difficult to differentiate visually. Forty-two pieces of this stone in twelve graves were noted in this analysis, and all but one of the stones were less than a centimeter in maximum dimension (Tables 6.12, 6.13). The largest piece, a roughly-shaped pendant 1.501 cm long, is full of impurities. The source for this stone was apparently low-quality and is unknown, but peridot is common in Egypt (Aston et al. 2000).

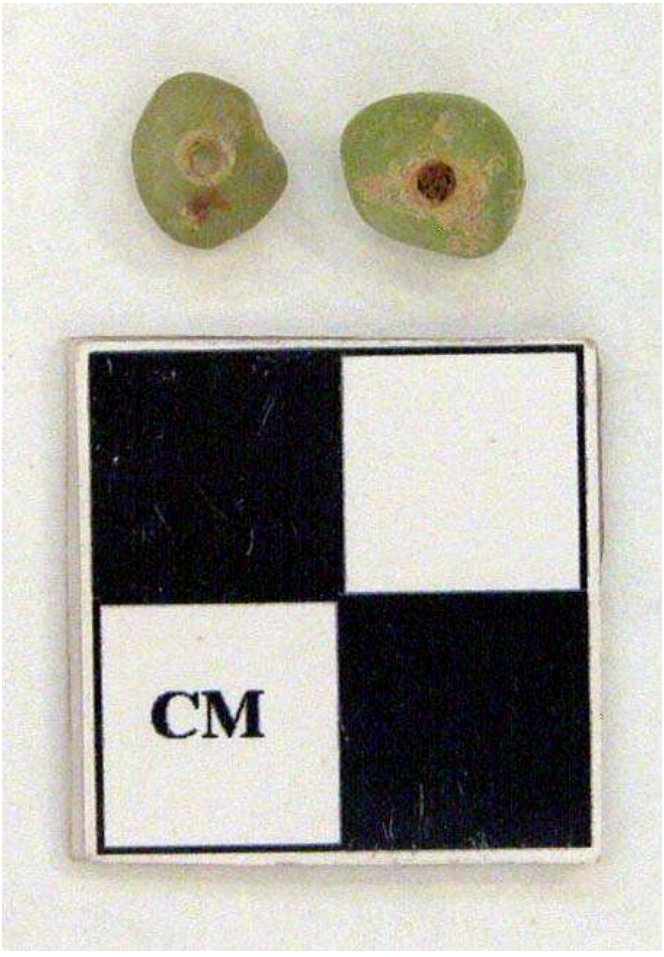


Figure 6.81: Irregular aventurine or peridot beads from Grave 710 (EDM 88418).



Figure 6.82: Pendants from Grave 40. Most are amazonite, but note the aventurine or peridot pendant in the upper right (B. 3421).

Table 6.12: Aventurine or peridot beads and pendants from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thickness	Diameter	Shape	Perforation	Description
10	9305	72056	5148		0.41	0.364	0.153		Irregular barrel disc	Drilled both sides (slight cones remain). Cone diameter 0.143 one side, 0.131 the other, tapering to 0.099	Translucent very homogenous pale yellow-green. Almost clear or slightly yellow when held up to the light. Slightly irregular in shape, but appears worked on all sides.
12	604		2231	3	0.528	0.45	0.352		Short barrel	Double cone	Flattened short barrel, homogenous pale translucent green coloring; flawed.

Table 6.12: Aventurine or peridot beads and pendants from Wadi Fidan 40, continued.

12	609		2244	5	0.653	0.605	0.286		Short barrel	Double cone	Pale, translucent green, irregular short barrel
12	609		2244	6	0.456	0.435	0.184		Short barrel	Double cone	Pale, translucent green, irregular short barrel
12	609		2244	7	0.377	0.354	0.19		Short barrel	Double cone	Pale, translucent green, irregular short barrel
12	623		2399	135	0.478	0.427	0.218		Barrel disc	Double cone	Somewhat wedge-shaped; thins to 0.114 one side
12	623		2399	136			0.16	0.397	Barrel disc	Cone one side	Much more regularly shaped
14	601		2229	1	0.492	0.361	0.191		Drilled pebble	Double cone	Vaguely ellipsoidal pebble pierced in center, pale green translucent color uniform throughout
14	601		2229	6	0.548	0.428	0.21		Drilled pebble	Double cone	Relatively impure aventurine, many inclusions, relatively pale green trending towards clear
14	601		2229	7			0.151	0.353	Cylinder disc	Double cone	Very rough cylinder disc, relatively impure aventurine, many inclusions, relatively pale green trending towards clear

Table 6.12: Aventurine or peridot beads and pendants from Wadi Fidan 40, continued.

40	693		3421	6	1.501	0.87	0.815		Pendant	Double cone, 0.345, 0.366 to 0.156	Irregular, roughly kidney-shaped pendant. Likely a drilled pebble. Major radius 0.828, thins to 0.492 proximally. Heavily included, with brown almost bedding planes running perpendicular to the axis of the drillhole—this is likely a reason for the generally very small aventurine examples. Somewhat translucent, except for these brownish inclusions.
227	1613	80383	2321	4			0.197	0.41	Cylinder disc	Double cone	Relatively dark brownish-green
240	1686	80646	2514	1			0.535	0.608	Short barrel	Double cone	Translucent green stone, roughly worked, many flaws like nicks in surface. Thins to 0.426 one side
532	2357	89163	5072	2			0.218	0.436	Cylinder disc	Double cone	Very pale green throughout
705	2466	88424	6799				0.183	0.431	Barrel disc	Double cone	

Table 6.12: Aventurine or peridot beads and pendants from Wadi Fidan 40, continued.

710	2454	88418	6796	1	0.744	0.651	0.354		Drilled pebble	Double cone	Translucent, rounded, drilled about in center
710	2454	88418	6796	2	0.707	0.599	0.226		Drilled pebble	Double cone	Translucent green stone, rounded, drilled approximately in center
710	2454	88422	6798		0.893	0.77	0.36		Drilled pebble	Double cone	Translucent green stone, roughly trapezoidal with rounded corners, drilled about in middle
710	2454	88427	6801	1	0.576	0.679	0.341		Drilled pebble	Half-cone	Translucent green stone, looks like cylinder disc when worn
710	2454	88427	6801	2	0.784	0.734	0.301		Drilled pebble	Double cone	Translucent green stone, looks like cylinder disc when worn
710	2454	88427	6801	3	0.761	0.719	0.224		Cylinder disc	Plain, medium large	Translucent green stone
710	2454	88427	6801	4	0.783	0.615	0.337		Drilled pebble	Double cone	Translucent green stone, looks like cylinder disc when worn
710	2454	88427	6801	5	0.688	0.638	0.294		Drilled pebble	Double cone	Translucent green stone, looks like cylinder disc when worn
710	2454	88427	6801	6	0.733	0.705	0.225		Barrel disc	Double cone	Translucent green stone, with some dark green opaque spots

Table 6.12: Aventurine or peridot beads and pendants from Wadi Fidan 40, continued.

710	2454	88427	6801	7	0.545	0.527	0.235		Drilled pebble	Double cone	Translucent green stone, looks like cylinder disc when worn
710	2454	88427	6801	8	0.839	0.662	0.33		Drilled pebble	Double cone	Translucent green stone, looks like cylinder disc when worn
710	2454	88427	6801	9	0.793	0.703	0.398		Drilled pebble	Double cone	Translucent green stone
710	2454	88427	6801	10	0.76	0.601	0.317		Drilled pebble	Double cone	Translucent green stone
710	2454	88427	6801	11	0.679	0.674	0.318		Drilled pebble	Double cone	Translucent green stone
710	2454	88427	6801	12	0.577	0.518	0.229		Drilled pebble	Double cone	Translucent green stone, looks like a barrel disc when worn
710	2454	88427	6801	13	0.66	0.513	0.291		Drilled pebble	Double cone	Translucent green stone
710	2454	88427	6801	14	0.665	0.706	0.356		Drilled pebble	Double cone	Translucent green stone
710	2454	88427	6801	15	0.637	0.602	0.204		Drilled pebble	Plain, medium large	Translucent green stone, looks like a barrel disc when worn
710	2454	88427	6801	16	0.631	0.547	0.333		Drilled pebble	Double cone	Translucent green stone
710	2454	89094	6828	3	0.529	0.438	0.204		Drilled pebble	Plain, medium large	Translucent pale green, appears to be a barrel disc when worn
710	2454	89094	6828	4	0.375	0.337	0.199		Drilled pebble	Plain, medium large	Pale translucent green
710	2454	89094	6828	5	0.464	0.366	0.267		Drilled pebble	Plain	Pale translucent green
710	2454	89094	6828	6	0.488	0.348	0.21		Drilled pebble	Plain, medium large	Pale translucent green

Table 6.13: Aventurine or peridot beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	Basket	Subnumeral	Shape
28	782	2557		?Short barrel
29	775	2559	3	Short barrel
29	775	2559	4	Short barrel
43	648	3350		Barrel disc

CARNELIAN

Carnelian is translucent silicate with red to purple coloring due to iron impurities. Carnelian varieties can be so deeply colored that are purple or nearly black; these are known as sard (Figs. 6.83-6.85). Carnelian is common in Egyptian jewelry and appears to have been highly valued, but sard, though equally accessible, was generally not used by the Egyptians (Andrews 1990: 41, 50). The common occurrence of darker cornelian and sard at Wadi Fidan 40 might indicate that the people here only had access to less desirable stones, or they may have preferred stones with less Egyptoid connotations.



Figure 6.83: A carnelian short barrel bead, typical of the beads of this material at Wadi Fidan 40. This one is from Grave 544 (EDM 72405).



Figure 6.84: Carnelian beads from Wadi Fidan 40, Grave 14, including many dark purple, sard beads (B. 2353).



Figure 6.85: Carnelian and rock crystal beads, probably an anklet, from Grave 14, hypothetically restrung (B. 2386).

Particularly pale carnelian, known as agattype carnelian, can be mistaken for amber (Figs. 6.86-6.87). Indeed, the preliminary Bead Analysis in 1997 classified ten stones as amber, and other pieces were suspected to be amber by later seasons' supervisors, and the preliminary publication of bead data also miscategorized beads as amber (Levy et al. 2004: 78). However, these stones are too dense to be amber, which floats in highly saline water. They are also too hard to be amber, ranking in the silicate range of the Moh's scale. Amber beads—or, more often today, plastic amber simulants—are common in Arabic jewelry. But access to amber is the result of globalization. The best amber sources are in the Baltic states, though some amber is found in Italy.



Figure 6.86: A backlit carnelain bead, showing a yellow tinge, from Grave 714 (EDM 89133).



Figure 6.87: An agattype carnleian bead fragment, from Grave 39 (B. 2378).

Carnelian is very common in other Levantine sites. Most notably, the Tawilan "gold hoard" is more accurately a carnelian hoard that contained some gold (Fig. 6.88). These beads have never been adequately published, and are not included in the site's small finds register (Bienkowski 1995d: 90). Alongside the twenty gold artifacts, either 336 (Bennett 1984: 4) or 334 beads (Petocz 1984: 13), including "a variety of spherical, barrel and tubular carnelian beads" (Ogden 1995: 69) were found. Carnelian was also common in the bead assemblage outside the hoard (Bienkowski 1995d: 90) and among the Area II, Group 1 burials that are almost certainly not Iron Age (Bienkowski 1995d: 91). Carnelian and sard beads were found at Buseirah (Sedman 2002: 365-366) The beads presented as possibly amber from Buseirah (Sedman 2002: 365-366) and Tawilan (Bienkowski 1995d: 90).



Figure 6.88: Carnelian beads from the Tawilan "gold hoard" (Bennet and Bienkowski 1995: 278).

Most interesting are the limited parallels for certain unusually-shaped beads. Most of the carnelian beads at Wadi Fidan 40 are barrel, cylinder, and biconical beads common throughout the Levant. However, one bead in Grave 14 was a broken axe- or adze-shaped bead (Fig. 6.89; B. 2400), and a similar bead was found in Grave 343 (EDM 70060). The bead is similar to those of the necklace found at Wadi Fidan 4 (Fig. 6.91). Identical beads were found at Tell el Ajjul (Fig. 6.90).



Figure 6.89: Beads from Grave 14. In addition to the tiny shell(?) beads and carnelian short barrel beads, note the carnelin axe- or adze-shaped bead, second from top left (B. 2400).

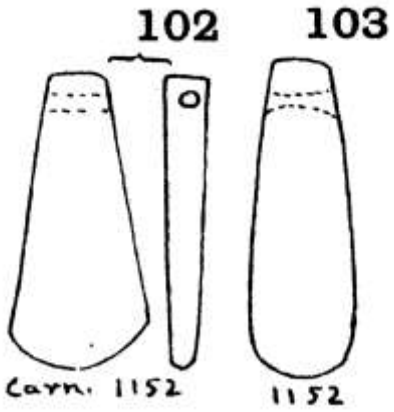


Figure 6.90: Carnelian axe- or adze-shaped beads from Tell el Ajjul, Tomb 1152 (Petrie 1932: Pl. XXV).



Figure 6.91: The carnelian and jasper adze-shaped beads from Wadi Fidan 4, Tomb 1, Locus 720 (EDM 50810).

Carnelian was also important symbolically. As we have seen, carnelian appears to have been worn as a charm in Egypt, including single carnelian beads, known as a *seweret* and commonly worn by women, at least in funerary contexts (Vilímková 1969: 29). As Andrews (1994: 102) notes, "Symbolically cornelian reflects the curious dichtotomy which the Egyptians felt to be embodied in the colour red, which was not

only connected with blood and hence energy, dynamism and power, but was also linked with the evil-tempered desert-god Seth, patron of disorder, storms and aridity and murder of his brother Osiris."

The precise source of the Wadi Fidan carnelian cannot be pinpointed. All carnelian was once believed to be imported from Cambay, India (Arkell 1936), but this argument has long been exploded. Well-known Egyptian carnelian sources are found in the Eastern Desert, including at Wadi Abu Gerida and at Wadi Saga. Both these sources are near the Red Sea port of Quseir. Carnelain is also found at the gneiss quarries at Gebel el-Asr in the Western Desert (Aston et al. 2000). Carnelian pebbles are not uncommon in the Eastern Desert (Lucas 1962: 391). Carnelian is also found in Persia, and was widely used in Mesopotamia (Moorey 1994: 97). Arabian carnelian is said to be particularly dark, which may explain the preponderance of sard in the sample. However, it is likely that there are other, closer sources. A large piece of carnelian was collected on the surface of Wadi Fidan 40 in 2009, and worked carnelian chunks have been found in the Fidan survey.

Carnelian is the single most common stone used in beads at the cemetery. With 626 examples, it makes up nearly 12% of the total bead assemblage. But it is not evenly distributed throughout the cemetery. Four hundred sixty-seven, or more than two-thirds, of the beads were found in the unusually rich Graves 12 and 14. Just thirty graves, or 10.7% of the excavated graves, contained carnelian, contrasted against 79 graves which contained amazonite, a stone which made up less than 6% of the total beads. Carnelian appears to be a marker of particular status in the cemetery.

Table 6.14: Carnelian beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thickness	Diameter	Shape	Perforation	Color	Description
0	2203	87028	4521		0.491	0.401	0.284		?	Double cone	Red	Translucent red carnelian. Only a fraction of one edge and part of the perforation survive; impossible to discuss shape though it is polished and not circular
0	2205	86687	2877				1.171	0.66	Standard barrel	Drilled from both ends	Red	Deep translucent red with white surface clouds and more opaque patches
0	2444	89051	8509	1			1.367	0.692	Standard barrel	Plain, medium large, 0.277	Red	Translucent red, almost covered by opaque white clouds, broken around perforation at both ends
0	2444	89071	6706	1			0.256	0.53	Barrel disc	Plain	Red	Relatively pale orange-red with white clouds
0	0	A09F0036	A09L006				0.56	0.72	Truncated bicone	Drilled both sides, 0.21, 0.20	Black	Opaque dark purple or black carnelian bead.
0	0	A09F0037	A09L006	1			0.53	0.6	Truncated bicone	Drilled both sides; 0.30 to 0.23	Black	Opaque dark purple or black carnelian bead. Some damage around perforations.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

0	0	A09F0037	A09L006	2			0.56	0.62	Short barrel	Cone; 0.22 to 0.16	Red	Translucent deep red to purple, damage around perforation includes pop on face with narrower cone from drilling
0	0	A09F0041	A09L006				0.44	0.6	Short barrel	Cone, 0.28 to 0.20	Black	Ridge around axis, making it almost a truncated bicone. One white inlcusion. Damage to face around narrow end of cone from drilling.
0	0	LB09F0086	A09L006	1			0.66	0.93	Short barrel	Cone; 0.26 to 0.21	Red	Opaque red with white clouds; some damage around circumference and around perforations
0	0	LB09F0086	A09L006	2			0.62	0.82	Short barrel	Drilled both sides; 0.30 to 0.26	Red	Translucent to almost opaque, some damage around circumference and around perforations. One face flat.
0	0	LB09F0086	A09L006	3			0.6	0.74	Short barrel	Plain, 0.33	Brown	Translucent yellow-brown bead

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

0	0	LB09F 0086	A09L 006	4			0.52	0.66	Short barrel	Cone; 0.29 to 0.24	Red	Translucent pale red; face with broader cone perforatoin is flat, other side slightly damaged
0	0	LB09F 0086	A09L 006	5			0.54	0.69	Short barrel	Cone; 0.22 to 0.18	Red	Translucent dark red, some damage around perforation, especially on narrower end
0	0	LB09F 0086	A09L 006	6			0.58	0.62	Short barrel	Drilled both sides; 0.24	Red	Translucent red and white bead; some damage around perforation
12	604		2227		2.051	1.331	0.908		Lenticular		Clear to brown	Clear with dark yellow, brown, and white stripes and speckles. Drilled lengthwise from both ends. Perforation clearly visible—0.418 cone tapers to 0.249 cone over 1.425, meets 0.299 wide, 0.611 long cone from the other end, meeting place slightly off center; parts of edges broken at both ends.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	604		2238	1	1.376	0.782	0.535		Drilled pebble	Double cone, to 0.101	Red-orange	Pebble, drilled slightly off center so that it hangs length-wise. Broken such that it is quasi-semi-circular, with a point upward. Major radius 0.844. Color is a yellow orange with dark red streaks.
12	604		2238	2	1.151	1.107	0.536		Drilled flake	Single cone; dimple from percussion flake on other side. 0.331 to 0.173; percussion flake scar 0.360	Red-orange	Triangular flake drilled through to make a bead. Roughly triangular, one flat side, one rough convex side. Mostly yellow-orange with dark red streaks. Thins to 0.332 at perforation
12	623		2311	2			0.725	0.875	Short barrel	Cone, 0.260, 0.160 with flake scar on narrower end	Red	Flaking to prepare drilling surface on wider side of cone, relatively opaque red carnelian, one paler section
12	623		2311	3			0.701	0.845	Short barrel	Cone, 0.211, 0.185 with flake scar on narrower end	Red-purple	Dark red-purple, relatively opaque, carnelian

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2311	4			0.709	1.06	Short barrel	Plain, 0.216	Orange-red	Dimple on one side, red-orange translucent stone
12	623		2311	5			0.638	0.792	Short barrel	Cone, 0.217, 0.149 with flake scar narrower side	Orange-red	Semi-translucent orange-red carnelian
12	623		2311	6			0.623	0.795	Short barrel	Cone, 0.250, 0.189, with several chips taken out of narrower side	Orange-red	Translucent orange-red stone
12	623		2311	7			0.717	0.996	Short pear-shaped	Double cone, 0.202, 0.203	Orange-red	Opaque orange-red stone, flaking around one side of perforation; cones meet nicely in middle
12	623		2311	8			0.782	0.561	Short truncated convex bicone	Cone, 0.228 to 0.206, flake scar on narrower end	Orange	Very translucent stone, some imperfections visible as apparent cracks
12	623		2311	9			0.576	0.996	Truncated convex bicone disc	Cone, 0.260, 0.181, flake scar on narrower end	Orange	Very translucent stone, one very dark red band
12	623		2311	10			0.378	0.71	Truncated convex bicone disc	Cone, 0.238, 0.189	Red	Translucend red carnelian; calcareous imperfection near narrower cone

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2311	11			0.411	0.749	Truncated convex bicone disc	Cone, 0.243, 0.173, flake scar narrower side	Red	Translucent, some faint facets remain on side with narrower cone, not quite round (d. 0.665 at narrowest)
12	623		2311	12			0.498	0.985	Truncated convex bicone disc	Cone, 0.230, 0.196, large deep flake scar on narrower end	Red-orange	Semi-translucent, large calcareous flaw on side of narrower end of cone, other side very rough—unsmoothed facet where drilling took place.
12	623		2311	13			0.234	0.498	Barrel disc	Cone, 0.194, 0.179	Red-purple	Translucent red-purple carnelian, scars 0.286, 0.329 wide on either side around perforation
12	623		2311	14			0.599	0.661	Short truncated convex bicone	Cone, 0.236, 0.199, flaking narrower side	Purple	Opaque deep purple, very slight ridge at meeting of bicones
12	623		2311	15			0.523	0.63	Short truncated convex bicone	Cone, 0.216, 0.184	Purple	Opaque deep purple, very slight ridge at meeting of bicones, flakes taken off both ends of perforation
12	623		2311	16			0.49	0.607	Short truncated convex bicone	Cone, 0.222, 0.206, flake narrower end	Purple	Opaque, very slight ridge at meeting of bicones

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2311	17			0.484	0.592	Short truncated convex bicone	Cone, 0.223, 0.209, flake narrower end	Purple	Opaque deep purple, very slight ridge at meeting of bicones
12	623		2311	18			0.64	0.749	Short truncated convex bicone	cone, 0.277, 0.239	Black	Opaque black speckled with tan, no flaking at perforation
12	623		2399	2			0.705	0.779	Truncated convex bicone	Single cone; 0.359 cone base tapering to 0.228	Purple	Very dark red-purple carnelian bead, tapers to 0.631 thickness on one side These beads almost opaque; only broken ones held up to the light show they are translucent
12	623		2399	3			0.589	0.65	Truncated convex bicone	Plain; 0.297 0.192	Purple	Very dark red-purple carnelian bead
12	623		2399	4			0.534	0.775	Truncated convex bicone	Single cone; 0.207, 0.225	Purple	Very dark red-purple carnelian bead. Tapers to 0.483 thickness one side Very broad face for drilling on that with wider hole, 0.622 cm in diameter Slight chipping near perforation on narrower side

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	5			0.62	0.74	Truncated convex bicone	Drilled both sides. Cone on one side 0.436 tapering quickly to 0.200; other side wide hole 0.250	Purple	Very dark red-purple carnelian bead. Cones meet slightly off center.
12	623		2399	6			0.605	0.691	Short barrel	Cone one side 0.434 tapering to 0.199; other side 0.236	Purple	Tapers one side to 0.507 thickness; slight ridge in places—almost bicone
12	623		2399	7			0.262	0.706	Truncated convex bicone	Cone one side 0.381 tapering quickly to 0.186; other side 0.266	Purple	Very dark red-purple carnelian bead
12	623		2399	8			0.653	0.572	Truncated convex bicone	Slight cones both sides, 0.400 tapering quickly to 0.224 one side, .356 to 0.223 the other	Purple	Very dark purple; thickness tapers to 0.418 one side
12	623		2399	9			0.689	0.56	Truncated convex bicone	Slight cone one side 0.370 to 0.227; 0.250	Purple	Very dark red-purple carnelian bead
12	623		2399	10			0.52	0.666	Truncated convex bicone	Slight cone one side 0.387 to 0.199; 0.233	Purple	Very dark red-purple carnelian bead
12	623		2399	11			0.475	0.579	Truncated convex bicone	Slight cone one side 0.321 to 0.190; 0.217	Purple	Very dark red-purple carnelian bead

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	12			0.615	0.735	Truncated convex bicone	Slight cone one side, 0.428 to 0.220; 0.192 other side but broken around perforation -- cone?	Purple	Chipped around perforation on one side
12	623		2399	13			0.606	0.739	Truncated convex bicone	Slight cone one side, 0.432 to 0.228; 0.250	Purple	Chipped around edges
12	623		2399	14			0.715	0.776	Truncated convex bicone	Slight cone one side, 0.437 to 0.206; 0.246	Purple	
12	623		2399	15			0.521	0.675	Truncated convex bicone	Slight cone one side, 0.439 to 0.202; 0.250	Purple	Chipped around edges
12	623		2399	16			0.6	0.723	Truncated convex bicone	Slight cones both sides, 0.488 to 0.325; 0.409 to 0.225	Purple	
12	623		2399	17			0.525	0.629	Truncated convex bicone	Slight cone one side, 0.393 to 0.158; 0.227	Purple	Cones slightly off center
12	623		2399	18			0.541	0.707	Truncated convex bicone	Slight cones both sides, 0.397 to 0.241; 0.385 to 0.218	Purple	Broken around one (narrower) perforation. Some grey spots on bead.
12	623		2399	19			0.527	0.695	Truncated convex bicone	Slight cone one side, 0.448 to 0.219; 0.232	Purple	Some chipping around edges next to perforations

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	20			0.547	0.661	Truncated convex bicone	Cone; 0.247, 0.194	Purple	Some chipping
12	623		2399	21			0.444	0.619	Truncated convex bicone	Irregular, broken cone one side 0.331 to 0.170; 0.232	Purple	Slightly more translucent than most in this collection; some chipping
12	623		2399	22			0.537	0.617	Truncated convex bicone	Plain; 0.232	Purple	
12	623		2399	23			0.642	0.718	Truncated convex bicone	Slight cone one side, 0.414 to 0.242; 0.264	Purple	Brown patch on one side
12	623		2399	24			0.664	0.753	Truncated convex bicone	Slight cone one side, 0.446 to 0.228; 0.228	Purple	
12	623		2399	25			0.654	0.626	Truncated convex bicone	Slight cone; 0.226, 0.210	Purple	Somewhat irregular—one flattened side, chipped on edge and around perforation
12	623		2399	26			0.542	0.708	Truncated convex bicone	Slight cone one side; 0.409 to 0.202, 0.257	Purple	
12	623		2399	27			0.57	0.714	Truncated convex bicone	Slight cone one side, 0.333 to 0.226; 0.187	Purple	
12	623		2399	28			0.506	0.632	Truncated convex bicone	Plain, 0.204	Purple	
12	623		2399	29			0.514	0.645	Truncated convex bicone	Cone; 0.225, 0.191	Purple	tapers to 0.465 one side, chipped around one perforation

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	30			0.495	0.636	Truncated convex bicone	Slight cone one side, 0.305 to 0.177, 0.207	Purple	
12	623		2399	31			0.547	0.691	Truncated convex bicone	Slight cone one side, 0.413 to 0.201, 0.245	Purple	Tapers to 0.432 one side. Chipped near perforation on narrower side
12	623		2399	32			0.613	0.803	Truncated convex bicone	Cone; 0.314, 0.263	Purple	Drilling spiral clearly present in this example, forming ridges down inside of perforation, from thicker side to narrower side
12	623		2399	33			0.581	0.698	Truncated convex bicone	Cone, 0.267, 0.245	Purple	Tapers to 0.500 one side
12	623		2399	34			0.743	0.762	Truncated convex bicone	Cone one side 0.377, 0.268; 0.227	Purple	Cone bases at about 30 degree angle to ends
12	623		2399	35			0.728	0.76	Truncated convex bicone	Cone one end 0.440 to 0.215; 0.313	Purple	One end at about 30 degee angle to other end, the result of drilling cone
12	623		2399	36			0.708	0.837	Truncated convex bicone	Cone .419 to 0.228; 0.254	Purple	One end at about 30 degee angle to other end, the result of drilling cone, 0.587 thickness here
12	623		2399	37			0.554	0.688	Truncated convex bicone	Cone 0.384 to 0.178; 0.224	Purple	
12	623		2399	38			0.519	0.719	Truncated convex bicone	Cone 0.435 to 0.253; 0.237	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	39			0.514	0.668	Truncated convex bicone	Cone 0.361 to 0.167; 0.222	Purple	Battering around perforations and to edges
12	623		2399	40			0.593	0.788	Truncated convex bicone	Cone, 0.276, 0.223	Purple	Narrower perforation battered somewhat during making and polished over; white inclusion on this side
12	623		2399	41			0.687	0.576	Truncated convex bicone	Cone, 0.274, 0.232	Purple	Small brown streak and white inclusion
12	623		2399	42			0.613	0.736	Truncated convex bicone	Cone one side, 0.486 to 0.211, 0.224	Purple	Light brown swirl near unconed perforation
12	623		2399	43			0.6	0.794	Truncated convex bicone	Cone one side 0.529 to 0.232, 0.246	Purple	
12	623		2399	44			0.725	0.783	Truncated convex bicone	Cone one side 0.389 to 0.224; 0.253	Purple	
12	623		2399	45			0.654	0.732	Truncated convex bicone	Cone one side 0.413 to 0.179; 0.225	Purple	
12	623		2399	46			0.63	0.74	Truncated convex bicone	Cone one side 0.363 to 0.193, 0.287	Purple	
12	623		2399	47			0.535	0.679	Truncated convex bicone	Cone one side 0.368 to 0.203; 0.208	Purple	
12	623		2399	48			0.505	0.591	Truncated convex bicone	Cone one side 0.295 to 0.186; 0.219	Purple	
12	623		2399	49			0.647	0.483	Truncated convex bicone	Cone, 0.258, 0.186	Purple	Battering around perforation one side
12	623		2399	50			0.709	0.723	Truncated convex bicone	Cone one side 0.413 to 0.198; 0.223	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	51			0.542	0.683	Truncated convex bicone	Cone one side 0.424 to 0.199; 0.223	Purple	Battering around non-coned perforation
12	623		2399	52			0.639	0.764	Truncated convex bicone	Cone one side 0.502 to 0.227, 0.221	Purple	
12	623		2399	53			0.464	0.632	Truncated convex bicone	Cone, 0.229, 0.236	Purple	
12	623		2399	54			0.522	0.611	Truncated convex bicone	Cone 0.391, 0.161; 0.241	Purple	Some pits on surface
12	623		2399	55			0.622	0.855	Truncated convex bicone	Cone 0.565, 0.211; 0.253	Purple	
12	623		2399	56			0.519	0.662	Truncated convex bicone	Cone; 0.324, 0.145; 0.202	Purple	White inclusion in one side at perforation
12	623		2399	57			0.638	0.681	Truncated convex bicone	Cone; 0.290, 0.194	Purple	Brown streak on one side near perforation
12	623		2399	58			0.707	0.759	Truncated convex bicone	Cone, 0.291, 0.194; 0.247	Purple	Breakage around cone perforation
12	623		2399	59			0.669	0.788	Truncated convex bicone	Cone, 0.246; 0.206	Purple	
12	623		2399	60			0.574	0.708	Truncated convex bicone	Cone, 0.229; 0.215	Purple	Grainy, brown streaks
12	623		2399	61			0.581	0.727	Truncated convex bicone	Cone, 0.245, 0.195	Purple	Pitting from inclusions, chipping near perforation
12	623		2399	62			0.539	0.698	Truncated convex bicone	Cone, 0.262, 0.176	Purple	White streaks, chipping around the narrower perforation

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	63			0.513	0.614	Truncated convex bicone	Cone; 0.335, 0.183; 0.192	Purple	Brown streaks on ends, perpendiicular to axis
12	623		2399	64			0.63	0.801	Truncated convex bicone	Cone, 0.647, 0.212; 0.239	Purple	
12	623		2399	65			0.555	0.721	Truncated convex bicone	Cone; 0.455, 0.260; 0.228	Purple	
12	623		2399	66			0.659	0.786	Truncated convex bicone	Cone, 0.212, 0.246	Purple	
12	623		2399	67			0.558	0.773	Truncated convex bicone	Cone, 0.223, 0.208	Purple	Some brown streaks, very opaque
12	623		2399	68			0.586	0.682	Truncated convex bicone	Cone, 0.225, 0.225	Purple	
12	623		2399	69			0.611	0.726	Truncated convex bicone	Cone, 0.518, 0.193; 0.277	Purple	Tapers to 0.498 one side
12	623		2399	70			0.513	0.692	Truncated convex bicone	Cone, 0.490, 0.198; 0.221	Purple	Tapers to 0.518 one side
12	623		2399	71			0.496	0.592	Truncated convex bicone	0.199, 0.177	Purple	Brown splotches
12	623		2399	72			0.57	0.728	Truncated convex bicone	Cone, 0.433, 0.222; 0.242	Purple	Whitish splotches
12	623		2399	73			0.639	0.668	Truncated convex bicone	Cone, 0.256; 0.263	Purple	Chipped around wider perforation
12	623		2399	74			0.711	0.558	Truncated convex bicone	Cone, 0.495, 0.190; 0.238	Purple	Tapers to 0.403 one side
12	623		2399	75			0.5	0.618	Truncated convex bicone	0.268; 0.192	Purple	
12	623		2399	76			0.59	0.701	Truncated convex bicone	Cone; 0.474, 0.231; 0.243	Purple	Tapes to 0.490 one side
12	623		2399	77			0.572	0.684	Truncated convex bicone	Cone, 0.488, 0.245; 0.240	Purple	Tapers to 0.483 one side

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	78			0.524	0.718	Truncated convex bicone	Cone, 0.226, 0.206	Purple	Pittied—inclusions
12	623		2399	79			0.531	0.719	Truncated convex bicone	Cone, 0.482, 0.263; 0.256	Purple	Broken into 2 pieces, refit. Bronw spot
12	623		2399	80			0.586	0.683	Truncated convex bicone	Cone; 0.250, 0.229; 0.225	Purple	Brown spot.
12	623		2399	81			0.635	0.727	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	Slight white streak
12	623		2399	82			0.692	0.737	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	83			0.63	0.809	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	84			0.491	0.717	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	85			0.53	0.718	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	Relatively translucent
12	623		2399	86			0.7	0.777	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	87			0.62	0.776	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	88			0.468	0.668	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	89			0.71	0.72	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	90			0.515	0.562	Truncated convex bicone	Dimple or cone & narrower hole on one side.	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	91			0.644	0.655	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	Tapers to 0.523 thick one side; one face angled
12	623		2399	92			0.588	0.651	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	93			0.578	0.731	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	Brown streak
12	623		2399	94			0.596	0.743	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	95			0.529	0.709	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	96			0.503	0.669	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	97			0.455	0.616	Truncated convex bicone	Dimple or cone, narrower hole on one side.	Purple	
12	623		2399	98			0.567	0.7	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	99			0.617	0.711	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	100			0.572	0.618	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	Narrows to 0.476 one side due to angled face.
12	623		2399	101			0.534	0.687	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	Narrows to 0.462 one side due to angled face.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	102			0.496	0.68	Truncated convex bicone	Plain	Purple	
12	623		2399	103			0.594	0.636	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	104			0.508	0.656	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	105			0.54	0.654	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	106			0.56	0.694	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	107			0.538	0.642	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	108			0.496	0.656	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	109			0.493	0.655	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	110			0.52	0.577	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	111			0.429	0.623	Truncated convex bicone	Dimple or cone, narrower hole on one side.	Purple	
12	623		2399	112			0.496	0.606	Truncated convex bicone	Slight cone	Purple	
12	623		2399	113			0.413	0.654	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	114			0.505	0.565	Truncated convex bicone	Dimple or cone and narrower hole on one side.	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	115			0.394	0.518	Truncated convex bicone	Dimple or cone and narrower hole on one side.	Purple	
12	623		2399	116			0.443	0.611	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	117			0.465	0.564	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	
12	623		2399	118			0.556	0.675	Truncated convex bicone	Dimple or cone on one side. This side also has a narrower hole than the other side.	Purple	Slightly paler than most of these stones.
12	623		2399	119			0.259	0.629	Barrel disc	Double cone; 0.316, 0.343 to 0.153	Red-orange	Somewhat irregular surface; divets
12	623		2399	120			0.647	0.89	Truncated convex bicone	Drilled one side; slight cone	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.
12	623		2399	121			0.633	0.81	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	122			0.699	0.791	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.
12	623		2399	123			0.638	0.781	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.
12	623		2399	124			0.696	0.801	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.
12	623		2399	125			0.742	0.79	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.
12	623		2399	126			0.814	0.615	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

12	623		2399	127			0.568	0.764	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Red-orange	Red-orange, relatively pale carnelian, consistent color throughout.
14	628		2353	1			0.611	0.749	Short convex truncated bicone	Cone with flake scar opposite	Purple	Stones are mostly a very deep purple carnelian, some almost opaque
14	628		2353	2			0.682	0.791	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	3			0.515	0.763	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	4			0.621	0.754	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	5			0.5	0.606	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	6			0.63	0.781	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	7			0.52	0.667	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	8			0.434	0.661	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	9			0.61	0.669	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	10			0.552	0.691	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	11			0.457	0.615	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	12			0.461	0.683	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	13			0.546	0.687	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	14			0.561	0.669	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	15			0.582	0.729	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	16			0.619	0.732	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	17			0.617	0.734	Short convex truncated bicone	Cone with flake scar opposite	Purple	cortex flaw on exterior
14	628		2353	18			0.639	0.739	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	19			0.565	0.789	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	20			0.635	0.761	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	21			0.589	0.722	Short convex truncated bicone	Cone with flake scar opposite	purple	
14	628		2353	22			0.499	0.641	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	23			0.569	0.73	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	24			0.426	0.696	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	25			0.588	0.806	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	26			0.725	0.801	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	27			0.64	0.756	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	28			0.587	0.736	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	29			0.581	0.703	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	30			0.444	0.553	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	31			0.481	0.571	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	32			0.522	0.655	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	33			0.652	0.754	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	34			0.478	0.645	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	35			0.517	0.715	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	36			0.485	0.619	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	37			0.487	0.628	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	38			0.686	0.792	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	39			0.445	0.522	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	40			0.526	0.722	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	41			0.434	0.582	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2353	42			0.52	0.632	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2353	43			0.831	0.875	Short convex truncated bicone	Cone with flake scar opposite	Red-orange	
14	628		2353	44			0.697	0.802	Short convex truncated bicone	Cone with flake scar opposite	Red-orange	
14	628		2353	46			0.789	0.822	Short convex truncated bicone	Cone with flake scar opposite	Red-orange	
14	628		2353	47			0.763	0.469	Short convex truncated bicone	Cone with flake scar opposite	Red-orange	
14	628		2353	48			0.73	0.809	Short convex truncated bicone	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	49			0.431	0.624	Short barrel	Cone with flake scar	Red-orange	Almost enough of a ridge to be called a bicone
14	628		2353	50			0.647	0.817	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	51			0.487	0.574	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	52			0.488	0.639	Short convex truncated bicone	Cone with flake scar opposite	Purple	Cortex flaw on exterior
14	628		2353	53			0.559	0.639	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	54			0.655	0.75	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	55			0.659	0.769	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	56			0.629	0.727	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	57			0.573	0.697	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	58			0.62	0.763	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	59			0.554	0.697	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	60			0.734	0.797	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	61			0.624	0.722	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	62			0.592	0.737	Short convex truncated bicone	Cone with flake scar opposite	purple	
14	628		2353	63			0.594	0.775	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	64			0.547	0.634	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	65			0.511	0.641	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	66			0.451	0.594	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	67			0.718	0.782	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	68			0.605	0.7	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	69			0.566	0.632	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	70			0.673	0.742	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	71			0.708	0.882	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	72			0.508	0.63	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	73			0.568	0.721	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	74			0.565	0.769	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	75			0.668	0.738	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	76			0.493	0.591	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	77			0.578	0.709	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	78			0.659	0.766	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	79			0.516	0.587	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	80			0.464	0.645	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	81			0.522	0.63	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	82			0.679	0.774	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	83			0.512	0.69	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	84			0.654	0.758	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	85			0.634	0.716	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	86			0.575	0.797	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	87			0.445	0.576	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	88			0.655	0.737	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	89			0.608	0.77	Short convex truncated bicone	Cone with flake scar opposite	purple	
14	628		2353	90			0.568	0.718	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	91			0.537	0.739	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	92			0.645	0.78	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	93			0.559	0.758	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	94			0.546	0.778	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	95			0.503	0.544	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	96			0.496	0.667	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	97			0.525	0.716	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	98			0.514	0.629	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	99			0.624	0.721	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	100			0.39	0.657	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	101			0.445	0.642	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	102			0.576	0.638	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	103			0.375	0.656	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	104			0.422	0.63	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	105			0.501	0.685	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	106			0.39	0.651	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2353	107			0.469	0.663	Short convex truncated bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2353	108			0.491	0.633	Short convex truncated bicone	Cone with flake scar opposite	Purple	
14	628		2374	11			0.833	0.874	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	12			0.649	0.71	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	13			0.62	0.765	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	14			0.569	0.761	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	15			0.606	0.697	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	16			0.519	0.716	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	17			0.551	0.639	Short barrel	Cone; flake scar on narrower end	Red-orange	Relatively translucent
14	628		2374	18			0.476	0.652	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	19			0.571	0.695	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	20			0.531	0.688	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	21			0.568	0.632	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	22			0.507	0.593	Short barrel	Cone; flake scar on narrower end	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2374	23			0.489	0.691	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	24			0.501	0.627	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2374	25			0.475	0.698	Short barrel	Cone; flake scar on narrower end	Red-orange	Flaking to prepare drilled surface
14	628		2374	26			0.507	0.631	Short barrel	Cone; flake scar on narrower end	Red-orange	Flaking to prepare drilled surface
14	628		2374	27			0.415	0.617	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2377	1			0.448	0.603	Short barrel	Cone with pressure flake opposite	Red-orange	Some flaws on exterior. All beads in this bracelet are relatively homogenously colored translucent red-orange.
14	628		2377	2			0.44	0.561	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	3			0.451	0.605	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	4			0.458	0.606	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	5			0.451	0.7	Short barrel	Cone with pressure flake opposite	Red-orange	Relatively clear, with one large dark red cloud
14	628		2377	6			0.424	0.608	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	7			0.482	0.63	Short barrel	Cone with pressure flake opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2377	8			0.51	0.61	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	9			0.606	0.733	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	10			0.59	0.761	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	11			0.738	0.772	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	12			0.751	0.83	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	13			0.682	0.811	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	14			0.668	0.813	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	15			0.588	0.783	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	16			0.447	0.645	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	17			0.528	0.663	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	18			0.49	0.619	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	19			0.512	0.656	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	20			0.586	0.632	Short barrel	Cone with pressure flake opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2377	21			0.524	0.625	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	22			0.47	0.676	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2377	23			0.537	0.663	Short barrel	Cone with pressure flake opposite	Red-orange	
14	628		2383	1			0.491	0.638	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	2			0.543	0.679	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	3			0.653	0.755	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	4			0.586	0.69	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	5			0.56	0.689	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	6			0.567	0.66	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	7			0.509	0.675	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	8			0.658	1.083	Short truncated convex bicone	Cone; flake scar on narrower end, 0.355, 0.301	Red-orange	
14	628		2383	9			0.52	0.714	Short barrel	Cone; flake scar on narrower end	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2383	10			0.624	0.63	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	11			0.457	0.634	Short truncated convex bicone	Cone; flake scar on narrower end	Purple	
14	628		2383	12			0.6	0.663	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	13			0.525	0.683	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	14			0.45	0.614	Short barrel	Cone; flake scar on narrower end	Red-orange	
14	628		2383	15			0.452	0.636	Short truncated convex bicone	Cone; flake scar on narrower end	Red-orange	
14	628		2383	16			0.253	0.389	Barrel disc	Cone; flake scar on narrower end; 0.163, 0.156	Red-orange	More opaque than other examples, with white cloud
14	628		2386	1			0.421	0.653	Truncated convex bicone	Cone with flake scar opposite	Purple	Beads near foot. Nearly opaque purple.
14	628		2386	2			0.528	0.681	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	3			0.651	0.512	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	4			0.668	0.777	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	5			0.652	0.476	Truncated convex bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2386	6			0.533	0.712	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	7			0.519	0.79	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	8			0.56	0.674	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	9			0.686	0.758	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	10			0.563	0.74	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	11			0.747	0.75	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	12			0.701	0.842	Truncated convex bicone	Cone with flake scar opposite	Red	Translucent deep red
14	628		2386	13			0.796	0.611	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	14			0.662	0.776	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	15			0.688	0.576	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	16			0.595	0.761	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	18			0.843	0.741	Truncated convex bicone	Cone with flake scar opposite	Red	Translucent deep red

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2386	19			0.717	0.787	Truncated convex bicone	Cone with flake scar opposite	Orange-red	Translucent orange-red; almost smooth enough to be a short barrel
14	628		2386	20			0.682	0.85	Short barrel	Cone with flake scar opposite	Orange-red	Translucent orange-red; almost ridged enough to be a truncated convex bicone
14	628		2386	23			0.652	0.807	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	24			0.615	0.76	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	25			0.731	0.753	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	26			0.632	0.653	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	27			0.572	0.696	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	28			0.616	0.72	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	29			0.422	0.564	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	30			0.505	0.63	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	31			0.528	0.748	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	32			0.609	0.722	Truncated convex bicone	Cone with flake scar opposite	Purple	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2386	33			0.573	0.747	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	34			0.632	0.756	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	35			0.514	0.684	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2386	36			0.539	0.594	Truncated convex bicone	Cone with flake scar opposite	Purple	
14	628		2391	1			0.827	0.887	Short barrel	Cone with flake scar opposite	Red-orange	Right arm midshaft bracelet.
14	628		2391	2			0.455	0.582	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	3			0.798	0.584	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	4			0.561	0.723	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	5			0.517	0.669	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	6			0.781	0.863	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	7			0.615	0.827	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	8			0.61	0.718	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	9			0.381	0.592	Short barrel	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2391	10			0.598	0.7	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	11			0.576	0.739	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	12			0.651	0.671	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	13			0.597	0.76	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	14			0.557	0.703	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	15			0.494	0.695	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	16			0.663	0.838	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	17			0.475	0.674	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	18			0.466	0.718	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	19			0.546	0.641	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	20			0.681	0.75	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	21			0.59	0.691	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	22			0.57	0.748	Short barrel	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2391	23			0.619	0.798	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	24			0.601	0.666	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	25			0.846	0.891	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	26			0.694	0.791	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	27			0.838	0.935	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	28			0.749	0.873	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	29			0.546	0.729	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	30			0.763	0.902	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	31			0.395	0.579	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	32			0.828	0.889	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	33			0.559	0.725	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	34			0.56	0.714	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	35			0.754	0.899	Short barrel	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2391	36			0.644	0.73	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	37			0.694	0.777	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	38			0.823	0.88	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	39			0.609	0.768	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	40			0.83	0.867	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	41			0.616	0.686	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	42			0.76	0.852	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	43			0.434	0.577	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	44			0.792	0.853	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	45			0.651	0.802	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	46			0.603	0.465	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	47			0.587	0.703	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2391	48			0.61	0.701	Short barrel	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2393	1			0.345	0.538	Short barrel	Cone with flake scar opposite	Red	Beads on left wrist. Must have been multiple bracelets given total length (about 31-32 cm). This piece darker red than most.
14	628		2393	2			0.19	0.473	Cylinder disc	Double cone	Red-orange	
14	628		2393	3			0.425	0.608	Short barrel	Cone with flake scar opposite	Red-orange	Relatively clear
14	628		2393	4			0.54	0.672	Short barrel	Cone with flake scar opposite	Red-orange	Dark
14	628		2393	5			0.525	0.674	Short barrel	Cone with flake scar opposite	Red-orange	Dark
14	628		2393	6			0.5	0.625	Short barrel	Cone with flake scar opposite	Red-orange	Relatively clear
14	628		2393	7			0.551	0.408	Short barrel	Cone with flake scar opposite	Red-orange	Relatively clear
14	628		2393	8			0.51	0.598	Short barrel	Cone with flake scar opposite	Red-orange	Relatively clear
14	628		2393	9			0.566	0.432	Short barrel	Cone with flake scar opposite	Red-orange	Relatively clear
14	628		2393	11			0.507	0.646	Short barrel	Plain, cone one side	Red	
14	628		2393	12			0.453	0.574	Short barrel	Plain, cone one side	Red	
14	628		2393	13			0.393	0.632	Short barrel	Plain, cone one side	Red	
14	628		2393	14			0.476	0.717	Short barrel	Plain, cone one side	Red	
14	628		2393	15			0.647	0.735	Short barrel	Plain, cone one side	Red	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2393	16			0.398	0.578	Short barrel	Plain, cone one side	Red	
14	628		2393	17			0.467	0.569	Short barrel	Plain, cone one side	Red	
14	628		2393	18			0.437	0.584	Short barrel	Plain, cone one side	Red	
14	628		2393	19			0.553	0.677	Short barrel	Plain, cone one side	Red	
14	628		2393	21			0.585	0.749	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	22			0.443	0.578	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	23			0.551	0.707	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	24			0.416	0.587	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	25			0.621	0.723	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	26			0.459	0.61	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	27			0.582	0.716	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	28			0.482	0.676	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	29			0.436	0.63	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	30			0.465	0.626	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	31			0.499	0.644	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	32			0.512	0.638	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	33			0.624	0.777	Short barrel	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2393	34			0.463	0.634	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	35			0.442	0.691	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	36			0.717	0.779	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	37			0.559	0.679	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	38			0.619	0.733	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	39			0.485	0.66	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	40			0.63	0.73	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	41			0.576	0.691	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	42			0.587	0.733	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	43			0.675	0.829	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	44			0.588	0.736	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	45			0.468	0.595	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	46			0.5	0.629	Short barrel	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2393	47			0.539	0.683	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	48			0.621	0.811	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	49			0.522	0.731	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	50			0.635	0.716	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	51			0.74	0.836	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	52			0.587	0.793	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	53			0.648	0.69	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	54			0.695	0.818	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	55			0.66	0.737	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	56			0.622	0.751	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	57			0.636	0.733	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	58			0.599	0.808	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	59			0.679	0.828	Short barrel	Cone with flake scar opposite	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2393	60			0.655	0.806	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2393	61			0.466	0.638	Short barrel	Cone with flake scar opposite	Red-orange	
14	628		2396	1			1.517	0.813	Truncated bicone	Drilled both sides, 0.225, 0.222	Red-orange	Well worked and polished bicone bead, relatively uniform translucent red-orange throughout, with some dark red patches visible when held up to the light. Some chipping on edges around perforations.
14	628		2396	2			0.455	0.509	Standard cylinder	Cone, 0.210, 0.143	Red-orange	Cylinder, very slightly streched towards ovoid, but nevertheless very regular. Uniform color but for one small dark red patch. Some small flaws on exterior.
14	628		2396	3			0.499	0.7	Short barrel	Plain, 0.237	Red-orange	Two apparent cracks or flaws runing through the stone. Uniform color throughout.
14	628		2396	4			0.577	0.735	Short barrel	Cone, 0.256, 0.165	Red-orange	One crack or flaw runs through the stone. Stone is relatively clear in this area. Breakage on narrow end of cone — some of it probably in manufacture.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2396	5			0.568	0.702	Short barrel	Slight cone, 0.192, 0.243	Red-orange	Chipping at both ends of perforation — in manufacture? Half of stone is relatively dark red-orange, the other half is relatively clear.
14	628		2400	1			0.831	0.89	Short pear-shape	Cone, 0.223 to 0.151 (narrower at narrow side of pear), with flake scar 0.272	Red-orange	Narrows to 0.471, consistent translucent red-orange throughout
14	628		2400	2			0.866	0.764	Short barrel	Cone with flake scar	Red-orange	Slightly lopsided on wider perforation's end
14	628		2400	3			0.679	0.517	Short barrel	Cone	Red-orange	
14	628		2400	4			0.723	0.879	Short barrel	Cone	Red-orange	
14	628		2400	5			0.39	0.737	Truncated convex bicone disc	Cone with flake scar	Red-orange	
14	628		2400	6			0.577	0.656	Short barrel	Cone	Red	Deeper red than most this lot, color still consistent throughout. Slightly lopsided on narrower end of cone, probably due to flake.
14	628		2400	7			0.468	0.656	Short pear-shape	Very slight cone with flake scar	Red-orange	
14	628		2400	8			0.559	0.668	Short pear-shape	Slight cone	Red-orange	
14	628		2400	9			0.457	0.647	Short barrel	Slight cone with flaking to wider end	Red-orange	

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

14	628		2400	10			0.33	0.666	Truncated convex bicone disc	Cone, 0.259, 0.183, also flaking on either side creating cones, 0.440, 0.383	Red-orange	
14	628		2400	11			0.764	0.943	Short barrel	Cone	Orange	Pale orange, very translucent. Flake scars on both ends, but also on other surfaces, making it somewhat irregular. Somewhat lopsided, thins to 0.636. A slight ridge almost makes it a short truncated convex bicone.
14	628		2400	12	0.859	0.736	0.38		Pendant	Cone, 0.186 to 0.176	Red-orange	Trapezoidal or axe-shaped pendant, broken distally, very reminiscent of pieces from WFD 4 Tomb 1. No polishing to broken surface, major radius as remains 0.618. Pierced through width, width is 0.390 at perforation
14	628		2400	13			0.972	0.69	Cylinder	Cone	Red-orange	Broken cylinder, thickness (length) as remains. Red-orange, but with some black and white patches.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

39	652		2478		2.228	0.707	0.918		Lenticular?	Plain, 0.306 diameter survives	Amber	Very fragmentary; from fill. Amber yellow, with white and red streaks. Small piece surviving of what was probably a lenticular bead. One edge, part of two sides and about 70% of part of the perforation survive, but little else.
203	1687	80803	2648				0.383	0.798	Short cylinder	Cone, flake scar 0.272, 0.170, scar 0.334	Red	Translucent red carnelian one side. The other side, banded orange agate, with some dark red bands. This is what is mostly visible when the piece is worn.
207	1602	80357	2299	1			0.323	0.475	Short barrel	Drilled both sides	Red	Translucent red stone, many opaque white clouds
221	1589	80327	2275				0.609	0.762	Short cylinder	Cone, flake scar	Red	Red translucent carnelain, largely covered with opaque white clouds

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

227	1613	80383	2321	3	0.508	0.431	0.171		Barrel disc	Double cone	Red	Red carnelian barrel disc, nicely fashioned, relatively uniform coloration throughout, missing one edge, which seems to be repolished. Broken and refashioned?
237	1661	80486	2407	1	0.684	0.617	0.365		Barrel disc	Double cone	Orange	Translucent orange stone, roughly worked, covered in white opaque clouds. Wedge-shaped, thins to 0.163 one side.
240	1686	80646	2514	7			0.329	0.584	Short barrel	Double cone	Red	Translucent red stone with numerous surface imperfections like nicks, making the stone somewhat irregular
240	1686	80646	2514	9			0.254	0.586	Barrel disc	Double cone	Red	Rranslucent deep red stone with orange-white clouds
246	1704	80838	2680	1			0.856	1.224	Short barrel	Two slight cones	Red	Red-orange semitransluce nt stone, well-shaped, without inclusions.
257	1723	80793	2639		0.67	0.597	0.258		Drilled pebble	Double cone	Orange	Translucent orange stone, roughly worked, covered in white opaque clouds

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

260	1728	80775	2625				1.077	1.144	Long barrel	Two slight cones, barely meeting	Red	Translucent banded white and red-yellow stone
314	2030	86101	2567				0.802	1.242	Truncated convex bicone	Double cone	Red-orange, white	Translucent red-orange carnelian covered with white clouding
339	3129	70099	3128	2			0.216	0.474	Cylinder disc	Double cone; 0.297, 0.291 to 0.157	Red	Red and white carnelian disc bead
343	3098	70060	3101		1.575	0.925	0.565		Pendant	Cone one side, 0.297 to 0.154; 0.225 other side	Red	Trapezoidal or axe-shaped bead-pendant. Translucent to nearly transparent yellow-white with substantial red streaks. Tapers to 0.492 proximally; thins to 0.298 distally. From cist. Very reminiscent of the beads from WFD 4, Tomb 1.
514	2345	87908	5083				0.487	0.331	Short barrel	Plain, 0.208	Red	Red carnelian, relatively opaque, with white clouds and one dark red patch
515	2235	87122	4589				0.62	0.907	Short barrel	Drilled both sides	Red	Translucent deep red carnelian with calcareous patch, polished over, on one side

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

518	2303	89085	4818		0.657	0.495	0.47		Triangular	Drilled both sides, slight cones. Meeting place clearly visible through translucent stone 2/3 from one end.	White, red-orange	Pierced length-wise, translucent red-orange carnelian with white patina, thick and opaque in places. Chipped in two spots
544	9381	72405	5312				0.648	0.831	short barrel	Plain	Red	Uniform red-orange color throughout, chipping around perforation
544	9381	72408	5315				0.421	0.535	Short barrel	Cone, percussion fracture	Orange	Red-orange carnelian, relatively uniform color throughout, with deep red streak.
544	9381	72408	5315				0.475	0.605	Short barrel	Cone, percussion fracture	Orange	Red-orange carnelian, relatively uniform color throughout, with white inclusion on surface.
544	9381	72408	5315				0.371	0.612	Short barrel	Cone	Orange	Rough surface one side due to white calcitic patch, other side slightly broken. Otherwise uniform translucent red-orange.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

544	9381	72408	5315				0.378	0.559	Short barrel	Cone, percussion fracture	Orange	Rough surface one side due to white calcitic patch, other side slightly broken—percussion fracture? Otherwise uniform translucent red-orange.
544	9381	72408	5315				0.567	0.675	Short barrel	Cone, percussion fracture	Orange	Relatively uniform red-orange color throughout
544	9381	72408	5315				0.769	0.91	Short barrel	Cone, percussion fracture	Red	Uniform orange-red color throughout, relatively large exit hole and percussion break.
544	9381	72408	5315				0.582	0.846	Short truncated convex bicone	Cone, percussion fracture	Red	Orange-red carnelian bead with some patches of translucent orange. Thins to 0.467 on side with percussion fracture.
544	9381	72408	5315				0.467	0.744	Short truncated convex bicone	Cone?	Red	Translucent orange-red uniform throughout. One side broken away.
544	9381	72408	5315				0.356	0.607	Short barrel	Cone, percussion fracture	Red	Translucent orange-red. Rough one side due to white inclusions. Larger percussion break on other side from drilling hole.

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

544	9381	72408	5315				0.365	0.594	Short barrel	Plain	Red	Translucent red-orange, but in places almost clear when held up to light. Fractures on both sides, apparently from drilling on both sides.
544	9381	72408	5315				0.472	0.59	Short barrel	Cone, percussion fracture	Orange	Translucent orange, chipped around perforations
544	9381	72408	5315				0.424	0.58	Short barrel	Cone?	Orange	Translucent orange, chipped around perforations
544	9381	73400	5309				0.764	0.892	Short barrel	Chamfered	Red	Uniform red-orange color throughout, chipping around perforation
544	9381	72408	5315				0.419	0.569	Short barrel	Plain, 0.211	Purple	Rough surface, opaque purple-black stone—but slightly translucent when held up to the light. Somewhat irregularly shaped, thins to 0.299 one side
701	2492	89093	6833				0.171	0.786	Short barrel	Cone, pressure flake opposite side	Red	Red-orange to almost colorless carnelian, with large flaw on exterior—patch of cacitic material

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

705	2466	88437	6807				0.694	1.022	Short barrel	Plain, 0.323, 0.300, dimpled narrower side—smoothing away flake scar? 0.580	Red-orange, white	Red orange with white surface cloud covering
710	2454	88427	6801	24			0.216	0.625	Cylinder disc	Double cone	Red, white	
710	2454	88383	6768	10	0.486	0.379	0.183		Drilled pebble	Double cone	Red	Deep red; uniform color throughout
710	2454	88383	6768	11	0.49	0.413	0.178		Drilled pebble	Double cone	Red	Deep red; uniform color throughout
710	2454	88390	6774	1	0.419	0.44	0.177		Drilled pebble	Double cone	Red	Translucent deep red
710	2454	88390	6774	2			0.202	0.412	Cylinder disc	Double cone	Red	One side translucent red carnelian, the other opaque orange
710	2454	88427	6801	25			0.223	0.554	Cylinder disc	Double cone	Red	Red and white carnelian disc
710	2454	88427	6801	26			0.259	0.671	Cylinder disc	Double cone	Red	Red and white carnelian disc
710	2454	88427	6801	27			0.338	0.511	Short barrel	Double cone	White, red	Well worked; relatively pale red-orange and white
710	2454	88427	6801	28			0.379	0.65	Short barrel	Cone	White, red	Red, mostly covered by white, carnelian
710	2454	88427	6801	29			0.282	0.645	Cylinder disc	Double cone	White, red	Red and white carnelian disc
710	2454	88427	6801	30			0.378	0.598	Short barrel	Drilled both sides	White, red	Roughly shaped red and white carnelian
710	2454	88427	6801	31			0.224	0.512	Barrel disc	Double cone	White, red	red and white carnelian disc
710	2454	88427	6801	32			0.376	0.67	Barrel disc	Double cone	White, red	Roughly shaped red and white carnelian

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

710	2454	88427	6801	33			0.225	0.513	Barrel disc	Double cone	White, red	Roughly shaped red and white carnelian
710	2454	88427	6801	34			0.225	0.615	Barrel disc	Double cone	White, red	Nicely shaped orangish white piece with some translucent red patches
710	2454	88427	6801	35			0.211	0.552	Cylinder disc	Double cone	Red, white	Nicely shaped red and white piece
710	2454	88427	6801	36			0.23	0.595	Cylinder disc	Double cone	White, red	Roughly shaped red and white carnelian
710	2454	88427	6801	37			0.262	0.614	Barrel disc	Double cone	White, red	Nicely shaped orangish white piece with some translucent red patches
710	2454	88427	6801	38			0.225	0.579	Barrel disc	Double cone	White, red	Opaque red and white swirls, nicely shaped
710	2454	88427	6801	39			0.212	0.518	Barrel disc	Double cone	Red, white	Nicely shaped orangish white piece with some translucent red patches
710	2454	88427	6801	40			0.165	0.536	Cylinder disc	Double cone	Red, white	Opaque white and translucent red swirls, nicely shaped
710	2454	88476	6844	6			0.251	0.519	Truncated bicone disc	Double cone	Red	Deep red translucent stone, nicely worked
710	2454	89094	6828	7			0.185	0.457	Pear-shaped disc	Cone	Red-orange	nicely worked very translucent red-orange
710	2454		6801	24			0.216	0.625	Cylinder disc	Double cone	Red and white	Red and white carnelian disc

Table 6.14: Carnelian beads from Wadi Fidan 40, continued.

714	2514	89133	6930				0.385	0.715	Short barrel	Double cone; 0.325, 0.262 to 0.161	Orange, white	Orange carnelian bead with white clouds, thins to 0.294 one side. From sieve
742	9655	89214	7231	4			0.089	0.403	Cylinder disc	Cone, pressure flake opposite side	Light orange	Opaque orange, with some red showing through in perforation cone

Table 6.15: Carnelian beads and pendants from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Subnumeral	Shape
22	467		2003	1	Short barrel
23	451		1926		Short barrel
23	464		1974	5	Barrel disc or short barrel
29	775		2559	6	Cylinder disc
29	775		2559	7	Cylinder disc
29	775		2559	8	Cylinder disc
29	775		2559	9	Cylinder disc
29	775		2559	10	Cylinder disc
29	775		2559	11	Cylinder disc
29	775		2559	12	Cylinder disc
29	775		2559	13	Cylinder disc
29	775		2559	14	Cylinder disc
29	775		2559	15	Cylinder disc
29	775		2559	16	Cylinder disc
29	775		2559	17	Cylinder disc
29	775		2559	18	Cylinder disc
29	775		2559	19	Cylinder disc
29	775		2559	20	Cylinder disc
29	775		2559	21	Cylinder disc

Table 6.15: Carnelian beads and pendants from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

29	775		2559	22	Cylinder disc
29	775		2559	23	Cylinder disc
29	775		2559	24	Cylinder disc
29	775		2559	25	Cylinder disc
29	775		2559	26	Cylinder disc
29	775		2559	27	Cylinder disc
29	775		2559	8	Cylinder disc
92	531		2136	9	
92	531		2136	10	
92	531		2136	11	
92	531		2136	12	
92	531		2136	13	
92	531		2136	14	
92	531		2136	15	
92	531		2136	16	
92	531		2136	17	
92	531		2136	18	
92	531		2136	19	
92	531		2136	20	
92	531		2136	21	
92	531		2136	22	
92	531		2136	23	
92	531		2136	24	
92	531		2136	25	
92	531		2136	26	
92	531		2136	27	
92	531		2136	28	
92	531		2136	29	
92	531		2136	30	
92	531		2136	31	
92	531		2136	32	
92	531		2136	33	
92	531		2136		
94	793		2682	2	Cylinder disc
101	814		2677	3	Cylinder disc
101	819		2705	3	Short barrel
101	819		2714	4	Short barrel
101	819		2714		Short barrel
544	9381	72400	5309	1	Short barrel

CITRINE

Citrine is a smoky yellow or yellow-brown quartz. The citrine in the cemetery tends to contain white clouds, sometimes making it opaque (Figs. 6.92, 6.93). This stone is unknown in Mesopotamian jewelry before the Seleucid period (Moorey 1994: 94), and also appears almost unknown in Egypt (Aston et al. 2000: 52-53). Thirty of these stones were recovered from nineteen graves at Wadi Fidan 40 (Tables 6.16, 6.17).



Figure 6.92: A citrine short barrel bead from Grave 202 (EDM 40005).

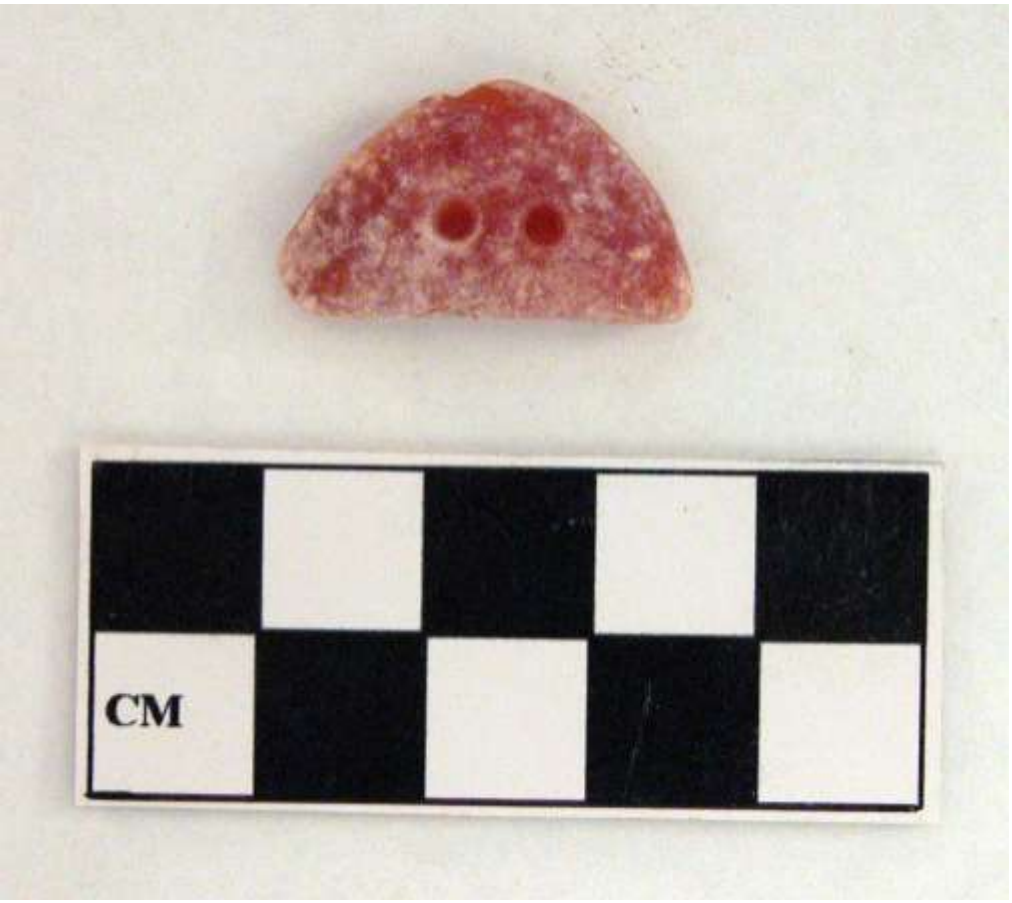


Figure 6.93: A semicircular citrine spacer bead with two parallel holes, found in Area C, unassociated with a grave (EDM 89058).

