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Author
Brown, Kaitlin

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"Becoming *'Amuwu*: Socioeconomic Transformation and Persistence of the Chumash Community at Mission La Purísima Concepción, AD 1813-1848"

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Anthropology

by

Kaitlin M. Brown

Committee in charge

Professor Gregory D. Wilson, Chair

Professor James F. Brooks

Professor Lynn H. Gamble

Dr. John R. Johnson, Adjunct Professor

Professor Stuart T. Smith

September 2021

The dissertation of Kaitlin M. Brown is approved.

James F. Brooks

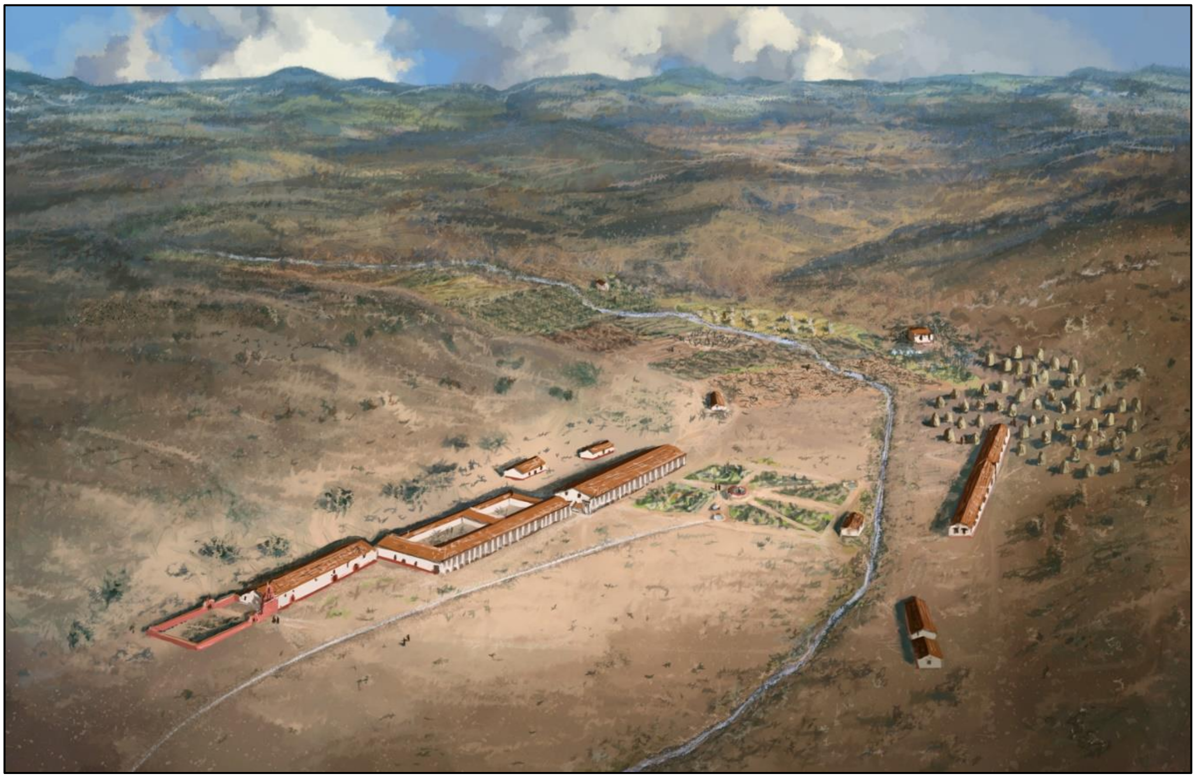
Lynn H. Gamble

John R. Johnson

Stuart T. Smith

Gregory D. Wilson, Chair

September 2021



"Becoming *'Amuwu*: Socioeconomic Transformation and Persistence of the Chumash Community at Mission La Purísima Concepción, AD 1813-1848"

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To Amy, Fred, Wren, and Rory

and the Santa Ynez Band of Chumash Indians

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Kaitlin M. Brown

Curriculum Vitae
September 1st, 2021

EDUCATION

2021 **Doctorate of Philosophy**
University of California, Santa Barbara
Anthropology with an emphasis in Archaeology

Dissertation Title: *Becoming ʼAmuwu: Socioeconomic Transformation and Persistence of the Chumash Community at Mission La Purísima Concepción*, AD 1813-1848

2013 **Master of Arts**
California State University, Los Angeles
Anthropology with an emphasis in Archaeology

2008 **Bachelor of Arts**
University of California, San Diego
Anthropology with an emphasis in Archaeology

PRIMARY RESEARCH INTERESTS

Culture contact/ colonialism/ postcolonialism
Historical archaeology
Socio-politics of archaeology
Identity politics
Indigenous studies
Public history
Archaeological ethics
California and Great Basin

PUBLICATIONS

Refereed Journal Articles

2018 "A Song of Resilience": Exploring Communities of Practice in Chumash Basket Weaving in Southern California. ***Journal of California and Great Basin Anthropology*** 38(2): 143-162. By **Kaitlin M. Brown**, Jan Timbrook, and Dana N. Bardolph.

2018 Crafting Identity: Acquisition, production, use, and recycling of soapstone during the Mission period in Alta California. ***American Antiquity***, 83(2):244-262.

2018 Gender, Race, and Mentorship: A Perspective from California Archaeology. ***Journal of California Archaeology*** 10(2): 131-158.

2018 The UCSB Gender Equity Project: Talking Stock of Mentorship, Equity, and Harassment in California Archaeology through Qualitative Survey Data. ***Journal of California Archaeology*** 10(2): 187-210. By Amber VanDerwarker, **Kaitlin M. Brown**, Toni Gonzalez, Hugh Radde.

2016 Asphaltum (bitumen) production in everyday life on the California Channel Islands. ***Journal of Anthropological Archaeology*** 43:66-76.

2014 Sourcing archaeological asphaltum (bitumen) from the California Channel Islands to submarine seeps. ***Journal of Archaeological Science*** 43:66-76. By **Kaitlin M. Brown**, Jacques Connan, Nicholas W. Poister, René L. Vellanoweth, John Zumberge, Michael H. Engel.

2014 Linking the artifact to the activity: Tarring pebble classification and use of asphaltum on San Nicolas Island, CA. ***Journal of California Archaeology*** 6(1):1-22. By **Kaitlin M. Brown** and René L.Vellanoweth.

Book Chapters

2021 Candelaria Valenzuela and Chumash Basketry: A Case Study Identifying Individual Artists in Native California Basketweaving. *In* ***Putting Theory and Things Together: Working with Museum Collections***, in press.

Book Reviews

2019 Review of Metini Village: An Archaeological Study of Sustained Colonialism in Northern California by Kent G. Lightfoot and Sara L. Gonzalez, Berkeley, Contributions of the Archaeological Research Facility, University of California, 2018, No. 69, xvi + 199 pp. ***Journal for California Archaeology***, 11(2):271-273.

Other Publications

2021 Subsistence and Economic Activities of the Chumash Community *'Amuwu* at Mission La Purísima Concepción. ***Boletín: The Journal of the California Missions Foundations Foundation*** 37(1):100-115. By **Kaitlin M. Brown**, Brian J . Barbier, Griffin F ox, Itzamara Ixta, Gina Mosqueda-Lucas, Brianna Rotella, Lindsey Willoughby

2020 Hidden in Plain Site: Archaeology Reveals Daily Life of the Chumash Community at Mission La Purísima Concepción. ***The Artifact, San Lois Obispo Archaeological Society***, 55(11-12):2-3.

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2010 Unearthing a history that Unites Los Angeles. ***San Diego Archaeological Society Newsletter*** September/ October 2010:9-10.

GRANTS (abbreviated)

2020 National Science Foundation Doctoral Dissertation Improvement Grant (DDIG).
Award # 2003428

2019 Critical Mission Studies UC Graduate Student Fellowship
Critical Mission Studies, University of California San Diego

2018 Humanities and Social Science Research Grant
University of California, Santa Barbara Graduate Division

AWARDS (abbreviated)

2020 Fagan Fund for Public Archaeology
University of California, Santa Barbara

2019 Charles E. Rozaire Award for Student Research in California Archaeology
Society for California Archaeology

CONFERENCE ACTIVITY/ PARTICIPATION (abbreviated)

Invited Talks

2021 ‘*Amuwu*: Uncovering the Chumash Community at Mission La Purisima Concepcion. Paper presented for the Santa Barbara Trust for Historic Preservation, August, 12, 2021.

2019 Gender, Community, and Identity in Chumash Basketweaving. Paper presented at the 53rd Society for California Archaeology Annual Meeting Plenary Session, Sacramento.

Conferences/ Symposia Organized

2021 Uncovering the Indigenous Past at Mission La Purísima Concepción
Organized for the 55th Society for California Archaeology Annual Meeting; online event.

2020 Uncovering the Indigenous Past at Mission La Purísima Concepción
University of California, Santa Barbara, public event

2017 Basketweaving: A Community Collaborative Event
Organized in collaboration with the UCSB Interdisciplinary Humanities Center (IHC) “Community Matters” series.

Papers Presented

2021 An Overview of Archaeological Investigations at Mission La Purisima Concepcion State Historic Park. Paper presented at the 55th Society for California Archaeology Annual Meeting, online event.

2020 Results of Archaeological Investigations at Mission La Purisima State Historic Park. Presented to the Elders Council of the Santa Ynez Band of Chumash Indians, online, November 19, 2020

ABSTRACT

"Becoming *'Amuwu*: Socioeconomic Transformation and Persistence of the Chumash Community at Mission La Purísima Concepción, AD 1813-1848"

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In 1963/64, James Deetz led a team in the excavation of the Chumash Family Apartments at Mission La Purísima Concepción. He suggested that the individuals who lived there had lost traditional lifeways by demonstrating more enculturation into the mission system than what was observed in the outlying Chumash village of *Soxtonokmu'*. In the last few decades, recent research has demonstrated the inherent problems with acculturation frameworks. As opposed to top-down processes of cultural domination over passive groups, scholars investigating colonial encounters demonstrate how indigenous peoples were active agents in constructing and negotiating their daily lives, communities, and futures both inside and outside of colonial institutions. Within this most recent realm of scholarship, there are two distinct approaches to understanding the social constructs of identity: "continuity" and "transformation." Continuity focuses on the ways local peoples navigated colonialism on their own terms. While change is inevitable in culture contact situations, researchers taking this approach illustrate how practices that involve alteration are rearticulated through indigenous meanings and values. Transformation investigates broad-scale social and

economic change initiated through community notions of identity construction and maintenance. It focuses on the creation of entirely new social entities. The philosophical trajectories from these two schools of thought help frame an updated interpretation of archaeological assemblages at Mission La Purísima Concepción and the Native community that lived there referred to as *'Amuwu*.

This dissertation conducts both horizontal and diachronic analyses to track change and continuity through time and across space. It draws on multiple lines of evidence to demonstrate a richly complex understanding of Native life entangled with broader colonial structures and linked to a deeper ancestral past. Using a fine-grained analysis of museum collections integrated with recent field work, the archaeological record reveals how the community of *'Amuwu* maintained connections to ancestral locations on the landscape and with hinterland communities. However, the distinguishable patterns identified in the mission suggests a cultural transformation occurred as well. Compared to other Chumash villages occupied during the Historic period in the Santa Ynez Valley and Purisemeño territory, and more broadly across the Chumash homeland, the material signature left behind by individuals at *'Amuwu* speaks to a reorganizational strategy linked to both Spanish and Mexican colonialism. Distinct chronological and spatial contexts within the Native rancheria at the mission exemplify how the community re-organized, transformed, and evolved in tandem with broader colonial structures.

The results lend important insight into arguments for and limitations of schools of continuity and transformation, specifically as it relates to Native-lived experiences in the mission and the effects of sustained face-to-face interactions following relocation programs and broader colonial policies. Rather, these studies and their theoretical trajectories can inform one another. A serious consideration of indigenous experiences in the mission system demands a thorough investigation of archaeological data considering broad-scale community-level change under colonialism and the distinct ways indigenous groups found ways to persevere. What emerges is a multi-scalar understanding of identity in this historical and situational context. The becoming of *'Amuwu* was tied to the creation of new identities linked to the construction of a new place in a colonial setting nestled within a long history of internal understandings of cultural knowledge and community. From here, we have a better grasp on identity issues in mission contexts in California that can help move forward conversations of transformation and persistence, which continue to reverberate in the present day.

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I. ARCHAEOLOGIES OF COLONIALISM: CONTINUITY AND TRANSFORMATION

On the afternoon of February 22nd, 1824, Mission La Purísima Concepción took center stage in the uprising known as the Chumash Revolt. The Chumash forcibly removed soldiers from the mission and released one priest in residence. They had burned down part of the complex at Mission Santa Inés and had disarmed soldiers at Mission Santa Bárbara. For about a month, they had occupied Mission La Purísima by erecting wooden palisades and arming themselves with muskets. This all came to a dramatic end on March 16th. Mexican soldiers attacked the mission, forcing the hundreds of Chumash defenders who had barricaded themselves inside to surrender. On the surface, the Chumash Revolt signifies growing discontent between colonial settlers and local Native groups. But underneath, the events that transpired highlight a complex web of interlocking colonial histories and narratives that began with the first incursion of Spanish settlers in the Chumash homeland. The Spanish mission system had significantly impacted the everyday lifeways and systems of social organization among the autonomous indigenous groups throughout California. Native peoples who formed new communities in the mission became deeply entangled with colonial structures that evolved over time and under waves of Spanish, Mexican, and American colonialism. Simultaneously, Chumash groups had maintained a level of social and economic autonomy, using their own social meanings and cultural understandings to navigate new colonial conditions. This dissertation investigates both transformation and persistence at Mission La Purísima Concepción that led up to the Chumash Revolt and after. It examines the everyday practices of the Chumash who formed the community of *’Amuwu* in the early nineteenth century.

In the past, the leading framework of culture contact studies emphasized macro-scale assimilation processes through which a passive culture is absorbed by a more dominant partner (Cusick 1998; Deagan 1998; Lightfoot and Martinez 1995). Local groups were perceived as static entities who succumbed to colonial incursions. However, theoretical advancements that consider agency and practice have reframed outdated assimilative models. Today, scholars consider the multiple dimensions and outcomes of colonialism from both bottom-up and top-down processes (e.g., Beaule and Douglass 2020; Dietler 2010; Ferris et al. 2014; Jordan 2009; Lightfoot 2005; Lyons and Papadopoulos 2002; Panich 2013; Robinson 2013; Silliman 2004, 2009; Stein 2005; Voss 2008). Within this more recent wave of scholarship, case studies from around the world include perspectives from both the *colonized* and the *colonizer*. A commonality they share is the attention to the complex and varied experiences among individuals and communities without the underlying assumption of unidirectional, irreversible change.

Identity issues have never been far from contemporary approaches to colonialism. However, the widespread use of identity in anthropological scholarship has led to ambiguous meanings and interpretations (Brubaker and Cooper 2000; Insoll 2004). Indeed, identity is a paradoxical concept (Gardner 2011). It has been described as both fixed and fluid, related to the individual and society, ascribed or cast out of free will, and rooted in the past but also looking ahead to the future (Díaz-Andreu and Lucy 2005; Gardner 2007; Hodos 2010; Smith 2014; Voss 2008). Theoretical applications used in conjecture with theories of practice (Bourdieu 1977 and Giddens 1984) assuage some of the dilemmas inherent in identity issues (e.g., Barrett 2001; Gardner 2007; Jones 1997; Smith 2014). Practice-based approaches investigate the constantly evolving dialectic between agency and structure. It positions individuals as the locus for making the processes that create and recreate society. Such constructivist methods overcome essentialist notions of identity as homogenous or unchanging. They highlight the active ways people create the world around them without denying the possibility for change and innovation.

Within the context of colonialism, approaches to identity have diverged into two schools of thought. I divide them into archaeologies of "continuity" and "transformation." In studies of continuity, I group issues of survivance (Vizenor 2008), persistence (Panich 2013, 2020), residence (Silliman 2014), and even postcolonial applications of hybridity (Silliman 2015; Stockhammer 2012; Liebmann 2015), among others, e.g., resiliency (Bornemann and Gamble 2018), endurance (Liebmann and Murphy 2011), resistance (Bernard 2008). Although these diverse approaches are applied somewhat differently among the individual scholars that use them, they emphasize how local groups maintained threads of continuity by using their own cultural systems to navigate new social conditions. Under the banner of transformation, I include ethnogenesis (Voss 2008, 2015), transculturation (Deagan 1998, Ortiz 1995), creolization (Dawdy 2000), and *mestizaje* (Deagan 1974). Common among them is highlighting processes of change, replacing old practices with new ones, and forming entirely new social entities.

After describing these two perspectives below, I follow with a section on the philosophical differences between them, specifically as they relate to (1) spatial and temporal boundaries, (2) practice versus process/ agency versus structure, and (3) the focus on the *colonizer* or *colonized* side of the equation. I then outline the goals of this study. The chapters that follow employ diachronic and spatial analyses to illustrate socioeconomic transformation and persistence at the nineteenth-century Chumash village of *ʼAmuwu*, located at Mission La

Purísima Concepción, Lompoc, CA. I argue an association between the formation of new indigenous identities and distinct sets of social practices entangled with broader colonial systems and shared residential space at the mission. Nonetheless, continuity is all-pervading. The Chumash at *ʼAmuwu* preserved long-established practices and maintained deeply connected social relationships that extended beyond the mission walls into the broader hinterlands. These results significantly impact colonial studies today by providing a dedicated multi-scalar investigation that tacks back and forth between issues of new identity formation and the carrying over of older practices. Moreover, the results appertain to the Chumash today, who continue to sustain connections to the ancestral landscape and the communities of their ancestors.

CULTURAL CONTINUITY

A significant and growing contribution to archaeologies of colonialism is the investigation of indigenous continuity (Ferris 2009; Law Pezzarossi and Sheptak 2019; Lightfoot and Gonzalez 2018ab; Silliman 2009; Panich 2013, 2020; Schneider 2015; Vizenor 2008). Rather than viewing change and continuity as dichotomous, this realm of scholarship uses innovative ways to establish how they are two sides to the same process. These studies decenter the precolonial/colonial divide and consider long-term, diachronic perspectives. For example, Panich (2013:107) defines archaeologies of persistence as a field of study that "acknowledges the physical and symbolic violence of colonialism but also allows for a continuum of process that encapsulates various forms of perseverance persistence…that can accommodate change— indeed, it may often require it." In this way, indigenous peoples are active agents that use their own systems of meanings to preserve their identities under new social and material conditions.

The study of continuity in the archaeological record has carried over into other frameworks utilized in recent approaches to colonialism: community formation, the ways people *sustained colonialism* over time, and meaningful places in the social landscape, i.e., place-making. For instance, Hull and Douglass (2018:11-12) use persistence as a framework to explore the strategies and the circumstances surrounding community formation in colonial Alta, California. They explain that the concept of community has no spatial or temporal constraints. Instead, a commonality among communities is a shared sense of belonging (Hull and Douglass 2018:9). Lightfoot and Gonzalez (2018a) examine how Native communities *sustained colonialism* during the Spanish, Mexican, and American periods. Using a diachronic perspective, they find how new traditions are rearticulated in indigenous ways that change but are nonetheless internally structured to persist (Lightfoot and Gonzalez 2018b). Beaule and Douglass (2020) note that persistence studies are valuable in understanding meaningful places in the landscape. The authors explain that place-making is about physical and geographic locations and the social spaces where people made strategic choices in adapting to evolving colonial worlds (Beaule and Douglass 2020:4-6).

These studies lend salience to the survival of indigenous groups today and make archaeology more relevant to descendant communities who continue to feel the residual effects of these significant shifts in history (Brooks 2018; Panich and Schneider 2014:49; Schneider 2019). Indeed, the array of Native identities visible in California and across North America result from indigenous agency and persistence over time (Panich 2020). Vizenor's (2008) notion of survivance further brings empowerment in the security of indigenous futurities. Survivance is "an active sense of presence over absence, deracination, and oblivion…Survivance stories are renunciations of dominance, detractions, obstructions, the unbearable sentiments of tragedy, and the legacy of victimry" (Vizenor 2008:1). The act of survivance disputes the static notion of Native authenticity by rearticulating our understanding of indigeneity (Law Pezzarossi and Sheptak 2019). Its application can further our understanding of how indigenous peoples moved beyond survival and culturally prosper (Acebo and Martinez 2018).

SOCIAL TRANSFORMATION

Scholars have provided various interpretive frameworks to investigate the formation of entirely new identities in colonial contexts. One of the first to contribute to this body of work was Cuban anthropologist Fernando Ortiz. Ortiz (1995 [1940]: 102-103) described the varied phenomenon in Cuba through the notion of transculturation—a process that involves the loss or uprooting of an older culture and the creation of a new cultural entity. Throughout Cuba's multicultural history, he found that social groups who came to the island began making new cultural traditions that overshadow previous historical practices. His primary thesis is that transculturation processes create something entirely new, original, and independent in culture contact situations.

Ortiz's study influenced the work of Kathleen Deagan (1974, 1998). Like other studies following the quincentennial—the 500th anniversary of Columbus's arrival into the Americas—she stressed the multidirectional inputs of how new cultural forms emerged in Early Spanish-America. Deagan (1974) examined culture change through the processes of *mestizaje*. She found a distinct *mestizo* population did not occur until settlers began to identify with each other rather than with a parental group. The idea of identity as relational, as opposed to it resulting from connections with longer lineages, carries over into ethnogenesis—the study of emerging new ethnicities. Barbara Voss's (2005, 2008) investigation at El Presidio de San Francisco illustrates the process of ethnogenesis in the construction of a new *Californio* identity among Spanish soldiers (see also Mason 1998). Military settlers who lived at the Presidio were engaged in creating a new shared social identity distinct from an ancestral population. At the same time, they were actively distinguishing themselves from local indigenous groups.

Not all identity transformations are related to ethnicity (Hu 2013; Emberling 1997:304-306; Voss 2015). Identity includes many different axes of social differentiation, such as status, race, ethnicity, gender, and age. These elements can crosscut and overlap with some categories of social difference prevailing over others in specific contexts. For example, Díaz-Andreu and Lucy (2005:1) define identity as an "individuals' identification with broader groups on the basis of differences socially sanctioned as significant." In this context, it is possible to detect the ways social groups created distinct and *real* social spaces that contrast from others. Thus, archaeologists studying emerging new identities are at a particular advantage to detect variations in the material record.

THREE DISTINCTIONS IN ARCHAEOLOGIES OF CONTINUITY AND TRANSFORMATION

I identify three main distinctions that set the archaeology of cultural transformation and persistence apart. These include (1) spatial and temporal boundaries, (2) an emphasis on practices versus processes, agency, and structure, (3) and the study of the colonizer versus the colonized side of the equation. While these three distinctions are overlapping, I point out some of their main differences below.

Spatial and Temporal Boundaries

With an emphasis on social relations, cultural transformation studies emphasize sustained face-to-face interaction in developing new, shared cultural identities. This school of thought argues that local interactions primarily shape a group's shared goals and obligations that reinforce a bond between people through collective action. Self-identification within a group involves constructing and maintaining boundaries, both real and assumed (Barth 1969; Jones 1997:47). Indeed, scholars have argued that group identification and boundary maintenance intensify in areas with competing interests for space, resources, and power (Barth 1969; McGuire 1982). Thus, cultural transformation studies emphasize spatially and temporally distinct interaction spheres that characterize colonial expansion, such as inside settler communities (e.g., Deagan 1996; Voss 2005).

The focus on cooperative interaction and shared cultural practices draws on Bourdieu's (1977, 1984) construct of *habitus*. Everyday discursive practices brought about by conscious or unconscious repetitive acts shape, and are shaped by, the structures created from their existence (Postone et al. 1993). As a result, there are patterns of interaction that form boundaries sustained and reinforced between groups (Brubaker 2009; Insoll 2007; Jones 1997). This creates spatial and temporal patterns in artifact assemblages (e.g., Dietler and Herbich 1998; Dobres and Hoffman 1994; Dobres and Rob 2005). Archaeologists investigating style and groupness have found Bourdieu's notation of *habitus* particularly useful (Carr 1995; Hegmon 1992; Sackett 1990; Wiessner 1983; Wobst 1977).

However, studies emphasizing continuities define membership within an unbounded space and time continuum. Face-to-face, daily interactions of group membership are not necessary. Hull (2015:227) describes this type of shared identity as sustainability—or the maintenance of unbroken sets of beliefs that are the essence of a living community, despite needing continuous interaction. The focus on asynchronous relationships follows Anderson's (1983:6) concept of "imagined community," the idea that social group members will never know their fellow members. Communities are emically defined as having “imagined” and essential characteristics. They are constructed in dynamic, conditional, and conflicting ways (Isbell 2000).

Studies of persistence question the traditional notion of group boundaries, thus expanding archaeological understanding of landscape (Panich and Schneider 2015; Schneider et al. 2020). They highlight the problem with core-periphery relationships by showing the cross-cutting social and economic ties between frontiers and homelands (Lightfoot and Martinez 1995). For example, lithics, shell beads, and local foodstuffs found in the mission link the indigenous communities to the broader ancestral landscape (Allen 2010; Panich and Schneider 2014, 2015). The networks extend beyond acquiring necessary resources and reflect maintained connections with people based on kinship, ethnicity, language class, or political affiliations (Lightfoot 2014:214-215). These studies also point out the spaces in-between—the "interspaces" or "interior worlds"—that intersect indigenous and colonial boundaries (Panich and Schneider 2015).

Practice and Process/Agency and Structure

There are differences in the investigation and conceptual use of practices emphasizing agency versus distinctive processes underscoring structural conditions. While practice is a repetition of an activity, a process is a series of events that produce something much bigger than the practices that make it—like a cultural phenomenon or new social entity.

As a direct rejection of acculturative models, studies of continuity recovered the role of individual efficacy by emphasizing the decisions and actions people pursue. Long-term genealogies of seemingly mundane acts can establish the meaning, motivations, choices, and desires of individual agents and entire communities (Dobres and Robb 2005; Dornan 2002; Lemomnier 1986, 1992, 2012; Pauketat and Alt 2005; Robb 2010; Wilson 2008). For example, in persistence studies, practice is constructed through a shared sense of community and identity drawn from existing cultural values (Panich 2013:108-109). Practice can also be informed through embodied and collective memory, serving as a vital link between remembrance and history (Silliman 2009). Structure plays a limited role in how identities are formed and/or a broad role with limited, defined social categories. These notions of structure relate to the somewhat pragmatic, phenomenological, and agency-centric way identity is explained in schools of continuity (see also Gardner 2007:35-61).

However, concepts under the banner of transformation emphasize new social processes resulting from different fields of practice over time and through space. The collective expressions and shared traits that result from distinct social and cultural demands are a part of changing social structures that affect individual and community notions of identity (Dietler and Herbich 1998; Voss 2008). Bourdieu's notion of *habitus* relates with this notion in transformation studies. *Habitus* is not a broad social category. Instead, individuals construct it vis-à-vis local and neighboring community members, but it grows more distinct as one moves further away (Smith 2014:3). Just as everyday acts change over time, the performances that drive these acts—within and through *habitus*—are transforming as well. These transformations can reassert and reinforce an individual's self-identity at the local level and contribute to developing shared social identities more broadly (Hodos 2010:15-19).

Thus, the focus on broader processes provides an organizing principle to understand how social identities emerged, transformed, and evolved in particular contextual situations.

The “Colonized” or the “Colonizer”

Tracing long-term changes and continuities in practice is more applicable when studying a group regionally situated for thousands of years. This approach mainly stems from scholars interested in blurring the lines of "prehistory" and "history" (e.g., Lightfoot 1995; Law Pezzarossi 2019; Silliman 2005). These studies are crucial given the significance of results and political issues that affect indigenous communities today (Silliman 2020). Indeed, archaeologists once claimed that there was significant cultural loss during the colonial period, which perpetuates the idea of the “vanished Indian.” Continuity approaches contribute to an ongoing history that puts the power back in the hands of the local communities.

A few researchers focused on the "colonized" have discussed indigenous identity transformation within California's missions. For example, Sarah Peelo’s (2011) study of plainware at Mission San Antonio de Padua recognized new practices and shared behaviors within a defined ‘community of practice’ among potters. Peelo explains that the many autonomous tribelets who formed a new community at the mission modified their cultural identity, which is observable along gendered and class divisions. Lightfoot (2005) also examines differences in the Native-lived experience from two different colonial systems that produced divergent trajectories of Native groups. Unlike the Russian/Alaskan mercantile system, pluralistic Native communities formed into one mission town and created new social, organizational strategies. Despite the restraints imposed during the Mission period, indigenous notions of identity were perpetuated in the mission setting.

In studies of transformation, scholars concentrate more on diasporic and settler communities. In these cases, there is uprooting from a place of origin to a new location, essentially making it more applicable to study synchronic structures and temporally defined spaces. However, Cipolla's (2013) pioneering case study of Brothertown Indians provides an excellent case study of Native ethnogenesis. Using texts, grave markers, and material culture, he interprets how individuals left their communities to reinvent themselves and take on new ethnic identities. This is one of the few studies that highlight ethnogenesis from the perspective of Native experiences. It sheds light on why Brothertown Indians, and other Native Americans today, have a hard time claiming federal recognition.

RESEARCH OBJECTIVES

What can future research contribute to schools of continuity and transformation, and why is it a worthwhile endeavor? The answer to this question demands a multi-scalar methodology to gain a complete picture of colonialism at the local level. Indeed, an essential requirement for a serious archaeological contribution to the broader comparative study of colonialism is the ability to deal with local practice, agency, and broader colonial structures (e.g., Dietler 2010; Jordan 2008; Stein 2005). Engaging with approaches that tack back and forth between these two schools of thought and their distinctions can gauge the varied Native-lived experiences under colonialism worldwide.

This study focuses specifically on *ʼAmuwu* —the Native village at Mission La Purísima Concepción (Appelgate 1975). I use inter- and intra- spatial modes of analysis to investigate the community's evolution over time and situate their practices within broader regional patterns. I compare archaeological data from *ʼAmuwu* to outlying Chumash villages occupied during the pre-Mission and Mission period. Chronological features discovered by James

Deetz in 1963/64 further allow for a diachronic analysis of continuity and transformation over time. The dataset consists of both local and non-local artifacts and ecofacts. I consider two main questions: (1) if and how the community of *'Amuwu* persisted through diachronic and spatial comparisons; (2) if and how the community of *'Amuwu* transformed by considering the evidence for an emergent new social identity. By addressing these two questions, a nuanced understanding of *'Amuwu'*s social organization emerges. Class and gender serve in different fields of division under a broader re-organizational strategy at the community level. Moreover, it is possible to ascertain community evolution in conjuncture with shifting colonial systems under Spanish and Mexican governmental strategies.

Researchers directing investigations in California's missions and presidios have been leading examples of continuity and transformation studies. Their contributions are crucial to updated research at Mission La Purísima Concepción. Previous investigations at the mission have suggested that the Chumash suffered significant culture loss (e.g., Deetz 1963). However, recent archaeological excavations, and a re-examination of Deetz's 1963/64 artifact assemblages, can reassess this outdated interpretation. This is especially significant because the Chumash are an active presence today. The Santa Ynez Band of Chumash Indians reservation, only 15 miles from the Mission, reminds us of their continued survival throughout the onslaught of Spanish, Mexican, and American colonialism. Many community members are descendants of relatives who lived at *'Amuwu*, making this study a significant part of their cultural history.

II. MISSIONIZATION, THE CHUMASH, AND *’AMUWU*

This chapter covers the implementation of the mission system in California. It begins by reviewing the history of missionization and its impact on local groups. I then focus on Chumash experiences before, during, and after the Mission period. The chapter concludes with historical background on Mission La Purísima Concepción and the Chumash individuals that resided at the village of *’Amuwu*.

NATIVE CALIFORNIANS AND THE MISSION SYSTEM

California was home to one of the most linguistically diverse populations worldwide (Golla 2011). Its defining feature is not so much the vast linguistic diversity as it was the socio-political organization. Language and social grouping were independent of one another, meaning that Native Californians did not necessarily speak the same language within the same culture group, e.g., Chumash. Early anthropologists noted this phenomenon and other social, organizational characteristics within the area, referring to the hundreds of autonomous territories as "tribelets" (Kroeber 1962). Comprised of a few hundred individuals that made up small corporate groups, tribelets were the backbone of California Native economies and political lifeways (Bettinger 2015). For thousands of years, they had developed their own historical, cultural, and independent trajectories before the arrival of colonizing social systems.

In the sixteenth century, the once secluded California coastline began experiencing the effects of the expanding trans-Pacific trade system. The years between AD 1542 and 1769—the latter date is the arrival of Portola's land expedition—saw many mariners involved in the Manila galleon trade. They would make infrequent stops within California’s harbors and bays to repair their boats, obtain wood, and trade with Native communities. Yet, they rarely documented the population, language, and social organization of local groups during these brief encounters (Brown 2001; Johnson 2011). These sporadic and geographically limited contacts did not have long-lasting impacts on local groups (Lightfoot and Simmons 1998; see also Silliman 2005). It was not until the establishment of the mission system when significant change drastically altered the cultural and political landscape.

European settlement on the California coast (Las Californias) began in Baja, California, in Loreto, near the Sea of Cortez in AD 1697. For the next 70 years, the Jesuits established 17 more missions up the peninsula to Alta, California, before being expelled. The Franciscan order oversaw the next series of twenty-one missions between AD 1769 and 1823, spanning from San Diego to San Francisco. The Franciscan mission system intended to curtail the advancement of the Russian/Alaskan colonial system from the north and to convert local groups into loyal Spanish citizens through relocation programs, religious indoctrination, and labor practices (Haas 1995, 2014; Hackel 2005; Hoover 1989; Milliken 1995; Lightfoot 2005).

One major change brought about by Spanish missionization was the employment of relocation programs that brought peoples from various communities who spoke multiple languages into a single town under one colonial jurisdiction. However, this strategy was not implemented in Southern California (San Diego area), where Native peoples could stay in their home villages. However, to the north, many strategies were employed to move Native populations into the mission. Franciscans deliberately sought out local chiefs to join the missions. They also implemented policies such as *reduccion* that reduced Native lands by bringing people into urban settlements. However, not everyone came to the mission, and not everyone stayed. Some avoided the mission by fleeing to interior communities and offshore islands (Bernard and Robinson 2018; Johnson 2018; Phillips 2004). Others deliberately left the mission to make commemorative trips to former village sites and seek places of refuge (Schneider 2015). These places provided safety and allowed for more indigenous autonomy (Schneider and Panich 2018, 2019). Some Native communities also stayed in their traditional homeland villages throughout the nineteenth century and beyond (Panich et al. 2020, Reddy 2015; Reddy and Douglass 2018; Ruby and Whitaker 2019). Native peoples outside the mission also took on the role of *vaqueros*, while still maintaining their traditional ancestral identities (see Gamble 2001, 2015; Panich 2017)

In the Middle Mission Period (AD 1805-1821), more Native labor was invested into technology and supplying surplus outside the mission, rather than recruiting and converting local groups (Costello and Hornbeck 1989). There was a sharp decline in population growth due to disease. Just before AD 1805 (between AD 1800-1805), introduced diseases such as syphilis led to many deaths (Milliken 1995: 172-176). At the same time, the missions had lost Spain's financial support during the Mexican Revolution. There was more outside demand on mission laborers for both agricultural and manufactured products. Duggan (2016) explains that mission residents were treated worse after the Mexican Revolution (AD 1813), receiving less clothing, tools, and resources necessary for other daily activities. This is why conflict between military and Mission residents increased after AD 1810 (Duggan 2016:24).

In the third and final phase of the Mission period (AD 1821-1832), there was an increase in opportunities for mission laborers due to the growth of the hide and tallow industry (Greenwood 1989). Mexico's independence from Spain also brought about legal foreign trade and new social policies. For example, the "Plan of Iguala" considered Native Americans living under Mexico to be *nuevos ciudadanos* (new citizens)—a phrase frequently encountered in historical texts after AD 1821 (Farris and Johnson 1999). Under this new Mexican doctrine, indigenous peoples were seen as social equals. They could apply for employment, housing, or even land ownership. Archaeologically, less restrictive assemblages are in contexts associated with this last phase in Mission history compared to the earlier Spanish period (Farnsworth 1992, Panich et al. 2018)

By AD 1833, the missions had managed vast amounts of land, controlled large herds of livestock, and had produced a well-established labor force. But with the onset of Mexican Independence, growing liberal political pressure, and global sea change, the missions became secularized. Under these terms, mission-owned lands were redistributed to private citizens and military control. Following these profound changes, Native peoples virtually disappeared from the documentary record (Costello and Hornbeck 1989:319). However, archaeological evidence has revealed much about Native lifeways at this significantly overlooked time in history (Greenwood 1989; Silliman 2004). Many former mission residents were a good labor source. They had found work at ranchos as ranch hands, farmworkers, and domestic laborers (Johnson 1993; Phillips 2010). Others joined growing urban centers, made cases for independent land grants, or moved to autonomous Indigenous settlements outside the purview of Spanish and Mexican settlements (Panich 2019:132).

THE CHUMASH BEFORE, DURING, AND AFTER MISSIONIZATION

Traditionally, the Chumash occupied lands in south-central California, spanning from modern-day San Louis Obispo County down to Los Angeles County. They also inhabited the Northern Channel Islands: Santa Cruz Island, Santa Rosa Island, San Miguel Island, and Santa Barbara Island (Figure 2.1). Chumashan languages are among the oldest language families in California (Golla 2011). DNA evidence further points to a long-established, *in* *situ* historical development beginning as early as 8,000 years ago (Johnson and Lorenz 2006). Although unified under one main language stock, ethnohistoric accounts point to six distinct Chumashan language groups: Obispeño, Purisimeño, Ineseño, Barbareño, Ventureño, Cruzeño.

The Chumash were organized into autonomous territories regionally connected by a complex and extensive trade network. Numerous items (furs, baskets, stone tools, seeds and nuts, asphaltum, etc.) were traded from the islands to the coast, interior valleys, and other areas beyond the Chumash territory (Armstrong 2011; Davis 1963; Fauvelle and Perry 2019; Smith and Fauvelle 2015; King 1976). A cornerstone of the Chumash trading economy was the production and consumption of Olivella shell money beads. These beads were a form of currency among the Chumash at least as early as 2,000 BP (Gamble 2020a). By the Late Period, Chumash craft specialists produced shell money beads in large quantities (Arnold 1987; Arnold and Munns 1994). They served as social markers that distinguished the wealthy from the poor (Gamble 2008:55). Chiefs and other elites, who had access to wealth in the form of bead money, reinforced their social status in Chumash communities, arguably controlling the entire economic system (C. King 1990; L. King 1982; Gamble 2008).

Cabrillo was the first recorded Spanish explorer that made contact in the region. Records indicate a series of attacks during one of his visits to the Channel Islands, which later led to his death in AD 1543 (Johnson 2011). This point onward saw many other visits from mariners involved in the Manila galleon trade. Still, only a few brief narratives of local encounters were recorded. This changed as the Franciscans made their way up the coastline. The first mission in Chumash territory was not in the south but rather in the north—Mission San Luis Obispo (AD 1772). The construction of four other missions to the south came after:

Figure 2.1. Map of Chumash region.

Note that the northern extension of the Chumash boundary is after Milliken and Johnson (2005).

Mission San Buenaventura (AD 1777), Mission Santa Bárbara (AD 1786), Mission La Purísima Vieja (AD 1787), Mission Santa Inés (AD 1804), and Mission La Purísima Concepción (AD 1813). The first individuals baptized in the mission resided in nearby villages. Only a handful of men and women came from the Channel Islands in the early years. Most islanders arrived later in AD 1815-1816. Those living in the interior valleys, e.g., Cuyama Valley, were among the last communities to come to the mission (Johnson 2018:134).

It was not until AD 1803 that the missions saw an influx of nearly 1200 Chumash individuals (Johnson 1989:369). The Viceroy of New Spain ruled that local peoples could no longer live in their Native villages and therefore must permanently move to the missions (Sandos 1991:90). Soon after, death rates spiked resulting from close residential proximity and introduced diseases (Johnson 1989:371-373). Small populations did stay within their ancestral villages and found work at affiliated ranchos (King 2011:23-38). Between AD 1815 and 1816, the missions recorded another peak in baptisms, and that too was followed by an increase in mortality rates in AD 1823. The latter group that came to the mission represents a massive exodus of islanders to the mainland, which may have been encouraged by economic motives, depletion of resources, and collapsing exchange systems (Johnson 1982:77). Individuals living in the Cuyama Valley were also actively incorporated into the mission system from about AD 1811-1815 (Johnson 2018:141-145). This period in time saw increased fugitism. Individuals found refuge among neighboring groups such as the Yokuts and in the San Joaquin Valley.

While ethnographic and historical records point to the abandonment of nearly all Chumash towns in the early part of the nineteenth century, archaeological evidence suggests otherwise. Some individuals stayed behind and/or made commemorative trips back to their ancestral villages. Coastal and interior villages have numerous glass beads and historic shell beads. While glass beads cannot be dated to a specific timeframe in the Mission period based on color alone (but see Dadiego et al. 2020), historic shell beads offer more insight. For example, Bennyhoff and Hughes (1987) note that H1b "Semi-ground Disk," "H2 "Rough Disk," and H3 "Chipped Disk" beads were manufactured in the early and mid-nineteenth century. These beads date between AD 1800-1816, AD 1816-1834, and after AD 1834

(Gibson 1976, King 1974). They have been found in the greater Santa Ynez Valley and San Emigdio Canyon, the northern Channel Islands, and other neighboring territories (e.g., Armstrong 2006; Bernard 2008; Kennett et al. 2000; Martz 2008; McRae 1999). Gamble and Zepeda (2002:87) also note the presence of Olivella rough disk beads produced in the Chumash area as far south in the San Diego area, illustrating exchange links between the Chumash and Kumeyaay Indians after AD 1800. The presence of historic money beads throughout California represents trade and exchange between mission residents and hinterland communities throughout the early- and mid-nineteenth century.

Between AD 1833-1836, there was a 60 percent reduction of mission populations (Johnson 2018:153). This was due in part to a large malaria epidemic that swept through Central California. It was also because many sought out new ways of living in the post-mission secularization world. Only a few Chumash were able to successfully receive land grants under the new Mexican administration (Johnson 1993:144-145). Instead, many found work as domestic servants, ranch hands, and laborers in growing urban centers and ranchos. Some stayed within the mission's landholding. Others started new, autonomous communities. Some of these communities, such as *Kamexmey* near San Buenaventura and *Qwa'* near the inlet to the Goleta Estero, restored pre-mission lifeways (Johnson 1993:145). They included features such as sweat lodges, acorn granaries, and tule-thatched houses. John P. Harrington also documents traditional economic activities, such as fishing, canoe-building, and bead money-making.

'AMUWU

Founded in AD 1813, Mission La Purísima Concepción came after the original Mission Vieja de la Purísima (AD 1787-1812) suffered significant damage in an earthquake.

The second mission was established at a time of cultural and political upheaval. The Mexican Revolution had just begun, and Spain cut imperial financing to Alta California. The mission was constructed on the north side of the Santa Ynez River in *Cañon de Los Berros*, a location that Father Mariano Payeras (1995:66) argued was more suitable for the mission than the previous site. The Chumash community that relocated there referred to the location as *'Amuwu*. There is no archaeological evidence within the mission complex that can be positively attributed to before AD 1813. Over the following decades, missionaries recorded a continuous ebb and flow of baptisms and deaths (Engelhardt 1932; Table 2.1). Chumash from Santa Ynez Valley, Cuyama Valley, Vandenberg area, the Channel Islands, and even the Yokuts territories merged into one community at this new location (Figure 2.2, Table 2.2).

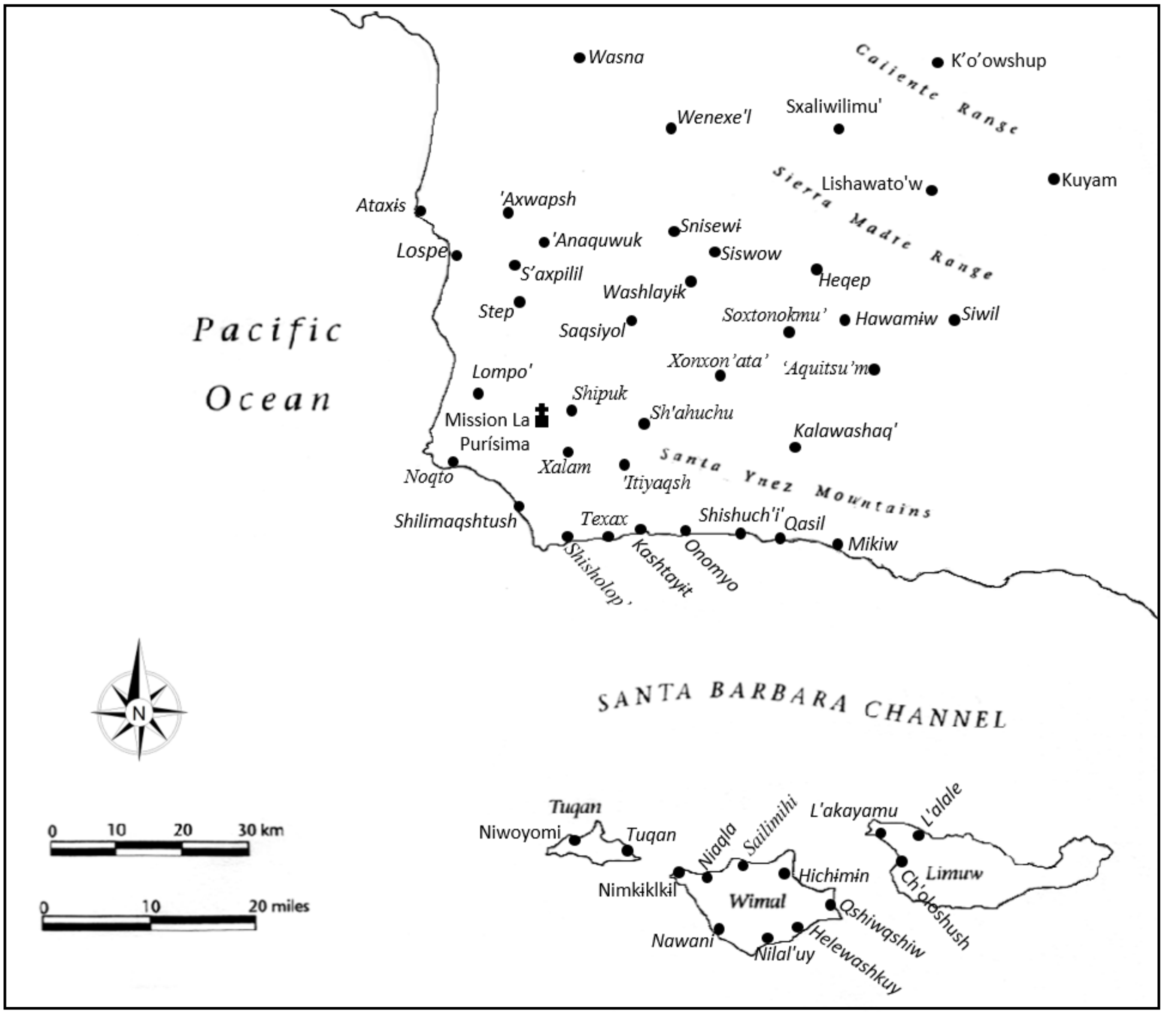
Table 2.1: Mission La Purísima Vieja and Mission La Purísima Concepción population.

Year	Baptisms	Deaths	Men	Women
1787	-	-	-	-
1788	95	-	-	-
1789	162	7	-	-
1790	308	25	-	-
1791	488	51	-	-
1792	598	86	-	-
1793	663	113	-	-
1794	804	138	-	-
1795	935	181	-	-
1796	997	226	383	373
1797	1132	226	-	-
1798	1229	307	448	471
1799	1301	364	-	-
1800	1380	420	460	501
1801	1472	516	-	-
1802	1581	557	457	571
1803	2033	610	-	-
1804	2214	707	685	835
1805	2328	800	-	-
1806	2360	1020	533	633

1807	2394	1108	-	-
1808	2425	1170	502	582
1809	2453	1243	-	-
1810	2495	1312	500	520
1811	2534	1399	480	498
1812	2595	1443	489	510
1813	2680	1518	507	497
1814	2729	1586	496	486
1815	2846	1675	510	509
1816	2920	1755	515	503
1817	2955	1846	486	472
1818	2991	1915	481	456
1819	3019	1980	468	420
1820	2046	2054	452	388
1821	3075	2112	435	373
1822	3099	2172	413	351
1823	3121	2243	496	326
1824	3138	2324	366	296
1825	3163	2370	300	232
1826	3173	2446	234	287
1827	3183	2486	201	270
1828	3199	2527	193	252
1829	3213	2561	170	236
1830	3224	2563	179	234
1831	3244	2549	180	224
1832	3255	2633	227	145
1833	3266	2658	-	-
1834	3325	2688	-	-
1835	3334	2732	-	-
1836	3342	2760	-	-
1837	3347	2805	-	-
1838	3350	2821	-	-
1839	3357	2839	-	-
1840	3361	2860	-	-
1841	3364	2880	-	-
1842	3371	2894	-	-
1843	3375	2964	-	-
1844	3377	2972	-	-
1845	3381	-	-	-
1846	3386	-	-	-

*After Engelhardt 1932:129

Figure 2.2. Map of Chumash villages affiliated with Mission La Purísima Concepción. After McLendon and Johnson (1999). See also Table 2.2



In the 35 years of the mission operation, the Chumash community at the mission endured much change. Between AD 1813-1815, padres completed a 36-question survey (*Interrogatorio*) to assess daily activities in the missions, such as kinship structure, social organization, labor, and diet (Geiger and Meighan 1976). Unfortunately, Mission La Purísima Concepción is missing from these documents. However, other reports from the mission's records (e.g., Engelhardt 1932) provide a picture of other aspects of the mission activities, such as lists of live holdings and harvests. Between AD 1813-1817, the Mission's crop production reached its highest per capita crop production before gradually decreasing from AD 1818 onward (Costello 1989:444). An opposite trend was the annual livestock per capita. Mission La Purísima Concepción had the highest growing livestock that boomed after AD 1818 (Costello 1989:445). These patterns fit within the historical backdrop of changes that occurred with the rise of the hide and tallow industry during the Mexican period and less emphasis on sustaining the mission economy through agricultural production.

Table 2.2: Baptisms by Chumash Village at Mission La Purísima Concepción.

General Location	Spanish spelling	Linguistic spelling	Baptisms
San Antonio Creek Vicnity[1]			
	Sgeletspe	*Lospe*	14
	Saxpil or Spile	*S'axpilil*	56
	Estep or Stipu	*Step*	16
	Sacciol	*Saqsiyol*	38
Santa Maria Vicinity[1]			
	Atajes or Setjaya	*'Ataxɨs*	9
	Ajuaps	*'Axwapsh*	32
	Naucu	*'Anaquwuk*	82
	Sishuohuo	*Siswow*	5
	Guaslaic	*Washlayɨk*	83
Interior Mountains[1]			
	Siuhuil, Asihuil, or Siuil	*Siwil*	6
	Gequep	*Heqep*	9
	Ahuam	*Hawamɨw*	7
Point Arguello to Rincon[1]			
	Nocto	*Noqto*	55
	Silimastus	*Shilimaqshtush*	98
	Sisolop	*Shisholop*	178
	Tejaj	*Texax*	41
	Estait	*Kashtayɨt*	103
	Nomgio	*Nomyo or 'Onomyo*	163
	Silsuchi	*Shɨsh uch'i'*	42
	Casil	*Qasil*	2
	Miquigui	*Mikiw*	5
Santa Ynez River Watershed[1]			
	Lompoc	*Lompo'*	51
	Jalama	*Xalam*	28
	Sipuc	*Shipuk*	14
	Sajuchu	*Sh'ahuchu*	112

	Ytiax	*Itiyaqsh*	48
	Najue	*Naxuwi*	84
	Jonjonata	*Xonxon'ata*	80
	Sotonocmu	*Soxtonokmu'*	57
	Aquitsumu	*'Aqitsu'm*	7
	Calahuasa	*Kalawashaq'*	35
Cuyama [2, 4]			
	Huasna	*Wasna*	24
	Snicehue	*Snisewɨ*	79
	-	*Wenexe'l*	87
	-	*Sxaliwilimu'*	66
		Lishawato'w	3
	Cuyam or Cuyama	*Kuyam*	11
	Coochup or Coochu	*K'o'owshup*	3
Santa Cruz Island[3]			
	Lalale	*L'alale*	2
	Lacayamu	*L'akayamu*	1
	Cholosos	*Ch'oloshush*	5
Santa Rosa Island[3]			
	Elehuascui	*Helewashkuy*	1
	Siucsiu	*Qshiwqshiw*	31
	Cheumen	Hichɨmɨn	5
	Silimi	*Silimihi*	49
	Niacla	*Niaqla*	7
	Nimquelquel	*Nimkɨklkɨl*	39
	Nahuani	*Nawani*	1
	Nilalui	*Nilal'uy*	38
San Miguel Island[3]			
	Toan	*Tuqan*	29
	Niuoiomi	*Niwoyomi*	3
San Louis Obispo[4]			
	Nipomo	-	10
	Chquehue	*Tsɨkyɨw*	1
	Chliquin	*Chɨliqin*	2
	Chojuale	*Chɨxwale*	1
	Quequec	-	1
	Sitpu	*Chɨtpu*	1
	Stemectatimi or Salatustus	*Stemeqtatimi*	2
Yokuts[4]			
	Huoulasi	*Wolasi*	2
	Lououato	-	1
	Seiqui	-	1
	Suntaths	*Chunut*	48
	Telamne	*Telamni*	5
	Tulamne	*Tulamni*	7
	Tulares	*specific Yokuts group unnamed*	1

Gabrielino[4]			
	Utucuit	*Jutucunga*	1
Other [2,4]			
	Lutijlog		2
	Ysleños		5

After (1) Johnson 1988, (2) Johnson 2014:33, (3) Johnson 1982:97, Johnson and McLendon 1999:53, (4) unpublished mission register database provided by Johnson.

Tensions grew due to increasing demands placed upon mission laborers to supply goods in the third and final phase of the mission to Mexican soldiers (Duggan 2016). An uprising was looming. On Saturday, February 21st, 1824, the flogging of a Purisemeño visitor to Mission Santa Inés sparked a revolt that included three missions: Mission Santa Inés, Mission La Purísima Concepción, and Mission Santa Bárbara (see Blackburn 1975; Geiger 1970; Sandos 1985). The revolt started at Mission Santa Inés, where buildings were set on fire and guards were attacked. The Chumash then retreated to Mission La Purísima Concepción, where they besieged the soldiers, erected palisade fortifications, and took over the mission quarters. Mission Santa Bárbara came next. The Chumash had captured the mission and repelled a military attack. However, Mission La Purísima Concepción became the epicenter of the revolt, which ensued for nearly a month. On March 16, a Mexican military unit attacked the mission, forcing the insurgents to surrender and bringing the uprising to an end. Some higher-ranked Indian officials at Mission La Purísima actively led the revolt, and some were punished for their crimes afterward. Many others sought refuge in the *tulares* of San Joaquin valley (Sandos 1985:122-123). Two plank canoes also took Chumash refugees from Santa Barbara to Santa Cruz Island (Hudson 1976).

A little less than ten years after the revolt, the mission system was dismantled. Various Mexican rancheros soon held title to the mission's lands. Nevertheless, a portion of the Chumash community stayed. In February 1839, 242 Chumash individuals were reported living at Mission La Purísima Concepción: 44 married couples, 35 children, and 64 widows and widowers (Farris and Wheeler 1998:4). This community came to be known as *Pueblo de los Berros.* Two ex-neophytes at the mission, Elceario and Pastor, petitioned and received a land grant. Other Chumash individuals left the mission and reoccupied former villages, including *Saqsiyol* or Los Alamos (Johnson 1993). Today, the Santa Ynez Band of Chumash Indians have enrolled members who descended from many Chumash villages, including from the Purisimeño territory, such as *Lompo*', *Shisholop* (Cojo), *'Onomoyo* (Gaviota)**,** *Sh'ahuchu* (Santa Rosa Creek), and *Washlay*~~*ik*~~ throughout the Santa Ynez Valley.

III. PREVIOUS INVESTIGATIONS AT *’AMUWU*

The Chumash village, or rancheria, at Mission La Purísima Concepción, was located "to the right and in front of the Father's dwelling" (Webb 1951, 1998). It was separated from the padres and soldiers' residences by a fountain or a *lavanderia* (Engelhardt 1932:41-42; Webb 1951). The village contained the lodgings of individuals who lived in both the Chumash Family Apartments and their tule-thatched homes. The apartment buildings have undergone serious archaeological investigations since the 1930s. However, the area of the tule-thatched houses have not been previously identified at Mission La Purísima Concepción. Based on a reconstruction of historical records and archaeological insight, there is strong evidence to suggest they were clustered around the northern and western portions of the Chumash Family Apartments.

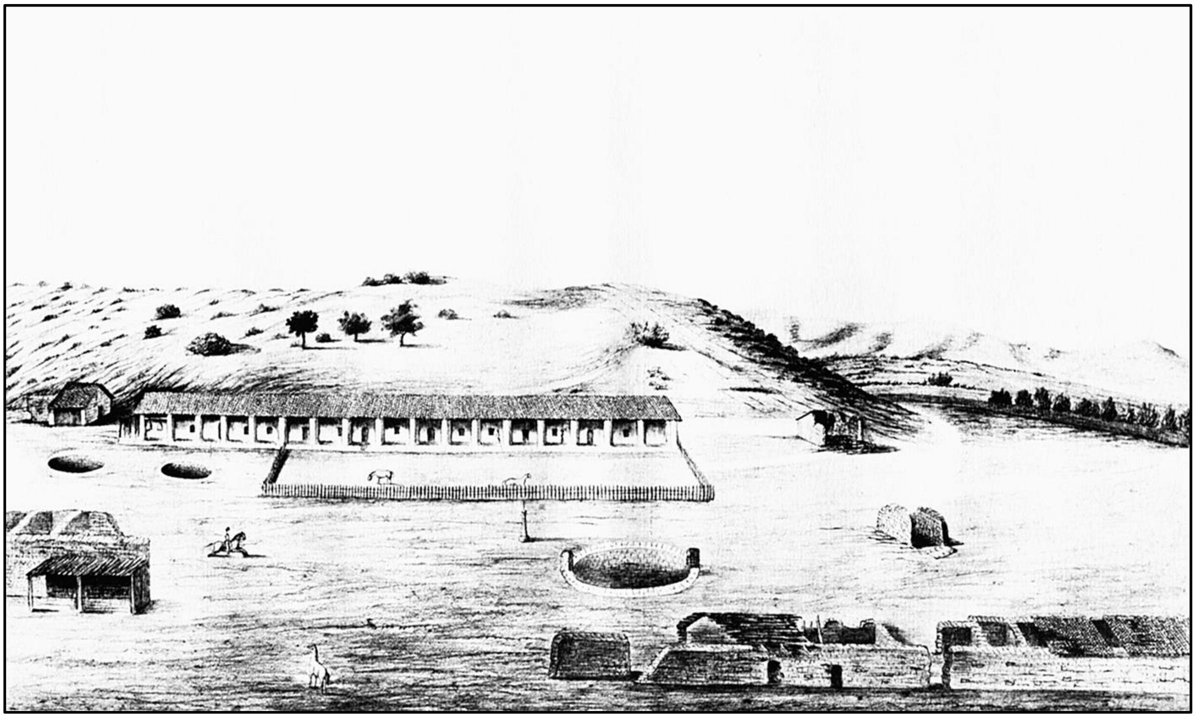
CHUMASH FAMILY APARTMENTS

Historic drawings by Henry Miller (Figure 3.1) and Edward Vischer (Figure 3.2) portray deteriorating structures, referred to as the area of the "neophyte dwellings," within the eastern portion of the mission. Numerous archaeological investigations within these buildings support the interpretation that Chumash families resided within them. Listed below in successive order are details regarding these previous studies, setting the stage for the next chapter—the analysis of artifacts within the Norman Gabel and James Deetz archaeological collections.

California Conservation Corps (1934-1938)

The first archaeological excavations at Mission La Purísima Concepción began in 1934 by the Civilian Conservation Corps (CCC). Architect Fred Hageman of the Works

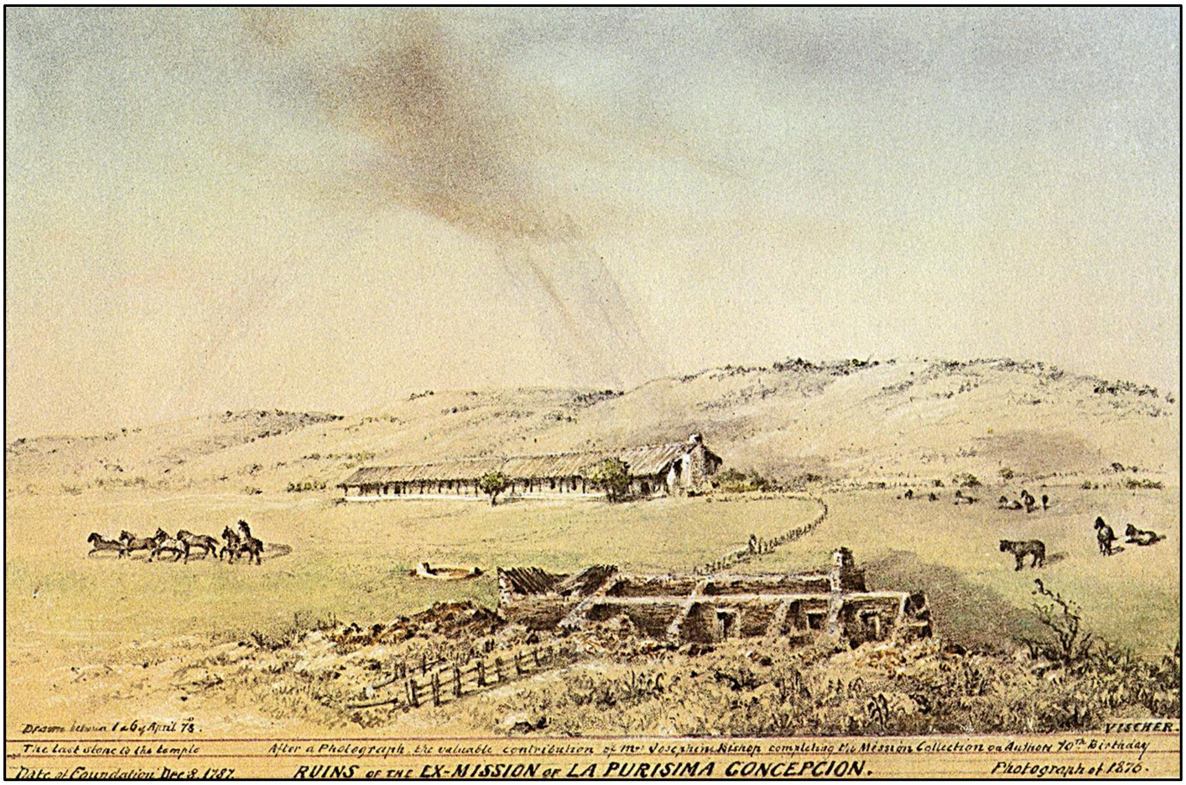
Figure 3.1. Henry Miller (1985:32) illustration. Note the Chumash Family Apartments in the foreground.



Progress Administration (WPA) supervised the investigations and was meticulous in his historical background research to provide an authentic reconstruction of the mission (Hageman and Ewing 1991). Hageman worked with Arthur Woodward and Mark R. Harrington, archaeologists for the Los Angeles County Museum and Southwestern Museum, respectively, who advised on proper excavation methods.

Archaeological work began with surveys and trenching to identify features in the western portion of the mission. The easterly side of the mission, the location of the Chumash rancheria, was targeted next. When foundations of structures were identified, the buildings would be excavated by following out the main walls, establishing the corner sections, and following the surface to sterile levels.

Figure 3.2. Edward Vischer (1982: Plate 24) illustration. Note the Chumash Family Apartments in the foreground.



The CCC extensively documented the water system, church, workshops, and the soldier's and padres' quarters. Less attention was on the indigenous residential space due to the location of the County Road that went through the Native residential space at the mission and private property restrictions. The CCC uncovered the remains of what came to be known as Building 102, the Chumash Family Apartments. The building includes the area identified as the "infirmary" and the twenty, two-room adobe apartments. The infirmary is the southernmost section of the building. It consists of three unevenly spaced rooms. About one hundred feet north of the infirmary, the CCC came across another building and excavated four, two-room apartments and partially excavated four other rooms. They also put in a test unit in the area that was later excavated by Deetz (Deetz 1964). The associated archaeological materials, maps, photographic records are on the property grounds at Mission La Purísima Concepción under accession #153.

Gabel (1952)

UC Santa Barbara archaeologist Norman Gabel focused on the northern end of Building 102. He utilized a trenching method following the Discovery Key Grid System utilized by the Park Service. He divided each trench into 3 x 7-foot sections. Once foundations were identified, Gabel then laid out more trenches on the building's northern, eastern, and southern extent. During this excavation, Gabel could determine that the "Indian Barracks" had a passageway between the buildings. They represent two separate structures. The building's northern extent was 202 feet in length and 25 feet wide and consisted of twenty rooms arranged in double rows, or ten apartments total with two rooms each. Although each room varied in length, they averaged about 18 feet long. However, the Old County Road destroyed a good portion of this building: only half of rooms 13, 14, and 15 were recovered, and all of rooms 16, 17, and 18 did not contain any information.

The fill materials within each room were screened through a $^{1}/_{8}$" mesh and treated as a separate lot (Gabel 1952:11). Gabel recorded the foundations (i.e., rock types, depth, level, quality), walls (width and construction material), wall openings (presence of doorways), roofing (type and quantity), and floors (soil type and location of hearth features). He cataloged over 2,000 types of artifacts such as stone artifacts (i.e., bowls, manos, metates), asphaltum, shell, bone and horn, wood, leather, ceramics, glass, and metal, iron, copper and brass, gold and silver, and food remains. These materials are at the La Purísima Curation Facility under ACC #147-B.

Harrison (1960)

Harrison surveyed the large mesa eastward (upslope) of the Indian apartments to locate additional structures and indigenous occupation. He used a topographic map by Corps of Engineers, U. S. Army Lompoc, Quadrangle grid zone “G” and the Archaeological Key Research Map La Purísima State Park #1014. He documented a large surface midden in the area of the Gabel excavation that extended upslope for about 150 feet and to the west about 100 feet (Harrison 1960:3). He proposed that the midden material on the slope represented a garbage dump or an earlier occupation. However, there has been no evidence thus far to support his later suggestion for a pre-mission habitation.

Deetz (1963 and 1964)

In the 1960s, UC Santa Barbara archaeologist James Deetz conducted archaeological excavations at the blacksmith shop, the tanning vats, the Indian barracks, and the associated midden located near the blacksmith shop (1963, 1978). Within the Chumash Family Apartments, his team investigated the area underneath the County Road. There, he identified four complete rooms (or two, two-room apartments) and portions of three other rooms. Each room was excavated as a separate unit, and random samples were screened through a $^{1}/_{8}$" mesh (Deetz 1963:178).

Four separate stratigraphic zones were identified: (1) surface-to-tile, (2) fill, (3) floor, and (4) floor-to-floor. The surface-to-tile is everything above the collapsed roof; the fill is the material between the layer of roof tile and the floor; the floor includes artifacts found on the compacted soil or plaster floor; the floor-to-floor consists of artifacts in soils between double floors in rooms 3-7.

However, not every room has this same stratigraphic content. Only the surface-to-tile, fill, and floor are within rooms 1 and 2. In rooms 3-7, not only are there the same three stratigraphic levels identified in rooms 1 and 2, but there is also an additional floor-to-floor level. The floor-to-floor level resulted from a renovation event that led to the first floor's capping in rooms 3-7 with a plaster floor above it. The renovation event is characterized by the placement of a lime-plastered floor, painting the walls with lime, also known as "whitewashing," and installing a drainage system that moved water from the east to the west under the floor in rooms 5 and 6.

Deetz had another field season in 1964. He finished excavating the apartments and reexamined the 14.4-foot walkway between the apartment building's southern and central parts. The only one-paragraph report was written about the 1964 excavations. All we have is the catalog and student field notes from 1964 that give some sense of the excavated areas. These materials are at Mission La Purísima under ACC #147 and ACC #155.

Dallas (1988)

Herb Dallas of the Department of Parks and Recreation excavated three units outside the Chumash Family Apartments to evaluate any pre-colonial occupation debris and determine the extent of the cultural deposits (Dallas 1988). He surveyed, used auger testing, and placed archaeological units outside the adobe buildings. While information regarding the location of the augers is absent, the map appears to suggest that two adjoining units (Units 2 and 2A) were placed in the backyard of the Gabel excavation area, while another unit (Unit 1) was approximately 40 feet north in the agricultural field. The cultural deposits were then screened through $^{1}/_{8}$" mesh.

Artifacts uncovered include glass and shell beads, ceramics, metal, glass, roof and floor tiles, seeds, asphaltum, bone, charcoal, wood, and shellfish. The most prevalent artifact types were glass and shell beads analyzed by Chester King (1988). One hundred and twenty-five glass beads were classified into five categories: (1) drawn cane, (2) wire wound, (3) pressed wire wound, (4) faceted cane, and (5) milled faceted beads. These beads are like types throughout the region between AD 1813-1844; however, one bead post-dates AD 1850 (King 1988:22). It may represent someone working in that area after the missions were secularized. There were also 45 Olivella Rough Disc beads. These particular types of shell money beads were first made around 1780 and continued in production throughout at least the AD 1840s. King (1988:22) suggests that most of the deposit was from the earliest occupation of the site, but many of the beads recovered were in "eroded" or "very eroded" condition. There were also sixteen *haliotis rufescens* epidermis discs and one Olivella lipped historic variant E3c. Both types of beads occur in the Historic period. Based on the results of shell and glass bead analyses, there is no direct evidence that this site was used before the Historic period. However, as the Olivella Rough Disc beads were used from AD 1780 to the 1840s, it could mean that there was a Chumash community that lived there for 33 years before the second mission was built, but it more likely suggests residential occupation that coincides with the operation of Mission La Purísima Concepción between AD 1813 and AD 1848, as there are no historic or ethnographic documents that the community of *'Amuwu* formed before AD 1813.

Costello (1990)

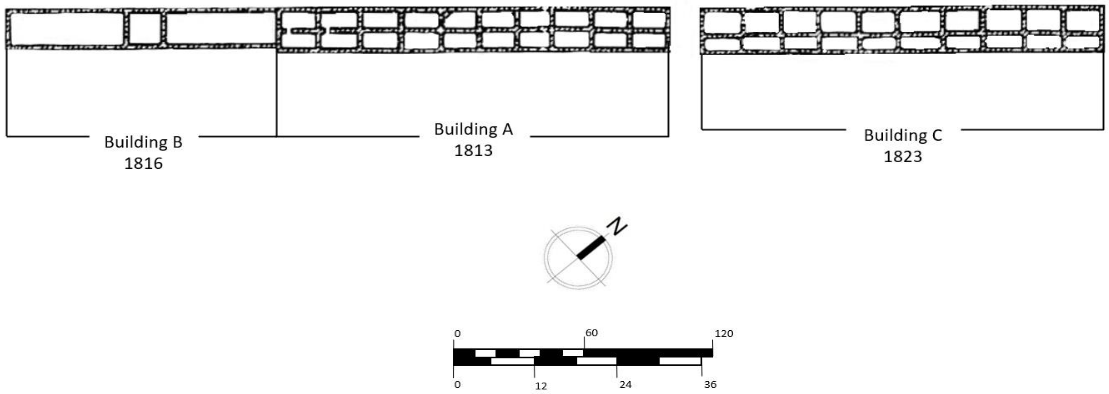
Julia Costello investigated economic diversity at Mission La Purísima using multiple lines of evidence, including ceramics from the Deetz collection. She reconstructed construction episodes of building in the adobe apartments using historical annual reports of building activities. She named the buildings in chronological order (Costello: 1990:270; Figure 3.3). According to Costello (1990:272):

(1) Building A was established in AD 1813. It is represented by ten two-room apartments that make up one building that is 200 feet long by 25.8 feet wide. This building was occupied sometime around the initial foundation of the mission. The apartment complex represented by Building A was the same complex excavated by Deetz in 1963.

(2) Building B was established in AD 1816, and it represents the southernmost building in the complex structure. It is comprised of two large ward rooms, each 56 feet long, and a smaller room that, combined, is 137.5 feet by 22.5 feet wide. Building B is not an apartment complex but rather was an infirmary. The date of construction for this building was taken from historical accounts that explain that in AD 1816: "Another house of adobe, fifty varas long, was constructed from the material of previous buildings, and was intended for the sick." (Engelhardt 1932:41)

(3) The last building, Building C, is the northern extent of the two-room Chumash Family Apartments and was separated by Building A with a *zaguan*, or passageway, that was 14.4 feet wide. It is another set of ten two-room apartments that are 203 feet long by 25 feet wide. According to Engelhart (1932b:45), in AD 1823, "ten new houses for the neophyte village were built and roofed with tiles." This building represents the area that was excavated by Norman Gabel.

Figure 3.3. Chumash Family Apartments and Infirmary with date of construction.



Costello also contributed to the interpretations of the renovation event that led to whitewashed rooms and double floors in Deetz's rooms 3-7. While Deetz suggests that this renovation occurred toward the end of the mission's operation, Costello (1990:274) argues that they occurred much earlier, as the lime cement re-flooring, whitewashed walls, and building of a drain needed trained labor and confidence in the mission's future. Thus, the renovation events in rooms 3-7 likely occurred when the mission facilities were still in operation, which may have also coincided with the building of Building B, the Infirmary, in AD 1816.

Farris and Wheeler (1998)

Farris and Wheeler (1998) discuss previous research at the mission and formally identified all the corners of Building 102 and a few walls. Brass copper stakes were placed at the northernmost corner of Building C and southernmost corners of Building B. In the northern building, ash, and other artifacts in Unit C2, indicated that Gabel had not fully excavated the area (Farris and Wheeler 1998:2). These artifacts were taken to the California

State Parks Archaeology Lab in West Sacramento for curation and were assigned accession number P1174.

Farris and Johnson (1999)

Farris and Johnson (1999) examined baptismal and marriage records to determine who the most likely residents living in the buildings. They listed how many times persons with highly ranked titles e.g., *padrino*, *madrina*, *testigo*, *alcalde*, appeared in the mission registers (Table 3.1). They identified a total of 26 couples as possible occupants over the course of 20 years.

Table 3.1: Probable residents of the Chumash Family Apartments. After Farris and Johnson (1999:11-19).

No	Name	Home village	Bapt. No.	Transcribed notes
1a	Secundino Malihuit	*Onomyo*	898	*padrino* (n=43); *testigo* (n=11)
1b	Calista	*Naxuwi*	845	*madrina* (n=50)
2a	Castor Uastiol	*Noqto*	331	*padrino* (n=15); *testigo* (n=28)
2b	Ana Francisca	*Kashtayit*	1190	*madrina* (n=4)
2c	Esteban Taluxma	*S'axpilil*	43	2nd husband of Ana Francisca
2d	Modesta	*Shisholop*	738	1st wife of Esteban Taxluxma
3a	Manuel Palaquiau	*Kashtayit*	1288	*padrino* (n=3); *testigo* (n=79); *interprete*; *rezador*
3b	Ylariona	*San Miguel Island*	2677	*madrina* (n=1)
4a	Patricio Gelalamaichet	*'Onomyo*	1636	*padrino* (n=3)
4b	Prisca	*Naxuwi*	2056	appears seven times.
5a	Maria del Rosario		471	*madrina* (n=9)
5b	Gonzalo de Nomgio	*'Onomyo*	357	Maria's first husband
5c	Felipe		679	Maria's second husband; member of 1824 uprising
5d	Melesio		958	Noted as a *vaquero*
6a	Cirilo Sajatauluichet		251	*padrino* (n=17); testigo (n=59); listed both as a paje and an *interprete*
6b	Faustina		667	*madrina* (n=30)
7a	Agustin Nipucal	*I'tiyaqsh*	53	*alcalde* (n=1); *paderno* (n=1)
7b	Maria Antonia	*Shishuch 'i*		*madrina* (n=1)
8a	Acursio Sulcucaxu	*'Onomyo*	1072	*padrino* (n=5)
8b	Andronica Antonia		632	*madrina* (n=8)
8c	Patricio Sapilulat	*Lompoc*	108	Second husband of Andronica; *interprete*; *sacristan*; *padrino* (n=23); *testigo* (n=42)

9a	Guido Majaquiauit	*S'axpilil*	356	*padrino* (n=3); testigo (n=13)
9b	Pascuala		1687*	*madrina* (n=2)
9c	Rosa Maria		1529	Second wife of Guido Majaquiauit
10a	Jose Miguel Chionio	*Shisholop*	70	*padrino* (n=2); alcalde in 1816
10b	Apolinaria		2691	
11a	Benvenuto Ulunumaxu	*Sh 'ahuchu*	236	*padrino* (n=5)
11b	Yginia		742	*madrina* (n=8)
11c	Maria Antonia		2334	second wife of Bunvenuto
11d	Silvestra	*Wenex 'el*	1695	third wife of Bunvenuto
12a	Jose Andres Sulupcucasu	*Shilimaqshtush*	499	*padrino* (n=5)
12b	Clara		1818*	*madrina* (n=1)
13a	Lorenzo Selmahuiyol	*Ytiax*	44	*padrino* (n=17); *testigo* (n=44)
13b	Maria Caridad	*Shisholop*	539	*madrina*, (n= 17)
13c	Constantino Puluyassuit		937	second husband of Maria Caridad
14a	Ana Columba	*'Onomyo*	702	*madrina* (n=1)
14b	Froylan Yahuihet	*Shisho/op*	444	*padrino* (n=3)
14c	Crispiano Stanajuyuyu		580	Second husband of Froylan Yahuihet
14d	Erasmo		2708*	*padrino* (n=2)
15z	Mariano Sulmaiameuit	*'Axwapsh*	2052	*padrino* (n=8)
15b	Maria Gertrudis		516	*madrina* (n=3)
16a	Guido Majaquiauit	*S'axpilil*	356	*padrino* (n=3); *testigo* (n=13)
16b	Pascuala		1687*	madrina (n=2)
16c	Rosa Maria		1529	Second wife of Guido
17a	Jose Miguel Chionio	*Shisholop*	70	*padrino* (n=2); *alcalde*
17b	Apolinaria		2691	wife of Jose Miguel
18a	Benvenuto Ulunumaxu	*Sh 'ahuchu*	236	*padrino* (n=5)
18b	Yginia		742	First wife of Benvenuto, *madrina* (n=8)
18c	Maria Antonia		2334	Sencond wife of Benvenuto
18d	Silvestra	*Wenex 'el*	1695	Third wife of Benvenuto
19a	Jose Andres	*Shilimaqshtush*	499	*padrino* (n=5); excecuted as part of the Chumash uprising
19b	Clara	*'Axwapsh*	2351	*madrina* (n=1)
20a	Lorenzo Selmahuiyol		44	*padrino* (n=17); testigo (n=14); *interprete*
20b	Maria Caridad	*Shisholop*	539	*madrina* (n=17)
20c	Constantino Puluyassuit	*'Onomyo*	937	*padrino* (n=2)
21a	Ana Columba	'Onomyo	702	*madrina* (n=1)
21b	Froylan Yahuihet		444	*padrino* (n=3)
21c	Crispiano Stanajuyuyu		580	Ana's second husband
21d	Erasmo		2695*	*padrino* (n=2)
22a	Mariano Sulmaiameuit	'Axwapsh	2052	*padrino* (n=8)
22b	Maria Gertrudis		516	*madrina* three times
23a	Gregorio Alexo Saputinunahuit	Texax	974	*padrino* (n=4)
23b	Maria Antonina	Sisolop	405	*madrina* (n=10)
24a	Junipero Luliapichet	Shilimaqshtush	247	*padrino* (n=1)
24b	Maria del Rosario	Nomgio	1648	*madrina* (n=11)
24c	Baldomera		2654	*madrina* (n=1)

25a	Pacomio Pogui	Snisewi	1600	*testigo* (n=5); leader in Chumash Revolt; trained carpenter
25b	Gordiana		1952	*madrina* (n=2)
25c	Eusebia Maria		836	second wife of Paciomio
26a	Pastor Choyama	Washlayik	208	*padrino* (n=2); judge (*alcalde?*);
26b	Beatriz	Shipuk	189	*madrina* (n=4)

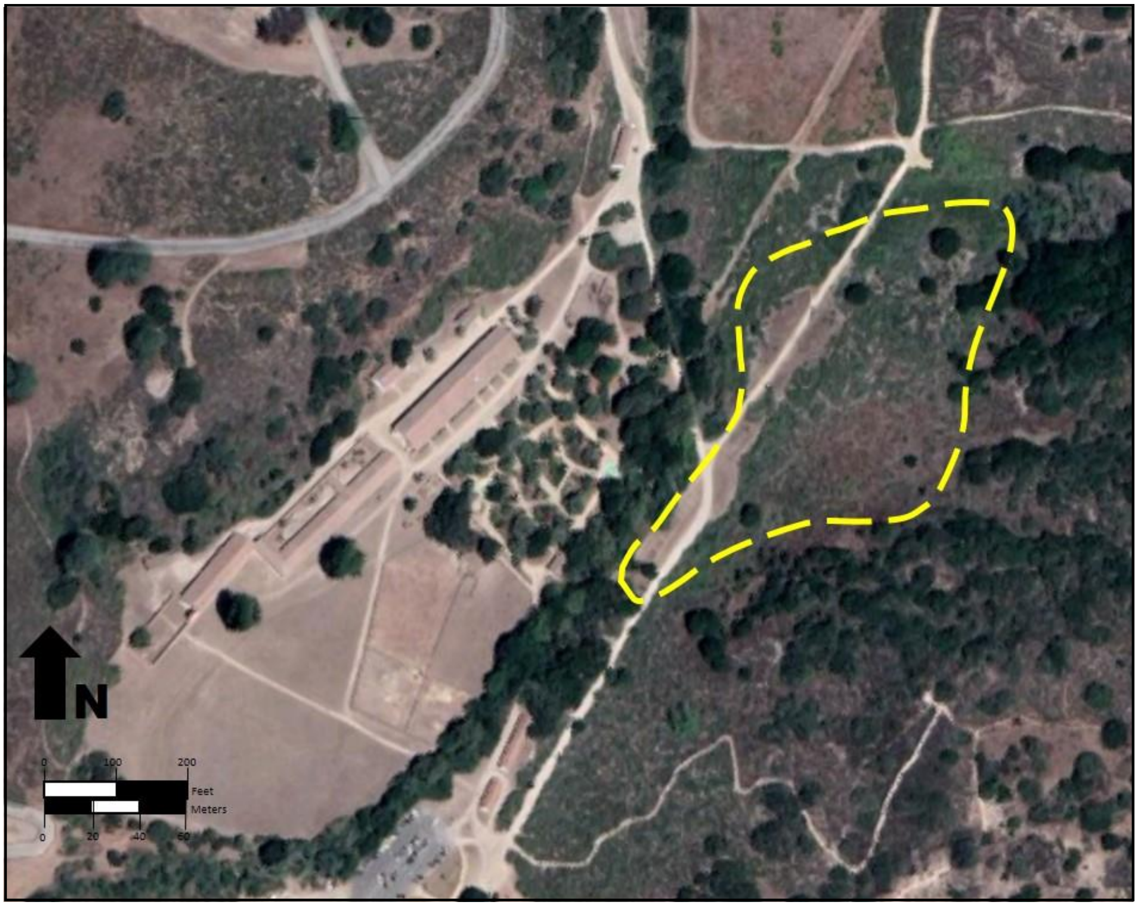
*No baptismal number listed; burial number given instead.

TULE-THATCHED HOUSES

Only a small fraction of Native inhabitants lived in the Chumash Family Apartments. In fact, mission registers in AD 1816 identified 257 couples living at the mission, and only about 8% of them would have resided in the adobe building (Farris and Johnson 1999:8). The rest of the community, the other 92%, would have lived in traditional, tule-thatched homes. Yet, the area of these traditional homes has never been located at Mission La Purísima Concepción, and there has been no previous attempt to find them. Based upon previous archaeological investigations and other research in California's missions (e.g., Panich et al. 2014), the most likely place these dwellings were situated was within the same neighborhood as the Chumash Family Apartments. DPR staff marked a boundary of midden material within and around the Chumash Family Apartments with the remains of shellfish, shell and glass beads, flaked stone, and porcelain (Figure 3.4). This area, denoted as CA-SBA-519, is the Chumash rancheria and is much larger than the apartment building itself. It expands beyond the adobe building to the north and west a few hundred feet. The midden represents *the entire* mission community that lived at the mission.

Previous surveys and excavations exposed only one other Native residential space at Mission La Purísima Concepción. It was a set of two temporary, parallel buildings with post-

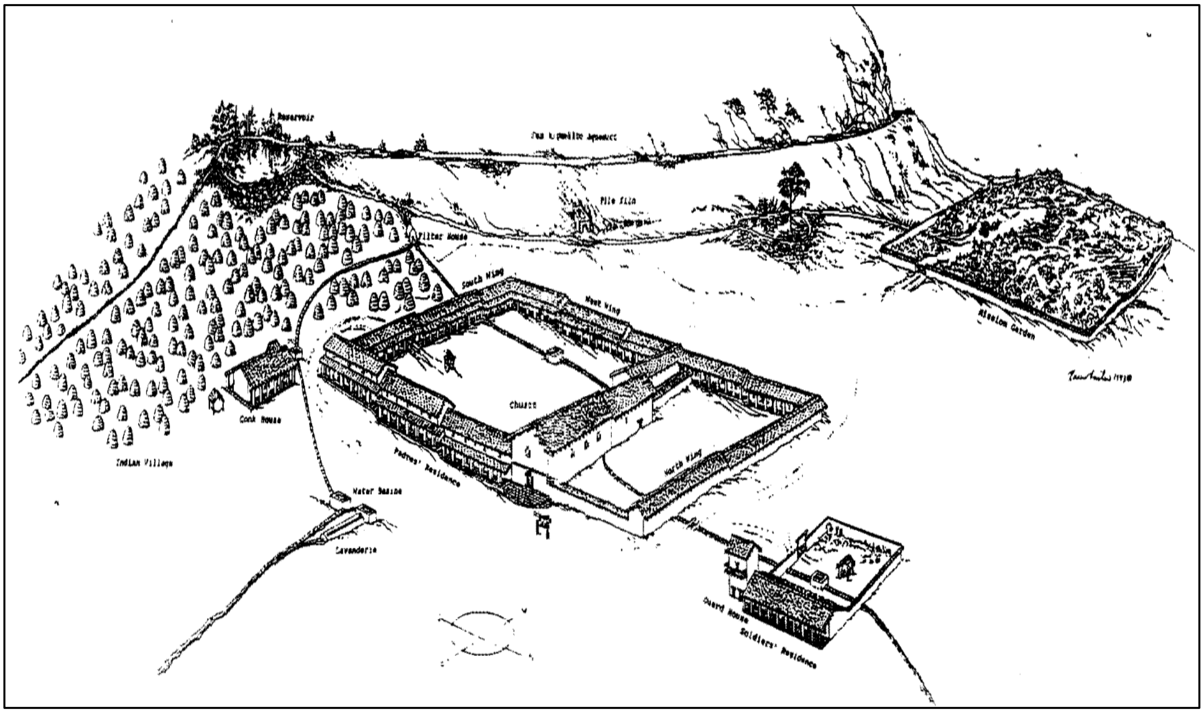
Figure 3.4: Location of Chumash village at Mission La Purísima Concepción.



construction and evidence of small fires inside the rooms, suggestive of Native habitation (Hageman and Ewing 1991:8). A handful of the first Chumash who moved to the mission following the collapse of Mission La Purísima Vieja most likely lived in these impermanent structures as they built the more permanent adobe apartments (Farris and Wheeler 1998). The rest of the Chumash community continued to live in their traditional tule-thatched houses.