Table 6.16: Citrine beads and from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thick-ness	Diameter	Shape	Perforation	Description
0	2444	89058	6673		2.512	0.1474	0.516		Semicircular spacer	Two parallel. Both drilled both sides. One (on one's right when one is facing the chipped side) 0.2787, 0.331 to 0.126; the other 0.273, 0.317 to 0.145	Orange splotched with white semicircular or half-moon bead or pendant with two parallel holes. Holes are close together, approximately in ceter of piece. Centers of holes 0.543 cm apart; edges just 0.184 apart. Center of one hole is 1.072 from furthest edge; center of other is 0.982. Small chips on either side, one at furthest radius of half circle; other on edge of half-circle.
14	628		2393	62			0.464	0.597	Short barrel	Plain	Yellow crystalline stone, broken on perforation
46	638		2414		0.976	0.854	0.229		Barrel disc	Plain, 0.366	Irregularly shaped, roughly rounded pale yellow, largely translucent bead with many white clouds. Not polished.

Table 6.16: Citrine beads and from Wadi Fidan 40, continued.

46	638		2414	1			0.801	1.188	Truncated convex bicone	Cone, 0.375 to 0.318	Yellow-orange with many white clouds, slightly irregularly shaped. Face with narrower hole may have percussion flake scar from drilling
202	1502	40005	2018				0.865	0.986	Short barrel	Slight cone, pressure flake opposite side	Translucent yellow, largely covered by opaque white clouds.
203	1503	80511	2428	1			0.833	1.106	Short barrel	Cone	Yellow-brown almost opaque stone with many white surface clouds. Some geode-like air pockets also on surface. Otherwise well formed. Thins to 0.690
203	1744	80850	2689		0.814	0.781	0.355		Drilled pebble	Cone	Translucent yellow-orange, mostly covered in opaque white. Very roughly rounded.
208	1552	80167	2144				0.332	0.732	Barrel disc	Double cone	Yellow-orange translucent stone, mostly covered by white exterior clouds. Roughly worked

Table 6.16: Citrine beads and from Wadi Fidan 40, continued.

227	1646	80482	2403	4	1.337	1.201	0.613		Drilled pebble	Slight cone	Translucent yellow with white surface clouds, roughly worked, one side roughly convex
228	1634	80400	2336				0.361	0.907	Short barrel	Double cone	Translucent yellow-orange, mostly covered in opaque white. somewhat roughly rounded, with a small calcareous patch polished over on one edge.
240	1686	80074	2539	1			0.46	1.005	Short barrel	Cone	Yellow-orange translucent stone, almost completely covered by white exterior clouds. Moslty well rounded with one flattened side.
240	1686	80074	2539	2			0.556	1.112	Short barrel	Cone	Yellow-orange translucent stone, almost completely covered by white exterior clouds. Some nice bands of yellow through the white. Well shaped.

Table 6.16: Citrine beads and from Wadi Fidan 40, continued.

240	1686	80646	2514	2			0.399	0.923	Short barrel	Cone, flake scar	Translucent yellow-orange stone with opaque white streaks on the surface. One side badly scared from flaking.
253	1705	40035	2588		1.367	1.293	0.552		Drilled pebble	Double cone	Translucent yellow-orange, almost entirely covered by orange-white clouding, rhombus-shaped piece. One side with perforation flat, the other with a hump in the middle—has been ground down to expose a little of its translucent nature, which is still nevertheless mostly clouded over.
260	1732	80802	2647				0.908	1.463	Truncated double bicone	Cone, broken slight on narrower end	Brown to yellow stone, with dark brown swirls

Table 6.16: Citrine beads and from Wadi Fidan 40, continued.

311	2174	86775	2916		1.07	1.009	0.611		Truncated convex bicone	Double cone; 0.304, 0.311 to 0.155	Orange, nearly covered in white. Somewhat irregularly shaped—not truly round. Straight perforation. Found with second burial.
363	9239	70355	3234	3			0.884	1.463	Oblate	Slight cone one side; 0.461 to 0.263; 0.315 other side	Highly polished; yellow and white swirls—one side mostly white, the other mostly yellow
519	2301	87456	4802				0.8	1.259	Truncated convex bicone	Double cone; 0.476, 0.379 to 0.159.	Yellow-orange, translucent, with white splotches—one face mostly covered with these splotches. Thins to 0.683 one side.
513	2276	87263	4686				0.862	0.691	Short barrel	Drilled both sides	Yellow-orange with white stripes
513	2276	87323	4725						Short barrel	Drilled both sides	Yellow-orange with white stripes
523 B	2342	87758	4993	2			0.653	1.298	Short barrel	Plain	Concave one side, yellowish stone bead with white cloudy cover.
523 B	2342	87758	4993	3			0.746	1.278	Short barrel	Plain	Concave one side around perforation, almost a large cone. Yellowish stone bead with white cloudy cover and brown lines. Slight ridge down its middle almost makes it a bicone.
736	2407	88033	6517				0.544	1.072	Short barrel	Plain, medium large, 0.441 both sides	Translucent yellow piece

Table 6.17: Citrine beads and pendants from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Subnumeral	Shape	Description
31	801		2671		Short barrel	Orange
31	818		2731	1	Short barrel	Orange
31	818		2731	2	Short barrel	White
94	809		2653	3	Short truncated bicone	Orange
94	809		2653	109	Long barrel	Orage
102	565		3676		Truncated convex bicone	Orange
253	1705	40036	2558		Rough short cylinder	Orange

CUPRIC MINERALS

For the purpose of this study, I use the term "cupric" to refer to a range of copper-rich minerals, including azurite, malachite, and turquoise. Azurite and malachite are both to be found in the Feinan region. Turquoise has not yet been reported there, but it is found in Timna region. The green turquoise known as Eilat stone is particularly popular among modern jewelers. It is possible that blue or green turquoise is found in the Faynan region.

Despite the proximity of the large copper mines, rather few cupric materials were found at Wadi Fidan 40. This is hardly surprising due to the softness and dullness of these minerals in comparison to others available; they lack luster and are easily damaged. For this reason, in most areas, malachite particularly is not considered a gem to be worn (Cipriani and Borelli 1986: 266). With the exception of turquoise, in Egypt the most common use of these stones was ground up to use as pigment (Aston et al. 2000: 43-44).

The majority of the cupric beads and pendants from Wadi Fidan 40 were drilled pebbles or roughly worked beads (Fig. 6.95). Two interesting exceptions are spacer beads, one with two perforations found unassociated with a grave (Fig. 6.94; EDM 88376) and one with three perforations found in Grave 710 (Fig. 6.95; EDM 88383).



Figure 6.94: A cupric spacer bead with two perforations, unassociated with a grave (EDM 88376).

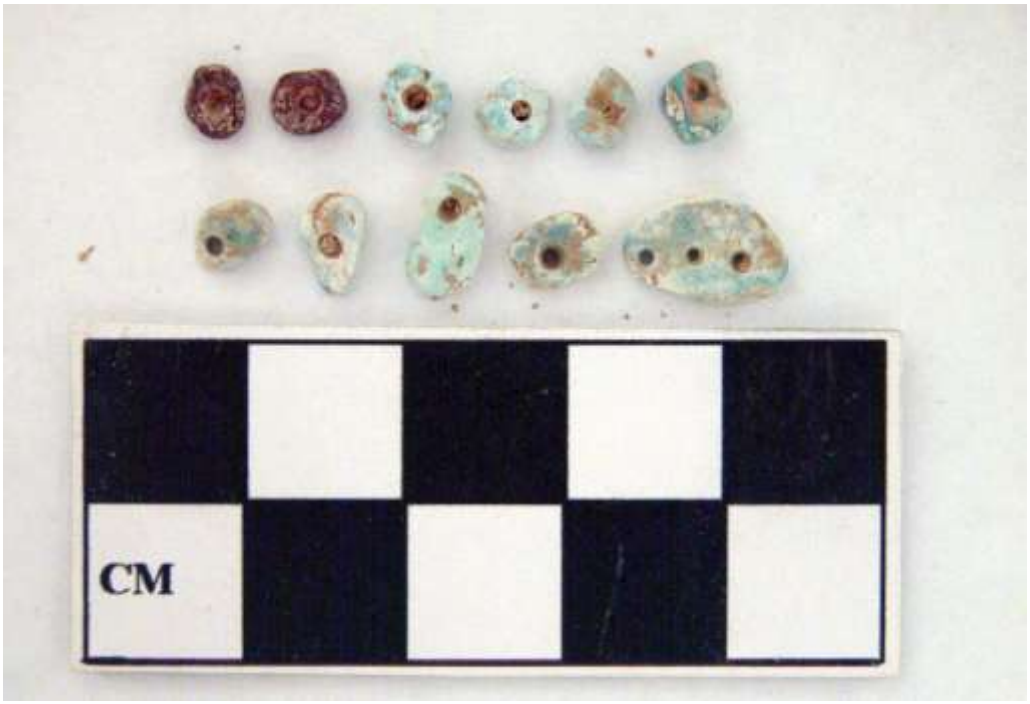


Figure 6.95: Two carnelian drilled pebbles (upper left) and nine cupric beads, including a spacer bead, found in Grave 710 (EDM 88383).

The most interesting of these beads are the eleven spherical beads, all from the fill and cist of looted Grave 542, which seem to have been deliberately crafted to imitate lapis lazuli (Fig. 6.96-6.98). No other beads like these were found in the cemetery. They bear a striking visual resemblance to the lapis beads in the contemporary necklace of Psusennes I, from his tomb at Tanis (Fig. 6.99; Montet 1951: 138-139). Lapis was highly prized in Egypt and Mesopotamia, but was not available locally. The stone was imported from the Badakhshan region of northeastern Afghanistan (Aston et al. 2000: 39). However, a hardness test on a broken surface of one of the beads from Grave 542 showed the stone showed it to be softer than lapis (about 4.0 on the Moh's scale, contrasted to the 5.0-5.5 of lapis). XRF testing showed the stone to be rich in copper. These therefore appear to be local imitations in cheaper stone of highly valued exotic materials. These eleven are the only beads of their size and shape made in the cemetery.



Figure 6.96: Eight of the eleven beads from Grave 542 apparently crafted in imitation of lapis lazuli (EDM 89197).



Figure 6.97: Two of the beads from Grave 542 (EDM 87998).



Figure 6.98: Two of the beads from Grave 542 (EDM 87998), showing perforations.



Figure 6.99: The necklace of Psusennes I, from his tomb at Tanis (Andrews 1990: 47).

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thick-ness	Diameter	Shape	Perforation	Description
0	2435	88236	6658		0.683	0.615	0.254		Drilled pebble	Drilled both sides	Blue with white and coppery patches
0	2435	88236	6658		0.604	0.505	0.21		Drilled pebble	Plain	Green with black swirls. Broken width-wise
0	2457	88376	6762		2.416	1.243	0.426		Lenticular, flat, pierced perpendicularly	Two parallel. One plain, 0.322 diameter. The other cone, 0.303 by 0.137 cm.	Friable green malachite piece, mostly flat with one slightly convex face, and with two parallel perforations. Possible spacer bead, or, as one perforation is much narrower than the other, one failed perforation. Green with white streaks. Perforations are in either narrow end of lenticular profile; center of coned one is 0.407 from edge, center of plain one is 0.411 from edge; they are 1.675 apart. Piece is crumbling at these lentiuclar edges on convex face.

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

10	9305	72058	5151		0.704	0.687	0.368		Irregular short cylinder	Drilled both sides (2 slight cones remain). Perforation diameter 0.273 one side, 0.248 the other, tapering to 0.172	Pale green with dark green and black patches. Has texture of green limestone. Slightly powdery; 3 Moh's hardness tested. Battered about edges.
10	9305	72069	5153		0.759	0.69	0.316		Irregular short cylinder	Drilled both sides (2 slight cones remain). Perforation diameter 0.279 one side, 0.277 the other tapering to 0.150	Pale green with whitish patches and dark green to black band around diameter. Irregularly worked and battered
11	625		2315				0.284	0.84	Cylinder disc	Plain, 0.340	Pale green, slightly wedge-shaped, thinning to 0.150, facet on one side—broken?
11	625		2341	3			0.37	0.744	Short barrel?	Plain	Small fragment of a green-blue bead; thickness is as survives
12	604			1			0.552	1.394	Short barrel	Plain; 0.397	Green with white swirls; some chips in sides
12	609		2244	8			0.699	1.273	Short cylinder	Plain	Somewhat irregularly shaped, much of one face broken away, dark green
12	609		2244	9	0.901	0.754	0.46		Lenticular, flat	Plain	Drilled length-wise, perforation slightly off center, stone is crumbly, poor quality
12	609		2244	10	0.828	0.682	0.366				two lumps of what was probably once a bead or part of the short barrel malachite bead; dimensions of larger

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

14	628		2374	10			0.268	0.834	Cylinder disc	Plain	Green one side, white the other, flatter on white side
18	605		2211	2			0.407	0.759	Short barrel	Slight cone	Green covered in white, some facets on rounded sides, some chipping.
38	627		3336				0.496	1.194	Short barrel	Plain	Light green with dark green swirls, one side convex, the other side flat
38 C	642		3360	1			0.615	1.161	Short barrel	Drilled both sides, meeting place slightly off	Green
38 C	642		3370	1			0.446	0.891	Short barrel	Plain, 0.287	Flat one side, rounded the other, thins to 0.311 one side, battered on edges, light green with black line running through it
38 C	642		3370	2			0.89	0.759	Cylinder	Plain as survives, 0.312	Broken, probably the very edge of what was once part of long cylinder or a long bicone bead, light green with blue swirls
38 C	642		3389	1	1.446	0.871	0.531		Ovoid	Drilled both sides, meets cleanly. Cones? 0.291 each side	Relatively flat. light green with very dark green clouds, pierced length-wise
38 C	642		3389	2			0.371	1.106	Short barrel	Plain, 0.217	Light green with dark green patches, well-rounded.
38 C	642		3389	3	1.098	1.033	0.541		Short cylinder	Plain, 0.217	Light green with many dark green swirls, irregularly shaped, some flattened sides

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

38 C	642		3389	4	1.287	1.129	0.597		Short cylinder	Slight cone, 0.479 to 0.345	Light green with many blue and black patches, irregularly shaped, some flattened sides, very shiny in places
38 C	642		3389	5	1.2	1.059	0.556		Short cylinder	Plain, 0.387	Light green with dark green swirls, wedge shaped, thins to 0.309, one side chipped.
38 D	635		2389		0.97	1.019	0.642		Drilled pebble		From north secondary burial, green with brown patina. Broken through perforation thin side, length as survives.
46	638		2425		1.038	0.897	0.373		Barrel disc	Teardrop shaped, with cone one side in bottom of teardrop. 0.371	Irregular shape, roughly rounded, possibly broken.
82	2009	86152	2096		1.034	0.985	0.793		Drilled pebble	Double cone	Irregular drilled pebble, green but with one dark blue band
91	3087	86893	2983				0.279	0.625	Short truncated bicone	Plain, 0.179 diameter	Pale grey-green with some white speckles and slight bluish tinge around perforation, chipped on one edge.
91	3087	89165	3016	1			0.29	0.61	Short truncated bicone	Plain, 0.215 cm diameter	Grey-green bead with some blackish or dark green and some white speckles, perforation slightly off-center, from sieve, associated with primary burial

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

240	1686	80646	2514	19	0.648	0.493	0.544		Drilled pebble	Plain	Blue-white lumpy drilled pebble, median.diameter 0.547
240	1686	80646	2514	20	0.635	0.391	0.513		Drilled pebble	Plain	Blue-white lumpy pebble, median.diameter 0.508
240	1686	80646	2514	21	0.737	0.465	0.44		Drilled pebble	Plain	Blue-white lumpy pebble, median.diameter 0.596
240	1686	80646	2514	22	0.809	0.697	0.405		Drilled pebble	Plain	Blue-white lumpy pebble, drilled approximately in middle
240	1686	80657	2525		0.882	0.673	0.723		Drilled pebble	Plain	White to blusih white lumpy pebble with many brown stripe inclusions
242	1691	80670	2536		0.722	0.416	0.357		Drilled pebble	Double cone	Greenish white irregular pebble with many brown inclusion
247	1699	80710	2568		0.42	0.408	0.306		Drilled pebble	Plain, medium large	Squarish green white stone
247	1699	80720	2576		0.638	0.588	0.316		Drilled pebble	Plain, medium large	Roughly rounded greenish white pebble
252	1702	80734	2590	1	0.77	0.593	0.556		Drilled pebble	Double cone	Lumpy drilled pebble, failed perforation next to one of the successful ones, major radius 0.580
305	2024	89034	2582		0.761	0.386	0.336		?	Plain?	Only edge of perforation remains, possibly a drilled pebble
336	3079	89160	8541		1.037	0.768	0.541		Drilled pebble?	Double cone, to 0.147	Pale green with dark green patina in places, irregular ellipse, thins to 0.214 at perforation, battered on edges

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

91	3087	89165	3016	2			0.232	0.516	Short barrel disc bead	Plain, 0.192 diameter	Grey-green with some white and dark green speckles, from sieve, associated with primary burial
229	1594	80275	2146	1			0.435	0.822	Short cylinder	Plain, medium large	Green-grey banded stone
229	1594	80275	2146	2			0.187	0.891	Cylinder disc	Plain, medium large	Green-grey stone
240	1686	80074	2539	3	0.743	0.705	0.526		Drilled pebble	Double cone	Greenish-white rounded pebble with many brown inclusion
240	1686	80646	2514	16	0.707	0.626	0.145		Drilled pebble	Cone	Flat blue pierced stone
240	1686	80646	2514	17	0.823	0.699	0.504		Drilled pebble	Double cone	Blue-white lumpy drilled pebble, failed perforation on one edge. Major radius. 0.543
240	1686	80646	2514	18	0.858	0.646	0.479		Drilled pebble	Plain	Blue-white lumpy drilled pebble, median.diameter 0.704
500	2221	87220	4649				0.309	0.372	Barrel disc	Plain, 0.187	Somewhat wedge-shaped, thins to 0.115, slightly elliptical, with piercing off-center, small chip off side
509	2234	87124	4590	4			0.531	1.539	Cylinder disc	Plain, medium large	Light green with dark green splotches, broken through perforation, much of one face eroded away
518	2302	87532	4842				0.272	0.702	Short cylinder	Plain, 0.269	Green
518	2302	87712	4964				0.339	0.722	Short barrel	Plain	Green
518	2302	89136	4917	1			0.367	0.798	Short cylinder	Plain	Blue-green, with darker green stripes
523	2315	87629	4906				0.338	0.91	Short barrel	Chamfered?	Broken through perforation

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

525	2332	87716	4968				0.962	1.811	Short barrel	Drilled both sides	Light green with many dark green patches
526	2339	87762	4995		0.803	0.753	0.463		Short cylinder	Double cone; 0.362 diameter one side; 0.340 the other; 0.216 at meeting	Green with some white streaks; very irregularly shaped, with knots and lumps along exterior, tapers to 0.382 one side, small section broken off of edge
530	2370	72183	5222		0.88	0.518	0.544		Cylinder ?	Plain? 0.214 surviving	Dark green with white, black, and grey swirls, fragment—only one side and one end survive
530	2370	72185	5224				0.386	0.7	Short barrel	Drilled both sides, 0.337 one side 0.359 the other, tapers to 0.252 in middle	Grey-green well-formed bead, perforation meets cleanly in middle with only slight cones remaining, chipped slightly
530	2370	72200	5229		0.84	0.424	0.468		Short cylinder	? 0.296 diameter survives	Dark green with white patches, small fragment
530	2370	72201	5230	1			0.523	0.923	Short barrel	Drilled both sides; 0.355, 0.342	Dark green with white and black swirls, well formed, tapers to 0.430 thick on one side.
530	2370	72201	5230	2	0.746	0.44	0.415		Short cylinder	Plain; 0.261 surviving	Dark green with white swirls bead fragment
530	2370	72226	5246	2	0.644	0.447	0.236				Very small fragment of dark green, probably short barrel, bead
530	2370	87941	5091				0.406	0.835	Short barrel	Plain; 0.258 surviving diameter	Broken dark green bead, well formed, with dark band running through it
531	2277	87412	4775	1			0.237	0.798	Cylinder disc	Plain, medium large	Green

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

531	2277	87412	4775	2			0.248	0.766	Cylinder disc	Plain, medium large	Green
543	9354	72458	5318				0.389	0.933	Short cylinder	Plain, 0.337	Grey-green with white swirls, relatively nicely formed bead (some places slightly flattened instead of truly round)
544	9381	72408	5315				2.167	0.564	Long cylinder	Plain, 0.167	Pale blue-green to blackish malachite long barrel bead with collared ends, collars somewhat damaged
706	2480	88533	6881				0.228	0.482	Barrel disc	Double cone, 0.194, 0.181 to 0.102	Green with brown streak inclusions
710	2454	88388	6772		0.593	0.465	0.391		Drilled pebble	Plain	Small blue and white pebble, turquoise-looking. Thins to .236, perforation roughly in center
710	2454	88476	6844	7	0.985	0.665	0.154		Spacer	Two parallel, single cones. Each .100 diameter	Blue and white roughly triangluar stone, with two parallel holes drilled close together, roughly in the middle, lengthwise, one being 0.361 from the triangle's point, the other being 0.272 from the triangle's base; centerpoints are 0.240 from each other.
710	2454	88476	6844	8	0.501	0.471	0.183		Drilled pebble	Double cone	Blue turquoise-like
710	2454	88476	6844	9	0.49	0.548	0.348		Drilled pebble	Plain, medium large	Thins to .145, wedge-shaped, blue, turquoise-like

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

710	2454	88476	6844	10	0.487	0.338	0.21		Drilled pebble	Plain, medium large	Thins to 0.120, shaped like a pot handle, blue, turquoise-like
710	2454	88383	6768	1	0.439	0.43	0.277		Drilled pebble	Double cone	Tiny blue, turqoise-looking irregular drilled stone.
710	2454	88383	6768	2	0.578	0.477	0.257		Drilled pebble	Double cone	Tiny blue, turqoise-looking irregular drilled stone.
710	2454	88383	6768	6	0.635	0.414	0.32		Drilled pebble	Double cone	Irregular teardrop-shaped blue turquoise-like pebble
710	2454	88383	6768	9	0.484	0.378	0.243		Drilled pebble	Cone	Blue, turquoise-like, hole is perpendicular to what appears to be the section of a hole drilled through the rock (now width-wise) which broke the stone
710	2454	88390	6774	7	0.54	0.46	0.332		Drilled pebble	Plain	Opaque blue and white
710	2454	88390	6774	8	0.447	0.326	0.307		Drilled pebble	Double cone	Opaque blue and white
710	2454	88390	6774	9	0.381	0.448	0.359		Drilled pebble	Plain	Opaque blue and white
710	2454	88390	6774	10			0.254	0.513	Drilled pebble	Double cone	Blue, turquoise-like
710	2454	88390	6774	11	0.581	0.517	0.305		Drilled pebble	Plain	Blue, turquoise-like
710	2454	88390	6774	12	0.53	0.39	0.225		Drilled pebble	Cone	Blue, turquoise-like
710	2454	88390	6774	13	0.448	0.417	0.231		Drilled pebble	Plain	Blue, turquoise-like
710	2454	88390	6774	14			0.187	0.45	Cylinder disc	Plain, medium large	Blue, turquoise-like
710	2454	88390	6774	15	0.639	0.409	0.442		Drilled pebble	Double cone	Blue, turquoise-like
710	2454	88427	6801	18	0.815	0.629	0.294		Drilled pebble	Double cone	Blue, turquoise-like
710	2454	88427	6801	19	0.862	0.64	0.234		Drilled pebble	Double cone	Blue, turquoise-like
710	2454	88427	6801	20	0.5	0.46	0.249		Drilled pebble	Plain	Blue, turquoise-like
710	2454	88427	6801	21	0.495	0.482	0.325		Drilled pebble	Cone	Blue, turquoise-like
710	2454	88427	6801	22	0.727	0.456	0.322		Drilled pebble	Cone	Blue, turquoise-like
710	2454	88427	6801	23	0.427	0.289	0.159		Drilled pebble	Double cone	Blue, turquoise-like
710	2454	88459	6826	1	0.513	0.549	0.301		Drilled pebble	Plain	Blue, turquoise-like

Table 6.18: Cupric mineral beads and pendants from Wadi Fidan 40, continued.

710	2454	88459	6826	2	0.459	0.349	0.494		Drilled pebble	Double cone	Blue, turquoise-like
710	2454	89094	6828	11	0.572	0.417	0.327		Drilled pebble	Plain, medium large	Blue, turquoise-like
710	2454	89094	6828	12	0.432	0.339	0.322		Drilled pebble	Double cone	Blue, turquoise-like
710	2454	89094	6828	13	0.365	0.357	0.224		Drilled pebble	Double cone	Blue, turquoise-like
717	2565	89164	7064		0.843	0.724	0.42		Short cylinder?	Drilled both sides	Irregularly shaped greenish white stone, thins to 0.305; from sieve
731	2584	74046	7183				0.408	1.158	Cylinder disc	Plain, medium large	Light green, somewhat soapy stone

Table 6.19: Cupric mineral beads and pendants from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	Basket	Subnumeral	Shape	Color	Description
22	467	1989b	1	Drilled pebble	Green	
24	454	1916		Short barrel	Green	
24	454	1924	1	Short barrel	Green	
24	454	1924	2	Short barrel	Green	Half bead, may be other half of 1980
24	454	1980		Short barrel	Green	Half bead, may be other half of 1924-2
25	550	2617		Short barrel	Green	
29	775	2559	2	Short barrel	Green	
31	818	2731	3	Short barrel	White	
31	818	2731	4	Drilled pebble	Green	
97	549	3645		?Short barrel	Green	

DOLERITE

Dolerite is a dark brown, grey, or black metavolcanic stone. It is common in the Faynan region, and large cobbles and small boulders were used in the surface architecture and to create anthropomorphic stones. Two beads of the substance was collected, both in

Grave 551 (Fig. 6.100). Only one was available for examination in 2007 (Tables 6.20, 6.21).

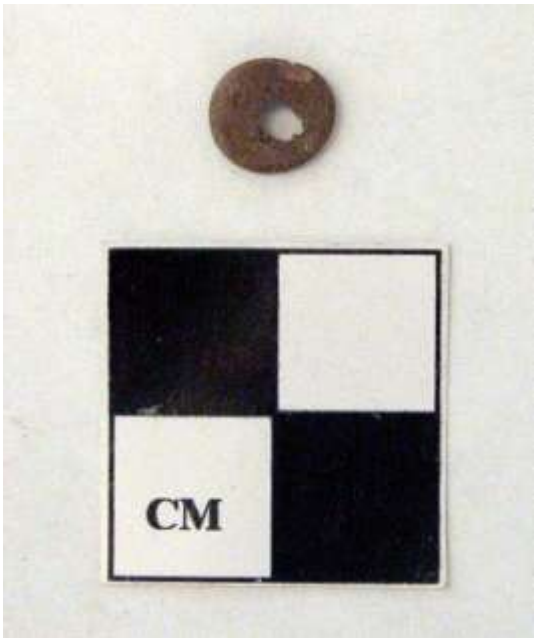


Figure 6.100: Dolerite bead from Grave 551 (EDM 89213).

Table 6.20: Dolerite bead from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Length	Width	Thick-ness	Shape	Perforation	Description
551	9365	89213	5299	0.758	0.736	0.238	Cylinder disc	Plain, teardrop shaped, at angle to perforated surface—likely a natural perforation 0.415 x 0.299 one side, 0.325 x 0.234 the other.	Dark brown perforated pebble, tapers to 0.125 thick one side. From sieve

Table 6.21: Dolerite bead from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Shape	Description
551	9365	89200	5299	Cylinder disc	Dark brown perforated pebble

FLINT

Flint is a silicate, chemically similar to carnelian and other silicates discussed here. Grey silicates were referred to as flint for the purposes of this study. The stone is commonly found in sedimentary rocks in the Faynan region, though of course a local source for these beads cannot be assumed. Roughly shaped pendants were made in Egypt during the Predynastic and Early Dynastic periods, but the stone was not used in jewelry after that date (Andres 1991: 42). They vary from light to dark grey, and from translucent to near-opaque (Fig. 6.101). All of these beads are tiny discs and short beads, generally less than half a centimeter in diameter, but finely shaped. Flint was not used to make pendants or other attention-grabbing pieces, but in one case (Grave 263) dozens of these disc beads were found in a single grave. Just 20 graves at Wadi Fidan 40 included flint beads (Tables 6.22, 6.23).

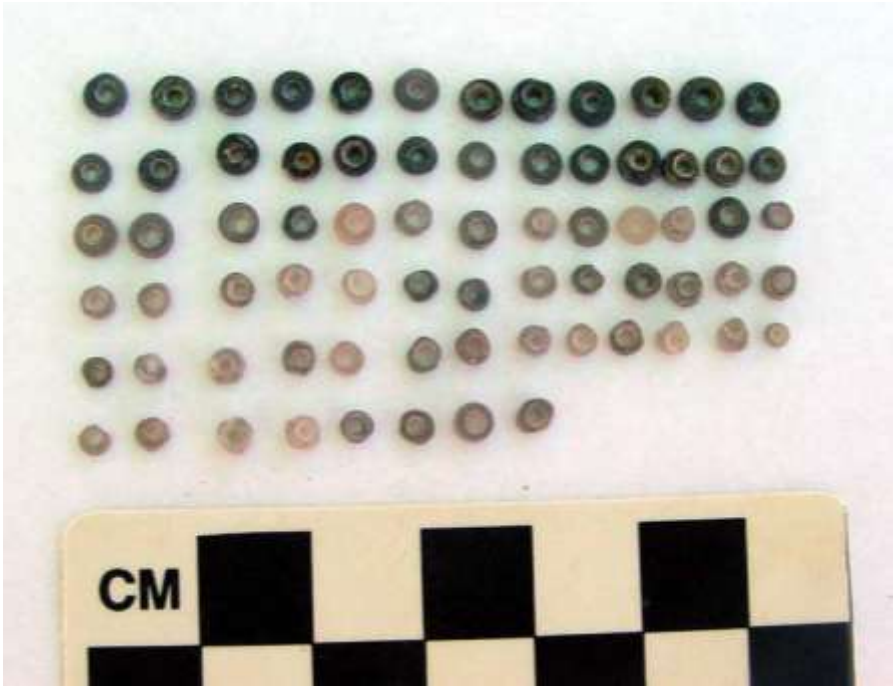


Figure 6.101: A selection of disc and short beads from Grave 263, showing the spectrum of colors and shapes of the flint beads at Wadi Fidan 40 (EDM 80813).

Table 6.22: Flint beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thick-ness	Diameter	Shape	Perforation	Description
0	614		2257	3			0.257	0.484	Cylinder disc	Two slight cones	Surface; somewhat irregularly round, translucent light grey stone
0	2444	89057	8506	1			0.132	0.613	Cylinder disc	Double cone	Translucent dark grey, finely worked
0	2444	89057	8506	2			0.1	0.301	Cylinder disc	Double cone	Translucent light grey, finely worked
0	2444	89071	6706	2			0.183	0.606	Barrel disc	Double cone	Tranlsucent light grey
12	604		2238	4			0.128	0.382	Barrel disc	Double cone, to 0.143	Translucent, very clear light grey stone.
12	623		2399	137			0.116	0.339	Barrel disc	Double cone; narrows to 0.127	Regularly shaped; resembles aventurine example
13	607		2228				0.452	0.685	Short barrel	Plain, 0.369	Dark blue-grey stone bead with white speckles, one side laregly white, chipping to one side
14	601		2229	2			0.1	0.321	Cylinder disc	Double cone	Translucent pale grey
39	652		2455	1			0.124	0.285	Cylinder disc	Double cone	Light translucent grey
43	648		2467				0.209	0.775	Barrel disc	Plain, 0.211	Same blue-grey stone as Basket 3402? Generally regularly shaped.
43	691		3402				0.238	0.533	Barrel disc	Double cone, 0.233, 0.233 to 0.136	Opaque dark blue-grey stone, irregularly shaped—numerous facets
200	1538	40030	2742	1			0.13	0.362	Barrel disc	Double cone	Tag says 7; one lost? translucent grey stone.
200	1538	40030	2742	2			0.146	0.369	Barrel disc	Double cone	Translucent grey stone
200	1538	40030	2742	3			0.142	0.39	Barrel disc	Double cone	Translucent grey stone
200	1538	40030	2742	4			0.135	0.326	Barrel disc	Double cone	Translucent grey stone

Table 6.22: Flint beads from Wadi Fidan 40, continued.

200	1538	40030	2742	5			0.137	0.295	Barrel disc	Double cone	Translucent grey stone
200	1538	40030	2742	6			0.135	0.295	Barrel disc	Double cone	Translucent grey stone
242	1691	80670	2536	1			0.142	0.369	Barrel disc	Double cone	Light translucent grey
242	1691	80670	2536	2			0.134	0.343	Barrel disc	Double cone	Light translucent grey
242	1691	80670	2536	3			0.124	0.344	Barrel disc	Double cone	Light translucent grey
242	1691	80670	2536	4			0.137	0.346	Barrel disc	Double cone	Light translucent grey
242	1691	80670	2536	5			0.154	0.355	Barrel disc	Double cone	Light translucent grey
242	1691	80670	2536	6			0.155	0.363	Barrel disc	Double cone	Light translucent grey
242	1691	80670	2536	7			0.14	0.349	Barrel disc	Double cone	Light translucent grey
247	1699	80719	2575				0.153	0.575	Barrel disc	Very slight double cone	Very light translucent grey
252	1702	80734	2590	2			0.118	0.333	Cylinder disc	Double cone	Light translucent grey
252	1741	40040	2660	3			0.169	0.389	Cylinder disc	Double cone	Somewhat irregularly shaped
263	1743	80813	2657	1			0.173	0.424	Short barrel	Double cone; 0.200, 0.200 to 0.143	Almost opaque dark grey
263	1743	80813	2657	2			0.132	0.456	Short barrel	Double cone, 0.209, 0.199 to 0.162	Almost opaque dark grey
263	1743	80813	2657	3			0.131	0.426	Short barrel	Double cone, 0.204, 0.189 to 0.163	Almost opaque dark grey
263	1743	80813	2657	4			0.153	0.268	Short barrel	Double cone, 0.207, 0.227 to 0.189	Translucent dark grey
263	1743	80813	2657	5			0.127	0.399	Short barrel	Double cone, 0.219, 0.228 to 0.161	Translucent dark grey
263	1743	80813	2657	6			0.126	0.434	Short barrel	Double cone, 0.202, 0.208 to 0.110	Translucent dark grey

Table 6.22: Flint beads from Wadi Fidan 40, continued.

263	1743	80813	2657	7			0.137	0.36	Short barrel	Double cone, 0.191, 0.217 to 0.164	Opaque dark grey
263	1743	80813	2657	8			0.184	0.33	Short barrel	Double cone, 0.225, 0.162 to 0.156	Light translucent grey
263	1743	80813	2657	9			0.155	0.329	Short barrel	Double cone, 0.195, 0.150 to 0.122	Light translucent grey
263	1743	80813	2657	10			0.133	0.326	Short barrel	Double cone, 0.169, 0.169 to 0.114	Irregularly rounded; one side almost flat. Light translucent grey.
263	1743	80813	2657	11			0.148	0.323	Short barrel	Double cone, 0.166, 0.127 to 0.121	Part broken away; translucent light grey
263	1743	80813	2657	12			0.209	0.401	Short barrel	Double cone; 0.233, 0.257 to 0.135	Opaque dark grey
263	1743	80813	2657	13			0.162	0.339	Short barrel	Double cone, 0.166, 0.159 to 0.119, drilled at an angle	Light translucent grey
263	1743	80813	2657	14			0.187	0.285	Short barrel	Double cone, 0.178, 0.159 to 0.146	One side thinner than the other; light translucent grey
263	1743	80813	2657	15			0.169	0.445	Short barrel	Cone, 0.226, half cone 0.207, to 0.143	Opaque dark grey
263	1743	80813	2657	16			0.131	0.321	Short barrel	Double cone, 0.187, 0.180 to 0.118	Translucent light grey
263	1743	80813	2657	17			0.118	0.379	Short barrel	Double cone, 0.157, 0.161 to 0.117	Opaque dark grey
263	1743	80813	2657	18			0.111	0.377	Short barrel	Double cone, 0.170, 0.176 to 0.130	Very light, almost clear translucent grey

Table 6.22: Flint beads from Wadi Fidan 40, continued.

263	1743	80813	2657	19			0.146	0.33	Short barrel	Double cone, 0.192, 0.179 to 0.133	Dark translucent grey
263	1743	80813	2657	20			0.144	0.402	Short barrel	Double cone, 0.190, 0.191 to 0.146	Almost opaque dark grey
263	1743	80813	2657	21			0.193	0.366	Short barrel	Double cone, 0.193, 0.198 to 0.166	Light translucent grey
263	1743	80813	2657	22			0.119	0.387	Short barrel	Double cone, 0.172, 0.161 to 0.133	One side flat, light translucent grey
263	1743	80813	2657	23			0.1	0.38	Short barrel	Cone, 0.199 to 0.123	Dark translucent grey
263	1743	80813	2657	24			0.126	0.335	Short barrel	Double cone, 0.194, 0.194 to 0.155	One side flat; dark translucent grey
263	1743	80813	2657	25			0.116	0.366	Short barrel	Cone, 0.179 to 0.145	Dark translucent grey
263	1743	80813	2657	26			0.168	0.389	Short barrel	Double cone, 0.247, 0.201 to 0.154	Dark opaque grey
263	1743	80813	2657	27	0.381	0.308	0.146		Oval	Double cone, 0.168, 0.201 to 0.138	Oval, pierced roughly in the center
263	1743	80813	2657	28			0.193	0.388	Short barrel	Double cone, 0.216, 0.218 to 0.129	Opaque black
263	1743	80813	2657	29			0.171	0.427	Short barrel	Double cone, 0.207, 0.174 to 0.170	Dark translucent grey
263	1743	80813	2657	30			0.142	0.418	Short barrel	Double cone, 0.235, 0.181 to 0.140	Dark opaque grey
263	1743	80813	2657	31	0.3	0.287	0.119	0.3	Short barrel	Double cone, 0.137, 0.130 to 0.115	Translucent dark grey

Table 6.22: Flint beads from Wadi Fidan 40, continued.

263	1743	80813	2657	32			0.176	0.348	Short barrel	Double cone, 0.179, 0.181 to 0.119	Slightly irregularly shaped, one spot cracked but not broken through, translucent grey stone
263	1743	80813	2657	33			0.156	0.31	Short barrel	Double cone, 0.144, 0.161 to 0.111	Translucent dark grey
263	1743	80813	2657	34	0.316	0.291	0.121		Short barrel	Double cone, 0.143, 0.154 to 0.124	Semitransluce nt dark grey, slightly irregularly shaped
263	1743	80813	2657	35			0.189	0.395	Short barrel	Double cone, 0.192, 0.203 to 0.126	Very light, almost clear translucent grey
263	1743	80813	2657	36			0.194	0.33	Short barrel	Double cone, 0.206, 0.185 to 0.115	Light translucent grey
263	1743	80813	2657	37			0.171	0.34	Short barrel	Double cone, 0.190, 0.194 to 0.145	Dark translucent grey
263	1743	80813	2657	38			0.113	0.248	Short barrel	Double cone, 0.146, 0.142 to 0.104	Light translucent grey
263	1743	80813	2657	39			0.203	0.454	Short barrel	two half-cones, 0.227, 0.231 to 0.194	Dark opaque grey
263	1743	80813	2657	40			0.172	0.352	Short barrel	Double cone, 0.188, 0.164 to 0.120	Light translucent grey
263	1743	80813	2657	41			0.131	0.405	Short barrel	Double cone, 0.178, 0.185 to 0.156	Dark translucent grey
263	1743	80813	2657	42			0.104	0.339	Short barrel	Double cone, 0.182, 0.171 to 0.123	Somewhat irregularly shaped—one small facet, light translucent grey
263	1743	80813	2657	43			0.154	0.435	Short barrel	Double cone, 0.215, 0.205 to 0.147	Dark opaque grey

Table 6.22: Flint beads from Wadi Fidan 40, continued.

263	1743	80813	2657	44			0.143	0.403	Short barrel	Double cone, 0.182, 0.193 to 0.139	Dark opaque grey
263	1743	80813	2657	45	0.312	0.293	0.181		Short barrel	Double cone, 0.137, 0.144 to 0.121	Somewhat irregularly rounded light translucent grey
263	1743	80813	2657	46			0.131	0.378	Short barrel	Double cone, 0.216, 0.221 to 0.174	Dark opaque grey
263	1743	80813	2657	47			0.139	0.32	Short barrel	Double cone, 0.172, 0.140 to 0.132	One flat spot, dark translucent grey
263	1743	80813	2657	48			0.134	0.309	Short barrel	Double cone, 0.126, 0.151 to 0.106	Light translucent grey
263	1743	80813	2657	49	0.278	0.259	0.085		Short barrel	Double cone, 0.141, 0.141 to 0.119	One side flat, light translucent grey
263	1743	80813	2657	50	0.319	0.296	0.177		Short barrel	Double cone, 0.187, 0.190 to 0.128	Not quite rounded—two flat sides, light translucent grey
263	1743	80813	2657	51	0.302	0.294	0.144		Short barrel	Double cone, 0.159, 0.227 to 0.130	Dark translucent grey
263	1743	80813	2657	52			0.153	0.448	Short barrel	Double cone, 0.220, 0.224 to 0.158	Opaque dark grey
263	1743	80813	2657	53	0.341	0.3	0.164		Short barrel	Double cone, 0.213, 0.216 to 0.127	Perforation is unusally long, dark translucent grey
263	1743	80813	2657	54			0.156	0.414	Short barrel	Double cone, 0.234, 0.253 to 0.144	Dark opaque grey
263	1743	80813	2657	55			0.12	0.375	Short barrel	Double cone, 0.192, 0.173 to 0.113	Dark opaque grey
263	1743	80813	2657	56			0.131	0.397	Short barrel	Double cone, 0.222, 0.223 to 0.140	Dark opaque grey

Table 6.22: Flint beads from Wadi Fidan 40, continued.

263	1743	80813	2657	57	0.331	0.307	0.157		Short barrel	Double cone, 0.168, 0.177 to 0.109	Irregularly shaped, light translucent grey
263	1743	80813	2657	58			0.148	0.404	Short barrel	Double cone, 0.183, 0.184 to 0.142	Dark opaque grey
263	1743	80813	2657	59			0.121	0.337	Short barrel	Plain, 0.141	Dark semitranslucent grey
263	1743	80813	2657	60	0.345	0.291	0.151		Short barrel	Double cone, 0.180, 0.213 to 0.130	Light translucent grey
263	1743	80813	2657	61	0.397	0.39	0.191		Short barrel	Double cone, 0.240, 0.193 to 0.150	Dark semitranslucent grey
263	1743	80813	2657	62	0.334	0.298	0.094		Short barrel	Cone, 0.168 to 0.122	Flat one side, very light translucent grey
263	1743	80813	2657	63			0.157	0.332	Short barrel	Double cone, 0.180, 0.142 to 0.106	One flattish spot, light translucent grey
263	1743	80813	2657	64			0.178	0.323	Short barrel	Double cone, 0.198, 0.176 to 0.113	Small chip in one side, translucent grey
263	1743	80813	2657	65	0.314	0.289	0.14		Short barrel	Double cone, 0.152, 0.159 to 0.124	Flat one side, dark translucent grey
263	1743	80813	2657	66			0.137	0.318	Short barrel	Double cone, 0.192, 0.186 to 0.132	Somewhat irregular; two flattened spots, dark translucent grey
263	1743	80813	2657	67			0.154	0.315	Short barrel	Double cone, 0.146, 0.171 to 0.113	Slightly irregularly shaped, translucent light grey stone
263	1743	80813	2657	68			0.111	0.395	Short barrel	Double cone, 0.180, 0.203 to 0.132	Translucent dark grey
263	1743	80813	2657	69			0.117	0.389	Short barrel	Double cone, 0.163, 0.191 to 0.154	Translucent dark grey

Table 6.22: Flint beads from Wadi Fidan 40, continued.

263	1743	80813	2657	70			0.214	0.323	Short barrel	Double cone, 0.193, 0.190 to 0.116	Thins to 0.130, light translucent grey
263	1743	80813	2657	71			0.288	0.33	Short barrel	Double cone, 0.177, 0.177 to 0.132	Two flat surfaces, dark translucent grey
340	9144	70222	3169	2			0.163	0.429	Barrel disc	Cone; 0.205 to 0.176	Translucent grey
511	2243	87164	4618	3			0.187	0.429	Short barrel	Double cone	Larger and darker than most flint pieces
511	2243	87164	4618	4			0.117	0.374	Short barrel	Double cone	Light, translucent grey flint
523	2291	87477	4810	1			0.28	0.625	Short truncated convex cone	Double cone	Opaque hard dark grey to black stone
524	2331	89149	5001	1			0.128	0.512	Cylinder disc	Plain	Dark grey opaque stone, somewhat irregularly shaped
524	2331	89162	5088				0.338	0.753	Barrel disc	Cone, half cone; cone 0.374 to 0.221; half cone 0.343	Black or blue-black stone bead. Wedge shaped, thins to 0.237. From sieve
532	2357	87832	5044				0.207	0.617	Pear-shaped disc	Double cone; 0.268, 0.266 to 0.201	Dark blue-black stone bead, flat on one side, convex on the other. Thins to 0.149 one side. Edges slightly irregular, not fully rounded
544	9381	72391	5306				0.101	0.471	Cylinder disc	Very slight cone	dark grey opaque stone, somewhat irregularly shaped
715	2456	88302	6712				0.277	0.642	Short cylinder	Double cone	Dark translucent grey
724	2557	88814	7077				0.335	0.826	Barrel disc	Plain, at angle	Grey with white streaks, translucent

Table 6.22: Flint beads from Wadi Fidan 40, continued.

730	2597	88925	7105	1			0.176	0.396	Barrel disc	Cone	Light grey, almost transparent stone
730	2597	88925	7105	2			0.179	0.47	Barrel disc	Cone	Dark grey with darker stripes, semi-translucent
730	2597	88925	7105	4			0.18	0.483	Barrel disc	Drilled at an angle, producing two half-cones	Dark grey, semi-translucent
730	2597	88925	7105	5			0.171	0.413	Barrel disc	Double cone	Translucent light grey
730	2597	88925	7105	6			0.141	0.495	Cylinder disc	Plain, medium large	Dark grey, opaque
730	2597	88925	7105	7			0.184	0.474	Cylinder disc	Plain, medium large	Dark grey, opaque
730	2597	88925	7105	8			0.168	0.453	Barrel disc	Plain, medium large, at angle	Translucent grey
730	2597	88925	7105	9			0.171	0.463	Barrel disc	Double cone	Dark opaque grey
730	2597	88925	7105	10			0.194	0.465	Barrel disc	Plain, medium large	Light, translucent grey
730	2597	88925	7105	11			0.158	0.47	Barrel disc	Plain, medium large	Translucent grey
730	2597	88925	7105	12			0.175	0.431	Barrel disc	Plain	Dark opaque grey
730	2597	88925	7105	13			0.127	0.419	Barrel disc	Double cone	Dark opaque grey
730	2597	88925	7105	14			0.163	0.399	Barrel disc	Plain, medium large	Translucent grey
730	2597	88925	7105	15			0.144	0.419	Cylinder disc	Double cone	Semi-translucent dark grey stone
730	2597	88925	7105	16			0.132	0.43	Barrel disc	Cone	Translucent grey
730	2597	88925	7105	17			0.13	0.421	Barrel disc	Plain, medium large	Dark transluscent grey
730	2597	88925	7105	18			0.107	0.368	Barrel disc	Two slight cones, medium large	Dark opaque grey
730	2597	88925	7105	19			0.157	0.425	Barrel disc	Double cone	Light, translucent grey
730	2597	88925	7105	20			0.167	0.441	Barrel disc	Double cone	Dark, translucent grey

Table 6.22: Flint beads from Wadi Fidan 40, continued.

730	2597	88919	7103				0.123	0.381	Barrel disc	Cone	Opaque grey-black
742	9655	89214	7231	3			0.132	0.305	Barrel disc	Double cone	Translucent light grey

Table 6.23: Flint bead from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	Basket	Subnumeral	Shape	Description
67	786	2586	7	Cylinder disc	Grey flint

GARNET

Garnet is a usually deep red silicate mineral. It is chemically similar to the other silicate gemstones described here, but it is usually a metamorphic rock. Garnet was available in the Eastern Desert, but rarely used in ancient Egypt because of the low quality and small stones in the Egyptian sources (Aston et al. 2000: 29-30). Only one garnet bead was recovered from Wadi Fidan 40, in Grave 227 (Table 6.24). This piece was recognized due to the preservation of its natural crystal faces (Fig. 6.102). It is a poor quality stone, and very small.



Figure 6.102: The garnet bead from Grave 227 (EDM 80426). Note the natural crystal facets.

Table 6.24: The garnet bead from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Length	Width	Thick-ness	Shape	Perforation	Description
227	1613	80426	2359	0.833	0.562	0.421	Short truncated cone	Double cone	Deep red, opaque but glassy stone. Convex one side, faceted. Concave the other, where it is very rough and broken

HEMATITE

Hematite is a silvery black to red brown iron oxide. The metallic form was widely prized (Aston et al. 2000). Two hematite pieces were found at Wadi Fidan 40. One is an oblate bead, while the other is a pendant. The pendant is pyramidal in form and was found in Grave 12, a grave unusually rich in beads (Fig. 6.103). It is especially interesting because it is very similar to a hematite pendant found at Wadi Fidan 4, Tomb 1 (Fig. 6.104; EDM 50810).



Figure 6.103: Beads from Grave 12. Note the hematite pendant at bottom center.



Figure 6.104: The hematite pendant from Wadi Fidan 4, Tomb 1, with some shell beads found in association (EDM 50810).

Table 6.25: Hematite bead and pendant from Wadi Fidan 40.

Grave	Locus	Basket	Subnumeral	Length	Width	Thick-ness	Diameter	Shape	Perforation	Description
12	623	2399	1	3.657	1.098	0.972		Pendant	Plain; 0.265 one side; 0.291 the other.	Pyramidal hematite pendant, similar to that at WFD 4. Three sided, with perforation through angle of two sides. Grooves down sides pierced by perfortation. One one side, this groove is 1.659 long, starting at the tip of the pendant and continuing downard through the perforation. On the other side, the groove starts 0.650 below the tip, 0.285 above the perforation and continues down a total of 1.179 cm. This side much more gashed, 0.625 wide in places. Presumably the wide third face would be visible to those viewing the piece. Bottom is rounded, some small gashes in wide face visible to viewer. Major radius 2.260
14	628	2400	14			0.324	0.567	Short cylinder	Plain	Very dark brown piece, dark stone, likely hematite or other iron-rich stone.

JET

Jet is the gem-quality carbon. It is a black stone that is soft and easily breaks. The one example retrieved at Wadi Fidan 40 was badly broken, and little could be said about its shape or dimensions (Table 6.26).

Table 6.26: The jet bead from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Description
247	1699	80709	2567	Tiny glassy black fragments of what was a bead

LAPIS LAZULI

Although some cupric materials were initially mistaken to be lapis lazuli (see above), only one very dark blue oblate disc bead might actually be this material (Table 6.27). Lapis was one of the most treasured stones in the ancient Near East, and was imported from the Badakhshan region of northeastern Afghanistan (Aston et al. 2000: 39). This bead was part of the rich assemblage of Grave 12.

Table 6.27: The lapis(?) bead from Wadi Fidan 40.

Grave	Locus	Basket	Subnumeral	Thick-ness	Diameter	Shape	Perforation	Description
12	623	2399	138	0.403	0.895	Oblate disc	Plain; 0.270	Very dark blue with white speckles, well formed

LIMESTONE

Limestone is a sedimentary stone common in the Faynan area. Eight of the beads and pendants directly examined were made of this stone, some crafted from fossils (Table 6.28). In addition, the 177 beads from Grave 87 appear in photographs to be this material. Just seven graves contained beads identified as limestone, and Grave 84 is the only grave that contained more than two such beads. Of the Grave 87 beads, one is a long cylinder, one is a flattened standard truncated convex bicone, one is a flattened long truncated convex bicone, and the remaining 174 beads all appear to be short barrel beads (Figs. 6.56, 6.105). Limestone is a common material in the region.



Figure 6.105: The beads from Grave 87 (B. 3640).

Table 6.28: Limestone beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Length	Width	Thickness	Diameter	Shape	Perforation	Description
0	608		2240	0.529	0.492	0.153		Drilled pebble	Two cones	Vaguely like a cylinder disc in section, but more rectangular with rounded corners

Table 6.28: Limestone beads from Wadi Fidan 40, continued.

10-2004	9322	72130	5192	0.78	0.72	0.386		Irregular short barrel bead.	Double cone perforation. Diameter of cone on one side 0.296, on other 0.306 tapering to 0.154.	Roughly shaped pebble. One side flattened to accomidate drilling; most parts only slightly worked. Light grey-white limestone.
12	609		2253	2.046	1.395	1.124		Drilled pebble	Natural?	Irregularly shaped limestone pebble, using possibly natural or partially natural perforation. Perforation is semiellipti cal one side, more rounded the other.
14	616		2338			0.429	1.223	Cylinder disc	Plain, medium large, 0.409	Some greenish spots, relatively hard white rock
512	2329	87891	5076	3.585	2.784	0.85		Drilled stone	Plain with slight cone, at angle to drilled surface. 0.651 diameter one side, 0.390 the other.	White one side, brown the other, drilled but otherwise unworked. Piece is tabluar, rounded on edges. Pentagon with two long sides, one rounded width side, and one very short width side, making it almost rhomboid. 2.485 major radius.

Table 6.28: Limestone beads from Wadi Fidan 40, continued.

710	2454	89094	6828			3.068	1.226	Long cylinder	Cone, 0.384, 0.330, natural?	Fossil coral, either drilled or utilizing natural hole. Circular bedding clearly visible in section. Exterior is lumpy, covered with nodules. Very pale grey. Diameter decreases to 0.905
710	2454	89094	6828			2.036	0.939	Long cylinder	Cone, 0.431, 0.323, natural?	Fossil coral, either drilled or utilizing natural hole. Circular bedding clearly visible in section. Exterior is lumpy, but not covered with nodules as is the other piece in this basket—though they may still be from the same piece of fossil coral. Very pale grey. Diameter decreases to 0.676
730	2597	88925	7105			0.083	0.31	Cylinder disc	Plain, medium large	Grey-white, opaque stone; diameter is as survives—much broken away

ONYX

Onyx is a black silicate mineral, closely related to carnelian. Just three samples of this stone were found at Wadi Fidan 40, each in a different grave (Fig. 6.106; Tables 6.29, 6.30).



Figure 6.106: The onyx bead from Grave 80-2004 (EDM 89023).

Table 6.29: Onyx beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Length	Width	Thick-ness	Dia-meter	Shape	Perforation	Description
80-2004	2075	89023	2619	1.292	1.045	0.968		Semi-circular	Plain, extra large. 0.493 one side, 0.477 the other	Black, sometimes almost bluish, with white streaks. Closest to Beck's VI.C.2.b. One side is rounded and thicker, other side is flat and thinner. Length is of longer side; shorter side is 0.983 long— this accentuates the bead as it hangs, as the heavier, broader, longer side would hang downward. Major radius 0.685. From sieve.
227	1646	80481	2402			1.753	0.84	Long barrel	Drilled both sides, one perforation wider than the other: 0.295, 0.348	Translucent dark brown and opaque white swirled stone, nicely fashioned into long barrel. A few surface nicks and cracks on weak parts of the stone — meeting places of swirls

Table 6.30: The onyx bead unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	Basket	Shape
94	809	2653	Short truncated bicone

QUARTZITE

Quartzite is a quartz-rich metamorphic rock often formed transformed from sandstone. Two quartzite beads were identified at Wadi Fidan 40, both in very poor condition (Fig. 6.107; Table 6.31).



Figure 6.107: The quartzite bead from Grave 38 (B. 3351).

Table 6.31: Quartzite beads and pendants from Wadi Fidan 40.

Grave	Locus	Basket	Subnumeral	Length	Width	Thick-ness	Shape	Perforation	Description
12	609	2253	7	2.712	1.311	0.724	Drilled pebble		Irregular red-brown quartzite piece, tapering to rough point. One side flat, the other rough, with a ridge running length-wise and a piece apparently knocked away in order to facilitate drilling.
38	627	3351		1.627	1.167	0.684	Drilled pebble	Plain	Was rounded pebble; split down middle—apparently by excavation damage, due to pickmark. Perforation roughly in center of one long side. 0.863 from perforation to opposite side

ROCK CRYSTAL

Rock crystal is the clear variety of quartz. Rock crystal is found in the Sinai and the Western Desert, but is not common in Egyptian jewelry (Aston et al. 2000: 52). It is chemically similar to carnelian and might be found in the same outcrops. Just nine

examples were recovered from the cemetery, all of them in the rich Graves 12 and 14 (Table 6.32). These beads were crafted in a similar fashion to the carnelian beads from those graves and likely came from the same workshop.

Table 6.32: Rock crystal beads from Wadi Fidan 40.

Grave	Locus	Basket	Subnumeral	Thick-ness	Diameter	Shape	Perforation	Description
12	623	2311	19	0.819	0.916	Short barrel	Cone, 0.309, 0.249, dimple or flake on narrower end	Clear rock crystal, thins to 0.695 one side
12	623	2399	128	0.684	0.868	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Very clear rock crystal; perforation visible through it. Small crack on dimpled side.
12	623	2399	129	0.729	0.863	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Very clear rock crystal; perforation visible through it.
12	623	2399	130	0.733	0.84	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Very clear rock crystal; perforation visible through it.
12	623	2399	131	0.638	0.804	Short barrel	Dimple or cone on one side. This side also has a narrower hole than the other side.	Very clear rock crystal; perforation visible through it.
14	628	2353	45	0.713	0.862	Short convex truncated bicone	Cone with flake scar opposite	Clear
14	628	2353	45	0.713	0.862	Short convex truncated bicone	Cone with flake scar opposite	Clear
14	628	2386	21	0.636	0.855	Short barrel	Cone with flake scar opposite	Clear
14	628	2386	22	0.69	0.831	Truncated convex bicone	Cone with flake scar opposite	Clear

SANDSTONE

Two sandstone beads were identified in the Wadi Fidan 40 assemblage. One is a drilled pebble, while the other is a badly eroded piece that may in fact be frit. One is from the unusually rich Grave 12, the other is from Grave 702 (Table 6.33).

Table 6.33: Sandstone beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Length	Width	Thick-ness	Diameter	Shape	Perforation	Description
12	604		2233	1.566	1.249	0.737		Drilled pebble		Rounded very fine grained sandstone pebble with hole -- either drilled or natural—0.222 wide, but broken through top. Major radius1.060. Small dimple below hole—failed drilling? 0.506 x 0.506.
702	2418	88076	6546			1.507	1.03	Truncated convex bicone	Drilled both ends	Eroded orangish bead, much now grey though orange remains in patches, apparently of sandstone

SILTSTONE

Siltstone is a fine-grained sedimentary rock. Thirteen examples were identified at Wadi Fidan 40 (Tables 6.34, 6.35).

Table 6.34: Siltstone beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thick-ness	Diameter	Shape	Perforation	Description
12	623		2311	26			0.153	0.613	Cylinder disc	Plain	Fragment of bedded brown siltstone bead, badly eroded surfaces—dimensions as remain

Table 6.34: Siltstone beads from Wadi Fidan 40, continued.

12	623		2399	139			0.484	0.602	Standard cylinder	Plain, somewhat oval 0.266 x 0.283	Olive-green with some white stripes. Perforation slightly off center, such that a thicker portion of the bead hangs down, below narrower arc of perforation's oval. 0.192 vs 0.105
12	623		2399	141			1.135	0.584	Long cylinder		Light olive green, fine grained.
14	628		2400	15			0.446	0.207	Short cylinder	Plain	Tan stone with some greenish patches
14	628		2400	16			0.458	0.208	Short cylinder	Plain	Tan stone with some greenish patches
40	693		3400				0.433	1.011	Short barrel	Plain, 0.306	Some black streaks. Breaking along bedding planes.
224	1715	80845	2685				0.228	0.56	Short cylinder	Plain, medium large	Tan fine-grained stone, some bedding visible running perpendicular to perforation

Table 6.34: Siltstone beads from Wadi Fidan 40, continued.

224	1715	80884	2722	2			0.236	0.536	Cylinder disc	Plain, medium large	Fine grained light brown or tan rock, perforation slightly off-center
225	1592	80347	2293	2			0.143	0.444	Cylinder disc	Plain, medium large	Fine-grained tan stone with some bedding planes visible under magnification perpendicular to the perforation
253	1706	70759	2611	3			0.236	0.575	Cylinder disc	Plain, medium large	Fine grained light brown or tan rock, perforation slightly off-center, thins to 0.114
345	3053	89200	3119	1	0.63	0.562	0.303		Truncated convex bicone	Cone; 0.227 one side, 0.194 the other	Powder blue to white stone bead; thins to .240 one side. Sieved from cist
543	9354	89225	5321				0.33	0.66	Short cylinder	Plain; 0.224 cm diameter	Small brown bead from sieve

Table 6.35: Siltstone bead from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Subnumeral	Shape
253	1706	70759	2611	3	Cylinder disc

ORGANIC MATERIALS

BONE

Seven of the bone artifacts were spatula-shaped pendants (Grave 95 [B. 2721], 231 [EDM 80677], 335 [EDM 86855], 507 [EDM 87761, associated with the secondary remains in the cist], 523 [EDM 87758], 706 [EDM 88494], and 707 [EDM 89050]). With the possible exception of Grave 231, which remains to be examined osteologically, all of the artifacts at Wadi Fidan 40 were found with adolescents or young adults, and the two that could be sexed, Graves 523 and 706, were both female (though the spatula in Grave 523 appeared to be associated with the secondary burial in the cist, which was unsexed). Two of these spatula pendants were found in situ. One was in Grave 335 (Figs. 6.108, 6.109; EDM 86855), and the other in Grave 706, and both of these were found in the neck region, apparently serving as pendants. These artifacts bear a strong similarity to the spatulae found at Buseirah and many other Levantine sites (Sedman 2002: 361-362) and which formed "The single largest type of bone items" at Tawilan (Bienkowski 1995d: 83) except that the Wadi Fidan 40 examples are rounded on both ends and pierced (Figs. 6.110-6.112), while the Buseirah examples have points at one end and have no perforation. The artifacts at Wadi Fidan 40, like those at Buseirah and Tawilan, were most likely used for weaving on a ground loom. However, the spatulae at Wadi Fidan also served a symbolic function, denoting young feminine weavers.

Table 6.36: Bone beads and pendants from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thick-ness	Perforation	Description
507	2306	87761	2306		5.646	1.505	0.281	Plain, 0.493	Ovoid spatula-like pendant, convex on one face, very slightly concave on the other. Tapers to 0.580 near rounded point of distal end. Both ends rounded. Broken at perforation; refitted for measuring.
523	2342	87758	2342	**1**	5.072	1.742	0.24	Plain, 0.453	Spatula-like pendant, made by splitting a longbone, one side slightly convex, the other mostly flat. Broken distally. Surviving major radius 4.109. Rounded on top.
706	2480	88494	2480		9.121	1.367	0.215	Plain, 0.382	Long spatula-like pendant, rounded at distal end. Broken through perforation; top portion originally recorded as EDM 88375, Locus 2469, Basket 6761. Only very slightly lenticular; almost flat. Very slight tapering of one side about 3 cm from end; tapers to 0.878 above perforation. Major radius 8.581.
707	2458	89050	2458		2.476	1.268	0.398	Plain, possibly slight cone	Very fragmentary bone pendant. 0.944 from surviving top, jogs inward and tapers to 0.696 width before it is broken away. Top is broken off, but apparently was rounded.

Table 6.37: Bone pendants unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Shape
95	820		2721	Spatula pendant
231	1656	80677	2542	Spatula pendant



Figure 6.108: Grave 335 spatula pendant in situ, after removal of overlying bones.

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Figure 6.109: Grave 335 spatula pendant in situ, after removal of overlying bones.

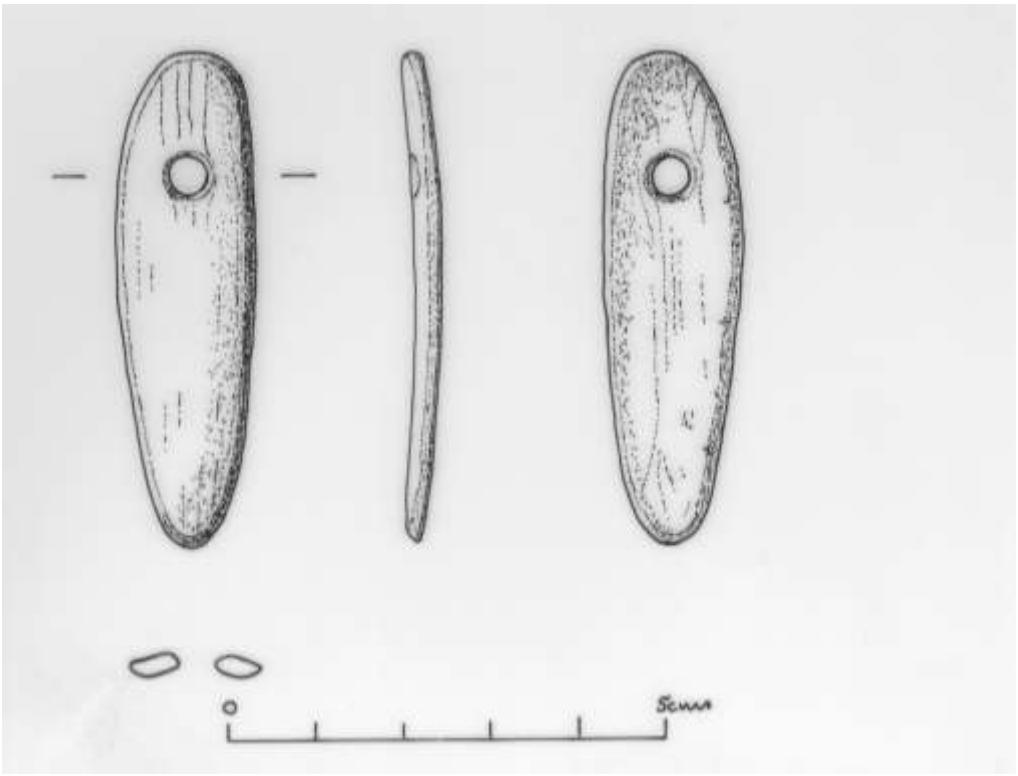


Figure 6.110: The spatula-pendant found in Grave 507 (EDM 87761).



Figure 6.111: The spatula-pendant found in Grave 507 (EDM 87761).



Figure 6.112: The spatula-pendant found in Grave 507 (EDM 87761).

CORAL

Five coral beads were recorded in the assemblage from Wadi Fidan 40 (Table 6.38). Three were in Grave 252 (Fig. 6.113). These beads are probably confected from pipe coral from the Red Sea, which was also used in Egypt (Andrews 1990: 64).



Figure 6.113: Two of the coral beads from Grave 252 (EDM 80804).

Table 6.38: Coral beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Sub-numeral	Length	Width	Thick-ness	Dia-meter	Shape	Perfora-tion	Descrip-tion
252	1717	80804	2649	1			0.529	0.75	Short cylinder	Plain, medium large	Rough-textured pink piece, nicely worked. Yellowish banded patch on one side. Thins to 0.330 cm.
252	1717	80804	2649	2			0.508	0.811	Short cylinder	Plain, medium large	Rough-textured pink piece, nicely worked. Brown patch on one side. Thins to 0.316.

Table 6.38: Coral beads from Wadi Fidan 40, continued.

252	1748	80815	2659	1			0.549	0.856	Short cylinder	Plain, medium large	Rough-textured pink piece, nicely worked. Brown patch on one side. Thins to 0.364.
511	2243	87164	4618	2			0.286	0.499	Short barrel	Double cone, more pronounced on one side. 0.234, 0.273 to 0.154	Pink short barrel
519	2277	87406	4772		0.729	0.644	0.215		Drilled fragment	Cone	Red-pink piece with two polished sides, roughly triangular with rounded corners

OSTRICH EGGSHELL

Ostrich eggshell is one of the most common materials used in the confection of beads found at Wadi Fidan 40. Two thousand four hundred forty-seven were recovered, making up nearly 47% of the bead assemblage (Tables 6.39, 6.40). All of the beads constructed of this material are small disc beads (Fig. 6.114). They are most likely made by broking the shell into fragments of the approximate size and then grinding them into shape. A group of shell fragments might have been drilled and strung and then ground together in order to bring the resulting objects to the same size and regular shape.

Ostrich eggshell was available locally. The range of the Syrian or Arabian ostrich (*Struthio camelus syriacus*) extended from the Arabian peninsula north to Syria and east to the Euphrates. This subspecies was driven to extinction in the twentieth century due to

a combination of aridification and overhunting following the introduction of firearms and motorized vehicles.

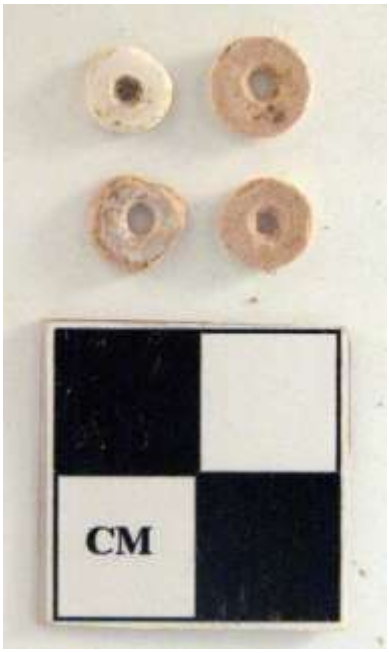


Figure 6.114: An example of the ostrich eggshell disc beads from Wadi Fidan 40. These are from Grave 715 (EDM 88518).

Ostrich eggshells were worked into beads in Egypt from the Badarian period on into the Iron Age (Lucas 1962: 38, 44; Phillips 2000). There appears to be a period during the Eighteenth Dynasty during which their manufacture was abandoned, but they appear again in the Nineteenth Dynasty of the New Kingdom and continue into the Twenty-Second Dynasty of the Third Intermediate Period (Lucas 1962: 38, 44). An ostrich eggshell bead manufactory, with both egg fragments and partially completed beads, was found at Amarna (Kemp 1980: 8).

The ostrich eggshell may have been important symbolically. Eggs as symbols of rebirth are sometimes important in funerary contexts. It is perhaps notable that ostrich eggshell cups are so common in Phoenician graves that Sabation Moscati (1988a: 456)

has argued, “so many have been found that the ostrich egg can be considered peculiar to the Phoenicians,” and while he notes that ostrich eggshell cups are found as early as the third millennium in Mesopotamia (cf. Laufer 1926), he considers the presence of ostrich eggshell cups in general, and decorated ones in particular, as a Punic ethnic funerary trait. Ostriches also appear frequently in the iconography of Midianite pottery (Fig. 6.115; Rothenberg and Glass 1983: 99; Rothenberg 1998: 175).

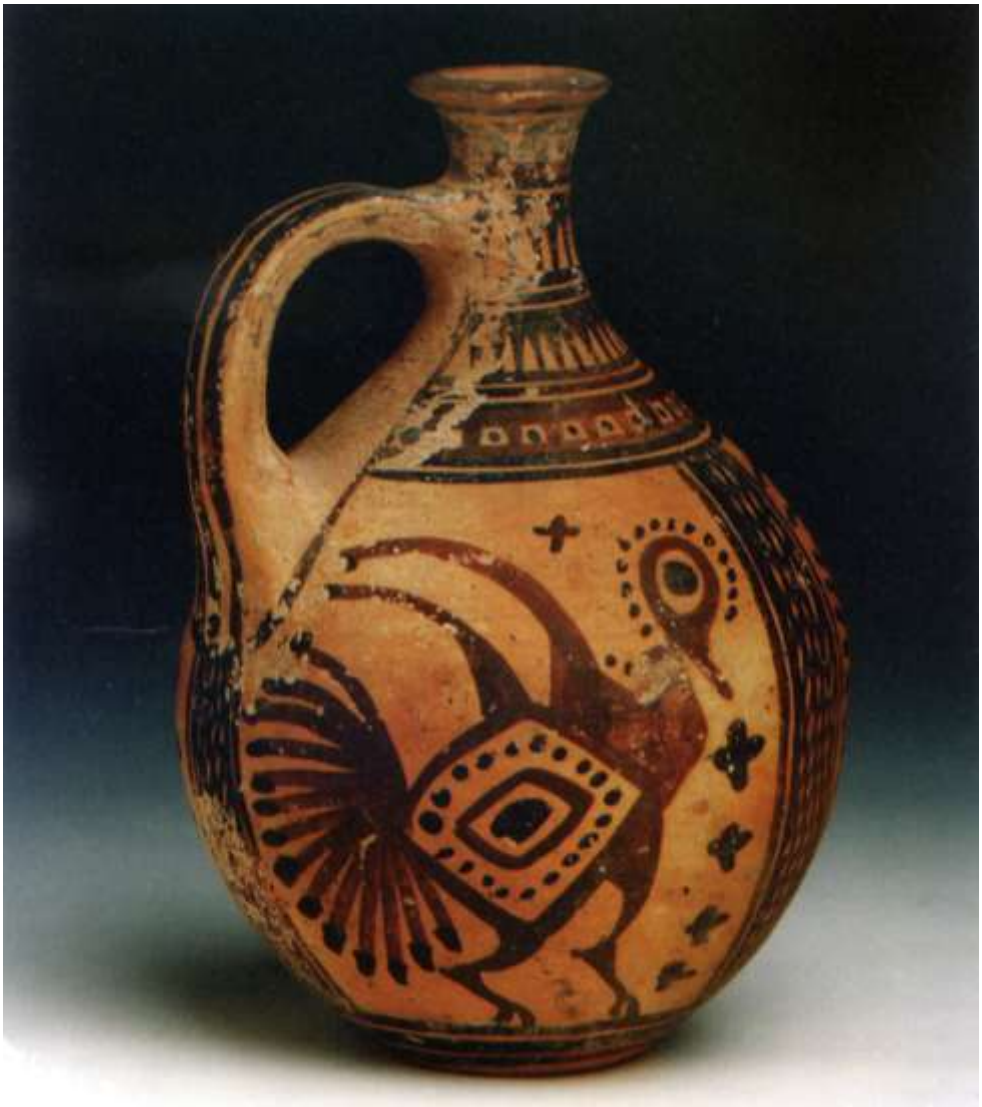


Figure 6.115: A Midianite juglet of unknown provenience, now in the Bible Lands Museum, Jerusalem. The ostrich motif displayed on this juglet is common in Midianite pottery (Rothenberg 1998: 175).

The quantity of ostrich eggshell beads found at Wadi Fidan 40, the ease with which this material is worked, and the ubiquity of the raw material all suggest that beads constructed of this material were among the least valuable in the cemetery's assemblage.

The range of uses of these beads is unknown, since they were seldom found in context on the dead. Some were likely used in necklaces. Particularly interesting, however, was the ostrich eggshell belt found in Grave 706 (Fig. 6.116-6.118).



Figure 6.116: The sacrum of the Grave 706 burial, with an ostrich eggshell belt still embedded in the attached matrix (EDM 88499).



Figure 6.117: A close-up of the ostrich eggshell belt, attached to the Grave 706 burial (EDM 88499).



Figure 6.118: The ostrich eggshell belt from the Grave 706 burial.

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thickness	Dia-meter	Shape	Perfora-tion	Descrip-tion
0	0	A09F0034	A09L000	1			0.2	1.01	Cylinder disc	Drilled both sides; 0.32 to 0.30	
0	0	A09F0034	A09L000	2			0.18	0.72	Cylinder disc	Drilled both sides slight cones 0.34 0.31	Damaged around edges
0	0	A09F0034	A09L000	3			0.18	0.71	Cylinder disc	Plain; 0.27	Damaged around edges
0	0	A09F0034	A09L000	4			0.18	0.66	Cylinder disc	Drilled both sides; 0.30, 0.30	Damaged around edges
0	0	A09F0048	A09L000	2			0.17	0.68	Cylinder disc	Drilled both sides; 0.22 to 0.18	Damaged around edges
0	614		2257	5			0.178	0.519	Cylinder disc	Two slight cones	From surface
0	614		2257	6			0.197	0.539	Cylinder disc	Two slight cones	From surface
0	614		2265	3			0.139	0.626	Cylinder disc	Plain, medium large	
0	1520	80633	2529				0.191	0.921	Cylinder disc	Cone	As survives
0	1523	80666	2532				0.181	0.604	Cylinder disc	Double cone	
0	2126	86891	2997				0.169	0.557	Cylinder disc	Drilled at an angle producing two half-cones	
0	2126	86895	3000				0.177	0.516	Convex truncated cone disc	One pronounced cone, one slight cone	Deep bowl in one cone, other cone scarcely visible
0	2182	86504	2808				0.084	0.5	Cylinder disc	Plain, medium large	
0	2194	86631	2823				0.184	0.557	Cylinder disc	Cone, medium large	
0	2207	87069	4551				0.158	0.737	Cylinder disc	Cone	
0	2244	87216	4645				0.169	0.814	Cylinder disc	Two slight cones	
0	2291	87478	4811				0.162	0.714	Cylinder disc	Double cone	As survives

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

0	2291	87529	4839	1			0.483	1.161	Cylinder disc	Cone	Nicely rounded; as survives
0	2291	87529	4839	2			0.172	0.745	Cylinder disc	Plain	
0	2291	87529	4839	3			0.173	0.76	Cylinder disc	Plain	
0	2291	87529	4839	4			0.148	0.699	Cylinder disc	Slight cone	
0	2291	87529	4839	5			0.041	0.561	Cylinder disc	Plain	As survives
0	2292	87522	4833				0.175	0.792	Cylinder disc	Plain	
0	2292	87598	4883				0.147	0.737	Cylinder disc	Slight cone	
0	2292	87599	4884				0.108	0.524	Cylinder disc	Plain, medium large	
0	2292	89106	4877	1			0.114	0.329	Cylinder disc	Plain, medium large	
0	2292	89106	4877	2			0.15	0.412	Cylinder disc	Cone, medium large	
0	2292	89106	4877	3			0.112	0.383	Cylinder disc	Plain, medium large	
0	2292	89106	4877	4			0.114	0.393	Cylinder disc	Plain, medium large	
0	2292	89106	4877	5			0.101	0.34	Cylinder disc	Plain, medium large	
0	2292	89106	4877	6			0.131	0.36	Cylinder disc	Cone, medium large	
0	2292	89106	4877	7			0.131	0.351	Cylinder disc	Very slight cone, medium large	
0	2292	89106	4877	8			0.113	0.34	Cylinder disc	Very slight cone	As survives
0	2292	89106	4877	9			0.124	0.345	Cylinder disc	Plain, medium large	
0	2292	89106	4877	10			0.101	0.366	Cylinder disc	Slight cone	As survives
0	2444	89017	6598	1			0.173	0.981	Cylinder disc	Slight cone	
0	2444	89017	6598	2			0.167	0.916	Cylinder disc	?	Diameter as survives
0	2444	89017	6598	3			0.303	0.604	?	?	As survives
0	2444	89051	8509	2			0.179	0.67	Cylinder disc?	Double cone	Broken around edges, diameter as survives

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

0	2444	89053	6673	1			0.178	0.589	Cylinder disc	Plain	Diameter as survives
0	2444	89055	8510	62			0.182	0.377	Cylinder disc	Plain	Diameter as survives
0	2444	89056	6673	1			0.187	0.793	Cylinder disc	Drilled at an angle making two half-cones	
0	2444	89056	6673	2			0.155	0.887	Cylinder disc	Double cone	
0	2444	89056	6673	3			0.171	0.779	Cylinder disc	Double cone	
0	2444	89056	6673	4			0.182	0.725	Cylinder disc	Double cone	
0	2444	89056	6673	5			0.173	0.713	Cylinder disc	Cone	
0	2444	89056	6673	6			0.176	0.881	Cylinder disc	Double cone	
0	2444	89056	6673	7			0.167	0.979	Cylinder disc	Double cone	
0	2444	89056	6673	8			0.181	0.997	Cylinder disc	Drilled at an angle making two half-cones	
0	2444	89056	6673	9			0.17	0.96	Cylinder disc	Cone	
0	2444	89056	6673	10			0.182	0.955	Cylinder disc	Double cone	
0	2444	89056	6673	11			0.181	0.961	Cylinder disc	Double cone	
0	2444	89056	6673	12			0.158	0.849	Cylinder disc	Double cone	
0	2444	89056	6673	13			0.177	0.759	Cylinder disc	Double cone	
0	2444	89056	6673	14			0.181	0.715	Cylinder disc	Double cone	
0	2444	89056	6673	15			0.178	0.785	Cylinder disc	Double cone	
0	2444	89056	6673	16			0.176	0.683	Cylinder disc	Plain	
0	2444	89056	6673	17			0.178	0.906	Cylinder disc	Drilled at an angle making two half-cones	
0	2444	89056	6673	18			0.17	0.823	Cylinder disc	Cone	
0	2444	89056	6673	19			0.159	0.874	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	20			0.193	0.733	Cylinder disc	Double cone	
0	2444	89056	6673	21			0.186	0.706	Cylinder disc	Double cone	
0	2444	89056	6673	22			0.175	0.701	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	23			0.178	0.67	Cylinder disc	Cone	Diameter as survives

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

0	2444	89056	6673	24			0.188	0.629	Cylinder disc	Half cone	Diameter as survives
0	2444	89056	6673	25			0.187	0.974	Cylinder disc	Ellipsoid, double cone	
0	2444	89056	6673	26			0.17	0.597	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	27			0.183	0.824	Cylinder disc	Ellipsoid, half cone	Diameter as survives
0	2444	89056	6673	28			0.173	0.663	Cylinder disc	Double cone	
0	2444	89056	6673	29			0.178	0.657	Cylinder disc	Cone	
0	2444	89056	6673	30			0.175	0.723	Cylinder disc	Double cone	
0	2444	89056	6673	31			0.162	0.678	Cylinder disc	Double cone	
0	2444	89056	6673	32			0.17	0.631	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	33			0.171	0.707	Cylinder disc	Cone, medium large	Diameter as survives
0	2444	89056	6673	34			0.171	0.653	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	35			0.148	0.643	Cylinder disc	Cone	
0	2444	89056	6673	36			0.169	0.649	Cylinder disc	Cone, half cone	
0	2444	89056	6673	37			0.194	1	Cylinder disc	?	Perforation broken
0	2444	89056	6673	38			0.173	0.63	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	39			0.163	0.596	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	40			0.171	0.663	Cylinder disc	Cone	
0	2444	89056	6673	41			0.174	0.668	Cylinder disc	Double cone	
0	2444	89056	6673	42			0.165	0.703	Cylinder disc	Half cone	Diameter as survives
0	2444	89056	6673	43			0.171	0.638	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	44			0.183	0.706	Cylinder disc	Cone	Diameter as survives
0	2444	89056	6673	45			0.172	0.633	Cylinder disc	Plain	Diameter as survives
0	2444	89056	6673	46			0.154	0.605	Cylinder disc	Cone	Diameter as survives
0	2444	89056	6673	47			0.183	0.663	Cylinder disc	Cone, half cone	Diameter as survives

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

0	2444	89056	6673	48			0.172	0.613	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	49			0.169	0.631	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	50			0.163	0.647	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	51			0.166	0.648	Cylinder disc	?	Perforation broken
0	2444	89056	6673	52			0.169	0.648	Cylinder disc	Plain	Diameter as survives
0	2444	89056	6673	53			0.164	0.572	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	54			0.169	0.564	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	55			0.184	0.56	Cylinder disc	Double cone	Diameter as survives
0	2444	89056	6673	56			0.155	0.635	Cylinder disc	Plain?	Diameter as survives
0	2444	89056	6673	57			0.168	0.606	Cylinder disc	Plain?	Diameter as survives
0	2444	89056	6673	58			0.174	0.378	Cylinder disc	Plain	Diameter as survives
0	2444	89056	6673	59			0.164	0.616	Cylinder disc	Plain?	Diameter as survives, broken through perforation
0	2444	89071	6706	3			0.175	0.796	Cylinder disc	Double cone	
0	2444	89071	6706	4			0.186	0.684	Cylinder disc	Double cone	As survives
0	2444	89071	6706	5			0.168	0.707	Cylinder disc	Plain	As survives
0	2444	89071	6706	6			0.162	0.668	Cylinder disc	Very slight double cone	As survives
0	2444	89071	6706	7			0.167	0.647	Cylinder disc	Cone	As survives
0	2444	89071	6706	8			0.167	0.593	Cylinder disc	Double cone	As survives
0	2444	89071	6706	9			0.181	0.378	Short cylinder	Plain	
0	2444	89071	6706	10			0.162	0.381	Short cylinder	Plain	
0	2533	88717	7019				0.148	0.535	?	Drilled at an angle, creating two half-cones	Probably once a cylinder disc, all edges broken away

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

0	2533	88721	7022	1			0.107	0.623	Cylinder disc	Plain, medium large	
0	2533	88721	7022	2			0.119	0.692	Cylinder disc	Plain	
0	3094	86931	3017				0.123	0.476	Cylinder disc	Slight cone then plain	From secondary burial
10	606		2215				0.12	0.858	Cylinder disc	Plain	
10	9305	72049	5147				0.129	0.666	Cylinder disc bead	Plain perforation (though with slight accidental cone from drilling). Perforation diameter 0.267 one side, 0.398 the other.	White bead with some black on exterior.
11	615		2262	1			0.152	0.586	Cylinder disc	At angle, making partial cone one side	Battered on edges
11	615		2262	2			0.086	0.478	Cylinder disc	Plain	Battered on edges
11	615		2270	2			0.135	0.71	Cylinder disc	Plain	Slightly battered
11	615		2270	3			0.153	0.661	Cylinder disc	Double cone	Slightly battered
11	615		2270	4			0.147	0.551	Cylinder disc	Plain	Slightly battered
11	615		2270	5			0.153	0.58	Cylinder disc	Cone	Battered at edges
11	615		2270	6			0.114	0.504	Cylinder disc	Plain	Battered at edges
11	615		2281	1			0.144	0.652	Cylinder disc	Cone, slight cone	
11	625		2341	1			0.141	0.695	Cylinder disc	Cone	
11	625		2341	2			0.162	0.686	Cylinder disc	Plain	
11	625		2354	1			0.167	0.7	Cylinder disc	Plain	
11	625		2354	2			0.156	0.631	Cylinder disc	Plain	Edges broken, dimensions as survive
12	604		2238	15			0.164	0.691	Cylinder disc	Cone to 0.182	
12	604		2238	16			0.126	0.423	Cylinder disc	Cone to 0.105	Small bead, slightly worn at edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

12	604			12			0.17	0.633	Barrel disc	Slight cones; 0.244, 0.245 to 0.181	Small piece, worn at edges
13	607		2226				0.141	0.538	Cylinder disc	Cone	
14	616		2276	1			0.121	0.686	Cylinder disc	Plain	Edge snapped off
14	616		2276	2			0.162	0.509	Barrel disc	Double cone	
17	603		2213	1			0.136	0.504	Cylinder disc	Double cone	From backfill
17	603		2213	2			0.089	0.503	Cylinder disc	Plain	Battered around edges
17	603		2213	3			0.147	0.524	Cylinder disc	Cone	Battered around edges
17	603		2223	1			0.089	0.411	Cylinder disc	Cone	Battered around edges
17	603		2223	2			0.115	0.556	Cylinder disc	Cone	Battered around edges
17	603		2223	3			0.217	0.687	Cylinder disc	Plain	Battered around edges
18	605		2211	3			0.134	0.672	Cylinder disc	Slight cone	Battered on edges
18	605		2225	1			0.458	1.35	Short cylinder	Plain, 0.468	Large bead
18	605		2225	2			0.148	0.627	Cylinder disc	Double cone	Battered around edges
18	605		2225	3			0.14	0.732	Cylinder disc	Cone	Battered around edges
18	605		2225	4			0.129	0.663	Cylinder disc	Plain	Battered around edges
18	632		2373	1			0.149	0.649	Cylinder disc	Plain	Battered on edges
18	632		2373	2			0.145	0.652	Cylinder disc	Slight cones	Battered on edges
18	632		2392	1			0.144	0.683	Cylinder disc	Plain	Battered on edges
18	632		2392	2			0.127	0.517	Cylinder disc	Cone	Battered on edges
18	632		2392	3			0.141	0.556	Cylinder disc	Cone	Battered on edges
18	632		2401				0.126	0.653	Cylinder disc	Cone	Battered on edges
18	632		2416				0.169	0.673	Cylinder disc	Cone	Battered on edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

33	636		2415				0.134	0.497	Cylinder disc	Slight cone	Battered around edges
35A	667		3315				0.102	0.504	Cylinder disc	Plain	Battered around edges
35A	667		3345	1			0.133	0.533	Cylinder disc	Slight cones	Battered at edges
35A	667		3345	2			0.085	0.521	Cylinder disc	Plain	Battered around edges
35A	667		3345	3			0.074	0.514	Cylinder disc	Plain	Battered around edges
35A	667		3345	4			0.125	0.541	Cylinder disc	Plain	Battered around edges
35A	667		3345	5			0.095	0.512	Cylinder disc	Plain	Battered around edges
35B	659		3315	1			0.137	0.62	Cylinder disc	Plain	Battered around edges
35B	659		3315	2			0.122	0.487	Cylinder disc	At angle, making slight cone either side	Battered around edges
39	652		2455	2			0.138	0.427	Cylinder disc	Double cone	
39	652		2455	3			0.151	0.424	Cylinder disc	Plain	
39	652		2455	4			0.152	0.418	Cylinder disc	Drilled at an angle producing two slight half-cones	
39	652		2455	5			0.152	0.464	Cylinder disc	Double cone	
39	652		2455	6			0.158	0.475	Cylinder disc	Double cone	
39	652		2455	7			0.15	0.412	Cylinder disc	Plain	
39	652		2455	8			0.145	0.414	Cylinder disc	Plain	
39	652		2455	9			0.143	0.415	Cylinder disc	Plain	
39	652		2455	10			0.102	0.264	Cylinder disc	Plain	
39	652		2455	11			0.141	0.41	Cylinder disc	Plain	
39	652		2455	12			0.156	0.43	Cylinder disc	Double cone	
39	652		2455	13			0.115	0.42	Cylinder disc	Cone	
39	652		2455	14			0.125	0.387	Cylinder disc	Double cone	
39	652		2455	15			0.131	0.258	Cylinder disc		
39	652		2465				0.133	0.259	Cylinder disc	Plain	
39	652		3312	1			0.156	0.424	Short cylinder	Cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

39	652		3312	2			0.109	0.408	Short cylinder	Cone	
39	692		3369				0.15	0.424	Cylinder disc	Plain	
43	691		3372	2			0.092	0.446	Barrel disc	Plain, 0.235	Slightly darker in color than usual examples
46	638		2414	3	1.262	0.997	0.14		Ovoid disc	Plain, 0.263	Peforation roughly in center.
46	638		2414	4			0.163	1.147	Barrel disc	Plain, at angle creating cone appearance	Battered at edges
47	9315	72094	5172				0.11	0.965	Cylinder disc	Plain	
47	9315	72105	5180	2			0.119	0.904	Cylinder disc	Plain	
47	9315	72167	5217				0.123	0.93	Cylinder disc	Plain	
47	9315	72195	5225				0.149	0.863	Cylinder disc	Plain	
47	9315	89182	5169	5			0.105	0.783	Cylinder disc	Plain	From sieve
203	1503	80548	2461				0.103	0.541	Cylinder disc	Plain, medium large	As survives
209	1548	80186	2159				0.103	0.553	Cylinder disc	Plain, medium large	
209	1548	80254	2214	1			0.155	0.539	Cylinder disc	Double cone	
209	1548	80254	2214	2			0.158	0.512	Cylinder disc	Double cone	
209	1548	80255	2215	1		0.105	0.483		Cylinder disc	Plain, medium large	
209	1548	80255	2215	2			0.141	0.435	Cylinder disc	Double cone	
209	1548	80256	2216	1			0.155	0.533	Cylinder disc	Double cone	
209	1548	80256	2216	2			0.111	0.561	Cylinder disc	Cone	
209	1548	80304	2256				0.152	0.473	Cylinder disc	Double cone, medium large	
209	1548	80305	2257				0.125	0.518	Cylinder disc	Drilled at an angle, producing two half cones	
209	1548	80325	2273	1			0.156	0.531	Cylinder disc	Plain	
209	1548	80325	2273	2			0.115	0.484	Cylinder disc	Half-cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

209	1548	80326	2274				0.117	0.495	Cylinder disc	Plain, medium large	
209	1620	80358	2300				0.146	0.522	Cylinder disc	Drilled at an angle, producing two half cones	
209	1620	80361	2303				0.093	0.525	Cylinder disc	Plain, medium large	
209	1620	80390	2328				0.14	0.534	Cylinder disc	Double cone	
209	1620	80391	2330				0.093	0.574	Cylinder disc	Plain, medium large	
209	1630	80401	2337	1			0.141	0.433	Cylinder disc	Slight double cones, medium large	
209	1630	80401	2337	2			0.133	0.468	Cylinder disc	Slight cone	As survives
216	1592	80296	2247	1			0.104	0.703	Cylinder disc	Plain	
216	1592	80296	2247	2			0.137	0.501	Cylinder disc	Plain	
221	2589	80308	2260				0.095	0.558	Cylinder disc	Half-cone	
225	1628	80381	2318	1			0.144	0.468	Cylinder disc	Double cone	Tag says 2 beads, only one in bag
229	1585	80257	2217	1			0.166	0.816	Cylinder disc	Double cone	As survives
229	1585	80257	2217	2			0.167	1.089	Cylinder disc	Double cone	As survives
229	1585	80257	2217	3			0.189	0.878	Cylinder disc	Cone	As survives
229	1585	80257	2217	4			0.154	0.75	Cylinder disc	Double cone	As survives
229	1585	80257	2217	5			0.171	0.866	Cylinder disc	Double cone	As survives
229	1585	80257	2217	6			0.19	0.936	Cylinder disc	Cone	As survives
229	1585	80257	2217	7			0.17	0.865	Cylinder disc	Cone	As survives
229	1585	80257	2217	8			0.185	0.817	Cylinder disc	Cone	As survives
229	1585	80257	2217	9			0.176	0.844	Cylinder disc	Very slight cone	As survives
229	1585	80257	2217	10			0.183	0.882	Cylinder disc	Double cone	As survives
229	1585	80257	2217	11			0.159	0.739	Cylinder disc	Double cone	As survives
229	1585	80257	2217	12			0.168	0.75	Cylinder disc	Cone	As survives
229	1585	80257	2217	13			0.163	0.809	Cylinder disc	Cone	As survives
229	1585	80257	2217	14			0.154	0.643	Cylinder disc	Cone	As survives

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

229	1585	80257	2217	15			0.146	0.611	Cylinder disc	Cone	As survives
229	1585	80257	2217	16			0.164	0.719	Cylinder disc	Cone?	As survives
229	1585	80257	2217	17			0.171	0.56	Cylinder disc	Plain?	As survives
229	1600	80302	2254	1			0.18	0.636	Cylinder disc	Double cone	As survives
229	1600	80302	2254	2			0.143	0.778	Cylinder disc	Cone	As survives
229	1600	80302	2254	3			0.164	0.785	Cylinder disc	Cone	As survives
229	1600	80302	2254	4			0.188	0.833	Cylinder disc	Cone	As survives
229	1600	80302	2254	5			0.158	0.817	Cylinder disc	Cone	As survives
229	1600	80302	2254	6			0.186	0.772	Cylinder disc	Cone	As survives
229	1600	80302	2254	7			0.188	0.658	Cylinder disc	Slight cone	As survives
229	1600	80302	2254	8			0.179	0.667	Cylinder disc	Plain	As survives
229	1600	80302	2254	9			0.156	0.718	Cylinder disc	Plain	As survives
229	1600	80302	2254	10			0.181	0.685	Cylinder disc	Slight cone	As survives
230	1623	80379	2316	2			0.124	0.398	Cylinder disc	Plain, medium large	
237	1661	80510	2427				0.094	0.437	Cylinder disc	Plain	
241	1653	80479	2400				0.166	0.682	Cylinder disc	Drilled at an angle producing two half-cones, medium large	
243	1685	80594	2497				0.154	0.458	Cylinder disc	Double cone	Tag says 2 beads, only one in bag
243	1694	80732	2589				0.163	0.431	Cylinder disc	Double cone	
243	1694	80733	2590				0.172	0.613	Cylinder disc	Double cone, medium large	
245	1688	80596	2499				0.172	0.573	Cylinder disc	Slight cone	
246	1652	80655	2523				0.079	0.379	Cylinder disc	Plain, medium large	
251	1732	40041	2651	2			0.163	0.451	Cylinder disc	Double cones	
252	1741	40040	2660	1			0.104	0.789	Cylinder disc	Plain, medium large	
252	1741	40040	2660	2			0.159	0.731	Cylinder disc	Plain	As survives
252	1748	80815	2659	2			0.141	0.902	Cylinder disc	Plain	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

252	1748	80815	2659	3			0.159	0.841	Cylinder disc	Slight cone	
252	1748	80815	2659	4			0.146	0.735	Cylinder disc	Cone	As survives
252	1748	80815	2659	5			0.157	0.803	Cylinder disc	Plain	As survives
252	1748	80815	2659	6			0.187	0.796	Cylinder disc	Cone	As survives
252	1748	80815	2659	7			0.096	0.624	Cylinder disc	Plain, medium large	
252	1748	80815	2659	8			0.096	0.62	Cylinder disc	Plain, medium large	
252	1748	80815	2659	9			0.176	0.834	Cylinder disc	Double cone	As survives
252	1748	80815	2659	10			0.144	0.623	Cylinder disc	Cone	As survives
253	1706	80736	2593				0.163	0.501	Cylinder disc	Double cone	
255	1523	80654	2522				0.149	0.484	Cylinder disc	Double cone	
257	1523	80735	2542				0.176	0.622	Cylinder disc	Double cone	
257	1722	80758	2610	3			0.181	0.611	Cylinder disc	Double cone	
257	1722	80758	2610	4			0.183	0.628	Cylinder disc	Double cone	
257	1722	80758	2610	5			0.17	0.603	Cylinder disc	Cone	
257	1722	80758	2610	6			0.158	0.535	Cylinder disc	Double cone	
257	1722	80758	2610	7			0.157	0.624	Cylinder disc	Double cone	
257	1722	80758	2610	8			0.151	0.528	Cylinder disc	Double cone	
257	1723	80793	2639				0.165	0.63	Cylinder disc	Cone	
257	1723	80793	2639				0.169	0.625	Cylinder disc	Cone	
257	1723	80793	2639				0.179	0.62	Cylinder disc	Cone	
257	1723	80793	2639				0.154	0.466	Cylinder disc	Cone	
257	1723	80793	2639				0.179	0.609	Cylinder disc	Drilled at an angle producing two half-cones	
257	1723	80793	2639				0.175	0.444	Cylinder disc	Double cone	
257	1723	80793	2639				0.171	0.534	Cylinder disc	Double cone	
257	1723	80793	2639				0.158	0.445	Cylinder disc	Cone	
257	1723	80793	2639				0.168	0.499	Cylinder disc	Double cone	
257	1723	80793	2639				0.159	0.461	Cylinder disc	Double cone	
257	1723	80846	2686	1			0.151	0.613	Cylinder disc	Cone	
257	1723	80846	2686	2			0.169	0.529	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

257	1723	80846	2686	3			0.185	0.602	Cylinder disc	Cone	
257	1753	80882	2720		1.062	0.999	0.543		Short cylinder	Ellipsoid, medium large	Rounded
311	2174	86445	2776				0.1	0.506	Cylinder disc	Plain, medium large	
337	3071	86854	2927				0.184	0.74	Cylinder disc bead	Double cone; 0.351, 0.333 to 0.144	Small disc bead
340	9144	70222	3169	3			0.17	0.637	Cylinder disc bead	Plain; 0.249	Wear on one edge
345	3053	89200	3119	12			0.152	0.499	Barrel disc	Cone; 0.290, 0.147	
345	3053	89200	3119	13			0.17	0.535	Barrel disc	Cone; 0.304 to 0.124	
345	3053	89200	3119	14			0.152	0.49	Barrel disc	Plain; 0.156	
345	3053	89200	3119	15			0.165	0.518	Barrel disc	Cone; 0.322 to 0.136	
345	3053	89200	3119	16			0.132	0.515	Barrel disc	Plain, 0.169	
345	3053	89200	3119	17			0.187	0.483	Barrel disc	Cone; 0.294 to 0.133	
345	3053	89200	3119	18			0.166	0.459	Barrel disc	Plain, 0.142	
345	3053	89200	3119	19			0.18	0.427	Cylinder disc	Plain, 0.158	
345	3053	89200	3119	20			0.155	0.415	Cylinder disc	Plain, 0.172	Not quite round
345	3053	89200	3119	21			0.126	0.416	Cylinder disc	Plain, 0.150	
345	3053	89200	3119	22			0.118	0.356	Cylinder disc	Plain, 0.131	Not quite round
346	3094	86997	3062				0.093	0.521	Cylinder disc	Plain, medium large	
351	9189	70147	3150				0.103	0.622	Cylinder disc	Plain, 0.223	
367	9209	70216	3165				0.158	0.481	Barrel disc	Double cone	Battered around edges
367	9209	70256	3191	1			0.159	0.573	Barrel disc	Cone	Battered around edges
367	9209	70256	3191	2			0.146	0.5	Barrel disc	Double cone	Battered around edges
367	9209	70256	3191	3			0.137	0.52	Barrel disc	Double cone	Battered around edges
367	9209	70256	3191	4			0.144	0.477	Barrel disc	Cone	Battered around edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

367	9209	70256	3191	5			0.139	0.501	Barrel disc	Plain	Battered around edges
367	9209	70256	3191	6			0.15	0.485	Barrel disc	Plain	Battered around edges
367	9209	70256	3191	7			0.142	0.469	Barrel disc	Double cone	Battered around edges
367	9209	70256	3191	8			0.15	0.456	Barrel disc	Plain	Battered around edges
367	9209	70256	3191	9			0.152	0.463	Barrel disc	Double cone	Battered around edges
367	9209	70256	3191	10			0.113	0.442	Barrel disc?	Plain	Battered around edges
367	9209	70256	3191	11			0.112	0.446	Barrel disc?	Plain	Battered around edges
367	9209	70256	3191	12			0.165	0.545	Barrel disc?	Plain	One side broken off, battered other edge
367	9209	70256	3191	13			0.113	0.446	Barrel disc?	Plain	One side broken off, battered other edge
367	9209	70256	3191	14			0.098	0.382	Barrel disc?	Plain	One side broken off, battered other edge
367	9209	89091	3168	1			0.144	0.474	Barrel disc?	Cone	Badly broken around edges, sieved from cist fill
367	9209	89091	3168	2			0.148	0.532	Barrel disc	Keyhole-shaped, angled on two sides, probably due to wear. Plain?	Battered around edges
367	9209	89091	3168	3			0.15	0.479	Barrel disc	Double cone	Battered around edges
367	9209	89091	3168	4			0.144	0.479	Barrel disc	Double cone	Battered around edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

367	9209	89091	3168	5			0.144	0.483	Barrel disc	Double cone	Battered around edges
367	9209	89091	3168	6			0.146	0.455	Barrel disc	Double cone	Battered around edges
371	0	86112	2570	1			0.114	0.507	Cylinder disc	Cone, medium large	
371	0	86112	2570	2			0.121	0.519	Cylinder disc	Cone, medium large	
371	0	86112	2570	3			0.125	0.616	Cylinder disc	Plain, medium large	
371	0	86112	2570	4			0.133	0.56	Cylinder disc	Plain, medium large	
371	0	86112	2570	5			0.128	0.568	Cylinder disc	Plain, medium large	Some flattening to sides—vaguely triangular
371	0	86112	2570	6			0.112	0.582	Cylinder disc	Plain, medium large	Slightly irregular
371	0	86112	2570	7			0.115	0.562	Cylinder disc	Very slight cone, medium large	Slightly irregular
371	0	86112	2570	8			0.133	0.53	Cylinder disc	Cone, medium large	
371	0	86112	2570	9			0.136	0.514	Cylinder disc	Plain, medium large	
371	0	86112	2570	10			0.115	0.564	Cylinder disc	Plain, medium large	
371	0	86112	2570	11			0.122	0.495	Cylinder disc	Very slight cone, medium large	
371	0	86112	2570	12			0.115	0.528	Cylinder disc	Very slight cone, medium large	
371	0	86112	2570	13			0.122	0.498	Cylinder disc	Plain, medium large	
371	0	86112	2570	14			0.129	0.466	Cylinder disc	Plain, medium large	
371	0	86112	2570	15			0.096	0.476	Cylinder disc	Plain, medium large	
371	0	86112	2570	16			0.134	0.454	Cylinder disc	Cone, medium large	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

500	2221	87126	4592				0.161	0.545	Truncated bicone disc	Double cone, one more pronounced	Broken on edges
500	2221	87144	4606				0.169	0.575	Barrel disc	Double cone, at angle one side	Battered around edges
500	2221	87145	4607				0.15	0.754	Truncated bicone disc	Cone	Battered around edges
500	2221	87223	4650				0.172	0.585	Pear-shaped disc	Double cone, one more pronounced	Broken around edges
500	2221	87242	4672				0.124	0.596	Barrel disc	Drilled at angle; half-cone either side	Battered around edges
500	2221	89012	4611	1			0.161	0.529	Pear-shaped disc	Double cone	Battered around edges, from sieve
500	2221	89012	4611	2			0.157	0.529	Barrel disc	Double cone; one side more pronounced	Battered around edges, from sieve
500	2265	87285	4699				0.165	0.601	Cylinder disc	Double cone; 0.323, 0.323 to 0.169	Battered on one side
500	2265	87287	4701	1			0.161	0.528	Pear-shaped disc	Double cone; 0.205, 0.235 to 0.159	Broken around edges
500	2265	87287	4701	2			0.159	0.518	Pear-shaped disc	Double cone 0.252, 0.270 to 0.143	Broken around edges
500	2265	87287	4701	3			0.167	0.528	Convex truncated bicone disc	Cone; 0.314 to 0.160	Battered around edges
500	2265	87318	4721	1			0.158	0.595	Barrel disc	Double cone; 0.268, 0.262 to 0.148	Broken around edges
500	2265	87318	4721	2			0.145	0.568	Convex truncated bicone disc	Cone; 0.247 to 0.177	Broken around edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

502	2219	87111	4579	1			0.96	0.466	Cylinder disc bead	Plain, 0.224 diameter	Small disc bead, some yellowish discoloration.
502	2219	87111	4579	2			0.121	0.498	Cylinder disc bead	Plain (but slight cone remains) diameter 0.275 one side, 0.203 the other.	Small disc bead.
502	2219	87111	4579	3			0.105	0.433	Cylinder disc bead	Plain (but slight cone remains) diameter 0.212 one side, 0.179 the other.	Small disc bead.
505	2278	87593	4878				0.116	0.612	Cylinder disc	Plain; 0.187	Badly broken on edges and one side
509	2234	87124	4590	2			0.152	0.349	Cylinder disc	plain, medium large	
509	2234	87124	4590	3			0.12	0.427	Cylinder disc	Plain, extra large	Ashy grey—burnt?
509	2234	87124	4590	29			0.114	0.86	Cylinder disc	Plain	
509	2234	87124	4590	30			0.119	0.916	Cylinder disc	Plain	
509	2234	87124	4590	31			0.116	0.871	Cylinder disc	Plain	
509	2234	87124	4590	32			0.111	0.833	Cylinder disc	Plain	
509	2234	87124	4590	33			0.121	0.867	Cylinder disc	Plain	
509	2234	87124	4590	34			0.108	0.793	Cylinder disc	Plain	
509	2234	87124	4590	35			0.107	0.868	Cylinder disc	Plain	
509	2234	87124	4590	36			0.113	0.837	Cylinder disc	Plain	
509	2234	87124	4590	37			0.147	0.299	Cylinder disc	Plain, extra large, 0.149	
509	2234	87124	4590	38			0.135	0.353	Cylinder disc	Cone, medium large, to 0.107	
511	2243	87164	4618	5			0.138	0.431	Cylinder disc	Plain	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

511	2243	87164	4618	6			0.153	0.356	Cylinder disc	Plain	
511	2243	87164	4618	7			0.088	0.346	Cylinder disc	Plain, large	
511	2243	87164	4618	8			0.138	0.354	Cylinder disc	Plain	
511	2243	87164	4618	9			0.149	0.316	Cylinder disc	Plain	
511	2243	87164	4618	10			0.122	0.349	Cylinder disc	Plain	
511	2243	87164	4618	11			0.161	0.366	Cylinder disc	Plain	
511	2243	87164	4618	12			0.129	0.314	Cylinder disc	Plain	
511	2243	87164	4618	13			0.15	0.314	Cylinder disc	Plain	
511	2243	87164	4618	14			0.068	0.336	Cylinder disc	Plain, large, 0.198	
515	2285	87718	4970				0.156	0.482	Cylinder disc bead	Drilled from one side at an angle; 0.271 diameter one side, 0.224 the other	Small disc bead
518	2277	87365	4746				0.133	0.501	Cylinder disc	Cone	
518	2277	87366	4747				0.118	0.589	Cylinder disc	Plain	As survives
518	2277	87433	4784				0.09	0.464	Cylinder disc	Plain, medium large	
518	2302	87511	4828				0.134	0.505	Cylinder disc	Plain	
518	2302	87518	4830				0.129	0.502	Cylinder disc	Half cone	
518	2302	87531	4841				0.108	0.458	Cylinder disc	Plain	
518	2302	87540	4848	1			0.124	0.526	Cylinder disc	Plain	
518	2302	87540	4848	2			0.125	0.518	Cylinder disc	Drilled on angle producing two very slight half-cones	
518	2302	87540	4848	3			0.1	0.427	Pear-shaped disc	Very slight cones	
518	2302	87540	4848	4			0.138	0.391	Cylinder disc	Cone	
518	2302	87545	4851				0.066	0.502	Cylinder disc	Plain, large	
518	2302	87546	4852				0.087	0.498	Cylinder disc	Plain	Edges don't survive
518	2302	87570	4864				0.117	0.607	Cylinder disc	Cone	
518	2302	87577	4870				0.097	0.433	Cylinder disc	Plain, large	Edges don't survive

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

518	2302	87591	4875				0.114	0.363	Cylinder disc	Double cone	Edges don't survive
518	2302	87600	4885				0.141	0.575	Cylinder disc	Half cone	
518	2302	87628	4905				0.151	0.455	Cylinder disc bead	Drilled from one side at an angle; 0.186 diameter one side, 0.253 the other	Small slightly irregular disc bead
518	2302	87637	4911				0.12	0.618	Cylinder disc	Drilled on angle producing two very slight half-cones	
518	2302	87650	4918				0.116	0.553	Cylinder disc	Plain	
518	2302	87689	4945				0.085	0.476	Cylinder disc	Plain, large	
518	2302	87690	4946				0.125	0.525	Cylinder disc	Cone	
518	2302	87704	4956				0.151	0.6	Cylinder disc	Cone	
518	2302	87705	4957				0.128	0.525	Cylinder disc	Plain	
518	2302	87706	4958				0.113	0.534	Cylinder disc	Half cone	
518	2302	87707	4959				0.104	0.462	Cylinder disc	Half cone	
518	2302	87708	4960				0.113	0.552	Cylinder disc	Plain	
518	2302	87709	4961				0.126	0.578	Cylinder disc	Drilled on angle producing two very slight half-cones	
518	2302	87710	4962				0.131	0.568	Barrel disc	Cone	
518	2302	87711	4963				0.156	0.576	Cylinder disc	Double cone	
518	2302	87713	4965				0.11	0.544	Cylinder disc	Drilled on angle producing two very slight half-cones	
518	2302	87724	4976				0.115	0.542	Cylinder disc	Double cone	
518	2302	87728	4979				0.111	0.569	Cylinder disc	Cone	
518	2302	89107	4876				0.127	0.516	Cylinder disc	Drilled both sides; larger hole one side: 0.266 / 0.205	From sieve

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

518	2302	89136	4917	2			0.116	0.54	Cylinder disc	Cone	
518	2302	89136	4917	3			0.129	0.494	Cylinder disc	Drilled on angle producing two very slight half-cones	
518	2302	89136	4917	4			0.089	0.384	Cylinder disc	Double cone	Edges don't survive
518	2302	89150	4980	1			0.12	0.56	Cylinder disc	Cone	From sieve
518	2302	89150	4980	2			0.093	0.422	Cylinder disc	Plain	From sieve
518	2302	89150	4980	3			0.126	0.445	Cylinder disc	Half cone	From sieve
518	2302	89150	4980	4			0.085	0.432	Cylinder disc	Cone	From sieve
518	2303	87462	4804	1			0.041	0.44	Cylinder disc	Cone	
518	2303	87462	4804	2			0.045	0.448	Cylinder disc	Cone	
518	2303	87462	4804	3			0.061	0.412	Cylinder disc	Very slight cone	
518	2303	87476	4809				0.094	0.539	Cylinder disc	Cone	
518	2303	87483	4814		0.418	0.345	0.164		Ovoid disc	Plain	
518	2303	87486	4819	1			0.073	0.384	Pear-shaped disc	Cone	
518	2303	87486	4819	2			0.066	0.344	Pear-shaped disc	Cone	
519	2277	87371	4751				0.104	0.399	Cylinder disc	Plain, medium large	
519	2277	87398	4765	1			0.127	0.441	Cylinder disc	Half cone	
519	2277	87398	4765	2			0.115	0.458	Cylinder disc	Cone	
519	2277	87400	4767				0.151	0.479	Cylinder disc	Double cone	
519	2277	87405	4771	1			0.124	0.529	Cylinder disc	Very slight cone	Diameter as survives
519	2277	87405	4771	2			0.119	0.575	Cylinder disc	Drilled at an angle creating two half-cones	Diameter as survives
519	2277	87411	4774	1			0.132	0.482	Cylinder disc	Very slight cones	
519	2277	87411	4774	2			0.153	0.522	Cylinder disc	Very slight cones	
519	2277	87411	4774	3			0.135	0.506	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

519	2277	87411	4774	4			0.117	0.521	Cylinder disc	Drilled at an angle, producing two half-cones	As survives
519	2277	87411	4774	5			0.118	0.618	Cylinder disc	Plain	As survives
519	2277	87411	4774	6			0.1	0.601	Cylinder disc	Slight cone	As survives
519	2277	87411	4774	7			0.113	0.621	Cylinder disc	Plain	As survives
519	2277	87411	4774	8			0.104	0.634	Cylinder disc	Plain	As survives
519	2277	87411	4774	9			0.103	0.648	Cylinder disc	Plain	As survives
519	2277	87411	4774	10			0.134	0.519	Cylinder disc	Plain	As survives
519	2277	87411	4774	11			0.083	0.653	Cylinder disc	Plain?	As survives
519	2277	87414	4777	1			0.155	0.51	Cylinder disc	Drilled at an angle producing two half-cones	
519	2277	87414	4777	2			0.109	0.686	Cylinder disc	?	As survives
519	2277	87415	4778	1			0.131	0.504	Cylinder disc	Oval, slight cone	
519	2277	87415	4778	2			0.116	0.485	Cylinder disc	Cone	
519	2277	87415	4778	3			0.113	0.434	Cylinder disc	Plain	As survives
519	2277	87415	4778	4			0.113	0.456	Cylinder disc	Plain	
519	2277	87415	4778	5			0.137	0.451	Cylinder disc	Plain	
519	2277	87415	4778	6			0.114	0.441	Cylinder disc	Cone	
519	2277	87415	4778	7			0.141	0.417	Cylinder disc	Cone	As survives
519	2292	87592	4881				0.151	0.727	Cylinder disc	Very slight cones	
519	2304	87487	4820				0.112	0.499	Cylinder disc bead	Double cone; 0.202, 0.206 to 0.167	Small ostrich eggshell disc bead
520	2328	89155	5040		0.754	0.704	0.141		Cylinder disc bead	Slight single cone, 0.274 one side, 0.237 the other	Yellow-white bead, battered on edges
521	2312	87536	4845	1			0.138	0.523	Cylinder disc bead	Plain, 0.152	
521	2312	87536	4845	2			0.163	0.403	Cylinder disc bead	Plain, 0.178	
521	2312	87536	4845	3			0.11	0.355	Cylinder disc bead	Plain, 0.148	Worn around edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

521	2312	87536	4845	4			0.106	0.354	Cylinder disc bead	Plain, 0.130	Chipped around edges
522	2305	87567	4862				0.173	0.675	Cylinder disc	Cone	
522	2323	87651	4920				0.158	0.747	Cylinder disc	Very slight cone	
522	2323	87679	4938				0.104	0.516	Cylinder disc	Plain	
522	2323	89138	4924	1			0.162	0.795	Cylinder disc	Drilled on angle producing two very slight half-cones	
522	2323	89138	4924	2			0.165	0.78	Cylinder disc	Cone	
522	2323	89138	4924	3			0.15	0.793	Cylinder disc	Drilled on angle producing two pronounced half-cones	
522	2323	89138	4924	4			0.156	0.771	Cylinder disc	Cone	
522	2323	89138	4924	5			0.142	0.751	Cylinder disc	Cone	
522	2323	89138	4924	6			0.118	0.48	Cylinder disc	Drilled on angle producing two pronounced half-cones	Edges do not survive
522	2323	89146	5007				0.152	0.788	Cylinder disc	Half-cone	
523	2207	87068	4550				0.161	0.749	Cylinder disc	Plain	
523	2244	87161	4617				0.194	0.767	Cylinder disc	Cone	As survives
523	2244	87179	4626				0.145	0.677	Cylinder disc	Double cone	
523	2244	87180	4627				0.121	0.449	Cylinder disc	Plain?	As survives
523	2244	87196	4641				0.159	0.725	Cylinder disc	Cone, half cone	
523	2291	87435	4786				0.175	0.687	Cylinder disc	Cone	
523	2291	87477	4810	2			0.158	0.752	Cylinder disc	Drilled at an angle creating two half-cones	
523	2291	87477	4810	3			0.135	0.716	Cylinder disc	Very slight cone	
523	2291	87477	4810	4			0.177	0.808	Cylinder disc	Cone	
523	2291	87477	4810	5			0.175	0.712	Cylinder disc	Plain	
523	2291	87477	4810	6			0.155	0.759	Cylinder disc	Very slight cones	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

523	2291	87477	4810	7			0.147	0.696	Cylinder disc	Slight cone	Diameter as survives
523	2291	87477	4810	8			0.142	0.707	Cylinder disc	Plain	Diameter as survives
523	2291	87484	4815	1			0.159	0.772	Cylinder disc	Plain	
523	2291	87484	4815	2			0.173	0.777	Cylinder disc	Cone	
523	2291	87484	4815	3			0.147	0.747	Cylinder disc	Plain	
523	2291	87484	4815	4			0.145	0.728	Cylinder disc	Drilled at an angle, producing two half-cones	
523	2291	87526	4836				0.153	0.669	Cylinder disc	Drilled at an angle, producing two half-cones	As survives
523	2291	87527	4837				0.151	0.557	Cylinder disc	Cone	As survives
523	2292	87590	4874				0.094	0.543	Cylinder disc	Plain, medium large	
523	2292	87597	4882				0.166	0.792	Cylinder disc	Cone	
523	2292	87601	4886				0.172	0.726	Cylinder disc	Cone	
523	2315	87548	4854				0.145	0.702	Cylinder disc	Very slight cone	Battered on edges
523	2315	87615	4898				0.154	0.734	Short cylinder	Drilled at angle creating two half-cones	
523	2315	87616	4899				0.144	0.746	Pear-shaped disc	Cone	
523	2315	87619	4901				0.171	0.786	Short barrel	Double cone	
523	2315	87630	4908				0.15	0.754	Pear-shaped disc	Drilled at angle creating two half-cones	Broken on edges
523	2315	87638	4912				0.153	0.718	Short barrel	Double cone	
523	2315	89139	4903	1			0.177	0.713	Cylinder disc	Double cone	Broken on edges
523	2315	89139	4903	2			0.184	0.737	Cylinder disc	Plain	Broken on edges
523	2315	89139	4903	3			0.157	0.727	Cylinder disc	Plain	Broken on edges
523	2315	89139	4903	4			0.161	0.699	Cylinder disc	One slight cone, one pronounced cone	Broken on edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

523	2315	89139	4903	5			0.162	0.738	Cylinder disc	Cone	Broken on edges
523	2315	89139	4903	6			0.079	0.497	Cylinder disc	Plain, large	Broken on edges
523	2315	89139	4903	7			0.109	0.513	Cylinder disc	Plain, large	Broken on edges
523	2315	89139	4903	8			0.115	0.506	Cylinder disc	At angle to produce two half-cones	Broken on edges
523	2326	87226	4977				0.146	0.786	Cylinder disc	Plain	One side white, other side yellow
523	2326	87652	4921				0.17	0.739	Cylinder disc	Plain	
523	2326	87653	4922				0.079	0.453	Cylinder disc?	Plain	
523	2326	87660	4926				0.153	0.701	Cylinder disc	Plain	
523	2326	87661	4927				0.107	0.506	Cylinder disc	Plain, large	Battered on edges
523	2326	87662	4928				0.191	0.786	Pear-shaped disc	Cone	Battered on edges
523	2326	87665	4929				0.159	0.729	Cylinder disc	Plain	
523	2326	87666	4930				0.17	0.71	Barrel disc	Double cone	Battered on edges
523	2326	87667	4931				0.096	0.528	Cylinder disc	Plain, large	
523	2326	87668	4932				0.144	0.698	Cylinder disc	Drilled on angle producing two half-cones	
523	2326	87673	4934				0.145	0.693	Cylinder disc	Drilled on angle producing two very slight half-cones	
523	2326	87680	4943				0.077	0.515	Cylinder disc	Plain, large, 0.226	
523	2326	87686	4942				0.155	0.743	Cylinder disc	Drilled on angle producing two half-cones	
523	2326	87687	4943				0.164	0.789	Cylinder disc	Cone one one side, half cone the other	
523	2326	87699	4953				0.168	0.709	Cylinder disc	Cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

523	2326	87714	4966				0.138	0.743	Cylinder disc	Plain	
523	2326	89140	4919	1			0.184	0.799	Cylinder disc	Cone	From sieve; battered on edges
523	2326	89140	4919	2			0.156	0.766	Cylinder disc	Drilled on angle producing two half-cones	White on rim, yellow in center
523	2326	89140	4919	3			0.164	0.698	Cylinder disc	Double cone	
523	2326	89140	4919	4			0.169	0.744	Cylinder disc	Drilled on angle producing two half-cones	
523	2326	89140	4919	5			0.148	0.679	Pear-shaped disc	Cone	
523	2326	89140	4919	6			0.184	0.72	Cylinder disc	Very slight cone	
523	2326	89140	4919	7			0.168	0.694	Cylinder disc	Double cone	
523	2326	89140	4919	8			0.155	0.699	Cylinder disc	Plain, oblong	Battered on edges
523	2326	89140	4919	9			0.134	0.725	Cylinder disc	Plain	
523	2326	89140	4919	10			0.15	0.718	Cylinder disc	Slight cone	
523	2326	89140	4919	11			0.142	0.69	Cylinder disc	Slight cone	
523	2326	89140	4919	12			0.145	0.7	Cylinder disc	Drilled on angle producing two half-cones	
523	2326	89140	4919	13			0.156	0.746	Cylinder disc	Drilled on angle producing two half-cones	
523	2326	89140	4919	14			0.119	0.506	Cylinder disc	Drilled on angle producing two half-cones	
523	2326	89140	4919	15			0.088	0.467	Cylinder disc	Plain, large	
523	2326	89140	4919	16			0.07	0.445	Cylinder disc?	Plain	
523	2326	89140	4919	17			0.069	0.405	Cylinder disc?	Plain	
523	2326	89147	4971				0.169	0.645	Cylinder disc	Drilled on angle producing two half-cones	
523 A	2342	87755	4990				0.108	0.531	Cylinder disc	Plain, large	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

523	2342	87781	5013				0.155	0.742	Cylinder disc	Cone	
523 A	2342	87756	4991				0.154	0.734	Cylinder disc	Plain	
523 A	2342	87757	4992				0.166	0.737	Cylinder disc	Double cone	
523 A	2342	87782	5014				0.165	0.7	Cylinder disc	Drilled on angle producing two very slight half-cones	
523 A	2342	87783	5015				0.17	0.744	Cylinder disc	Drilled on angle producing two very slight half-cones	
523 A	2342	87784	5016				0.111	0.504	Cylinder disc	Drilled on angle producing two very slight half-cones	
523 A	2342	87796	5028				0.095	0.486	Cylinder disc	Plain, large	
523 A	2342	89151	4999				0.082	0.471	Cylinder disc	Plain, large	
524	2291	87401	4768				0.177	0.789	Cylinder disc	Drilled at an angle creating two half-cones	
524	2331	87688	4944	1			0.325	0.142	Cylinder disc	Double cone, to 0.113	
524	2331	87688	4944	2			0.337	0.108	Cylinder disc	Double cone, to 0.113	
524	2331	87769	5002				0.346	0.145	Cylinder disc	Double cone	
524	2331	87770	5003				0.361	0.145	Cylinder disc	Cone	
524	2331	87886	5071		0.283		0.078		Cylinder disc	?	Extremely fragmentary; length is surviving diameter
524	2331	89149	5001	2			0.145	0.327	Short cylinder	Plain, medium large	
524	2331	89149	5001	3			0.137	0.353	Short cylinder	Plain, medium large	
525	2292	87571	4865	1			0.139	0.381	Cylinder disc	Plain, medium large	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

525	2292	87571	4865	2			0.142	0.42	Cylinder disc	Drilled at an angle creating two half-cones	
525	2292	87571	4865	3			0.132	0.365	Cylinder disc	Double cone	
525	2292	87571	4865	4			0.127	0.361	Cylinder disc	Cone, medium large	
525	2292	87571	4865	5			0.123	0.365	Cylinder disc	Cone, medium large	
525	2292	87571	4865	6			0.12	0.387	Cylinder disc	Cone, medium large	
525	2292	87571	4865	7			0.132	0.402	Cylinder disc	Plain, medium large	
525	2292	87571	4865	8			0.114	0.35	Cylinder disc	Plain, medium large	
525	2292	87571	4865	9			0.131	0.352	Cylinder disc	Cone, medium large	
525	2292	87571	4865	10			0.123	0.365	Cylinder disc	Cone, medium large	
525	2292	87571	4865	11			0.145	0.408	Cylinder disc	Plain, medium large	
525	2292	87571	4865	12			0.123	0.416	Cylinder disc	Plain, medium large	
525	2292	87571	4865	13			0.138	0.382	Cylinder disc	Plain, medium large	
525	2292	87571	4865	14			0.126	0.278	Cylinder disc	Plain, medium large	
525	2292	87571	4865	15			0.116	0.352	Cylinder disc	Cone, medium large	
525	2292	87571	4865	16			0.119	0.379	Cylinder disc	Plain, medium large	
525	2292	87571	4865	17			0.151	0.514	Cylinder disc	Cone, half cone	
525	2292	87571	4865	18			0.127	0.345	Cylinder disc	Plain, medium large	
525	2292	87571	4865	19			0.075	0.309	Cylinder disc	Plain, medium large	
525	2292	87571	4865	20			0.085	0.314	Cylinder disc	Plain, medium large	Diameter as survives
525	2292	87571	4865	21			0.116	0.351	Cylinder disc	Plain, medium large	Diameter as survives
525	2292	87571	4865	22			0.115	0.288	Cylinder disc	Plain, medium large	Diameter as survives

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

525	2292	87571	4865	23			0.129	0.372	Cylinder disc	Plain, medium large	Diameter as survives
525	2292	87573	4867				0.126	0.349	Cylinder disc	Cone	As survives
525	2292	87576	4869				0.13	0.393	Cylinder disc	Cone, medium large	
525	2332	87715	4967				0.148	0.41	Cylinder disc	Double cone	
525	2332	87717	4969				0.142	0.373	Cylinder disc	Cone then parallel	
525	2332	87727	4978				0.129	0.398	Cylinder disc	Cone	
525	2332	89145	4972	1			0.17	0.501	Cylinder disc	Double cone	From sieve
525	2332	89145	4972	2			0.11	0.376	Cylinder disc	Double cone	From sieve
525	2332	89145	4972	3			0.154	0.428	Cylinder disc	Very slight cone, to 0.191	From sieve
525	2340	87763	4996				0.131	0.395	Cylinder disc	Cone	
525	2340	87764	4997				0.146	0.477	Cylinder disc	Drilled on angle producing two slight half-cones	
525	2344	87771	5004				0.125	0.396	Cylinder disc	Drilled on angle producing two slight half-cones, medium large	
525	2344	87773	5006				0.159	0.406	Cylinder disc	Plain, medium large	
525	2344	87780	5012	1			0.149	0.504	Cylinder disc	Double cone	
525	2344	87780	5012	2			0.153	0.445	Cylinder disc	Cone	
525	2344	87780	5012	3			0.128	0.368	Cylinder disc	Drilled on angle producing two slight half-cones, medium large	
525	2344	87780	5012	4			0.081	0.264	Cylinder disc	Plain, medium large	
525	2344	89148	5017				0.073	0.259	Cylinder disc	Plain, large, 0.141	From sieve
526	2339	87795	5027				0.131	0.663	Cylinder disc bead	Plain; 0.219 diameter	Edge broken off

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

526	2366	87994	5117				0.157	0.666	Cylinder disc bead	Plain; 0.198 diameter	Edge broken off
531	2277	87367	4748				0.119	0.516	Cylinder disc	Cone	As survives
531	2277	87375	4755				0.077	0.588	Cylinder disc	?	As survives
531	2277	87376	4756				0.147	0.512	Cylinder disc	Cone	As survives
531	2277	87377	4757	1			0.108	0.516	Cylinder disc	Cone	
531	2277	87377	4757	2			0.126	0.594	Cylinder disc	Plain	As survives
531	2277	87377	4757	3			0.114	0.593	Cylinder disc	Plain	
531	2277	87377	4757	4			0.106	0.548	Cylinder disc	Plain	As survives
531	2277	87377	4757	5			0.127	0.499	Cylinder disc	Plain	
531	2277	87377	4757	6			0.125	0.527	Cylinder disc	Half-cone	
531	2277	87377	4757	7			0.124	0.419	Cylinder disc	Plain	As survives
531	2277	87377	4757	8			0.162	0.699	Cylinder disc	Plain, medium large	As survives
531	2277	87377	4757	9			0.113	0.588	Cylinder disc	Half-cone	As survives
531	2277	87377	4757	10			0.112	0.508	Cylinder disc	Cone	
531	2277	87377	4757	11			0.118	0.573	Cylinder disc	Plain	
531	2277	87377	4757	12			0.119	0.502	Cylinder disc	Cone	
531	2277	87377	4757	13			0.126	0.585	Cylinder disc	Plain	
531	2277	87377	4757	14			0.131	0.538	Cylinder disc	Plain	
531	2277	87377	4757	15			0.12	0.535	Cylinder disc	Plain	
531	2277	87377	4757	16			0.127	0.652	Cylinder disc	Plain	As survives
531	2277	87377	4757	17			0.105	0.637	Cylinder disc	Plain	As survives
531	2277	87377	4757	18			0.107	0.602	Cylinder disc	Plain	As survives
531	2277	87377	4757	19			0.104	0.655	Cylinder disc	Plain	As survives
531	2277	87377	4757	20			0.121	0.508	Cylinder disc	Plain	As survives
531	2277	87377	4757	21			0.119	0.543	Cylinder disc	Plain	As survives
531	2277	87377	4757	22			0.118	0.555	Cylinder disc	Cone	As survives
531	2277	87377	4757	23			0.12	0.47	Cylinder disc	?	As survives
531	2277	87413	4776	1			0.125	0.437	Cylinder disc	Plain, medium large	
531	2277	87413	4776	2			0.119	0.431	Cylinder disc	Very slight cones	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

531	2277	87413	4776	3			0.147	0.452	Cylinder disc	Drilled at an angle, producing two very slight half-cones	
531	2277	87413	4776	4			0.156	0.52	Cylinder disc	Very slight cone	As survives
532	2291	87464	4806				0.158	0.731	Cylinder disc	Slight cone	
532	2291	87507	4827				0.148	0.733	Cylinder disc	Cone	Diameter as survives
532	2357	87818	5036				0.159	0.7	Cylinder disc	Cone	
532	2357	87829	5042				0.148	0.748	Cylinder disc	Cone	
532	2357	87847	5050				0.152	0.732	Cylinder disc	Cone	
532	2357	87848	5051				0.122	0.492	Cylinder disc	Drilled on angle producing two very slight half-cones	
532	2357	87885	5070	1			0.161	0.75	Cylinder disc	Very slight cones	
532	2357	87885	5070	2			0.144	0.773	Cylinder disc	Cone	
532	2357	87885	5070	3			0.144	0.759	Cylinder disc	Drilled on angle producing two very slight half-cones	
532	2357	89154	5041	1			0.172	0.672	Cylinder disc	Double cone	From sieve
532	2357	89154	5041	2			0.168	0.761	Cylinder disc	Very slight cone	From sieve
532	2357	89154	5041	3			0.146	0.724	Cylinder disc	Drilled on angle producing two very slight half-cones	From sieve
532	2357	89154	5041	4			0.16	0.692	Cylinder disc	Cone	From sieve; broken into three refitting pieces through perforation
532	2357	89163	5072	1			0.163	0.785	Cylinder disc	Cone	Slightly irregular, battered on edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

535	9338	72260	5259				0.148	0.729	Cylinder disc bead	Plain, bored at slight angle 0.291 one side, 0.272 the other	Slightly irregular or battered on edges
537	2254	87284	4698				0.118	0.936	Cylinder disc	Plain	
537	2254	87286	4700				0.133	0.582	Cylinder disc	Drilled at an angle creating two half-cones	
537	9300	72006	5126				0.138	0.681	Cylinder disc bead	Plain, 0.229 diameter	Slightly irregularly shaped
537	9300	89167	5150				0.141	0.938	Cylinder disc bead	Plain, 0.250 diameter	From sieve
543	2207	87067	4549				0.162	0.694	Cylinder disc	Double cone	
543	2244	87159	4615				0.151	0.785	Cylinder disc	Drilled at an angle creating two half-cones	
543	2244	87160	4616				0.097	0.538	Cylinder disc	Plain, medium large	
543	9313	89183	5166				0.146	0.715	Cylinder disc bead	Slight cone, 0.217 one side, 0.195 other	From sieve; perforation at slight angle, chipped on edges
544	9374	72281	5302				0.161	0.542	Cylinder disc	Cone	One side flattened
544	9381	72401	5310	1			0.158	0.533	Cylinder disc	Very slight cone	Battering to one side
544	9381	72401	5310	2			0.158	0.473	Cylinder disc	Very slight cone	Battering to one side
544	9381	72407	5314				0.144	0.546	Barrel disc	Plain	
544	9381	72408	5315	1			0.114	0.243	Short cylinder	Plain, 0.057	Tiny cylinder disc.