An artist's reconstruction of Mission La Purísima Vieja based on archaeological evidence illustrates what this community looked like before relocating to the second mission (Figure 3.5). A cluster of dozens of traditional-style Native homes surrounds the outskirts of

Figure 3.5. Illustration of Mission La Purísima Vieja. Note the Chumash residential area. Costello (1994:76).



the mission. The houses have no apparent structure or organizational order, such as parallel arrangements or streets. Archaeological investigations in the area of the tule-thatched houses at Mission La Purísima Vieja identified a similar midden to that of Mission La Purísima Concepción. A midden deposit roughly a meter deep included a wide variety of both local and nonlocal materials such as shell, fish, shell and glass beads, mammal bone, lithic debitage, and *tejas* (Abdo-Hintzman and Hamilton 2004). Although house features were not exposed, the analyses of materials in the midden at the first mission provided a glimpse of the everyday activities of the Chumash that lived in their traditional homes.

The same holds for Mission La Purísima Concepción. The extensive midden that makes up the Native rancheria provides clues to the everyday life of the Chumash, who not only lived in the apartment buildings but also resided in their tule-thatched houses. The northernmost and westernmost portions of the midden provide the best possible locations for these traditional-style homes. A previous survey by Harrison (1960) found that the large midden deposit that surrounded the Native adobe apartments extended 150 feet upslope to the west and 100 feet north of the northern border of the apartment building. A survey led by Brown over the 2019 field season confirmed that these two areas were ideal locations to test for the tule-thatched houses, and they both contained historic deposits. Archaeological testing in the northern section of CA-SBA-519, discussed in Chapter 5, identified a dense deposit of materials. Rather than the apartment's residents walking over to throw away their trash in the northern section of the village space, this area more likely represents the location of the other community members who lived in their traditional homes. As is explored later, there are stark contrasts in the site's northern section compared to the southern section where the apartments are located.

IV. MUSEUM COLLECTIONS AND DIACHRONIC ANALYSIS

This chapter focuses explicitly on the Norman Gabel and James Deetz archaeological collections because of their chronological importance, provenience information, and a large representation of artifacts. For both collections, each artifact was individually assessed first by material class. The catalog numbers and object descriptions were recorded on a spreadsheet that included additional information, such as count, weight, and other descriptive factors (e.g., length, width, notes, etc.). The associated contextual information for each artifact was in the main catalog. Unfortunately, the Norman Gabel catalog was re-cataloged in 1963. While the original catalog was located, the new catalog was never found. Therefore, everything in the Gabel collection could not be broken down by individual rooms like the Deetz collection. Nonetheless, the materials in the Gabel collection represent the northern building complex.

Table 4.1: Date ranges of excavated materials.

Excavator/ Stratigraphic level	Date
Gabel excavation	1822-1848
Deetz “floor-to-floor”	1813-1817
Deetz “fill & floor”	1817-1848
Deetz “rooms 1 & 2”	1813-1848

Each catalog number and the associated object information were documented on a catalog sheet within the Deetz collection. Careful attention was paid to the stratigraphy of each room, as they represent different chronological contexts: The floor-to-floor represents the period from about AD 1813-1817 (Costello 1990). Everything above the floor-to-floor

Table 4.2: Gabel excavation area soil volume.

Room Number	Room size length (ft)*	Room size width (ft)*	Depth (ft)**	Total Soil Volume
1	16.8	7	3.58	15.59
2	19	7.2	3.58	18.14
3	18.4	7.4	3.58	18.05
4	18	7	3.58	16.71
5	18	7	3.58	16.71
6	17.6	7	3.58	16.34
7	18.3	7	3.58	16.99
8	18.5	7	3.58	17.17
9	18	5	3.58	11.93
10	18	5*	3.58	17.18
11	17.3	10.7	3.58	24.58
12	18.7	11	3.58	27.27
13	18.1	10	3.58	24
14	18.2	5*	3.58	16.89
15	18.2	3*	3.58	10.86
16	17.4	1.5*	3.58	3.46
17	n/a	n/a	n/a	n/a
18	n/a	n/a	n/a	n/a
19	n/a	n/a	n/a	n/a
20	17.8	0.5*	3.58	1.18
SUM Cubic Yards				*273.05*
SUM Cubic Meters				*207.99*

*Approximate excavated area based on Gabel 1952

**Approximate depth based on Summer 2019 excavations from surface to floor

level, that is the fill and the floor, would represent everything from AD 1817 to the time of the mission's demolishment, around AD 1848 (Table 4.1). Rooms 1 & 2 only represent a single component throughout the entire occupation of the mission that lasted from AD 1813 to roughly the beginning of the American period in AD 1848 (Deetz 1963:179-181).

Because both the Deetz and Gabel field projects represent different excavation areas, the soil volume was determined by previous descriptions of room sizes and depth. The Gabel excavation area included a total estimated excavation volume of 207.99 cubic yards (Table 4.2), and the Deetz excavation area had much smaller amounts of soil volume. Room 1 and

Table 4.3: Rooms 1 & 2 soil volume.

Rooms	Length	Width	Depth*	Total
1	6.6	10	2.2	5.38
2	11.4	10	2.2	9.29
SUM Cubic Yard				*14.67*
SUM Cubic Meter				*11.21*

*Depth includes under the roof tile collapse to the earthen floor.

Table 4.4: Rooms 3-7 fill & floor excavated soil volume.

Rooms	Length	Width	Depth	Total
3	7.6	18.8	1.64	8.68
4	12	18.8	1.64	13.7
5	7.9	16.9	1.64	8.11
6	11.2	16.9	1.64	11.5
7	17	8	1.64	8.26
Sum Cubic Yard				*50.25*
Sum Cubic Meter				*38.42*

*Depth includes under the roof tile collapse to the plaster floor.

Table 4.5: Rooms 3-7 floor-to-floor excavated soil volume.

Rooms	Length	Width	Depth	Total
3	7.6	18.8	1	5.29
4	12	18.8	1	8.36
5	7.9	16.9	0.2	0.99
6	11.2	16.9	0.5	3.51
7	17	8	0.8	9.47
Sum Cubic Yard				*27.62*
Sum Cubic Meter				*21.12*

* Depth includes under the plaster floor to the earthen floor.

Room 2 represent 11.21 cm^3 (Table 4.3); the fill & floor includes 38.42 cm^3 (Table 4.4), and the floor-to-floor equates to 21.12 cm^3 (Table 4.5). When taking the entire Deetz collection, including the soil volume from all three of the contexts previously mentioned, including the upper surface-to-tile level that represents everything from the roof tile collapse to the surface, there is a total of 121.64 cm^3 of soil. The depth and soil volume from the roof tile collapse to the surface was not reported in Deetz (1963). Excavations that occurred over the summer of 2019 aided in the identifying the amount of soil volume from under the roof tile collapse to the floor (see Chapter 6).

The following analyses consist of seven artifact classes representing the largest assemblages from both the Norman Gabel and James Deetz excavations. The materials analyzed in this chapter include (1) soapstone, (2) lithics, (3) asphaltum, (4) groundstone, (5) metal, (6) glass, and (7) ceramics. Each section in this chapter begins with a brief introduction of the artifact class, followed by an explanation of the methods. When there is a comparison between contexts, three methods are used to make sure they are equivalent: (1) a comparison of ratios of artifacts within and between assemblages; (2) a standardized count and weight that considers the soil volume; (3) a Kintigh DIVERS test of significance to investigate diversity between assemblages, which takes into account sample size (Kintigh 1984, 1989). Analysis and interpretation of these results conclude each section.

SOAPSTONE

Soapstone is an easily modifiable stone that occurs in natural outcrops throughout Southern California, particularly in Santa Barbara, Ventura, and Los Angeles counties. The Chumash used it for thousands of years for various purposes, such as arrowshaft straighteners, pipes, effigies, and cooking wares. There are many variabilities with the mineralogical components that make up the stone; however, it was the softer coarse-grained soapstone, primarily explored here, that large ollas, bowls, and griddles—referred to here as *comales*—were manufactured (Wlodarski 1979). The analysis of these larger artifact classes can explore various issues related to acquisition locations, foodway practices, and indigenous identity construction and maintenance (Brown 2018, Gamble 2015).

Soapstone displays distinctive characteristics that can be distinguished with the naked eye and can help identify acquisition locations. For example, on Santa Catalina Island, there are outcroppings of micaceous soapstone with an abundance of anthophyllite—a mineral characterized by radiating bundles of needle-like crystals (Romani 1982:28–31; Weide 1973). However, the interior Yokuts area and sources in Sierra Pelona are more schist-like (King 1982:127).

The larger soapstone vessels also reveal information about foodways. In a recent article, Brown (2018) investigated soapstone ollas and bowls from the historic assemblages at Mission San Buenaventura, Mission La Purísima Concepción, the historic Chumash site of *Helo'* (CA-SBA-46), and the protohistoric village of Medea Creek (CA-LAN-243). A striking pattern emerged when comparing the bowls and ollas from these contexts: there are more bowls inside the Mission than at Medea Creek and *Helo'*. The griddles also displayed distinct differences between these contexts. The mission assemblages became more formalized and exhibiting "comfort features" (*sensu* Adams 2002:19), such as projecting rims and handles with well-burnished sides and upward-lifted edges. Brown (2018: 257) argued that these patterns represent a functional shift in food preparation techniques and tortilla consumption—a change that was intimately linked to the creation of new identities inside the mission.

Methods

A systematic investigation of each soapstone artifact included an examination of use-wear and style (i.e., etching, buffed edges, rim type, and vessel form and size), which allowed for the placement of objects into various categories: ollas, bowls, griddles, arrowshaft straighteners, and effigies. Ollas have restricted orifices that taper in at the shoulder, while bowls feature wide, unrestricted orifices, and *comales* have flat or curved bodies with at least four-angled edges. Arrowshaft straighteners are modified soapstone fragments with an incised groove on the front side to sharpen the arrow point. Finally, soapstone effigies are small figures shaped into various forms, e.g., animal, human, or abstract.

The object's primary use (its original design) and secondary use (a later addition to its primary function) were analyzed following Adams (2002:21–24). This allowed for the examination of repurposed and recycled cooking wares and vessels. Some of the objects could not be placed into any category and were classified as miscellaneous.

The following section describes the counts and weights of the soapstone artifacts from the collection, combining both the Gabel and Deetz soapstone assemblages. Because the most significant artifact classes identified here are related to foodway practices, I discuss what the results mean concerning Native food preparation and consumption at the mission. I then compare the soapstone assemblages within the Norman Gabel and James Deetz collections to distinguish if certain practices change over time. I use the ratio of different soapstone cooking wares (e.g., the whole number of *comales* in relation to the whole numbers of ollas and bowls) between the collections that were recovered from distinct contexts and then compare the proportions to examine change and continuity over time. Using the proportions of different types of soapstone cooking wares helps account for differences in sample size. When investigating the miscellaneous soapstone category, I compare the assemblages to one another by standardizing the count and weight. The total count or weight is divided by the total amount of soil volume excavated in each context to account for an equal comparison.

To achieve a minimum number of vessels (MNV), I calculate the soapstone fragments by weight. This has provided a working framework for comparing different vessel types amongst each other. For example, Brown (2018:249) could not previously determine the MNV of *comales* using count because these objects break into uneven fragments. However, by combining the total weight of all the fragments identified as *comales* and dividing this number by the average weight of one whole *comal*, it is possible to determine the MNV. When applied to the ollas and bowls, this method can lead to an equal comparison of the different types of soapstone cooking wares represented at the Mission. To get the average weight of an olla and bowl, I used the largest vessel fragments that had the rim and body still attached. With a ceramic rim diameter sheet, I was able to estimate how much of the vessel was present and that percentage was then used to determine approximate weight of a whole vessel.

Soapstone results: Raw material

All of the soapstone in the olla, bowl, *comal*, miscellaneous, and effigy categories are course-grained (grain size >1 mm, after Rosenthal and Williams 1992:221) silicate-rich (e.g., talc-schist, chlorite-schist, chlorite-talc-schist) rocks (see also Huhta and Kärki 2017). There was only one serpentine artifact comprised of hydrous magnesium silicate that forms a very fine-grained, green and smooth gemstone and it was classified as an arrowshaft straightener. The other stone, labeled as soapstone, is concentrated with medium, sheet-like minerals, suggesting a source that has a high concentration of schist within its granular composition. Many of the objects have large, chunky, needle-like inclusions that likely represent the mineral mica. However, this is distinct from the more densely aggregated crystals identified within soapstone ollas from Medea Creek and *Helo'*. Objects fashioned from this distinctive stone are shinier, where the crystals are not large inclusions visible on the outer surface of the rock. Instead, they are tightly interwoven into the fabric of the stone itself (Brown 2018:252). These tightly woven fibers in the source material may be an abundance of anthophyllite found on Santa Catalina Island (see also Weide 1973). Anthophyllite is characterized by a fibrous mass that classified as a type of asbestos. Under a microscope it holds a crystalline structure with gold/brown/ or bronze coloring. These characteristics were identified within the assemblages at Medea Creek (Brown 2018, Figure 3, see also L. King 1982:127). King (1982:127) also noted that two pipes made of a different more shist-like soapstone was present at Medea Creek. However, this was not the case with the hollowware vessels, which all had a crystalline appearance. The chunkier, more shist-like materials represent sources in the interior, such as Tulare County or Sierra Pelona (L. King 1982:127; Landberg 1980; Romani 1982). Soapstone locations in Santa Clara, Calleguas, Santa Rosa, and Simi Valley, and the Ventura are described as having the same characteristics as Sierra Pelona schists (Landberg 1980:14-15). The differences in soapstone sources inside and outside the mission may also have to do with the quality of the source material. The soapstone from Mission La Purísima was likely acquired from lower-grade sources. In contrast, Medea Creek and *Helo's* soapstone derived from higher-quality ones. Many soapstone sources in may not be (re)identified today because of the large-scale production of soapstone during the Mission period and overexploitation.

These patterns may have risen because of changing procurement practices that emerged due to destabilized trade networks extending from the Channel Islands to the

Mainland. By AD 1803, many islanders had left their Native villages to join the missions. Between AD 1814 and 1817, the Northern Channel Islands became nearly devoid of Native peoples (Johnson 1982:67–68). The Southern Channel Islands went through similar disturbances: by AD 1819, Santa Catalina Island's native population was gone (Strudwick 2013). Closer sources in the interior, like those identified by Romani (1982), may have been exploited (Table 4.6); this includes San Emigdio Range in Santa Barbara County and in the Southern San Joaquin Valley. Bouquet Canyon in the upper Santa Clarita River is also another possible source (Greenwood 1969:5)

Soapstone appears to have been not only accessed from different outcroppings by residents at the mission but also lower-grade sources may have become more available with the introduction of metal tools. The soapstone in the mission was of a blockier structure and had thick inclusions. These lower grade sources could represent the more "schist-like" materials noted from interior soapstone locales, such as in Tulare County and Sierra Pelona. Gamble (2015) argues that the

Table 4.6: Soapstone sources. After Romani (1982).

Location	**Number of sources**
Channel Islands	
San Clemente Island	1
Santa Catalina Island	7
Santa Barbara Island	1
Santa Cruz Island	2
Santa Rosa Island	1
Los Angeles County	
Palos Verdes Peninsula	1
Redondo Beach	1
Pacific Palisades	1
Point Dume	1
San Gabriel Mountains	1
Simi Valley	1
Sierra Pelona Range	1
Ritter Ranch	1
Santa Barbara County	
San Emigdio Range	1
San Rafael Mountains	2
Southern San Joaquin Valley	
Lindsay, Tulare County	1
San Diego County	
Cuyamaca Peak	1

introduction of metal during the contact period led to increased soapstone production during the Late and Historic period. I further propose that metal tools may have also made it easier to exploit lower-grade sources with blockier structures and thick inclusions, such as those recognized in the mission. This likely also led to the more pronounced signature of soapstone bowls, ollas, and *comales* in the Protohistoric and Historic periods.

Soapstone results: Typological classification

There are 583 soapstone fragments comprised of bowls, ollas, *comales*, miscellaneous pieces, arrowshaft straighteners, and one effigy (Table 4.7, Appendix 1a, 1b). Altogether, they weigh 66,757 g. The largest number of identifiable fragments by count and weight are *comales*. This includes 206 fragments and two additional whole *comales* that weigh 36,908 g. One whole *comal* (Cat. no. 155-207a) is 1,689 g, while the other whole *comal* (Cat. no. 155-207b) is 2,045 g. The average of these two whole *comales* is 1,867 g. Considering this average weight and dividing it by the total number of artifacts classified as *comales*, there are at least 20 *comales* represented within this assemblage.

Table 4.7: Count and weight of soapstone in Deetz and Gabel Collections.

Type	**Count**	**Weight**
Bowls	120	14,742
Ollas	60	8,370
Comales	208	36,908
Miscellaneous	191	5,587
Effigy	1	96
Arrowshaft straightener	3	1,054
Total	*583*	*66,757*

Bowls make up the second greatest category in the soapstone assemblage. There are 120 bowl fragments and 37 are rim fragments. Within the Deetz collection, 35% of one bowl (Cat. no. 147-1752) weighs 907 g. It was possible to establish how much of the bowl was present with the aid of a ceramic rim diameter sheet, which gives the orifice diameter and the proportional representation of the bowl itself. This bowl also has the rim, body, and base still attached. Considering that 35% of one soapstone bowl weighs 907 g, the whole bowl likely weighs approximately 2,591 g. Therefore, with a combined weight of 14,742 g in the bowl category, at least a minimum of 6 bowls are represented.

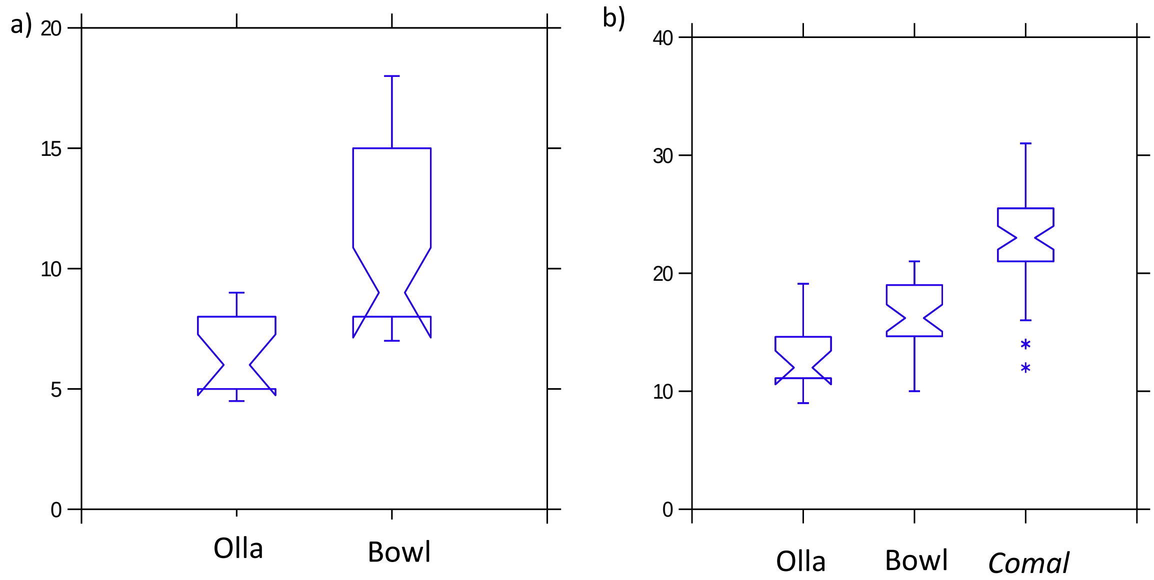
Table 4.8: Average thickness and orifice diameter of bowl, olla, and *comale* rims.

Orifice diameter and thickness	**Gabel**	**Deetz**	**Average**
Bowl rim thickness	2.3	1.8	2.1
Bowl orifice	17	14.4	15.7
Olla rim thickness	1.3	1.2	1.3
Olla orifice	10.7	7	8.9
Comale rim thickness	2.4	2.2	2.3

There are less olla body fragments and rims than bowls and *comales*. Only 40 olla body sherds and 20 olla rims are present, and together these weigh 8,370 g. One half of one olla (Cat. no. 155-324) weighs 1,535 g, and one-quarter of another olla (Cat. no. 147-1714) weighs 725 g. When calculating the whole weight for ollas, the former is likely around 3,070 g, while the latter is approximately 2,900 g. Based on this average weight, there is a minimum of 3 ollas represented.

The bowls average rim size is 2.1 cm across a typically flat or well-rounded surface. The average orifice is 15.7 cm. The ollas have a rim 1.3 cm across a thin, curved surface and an orifice that is, on average, 8.9 cm across (Table 4.8). There is a statistically significant

Figure 4.1: Box plots of (a) rim sizes of ollas and bowls, and (b) thickness of ollas, bowls, and *comales.*



difference when comparing these two artifacts classes (Figure 4.1a), making them easier to distinguish in the archaeological record. The body fragments of these vessels are easy to recognize as well: the ollas have a highly curved and thin body, while the bowls have thicker bodies and less curvature. There is also a statistically significant difference when considering the rims of the *comales* (Figure 4.1b). They are thicker than the rims of the ollas and the bowls, making the identification of *comal* fragments more distinguishable as well. The body fragments of the *comales* stand out among the bowls and olla fragments, as they are flat and could not have functioned as a vessel that held a liquid-based stew or soup.

Miscellaneous pieces make up 32% (n=191) of the entire soapstone assemblage. These small, unidentifiable pieces are comprised of bowls, ollas, or *comales* but did not fit into any category because they are too small, or the form could not be determined. All of the fragments in this category also had predefined curves and rims, which is expected if the vessels are formed and shaped at the mission. This suggests that these small pieces represent already fashioned vessels that broke apart after the cooking wares were discarded, or the miscellaneous fragments represent shatter during the repurposing of one cooking ware into another, e.g., an olla or bowl-shaped into a *comal*.

Conversely, the arrowshaft straighteners are all comprised of very fine-grained (grain size is less than 0.1mm after Rosenthal and Williams 1992) materials and are classified as serpentine.

These results echo those identified in Brown (2018); however, the supplementary analysis provided here adds to a more nuanced picture of foodway practices at Mission La Purísima Concepción. Previously, Brown (2018:254) found that bowl and olla rims are statistically different from one another. Additional information provided here illustrates that *comal* rims are also statistically different from bowls and ollas. This provides additional evidence to demonstrate that it is possible to determine different soapstone cooking ware types when investigating the fragments of domestic assemblages in the archaeological record. Brown (2018:254) also previously demonstrated more bowls than ollas at Mission La Purísima: the Deetz collection consisted of 72% bowls and 28% ollas. When considering all the museum collections from this Mission, the percentages are only slightly different. There are 67% bowls and 33% ollas.

Bowls were used for simmering foods for short periods, while ollas served long-term boiling and storage purposes. Bowls also have open orifices that could facilitate the serving of foods for the mission community. Their flat bases suggest they were placed on level surfaces. The Native community at the Mission likely cooked thick-pasted stews and soups in the bowls influenced by early Spanish cuisines, such as simmering beans and meats or thickening rice and bean dishes. The use of thee bowls in the Mission contrasts significantly with the more traditional uses of soapstone among the Chumash, which emphasized the use of ollas (Brown 2018:257-258). This stark distinction illustrates new practices in food preparation techniques among the indigenous community at the Mission. These results go hand-in-hand with the creation of new indigenous identities that separated pre-colonial traditions from those occurring solely in the mission.

The present analysis contributes more to this previous research by illustrating the significant shift in Native food preparation and consumption in the mission, especially in regard to the prevalence of *comales*. All the *comales* display well-burnished rims and handles that illustrate functional shifts linked to cooking foods such as corn or wheat tortillas (Brown 2018:258-259). These are different from “griddles” in proto-historic and pre-colonial assemblages that display irregular shapes and smaller sizes (Brown 2018:253). Before the Mission period, flat soapstone pieces were likely used for different purposes such as lids to keep dirt out of ollas, markers for family burial plots (Hudson and Blackburn 1984; L. King 1982). They may have also been used as heating stones to make acorn mush in the same way tarring pebbles were used to heat asphaltum in baskets. The *comales* constitute 72% (MNI 20) of the total identifiable cooking ware assemblage, while the other 28% (MNI 8) are ollas and bowls. This pattern exemplifies a diet primarily based on solid-based foodstuffs.

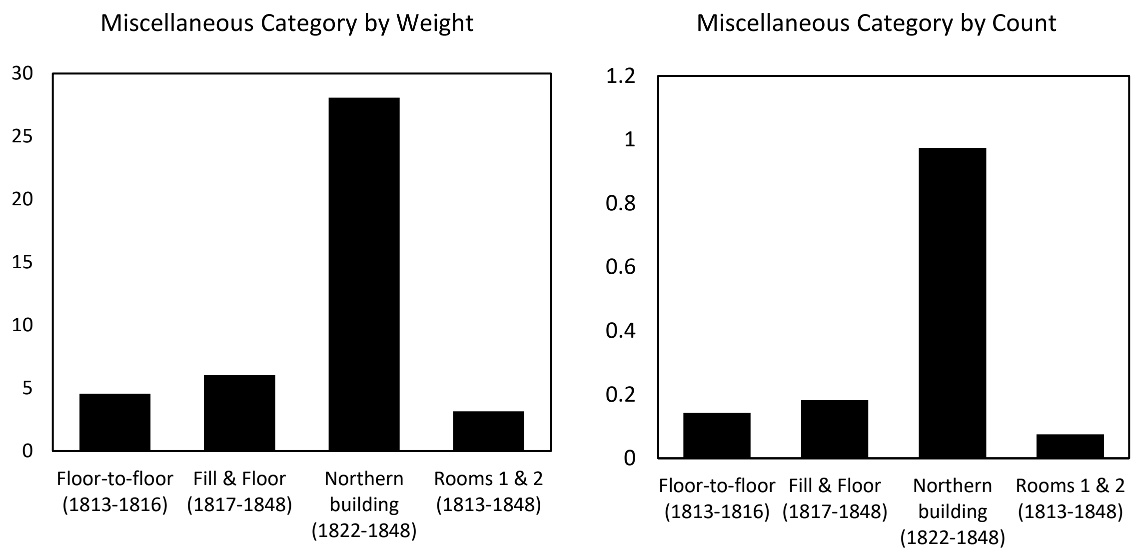
Outside the Mission, however, the olla/bowl ratio to *comales* is significantly different (Brown 2018). At the historic Chumash site of *Helo'*, there are 56 ollas and 15 comales. There were also 15 schist/serpentine bowls, cups, or dishes (Gamble 2020b:64). However, it is important to acknowledge that the mission represents domestic assemblages while outside the mission is largely comprised of artifacts from cemeteries. The abrupt and distinct shift in diet among mission residents may have been influenced by early Hispanic foodway traditions, attesting to the creation of new Native identities that formed at Mission La Purísima in conjunction with introduced customs and practices.

Soapstone results: Comparing contexts

There are three conclusions when comparing the ollas, bowls, and *comales* between the chronologically distinct assemblages. First, the Chumash, who moved to the Mission La Purísima Concepción, came with a set of predefined practices that were influenced by early Hispanic cuisines—and this did not change throughout the occupation of the Mission. Second, the highly fragmented nature of soapstone pieces within the Gabel collection suggests vessels were repurposed more later in time. Third, the overwhelming amount of soapstone in the floor-to-floor level, which includes the presence of two whole and one partially whole *comale*, may have to do with a distinct caching event that happened sometime between AD 1826 and 1830.

Within the floor-to-floor context, or the earliest assemblage at the Mission, there are no ollas: only 17 bowl fragments that weigh 3,880 g, and 18 whole, partially whole, and fragmented *comales* that weigh 7,482.44 g. Considering the approximate average weight of one bowl is 2,592 g, and the estimated average weight of one whole *comale* is 2,045 g, there are at least two bowls and four *comales*—a two to one ratio. In this earliest assemblage, the analysis of soapstone illustrates that the Chumash community had moved to Mission La Purísima Concepción with a set of distinct foodway practices that had already integrated early Hispanic customs. The change in the soapstone industry to fashioning more bowls and *comales* likely emerged beforehand, at the Mission La Purísima Vieja that operated between AD 1787-1812. The pattern does not change when investigating the latest assemblage at

Figure 4.2: Miscellaneous soapstone pieces (a) by weight and (b) by count.



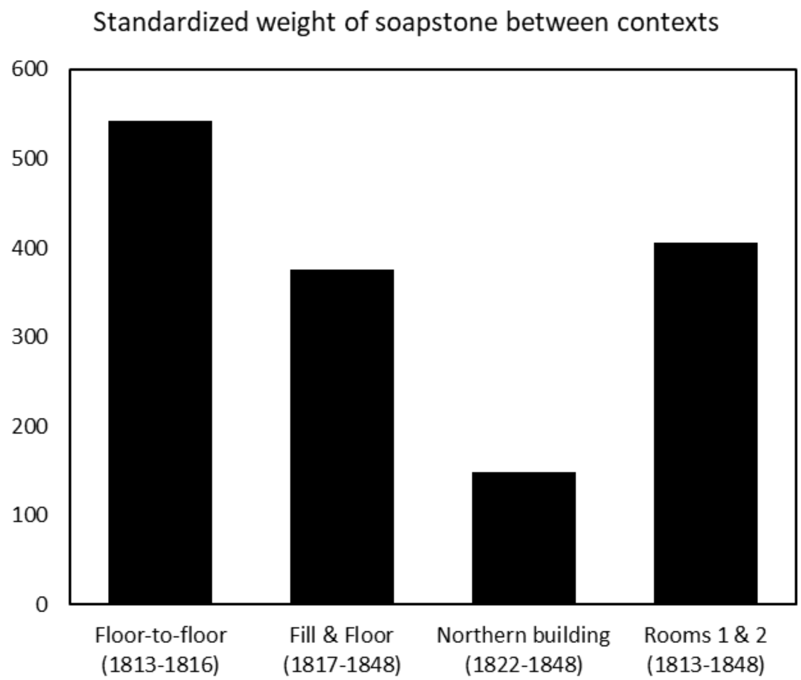
Mission La Purísima Concepción. Within the Gabel collection, there are approximately three bowls, one olla, and eight *comales*. Compared to the earliest assemblage, the ratio of vessels used to consume liquid-based foodstuffs (ollas and bowls) to solid-based foods remains the same, two comales to one holloware vessel.

While there is no change in soapstone cooking wares over time, there is a noticeable difference between the counts of miscellaneous pieces in the earliest and latest assemblages. For example, within the earliest collection, miscellaneous soapstone pieces only make up 7% (n=3) of the overall count. Within the latest assemblage, 37% (n=176) of the soapstone assemblage is classified as miscellaneous. Even when considering the soil volume within these contexts, there remains a significant difference between the earliest and latest assemblage: the standardized count considering soil volume is 86.6 m^3 in the Gabel assemblage and only 14.2 m^3 in the floor-to-floor in the Deetz assemblage (Table 4.9). The same pattern holds true when investigating all the contexts studied here (Figure 4.2). There

Table 4.9: Count and weight of soapstone by category within each context.

	Gabel		Deetz		Room 1 & 2		Fill & Floor		Floor-to-Floor	
	Count	**Weight**	**Count**	**Weight**	**Count**	**Weight**	**Count**	**Weight**	**Count**	**Weight**
Bowl fragments	68.00	6608.08	15.00	3062.00	1.00	123.00			13.00	2726.00
Bowl rims	25.00	1264.96	12.00	3806.50	3.00	633.00	3.00	1982.50	4.00	1154.00
Olla fragments	33.00	1259.51	7.00	2039.20	1.00	37.00	7.00	2711.00		
Olla rims	15.00	1341.30	5.00	3607.00	1.00	398.00	2.00	1598.00		
Comale fragments	154.00	15186.91	54.00	21721.17	10.00	3321.00	21.00	7287.73	18.00	7482.44
Miscellaneous	176.00	5075.94	15.00	511.42	1.00	42.00	7.00	231.22	3.00	96.40
Effigy	1.00	96.00			0.00		0.00		0.00	
Arrow shaft straightener	1.00	74.00	2.00	980.00			1.00	642.00		
Total	473.00	30906.70	110.00	35727.29	17.00	4554.00	41.00	14452.45	38.00	11458.84
Soil Volume (SV)	207.99	207.99	121.63	121.63	11.21	11.21	38.42	38.42	21.12	21.12
Total w/ Soil Volume	2.27	148.60	0.90	293.74	1.52	406.24	1.07	376.17	1.80	542.56

Figure 4.3: Standardized weight of soapstone between each context.



are more miscellaneous soapstone pieces in the latest assemblage than there are in contexts with earlier components.While this pattern may have to do with different sampling strategies employed during the Norman Gabel and James Deetz archaeological field projects, another consideration may be due to increased recycling later in time. Because soapstone vessels were not traditionallyproduced on-site but were carved at the source rock outcropping, the highly fragmented nature of the latest collection may suggest that more cooking wares were being repurposed at the Mission—as opposed to these fragments representing the production of whole new vessels completely. In fact, in the northern part of the building, the weight is lower than all the other contexts, further attesting to more recycling instead of new soapstone coming into the mission later in time (Figure 4.3). Some miscellaneous pieces even display cut marks, grinding, or have some characteristic (e.g., a bowl or olla rim or curvature)

Figure 4.4: Two whole and one partially whole reconstructed *comales* in the floor-to-floor.

illustrating its remodeling from one object into another. This pattern has also been identified at Mission San Buenaventura. Wlodarski and Larson (1976:57–58) show that recycled soapstone objects and vessels associated with food preparation increased over time, based on raw counts from 0 to 180 cm. The small, miscellaneous pieces identified in the Gabel collection may also bear evidence of more recycling later in time, as Native artisans refashioned bowls and ollas into *comales* or used these objects for other unknown purposes.

The last point examined here is a large amount of soapstone by weight within the floor-to-floor level. By dividing the total weight of all the soapstone by the amount of soil volume excavated within each context, the floor-to-floor has a heavier weight than the other contexts. Interestingly, within this assemblage, there are two whole, reassembled *comales* and one partially whole reassembled *comal* (Figure 4.4). The other fragments within the floor-to-floor level appear to have also fit together to make at least one other whole *comal*.

These cooking wares likely broke from frequent traffic on the upper floor after they were cached. The re-assembly of these whole and partially whole cooking wares is exceptional, and no others have been found like them at the mission. Moreover, these artifacts were all found in room 4 within the Deetz excavation area. Later in this chapter, I discuss a glass and ceramic cache in room 3, which is in the same apartment unit as room 4. Since rooms 3 and 4 are spatially linked to one Native individual or family—they represent a front and backroom in a two-room apartment—these *comales* in room 4 may have also been

FLAKED STONE

Locally procured raw materials to fashion stone tools served various purposes, such as hunting, hide-scrapping, drilling, cutting, hammering, and weaponry. Materials with proper characteristics (e.g., density, hardness, and texture) were chosen to make certain tools. The study of flaked stone can thus shed light on everyday practices that continued throughout the Mission period and some of the household activities that were occurring. The raw materials can additionally reveal acquisition locations, providing further insight into trade networks and expansive mission landscapes.

Methods

Many, but not all, of the raw materials and tool types were noted in the Deetz catalog. However, I did not rely solely upon the catalog when analyzing these materials. I also conducted a systematic investigation of both the Gabel and Deetz collection. Some of the flakes and formal stone tools were not previously noted in the catalog or were only noted as "stone," while others were more clearly documented by type and material. I updated the more basic descriptions when conducting my analysis of the collection that I include in the appendix. As the Gabel and Deetz collections are from the 50s and 60s, it remains uncertain if *every* piece of flaked stone was collected; however, based on the quality of curation and in-depth cataloguing of the James Deetz collection at least, it most certainly appears that he did collect all lithic flakes and stone tools. As previously noted, both Gabel and Deetz screened materials through $^{1}/_{8}$" mesh, additionally suggesting that they both were thoroughly sorting through the materials and likely collecting all the artifacts.

Each lithic artifact was counted, weighed, and placed into a category based upon form and function. The flakes displayed one or more diagnostic flake features, such as a bulb of percussion, striking platform, or ripples. They were then subdivided based upon their production sequence that was classified by the amount of cortex visible on the flake's outer surface. Primary flakes have 50-100% dorsal cortex; secondary flakes have 50% but more than 0% cortex; tertiary flakes have no cortex (Bradbury and Carr 1995; Odell 1989:195). Artifacts in the core category had one or more flakes taken from the raw material.

The tool category includes retouched flakes, scrapers, hammerstones, projectile points, drills, blades, and bifaces. I did not perform usewear analyses and did not type these tools by function but rather by following a classification scheme with characteristics visible to the naked eye. According to Shea (2013:17-46, see also Andrefsky 1998), retouched flakes have overlapping clusters of small flake scars (retouch); scrapers have at least one unifacially flaked or retouched edge; hammerstones are used to initiate a fracture in a piece of rock, thus leaving behind battering on the distal edge; and blades are flakes whose length is twice that of the width and have been made by prepared core. Projectile points were only classified as such if they were in complete or nearly complete form, including a base and a point, and could be classified to a type (e.g., Cottonwood). Some artifacts that were bifacially flaked and could not be classified into any category were placed in a "biface" group. This generally includes large bifaces or poorly formed bifaces that does not allow for their classification in a more specific group. Finally, drills are fashioned into long, cylindric, narrow tools with a pointed edge (only one possible drill was classified in this study).

The following section describes the materials, counts, and weights of the flaked stone in both the Gabel and Deetz collections combined. This is followed by comparing these two collections against each other. The Deetz collection represents everything from AD 1813 to 1848; this includes rooms 1 and 2 and the floor-to-floor. It also has a component from AD 1817 to 1848, the fill & floor. Conversely, all the flaked stone in the Gabel collection is within AD 1822 to 1848. When comparing these two collections, it is possible to determine differences between contexts with earlier components versus those that are strictly later.

Following these general descriptions and comparisons, I run a Kintigh DIVERS test on raw material types, including colors, to see if or what assemblages are more diverse and if there are any statistical differences between them. I include color as an axis of comparison because there were noticeable differences among the lithics when studying the Gabel and Deetz collections. At first glance, this appeared to be associated with color and type. After running a Kintigh DIVERS test that included both color and type of material (Monterey and Franciscan chert), I found a statistically significant difference between the different contexts as discussed below. A DIVERS test also resolves issues inherent with variations in sample size (Kintigh 1984, 1989). In the other comparison between contexts, the samples are standardized by weight and count by dividing the total amount of flaked stone by the excavated soil volume per context.

Flaked stone results: Typological classification and raw materials

A total of 139 flakes, cores, and lithic tools that weigh 4,164.92 g are within the Gabel and Deetz collections (Table 4.10, Appendix IIa, IIb). Flakes make up the majority (63%) of the assemblage, demonstrating that tools were manufactured on the premise. In fact, within the flake and retouched-flake categories, 54 (58%) are tertiary, 23 (25%) are secondary, and 16 (17%) are primary. The predominance of tertiary and secondary flaked types demonstrates that the stone is being retouched and shaped into formal tools. The retouched flakes, scrapers, hammerstones, blades, bifaces, and drills bear additional evidence for the continuation of

Table 4.10: Total count and weight of flaked stone in the Gabel and Deetz collections.

Lithic Type		Count	Weight
Flakes		87	601.69
Cores		15	2252.6
Tools			
	Retouched Flakes	6	61.69
	Scrapers	14	473.67
	Hammerstones	4	646
	Bifaces	5	52.86
	Projectile Points	4	4.06
	Drill	1	4.17
	Blades	3	64.08
Total		*139*	*4160.82*

various expedient purposes. At the same time, the projectile points illustrate a sustained reliance on hunting wild game or perhaps weaponry. All of the finished projectile points were classified as Cottonwood (Glassow et al. 2007:208, Justice 2002:367, Figure 4.5).

The raw material is nearly all comprised of Franciscan and Monterey chert, which makes up 96% (n=133) of the flaked stone assemblage. Hard, platy to bridle cherty Monterey shale naturally occurs in the Lompoc and surrounding areas (Dibblee 1988a, 1988b, 1988c,

Figure 4.5: Cottonwood projectile point. Cat. no. 147-B647.

1988d, 1988e, 1993a, 1993b, 1993c). However, the chert listed in bedrock formation around Point Arguello within the Vandenberg Airforce Base comes in the form of siliceous rock (chert). It is approximately 19 miles from Mission La Purísima Concepción. As not all Monterey shale outcrops contain workable chert, the later source was likely utilized in the production of flaked stone tools. Franciscan formations also occur in local deposits near the Mission (Dibblee 1988b, 1988d). Yet Dibblee (1993b, 1993c, 1994) notes that Franciscan chert in particular is located in the southern portion of the Zaca Lake Quadrangle, the northern section of the Los Olivos Quadrangle, and the central portion of the Figueroa Mountain Quadrangle (see also Moore 1989). These sources are approximately 30 miles away from Mission La Purísima Concepción. There were also two pieces of fused shale. Fused shale, which has similar characteristics to chert, was obtained from Grimes Canyon, located in Moorpark and Oak Ridge, northwest of Simi Valley. The presence of these raw materials attests to movement across the colonial landscape and access to traditional chert resources by the Chumash throughout the Mission period.

Comparing contexts: Raw materials

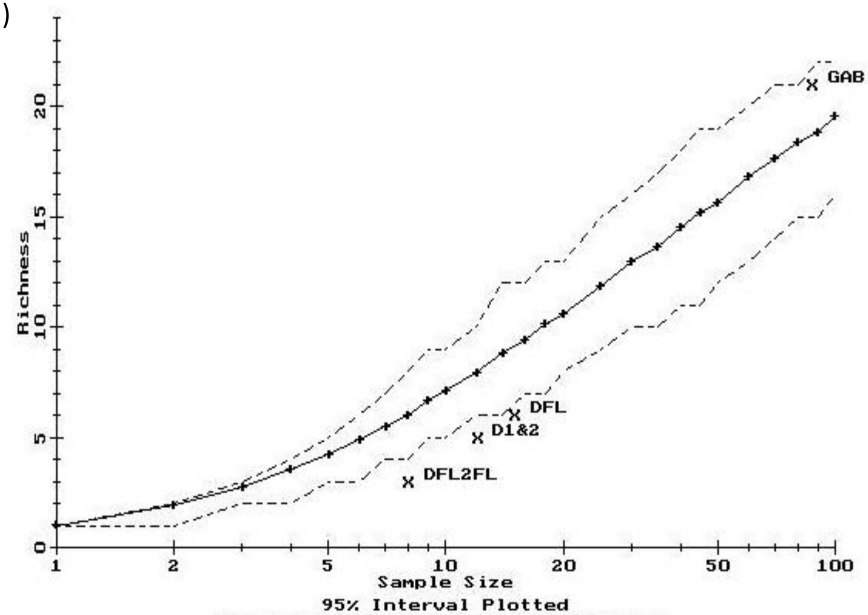
Although the raw material is nearly all comprised of chert, there are differences in the types of cherts between the collections, signifying the temporal distinctions between them. For instance, Franciscan chert makes up 34% (n=31) of the lithic assemblage within the Gabel collection but, within the Deetz collection, there were only two (4%) flakes of Franciscan chert (Table 4.11). Not only are the chert types acquired from different locations, but also the

Table 4.11: Franciscan and Monterey chert in Gabel and Deetz Collection.

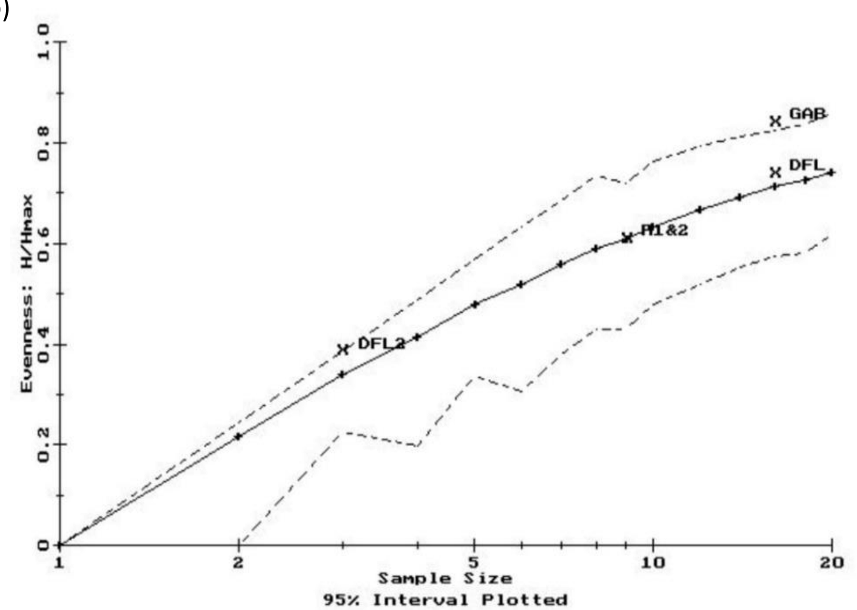
	Gabel Collection		Deetz Collection	
Chert Colors	**Franciscan**	**Monterey**	**Franciscan**	**Monterey**
beige	1		2	2
beige/ green	2			6
beige/ grey	2	13		
blue/ green	1	3		
black	1	8		2
brown	3	12		
brown/ beige				16
grey	1	7		2
grey/green		1		
grey/orange		1		
grey/white		4		10
grey/black				2
orange	2	6		
red	13	2		
red/ grey	3			
red/beige				2
white	2	2		
Total	*31*	*59*	*2*	*42*

Figure 4.6: Kintigh DIVERS output showing a difference of Monterey and Franciscan chert colors in the latest collection in regard to the (a) richness and (b) evenness.

a)



b)



*XFL2FL—Deetz's "floor-to-floor,"XD1&2—Deetz's "Rooms 1 & 2," XDFL—Deetz's "Floor & Fill," XGAB—Gabel Collection

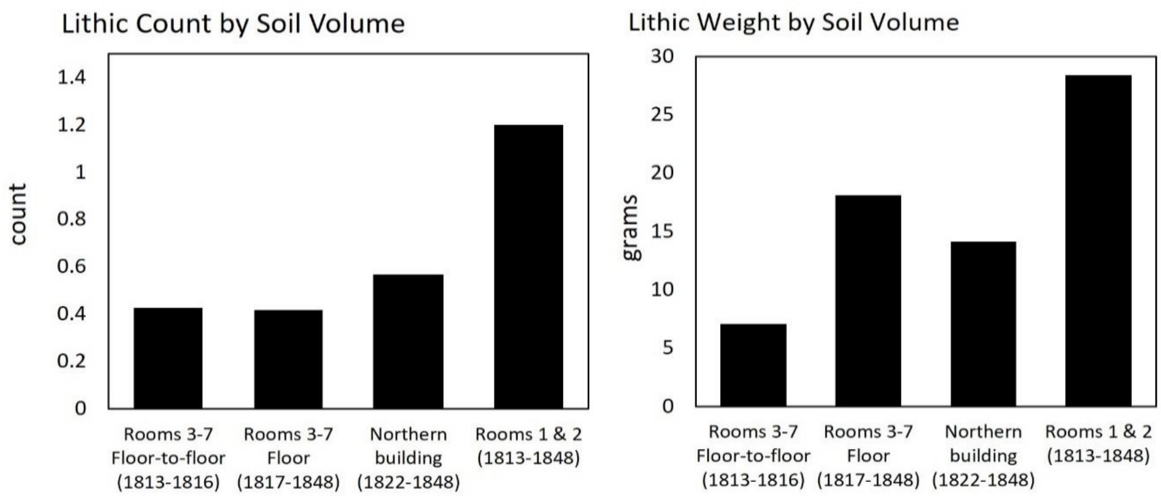
color varietals of Monterey chert are distinct as well. A Kintigh DIVERS test investigating the chert type and color varieties among all the assemblages show statistically more richness and more evenness among the flaked stone within the Gabel collection—the latest group (Figure 4.6ab). Equally, the contexts with earlier components remain statistically less diverse and more restricted, falling below the expected standard curve based on sample size.

Within the Gabel collection, there is more Franciscan chert and Grimes Canyon fused shale. The Franciscan chert is about 10 miles further from Mission La Purísima than the Monterey chert bedrock located at Point Arguello. Grimes Canyon fused shale is near Simi Valley, about 120 miles away. The greater diversity in flaked stone procurement sources may directly result from the changes in the socio-economic system from Spanish to Mexican California. Spanish policies may have placed more control over access to outside trade networks and sources. In comparison, during the Mexican period, there may have been less control over indigenous movement across the landscape, facilitating more expansive trade networks and more access to local resources.

Comparing contexts: Flaked stone types

This section tests an interpretation made by James Deetz (1963:188) that explained a higher concentration of chipped stone flakes and chert tools are present in the Gabel collection, but were not identified in his excavations. However, Gabel excavated nearly the entire 20 room building of the northern extent of the Native Family Apartments. In contrast, Deetz only excavated seven rooms in the central building. When considering the soil volume within these contexts, results indicate only a slightly higher count and weight between the northern extent of the building and what was found by Deetz—except for rooms 1 and 2.

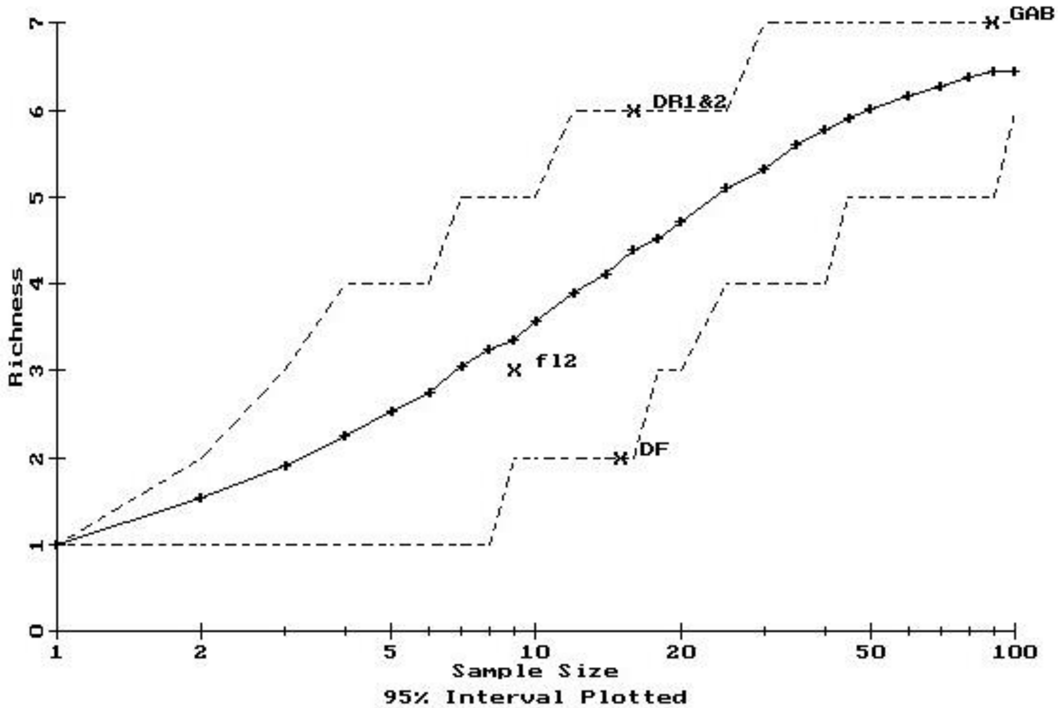
Figure 4.7: Lithic (a) count and (b) weight by soil volume.



The higher counts and weights of flaked stone in rooms 1 and 2 are striking and deserve more clarification (Figure 4.7). These rooms not only had flakes, but the tool assemblage has utilized flakes, a scraper, a hammerstone, and a projectile point. In rooms 3-7, and within the floor-to-floor and fill & floor, there is only one utilized flake and one hammerstone combined. A Kintigh DIVERS analysis further illuminates the distinction between these assemblages (Figure 4.8). Running the counts of all the categories of flaked stone in the DIVERS program, the lithic tools in rooms 1 and 2 have greater diversity and are on the cusp of being statistically more significant than the rest of the contexts. At the same time, results also reveal a similar high diversity of stone tools within the Gabel collection.

The restricted assemblage of flaked stone in rooms 3-7 is one of the multiple lines of evidence—discussed throughout this chapter and later in this dissertation—that suggests an *alcalde,* or an Indian official, occupied and controlled these rooms. For example, Deetz (1963:188-189) identified a significant renovation event that led to the capping of the floor in rooms 3-7. The upgrade included lime whitewashed adobe walls and a plaster-coated floor. It

Figure 4.8: Kintigh DIVERS output showing a difference between the latest collection and rooms 1 and 2 compared with Deetz's fill & floor and floor-to-floor samples.



*XFL2FL—Deetz's "floor-to-floor,"XD1&2—Deetz's "Rooms 1 & 2," XDFL—Deetz's "Floor & Fill," XGAB—Gabel Collection

is possible that a family of Chumash *alcalde* occupied and controlled these rooms—the restoration event signifying a rise in the social status of the individual. These rooms are also closer to the central mission, mainly the shop, chapel, and other residences, allowing for more access to the essential workings of the mission. If an *alcalde* lived in these rooms, a more restricted lithic assemblage is expected since their responsibilities included organizing labor, handling land deals, and managing the Native community (Hackel 1997: 354). Perhaps the *alcalde* who lived in rooms 3-7 simply did not have the time to partake in the lithic production activities. Alternatively, as a form of identity maintenance, they may have blatantly chosen not to participate in this more traditional craft.

The flaked stone assemblage in rooms 3-7 contrasts with rooms 1 and 2 and the Gabel collection, even though both contexts represent the material remains of Native individuals and families who resided in the adobe apartments. Since rooms 1 and 2 and the Gabel collection did not have evidence for a renovation event that led to whitewashed walls and a lime-plastered floor, these rooms may represent the expected norm of everyday activities that would have occurred by Native peoples who occupied the apartments. The excavations in the summer of 2019 further attest to this interpretation (see Chapter 6).

ASPHALTUM

The Chumash traditionally used asphaltum for a variety of symbolic, decorative, and practical purposes (see Brown 2014, 2016; Hudson and Blackburn 1983, 1987; Gamble 1983, 2008). Regarding decoration, it was used to appliqué shell beads onto objects such as mortars and pestles, soapstone pipes, and effigies. For everyday use, the substance fostered many sophisticated technologies, such as hafting projectile points to shafts and knife blades to handles and gluing fishhooks to cordage. Additionally, the water-resistant characteristics of asphaltum made it ideal for waterproofing basketry and caulking the sea-going canoe, the *tomol*.

South-central California is home to a variety of asphaltum sources, which can occur both on land, appearing in liquid pools that harden into mounds. Submarine seeps that subsequently release tarballs also washup along sandy beaches and rocky shorelines. One of the most prolific submarine seep fields in the world, which is responsible for amassing numerous tarballs on the mainland coast and Channel Island beaches, exist submerged in the Santa Barbara Channel (Landes 1973). Recent geochemical analysis of archaeological asphaltum on San Nicolas Island and San Miguel Island has demonstrated that these tarballs were used for a wide variety of routine manufacturing and repair processes for thousands of years (Brown et al. 2014). Mainland seeps also occur throughout the coastal and interior valleys. Ethnographic evidence suggests that asphaltum gathered from terrestrial seeps was formed into cakes and traded throughout the Chumash homeland (Hudson et al. 1978:52).

In the following section, asphaltum artifacts are placed into a distinct asphaltum typology. The results are interpreted through a range of activities occurring at the mission. A comparison of the different assemblages in the Deetz and Gabel collection follows, using standardized counts and weights divided by the overall soil volume excavated from each context. Finally, the section concludes by examining the importance of one primary purpose asphaltum served for Native women and communities—basketry construction.

Methods

Asphaltum is a well-preserved artifact class that leaves behind a distinctive archaeological signature, allowing for its typological classification and placement in a *chaîne opératoire*—or sequence of production. The artifacts in this study were classified based on the typology defined in Brown (2016), which includes four asphaltum categories: (1) technological, (2) processing and application, (3) detritus, and (4) cached (Table 4.12). The technological category consists of artifacts overtly employed in the construction of a final object. There are three subgroups within the *technological* category: constructive, reconstructive, and decorative. The constructive subgroup includes objects used as waterproofing and gluing agents in the production of composite artifacts. The reconstructive subgroup consists of artifacts that were glued back together, and the decorative subgroup includes asphaltum coated objects used for ornamentation.

Table 4.12: Asphaltum typology developed by Brown (2016).

Asphaltum Category	**Examples**
I) *Technological*	
A) Constructive	Hafted points, plugged abalone shells, basketry impressions
B) Reconstructive	Repaired bowls, pestles, mortars, baskets, and ollas
C) Decorative	Shell inlay, painted objects
II) *Processing and Application*	Tarring pebbles
A) Processing	Steatite ollas, interior-stained abalone shells
B) Application	Applicators of bone, shell, stone, or wood
III) *Detritus*	
A) Fragments	Processed fragments less than 2 cm; Non-recyclable
B) Incidental	Asphaltum smudges on artifacts and ecofacts with no function
IV) *Cached*	
A) Cakes	Hand molded asphaltum pads, typically 15-45 cm* in diameter
B) Filled Shells	Shells with the inner cavity filled with asphaltum
C) Chunks	Unmodified or modified fragments between 2-15cm; Recyclable

*Cakes do not necessarily depend on their size but shaped or molded, and processed characteristics.

The *processing and application* category consists of artifacts used for heating, mixing, and application. In California, these artifacts can include tarring pebbles, which are ethnographically known to melt and apply asphaltum. Tarring pebbles can be further classified into another typology to address the array of asphaltum-related activities occurring. To better understand these activities, the tarring pebbles were measured according to the Brown and Vellanoweth (2014) tarring pebble classification scheme, which modified the Wentworth geological classification for pebbles based on maximum diameter (4-64mm), divided it into four subgroups: small (4 to 15 mm), medium (15 to 30 mm), large (30 to 45 mm), and extra-large (45 to 64 mm). Each tarring pebble was placed into one of these subgroups.

Artifacts used for heating are in the processing subgroup. In contrast, the application subgroup contained applicators that contained residue on their distal ends, suggesting that their primary function was to apply asphaltum onto another artifact.

The *detritus* category contains two subgroups: fragments and incidental. Artifacts placed in the fragment's subgroup are less than 2 cm in size and display signs of being processed, such as degassed holes. The other artifacts in the incidental subgroup consist of objects unintentionally smeared with asphaltum during the production process.

Finally, the *cached* category consists of three sub-categories: cakes, chunks, and asphaltum filled mollusk shells. Cakes are circular to semi-circular molded pads that typically measure between 15 and 45 cm. However, cakes are not so much measured by their size but shaped or molded and processed characteristics. Chunks, which were not prepared or molded, are irregular in shape and measure between 2 and 15 cm. Conversely, asphaltum filled mollusk shells contain large masses of asphaltum stuffed inside the shell's interior cavity.

Asphaltum Results

Artifacts representing every stage of the asphaltum production sequence (technological, processing and application, and cached) are present within the contexts analyzed here, illustrating that asphaltum production was occurring within the context of the Chumash Family Apartments throughout the mission's operation (Table 4.13, Appendix IIIa, IIIb).

In the *technological* category, basketry impressions are the predominant form of material culture identified, while two abalone dishes with their siphon holes plugged are the only other tools. The impressions left behind on the asphaltum lining illustrate that the

Table 4.13: Asphaltum results.

	Count	Weight
(I) Technological		
Waterbottle basketry	52	438
Basktery hopper-mortar	1	3,700
Dish	2	1,219.40
(II) Processing and Application		
Tarring pebbles	77	4,883.90
Mixing dishes	4	181
olla	1	1,535.00
(III) Detritus		
Fragments	62	222.7
Incidental	5	511
(IV) Cached		
Cakes	18	3,660.60
Chunks	31	878.2
Total	*253*	*17,229.70*

twining technique made the bottles watertight. However, due to the nature of the fragmented pieces, it remains unclear how big these baskets are or the minimum number of baskets represented.

Within the processing category, there are four mixing dishes and one asphaltum coated soapstone olla. Still, there are no other applicators in the assemblage besides tarring pebbles and no additional tools in the technological category besides baskets and abalone dishes. Thus, there remains an unidentified activity regarding what the asphaltum in the mixing dishes and the soapstone olla was used for (e.g., fishhook construction or projectile point adhesive).

Within the *detritus* category, small fragments and asphaltum smudges on rocks and shells illustrate that the substance was produced within the mission. The majority (97%) of this category is "fragments," while the other 3% is incidental. The processing and application of asphaltum can lead to spilling and smears on a variety of objects. Thus, the incidental category and small fragments identified here also attest to transforming the material into an adhesive or waterproofing agent.

Evidence for asphaltum caching was considerable at Mission La Purísima; these patterns illustrate a continued reliance on existing trade networks and access to locally available tar seeps. The pattern is distinct from other sites in southern California and suggests a reliable source and trade of the substance. For example, on San Nicolas Island, Brown (2016) found no cakes within the asphaltum assemblage at the large proto-historic village site of CA-SNI-25. Within the island context, there may have been a lack of reliable and steady asphaltum sources. Indeed, the geochemical signature of the utilized tar matched seeps underwater in the Santa Barbara Channel. The submerged seeps exude the liquid substance from the ocean floor, which follows the coastal tides southwards and washes up in small globs that harden on the rocky intertidal shores (Brown 2014). However, the presence of large hand-molded cakes at Mission La Purísima suggests more significant access to reliable seeps, as well as the continuation of existing trade networks. Interestingly, Salwen (2011) found more evidence for asphaltum cakes during the Historic period in the Santa Barbara Channel region. Like the soapstone industry that became more predominant later in time, asphaltum may have also been another traditional industry that boomed during the Historic period.

The asphaltum at the mission was likely acquired from local, terrestrial seeps because they are stored in large, hand-molded cakes, and there are significant quantities of them. Four seeps are located near Mission La Purísima (Heizer and Treganza 1944:319). These tar seeps include (1) Mission San Luis Obispo, probably the location of the current oil-producing wells in Price Canyon near Pismo Beach, located 59 miles away (2) McKittrick tar seep, Kern

County, which is approximately 65 miles away, (3) More's Landing at La Patera 38 miles from the Mission, and (4) Tajiguas Creek—about 21 miles away. There are many other mainland seeps in the Santa Barbara/Ventura area. One is in Goleta (on the campus of UCSB) and a large one between Santa Paula and Upper Ojai Valley. Only geochemical testing can shed light on the source location and trade patterns.

Tarring pebbles make up a large portion of the asphaltum artifacts. When looking at the unbroken tarring pebbles from the Gabel collection, the majority (n=22; 63%) are classified as "extra-large," while the second largest category was "large" (n=10; 28%). Some pebbles (n=3; 9%) are so big that they did not fit in the Brown and Vellanoweth (2014) classification scheme and were placed in the cobble category. This is also true for the tarring pebbles in the Deetz collection. Most (n=14; 74%) of the whole pebbles fit into the "extra-large" category, while four (21%) other pebbles were placed in the "large" category, and one (5%) was placed in the small category. The similarities among all the pebble sizes illustrate that baskets are made with similar-sized orifices. These baskets may represent those described by Hudson and Blackburn (1983:283) as being big with circular bodies with the capacity of storing a large surplus of water.

Asphaltum results: Comparing contexts

The asphaltum assemblage described here does not allow for a thorough comparison through time. The methods consider not just the substance itself but also what it appeared on. For example, one whole olla with asphaltum adhered to its surface in the processing category weighs 1535 g. Some artifacts in the detritus category weighs less than 5 g. Counts also lead to uneven comparisons because small fragments, such as those in the incidental category, are more representative than whole counts of asphaltum cakes. While the small sample size does not permit a comparison of these individual categories over time, it is possible to understand the actual practices occurring in the earliest and latest periods at the mission.

The same types of asphaltum coated artifacts were recovered from both the Gabel and Deetz collections. They represent every category of the asphaltum production sequence. While every piece of detritus may not have been collected during the excavations in the 50s and 60s, the similarities in artifact types between the collections and rigorous screening through $^{1}/_{8}$" mesh suggests that most asphaltum artifacts were collected. The predominant type of artifact recovered points to basketry production as the primary use of the substance through the mission's occupation. In the floor-to-floor, this is evident in the form of basketry impressions, tarring pebbles, cakes, and detritus. The same artifacts are found in the latest assemblage, confirming a similar emphasis on making water bottle baskets. What can be gleaned from this information is the crucial role that asphaltum played in the continuation of basketry manufacturing from the earliest to the latest phases of the mission. Chumash women, who have been traditionally linked to the production of this craft, are primarily responsible for this continuity in tradition (Brown et al. 2018). This includes creating the basket itself and a whole suite of other practices, such as extensive knowledge on how to find, prepare, and weave the materials. Today, many California Indians continue the art of basket weaving because of these sustained communities of weavers throughout the Mission period.

GROUNDSTONE

This section includes manos, metates, pestles, and mortars used to grind and pulverize seeds and nuts. For thousands of years, the Chumash used all these implements to pound, crush, grind, pulverize and stir local seeds and nuts. The groundstone analysis can establish a range of activities and contextualized these routines in light of change and continuity over time. Changes in grinding stone technologies are especially apparent with the use of the pestle and mortar contrasted with the mano and metate. For example, there is a dearth of manos and metates in archaeological sites during the Late Period in the Santa Barbara Channel region (King 1990). Instead, pestles and mortars are the predominant forms of grinding stone in these assemblages. The presence of pestles and mortars suggests that pounding acorn was much more significant later in time, while seeds and nuts were more integral in the Chumash diet earlier in time (King 1990, 2011). The raw materials with which these implements were fashioned can also reveal access to new and different sources that came with a suite of introduced practices that significantly impacted the local indigenous diet.

Methods

Groundstone has attributes that allow for its placement into distinct categories (see Adams 2002). Pestles are over twice as long as they are wide, and they are blunt, club-shaped tools with the distal end that is thicker than the dorsal end. Pestles are specifically designed to pulverize, crush, and grind. They come in many different sizes and shapes: larger pestles crush and break materials, while smaller ones crush, grind, and stir (Adams 2002:138-139). Mortars work with a pestle to pound, crush, or stir. There are many different subtypes of mortars (i.e., pebble mortars, rock mortars, and shaped mortars; Adams 2002:128-132). The ones investigated here are all shaped mortars, with deep basins, rims, and flat bottoms to steadily place on the ground.

Manos are both modified and unmodified and come into various forms, e.g., ovular, circular, and rectangular, with distinct edges and use-wear patterns such as a smooth polished

Table 4.14: Count and weight of groundstone.

Type	Count	Weight
Pestel	12	9,281
Mortar	10	7,002
Mano	19	11,466
Metate	14	11,000

grinding surface. Manos are ground against a compatible metate. For example, circular *basin metates* are used with circular *basin manos*. In contrast, rectangular *trough metates* are used with a rectangular *trough manos* (Adams 2002:100-102). These distinct shapes give inference to the types of grinding motions used with them: the former being a circular gesture. The latter consisted of a back and forth rubbing movement. The bottom of the metate lies flat against the ground or stands upright on three or four legs, which is typical among Mexican metates. Each artifact was inspected for the raw material with which the tool was fashioned, then typed by form and function, and studying for use-wear patterns following Adams (2002).

The following section first describes the counts and weights of each groundstone class, considering both the Gabel and Deetz collections. The defining factors and subtypes are explored using Adams' (2002) groundstone analysis methods. Following these descriptions, the collections are compared using a chi-square test of significance and standardized counts and weights that consider the soil volume. Since the Gabel collection is strictly a late component, and the contexts within the Deetz collection have all earlier elements, it is possible to test differences between contexts with earlier elements versus those strictly later. At Mission La Purísima, this type of analysis can shed insight into changes that occurred during the Mexican period, such as the types of raw materials that were imported into the mission and the new foodway preparation techniques linked to these material shifts.

Groundstone Results

The overall groundstone assemblage has 12 (22%) pestles (two whole pestles) and pestle fragments that weigh 9,281 g, ten (18%) mortar fragments that weigh 7,002 g, 19 (35%) whole manos and mano fragments that weigh 11,4600 g, and 14 (25%) metate fragments that weigh 11,000 g (Table 4.14, Appendix IVa, IVb). The materials to fashion these tools are acquired from local and non-local sources. The local sources are both volcanic and sandstone, while the nonlocal sources are strictly vesicular basalt. Only the basalt is fashioned into double-handed manos and metates with legs, suggesting that they are all imported. While the former category makes up all the groundstone types explored here, i.e., pestles, mortars, manos, and metates, it is the latter category—materials made of vesicular basalt—that are all solely fashioned into manos and metates.

Eleven of the 19 (58%) manos are imports, and they are all two-handed rectangular manos that are polished and smooth on one or more sides. Although these manos are rectangular, they do not display *trough ware*—that is distinctive wear on the edge of the mano due to rubbing against trough borders (sensu Adams 2002:110)—suggesting they operated with a flat metate. The eight (42%) locally produced mano and mano fragments, however, are all ovular.

There are also 12 (86%) metate fragments made of imported stone. As all the metates are in smaller pieces, it was not possible to gauge how big they are, but some of the larger pieces display ground and incised edges that suggest they are large enough to fit the rectangular manos. One imported metate leg illustrate that some of the imported metates stood on legs above the ground (Figure 4.9). The leg was triangular with a thick dorsal edge that thinned out to a flat bottom, which likely represents one of two or three other legs that

Figure 4.9: A leg of a basalt metate. Cat. no. 147-2380.

held the metate up from the ground. Contrarily, the two (14%) locally produced metate fragments with circular edges were classified as basin-shaped metates.

The pestles are fashioned from local stone into a variety of shapes ranging from small (11 cm in length) for grinding and stirring (Cat. no. 147-2652), to a long (56 cm) and heavy intended for crushing (Cat. no. 147-1975). The mortar fragments are all from locally procured sandstone, and they have thick well-defined rims shaped like a bowl.

Together, these data indicate that there is continuity, in the sense that there are traditional pestles, mortars, manos, and metates sourced from local outcroppings that continue to be utilized in the mission. These artifacts illuminate a range of activities, such as pulverizing seeds and nuts that were likely locally procured as well. However, the groundstone assemblage also represents shifts in diet and everyday practices. The introduction of newly imported materials that are strictly fashioned into manos and metates suggest new methods for grinding seeds in distinct ways. They were not only ground differently—with a back-and-forth, double-handed motion rather than a single-handed, circular gesture—but also likely used conjunctively with introduced materials such as corn and wheat.

Comparing Contexts

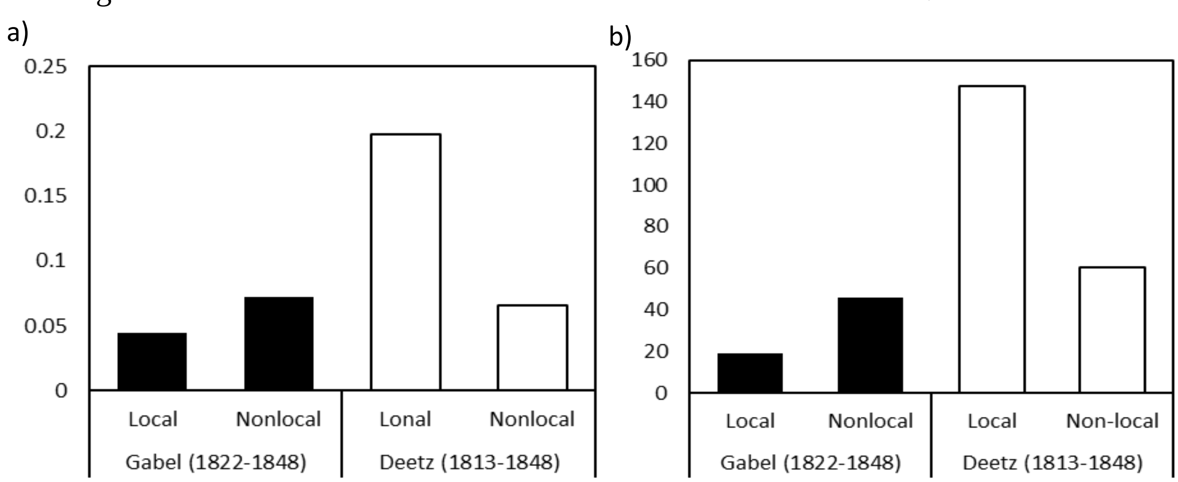
The sample size of the groundstone is small; thus, I focus on analyzing the Deetz and the Gabel collection as a whole. Within both collections, artifacts indicate a continuation of traditional practices: pounding acorns with a pestle and mortar and grinding seeds or nuts with a traditional mano and metate. While there is no statistical difference when comparing the types of artifacts between the Gabel and Deetz collections, a chi-square test of significance on the raw materials (local and non-local) shows a statistically significant difference between them ($\chi^2=8.8959$, df=1, $p\leq0.01$). Contexts with earlier components have less non-local groundstone by count and weight, while the latest context (the Gabel collection) has more imported groundstone (Table 4.15; Figure 4.10). This shift may be a result of (1) no supply ships coming to Alta California during the early years of Mission La Purisima due to the disruption of trade networks during the Mexican War of Independence (AD 1810-1821) and (2) greater access to global trade during the Mexican period (AD 1821-1848). Moreover, all the imported groundstone is fashioned entirely into manos and metates. Their presence in the latest assemblage further indicates a shift that emphasizes more grinding of domesticated seeds and grain after AD 1822. The dominant signature of *comales* in the soapstone category yields additional insight to suggest that Mexican metates and manos were likely also used to grind corn or wheat to make tortillas.

Table 4.15: Gabel and Deetz local and nonlocal groundstone by count and weight.

	Gable				Deetz			
	Local		Non-local		Local		Non-local	
	Count	Weight	Count	Weight	Count	Weight	Count	Weight
Pestle	3	1830			9	7451		
Mortar	2	662.3			8	6339.3		
Mano	1	223	5	2652	7	4159	6	4432
Metate	2	1200.2	10	6899	0		2	2901

These data illuminate continuity and change in foodway practices by the Native residents at Mission La Purísima. Traditional foodway preparation techniques of pulverizing local seeds and nuts with a pestle and mortar were certainly not displaced by the introduction of Mexican manos and metates. These tools were used together. However, after the Mexican War of Independence, there is more access to Mexican manos and metates, which additionally illustrates a shift concerning more emphasis on grinding corn or wheat to produce tortillas. Whether this emphasis was intentional, whereby Native residents requested these manos and metates for themselves, or non-intentional, e.g., Native residents received these materials from the request of a mission supervisor or an *alcalde*, is uncertain. However,

Figure 4.10: Groundstone by (a) count and (b) weight standardized by soil volume including local and non-local materials in the Gabel and Deetz collection.



their presence speaks to the formation of new practices that formed among the mission community that is distinct from traditional practices and attests to creating new indigenous routines linked to Early Hispanic customs.

METAL

Metal was introduced into California during the initial culture contact period. Regionally, this period begins with the first contact with Juan Rodríguez Cabrillo in 1542.At Medea Creek (CA-LAN-243), which is estimated to date between AD 1500-1700, a metal fragment was found associated with one glass bead and one shell bead (King 1982:26). Outside the mission and during the Mission period, metal artifacts are also less frequently occurring than other introduced material classes such as glass beads. This may also be due to the poor preservation of the material in the archaeological record. However, at Mission La Purísima metal is one of the most predominant artifact classes. It was used for building and architecture, specialized tools and crafts, construction hardware, and a variety of everyday household purposes. The analysis of metal can thus establish specific activities if one use is more pronounced than another and the diversity of activities within and between different time periods.

Methods

The artifacts analyzed were assessed for material type (copper, iron, lead, brass, etc.), form, and function. Each was quantified by number and weight and placed into a typology using Van Wormer's (1996) classification scheme. Under this system, items were grouped into different categories based upon functional artifact profiles to provide information regarding behavioral and consumption practices (Table 4.16).

Table 4.16: Van Wormer (1996) classification system.

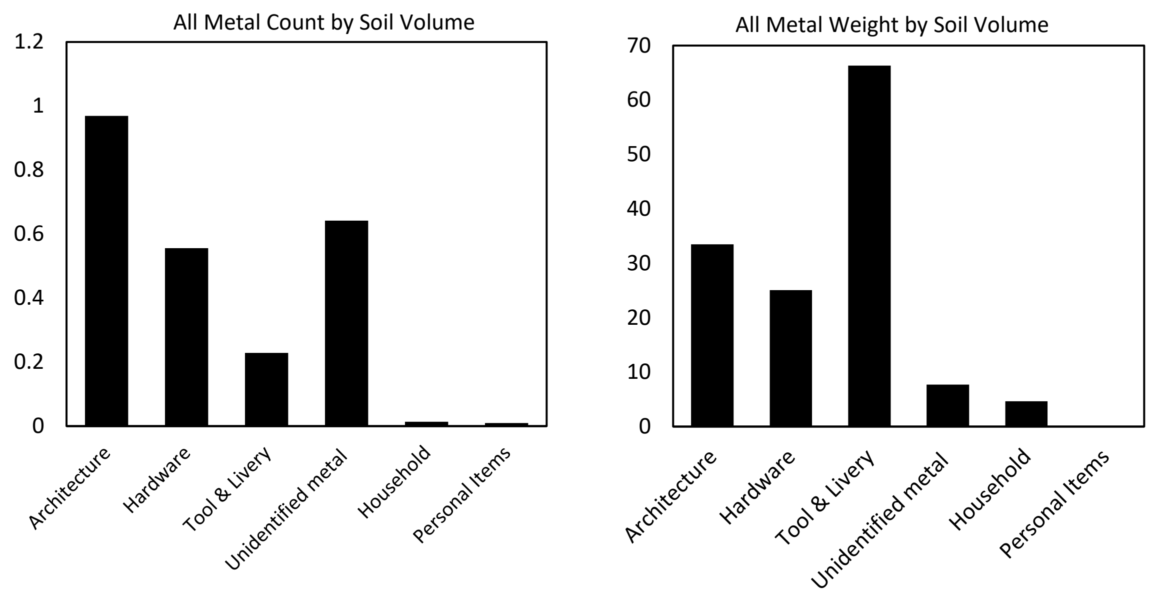
Metal Group	Description	Examples
Consumer Items	Products consumed on a regular basis	Tin cans and other tins.
Kitchen	Food preparation and serving	Bottle caps, can lids, and related items.
Household Items	Daily household maintenance	Candle sticks, medical items, and misc. items.
Garment Items	All clothing items	Shoe parts, cufflinks, and buttons.
Personal Items	Belonging to a single individual	Jewelry, toys and games.
Furniture Parts	All furniture parts	Upholstery tacks and drawer pulls.
Hardware	Machinery and other durable equipment	Bolts and nuts, chain links, and screws.
Tools	All hand tools	Carpenter's tools, agricultural tools, and livery.
Livery	Horse and horse-drawn vehicle items	Bridle parts, saddle parts, and harness parts.
Munition Items	All firearms and related items	Bullets, cartridges, and musket balls.
Coins	All coinage and tokens	Spanish coins.
Building materials	Construction Materials	Nails and spikes, door locks and parts.
Forge materials	All forge, furnace, and stove wastes	stove parts, coal, and slag.
Agricultural implements	All farm machinery	Plow parts, chain belting, and mower parts.
Other occupations	Specialized occupation items	Farmstead or mining items.
Unique Items	items not included in other groups	
Unidentifiable metal	Unidentifiable metal fragments	
Unidentifiable items	Items that cannot be identified	
Intrusive Items	Items intrusive to a discrete dated deposit	

The analysis begins by comparing each group of metal artifacts in the Van Wormer (1996) system using standardized weight and counts that consider the soil volume. Each class of artifact is then further described to illuminate its use. This is followed by a statistical test of diversity using Kintigh DIVERS analysis on all the metal artifacts and the tools and livery category.

Metal Results

The main categories identified here are "Building Materials and Architecture," "Hardware," "Household," "Personal Items," "Tools," and "Unidentifiable Metal." The household and personal items groups, which are standardized by weight, are the least

Figure 4.11: Metal (a) count and (b) weight by soil volume for each group.



represented, while the other four categories are the predominant metal types recognized (Figure 4.11, Appendix Va, Vb).

The "Building Materials and Architecture" category makes up the largest count by soil volume compared to the other metal groups. In total, there are twelve types of artifacts that represent 298 artifacts that weigh 10,159 g (Table 4.17).

Two subgroups are in the Building Materials and Architectural group: fasteners and window/door related items. Although these subgroups are not in Van Wormer's classificatory scheme, I include them here to better distinguish between distinct artifact types and practices. The fasteners subgroup contains objects known to produce a bond between two objects in the construction of a building. This is represented by artifacts such as bars, brackets, nails, screws, spikes, tacks, and washers. A total of 283 (95%) of the objects in the Building Materials and Architecture group were placed into the Fasteners category. Window/door

Table 4.17: Building and Architecture

Subgroub	Description	Count	Weight
Fasteners			
	bar	40	4,391
	bracket	2	223
	nail	206	2,123
	screw	1	3
	staple	5	32
	spike	27	1,379
	tack	1	
	washer	1	
Window/door related			
	door boss	5	277
	hinge	4	1,323
	latch	3	301
	key	3	105
Total		*298*	*10,159*

related items make up the other 5% (n=8) and consist of door bosses, hinges, latches, and keys.

Like the Building Materials and Architectural group, the Hardware category also comprises a large portion of the total count and weight in the Metal category. In this case, 163 specimens weigh 7,540 g (Table 4.18). These artifacts were placed into three subgroups: (1) construction hardware, (2) metal bands and strapping, and (3) miscellaneous hardware. Many artifacts within the Hardware group fell within the Metal Bands and Strapping subgroup; 90 “straps,” strips,” bands,” and “hoops.” Each has the same consistent width, although their length and form (e.g., curved or flat) vary, suggesting some type of similar function. The bands and straps may have primarily been used as barrel hoops structured around a wooden barrel and held unknown contents but became flattened over

Table 4.18: Hardware

Subgroup	Type	Count	Weight
Construction hardware		0	0
	link	9	721
	plate	7	397
	hook	23	191
	washer	1	0
Metal bands and strapping		0	0
	"strip;" "strap; "hoop"	90	5,594
Miscellaneous hardware		0	0
	wire	33	637
Total		*163*	*7,540*

Table 19: Tools

Subgroub	Description	Count	Weight
Agricultural			
	axe/wedge	7	7,089
	cleaver	1	1,174
	Hoe	1	1,800
	Pitchfork	1	1,500
	Shovel	3	1,809
	Sickle	4	538
	trowel	1	82
Carpinter's tools			
	file	4	128
	knife	8	279
	hammer	2	996
	saw	2	1,614
	scissors	6	142
	screwdriver	3	187
Household tools			
	awl	1	8
Livery			
	bridle bit	4	304
	buckle	1	32
	horse shoe	1	198
	spur	2	87
	stirrup	1	259
miscellaneous tool			
	unkown tool	16	1,823
Total		*69*	*20,050*

time. Indeed, James Deetz (1963:184) noted a prevalence of barrel hoops on the floor of the apartments during their excavation. The next highest count and weight is the construction subgroup includes artifacts used to build something not architecturally related. Forty objects were placed into four subgroups: chains, hooks, plates, and staples. Only one artifact type, with 33 separate pieces, was classified as wire.

The Tools & Livery group makes up another significant portion of the metal artifact assemblage, with 69 tools that weigh a total of 20,050 g (Table 4.19).

Within this category, five subgroups were identified, including devices used for agriculture, carpentry, livery, household, and miscellaneous purposes. The agricultural tools were used for either large-scale farming purposes or everyday garden uses. This subgroup is represented by axes/wedges, cleavers, hoes, pitchforks, shovels, sickles, and trowels. Altogether, 18 (26%) tools are in the agricultural subgroup. Carpenter's tools are small hand-held tools used for various activities indicative of construction, installation, and repairing structures and fixtures. 25 (26%) are carpenter's tools, including files, scissors, knives, blades, hammers, saws, and screwdrivers. Within the Livery subgroup, nine (13%) items are associated with the use of horses: bridle bits, buckles, horseshoes, spurs, and stirrups. The miscellaneous tool subgroup includes smaller unidentifiable tools with an unknown function that are likely carpenter's tools: they are smaller tools not used in livery or for agricultural/gardening purposes. There are 16 (23%) different types of tools in this category.

The unidentifiable category includes 194 large metal chunks and small miscellaneous pieces that could not be identified as any specific type of metal. Many of these pieces are rusted to the point of unrecognition or had clumped into an unknown form. The clumps ranged from large fist-like clumps to smaller rusted scrapings.

The household category has four items, and they are categorized into a kitchen and miscellaneous household item group. The former subgroup includes a fork handle and two metal kettles, while the latter subgroup is made up of one candle holder and one metal awl.

The last group is personal items. This artifact class only has three buttons that are embossed and worn on clothing.

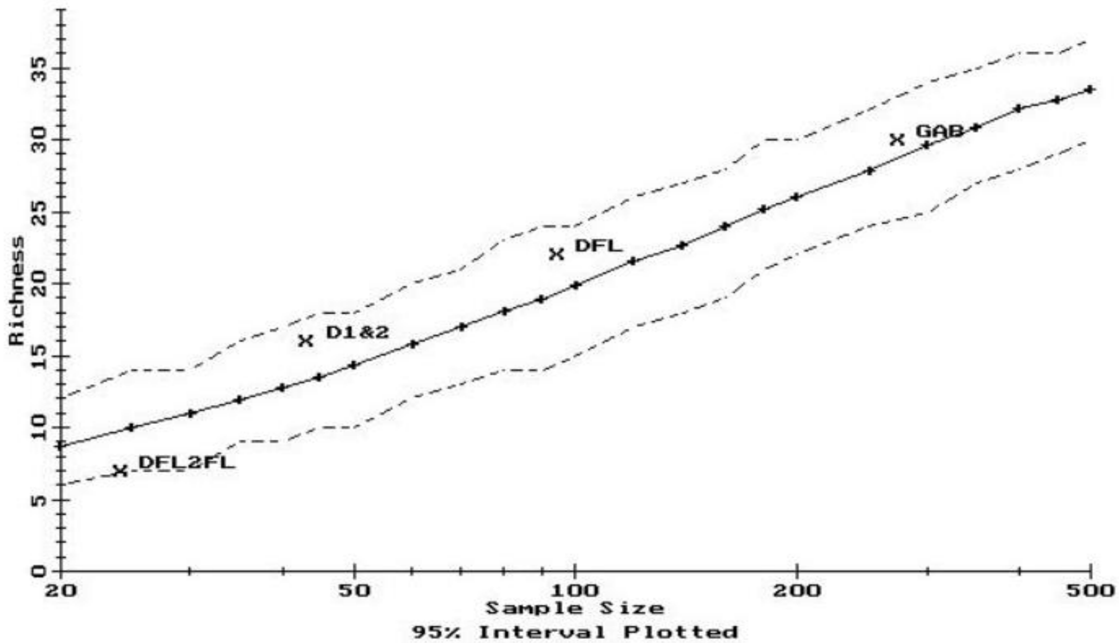
The Van Wormer classification system illuminated a range of artifacts and activities at Mission La Purísima. The Native community used metal to build new types of adobe-style dwellings with nails and fasteners; hardware for storing away items in large barrels; tools for agriculture, carpentry, and livery; and domestic purposes linked to everyday household purposes; and a decorative element on clothing.