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

544	9381	72408	5315	2			0.13	0.255	Short cylinder	Plain, 0.085	Tiny cylinder
544	9381	72408	5315	3			0.119	0.276	Short cylinder	Plain, 0.084	Tiny cylinder
544	9381	72408	5315	4			0.109	0.269	Short cylinder	Plain, 0.100	Tiny cylinder
544	9381	72408	5315	5			0.127	0.294	Short cylinder	Plain, 0.106	Tiny cylinder
544	9381	72408	5315	6			0.101	0.294	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	7			0.124	0.304	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	8			0.139	0.296	Short cylinder	Plain	Tiny cylinder .Wedge-shaped, thins to 0.120
544	9381	72408	5315	9			0.118	0.314	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	10			0.101	0.319	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	11			0.117	0.328	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	12			0.123	0.316	Short cylinder	Plain, 0.112	Tiny cylinder
544	9381	72408	5315	13			0.136	0.315	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	14			0.138	0.33	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	15			0.151	0.429	Short cylinder	Plain, 0.181	Tiny cylinder
544	9381	72408	5315	16			0.135	0.423	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	17			0.245	0.471	Short cylinder	Plain	Tiny cylinder
544	9381	72408	5315	18			0.173	0.568	Barrel disc	Single cone	
544	9381	72408	5315	19			0.172	0.53	Barrel disc	Single cone	Damage around perforat oin
544	9381	72408	5315	20			0.176	0.59	Barrel disc	Single cone	
544	9381	72408	5315	21			0.17	0.542	Cylinder disc	Plain	
544	9381	72408	5315	22			0.146	0.532	Cylinder disc	Cone	
544	9381	72408	5315	23			0.18	0.601	Cylinder disc	Plain	Battered around edges
544	9381	72408	5315	24			0.173	0.529	Cylinder disc	Plain	Battered around edges
544	9381	72408	5315	25			0.184	0.544	Cylinder disc	Cone	
544	9381	72408	5315	26			0.16	0.511	Cylinder disc	Cone	Worn perforation and edges
544	9381	72408	5315	27			0.12	0.501	Cylinder disc	Plain	Worn perforation and edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

544	9381	72408	5315	28			0.15	0.441	Cylinder disc	Plain	
544	9381	72408	5315	29			0.15	0.441	Cylinder disc	Cone	Battered around edges
544	9381	72408	5315	30			0.122	0.365	Cylinder disc	Plain	Wedge, thins to 0.086
544	9381	72408	5315	31			0.123	0.294	Cylinder disc	Plain	
544	9381	72408	5315	32			0.118	0.325	Cylinder disc	Plain	
544	9381	72408	5315	33			0.148	0.308	Cylinder disc	Plain	
544	9381	72408	5315	34			0.122	0.319	Cylinder disc	Plain	
544	9381	72408	5315	35			0.126	0.284	Cylinder disc	Plain	
544	9381	72408	5315	36			0.11	0.302	Cylinder disc	Plain	
544	9381	72408	5315	37			0.103	0.296	Cylinder disc	Plain	
544	9381	72408	5315	38			0.117	0.268	Cylinder disc	Plain	
544	9381	72408	5315	39			0.124	0.278	Cylinder disc	Plain	
544	9381	72408	5315	40			0.087	0.248	Cylinder disc	Plain	
544	9381	72408	5315	41			0.108	0.255	Cylinder disc	Plain	
544	9381	72408	5315	42			0.136	0.262	Cylinder disc	Plain	
544	9381	72463	5320			0.235	0.147	0.258	Cylinder disc	Plain	One side flattened
544	9381	89226	5322				0.153	0.552	Cylinder disc	Very slight cone	
550	2201	87005	4503				0.161	0.528	Cylinder disc	Double cone	Diameter as survives
702	2400	88030	6516				0.15	0.762	Cylinder disc	Plain	Diameter as survives
703	2480	88385	6770	1			0.163	0.618	Cylinder disc	One pronounced, one smaller cone	
703	2480	88385	6770	2			0.152	0.603	Cylinder disc	One pronounced, one smaller cone	
703	2480	88385	6770	3			0.161	0.608	Cylinder disc	One pronounced, one smaller cone	
703	2480	88385	6770	4			0.175	0.608	Cylinder disc	Double cone	
703	2480	88385	6770	5			0.168	0.556	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

703	2480	88385	6770	6			0.175	0.569	Cylinder disc	Double cone	
703	2480	88385	6770	7			0.158	0.617	Cylinder disc	Double cone	
703	2480	88385	6770	8			0.163	0.599	Cylinder disc	Double cone	
703	2480	88385	6770	9			0.176	0.556	Cylinder disc	Double cone	
703	2480	88385	6770	10			0.178	0.611	Cylinder disc	Double cone	
703	2480	88385	6770	11			0.184	0.623	Cylinder disc	Double cone	
703	2480	88385	6770	12			0.148	0.624	Cylinder disc	Double cone	
703	2480	88385	6770	13			0.154	0.616	Cylinder disc	Cone	
703	2480	88385	6770	14			0.174	0.617	Cylinder disc	Double cone	
703	2480	88385	6770	15			0.163	0.558	Cylinder disc	Double cone	
703	2480	88385	6770	16			0.172	0.596	Cylinder disc	Double cone	
703	2480	88385	6770	17			0.175	0.558	Cylinder disc	Double cone	
703	2480	88385	6770	18			0.173	0.581	Cylinder disc	Double cone	
703	2480	88385	6770	19			0.142	0.541	Cylinder disc	Cone	
703	2480	88385	6770	20			0.185	0.544	Cylinder disc	Double cone	
703	2480	88385	6770	21			0.16	0.562	Cylinder disc	Double cone	
703	2480	88385	6770	22			0.164	0.572	Cylinder disc	Double cone	
703	2480	88385	6770	23			0.155	0.544	Cylinder disc	Double cone	
703	2480	88385	6770	24			0.166	0.535	Cylinder disc	Cone	
703	2480	88385	6770	25			0.172	0.573	Cylinder disc	Double cone	
703	2480	88385	6770	26			0.167	0.562	Cylinder disc	Double cone	
703	2480	88385	6770	27			0.17	0.545	Cylinder disc	Double cone	
703	2480	88385	6770	28			0.163	0.534	Cylinder disc	Double cone	
703	2480	88385	6770	29			0.159	0.5	Cylinder disc	Double cone	
703	2480	88385	6770	30			0.165	0.538	Cylinder disc	Double cone	
703	2480	88385	6770	31			0.152	0.569	Cylinder disc	Double cone	
703	2480	88385	6770	32			0.148	0.532	Cylinder disc	Double cone	
703	2480	88385	6770	33			0.151	0.575	Pear-shaped disc	Double cone	
703	2480	88385	6770	34			0.147	0.5	Cylinder disc	Double cone	
703	2480	88385	6770	35			0.183	0.502	Cylinder disc	Double cone	
703	2480	88385	6770	36			0.165	0.498	Cylinder disc	Cone	
703	2480	88385	6770	37			0.164	0.474	Pear-disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

703	2480	88385	6770	38			0.161	0.552	Cylinder disc	Double cone	
703	2480	88385	6770	39			0.17	0.48	Cylinder disc	Double cone	
703	2480	88385	6770	40			0.17	0.513	Cylinder disc	Cone	
703	2480	88385	6770	41			0.166	0.546	Cylinder disc	Cone	
703	2480	88385	6770	42			0.153	0.476	Cylinder disc	Double cone	
703	2480	88385	6770	43					Cylinder disc		Small bead fragments
704	2599	88956	7125				0.116	0.739	Cylinder disc	Plain	
704	2599	88982	7145				0.14	0.728	Cylinder disc	Plain	
705	2428	88189	6624				0.127	0.403	Cylinder disc	Double cone	
705	2428	88225	6650				0.172	0.81	Cylinder disc	Plain	Edges all broken, damange to perforation
705	2428	88227	6652				0.11	0.33	Cylinder disc	Plain, medium large	
705	2428	88232	6655				0.106	0.679	Cylinder disc	Plain, medium large	
705	2428	88234	6657	1			0.109	0.666	Cylinder disc	Plain, medium large	
705	2428	88234	6657	2			0.122	0.658	Cylinder disc	Plain, medium large	
705	2428	88235	6656				0.097	0.76	Cylinder disc	Plain	
705	2428	88237	6660				0.379	0.133	Cylinder disc	Drilled both sides, medium large	Slight ledge at holes' meeting
705	2428	89025	6627				0.765	0.112	Cylinder disc	Plain	
705	2428	89027	6615	1			0.105	0.732	Cylinder disc	Plain	
705	2428	89027	6615	2			0.089	0.734	Cylinder disc	Plain	
705	2466	88276	6686				0.132	0.355	Cylinder disc	Plain, medium large	Broken on edges
705	2466	88277	6687				0.116	0.773	Cylinder disc	Plain	
705	2466	88293	6703				0.098	0.737	Cylinder disc	Plain	All edges damaged; diameter is as remains

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

705	2466	88327	6729				0.103	0.794	Cylinder disc	Plain, medium large	
705	2466	88337	6734				0.107	0.82	Cylinder disc	Plain, medium large	
705	2466	88338	6735				0.102	0.477	Cylinder disc	Plain, medium large	Broken on edges
705	2466	88378	6764	1			0.761	0.09	Cylinder disc	Plain	
705	2466	88378	6764	2			0.611	0.142	Cylinder disc	Plain	
705	2466	88404	6785	1			0.12	0.634	Cylinder disc	Plain, medium large	
705	2466	88404	6785	2			0.057	0.364	Cylinder disc	Plain, medium large	Edges all broken; diameter as survives
705	2466	88404	6785	3			0.168	0.458	Cylinder disc	Double cone	Broken through perforation
705	2466	88411	6792	1			0.106	0.801	Cylinder disc	Plain, medium large	
705	2466	88411	6792	2			0.111	0.76	Cylinder disc	Plain, medium large	
705	2466	88411	6792	3			0.129	0.643	Cylinder disc	Plain, medium large	
705	2466	88411	6792	4			0.092	0.327	Cylinder disc	Plain, extra large	Edges all broken; diameter as survives
705	2466	88424	6799				0.125	0.394	Short cylinder	Plain, medium large	
705	2466	89074	6766				0.129	0.391	Cylinder disc	Plain, medium large	
706	2469	88294	6704	1			0.165	0.563	Cylinder disc	Cone; 0.215 to 0.142	Battered on edges; part snapped off
706	2469	88294	6704	2			0.15	0.621	Cylinder disc	Double cone; 0.274, 0.229 to 0.148	Battering to edges
706	2469	88306	6715				0.149	0.504	Cylinder disc	Cone; 0.286 to 0.180	Badly battered
706	2469	88369	6756				0.146	0.502	Cylinder disc	Cone; 0.278 to 0.141	Badly battered

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88433	6805	1			0.191	0.655	Cylinder disc	Double cone	
706	2480	88433	6805	2			0.194	0.617	Cylinder disc	Drilled at an angle, making two half-cones	
706	2480	88433	6805	3			0.174	0.632	Cylinder disc	Double cone	
706	2480	88433	6805	4			0.19	0.613	Cylinder disc	Double cone	
706	2480	88433	6805	5			0.186	0.624	Cylinder disc	Double cone	
706	2480	88433	6805	6			0.166	0.625	Cylinder disc	Double cone	
706	2480	88433	6805	7			0.177	0.631	Cylinder disc	Double cone	
706	2480	88433	6805	8			0.173	0.606	Cylinder disc	Cone	
706	2480	88433	6805	9			0.177	0.609	Cylinder disc	Double cone	
706	2480	88433	6805	10			0.188	0.629	Cylinder disc	Double cone	
706	2480	88433	6805	11			0.188	0.619	Cylinder disc	Cone	
706	2480	88433	6805	12			0.178	0.635	Cylinder disc	Double cone	
706	2480	88433	6805	13			0.178	0.652	Cylinder disc	Double cone	
706	2480	88433	6805	14			0.18	0.603	Cylinder disc	Double cone	
706	2480	88433	6805	15			0.178	0.623	Cylinder disc	Double cone	
706	2480	88433	6805	16			0.198	0.621	Cylinder disc	Double cone	
706	2480	88433	6805	17			0.153	0.631	Cylinder disc	Cone	
706	2480	88433	6805	18			0.179	0.653	Cylinder disc	Double cone	
706	2480	88433	6805	19			0.178	0.642	Cylinder disc	Cone, slight cone	
706	2480	88433	6805	20			0.165	0.646	Cylinder disc	Slight cone	
706	2480	88433	6805	21			0.17	0.63	Cylinder disc	Double cone	
706	2480	88433	6805	22			0.172	0.612	Cylinder disc	Double cone	
706	2480	88433	6805	23			0.179	0.626	Cylinder disc	Double cone	
706	2480	88433	6805	24			0.169	0.663	Cylinder disc	Cone	
706	2480	88433	6805	25			0.172	0.655	Cylinder disc	Double cone	
706	2480	88433	6805	26			0.188	0.633	Cylinder disc	Double cone	
706	2480	88433	6805	27			0.166	0.61	Cylinder disc	Double cone	
706	2480	88433	6805	28			0.177	0.613	Cylinder disc	Double cone	
706	2480	88433	6805	29			0.163	0.606	Cylinder disc	Double cone	
706	2480	88433	6805	30			0.169	0.619	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88433	6805	31			0.18	0.625	Cylinder disc	Double cone	
706	2480	88433	6805	32			0.176	0.602	Cylinder disc	Double cone	
706	2480	88433	6805	33			0.167	0.627	Cylinder disc	Cone, slight cone	
706	2480	88433	6805	34			0.172	0.635	Cylinder disc	Double cone	
706	2480	88433	6805	35			0.151	0.601	Cylinder disc	Cone	
706	2480	88433	6805	36			0.153	0.614	Cylinder disc	Cone	
706	2480	88433	6805	37			0.162	0.623	Cylinder disc	Double cone	
706	2480	88433	6805	38			0.176	0.611	Cylinder disc	Double cone	
706	2480	88433	6805	39			0.165	0.58	Cylinder disc	Double cone	
706	2480	88433	6805	40			0.156	0.629	Cylinder disc	Double cone	
706	2480	88433	6805	41			0.165	0.581	Cylinder disc	Cone	
706	2480	88433	6805	42			0.161	0.599	Cylinder disc	Double cone	
706	2480	88433	6805	43			0.165	0.616	Cylinder disc	Double cone	
706	2480	88433	6805	44			0.171	0.582	Cylinder disc	Drilled at an angle, making two half-cones	
706	2480	88433	6805	45			0.164	0.581	Cylinder disc	Double cone	
706	2480	88433	6805	46			0.164	0.584	Cylinder disc	Double cone	
706	2480	88433	6805	47			0.168	0.578	Cylinder disc	Drilled at an angle, making two half-cones	
706	2480	88433	6805	48			0.171	0.568	Cylinder disc	Double cone	
706	2480	88433	6805	49			0.173	0.597	Cylinder disc	Double cone	
706	2480	88433	6805	50			0.167	0.583	Cylinder disc	Double cone	
706	2480	88433	6805	51			0.134	0.629	Cylinder disc	Cone	
706	2480	88433	6805	52			0.164	0.6	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88433	6805	53			0.156	0.622	Cylinder disc	Drilled at an angle, making two half-cones	
706	2480	88433	6805	54			0.129	0.634	Cylinder disc	Drilled at an angle, making two half-cones	
706	2480	88433	6805	55			0.171	0.562	Cylinder disc	Double cone	
706	2480	88433	6805	56			0.112	0.503	Cylinder disc	Cone	Edges gone
706	2480	88433	6805	57			0.144	0.588	Cylinder disc	Cone	Edges gone
706	2480	88433	6805	58			0.116	0.637	Cylinder disc	Cone	One face eroded
706	2480	88433	6805	59			0.155	0.592	Cylinder disc	Cone	Edges gone, one face eroded
706	2480	88433	6805	60			0.11	0.595	Cylinder disc	Cone	Edges gone, one face eroded
706	2480	88471	6840	1			0.173	0.625	Cylinder disc	Double cone; 0.235 tapering to 0.171 hole one side, 0.326 the other.	First bead measured in long strand. Very delicate beads—areas around bead perforations likely worn away by use.
706	2480	88471	6840	2			0.172	0.596	Cylinder disc	Double cone, 0.300 one side, 0.286 the other, 0.198 hole	Some battering to edges
706	2480	88471	6840	3			0.188	0.625	Cylinder disc	Double cone, 0.301, 0.287 taper to 0.154	Some battering to edges
706	2480	88471	6840	4			0.17	0.63	Cylinder disc	Cone, 0.333 one side tapers to 0.196	Battering to edges and perforation

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	5			0.166	0.581	Cylinder disc	Double cone; 0.279, 0.291 tapering to 0.183	Battering to edges and perforation
706	2480	88471	6840	6			0.165	0.573	Cylinder disc	Double cone; 0.210, 0.249 taper to 0.179	Edges battered, part snapped off
706	2480	88471	6840	7			0.166	0.551	Cylinder disc	Double cone, 0.258, 0.308 taper to 0.160	Edges battered, part snapped off
706	2480	88471	6840	8			0.17	0.624	Cylinder disc	Double cone; 0.285, 0.235 taper to 0.158	Edges battered, part snapped off
706	2480	88471	6840	9			0.162	0.586	Cylinder disc	Double cone; 0.296, 0.296 taper to 0.203	Some battering to edges
706	2480	88471	6840	10			0.134	0.482	Cylinder disc	Plain, 0.201	Some battering to edges
706	2480	88471	6840	11			0.083	0.492	Cylinder disc	Plain, 0.251	Some battering to edges
706	2480	88471	6840	12			0.164	0.611	Cylinder disc	Cone, 0.232, .177	Some battering to edges
706	2480	88471	6840	13			0.176	0.578	Cylinder disc	Double cone, 0.222, 0.282 to 0.150	Some battering to edges
706	2480	88471	6840	14			0.152	0.61	Cylinder disc	Plain, 0.283, at angle	Some battering to edges
706	2480	88471	6840	15			0.174	0.567	Cylinder disc	Double cone, 0.283, 0.221 to 0.152	Some battering to edges
706	2480	88471	6840	16			0.172	0.603	Cylinder disc	Double cone, 0.319, 0.264 to 0.211	Battering to edges, side broken off
706	2480	88471	6840	17			0.196	0.6	Cylinder disc	Double cone, 0.262, 0.262 to 0.118	Some battering to edges
706	2480	88471	6840	18			0.137	0.629	Cylinder disc	Cone; 0.315 to 0.191	Some battering to edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	19			0.167	0.564	Cylinder disc	Double cone, 0.300, 0.307 to 0.172	Some battering to edges
706	2480	88471	6840	20			0.182	0.605	Cylinder disc	Double cone; 0.269, 0.269 to 0.137	Some battering to edges
706	2480	88471	6840	21			0.205	0.578	Cylinder disc	Double cone, 0.267, 0.285 to 0.140	Some battering to edges
706	2480	88471	6840	22			0.167	0.571	Cylinder disc	Cone; 0.282 to 0.170	Some battering to edges
706	2480	88471	6840	23			0.18	0.551	Cylinder disc	Double cone, 0.252, 0.273 to 0.168	Some battering to edges
706	2480	88471	6840	24			0.202	0.605	Cylinder disc	Double cone, 0.267, 0.284 to 0.194	Some battering to edges
706	2480	88471	6840	25			0.146	0.594	Cylinder disc	Double cone, 0.260, 0.224 to 0.144	Some battering to edges
706	2480	88471	6840	26			0.193	0.522	Cylinder disc	Double cone; 0.287, 0.287 to 0.163	Some battering to edges
706	2480	88471	6840	27			0.204	0.634	Cylinder disc	Double cone; 0.300, 0.274 to 0.190	Some battering to edges
706	2480	88471	6840	28			0.197	0.622	Cylinder disc	Pronounced cone, 0.374 to 0.220	Some battering to edges
706	2480	88471	6840	29			0.195	0.615	Cylinder disc	Double cone; 0.299, 0.300 to 0.154	Some battering to edges
706	2480	88471	6840	30			0.165	0.625	Cylinder disc	Plain; 0.224	Some battering to edges
706	2480	88471	6840	31			0.179	0.593	Cylinder disc	Plain at angle; 0.279, 0.241	Some battering to edges
706	2480	88471	6840	32			0.167	0.623	Cylinder disc	Double cone, 0.291, 0.291 to 0.187	Some battering to edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	33			0.118	0.502	Cylinder disc	Cone; 0.349 to 0.184	One face appears to be missing
706	2480	88471	6840	34			0.15	0.596	Cylinder disc	Cone; 0.282 to 0.158; but one face of bead seems to be missing	One face appears to be missing
706	2480	88471	6840	35			0.165	0.601	Cylinder disc	Double cone; 0.244, 0.283 to 0.150	Some battering to edges
706	2480	88471	6840	36			0.189	0.549	Cylinder disc	Double cone; 0.269, 0.291 to 0.156	Edges battered, part snapped off
706	2480	88471	6840	37			0.168	0.61	Cylinder disc	Cone; 0.310 to 0.165	Some battering to edges
706	2480	88471	6840	38			0.15	0.593	Cylinder disc	Double cone; 0.353, 0.277 to 0.182	Edges very badly battered
706	2480	88471	6840	39			0.163	0.582	Cylinder disc	Double cone; 0.227, 0.290 to 0.173	Edges battered, part snapped off
706	2480	88471	6840	40			0.178	0.587	Cylinder disc	Double cone; 0.221, 0.220 to 0.137	Some battering to edges
706	2480	88471	6840	41			0.195	0.621	Cylinder disc	Cone, 0.329 to 0.182	Some battering to edges
706	2480	88471	6840	42			0.176	0.572	Cylinder disc	Double cone; 0.267, 0.283 to 0.165	Some battering to edges
706	2480	88471	6840	43			0.179	0.61	Cylinder disc	Double cone; 0.280, 0.304 to 0.134	Some battering to edges
706	2480	88471	6840	44			0.175	0.587	Cylinder disc	Double cone; 0.295, 0.264 to 0.176	Some battering to edges
706	2480	88471	6840	45			0.18	0.618	Cylinder disc	Double cone; 0.274, 0.274 to 0.142	Some battering to edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	46			0.171	0.602	Cylinder disc	Double cone; 0.202, 0.219 to 0.150	Some battering to edges
706	2480	88471	6840	47			0.169	0.629	Cylinder disc	Cone; 0.334 to 0.153	Some battering to edges
706	2480	88471	6840	48			0.176	0.627	Cylinder disc	Double cone, 0.276, 0.276 to 0.167	Some battering to edges
706	2480	88471	6840	49			0.175	0.556	Cylinder disc	Double cone; 0.273, 0.238 to 0.163	Some battering to edges
706	2480	88471	6840	50			0.168	0.625	Cylinder disc	Double cone; 0.280, 0.305 to 0.189	Some battering to edges
706	2480	88471	6840	51			0.161	0.634	Cylinder disc	Cone; 0.296 to 0.138	Some battering to edges
706	2480	88471	6840	52			0.19	0.588	Cylinder disc	Cone; 0.275 to 0.238, but one side partially effaced	One side effaced
706	2480	88471	6840	53			0.161	0.547	Cylinder disc	Plain, 0.211, but one side effaced	One side effaced
706	2480	88471	6840	54			0.162	0.546	Cylinder disc	Plain, 0.195, but one side effaced	One side effaced
706	2480	88471	6840	55			0.159	0.586	Cylinder disc	Plain, 0.216	Some battering to edges
706	2480	88471	6840	56			0.159	0.495	Cylinder disc	Plain, 0.231	Some battering to edges
706	2480	88471	6840	57			0.169	0.571	Cylinder disc	Plain, 0.214	Some battering to edges
706	2480	88471	6840	58			0.174	0.631	Cylinder disc	Double cone; 0.264, 0.276 to 0.161	Some battering to edges
706	2480	88471	6840	59			0.166	0.495	Cylinder disc	Double cone; 0.221, 0.227 to 0.163	Some battering to edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	60			0.191	0.566	Cylinder disc	Double cone; 0.288, 0.266 to 0.106	Some battering to edges
706	2480	88471	6840	61			0.156	0.54	Cylinder disc	Plain, 0.230	Some battering to edges
706	2480	88471	6840	62			0.178	0.63	Cylinder disc	Cone; 0.240 to 0.146	Some battering to edges
706	2480	88471	6840	63			0.179	0.63	Cylinder disc	Double cone; 0.325, 0.315 to 0.153	Some battering to edges
706	2480	88471	6840	64			0.173	0.528	Cylinder disc	Plain; 0.203	Some battering to edges
706	2480	88471	6840	65			0.159	0.513	Cylinder disc	Cone; 0.242 to 0.144	Some battering to edges
706	2480	88471	6840	66			0.168	0.617	Cylinder disc	Cone; 0.236 to 0.147	Some battering to edges
706	2480	88471	6840	67			0.161	0.628	Cylinder disc	Cone; 0.90 to 0.166	Some battering to edges
706	2480	88471	6840	68			0.163	0.626	Cylinder disc	Double cone; 0.238, 0.279 to 0.153	Some battering to edges
706	2480	88471	6840	69			0.193	0.628	Cylinder disc	Double cone, 0.239, 0.343 to 0.15	Some battering to edges
706	2480	88471	6840	70			0.181	0.549	Cylinder disc	Double cone; 0.285, 0.310 to 0.147	Some battering to edges
706	2480	88471	6840	71			0.183	0.631	Cylinder disc	Double cone; 0.274, 0.311 to 0.158	Some battering to edges
706	2480	88471	6840	72			0.161	0.625	Cylinder disc	Cone; 0.256 to 0.157	Some battering to edges
706	2480	88471	6840	73			0.171	0.627	Cylinder disc	Double cone; 0.289, 0.301 to 0.161	Some battering to edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	74			0.162	0.535	Cylinder disc	Plain, 0.218	Some battering to edges
706	2480	88471	6840	75			0.168	0.485	Cylinder disc	Double cone; 0.298, 0.283 to 0.140	Some battering to edges
706	2480	88471	6840	76			0.191	0.629	Cylinder disc	Plain, 0.181	Some battering to edges
706	2480	88471	6840	77			0.184	0.585	Cylinder disc	Plain, 0.248	Some battering to edges
706	2480	88471	6840	78			0.173	0.619	Cylinder disc	Double cone, 0.205, 0.205 to 0.132	Some battering to edges
706	2480	88471	6840	79			0.18	0.625	Cylinder disc	Double cone; 0.321, 0.244 to 0.171	Some battering to edges
706	2480	88471	6840	80			0.164	0.625	Cylinder disc	Cone; 0.312 to 0.187	Some battering to edges
706	2480	88471	6840	81			0.141	0.59	Cylinder disc	Cone; 0.283 to 0.212	Some battering to edges
706	2480	88471	6840	82			0.158	0.507	Cylinder disc	Cone; 0.291 to 0.203	Some battering to edges
706	2480	88471	6840	83			0.171	0.544	Cylinder disc	Double cone; 0.291, 0.312 to 0.175	Some battering to edges
706	2480	88471	6840	84			0.149	0.599	Cylinder disc	Plain, 0.201	Some battering to edges
706	2480	88471	6840	85			0.142	0.555	Cylinder disc	Double cone; 0.259, 0.283 to 0.204	Some battering to edges
706	2480	88471	6840	86			0.186	0.594	Cylinder disc	Cone; 0.247 to 0.198	Some battering to edges
706	2480	88471	6840	87			0.166	0.57	Cylinder disc	Double cone; 0.282, 0.282 to 0.163	Some battering to edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	88			0.153	0.599	Cylinder disc	Cone; 0.265 to 0.150, but one side effaced	One side effaced
706	2480	88471	6840	89			0.156	0.623	Cylinder disc	Cone; 0.242 to 0.169	Some battering to edges
706	2480	88471	6840	90			0.139	0.507	Cylinder disc	Cone, 0.264 to 0.183, but one side effaced	One side effaced
706	2480	88471	6840	91			0.144	0.573	Cylinder disc	Cone, 0.260 to 0.190	Some battering to edges
706	2480	88471	6840	92			0.156	0.614	Cylinder disc	Cone; 0.292 to 0.194	Some battering to edges
706	2480	88471	6840	93			0.186	0.571	Cylinder disc	Double cone; 0.274, 0.311 to 0.191	Some battering to edges
706	2480	88471	6840	94			0.162	0.627	Cylinder disc	Cone; 0.216 to 0.151	Some battering to edges
706	2480	88471	6840	95			0.167	0.545	Cylinder disc	Cone; 0.257 to 0.160	Some battering to edges
706	2480	88471	6840	96			0.167	0.605	Cylinder disc	Cone; 0.309 to 0.203	Some battering to edges
706	2480	88471	6840	97			0.165	0.494	Cylinder disc	Double cone; 0.281, 0.259 to 0.169	Some battering to edges
706	2480	88471	6840	98			0.13	0.518	Cylinder disc	Plain; 0.182	Appears split in two
706	2480	88471	6840	99			0.141	0.571	Cylinder disc	Double cone; 0.298, 0.263 to 0.192	Some battering to edges
706	2480	88471	6840	100			0.167	0.592	Cylinder disc	Cone; 0.252, 0.139	Some battering to edges
706	2480	88471	6840	101			0.16	0.604	Cylinder disc	Double cone; 0.321, 0.346 to 0.155	Some battering to edges

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	102			0.171	0.518	Cylinder disc	Double cone; 0.276, 0.308 to 0.218	Some battering to edges
706	2480	88471	6840	103			0.173	0.562	Cylinder disc	Double cone; 0.251, 0.251 to 0.169	Some battering to edges
706	2480	88471	6840	104			0.17	0.562	Cylinder disc	Cone; 0.273 to 0.140	Some battering to edges
706	2480	88471	6840	105			0.169	0.57	Cylinder disc	Double cone; 0.339, 0.298 to 0.153	Some battering to edges
706	2480	88471	6840	106			0.156	0.566	Cylinder disc	Double cone; 0.270, 0.270 to 0.175	Some battering to edges
706	2480	88471	6840	107			0.176	0.625	Cylinder disc	Cone; 0.303 to 0.183	Some battering to edges
706	2480	88471	6840	108			0.159	0.53	Cylinder disc	Cone; 0.245 to 0.172	Some battering to edges
706	2480	88471	6840	109			0.17	0.593	Cylinder disc	Double cone; 0.291, 0.291 to 0.172	Some battering to edges
706	2480	88471	6840	110			0.16	0.615	Cylinder disc	Double cone; 0.286, 0.235 to 0.155	Some battering to edges
706	2480	88471	6840	111			0.186	0.564	Cylinder disc	Double cone at angle; 0.313, 0.274 to 0.145	Some battering to edges
706	2480	88471	6840	112			0.167	0.567	Cylinder disc	Double cone; 0.268, 0.303 to 0.182	Some battering to edges
706	2480	88471	6840	113			0.15	0.486	Cylinder disc	Cone; 0.300 to 0.224 but one side effaced	Split horizontally
706	2480	88471	6840	114			0.169	0.572	Cylinder disc	Cone; 0.226 to 0.160 but one side effaced	Split horizontally

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	115			0.184	0.516	Cylinder disc	Cone; 0.317 to 0.194	Some battering to edges
706	2480	88471	6840	116			0.17	0.601	Cylinder disc	Double cone; 0.304, 0.257 to 0.152	Some battering to edges
706	2480	88471	6840	117			0.159	0.525	Cylinder disc	Cone; 0.235 to 0.169	Some battering to edges
706	2480	88471	6840	118			0.184	0.514	Cylinder disc	Double cone; 0.248, 0.260 to 0.155	Some battering to edges
706	2480	88471	6840	119			0.165	0.582	Cylinder disc	Double cone at angle; 0.266, 0.237 to 0.175	Some battering to edges
706	2480	88471	6840	121			0.163	0.458	Cylinder disc	Double cone; 0.280, 0.273 to 0.170	Some battering to edges
706	2480	88471	6840	122			0.157	0.575	Cylinder disc	Cone; 0.261 to 0.155	Some battering to edges
706	2480	88471	6840	123			0.177	0.579	Cylinder disc	Double cone; 0.280, 0.280 to 0.125	Some battering to edges
706	2480	88471	6840	124			0.17	0.505	Cylinder disc	Double cone; 0.289, 0.266 to 0.174	Some battering to edges
706	2480	88471	6840	125			0.168	0.603	Cylinder disc	Cone; 0.323 to 0.172	Some battering to edges
706	2480	88471	6840	126			0.162	0.622	Cylinder disc	Cone; 0.258 to 0.209	Large part snapped off
706	2480	88471	6840	127			0.157	0.573	Cylinder disc	Cone; 0.288 to 0.256	Large part snapped off
706	2480	88471	6840	128			0.154	0.532	Cylinder disc	Cone; 0.226 to 0.136	Large part snapped off
706	2480	88471	6840	129			0.167	0.531	Cylinder disc	Double cone; 0.325, 0.320 to 0.177	Half broken away

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88471	6840	130			0.167	0.495	Cylinder disc	Double cone; 0.223, 0.392 to 0.103	Half broken away
706	2480	88471	6840	131			0.167	0.483	Cylinder disc	Double cone; 0.255, 0.251 to 0.176	Half broken away
706	2480	88471	6840	132			0.152	0.543	Cylinder disc	Plain? 0.230	More than half broken away
706	2480	88471	6840	133			0.08	0.57	Cylinder disc	Damaged	More than half broken away
706	2480	88471	6840	134			0.155	0.424	Cylinder disc	Damaged	More than half broken away
706	2480	88471	6840	135			0.15	0.409	Cylinder disc	Damaged	More than half broken away
706	2480	88471	6840	136			0.121	0.418	Cylinder disc	Damaged	More than half broken away
706	2480	88513	6872	1			0.172	0.621	Cylinder disc	Double cone	
706	2480	88513	6872	2			0.149	0.591	Cylinder disc	Double cone	
706	2480	88513	6872	3			0.155	0.605	Cylinder disc	Double cone	
706	2480	88513	6872	4			0.159	0.626	Cylinder disc	Double cone	
706	2480	88513	6872	5			0.176	0.593	Cylinder disc	Double cone	
706	2480	88513	6872	6			0.175	0.607	Cylinder disc	Double cone	
706	2480	88513	6872	7			0.168	0.589	Cylinder disc	Double cone	
706	2480	88513	6872	8			0.193	0.632	Cylinder disc	Double cone	
706	2480	88513	6872	9			0.17	0.598	Cylinder disc	Cone, half-cone	
706	2480	88513	6872	10			0.175	0.598	Cylinder disc	Double cone	
706	2480	88513	6872	11			0.178	0.615	Cylinder disc	Double cone	
706	2480	88513	6872	12			0.178	0.618	Cylinder disc	Double cone	
706	2480	88513	6872	13			0.179	0.522	Cylinder disc	Double cone	
706	2480	88513	6872	14			0.181	0.614	Cylinder disc	Double cone	
706	2480	88513	6872	15			0.178	0.616	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88513	6872	16			0.18	0.629	Cylinder disc	Double cone	
706	2480	88513	6872	17			0.202	0.601	Cylinder disc	Double cone	
706	2480	88513	6872	18			0.176	0.614	Cylinder disc	Double cone	
706	2480	88513	6872	19			0.184	0.629	Cylinder disc	Double cone	
706	2480	88513	6872	20			0.205	0.644	Cylinder disc	Double cone	
706	2480	88513	6872	21			0.161	0.602	Cylinder disc	Double cone	
706	2480	88513	6872	22			0.172	0.614	Cylinder disc	Double cone	
706	2480	88513	6872	23			0.178	0.597	Cylinder disc	Double cone	
706	2480	88513	6872	24			0.183	0.636	Cylinder disc	Double cone	
706	2480	88513	6872	25			0.15	0.599	Cylinder disc	Double cone	
706	2480	88513	6872	26			0.193	0.605	Cylinder disc	Double cone	
706	2480	88513	6872	27			0.195	0.572	Cylinder disc	Double cone	
706	2480	88513	6872	28			0.166	0.607	Cylinder disc	Double cone	
706	2480	88513	6872	29			0.161	0.582	Cylinder disc	Cone	
706	2480	88513	6872	30			0.187	0.599	Cylinder disc	Double cone	
706	2480	88513	6872	31			0.16	0.617	Cylinder disc	Double cone	
706	2480	88513	6872	32			0.163	0.558	Cylinder disc	Double cone	
706	2480	88513	6872	33			0.173	0.575	Cylinder disc	Double cone	
706	2480	88513	6872	34			0.166	0.575	Cylinder disc	Double cone	
706	2480	88513	6872	35			0.184	0.617	Cylinder disc	Double cone	
706	2480	88513	6872	36			0.172	0.63	Cylinder disc	Double cone	
706	2480	88513	6872	37			0.186	0.609	Cylinder disc	Double cone	
706	2480	88513	6872	38			0.163	0.627	Cylinder disc	Double cone	
706	2480	88513	6872	39			0.168	0.613	Cylinder disc	Cone	
706	2480	88513	6872	40			0.151	0.489	Cylinder disc	Double cone	
706	2480	88513	6872	41			0.181	0.613	Cylinder disc	Double cone	
706	2480	88513	6872	42			0.169	0.617	Cylinder disc	Plain?	
706	2480	88513	6872	43			0.187	0.621	Cylinder disc	Double cone	
706	2480	88513	6872	44			0.171	0.604	Cylinder disc	Double cone	
706	2480	88513	6872	45			0.169	0.607	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

706	2480	88513	6872	46			0.173	0.609	Cylinder disc	Drilled on an angle creating two prominent half cones	
706	2480	88513	6872	47			0.155	0.65	Cylinder disc	Double cone	
706	2480	88513	6872	48			0.163	0.516	Cylinder disc	Double cone	
706	2480	88513	6872	49			0.162	0.598	Cylinder disc	Double cone	
706	2480	88513	6872	50			0.164	0.606	Cylinder disc	Double cone	
706	2480	88513	6872	51			0.168	0.6	Cylinder disc	Double cone	
706	2480	88513	6872	52			0.182	0.62	Cylinder disc	Plain	
706	2480	88513	6872	53			0.15	0.587	Cylinder disc	Double cone	
706	2480	88513	6872	54			0.176	0.624	Cylinder disc	Double cone	
706	2480	88513	6872	55			0.155	0.581	Cylinder disc	Double cone	
706	2480	88513	6872	56			0.166	0.564	Cylinder disc	Double cone	
706	2480	88513	6872	57			0.176	0.617	Cylinder disc	Double cone	
706	2480	88513	6872	58			0.189	0.572	Cylinder disc	Double cone	
706	2480	88513	6872	59			0.166	0.583	Cylinder disc	Double cone	
706	2480	88513	6872	60			0.158	0.619	Cylinder disc	Cone	
706	2480	88513	6872	61			0.169	0.612	Cylinder disc	Double cone	
706	2480	88513	6872	62			0.174	0.617	Cylinder disc	Double cone	
706	2480	88513	6872	63			0.173	0.638	Cylinder disc	Double cone	
706	2480	88513	6872	64			0.169	0.606	Cylinder disc	Double cone	
706	2480	88513	6872	65			0.17	0.571	Cylinder disc	Double cone	
706	2480	88513	6872	66			0.167	0.578	Cylinder disc	Double cone	
706	2480	88513	6872	67			0.154	0.585	Cylinder disc	Double cone	
706	2480	88513	6872	68			0.18	0.525	Cylinder disc	Double cone	
706	2480	88513	6872	69			0.146	0.462	Cylinder disc	Double cone	
706	2480	88513	6872	70			0.168	0.638	Cylinder disc	Cone	
706	2480	88513	6872	71			0.106	0.506	Cylinder disc	Cone	
706	2480	88513	6872	72					Cylinder disc		Small bead fragments
709	2434	88139	6588				0.121	0.42	Cylinder disc	Plain	
709	2442	88150	6595				0.126	0.383	Cylinder disc	Double cone	

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

709	2442	88180	6620				0.144	0.402	Cylinder disc	Drilled at an angle, creating two half-cones	Nicely shaped
709	2442	88183	6622				0.142	0.421	Cylinder disc	Plain	Nicely shaped
709	2452	88213	6642				0.193	0.51	Cylinder disc	Double cone	
709	2452	88278	6690				0.124	0.363	Cylinder disc	Plain, medium large	
709	2473	88311	6717	2			0.091	0.389	Cylinder disc	Plain, medium large	Well-worked
709	2473	88311	6717	3			0.127	0.372	Cylinder disc	Plain, medium large	
709	2473	88311	6717	4			0.09	0.375	Cylinder disc	Plain, medium large	
709	2473	88311	6717	5			0.098	0.367	Cylinder disc	Plain, medium large	
710		89186	8561				0.216	0.613	Cylinder disc	Double cone	Shiny in spots
711	2490	88516	6874	3			0.076	0.555	Cylinder disc	Plain, medium large	
711	2536	88671	6952				0.15	0.451	Cylinder disc	Double cone	
715	2479	88574	6901	1			0.165	0.579	Barrel disc	Double cone	
715	2479	88574	6901	2			0.167	0.557	Barrel disc	Double cone	Battered on edges
715	2479	88574	6901	3			0.245	0.741	Barrel disc	Double cone	Battered on edges
715	2479	88574	6901	4			0.172	0.572	Barrel disc	Cone	
715	2479	88574	6901	5			0.168	0.716	Barrel disc	Cone	Battered on edges
715	2479	88574	6901	6			0.172	0.632	Barrel disc	One pronounced cone, one slight cone	Battered on edges
715	2497	88486	6852	1			0.177	0.779	Barrel disc	Double cone	Battered on edges
715	2497	88486	6852	2			0.19	0.746	Barrel disc	Double cone	Battered on edges
715	2497	88486	6852	3			0.174	0.634	Barrel disc	Double cone	Battered on edges
715	2497	88486	6852	4			0.163	0.664	Pear-shaped disc	?	Battered on edges and perforation

Table 6.39: Ostrich eggshell beads from Wadi Fidan 40, continued.

715	2497	88518	6876	1			0.176	0.748	Barrel disc	Double cone	
715	2497	88518	6876	2			0.175	0.654	Barrel disc	Double cone	Battered on edges and perforation
715	2497	88518	6876	3			0.18	0.625	Barrel disc	Double cone	Battered on edges
715	2497	88518	6876	4			0.163	0.716	Barrel disc	Double cone	Battered on edges
715	2497	88561	6889	1			0.174	0.73	Cylinder disc	Double cone	Battered on edges
715	2497	88561	6889	2			0.182	0.646	Barrel disc	Double cone	Battered on edges
715	2497	88561	6889	3			0.152	0.705	Barrel disc	Plain, large	Battered on edges
715	2526	88660	6946				0.173	0.608	Cylinder disc	Double cone	
715	2526	88676	6955				0.173	0.716	Cylinder disc	Double cone	
720	2516 or 2416	88653	6942				0.137	0.462	Cylinder disc	Double cone	
720	2516 or 2416	88654	6943				0.174	0.497	Cylinder disc	Double cone	
732	9607	89184	7135				0.173	0.658	Cylinder disc	Drilled at an angle, producing two half-cones	From sieve
734	9628	74020	7165				0.125	0.484	Cylinder disc	Plain, medium large	Perforation very regular
740	9666	74187	7249				0.12	0.342	Short barrel	Plain, medium large	

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Subnumeral	Shape
0	1520	80663	2529		Cylinder disc
21	452		1927		Cylinder disc
22	467		1952		Disc
22	467		1989	1	Cylinder disc
22	467		1989	2	Cylinder disc
22	467		1989	3	Cylinder disc
22	467		1989	4	Cylinder disc
22	467		1989	5	Cylinder disc
22	467		1989	6	Cylinder disc
22	467		1989	7	Cylinder disc
22	467		1989	8	Cylinder disc
22	467		1989	9	Cylinder disc
22	467		1989	10	Cylinder disc
22	467		1989	11	Cylinder disc
22	467		1989	12	Cylinder disc
22	467		1989	13	Cylinder disc
22	467		1989	14	Cylinder disc
22	467		1989	15	Cylinder disc
22	467		1989	16	Cylinder disc
22	467		1989	17	Cylinder disc
22	467		2003	3	Cylinder disc
22	467		2003	4	Cylinder disc
22	467		2003	5	Cylinder disc
22	467		2003	6	Cylinder disc
22	467		2003	7	Cylinder disc
22	467		2003	8	Cylinder disc
22	467		2003	9	Cylinder disc
22	467		2003	10	Cylinder disc
22	467		2003	11	Cylinder disc
22	467		2018		Cylinder disc
22	467		2039	1	Cylinder disc
22	467		2039	2	Cylinder disc
22	467		2043		Cylinder disc
22	467		1989b	3	Cylinder disc
22	467		1989b	4	Cylinder disc
22	467		1989b	5	Cylinder disc
22	467		1989b	6	Cylinder disc
22	467		1989b	7	Cylinder disc
22	467		1989b	8	Cylinder disc
22	467		1989b	9	Cylinder disc
22	467		1989b	10	Cylinder disc
22	467		1989b	11	Cylinder disc
22	467		1989b	12	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

22	467		1989b	13	Cylinder disc
22	467		1989b	14	Cylinder disc
22	467		1989b	15	Cylinder disc
22	467		1989b	16	Cylinder disc
22	467		1989b	17	Cylinder disc
22	467		1989b	18	Cylinder disc
22	467		1989b	19	Cylinder disc
22	467		1989b	20	Cylinder disc
22	467		1989b	21	Cylinder disc
22	467		1989b	22	Cylinder disc
22	467		1989b	23	Cylinder disc
22	467		1989b	24	Cylinder disc
22	467		1989b	25	Cylinder disc
22	467		1989b	26	Cylinder disc
22	467		1989b	27	Cylinder disc
22	467		1989b	28	Cylinder disc
22	467		1989b	29	Cylinder disc
22	467		1989b	30	Cylinder disc
22	467		1989b	31	Cylinder disc
26B	780		2553		Cylinder disc
28	778		2555		Cylinder disc
29	775		2559	28	Cylinder disc
29	775		2559	29	Cylinder disc
29	775		2559	30	Cylinder disc
29	775		2559	31	Cylinder disc
29	775		2559	32	Cylinder disc
29	775		2559	33	Cylinder disc
29	775		2559	34	Cylinder disc
29	775		2559	35	Cylinder disc
29	775		2559	36	Cylinder disc
29	775		2559	37	Cylinder disc
29	775		2559	38	Cylinder disc
29	775		2559	39	Cylinder disc
29	775		2559	40	Cylinder disc
29	775		2559	41	Cylinder disc
29	775		2559	42	Cylinder disc
29	775		2559	43	Cylinder disc
29	775		2559	44	Cylinder disc
29	775		2559	45	Cylinder disc
29	775		2559	46	Cylinder disc
29	775		2559	47	Cylinder disc
29	775		2559	48	Cylinder disc
29	775		2559	49	Cylinder disc
29	775		2559	50	Cylinder disc
29	775		2559	51	Cylinder disc
29	775		2559	52	Cylinder disc
29	775		2559	53	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

29	775		2559	54	Cylinder disc
29	775		2559	55	Cylinder disc
29	775		2559	56	Cylinder disc
29	775		2559	57	Cylinder disc
29	775		2559	58	Cylinder disc
29	775		2559	59	Cylinder disc
29	775		2559	60	Cylinder disc
29	775		2559	61	Cylinder disc
29	775		2559	62	Cylinder disc
29	775		2559	63	Cylinder disc
29	775		2559	64	Cylinder disc
29	775		2559	65	Cylinder disc
29	775		2559	66	Cylinder disc
29	775		2559	67	Cylinder disc
29	775		2559	68	Cylinder disc
29	775		2559	69	Cylinder disc
29	775		2559	70	Cylinder disc
29	775		2559	71	Cylinder disc
29	775		2559	72	Cylinder disc
29	775		2559	73	Cylinder disc
29	775		2559	74	Cylinder disc
29	775		2559	75	Cylinder disc
29	775		2559	76	Cylinder disc
29	775		2559	77	Cylinder disc
29	775		2559	78	Cylinder disc
29	775		2559	79	Cylinder disc
29	775		2559	80	Cylinder disc
29	775		2559	81	Cylinder disc
29	775		2559	82	Cylinder disc
29	775		2559	83	Cylinder disc
29	775		2559	84	Cylinder disc
29	775		2559	85	Cylinder disc
29	775		2559	86	Cylinder disc
29	775		2559	87	Cylinder disc
29	775		2559	88	Cylinder disc
29	775		2559	89	Cylinder disc
29	775		2559	90	Cylinder disc
29	775		2559	91	Cylinder disc
29	775		2559	92	Cylinder disc
29	775		2559	93	Cylinder disc
29	775		2559	94	Cylinder disc
29	775		2559	95	Cylinder disc
29	775		2559	96	Cylinder disc
29	775		2559	97	Cylinder disc
29	775		2559	98	Cylinder disc
29	775		2559	99	Cylinder disc
29	775		2559	100	Cylinder disc
29	775		2559	101	Cylinder disc
29	775		2559	102	Cylinder disc
29	775		2559	103	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

29	775		2559	104	Cylinder disc
29	775		2559	105	Cylinder disc
29	775		2559	106	Cylinder disc
29	775		2559	107	Cylinder disc
29	775		2559	108	Cylinder disc
29	775		2559	109	Cylinder disc
29	775		2559	110	Cylinder disc
29	775		2559	111	Cylinder disc
29	775		2559	112	Cylinder disc
29	775		2559	113	Cylinder disc
29	775		2559	114	Cylinder disc
29	775		2559	115	Cylinder disc
29	775		2559	116	Cylinder disc
29	775		2559	117	Cylinder disc
29	775		2559	118	Cylinder disc
29	775		2559	119	Cylinder disc
29	775		2559	120	Cylinder disc
29	775		2559	121	Cylinder disc
29	775		2559	122	Cylinder disc
29	775		2559	123	Cylinder disc
29	775		2559	124	Cylinder disc
29	775		2559	125	Cylinder disc
29	775		2559	126	Cylinder disc
29	775		2559	127	Cylinder disc
29	775		2559	128	Cylinder disc
29	775		2559	129	Cylinder disc
29	775		2559	130	Cylinder disc
29	775		2559	131	Cylinder disc
29	775		2559	132	Cylinder disc
29	775		2559	133	Cylinder disc
29	775		2559	134	Cylinder disc
29	775		2559	135	Cylinder disc
29	775		2559	136	Cylinder disc
29	775		2559	137	Cylinder disc
29	775		2559	138	Cylinder disc
29	775		2559	139	Cylinder disc
29	775		2559	140	Cylinder disc
29	775		2559	141	Cylinder disc
29	775		2559	142	Cylinder disc
29	775		2559	143	Cylinder disc
29	775		2559	144	Cylinder disc
29	775		2559	145	Cylinder disc
29	775		2559	146	Cylinder disc
29	775		2559	147	Cylinder disc
29	775		2559	148	Cylinder disc
29	775		2559	149	Cylinder disc
29	775		2559	150	Cylinder disc
29	775		2559	151	Cylinder disc
29	775		2559	152	Cylinder disc
29	775		2559	153	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

29	775		2559	154	Cylinder disc
29	775		2559	155	Cylinder disc
29	775		2559	156	Cylinder disc
29	775		2559	157	Cylinder disc
29	775		2559	158	Cylinder disc
29	775		2559	159	Cylinder disc
29	775		2559	160	Cylinder disc
29	775		2559	161	Cylinder disc
29	775		2559	162	Cylinder disc
29	775		2559	163	Cylinder disc
29	775		2559	164	Cylinder disc
29	775		2559	165	Cylinder disc
29	775		2559	166	Cylinder disc
29	775		2559	167	Cylinder disc
29	775		2559	168	Cylinder disc
29	775		2559	169	Cylinder disc
29	775		2559	170	Cylinder disc
29	775		2559	171	Cylinder disc
29	775		2559	172	Cylinder disc
29	775		2559	173	Cylinder disc
29	775		2559	174	Cylinder disc
29	775		2559	175	Cylinder disc
29	775		2559	176	Cylinder disc
29	775		2559	177	Cylinder disc
29	775		2559	178	Cylinder disc
29	775		2559	179	Cylinder disc
29	775		2559	180	Cylinder disc
29	775		2559	181	Cylinder disc
29	775		2559	182	Cylinder disc
29	775		2559	183	Cylinder disc
29	775		2559	184	Cylinder disc
29	775		2559	185	Cylinder disc
29	775		2559	186	Cylinder disc
29	775		2559	187	Cylinder disc
29	775		2559	188	Cylinder disc
29	775		2559	189	Cylinder disc
29	775		2559	190	Cylinder disc
29	775		2559	191	Cylinder disc
29	775		2559	192	Cylinder disc
29	775		2559	193	Cylinder disc
29	775		2559	194	Cylinder disc
29	775		2559	195	Cylinder disc
29	775		2559	196	Cylinder disc
29	775		2559	197	Cylinder disc
29	775		2559	198	Cylinder disc
29	775		2559	199	Cylinder disc
29	775		2559	200	Cylinder disc
29	775		2559	201	Cylinder disc
29	775		2559	202	Cylinder disc
29	775		2559	203	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

29	775		2559	204	Cylinder disc
29	775		2559	205	Cylinder disc
29	775		2559	206	Cylinder disc
29	775		2559	207	Cylinder disc
29	775		2559	208	Cylinder disc
29	775		2559	209	Cylinder disc
29	775		2559	210	Cylinder disc
29	775		2559	211	Cylinder disc
29	775		2559	212	Cylinder disc
30	821		2707	1	Cylinder disc
30	821		2707	2	Cylinder disc
30	821		2707	3	Cylinder disc
30	821		2707	4	Cylinder disc
30	821		2707	5	Cylinder disc
30	821		2707	6	Cylinder disc
30	821		2707	7	Cylinder disc
30	821		2707	8	Cylinder disc
30	821		2707	9	Cylinder disc
30	821		2707	10	Cylinder disc
30	821		2707	11	Cylinder disc
30	821		2707	12	Cylinder disc
30	821		2707	13	Cylinder disc
30	821		2707	14	Cylinder disc
30	821		2707	15	Cylinder disc
30	821		2707	16	Cylinder disc
30	821		2707	17	Cylinder disc
30	821		2707	18	Cylinder disc
30	821		2707	19	Cylinder disc
30	821		2707	20	Cylinder disc
30	821		2707	21	Cylinder disc
30	821		2707	22	Cylinder disc
30	821		2707	23	Cylinder disc
30	821		2707	24	Cylinder disc
30	821		2707	25	Cylinder disc
30	821		2707	26	Cylinder disc
30	821		2707	27	Cylinder disc
30	821		2707	28	Cylinder disc
30	821		2707	29	Cylinder disc
30	821		2707	30	Cylinder disc
30	821		2707	31	Cylinder disc
30	821		2707	32	Cylinder disc
30	821		2707	33	Cylinder disc
30	821		2707	34	Cylinder disc
30	821		2707	35	Cylinder disc
30	821		2707	36	Cylinder disc
30	821		2707	37	Cylinder disc
30	821		2707	38	Cylinder disc
30	821		2707	39	Cylinder disc
30	821		2707	40	Cylinder disc
30	821		2707	41	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

30	821		2707	42	Cylinder disc
30	821		2707	43	Cylinder disc
30	821		2707	44	Cylinder disc
30	821		2707	45	Cylinder disc
30	821		2707	46	Cylinder disc
30	821		2707	47	Cylinder disc
30	821		2707	48	Cylinder disc
30	821		2707	49	Cylinder disc
30	821		2707	50	Cylinder disc
30	821		2707	51	Cylinder disc
30	821		2707	52	Cylinder disc
30	821		2707	53	Cylinder disc
30	821		2707	54	Cylinder disc
30	821		2707	55	Cylinder disc
30	821		2707	56	Cylinder disc
30	821		2707	57	Cylinder disc
30	821		2707	58	Cylinder disc
30	821		2707	59	Cylinder disc
30	821		2707	60	Cylinder disc
30	821		2707	61	Cylinder disc
30	821		2707	62	Cylinder disc
30	821		2707	63	Cylinder disc
30	821		2707	64	Cylinder disc
30	821		2707	65	Cylinder disc
30	821		2707	66	Cylinder disc
30	821		2707	67	Cylinder disc
30	821		2707	68	Cylinder disc
30	821		2707	69	Cylinder disc
30	821		2707	70	Cylinder disc
30	821		2707	71	Cylinder disc
30	821		2707	72	Cylinder disc
30	821		2707	73	Cylinder disc
30	821		2707	74	Cylinder disc
30	821		2707	75	Cylinder disc
30	821		2707	76	Cylinder disc
30	821		2707	77	Cylinder disc
30	821		2707	78	Cylinder disc
30	821		2707	79	Cylinder disc
30	821		2707	80	Cylinder disc
30	821		2716	1	Cylinder disc
30	821		2716	2	Cylinder disc
30	821		2716	3	Cylinder disc
30	821		2716	4	Cylinder disc
30	821		2716	5	Cylinder disc
30	821		2716	6	Cylinder disc
30	821		2716	7	Cylinder disc
30	821		2716	8	Cylinder disc
30	821		2716	9	Cylinder disc
30	821		2716	10	Cylinder disc
30	821		2716	11	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

30	821		2716	12	Cylinder disc
30	821		2716	13	Cylinder disc
30	821		2716	14	Cylinder disc
30	821		2716	15	Cylinder disc
30	821		2716	16	Cylinder disc
30	821		2716	17	Cylinder disc
30	821		2716	18	Cylinder disc
30	821		2716	19	Cylinder disc
30	821		2716	20	Cylinder disc
30	821		2716	21	Cylinder disc
30	821		2716	22	Cylinder disc
30	821		2716	23	Cylinder disc
30	821		2716	24	Cylinder disc
30	821		2716	25	Cylinder disc
30	821		2716	26	Cylinder disc
30	821		2716	27	Cylinder disc
30	821		2716	28	Cylinder disc
30	821		2716	29	Cylinder disc
30	821		2716	30	Cylinder disc
30	821		2716	31	Cylinder disc
30	821		2716	32	Cylinder disc
30	821		2716	33	Cylinder disc
30	821		2716	34	Cylinder disc
30	821		2716	35	Cylinder disc
30	821		2716	36	Cylinder disc
30	821		2716	37	Cylinder disc
30	821		2716	38	Cylinder disc
30	821		2716	39	Cylinder disc
30	821		2716	40	Cylinder disc
30	821		2716	41	Cylinder disc
30	821		2716	42	Cylinder disc
30	821		2716	43	Cylinder disc
30	821		2716	44	Cylinder disc
30	821		2716	45	Cylinder disc
30	821		2716	46	Cylinder disc
30	821		2716	47	Cylinder disc
30	821		2716	48	Cylinder disc
30	821		2716	49	Cylinder disc
31	801		2626		Cylinder disc
31	801		2656	1	Cylinder disc
31	801		2662	2	Cylinder disc
31	818		2695	1	Cylinder disc
31	818		2695	2	Cylinder disc
31	818		2695	3	Cylinder disc
31	818		2695	4	Cylinder disc
31	818		2704	1	Cylinder disc
31	818		2704	2	Cylinder disc
31	818		2704	3	Cylinder disc
31	818		2727	1	Cylinder disc
31	818		2727	2	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

31	818		2727	3	Cylinder disc
31	818		2727	4	Cylinder disc
31A	824		2713		Cylinder disc
60	467		2028	1	Cylinder disc
60	467		2028	2	Cylinder disc
66	787		2384		Cylinder disc
66	787		2611	1	Cylinder disc
66	787		2611	2	Cylinder disc
94	793		2637	2	Cylinder disc
94	793		2693	2	Cylinder disc
94	809		2653	4	Cylinder disc
94	809		2653	5	Cylinder disc
94	809		2653	6	Cylinder disc
94	809		2653	7	Cylinder disc
94	809		2653	8	Cylinder disc
94	809		2653	9	Cylinder disc
94	809		2653	10	Cylinder disc
94	809		2653	11	Cylinder disc
94	809		2653	12	Cylinder disc
94	809		2653	13	Cylinder disc
94	809		2653	14	Cylinder disc
94	809		2653	15	Cylinder disc
94	809		2653	16	Cylinder disc
94	809		2653	17	Cylinder disc
94	809		2653	18	Cylinder disc
94	809		2653	19	Cylinder disc
94	809		2653	20	Cylinder disc
94	809		2653	21	Cylinder disc
94	809		2653	22	Cylinder disc
94	809		2653	23	Cylinder disc
94	809		2653	24	Cylinder disc
94	809		2653	25	Cylinder disc
94	809		2653	26	Cylinder disc
94	809		2653	27	Cylinder disc
94	809		2653	28	Cylinder disc
94	809		2653	29	Cylinder disc
94	809		2653	30	Cylinder disc
94	809		2653	31	Cylinder disc
94	809		2653	32	Cylinder disc
94	809		2653	33	Cylinder disc
94	809		2653	34	Cylinder disc
94	809		2653	35	Cylinder disc
94	809		2653	36	Cylinder disc
94	809		2653	37	Cylinder disc
94	809		2653	38	Cylinder disc
94	809		2653	39	Cylinder disc
94	809		2653	40	Cylinder disc
94	809		2653	41	Cylinder disc
94	809		2653	42	Cylinder disc
94	809		2653	43	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

94	809		2653	44	Cylinder disc
94	809		2653	45	Cylinder disc
94	809		2653	46	Cylinder disc
94	809		2653	47	Cylinder disc
94	809		2653	48	Cylinder disc
94	809		2653	49	Cylinder disc
94	809		2653	50	Cylinder disc
94	809		2653	51	Cylinder disc
94	809		2653	52	Cylinder disc
94	809		2653	53	Cylinder disc
94	809		2653	54	Cylinder disc
94	809		2653	55	Cylinder disc
94	809		2653	56	Cylinder disc
94	809		2653	57	Cylinder disc
94	809		2653	58	Cylinder disc
94	809		2653	59	Cylinder disc
94	809		2653	60	Cylinder disc
94	809		2653	61	Cylinder disc
94	809		2653	62	Cylinder disc
94	809		2653	63	Cylinder disc
94	809		2653	64	Cylinder disc
94	809		2653	65	Cylinder disc
94	809		2653	66	Cylinder disc
94	809		2653	67	Cylinder disc
94	809		2653	68	Cylinder disc
94	809		2653	69	Cylinder disc
94	809		2653	70	Cylinder disc
94	809		2653	71	Cylinder disc
94	809		2653	72	Cylinder disc
94	809		2653	73	Cylinder disc
94	809		2653	74	Cylinder disc
94	809		2653	75	Cylinder disc
94	809		2653	76	Cylinder disc
94	809		2653	77	Cylinder disc
94	809		2653	78	Cylinder disc
94	809		2653	79	Cylinder disc
94	809		2653	80	Cylinder disc
94	809		2653	81	Cylinder disc
94	809		2653	82	Cylinder disc
94	809		2653	83	Cylinder disc
94	809		2653	84	Cylinder disc
94	809		2653	85	Cylinder disc
94	809		2653	86	Cylinder disc
94	809		2653	87	Cylinder disc
94	809		2653	88	Cylinder disc
94	809		2653	89	Cylinder disc
94	809		2653	90	Cylinder disc
94	809		2653	91	Cylinder disc
94	809		2653	92	Cylinder disc
94	809		2653	93	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

94	809		2653	94	Cylinder disc
94	809		2653	95	Cylinder disc
94	809		2653	96	Cylinder disc
94	809		2653	97	Cylinder disc
94	809		2653	98	Cylinder disc
94	809		2653	99	Cylinder disc
94	809		2653	100	Cylinder disc
94	809		2653	101	Cylinder disc
94	809		2653	102	Cylinder disc
94	809		2653	103	Cylinder disc
94	809		2653	104	Cylinder disc
94	809		2653	105	Cylinder disc
94	809		2653	106	Cylinder disc
94	809		2653	107	Cylinder disc
94	809		2653	108	Cylinder disc
94	809		2653	110	Cylinder disc
94	809		2653	111	Cylinder disc
94	809		2653	112	Cylinder disc
94	809		2653	113	Cylinder disc
94	809		2653	114	Cylinder disc
94	809		2653	115	Cylinder disc
94	809		2653	116	Cylinder disc
94	809		2653	117	Cylinder disc
94	809		2666	1	Cylinder disc
94	809		2666	2	Cylinder disc
94	809		2666	3	Cylinder disc
94	809		2666	4	Cylinder disc
94	809		2666	5	Cylinder disc
94	809		2666	6	Cylinder disc
94	809		2666	7	Cylinder disc
94	809		2666	8	Cylinder disc
94	809		2666	9	Cylinder disc
94	809		2666	10	Cylinder disc
94	809		2666	11	Cylinder disc
94	809		2666	12	Cylinder disc
94	809		2666	13	Cylinder disc
94	809		2666	14	Cylinder disc
94	809		2666	15	Cylinder disc
94	809		2666	16	Cylinder disc
94	809		2666	17	Cylinder disc
94	809		2666	18	Cylinder disc
94	809		2666	19	Cylinder disc
94	809		2666	20	Cylinder disc
94	809		2666	21	Cylinder disc
94	809		2666	22	Cylinder disc
94	809		2666	23	Cylinder disc
94	809		2666	24	Cylinder disc
94	809		2666	25	Cylinder disc
94	809		2666	26	Cylinder disc
94	809		2666	27	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

94	809		2666	28	Cylinder disc
94	809		2666	29	Cylinder disc
94	809		2666	30	Cylinder disc
94	809		2666	31	Cylinder disc
94	809		2666	32	Cylinder disc
94	809		2666	33	Cylinder disc
94	809		2666	34	Cylinder disc
94	809		2666	35	Cylinder disc
94	809		2666	36	Cylinder disc
94	809		2666	37	Cylinder disc
94	809		2666	38	Cylinder disc
94	809		2666	39	Cylinder disc
94	809		2666	40	Cylinder disc
94	809		2666	41	Cylinder disc
94	809		2666	42	Cylinder disc
94	809		2666	43	Cylinder disc
94	809		2674	1	Cylinder disc
94	809		2674	2	Cylinder disc
94	809		2674	3	Cylinder disc
94	809		2674	4	Cylinder disc
94	809		2674	5	Cylinder disc
94	809		2674	6	Cylinder disc
94	809		2674	7	Cylinder disc
94	809		2674	8	Cylinder disc
94	809		2674	9	Cylinder disc
94	809		2674	10	Cylinder disc
94	809		2674	11	Cylinder disc
94	809		2674	12	Cylinder disc
94	809		2674	13	Cylinder disc
94	809		2674	14	Cylinder disc
94	809		2674	15	Cylinder disc
94	809		2674	16	Cylinder disc
94	809		2674	17	Cylinder disc
94	809		2674	18	Cylinder disc
94	809		2674	19	Cylinder disc
94	809		2674	20	Cylinder disc
94	823		2700	1	Cylinder disc
94	823		2700	2	Cylinder disc
94	823		2700	3	Cylinder disc
94	823		2700	4	Cylinder disc
94	823		2700	5	Cylinder disc
94	823		2700	6	Cylinder disc
94	823		2700	7	Cylinder disc
94	823		2700	8	Cylinder disc
94	823		2700	9	Cylinder disc
94	823		2700	10	Cylinder disc
94	823		2700	11	Cylinder disc
94	823		2700	12	Cylinder disc
94	823		2700	13	Cylinder disc
94	823		2700	14	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

94	823		2700	15	Cylinder disc
94	823		2700	16	Cylinder disc
94	823		2700	17	Cylinder disc
94	823		2700	18	Cylinder disc
94	823		2700	19	Cylinder disc
94	823		2700	20	Cylinder disc
94	823		2709	1	Cylinder disc
94	823		2709	2	Cylinder disc
94	823		2709	3	Cylinder disc
94	823		2709	4	Cylinder disc
94	823		2709	5	Cylinder disc
94	823		2709	6	Cylinder disc
94	823		2709	7	Cylinder disc
94	823		2709	8	Cylinder disc
94	823		2709	9	Cylinder disc
94	823		2709	10	Cylinder disc
94	823		2709	11	Cylinder disc
94	823		2709	12	Cylinder disc
94	823		2709	13	Cylinder disc
94	823		2709	14	Cylinder disc
94	823		2709	15	Cylinder disc
94	823		2709	16	Cylinder disc
94	823		2709	17	Cylinder disc
94	823		2709	18	Cylinder disc
94	823		2709	19	Cylinder disc
94	823		2709	20	Cylinder disc
94	823		2709	21	Cylinder disc
94	823		2709	22	Cylinder disc
94	823		2724	1	Cylinder disc
94	823		2724	2	Cylinder disc
94	823		2724	3	Cylinder disc
94	823		2724	4	Cylinder disc
94	823		2724	5	Cylinder disc
94	823		2724	6	Cylinder disc
94	823		2724	7	Cylinder disc
94	823		2724	8	Cylinder disc
94	823		2724	9	Cylinder disc
94	823		2724	10	Cylinder disc
94	823		2724	11	Cylinder disc
94	823		2724	12	Cylinder disc
94	823		2724	13	Cylinder disc
94	823		2724	14	Cylinder disc
94	823		2724	15	Cylinder disc
94	823		2724	16	Cylinder disc
94	823		2724	17	Cylinder disc
94	823		2724	18	Cylinder disc
94	823		2724	19	Cylinder disc
94	823		2724	20	Cylinder disc
94	823		2724	21	Cylinder disc
94	823		2724	22	Cylinder disc

Table 6.40: Ostrich eggshell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs, continued.