Comparing contexts

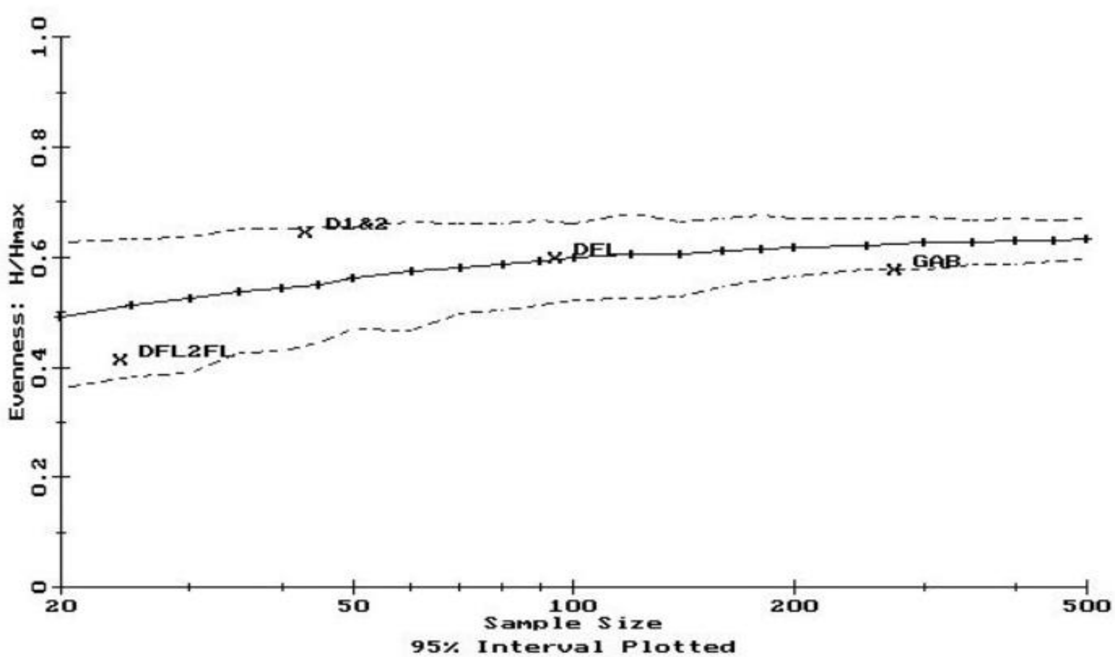
This section begins by conducting a Kintigh DIVERS test to examine the diversity of the assemblages on all the different categories in the Van Wormer functional metal system.

Figure 4.12: Kintigh DIVERS test for all metal artifacts: a) richness and b) evenness.

a)



b)



*XFL2FL—Deetz's "floor-to-floor,"XD1&2—Deetz's "Rooms 1 & 2," XDFL—Deetz's "Floor & Fill," XGAB—Gabel Collection

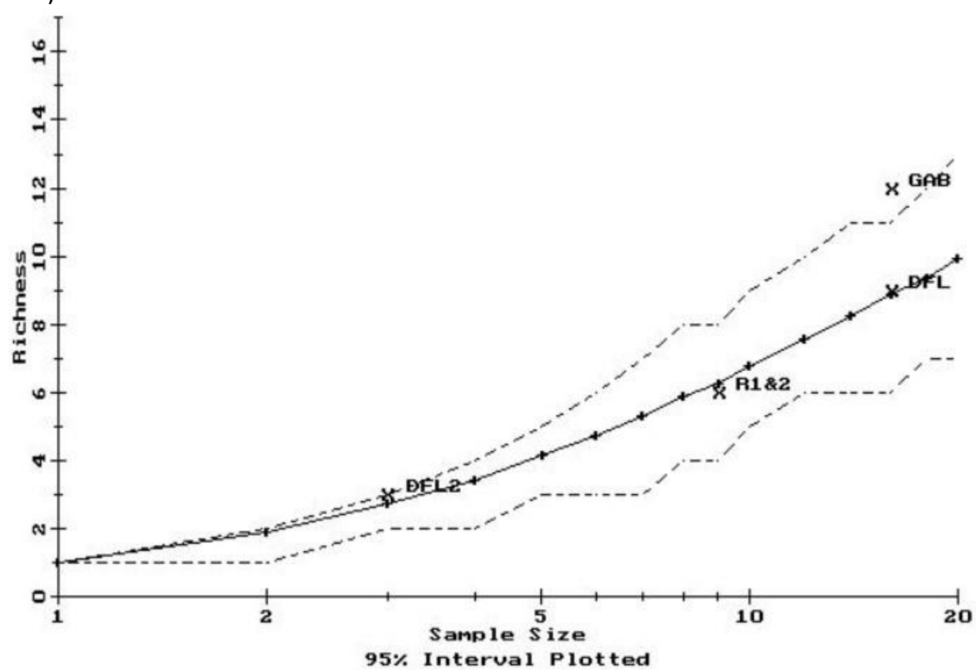
Results reveal no statistical difference between the collections: they all fall into the expected range of diversity and evenness through time (Figure 4.12a,b). However, although not statistically significant, Deetz's floor-to-floor level is much *lower* in richness and evenness on the distribution curve. The lower diversity of metal in this earliest context may have to do with changes to artifact categories over time. Indeed, when exclusively investigating the tools and livery category using the DIVERS test again, this interpretation is further illuminated. Results indicate a statistically significant difference in both richness and evenness among the tools and livery within the Gabel collection (Figure 4.13a,b). More tool diversification bears evidence for a greater range of activities, while more unevenness signifies less specialization in specific industries.

These data indicate a more extensive range of mission industries occurring under the Mexican government than during the former Spanish administration. As most of the tools in the Gabel collection are small handheld tools rather than large agricultural ones, carpentry activities appear to be emphasized more after AD 1822. Only 15% (n=4) of the latest assemblage is related to agriculture, while the other 85 % (n=22) are craftsman tools. The carpenters' tools could have made shoes and other clothing essentials. They could have also been used for fashioning items needed in the hide and tallow industry: screwdrivers to make large cauldrons, blades for shaping candles, scissors for cutting hides. Their greater diversity also attests to a shift in labor practices after the Mexican War of Independence, from an emphasis on agriculture to carpentry. This shift may have impacted labor systems, as craft industries became more individualized as opposed to a centralized labor force.

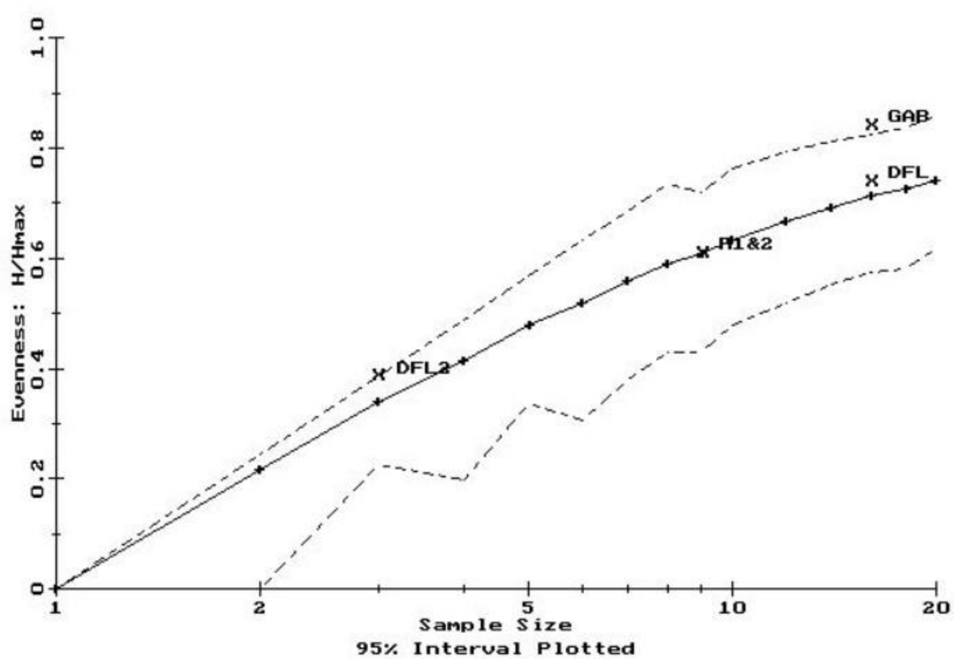
Within the livery category, there are no clear-cut distinctions among the artifacts between the Gabel and Deetz collections. There are only nine artifacts in this category and no

Figure 4.13: Kintigh DIVERS test of the Tools and Livery category showing a statistically significant difference in the Gabel collection for both a) richness and b) evenness.

a)



b)



*XFL2FL—Deetz's "floor-to-floor,"XD1&2—Deetz's "Rooms 1 & 2," XDFL—Deetz's "Floor & Fill," XGAB—Gabel Collection

pieces of horse equipment were identified within the floor-to-floor strata. Artifacts such as bridle bits, buckles, a horseshoe, spurs, and a stir-up attest to the presence of Native vaqueros at the mission (see Table 4.19).

GLASS

Glass is an introduced material class that can reveal consumer behavior and consumption patterns. It can occur in many different forms with varying functions, such as building glass for architecture, bottles and containers that held a range of substances, and as glass beads. This study pertains to the analysis of glass as a building material and consumer item and excludes glass beads. Glass beads are explored more in-depth in Chapter 6.

Methods

In this study, the glass was first separated into window glass and consumer glass. The window glass was analyzed for color, while the glass bottles were analyzed for form and function and quantified for the minimum number of vessels represented based on the presence of a bottle base. In some contexts, there was no base but two different necks or bottle lips, also allowing a way to count the minimum number of vessels accurately. In other cases, if there was no base, the color differences made it possible to distinguish between different bottle types. A detailed analysis was conducted on the bottle parts using the Society for Historic Archaeology Historic Glass Bottle Identification & Information website. This aided with the identification of manufacturing dates or ages of a particular bottle based on the technology, identifying the function of the container, color naming, typing bottle base morphologies, and general terminology.

Following a brief description of the glass artifacts placed into the “Building Materials and Architecture” and “Consumer” categories, a comparison of glass between contexts follows. The glass analysis uses standardized counts and weights by dividing by the soil volume excavated within each context. After discussing the results of the standardized count and weight comparisons, a Kintigh DIVERS test that considers differences in sample size is used to identify if any of the assemblages are more diverse. These different analytical tests can aid in building a chronology for the deposition of certain glass artifacts, establish if more or different types of glass are consumed at discrete periods in time, and help determine the primary purpose the glass served. As shown below, these methods can additionally help determine when and where distinctive glass bottle caches occurred in the Native Family Apartments.

Glass Results

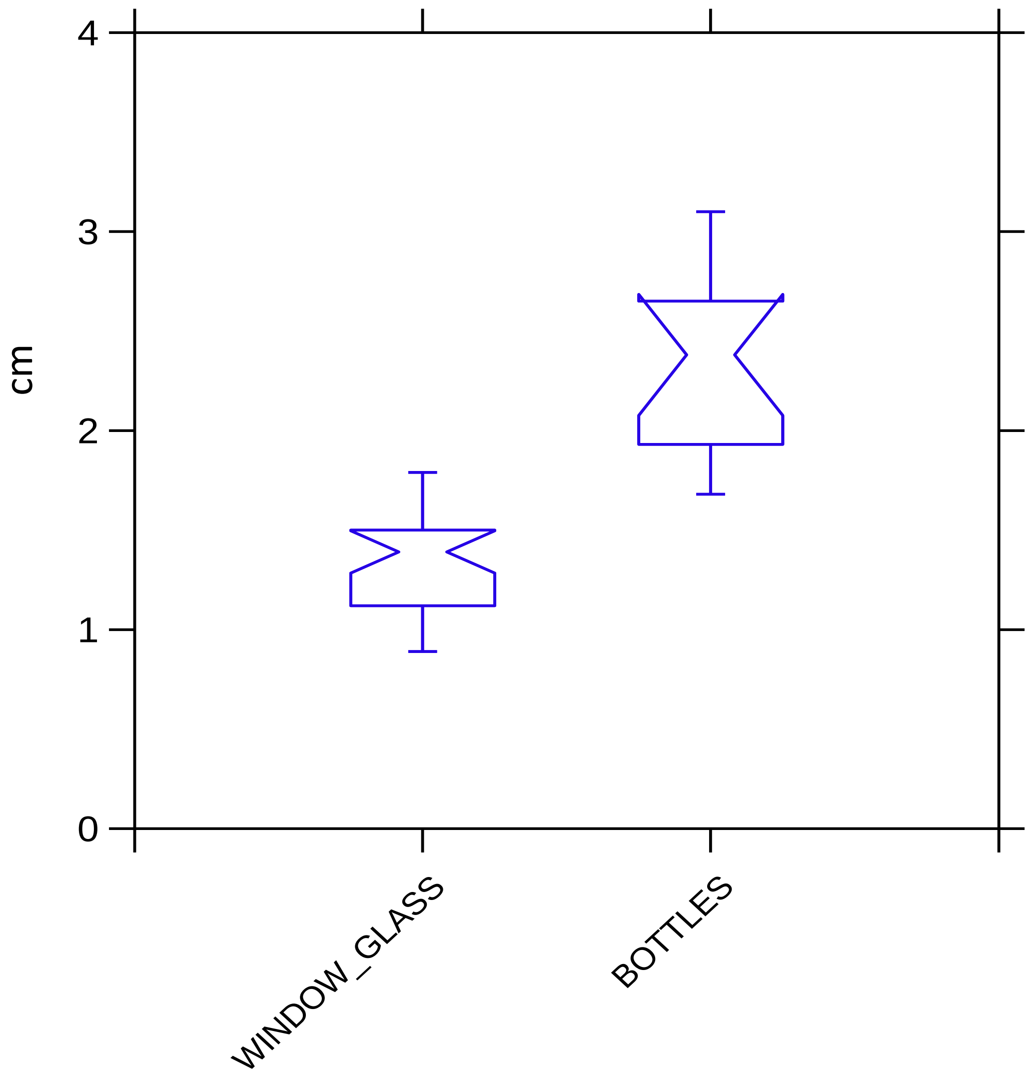
Table 4.20: Building Material Glass.

Color	Count	Weight
clear	119	100.22
clear/patina	123	229.64
light green	23	33.9
light green/patina	32	42.76
light blue	4	13.93
light blue/patina	16	30.21
Total	*317*	*450.66*

Overall, the glass assemblage is comprised of 985 large and small fragments that weigh a total of 7,845 g. The glass shards were divided into two main groups: Building Materials and Consumer Items. Building Materials include 317 highly fragmented pieces of window glass that weigh 451g. Three different colors of window glass were identified: clear, green, and blue. All three colors of window glass had a patina coating and were placed into their own category (Table 4.20, Appendix VIa, VIb).

The window glass is very thin, making it distinguishable from items in the consumer category. For example, a sample of glass fragments identified as window glass compared to a sample of glass shards identified as consumer glass produced a statistically significant difference in terms of their thickness (Figure 4.14).

Figure 4.14: Box plot showing a statistically significant difference in thickness between window glass and consumer glass.



The Consumer Items have more fragmented glass than the Building Materials, including 234 shards that weigh 5021 g (Table 4.21). The assemblage was highly fragmented; however, diagnostic fragments made it possible to detect the form and function of the glass pieces and their placement into a subgroup. These subgroups include Wine/Liquor& Spirits bottles; Wine Bottles; Household Items (e.g., medicinal bottles,

Table 4.21: Consumer Items

Subgroup	Color	Count	Weight	MNI
Canning jar		1	1.8	1
Liquor bottle		0	0	0
	Brown	1	3.4	1
	Clear	5	108.8	2
	Green	71	1641.4	6
	Green*	5	246	1
	Light blue	1	3.5	1
Household		0	0	0
	Blue	3	33	3
	Green	1	33	1
	Clear	2	74.6	2
	Clear*	1	17.4	1
	Green	0	123	2
Wine bottle		0	0	0
	Green	92	1759.4	7
	Green*	51	975.8	3
		0	0	0
Total		*234*	*5021*	*31*

*Denotes glass with patina

toilettes, etc.); and Canning Jars. It is essential to acknowledge that the glass bottles may have served multiple purposes, as they were likely continuously used and reused. For instance, liquor and spirits bottles could have also carried ale/porter, wine, and other liquid consumables (Lindsey 2010a).

There are 83 fragments of liquor bottles that make up at least 11 individual vessels and weigh 2,003 g. Four different colors of liquor bottles (i.e., brown, clear, green, and green/patina) were identified that come in two different shapes, cylindrical and square/rectangular. The diagnostic features on cylindrical style liquor bottles have temporal dates based upon the form of the neck and body, allowing for their chronological placement of the bottle type. For example, the earliest liquor bottles are wider and shorter than the later types, which are narrower and taller (Jones 1986; Lindsey 2010b). The cylindrical liquor bottles identified here have bases that place them into the latter category—they are narrower and taller rather than wider and shorter. The presence of a bulging bottleneck (Cat. no. 147-2909) on at least one bottle allows for more accurate dating of the bottle. According to Wilson and Wilson (1986), tall liquor & spirit bottles with a moderately slender bulged neck became popular in the 1820s and 1830s. Later spirit bottles with straighter necks appear toward the later end of the 19th century.

The square/ rectangular style liquor bottles have bases with at least four-angled edges. Like the cylindrical style bottle, square bottles were used for a wide assortment of different products, such as various spirits and high alcohol medicinal products. Only one bottle had an associated neck and lip, allowing for a typological assignment of the bottle type. This bottle is a "short-neck spirit bottle," which was common in the early 19th century. Early versions of this type of bottle have deeply domed bases, such as Cat. no. 147-2907 in the Deetz collection, and were used before AD 1870. Another liquor bottle had beveled corners of the base that come up to meet the neck (Cat. no. 147-2910). Unlike the "Coffin flask" or "Shoo-fly" bottle styles with flattened panels, this type of vessel has flattened corners that meet a flat body (Lindsey 2010b). This bottle type also falls within the "Tall, square short-necked spirit bottles" common in the early 19th century.

There are 143 wine bottle fragments, representing at least ten vessels, that weigh 2,735 g. All the bottles were green and green with patina on the outer surface. Four of the bottles have a distinct shape represented by vertically parallel sides, a moderately steep shoulder, a distinct neck that is less than a third of the bottle length, and a deep base that pushes up with the presence of a *mamelon*—a small circular intrusion found on the basal surface, which usually occurs at the tip of the pushup (Jones and Sullivan 1989). This type of bottle refers to a “Bordeaux” style bottle, which is in reference to the Bordeaux region where wines such as cabernet sauvignon, claret, and sauterne were bottled in it (Lindsey 2010c). One whole wine bottle in the collection had the Bordeaux style with golden patina (Cat. no. 147-2914). This shape originated in Europe until the mid-19th century and came to the U.S. shortly after. Because most of the bottles are within the earliest assemblage, they were likely shipped from the Bordeaux region.

The Household, non-food-related bottles can include medicinal/chemical/and druggist bottles, ink bottles, mucilage and glue, cleaning products, and toiletries such as hair products, creams, and lotions (Lindsey 2010d). This category had seven glass fragments, weighing 281g, and a minimum number of seven vessels. The colors of the bottles include blue, green, clear, and clear with patina. Although the contents these bottles held are unknown, there are diagnostic features on a few of them that can help illuminate what they may have contained. One cylindrical bottle with a small (2.5cm) diameter, narrow-body, thick base, and blue tint may be a possible perfume/cologne/ oil bottle (Cat. no. 147-2741). Similar characteristics of these bottles were documented by Van den Bossche (2001), who found a case of six similar style bottles holding cologne and date to about the 1840s. The other diagnostic bottle is an ink bottle (Cat. no. 147-2346). This bottle is also about 2.5cm long and cylindrically shaped with flat panels around the circular body. Multi-sided vertical, clear bottles were popular between AD 1835 to 1865 for holding ink (Lindsey 2010d). This bottle is like the octagonal ink bottles of English origin and may have been imported from England as well. Both the cologne and ink bottle were found in Deetz’s excavation area of the Chumash Family Apartments but not within any distinct context analyzed here.

Table 4.22: Household Items

	Count	Weight	MNI
Household			
drinking cup	5	205	4
glass stem	1	55	1
wine stopper	3	83	3
Total	*9*	*343*	*8*

The last category identified in the consumer group is the canning jar subgroup. Only one fragmented canning jar was in the collection that weighs 1.8 g. It had incising around the rim and was made of clear glass, appearing to be more modern. It was found in the Gabel assemblage, the latest context at Mission La Purísima.

The kitchen group includes drinking cups, glass stemware, and a wine stopper (Table 4.22). Altogether, this group had nine fragments, representing eight different items and weighing 343 g. The drinking cups all have smaller bases than tops, are smooth with thicker bases, and are clear. They are within all the stratigraphic/chronological contexts analyzed here. The stemware includes the base of a wine glass; only one was in the lot. The wine stoppers have incisions around the outer sides and a smaller bottom that would have gone into the wine bottle opening. Three wine stoppers were found in the entire collection, weighing a total of 83g.

Table23: Miscellaneous Items

Color	Count	Weight	MNV
black	1	2.4	1
blue	14	48.4	3
brown	10	63.8	1
brown*	1	9.7	1
clear	94	585.3	8
clear*	8	12.1	2
green	200	816.3	4
green*	83	487.4	3
pink	2	100	1
purple*	2	5.4	1
red	1	0.5	1
white	3	4.1	1
white*	6	17.7	1
Total	*425*	*2153*	*28*

*denotes glass with patina

The unidentifiable pieces could not be placed in any of the above vessel types and likely represent items in the consumer and household group. There are 425 fragments in this category weighing 2,153 g and representing a minimum of 28 different bottles (Table 4.23). Overall, 13 colors were identified in this category. Five of the colors have patina and were placed into their own category. The color with the highest count and weight was green: 200 pieces of undistinguished shards that weigh 816 g and represent at least two different types of bottles. Most of these glass pieces are the same color as the bottles placed in the wine bottle category and likely represent the body fragments of one or more wine bottles. Clear was the second-highest category of miscellaneous glass shards; 94 fragments weigh 585 g and represent at least eight different types of consumer items or household wares. The third-largest category was green with a patina. This color had 83 pieces that weigh 487 g and represent at least three different vessels. Like the miscellaneous green fragments, the green with patina shards likely also represents wine bottles, as was identified on the green patina bottle Cat. no. 147-2914.

Figure 4.15: Blue and green glass projectile point in Gabel collection (Cat. no. 147A-697 and Cat. no. 147A. 695).

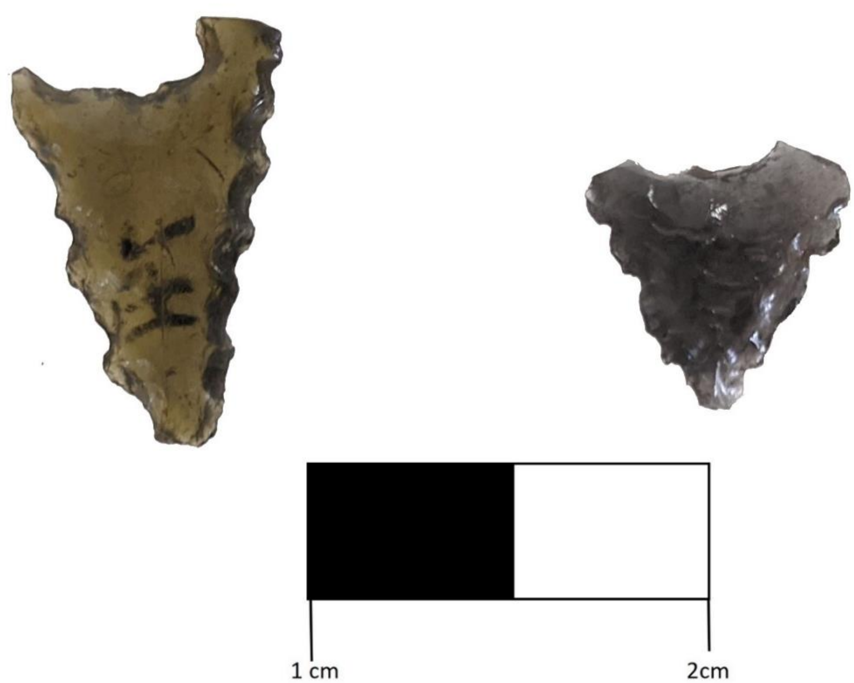


Table 4.24: Glass flakes and tools in the Deetz collection.

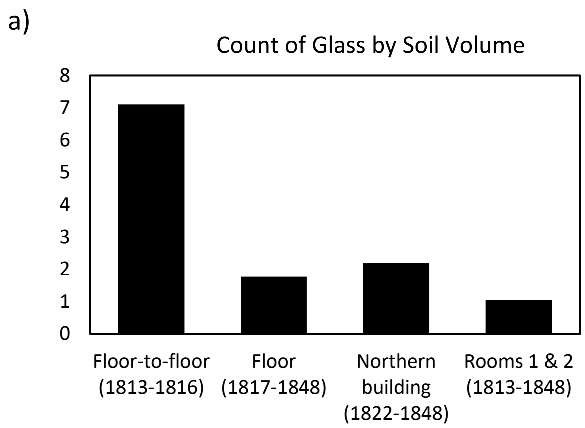
Catalog #	Feature	Room	Context	Color	Notes	Weight
155-119	6	1	exterior of east wall	amber	Utilized, thick	2
155-1863	6	7	fill	green	flaked	8.8
155-180	6	7	surface test pit	clear/patina	flaked	5.12

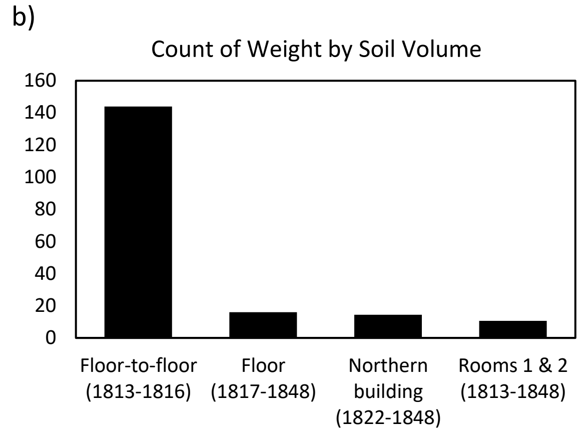
Table 4.25: Glass flakes and tools in the Gabel collection.

Object Number	Description	Notes	Weight	Length	Width
147-B-350	green	utilized scraper	10.5		
147-B-697	green	utilized scraper	4.28		
147-B-458.D	green	flake	2.81		
147-B-607.D13	green*	flake	3.95		
147-B-795	green*	flake	3.87		
147-B-786.D	green*	flake	3.89		
147-B-872.D2	green*	flake	3.5		
147-B-1038	blue	flake	17.7		
147-B-697	green glass projectile point, nearly whole	projectile point	0.7	19.73	12.8
147-B-695	blue glass, projectile point, whole, small	projectile point	0.4	12.52	11.6

The flaked glass is the last artifact class investigated here. This assemblage is small altogether; there are only 13 artifacts comprised of flakes and flakes utilized as tools (Table 4.24, 4.25). Within the Gabel collection, six flakes, two scrapers, and two projectile points were identified. The glass projectile points were thick, small, and triangular. They are classified as Cottonwood (Figure 4.15). The majority (n=8; 80%) of the utilized glass in the Gabel collection was green, while the other two pieces are blue. A little over half (n=5; 62.5%) of the green glass had a golden patina on the surface. The only identifiable green bottle with patina on the surface was a Boudreaux style wine bottle. It is possible that these flakes came from this same wine bottle. There were only three glass flakes in the Deetz collection that were all different colors: clear, green, and brown. The brown flake has evidence of utilization in the form of notching on the side.

Figure 4.16: Glass (a) count and (b) weight standardized by soil volume in each context.



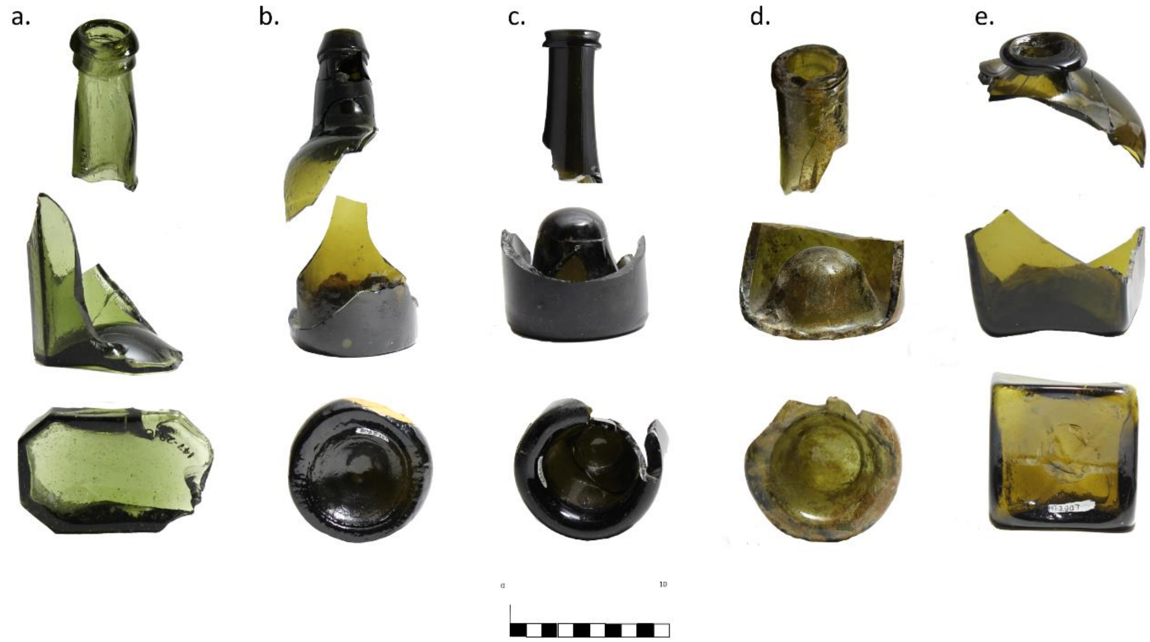


A Glass Cache

Within the earliest assemblage, the floor-to-floor level shows a significantly higher proportion of glass, based upon both count and weight, excluding building materials (Figure 4.16). Deetz's (1963:182) excavations at Mission La Purísima noted the high presence of glass within the floor-to-floor level as well, where he explained that five whole wine bottles were uncovered. Further analysis of these collections shows that at least three wine bottles are within the floor-to-floor level, as are four other whole liquor bottles, which altogether make up at least seven vessels. The liquor bottles may not have just contained liquor, however. They may have also held wine, beer, or champagne, and other proprietary medicines, bitters, and tonics. When investigating the exact room these artifacts occur in, these glass bottles all occur in room 3 (see Deetz appendix).

Deetz (1963:182) noted that the glass fragments were uncovered within a limited space of approximately one cubic foot with dirt-free spaces between them. The recovery of glass fragments in this context suggests that they may have been intentionally placed there

Figure 4.17: Wine bottles and liquor bottles found under the floor in Room 3 a) liquor bottle (Cat. no. 147-2910 and 147-2911), b) liquor bottle (Cat. no.147-2909), c) wine bottle (Cat. no. 147-2907), d) wine bottle (Cat. no. 147-2914), e) liquor bottle (Cat. no. 147-2907A).



for an uncertain reason. Two hypotheses were proposed by Deetz (1963:182). On the one hand, the glass may have been deposited when the first floor was capped in a renovation event and was later fragmented by people walking on the upper floor. On the other hand, these bottles may have been intentionally buried later in time by digging into the lime-plaster floor and carefully repairing the floor after caching the bottles.

There are five whole glass bottles within this cache: three liquor bottles and two wine bottles (Figure 4.17). The diagnostic bottles date to the early-mid-nineteenth century, specifically between AD 1820 and 1830. These glass bottles were found associated with at least five whole ceramic vessels—discussed in the ceramics section—and, based on the ceramic analysis, further pinpoint the date of the event that occurred between AD 1826 and

1830. There are no other diagnostic glass fragments outside of the cache that occurred in room 3 and 4. However, the ceramic assemblage in the other rooms suggests that the other materials in the floor-to-floor context are earlier than the caching event, illustrating that although this cache is in the floor-to-floor context, it was deposited later in time.

The glass cache may speak to shifts in the socio-economic system at the later end of the mission system. As was previously discussed in the lithics portion, an *alcalde,* or Native official, likely occupied rooms 3 and 4. The intentional stashing away of valuable glass containers underneath one of these rooms may have more to do with the achieved status of the person(s) who occupied these rooms, rather than just a random caching event. For example, one way to interpret the glass cache could be due to changes in the mission system after the Mexican War of Independence. Under the earlier Spanish system, status hierarchies such as the *gente de razon* [people with reason] and *gente sin razon* [people without reason] were social classification schemes used to distinguish Indians who had integrated more fully into the mission system (Brown 2018; Haas 2014; Hackel 2005; Lightfoot 2005; Milliken 1995). However, under the Mexican government, new policies, such as Jose Maria Echeandía's "Proclamation of Emancipation" to free Indians from missionary rule may have evened out these social distinctions. This shift would have directly affected individuals and families who had gained higher prestige in the mission, such as those who occupied rooms 3 and 4. While the titles of those in high status positions may have remained the same from the Spanish to Mexican period, archaeological evidence explored more in Chapter 7 suggests that there was an evening out of roles under the Mexican government that may have caused the stashing of these valuable items.

Comparing Contexts

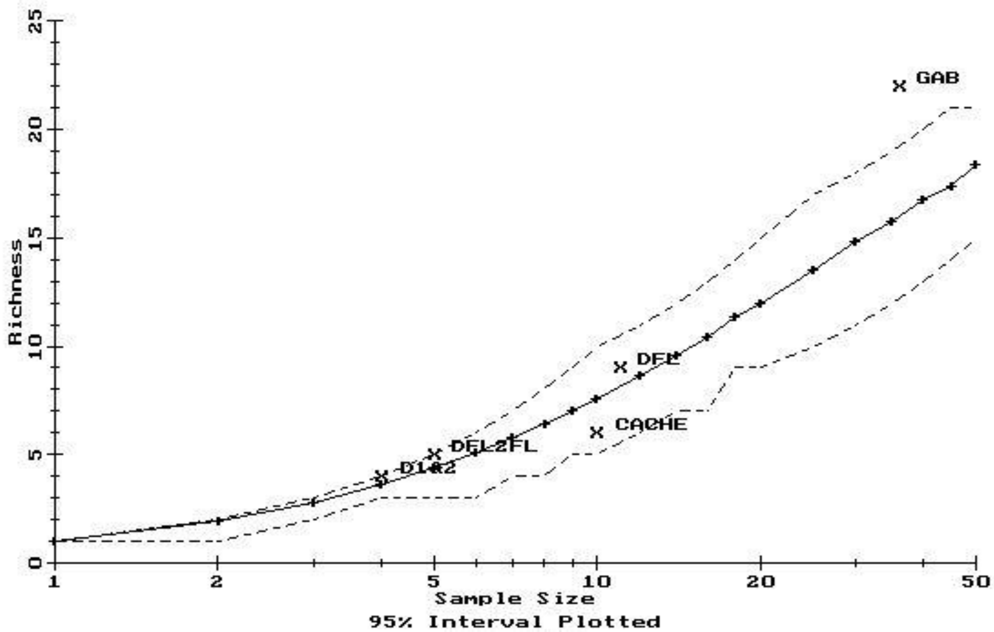
As a result of this later caching event in room 3, which also spills over into room 4 (as identified in Deetz's report 1963:216), I have decided to remove these two rooms from the through time/stratigraphic/chronological comparison and treat it as a distinct cache that occurred later (Table 4.26). Following the removal of the cache, the floor-to-floor context is

Table 4.26: Glass vessels in the floor-to-floor level, non-cache and cache level.

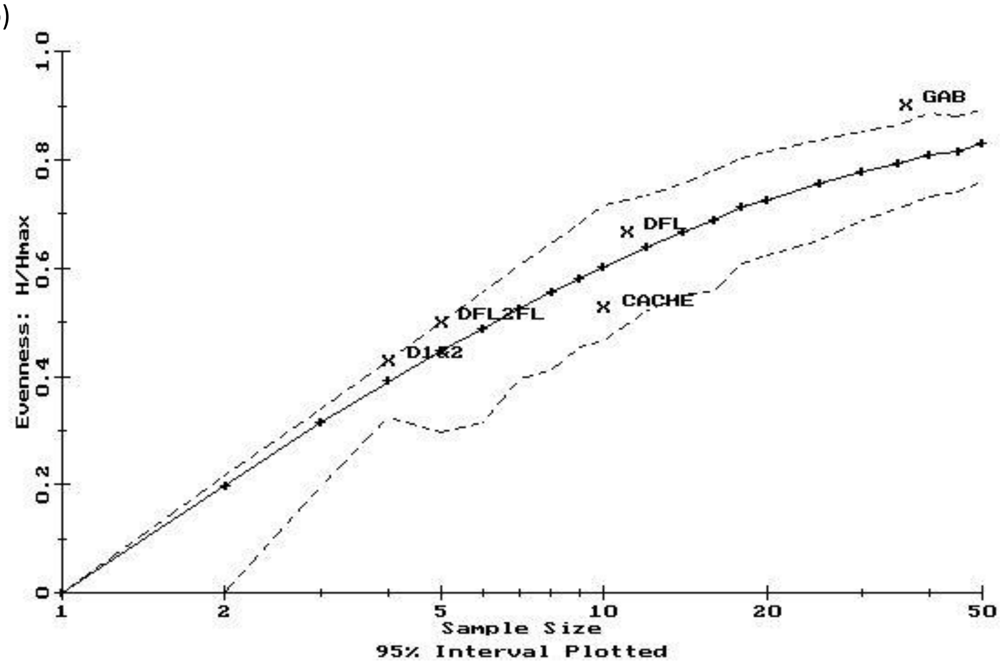
		Non-caching event Rooms 5, 6, and 7			Caching evet Rooms 3 and 4		
Subgroup	**Color**	**Count**	**Weight**	**MNV**	**Count**	**Weight**	**MNV**
Liquor bottle							
	clear				4	97.5	1
	green	1	4.5	1	47	1333.5	2
Wine bottle							
	green				3	382.5	2
	green*				38	978	3
Drinking cup							
	clear				1	54	1
Wine stopper							
	clear				1	12	1
Miscellaneous							
	brown	1	0.5	1			
	clear	3	8.26	1	2	2.7	0
	clear*	1	0.86	1	1	1.22	0
	green	1	1.59	0	8	44.51	0
	green*				2	19.65	0
	pink				2	100	1
Total		*7*	*15.71*	*4*	*113*	*3032.21*	*11*
Soil Volume		*16.45*	*16.45*	*16.45*	*4.67*	*4.67*	*4.67*
Total with Soil Volume		*0.43*	*0.96*	*0.30*	*24.20*	*649.30*	*2.34*

Figure 4.18: Kintigh DIVERS analysis of the glass by MNI, showing the Gabel collection as statically (a) more richness and (b) more evenness.

a)



b)



*XFL2FL—Deetz's "floor-to-floor,"XD1&2—Deetz's "Rooms 1 & 2," XDFL—Deetz's "Floor & Fill," XGAB—Gabel Collection, CACHE—Glass Cache.

thus only comprised of seven pieces of glass weighing 15.71 g, the majority of which (n=6) are found in room 5.

A Kintigh DIVERS analysis of all the assemblages, including the cache as its own separate context, shows statistically more significant richness and evenness in the Gabel collection (Figure 4.18). There are different varieties of liquor and wine bottles, kitchenware, and small miscellaneous bottles, which all held a wide range of contents. These results indicate that the Native community had greater access to more imported glass and the substances they held. These patterns may speak to different trading policies under the Mexican government. For example, all the glass found at Mission La Purísima had origins in Europe. This has likely do with Mission La Purísima being a late mission, established in AD 1813. For example, before AD 1810, virtually all glass was imported from Spanish ships sailing from coastal seaports in Mexico (Costello 1992, Deagan 1987). Costello (1992:121) notes that by the Mexican War of Independence of 1821, the glass began to be especially exported from Europe and England. Instead of Mexico, where English ships sailing from Lima, Peru had supplanted the Spanish trade. More diversity in the post-1822 glass assemblage at Mission La Purísima additionally speaks to an opening up of trading policies in the mission that impacted the types of goods the Chumash community accessed.

The glass identified at Mission La Purísima appears to have a higher, perhaps even highest, representation of glass by count and weight previously recorded at other missions. For example, Dietler et al. (2015:277) note that glass, except for glass beads, is an artifact class found less frequently in California missions than other types of materials. At Mission San Buenaventura, Greenwood (1976:270) explained that the recovered glass was too fragmented to glean any information. Although consumer glass bottles and window glass were found at Mission Santa Inés (Costello 1989), it remains less frequently observed than other artifacts recovered. The same holds for missions outside the Chumash homeland. Excavations at Santa Clara de Asís Mission yielded no glass over a three-year excavation period (Hylkema 1995). At San Fernando Mission, the limited amount of glass was restricted to the upper fill stratigraphic levels (Abdo-Hintzman et al. 2010).

While there may be more evidence of glass at Mission La Purísima compared to other missions, the Chumash community does not appear to be using it for expedient tool manufacturing purposes. Only thirteen glass flakes and flaked tools existed within the collections. The pattern identified at Metini Village situated near the Russian mercantile Fort Ross colony in Kashaya territory in Central California is much different. Metini was home to Kashaya Pomo men and women, along with other Native California people (Coast Miwok and Southern Pomo). They interacted with Russian, Creole (people of mixed Russian and Native heritage), and Native Alaskan peoples (Lightfoot and Gonzalez 2018 ab).Lightfoot and Gonzalez (2018b:102) found that worked glass made up 67% of the flaked glass and chipped stone assemblage, illustrating that Native peoples were primarily using recycled glass for various kinds of everyday purposes.

Yet, there is a striking difference within California's missions—at least in southern California. For instance, at Mission San Gabriel, Dietler noted only three modified glass flakes, including one biface and two flakes (Dietler et al. 2015:279). At Mission La Purísima, only 5 of the glass flakes had use-wear. When combining these results with the chipped stone assemblage and examining these two material classes together as a distinct technology, worked glass makes up only 14% of the collection. In contrast, the flaked stone makes up the other 86%. The differences between Metini Village and the southern California missions may speak to the different colonization strategies employed between the Spanish and Russian/Alaska. For example, the Franciscan mission system had direct enculturation programs using tactics such as labor, religious indoctrination, relocation programs. Conversely, the Russian/Alaskan mercantile system had no formal enculturation program with flexibility in residential options (Lightfoot 2005). As the actual access to glass does not seem to be an issue for residents at Mission La Purísima, these broader colonial structures may have played more of a significant role in the differences recognized at Metini Village and the Native residential zone at Mission La Purísima. Although it appears that there was more liberation under later Mexican policies at the mission later in time, the initial strategies by the Spanish may have continued to play out throughout the Mexican period in ways that affected Native technology.