94	823		2724	23	Cylinder disc
94	823		2724	24	Cylinder disc
94	823		2724	25	Cylinder disc
94	823		2724	26	Cylinder disc
94	823		2724	27	Cylinder disc
94	823		2724	28	Cylinder disc
94	823		2724	29	Cylinder disc
95	813		2661	2	Cylinder disc
95	813		2662	1	Cylinder disc
95	813		2662	2	Cylinder disc
95	813		2662	3	Cylinder disc
95	813		2680	2	Cylinder disc
95	820		2706	1	Cylinder disc
95	820		2706	2	Cylinder disc
95	820		2706	3	Cylinder disc
95	820		2706	4	Cylinder disc
95	823		2730	1	Cylinder disc
95	823		2730	2	Cylinder disc
95	823		2730	3	Cylinder disc
95	823		2730	4	Cylinder disc
95A	825		2719	4	Cylinder disc
95A	825		2719	5	Cylinder disc
100	822		2723	1	Cylinder disc
100	822		2723	2	Cylinder disc
101	814		2672	4	Cylinder disc
101	814		2672	5	Cylinder disc
107	542		2179		?Cylinder disc
107	557		3647	1	Cylinder disc
107	557		3647	2	Cylinder disc
107	557		3663	1	Cylinder disc
107	557		3663	2	Cylinder disc
109	547		3611		Cylinder disc
110	556		3611		Cylinder disc
209	1548	80265	2215	1	Cylinder disc
209	1548	80265	2215	2	Cylinder disc
225	1592	40045	2247	1	Cylinder disc
225	1592	40045	2247	2	Cylinder disc
523	2292	87596	4881		Cylinder disc
544	9374	72381	5302		Cylinder disc

MARINE SHELL

Several kinds of marine shell beads and pendants were found at Wadi Fidan 40, confected in different ways. Cowry shell beads were created by removing the back from the shell. Univalve shells were pierced, had their apexes cut off, or were sliced perpendicular to their natural openings and then polished. Finally, some beads and pendants were shaped from mother of pearl, obscuring their original form.

UNIDENTIFIED SHELL AND MOTHER OF PEARL

Some shells were shaped was by taking a long univalve and cutting it perpendicular to its axis, creating a disc bead with the shell's natural aperture rather than an artificial perforation serving to string it (Figs. 6.119, 6.120).

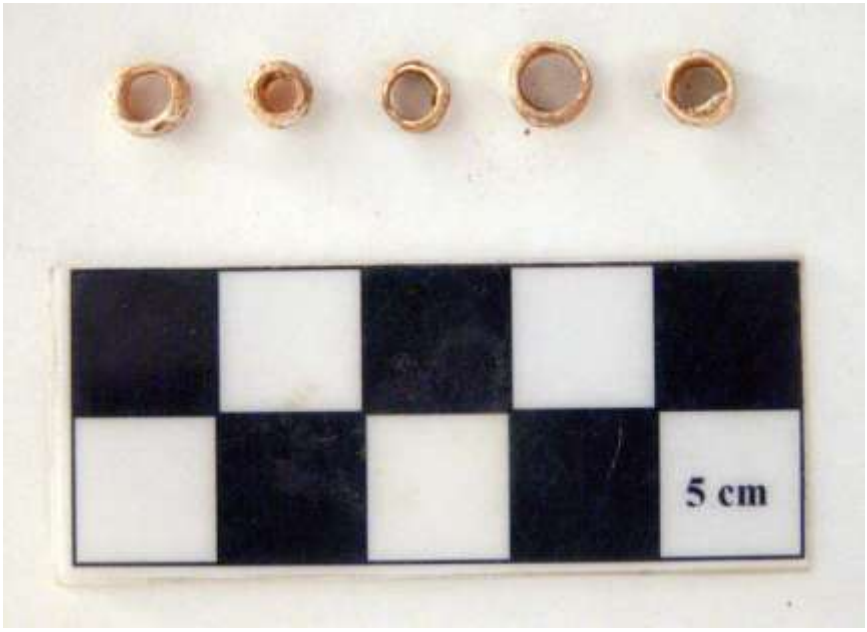


Figure 6.119: Tubular shell beads, taking advantage of their natural apertures, from Grave 524 (EDM 89152).



Figure 6.120: Tubular shell beads, taking advantage of their natural apertures, from Grave 25 (B. 3646).

Seven of the artifacts designated shell are so unusual or unique that they deserve special comment here. One is a pierced mother of pearl artifact (EDM 80425). It has one perforation, but next to this is the beginning of a second perforation which does not go all the way through the artifact (Fig. 6.121). One end of the artifact has a recent break; it is possible that the piece was once lenticular. Grave 210 was looted, and the human remains were badly fragmented; a single amazonite bead was the only other artifact found here. A second, much smaller lenticular or eye-shaped mother of pearl piece, pierced through the middle, was also found (EDM 88799), in Grave 725. This was the only artifact found with a juvenile's and a fragmentary infant's remains. A similar eye-shaped piece was found in Grave 505 (Fig. 6.122; EDM 87620). Each of these artifacts could have been hung as a pendant or could have been sewn onto clothing or otherwise displayed.



Figure 6.121: The mother of pearl artifact from Grave 210 (EDM 80425).



Figure 6.122: The mother of pearl artifact from Grave 725 (EDM 88799).

In Grave 22 a more robust piece three centimeter long, drilled at both ends, was uncovered (Fig. 6.123). This likely served as a spacer in a necklace or collar (B. 1977).

Grave 22 contained many other beads and the remains of an adult male, but unfortunately was robbed.



Figure 6.123: The mother of pearl artifact from Grave 22 (B. 1977).

A large shell pendant was recovered from Grave 94 (Fig. 6.124).



Figure 6.124: The mother of pearl pendant from Grave 94 (B. 2653).

Finally, in Grave 92 a very large (greater than 3 cm in diameter) shell disc bead was recovered (Fig. 6.125). This bead also had an unusually large perforation. It appears that the string was passed through this perforation and passed through the scarab, so that the scarab rested flat against this bead. The scarab could then be turned to face towards or away from the bead, revealing either the inscribed bottom or the rounded top.



Figure 6.125: The large disc bead found associated with the scarab in Grave 92 (B. 2154).

Most of the shell beads were simple cylinder, disc, and barrel beads (Tables 6.41, 6.42). Five hundred fifty-two of these are tiny beads of what is probably shell (Fig. 6.126). All but two of these were all found in the chest area in Grave 14. They may have been sewn onto a garment rather than worn as a necklace. The other two such beads were found in Grave 100, but that grave was highly disturbed and few other remains were

found associated with it. These beads appear to be identical to the tiny beads found at Wadi Fidan 4, Tomb 1.



Figure 6.126: The tiny shell beads from Grave 14, with some of the more finely made carnelian beads found in association with them (B. 2396).

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thickness	Diameter	Shape	Perforation	Description
0	2207	87078	4557				0.52	0.673	Short cylinder	Tubular	Opening probably natural
0	2444	89053	6673	2			0.301	0.736	?	Double cone	Shell drilled through, with all edges broken—as survives
0	0	A09F0039	A09L000				0.24	0.5	Short barrel	Natural hole, sliced through top of shell. 0.26 to 0.40.	White bead, perhaps formed by cutting the top off a shell. Hole appears to be natural. One face of bead is smooth, apparently the natural top of the shell, whie the other side is rougher, where the shell has been sliced through.
11	615		2262	3			0.158	0.378	Cylinder disc	Tubular	Uses natural perforation
11	615		2281	2			0.229	0.419	Short cylinder	Tubular	
11	615		2281	3			0.209	0.43	Short cylinder	Tubular	
12	604		2231	2			0.364	0.519	Short cylinder	Tubular	Uses natural perforation
14	601		2229	5			0.123	0.31	Cylinder disc	Plain, medium large, 0.133	White bead
14	616		2299				0.379	0.487	Short barrel	Tubular	Very well worked
14	628		2383	18			0.132	0.893	Cylinder disc	Plain	Uses natural hole, cut along spiral
14	628		2374	1			0.149	0.301	Short cylinder	Plain	
14	628		2374	2			0.106	0.302	Short cylinder	Plain	
14	628		2374	3			0.125	0.302	Short cylinder	Plain	
14	628		2374	4			0.12	0.3	Short cylinder	Plain	
14	628		2374	5			0.113	0.294	Short cylinder	Plain	
14	628		2374	6			0.125	0.289	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2374	7			0.125	0.285	Short cylinder	Plain	
14	628		2374	8			0.128	0.292	Short cylinder	Plain	
14	628		2374	9			0.115	0.287	Short cylinder	Plain	Broken through perforation
14	628		2383	20			0.09	0.311	Short cylinder	Plain	
14	628		2383	21			0.12	0.298	Short cylinder	Plain	
14	628		2383	22			0.116	0.292	Short cylinder	Plain	
14	628		2383	23			0.166	0.296	Short cylinder	Plain	
14	628		2383	24			0.113	0.29	Short cylinder	Plain	
14	628		2383	25			0.117	0.297	Short cylinder	Plain	
14	628		2383	26			0.133	0.305	Short cylinder	Plain	
14	628		2383	27			0.104	0.277	Short cylinder	Plain	
14	628		2383	28			0.107	0.273	Short cylinder	Plain	
14	628		2383	29			0.14	0.287	Short cylinder	Plain	
14	628		2383	30			0.137	0.296	Short cylinder	Plain	
14	628		2383	31			0.125	0.303	Short cylinder	Plain	
14	628		2383	32			0.108	0.287	Short cylinder	Plain	
14	628		2383	33			0.152	0.291	Short cylinder	Plain	
14	628		2383	34			0.116	0.305	Short cylinder	Plain	
14	628		2383	35			0.126	0.317	Short cylinder	Plain	
14	628		2383	36			0.136	0.282	Short cylinder	Plain	
14	628		2383	37			0.148	0.298	Short cylinder	Plain	
14	628		2383	38			0.133	0.298	Short cylinder	Plain	
14	628		2383	39			0.158	0.295	Short cylinder	Plain	
14	628		2383	40			0.133	0.287	Short cylinder	Plain	
14	628		2383	41			0.117	0.308	Short cylinder	Plain	
14	628		2383	42			0.14	0.314	Short cylinder	Plain	
14	628		2383	43			0.146	0.32	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2383	44			0.129	0.296	Short cylinder	Plain	
14	628		2383	45			0.119	0.307	Short cylinder	Plain	
14	628		2383	46			0.124	0.287	Short cylinder	Plain	
14	628		2383	47			0.172	0.296	Short cylinder	Plain	
14	628		2383	48			0.126	0.3	Short cylinder	Plain	
14	628		2383	49			0.121	0.29	Short cylinder	Plain	
14	628		2383	50			0.105	0.283	Short cylinder	Plain	
14	628		2383	51			0.146	0.299	Short cylinder	Plain	
14	628		2383	52			0.148	0.286	Short cylinder	Plain	
14	628		2383	53			0.092	0.303	Short cylinder	Plain	
14	628		2383	54			0.126	0.297	Short cylinder	Plain	
14	628		2383	55			0.164	0.294	Short cylinder	Plain	
14	628		2383	56			0.139	0.3	Short cylinder	Plain	
14	628		2383	57			0.12	0.305	Short cylinder	Plain	
14	628		2383	58			0.127	0.287	Short cylinder	Plain	
14	628		2383	59			0.123	0.295	Short cylinder	Plain	
14	628		2383	60			0.107	0.291	Short cylinder	Plain	
14	628		2383	61			0.111	0.31	Short cylinder	Plain	
14	628		2383	62			0.144	0.304	Short cylinder	Plain	
14	628		2383	63			0.105	0.3	Short cylinder	Plain	
14	628		2383	64			0.104	0.286	Short cylinder	Plain	
14	628		2383	65			0.13	0.303	Short cylinder	Plain	
14	628		2383	66			0.143	0.303	Short cylinder	Plain	
14	628		2383	67			0.153	0.299	Short cylinder	Plain	
14	628		2383	68			0.126	0.303	Short cylinder	Plain	
14	628		2383	69			0.117	0.273	Short cylinder	Plain	
14	628		2383	70			0.13	0.282	Short cylinder	Plain	Thins to 0.085 one side—not a wedge

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2383	71			0.13	0.292	Short cylinder	Plain	
14	628		2383	72			0.11	0.284	Short cylinder	Plain	Thins to 0.091 one side—not a wedge
14	628		2383	73			0.12	0.283	Short cylinder	Plain	
14	628		2383	74			0.102	0.312	Short cylinder	Plain	One side gone
14	628		2383	75			0.118	0.283	Short cylinder	Plain	broken through perforation —diameter as survives
14	628		2396	6			0.115	0.291	Short cylinder	Plain	Very nicely shaped round bead
14	628		2396	7			0.119	0.291	Short cylinder	Plain	
14	628		2396	8			0.127	0.3	Short cylinder	Plain	Chunk missing from side; measurements of full piece
14	628		2396	9			0.121	0.295	Short cylinder	Plain	
14	628		2396	10			0.113	0.303	Short cylinder	Plain	
14	628		2396	11			0.13	0.298	Short cylinder	Plain	
14	628		2396	12			0.128	0.29	Short cylinder	Plain	
14	628		2396	13			0.119	0.289	Short cylinder	Plain	
14	628		2396	14			0.099	0.296	Short cylinder	Plain	
14	628		2396	15			0.121	0.287	Short cylinder	Plain	
14	628		2396	16			0.151	0.298	Short cylinder	Plain	
14	628		2396	17			0.111	0.308	Short cylinder	Plain	
14	628		2396	18			0.125	0.316	Short cylinder	Plain	
14	628		2396	19			0.13	0.303	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2396	20			0.148	0.316	Short cylinder	Plain	
14	628		2396	21			0.097	0.282	Short cylinder	Plain	One edge flattened
14	628		2396	22			0.126	0.279	Short cylinder	Plain	
14	628		2396	23			0.142	0.305	Short cylinder	Plain	
14	628		2396	24			0.133	0.301	Short cylinder	Plain	
14	628		2396	25			0.14	0.288	Short cylinder	Plain	
14	628		2396	26			0.13	0.284	Short cylinder	Plain	
14	628		2396	27			0.14	0.303	Short cylinder	Plain	
14	628		2396	28			0.123	0.306	Short cylinder	Plain	
14	628		2396	29			0.139	0.296	Short cylinder	Plain	
14	628		2396	30			0.117	0.299	Short cylinder	Plain	
14	628		2396	31			0.15	0.303	Short cylinder	Plain	
14	628		2396	32			0.162	0.294	Short cylinder	Plain	
14	628		2396	33			0.151	0.294	Short cylinder	Plain	
14	628		2396	34			0.131	0.318	Short cylinder	Plain	
14	628		2396	35			0.14	0.302	Short cylinder	Plain	
14	628		2396	36			0.147	0.294	Short cylinder	Plain	
14	628		2396	37			0.108	0.265	Short cylinder	Plain	
14	628		2396	38			0.106	0.288	Short cylinder	Plain	
14	628		2396	39			0.13	0.317	Short cylinder	Plain	
14	628		2396	40			0.113	0.28	Short cylinder	Plain	
14	628		2396	41			0.117	0.3	Short cylinder	Plain	
14	628		2396	42			0.084	0.295	Short cylinder	Plain	
14	628		2396	43			0.138	0.306	Short cylinder	Plain	
14	628		2396	44			0.151	0.315	Short cylinder	Plain	
14	628		2396	45			0.122	0.298	Short cylinder	Plain	
14	628		2396	46			0.138	0.293	Short cylinder	Plain	
14	628		2396	47			0.153	0.275	Short cylinder	Plain	
14	628		2396	48			0.104	0.291	Short cylinder	Plain	
14	628		2396	49			0.109	0.294	Short cylinder	Plain	
14	628		2396	50			0.107	0.289	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2396	51			0.117	0.296	Short cylinder	Plain	
14	628		2396	52			0.114	0.294	Short cylinder	Plain	
14	628		2396	53			0.117	0.291	Short cylinder	Plain	
14	628		2396	54			0.161	0.316	Short cylinder	Plain	
14	628		2396	55			0.119	0.308	Short cylinder	Plain	
14	628		2396	56			0.11	0.305	Short cylinder	Plain	
14	628		2396	57			0.109	0.314	Short cylinder	Plain	
14	628		2396	58			0.133	0.287	Short cylinder	Plain	
14	628		2396	59			0.104	0.301	Short cylinder	Plain	
14	628		2396	60			0.129	0.307	Short cylinder	Plain	
14	628		2396	61			0.122	0.317	Short cylinder	Plain	
14	628		2396	62			0.123	0.295	Short cylinder	Plain	
14	628		2396	63			0.148	0.307	Short cylinder	Plain	
14	628		2396	64			0.126	0.315	Short cylinder	Plain	
14	628		2396	65			0.09	0.305	Short cylinder	Plain	
14	628		2396	66			0.11	0.286	Short cylinder	Plain	
14	628		2396	67			0.157	0.311	Short cylinder	Plain	
14	628		2396	68			0.13	0.309	Short cylinder	Plain	
14	628		2396	69			0.166	0.307	Short cylinder	Plain	
14	628		2396	70			0.136	0.31	Short cylinder	Plain	
14	628		2396	71			0.161	0.307	Short cylinder	Plain	
14	628		2396	72			0.126	0.293	Short cylinder	Plain	
14	628		2396	73			0.143	0.303	Short cylinder	Plain	
14	628		2396	74			0.142	0.277	Short cylinder	Plain	
14	628		2396	75			0.098	0.285	Short cylinder	Plain	
14	628		2396	76			0.138	0.299	Short cylinder	Plain	
14	628		2396	77			0.111	0.306	Short cylinder	Plain	
14	628		2396	78			0.137	0.307	Short cylinder	Plain	
14	628		2396	79			0.119	0.278	Short cylinder	Plain	
14	628		2396	80			0.142	0.316	Short cylinder	Plain	
14	628		2396	81			0.107	0.307	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2396	82			0.146	0.288	Short cylinder	Plain	
14	628		2396	83			0.136	0.303	Short cylinder	Plain	
14	628		2396	84			0.133	0.292	Short cylinder	Plain	
14	628		2396	85			0.092	0.273	Short cylinder	Plain	
14	628		2396	86			0.152	0.292	Short cylinder	Plain	
14	628		2396	87			0.134	0.296	Short cylinder	Plain	
14	628		2396	88			0.112	0.297	Short cylinder	Plain	
14	628		2396	89			0.105	0.305	Short cylinder	Plain	
14	628		2396	90			0.136	0.303	Short cylinder	Plain	
14	628		2396	91			0.142	0.306	Short cylinder	Plain	
14	628		2396	92			0.1	0.295	Short cylinder	Plain	
14	628		2396	93			0.11	0.305	Short cylinder	Plain	
14	628		2396	94			0.123	0.304	Short cylinder	Plain	
14	628		2396	95			0.1	0.279	Short cylinder	Plain	
14	628		2396	96			0.091	0.281	Short cylinder	Plain	
14	628		2396	97			0.104	0.296	Short cylinder	Plain	
14	628		2396	98			0.136	0.297	Short cylinder	Plain	
14	628		2396	99			0.101	0.299	Short cylinder	Plain	
14	628		2396	100			0.122	0.281	Short cylinder	Plain	
14	628		2396	101			0.107	0.303	Short cylinder	Plain	
14	628		2396	102			0.106	0.306	Short cylinder	Plain	
14	628		2396	103			0.129	0.319	Short cylinder	Plain	
14	628		2396	104			0.114	0.29	Short cylinder	Plain	
14	628		2396	105			0.118	0.291	Short cylinder	Plain	
14	628		2396	106			0.136	0.294	Short cylinder	Plain	
14	628		2396	107			0.09	0.281	Short cylinder	Plain	
14	628		2396	108			0.118	0.317	Short cylinder	Plain	
14	628		2396	109			0.099	0.301	Short cylinder	Plain	
14	628		2396	110			0.115	0.296	Short cylinder	Plain	
14	628		2396	111			0.129	0.31	Short cylinder	Plain	
14	628		2396	112			0.116	0.306	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2396	113			0.151	0.28	Short cylinder	Plain	
14	628		2396	114			0.1	0.299	Short cylinder	Plain	
14	628		2396	115			0.133	0.303	Short cylinder	Plain	
14	628		2396	116			0.099	0.31	Short cylinder	Plain	
14	628		2396	117			0.136	0.301	Short cylinder	Plain	
14	628		2396	118			0.111	0.31	Short cylinder	Plain	
14	628		2396	119			0.106	0.279	Short cylinder	Plain	
14	628		2396	120			0.113	0.3	Short cylinder	Plain	
14	628		2396	121			0.107	0.289	Short cylinder	Plain	
14	628		2396	122			0.136	0.297	Short cylinder	Plain	
14	628		2396	123			0.145	0.291	Short cylinder	Plain	
14	628		2396	124			0.11	0.281	Short cylinder	Plain	
14	628		2396	125			0.111	0.312	Short cylinder	Plain	
14	628		2396	126			0.113	0.306	Short cylinder	Plain	
14	628		2396	127			0.124	0.299	Short cylinder	Plain	
14	628		2396	128			0.151	0.28	Short cylinder	Plain	
14	628		2396	129			0.132	0.293	Short cylinder	Plain	
14	628		2396	130			0.126	0.307	Short cylinder	Plain	
14	628		2396	131			0.094	0.286	Short cylinder	Plain	
14	628		2396	132			0.113	0.297	Short cylinder	Plain	
14	628		2396	133			0.121	0.3	Short cylinder	Plain	
14	628		2396	134			0.184	0.304	Short cylinder	Plain	
14	628		2396	135			0.12	0.311	Short cylinder	Plain	
14	628		2396	136			0.128	0.301	Short cylinder	Plain	
14	628		2396	137			0.113	0.286	Short cylinder	Plain	
14	628		2396	138			0.132	0.283	Short cylinder	Plain	
14	628		2396	139			0.114	0.296	Short cylinder	Plain	
14	628		2396	140			0.123	0.296	Short cylinder	Plain	
14	628		2396	141			0.129	0.298	Short cylinder	Plain	
14	628		2396	142			0.112	0.299	Short cylinder	Plain	
14	628		2396	143			0.102	0.299	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2396	144			0.113	0.296	Short cylinder	Plain	
14	628		2396	145			0.106	0.284	Short cylinder	Plain	
14	628		2396	146			0.126	0.296	Short cylinder	Plain	
14	628		2396	147			0.11	0.291	Short cylinder	Plain	
14	628		2396	148			0.107	0.293	Short cylinder	Plain	
14	628		2396	149			0.123	0.286	Short cylinder	Plain	
14	628		2396	150			0.108	0.292	Short cylinder	Plain	
14	628		2396	151			0.125	0.307	Short cylinder	Plain	
14	628		2396	152			0.119	0.311	Short cylinder	Plain	
14	628		2396	153			0.106	0.301	Short cylinder	Plain	Broken through perforation
14	628		2396	154			0.156	0.298	Short cylinder	Plain	
14	628		2400	18			0.143	0.387	Short cylinder	Plain	
14	628		2400	19			0.156	0.391	Short cylinder	Plain	
14	628		2400	20			0.164	0.4	Short cylinder	Plain	
14	628		2400	21			0.113	0.303	Short cylinder	Plain	
14	628		2400	22			0.135	0.304	Short cylinder	Plain	
14	628		2400	23			0.048	0.214	Short cylinder	Plain	
14	628		2400	24			0.168	0.286	Short cylinder	Plain	
14	628		2400	25			0.121	0.331	Short cylinder	Plain	
14	628		2400	26			0.121	0.289	Short cylinder	Plain	
14	628		2400	27			0.114	0.294	Short cylinder	Plain	
14	628		2400	28			0.134	0.302	Short cylinder	Plain	
14	628		2400	29			0.149	0.285	Short cylinder	Plain	
14	628		2400	30			0.118	0.293	Short cylinder	Plain	Thins to 0.067
14	628		2400	31			0.119	0.297	Short cylinder	Plain	Striations on flat surfaces, likely from cutting.
14	628		2400	32			0.152	0.301	Short cylinder	Plain	
14	628		2400	33			0.137	0.292	Short cylinder	Plain	
14	628		2400	34			0.125	0.291	Short cylinder	Plain	
14	628		2400	35			0.106	0.308	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	36			0.122	0.309	Short cylinder	Plain	
14	628		2400	37			0.14	0.322	Short cylinder	Plain	
14	628		2400	38			0.165	0.306	Short cylinder	Plain	
14	628		2400	39			0.115	0.306	Short cylinder	Plain	
14	628		2400	40			0.112	0.292	Short cylinder	Plain	
14	628		2400	41			0.13	0.305	Short cylinder	Plain	
14	628		2400	42			0.146	0.279	Short cylinder	Plain	
14	628		2400	43			0.129	0.295	Short cylinder	Plain	
14	628		2400	44			0.142	0.31	Short cylinder	Plain	
14	628		2400	45			0.125	0.295	Short cylinder	Plain	
14	628		2400	46			0.142	0.319	Short cylinder	Plain	
14	628		2400	47			0.112	0.288	Short cylinder	Plain	
14	628		2400	48			0.125	0.297	Short cylinder	Plain	Thins to 0.096
14	628		2400	49			0.133	0.289	Short cylinder	Plain	
14	628		2400	50			0.114	0.309	Short cylinder	Plain	
14	628		2400	51			0.15	0.296	Short cylinder	Plain	
14	628		2400	52			0.109	0.299	Short cylinder	Plain	
14	628		2400	53			0.135	0.296	Short cylinder	Plain	
14	628		2400	54			0.137	0.288	Short cylinder	Plain	
14	628		2400	55			0.123	0.324	Short cylinder	Plain	
14	628		2400	56			0.178	0.292	Short cylinder	Plain	
14	628		2400	57			0.123	0.304	Short cylinder	Plain	
14	628		2400	58			0.094	0.272	Short cylinder	Plain	
14	628		2400	59			0.177	0.306	Short cylinder	Plain	
14	628		2400	60			0.151	0.29	Short cylinder	Plain	
14	628		2400	61			0.138	0.3	Short cylinder	Plain	
14	628		2400	62			0.152	0.298	Short cylinder	Plain	
14	628		2400	63			0.1	0.302	Short cylinder	Plain	
14	628		2400	64			0.116	0.301	Short cylinder	Plain	
14	628		2400	65			0.116	0.286	Short cylinder	Plain	
14	628		2400	66			0.129	0.289	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	67			0.149	0.294	Short cylinder	Plain	
14	628		2400	68			0.167	0.286	Short cylinder	Plain	
14	628		2400	69			0.115	0.305	Short cylinder	Plain	
14	628		2400	70			0.114	0.296	Short cylinder	Plain	
14	628		2400	71			0.112	0.301	Short cylinder	Plain	
14	628		2400	72			0.138	0.302	Short cylinder	Plain	
14	628		2400	73			0.148	0.309	Short cylinder	Plain	
14	628		2400	74			0.16	0.306	Short cylinder	Plain	
14	628		2400	75			0.115	0.302	Short cylinder	Plain	
14	628		2400	76			0.124	0.284	Short cylinder	Plain	
14	628		2400	77			0.135	0.308	Short cylinder	Plain	
14	628		2400	78			0.155	0.315	Short cylinder	Plain	
14	628		2400	79			0.119	0.311	Short cylinder	Plain	
14	628		2400	80			0.149	0.301	Short cylinder	Plain	
14	628		2400	81			0.111	0.305	Short cylinder	Plain	
14	628		2400	82			0.125	0.311	Short cylinder	Plain	
14	628		2400	83			0.126	0.299	Short cylinder	Plain	
14	628		2400	84			0.101	0.287	Short cylinder	Plain	
14	628		2400	85			0.122	0.304	Short cylinder	Plain	
14	628		2400	86			0.141	0.303	Short cylinder	Plain	
14	628		2400	87			0.139	0.212	Short cylinder	Plain	
14	628		2400	88			0.135	0.297	Short cylinder	Plain	
14	628		2400	89			0.135	0.295	Short cylinder	Plain	
14	628		2400	90			0.154	0.297	Short cylinder	Plain	
14	628		2400	91			0.134	0.302	Short cylinder	Plain	
14	628		2400	92			0.135	0.29	Short cylinder	Plain	
14	628		2400	93			0.129	0.3	Short cylinder	Plain	
14	628		2400	94			0.126	0.296	Short cylinder	Plain	
14	628		2400	95			0.129	0.317	Short cylinder	Plain	
14	628		2400	96			0.133	0.312	Short cylinder	Plain	
14	628		2400	97			0.123	0.29	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	98			0.133	0.292	Short cylinder	Plain	
14	628		2400	99			0.163	0.313	Short cylinder	Plain	
14	628		2400	100			0.117	0.3	Short cylinder	Plain	
14	628		2400	101			0.144	0.298	Short cylinder	Plain	
14	628		2400	102			0.106	0.3	Short cylinder	Plain	
14	628		2400	103			0.141	0.301	Short cylinder	Plain	
14	628		2400	104			0.143	0.279	Short cylinder	Plain	
14	628		2400	105			0.153	0.3	Short cylinder	Plain	
14	628		2400	106			0.121	0.299	Short cylinder	Plain	
14	628		2400	107			0.145	0.285	Short cylinder	Plain	
14	628		2400	108			0.128	0.298	Short cylinder	Plain	
14	628		2400	109			0.131	0.289	Short cylinder	Plain	
14	628		2400	110			0.157	0.298	Short cylinder	Plain	
14	628		2400	111			0.138	0.302	Short cylinder	Plain	
14	628		2400	112			0.142	0.287	Short cylinder	Plain	
14	628		2400	113			0.11	0.326	Short cylinder	Plain	
14	628		2400	114			0.119	0.301	Short cylinder	Plain	
14	628		2400	115			0.099	0.287	Short cylinder	Plain	
14	628		2400	116			0.157	0.304	Short cylinder	Plain	
14	628		2400	117			0.127	0.272	Short cylinder	Plain	
14	628		2400	118			0.155	0.304	Short cylinder	Plain	
14	628		2400	119			0.122	0.311	Short cylinder	Plain	
14	628		2400	120			0.095	0.295	Short cylinder	Plain	
14	628		2400	121			0.137	0.305	Short cylinder	Plain	
14	628		2400	122			0.115	0.299	Short cylinder	Plain	
14	628		2400	123			0.159	0.321	Short cylinder	Plain	
14	628		2400	124			0.135	0.294	Short cylinder	Plain	
14	628		2400	125			0.176	0.3	Short cylinder	Plain	
14	628		2400	126			0.146	0.295	Short cylinder	Plain	
14	628		2400	127			0.124	0.315	Short cylinder	Plain	
14	628		2400	128			0.085	0.311	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	129			0.093	0.291	Short cylinder	Plain	
14	628		2400	130			0.128	0.314	Short cylinder	Plain	
14	628		2400	131			0.14	0.306	Short cylinder	Plain	
14	628		2400	132			0.105	0.303	Short cylinder	Plain	
14	628		2400	133			0.125	0.294	Short cylinder	Plain	
14	628		2400	134			0.125	0.292	Short cylinder	Plain	
14	628		2400	135			0.115	0.295	Short cylinder	Plain	
14	628		2400	136			0.127	0.293	Short cylinder	Plain	
14	628		2400	137			0.111	0.29	Short cylinder	Plain	
14	628		2400	138			0.127	0.282	Short cylinder	Plain	
14	628		2400	139			0.108	0.295	Short cylinder	Plain	
14	628		2400	140			0.107	0.298	Short cylinder	Plain	
14	628		2400	141			0.104	0.3	Short cylinder	Plain	
14	628		2400	142			0.123	0.31	Short cylinder	Plain	
14	628		2400	143			0.126	0.294	Short cylinder	Plain	
14	628		2400	144			0.138	0.298	Short cylinder	Plain	
14	628		2400	145			0.129	0.292	Short cylinder	Plain	
14	628		2400	146			0.129	0.284	Short cylinder	Plain	
14	628		2400	147			0.132	0.301	Short cylinder	Plain	
14	628		2400	148			0.122	0.285	Short cylinder	Plain	
14	628		2400	149			0.141	0.306	Short cylinder	Plain	
14	628		2400	150			0.136	0.302	Short cylinder	Plain	
14	628		2400	151			0.152	0.292	Short cylinder	Plain	
14	628		2400	152			0.152	0.313	Short cylinder	Plain	
14	628		2400	153			0.118	0.293	Short cylinder	Plain	
14	628		2400	154			0.122	0.287	Short cylinder	Plain	
14	628		2400	155			0.17	0.312	Short cylinder	Plain	
14	628		2400	156			0.118	0.295	Short cylinder	Plain	
14	628		2400	157			0.116	0.305	Short cylinder	Plain	
14	628		2400	158			0.139	0.284	Short cylinder	Plain	
14	628		2400	159			0.113	0.33	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	160			0.146	0.301	Short cylinder	Plain	
14	628		2400	161			0.15	0.278	Short cylinder	Plain	
14	628		2400	162			0.135	0.293	Short cylinder	Plain	
14	628		2400	163			0.094	0.296	Short cylinder	Plain	
14	628		2400	164			0.136	0.305	Short cylinder	Plain	
14	628		2400	165			0.139	0.307	Short cylinder	Plain	
14	628		2400	166			0.124	0.304	Short cylinder	Plain	
14	628		2400	167			0.133	0.295	Short cylinder	Plain	
14	628		2400	168			0.098	0.288	Short cylinder	Plain	
14	628		2400	169			0.11	0.291	Short cylinder	Plain	
14	628		2400	170			0.128	0.297	Short cylinder	Plain	
14	628		2400	171			0.109	0.297	Short cylinder	Plain	
14	628		2400	172			0.105	0.283	Short cylinder	Plain	
14	628		2400	173			0.131	0.312	Short cylinder	Plain	
14	628		2400	174			0.151	0.288	Short cylinder	Plain	
14	628		2400	175			0.113	0.301	Short cylinder	Plain	
14	628		2400	176			0.119	0.296	Short cylinder	Plain	
14	628		2400	177			0.134	0.299	Short cylinder	Plain	
14	628		2400	178			0.11	0.293	Short cylinder	Plain	
14	628		2400	179			0.135	0.295	Short cylinder	Plain	
14	628		2400	180			0.104	0.285	Short cylinder	Plain	
14	628		2400	181			0.104	0.311	Short cylinder	Plain	
14	628		2400	182			0.136	0.3	Short cylinder	Plain	
14	628		2400	183			0.128	0.28	Short cylinder	Plain	
14	628		2400	184			0.143	0.313	Short cylinder	Plain	
14	628		2400	185			0.164	0.301	Short cylinder	Plain	Thins to 0.132
14	628		2400	186			0.113	0.28	Short cylinder	Plain	
14	628		2400	187			0.151	0.303	Short cylinder	Plain	
14	628		2400	188			0.113	0.301	Short cylinder	Plain	
14	628		2400	189			0.151	0.288	Short cylinder	Plain	
14	628		2400	190			0.104	0.312	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	191			0.128	0.292	Short cylinder	Plain	
14	628		2400	192			0.118	0.302	Short cylinder	Plain	
14	628		2400	193			0.144	0.303	Short cylinder	Plain	
14	628		2400	194			0.111	0.292	Short cylinder	Plain	
14	628		2400	195			0.1	0.313	Short cylinder	Plain	
14	628		2400	196			0.134	0.279	Short cylinder	Plain	
14	628		2400	197			0.12	0.275	Short cylinder	Plain	
14	628		2400	198			0.142	0.293	Short cylinder	Plain	
14	628		2400	199			0.112	0.312	Short cylinder	Plain	
14	628		2400	200			0.101	0.313	Short cylinder	Plain	
14	628		2400	201			0.125	0.285	Short cylinder	Plain	
14	628		2400	202			0.141	0.317	Short cylinder	Plain	
14	628		2400	203			0.118	0.301	Short cylinder	Plain	
14	628		2400	204			0.114	0.308	Short cylinder	Plain	
14	628		2400	205			0.114	0.317	Short cylinder	Plain	
14	628		2400	206			0.148	0.3	Short cylinder	Plain	
14	628		2400	207			0.138	0.305	Short cylinder	Plain	
14	628		2400	208			0.117	0.316	Short cylinder	Plain	
14	628		2400	209			0.118	0.294	Short cylinder	Plain	
14	628		2400	210			0.13	0.293	Short cylinder	Plain	
14	628		2400	211			0.117	0.281	Short cylinder	Plain	
14	628		2400	212			0.108	0.295	Short cylinder	Plain	
14	628		2400	213			0.155	0.305	Short cylinder	Plain	
14	628		2400	214			0.118	0.299	Short cylinder	Plain	
14	628		2400	215			0.144	0.291	Short cylinder	Plain	
14	628		2400	216			0.135	0.297	Short cylinder	Plain	
14	628		2400	217			0.113	0.278	Short cylinder	Plain	
14	628		2400	218			0.126	0.288	Short cylinder	Plain	
14	628		2400	219			0.109	0.295	Short cylinder	Plain	
14	628		2400	220			0.133	0.29	Short cylinder	Plain	
14	628		2400	221			0.146	0.298	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	222			0.16	0.288	Short cylinder	Plain	
14	628		2400	223			0.147	0.285	Short cylinder	Plain	
14	628		2400	224			0.129	0.283	Short cylinder	Plain	
14	628		2400	225			0.123	0.301	Short cylinder	Plain	
14	628		2400	226			0.111	0.286	Short cylinder	Plain	
14	628		2400	227			0.117	0.297	Short cylinder	Plain	
14	628		2400	228			0.143	0.289	Short cylinder	Plain	
14	628		2400	229			0.128	0.312	Short cylinder	Plain	
14	628		2400	230			0.092	0.306	Short cylinder	Plain	
14	628		2400	231			0.126	0.284	Short cylinder	Plain	
14	628		2400	232			0.123	0.317	Short cylinder	Plain	
14	628		2400	233			0.108	0.29	Short cylinder	Plain	
14	628		2400	234			0.137	0.302	Short cylinder	Plain	
14	628		2400	235			0.128	0.302	Short cylinder	Plain	
14	628		2400	236			0.129	0.3	Short cylinder	Plain	
14	628		2400	237			0.116	0.307	Short cylinder	Plain	
14	628		2400	238			0.146	0.295	Short cylinder	Plain	
14	628		2400	239			0.163	0.306	Short cylinder	Plain	
14	628		2400	240			0.126	0.292	Short cylinder	Plain	
14	628		2400	241			0.145	0.3	Short cylinder	Plain	
14	628		2400	242			0.132	0.29	Short cylinder	Plain	
14	628		2400	243			0.138	0.302	Short cylinder	Plain	
14	628		2400	244			0.138	0.295	Short cylinder	Plain	
14	628		2400	245			0.146	0.302	Short cylinder	Plain	
14	628		2400	246			0.134	0.284	Short cylinder	Plain	
14	628		2400	247			0.132	0.303	Short cylinder	Plain	
14	628		2400	248			0.149	0.302	Short cylinder	Plain	
14	628		2400	249			0.158	0.306	Short cylinder	Plain	
14	628		2400	250			0.139	0.315	Short cylinder	Plain	
14	628		2400	251			0.146	0.317	Short cylinder	Plain	
14	628		2400	252			0.123	0.306	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	253			0.105	0.301	Short cylinder	Plain	Thins to 0.076
14	628		2400	254			0.112	0.296	Short cylinder	Plain	
14	628		2400	255			0.112	0.297	Short cylinder	Plain	
14	628		2400	256			0.112	0.294	Short cylinder	Plain	
14	628		2400	257			0.107	0.303	Short cylinder	Plain	
14	628		2400	258			0.116	0.297	Short cylinder	Plain	
14	628		2400	259			0.111	0.292	Short cylinder	Plain	
14	628		2400	260			0.113	0.306	Short cylinder	Plain	
14	628		2400	261			0.154	0.292	Short cylinder	Plain	
14	628		2400	262			0.112	0.293	Short cylinder	Plain	
14	628		2400	263			0.123	0.307	Short cylinder	Plain	Thins to 0.085
14	628		2400	264			0.154	0.3	Short cylinder	Plain	
14	628		2400	265			0.115	0.306	Short cylinder	Plain	
14	628		2400	266			0.135	0.284	Short cylinder	Plain	Thins to 0.075
14	628		2400	267			0.129	0.291	Short cylinder	Plain	
14	628		2400	268			0.128	0.299	Short cylinder	Plain	
14	628		2400	269			0.113	0.304	Short cylinder	Plain	
14	628		2400	270			0.13	0.313	Short cylinder	Plain	
14	628		2400	271			0.104	0.305	Short cylinder	Plain	
14	628		2400	272			0.11	0.306	Short cylinder	Plain	
14	628		2400	273			0.113	0.296	Short cylinder	Plain	
14	628		2400	274			0.124	0.295	Short cylinder	Plain	
14	628		2400	275			0.114	0.298	Short cylinder	Plain	
14	628		2400	276			0.141	0.284	Short cylinder	Plain	
14	628		2400	277			0.122	0.279	Short cylinder	Plain	
14	628		2400	278			0.103	0.291	Short cylinder	Plain	
14	628		2400	279			0.121	0.299	Short cylinder	Plain	
14	628		2400	280			0.143	0.297	Short cylinder	Plain	
14	628		2400	281			0.117	0.308	Short cylinder	Plain	
14	628		2400	282			0.113	0.296	Short cylinder	Plain	
14	628		2400	283			0.125	0.283	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	284			0.106	0.296	Short cylinder	Plain	
14	628		2400	285			0.133	0.301	Short cylinder	Plain	
14	628		2400	286			0.124	0.282	Short cylinder	Plain	
14	628		2400	287			0.117	0.279	Short cylinder	Plain	
14	628		2400	288			0.136	0.305	Short cylinder	Plain	
14	628		2400	289			0.092	0.285	Short cylinder	Plain	
14	628		2400	290			0.091	0.299	Short cylinder	Plain	
14	628		2400	291			0.138	0.32	Short cylinder	Plain	
14	628		2400	292			0.103	0.292	Short cylinder	Plain	
14	628		2400	293			0.106	0.28	Short cylinder	Plain	
14	628		2400	294			0.132	0.289	Short cylinder	Plain	
14	628		2400	295			0.137	0.295	Short cylinder	Plain	
14	628		2400	296			0.145	0.298	Short cylinder	Plain	
14	628		2400	297			0.133	0.276	Short cylinder	Plain	
14	628		2400	298			0.104	0.3	Short cylinder	Plain	
14	628		2400	299			0.133	0.304	Short cylinder	Plain	
14	628		2400	300			0.131	0.316	Short cylinder	Plain	
14	628		2400	301			0.127	0.296	Short cylinder	Plain	
14	628		2400	302			0.121	0.292	Short cylinder	Plain	
14	628		2400	303			0.148	0.312	Short cylinder	Plain	
14	628		2400	304			0.134	0.301	Short cylinder	Plain	
14	628		2400	305			0.111	0.301	Short cylinder	Plain	
14	628		2400	306			0.116	0.307	Short cylinder	Plain	
14	628		2400	307			0.128	0.286	Short cylinder	Plain	
14	628		2400	308			0.111	0.289	Short cylinder	Plain	
14	628		2400	309			0.108	0.297	Short cylinder	Plain	
14	628		2400	310			0.132	0.285	Short cylinder	Plain	
14	628		2400	311			0.12	0.302	Short cylinder	Plain	
14	628		2400	312			0.135	0.283	Short cylinder	Plain	
14	628		2400	313			0.113	0.292	Short cylinder	Plain	Thins to 0.075
14	628		2400	314			0.114	0.304	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	315			0.142	0.284	Short cylinder	Plain	
14	628		2400	316			0.129	0.301	Short cylinder	Plain	
14	628		2400	317			0.127	0.287	Short cylinder	Plain	
14	628		2400	318			0.124	0.316	Short cylinder	Plain	
14	628		2400	319			0.115	0.283	Short cylinder	Plain	
14	628		2400	320			0.125	0.298	Short cylinder	Plain	
14	628		2400	321			0.123	0.284	Short cylinder	Plain	
14	628		2400	322			0.119	0.296	Short cylinder	Plain	
14	628		2400	323			0.134	0.3	Short cylinder	Plain	
14	628		2400	324			0.122	0.302	Short cylinder	Plain	
14	628		2400	325			0.143	0.303	Short cylinder	Plain	
14	628		2400	326			0.155	0.307	Short cylinder	Plain	
14	628		2400	327			0.113	0.294	Short cylinder	Plain	
14	628		2400	328			0.137	0.304	Short cylinder	Plain	
14	628		2400	329			0.127	0.291	Short cylinder	Plain	
14	628		2400	330			0.137	0.32	Short cylinder	Plain	
14	628		2400	331			0.11	0.299	Short cylinder	Plain	
14	628		2400	332			0.132	0.297	Short cylinder	Plain	
14	628		2400	333			0.133	0.284	Short cylinder	Plain	Thins to 0.099
14	628		2400	334			0.127	0.307	Short cylinder	Plain	
14	628		2400	335			0.113	0.296	Short cylinder	Plain	
14	628		2400	336			0.13	0.299	Short cylinder	Plain	
14	628		2400	337			0.133	0.294	Short cylinder	Plain	
14	628		2400	338			0.119	0.3	Short cylinder	Plain	
14	628		2400	339			0.111	0.287	Short cylinder	Plain	
14	628		2400	340			0.142	0.316	Short cylinder	Plain	
14	628		2400	341			0.151	0.278	Short cylinder	Plain	
14	628		2400	342			0.116	0.301	Short cylinder	Plain	
14	628		2400	342			0.139	0.299	Short cylinder	Plain	
14	628		2400	344			0.097	0.3	Short cylinder	Plain	
14	628		2400	345			0.138	0.287	Short cylinder	Plain	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

14	628		2400	346			0.119	0.289	Short cylinder	Plain	
14	628		2400	347			0.127	0.299	Short cylinder	Plain	
14	628		2400	348			0.125	0.293	Short cylinder	Plain	
14	628		2400	349			0.133	0.305	Short cylinder	Plain	
14	628		2400	350			0.097	0.296	Short cylinder	Plain	
14	628		2400	351			0.122	0.294	Short cylinder	Plain	
14	628		2400	352			0.094	?	Short cylinder	Plain	Shattered into four pieces
17	620		2395				0.427	0.238	Long cylinder	Tubular	Tubular shell bead using natural hole, ridges run lengthwise
17	620		2405				0.425	0.303	Long truncated bicone	Tubular	From secondary burial. Shell using natural hole. Battering around edges
22	467		1977		3.273	0.778	0.441			Two parallel perforations, both double cones. On one end, 0.434, 0.46 to 0.246; other end 0.512, 0.441 to 0.253	Curved piece (arc is 0.554 high at base) drilled at either end. Center of holes 2.477 apart, holes 0.396, 0.447 from ends. Apparently shell, some beds but not lustrous; originally identified as chalk.
43	691		3372	1			0.242	0.435	Tubular short barrel	Plain, tubular natural hole 0.328	Shell utilizing natural tubular hole. Broken along one edge

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

94	809		2653		5.45	2.965	0.396		Pendant	Double cone, 0.419, 0.460 to 0.262	Natural shell, apparently unworked except for drilling of perforation. Broken proximally so top is flat, 3 other sides rounded. Major radius 4.046
209	1620	40017	2329				0.104	0.44	Cylinder disc	Plain, medium large	White shell with some brown, using natural hole
210	1607	80425	2358		1.869	0.755	0.138		Pendant	Slight cone, 0.314 to 0.234	Mother of pearl, probably once lenticular in transverse section. One perforation, and one drillmark extending about halfway through the material. This drillmark's centerpoint is 0.514 from the centerpoint of the perforation, 0.835 from the tip of the lenticular piece. Edge is 0.288 from edge of perforation, 0.745 from tip of piece. Drillmark 0.241 diameter, coning ot about 0.139
219	1542	80131	2117				0.443	0.327	Short cylinder	Tubular	Using natural hole
225	1592	80347	2293	1			0.236	0.448	Short cylinder	Tubular	
237	1645	40021	2383				0.201	0.309	Short cylinder	Plain, medium large	Using natural hole
237	1661	80669	2535	1			0.071	0.296	Cylinder disc	Tubular	Using natural hole

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

257	1753	80882	2720				0.37	0.359	Standard cylinder	Tubular	Uses natural hole
336	3079	89161	8542				0.266	0.375	Short cylinder	Tubular, 0.235	White, utilized natural hole? From sieve
345	3053	89200	3119	9			0.13	0.268	Long cylinder	Plain, extra large; 0.164	Tubular, hard dark brown bead, flaking—cut from shell
345	3053	89200	3119	10			0.157	0.222	Long cylinder	Plain, extra large; 0.136	Tubular, hard dark brown bead —cut from shell
366		89355	8655	1			0.102	0.379	Cylinder disc	Tubular, 0.295	Tubular shell cut to make bead. One side broken off
366		89355	8655	2			0.228	0.402	Cylinder disc	Tubular, 0.336	Tubular shell cut to make bead.
366		89355	8655	3			0.205	0.393	Barrel disc	Plain, extra large, 0.166	Tubular shell cut to make bead, relatively thick-walled.
366		89355	8655	4			0.213	0.414	Barrel disc	Plain, extra large, 0.211	Tubular shell cut to make bead, relatively thick-walled.
367	9209	70256	3191	15	0.662	0.787	0.212		Pendant	Plain, 0.140	Disintegrating, roughly triangular pendant made of piece of shell. Probably once part of a larger piece; possibly simply natural. Major radius 0.553

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

367	9209	89091	3168	7	1.603	0.779	0.756			Hole broken through shell opposite natural opening — but ragged and appearing to be natural. 0.273 x 0.273	Probably natural, broken around natural aperture
500	2221	87152	4610				0.172	0.289	Barrel disc?	Plain, tubular	Tiny bead, battered around edges, which are powdering. Original shape difficult to determine
505	2306	87620	4902		0.545	0.12	0.119		Lenticular disc	Plain, 0.191	Eye-shaped bead with piercing in center
524	2331	87868	5060				0.271	0.486	Cylinder disc	Plain, tubular 0.292	Ridges of shell faintly visible on exterior
524	2331	89152	8535	1			0.349	0.578	Short cylinder	Tubular	
524	2331	89152	8535	2			0.37	0.544	Short cylinder	Tubular	
524	2331	89152	8535	3			0.497	0.45	Standard cylinder	Tubular	
524	2331	89152	8535	4			0.522	0.535	Standard cylinder	Tubular	
524	2331	89152	8535	5			0.397	0.503	Short cylinder	Tubular	
531	2277	87377	4757	24			0.215	0.703	Cylinder disc	Cone	Cut along natural hole, as survives
544	9381	72408	5315				0.481	0.715	Short barrel	Plain, 0.316	White and tan shell cut into barrel. Thins to 0.343 one side
702	0	89020	6587				0.453	0.611	Short barrel	Plain, tubular	Cut natural shell
702	2418	88077	6543				0.468	0.59	Short barrel	Plain, tubular, 0.318	Nicely shaped, symmetrical short barrel
702	2418	88125	6579				0.428	0.727	Short barrel	Plain, tubular	
702	2418	88137	6585				0.38	0.517	Short barrel	Plain, tubular	

Table 6.41: Unidentified shell and mother of pearl beads and pendants from Wadi Fidan 40, continued.

702	2418	89007	6542	1			0.533	0.58	Short barrel	Plain, tubular	
702	2418	89007	6542	2			0.508	0.582	Short barrel	Plain, tubular	
702	2418	89014	6580				0.444	0.604	Short barrel	Plain, tubular, 0.467	Nicely shaped, symmetrical short barrel
705	2466	89080	6742				0.289	0.399	Short cylinder	Tubular	Utilizes natural hole
707	2432	88108	6564				0.387	0.598	Short cylinder	Tubular	Tubular bead utilizing natural perforation
709	2442	88167	6610				0.221	0.466	Cylinder disc	Tubular	Shell using natural tubular opening
709	2442	88176	6618	1			0.178	0.35	Cylinder disc	Tubular	
709	2442	88176	6618	2			0.12	0.42	Cylinder disc	Tubular	
709	2452	88221	6645				0.136	0.394	Cylinder disc	Tubular	Shell cut along natural perforation
709	2473	88311	6717	1			0.179	0.366	Barrel disc	Tubular	Nicely worked
725	2567	88799	7063		1.354	0.733	0.173		Lenticular disc	Cone; 0.270 to 0.211	Eye-looking piece. Lenticular, with pointed ends, drilled roughly in the center. Slightly concave.
736	9633	74055	7187				0.302	0.321	Short cylinder	Tubular	Cut tubular shell utilizing natural hole
736	9633	74129	7225				0.204	0.362	Short barrel	Plain, medium large	

Table 6.42: Unidentified shell and mother of pearl beads and pendants unavailable for analysis in 2007, and studied only from photographs.

Grave	Locus	Basket	Subnumeral	Shape
0	791	2622		Standard cylinder
14	628	2374	10	Short cylinder
22	467	2003	2	Long cylinder?
25	562	3637		Long cylinder
25	562	3646	1	Long cylinder
25	562	3646	2	Long cylinder
25	562	3646	3	Long cylinder
25	562	3646	4	Long cylinder
31A	824	2710		Short barrel
66	792	2598	1	Short cylinder

Table 6.42: Unidentified shell and mother of pearl beads and pendants unavailable for analysis in 2007, and studied only from photographs, continued.

66	792	2598	2	Short cylinder
94	809	2653	1	Pendant
95A	825	2719	3	Short cylinder
100	822	2723	3	Cylinder disc
100	822	2723	4	Cylinder disc
101	814	2664		Standard cylinder
101	814	2672	6	Standard cylinder
101	814	2672	7	Standard cylinder
101	814	2672	8	Standard cylinder
101	814	2672	9	Standard cylinder

BIVALVES

Two single bivalves, pierced just above the hinge, were recovered. One of these was found in the cist of Grave 25 (B. 3642), while the other was found unassociated with any grave in Area A (Figs. 6.127, 6.128; EDM 86918). Neither of these was available for direct examination.



Figure 6.127: The drilled bivalve found in Area A but unassociated with any grave (EDM 86918).



Figure 6.128: The drilled bivalve found in Area A but unassociated with any grave (EDM 86918), showing the perforation.

COWRIES

Cowries, and particularly cowries with their backs removed, are commonly used as beads in the Late Bronze and Iron Ages. But modifying cowries in this way is still common practice, and such artifacts (possibly made in India) can be seen for sale in the tourist markets of Jordan.

Judging from Egyptian parallels, cowries may have also held symbolic value. Petrie (1914: 27) notes that both cowries and amulets in the shape of cowries are known from the Prehistoric period through the Roman period in Egypt. Cowries are commonly used as beads, and they are often represented in metal in Middle Kingdom jewelry, and particularly as belts. An example is the gold cowry belt of Sat-Hathor, from her tomb in the mortuary complex of Sesostris III. These objects were made so that both sides of the bead represent an open cowry bottom (Saleh and Sourouzian 1987: no. 109). Similar

gold cowry beads were found at Lahun; these included smaller cowry shells apparently used as spacers between the larger ones (Brunton 1920: 30-31; Winlock 1934: 37-41). These cowries may have been worn either as a belt or as a necklace (Vilímková 1969: pl. 20). Silver Twelfth Dynasty cowries were found in Tomb 840 at Thebes (Capel 1996: 85). Cowries even appear in belts on Egyptian figurines (Winlock 1934: 40). The cowry has often been said to represent the female genitalia (Andrews 1994: 42; Capel 1996: 85; Petrie 1914: 27)—and hence their appearance in women's belts—or "a half-closed but ever watching eye" (Aldred 1971: 16). "Even in recent times," Cyril Aldred (1971: 16) notes, "Nilotic women have worn aprons sewn with cowrie shells to protect the pelvic organs from the aborting and sterilizing effect of a male-violent gaze." Appearing in cemeteries, the cowry, like eggshells and the color green, may be symbolic of new life.

Cowries were also important in Edomite and other Iron Age contexts. At Horvat Qitmit, just 18 mollusk shells were recovered. All of them were *Cypraea annulus*, the gold-ringed cowrie, which is rare in the Gulf of Aqaba but more common in the southern Red Sea. All of these shells were also modified in the same way as the Wadi Fidan 40 cowries, by removing the back (Mienis 1995). Most of the 56 cowries from Buseirah were also this species of cowry (Reese et al. 2002: 458). At Tawilan, 27 of the 68 marine shells—40%—are cowries, again mainly *C. annulus*, and some of them, including that associated with Burial XXXI, are "holed." Three cowries were found at Ghareh and 104 at Umm el-Biyara, and 56 at Buseirah (Reese 1995: 93). Cowries, both unmodified and with the backs removed, were also found at Khirbat en-Nahas. Cowries with the backs removed were found in the Iron Age Tumulus B at Yafit, along with other jewelry, including ostrich eggshell beads, and a fourth century coin (Magen 2004: 291). Cowries

and other Indo-Pacific shells are common at Iron Age sites, but it is unusual for them to occur in such numbers except, as in the case of Wadi Fidan 40 and Horvat Qitmit, in burials and at shrines (Reese 1991).

Twenty-one cowries, all modified, were found in the cemetery (Tables 6.43, 6.44). Ten of these were found in Grave 92 (Fig. 6.129). Of the remainder, only three graves had more than one cowry—Grave 14, Grave 29, and Grave 97, each of which held two such beads. In two cases, these shells were found at the waist, having been worn on a belt (Fig. 6.130). All of these graves were unusual for other reasons, also. Grave 92 was the woman buried with metal bangles and a scarab in addition to a few stone beads. Grave 14 and Grave 29 were both unusually rich in stone beads. Finally, Grave 97 was a child buried with a wooden bowl and cowries at the neck.



Figure 6.129: Cowries with the backs removed to serve as beads and other univalve shells from Grave 92 (B. 2149).

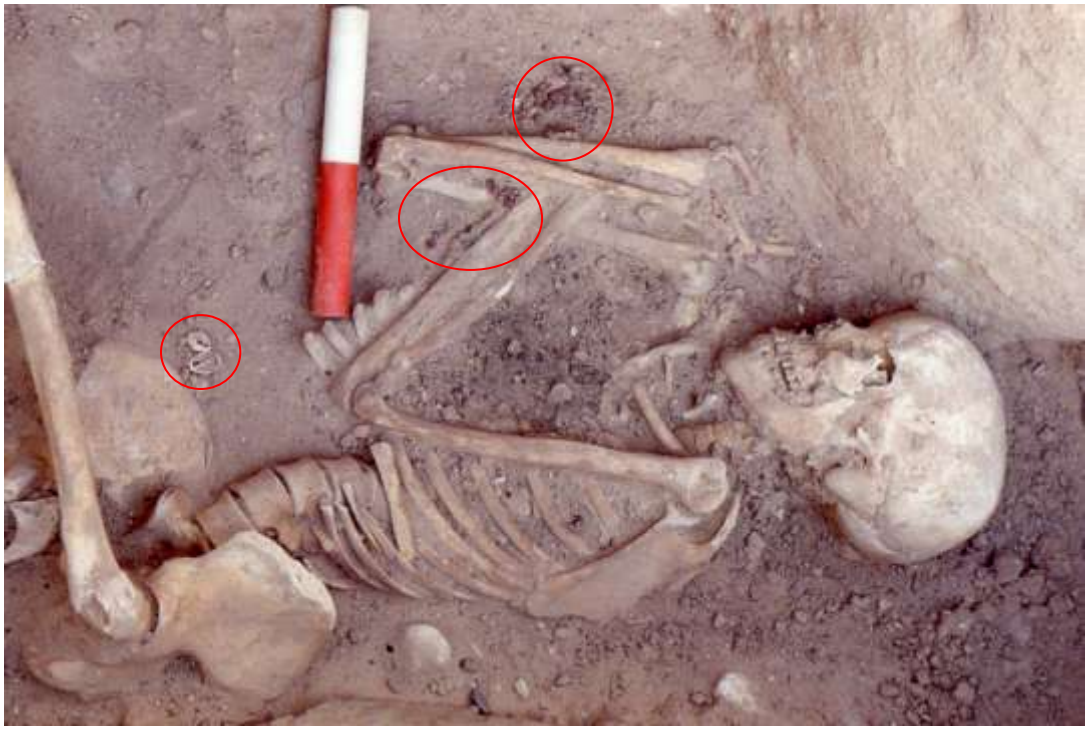


Figure 6.130: Grave 14 burial, close-up. Note cowry shells near pelvis and carnelian beads near forearms (red ovals).

Table 6.43: Cowry beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thick-ness	Perforation	Description
12	623		2321		1.723	1.223	0.446	Back removed to create aperture 1.301 x 0.924	Flaking to exterior shell covering
14	628		2378	1	2.263	1.485	0.633	Back removed to create aperture 1.646 x 1.254	Much chipping to created aperture, flaking of exterior covering.
14	628		2378	2	1.714	1.295	0.675	Back removed to create aperture 1.099 x 0.771	Much chipping to created aperture and to natural hole, flaking of exterior covering.
53	476		1997		3.796	2.532	1.175	Back removed to create aperture, 2.436 x 1.958	Much chipping around aperture.

Table 6.43: Cowry beads from Wadi Fidan 40, continued.

92	531		2149	4	2.012	1.513	0.56	Back removed to create aperture 1.412 x 1.077	Exterior peeling
92	531		2149	5	2.008	1.557	0.662	Back removed to create aperture 1.403 x 0.887	Exterior peeling
92	531		2149	6	1.854	1.372	0.554	Back removed to create aperture 1.285 x 0.896	
92	531		2149	7	1.744	1.197	0.525	Back removed to create aperture 1.186 x 0.941	
92	531		2149	8	1.493	1.03	0.541	Back removed to create aperture 1.033 x 0.660	
92	531		2149	9	1.473	1.034	0.404	Back removed to create aperture 1.094 x 0.719	
92	531		2149	10	1.449	1.053	0.423	Back removed to create aperture 1.006 x 0.768	
92	531		2149	11	1.344	0.999	0.424	Back removed to create aperture 1.032 x 0.778	
92	531		2149	12	1.287	0.934	0.437	Back removed to create aperture 0.922 x 0.653	
92	531		2164		1.528	1.134	0.508	Back removed to create aperture 1.005 x 0.720	
97	549		3607		1.746	1.19	0.589	Back removed to create aperture, 1.191 x 0.809	

Table 6.43: Cowry beads from Wadi Fidan 40, continued.

97	549	89200	3632		1.492	1.137	0.553	Back removed to create aperture, 0.963 x 0.704	Much chipping around aperture
345	3053	89054	3119	3	1.484	1.044	0.522	Back removed aperture 0.887 x 0.725	

Table 6.44: Cowry beads from Wadi Fidan 40 unavailable for analysis in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Shape
55-2004	8536	86737	2185	Cowrie with back removed
701	2480	88451	6819	Cowrie with back removed

DENTALIUM

Although biologically only applied to shells of the genus *Dentalius*, the term dentalium is used by archaeologists to refer to any tusk shells of scaphalopods. These long, tubular shells are easily strung through their natural openings. Two hundred twenty-seven dentalium shells were counted (Fig. 6.131). It is possible that the original number was slightly smaller, since these delicate shells easily break and it is difficult to determine minimum numbers of individuals. As found, the dentalia measured from about 0.5 cm to about 2.5 cm. One hundred forty-nine of the shells were recovered from looted contexts in Area C. The others came from unusual contexts. Two graves in the Grave 38 cluster, 38C and 38M, each contained dentalia. Forty-seven were found in 38M, and 27 in Grave 38C. One dentalium each was found in Grave 22 and Grave 253. Grave 22 is unusually rich in other finds, including metal rings and beads. Grave 253 was severely disturbed, but a lambis bracelet fragment, a copper bead and other beads, and an anthropomorphic stone testify to its original wealth. Two dentalia were found in Grave 345, the copper rich child's grave.



Figure 6.131: Dentalia found in Area C, unassociated with any grave (EDM 89055).

Table 6.45: Dentalia from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Diameter
0	2444	89017	6598	4	2.09	0.377
0	2444	89017	6598	5	1.075	0.307
0	2444	89017	6598	6	1.811	0.32
0	2444	89017	6598	7	1.78	0.319
0	2444	89017	6598	8	1.514	0.299
0	2444	89017	6598	9	1.617	0.348
0	2444	89017	6598	10	1.643	0.285
0	2444	89017	6598	11	1.669	0.325
0	2444	89017	6598	12	1.388	0.329
0	2444	89017	6598	13	1.553	0.258
0	2444	89017	6598	14	1.31	0.288
0	2444	89017	6598	15	1.32	0.339
0	2444	89017	6598	16	1.541	0.282
0	2444	89017	6598	17	1.339	0.297
0	2444	89017	6598	18	1.409	0.277
0	2444	89017	6598	19	1.335	0.29
0	2444	89017	6598	20	1.247	0.302
0	2444	89017	6598	21	1.44	0.268
0	2444	89017	6598	22	1.387	0.246
0	2444	89017	6598	23	1.136	0.284
0	2444	89017	6598	24	1.051	0.339
0	2444	89017	6598	25	0.981	0.27
0	2444	89017	6598	26	1.111	0.27

Table 6.45: Dentalia from Wadi Fidan 40, continued.

0	2444	89017	6598	27	0.475	0.305
0	2444	89052	8508	1	1.899	0.318
0	2444	89052	8508	2	2.153	0.314
0	2444	89052	8508	3	1.833	0.324
0	2444	89052	8508	4	1.758	0.31
0	2444	89052	8508	5	1.665	0.332
0	2444	89052	8508	6	1.864	0.289
0	2444	89052	8508	7	1.616	0.343
0	2444	89052	8508	8	1.712	0.348
0	2444	89052	8508	9	1.465	0.396
0	2444	89052	8508	10	1.532	0.302
0	2444	89052	8508	11	1.388	0.292
0	2444	89052	8508	12	1.315	0.31
0	2444	89052	8508	13	1.354	0.243
0	2444	89052	8508	14	1.23	0.268
0	2444	89052	8508	15	1.208	0.347
0	2444	89052	8508	16	1.41	0.295
0	2444	89052	8508	17	1.442	0.303
0	2444	89052	8508	18	1.294	0.296
0	2444	89052	8508	19	1.318	0.293
0	2444	89052	8508	20	1.181	0.315
0	2444	89052	8508	21	1.159	0.339
0	2444	89052	8508	22	1.095	0.243
0	2444	89052	8508	23	1.173	0.4
0	2444	89052	8508	24	1.067	0.263
0	2444	89052	8508	25	1.045	0.33
0	2444	89052	8508	26	0.964	0.308
0	2444	89052	8508	27	0.95	0.286
0	2444	89052	8508	28	1.027	0.264
0	2444	89052	8508	29	0.934	0.246
0	2444	89052	8508	30	0.786	0.275
0	2444	89052	8508	31	0.747	0.218
0	2444	89052	8508	32	0.649	0.286
0	2444	89055	8510	1	1.05	0.333
0	2444	89055	8510	2	2.12	0.323
0	2444	89055	8510	3	1.471	0.287
0	2444	89055	8510	4	0.978	0.231
0	2444	89055	8510	5	1.521	0.336
0	2444	89055	8510	6	2.121	0.37
0	2444	89055	8510	7	1.84	0.333
0	2444	89055	8510	8	1.386	0.316
0	2444	89055	8510	9	1.94	0.322
0	2444	89055	8510	10	1.626	0.322
0	2444	89055	8510	11	1.544	0.254
0	2444	89055	8510	12	1.346	0.29
0	2444	89055	8510	13	1.093	0.301
0	2444	89055	8510	14	1.429	0.281
0	2444	89055	8510	15	1.804	0.351
0	2444	89055	8510	16	1.711	0.306
0	2444	89055	8510	17	1.669	0.322
0	2444	89055	8510	18	1.323	0.272

Table 6.45: Dentalia from Wadi Fidan 40, continued.

0	2444	89055	8510	19	1.654	0.319
0	2444	89055	8510	20	0.938	0.336
0	2444	89055	8510	21	0.986	0.388
0	2444	89055	8510	22	1.166	0.293
0	2444	89055	8510	23	1.756	0.319
0	2444	89055	8510	24	1.525	0.306
0	2444	89055	8510	25	1.33	0.326
0	2444	89055	8510	26	1.617	0.301
0	2444	89055	8510	27	1.48	0.312
0	2444	89055	8510	28	1.234	0.329
0	2444	89055	8510	29	1.479	0.321
0	2444	89055	8510	30	1.319	0.286
0	2444	89055	8510	31	1.581	0.331
0	2444	89055	8510	32	1.572	0.32
0	2444	89055	8510	33	1.53	0.273
0	2444	89055	8510	34	1.608	0.285
0	2444	89055	8510	35	1.305	0.278
0	2444	89055	8510	36	1.341	0.293
0	2444	89055	8510	37	1.461	0.315
0	2444	89055	8510	38	1.419	0.278
0	2444	89055	8510	39	1.296	0.246
0	2444	89055	8510	40	1.632	0.303
0	2444	89055	8510	41	1.36	0.315
0	2444	89055	8510	42	1.363	0.253
0	2444	89055	8510	43	1.392	0.267
0	2444	89055	8510	44	1.542	0.264
0	2444	89055	8510	45	1.455	0.274
0	2444	89055	8510	46	1.228	0.279
0	2444	89055	8510	47	1.27	0.291
0	2444	89055	8510	48	1.027	0.238
0	2444	89055	8510	49	1.41	0.278
0	2444	89055	8510	50	1.28	0.274
0	2444	89055	8510	51	1.112	0.27
0	2444	89055	8510	52	0.956	0.239
0	2444	89055	8510	53	0.722	0.278
0	2444	89055	8510	54	1.007	0.306
0	2444	89055	8510	55	0.917	0.332
0	2444	89055	8510	56	1.111	0.245
0	2444	89055	8510	57	0.877	0.23
0	2444	89055	8510	58	0.773	0.204
0	2444	89055	8510	59	0.595	0.301
0	2444	89055	8510	60	1.603	0.334
0	2444	89055	8510	61	1.538	0.303
0	2444	89071	6706	11	1.731	0.317
0	2444	89071	6706	12	1.768	0.317
0	2444	89071	6706	13	1.731	0.295
0	2444	89071	6706	14	1.873	0.262
0	2444	89071	6706	15	1.675	0.272
0	2444	89071	6706	16	1.302	0.307
0	2444	89071	6706	17	1.568	0.253
0	2444	89071	6706	18	1.664	0.286

Table 6.45: Dentalia from Wadi Fidan 40, continued.

0	2444	**89071**	6706	19	1.5	0.278
0	2444	**89071**	6706	20	1.432	0.279
0	2444	**89071**	6706	21	1.372	0.336
0	2444	**89071**	6706	22	1.485	0.316
0	2444	**89071**	6706	23	1.759	0.339
0	2444	**89071**	6706	24	1.333	0.26
0	2444	**89071**	6706	25	1.437	0.251
0	2444	**89071**	6706	26	1.188	0.273
0	2444	**89071**	6706	27	1.335	0.249
0	2444	**89071**	6706	28	1.886	0.337
0	2444	**89071**	6706	29	1.552	0.329
0	2444	**89071**	6706	30	1.294	0.319
0	2444	**89071**	6706	31	1.153	0.286
0	2444	**89071**	6706	32	1.259	0.307
0	2444	**89071**	6706	33	1.116	0.264
0	2444	**89071**	6706	34	0.847	0.273
0	2444	**89071**	6706	35	0.929	0.263
0	2444	**89071**	6706	36	0.861	0.264
0	2444	**89071**	6706	37	0.903	0.292
0	A09L000	**A09F0034**	A09B000	5	2.31	0.36
0	A09L000	**A09F0034**	A09B000	6	1.5	0.27
0	A09L000	**A09F0034**	A09B000	7	1.47	0.3
0	A09L000	**A09F0034**	A09B000	8	1.43	0.34
0	A09L000	**A09F0034**	A09B000	9	0.9	0.36
38M	675		3341	1	1.892	0.349
38M	675		3341	2	1.938	0.285
38M	675		3341	3	1.403	0.283
38M	675		3341	4	1.145	0.271
38M	675		3341	5	0.986	0.244
38M	675		3341	6	0.833	0.268
38M	675		3341	7	0.775	0.191
38M	675		3388	1	1.639	0.332
38M	675		3388	2	1.73	0.332
38M	675		3388	3	1.388	0.273
38M	675		3388	4	1.318	0.336
38M	675		3388	5	1.171	0.302
38M	675		3388	6	1.289	0.327
38M	675		3388	7	1.151	0.271
38M	675		3388	8	1.091	0.275
38M	675		3388	9	1.201	0.291
38M	675		3388	10	0.775	0.266
38M	675		3388	11	1.017	0.253
38M	675		3388	12	0.969	0.312
38M	675		3388	13	1.028	0.218
38M	675		3388	14	0.431	0.22
38M	675		3388	15	0.941	0.226
38M	675		3388	16	0.888	0.24
38M	675		3388	17	0.769	0.271
38M	675		3388	18	0.996	0.247
38M	675		3388	19	0.953	0.226
38M	675		3388	20	0.877	0.229

Table 6.45: Dentalia from Wadi Fidan 40, continued.

38M	675		3388	21	0.966	0.218
38M	675		3388	22	0.825	0.239
38M	675		3388	23	0.764	0.3
38M	675		3388	24	0.895	0.204
38M	675		3388	25	0.697	0.211
38M	675		3388	26	0.776	0.181
38M	675		3388	27	0.588	0.236
38M	675		3388	28	0.676	0.261
38M	675		3388	29	0.536	0.168
38M	675		3388	30	0.214	0.169
38M	675		3401	1	1.035	0.217
38M	675		3401	2	0.889	0.268
38M	675		3401	3	0.935	0.235
38M	675		3401	4	0.724	0.223
38M	675		3401	5	0.69	0.222
38M	675		3401	6	0.637	0.258
38M	675		3401	7	0.546	0.214
38M	675		3401	8	0.44	0.214
38M	675		3417	1	1.073	0.224
38M	675		3417	2	0.838	0.238
253	1705	40037	2587		1.255	0.329
345	3053	89200	3119	8	0.316	0.319
345	3053	89200	3119	11	0.196	0.387

Table 6.46: Dentalia unavailable for analysis in 2007 and studied only from photographs.

Grave	Locus	Basket	Subnumeral
22	467	1989b	2
38C	642	3360	3
38C	642	3360	4
38C	642	3360	5
38C	642	3360	6
38C	642	3360	7
38C	642	3360	8
38C	642	3360	9
38C	642	3360	10
38C	642	3360	11
38C	642	3360	12
38C	642	3360	13
38C	642	3360	14
38C	642	3360	15
38C	642	3360	16
38C	642	3360	17
38C	642	3360	18
38C	642	3360	19
38C	642	3360	20
38C	642	3360	21
38C	642	3360	22
38C	642	3360	23

Table 6.46: Dentalia unavailable for analysis in 2007 and studied only from photographs, continued.

38C	642	3360	24
38C	642	3360	25
38C	642	3360	26
38C	642	3360	27
38C	642	3360	28
38C	642	3360	29

OTHER UNIVALVES

Univalves were sometimes formed into the beads or pendants found at Wadi Fidan 40 in a way that retains their form as shells (Tables 6.47, 6.48). These shells were pierced opposite their natural apertures or had their apexes cut off in order to string them (Fig. 6.132). Pierced univalves were found among the burials at Tawilan, though as we have seen these postdate occupation at the site (Reese 1995). *Conus spp.* univalve shells with their apexes cut off were also found at Buseirah and Ghareh (Reese et al. 2002: 460), and are common throughout the Levant.



Figure 6.132: A selection of modified univalves from Grave 68 (B. 2041).

Table 6.47: Univalve shell beads from Wadi Fidan 40.

Grave	Locus	EDM	Basket	Subnumeral	Length	Width	Thickness	Diameter	Perforation	Description
0	2400	88034	6518		1.315	1.277	0.794	1.315	End opposite natural opening (length-wise) cut off to create aperture 0.321 x 0.234	Stumpy oyster-like shell with end cut off to create ovoid aperture
22	483		2045		0.981	0.689	0.617	0.981	End cut off to create small aperture, 0.108 diameter	Small trumpet-like shell with end removed with a sharp instrument
29	775		2259	1	0.719	0.421	0.442	0.719	End removed (or possibly naturally broken), aperture diameter 0.233	Univalve shell with end removed opposite natural hole. Possibly naturally broken, or possibly a shell bead. Appears to be salt water shell.
29	775		2259	2	0.726	0.461	0.428	0.726	End removed (or possibly naturally broken), aperture diameter 0.154	Univalve shell with end removed opposite natural hole. Possibly naturally broken, or possibly a shell bead. Appears to be salt water shell.
68	490		2041	1	2.689	1.385	1.112	2.689	End of spiral removed to create hole 0.286 diameter	Long, tiger striped (brown on white) shell—exterior now faded—with very short spiral. Spiral top removed to create aperture.
68	490		2041	2	1.494	1.255	0.94	1.494	End cut off with sharp instrument to create aperture, 0.334 x 0.217	Short shell with end removed
68	490		2041	3	1.629	1.397	0.981	1.629	End cut off with sharp instrument to create aperture, 0.273 x 0.240	Short shell with end removed
68	490		2041	4	1.088	0.858	0.621	1.088	End cut off with sharp instrument to create aperture, 0.257 x 0.189	Short shell with end removed

Table 6.47: Univalve shell beads from Wadi Fidan 40, continued.

68	490		2041	5	1.434	1.165	0.789	1.434	End cut off with sharp instrument to create aperture, 0.311 x 0.248. Also small aperture above natural hole, possibly drilled, 0.134 diameter, center .368 above natural hole.	Short shell with end removed. Possibly some accidental breakage to artificial hole at end.
92	531		2149	1	1.434	1.564	1.899	1.434	Piece sliced off of side opposite of natural opening, creating hole 0.366 x 0.280	Rough white apparent seashell. Length is from natural opening to spiral tip, width is across with natural opening facing one, thickness is from natural opening to opposite side of shell. A small spot opposite the natural opening has been sliced off with a sharp instrument, leaving an aperture and a flat plane where exterior has been removed. A tiny hole 0.092 x 0.103, probably accidental, also exists towards the top of the spiral.
92	531		2149	2	1.479	1.708	2.016	1.479	Piece sliced off of side opposite of natural opening, creating hole 0.529 x 0.375	Rough white shell. Small spot opposite the natural opening has been sliced off with a sharp instrument, leaving an aperture and a flat plane where exterior has been removed. Hole appears to have been enlargened by accidental breakage. Smaller holes further up the spiral appear accidental.

Table 6.47: Univalve shell beads from Wadi Fidan 40, continued.

92	531		2149	3	1.235	1.362	1.7	1.235	Pieces cut off	Rough white shell. Numerous holes exist, such that it is difficult to tell what has been worked and what are accidental. Large hole opposite the natural aperture, 1.220 x 0.557, running along one turn of the spiral. Another hole further up is 1.246 x 0.047, also following the spiral. Small oval hole, likely accidental, further up the spiral, 0.484 x 0.200. Most likely a piece opposite the natural opening was removed and accidental breakage resulted in the great fenestration.
345	3053	89200	3119	7	0.835	0.703	0.451	0.835	Tip removed; aperture 0.161 x 0.222 diameter	Oyster-like shell with tip removed to facilitate suspension
345	3053	89200	3119	4	0.777	0.585	0.555	0.777	Tip removed; aperture 0.279 diameter	Univalve shell with spiral end cut off to facilitate suspension. Striped white and brown, conch-like.
345	3053	89200	3119	5	0.912	0.744	0.687	0.912	Tip removed; aperture 0.176 diameter	Univalve shell with spiral end cut off to facilitate suspension. This is likely the kind of shell from which the thin disc beads were cut.
345	3053	89200	3119	6	0.987	0.772	0.717	0.987	Tip removed; aperture 0.195 diameter	Univalve shell with spiral end cut off to facilitate suspension. This is likely the kind of shell from which the thin disc beads also seem to have been cut.
519	2277	87346	4733	1			0.164		Cone	Shell cut along natural conical opening and left rough
519	2277	87346	4733	2			0.208		Cone	Shell cut along natural conical opening and left rough
544	9381	72408	5315		1.618	1.347	0.967	1.618	Oblong, 0.221 x 0.150	Oyster-like shell with end cut off such that a hole was made opposite its natural aperture.

Table 6.47: Univalve shell beads from Wadi Fidan 40, continued.

544	9381	89347	8649		2.03	1.689	1.448	2.03	Triangular, 0.429 x 0.779	Large crennalated shell with side cut away along width opposite natural aperture

Table 6.48: Univalve shell beads from Wadi Fidan 40 unavailable for examination in 2007 and studied only from photographs.

Grave	Locus	EDM	Basket	Subnumeral	Description
22	467		2045		Shell with apex cut off
23	451		1926	2	Shell with apex cut off
29	775		2259	1	Univalve shell with apex removed
29	775		2259	1	Univalve shell with apex removed
29	775		2259	2	Univalve shell with apex removed
29	775		2259	2	Univalve shell with apex removed
240	1686	80667	2533		Drilled shell
544	9381	72406	5313		Drilled shell, probably *Conus hebraicus*

CONCLUSIONS

Before analyzing the contents of these graves, it must be born in mind that looting has altered the archaeological record at Wadi Fidan 40. Of the 280 cist, pit, and capstone-covered pit graves excavated at the cemetery, 179 showed clear signs of looting, in the form of missing capstones or disturbed human remains (Table 6.49). And these are only those graves which were definitely looted; there is a strong likelihood that other graves were looted but were resealed and showed no clear signs of disturbance. Artifacts are likely missing from these graves which were items of prestige or indications of social position. Also, this looting was often accompanied by destruction of the human remains. Since these graves were often reused, the broken remains of multiple individuals are often found in the looted graves, commingled in the grave fill and the cist. Consequently, it is often difficult or impossible to determine which set of fragmentary remains should be

matched to the personal ornaments found, or which set of remains are those of the most recent occupant.

Nevertheless, it is worth noting first what was *not* found at Wadi Fidan 40. Despite the proximity of Wadi Fidan 40 to Egypt, very few Egyptian amulets were recovered. Only two Egyptian-style amulets were recovered. One of these, that in Grave 92, is a MBIIB scarab which was actually made in Palestine and was either a found object or was a curated heirloom. The other is roughly coterminous stylistically with the radiocarbon dates and may therefore be a genuine Egyptian import. None of the other most common amulets which were mass-produced in Egypt were found at Wadi Fidan 40 (Fig. 6.133; Petrie 1914). Avoidance of Egyptian objects on the whole may be an attempt to show identity.



Figure 6.133: An example of what are not found at Wadi Fidan 40—a collection of some of the most common Egyptian amulets, from the collection of the Louvre (Andreu 1997: 195).

STATUS

A hierarchy of value can be ascribed to the cemetery's artifacts. Most valuable are the metal items and the Egyptian imports. Least valuable are ostrich eggshell beads. These less valuable beads are often avoided in the richer graves, and are frequently found in the graves of infants who were not provided with any other surviving artifacts.

The scarab and seal each would appear to be unusually expensive artifacts, since they had to be crafted and brought in from outside. However, the scarab was curated, and may have obtained additional status with time. It does not appear to have lost status by becoming obsolete, since it was buried in what is by far the richest grave, along with iron and more copper than any other grave.

Moreover, at Wadi Fidan 40 there is clear evidence of ascribed status. Children are buried with some of the richest jewelry, including copper goods. The lack of more wealthy adult graves is due in no small part no doubt to the looting at Wadi Fidan 40, but these children, especially in Grave 345 and Grave 371, possess objects clearly out of keeping with any likely achievements made in life. As Saxe (1970) points out, this is likely evidence of a ranked society, since a status appears to be implied which overrides these children's age group category.

GENDER, AGE, AND METAL

John Greene (2007) has argued that the side on the body on which personal adornment is worn reflects both status and gender. Specifically, he argues from iconography and from burials at Tell es-Sa'idiyeh that paired anklets are an important maker of gender among women in the Levant. He argues certain high status men wear single anklets, but that paired anklets appear in Egyptian iconography to show humiliated Levantine men.

The limited evidence suggests women were buried with paired anklets at Wadi Fidan 40, but no men were found with anklets. Paired copper anklets were found in the one case where anklets were found at Wadi Fidan 40. The burial in Grave 92, a woman, was even laid so that one leg crossed the other, emphasizing the anklets by touching them together. Paired copper anklets were also found in Wadi Fidan 4, Tomb 1.

There also appeared to be a preference for paired copper toe rings. The individual in Grave 54 was buried with a copper ring on each foot, and two rings, apparently toe rings, were found in disturbed Grave 12. These individuals could not be sexed, so they shed no light on gender construction.

Earrings were buried only with children at both Wadi Fidan 40 and Wadi Fidan 4. A pair of earrings was found each with the individual in Grave 345 and the individual in Grave 371. An additional earring was also found with Grave 371. Only one earring was found at Wadi Fidan 4.

Differences were observed in how copper and iron were worn on the hands. Though only two iron objects of personal adornment were recovered, both were on the sinister side. The bracelet of Grave 92 and the finger ring in Grave 54 were both on the left. Both copper bracelets found at the cemetery were found on the right arms and on children. Only one shell bracelet was recorded in situ; it was also on the right arm.

Because of the small sample size, no definite conclusions can be drawn regarding the expression of age and gender in metal at Wadi Fidan 40. However, in all observed cases iron is associated with the left hand side, and copper bracelets with the right hand side. There is a preference for pairing anklets. Earrings were only found with children. We found no definite cases of males buried with metal jewelry, though some of the children or unsexed adults may have been males. There is a preference for paired anklets, but these are very rare, even among women.

However, subsequent analysis has shown that items of personal adornment are often a female trait at Wadi Fidan 40, but not exclusively so. The wealthy Grave 92, the only sexable burial which included metal jewelry and which also included the scarab, was female. Both male and female remains were found with beads. Of the fourteen burials with more than fifty beads, only six could be sexed. Two of these were male, and three were female. A third included both male and female remains, but the female appeared to be the most recent primary burial.

ETHNICITY

No artifacts at Wadi Fidan are clear indicators of ethnic identity. Aside from the scarab and seal, only one of the items of personal adornment had any form of decoration. This was the iron ring which bore a chevron design. I am aware of no parallels and therefore can offer no suggestions of meaning.

One identifying mark of this population, however, is the presence of amazonite pendants. Although these pendants made up only 5.7% of the sample (Tables 6.9, 6.10), more than 28% of the 280 cist and pit graves contained this stone (Table 6.49). The number may have been higher before the site was looted. Single beads of this stone were sometimes worn as pendants in prominent locations, such as at the neck (Fig. 6.134). Furthermore, a cross section of the population was found with amazonite, which as J. D. M. Green (2006) has pointed out is a suggestion of a marker for the group as a whole rather than a particular subset such as an age group or sex.

The green amazonite stone may have been used as a means of identifying the users of the cemetery as a nomadic group with ties to the south. It cannot be ignored that the stone, like the cists described earlier, may have had a utilitarian function as a charm. If the stone were protection against the evil eye, for example, then their presence among a cross-section of the population would also be explained. This particular use of the beads, however, might also be an ethnic marker, just as painting windowframes blue in the border regions of the United States wards off evil among Catholics of Mexican origin today, and would be found archaeologically in association with dietary, linguistic, and other markers of identity.

The articles of personal adornment at Wadi Fidan 40 are typical of a pastoral nomadic population. As we saw in Chapter 1, Edom appears to have developed out of pastoral nomads called *Shasu* in Egyptian texts, and the Hebrew Bible preserves a strong tradition that the Edomites and Israelites both emerged from the same pastoral people. The pattern observed, of women with the most durable wearable wealth, is consistent with, but not limited to, pastoral peoples; the same pattern is seen at the settlement Tell es-Sa'idiyeh (Green, in press). The very presence of large amounts of amazonite, however, displays trading links with the region of Wadi Tbeik, the closest source.



Figure 6.134: Grave 714 primary burial skull. Note the amazonite pendant, notched distally (cf. Fig. 6.74).

Table 6.49: Wadi Fidan 40 bead data.

Grave No.	Area	Season	Total beads	Beads in fill[1]	Beads below capstones	Bead materials	Age[2]	Sex[2]	Evidence of looting?[3]
5-2004	A	2004	0	0	0	N/A	Adult		None
9-2004	A	2004	0	0	0	N/A	19-40	M	None
10-2004	B	2004	7	5	2	Amazonite, aventurine, cupric, limestone, ostrich eggshell	Adult		Recent and ancient
11	B	1997	18	18	0	Agate, cupric, ostrich eggshell, shell			Recent
12	B	1997	291	118	173	Agate, alabaster, amazonite, apatite, aventurine, carnelian, cowrie, cupric, faience, flint, glass, hematite, limestone, olivine, ostrich eggshell, quartzite, rock crystal, sandstone, shell, siltstone	Juvenile		Recent
13	B	1997	2	0	2	Flint, ostrich eggshell	Juvenile		Ancient
14	B	1997	900	11	889	Agate, apatite, aventurine, bone, carnelian, cowry, cupric, flint, hematite, limestone, ostrich eggshell, rock crystal, siltstone, seed, shell, wood	Adolescent		Recent
16	B	1997	6	6	0	Ostrich eggshell	Juvenile		Recent

Table 6.49: Wadi Fidan 40 bead data, continued.

18	B	1997	14	7	7	Amazonite, bone, cupric, ostrich eggshell			Recent
20	A	1997	0	0	0	N/A			Recent
21	A	1997	2	2	0	Amazonite, ostrich eggshell			Recent
22	A	1997	64	63	1	Carnelian, cupric, dentalium, ostrich eggshell	Adult	M	Recent
23	A	1997	3	2	1	Carnelian, shell	Adolescent		Recent
24	A	1997	2	2	0	Cupric	Adult		Recent
25	A	1997	9	3	6	Agate, amazonite, shell	Adult	M	Recent
26A	C	1997	0	0	0	N/A	Adult		Recent
26B	C	1997	1	0	1	Ostrich eggshell			Recent
27	C	1997	1	1	0	Ostrich eggshell	Adolescent		None
28	C	1997	1	0	1	Aventurine	Adult		Recent
29	C	1997	914	0	914	Aventurine, bone, carnelian, cupric, ostrich eggshell, shell	Adult	F	Recent
30	C	1997	130	1	129	Ostrich eggshell			Ancient
31	C	1997	18	6	12	Agate, amazonite, citrine, cupric, ostrich eggshell			None
31A	C	1997	2	0	2	Ostrich eggshell, shell			None
33	B	1997	6	1	5	Amazonite, ostrich eggshell	Mature adult	F	None
34	B	1997	0	0	0	N/A	Adult	F	Ancient
35A	B	1997	6	0	6	Ostrich eggshell	Infant		None
35B	B	1997	2	0	2	Ostrich eggshell	Adult		Ancient
38A	B	1997	3	3	0	Cupric, quartzite	Adult	M	Ancient
38B	B	1997	3	3	0	Cupric, quartzite	Infant		None

Table 6.49: Wadi Fidan 40 bead data, continued.

38C	B	1997	41	3	38	Cupric, dentallium, quartzite, sandstone	Adult		Ancient
38I	B	1997	3	3	0	Cupric, quartzite	Infant		None
38J	B	1997	3	3	0	Cupric, quartzite	Young adult		Ancient
38M	B	1997	50	3	47	Cupric, dentallium, quartzite	Adult		Ancient
38N	B	1997	3	3	0	Cupric, quartzite			None
38O	B	1997	3	3	0	Cupric, quartzite	Infant		None
38Q	B	1997	3	3	0	Cupric, quartzite			Ancient
38S	B	1997	3	3	0	Cupric, quartzite	Adult		Ancient
39	B	1997	20	19	1	Carnelian, ostrich eggshell	Infant		None
40	B	1997	11	3	8	Amazonite, aventurine, siltstone	Adult		Ancient
43	B	1997	5	2	3	Aventurine, flint, ostrich eggshell, shell	Adult	F	None
46	B	1997	6	0	6	Alabaster, amazonite, citrine, cupric, ostrich eggshell	Adult		None
47-2004	B	2004	64	42	22	Agate, alabaster, cupric, ostrich eggshell	Adult		Ancient
49	A	1997	1	0	1	Bone			Ancient
53	A	1997	1	1	0	Cowry			Ancient
54	C	1997	0	0	0	N/A	15-21		None
55	A	1997	0	0	0	N/A			None
55-2004	A	2004	0	0	0	N/A	30-35	F	None
56	A	1997	0	0	0	N/A	Adult	F	None
58	A	1997	0	0	0	N/A			Ancient
59-2004	A	2004	0	0	0	N/A	24-34	M	None
60	A	1997	2	2	0	Ostrich eggshell	Juvenile		None
61	A	1997	0	0	0	N/A			Ancient

Table 6.49: Wadi Fidan 40 bead data, continued.

63	C	1997	0	0	0	N/A			None
66	C	1997	5	3	2	Ostrich eggshell, shell	Infant		None
67	C	1997	32	20	12	Amazonite, agate, alabaster, flint	Adult		None
68	A	1997	5	5	0	Univalve	Adult		None
69	A	1997	0	0	0	N/A	Infant		None
71	A	1997	0	0	0	N/A	Juvenile		None
74	A	1997	0	0	0	N/A	Adult		None
75	C	1997	0	0	0	N/A	Adult	M	None
80	A	1997	0	0	0	N/A	Infant		None
80-2004	A	2004	1	0	1	Onyx	21-50	F	None
82-2004	A	2004	1	1	0	Cupric	Adult		Ancient
84-2004	A	2004	0	0	0	N/A	38-55	F	None
87	A	1997	177	0	177	Limestone	Mature adult	F	None
90-2004	A	2004	0	0	0	N/A	Adult		None
91-2004	A	2004	3	0	3	Cupric	27-66		None
92	A	1997	38	0	38	Carnelian, cowry, glass, shell	Mature adult	F	None
93	A	1997	0	0	0	N/A	Adult		Ancient
94	C	1997	130	7	123	Amazonite, carnelian, citrine, cupric, onyx, ostrich eggshell, shell	Adult	M	None
95	C	1997	17	8	9	Alabaster, amazonite, bone, ostrich eggshell	Adolescent		Present
95A	C	1997	13	8	5	Alabaster, amazonite, ostrich eggshell, shell	Adolescent		Present

Table 6.49: Wadi Fidan 40 bead data, continued.

96	A	1997	0	0	0	N/A	Adult		Ancient
97	A	1997	3	0	3	Cupric, cowry	Juvenile		None
99	C	1997	0	0	0	N/A	Infant		None
100	C	1997	7	3	4	Amazonite, ostrich eggshell, shell	Adult		Ancient
101	C	1997	30	14	16	Alabaster, amazonite, carnelian, ostrich eggshell, shell	Adult		Ancient
102	A	1997	1	0	1	Citrine	Adult	F	None
105	A	1997	0	0	0	N/A	Infant		None
107	A	1997	7	1	6	Amazonite, ostrich eggshell	Adult		Ancient
109	A	1997	1	0	1	Ostrich eggshell	Juvenile		None
110	A	1997	1	0	1	Ostrich eggshell	Adult	F	Recent
200	E	2003	7	0	7	Flint	Adolescent	M	None
201	E	2003	1	1	0	Amazonite			Ancient
202	E	2003	1	1	0	Citrine	Infant		None
203	E	2003	8	5	3	Alabaster, amazonite, citrine, ostrich eggshell			Ancient
205	E	2003	0	0	0	N/A			Ancient
206	E	2003	0	0	0	N/A			Ancient
207	E	2003	3	0	3	Amazonite, carnelian			Ancient
208	E	2003	1	0	1	Citrine			Ancient
209	E	2003	22	7	15	Agate, ostrich eggshell			Ancient
210	E	2003	2	0	2	Amazonite, shell			Ancient
211	E	2003	0	0	0	N/A			Ancient
212	E	2003	0	0	0	N/A			Ancient
213	E	2003	1	0	1	Amazonite			Ancient
216	E	2003	6	0	6	Agate, amazonite, ostrich eggshell			Ancient
217	E	2003	1	0	1	Amazonite			None
218	E	2003	5	3	2	Alabaster, amazonite, cupric			Ancient

Table 6.49: Wadi Fidan 40 bead data, continued.

220	E	2003	1	1	0	Agate			Ancient
221	E	2003	2	2	0	Carnelian, ostrich eggshell			Ancient
222	E	2003	1	0	1	Amazonite			Ancient
223	E	2003	6	5	1	Amazonite			Ancient
224	E	2003	4	4	0	Amazonite, siltstone			Ancient
225	E	2003	12	8	4	Agate, amazonite, ostrich eggshell, shell, siltstone			Ancient
226	E	2003	5	3	2	Agate, amazonite			Ancient
227	E	2003	25	11	14	Agate, amazonite, aventurine, carnelian citrine, garnet, onyx			Ancient
228	E	2003	1	0	1	Citrine			Ancient
229	E	2003	29	0	29	Cupric, ostrich eggshell			Ancient
230	E	2003	3	0	3	Amazonite, ostrich eggshell			Ancient
231	E	2003	1	0	1	Bone			Ancient
233	E	2003	0	0	0	N/A	Infant		None
234	E	2003	1	0	1	Amazonite			Ancient
235	E	2003	2	0	2	Amazonite			Ancient
237	E	2003	48	5	43	Agate, alabaster, amazonite, carnelian, ostrich eggshell, shell			Ancient
238	E	2003	5	0	5	Amazonite			Ancient
239	E	2003	2	2	0	Alabaster, amazonite			Ancient
240	E	2003	25	1	24	Agate, alabaster, aventurine, carnelian, citrine, cupric, univalve			Ancient
241	E	2003	4	3	1	Agate, alabaster, amazonite, ostrich eggshell			None
242	E	2003	9	1	8	Amazonite, cupric, flint			Ancient

Table 6.49: Wadi Fidan 40 bead data, continued.

243	E	2003	4	3	1	Amazonite, ostrich eggshell			Ancient
244	E	2003	1	0	1	Alabaster			Ancient
245	E	2003	1	0	1	Ostrich eggshell			Ancient
246	E	2003	28	2	26	Agate, amazonite, carnelian, ostrich eggshell			Ancient
247	E	2003	5	0	5	Amazonite, cupric, flint, jet			Ancient
248	E	2003	0	0	0	N/A	Infant		None
249	E	2003	0	0	0	N/A			Ancient
251	E	2003	5	3	2	Amazonite, shell			Ancient
252	E	2003	17	3	14	Amazonite, coral, cupric, flint, ostrich eggshell			Ancient
253	E	2003	10	2	8	Amazonite, citrine, copper, dentallium, ostrich eggshell, siltstone			Ancient
254	E	2003	0	0	0	N/A			Ancient
255	E	2003	1	1	0	Ostrich eggshell			Ancient
256	E	2003	1	1	0	Amazonite			Ancient
257	E	2003	25	21	4	Amazonite, alabaster, carnelian, ostrich eggshell, shell			Ancient
258	E	2003	3	0	3	Amazonite			Ancient
259	E	2003	0	0	0	N/A			Ancient
260	E	2003	9	0	9	Amazonite, carnelian, citrine			Ancient
261	E	2003	0	0	0	N/A			Ancient
262	E	2003	0	0	0	N/A			Ancient
263	E	2003	76	76	0	Flint			Ancient
300	A	2004	0	0	0	N/A			Ancient
301	A	2004	0	0	0	N/A	Adult		None
305/ 323	A	2004	1	1	0	Cupric			Ancient
306	A	2004	1	1	0	Amazonite	Neonate		Ancient

Table 6.49: Wadi Fidan 40 bead data, continued.

307	A	2004	1	0	1	Alabaster	Adult		Ancient
308	A	2004	0	0	0	N/A	0-5		None
311	A	2004	3	3	0	Amazonite, citrine, ostrich eggshell	35-50+		Ancient
316	A	2004	0	0	0	N/A	10-15		Ancient
317	A	2004	0	0	0	N/A	4 children		Ancient
318	A	2004	0	0	0	N/A	1 adult, 1 fetus		None
319	A	2004	0	0	0	N/A	2 adults, 1 child, 1 juvenile		None
320	A	2004	0	0	0	N/A	Adult		None
321	A	2004	0	0	0	N/A	3-12		None
322	A	2004	0	0	0	N/A	3-12		Ancient
324	A	2004	0	0	0	N/A	6 mos.-2 years		None
325	A	2004	0	0	0	N/A	Infant		None
326	A	2004	0	0	0	N/A	Neonate		None
327	A	2004	0	0	0	N/A	Juvenile		None
328	A	2004	0	0	0	N/A	3-6		Ancient
329	A	2004	2	2	0	Amazonite	Adult, neonate		Ancient
330	A	2004	0	0	0	N/A	3-6		None
331	A	2004	1	0	1	Bone	Mid-old adult		Ancient
334	A	2004	0	0	0	N/A	Young-mid adult		Ancient
335	A	2004	1	0	1	Bone	21-59		None
336	A	2004	2	0	2	Cupric, shell	3-12		None
337	A	2004	1	0	1	Ostrich eggshell	Adult		None
338	A	2004	0	0	0	N/A	50-60		None
339	A	2004	2	0	2	Agate, carnelian	Young-mid adult		Ancient
340	A	2004	3	0	3	Agate, flint, ostrich eggshell	Adult		None
341	A	2004	0	0	0	N/A	6-18 mos.		None
342	A	2004	1	0	1	Amazonite	Adult		Ancient
343	A	2004	1	0	1	Carnelian	18-25		Ancient
344	A	2004	0	0	0	N/A	2-4		None
345	A	2004	22	0	22	Flint, cowry, ostrich eggshell, pearl, shell	1-3		None
346	A	2004	2	1	1	Amazonite, ostrich eggshell	Adult		Ancient
348	A	2004	0	0	0	N/A	35-50		None
349A	A	2004	0	0	0	N/A	5-7		None

Table 6.49: Wadi Fidan 40 bead data, continued.

349B	A	2004	0	0	0	N/A	12-15		None
350	A	2004	0	0	0	N/A	Adult		Ancient
351	A	2004	1	0	1	Ostrich eggshell	Adult		Ancient
352	A	2004	0	0	0	N/A	Adult		Ancient
353	A	2004	0	0	0	N/A	12-16		Ancient
354	A	2004	0	0	0	N/A			Ancient
355	A	2004	0	0	0	N/A	9-12 mos.		None
356	A	2004	0	0	0	N/A	18-22	M	None
357	A	2004	0	0	0	N/A	21-46		None
358	A	2004	0	0	0	N/A	40-49	F	None
359	A	2004	0	0	0	N/A	1-3		None
360	A	2004	0	0	0	N/A	Adult		Ancient
361	A	2004	0	0	0	N/A	Sub-adult		Recent
362	A	2004	0	0	0	N/A	1 young-mid adult, & 1 sub-adult		Ancient
363	A	2004	3	0	3	Amazonite, citrine	27-66	M	None
364	A	2004	0	0	0	N/A	Adult		Ancient
366	A	2004	5	0	5	Alabaster, shell			Ancient
367	A	2004	23	0	23	Ostrich eggshell, shell	12-18		None
368	A	2004	0	0	0	N/A			Ancient
370	A	2004	0	0	0	N/A	Young adult		Ancient
371	A	2004	16	16	0	Ostrich eggshell	6-8		None
501	B	2004	0	0	0	N/A	Adult		Ancient
502	B	2004	3	3	0	Ostrich eggshell	Adult		Ancient
504	B	2004	1	1	0	Ostrich eggshell	3 adults, 1 sub-adult		Ancient
505	B	2004	1	0	1	Ostrich eggshell	Mid adult	M	Ancient
506	B	2004	0	0	0	N/A	Young adult		Ancient
507	B	2004	3	1	2	Amazonite, bone, shell	Adult	F	None
508	B	2004	0	0	0	N/A	Adult		Ancient
510	B	2004	0	0	0	N/A	6-10		None
512	B	2004	0	0	0	N/A	Mid-old adult	F	Ancient
514	B	2004	2	0	2	Agate, carnelian	Young adult & juvenile		Ancient

Table 6.49: Wadi Fidan 40 bead data, continued.

515	B	2004	4	3	1	Agate, amazonite, carnelian, ostrich eggshell	Adult		Ancient
516	B	2004	0	0	0	N/A	Missing		Ancient
517	B	2004	1	0	1	Agate	28-38	M	None
518	B	2004	52	12	40	Agate, carnelian, cupric, ostrich eggshell	Adult, child		Ancient
519	B	2004	34	33	1	Alabaster, amazonite, citrine, coral, ostrich eggshell, shell	21+		Ancient
520	B	2004	1	0	1	Ostrich eggshell	Adult, infant	M	Ancient
521	B	2004	4	4	0	Ostrich eggshell	Adult		None
522	B	2004	11	2	9	Agate, ostrich eggshell			Ancient
523	B	2004	85	37	48	Bone, citrine, cupric, flint, ostrich eggshell	25-50	F	Ancient
524	B	2004	17	1	16	Amazonite, flint, ostrich eggshell, shell	1 adolescent, 2 adults	1 M	Ancient
525	B	2004	41	32	9	Cupric, ostrich eggshell	3-6		None
526	B	2004	2	1	1	Cupric, ostrich eggshell	15, 9 mos-5 years		Ancient
527	B	2004	0	0	0	N/A	Adult		None
528	B	2004	0	0	0	N/A	2 adults, 1 2-6	1 M, 1 F	Ancient
529	B	2004	0	0	0	N/A	Neonate		Ancient
530	B	2004	9	0	9	Amazonite, cupric	2 adults	1 M	Ancient
531	B	2004	33	33	0	Cupric, ostrich eggshell	Adult	M	Ancient
532	B	2004	16	2	14	Aventurine, flint, ostrich eggshell			Ancient
533	B	2004	0	0	0	N/A	2 adults, 2 juveniles, 1 infant		Ancient

Table 6.49: Wadi Fidan 40 bead data, continued.

534	B	2004	0	0	0	N/A	1 young adult, 1 subadult		None
535	B	2004	2	1	1	Amazonite, ostrich eggshell	2 adults, 1 juvenile		Ancient
536	B	2004	0	0	0	N/A	1 adult, 1 child		None
537	B	2004	26	23	3	Agate, alabaster, amazonite, carnelian, citrine, coral, flint, ostrich eggshell	Young-mid adult		Ancient
539	B	2004	0	0	0	N/A	Mid-old adult	F	Ancient
540	B	2004	0	0	0	N/A	25-29	M	None
541	B	2004	0	0	0	N/A	Juvenile		None
542	B	2004	11	10	1	Cupric	Young-mid adult	M	Ancient
543	B	2004	7	4	3	Amazonite, cupric, ostrich eggshell	Mid-old adult	F	Ancient
544	B	2004	82	1	81	Alabaster, amazonite, carnelian, ostrich eggshell, shell	9-16		None
545	B	2004	0	0	0	N/A	Young adult		Ancient
546	B	2004	2	0	2	Amazonite	2 adults		Ancient
547	B	2004	0	0	0	N/A	Old adult	M	Ancient
549	B	2004	3	3	0	Alabaster, amazonite	About 34	M	None
550	B	2004	1	1	0	Ostrich eggshell	Juvenile		Ancient
551	B	2004	2	0	2	Dolerite	Young adult		Ancient
552	B	2004	0	0	0	N/A	1-3		None
553	B	2004	0	0	0	N/A	No remains		Recent
554	B	2004	0	0	0	N/A	6 mos-1 year		None
555	B	2004	0	0	0	N/A	Adult	M	None
701	C	2004	1	0	1	Carnelian	26-70	M	None
702	C	2004	9	9	0	Ostrich eggshell, shell, siltstone			Ancient
703	C	2004	0	0	0	N/A	5-16		Ancient
704	C	2004	4	1	3	Amazonite, ostrich eggshell	15-24		None

Table 6.49: Wadi Fidan 40 bead data, continued.

705	C	2004	41	41	0	Agate, alabaster, amazonite, aventurine, carnelian, ostrich eggshell	Adult		Recent
706	C	2004	291	2	289	Amazonite, bone, cupric, ostrich eggshell	15-23	F	None
707	C	2004	4	3	1	Amazonite, bone, shell	14-20		Ancient
708	C	2004	0	0	0	N/A	7-14		Ancient
710	C	2004	132	0	132	Agate, alabaster, amazonite, aventurine, carnelian, ceramic, cupric, ostrich eggshell	3 adults, 1 subadult	1 F, 1M, 2 Unk	Ancient
711	C	2004	5	4	1	Alabaster, amazonite, ostrich eggshell	Adult, juvenile		Ancient
712	C	2004	0	0	0	N/A	Adult		Ancient
713	C	2004	0	0	0	N/A	20-30	M?	None
714	C	2004	3	1	2	Amazonite, carnelian	26-70	M	None
715	C	2004	19	17	2	Ostrich eggshell	Adult		Ancient
716	C	2004	0	0	0	N/A	Adult		None
717	C	2004	0	0	0	N/A	3-5		None
718	C	2004	0	0	0	N/A	Adult	F	None
719	C	2004	1	0	1	Amazonite	Young-mid adult		Ancient
720	C	2004	4	2	2	Amazonite, ostrich eggshell	2 adults		Ancient
721	C	2004	0	0	0	N/A	Adult		None
722	C	2004	0	0	0	N/A	Mid-Adult	M	Ancient
723	C	2004	0	0	0	N/A	3-12		Ancient
724	C	2004	1	1	0	Flint	2 Adults	1 M, 1 F	Ancient
725	C	2004	1	0	1	Shell	5-8		None
726	C	2004	1	0	1	Alabaster	Adult		Ancient
728	C	2004	0	0	0	N/A	15-21		Ancient
730	C	2004	21	21	0	Flint, limestone			Ancient
731	C	2004	7	0	7	Agate, amazonite, cupric	Young adult	F	Ancient

Table 6.49: Wadi Fidan 40 bead data, continued.

732	C	2004	1	0	1	Ostrich eggshell	Mid-old adult	F	None
733	C	2004	0	0	0	N/A	3-5		None
734	C	2004	2	0	2	Amazonite, ostrich eggshell	Adult		Ancient
735	C	2004	0	0	0	N/A	Juvenile or Adult		Ancient
736	C	3004	3	2	1	Citrine, shell	20-50		Ancient
737	C	2004	1	0	1	Alabaster			Ancient
738	C	2004	3	3	0	Alabaster, amazonite			Ancient
739	C	2004	0	0	0	N/A			Ancient
740	C	2004	3	0	3	Alabaster, amazonite, ostrich eggshell	Infant		
741	C	2004	0	0	0	N/A	6-12 mos.		None
742	C	2004	5	5	0	Alabaster, amazonite, carnelian, flint			Recent
2009	A	2009	0	0	0	N/A	Adult	M	None

[1]Includes apparently undisturbed grave fill and looters' backdirt, if applicable. Some may be associated with secondary remains.

[2]Of main occupant. Ageing and sexing of 1997 remains by Rula Shafiq, of 2004 remains by Kenneth Maes. All human remains are presently under analysis by Melanie Beaslie; that data will appear in a future publication.

[3]Is evidence of disturbance at the cist level present? If so, does this disturbance appear to be ancient or modern? Looting may have left no evidence.

CHAPTER 7: CONCLUSIONS

Nomads in Transition: Mortuary Archaeology in the Lowlands of Edom (Jordan) has brought together the data and theoretical models of archaeology, anthropology, and Near Eastern history to study the thus-far unpublished material from the largest known Iron Age (ca. 1200 – 500 BCE) cemetery in southern Jordan. Previous studies of Iron Age mortuary sites in the southern Levant, such as that of Bloch-Smith (1992), have added exponentially to our knowledge and understanding of the organization of culture in the Levant. This study contributes a more thorough anthropological analysis of a particular group, the Edomites, of which a greater proportion of the population were pastoralists than elsewhere in the Levant. This has been possible first by thick description of the entire corpus of data, rather than examining particular materials and ignoring others. Then, each of these materials is examined at length, with raw materials, production methods, and their use within regional contexts being considered.

The cemetery at Wadi Fidan 40 yields data which answer questions in fulfillment of the promises of the theories of the New Archeology, as tempered by later theorists. It fulfilled an important role in society, giving the people who used it at once an anchor for their religious and social existence and a claim on the land at a time when control over important geographically located resources, including trade routes, cupric ores, and precious stones, became extremely important economically. The cemetery also provided one means of expression of the group's identity in a world where, due to changing political circumstances, group identities were hardening and changing. Each of these aspects of reading the cemetery will be discussed here.

ETHNICITY, PASTORALISM, AND ARCHAEOLOGY IN THE LEVANT

As we saw in Chapter 1, ethnogenesis is an important area of anthropological study. Barth (1969) noted that ethnic groups emerge not in isolation but because of interaction with other ethnic groups. Archaeology, with its ability to see long periods of time and social change, permits an examination of ethnogenesis over a time scale that is much broader than that for which cultural anthropology generally has data. The emergence of Edom, a pastoral people on the fringes of Egypt, allows for a particularly interesting case study (Levy 2009). Edom lay on the fringes of the old but weakened civilization of Egypt, in a region with increasing numbers of small polities, allowing for testing of Emberling's (1997) assertions that ethnic identity is particularly important for groups in such contexts.

Chapter 1 explores the way Edom has been seen as an ethnicity in the past, but also points out problems with these characterizations. Scholarly consensus following Crystal-M. Bennett's work on the Edomite plateau in the 1960s to 1980s held that Edom emerged as the result of Assyrian intervention in the seventh century. However, these studies have placed too great an emphasis on settled Edomite civilization, a late flowering of Edomite culture. The ELRAP work in Southern Jordan has shown use of the area by people utilizing classically Edomite pottery centuries earlier than had been supposed (Smith 2009; Smith and Levy 2008). The new understanding of Edomite archaeology is more in keeping with the Biblical and Egyptian documents, which state that a group known as Edom existed in the region by the early Iron Age.

Chapter 2 examines burial specifically as a vehicle for understanding society in the Levant in the Iron Age. Ritual has long been understood as a means of bringing a

group together in a way that effervesces, creating group solidarity (Durkheim 1915). Ritual is particularly important in bonding together a group that has suffered a death, and particularly a death of a politically important group member (Malinowski 1954). The New Archeology, utilizing the concepts of role theory, notes that particular roles within a group can often be identified using the material record left behind at the time of burial (Saxe 1970).

In the Levant specifically, Bloch-Smith (1992) has argued burial architecture reflects the ethnicity of the deceased. We examined the few excavated burials published in Edom, and added to them the burials at Wadi Fidan 4 and Wadi Fidan 45, which were hitherto unpublished. These Edomite burials all fall within what Bloch-Smith identifies as a lowland/coastal (i.e., not Judean Highlands) burial form. However, so few burials have been excavated in Edom that we are precluded from defining an Edomite burial pattern. As we shall see, the burials at Wadi Fidan 40 fit a strict pattern of burial within cists, but this may be in large part for functional reasons.

Certain grave sites, as we have seen in Chapter 3, are particularly important for pastoral nomadic populations. The work of Emanuel Marx (1985, 2006, 2007) shows that it is often through pilgrimage and the maintenance of tombs (or alleged tombs) that social and land rights are maintained. This is not to say that these events happen in a vacuum. As Khazanov (1994a) points out, pastoral societies are maintained through their contacts with the outside world. Even religion is largely dependent on sedentary societies (Khazanov 1994b). This dissertation sets its subject in the context of the pastoral society which the archaeological surveys described in Chapter 1 suggest existed in Edom at this time. Pastoral society does not preclude even state level society. However, the mobility

of pastoral society creates particular stresses that do not exist in more settled society, the most important of these being control over access to the goods of settled peoples. Pilgrimage serves to cement pastoral society and reaffirm the control of its leaders.

SOCIAL COMPLEXITY

One of the most fundamental contributions of the New Archeology is the application of role theory to mortuary archaeology in order to determine social rank and status. The promise of these studies was made clear at roughly the same time by Saxe (1970) and Binford (1971). Tainter and Cordy (Tainter 1971; Tainter and Cordy 1975) contributed to these discussions the understanding that the one objective measure of status is wealth expenditure, and the strongest proof of wealth expenditure is labor investment. Rank and status are part of the social system, and as such any change in social rankings also leads to change in the whole social system. As Emberling (1997) notes, this is evident in hardening of ethnic lines and even the emergence of new ethnic groups.

Wadi Fidan 40 was in use at a time of growing social complexity in southern Jordan and across the southern Levant. The clearest evidence of this in the local region are the massive metal production and monumental buildings constructed at Wadi Fidan 40 in the tenth and ninth centuries. The fortress and the Area R monumental residence at the site testify to elite control, and the scale of copper production at the site suggests centralized control over the site (Levy et al. 2004; Levy et al. 2005b; Levy et al. 2008; Levy et al. in press).

The graves at Wadi Fidan 40 appear to be indicative of a chiefdom level society. On the whole, the cemetery at first gives an impression of egalitarianism. Almost all of

the burials were placed within stone built cists, and even neonates were invested with enough personhood to merit burial. However, certain of the graves contain many beads, and others possess relatively complex surface architecture, including anthropomorphic stones. As Peebles and Kus (1977) explain, the graves of chiefdoms tend to display great variety in wealth. However, they also show attempts to emphasize attachments to competing ruling families. At Wadi Fidan 40, the surface architecture helped contribute to this emphasis on ancestors. This is one possible way the standing stones at Wadi Fidan 40 were particularly important, in that they drew attention and religious devotion towards the graves of particular individuals who were important in the world view of the chiefdom, most likely the ancestors of those who made claims to authority. The burials at Wadi Fidan 40, as one might expect in a pastoral society, point towards an egalitarian ideal, but at the same time reaffirm the importance of certain families over others.

The bodies of those interred at Wadi Fidan 40 are still undergoing pathological analysis, but preliminary studies in 2004 show signs of extreme violence to some of the individuals. The studies in 2004 noted only obvious pathologies noticed while aging and sexing remains. But that very preliminary analysis showed that at least five individuals (Graves 59-2004, 363, 501, 517, and 713) display healed compression fractures to the skull, consistent with being clubbed. The only probable weapon found at Wadi Fidan 40 is the iron material believed to be a blade in Grave 9-2004. However, this skeletal data suggests competition over resources in a warlike society, though in a society in which such violence did not always end in death. As Carneiro (1970) argues, this competition over resources often leads towards social complexity.

It cannot be said that this was not one part of a state-level society. Pastoral societies often operate with sheikhs who operate very much like chiefs. These individuals obtain their power largely through negotiating with the outside world. Others, particularly in the modern world, obtain their power by negotiating in the face of the outside world—mediating disputes that cannot be brought to the attention of the state authorities. The evidence seems to suggest that the graves at Wadi Fidan 40 belong to the equivalent of a chiefdom operating on the fringes of a state.

VIOLATION AND RECONSECRATION

The Wadi Fidan 40 cemetery is an important example of violation and reconsecration. Although many or even most cemeteries in the Levant—including but not limited to Iron Age cemeteries—show signs of looting, violation and reconsecration are not generally studied anthropologically or archaeology. The closest studies deal not with the violation of the dead but with iconoclasm, the destruction of images which also occurred at the cemetery. Like the tomb of Herod described in Chapter 2, the graves at Wadi Fidan 40 were targeted for violation. It remains unclear by whom, and whether this was a one time event or a protracted series of assaults. Unlike the cemetery at Tell es-Sa'idiyeh, where published reports suggest a particular element of the community was targeted, the Wadi Fidan cemetery as a whole fell victim.

In antiquity, the majority of the graves in the cemetery (at least among those which were excavated) were disturbed. One hundred fifty graves showed clear signs of disturbance in antiquity. The number of looted graves is probably higher, since some graves were robbed more recently and therefore it could not be determined whether they had previously been robbed, while other graves may have been looted without showing

clear signs of disturbance. These disturbances themselves can be seen as a religious act meant to desecrate the interred. Like the burial ceremony itself, the desecration required considerable manpower. However, it remains unclear whether the graves' desecration was a coordinated effort which took place at one time, or was a series of events that took place over a period of years. It is possible that an invading force desecrated the cemetery. It is equally possible that, as the nomadic group which utilized the burial place left during seasons of the year, individual graves and groups of graves were opened by rival groups. There is no clear pattern to the looting. In some cases, the skeleton was entirely smashed and disturbed. In other cases, only the upper body was destroyed, or the skeleton was left mostly intact but cultural objects were removed. Usually only enough of the grave was excavated by the looters to obtain access to the cist; thus, only one or two capstones were exposed and removed.

In contemporary Egypt, grave robbery accompanied by reconsecration of the grave was not only widespread, it was officially sanctioned. For example, Egyptian records describe the actions of General Piankhy, who ordered his men both to collect and rebury the human remains from looted royal tombs, but also to uncover sealed tombs, which he apparently intended to rob (Snape 2011: 247). The actions of the Third Intermediate rulers display a pragmatism towards the wealth buried with the dead combined with a desire to respect the human remains. The almost complete lack of association between secondary burials and artifacts at Wadi Fidan 40 suggests that here, when the grave was reused, the deceased did not retain ownership of what was buried with the individual. Bloch-Smith (1992) argues that in Judah, after decomposition, the soul was believed to have departed the corpse. Belief is not recoverable archaeologically,

but it may be that tombs were mined by the very populations which used the Wadi Fidan 40 cemetery.

When and in what context the looted graves at Wadi Fidan 40 were filled in and apparently reconsecrated cannot be determined. The act of reconsecrating defiled sites is an important one which has not been anthropologically theorized. However, reconsecration can be seen as the cause for many of the spontaneous public shrines that have been the particular focus of anthropological analysis since September 11, 2001. These shrines, like the death ritual itself, serve to heal the society of the psychic wounds that disrupt it (Santino 2006). However, unlike the burial, these practices are often undertaken by members of the society at large who are otherwise only tangentially involved with the deceased.

One example of such a shrine is at the gravesite of Anita Gillis in El Campo Santo, the burial ground in San Diego's Old Town. El Campo Santo was San Diego's main Catholic cemetery between 1849 and the end of the 1880s. By the early twentieth century it had fallen into disuse and neglect. The cemetery was bisected by streetcar tracks and portions of the cemetery were paved over to form San Diego Avenue and Linwood Street. Approximately 33 burials have been found beneath these streets using ground penetrating radar (Mallios and Caterino 2007: 30-38, 120). The work was done knowingly impacting the graves, but according to a bronze plaque set at the site in 1994 by the San Diego Community Development Board only the remains and the large stone marker of state Assemblyman Edward L. Greene were moved to within the present walls. Such desecrations of cemeteries were common as San Diego grew in the twentieth century; other cemeteries similarly impacted include but are not limited to the eighteenth

century mariners' Dead Men's Point cemetery, where Seaport Village is now found, the Congregation Beth Israel Jewish Cemetery, from which the burials were relocated to Mount Hope Cemetery and which is now the site of Sharp Cabrillo Hospital, the Protestant Cemetery, which was destroyed to create the Interstate 8-Old Town Avenue interchange, and Mount Calvary Catholic Cemetery, from which the San Diego City Council decided to remove gravestones to create Pioneer Park in 1970. But beginning in the 1930s, preservation groups took an interest in restoring El Campo Santo, and, the San Diego Historical Society began marking graves mentioned in historical documents or found in photographs (Bissell 1982). Anita Gillis' grave was marked at an unknown time, possibly as late as the 1970s, with a simple cross bearing the inscription:

+
ANITA GILLIS
A LITTLE GIRL
R.I.P.

At an unknown time after that, probably after 1995, a reminiscence of Gills' funeral, related by Lillian Whaley (1995), was posted next to this cross. It appears to be on the basis of this story of grief at the death of a young child that offerings, including beads, flowers, American and Mexican coins, stuffed animals and other toys, statuettes, and other artifacts began to be left at the grave (Fig. 7.1). Visitors to the site rearrange the surface architecture of bricks and cobbles, which sometimes appears as a large rectangle, and other times is a small oval. Young children are often revered in folk Catholicism along the border as *angelitos,* little angels, who because of their youth and relative sinlessness are particularly efficacious in bringing about miracles and granting favors (Griffith 2003). However, Gillis' grave is the only grave treated this way in the

small cemetery. The only reason Gillis' grave appears to have been selected over other children's graves is because of the heartfelt passage by Lillian Whaley. The shrine at her grave appears to have grown up in large part as a psychic balm for those touched by the death and funeral of a young child, a child they did not know, shared no kinship with, and would have not even known about were it not for the grave's desecration and rehabilitation. The reconsecration of this particular grave has nothing to do with the deceased's role in the society in which she lived, but rather reflects a role she plays in a society that utilizes the same geographical space which believes it shares the same cultural values as the society of the deceased, but which exists more than a century and a half after the interment and is constituted of people with few biological or cultural ties to the deceased. It is in that way very much like the shrine at Jabal Haroun, discussed in Chapter 3.



Figure 7.1: The shrine at the grave of Anita Gillis in El Campo Santo, San Diego. The grave was unmarked for decades when the San Diego Historical Society placed a cross on what is believed to be the location. Offerings are commonly left on the grave. The cross is obscured by the artificial sunflower and beads hung on it, while the description of Gills' funeral is on the placard to the left.

The motives of those who restored Wadi Fidan 40 will remain unknown. Levy *et al.* (2008) have suggested that copper production at Khirbat en-Nahas was interrupted by the activities of Shoshenq I, who carried out raids in the Levant in the late tenth century. There is no evidence at present that Soshenq entered Transjordan, but such an upset in the region may have weakened or even temporarily driven away the people who used the cemetery, allowing enemies to desecrate the graves. The graves may have been restored in a similar way to those of El Campo Santo, as a reaction by later peoples who felt a

bond to those at Wadi Fidan 40 regardless of kinship. Many of the desecrated graves were full of hard packed, nearly mud brick material, which suggests they were open for a considerable time as silt washed in before they were filled. However, those who reconsecrated the graves do appear to be from the same cultural milieu as the deceased. Of the 150 graves which were looted and refilled in antiquity, 34 had pavements constructed over them. In many cases, these were relict pavements, what was left behind after the looting operation. However, in other cases, the pavement was clearly constructed by those who reconsecrated the grave. For example Grave 208 includes a nearly complete circle and a pavement missing only a few, disintegrated stones. Still more striking are the Grave 716 and Grave 717 pair. Each of these is covered by a nearly identical small stone circle surrounding a well-laid pavement which in turn surrounds a standing stone (Fig. 7.2). The exterior circles of these two graves touch. However, while Grave 717 is an apparently intact capped pit burial of a juvenile, Grave 716 was a capped pit burial, apparently looted in antiquity, containing only very poorly preserved and fragmentary remains, possibly of a partial secondary burial. In some instances, such as Grave 240, the pavement appears to have been constructed to cover the looter's hole rather than the interior of the grave circle.



Figure 7.2: Grave 716 (foreground) and Grave 717 (background). One structure lay over the apparently undisturbed grave of a juvenile, while the other lay over the fragmentary, likely disturbed, remains of an adult.

RITUAL AND PILGRIMAGE

As we saw in Chapter 3, ritual is what binds societies. In the case of mobile societies like pastoral nomads, pilgrimage brings the society together. It allows individuals to reassert their rights to resources and social ties. It also allows for leadership to assert itself, reaffirming their control over the group through the right to control the rites (Marx 1985, 2006, 2007).

The best evidence for ritual and pilgrimage at the site is the restoration of the graves. The Grave 247 pavement and wall may be the remnants of a shrine which in turn

may or may not have been associated with the grave itself (Fig. 7.3). But no artifacts were recovered in association with this feature, and too little of the structure remained to determine its true nature. The grave itself was looted and disturbed. Of particular note is the complex Grave 712 feature. As described in detail in Chapters 4 and 5, this feature was constructed over a looted grave, and consisted of a libation pit in front of an anthropomorphic standing stone (Fig. 7.4). An incised stone that could only be seen by one standing over the pit was incorporated into the stone lining of the pit. Libations poured into the pit would flow past another, much smaller anthropomorphic stone (Fig. 7.5), which is further evidence that some of these stones may not have been intended to be used in surface architecture.



Figure 7.3: Grave 247 pavement and wall. Possibly the remains of a shrine.



Figure 7.4: The Grave 712 surface architecture after excavation. Note the dual stone circle (with remnants of a pavement between the two) and the paved pit. The stone in the pit is believed to have fallen in at some time in the past; it has the shoulders of an anthropomorphic stone. Offerings may have been poured into the pit, which would slowly seep through the pavement and past a second anthropomorphic stone, buried below. The pit lies directly over the open, looted cist.

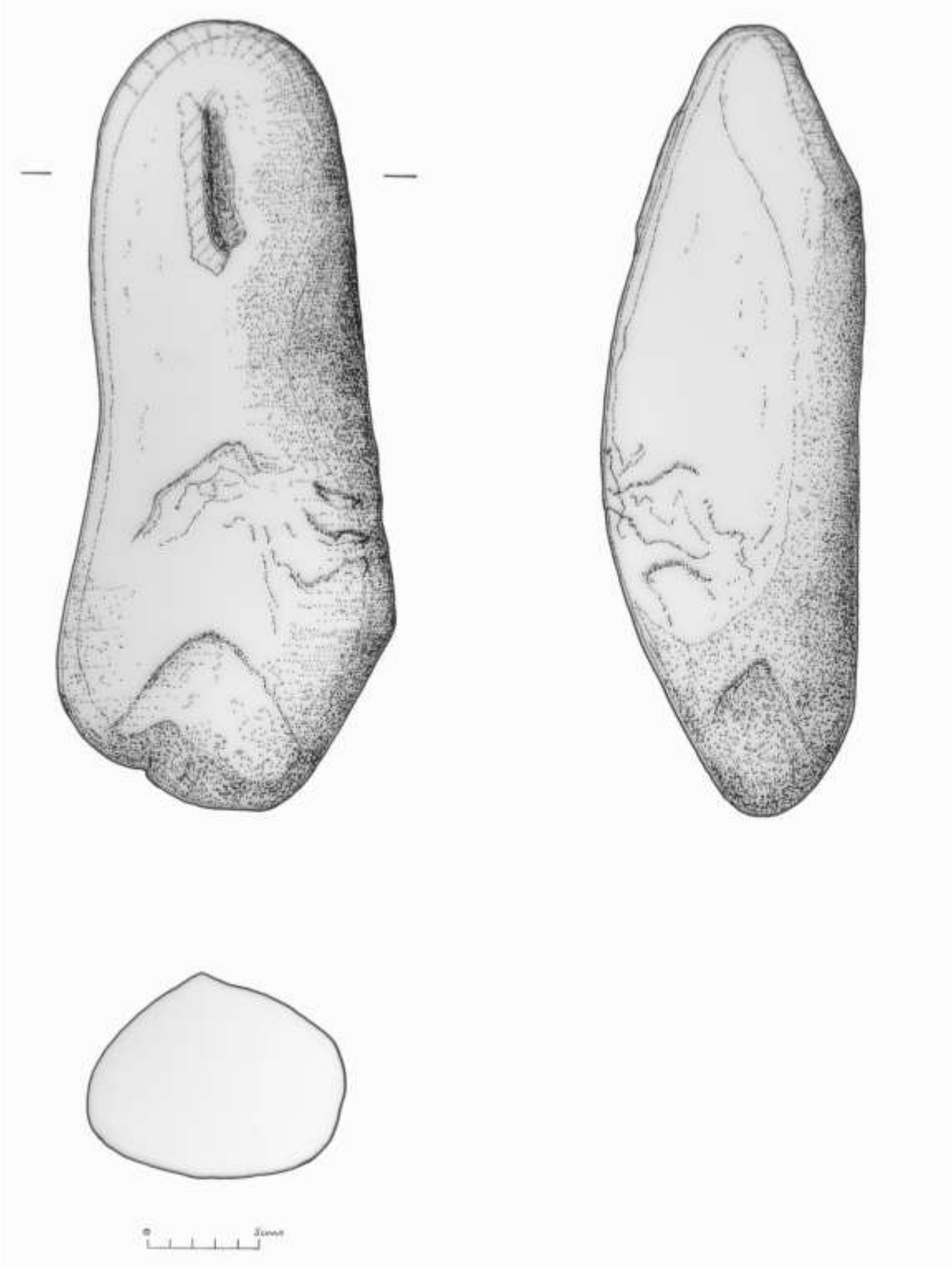


Figure 7.5: The small anthropomorphic stone which was buried face-up beneath the paved pit in Grave 712.

As we saw in Chapter 3, pilgrimage is an important means of solidifying rights to land and property. Those who partake in pilgrimage reaffirm their rights within the community, especially if they have lived for an extended period outside the group. At the same time, pilgrimage allows the sheikh to reaffirm his own control over the group (Marx 1985, 2006, 2007). In the case of Jabal Haroun, the guardian of the shrine determines who can access the shrine when, and receives tribute even when sacrifices are performed on behalf of the saint away from the shrine (Crawford 1930). The pilgrimage allows for integration of the individual into the life of the group and affirmation of social roles within the group.

Pilgrimage would have allowed for social control within the group. The very presence of a cemetery with durable, visible markers would allow for control extending beyond the group. As we saw in Chapter 2, formal disposal areas for the dead themselves are often signs of the existence of hierarchical societies (Saxe 1970). Wadi Fidan 40 lay at an important point where the Wadi Fidan debouches into the Wadi Arabah. It might be seen as a claim on the territory surrounding, including the route from Khirbat Faynan, the WF 424 field system, and the surrounding small settlements. The site is also near the massive copper production site Khirbat en-Nahas, and may indicate a claim on commerce with that site, which possibly included providing the site with charcoal just as nomadic peoples are known to provide settled peoples with charcoal ethnographically. At the same time that the Wadi Fidan 40 cemetery was in use, or soon after it went out of use, cemeteries with distinctive markers sprang up in much of the Levant. The Late Bronze Age cemetery at Tell Tell es-Sa'idiyeh included stone markers, but these were apparently indistinctive, since they were not described by the excavators. Very few Late Bronze

Age Egyptian-style stelae have been found in the Levant. In the Iron Age, and particularly in the Iron II, very distinctive grave markers appear. In Phoenician territory, these are blocky markers inscribed with Phoenician letters or designs. In Arabia, where land around oases can be particularly contested, anthropomorphic stone grave markers appear possibly as early as the twelfth century and definitely by the ninth century. In the Judean highlands, markedly visible bench tombs became increasingly common in the Iron Age, while in the Philistine areas, communal burial in cist tombs became the norm in the Iron Age IIB. As Saxe (1970) and Barth (1969) suggested, increased social complexity leads to hardening of social identity, which is expressed in funerary markers which in turn are claims to land.

GRAVE STRUCTURES AND IDENTITY

Examinations of ethnicity in the Levant often focus on mortuary architecture. As we discussed in Chapter 2, Raphael Giveon (1992) paved the way for these studies with his broad regional analysis of grave structures of the Late Bronze Age. He was followed by Elizabeth Bloch-Smith's (1992) study of Iron Age burial. The grave structures at Wadi Fidan 40 most closely resemble the cists Bloch-Smith defined as part of the "lowland/coastal" burial pattern. However, this cist category is extremely broad. It includes the large, multi-individual cists at Tell Zeror (Ohata 1967, 1970) and which became the most common burial practice in Philistine Azor (Ben-Shlomo 2008). Only one grave at Wadi Fidan 40, Grave 710, was a multi-individual cist tomb of this kind, although Wadi Fidan 4, Tomb 1 and possibly the tumulus at Wadi Fidan 45 are clearly also of this tomb type. The cist category also includes a broad range of funerary architecture at central Jordan Valley sites, notably Tell es-Sa'idiyeh (Green 2006, 2008,

2010, in press; Pritchard 1980; Tubb 1986, 1988a, 1988b, 1990, 1995; Tubb and Dorrell 1991, 1993, 1994; Tubb et al. 1996, 1997) and Tell el-Mazar (Yassine 1984a).