CERAMICS

This segment includes both imported and mission-made ceramics. Ceramics are one of the most prominent artifact classes found within mission sites. Their analysis can shed light on foodways, status, trade patterns and help establish a chronology (e.g., Allen et al. 2013a; Costello 2014a; Pavao-Zuckerman and Loren 2012; Voss 2012). On the one hand, ceramics can represent the most basic utilitarian wares and their use for various functional household needs. On the other hand, they can represent complicated forms, patterns, and designs that enlighten researchers about complex human behaviors in the past. Perhaps one of the most favorable attributes of ceramics in the historical record is the ability to inform the chronological history at the site-based and regional level. The following study investigates these different modes of ceramic analysis at Mission La Purísima Concepción.

Methods

The methods employed here include: (1) an examination of the paste consistency, density, color, and hardness, (2) the decorative treatment (e.g., painted applications, transfer prints, and edge/rim decertations), and (3) establishing an MNV. The first method allowed for a typological classification based on whether the artifacts were earthenware, stoneware, or porcelain. The second method used design patterns to aid with a more accurate placement into a group, technological innovation, and subsequent time frame. The last process allows for a precise count of the minimum number of vessels within the lot. The methods followed the procedures in Allen et al. (2013a:55-95) and Hamilton et al. (2015). Examination of the mission-made ceramics included investigating whether the vessels were either wheel-thrown or hand-molded technologies. Their paste was assessed for density and treatment.

Ceramics Results

The ceramics are divided into four main categories (1) Chinese porcelain, (2) Mexican imports, (3) English wares, and (4) mission-made wares. Overall, 1,361 vessel sherds weigh 10,146 g. Within this fragmented assemblage, at least 230 minimum number of individual vessels are present. There is also one fragmented ceramic Cottonwood projectile point with blue finish on its surface (Figure 4.19, Appendix VIIa, VIIb) and four fired clay

Figure 4.19: Ceramic projectile point (Cat. no. 147-B-222).

Figure 4.20: Four fired clay (*teja*) hand-molded spherical disks that are likely gaming pieces.

(teja) sepherical disks from the Gabel collection (Figure 4.20). Deetz (1963:170) also identified ground roof tile in the form of a plug or disk; however, these were not found in the vicinity in the Chumash Family Apartments. The latter were likely used as gaming pieces (Panich 2018).

Chinese Porcelain

A total of 442 Chinese porcelain vessel (61 MNI) fragments weighing 3,760 g are in both the Gabel and Deetz collection (Table 4.27). Many different categories of porcelain were identified, including Canton Ware, Famille Rose, Late eighteenth-century bands and lines, hand painted miscellaneous undecorated porcelain, and unknown (Figure 4.21).

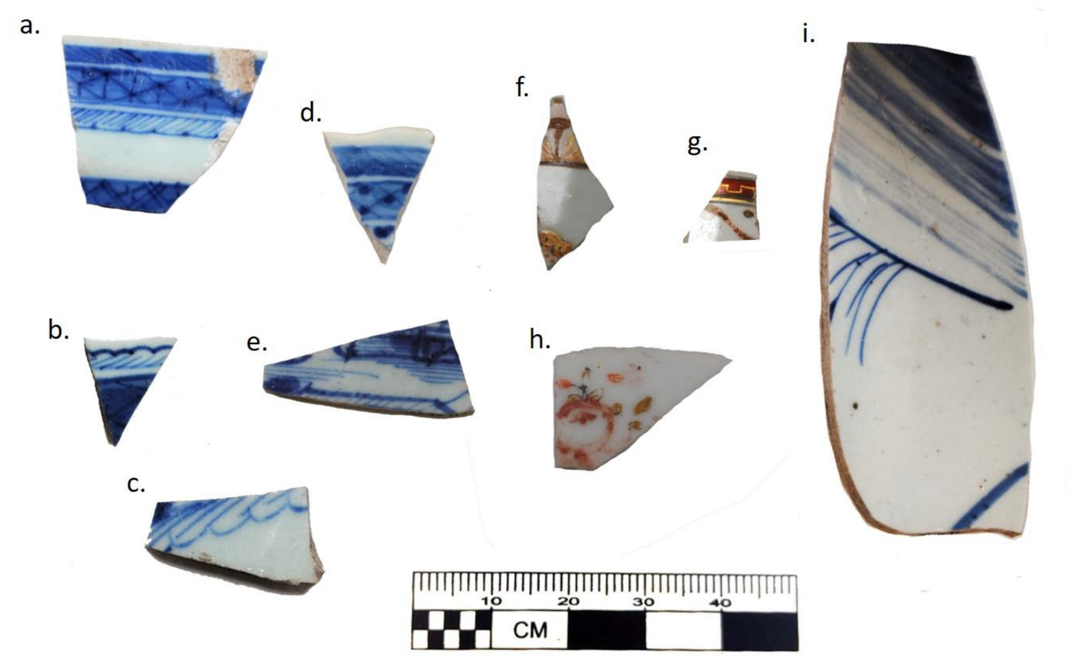
Table 4.27: Chinese porcelain

Type	Count	MNI	Weight
Canton	362	38	3,146
Familie Rose	13	5	72
Handpainted misc.	1	1	78
Overglazed misc.	12	6	41
Undecorated	43	6	299
Stoneware	2	2	72
Unknown	9	3	52
Total	442	61	3,760

Canton or Cantonese decorated wares are under-glazed Chinese porcelain that depict aquatic landscapes, such as islands, waves, bridges, and boats in blue patterns. These wares were decorated in Guangzhou—also referred to as Canton, located in the southern portion of China —and shipped to the West for trade from the about AD 1785 to 1853 (Hamilton et al. 2015; Madsen and White 2011). Manufactured in a wide variety of forms, e.g., plates, platters, large soup vessels, vessel lids, teacups, and saucers, Canton wares were among the largest of the Chinese porcelain class identified here and make up a significant portion of the Chinese porcelain assemblage. This general trend is seen throughout North American historic archaeology sites as well. In fact, 362 sherds (MNI 38), weighing 3,146 g of Canton wares, constitutes 84% of the entire porcelain assemblage. Nanking decorated Chinese sherds are much like Canton wares regarding the colors used and the employment of aquatic landscapes.

Famille Rose is an overglazed ware with thinly lined hand-painted patterns of flowers or edge decor dominated by pink, ranging from the palest tone to a deep, vibrant pinkish color (Madsen and While 2011:106). Sometimes the color palate can come in green made from the oxide of copper, blue created from the cobalt oxide, or purple derived from manganese ore (Hamilton et al. 2015: 312-313). These wares were used early in the mission

Figure 4.21: Chinese porcelain types in the Deetz collection.



a-e: Underglaze porcelain (Canton); f: Overglazed porcelain (miscellaneous), g: Overglazed porcelain (bands and lines); h. Overglaze porcelain (Famille Rose); i: Hand painted porcelain.

system, primarily from AD 1720-1800 (Madsen 2008). Only 13 fragments (MNI 5) were identified that weigh 72 g. Most of the identifiable pieces in this category are very thin and likely primarily represent teacups and saucers.

Late-eighteenth-century bands and lines are other types of overglazed and decorative Chinese porcelain. This group can display one or more bands and line patterns, such as rows of stars, repeated waves, or arrow points (Madsen 2008). This style was used earlier on in the mission systems, particularly from the end of the eighteenth century to the first decade of the 19th century. A total of 12 ceramic sherds (MNI 6) weighs 41 g.

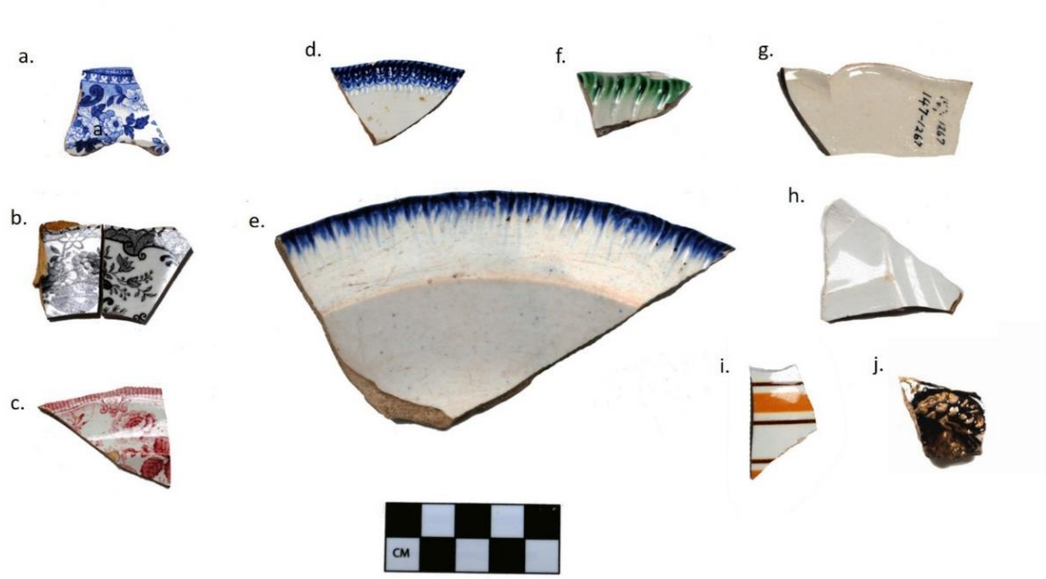
Chinese Brown Stoneware is a high-fired ware used mainly for utilitarian vessels (Hamilton et al. 2015:314). This can include both brown glazed and olive glazed vessels. Only two pieces of brown stoneware are in the lot, and these weigh 72 g. Provincial wares only had two recognizable pieces as well. The two other types in the porcelain category include undecorated and unknown porcelain. The undecorated porcelain did not have any patterns to place them into a subgroup based on decorative designs and represent both under glazed and glazed varietals. There are 43 ceramic sherds (MNI 6) that weigh 299 g in this category. There is one hand painted misc. platter and nine unidentifiable fragments (MNI 3) that only weigh 52 g.

British Earthenware

Challenging the Chinese porcelain market was European ceramic export. Since the later part of the eighteenth century, British potters had developed and marketed various ceramics with distinctive characteristics, allowing for a typological classification based on type over time (Figure 4.22). This includes (1) creamware, (2) pearlware, and (3) whiteware (Hamilton et al. 2015). Altogether, there are 518 fragments of ceramics representing at least 109 vessels, weighing a total of 3201 g (Table 4.28).

Creamware is the earliest form of English ware produced from the second half of the eighteenth century to the later nineteenth century (Allen et al. 2013b:36). The commercial success of this British ware is credited to Josiah Wedgwood, who was the apprentice of master potter Thomas Whieldon. The main characteristic of creamware is its yellow/cream/ivory-like color that was made by glazing clay fired at a low temperature then coating it with liquid lead oxide (Majewski and O’Brien 1987). The iron impurities in the clay mixed with the glaze created the cream color of the ceramic. Creamware has the fewest

Figure 4.22: British earthenware in the Deetz collection



a-c: Transfer printed pattern; d-f: edge decorated white ware g: undecorated cream ware; h. undecorated white ware; i: Annular ware; i: Rockingham Pottery.

decorative applications compared to the other types of British earthenware. It is generally a low-cost commodity (Hamilton et al. 2015: 316). Within the Gabel and Deetz assemblage, 155 fragments (MNV 31) of creamware pottery weigh 588.15 g. Most (n=136; 87%) of the creamware is undecorated; however, the few decorations that occur appear as hand-painted or edge decorated sherds. Indeed, six sherds are transferware print.

In AD 1779, Wedgewood later made an “alternative creamware” described as ‘pearl white’ and is referred to here as pearlware. The bluish-tinted ceramic body that characterizes this ceramic type was made by adding a glaze with a small amount of cobalt (Majewski and O’Brien 1987:118). The general mold characteristics are much like creamware; however, pearlware tends to show more secondary decoration in a greater diversity of colors (Allen et al. 2013b:36; Hamilton et al. 2015). A total of 13 pieces of pearlware (MNV 4) weigh 49 g.

Table 4.28: British earthenware

Type	*Count*	*MNI*	*Weight*
Creamware (edge decorated)	6	4	43
Creamware (transfer ware)	6	2	20
Creamware (handpainted)	7	4	53
Creamware (undecorated)	136	22	472
Pearlware	10	3	24
Pearlware (transferware)	3	1	25
Rockingham Pottery	4	1	57
Whiteware (edge decorated)	10	7	36
Whiteware (handpainted)	6	2	17
Whiteware (handpainted; banded)	38	8	59
Whiteware (handpainted Peasant)	31	3	67
Whiteware (transfer ware)	167	38	1,783
Whiteware (unknown)	1	0	3
Whiteware (undecorated)	93	15	542
Total	*518*	*110*	*3,201*

However, while analyzing these materials, it became evident that there is also ironstone in the collection, which has the same pearly white and bluish tint. The author acknowledges that some of the pearlware may be ironstone. This, however, did not eschew the chronology, as they were both used in the early part of the 19th century.

Whiteware was the latest ceramic type produced in the English ware ceramics category. Manufactured in the early part of the nineteenth century, these wares are generally harder than pearlware, and they have a colorless glaze. After introducing transferware patterns, in the late eighteenth and early nineteenth century, hand-painted decorations became less frequent. In fact, in the early to mid-1800s, transfer printing led to mass production and availability to the New World (Hamilton et al. 2015:317). A total of 337 whiteware sherds (MNV 73) are in the Gabel and Deetz collection that weighs 2,506 g. The sherds come in a variety of decorations: shell-decorated wares, hand-painted wares (Peasantry style and Annular ware), and transferwares.

British earthenware decoration: Edge-decorated wares have a circular-style shell-like molding or embossed rims with feathered edges. These designs occurred on plates, platters, and bowls and were used from the 1800s to the 1860s (Allen et al. 2013b:40). A total of 16 (11 MNV) shell-decorated wares weigh 79.37 g. Six fragments (4 MNV) are creamware, and 10 (7 MNV) are whiteware.

Hand-painted body wares occur in two different types: (1) Peasant style and (2) Annular ware. The Peasant style has a floral motif that is painted in broad brush strokes (Majewski and O'Brien 1987:157). Bright reds, blues, and green foliage are the typical colors represented on this ceramic type that takes up much of the vessel surface (Hamilton 1990:64). This particular style reached its peak in production between AD 1820 and 1840. A total of 31 fragmented Peasant style ceramics (MNV 3) weigh 66.57 g. All of them are whiteware and are in the Gabel assemblage. Annular banded earthenware consists of decorative bands that are hand-painted parallel to the vessel's exterior rim and base (Majewski and O'Brien 1987:85). The banded colors typically occur in earthen tones, i.e., brown, orange, olive, and yellow, and appear on mugs, bowls, cups, and jars. The date for this decoration on pearlware is around AD 1790-1830. On whiteware, it occurs later, between AD 1830-1860 (Majewski and O'Brien 1987). The earlier forms of this decorative style have narrow bands employed with earth colors. The later vessels tend to have more full bands of brighter colors (Hamilton et al. 2015:321). Overall, 31 sherds (MNV 3) that weigh 66.57 g of annual painted ware are in the Gabel assemblage.

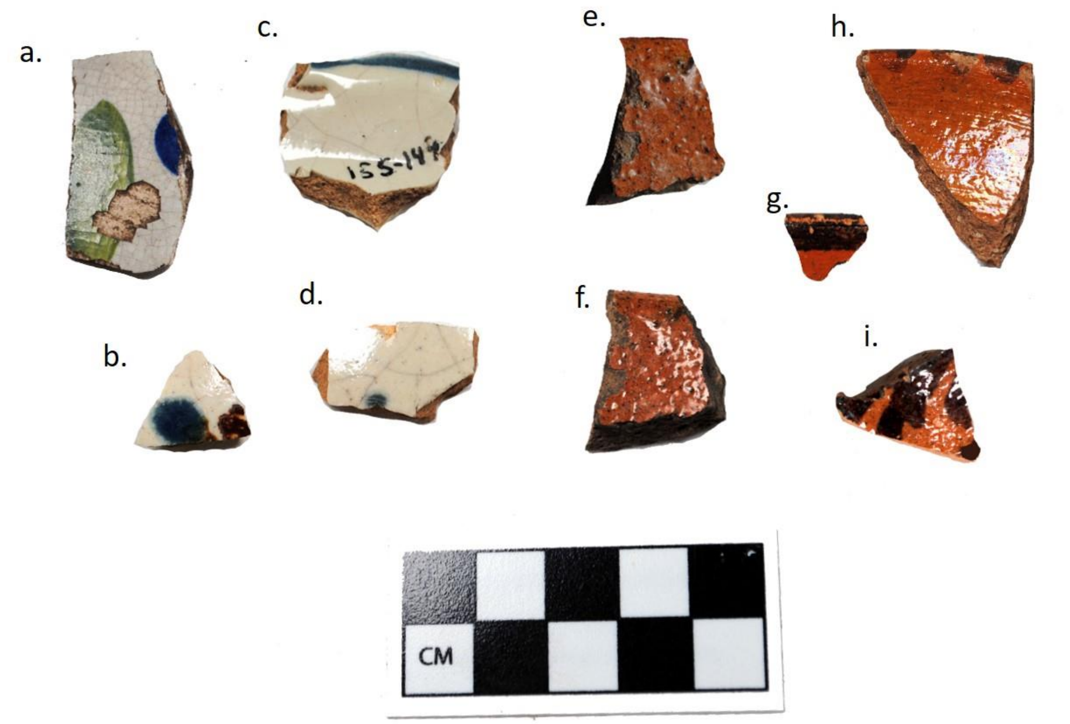
There are also unknown hand-painted wares. These are on whiteware and represented by six sherds (MNV 2) that weigh 16.51 g.

The last type of decorative style is transfer-printed earthenware. The transfer printing process involves using printed designs or motifs that are transferred from ink-fused paper and applied to an unfired clay vessel. Many of the printed designs are repetitive because they were copied from copperplate engravings. While the transferware technique developed in England between AD 1753 and 1765, it was not until after AD 1822 that this decorative type reached its full height. It continued to be used to the present (Allen et al. 2013b:41; Hamilton 1990). The earlier forms of transfer prints are black and sepia, while cobalt blue dominated the market later. New colors were also introduced in the early part of the nineteenth century, including green, blue, purple, and red. A total of 167 ceramic vessels (MNV 41) weighing 1,828.04 g are transfer prints: 6 (MNV 2; 20.37 g) fragments are on creamware, 3 (MNV 1; 210.25 g) are on pearlware, and 158 sherds (MNV 28) are on whiteware. Many of the colors were a deep cobalt blue, and black and red were found in small numbers, approximately less than 10% combined.

Mexican Imports

The two main types of Mexican imports identified here include (1) tin-enameled Majolica and (2) Mexican low-fired earthenware (Figure 4.23). Both types of ceramics are soft paste earthenware introduced into New Spain (later Mexico) during the 16th century and used until the 1830s. A total of 252 fragments (MNV 46) that weigh 1669 g are within both the Gabel and Deetz collection (Table 4.29).

Figure 4.23: Mexican imports in the Deetz collection.



a-d: Mexican Tin-Enameled Earthenware (Majolica); e-f: Mexican Low-Fired Earthenware (undecorated); g-i: Mexican Low-fired Earthenware (decorated).

The Mexican low-fired earthenware is Galera. It can be either hand-molded or wheel-thrown and coated with a clear, lead salt glaze. These ceramic types were produced in Mexico and other locations throughout New Spain between AD 1780 and 1830 (Hamilton et al. 2015:302), but are less common in archaeological deposits in California before AD 1822 (Farris 2013). While the production of small quantities continued in Alta California missions (Skowronek et al. 2003), it remains uncertain if any Mexican-low fired wares were locally

Table 4.29: Mexican imports

	Count	MNI	Weight
Low-fired			
undecorated	78	12	348
hand painted	80	13	212
Majolica			
undecorated	19	5	42
decorated	75	16	1,068
Total	252	46	1,669

produced at Mission La Purísima. There are 78 highly fragmented sherds (MNV 12) in the undecorated category that weigh 348 g. Another 80 sherds (MMV 18) that weigh 211 g have hand-painted lines with black brush strokes in swirly lines. As the fragments were very fragmented, it was difficult to reconstruct them to identify any pattern.

The other type of Mexican import is Majolica tin-enameled, typically white-glazed, earthenware common in California after 1769, but before AD 1822 (Allen et al. 2013b: 30; Farris 2013). This type of pottery is characteristic of Spanish-era archaeological sites in California. It is a hallmark of Spanish colonial tradition (Hamilton et al. 2015:304). The roots of making this ceramic vessel extend back to Majolica, Spain. However, after the 1700s, most of the Majolica that arrived in Alta, California, was imported from Mexico (Voss 2012:44). This ceramic type is soft-paste pottery covered with white glaze. Within the Gabel and Deetz assemblage, 19 fragments (MNV 5) of undecorated Majolica weigh 41 g. The painted Majolica occurs as an overglaze applied to the dry enamel before firing. At least two types of identifiable painted patterns are in this assemblage, the Puebla Blue-on-white and Abo Polychrome. Among all the painted wares, 75 ceramic sherds (MNV 16) weigh 1067.88 g.

Mission-made ceramics

Mission-made ceramics ware was made using hand-molded and wheel-thrown techniques (Table 4.30). Most of these vessels have flat and thick bases burnt on the bottom, suggesting their use for cooking (Figure 4.24). They consist of self-tempered clays that burned into shades of orange to red, brown, or grayish brown. There are 78 glazed fragments (MNI 5) that weigh 351g, and 60 unglazed fragments (MNV 8) weighing 1138 g. The unglazed ceramics were chunkier and displayed burn marks; their heavier weight may suggest that they were used primarily for cooking. Wheel-thrown pottery-making techniques were identified on at least 20 vessel fragments. In contrast, evidence for hand-molded vessels only included eight pieces.

Figure 4.24: Mission-made ceramics in the Deetz collection

Table 4.30: Mission-made ceramics

Tyle	***Count***	***MNI***	***Weight***
Glazed	78	5	351
Unglazed	60	8	1,138
Total	138	13	1,489

The unknown category is last. It consists of ceramic fragments that could not fit any of the above groups or subgroups. There are eleven vessel sherds that weigh 27 g.

Summary

The overall patterns suggest that the two primary ceramic types at Mission La Purísima are Chinese porcelain and British earthenware. By count, Chinese porcelain represents 33% (n=442) of the assemblage, and British earthenware comprises 38%. By weight, 37% (3,760 g) is Chinese, and 33% is British (3201 g). This pattern is similar to Costello's findings that there is more British earthenware (44%) and Chinese porcelain (22%) than there are Mexican imports (18%) and mission-made ceramics (4%). Mission La Purísima has the least Spanish-American ceramics and the most English ceramics compared to other missions (Costello 1990:327). The predominance of British earthenware and Chinese porcelain is like other sites that postdate AD 1822, such as the Cooper Molera Adobe. Farris (2013:112) noted that most ceramic imports are from Great Britain and China.

While the proportions of count and weight are on the higher end of ceramic assemblages at the mission, the minimum number of vessels represented among British earthenware and Chinese porcelain differs. There are only 61 (27%) porcelain plates and vessels, as opposed to 110 (48%) British earthenware vessels. The reconstructed ceramics in the Deetz collection, and the author's own observations of the ceramic assemblage, may illuminate these differences. For example, in the floor-to-floor level, the one reassembled Chinese porcelain vessel was a large soup tureen with a matching lid. The other fragmented sherds in the collection were also primarily platters and serving dishes because of their flat, long rectangular, or ovular, bases with a decorated rim. These serving wares were all the Canton design. However, the British earthenware (creamware, pearlware, and whiteware) is almost entirely individual plates and bowls, distinguished by their smaller sized and circular bases and rims. These two types of ceramic imports were principally tableware for serving and consuming food, the former for communal settings and the latter for personal use.

There are fewer Mexican imports and locally produced ceramic vessels and plates. Mexican imports only make up 19% (n=252) of the ceramic distribution by count and 15% (1,669 g) by weight. This pattern parallels Farris' (2013) observation that Mexican period ceramics lack Mexican-made wares. The shift in access to Mexican imports directly resulted from the socio-economic conditions that resulted from the Mexican Revolt and Mexican War of Independence. Prior to AD 1810, the ceramics arrived from San Blas in Mexico, but by AD 1822, there was more access to different goods because of opened trade systems with foreign ships (Farris 2013:105). These changes overlapped England's booming ceramic industry, as pottery became more cheaply produced and in higher quantities. As Mission La Purísima is relatively late, the shift in global trading patterns manifested into the archaeological signature seen today, with more Chinese Porcelain and British earthenware and a dearth of Mexican imports.

At the same time, this assemblage demonstrates that the Native community did not suddenly make their pottery after Spanish trading restrictions were eliminated. Indeed, mission-made wares only make up 10% of the assemblage by count and 15% by weight.

Nearly all the mission ceramics were thick with soot buildup on the vessel's exterior surface, suggesting their use for cooking. While the mission-made vessels may have primarily served for cooking food, the imports may have solely been used as tableware.

A Ceramic Cache

Like the glass assemblage, there is an extraordinarily high amount of ceramics, standardized by weight, within the earliest level, the floor-to-floor level (Figure 4.25). However, the count cannot be used in this comparison between these contexts because three whole vessels in the floor-to-floor level were reconstructed for pictures in the 1963 Deetz report. Therefore, all the fragments that went into recreating the vessels skew the data. The recreated ceramic vessels in the floor-to-floor level are a Mexican import Majolica “apothecary” vessel, a British whiteware pitcher with blue transfer print, a Chinese porcelain Canton soup bowl with lid, and a blue transferware print bowl (Figure 4.25). All these vessels were found in room 3. They were associated with at least seven glass bottles previously discussed, and possibly three whole *comales*.

The analysis of the glass in this cache suggests that the event occurred between AD 1820 and 1830, but the ceramic assemblage has further helped to pinpoint a date for this caching event. Not only does whiteware with transfer print bowl place the cache to post AD 1820, but it is also the otransfer printed whiteware pitcher that is directly dateable to AD 1825. The pitcher has a transferware print referred to as the “Lafayette at Franklin’s tomb.” It is a blue Staffordshire Pitcher that was made by EnochWood & Sons in Burslem, England, between AD 1825-1840 (Miller 1979). Thus, using the chronology of the glass and ceramics in the cache, it is clear it occurred sometime between AD 1826 and 1830.

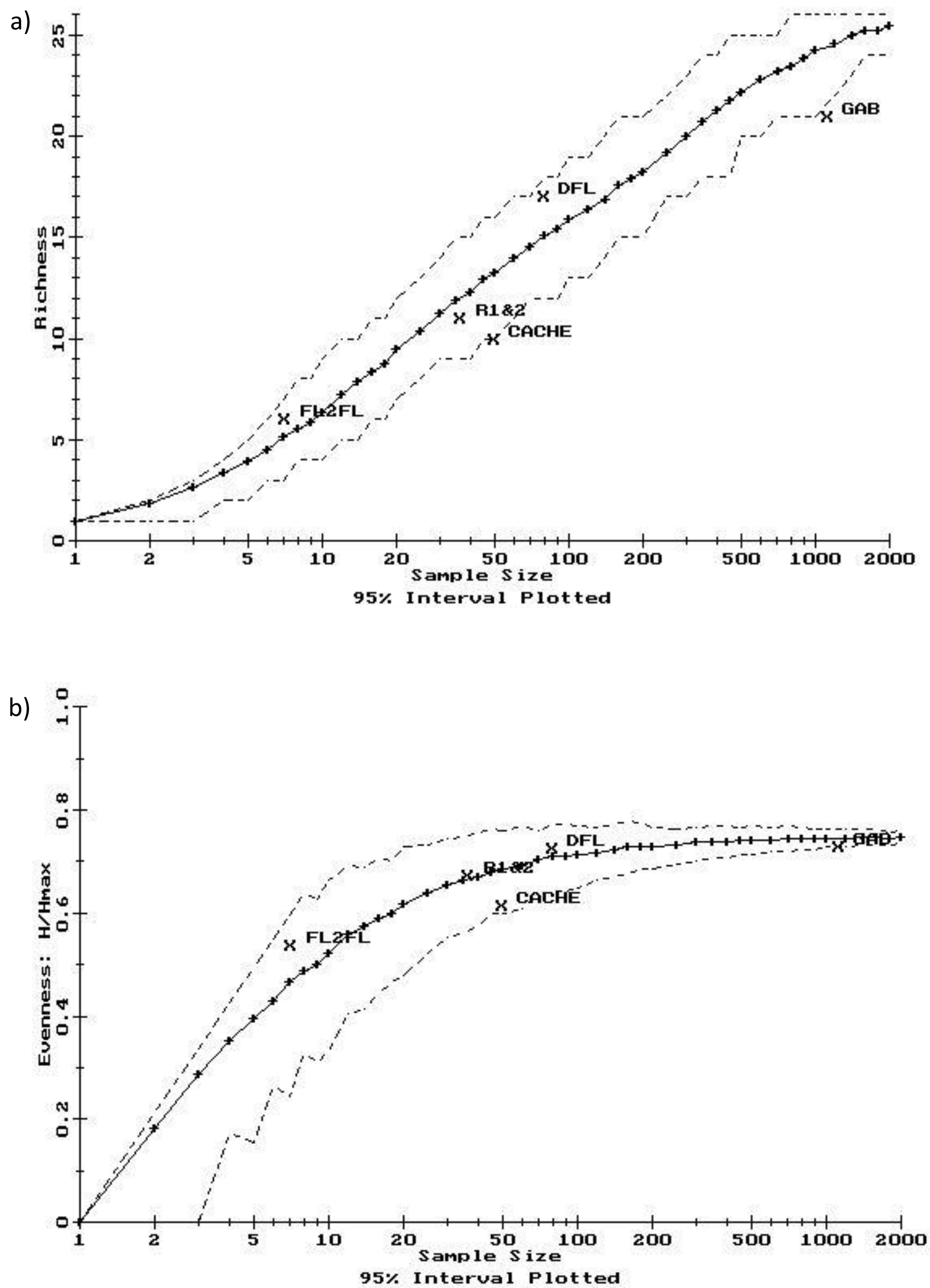
Figure 4.25: Ceramic vessels under the plaster floor in Room Three: from top: a) Majolica apothecary vessel (Cat. no. 147-2905) b) Chinese Canton soup serving vessel with a compatible lid (Cat. no. 147-2903 and 147-2904) c) a British blue transferware print pitcher (Cat. no. 147-2906) d) a British blue transferware print bowl (Cat. no.

Table 4.31: Differences in ceramics in the floor-to-floor level, non-cache and cache.

		Non-caching event			Caching event		
		Count	MNI	Weight	Count	MNI	Weight
Chinese							
	Canton				8	3	1,444
	Overglazed Misc.				1	1	3
	Undecorated				3	1	14
English							
	Creamware (undecorated)	1	0	7	5	1	14
	Pearlware (transferware)	1	1	8	1	0	15
	Whiteware (transfer ware)				15	3	1,201
Mexican Imports							
	low-fired (handpainted)	1	1	0	4	2	13
	low-fired (undecorated)	1	1	0	7	1	27
	Majolica	2	1	4	2	1	876
Missionware							
	unglazed	1	1	7	3	0	36
Total		*7*	*5*	*26*	*49*	*13*	*3,642*

The rest of the ceramics within the floor-to-floor level are distinct from the cache. There are no British whitewares, only one creamware and one pearlware (Table 4.31). As discussed earlier, the technology that produced whiteware was much later than creamware and pearlware. Also, there are more Mexican low-fired lead-glazed wares and Majolica within the floor-to-floor level than there are British creamware and pearlware—a pattern that parallels Farris's (2013) observations. In the non-cache context, Mexican wares make up the most significant percentage of ceramic types, with 57% (n=4) of the overall assemblage. This is followed by 29% (n-2) British earthenware, represented by creamware and pearlware. However, in the cache, Mexican imports only make up 27% (n=13) of the assemblage, while British earthenware (43 %) make up more. These data paint a more precise picture that the

Figure 4.26: DIVERS analysis of the ceramic assemblage by NISP (a) diversity and (b) evenness



*XFL2FL—Deetz's "floor-to-floor,"XD1&2—Deetz's "rooms 1 & 2," XDFL—Deetz's "floor & fill," XGAB—Gabel Collection, CACHE—ceramic cache.

floor-to-floor contexts are earlier than the cache in rooms 3 and 4. It likely resulted from the renovation event that occurred in the Native Family Apartments in AD 1817.

Comparing Contexts

A Kintigh DIVERS test to identify if and what assemblages are more statistically diverse reveals a distinct pattern by separating components with earlier contexts from strictly later ones. The Gabel collection and the ceramic cache are statistically *less* diverse than the other assemblages (Figure 4.26a). Regarding evenness, both are also on the lower end of the expected norm (Figure 4.26b). Interestingly, this pattern is the opposite of the glass in the Gabel collection, which is statistically *more* diverse. Though there are fewer varieties of ceramic imports and decorative types after AD 1822, the results still correspond to shifts in the trading markets. Farris (2013) explains that global trade networks ceased in Mexico following the Mexican Revolt, and California's ports became increasingly open to foreign traders along the Pacific coast. The changes in trading policies appear to have led to more access to certain types of ceramics, specifically Chinese porcelain Canton ware, and English transferware. The industrial revolution in Great Britain led to more accessible and cheaper whiteware and transferware. These changes affected the archaeological record by showing more restricted ceramic assemblages rather than more diversity later in time at Mission La Purísima.

SUMMARY

The Norman Gabel and James Deetz archaeological collections provided an invaluable opportunity to investigate diachronic change and continuity at Mission La Purísima Concepción. This type of reanalysis is part of a growing effort to confront outdated historical narratives that focused on acculturation models and demonstrate a nuanced understanding of community formation under successive waves of colonialism. The rigorous methodological study employed here also helped re-interpret previous understandings of identity negotiations, particularly with the rediscovery of the glass, ceramic, and soapstone cache in rooms three and four and their linkage to a higher status Native individual who occupied them. Such reanalysis of existing museum collections is crucial as we continue to feel the growing effects of the curation crisis.

Yet gaps in our knowledge still exist. Previous research has solely focused on the Chumash Family Apartments with little effort to study the midden materials or identify the area of the traditional tule-thatched houses. As a result, 2019 archaeological investigations set out to focus on gauging the extent and depth of the midden and the area of the traditional tule-thatched homes. A part of the project also aimed to expose a small portion of a room in the Chumash Family Apartments to document stratigraphic levels previously reported by Deetz. The next Chapter explains these investigations and the materials uncovered over the field season.

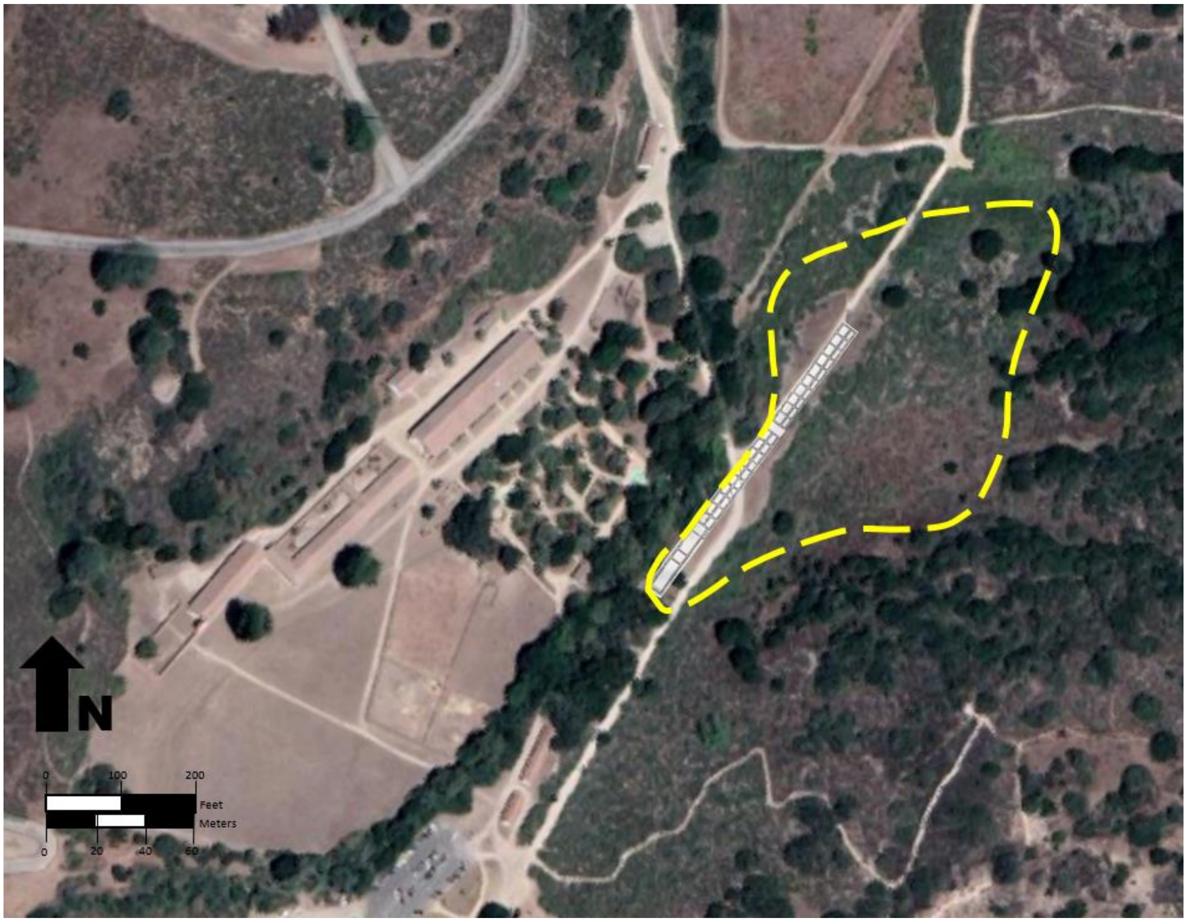
V. 2019 ARCHAEOLOGICAL INVESTIGATIONS

This chapter describes the archaeological field methods employed during the summer of 2019 at Mission La Purísima Concepción. It consists of artifact and ecofact analysis from the (1) midden units and (2) apartment units. Each section includes seven categories: (1) invertebrates (including shell beads and shell bead production), (2) vertebrates (includes fish and bone beads), (3) ethnobotanical remains, (4) groundstone, (5) lithics, (6) asphaltum, (7) metal, (8) ceramics, (9) glass (including glass beads and glass flakes), and (10) miscellaneous finds. The next chapter, Chapter 6, contextualizes these outcomes at the inter- and intra- site level.

PREPARATION AND FIELDWORK

An assessment of the Chumash neighborhood at Mission La Purísima Concepción began with analyzing archaeological maps from the Department of Parks and Recreation, CCC, Norman Gabel, and James Deetz's excavations. The maps were scanned and georeferenced in Geographical Information Systems (GIS), allowing for the accurate placement of previous surveys and excavations in real space (Figure 5.1). After assessing the size and layout of these buildings in GIS, a physical survey was conducted in the northeastern portion of the Mission to identify surface features. Fence posts, pedestrian walkways, and other physical points on the landscape were mapped using a TopCon 239W total station. An organized grid system was established for future geophysical testing. Surveys revealed four brass-capped markers placed by Glenn Farris. They marked the northernmost corners of the apartment complexes (Building C) and the southernmost edges of the Infirmary (Building A) (Farris and Wheeler 1998). The southernmost and northernmost corners of the building allowed for the overlay of Buildings A, B, and C in

Figure 5.1: GIS overlay of Chumash Family Apartments.



GIS. This information facilitated the placement of the apartment units, or "AUs" (Figure 5.2).

In addition to gathering information from inside the apartment, it was essential to test the deposits outside the complex. As discussed in Chapter 3, this area represents the entire Chumash community, including the families who lived in the adobe apartments and those who lived in traditional tule-thatched houses. A survey was conducted to mark the boundaries of the village. It extended as far as 200 ft to the west and another 200 ft to the north, as well as 50 ft to the northeast. The western portion of the midden was upslope. It was covered with dense chaparral and poison oak. As a result, testing of the midden unit to locate the tule-thatched houses occurred in the northern section of the defined space of the village. A total of five midden units, or "MUs," were placed in this area. Each unit was 1 m x .5 m (Figure 5.3). The data are reported in Appendix VIII.

ARTIFACT AND ECOFACT METHODS

I led a team of 15 undergraduate and graduate students in processing of archaeological materials from the field project in the Archaeological Processing Laboratory at UCSB. More in-depth analysis occurred by the following people: Sara Noe, land mammal identification; Hugh Radde, fish identification; Brianna Rotella, glass beads; Brian Barbier, shell beads.

Figure 5.2: Placement of Apartment Units.

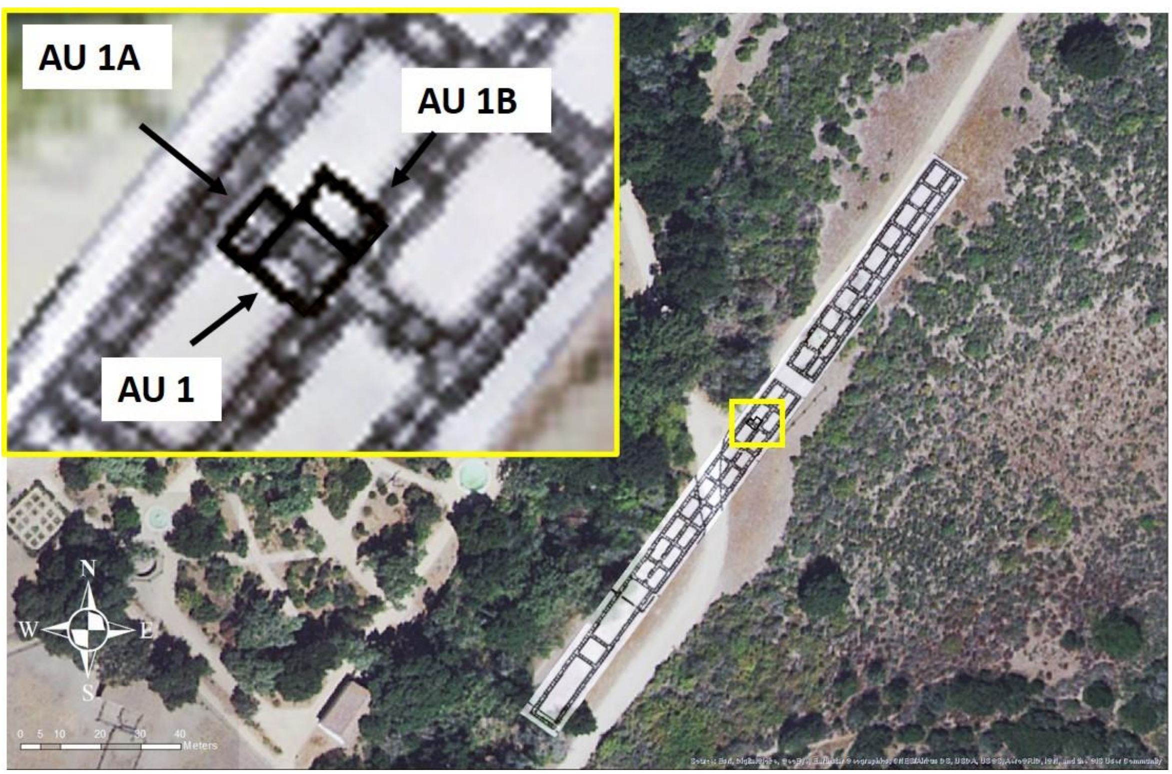
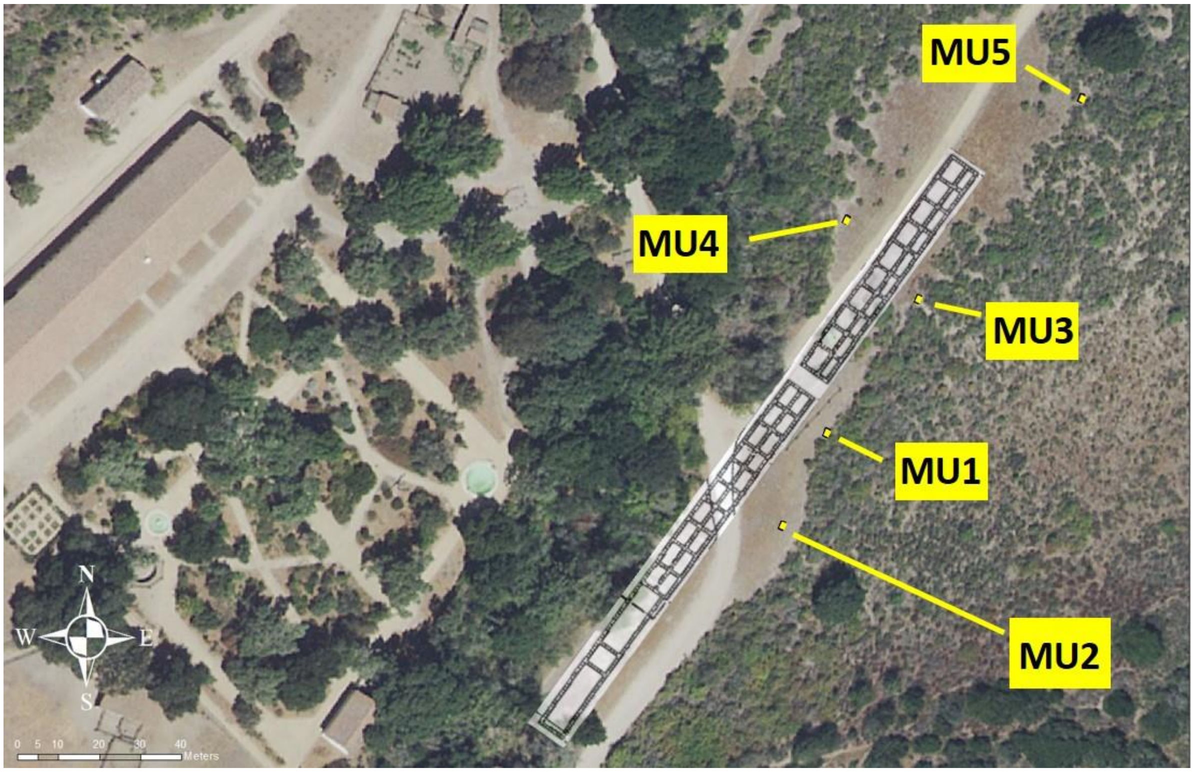


Figure 5.3: Placement of Midden Units.