The closest parallel to the Wadi Fidan 40 cists outside of the Fidan valley appears to be Tomb 404 at Tell es-Sa'idiyeh (Fig. 7.6). This was identified as the most similar tomb to those of Wadi Fidan 40 independently by the present author (in the published reports) and by John Green (personal communication), who has personal knowledge of the unpublished materials. Like many of the cists at Wadi Fidan 40, this cist contained both an articulated skeleton and a the disarticulated remains of a probable former occupant. However, even this tomb shows striking differences between those at Wadi Fidan 40. This cist is long enough to contain its extended burial, unlike any of the cists at Wadi Fidan 40. Its walls are constructed by stacking stones. This construction technique is seen at Wadi Fidan 40, but it is far more common that sandstone slabs are laid on edge to form the sides of the tomb. The closest parallels to this technique are among the Roman tombs at the Faynan South Cemetery. This fact suggests that the cist tomb and its building technique used at Wadi Fidan 40 is primarily functional and was chosen because of the availability of the large sandstone slabs in the region.



Figure 7.6: Tell es-Sa'idiyeh, Tomb 404. A stone-built tomb meant for a single interment, left, after removal of the capstones, and right, after excavation. This grave appears to be the closest excavated parallel to the graves at Wadi Fidan 40 (Tubb and Dorrell 1993: 67).

The extreme regularity of the burial structure at Wadi Fidan 40, in contrast to the diversity at other sites, suggests that a single population used this burial place. Just three cist types were identified, trapezoidal (Fig. 7.7), L-shaped (Fig. 7.8), and rectangular (Fig. 7.9). Rectangular cists tend to be small and were used only to contain infants or secondary burials. L-shaped and trapezoidal cists appear to have been in use at the same time, as evidenced by Grave 337 and Grave 348. One of these graves is an L-shaped cist, while the other is a trapezoidal cist. They were covered by an unbroken line of capstones, and were probably constructed at the same time. However, there are 154 trapezoidal cists and just thirteen L-shaped cists. The trapezoidal cists are easier to reuse (since the L-shaped cists are made to the exact proportions of the interred individual), and

for this reason were probably more popular. There are no exact parallels for the cists at Wadi Fidan 40 in published excavation reports.



Figure 7.7: Grave 337, an example of a trapezoidal grave cist. The cist is wider at the south than at the north, built to accommodate the flexed legs of the interred.



Figure 7.8: Grave 358, an example of an L-shaped cist. The west wall of the cist bends sharply in the north in order to accommodate the flexed legs of the deceased.



Figure 7.9: Grave 516, an unusually fine example of a rectangular cist with a partially paved floor.

The surface architecture at Wadi Fidan 40 was largely uniform, but certain differences appear to denote the idealized roles of the interred. Pavements or stone piles found within the grave circle are the most common deviation (Fig. 7.10). But the most prominent difference is that of the standing stones and anthropomorphic stones. The anthropomorphic stones were probably also standing stones, though several were found buried in reconsecrated graves, and it cannot be ruled out that they played ritual roles related to the reconsecration of graves and did not generally stand over graves. Standing stones, either anthropomorphic or aniconic, stood over a minority of graves, and no clear correlation was found between their presence and the age, sex, or grave goods encountered. Indeed, the graves with anthropomorphic stones appear to have been

singled out to be robbed, and therefore whatever offerings or objects of personal adornment were deposited in these graves are largely lost.



Figure 7.10: Grave 713. The stone circle that surrounds the grave contains a partially disturbed pavement.

ETHNICITY

In Chapter 1, we described the importance of examining difference to determine ethnic groups. As Barth (1969) noted more than four decades ago, it is through contact and competition that ethnic groups form and define themselves. Hardening of ethnic boundaries often co-occurs with competition over resources and increasing social complexity. Emberling (1997) has shown that this is particularly the case on the borders of state societies. In the particular case of the Levant, Faust (2006) has used documents and archaeological data to document the emergence of ethnicity in Israel. Bloch-Smith (1992) has done so to a more limited extent, documenting the appearance of specifically

Judahite burial customs. This dissertation examines identity in a much less known region, southern Jordan.

Ethnicity is often visible archaeologically, but there is seldom a 1:1 correspondence between the archaeological record and ethnic groups. One of the best means of analyzing ethnicity archaeologically remains the study of pottery. Pottery allows for the display of symbolic motifs, often in communal feasting settings. It also reflects what food was consumed and how it was prepared, foodways which tend to be among the ways ethnic groups define themselves.

The limited corpus of pottery found at Wadi Fidan 40 allows for little speculation on the role of ceramics in signifying the identity of these people. At Wadi Fidan 40 only two pottery vessels were found. One, a juglet with a trefoil opening and a globular body (Figs. 7.11., 7.12; EDM 72399), was found in Grave 544 with a semi-flexed adolescent of indeterminate gender. In addition to its Cisjordanian parallels cited earlier (Levy et al. 2005: 459, 460, 468-469), it has parallels at Tell el-Kheleifeh (Pratico pl. 31:9) and Tawilan (Hart 1995: 257: figs. 1, 2, 7). The other vessel is a pottery bowl, also found with a semi-flexed individual, a child in Grave 345 (Figs. 7.13, 7.14; EDM 86981). This bowl has an abnormally thick and misshapen base (Levy et al. 2005: 468). The offerings found in Grave 345 also included copper earrings, one of the most labor-intensive and therefore prestigious grave goods. Both these graves were also unusual in that their occupants were oriented with heads to the north, while the vast majority of individuals in the cemetery were buried with heads to the south. Neither cist appeared disturbed, although no surface architecture related to Grave 544 survived.



Figure 7.11: The trefoil juglet from Grave 544 (EDM 72399) .

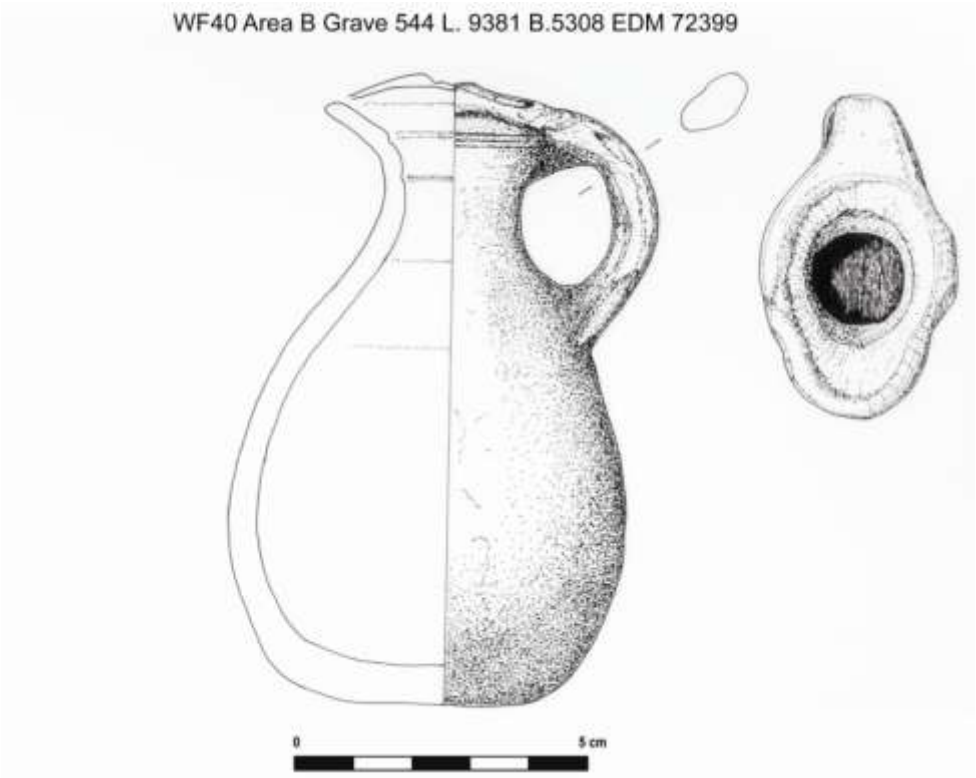


Figure 7.12: The trefoil juglet from Grave 544 (EDM 72399).



Figure 7.13: A detailed view of the ceramic bowl from Grave 345 (EDM 86981). Note the abnormally thick base.

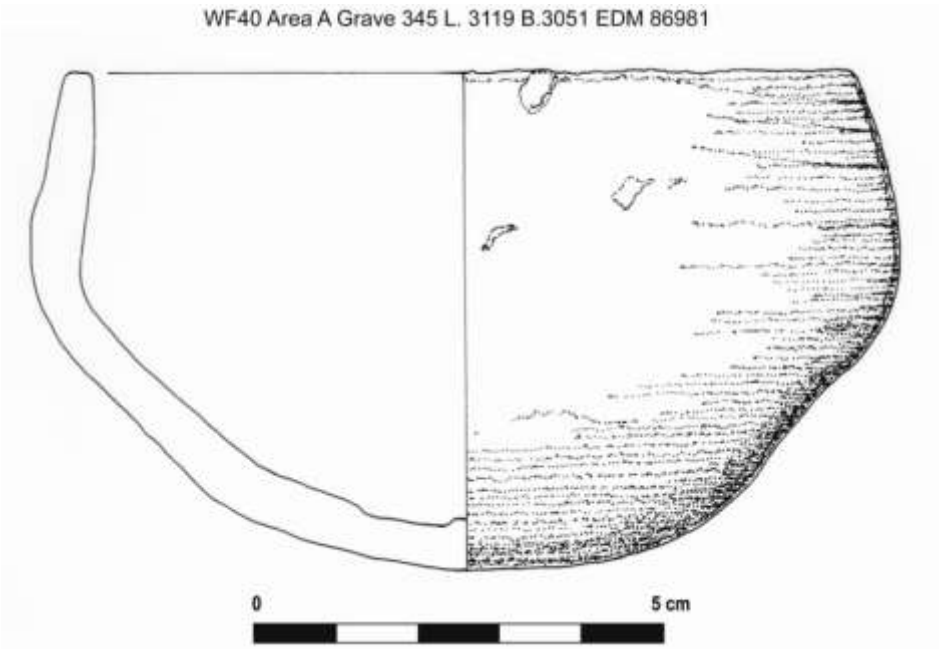


Figure 7.14: The ceramic bowl from Grave 345 (EDM 86981). Note the misshapen profile of this vessel.

Despite the natural bias against the preservation of wooden artifacts, wooden vessels were found much more commonly than ceramic ones, and these vessels show a remarkable variety of forms and crafting. The badly looted Grave 12 included wooden bowl fragments with peg holes along the rim (B. 2318). A broken wooden bowl was found amidst skull fragments in the chest region of the juvenile of Grave 13; more of this bowl was found beneath the left arm, which may have been its original position (B. 2287). In Grave 22, a large wooden bowl, 24 centimeters in diameter, was found beside the skull (Figure 7.10). This complete bowl did not survive extraction, but it had a lug handle and holes for pegs were observed along the rim (Fig. 7.15; B. 2048). In Grave 33, that of a mature adult female, fragments of a poorly preserved, small wooden bowl or cup about ten centimeters in diameter was found lying between the hands and face of the deceased. Grave 59-2004 included a teapot-like wooden vessel with a spout and a lug handle carved from a single block of wood (Fig. 7.16; EDM 86460). This vessel contained four pomegranates and was placed in the chest region of an extended burial (Fig. 7.17; Levy et al. 2005: 469). A wooden pin, probably used to hold together the shroud or clothing, was also found in the thoracic region of this individual. Grave 92, another wealthy grave (Levy et al. 1999: 299), also included the fragmentary remains of a wooden bowl found in the chest region. This vessel also had small pegs that were carefully inserted along its rim (Fig. 7.18; B. 2133). The best-preserved wooden bowl was found in Grave 97, carved from a single piece of wood but with pegs around its circumference (Fig. 7.19). Inside was a gazelle bone with a cut mark and numerous seeds (Fig. 7.20; Levy et al. 1999). These were no doubt food offering placed near the

deceased at the time of burial. Wood fragments, most likely the remains of a vessel, were found mixed with the ovicaprid remains beside the skull of Grave 701. Wood fragments which could not be identified were also reported from Graves 29, 54, 102, 110, 240, 258, 516, 522, 535, 544, and 714.

As we have seen, archaeological studies show that food ways are among the most vital means of identifying ethnic groups. The way food is prepared and offered in a community is a means for affirming who is in, and who remains outside, the group. Decoration on food bearing vessels also helps a community identify itself to members and outsiders who attend feasts. Among the emerging Israelites, for example, particular food prohibitions helped the group identify itself in opposition to surrounding groups, and particularly the Philistines (Faust 2006). The vessel forms at Wadi Fidan 40 present such a diverse group of food ways that defining the group using them at this time is not possible beyond pointing out the obvious avoidance of ceramic or metal vessels.



Figure 7.15: Grave 22. Note the large wooden bowl placed beside the head. During the excavation this appeared to be a large wooden basin.



Figure 7.16: Rim of the Grave 22 wooden bowl, showing peg holes and lug handle.



Figure 7.17: The Grave 59-2004 burial with spouted, teapot-shaped wooden vessel (EDM 86460), formed from a single piece of wood, and pomegranates. Radiocarbon dates for the burial were derived from these pomegranates, which suggest that this mature adult female was buried in late summer to early fall.

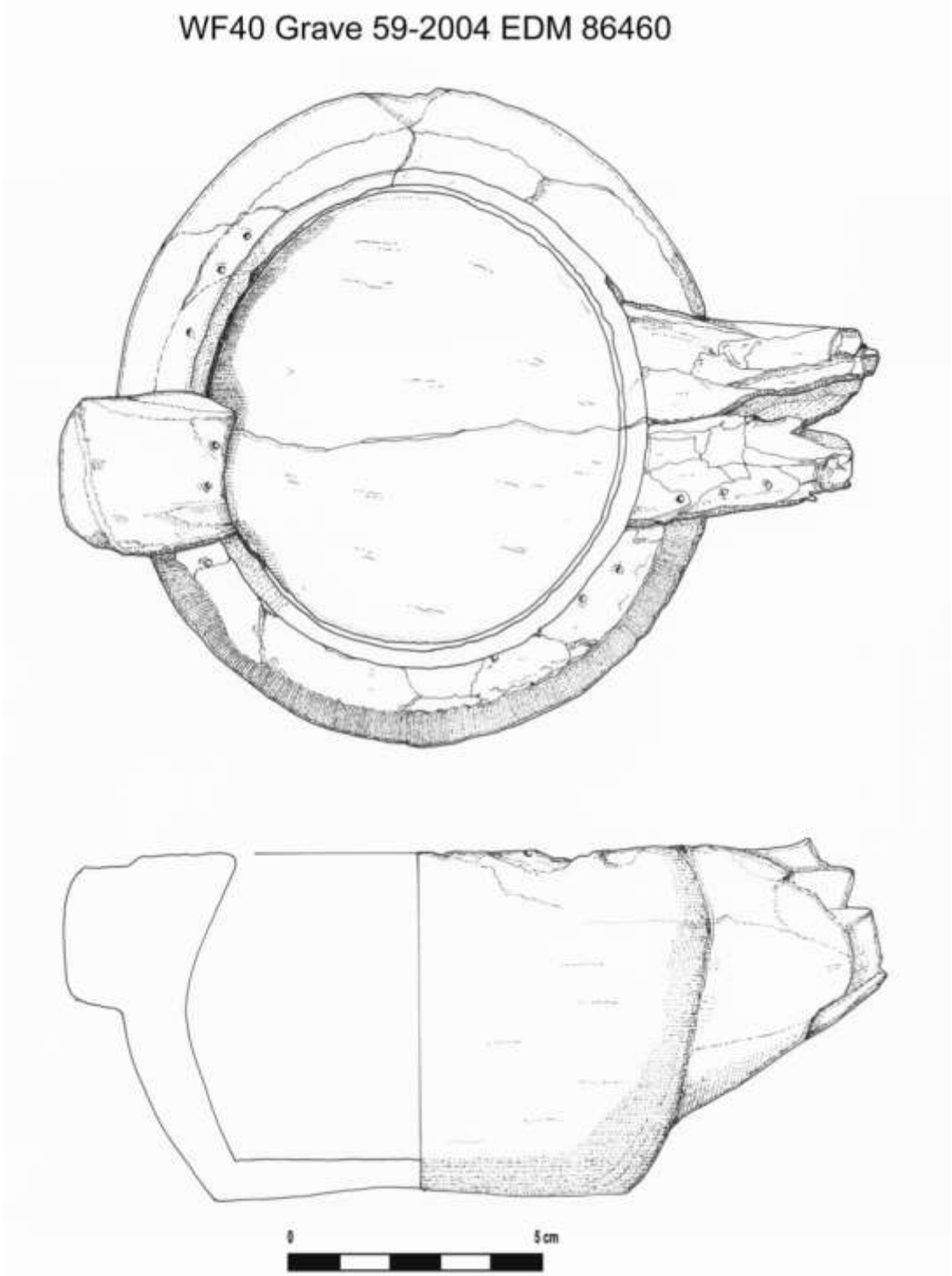


Figure 7.18: The teapot-shaped wooden vessel from Grave 59-2004 (EDM 86460). Note the spout, lug handle, and pegs along the rim. This, like all the surviving wooden vessels, was expertly constructed from a single piece of wood.



Figure 7.19: The wooden bowl from Grave 97 (B. 3619). Note the wooden pegs along the rim. The body of this bowl, like all the surviving wooden vessels, was constructed from a single piece of wood.



Figure 7.20: The in-situ wooden bowl containing an ungulate bone and seeds, buried with a juvenile in Grave 97 (B. 3619).

More of an indicator of personal adornment than of food ways is the only other 'vessel' in the Wadi Fidan 40 cemetery, unworked marine shell. This is indicative of customs of self-decoration more than of food ways. Marine shell fragments were common finds in fill and looted tombs. In two graves in the west-central portion of the cemetery (Areas B and C), Grave 543 and Grave 706, intact single valves of marine shells were found in situ, lying flat. In Grave 543, that of a middle to old adult female, the shell was found below the mandible and between the wrists (EDM 72412). In Grave 706, that of a female of about eighteen, a large marine shell was placed at the elbow (EDM 88492). In Egypt bivalve shells, particularly those of the freshwater mussels *Mutela nilotica* and *Aspatharia (Spathopsis) rubens*, were commonly used as palettes to hold kohl or other pigments, and were so highly valued that artificial shells were even molded out of stone (Berman and Bohač 1999: 270). Nothing was found in either shell at Wadi Fidan 40, and no flotation or residue analyses have been conducted.

The use of wooden bowls rather than pottery is suggestive of a pastoral nomadic group (Levy and Holl 2002: 96; Levy et al. 2004: 86-87). Ethnographically, pastoral nomads are more likely to carry wooden and metal vessels (Musil 1928: 86-114). However, in premodern societies, and particularly during the Iron Age, metal may have been prohibitively expensive. Those ceramic vessels which were found were also very small and robust – small and robust enough to be less likely to be broken on a journey. However, nomadism itself is not an ethnic marker, and ethnographically nomadic groups often consider themselves to be of the same ethnicity as nearby settled peoples. Indeed,

the fact that ethnicity was so often shared by migratory and sedentary peoples is one of the facts that prompted Barth's (1969) reexamination of the concept of ethnicity.

The excavated wooden bowls contained a range of items from meat to seeds to fruit, and may have contained such perishable offerings as juices. The spouted vessel implies by its form that it was meant to contain liquids, in which the pomegranates might have been floated. Large bowls, a small bowl, a possible cup, and even a spouted vessel were represented in the wooden bowl assemblage. The pegs along the rims of the wooden vessels suggest interlocking lids, but no lids were ever found, and these may be a decorative device. Each surviving wooded vessel was shaped from a single block of wood, which would have required expert craftsmanship and large pieces of wood likely not available in the immediate area, adding to their expense of manufacture and therefore prestige. They may have even been obtained from settled groups, rather than manufactured by the nomads themselves.

The wooden vessels explain the initial misdating of Wadi Fidan 40. The initial surveyors and excavator dated the site primarily on the presence of Early Bronze potsherds (Adams 1991; MacDonald 1992), which are now known to be unconnected to the graves. Too great a reliance on pottery has no doubt resulted in the misdating of other sites in the region, especially those used by pastoral nomads.

This lack of pottery in the WFD 40 cemetery is especially interesting in contrast to excavated production sites such as Khirbat en-Nahas, the region's largest Iron Age metallurgical site. There, pottery is uncommon compared to other sites in the Levant. However, bowls with black concentric circles painted on their red fabric were proportionally not uncommon among the assemblage (Smith and Levy 2008: 80), and

Smith and Levy (2008: 85) argue the pottery is similar and the chronological processor assemablage to that of highland Edomite sites. Indeed, the pottery is so similar that Finkelstein and Singer-Avitz (2009) went so far as to argue that the pottery and monumental buildings at the site are contemporaneous with the highland Edomite sites, while the copper smelting dated to earlier periods. Their arguments are not borne out by stratigraphy. Radiocarbon dates from within the buildings place them in the tenth century, and when the gate fell into disuse smelting, radiocarbon dated to the ninth century, took place within it. A good seriation of Edomite pottery is now lacking, and it is unclear whether Edomite pottery is marked by such extreme conservatism or whether careful future examination, and even better the excavation of a site continuously occupied throughout the Iron Age, will clarify this problem. It seems unlikely that Edomite pottery underwent no changes in half a millennium.

The absence of painted pottery at Wadi Fidan 40 cemetery suggests that, while painted wares may have been an important marker of ethnic identity at sites such as Khirbat en-Nahas, they were not the engine by which those at Wadi Fidan 40 chose to signify themselves. By avoiding ceramics, the individuals interred at Wadi Fidan appear to have signaled a distinction between themselves and neighboring groups which used ceramics. The variety of wooden vessel forms indicates a variety of different foods presented to the dead. This differs considerably from the "funeral kit" (Baker 2006) conception. This variety also makes it impossible to draw similarities in foodways between the people of Wadi Fidan 40 and others. The collection does include one shallow wooden bowl reminiscent of the shallow bowls which are often painted and are common at Edomite sites. However, its most distinctive artifact, the teapot-shaped vessel

with the spout and the lug handle, does not appear to have ceramic parallels in Edom or the rest of the Levant.

Items of personal adornment are often believed to be strong indicators of ethnic identity. However, interpreting these symbols is another matter, since age and gender distinctions are also negotiated through this medium. At Wadi Fidan 40, items of personal adornment are the most common find. Ostrich eggshell beads are the most common among these, and green stones are most common after that. Both the eggshells (which come to be extremely common in Phoenician tombs) and green may be symbols of new life (Bar-Yosef Mayer and Porat 2008), though again belief is not archaeological visible. Many Egyptian funerary items must be green, but there are surprisingly few Egyptian artifacts in the cemetery. The amazonite objects in the cemetery (Fig. 7.21) do suggest extensive trade or travel to amazonite deposits, probably those in northern Arabia. None of this material was found at Khirbat en-Nahas, nor is any reported at any of the highland Edomite sites. None was found at Wadi Fidan 4, Tomb 1 or at Wadi Fidan 45. This in turn may suggest a nod toward Arabian identity on the part of the people of Wadi Fidan 40.



Figure 7.21: Amazonite bead and pendants from Grave 706 (EDM 88519). Note the "horns" on the third piece from the right, which appears to have been reworked after having been broken through an earlier perforation.

The majority of items of personal adornment, including copper and iron bracelets and anklets and beads and pendants, are found with adult females or with those whose gender could not be determined either because of preservation issues or due to age. Males are often buried with smaller numbers of beads or pendants. Both male and female pendants are likely talismanic in significance. The larger amount of wealth found on women's bodies is typical ethnographically; however, this does not necessarily mean that the typical woman carried a greater amount of wealth on her person than the typical male. As Musil's (1928: 122, 125) figures show, Rwala women's apparel cost only approximately 5.4% more than men's, but men's apparel is less likely to be preserved archaeologically. Those with the greatest wearable wealth in the cemetery are the child in Grave 371, the adolescent in Grave 14, and the mature adult woman in Grave 92. While the Grave 92 woman may be displaying earned status, the other two individuals appear to be displaying inherited status. No age group categories could be distinguished based on grave goods, although bone spatula pendants (Fig. 7.22) were found only with

adolescents or young adults, and the two that could be sexed, Graves 523 and 706, were both female (though the spatula in Grave 523 appeared to be associated with the secondary burial in the cist, which was unsexed). The spatulae at Wadi Fidan probably served a symbolic function, denoting young, feminine, and likely marriageable weavers.



Figure 7.22: Grave 335 pendant in situ, after removal of overlying postcranial skeletal remains.

CONCLUDING REMARKS

The Edom Lowlands provide an ideal ground for analyzing human activity in a desert environment. During the Iron Age, the inhabitants, the Edomites, created a civilization with but a single city, Buseirah. But during the majority of the existence of Edom as a group of people, recognized as an ethnic group by both themselves and others,

they were a pastoral people, one that through choice or necessity organized into a state identified with an ethnic group.

The Wadi Fidan 40 cemetery is an anomaly in the southern Levant. It is the large burial ground of an apparently pastoral people. The site was utilized at a time when social complexity was increasing in the region, and the cemetery marked claim to the Fidan valley and surrounding region. The physical remains of the people, now under study by Melanie Beasley, show evidence of violence and competition. Ritual is attested to at the site by the Grave 712 structure and the reconsecration of graves at the site. Other devotions may have left less durable remains. The artifacts found with the burials are not indicative of what came to be regarded as Edomite material culture. The amazonite found there, however, shows ties to northern Arabia. The anthropomorphic stones also suggest Arabian ties, although they are noticeably different from those funerary stelae found in Arabia at the time. At present, the Wadi Fidan burial pattern testified to by the Wadi Fidan 40 cemetery, Wadi Fidan 4, Tomb 1, and Wadi Fidan 45 is evidence of one of the groups active in the southern Levant, but cannot be firmly identified with the Horites, Edomites, Kenites, or others known historically to have inhabited the region.

As an example of one pastoral people and its attitude towards the dead, Wadi Fidan 40 presents an image of a group truly in transition. Rigid canons are used to construct the grave features, which set them apart from other cemeteries of the same period. However, the variety with which identities are negotiated in grave goods shows a flexibility in how social roles are displayed. Nevertheless, even neonates possess enough personhood to warrant burial in this holy ground, and children are buried with wealth

beyond any possible earned status. The spirits of the dead were propitiated in a way that shows they remained important members of society. And yet, the material culture seen at Wadi Fidan 40 do not turn into the defining attributes of Edomite material culture, a material culture we already see in its nascence at Khirbat en-Nahas. The cemetery at Wadi Fidan 40 offers us a glimpse into the beginnings of Edomite identity, but a beginning which found its end in the tenth century, while alternative ideas of Edomite ethnicity blossomed in the state.

WORKS CITED

Abel, F.-M. 1933-1938. *Géographie de la Palestine*. Paris: Librairie Lecoffre, 2 vols.

Abudanh, Fawzi. 2004. "The Archaeological Survey for the Region of Udhruh, 2003 (Preliminary Report)." *Annual of the Department of Antiquities of Jordan* 48: 51-69.

Abu-Rabia, Aref. 2007. "Nabi Musa: A Common *Weli* Between Bedouin and Fellahin." Pp. 9-18 in *On the Fringe of Society: Archaeological and Ethnoarchaeological Perspectives on Pastoral and Agricultural Societies* BAR International Series 1657). Edited by Benjamin A. Saidel and Eveline J. van der Steen. Oxford: Archaeopress.

Adams, Robert McC. 1974. "The Mesopotamian Social Landscape: A View from the Frontier." Pp. 1-20 in *Reconstructing Complex Societies: An Archaeological Colloquium (Supplement to the Bulletin of the American Schools of Oriental Research No. 20).* Edited by Charlotte B. Moore. Boston: American Schools of Oriental Research.

-----, and Hans J. Nissen. 1972. *The Uruk Countryside: The Natural Setting of Urban Societies.* Chicago: University of Chicago Press.

Adams, Russell. 1991. "The Wadi Fidan Project, Jordan, 1989." *Levant* 23: 181-183.

-----. 1992. "Romancing the Stones: New Light on Glueck's 1934 Survey of Eastern Palestine as a Result of Recent Work by the Wadi Fidan Project." Pp. 177-186 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications.

-----. 2000. "The EBA III-IV Transition in southern Jordan: Evidence from *Khirbet Hamra Ifdan*." Pp. 379-401 in *Ceramics and Change in the Early Bronze Age of the Southern Levant*. Edited by G. Philip and D. Baird. Sheffield: Sheffield Academic Press.

-----, and Hermann Genz. 1995. "Excavations at Wadi Fidan 4: A Chalcolithic Village Complex in the Copper Ore District of Feinan, Southern Jordan." *Palestine Exploration Quarterly* 127: 8-20.

Aharoni, Yohanan. 1968. "Arad: Its Inscriptions and Temple." *Biblical Archaeologist* 31 (1): 1-32.

-----. 1967a. "Forerunners of the Limes: Iron Age Fortresses in the Negev." *Israel Exploration Journal* 17 (1): 1-17.

-----. 1967b. "The Negeb." Pp. 384-403 in *Archaeology and Old Testament Study: Jubilee Volume of the Society for Old Testament Study, 1917-1967.* Edited by D. Winton Thomas. Oxford: Clarendon Press.

-----. 1970. "Three Hebrew Ostraca from Arad." *Bulletin of the American Schools of Oriental Research* 197: 16-42.

-----. 1981. *Arad Inscriptions.* Jerusalem: Israel Exploration Society.

Albright, William Foxwell. 1938. [Appendix to] "The First Campaign at Tell el-Kheleifeh (Ezion-Geber)." *Bulletin of the American Schools of Oriental Research* 71: 17-18.

-----. 1953. "Dedan." *Geschichte und Altes Testament.* Edited by Gerhard Ebeling. Tübingen, Germany: J. C. B. Mohr (Paul Siebeck): 1-12.

Aldred, Cyril. 1971. *Jewels of the Pharaohs: Egyptian Jewelry of the Dynastic Period.* New York: Praeger Publishers.

Algaze, Guillermo. 1993. *The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization.* Chicago: University of Chicago Press.

-----. 2001. "Initial Social Complexity in Southwestern Asia: The Mesopotamian Advantage." *Current Anthropology* 42: 199-233.

Ali, Maulana Muhammad. 2002. *The Holy Qur'an with English Translation and Commentary.* Dublin, OH: Ahmadiyya Anjuman Isha'at Islam Lahore Inc. U.S.A.

Andreu, Guillermo. 1997. "Amulets." Pp. 194-195 in *Ancient Egypt at the Louvre,* by Guillermo Andreu, Marie-Hélène Rutschowscaya, and Christine Ziegler. Paris: Hachette.

Andrews, Carol. 1990. *Ancient Egyptian Jewellery.* London: British Museum Publications.

-----. 1994. *Amulets of Ancient Egypt.* Austin: University of Texas Press.

Arkell, A. J. 1936. "Cambay and the Bead Trade." *Antiquity* 10: 292-305.

Asad, Talal. 1974. "The Beduin as a Military Force: Notes on Some Aspects of Power Relations Between Nomads and Sedentaries in Historical Perspective. Pp. 61-73 in *The Desert and the Sown: Nomads in the Wider Society.* Edited by Cynthia Nelson. Berkeley: Institute of International Studies, University of California.

Aston, Barbara, James Harrell, and Ian Shaw. 2000. "Stone." Pp. 5-77 in *Ancient Egyptian Materials and Technology,* edited by Paul T. Nicholson and Ian Shaw. Cambridge: Cambridge University Press.

Atajanyan, Emmanuel, and Gevorg Madoyan. 2003. *The Armenian Sanctuaries of Jerusalem.* Moscow: Moscow Press.

Aubet, Maria Eugenia. 2004. "The Tyre-Al Bass Necropolis." Pp. 16-27 in *Decade: A Decade of Archaeology and History in the Lebanon.* Edited by Claude Doumet-Serhal, in collaboration with Anne Rabate and Andrea Resek. Beirut: Lebanese British Friends of the National Museum.

-----. 2010. "The Phoenician Cemetery of Tyre al-Bass." *Near Eastern Archaeology* 73 (2-3): 144-155.

Axelsson, Lars Eric. 1987. *The Lord Rose Up From Seir: Studies in the History of the Negev and Southern Judah.* Stockholm: Almqvist & Wiksell International.

Avi-Yonah, Michael. 1993. "Mareshah (Marisa)." *New Encyclopedia of Archaeological Excavations in the Holy Land* 3: 948-951.

Avigad, N. 1953. "The Epitaph of a Royal Steward from Siloam Village." *Israel Exploration Journal* 3 (3): 137-152, pls.8-11.

Avner, Uzi. 1984. "Ancient Cult Sites in the Negev and Sinai Deserts." *Tel Aviv* 11 (2): 115-31.

-----. 2007. "Bedouin Cultural Remains in the Eilat Region." Pp. 25-36 in *On the Fringe of Society: Archaeological and Ethnoarchaeological Perspectives on Pastoral and Agricultural Societies* BAR International Series 1657). Edited by Benjamin A. Saidel and Eveline J. van der Steen. Oxford: Archaeopress..

Baker, Jill. 2006. "The Funeral Kit: A Newly Defined Canaanite Mortuary Practice Based on the Middle and Late Bronze Age Tomb Complex at Ashkelon." *Levant* 38: 1-31.

Banning, E. B., and Ilse Köhler-Rollefson. 1992. "Ethnographic Lessons for the Pastoral Past: Camp Locations and Material Remains Near Beidha, Southern Jordan." Pp. 181-217 in *Pastoralism in the Levant: Archaeological Materials in Anthropological Perspectives* (Monographs in World Archaeology 10). Edited by Ofer Bar-Yosef and Anatoly Khazanov. Madison: Prehistory Press.

Bar-Yosef, O., A. Belfer, A. Goren, and P. Smith. 1977. "The Nawamis near 'Ein Huderah (Eastern Sinai)." *Israel Exploration Journal* 23:65-88.

Bar-Yosef Mayer, Daniella E., and Naomi Porat. 2008. "Green Stone Beads at the Dawn of Agriculture." *Proceedings of the National Academy of Sciences of the U.S.A.* 105 (25): 8548-8551.

Barfield, Thomas J. 1993. *The Nomadic Alternative.* Englewood Cliffs, NJ: Prentice Hall.

Barkay, Gabriel. 1986. *Ketef Hinnom: A Treasure Facing Jerusalem's Walls.* Jerusalem: Israel Museum.

-----. 1992. "The Priestly Benediction on Silver Plaques from Ketef Hinnom in Jerusalem." *Tel Aviv* 19 (2): 139-192.

Barker, Graeme. 2000. "Farmers, Herders and Miners in the Wadi Faynan, Southern Jordan: A 10,000-Year Landscape History." Pp. 63-85 in *The Archaeology of Drylands: Living at the Margin,* edited by Graeme Barker and David Gilbertson. London: Routledge.

-----. 2001. "A Tale of Two Deserts: Contrasting Desertification Histories on Rome's Desert Frontiers." *World Prehistory* 33 (3): 488-507.

-----, R. Adams, O. H. Creighton, D. Crook, D. D. Gilbertson, J. P. Grattan, C. O. Hunt, D. J. Mattingly, S. J. McLaren, H. A. Muhammad, P. Newson, C. Palmer, F. B. Pyatt, T. E. G. Reynolds, and R. Tomber. 1999. "Environment and Land Use in the Wadi Faynan, Southern Jordan: The Third Season of Geoarchaeology and Landscape Archaeology (1998)." *Levant* 31: 255-292.

-----, R. Adams, O. H. Creighton, P. Daly, D. D. Gilbertson, J. P. Grattan, C. O. Hunt, D. J. Mattingly, S. J. McLaren, P. Newson, C. Palmer, F. B. Pyatt, T. E. G. Reynolds, H. Smith, R. Tomber, and A. J. Truscott. 2000. "Archaeology and Desertification in the Wadi Faynan: The Fourth (1999) Season of the Wadi Faynan Landscape Survey." *Levant* 32: 27-52.

Barth, Fredrik. 1961. *Nomads of South Persia: The Basseri Tribe of the Khamseh Confederacy.* London: George Allen & Unwin, Ltd. For Oslo University Press.

-----. 1969. "Introduction." Pp. 9-38 in *Ethnic Groups and Boundaries: The Social Organization of Culture Difference.*

-----. 1973. "A General Perspective on Nomad-Sedentary Relations in the Middle East." Pp. 11-21 in *The Desert and the Sown: Nomads in the Wider Society.* Edited by Cynthia Nelson. Berkeley: Institute of International Studies, University of California.

Bartlett, John R. 1965. "The Edomite King-List of Gen. 36.31-39 and 1 Chron. 1.43-

50." *Journal of Theological Studies, New Series* 16: 301-314.

-----. 1982. "Edom and the Fall of Jerusalem, 587 B. C." *Palestine Exploration Quarterly* 114: 13-24.

-----. 1989. *Edom and the Edomites.* Sheffield: Journal for the Study of the Old Testament Press.

-----. 1992. "Biblical Sources for the Early Iron Age in Edom." Pp. 12-19 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications: 13-19.

-----. 1995. "Edom in the Nonprophetical Corpus." Pp. 13-21 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

-----. 1999. "Edomites and Idumaeans." *Palestine Exploration Quarterly* 131: 102-114.

Bean, Lowell John. 1992. "Menil (Moon): Symbolic Representation of Cahuilla Woman." Pp. 162-183 in *Earth & Sky: Visions of the Cosmos in Native American Folklore.* Edited by Ray A. Williamson and Claire R. Farrer. Albuquerque: University of New Mexico Press.

Beaulieu, Paul-Alain. 1989. *The Reign of Nabonidus King of Babylon 556-539 B.C.* New Haven: Yale University Press.

Beck, Horace. [1928] 1973. *The Classification and Nomenclature of Beads and Pendants.* York, PA: Liberty Cap Books.

Beck, Pirhiya. 1990. "A Note on the 'Schematic Statues' from the Stelae Temple at Hazor." *Tel Aviv* 17 (1): 91-95.

Behar, D. M., M. G. Thomas, K. Skorecki, M. F. Hammer, E. Bulygina, D. Rosengarten, A. L. Jones, K. Held, V. Moses, D. Goldstein, N. Bradman, and M. E. Weale. 2003. "Multiple Origins of Ashkenazi Levites: Y Chromosome Evidence for Both Near Eastern and European Ancestries." *American Journal of Human Genetics*, 73: 768-799.

Beit-Arieh, Itzhaq. "Further Burials from the Deir el-Balah Cemetery." *Tel Aviv* 12 (1): 43-53.

-----. 1987. *Edomite Shrine: Discoveries from Qitmit in the Negev.* Jerusalem: Israel Museum.

-----. 1988. "New Light on the Edomites." *Biblical Archaeology Review* 14 (2): 28-41.

-----. 1989. "New Data on the Relationship Between Judah and Edom Toward the End of the Iron Age." *Annual of the American Schools of Oriental Research* 49: 125-131.

-----. 1991. "The Edomite Shrine at Horvat Qitmit in the Judean Negev: Preliminary Excavation Report. *Tel Aviv* 18: 93-116.

-----. 1995. "The Edomites in Cisjordan." Pp. 33-40 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

-----. 1999. *Horvat Qitmit: An Edomite Shrine in the Biblical Negev.* Tel Aviv: Monograph Series of the Institute of Archaeology.

-----, and Bruce Cresson. 1985. "An Edomite Ostracon from Horvat 'Uza." *Tel Aviv* 12 (1): 96-101.

-----, Liona Freud and Aileen G. Baron. 1999. "The Cemetery." Pp. 129-169 in *Tel 'Ira: A Stronghold in the Biblical Negev.* Edited by Itzhaq Beit-Arieh. Tel Aviv: Emery and Claire Yass Publications in Archaeology.

Ben-Shlomo, David. 2008. "The Cemetery of Azor and Early Iron Age Burial Practices." *Levant* 40 (1): 29-54.

Ben Yehudah, Eliezer. 1921. "The Edomite Language." *Journal of the Palestine Oriental Society* 1 (1): 113-115.

Ben-Yosef, Erez, Thomas E. Levy, and Mohammad Najjar. 2009. "Ras al-Miyah Fortresses: New Discoveries at One of the Gateways to the Iron Age Copper Production District of Faynan, Jordan." *Studies in the History and Archaeology of Jordan* 10: 823-841.

Bendann, Effie. 1930. *Death Customs: An Analytical Study of Burial Rites.* London: Kegan Paul, Trench, Trubner & Co., Ltd.

Bennett, Crystal-M. 1966. "Fouilles d'Umm el-Biyara: Rapport Préliminaire." *Revue Biblique* 73: 372-403.

-----. 1971. "A Brief Note on Excavations at Tawilan, Jordan, 1968-1970." *Levant* v-vii, pl. I-II.

-----. 1973. "Excavations at Buseirah, Southern Jordan 1971: A Preliminary Report." *Levant* 5: 1-11.

-----. 1974. "Excavations at Buseirah, Southern Jordan 1972: Preliminary Report." *Levant* 6: 1-24, pl. I-VI.

-----. 1975. "Excavations at Buseirah, Southern Jordan 1973: Third Preliminary Report." *Levant* 7: 1-19, pl. I-VI.

-----. 1977. "Excavations at Buseirah, Southern Jordan 1972: Fourth Preliminary Report." *Levant* 9: 1-10, pl. I-III.

-----. 1978. "Some Reflections on Neo-Assyrian Influence in Transjordan." Pp. 164-171 in *Archaeology in the Levant: Essays for Kathleen Kenyon.* Edited by Roger Moorey and Peter Parr. Warminster, UK: Aris & Phillips Ltd..

-----. 1980. "A Graeco-Nabatean Sanctuary on Umm el Biyara." *Annual of the Department of Antiquities of Jordan* 24: 209-212, pls. 134-135.

-----. 1982. "Neo-assyrian Influence in Transjordan." *Studies in the History and Archaeology of Jordan* 1: 181-187.

-----. 1983. "Excavations at Buseirah (Biblical Bozrah)." Pp. 9-17 in *Midian, Moab, and Edom: The History and Archaeology of Late Bronze and Iron Age Jordan and North-west Arabia.* Edited by J.F.A. Sawyer and D.J.A. Clines. Sheffield: Journal for the Study of the Old Testament Press.

-----. 1984. "Excavations at Tawilan in Southern Jordan, 1982." *Levant* 16: 1-23.

----. 1986. "Biblical Traditions and Archaeological Results." Pp. 75-83 in *The Archaeology of Jordan and Other Studies Presented to Siegfried H. Horn.* Edited by Lawrence T. Gearty and Larry G. Herr. Berrien Springs, MI: Andrews University Press.

-----, and Piotr Bienkowski. 1995. *Excavations at Tawilan in Southern Jordan.* Oxford: Oxford University Press.

Berman, Lawrence M., with Kenneth J. Bohač. 1999. *The Cleveland Museum of Art Catalogue of Egyptian Art.* New York: Hudson Hills Press.

-----, Denise M. Doxey, and Rita E. Freed. 2003. "The Collection." Pp. 39-195 in *MFA Highlights: Arts of Ancient Egypt.* By Rita E. Freed, Lawrence M. Berman, and Denise M. Doxey. Boston: MFA Publications.

Betts, Alison V. G., and Vadim N. Yagodin. 2000. "A New Look at Desert Kites." Pp. 31-43 in *The Archaeology of Jordan and Beyond: Essays in Honor of James A. Sauer.* Edited by Lawrence E. Stager, Joseph A. Greene, and Michael D. Coogan. Winona Lake, IN: Eisenbrauns.

Bienkowski, Piotr. 1982. "Some Remarks on the Practice of Cremation in the Levant." *Levant* 14: 80-89.

-----. 1990. "Umm el-Biyara, Tawilan, and Buseirah in Retrospect." *Levant* 22: 91-109.

-----. 1992a. "The Beginning of the Iron Age in Edom: A Reply to Finkelstein." *Levant* 24: 167-169.

-----. 1992b. "The Beginning of the Iron Age in Southern Jordan: A Framework." Pp. 1-12 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications.

-----. 1992c. "The Date of Sedentary Occupation in Edom: Evidence from Umm el-Biyara, Tawilan and Buseirah." Pp. 99-112 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications.

-----. 1995a. "The Architecture of Edom." *Studies in the History and Archaeology of Jordan* 5: 135-143.

-----. 1995b. "The Edomites: The Archaeological Evidence from Transjordan." Pp. 41-92 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

-----. 1995c. "Observations on Late Bronze-Iron Age Sites in the Wadi Hasa, Jordan." *Levant* 27: 29-37.

----- 1995d. "The Small Finds." Pp. 79-92 in *Excavations at Tawilan in Southern Jordan.* Edited by Crystal-M. Bennett and Piotr Bienkowski. Oxford: Oxford University Press.

-----. 2000. "Transjordan and Assyria." Pp. 44-58 in *The Archaeology of Jordan and Beyond: Essays in Honor of James A. Sauer.* Edited by Lawrence E. Stager, Joseph A. Greene, and Michael D. Coogan. Winona Lake, IN: Eisenbrauns.

-----. 2001. "Iron Age Settlement in Edom: A Revised Framework." Pp. 257-269 in *World of the Aramaeans: Studies in History and Archaeology in Honour of Paul-Eug*ène Dion. Edited by by P.M. Michèle Daviau, John W. Wevers and Michael Weigl. Sheffield: Sheffield Academic Press.

-----. 2002, ed. *Busayra: Excavations by Crystal-M. Bennett 1971-1980.* Oxford: Oxford University Press.

-----. 2008. "The Persian Period." Pp. 335-352 in *Jordan: An Archaeological Reader.* Edited by Russell B. Adams. London: Equinox.

-----, and Russell Adams. 1999. "Soundings at Ash-Shorabat and Khirbat Dubab in the Wadi Hasa, Jordan: The Pottery." *Levant* 31: 149-172.

-----, Russell Adams, R. A. Philpott, and Leonie Sedman. 1997. "Soundings at Ash-Shorabat and Khirbat Dubab in the Wadi Hasa, Jordan: The Stratigraphy." *Levant* 29: 41-70.

-----, and Eveline van der Steen. 2001. "Tribes, Trade, and Towns: A New Framework for the Late Iron Age in Southern Jordan and the Negev." *Bulletin of the American Schools of Oriental Research* 323: 21-47.

-----, and Leonie Sedman. 2001. "Busayra and Judah: Stylistic Parallels in the Material Culture." Pp. 310-325 in *Studies in the Archaeology of the Iron Age in Israel and Jordan* (Journal for the Study of the Old Testament Supplement Series 331). Edited by Amihai Mazar. Sheffield: Sheffield Academic Press.

Bietak, Manfred. 2010. "A Palace of the Hyksos Khayan at Avaris." Vol. 2, pp. 99-109 in *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East.* Edited by Paolo Matthiae, Frances Pinnock, Lorenzo Nigro, Nicolo Marchetti and Licia Romano. Wiesbaden: Harrassowitz Verlag.

Bilu, Yoram. 2006. "The Rise of a New Negev Cult Center Today: Baba Sali's Sanctuary in Netivot, Israel." Pp. 75-92 in *Archaeology, Anthropology and Cult: The Sanctuary at Gilat, Israel.* Edited by Thomas E. Levy. London: Equinox.

Binford, Lewis. 1971. "Mortuary Practices: Their Study and Their Potential." In *Approaches to the Social Dimensions of Mortuary Practices,* edited by James A. Brown. *American Antiquity* 36 (3): 6-29.

Biran, A., and R. Gophna. 1970. "An Iron Age Burial Cave at Tel Halif." *Israel Exploration Journal* 20 (3-4): 151-169, pl. 36-38.

Bissell, Laurie. 1982. "San Diego Cemeteries: A Brief Guide." *The Journal of San Diego History* 28 (4): 269-291.

Bloch-Smith, Elizabeth. 1992. *Judahite Burial Practices and Beliefs About the Dead.* Sheffield: Journal for the Study of the Old Testament Press.

-----. 2003. "Israelite Ethnicity in Iron I: Archaeology Preserves What Is Remembered and What is Forgotten in Israel's History." *Journal of Biblical Literature* 122 (3): 401-425.

-----. 2004. "Resurrecting the Iron I Dead." *Israel Exploration Journal* 54: 77-91.

Boertien, Jeannette H. 2004. "Iron Age Loom Weights from Tall Dayr 'Alla in Jordan." *Annual of the Department of Antiquities of Jordan* 48: 305-332.

Borowski, Oded. 1992. "The Iron Age Cemetery at Tel Halif." *Eretz-Israel* 23: 13-62.

Bradbury, Jennie Nicole. 2010. "Space, Place and Burial: An Examination of the Importance of Interdisciplinary Approaches Within the Investigation of Burial Monuments in the Ancient Near East." Vol. 1, pp. 205-217 in *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East.* Edited by Paolo Matthiae, Frances Pinnock, Lorenzo Nigro, Nicolo Marchetti and Licia Romano. Wiesbaden: Harrassowitz Verlag.

Braghin, Cecilia. 2001. "An Archaeological Investigation into Ancient Chinese Beads." Pp. 273-293 in *Beads and Bead Makers: Gender, Material Culture and Meaning.* Edited by Lidia D. Sciama and Joanne B. Eicher. Oxford: Berg.

Breasted, James, editor. [1906] 1962. *Ancient Records of Egypt.* New York: Russell & Russell. 5 vols.

Brown, James. 1995. "On Mortuary Analysis—with Special Reference to the Saxe-Binford Research Program." Pp. 3-26 in *Regional Approaches to Mortuary Analysis.* Edited by Lane Anderson Beck. New York: Plenum Press.

Brunton, Guy. 1920. *Lahun I: The Treasure.* London: British School of Archaeology in Egypt.

Budge, Sir E. A. Wallis. 1894. *The Mummy: A History of the Extraordinary Practices of Ancient Egypt.* Cambridge: Cambridge University Press.

-----. 1899. *Egyptian Religion: Egyptian Ideas of the Future Life.* London: Kegan Paul, Trench, Trübner & Co.

Buikstra, Jane E. and Douglas E. Ubelaker. 1994. *Standards for Data Collection from Human Skeletal Remains* (Arkansas Archaeological Survey Research Series No. 44). Fayetteville, Arkansas: Arkansas Archaeological Survey.

Burckhardt, John Louis. 1822. *Travels in Syria and the Holy Land.* London: John Murray.

-----. 1831. *Notes on the Bedouin and Wahábys, Collected During his Travels in the East, by the Late John Lewis Burckhardt.* Edited by William Ouseley. London: Henry Colburn and Richard Bentley. 2 vols.

Byron, Robert. 1937. *The Road to Oxiana.* London: Jonathan Cape.

Canaan, Tewfik. 1920. "Hauned Springs and Water Demons in Palestine." *Journal of the Palestine Oriental Society* 1 (1): 153-170.

-----. 1927. *Mohammedan Saints and Sanctuaries in Palestine.* Jerusalem: Ariel Publishing House.

Capel, Anne K. 1996. "Woman's Burial Assemblage." Pp. 84-87 in *Mistress of the House, Mistress of Heaven: Women in Ancient Egypt.* Edited by Anne K. Capel and Glenn E. Markoe. New York: Hudson Hills Press.

Carneiro, Richard L. 1970. "A Theory of the Origin of the State." *Science* 169 (3947): 733-738.

Chapman, Robert William. 2005. "Mortuary Analysis: A Matter of Time?" Pp. 25-40 in *Interacting with the Dead: Perspectives on Mortuary Archaeology for the New Millennium.* Edited by Gordon F. M. Rakita, Jane Buikstra, Lane A. Beck, and Sloan R. Williams. Gainesville: University Press of Florida.

Chapman, Rupert L., III. 2003. "Annotated Index to Eusebius' Onomasticon." Pp. 99-184 in *The Onomasticon,* by Eusebius of Caesarea, translated by G. S. P. Freeman-Grenville. Jerusalem: Carta.

Childe, V. Grodon. 1952. *New Light on the Most Ancient East: The Oriental Prelude to European Prehistory.* London: Routledge & Paul.

Cipriani, Cruzio, and Alessandro Borelli. 1986. *Simon & Schuster's Guide to Gems and Precious Stones.* Edited by Kennie Lyman. New York: Simon and Schuster.

Clements, Frank. 2003. *Conflict in Afghanistan: A Historical Encyclopedia.* Santa Barbara, CA: ABC-CLIO/Greenwood.

Cleveland, Ray L. 1965. *An Ancient South Arabian Necropolis: Objects From the Second Campaign, 1951, in the Timna Cemetery.* Baltimore: Johns Hopkins Press.

Cohen, Rudolph, and Yigal Yisrael. 1995a. "The Iron Age Fortress at 'En Hasevah." *The Biblical Archaeologist* 58 (4): 223-235.

-----. 1995b. *On the Road to Edom: Discoveries from 'En Hazeva.* Jerusalem: Israel Museum.

Cooley, Robert E. 1983. "Gathered to His People: A Study of a Dothan Family Tomb." Pp. 47-58 in *The Living and Active Word of God: Studies in Honor of Samuel J.*

Schultz. Edited by Morris Inch and Ronald Youngblood. Winona Lake, IN: Eisenbrauns.

Crawford, Stewart. 1930. "The Attitude of the Present Day Arab to the Shrine of 'Mt. Hor.'" Pp. 285-300. In *The Sarcophagus of an Ancient Civilization: Petra, Edom and the Edomites,* by George Livingston Robinson. New York: Macmillan Company.

Cresson, Bruce Collins. 1963. *Israel and Edom: A Study of the Anti-Edom Bias in Old Testament Religion.* Unpublished Ph.D. dissertation, Duke University, Durham, North Carolina.

Cribb, Roger L. D. 1991. "Mobile Villagers: The Structure and Organisation of Nomadic Pastoral Campsites in the Near East." Pp. 371-393. In *Ethnoarchaeological Approaches to Mobile Campsites: Hunter-Gatherer and Pastoralist Case Studies.* Edited by C. S. Gamble and W. A. Boismier. Ann Arbor, MI: International Monographs in Prehistory.

-----. 1997. *Nomads in Archaeology.* Cambridge: Cambridge University Press.

Crowell, Bradley Lewis. 2004. *On the Margins of History: Social Change and Political Development in Iron Age Edom.* Unpublished Ph.D. dissertation, University of Michigan.

Dalley, Stephanie. 1995. "The Cueniform Tablet." Pp. 67-68 in *Excavations at Tawilan in Southern Jordan.* Edited by Crystal-M. Bennett and Piotr Bienkowski. Oxford: Oxford University Press.

----- and Anne Goguel. 1997. "The Sela' Sculpture: A Neo-Babylonian Rock Relief in Southern Jordan." *Annual of the Department of Antiquities of Jordan* 41: 169-176.

Davis, Edward H. 1919. "The Diegueño Ceremony of the Death Images." *Contributions from the Museum of the American Indian Heye Foundation* 5 (2): 5-33.

-----. 1921. "Early Cremation Ceremonies of the Luiseño and Diegueño Indians of Southern California." *Indian Notes and Monographs* 7 (3): 87-110.

Dearman, J. Andrew. 1995. "Edomite Religion. A Survey and an Examination of Some Recent Contributions." Pp. 119-136 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

Dever, William G. 1970. "Iron Age Epigraphic Material from the Area of Khirbet el-

Kôm." *Hebrew Union College Annual* 40: 139-204.

-----. 1995. "Social Structure in Palestine in the Iron II Period on the Eve of Destruction." Pp. 416-430 in *The Archaeology of Society in the Holy Land.* Edited by Thomas E. Levy. New York: Facts on File.

Dicou, Bert. 1994. *Edom, Israel's Brother and Antagonist: The Role of Edom in Biblical Prophecy and Story.* Sheffield: Journal for the Study of the Old Testament.

Disi, A., W. Hnke, and J. Wahle. 1984. "Human Skeletal Remains." In *Tell el Mazar I: Cemetery A*, by Khair Yassine. Amman: University of Jordan: 135-195.

DiVito, Robert A. 1993. "The Tell el-Kheleifeh Inscriptions." Pp. 51-63 in *Nelson Glueck's 1938-1940 Excavations at Tell el-Kheleifeh: A Reappraisal*, by Gary D. Pratico. Atlanta: Scholar's Press.

Dothan, Trude. 1972. "Anthropoid Clay Coffins from a Late Bronze Age Cemetery Near Deir el-Balah (Preliminary Report)." *Israel Exploration Journal* 22 (2-3): 65-72, pls. 9-13.

-----. 1973. "Anthropoid Clay Coffins from a Late Bronze Age Cemetery Near Deir el-Balah (Preliminary Report II)." *Israel Exploration Journal* 23 (3): 129-146, pls. 33-45.

-----. 1982. *The Philistines and Their Material Culture.* New Haven: Yale University Press.

Doss, Erika. 2008. *The Emotional Life of Contemporary Public Memorials: Towards a Theory of Temporary Memorials.* Amsterdam: Amsterdam University Press.

Douglass, William A. 1969. *Death in Murélaga: Funerary Ritual in a Spanish Basque Village.* Seattle: University of Washington Press.

Durkheim, Emile. 1915. *The Elementary Forms of the Religious Life.* London: G. Allen & Unwin.

Edelman, Diana Vikander. 1995. "Edom: A Historical Geography." Pp. 1-11 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

Edmonds. C. J. 1967. *A Pilgrimage to Lalish* (Royal Asiatic Society Prize Publication Fund Vol. XXI). London: The Royal Asiatic Society of Great Britain and Ireland.

Eicher, Joanne B. 2001. "Beaded and Bedecked Kalabari of Nigeria." Pp. 95-116 in *Beads and Bead Makers: Gender, Material Culture and Meaning.* Edited by Lidia D. Sciama and Joanne B. Eicher. Oxford: Berg.

Elitzur, Yoel. 2004. *Ancient Place Names in the Holy Land: Preservation and History.* Jerusalem: Magnes Press.

Emberling, Geoff. 1997. "Ethnicity in Complex Societies: Archaeological Perspectives." *Journal of Archaeological Research* 5 (4): 295-344.

Eshel, Esther, and Amos Kloner. 1996. "An Aramaic Ostracon of an Edomite Marriage Contract from Maresha, Dated 176 B.C.E." 46 (1-2): 1-22.

Eshel, Hanan. 1987. "The Late Iron Age Cemetery of Gibeon." *Israel Exploration Journal* 37 (1): 1-17.

Fabiano, Marzia, Francesco Berna, and Edoardo Borzatti von Löwenstern. 2004. "Pre-Pottery Neolithic Amazonite Bead Workshops in Southern Jordan." Vol. 1303, pp. 265-273 in *Acts of the XIVth World Congress of the Union of Prehistoric and Protohistoric Sciences* (BAR International Series). Edited by the Sécretariat du Congress. Oxford: Archaeopress.

Fars, Nabih Amin. 1952. *The Book of Idols: Being a Translation from the Arabic of the* Kitab al-Asnam *by Hisham Ibn-al-Kalbi.* Princeton: Princeton University Press.

Faust, Avraham. 2000. "Ethnic Complexity in Northern Israel During Iron Age II." *Palestine Exploration Quarterly* 132 (1): 2-27.

-----. 2004. "Mortuary Practices, Society and Ideology: The Lack of Highlands Iron Age I Burials in Context." *Israel Exploration Journal* 54: 174-190.

-----. 2006. *Israel's Ethnogenesis: Settlement, Interaction, Expansion and Resistance.* London: Equinox.

Fenn, Thomas R. 2006. "Copper Metallurgy and Trans-Saharan Commerce: Report on Summer 2006 Field Research in the Western Agadez Region, Central Niger." *Nyame Akuma* 66: 25-34.

Findlater, George, Mahmoud El-Najjar, Abdel-Halim Al-Shiyab, Margaret O'Hea, and Edward Easthaugh. 1998. "The Wadi Faynan Project: The South Cemetery Excavation, Jordan 1996: A Preliminary Report." *Levant* 30: 69-83.

Fiema, Zbigniew T. Fiema and Jaakko Frösén, eds. *Petra—The Mountain of Aaron: The Finnish Archaeological Project in Jordan, Volume I: The Church and the Chapel.* Helsinki: Societas Scientiarum Fennica.

Finkelstein, Israel. 1988. "Arabian Trade and Socio-Political Conditions in the Negev in the Twelfth-Eleventh Centuries B. C. E." *Journal of Near Eastern Studies* 47 (4): 241-252.

-----. 1990. "A Few Notes on Demographic Data from Recent Generations and Ethnoarchaeology." *Palestine Exploration Quarterly* 122 (1): 47-52.

-----. 1992a. "Edom in the Iron I." *Levant* 24: 159-166.

-----. 1992b. "*Horvat Qitmit* and the Southern Trade in the Late Iron Age II." *Zeitschrift des Deutschen Palästina-Vereins* 108 (2): 156-170.

-----. 1992c. "Invisible Nomads: A Rejoinder." *Bulletin of the American Schools of Oriental Research* 287: 87-88.

-----. 1992d. "Stratigraphy, Pottery and Parallels: A Reply to Bienkowski." *Levant* 24: 171-172.

-----. 1995. *Living on the Fringe: The Archaeology and History of the Negev, Sinai and Neighbouring Regions in the Bronze and Iron Ages.* Sheffield: Sheffield Academic Press.

-----, and Avi Perevolotsky. 1990. "Processes of Sedentarization and Nomadization in the History of Sinai and the Negev." *Bulletin of the American Schools of Oriental Research* 279: 67-88.

-----, and Lily Singer-Avitz. 2009. "The Pottery of Khirbet en-Nahas: A Rejoinder." *Palestine Exploration Quarterly* 141 (3): 207-218.

-----, and Neil Asher Silberman. 2001. *The Bible Unearthed: Archaeology's New Vision of Ancient Israel and the Origin of its Sacred Texts.* New York: The Free Press.

Fischer, Peter M. 1997. *A Late Bronze to Early Iron Age Tomb at* Sahem, *Jordan.* Wiesbaden: Harrassowitz Verlag.

Fischer-Elfert, Hans-Werner. 2005. "Sedentarism and Nomadism as Criteria of Ancient Egyptian Cultural Identity." Pp. 327-349 in *Shifts and Drifts in Nomad-Sedentary Relations.* Edited by Stefan Leder and Bernhard Streck. Wiesbaden: Dr. Ludwig Reichert Verlag.

Fisher, Clarence Stanley. 1924. "Part III: Architectural Remains." Pp. 91-223 in *Harvard Excavations at Samaria, 1908-1910.* Cambridge: Harvard University Press.

Flannery, Kent. 1999. "Chiefdoms in the Early Near East: Why It's So Hard to Identify Them." Pp. 44-63 in *The Iranian World: Essays on Iranian Art and Archaeology Presented to Ezat O. Negahban.* Edited by Abbas Alizadeh, Yousef Majidzadeh, and Sadegh Malek Shahmirzadi. Tehran: Iran University Press.

Forder, Archibald. 1909. *'Ventures Among the Arabs in Desert, Tent and Town: Thirteen Years of Pioneer Missionary Life With the Ishmaelites of Moab, Edom and Arabia.* New York: Gospel Publishing House.

Frank, Fritz. 1934. "Aus der 'Araba. I. Reiseberichte." *Zeitschrift des Deutschen Palästina-Vereins* 57: 191-280.

Franklin, Norma. 2007. "Lost Tombs of the Israelite Kings." *Biblical Archaeology Review* 33 (4): 26-35.

Frazer, Sir James George. 1918. *Folk-Lore in the Old Testament: Studies in Cmparative Religion, Legend and Law.* London: Macmillan and Co.

Freeman-Grenville, G. S. P., translator. 2003. *The Onomasticon,* by Eusebius of Caesarea. Jerusalem: Carta.

Friedman, Richard Elliott. 1998. *The Hidden Book in the Bible: The Discovery of the First Prose Masterpiece.* New York: HarperSanFrancisco.

Freud, Liora. 1999. *Tel 'Ira: A Stronghold in the Biblical Negev.* Edited by Itzhaq Beit-Arieh. Tel Aviv: Emery and Claire Yass Publications in Archaeology: 395-401.

Freud, Sigmund. 1949. *An Outline of Psycho-Analysis.* Translated and edited by James Strachey. New York: W. W. Norton & Company.

Friedman, F. D. 1994. "Aspects of Domestic Life and Religion." Pp. 95-118 in *Pharaoh's Workers: Villagers of Deir El Medina.* Edited by Leonard H. Lesko. Ithaca: Cornell University Press.

Fritz, Volkmar. 1994. "Vorbericht über die Grabungen in Barqa el-Hetiye im Gebiet von Feinan, Wadi el-'Araba (Jordanien) 1990." *Zeitschrift des Deutschen Palästina-Vereins* 110 (2): 125-150.

-----. 1996. "Ergebbisse einer Sondage in *Hirbet en-Naha, Wadi el-'Araba* (Jordanien)." *Zeitschrift des Deutschen Palästina-Vereins* 112 (1): 1-9.

-----. 2002. "Copper Mining and Smelting in the Area of Feinan at the End of the Iron Age I. Pp. 93-102 in *Aharon Kempinski Memoiral Volume: Studies in Archaeology and Related Disciplines.* Edited by E. Oren and S. Ahituv. Beersheba: Ben Gurion University Press.

Frösén, Jakkl, Zbigniew T. Fiema, Mika Lavento, Christina Danielli, Richard Homgren, Jaakko Latikka, Anu Rajala, Erko Mikkola, Antti Lahelma, Maija Holappa, and Kai Juntunen. 2004. "The 2003 Finnish Jabal Harun Project: Preliminary Report." *Annual of the Department of Antiquities of Jordan* 48: 97-116.

Fuglesang, Signe Horn. 1989. "Viking and Medieval Amulets in Scandinavia." *Fornvännen* 84: 15-27.

Garr, W. Randall. 1985. *Dialect Geography of Syria-Palestine, 1000-586 B.C.E.* Philadelphia: University of Pennsylvania.

Gellner, Ernest. 1969. *Saints of the Atlas.* Chicago: University of Chicago Press.

Gibb, H. A. R., translator and editor. 1957. *Ibn Battuta's Travels in Asia and Africa, 1325-1354.* London: G. Routledge & Sons.

Gilmour, G. 2002. "Foreign Burials in Late Bronze Age Palestine." *Near Eastern Archaeology* 65 (2): 112-119.

Giveon, Raphael. 1969-70. "The Shosu of the Late XXth Dynasty." *Journal of the American Research Center in Egypt* VIII: 51-53.

-----. 1971. *Les Bédouins Shosou des Documents Égyptiens.* Leiden: E. J. Brill.

Glazier-McDonald, Beth. 1995. "Edom in the Prophetical Corpus." Pp. 23-32 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

Glueck, Nelson. 1933-1934. "Explorations in Eastern Palestine, I." *Annual of the American Schools of Oriental Research* 15: 1-113.

-----. 1934. "Explorations in Eastern Palestine and the Negeb." *Bulletin of the American Schools of Oriental Research* 55: 3-21.

-----. 1934-1935. "Explorations in Eastern Palestine, II." *Annual of the American Schools of Oriental Research* 15: ix-202.

-----. 1936. "The Boundaries of Edom." *Hebrew Union College Annual* 11: 141-157.

-----. 1937-1939. "Explorations in Eastern Palestine, III." *Annual of the American Schools of Oriental Research* 18-19: i-xxiv, 1-288.

-----. 1938a. "The First Campaign at Tell el-Kheleifeh (Ezion-Geber)." *Bulletin of the American Schools of Oriental Research* 71: 3-17.

-----. 1938b. "The Topography and History of Ezion-Geber and Elath." *Bulletin of the American Schools of Oriental Research* 72: 2-13.

-----. 1940a. *The Other Side of the Jordan*. New Haven, Connecticut: American Schools of Oriental Research.

-----. 1940b. "The Third Season of Excavation at Tell el-Kheleifeh." *Bulletin of the American Schools of Oriental Research* 79: 2-18.

-----. 1965. *Deities and Dolphins: The Story of the Nabateans.* New York: Farrar, Straus and Giroux.

-----. 1967a. "Some Edomite Pottery from Tell el-Kheleifeh, Part I." *Bulletin of the American Schools of Oriental Research* 188: 8-38.

-----. 1967b. "Transjordan." Pp. 429-453 in *Archaeology and Old Testament Study: Jubilee Volume of the Society for Old Testament Study, 1917-1967.* Edited by D. Winton Thomas. Oxford: Clarendon Press.