The same artifact types recovered during the 2019 archaeological investigations appear in the Gabel and Deetz collections explored in the last chapter. These include (1) soapstone, (2) groundstone, (3) lithics, (4) asphaltum, (5) metal, (5) ceramics, and (6) glass. The methods of analysis remained consistent during laboratory examination of artifacts uncovered during recent excavations as were those used to study the Gabel and Deetz collections. Other materials not investigated in the museum collections were uncovered over the field season. These items and the methods used in their study are listed next:

Marine Invertebrates

A reference collection located in the Collections Processing Laboratory and the Zooarchaeological Laboratory at UCSB aided in identifying shellfish types. The reference collection contained examples from shellfish found along the California coast and the

Channel Islands. The classification system under the World Register of Marine Species, also known as WoRMS, was used to reference the proper name. Within the ¼" sample, each fragment was counted and weighed. In the $^{1}/_{8}$" sampling strategy, shellfish fragments were only weighed.

Vertebrates

The fish and the terrestrial animals were separated into identifiable and non-identifiable species. Identifiable species were classified into the closest taxonomic level by using direct comparison with specimens curated at the UCSB Subsistence Laboratory and the Santa Barbara Museum of Natural History. The analysis included skeletal elements, part of the element, anatomical side, age, sex, weight, and any modifications (e.g., butchering, burning, etc.). Sarah Noe identified the species of terrestrial animals in the Subsistence Laboratory. Hugh Radde identified the species of fish in the Zooarchaeological Laboratory. All the vertebrates identified by species were individually counted and weighed, while the unidentifiable fragments were weighed altogether.

Macrobotanical remains

Dr. Eric Wohlgemuth analyzed Macrobotanical remains at the Far Western Anthropological Research Group facility. Soil volume (in liters) and weight (in kilograms) were recorded for each flotation sample. Samples were flotation-processed by means of the bucket method used throughout California and Nevada (Wohlgemuth 1989). The buoyant light fraction was collected using a 40 mesh/inch (0.4-millimeter) screen; the heavy fraction washed through $^{1}/_{8}$" (3-millimeter) and 24 mesh/inch (0.7-millimeter) mesh. All segregated constituents were counted. Fragments of the nutshell and wood charcoal were weighed to 0.1

milligrams. Constituents were then stored in centrifuge tubes denoting site trinomial, sample number, and size grade.

Shell Beads and Bead production detritus

Olivella shell beads were classified according to the typology developed by Bennyhoff and Hughes (1987). This includes identifying characteristics such as size, shape, perforation diameter, and thickness, which assisted in determining temporally diagnostic beads (Bennyhoff and Hughes 1987; Graesch 2004; King 1990; Milliken and Schwitalla 2012). Brian Barbier aided with the identification of bead types. The shell bead detritus was separated from the invertebrate assemblage. It was all counted, weighed, and cataloged.

Glass Beads

Glass beads were systematically examined for size and color and compared to previous glass bead typologies (e.g., Dallas 1988, Gibson 1976, Karklins 1982; Kidd and Kidd 1970, Meighan [n.d.], Ross 1989). Characteristics such as size, shape, perforation diameter, and thickness were documented in a spreadsheet. A Munsell color bead chart was used to color-code the beads.

MIDDEN DEPOSIT

Five midden units, or "MUs," were separated by approximately 20 m. Each unit was 1 x .5 m. MU1 is in the back of Building A. It hit sterile soils at 110 cmbd. MU 2 is behind Building A, and it did not yield any materials after 110 cmbd. MU 3 is behind Building C. It went down to 90 cmbd. MU4 is situated in the front yard of the apartments to determine the extent of the midden to the east. This unit hit sterile soils at 100 cmbd. Finally, MU5 was placed 75 m from the northernmost marker in the apartment complex. It was one of the deeper and denser units, hitting sterile levels at 110 cmbd. Altogether, there were 2.6 m^3 of soil volume excavated from these midden units.

The midden units have a high density of ecofacts (bone and shell). The sampling strategies differ from those in the apartment units. Upon screening field materials over an ⅛" mesh, materials were separated through a sifting pan. They were then bagged separately into a ¼" mesh and a ⅛" mesh. All the ¼" samples were fully sorted by material type and category, including shellfish, bone, beads, charcoal, seeds, ceramics. With the ⅛" samples, a 100g sub-sample was separated, and a "full sort" was conducted on these samples by category. The remaining artifacts and ecofacts were "fast sorted," meaning that only artifacts, e.g., lithics, asphaltum, shell beads, glass beads, and other specialized finds, were pulled, bagged, and cataloged. Once all the materials were classified and categorized, they were counted and weighed. An associated catalog tag was placed within each bag that included the site number, mesh, level, sample type, description, count, weight, date, lab workers' initials, and catalog number.

Marine Invertebrates

The invertebrate assemblage consisted of highly fragmented shellfish species representing at least 26 different marine species of both rocky intertidal and bay/estuary habitats (Table 5.1). Within the ¼" sampling strategy, the shellfish weighs 3,238 g. 86% (2,778.24 g) is comprised of *Mytilus californianus*. These are small fragments, with 8,836 pieces counted. *Haliotis cracherodii* (6%) is the second most abundant species, followed by Olivella biplicata (3%) and undifferentiated *Haliotis* spp. (2%). The remaining 21 different shellfish species make up the last 3% of the assemblage. Within the ⅛" 100g sample, the

Table 5.1: Rocky intertidal and bay/estuary taxa

	Total ¼"Count	¼" Weight	Total ⅛" Weight
Rocky Intertidal			
Mytilus Californianus	8536	2778.24	459.31
Haliotis cracherodii	239	183.69	3.32
Haliotis rufescens	3	2.24	-
Haliotis spp.	85	58.7	6.7
Olivella biplicata	371	83.25	21.92
Tivela stultorum	8	12.31	0.13
Tegula spp.	32	10.39	0.16
Pollicipes polymerus	74	10.29	0.54
Megastraea undosa	1	3.77	-
Tegula funebralis	34	8.23	0.06
Nucella canaliculata	3	1.84	0.08
Strongylocentrotus purpuratus	2	0.19	-
Balanus spp.	240	44.85	1.049
Chiton spp.	2	0.07	
Bay/ Estuary			
Leukoma staminea	10	7.079	0.09
Chione undatella	6	2.66	-
Chione californianiensis	4	1.32	0.42
Chione spp.	3	1.31	0.04
Mytilisepta bifurcata	4	0.61	0.08
Saxidomus nuttallii	4	2.87	-
Tresus Nuttallii	2	0.3	-
Parapholas californica	1	0.22	-
Argopecten spp.	2	3.69	0.17
Other			
Decapoda spp.	1	0.18	0.07
Gastropod spp.	3	0.3	-
Shell undiff	189	20.1	28.88
Total	***9859.00***	***3238.70***	***523.02***

results are similar. There are at least seventeen different species represented, and 88% is *Mytilus californianus*. Undifferentiated shellfish made up the second-highest amount at 6%, and Olivella is the third-highest at 4%. All other species of shellfish made up less than 1% of the sample.

Olivella bead production detritus and shell beads: A significant amount of Olivella bead production detritus was identified within the midden's shellfish assemblage. Within the ¼" mesh, $^{1}/_{8}$" 100 g sample, and fast-sorted samples there were 867 pieces of Olivella detritus weighing 127.17 g. Based on the soil volume by weight, this represents 58.91 per m^3 of Olivella detritus by weight. By count, this equates to 333.5 per m^3. There were also 23 whole shells that weighed 15.75 g.

A total of 82 Olivella shell beads were identified, two of which were identified in the apartment building, which are discussed in the next section (Table 5.2; Figure 5.4, Appendix IV). 75 are H beads. These beads have a small central perforation made by drilling the bead with a metal needle (Bennyhoff and Hughes 1987:135-136). Their average length is 6.13 cm, and the width is 5.47 cm. The perforation diameter has an average of 1.02 cm. The beads are further distinguished into four subgroups: H1a "Ground Disks" (n=15), H1b "Semi-ground Disks" (n=7), H2 "Rough Disks" (n=10), and H3 "Chipped Disks" (n=10). Due to wear, breakage, and other environmental factors, 21 beads could not be classified beyond the general H category. Eleven could not be classified beyond the H2 subcategory. It is important to note that the H1 category may be overreported due to extensive weathering and the generally poor conditions of the beads due to the depositional context.

Even though these beads are all temporally distinguished by their manufacturing and use in the Historic period, the subcategories have fine-grained chronological significance. For example, the H1a beads were used mostly during the early Mission period, from AD 1770–1800, while H1b beads are widespread in the middle Mission period, between AD

Table 5.2: Shell Beads in midden units.

Bead Type		Count (n)
Needle Drilled Disks (Class H)		
	H1a Ground Disks	15
	H1b Semi-Ground Disks	7
	H2 Rough Disks	10
	H3 Chipped Disks	10
	H (fragmented, indeterminate)	21
	H1 (ground, but damaged edges)	12
	Total Needle Drilled Disks:	75
Lipped Olivella (Class E)		
	E2a	2
	E Outlier variants	2
Chert-drilled Wall Beads		
	J1	2
	G1	1
Total		*82*

*Beads reported include all units and column samples.

1800 and 1816. H2 beads occur most often from the middle of the Mission period to the termination of the mission system in AD 1832. Finally, H3 beads are markers for the post-Mission period to at not much beyond 1850 (Bennyhoff and Hughes 1987: 135). The beads within the Mission La Purísima Concepción midden assemblage represent a relatively equal distribution of the H bead subcategories. The reproduction of beads in the early Mission carried over and mixed with new forms later in time. The results additionally attest to a later, post-mission Native occupation.

There are eight other Olivella shell beads and one other bead-in-production. Four of the beads are E beads, or "Lipped Beads," made from the upper callus of the lip of the Olivella shell. Two beads are E bead variations. The other two are E2a (n=1) and E2a1 (n=1). These beads are diagnostic markers of the Late Period Phase 2 (AD 1560-1776) that

Figure 5.4: Four types of shell beads identified in the midden deposit

Top left: H1B (Cat no. 31); Top right: J1 (Cat no. 75); Bottom left: E (Cat no. 83); Bottom right: H1a (Cat no. 101). Photo by Brian Barbier.

continued to be used into the Historic period, although a specific time in the Historic period is not given (see Bennyhoff and Hughes 1987:138; Milliken and Schwitalla 2012:35). There are also two J1 beads and one G1 stone-drilled disk. The J1 beads are medium-sized disks with ground edges. They were used just before the Mission period began and continued into the middle of the middle Mission period to about AD 1816 (Bennyhoff and Hughes 1987:136). The G1 "Tiny Saucer Bead" is very small with carefully ground edges. It does not have any temporal significance and can occur in any period. One wall bead is very eroded and could not be classified any further than a general wall bead.

Finally, there are eleven non-Olivella shell beads in the midden units. Seven of the beads are red abalone, one of which was found in the heavy fraction of the column sample. They are drilled with a metal needle, signifying their placement in the Historic period. The other four beads are *Mytilus* (n=1), clam (n=2), and one undifferentiated gastropod.

Vertebrates

There are 5,602 g of terrestrial animal bones, most of which (97%) are highly fragmented unidentifiable mammals (Table 5.3). Because the midden is exposed, these fragmented mammal remains may be a result of environmental and taxonomic processes. However, they could potentially be evidence for an intensified butchering process, disposal practices, and/or trampling. Of the identifiable animal remains, the cow (*Bos taurus*) makes up the largest by weight. There are 11 individual specimens of cow bone that weigh 101.13 g. The second-largest amount of vertebrate material is comprised of sheep (*Ovis aries*). Six individual sheep fragments weigh 24.69 g. The remaining cultural animal all weigh less than 4 g. Together, they include California Ground Squirrel (*Spermophilus beecheyi*), Brush Rabbit (*Sylvilagus bachmani*), Jack Rabbit (*Lepus californicus*), Bobcat (*Lynx rufus*), Crow (*Corvus brachyrhynchos*), Turtle (*Testudines*), and domesticated chicken (*Gallus gallus*). Although sea mammal is typically observed at coastal sites such as *Noqto* (Glassow 1990), it may not have been hunted by the mission community because of the time investment or the mammal’s heavy weight, which had to be walked back to Mission La Purisima about 13 miles from the coastline.

Fish specimens are only included from MU 1 and MU 5 due to time, funding, and access as a result of Covid-19 related issues. The fish remains are represented by seven families, seven genera, and five species of marine fishes (Table 5.4). The most common fish

Table 5.3: Mammal in midden units.

Taxon	Species	Common Name	Count	Weight
Mammal	Bos taurus	Cow	11	101.13
Mammal	Ovis aries	Sheep	6	24.69
Mammal	Spermophilus beecheyi	California Ground Squirrel	14	2.54
Mammal	Spermophilus beecheyi	Brush Rabbit	2	0.22
Mammal	Lepus californicus	Jack rabbit	1	0.38
Mammal	Lynx rufus	Bobcat	1	3.74
Mammal	Neotoma fuscipes	Dusky-footed woodrat	4	0.39
Mammal	Ondatra zibethicus	Muskrat	2	0.39
Mammal	Thomomys bottae	Pocket gopher	15	1.92
Reptile	Testudines	Turtle	1	1.16
Aves	Corvus brachyrhynchos	Crow	1	0.29
Aves	Gallus gallus	Domestic chicken	1	0.26
Unidentifiable mammal 1/4			14,249	4,597.71
Unidentifiable mammal 1/8"			n/a	867.38
Total			*14,308*	*5,602*

Table 5.4: Fish in MU1 and MU5.

Taxon	Common Name	Family	MU 1 count	MU 1 %	MU 1 wt.	MU 5 count	MU 5 %	MU 5 wt.	TOTAL count	TOTAL %	TOTAL wt.
Clupeidae	Sardines or herrings	Clupeidae	3	18%	0.03	1	4%	0.01	4	10%	0.04
Embiotocidae	Surfperch	Embiotocidae	1	6%	0.02				1	2%	0.02
Heterostichus rostratus	Giant kelpfish	Uranoscopidae	1	6%	0.11				1	2%	0.11
Paralabrax sp.	Sea basses	Serranidae				1	4%	0.29	1	2%	0.29
Sarda chiliensis	Pacific bonito	Scombridae				2	8%	1.64	2	5%	1.64
Scomber japonicus	Pacific mackerel	Scombridae				5	21%	0.7	5	12%	0.7
Scombridae	Mackerels and tunas	Scombridae				1	4%	0.05	1	2%	0.05
Scorpaena argentea	Calif scorpionfish	Scorpaenidae				1	4%	0.29	1	2%	0.29
Scorpaenidae	Rockfishes or scorpionfishes	Scorpaenidae	9	53%	4.19	7	29%	2.28	16	39%	6.47
Sebastes sp.	Rockfishes	Scorpaenidae	2	12%	0.4				2	5%	0.4
Sphyraena argentea	Pacific barracuda	Sphyraenidae	1	6%	0.52	6	25%	2.24	7	17%	2.76
Actinopterygii	Bony fish	Actinopterygii/Teleostei	201		11.79	113		4.3	314		16.09
Total			*218*	*100%*	*17.06*	*137*	*100%*	*11.8*	*355*	*100%*	*28.86*

are from the family Scorpaenidae (rockfishes and scorpionfishes; n=19). Scombridae (n=8), mostly Pacific mackerel, are the next most common fish family. Seven specimens represent Pacific barracuda, and clupeids account for an additional four specimens. Fewer than two specimens represent the remaining identified fish families and genera. Unidentifiable fragmentary specimens constitute much of the fish assemblage (Actinopterygii; n=314).

Macrobotanicals

The macrobotanical remains only consist of materials from MU1 and MU5. There are two samples from MU1, within Stratum II and III: the combined soil volume was 20.3 liters. Only one sample was analyzed from MU5, and it was 10.2 liters. In total, this is 3.5 liters. There are no statistical differences between these two midden units, and I report on them combined (Table 5.5).

Table 5.5: Density of charred plant remains from midden units.

Nutshell			
Pinus sabiniana	Gray pine	ct	1.8
		mg	2.6
Prunus ilicifolia	Islay	ct	2.5
		mg	2.7
Quercus spp.	Acorn	ct	13.3
		mg	5.6
Total		ct	17.6
		mg	10.9
Berry Pit			
Arctostaphylos spp.	Manzanita	ct	1.9
		mg	3.2
Small Seed			
Adenostoma fasciculatum	Chamise	ct	0.1
Calandrinia spp.	Red maids	ct	0.2
Chenopodium spp.	Goosefoot	ct	0.1
Clarkia spp.	Farewell to spring	ct	0.6
Galium spp.	Bedstraw	ct	1.2
Juncus spp.	Rush	ct	0.6

Opuntia spp.	Prickly pear	ct	0.1
Phacelia spp.	Phacelia	ct	0.2
Phalaris spp.	Maygrass	ct	0.4
Salvia spp.	Sage	ct	1.1
Asteraceae	Sunflower family	ct	0.1
Fabaceae	Bean family	ct	0.1
Papaveraceae	Poppy family	ct	0.4
Poaceae fragments	Grass family	ct	12.1
Total identified to genus			4.8
Total identified to family			17.5
Eurasian Weed[1]			
Medicago spp.	Burclover	ct	0.3
Cultigen[1]			
Cultivated grain fragments		ct	5.6
Hordeum vulgare	Barley	ct	0.4
Triticum spp.	Wheat	ct	0.7
Zea mays cupules	Corn cupules	ct	4.1
Zea mays kernels	Corn kernel	ct	1.0
Miscellaneous			
Acorn attachment disk	Acorn	ct	1.7
Large non-seed		ct	0.2
Marah spp.	Wild cucumber	ct	0.4
		mg	0.7
Non-grain pieces		ct	4.1
Poaceae rachis	Grass family	ct	0.1
Unidentified embryo		ct	0.4
Unidentified nutshell		ct	7.8
Unidentified seed fragments		ct	12.7
Unidentified wood charcoal		mg	496.7

[1] Non-native Eurasian taxon.

The 50.9 charred fragments consisted of seeds, nuts, berry pits, cultigens, and miscellaneous botanical remains. 34 % are nutshells, of which acorn made up the majority 75%. Small seeds also made up 34%. Bedstraw (*Galium* sp.) makes up 25% of the identifiable seeds to genius, followed by sage at 23%. The small seeds identifiable to just family are nearly all (95%) Poaceae fragments from the grass family. Cultigens made up 23% of the plants. Among the cultigens, which make up 22% of the overall sample, the undifferentiated grain fragments make up 47% and are the predominant form of botanical remains identified. Corn cupules follow this at 35% and corn kernels (8%). Wheat (*Triticum* spp.) and Barley (*Hordeum vulgare*) are also present. There are also 2.1 Eurasian weeds. Nearly all of it (90%) is Cheeseweed. Finally, the only type of berry pit identified within the midden units is Manzanita (*Arctostaphylos* spp.).

Groundstone

The groundstone is comprised entirely of soapstone: twelve fragments weigh 74.42 g. One *comal* rim sherd (Cat. no.541) weighs 17.5 g. It is a corner piece with a maximum width of 20.29 mm. There is also one soapstone olla rim fragment (Cat. no. 566) that weighs 21.13 g. The rim has a thin (10.76 mm) lip, food residue on the interior, and burning on the exterior. These large diagnostic fragments came from MU 1. Nine other miscellaneous soapstone fragments could not be classified into a vessel form. Together they total 35.79 g.

Flaked stone and stone beads

There are 32 flakes and one utilized flake (Cat. no. 540) in the midden units. The flakes weigh 78.8 g, and the tools have a combined weight of 3.4 g. There are 22 (73%) pieces of Monterey chert and nine (28%) pieces of Franciscan chert is. There is also one porphyritic volcanic flake and one undifferentiated stone flake.

Five stone beads also make up the lithic assemblage. They are small and weigh 0.56 g. They have an average length of 5.21 mm and an average width of 2.26 mm. The beads are coarse-grained and likely made of schist. These beads are not temporally diagnostic.

Asphaltum (bitumen)

Asphaltum represented every production stage, including its processing, application, final technological craft, and detritus. Following Brown (2016), there is one mixing dish (Cat. no. 534) in the processing subcategory. It is a red abalone (*Haliotis rufescens*) with a thin coat of asphaltum on the shell's inner cavity. It weighs the most of all the other asphaltum artifacts at 54.2 g. There is also one tarring pebble (Cat. no. 1373). It is 17.08 g and broken. Less than half the length (27.84 mm) is present, while the maximum width is 38.44 mm, falling into the large category of the Brown and Vellanoweth (2014) classification scheme. There is also one chunk of asphaltum with basketry impressions left behind on the asphaltum lining. It is larger than the rest of the detritus, weighing 4.91 g. The vast majority of the asphaltum is classified as detritus. There are 126 small pieces of asphaltum that weigh 55.49 g. It is difficult to say for certain what these small pieces of detritus represent; however, they likely speak to the construction of basketry production in the midden area.

Metal

The metal is very fragmented. Together, 136 metal pieces weigh 66.52 g. The majority, or 82 small miscellaneous pieces of metal weighing 291.18 g and could not be classified into any category on the Van Wormer classification scheme and were labeled miscellaneous. At least fifty small fragments are nails and placed in the "Building Materials and Architecture Category." These fragments appear to make up at least seven individual nails that are too eroded to glean information about their manufacturing type. There is, however, one square head and one machine-cut nail. The nail fragments together weigh 29.27 g. Six other pieces of wire fit into the "hardware" category. They weigh 7.5 g. The last metal piece is a modern bottle cap.

Figure 5.5: Metal decorative fastener (Cat. no. 249) identified in MU 1.

One decorative metal fastener (Cat. no. 249) was also found in the wall fall of MU1 (Figure 5.5). It has a double-sided flower with about 12-13 flower petals etched into it. It has a length and width of 13.74 mm, and it weighs 0.29 g. This fastener was likely worn on a garment.

Ceramics

The ceramic assemblage originated from four different places: (1) China, (2) England, (3) Mexico, and (4) locally produced missionware. Altogether there are 42 ceramic sherds in the midden unit that weigh 131.52 g (Table 5.6). Six pieces of Chinese porcelain weigh 14.93 g. Two pieces are parts to a decorated provincial ware plate with a blue geometric pattern. Three pieces are from Canton plates or platters; one has a border of short diagonal lines on the rim, and the other two have blue linear patterns. The last piece is miscellaneous overglazed porcelain with red paint on the side.

Table 5.6: Midden unit ceramics

	Count	Weight
Chinese Porcelain		
Provinicial ware	2	8.79
Canton	3	1.64
Misc. Overglazed	1	4.5
British Earthenware		
Creamware	6	16.4
Whiteware (transferware)	4	1
Whiteware (painted peasant)	1	2.63
Mexican Imports		
Undecorated	4	8.23
Decorated	2	5
Mission ware	14	78.16
Unknown	5	5.17
Total	*42*	*131.52*

Eleven pieces of British earthenware weigh 20.3 g. Six pieces, and two rim sherds, are creamware with no decoration, while five whiteware sherds have a transfer print design. Three are blue transferware, and the other one is a faded red print. The last sherd from Britain has a Painted Peasant design with green foliage and a red flower.

The Mexican imports consist of six sherds that weigh 13.23 g. Two sherds have black, thinly curved line paintings. The other four are undecorated low-fired, lead-glazed ceramics.

Finally, fourteen dense sherds of locally produced missionware weigh the most of all the ceramics, at 78.16 g. Five of the pots are wheel thrown with evidence of incised lines from the wheel manufacturing. Two have uneven grooves on the surface illustrating their hand molding technique. The manufacturing techniques on the seven other sherds could not be determined. Burning and soot buildup was only noted on five of the sherds—no other ceramic vessels have evidence for this type of cooking method. Five other locally produced sherds could not be classified into any type and they weighed 5.17g.

Table 5.7: Glass beads within the midden units.

Type	MU 1	MU1 Col. Sample	MU 2	MU 3	MU 4	MU4 Col. Sample	MU 5	MU 5 Col. Sample	AU1, 1a, 1b	Total
Drawn Cane										
Ia	2		2		2		2		2	10
IIa	39	10	5	12	18	3	6	2	6	101
If									1	1
Iva	2				2					4
Wire wound										0
WIb	3								1	4
WId	2				2				2	6
WIIc			1							1
WIIx	1									1
WIIIa					1				1	2
WIIIc									1	1
Prosser molded										0
PMIa					1					1
PMIc					1					1
PMId							1			1
PMIg	1									1
Total *50* *10* *8* *12*	*27*		*3*		*9*	*2*		*14*		***135***

*Type based upon Kidd & Kidd (2012 [1970]) and Karklins 2012

Glass

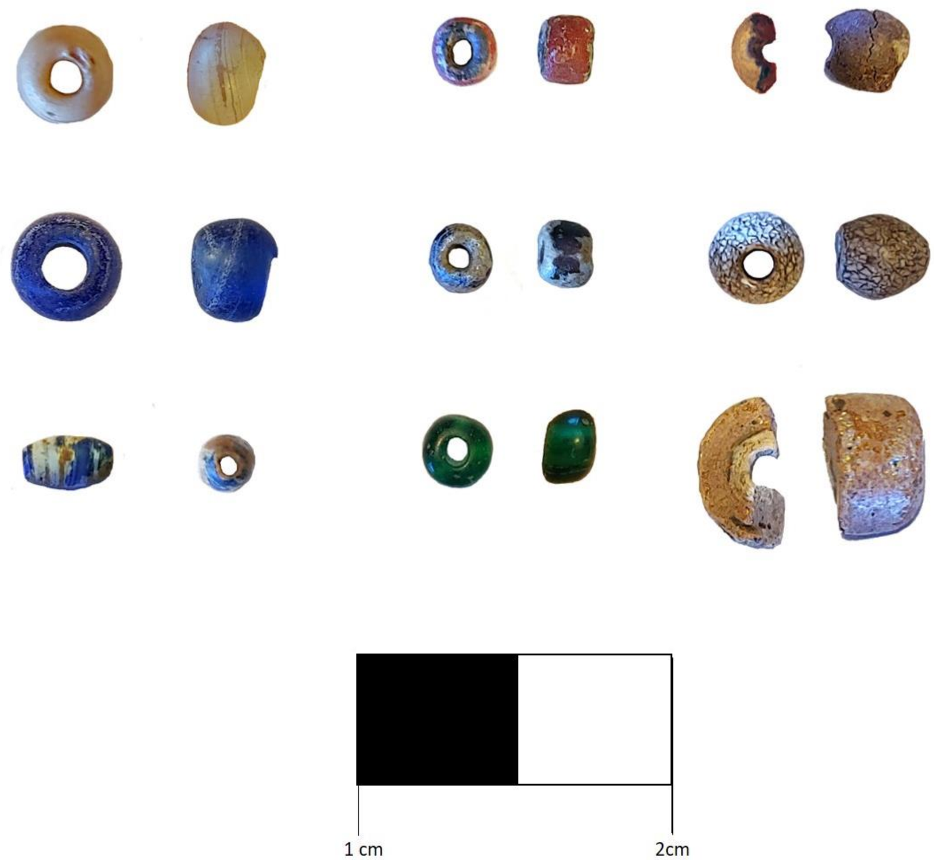
Within the glass category, there are glass beads, window glass, and consumer glass. Of the window glass, five pieces weigh less than one gram (0.83 g). They are all clear with patina. Fourteen pieces of consumer glass went to miscellaneous bottles that weigh 42.97 g. Ten glass sherds recognized in this category are glass flakes, and together they weigh 7.76 g. Three (30%) of the flakes are amber, and the other seven (70%) are green. The four other non-flaked pieces of consumer glass consisted of a bottle base and three miscellaneous fragments. The bottle base (Cat. no. 535) is clear and has an unrecognizable maker's mark on the bottom. It weighs the most at 34.34 g.

A total of 121 glass beads were identified in the midden deposit, 15 of which were pulled from the heavy fraction of the column samples (Table 5.7). They came in a variety of colors and types (Figure 5.6) In regard to color, blue is the most dominant (n=37), followed by black (n=18), white (n=17), and green (n=16) (Table 5.8). They are manufactured in thre

Table 5.8: Glass bead colors by midden units and apartment units

	Midden Units	Apartment Units	Total
Blue	37	7	44
White	17	2	19
Black	18		18
Green	17	2	19
Clear	11		11
Brown	9		9
Purple	1		1
Red	8	1	9
Yellow	4	1	5
Total	*122*	*13*	***135***

Figure 5.6: Nine types of glass beads identified in the midden units.



Top left: WIb (Cat. no. 215); Top middle: IVa (Cat. no. 182); Top right: PMIa (Cat no. 135);
Middle left: WId (Cat. no. 127); Middle IIa (Cat no. 221); Middle right: PMIc (Cat. no. 140).
Bottom left: WIIx (Cat no. 208); Bottom middle: IIa (Cat. no. 233); Bottom right: PMIg (Cat no. 237).

distinct ways: drawn cane, wire wound, and Prosser-molded. One hundred seven of the beads are drawn cane. According to the Kidd and Kidd (1970) and Karklins (1982) typology, eight beads fit into the Ia category; 95 fit into the IIa type, and the other four glass beads fit into the IVa type. The first type, Class Ia, is the simplest form of monochrome tube beads, while Class IIa has been subjected to rounding by reheating after it was cut into a tube shape (Kidd and Kidd 2012:43-44). The last type of tube bead, Class IVa, has multilayered gatherings and is more complex in manufacturing style than other tube beads.

Ten beads are wire wound. This bead type is handcrafted and cannot be reduced into a neat categorical scheme. However, Kidd and Kidd (1970) and Karklins (1982) break down wire wound beads into three types with subtypes: WIb (n=3) are monochrome beads that are round and WId (n=4) are monochrome beads that are doughnut shaped. WIIs display more elaborate shaping with pinching or molding than WIs. There is one WIIc is faceted with five sides and there is one WIIx that is oval ribbed. The WIII types are any beads that are not monochrome and include shapes found in both WI and WII. There is one WIIIc that has inlaid decoration The wire wound beads are much larger than the drawn cane beads, with an average length of 5.99 mm and an average width of 5.50 mm.

There are also five Prosser-molded beads. Although the beads are technically ceramic, I include them here following Karklins (2012). Four of the beads are classified as a PMIa, a PMIc, and two PMIg (Karklins 1982:74-76). The beads have an average length of 5.63 mm and an average width of 4.12 mm. The other ceramic bead is much larger and has not been typed using a classification scheme. It has a width of 13.31 mm. It is broken lengthwise and a weight of 11.24 mm. The perforation hole that went vertically from one side to the other is also quite large, at 2.78 mm. The bead has eight incised lines running horizontally across it.

Discussion

The midden units reveal a glimpse of everyday activities among the Native community that had not been previously documented at Mission La Purísima Concepción. The most surprising recovery was the extensive amount of glass and shell beads and evidence of shell bead production with Olivella detritus. These data highlight the continued reliance on the production of shell beads for trade and exchange and the vast array of glass beads incorporated into the Native shell bead money system. The H3 Olivella shell beads and Prosser-molded glass beads were both manufactured after mission secularization.

Thus, the Native community that continued to reside at the Mission after AD 1832 is present. The stone tool industry illuminates traditional practices that carried over to new forms, such as using glass to make tools. The midden revealed many more glass and stone flakes than the museum collection research, suggesting more flaking activities outside the apartment units. However, this may have to do with different techniques of screening and sorting in the 1950s and 1960s. The diversity of ceramics represents an expected sample based upon the analysis of the Deetz and Gabel collection, including ceramics from China, Mexico, England, and locally produced pots. Furthermore, there has never been a focus on the Native diet at the Mission. These midden units revealed a body of information for both continuity and change in diet. The Chumash at the mission relied on marine resources for a portion of their caloric needs and acquired local nuts and seeds from ancestral locations. However, they also supplemented a large portion of their diet with domesticated cows and sheep.

APARTMENT UNITS

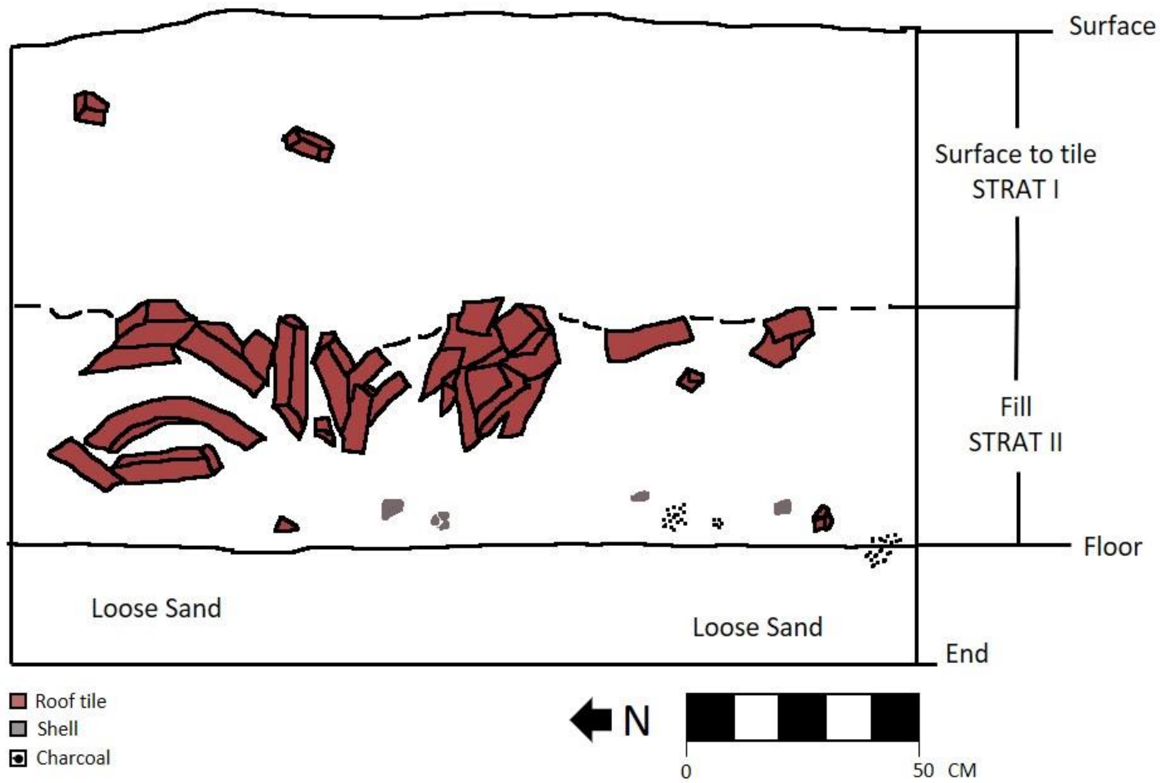
The first apartment unit, or AU1, was placed after measuring 89 m from the southwest corner of Building B, which was visible by the brass-capped markers on the surface that were placed by Farris (Farris and Wheeler 1998). In GIS, 89 m north of the southernmost corner marked the unexcavated and empty area on the CCC map. This placed

Figure 5.7: Unit 1, Level 6, showing patchy rooftile collapse.

AU1 in the nineth northernmost room in Building B and the complex's westward-facing room. This test unit was 1 x 1 m. It was excavated in 10 cm arbitrary levels to determine site stratigraphy and identify features such as wall structures, floors, and hearths.

Within Unit A1, two features were identified, including Feature 1, the roof tile collapse, and Feature 2, the earthen floor. Feature 1 was approximately 56 cm below the ground surface, and it occurred as a large pile of *tejas* (roof tiles) that were stacked one on top of the other. This feature corresponds to Deetz's finding of a roof tile collapse in the building. It has the same characteristics: it is patchy and is more visible in some sections than others (Figure 5.7). In AU1, the feature was densest in the northeastern part of the unit, from 56 cmbd to 68 cmbd. The soil between the roof tile collapse consisted of a "very dark greyish

Figure 5.8: East wall stratigraphic profile of Apartment Unit 1 and 1b.



brown" (10YR 3/2) well-sorted, sandy clay heavily impacted by krotovina. After removing the feature, the soil color changed to a "dark greyish brown" (10YR 4/2). The soil was more compacted and mottled with loose sandy patches. Under the roof tile collapse and above the floor, this space represents the fill layer identified by Deetz (1963:178).

At 103.5 cmbd, the second feature, Feature 2, was identified. It was a highly compacted clay floor mottled with loose sand. The clay was a high density of charcoal, small fragments of shellfish, and disintegrated fired clay. The charcoal from AU1 (as well as AU1A and AU1B) has an extraordinary amount of charcoal and ash between 90 cmbd to 120 cmbd. Many artifacts were recovered on top and inside the floor and were mapped and photographed *in situ*. After 110 cmbd, the soil changed to very loose sand (10YR 3/2); however, evidence of the clay floor still occurred in uneven areas. This unit closed out at 140 cmbd once sterile soils were encountered, and the soil changed to very soft and fine sand. Feature 2 corresponds to the same earthen floor identified by Deetz in rooms 1 and 2 because no plaster floor occurred above the earthen clay floor.

After excavating AU1 and identifying the roof tile collapse, the floor, and the fill between Feature 1 and 2, it was possible to gauge the apartment area's stratigraphic profile and attempt to find the exterior westward-facing wall (Figure 5.8). An adjoining unit that was 1 m long, running north-south, and 0.5 m wide, running east-west, was placed to the east of AU1. This unit was designated AU1A. Unlike AU1, AU1A had harder soil compaction, making it difficult to dig through. Since the roof tile collapse began at 56 cmbd, AU1A was not excavated in arbitrary levels. Instead, we removed the upper fill to identify the roof tile collapse. While *tejas* were found at this level, they were not evenly distributed across the surface. Instead, the compacted soil gave way to an uneven stone structure—Feature 3—that was first noticed about 72 cmbd and went down to 80cmbd. The stonewall ran from north-south through the entire unit. According to the GIS maps, the stone wall likely represents the front, westerly facing wall of the building complex. It may be a doorway. Feature 3 was above Feature 2, suggesting that individuals entering the room had to step down from the stone doorway onto the earthen floor that lay underneath it once they were in the room. Feature 4 was in the northern section of the unit. It was a vertical feature comprised of a sizeable uneven stone covered with plaster that came out of the northernmost sidewall. It overlapped the stonewall, Feature 3, and its bottom went under the floor. This feature was likely a footing of some sort, corroborated by Deetz's description that footings were of unshaped sandstone set in adobe and laid on the ground's natural contour of the ground (1963:179).

Another unit was placed directly to the north of AU1 to identify the interior wall area and reveal more of Feature 4. This unit, designated as AU1B, was a 1 x 1 m unit. Like AU1A, the upper 56 cm was excavated to identify Feature 1, the *tejas*. It was this unit that yielded the most preserved and homogenous collapsed roof. Upon its removal, excavation techniques reverted to arbitrary 10 cm levels. Flotation samples were taken for macrobotanical analysis above and within the floor of AU1B before the unit closed out at 140 cmbd.

The following section discusses the analysis of the artifacts and ecofacts recovered from AU1, AU1A, and AU1B. I only include materials under the roof tile collapse in this analysis, counting ecofacts and artifacts found under 60 cmbd to the bottom of the unit at 140 cmbd. Thus, the soil volumes for this comparison is as follows: AU1 = 0.72 cm^3, AU1A = 0.12 cm^3, and AU1B = 0.72 cm^3. Collectively, this is 1.56 m^3 of excavated soil. The total amount of excavated soil above the roof tile collapse within the surface-to-tile stratigraphic level is 1.8 cm^3.

All the archaeological materials were screened in the field over ⅛" mesh. Because the midden units and apartment units represent different contexts—a trash heap and a residential building—the sampling strategies were different. Within the apartment units, everything passed through a ⅛" mesh, and all cultural material was sorted by material type and category.

Marine Invertebrates

Table 5.9: Invertebrate species in apartment units.

	AU1	AU1A	AU1B	Total Weight
M. Californianus	772.53	46.85	116.72	936.10
H. chracherodii	20.65	2.06	2.41	25.12
Olivella biplicata	2.34	0.08	3.67	6.09
H. rufescens	985.51	-	-	985.51
Haliotis spp.	-	0.21	1.55	1.76
Tegula spp.	1.37	-	1.35	2.72
Pollicipes polymerus	1.15	-	-	1.15
Tivella stultorum	2.84	-	5.43	8.27
Leukoma staminea	2.39	-	-	2.39
Tegula funebralis	-	-	0.62	0.62
Chione californianiensis	4.04	-	-	4.04
Mytillsepta bifurcata	-	-	0.25	0.25
Shell undiff	13.14	0.43	0.03	13.60
Polyplarophora spp.	1.05	-	-	1.05
Columella misc.	3.84	-	-	3.84
Total	*1,808.51*	*49.55*	*128.36*	*1,986.42*

The invertebrates weigh 1,986.42 g (Table 5.9). It is dominated by the discovery of one whole abalone (*Haliotis rufescens*). At 985.51 g, this abalone took up 50% of the entire invertebrate assemblage in the apartment units. The whole abalone shell likely served a more functional and/or ceremonial purpose beyond dietary needs. Hudson and Blackburn (1982:279) explain that large abalone shells with their siphon holes plugged with asphaltum served as cups and bowls. Although no asphaltum is noted on the abalone shell, it may have held solid foodstuffs, such as dried fruits and meats. The shell may have also recreated a sensation of the past within the mission setting, perhaps exemplifying nostalgia of Native identity inside the intimate household space.