-----. 1971. "Tell el-Kheleifeh Inscriptions." Pp. 225-242 in *Near Eastern Studies in Honor of William Foxwell Albright.* Edited by Hans Goedicke. Baltimore: Johns Hopkins Press.

Golani, Amir. 2010. "Jewelry as a Cultural Marker in the Archaeological Record: The Case of Basket Earring Pendants." Vol. 1, pp. 751-764 in *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East.* Edited by Paolo Matthiae, Frances Pinnock, Lorenzo Nigro, Nicolo Marchetti and Licia Romano. Wiesbaden: Harrassowitz Verlag.

Gonen, Rivka. 1992. *Burial Patterns and Cultural Diversity in Late Bronze Age Canaan.* Winona Lake: Eisenbrauns.

Graesser, Carl F. 1972. "Standing Stones in Ancient Palestine." *Biblical Archaeologist* 35 (2): 33-63.

Green, John D. M. 2006. *Ritual and Social Structure in the Late Bronze and Early Iron Age Southern Levant: The Cemetery at Tell es-Sa'idiyeh, Jordan.* Unpublished Ph.D. dissertation, University of London. 2 volumes.

-----. 2007. "Anklets and the Social Construction of Gender and Age in the Late Bronze and Early Iron Age Southern Levant." Pp. 283-311 in *Archaeology and Women: Ancient and Modern Issues.* Edited by Sue Hamilton, Ruth D. Whitehouse, and Katherine I Wright. Walnut Creek, CA: Left Coast Press.

-----. 2009. "Forces of Transformation in Death: The Cemetery at Tel es-Sa'idiyeh, Jordan." Pp. 80-91 in *Forces of Transformation: The End of the Bronze Age in the Mediterranean.* Edited by Christoph Bachhuber and R. Gareth Roberts. Oxford: Oxbow Books.

-----. 2010. "Creating Prestige in the Jordan Valley: A Reconstruction of Ritual and Social Dynamics from the Late Bronze-Early Iron Age Cemetery at Tell es-Sa'idiyeh." Vol. 1, pp. 765-779 in *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East.* Edited by Paolo Matthiae, Frances Pinnock, Lorenzo Nigro, Nicolo Marchetti and Licia Romano. Wiesbaden: Harrassowitz Verlag.

-----. In press. "Social Identity in the Jordan Valley During the Late Bronze and Early Iron Ages: Evidence from the Tall as-Sa'idiyya Cemetery." *Studies in the History and Archaeology of Jordan* 11.

Griffith, Arthur. 2003. *Folk Saints of the Borderlands: Victims, Bandits & Healers.* Tucson: Rio Nuevo Publishers.

Gulriz, Kozbe. 2010. "The Neo-Assyrian Burials Recovered at Kavusan Hoyuk in the Upper Tigris Region." Vol. 2, pp. 349-356 in *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East.* Edited by Paolo Matthiae, Frances Pinnock, Lorenzo Nigro, Nicolo Marchetti and Licia Romano. Wiesbaden: Harrassowitz Verlag.

Haas, N. 1963. "Human Skeletal Remains in Two Burial Caves." *Israel Exploration Journal* 13 (2): 93-96.

Hall, H. R. 1913. *Catalogue of Egyptian Scarabs, Etc. in the British Museum.* London: Harrison and Sons.

Haller, Arndt. 1954. *Die Gräber und Grüfte von Assur.* Berlin: Gebr. Mann Verlag.

Hammer, M. F., A. J. Redd, E. T. Wood, M. R. Bonner, H. Jarjanazi, T. Karafet, S. Sntachiara-Benerecetti, A. Oppenheim, M. A. Jobling, T. Jenkins, H. Ostrer, and B. Bonne-Tamir. 2000. "Jewish and Middle Eastern Non-Jewish Populations Share a Common Pool of Y-chromosome Biallelic Haplotypes." *Proceedings of the National Academy of Sciences* 97 (12): 6769-6774

Hanauer, J. E. 1907. *Folklore of the Holy Land.* London: The Sheldon Press.

Harel, M. 1959. "The Roman Road at Ma'aleh 'Aqrabbim ('Scorpions' Ascent')." *Israel Exploration Journal* 9 (3): 175-179, pls. 18-20.

Harris, J. R. 1961. *Lexicographical Studies in Ancient Egyptian Minerals.* Berlin:

Akademie-Verlag.

Hart, Stephen. 1986a. "Sela`: The Rock of Edom?" *Palestine Exploration Quarterly* 118: 91-95.

-----. 1986b. "Some Preliminary Thoughts on Settlement in Southern Edom." *Levant* 18: 51-58.

-----. 1987a. "The Edom Survey Project 1984-85: The Iron Age." *Studies in the History and Archaeology of Jordan* 3: 287-290.

-----. 1987b. "Five Soundings in Southern Jordan." *Levant* 19: 33-47.

-----. 1988. "Excavations at Ghrareh, 1986: Preliminary Report." *Levant* 20: 89-99.

-----. 1989. *The Archaeology of the Land of Edom.* Unpublished Ph.D. dissertation, Macquarie University, Sydney, Australia.

-----. 1995. "The Pottery." *Excavations at Tawilan in Southern Jordan,* by Crystal M. Bennett and Piotr Bienkowski. Oxford: Oxford University Press: 53-68, 196-271.

-----, and Robin Kenneth Falkner. 1985. "Preliminary Report on a Survey in Edom, 1984." *Annual of the Department of Antiquities of Jordan* 29: 255-277.

Hasson, Nir. 2010, 18 February. "Jerusalem to Turn Sheikh Jarrah Land into Parking Lot Near Jewish Tomb." *Haaretz*. http://www.haaretz.com/print-edition/news/jerusalem-to-turn-sheikh-jarrah-land-into-parking-lot-near-jewish-tomb-1.263511 Last accessed 29 July 2011.

Hauptmann, Andreas. 1986. "Archaeometallurgical and Mining-Archaeological Studies in the Eastern 'Arabah, Feinan Area, 2nd Season." *Annual of the Department of Antiquities of Jordan* 30: 415-419.

-----. 2009. *The Archaeometallurgy of Copper: Evidence from Faynan, Jordan.* Berlin: Springer.

-----, and Gerd Weisgerber. 1992. "Periods of Ore Exploitation and Metal Production in the Area of Feinan, Wadi 'Arabah, Jordan." *Studies in the History and Archaeology of Jordan* 4: 61-66.

Heimbuch, Raymond J., Frank C. Marcellino, and Bradford M. Greene. 1980. *Evaluation of Alternative Interment Methods for National Cemeteries: Research Study Report.* New York: Clarke + Rapuano, Inc./Veterans Administration Office of Construction.

Heizer, Robert F., ed. 1959. *The Archaeologist at Work: A Source Book in Archaeological Method and Interpretation.* New York: Harper & Brothers.

Herr, Larry. 1980. "The Formal Scripts of Iron Age Transjordan." *Bulletin of the American Schools of Oriental Research* 238: 21-34.

-----. 2001. "The History of the Collared Pithos at Tell el-'Umeiri, Jordan." Pp. 237-250 in *Studies in the Archaeology of Israel and Neighboring Lands in Memory of Douglas L. Esse.* Edited by S. R. Wolff. Chicago: Oriental Institute of the University of Chicago.

-----, and Muhammad Najjar. 2008. "The Iron Age." Pp. 310-334 in *Jordan: An Archaeological Reader.* Edited by Russell B. Adams. London: Equinox.

Hertz, Robert. 1960. *Death and the Right Hand.* New York: Free Press.

Hiebert, Theodore. 2009. "Israel's Ancestors Were Not Nomads." Pp. 199-205 in *Exploring the Logue Durée: Essays in Honor of Lawrence E. Stager.* Edited by J.David Schloen. Winona Lake, Indiana: Eisenbrauns.

Higham, Thomas, Johannes van der Plicht, Christopher Bronk Ramsey, Hendrik J. Bruins, Mark Robinson, and Thomas E. Levy. 2005. "Radiocarbon Dating of the Khirbat en-Nahas Site (Jordan) and Bayseian Modeling of the Results." Pp. 164-178 in *The Bible and Radiocarbon Dating: Archaeology, Text and Science.* Edited by Thomas E. Levy and Thomas Higham. London: Equinox.

Hodder, Ian. 1982. *Symbols in Action: Ethnoarchaeological Studies of Material Culture.* Cambridge: Cambridge University Press.

-----. 1984. "Burials, Houses, Women and Men in the European Neolithic." Pp. 51-68 in *Ideology, Power and Prehistory.* Edited by D. Miller and C. Tilley. Cambridge: Cambridge University Press.

-----. 1985. "Boundaries as Strategies: An Ethnoarchaeological Study." Pp. 141-159 in *The Archaeology of Frontiers and Boundaries.* Edited by Stanton W. Green and Stephen M. Perlman. Orlando: Academic Press.

Holladay, John S. 2001. "Toward a New Paradigmatic Understanding of Long-Distance Trade in the Ancient Near East: From the Middle Bronze II to Early Iron II—a Sketch." Pp. 136-198 in *The World of the Aramaeans II: Studies in History and Archaeology in Honour of Paul-Eug*ène Dion. Edited by by P.M. Michèle Daviau, John W. Wevers and Michael Weigl. Sheffield: Sheffield Academic Press.

Homan, Michael. 2002. *To Your Tents, O Israel! The Terminology, Function, Form, and Symbolism of Tents in the Hebrew Bible and the Ancient Near East.* Leiden: Brill.

Horowitz, Wayne. 1993. "Moab and Edom in the Sargon Geography." *Israel Exploration Journal* 43 (2-3): 151-156.

Horsfield, George, and Agnes Conway. 1930. "Historical and Topographical Notes on Edom: With an Account of the First Excavations at Petra." *The Geographical Journal* 76 (5): 369-388.

Howard Carter, Theresa. 1970. "The Stone Spirits." *Expedition* 12 (3): 22-40.

Hübner, Ulrich, and Manfred Lindner. 2003. "Archaeological Check-up on Jabal ash-Shara: Edomite Khirbat al-Kur." *Annual of the Department of Antiquities of Jordan* 47: 225-233.

Hull, E. 1908. "Arabah." Vol. I, pp. 130-131 in *A Dictionary of the Bible.* Edited by James Hastings, with John A. Selbie. New York: Charles Scribner's Sons.

Irby, Charles Leonard, and James Mangles. 1852. *Travels in Egypt and Nubia, Syria and the Holy Land.* London: John Murray.

Irvine, James Sheppard. 1958. *The Early History of Edom: A Study of the Land of Edom and its Inhabitants from Prehistoric Times to 922 B.C.* Unpublished Ph.D. dissertation, Johns Hopkins University, Baltimore, Maryland.

Israel, Felice. 1979. "Miscellenea Idumea." *Revista Biblica Italiana* 27: 171-205.

Jackson, Kent P. 1983. *The Ammonite Language of the Iron Age.* Chico, California: Scholar's Press.

Jacobson, David M. 2007. "Editorial: Has Herod's Place of Burial Been Found?" *Palestine Exploration Quarterly* 139 (3): 147-148.

Jobling, William J. 1989. "'Aqaba-Ma'an Archaeological and Epigraphic Survey." Vol. 2, pt.1, pp. 16-24 in *Archaeology of Jordan* (*Akkadia* Supplementum VII). Edited by D. Homès-Fredericq and J. B. Hennessy. Leuven: Peeters.

Jones, Siân. 1997. *The Archaeology of Ethnicity: Constructing Identities in the Past and Present.* New York: Routledge.

Kallai, Zecharia. 1986. *Historical Geography of the Bible: The Tribal Territories of Israel.* Jerusalem: Magnes Press.

Kasher, Aryeh. 1988. *Jews, Idumaeans, and Ancient Arabs.* Tübingen, Germany: J. C. B. Mohr (Paul Siebeck).

Katzenstein, H. J. 1960. "The Royal Steward (*Asher 'al ha-Bayith*)." *Israel Exploration Journal* 10 (3): 149-154.

Kemp, Barry J. 1980. "Preliminary Report on the El-'Amarna Expedition, 1979." *Journal of Egyptian Archaeology* 66: 5-16.

Kempinski, Aaron. 1979. "Hittites in the Bible: What Does the Archaeology Say?" *Biblical Archaeology Review* 5 (5): 20-44.

Khazanov, Anatoly M. 1994a. *Nomads and the Outside World.* Madison: University of Wisconsin Press.

-----. 1994b. "The Spread of World Religions in Medieval Nomadic Societies of the Eurasian Steppes." Pp. 11-33 in *Nomadic Diplomacy, Destruction and Religion from the Pacific to the Adriatic: Papers Prepared for the Central and Inner Asian Seminar, University of Toronto, 1992-93* (Toronto Studies in Central and Inner Asia No. 1). Edited by Michael Gervers and Wayne Schlepp. Toronto: Joint Centre for Asia Pacific Studies.

-----. 1998. "Pastoralists in the Contemporary World: The Problem of Survival." Pp.7-23 in *Changing Nomads in a Changing World.* Edited by Joseph Ginat and Anatoly M. Khazanov. Brighton: Sussex Academic Press.

-----. 2001. "Nomads in the History of the Sedentary World." Pp. 1-23 in *Nomads in the Sedentary World.* Edited by Anatoly M. Khazanov and André Wink. Richmond, UK: Curzon Press.

-----. 2005. "Nomads and Cities in the Eurasian Steppe Region and Adjacent Countries: A Historical Overview." Pp. 163-178 in *Shifts and Drifts in Nomad-Sedentary Relations.* Edited by Stefan Leder and Bernhard Streck. Wiesbaden: Dr. Ludwig Reichert Verlag.

Killick, Alistair. 1987. "Udruh and the Trade Route Through Southern Jordan." *Studies in the History and Archaeology of Jordan* 3: 173-179.

Kindler, A. 1983. *Coinage of Bostra.* Warminster, U. K.: Aris & Phillips.

King, Geoffrey R. D. 1989. "Feinan." Vol. 2, pt. 1, pp. 225-227 in *Archaeology of Jordan* (*Akkadica* Supplementum VII). Edited by D. Homès-Fredericq and J. B. Hennessy. Leuven: Peeters.

Kirkbride, Diana. 1969a. "Ancient Arabian Ancestor Idols: Part I." *Archaeology* 22

(2): 116-121.

-----. 1969b. "Ancient Arabian Ancestor Idols: Part II." *Archaeology* 22 (3): 188-195.

Kitchen, K. A. 1964. "Some New Light on the Asiatic Wars of Ramesses II." *Journal of Egyptian Archaeology* 50: 47-70.

-----. 1972. "Review: *Les Bédouins Shosou des Documents Égyptiens.*" *Journal of Egyptian Archaeology* 58: 322-323.

-----. 1992. "The Egyptian Evidence on Ancient Jordan." Pp. 21-34 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications.

Kletter, Raz. 2002. "People Without Burials? The Lack of Iron Age Burials in the Central Highlands of Palestine." *Israel Exploration Journal* 52: 28-48.

Klumpp, Donna, and Corinne Kratz. 1993. "Aesthetics, Expertise, and Ethnicity: Okiek and Maasai Perspectives on Personal Ornament." Pp. 195-222 in *Being Maasai: Ethnicity & Identity in East Africa.* Edited by Thomas Spear and Richard Waller. London: James Currey.

Knauf, Ernst Axel. 1992a. "The Cultural Impact of Secondary State Formation: The Cases of the Edomites and Moabites." Pp. 47-54 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Sheffield: J. R. Collis Publications.

-----, 1992b. "Seir (Place)." Vol. 5, pp. 1072-1073 in *The Anchor Bible Dictionary.* Edited by David Noel Freedman, Gary A Herion, David F. Graf, John David Pleins, and Astrid Beck. New York: Doubleday.

-----, and C. J. Lenzen. 1987. "Edomite Copper Industry." *Studies in the History and Archaeology of Jordan* 3: 83-88.

Knauf-Belleri, Ernst Axel. 1995. "Edom: The Social and Economic History." Pp. 93-117 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

Kochavi, Moshe. 1993. "Malhata, Tel." *New Encyclopedia of Archaeological Excavations in the Holy Land* 3: 934-936.

Kratz, Corine, and Donna Pido. 2000. "Gender, Ethnicity & Social Aesthetics in Maasai & Okiek Beadwork." Pp. 43-71 in *Rethinking Pastoralism in Africa*. Edited by Dorothy L. Hodgson. Athens: Ohio University Press.

Kroeber, Alfred L. 1927. "Disposal of the Dead." *American Anthropologist* 29 (3): 308-315.

Küchler, Susanne. 2002. *Malanggan: Art, Memory and Sacrifice.* Oxford: Berg.

Laborde, Leon de. 1838. *Journey Through Arabia Petraea, to Mount Sinai, and the Excavated City of Petra, the Edom of the Prophecies.* London: John Murray.

LaBianca, Øystein Sakala. 1985. "The Return of the Nomad: An Analysis of the Process of Nomadization in Jordan." *Annual of the Department of Antiquities of Jordan* 29: 251-254.

-----. 1990. *Sedentarization and Nomadization: Food System Cycles at Hesban and Vicinity in Transjordan* (Hesban 1). Berrien Springs, MI: Institute of Archaeology and Andrews University Press.

Lancaster, William. 1997. *The Rwala Bedouin Today.* Prospect Heights, IL: Waveland Press.

Latour, Bruno. 2002. "What is Iconoclash? Or Is There a World Beyond the Image Wars?" Pp. 16-40 in *Iconoclash: Beyond the Image-Wars in Science, Religion, and Art.* Edited by Peter Weibel and Bruno Latour. MIT Press.

Laufer, Berthold. 1926. *Ostrich Egg-shell Cups of Mesopotamia and the Ostrich in Ancient and Modern Times.* Chicago: Field Museum of Natural History.

Lawler, Andrew. 2011. "Mining Afghanistan's Past: Will Economic Pressure Destroy the Country's Buddhist Heritage?" *Archaeology* 64 (1): 18-23.

Leach, Stephany and Elizabeth Rega. 1996. "Interim Report on the Human Skeletal Material Recovered from the 1995 Tell Es-Sa'idiyeh, Excavations, Areas BB and DD." *Palestine Exploration Quarterly* 128 (2): 131-138.

Lehmann, Gunnar. 2003. "The United Monarchy in the Countryside: Jerusalem, Judah, and the Shephelah During the Tenth Century B.C.E." Pp. 117-162 in *Jerusalem in Bible and Archaeology: The First Temple Period.* Edited by Andrew G. Vaughn and Ann E. Killebrew. Atlanta: Society of Biblical Literature.

Leonard, Albert, Jr. 1981. "Kataret es-Samra: A Late Bronze Age Cemetery in Transjordan?" *Annual of the Department of Antiquities of Jordan* 25: 179-195, pls. 48-49.

Lessa, William A., and Evon Z. Vogt. 1958. *Reader in Comparative Religion: An Anthropological Approach.* Evanston, Illinois: Row, Peterson and Company.

Lévi-Strauss, C. 1969. *The Raw and the Cooked*. New York: Harper & Row.

Levy, Thomas E. 2003, Winter. "Emergency Excavations in the Wadi Fidan: Development, Education, and Preservation." *ACOR Newsletter:* 4-5.

-----. 2004. "Some Theoretical Issues Concerning the Rise of the Edomite Kingdom – Searching for 'Pre-Modern Identities.'" *Studies in the History and Archaeology of Jordan* 8: 253-261.

-----. 2008. "'You Shall Make for Yourself No Molten Gods: Some Thoughts on Archaeology and Edomite Ethnic Identity." Pp. 239-255 in *Sacred History, Sacred Literature: Essays on Ancient Israel, the Bible, and Religion in Honor of R. E. Friedman on His Sixtieth Birthday.* Edited by Shawna Dolansky. Winona Lake, IN: Eisenbrauns.

-----. 2009. "Ethnic Identity in Biblical Edom, Israel, and Midian: Some Insights from Mortuary Contexts in the Lowlands of Edom." Pp. 251-261 in *Exploring the Logue Durée: Essays in Honor of Lawrence E. Stager.* Edited by J.David Schloen. Winona Lake, IN: Eisenbrauns.

-----. 2010. "The New Pragmatism: Integrating Anthropological, Digital, and Historical Biblical Archaeologies." Pp. 3-44 in *Historical Biblical Archaeology and the Future – The New Pragmatism.* Edited by T. E. Levy. London: Equinox.

-----, and Augustin F. C. Holl. 2002. "Migrations, Ethnogenesis, and Settlement Dynamics: Israelites in Iron Age Canaan and Shuwa-Arabs in the Chad Basin." *Journal of Anthropological Archaeology* 21: 83-118.

-----, and David Alon. 1987. "Excavations in Shiqmim Cemetery 3: Final Report on the 1982 Excavations." Vol. 1, pp. 333-355 and Vol. 2, pp. 653-683 in *Shiqmim I: Studies Concerning Chalcolithic Societies in the Northern Negev Desert, Israel (1982-1984).* Edited by Thomas Evan Levy. Oxford: B. A. R. International Series 356. 2 vols.

-----, Mohammad Najjar, Adolfo Muniz, Sarah Malena, Elizabeth Monroe, Marc Beherec, Neil G. Smith, Thomas Higham, Stefan Münger, and Kenneth Maes. 2005a. "Iron Age Burial in the Lowlands of Edom: The 2004 Excavations at Wadi Fidan 40, Jordan." *Annual of the Department of Antiquities of Jordan* 49: 443-487.

-----, Mohammad Najjar, Johannes van der Plicht, Thomas Higham, and Hendrik J. Bruins. 2005b. "Lowland Edom and the High and Low Chronologies: Edomite State Formation, the Bible and Recent Archaeological Research in Southern Jordan." Pp. 129-163 in *The Bible and Radiocarbon Dating: Archaeology, Text and Science.* Edited by Thomas E. Levy and Thomas Higham. London:

Equinox.

-----, and Neil G. Smith. 2007. "On-Site GIS Digital Archaeology: GIS-Based Excavation Recording in Southern Jordan." Pp. 47-58 in *Crossing Jordan: North American Contributions to the Archaeology of Jordan.* Edited by Thomas E. Levy, P. M. Michele Daviau, and Randall Younker. London: Equinox.

-----, Russell B. Adams, Andreas Hauptmann, Michael Prange, Sigfrid Schmitt-Strecker and Mohammed Najjar. 2002. "Early Bronze Age Metallurgy: A Newly Discovered Copper Manufactory in Southern Jordan." *Antiquity* 76: 425-437

-----, Russell B. Adams, and Adolfo Muniz. 2004. "Archaeology and the Shasu Nomads: Recent Excavations in the Jabal Hamrat Fidan, Jordan. Pp. 63-89 in *Le-David Maskil: A Birthday Tribute for David Noel Freedman.* Edited by William H. C. Propp and Richard Elliot Friedman. Winona Lake, IN: Eisenbrauns.

-----, Russell B. Adams, Alan J. Witten, James Anderson, Yoav Arbel, Solomon Kuah, John Moreno, Angela Lo, and Mark Wagonner. 2001. "Early Metallurgy, Interaction, and Social Change: The Jabal Hamrat Fidan (Jordan) Research Design and 1998 Archaeological Survey: Preliminary Report." *Annual of the Department of Antiquities of Jordan* 45: 159-187.

-----, Russell B. Adams, James D. Anderson, Mohammad Najjar, Neil Smith, Yoav Arbel, Lisa Soderbaum, and Adolfo Muniz. 2003. "An Iron Age Landscape in the Edomite Lowlands: Archaeological Surveys along Wadi al-Ghuwayb and Wadi al-Jariya, Jabal Hamrat Fidan, Jordan, 2002." *Annual of the Department of Antiquities of Jordan* 47: 247-277.

-----, Russell B. Adams, Mohammad Najjar, Andreas Hauptmann, James D. Anderson, Baruch Brandl, Mark A. Robinson, and Thomas Higham. 2004. "Reassessing the Chronology of Biblical Edom: New Excavations and 14C Dates from Khirbat en-Nahas (Jordan)." *Antiquity* 78: 863-876.

-----, Russell B. Adams, and Rula Shafiq. 1999. "The Jabal Hamrat Fidan Project: Excavations at the Wadi Fidan 40 Cemetery, Jordan (1997)." *Levant* 31: 293-308.

-----, Thomas Higham, Christopher Bronk Ramsey, Neil G. Smith, Erez Ben-Yosef, Mark Robinson, Stefan Münger, Kyle Knabb, Jürgen P. Schulze, Mohammad Najjar, and Lisa Tauxe. 2008. "High-Precision Radiocarbon Dating and Historical Biblical Archaeology in Southern Jordan." *Proceedings of the National Academy of Sciences* 105 (43): 16460-16465.

Lewis, Theodore J. 1992. "Ancestor Worship." Vol. I, pp. 240-242 in *Anchor Bible*

Dictionary. Edited by David Noel Freedman, Gary A. Herion, David F. Graf, John David Pleins, and Astrid B. Beck. New York: Doubleday.

-----. 1995. "Teraphim." Pp. 1588-1601 in *Dictionary of Deities and Demons in the Bible (DDD).* Edited by Karel van der Toorn, Bob Becking, and Pieter W. van der Horst. Leiden: Brill.

Lindner, Manfred. 1987. "Archaeologial Explorations in the Petra Region – 1980-1984 (1986)." *Studies in the History and Archaeology of Jordan* 3: 291-294.

-----. 1992a. "Edom Outside the Famous Excavations: Evidence from Surveys in the Greater Petra Area." Pp. 143-176 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications.

-----. 1992b. "Survey of Sabra (Jordan) 1990 Preliminary Report." *Levant* 36: 193-216.

-----, and Ernst A. Knauf. 1997. "Between the Plateau and the Rocks: Edomite Economic and Social Structure." *Studies in the History and Archaeology of Jordan* 6: 261-264.

-----, and Suleiman Farajat. 1987. "An Edomite Mountain Stronghold North of Petra (Ba'ja III)." *Annual of the Department of Antiquities of Jordan* 31: 175-185, pls. 13-22.

-----, Suleiman Farajat, Ernest Axel Knauf, and John P. Zeitler. 1990. "Es-Sadeh – A Lithic-Early Bronze-Iron II (Edomite)-Nabataean Site in Southern Jordan: Report on the Second Exploratory Campaign, 1988." *Annual of the Department of Antiquities of Jordan* 34: 193-237.

-----, Suleiman Farajat, and John P. Zeitler. 1988. "Es-Sadeh: An Important Edomite-Nabataean Site in Southern Jordan: Preliminary Report." *Annual of the Department of Antiquities of Jordan* 32: 75-99, 363-369.

-----, Ernst A. Knauf, and John P. Zeitler. 1996a. "An Edomite Fortress and a Late Islamic Village Near Petra (Jordan): Khirbat al-Mu'allaq." *Annual of the Department of Antiquities of Jordan* 40: 111-135.

-----, Ernst A. Knauf, John P. Zeitler, and Hannes Hubl. 1996b. "Jabal al-Qseir: A Fortified Iron II (Edomite) Mountain Stronghold in Southern Jordan, Its Pottery and Its Historical Context." *Annual of the Department of Antiquities of Jordan* 40: 137-166.

-----, Ernst A. Knauf, Ulrich Hubner, and Johannes Hubl. 1998. "From Edomite to Late Islamic: Jabal as-Suffaha North of Petra." *Annual of the Department of*

Antiquities of Jordan 42: 225-240.

----- and Jürgen Zangenberg. 1993. "The Re-Discovered *Baityl* of the Goddess Atargatis in the *Siyyag* Gorge of Petra (Jordan) and Its Significance for Religious Life in Nabatea." *Zeitschrift des Deutschen Palästina-Vereins* 109 (2): 141-151.

Lindsay, John. 1976. "The Babylonian Kings and Edom, 605-550 B.C." *Palestine Exploration Quarterly* 108: 23-39.

Lucas, A., and J. R. Harris. 1962. *Ancient Egyptian Materials and Industries.* Fourth edition, by A. Lucas, revised and enlarged by J. R. Harris. London: Edward Arnold (Publishers) Ltd.

Lyman, R. Lee, and Michael J. O'Brien. 2001. "The Direct Historical Approach, Analogical Reasoning, and Theory in Americanist Archaeology." *Journal of Archaeological Method and theory* 8 (4): 303-342.

MacDonald, Burton. 1980. "The Wadi El Hasa Survey 1979: A Preliminary Report." *Annual of the Department of Antiquities of Jordan* 24: 169-183, pl. 103-110.

-----. 1988. *The Wadi el Hasa Archaeological Survey, 1979-1983, West-Central Jordan.* Waterloo, Ontario: Wilfrid Laurier University Press.

-----. 1992a. "Evidence from the Wadi el-Hasa and Southern Ghors and North-east Arabah Archaeological Surveys." Pp. 113-142 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications.

-----. 1992b. *The Southern Ghors and Northeast 'Arabah Archaeological Survey.* Sheffield: J. R. Collis Publications.

-----. 2000. *"East of the Jordan": Territories and Sites of the Hebrew Scriptures.* Boston: American Schools of Oriental Research.

-----. 2010. *Pilgrimage in Early Christian Jordan: A Literary and Archaeological Guide.* Oxford: Oxbow Books.

MacDonald, B., A. Bradshaw, L. Herr, M. Neeley, and S. Quaintance. 2000. "The Tafila-Busayra Archaeological Survey: Phase 1 (1999)." *Annual of the Department of Antiquities of Jordan* 44: 507-522.

MacDonald, Burton, Larry G. Herr, and Michael P. Neely. 2004. "Site Descriptions (1-290)." Pp. 151-415 in *The Tafila-Busayra Archaeological Survey 1999-2001, West-Central Jordan,* by B. MacDonald, L. G. Herr, M. P. Neely, T. Gagos, K. Moumani, and M. Rockman. Boston: American Schools of Oriental Research.

MacDonald, Burton, Gary O. Rollefson, and Duane W. Roller. 1982. "The Wadi el Hasa Survey 1981." *Annual of the Department of Antiquities of Jordan* 26 (1): 117-131, 26 (2): 449-455.

MacDonald, B., L. G. Herr, M. P. Neely, T. Gagos, K. Moumani, and M. Rockman. 2004. *The Tafila-Busayra Archaeological Survey 1999-2001, in West-Central Jordan.* Boston: American Schools of Oriental Research.

Magen, Yitzhak. 1993. "Mamre." Vol. 3, pp. 939-942 in *The New Encyclopedia f Archaeological Excavations in the Holy Land.* Edited by Ephraim Stern, Ayelet Lewinson-Gilboa and Joseph Aviram. New York: Simon and Schuster.

-----. 2004. "Two Tumuli in the Jordan Valley (Yafit)." Pp. 285-299 and pls. 7-8 in *Burial Caves and Sites in Judea and Samaria from the Bronze and Iron Ages* (Judea & Samaria Publications 4). Jerusalem: Staff Officer of Archaeology—Civil Administration of Judea and Samaria, Israel Antiquities Authority.

Malinowski, Bronislaw. 1954. "Magic, Science, and Religion." In *Magic, Science, and Religion and Other Essays*, by Bronislaw Malinowski. Pp. 17-91. Garden City, New York: Doubleday.

Mallios, Seth, and David M. Caterino. 2007. *Cemeteries of San Diego: Images of America.* Charleston: Arcadia Publishing.

Marcus, Ralph and Allen Wikgren. 1963. *Josephus VIII: Jewish Antiquities, Books XV-XVII* (The Loeb Classical Library). Cambridge: Harvard University Press.

Marx, Emanuel. 1967. *Bedouin of the Negev.* New York: Frederick A. Praeger.

-----. 1985. "Tribal Pilgrimages to Saints' Tombs in South Sinai." Pp. 104-131 in *Islamic Dilemmas: Reformers, Nationalists and Industrialization: The Southern Shore of the Mediterranean.* Edited by Ernest Gellner. Berlin: Mouton Publishers.

-----. 2006. "Tribal Pilgrimages to Saints' Tombs in South Sinai." Pp. 54-74 in *Archaeology, Anthropology and Cult: The Sanctuary at Gilat, Israel.* Edited by Thomas E. Levy. London: Equinox.

-----. 2007. "Nomads and Cities: Changing Conceptions." In *On the Fringe of Society: Archaeological and Ethnoarchaeological Perspectives on Pastoral and Agricultural Societies* BAR International Series 1657). Edited by Benjamin A. Saidel and Eveline J. van der Steen. Oxford: Archaeopress: 75-78.

Maxwell-Hyslop, K. R. 1971. *Western Asiatic Jewellery, c. 3000-612 B. C.* London:

Methuen & Co Ltd.

-----. 1984. "Appendix B: The Gold Jewllery." *Levant* 16: 22-23.

Mazar, Amihai. 1976. "Iron Age Burial Caves North of the Damascus Gate, Jerusalem." *Israel Exploration Journal* 26 (1): 1-8, pls.1-2.

Mazar, Benjamin. 1975. *Cities and Districts in Eretz-Israel* (Hebrew). Jerusalem: [Bialik Press].

Mazar, Eilat. 1985. "Edomite Pottery at the End of the Iron Age." *Israel Exploration Journal* 35 (4): 253-269.

McCarter, P. Kyle, Jr. 1980. *I Samuel: A New Translation with Introduction, Notes & Commentary* (*The Anchor Bible*). Garden City, NY: Doubleday & Company, Inc.

McQuitty, Alison. 1998. "The Wadi Faynan Project: A Preface." *Levant* 30: 1-3.

Meir, Avinoam. 1997. *As Nomadism Ends: The Israeli Bedouin of the Negev.* Boulder: Westview Press.

Meshel, Ze'ev. 1977. "Horvat Ritma—An Iron Age Fortress in the Negev Highlands." *Tel Aviv* 4 (3-4): 110-135.

Meskell, Lynn. 2001. "The Egyptian Ways of Death." Pp. 27-40 in *Social Memory, Identity, and Death: Anthropological Perspectives on Mortuary Rituals* Archaeological Papers of the American Anthropological Association No. 10). Edited by Meredith S. Chesson. Arlington, VA: American Anthropological Association.

-----. 2003. "Memory's Materiality: Ancestral Presence, Commemorative Practice and Disjunctive Locales." Pp. 34-55 in *Archaeologies of Memory.* Edited by Ruth M. Van Dyke and Susan E. Alcock. Malden, MA: Blackwell Publishing.

Mettinger, Tryggve N. D. 1995. *No Graven Image? Israelite Aniconism in Its Ancient Near Eastern Context.* Stockholm: Almqvist & Wiksell International.

Mienis, Henk K. 1999. "Molluscs." Pp. 276-279 in *Horvat Qitmit: An Edomite Shrine in the Biblical Negev,* edited by Itzaq Beit-Arieh. Tel Aviv: Monograph Series of the Institute of Archaeology.

Miettunen, Päivi. 2008. "Jabal Harun: History, Past Explorations, Monuments, and Pilgrims." Pp. 26-49 in *Petra—The Mountain of Aaron: The Finnish*

Archaeological Project in Jordan, Volume I: The Church and the Chapel. Edited by Zbigniew T. Fiema and Jaakko Frösén. Helsinki: Societas Scientiarum Fennica.

Miglus, Peter A. 1996. *Das Wohngebiet von Assur: Stratigraphie und Architektur.* Berlin: Gebr. Mann Verlag. 2 volumes.

Mikkola, Erko, Antti Lahelma, Zbigniew T. Fiema, and Richard Homgren. 2008. "The Church and the Chapel: Analysis and Phasing." Pp. 98-185 in *Petra—The Mountain of Aaron: The Finnish Archaeological Project in Jordan, Volume I: The Church and the Chapel.* Edited by Zbigniew T. Fiema and Jaakko Frösén. Helsinki: Societas Scientiarum Fennica.

Miller, J. Maxwell, ed. 1991. *The Archaeological Survey of the Kerak Plateau.* Atlanta: Scholar's Press.

Mitchell, T. C. 1967. "Philistia." *Archaeology and Old Testament Study: Jubilee Volume of the Society for Old Testament Study, 1917-1967.* Edited by D. Winton Thomas. Oxford: Clarendon Press: 404-427.

Montet, Pierre. 1951. *Les Constructions et le Tombeau de Psousennès a Tanis* (*La Nécropole Royale de Tanis,* vol. 2). Paris: N. p.

Moon, Cyrus Hee-Suk. 1971. *A Political History of Edom in the Light of Recent Literary and Archaeological Research.* Unpublished Ph.D. dissertation, Emory University, Atlanta, Georgia.

Moorey, P. R. S. 1994. *Ancient Mesopotamian Materials and Industries: The Archaeological Evidence.* Oxford: Clarendon Press.

Morton, William H. 1956. "Umm el-Biyara." *The Biblical Archaeologist* 19 (2): 1, 25-36.

Moscati, Sabatino. 1988a. "Ostrich Eggs." Pp. 456-463 in *The Phoenicians.* Edited by Sabatino Moscati. New York: Abbeville Press.

-----. 1988b. "Stelae." Pp. 304-327 in *The Phoenicians.* Edited by Sabatino Moscati. New York: Abbeville Press.

Mueller, Tom. 2008, December. "The Holy Land's Visionary Builder: Herod." *National Geographic Magazine* 214 (6): 34-59.

Münger, Stefan. In press. "The Iron Age Egyptian Amulet Assemblage from the Edom Lowlands Regional Archaeology Project." *Annual of the American Schools of Oriental Research.*

Muniz, Adolfo. 2007. *Feeding the Periphery: Modeling Early Bronze Age Economies and the Cultural Landscape of the Faynan District, Southern Jordan.* Unpublished Ph.D. dissertation, University of California, San Diego.

Murphy-O'Connor, Jerome. 1998. *The Holy Land: An Oxford Archaeological Guide from Earliest Times to 1700.* Oxford: Oxford University Press.

Musa, Mark, ed. 1995. *The Portable Dante.* New York: Penguin Books.

Musil, Alois. 1908. *Arabia Petraea II: Edom.* Vienna: Alfred Hölder. 2 vols.

-----. 1926. *The Northern Hegaz: A Topographical Itinerary* (Oriental Explorations and Studies No. 1). New York: American Geographical Society.

-----. 1928. *The Manners and Customs of the Rwala Bedouins* (Oriental Explorations and Studies No. 6). New York: American Geographical Society

Myers, J. M. 1971. *Near Eastern Studies in Honor of William Foxwell Albright.* Edited by Hans Goedicke. Baltimore: Johns Hopkins Press: 375-392.

Na'aman, Nadav. 1992. "Israel, Edom and Egypt in the 10th Century B. C. E." *Tel Aviv* 19: 71-93.

Naveh, J. 1963. "Old Hebrew Inscriptions in a Burial Cave." *Israel Exploration Journal* 13 (2): 74-92.

Negbi, Ora. 1991. "Were There Sea Peoples in the Central Jordan Valley at the Transition from the Bronze Age to the Iron Age?" *Tel Aviv* 18: 205-243.

-----. 1998. "Were There Sea Peoples in the Central Jordan Valley at the Transition from the Bronze Age to the Iron Age? Once Again." *Tel Aviv* 25: 184-207.

Netzer, Ehud. 2006. *The Architecture of Herod, the Great Builder.* Tübingen, Germany: Mohr Siebeck.

Nicholson, Paul T., with Edgar Peltenburg. 2000. "Egyptian Faience." Pp. 177-194 in *Ancient Egyptian Materials and Technology.* Edited by Paul T. Nicholson and Ian Shaw. Cambridge: Cambridge University Press.

Oakeshott, M. F. 1983. "The Edomite Pottery." Pp. 53-63 in *Midian, Moab and Edom: The History and Archaeology of Late Bronze and Iron Age Jordan and North-West Arabia.* Edited by John F. A. Sawyer and David J. A. Clines. Sheffield: Journal for the Study of the Old Testament Press.

Ofer, Avi. 1993. "Hebron." Vol. 2, pp. 606-609 in *The New Encyclopedia of Archaeological Excavations in the Holy Land.* Edited by Ephraim Stern, Ayelet Lewinson-Gilboa and Joseph Aviram. New York: Simon and Schuster.

Ogden, Jack. 1995. "The Gold Jewellery." Pp. 69-78 in Crystal-M. Bennett and Piotr Bienkowski. *Excavations at Tawilan in Southern Jordan.* Oxford: Oxford University Press.

-----. 2000. "Metals." Pp. 148-176 in *Ancient Egyptian Materials and Technology.* Edited by Paul T. Nicholson and Ian Shaw. Cambridge: Cambridge University Press.

Ohata, Kiyoshi. 1967. *Tel Zeror II: Preliminary Report of the Excavation, Second Season 1965.* Tokyo: Society for Near Eastern Studies in Japan.

-----. 1970. *Tel Zeror III: Report of the Excavation, Third Season 1966.* Tokyo: Society for Near Eastern Studies in Japan.

Ortner, Donald J., and Bruno Frolich. 2008. *The Early Bronze Age I Tombs and Burials of Bâb edh-Dhrâ', Jordan.* Landham, MD: Rowman Altamira.

O'Shea, John. 1981. "Social Configurations and the Archaeological Study of Mortury Practices: A Case Study." Pp. 39-52 in *The Archaeology of Death.* Edited by Robert Chapman, Ian Kinnes, and Klavs Randsborg. Cambridge: Cambridge University Press.

-----. 1984. *Mortuary Variability: An Archaeological Investigation.* Orlando: Academic Press, Inc.

Palmer, Carol, David Gilbertson, Hwedi el-Rishi, Chris Hunt, John Grattan, Sue McLaren, and Brian Pyatt. 2007a. "The Wadi Faynan Today: Landscape, Environment, People." Pp. 27-57 in *Archaeology and Desertification: The wadi Faynan Landscape Survey, Southern Jordan.* Edited by Graeme Barker, David Gilbertson, and David Mattingly. Oxford: Oxbow Books.

Palmer, Carol, Helen Smith, and Patrick Daly. 2007b. "Ethnoarchaeology." Pp. 369-395 in *Archaeology and Desertification: The Wadi Faynan Landscape Survey, Southern Jordan.* Edited by Graeme Barker, David Gilbertson, and David Mattingly. Oxford: Oxbow Books.

Parker Pearson, Michael. 1982. "Mortuary Practices, Society and Ideology: An Ethnoarchaeological study." Pp. 99-113 in *Symbolic and Structural Archaeology*. Edited by Ian Hodder. Cambridge: Cambridge University Press.

-----. 2000. *The Archaeology of Death and Burial.* College Station, Texas: Texas A&M

Press.

Patencio, Francisco. 1943. *Stories and Legends of the Palm Springs Indians.* As told to Margaret Boynton. Palm Springs: Palm Springs Desert Museum.

Pedde, Friedhelm. 2010. "The Assur-Project: A New Analysis of the Middle- and Neo-Assyrian Graves and Tombs." *Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East.* Edited by Paolo Matthiae, Frances Pinnock, Lorenzo Nigro, Nicolo Marchetti and Licia Romano. Wiesbaden: Harrassowitz Verlag: 1.913-923.

Peebles, Christopher S., and Susan M. Kus. 1977. "Some Archaeological Correlates of Ranked Societies." *American Antiquity* 42 (3): 421-448.

Perlman, I., F. Asaro, and Trude Dothan. 1973. "Provenance of the Deir el-Balah Coffins." *Israel Exploration Journal* 23 (3): 147-151.

Petocz, Dani. 1984. "Tawilan Trench II—Preliminary Report 1982." Pp. 9-13 in "Excavations at Tawilan in Southern Jordan, 1982," by Crystal-M. Bennett. *Levant* 16: 1-23.

-----. 1995. "Area II." Pp. 23-37 in *Excavations at Tawilan in Southern Jordan.* Edited by Crystal-M. Bennett and Piotr Bienkowski. Oxford: Oxford University Press.

Petrie, Sir W. M. Flinders. 1909. *Arts and Crafts of Ancient Egypt.* Edinburgh: T. N. Foulis.

-----. 1914. *Amulets.* London: Constable & Company Ltd.

-----. 1930. *Beth-Pelet I (Tell Fara).* London: British School of Archaeology in Egypt.

-----. 1932. *Ancient Gaza II.* London: British School of Archaeology in Egypt.

-----. 1933. *Ancient Gaza III.* London: British School of Archaeology in Egypt.

Phillips, Jacke. 2000. "Ostrich Eggshells." Pp. 332-333 in *Ancient Egyptian Materials and Technology,* edited by Paul T. Nicholson and Ian Shaw. Cambridge: Cambridge University Press.

Phythian-Adams, W. J. 1934. "Israel in the Arabah (II)." *Palestine Exploration Fund Quarterly Statement* 181-188.

Pope, Marvin H. 1981. "The Cult of the Dead at Ugarit." Pp. 159-179 in *Ugarit in Retrospect: Fifty Years of Ugarit and Ugaritic,* edited by Gordon Douglas Young. Winona Lake, IN: Eisenbrauns.

Pratico, Gary D. 1985. "Nelson Glueck's 1938-1940 Excavations at Tell el-Kheleifeh: A Reappraisal." *Bulletin of the American Schools of Oriental Research* 259: 1-32.

-----. 1993. *Nelson Glueck's 1938-1940 Excavations at Tell el-Kheleifeh: A Reappraisal.* Atlanta: Scholar's Press.

Pritchard, James B., Ed. *Ancient Near Eastern Texts Relating to the Old Testament.* Princeton: Princeton University Press.

-----. 1980. *The Cemetery at Tell es-Sa`idiyeh, Jordan.* Philadelphia: University Museum, University of Pennsylvania.

-----. 1985. *Tell es-Sa`idiyeh: Excavations on the Tell, 1964-1966.* Philadelphia: University Museum, University of Pennsylvania.

Privratsky, Bruce G. 2001. *Muslim Turkistan: Kazak Religion and Collective Memory.* Richmond, UK: Curzon Press.

Puech, Emile. 1977. "Documents Epigraphiques de Buseirah." *Levant* 9: 11-20.

Al-Qu'aiti, Sultan Ghalib. 2007. *The Holy Cities, the Pilgrimage, and the World of Islam.* Louisville: Fons Vitae.

Raikes, Thomas. 1980. "Notes on Some Neolithic and Later Sites in Wadi Araba and the Dead Sea Valley." *Levant* 12: 40-60.

-----. 1985. "The Character of the Wadi Araba." *Studies in the History and Archaeology of Jordan* 2: 95-101.

Rapaport, Uriel. 1969. "Les Iduméens en Égypte." *Revue de Philologie, de Littérature et d'Histoire Anciennes* 95: 73-82.

Rattray, R. S. 1927. *Religion & Art in Ashanti.* London: Oxford University Press.

Redford, Donald. 1982. "Contact Between Egypt and Jordan in the New Kingdom: Some Comments on Sources." *Studies in the History and Archaeology of Jordan* 1: 115-119.

-----. 1992. *Egypt, Canaan, and Israel in Ancient Times.* Princeton: Princeton University Press.

Reese, David S. 1991. "The Trade of Indo-Pacific Shells into the Mediterranean Basin and Europe." *Oxford Journal of Archaeology* 10 (2): 159-196.

-----. 1995. "Marine Invertebrates and Fossils." Pp. 93-96 in *Excavations at Tawilan in Southern Jordan.* Edited by Crystal-M. Bennett and Piotr Bienkowski. Oxford: Oxford University Press.

-----, with contributions by Kenneth J. McNamara and Catherine Sease. "Fossil and Recent Marine Invertebrates." Pp. 441-469 in *Busayra: Excavations by Crystal-M. Bennett 1971-1980.* Edited by Piotr Bienkowski. Oxford: Oxford University Press.

Reisner, George Andrew. 1923. *Excavations at Kerma, Parts IV-V* (Harvard African Studies Vol. VI). Cambridge: Peabody Museum of Harvard University.

-----. 1924. "Part II: Principles, Methods, and General Results." Pp. 29-90 in *Harvard Excavations at Samaria, 1908-1910.* Cambridge: Harvard University Press.

Ribichini, Sergio. 1988. "Beliefs and Religious Life." Pp. 104-125 in *The Phoenicians,* edited by Sabatino Moscati. New York: Abbeville Press.

Robinson, Edward. 1833. "Sketches of Idumaea and its Present Inhabitants. From the Travels of Burckhardt and Legh. With an Historical Introduction. By the Editor." *The Biblical Repository* 3 (9-12): 247-287.

-----. 1849. "Notes on Biblical Geography." *Bibliotheca Sacra and Theological Review* 6 (22): 366-386.

Robinson, George Livingston. 1930. *The Sarcophagus of an Ancient Civilization: Petra, Edom and the Edomites.* New York: Macmillan Company.

Rocca, Samuel. 2008. *Herod's Judaea: A Mediterranean State in the Classical World.* Tübingen, Germany: Mohr Siebeck.

Ronen, I. 1988. "Formation of Jewish Nationalism Among the Idumaens." Pp. 214-239 in *Jews, Idumaeans, and Ancient Arabs,* by Aryeh Kasher. Tübingen, Germany: J. C. B. Mohr (Paul Siebeck).

Rosen, Steven. 1997. *Lithics After the Stone Age: A Handbook of Stone Tools from the Levant.* Walnut Creek, CA: AltaMira Press.

-----. 1992. "Nomads in Archaeology: A Response to Finkelstein and Perevolotsky. *Bulletin of the American Schools of Oriental Research* 287: 75-85.

Rothenberg, Beno. 1998. "Who were the 'Midianite' copper miners of the Arabah?" Pp. 175, 197-212 in *Metallurgica Antiqua: In Honour of Hans-Gert Bachmann and Robert Maddin* (*Der Anschnitt* 8). Edited by Thilo Rehren, Andreas Hauptmann,

and James D. Muhly. Bochum: Dt. Bergbau-Museum.

Rothenberg, Beno, and Jonathan Glass. 1983. "The Midianite Pottery." Pp. 65-124 in *Midian, Moab and Edom: The History and Archaeology of Late Bronze and Iron Age Jordan and North-West Arabia.* Edited by John F. A. Sawyer and David J. A. Clines. Sheffield: Journal for the Study of the Old Testament Press.

Ruben, Isabell, R. Hugh Barnes, and Ruba Kana'an. 1997. "Mapping and Preliminary Survey in Wadi Faynan South Jordan." *Annual of the Department of Antiquities of Jordan* 41: 433-452.

Sáenz, Candelario. 1991. "Lords of the Waste: Predation, Pastoral Production, and the Process of Stratification Among the Eastern Twaregs." Pp. 100-118 in *Chiefdoms: Power, Economy, and Ideology.* Edited by Timothy Earle. Cambridge: Cambridge University Press.

Saggs, H. W. F. 1955. "The Nimrud Letters, 1952: Part II." *Iraq* 17 (2): 126-160.

Al-Salameen, Zeyad, and Hani Falahat. 2009. "Religious Practices and Beliefs in Wadi Mousa Between the Late 19th and Early 20th Centuries." *Jordan Journal for History and Archaeology* 3 (3): http://journals.ju.edu.jo/JJHA/article/view/815 Accessed 9 July 2011.

Saleh, Mohamed, and Hourig Sourouzian. 1987. *Official Catalogue: The Egyptian Museum.* Mainz, Germany: Verlag Philipp von Zaben.

Santino, Jack. 2006. "Performative Commemoratives: Spontaneous Shrines and the Public Memorialization of Death." Pp. 5-25 in *Spontaneous Shrines and the Public Memorialization of Death.* Edited by Jack Santino. New York: Palgrave Macmillan.

Sauer, James A. 1986. "Transjordan in the Bronze and Iron Ages: A Critique of Glueck's Synthesis." *Bulletin of the American Schools of Oriental Research* 263: 1-26.

Sawyer, John F. A. 1983. "The Meaning of *Barzel* in the Biblical Expressions 'Chariots of Iron', 'Yokes of Iron', Etc." Pp. 129-134 in *Midian, Moab and Edom: The History and Archaeology of Late Bronze and Iron Age Jordan and North-West Arabia.* Edited by John F. A. Sawyer and David J. A. Clines. Sheffield: Journal for the Study of the Old Testament Press.

Saxe, Arthur A. 1970. *Social Dimensions of Mortuary Practices.* Unpublished Ph.D. dissertation, University of Michigan.

-----. 1971. "Social Dimensions of Mortuary Practices in a Mesolithic Population from

Wadi Halfa, Sudan." In *Approaches to the Social Dimensions of Mortuary Practices,* edited by James A. Brown. *American Antiquity* 36 (3): 39-57.

Saxe, Arthur A., and Patricia L. Gall. 1977. "Ecological Determinants of Mortuary Practices: The Temuan of Malaysia." Pp. 74-82 in *Cultura-Ecological Perspectives on Southeast Asia* (Papers in International Studies, Southeast Asia Series No. 41). Edited by William Wood. Athens, OH: Center for International Studies, Ohio University.

Schick, Robert. 1995. *The Christian Communities of Palestine from Byzantine to Islamic Rule: A Historical and Archaeological Study.* Princeton, NJ: Darwin Press.

Schwaller de Lubicz, R. A. 1999. *The Temples of Karnak.* Rochester, VT: InnerTraditions.

Sciama, Lidia D. 2001. "Gender in the Making, Trading and Uses of Beads. An Introductory Essay." Pp. 1-45 in *Beads and Bead Makers: Gender, Material Culture and Meaning.* Edited by Lidia D. Sciama and Joanne B. Eicher. Oxford: Berg.

Schiettecatte, Jérémie. 2010. "The Arabian Iron Age Funerary Stelae and the Issue of Cross-Cultural Contacts." Pp. 191-203 in *Death and Burial in Arabia and Beyond: Multidisciplinary Perspectives* (Society for Arabian Studies Monographs No. 10; BAR International Series 2107). Edited by Lloyd Weeks. Oxford: Archaeopress.

Seiler, Hansjakob. 1970. *Cahuilla Texts with an Introduction* (Language Science Monographs vol. 6). Bloomington, IN: Indiana University Publications.

Sedman, Leonie. 2002. "The Small Finds." Pp. 353-428 in *Busayra: Excavations by Crystal-M. Bennett 1971-1980.* Edited by Piotr Bienkowski. Oxford: Oxford University Press.

Shanks, Michael, and Christopher Tilley. 1982. "Ideology, Symbolic Power and ritual Communication: A Reinterpretation of Neolithic Mortuary Practices." Pp. 129-154 in *Symbolic and Structural Archaeology*. Edited by Ian Hodder. Cambridge: Cambridge University Press.

Singer-Avitz, Lily. 1999. "Beersheba – A Gateway Community in Southern Arabian Long-Distance Trade in the Eighth Century B. C. E." *Tel Aviv* 26 (1): 3-75.

Skorecki, K., S. Selig, S. Blazer, R. Bradman, N. Bradman, P. J. Waburton, M. Ismajiowicz, and M. F. Hammer. 1997. "Y chromosomes of Jewish Priests." *Nature* 385: 32.

Sleen, W. G. N. van der. N.d. [1973]. *A Handbook on Beads.* York, PA: Liberty Cap Books.

Smith, Anthony D. 2004. "Ethnic Cores and Dominant Ethnies." Pp. 17-30 in *Rethinking Ethnicity: Majority Groups and Dominant Minorities.* Edited by Eric P. Kaufmann. London: Routledge.

Smith, Neil G. 2009. *Social Boundaries and State Formation in Ancient Edom: A Comparative Ceramic Approach.* Unpublished Ph.D. dissertation, University of California, San Diego.

-----, and Thomas E. Levy. 2008. "The Iron Age Pottery from Khirbat en-Nahas, Jordan: A Preliminary Study." *Bulletin of the American Schools of Oriental Research* 32: 41-91.

Smith, William. 1875. *Dictionary of Greek and Roman Antiquities.* London: John Murray.

Snape, Steven. 2011. *Ancient Egyptian Tombs: The Culture of Life and Death.* Chichester, U.K.: Wiley-Blackwell.

Snodgrass, Anthony M. 1980. *Archaic Greece: The Age of Experiment.* London: Dent & Sons.

Spronk, Klaas. 1986. *Beatific Afterlife in Ancient Israel and in the Ancient Near East.* Kevelaer: Butzon & Bercker.

Stewart, Frank Henderson. 1986. *Bedouin Boundaries in Central Sinai and the Southern Negev: A Document from the Ahaywat Tribe.* Wiesbaden: Otto Harrassowitz

Stevens, E. S. 1923. *By Tigris and Euphrates.* London: Hurst & Blackett, Ltd.

Stocks, Denys A. 1989. "Ancient Factory Mass-Production Techniques: Indications of Large-Scale Stone Bead Manufacture During the Egyptian New Kingdom Period." *Antiquity* 63: 526-531.

Strange, John. 2008. "The Late Bronze Age." Pp. 281-310 in *Jordan: An Archaeological Reader.* Edited by Russell B. Adams. London: Equinox.

Strong, William Duncan. 1929. "Aboriginal Society in Southern California." *University of California Publications in American Archaeology and Ethnology* 26: 1-358.

Tainter, J. A. 1975. Social Inference and Mortuary Practices: An Experiment in Numerical Classification. *World Archaeology* 7: 1-15.

-----, and R. H. Cordy. 1977. An Archaeological Analysis of Social Ranking and Residence Groups in Prehistoric Hawaii. *World Archaeology* 9: 95-112.

Tappy, Ron. 1995. "Did the Dead Ever Die in Biblical Judah?" *Bulletin of the American Schools for Oriental Research* 298: 59-68.

Thackeray, H. St. J. 1956. *Josephus IV: Jewish Antiquities, Books I-IV* (The Loeb Classical Library). Cambridge: Harvard University Press.

-----. 1961. *Josephus II: The Jewish War, Books I-III* (The Loeb Classical Library). Cambridge: Harvard University Press.

Thomas, M. G., K. Skorecki, H. Ben-Ami, T. Parfitt, N. Bradman, and D. B. Goldstein. 1998. "Origins of Old Testament Priests." *Nature* 394: 138-140.

Tubb, Jonathan N. 1985. "Preliminary Report on the 1985 Season of Excavations at Tell es-Sai'idiyeh, Jordan." *Annual of the Department of Antiquities of Jordan* 29: 131-140, pls. 15-20.

-----. 1986. "Tell Es-Sa'idiyeh 1986: Interim Report of the Second Season of Excavations." *Annual of the Department of Antiquities of Jordan* 30: 115-129.

-----. 1988b. "Tell Es-Sa'idiyeh 1987: Third Season Interim Report." *Annual of the Department of Antiquities of Jordan* 32: 41-58.

-----. 1988b. "Tell Es-Sa'idiyeh: Preliminary Report on the First Three Seasons of Renewed Excavations." *Levant* 20: 23-88.

-----. 1988c. "The Role of the Sea Peoples in the Bronze Industry of Palestine and Transjordan in the Late Bronze-Early Iron Age Transition." Pp. 99-112 in *Bronzeworking Centres of Western Asia, c. 1000-539 B.C.* Edited by J. Curtis. London: British Museum Press.

-----. 1990. "Preliminary Report on the Fourth Season of Excavations at Tell Es-Sa'idiyeh in the Jordan Valley." *Levant* 22: 21-42.

-----. 1995. "An Aegean Presence in Egypto-Canaan." Pp. 136-144 and pl. 9, 25-30 in *Egypt, the Aegean, and the Levant: Interconnections in the Second Millennium BC.* Edited by W. Vivian Davies and Louise Schofield. London: British Museum Press.

Tubb, Jonathan N., and Peter G. Dorrell. 1991. "Tell es-Sa'idiyeh: Interim Report on the Fifth (1990) Season of Excavations." *Levant* 23 67-86.

Tubb, Jonathan N., and Peter G. Dorrell. 1993. "Tell Es-Sa'idiyeh: Interim Report on the Sixth Season of Excavations." *Palestine Exploration Quarterly* 125 (1): 50-74.

Tubb, Jonathan N., and Peter G. Dorrell. 1994. "Tell Es-Sa'idiyeh 1993: Interim Report on the Seventh Season of Excavations." *Palestine Exploration Quarterly* 126 (1): 52-67.

Tubb, Jonathan N., Peter G. Dorrell, and Felicity J. Cobbing. 1996. "Interim Report on the Eighth Season (1995) of Excavations at Tell Es-Sa'idiyeh, Jordan." *Palestine Exploration Quarterly* 128 (1): 16-40.

Tubb, Jonathan N., Peter G. Dorrell, and Felicity J. Cobbing. 1997. "Interim Report on the Ninth Season (1996) of Excavations at Tell Es-Sa'idiyeh, Jordan." *Palestine Exploration Quarterly* 129 (1): 54-77.

Turner, Geoffrey. 1970. "The State Apartments of Late Assyrian Palaces." *Iraq* 32: 177-213.

Twaissi, Saad. 2007. "Nabatean Edom: A Demographic and Archaeological Approach to Modelling Sedentarisation and Regional Dynamics." *Levant* 39: 143-163.

Ussishkin, David. 1993. *The Village of Silwan: The Necropolis from the Period of the Judean Kingdom.* Jerusalem: Israel Exploration Society.

-----. 2007. "The Disappearance of Two Royal Burials." *Biblical Archaeology Review* 33 (6): 68-70.

Van Binsbergen, Wim M. J. 1985. "The Cult of Saints in North-Western Tunisia; An Analysis of Contemporary Pilgrimage Structures." Pp. 199-239 in *Islamic Dilemmas: Reformers, Nationalists and Industrialization: The Southern Shore of the Mediterranean.* Edited by Ernest Gellner. Berlin: Mouton Publishers.

Van der Steen, Evelyn G. 1999. "Survival and Adaptation: Life East of the Jordan in the Transition from the Late Bronze Age ot the Early Iron Age." *Palestine Exploration Quarterly* 131: 176-192.

Vanderhooft, David S. 1995. "The Edomite Dialect and Script: A Review of the Evidence." Pp. 137-157 in *You Shall Not Abhor an Edomite for He is Your Brother: Edom and Seir in History and Tradition.* Edited by Diana Vikander Edelman. Atlanta: Scholar's Press.

Vaux, R. de. 1969. "Téman: Ville ou Region d'Edom?" *Revue Biblique* 76: 380-385.

Ventura, Raphael. 1987. "Four Egyptian Funerary Stelae from Deir el-Balah." *Israel*

Exploration Journal 37 (2-3): 105-115.

Vilímková, Milada. 1969. *Egyptian Jewellery*. London: Paul Hamlyn.

Waldbaum, Jane C. 1980. "The First Archaeological Appearance of Iron and the Transition to the Iron Age." Pp. 69-98 in *The Coming of the Age of Iron.* Edited by Theodore A. Wertime and James D. Muhly. New Haven: Yale University Press.

Ward, William A. 1972. "The Shasu 'Bedouin': Notes on a Recent Publication." *Journal of the Economic and Social History of the Orient* XV (I-II): 35-60.

-----. 1992. "Shasu." Vol. V, pp. 1165-1167 in *Anchor Bible Dictionary*. Edited by David Noel Freedman, Gary A. Herion, David F. Graf, John David Pleins, and Astrid B. Beck. New York: Doubleday.

-----, and M. F. Martin. 1964. "The Balu'a Stele: A New Transcription with Palaeographical and Historical Notes." *Annual of the Department of Antiquities of Jordan* 8-9: 5-29, pl. I-VI.

Weippert, Manfred. 1982. "Remarks on the History of Settlement in Southern Jordan During the Early Iron Age." *Studies in the History and Archaeology of Jordan* 1: 153-162.

-----. 1987. "The Relations of the States East of the Jordan With the Mesopotamian Powers During the First Millennium BC." *Studies in the History and Archaeology of Jordan* 3: 97-105.

Wengrow, D. 1996. "Egyptian Taskmasters and Heavy Burdens: Highland Exploitation and the Collared-Rim Pithos of the Bronze/Iron Age Levant." *Oxford Journal of Archaeology* 15: 307-326.

Whaley, C. Lillian. 1995. *California's Oldest Town.* Edited by June A. Reading. San Diego: Whaley House.

Whiting, Charlotte M. 2007. *Complexity and Diversity in the Late Iron Age Southern Levant: The Investigation of 'Edomite' Archaeology and Scholarly Discourse* (British Archaeological Reports International Series 1672). Oxford: Archaeopress.

-----, S. Alderson, J. A. Fraser, M. Makinson, I. K. McRae, H. Miller, G. Rees, and J. Vivona. 2008. "The First Preliminary Report of the South Jordan Iron Age II Survey and Excavation Project (SJIAP): The 2004, 2005 and 2006 Seasons of Excavation at Khirbat ad-Dabba." *Annual of the Department of Antiquities of Jordan* 52: 255-278.

Williamson, G. A., and E. Mary Smallwood. 1981. *Josephus: The Jewish War.* New York: Penguin Books.

Winlock, H. E. 1934. *The Treasure of El Lahun.* New York: The Metropolitan Museum of Art.

Wolff, Paul. 2002. "Mortuary Practices in the Persian Period of the Levant." *Near Eastern Archaeology* 65 (2): 131-137.

Woreczko, Wadi, and Jan Woreczko. 2010. "The Black Stone in Istanbul?" *Meteorite* 16 (4): 13-16.

Worschech, Udo. "The Burial Ground of ar-Raha al-Mu`arrajah." *Annual of the Department of Antiquities of Jordan* 46: 193-200.

-----. 2003. *A Burial Cave at* Umm Dimis *North of* El-Balu`. Frankfurt am Main: Peter Lang.

-----, U. Rosenthal, and F. Zayadine. 1986. "The Fourth Survey Season in the North-West Ard el-Kerak, and Soundings at Balu` 1986." *Annual of the Department of Antiquities of Jordan* 30: 285-.

Yadine, Yigael. 1975. *Hazor: The Rediscovery of a Great Citadel of the Bible.* New York: Random House.

-----, Yohanan Aharoni, Ruth Amiran, Trude Dothan, Immanuel Dunayevsky, and Jean Perrot. 1958. *Hazor I: An Account of the First Season of Excavations, 1955.* Jerusalem: Magnes Press.

Yassine, Khair. 1975. "Anthropoid Coffins From Raghdan Royal Palace Tomb in Amman." *Annual of the Department of Antiquities of Jordan* 20: 57-68, pls. 21-24.

-----. 1983. "Social-Religious Distinctions in Iron Age Burial Practice in Jordan." Pp. 29-36 in *Midian, Moab and Edom: The History and Archaeology of Late Bronze and Iron Age Jordan and North-West Arabia.* Edited by John F. A. Sawyer and David J. A. Clines. Sheffield: Journal for the Study of the Old Testament Press.

-----. 1984a. *Tell el Mazar I: Cemetery A.* Amman: University of Jordan.

-----. 1984b. "The Open Court Sanctuary of the Iron Age I *Tell el-Mazar* Mound A." *Zeitschrift des Deutschen Palästina-Vereins* 100: 108-118.

Yekutieli, Yuval. 2007. "Bet al-Malahi." Pp. 127-138 in *On the Fringe of Society:*

Archaeological and Ethnoarchaeological Perspectives on Pastoral and Agricultural Societies (BAR International Series 1657). Edited by Benjamin A. Saidel and Eveline J. van der Steen. Oxford: Archaeopress.

Yezerski, Irit. 1999. "Burial-Cave Distribution and the Borders of the Kingdom of Judah Toward the End of the Iron Age." *Tel Aviv* 26 (2): 253-270.

Zeitler, John P. 1992. "'Edomite' Pottery from the Petra Region." Pp. 167-176 in *Early Edom and Moab: The Beginning of the Iron Age in Southern Jordan.* Edited by Piotr Bienkowski. Sheffield: J. R. Collis Publications.

Zevit, Ziony. 1984. "The Khirbet el-Qôm Inscription Mentioning a Goddess." *Bulletin of the American Schools of Oriental Research* 255: 39-47.

Zorn, Jeffrey R. 1993. "Mesopotamian-Style Ceramic 'Bathtub' Coffins from Tell en-Nasbeh." *Tel Aviv* 20 (2): 216-224.

-----. 1997. "More on Mesopotamian Burial Practices in Ancient Israel." *Israel Exploration Journal* 47 (3-4) 214-219.

Zucconi, Laura M. 2007. "From the Wilderness of Zin Alongside Edom: Edomite Territory in the Eastern Negev During the Eight-Sixth Centuries B.C.E." Pp. 241-256 in *Milk and Honey: Essays on Ancient Israel and the Bible in Appreciation of the Judaic Studies Program at the University of California, San Diego.* Edited by Sarah Malena and David Miano. Winona Lake, IN: Eisenbrauns.