The second most abundant shellfish is mussel (*Mytilus californianus*). It weighs 936.51g. Unlike the whole abalone shell, there were 906 fragments of *Mytilus*. Not including the whole abalone shell, *Mytilus* made up 94% of the shellfish fragments in the apartment units. There were fourteen other species of shellfish identified. Besides *Haliotis cracherodii*, which comprises 3% of the shellfish, the other species each makeup less than 1%.

Olivella bead production detritus and Olivella shell beads: Olivella biplicata was represented by both whole shells (n=4; 3.99g) and in smaller fragments (n=12; 2.1g), but there were only two Olivella beads. The Olivella beads were above the roof-tile collapse, representing a stratigraphic level not associated with the apartment's interior. One bead (Cat. no. 1598) was found 40-50 cmbd. It was a weathered H (needle-drilled) bead that could not be classified into any subcategories. The other bead (Cat. no. 114) was an Olivella *H1a*, a "Ground Disk" needle-drilled shell bead. Both beads have a perforation diameter of 1 and 1.1, indicating their manufacturing with a metal needle. While the H bead represents a general historic timeframe between AD 1770 and 1830, H1a beads are thought to be indicative of beads produced in the Early Mission period, between AD 1770 and 1800 (Bennyhoff and Hughes 1987:135). No non-Olivella shell beads were within the apartments.

Vertebrates

There were 939 pieces of terrestrial animals that weigh 551.47 g (Table 5.10). In the upper portion of the roof tile collapse, identified species include deer (*Odocoileus hemionus*) fragment, grey fox (*Urocyon cinereoargenteus*), and sheep (*Ovis aries*), represented by one bone fragment each. However, these are not related to inside the apartment unit. Under the roof tile collapse, the cultural animal is predominantly cow (NISP 5). These weigh 56.57 g. Sheep had a NISP of 3 and weigh 2.74 g. There were only two bones from California Ground Squirrel (*Spermophilus beecheyi*) that weighs 0.23 g. The unidentifiable mammal category had the largest count and weight: 558 fragments and 307.43 g. Pocket gopher was the most

Table 5.10: Mammals in the apartment units.

Level	Taxon	Species	Common Name	Count	Weight
Surface to roof collapse	Mammal	Cervidae	Deer	1	26.63
	Mammal	Urocyon cineroargentius	Grey Fox	1	0.72
	Mammal	Ovis	Sheep	1	0.81
	Mammal	Spermophilus beecheyi	California Ground Squirrel	3	0.71
	Mammal	Scapanus latimanus	Broad footed mole	2	0.02
	Mammal	Thomomys bottae	Pocket gopher	22	3.57
	Unidentifiable Mammal			313	146.44
	Unidentifiable Aves			1	0.18
Roof collapse to sterile	Mammal	Bos taurus	Cow	5	56.57
	Mammal	Ovis	Sheep	3	2.74
	Mammal	Spermophilus beecheyi	California Ground Squirrel	2	0.23
	Mammal	Neotoma fuscipes	dusky-footed woodrat	1	0.23
	Mammal	Mus	Mouse	1	0.01
	Mammal	Thomomys bottae	Pocket gopher	25	5.18
	Unidentifiable Mammal			558	307.43
Total				*939*	*551.47*

predominant non-cultural animal present. It occurred mostly in the 50-60 cmbd range, right within the roof tile collapse. There are not many fish in the apartment units. They are represented by six different species that mostly include rocky intertidal species (Table 5.11). There are also two beads made of an unidentified bone. One (Cat. no. 248) was very small, measuring 2.9 mm by 3.95 mm and weighing only 0.02 g. The other bone bead (Cat. no. 246) was over twice as large. It had a length of 7.28 mm and a width of 2.56 mm. It weighs 0.10g.

Table 5.11: Fish in the apartment units.

Taxon	Common Name	Family	Weight	Count
sphyraena argentea	Pacific barracuda	Sphyraenidae	1.14	1
Scorpaenichthys marmoratys	Cabezon	Cottidae	0.51	2
Menticirrhus undulates	California Corbina	Sciaenidae	0.04	1
Sebastes sp.	Rockfish	Scorpaenidae	3.24	3
Scorpaenidae	rockfishes or scorpionfishes	Scorpaenidae	1.18	4
semicossyphus pulcher	Sheephead	Sparidae	0.2	1
Total			*6.31*	*12*

Macrobotanical

Two flotation samples were taken from Unit 1B just above the floor 90-100 cmbd, and within the floor, between 110-112 cmbd. The former had 11.9 liters, and the later had 8 liters. There are no statistical differences between these two samples, and I combine them here. Together, this makes up 19.9 liters (Table 5.12). There were 34.8 fragments of charred remains that could be identified to genus and species. An additional 16.6 fragments are miscellaneous and unidentifiable. Considering just the identifiable fragments, 57% are nutshells. Acorn (*Quercus* spp.) represents 83% of the nutshell. Small seeds made up the second-highest count (27%) of macrobotanical remains with present. Of the identifiable small seeds to genus, Plantain (*Plantago* spp.), Rush (*Juncus* spp.) and Bedstraw (*Galium* spp.) made up the most significant (60%) proportion. These three species were also found at *Xonxon'ata* (save juncus) and *Wenexe'l* (Hildebrandt et al. 1999:70; Mikkelsen et al. 2014). Plantain is both local and introduced. The leaves were used medicinally, to draw out poison, or they were applied to cuts and bruises to help with the healing process (Timbrook 2008:186-187). Juncus, however, was primarily used for basketry construction for thousands of years (Craig 1966; Timbrook 2007). The uses for *Galium* among the Chumash are not explained. The largest small seed (90%) identified by family is Poaceae. Poaceae seeds were used by the Chumash for food and its presence also represents an environmental signature. Introduced cultigens are the third-largest category. They only make up 8% of all the identifiable macro botanical species in the apartment unit. The largest identified species among them, or 79%, are cultivated grain fragments. This is followed by wheat and corn kernels. There were two species of Eurasian weeds that also make up 5% of the identifiable botanicals. Cheeseweed (*Malva* spp.) makes up the largest percent (88%) of these intrusive plants, followed by Filaree (*Erodium* spp.). Finally, berry pits only make up 2% of identifiable species. The majority, or 87%, are Manzanita (*Arctostaphylos* spp.) berries.

Groundstone

Eleven pieces of soapstone weigh 294.99 g. Most (85%) of the pieces were just above the earthen floor where fragments were mapped and photographed *in situ*. Two hollowware bowl fragments (Cat. no. 1350 and Cat. no. 1354) mapped near each other were likely part of the same vessel. Together these weigh 100.99 g. One-piece was a rim fragment, and it was 2 cm with an orifice that was 13 cm wide. Four other vessel fragments were

Table 5.12: Macrobotanical remains from apartment units.

Nutshell			
Pinus sabiniana	Gray pine	ct	0.3
		mg	1.1
Prunus ilicifolia	Islay	ct	3
		mg	3.8
Quercus spp.	Acorn	ct	16.5
		mg	9.7
Total		ct	19.8
		mg	14.6
Berry Pit			
Arctostaphylos spp.	Manzanita	ct	0.7
		mg	1.9
Rubus spp.	Blackberry	ct	0.1
Small Seed			
Atriplex spp.	Saltbush	ct	0.1
Calandrinia spp.	Red maids	ct	0.1
Claytonia spp.	Miners lettuce	ct	0.1
Deschampsia spp.	Hairgrass	ct	0.1
Galium spp.	Bedstraw	ct	0.5
Hemizonia spp.	Tarweed	ct	0.1
Juncus spp.	Rush	ct	0.9
Madia spp.	Tarweed	ct	0.1
Opuntia spp.	Prickly pear	ct	0.1
Phacelia spp.	Phacelia	ct	0.2
Plantago spp.	Plantain	ct	1
Salvia spp.	Sage	ct	0.1
Trifolium spp.	Clover	ct	0.2
Verbena spp.	Vervain	ct	0.1
Asteraceae	Sunflower family	ct	0.3
Chenopodiaceae	Goosefoot family	ct	0.1
Fabaceae	Bean family	ct	0.1
Poaceae caryopses	Grass family	ct	0.1
Poaceae fragments	Grass family	ct	5.2
Total identified to genus			3.7

Total identified to family			9.5
Eurasian Weed[1]			
Erodium spp.	Filaree	ct	0.2
Malva spp.	Cheeseweed	ct	1.6
Cultigen[1]			
Cultivated grain fragments		ct	2.3
Triticum spp.	Wheat	ct	0.5
Zea mays kernels	Corn kernel	ct	0.1
Miscellaneous			
Acorn attachment disk	Acorn	ct	0.8
Buds		ct	0.9
Clarkia spp. capsule	Farewell to spring	ct	0.1
Leaf fragments	Leaf fragments	ct	0.6
Non-grain pieces		ct	1.6
Poaceae rachis	Grass family	ct	0.1
Small non-seed		ct	0.5
Unidentified embryo		ct	0.4
Unidentified nutshell		ct	3
Unidentified seed		ct	0.8
Unidentified seed fragments		ct	7.8
Unidentified wood charcoal		mg	506.3

[1] Non-native Eurasian taxon.

comales that weigh 191.13 g. Among them, one was a rim piece that was 2.1 cm thick. The *comale* fragments are flatter than the bowls, and the rim is angular with residue that was only apparent on the surface of one side. There were an additional five fragments that could not be typed. These were small, weighing just under 3 g.

One sandstone mortar rim fragment (Cat. no. 1595) and a volcanic pestle (Cat. no. 2030) was mapped and photographed on the floor of AU1B. These objects were used together to grind and pulverize seeds and nuts, such as locally available acorn.

Figure 5.9: Grindstone and pestle on the floor of the Chumash Family Apartments in AU1B.

One whole grindstone, used for sharpening metal tools, was also found on the floor in AU1B, where it was mapped and photographed *in situ* next to the whole pestle (Figure 5.9). The circular grindstone measured 18 cm across and had a square hole that was 6 cm by 6 cm. This object was probably much larger in diameter before it had been ground down to the size it was discovered. Other grinding implements found in Northern California have a diameter of about 40 cm. They were used by rotating a crank at one end of an axle (Glenn Farris, personal communication). Further use-wear analysis on the grindstone shows an uneven depression on the surface of one side that indicates its repurposing as a sharpening stone for another activity. Although the grindstone itself suggests a form of labor connected to manufacturing goods for the larger mission economy, its repurposing brings it into the domestic realm when it served to sharpen other tools for everyday household purposes.

Lithics

The lithic assemblage contains five stone flakes and two stone tools, altogether weighing 64.26 g. The flakes only weigh 1.47 g combined. Of the seven flaked stone artifacts that were identified, four are Monterey chert and the other three are Franciscan chert, undifferentiated chert, and volcanic.

The visual inspection of two stone tools reveal evidence of utilization, exhibiting retouched edges. One tool (Cat. no. 1255) is a Monterey chert notched scraper. It weighs 35.04 g and is 5.7 cm long and 5.6 cm wide. Basal notching appears on the distal flat surface. The other tool (Cat. no. 1231) is a large tertiary Monterey flake that was worked into a tool. It weighs 27.75 g. Use-wear, in the form of notching on both the left and right medial surface, is present on both sides. Both tools were found between 110-120 cmbd in AU1 and AU1B, and within the earthen floor of the room.

Also noted within the lithic assemblage was one fire-affected pebble. The pebble was broken but had a width of 2.4 cm, falling into the "medium" category of the Brown and Vellanoweth (2014) classification scheme. However, there was no asphaltum present, illustrating that this stone was not used for basketry construction. Also, being in the "medium" category, this pebble does not fall into the more typical "large" tarring pebbles found in the La Purísima collections. Instead, it likely served as a cooking stone to heat liquid-based foods in a basket. California Indians have long been known to heat pebbles and cobbles to cook foods like acorn mush and seafood stews in baskets (Jacknis 2004: 193-194). The fire-affected pebble found on the floor of the apartment may have served such a purpose. Indeed, the emphasis on basketry construction identified in the asphaltum category attests to the continuation of basketry production.

Asphaltum

Only one large piece of asphaltum was in the apartment units and under the roof tile collapse. It was on top of the floor at 98 cmbd. It weighs 40.36 g and had a twined basketry impression left behind on the asphaltum lining. Above the roof tile collapse, within the surface-to-tile stratigraphic level, three other pieces of asphaltum basketry impressions weigh 6.25 g. Ten pieces of asphaltum detritus have a combined weight of 12.09 g. The presence of basketry impressions indicates the primary importance the substance served to Native individuals at the Mission to produce water bottle baskets.

Metal

Twelve pieces of metal weigh 191.85g. Two of the metal pieces are nails. Due to the rust, it could not be determined if the nails are square head or machine cut. The other metal fragments were also very rusted; however, two pieces were large enough to be classified as miscellaneous hardware. The seven other pieces of metal were unidentifiable fragments.

Another artifact is a copper ornament at 16 mm across (Figure 5.10). The top of the object has a small facet, illustrating its use for stringing to a necklace or a piece of clothing. It was found in Unit 1b between 80-90 cmbd, and it weighs 2.35 g. This trinket speaks to the

Figure 5.10: Unit 1b copper ornament. Cat. no. 1520

attire and clothing that the Native individual who lived in the apartment would have worn on themselves, perhaps signaling their achieved status in the Mission.

Ceramics

Sixteen ceramic sherds weigh 20.5 g. However, only four ceramic sherds, weighing a total of 6.28 g, were found under the roof tile collapse. They represent two different imported types of pottery: Mexican-imported Majolica and Chinese porcelain. Three Majolica sherds appear to have come from the same vessel. They have purple and curved linear features and display green dots of paint. Although no rim is present, the vessel fragments are flat and appear to have functioned as a plate or a platter. Together they weigh 4.76 g. The other ceramic sherd is Chinese porcelain. It has blue hand-painted lines on the outer surface that reflect the typical Canton design. Based on its curved features, this vessel type was likely a part of a large bowl. It was 2.25 g.

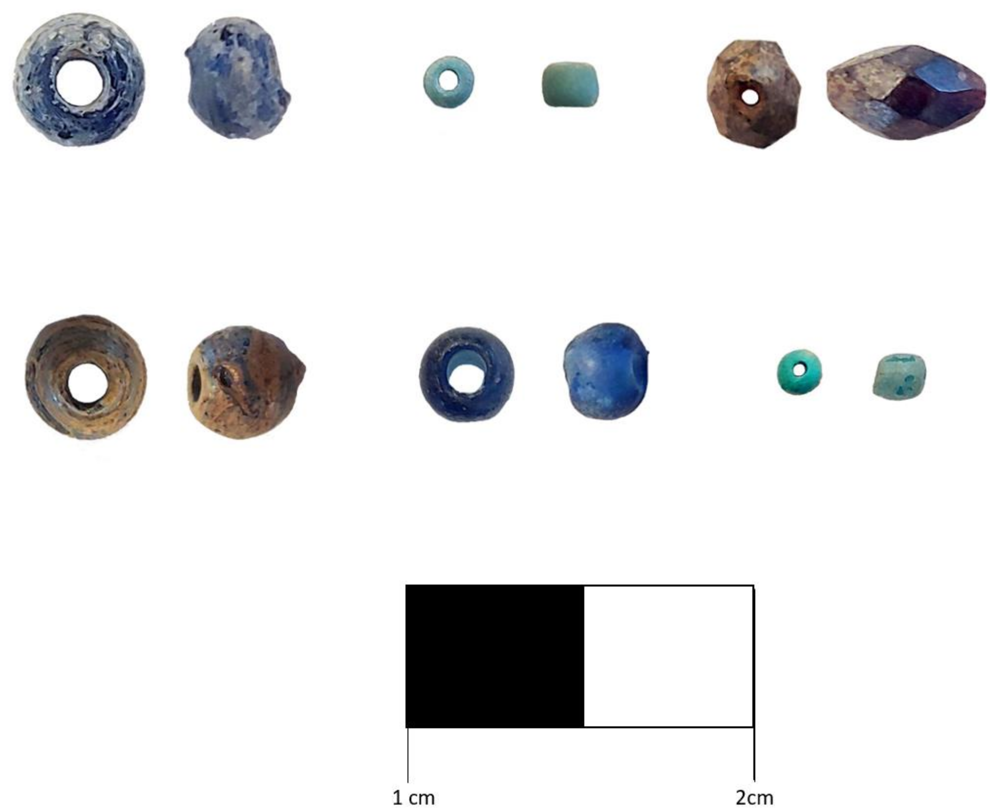
The other twelve ceramic pieces were within the surface-to-tile, and these took up most of the weight at 14.22 g. There were two different types: British earthenware and Chinese porcelain. The British earthenware was represented by creamware and whiteware. The creamware consisted of four pieces that weigh 1.4 g, while the seven pieces of whiteware were all blue transferware that together weigh 11.42 g. There was also one piece of Chinese porcelain that weighs 1.4 g.

Glass

The glass assemblage consists of both window glass and consumer glass. The four window glass pieces are all clear with patina—the other five pieces of glass fall in the consumer category. Four of the five (80%) glass shards are flakes. None of the flakes had signs of utilization.

Glass beads: A total of fourteen glass beads were between the surface and the floor in the apartment units, but only eight of them were under the roof tile collapse below 60cmbd. Of these glass beads that are associated with the interior of the apartment unit, five (62%) are of drawn cane manufacture, and three (38%) are wire wound. Six of the eight beads were found on the earthen floor in the apartment (Figure 5.11). Following the Kidd and Kidd and Karklins typology, the drawn cane beads represent classes Ia (n=1), IIa (n=3), and If (n=1). While Class Ia represents the simplest monochrome beads, and class IIa exhibits more shaping. These beads have an average length of 2.77 mm and 2.96 mm wide. The beads are blue (n=2) and green (greenish blue) (n=3). The one red bead in the class Ifa category is

Figure 5.11: Six glass beads identified on the floor in the apartment units.



more elaborate, displaying numerous facets with a shiny polish. The bead is also much larger, with a length of 9.43 mm and a width of 5.69 mm.

The three wound beads associated with the apartment unit came in two different colors: blue (n=2) and yellow (n=1). They are classified as WIb, WId, and WIIIC. These beads have an average length of 5.21 mm and a width of 6.59 mm.

Above the roof tile collapse, in the stratigraphic level labeled the surface-to-tile, six additional glass beads were found. They represent the same types found under the roof tile collapse. The beads are drawn cane (n=4) and wound (n=2). The former (drawn cane) is comprised of two white and two blue beads. They are classified into Class Ia and IIa under the Kidd and Kidd typology. The beads have an average length of 2.55 and a width of 2.95. The two wire wound beads fall into the Class WId and WIIIa. The former is an ultramarine blue bead with a length of 6.01 mm and a width of 6.49 mm. The latter is a topaz/amber bead. It is 7.25 mm long and 6.49 mm wide.

Miscellaneous finds

A lead musket ball (Cat. no. 248) was found in AU1B from 110-120 cmbd, inside the apartment floor. The musket ball is 15.3 mm (0.60 in) and weighs 12.54 g. It has a smooth mold, evidence of a casting spur, and a whitish patina on the surface. According to Sivilich (2016:21), this bore diameter hints at the type of firearm it was used with, which is more reminiscent of the French-supplied "Charleville" muskets and British fusils rather than types used by the British infantry's "Brown Bes" (Sivilich 2016:28-31). It was likely ordered for soldiers at the Santa Barbara Presidio. Weapon accessories such as musket holders, swords, sabers, and muskets were recorded in the *Memorias y Facturas* (Perissinotto 1988:33). This musket ball has no dents or marks, suggesting it was likely not used in action (Sivilich 2016:47-65).

Discussion

The ecofacts and artifacts within this apartment unit illustrate how the individual or family who lived within them occupied spaces between the previously defined categories of "Hispanic" and "Native." They used soapstone for daily cooking purposes, asphaltum-lined water bottles baskets to store water, and stone tools for utilitarian purposes. They also incorporated imported ceramics for tablewares and presented food, metal for labor and construction, and clothing buttons. There is a re-articulation of older practices onto new forms, such as glass as a flaking implement and the merging of European trade beads into the shell bead money system. The invertebrate assemblage and fish data attest to the expansive networks outside of the mission center. The terrestrial vertebrate assemblage speaks to a heavy reliance on new forms of domesticated meat, specifically cow and sheep. The macro botanical remains highlight continuity, with nearly 77% of the charred seeds that were acquired locally.

CONCLUSION

Results of the 2019 field season have painted a nuanced picture of everyday life within the village of *'Amuwu*. On the one hand, this research has reinforced the findings from the Norman Gable and James Deetz archaeological collections. The same types of materials were recovered that speak to both change and continuity in everyday practices among the Native community. On the other hand, the field project provided additional insight into other aspects of Native lifeways. More information about subsistence and economic activities becomes evident using fine-grained methodological techniques both in the field and laboratory. The marine invertebrates, vertebrates, and macrobotanical analysis yield crucial information about continued gathering locations across the landscape and new diets following Spanish colonialism. Evidence for bead making in Olivella detritus is perhaps the most significant discovery documented in a mission context to date. It speaks to the continuing trade and exchange of shell money beads through the Spanish and Mexican periods and into the American period. These data, combined with museum research, set the stage for an inter- and intra-site comparison explored in the next chapter.

VI. INTER- AND INTRA-SITE ANALYSES

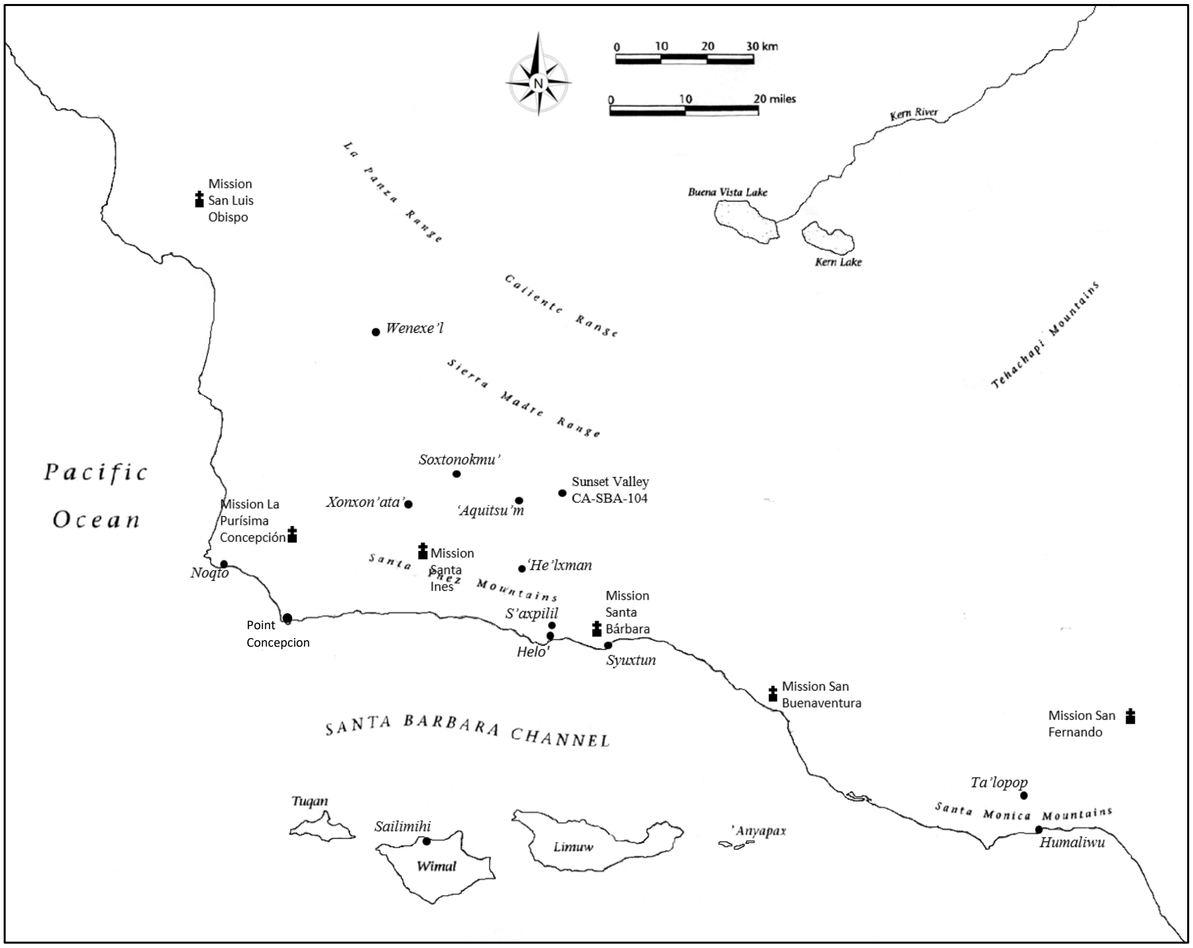
The last chapter provided the results during the 2019 archaeological investigations: inside one room in the Chumash Family Apartments and the adjacent midden deposit. These data have set the stage for a horizontal evaluation at the intra- and inter-site levels. This chapter investigates the patterns and practices in other Chumash villages in the interior and coastal regions and situates Mission La Purísima within these broader patterns. I then investigate two distinct units in the midden deposit, including MU1 that is associated with the Chumash Family Apartments and MU5 that is linked to the proposed area of the tule-thatched houses. The results add to a more dynamic picture of the mission community's internal dynamics. Native identities were rearticulated in new but nonetheless meaningful ways that were linked to a deeper ancestral past.

'AMUWU COMPARED TO COASTAL AND INTERIOR CHUMASH VILLAGES

It is important to acknowledge that historically occupied villages outside the mission are multi-component sites that were primarily occupied during the Late Period—from AD 1150 until mission times. When Mission La Purísima moved to its second location in AD 1813, villages within the Purisimeño and Ineseño region were no longer occupied by people living apart from the missions (Johnson 1988). Additionally, many different variables can affect how regional patterns are understood, such as the various field methods employed at each site and how these data were reported. Nonetheless, archaeological data deriving from ethnohistoric villages offer insight into how *'Amuwu* continued practices and changed others

when forming a new community in a landscape known to members of the community for thousands of years. They can also aid in addressing change and continuity, specifically

Figure 6.1: Map of Chumash villages discussed in Chapter 6. After McLendon and Johnson (1999).



during the Historic period. To tackle both these research objectives, I distinguish between two types of analysis: (1) local artifacts and ecofacts that cannot be distinguished between the pre-colonial and colonial period, and (2) nonlocal artifacts specifically used during the Mission period. The first objective aids in situating Mission La Purísima within broader local patterns to address change and continuity. The second allows for a comparison across space during the Mission Period to investigate if the Native community used historic materials in similar or different ways.

Reports and records of previous research were retrieved from historic villages within a 30-mile radius of Mission La Purísima Concepción at the Central California Coast Information Center (CCIC). Supplementary data from a master's theses and other published material were also utilized. The villages with the most comprehensive and contextual information include (1) *Soxtonokmu'* (CA-SBA-167), (2) *'Aquitsu'm* (CA-SBA-809), (3) *Xonxon'ata* (CA-SBA-3404), (4) *Noqto* (CA-SBA-210), and (5) *Wenexe'l* (CA-SLO-95). I do not include the village of *Laxshakupi* (Alascupi)—the village at Mission La Purísima Vieja. *Laxshakupi* has a pre-colonial and colonial component but is distinct from the other Chumash communities outlined above in that it represents the formation of the first Chumash community under Spanish colonialism. This community lived at Mission La Purísima Vieja from AD 1787-1812, before the mission collapsed in a severe earthquake. Other Chumash villages beyond the 30-mile zone offer additional context, including *He'lxman* (CA-SBa-485) approximately 45 miles east, southeast of the Mission; *Helo'* (CA-SBA-46), approximately 45 miles southeast; *Syuxtun* (CA-SBA-27), about 60 miles southwest; and *Ta'lopop* (CA-LAN-279), which is over 100 miles away in the Santa Monica Mountains (Figure 6.1). This broad-scale intra-regional comparison speaks to merging Native identities, the making of new traditions at Mission La Purísima, and continued reliance on long-existing social networks.

Continuity in Artifact and Ecofact Uses between Pre-Colonial and Colonial Periods

This section discusses broader trends within domestic archaeological assemblages in the Purisimeño and interior region during the Late Period. The materials discussed here cannot be associated with a specific period of time, such as colonial and pre-colonial, or within a particular phase of the Late Period (e.g., L1, L2, L3 [King 1990]). The data reported from each site represents hundreds of years of occupation but primarily between AD 1150 to about AD 1800. I intend to conduct this analysis in order to situate *'Amuwu* within the cultural and physical landscape and identify patterns and practices that may have carried over into the mission setting. Broader regional syntheses have been previously discussed elsewhere (e.g., Glassow 1996, Horne 1981; McRae 1999). However, here, I focus specifically on seven types of material classes: (1) shellfish, (2) fish, (3) ethnobotanical remains, (4) shell bead production, (5) soapstone, (6) lithics, and (7) asphaltum. Each material class begins with a general background of its use during the Late Period from ethnohistoric villages around Mission La Purísima. I then present data from recent museum and field research reported in this dissertation to illustrate if and how Mission La Purísima Concepción fits within broader regional trends.

Shellfish: Shellfish played an essential part in Native subsistence economies for thousands of years, but evidence from Late Period villages in the Purisimeño territory and Santa Ynez Valley suggest shellfish were more significant to the diet of coastal peoples than to the interior Chumash (Glassow 1996, McRae 1999; Horne 1981). For example, the weight of shellfish recovered from the interior village of *'Aquitsu'm* was 84 g per m^3. The same holds for two other villages in the interior. At *Soxtonokmu'*, the weight of the shellfish was 44 g per m^3, and *Xonxon'ata* had a shellfish weight of 21 g per m^3 (McRae 1999:104). On the other end of the spectrum are villages along the coast. Archaeological sites in the Vandenberg area, such as *Noqto*, have over 12,000 g of shellfish per cubic meter (Glassow 1991; McRae 1999:104). Glassow and Wilcoxon (1988) explain the heavy surf north of Point Conception precluded the use of boats for fishing; thus, the Chumash who inhabited the Vandenberg coastal region depended more heavily on shellfish collecting than their southern coastal neighbors.

The types of shellfish species further illuminate similarities and differences across the landscape. Investigations by Glassow et al. (1990: Table12.15) found that *Mytilus californianus* made up 87% of the shellfish at *Noqto*. The other 12% of shellfish species inhabited the rocky intertidal zone (Glassow 1996). Conversely, at historically occupied Chumash villages closer to *'Amuwu* and in the interior valley, bay/estuary taxa are more prevalent than they are at the mission itself. For example, at *Soxtonokmu'*, marine shellfish living in bay/estuary environments made up 19% (122 g) of all the invertebrate species. *Chione* sp. was the most prevalent (50%), followed by Pacific Little Neck Clam (*Protothaca staminea*) (26%) and Washington Clam (*Saxidomus nuttalli*) (13%). At *Xonxon'ata*, 8% of the shellfish is from wetland environments, including Pacific Gaper Clam (8 g; *Protothaca staminea*), Basket Cockle (7 g; *Clinocardium nuttallii*), Moon Snail *(*4 g; *Polinices lewisii),* and frilled California Venus Clam *(*4 g; *Chione undatella)* (Hildebrandt et al. 1999:82). The bay/estuary taxa identified at *Soxtonokmu'* and *Xonxon'ata*, such as clams and scallops, prefer mudflats and sandy beaches, which are widespread south of Point Conception.

> *Mission La Purísima:* The 2019 archaeological investigations in the midden deposit—excluding inside the apartment unit—of *'Amuwu* yielded an overall shellfish weight of 3,761.72 g. Considering the amount of soil volume (2.6 cm^3), there are 1,447 g of shellfish per cubic meter of soil. The predominance of shellfish found at the mission is in stark contrast to the general pattern recognized at most interior Chumash villages, where shellfish densities are relatively low, and the species of shellfish indicate trade networks south of Point Conception. Rather, *'Amuwu* appears

to have patterns that align with a Purisimeño tradition north of Point Conception. In the Vandenberg area, there are considerably more extensive California mussel beds. Indeed, the 2019 archaeological investigations produced 86% mussel (*Mytilus Californianus*)—a species that flourishes off the rocky intertidal coast of Central California. Overall, 98% (3691.32 g) of the shellfish at *ʼAmuwu* inhabited rocky environments, which mostly comprises of *Mytilus californianus* but also include *Haliotis cracherodii*, *Haliotis rufescens*, *Tivella stultorum*, *Tegula* spp., among others. There are many mussel beds situated along the central coast in the Vandenberg area. Lompoc Landing has a high metric value (0.15) of *Mytilus californianus* (marine.ucsc.edu 2018). The acquisition of rocky-intertidal shellfish, especially mussel, may have also carried over from groups who lived along the coast and resettled at the mission.

Fish: The Santa Ynez River, which flows east to west in the Santa Ynez Valley, is inhabited by steelhead and rainbow trout (*Oncorhynchus mykiss*). Chinook (*Oncorhynchus tshawytscha*) and Coho salmon (*Oncorhynchus kisutch*) are historically recorded as also having roamed the river (Spanne 1975). However, interior archaeological sites support the idea that riverine fish were not economically significant in the pre-colonial period and after. For example, at *Soxtonokmu'*, no riverine fish were identified (McRae 1999:80). Instead, schooling fish made up the most considerable portion (77%; 46.42 g) of identifiable fish. They include species in the Clupeidae family (7.76 g) and Pacific mackerel (6.82 g). Inshore fish are less represented at *Soxtonokmu'*, making up only 14.04 g (23%) (McRae 1999: Table 10.4). At *Xonxon'ata*, riverine fish are only represented by six specimens (Hildebrandt et al.

1999:77). Schooling fish are much more prevalent, including Pacific herring (*Clupea pallasii*), Pacific sardine (*Sardinops sagax*), Northern anchovy (*Engraulis mordax*), and Pacific mackerel (*Scomber japonicus*). At *Wenexe'l*, riverine fish only made up 13% (n=52), while 81% (n=325) are shoaling fish. They include species in the herrings and sardines (Clupeidae) and Northern anchovy (*Engraulis mordax*).

Mission La Purísima: Like the ethnohistoric villages in the local area, the Native community at Mission La Purísima Concepción did not consume fish from interior watersheds. Riverine fish may have been rare or only present in large numbers unpredictably in the Santa Ynez River (Alagona et al. 2012:174). Instead, the community at the mission acquired fish from the ocean. There were relatively equal amounts of species from the shallow Pacific Coast waters and fish found in kelp forests. The former includes rockfish and scorpionfish family, while the latter is comprised of Pacific mackerel (*Scomber japonicus*), Pacific barracuda (*Sphyraena argentea*), and herrings/sardines (Clupeidae).

Due to the heavy surf in the Vandenburg area, fish that dwell in the deep sea were likely acquired South of Point Conception (Glassow et al. 1991) and exchanged to the interior through trade networks or ceremonial and community gatherings. This would have ensured that both coastal and inland populations benefited during a time of scarcity or uneven resource distribution (Glassow 1992; Kennett 2005). The fish that dwell in the kelp forests identified at *'Amuwu* and other interior coastal villages indicate that interior Chumash peoples may have obtained a small portion of their protein from the Santa Barbara Channel fishery.

Ethnobotanical Remains: The most successful macrobotanical studies in the greater Santa Ynez Valley were conducted at the village of *Xonxon'ata* and *Wenexe'l*. Wohlgemuth reports that in both villages, acorns made up the largest percentage in the nutshell category (Hildebrandt et al. 1999:70; Mikkelsen et al. 2014). Traditionally, acorns were the single most important food to the Chumash. They represent an abundant, reliable, and storable food source. Chumash consultants agreed that live-oak acorns (*Quercus agrifolia*) were the best tasting and made the best mush or an acorn-based thick-pasted soup (Timbrook 2008: 202-203). There are many dense groves of live-oak acorns around *'Amuwu* where it could have been acquired (Griffin and Critchfield 1976:97). Hollyleaf cherry (*Prunus ilicifolia*), or islay, was also present in the ethnohistoric villages. Like acorns, the islay had to be leached before it was eaten. It was then boiled in a steatite olla over direct heat. The resulting mushy substance would be formed into a ball and covered with flour (Timbrook 2008:192-196).

Other species, such as Gray pine (*Pinus sabiniana*), are also identified at *Xonxon'ata*. Many California groups ate the large nuts of gray pine in a raw state, roasted, or pounded (United States Department of Agriculture Natural Resources Conservation Services). From *'Amuwu*, Gray pine is approximately 15 km away (Griffin and Critchfield 1976:89). Traditional berry pits and small seeds at *Xonxon'ata* include Manzanita berries. The Chumash would gather the berries in the summer. They were then pounded, dried, and stored as a course meal in the winter (Timbrook 2008:32; Horn 1981:246-247). Poaceae fragments made up a large portion of seeds in these two villages as well. Traditionally plants in the Poaceae family were used for their seeds (Gamble 2008:143).

Mission La Purísima: Like *Xonxon'ata* and *Wenexe'l*, the plant data at *'Amuwu* speaks to an ongoing relationship with traditional gathering places and food consumption practices that required gathering resources from the local environment. Acorns were an important economic resource to the villagers at the mission, a staple that was used for thousands of years by the Chumash. Gray pine (*Pinus sabiniana*) nuts were traded from different environmental zones to the mission. Other local traditional berry pits and seeds speak to the broader pattern of gathering plant materials in the local region.

Shell Bead Production: Olivella bead production detritus has only been identified within two interior sites: *Soxtonokmu'* and *Xonxon'ata* (Brandoff and Reeves 2014). The former yielded 15.73 g (n=42) of Olivella detritus, while the latter produced 21 pieces of shell bead detritus weighing 9.73 g. Based on the amount of soil excavated from these sites, Olivella detritus makes up 0.93 pieces per m^3 at *Soxtonokmu'*, while *Xonxon'ata* has a count of 0.43 m^3. This suggests that beads were not intensively produced in the interior Chumash area as it has been recorded on the Northern Channel Islands in the pre-colonial or Mission period (Arnold and Graesch 2001, Gamble 2008).

Mission La Purísima: At *'Amuwu*, Olivella detritus represents 58.91 by weight per m^3, suggesting an emphasis on historic shell bead production. In fact, there are only 82 Olivella shell beads uncovered during the 2019 archaeological field investigations, but the weight and count of Olivella detritus in the midden units suggest that hundreds of shell beads are unaccounted for in the sample. Based on replicative experiments that determined 1.67 grams of detritus is left behind per wall disk bead (Barbier 2017, 2018), the Olivella detritus represents the production of 212 beads at the site level. However, when looking just at the intact, densest area of midden deposit, the density of Olivella detritus is as high as 265 grams per cubic meter (Midden Unit 1, 40-50 cmbd). Thus, there is a representation of 442 beads per cubic meter, which although only minimally sampled, likely amounts to several cubic meters of deposit at the site. Compared with the 82 Olivella beads recovered in 2019, it becomes clear that the Chumash residents at the Mission were producing far more beads than were circulated or consumed within the community, suggesting (1) they were exported to other mission communities not in the Chumash region, possibly as far north as Mission Santa Clara de Asís (Panich 2014:735-736), and/or (2) traded to neighboring groups i.e., Southern Valley Yokuts tribes or San Diego (Gamble and Zepeda 2002).

Evidence of bead-making also appears at Mission San Buenaventura (Gamble and Zepeda 2002; Gibson 1976). Although a detailed analysis was not undertaken, Gibson (1976:97) documented at least 704 examples of Olivella detritus. However, this represents the *entire* excavated area, which includes 116, 2 x 2 m units (the soil volume is not available). The Olivella detritus at Mission San Buenaventura is significantly less than the detritus identified in the five, 1 x .5 m units at Mission La Purísima Concepción. While it is difficult to say for certain if less bead-making was occurring at the Mission San Buenaventura compared to Mission La Purísima Concepción, the trade and exchange of shell beads played an essential part in fostering and maintaining connections within and among mission communities in the Historic period.

Soapstone: Soapstone occurs in historically occupied Chumash villages to varying degrees. For example, McRae (1999:199) documented 25 pieces of soapstone at *Soxtonokmu'*, representing a standardized count of 0.38 m^3. At *Xonxon'ata*, there were only three pieces of soapstone, which represented 0.01 m^3 (Hildebrandt et al. 1999). At *Noqto*, very limited amounts of soapstone were found (Glassow et al. 1991). Site reports indicate a few steatite beads, one steatite artifact, and some "discoidal steatite heads." Even if these deposits were made in a 30-year time period, comparable to Mission La Purísima, it is still occurs significantly less than inside the missions. Soapstone appears to not have been used as rigorously at traditional villages before the mission period for the large-scale production and use of cooking vessels, i.e., bowls, ollas, and *comales*, as was identified at Mission La Purísima Concepción and Mission San Buenaventura (see Brown 2018, Wlodarski and Larson 1976).

In a regional comparison using soapstone from mixed Late and Historic period mortuary contexts, Brown (2018) found that Chumash communities primarily acquired soapstone from sources on Santa Catalina Island due to the presence of anthophyllite. This crystalline mineral occurs in soapstone sources specifically on Santa Catalina Island. The vessels were shaped into ollas, which have long been recognized as ideal for boiling foods for long periods as excess water could not boil over the top of the small opening. Food could therefore remain hydrated (Rice 1987:240–241). Each vessel also displayed a thin rim that gradually increased in thickness toward a bulbous base, suggesting that the ollas were positioned over the cooking fire with some support. The ollas frequently display decorative Vs or Xs etched around the orifice. There is a lack of bowls in the Late Period, pre-colonial/colonial period sites outside the mission. Finally, soapstone *comales* used in the pre-colonial past are flat, irregular, and informal, with no shaping around the edges.

However, during the Mission period and outside the mission space, griddles (*comales*) take more formal shapes and larger sizes. At *Helo'* (CA-SBA-46) griddles display characteristics resembling mission assemblages, including incised lines around the edges, distinctly thick rims, and much larger size than what was recognized in Protohistoric assemblages, such as Medea Creek (Brown 2018:259). This pattern was also identified on the California Channel Islands. One example comes from the historic village of *Silimihi*, CA-SRI-40, on Santa Rosa Island. It was excavated by Philip Mills Jones, who, in 1901, noted the presence of glass beads in the historic cemetery (Kennett 2005:99–100). Among at least 13 griddles, all displayed characteristics of formal, burnished rims and large sizes or elements that suggest they were modified from ollas or bowls. Rather than these griddles used to specifically cook tortillas, Koerper and colleagues (2011) have found that many remodified *comales* were incorporated into the mortuary/mourning area in the Gabrieliño (Tongva) historic village of CA-LAN-62 and were used as funerary and ritual offerings. These Mission period *comales*, not being associated with the consumption of tortillas, may have taken on a different meaning among the Chumash, as they were incorporated into ceremonial spheres. Alternatively, they may appear in mortuary contexts as an indicator of a person's belongings. However, it is interesting that on the Channel Islands, foodway data suggests no change in Native diet with the introduction of domesticated plants during the Historic period. The prevalence of *comales* in Island contexts, such as those identified at

Figure 6.2: *Comal* from *Silimihi*, CA-SRI-40. Cat No. 1-5168. Phoebe A. Hearst Museum of Anthropology

Silimihi and more broadly across the Chumash homeland, may indicate that these artifacts did not function to cook tortillas outside the mission. Additionally, there has been no evidence to suggest that there was a shift in Native diet to an emphasis on more solid-based foodstuffs during the Mission period and outside the mission, such as the increased production of ground acorn patties. Taken together, the prevalence of Historic period *comales* outside of mission contexts may be a result of their shifting functional attributes, from artifacts used for utilitarian purposes to their incorporation into ritual spheres. Their designs are also distinct from *comales* inside the mission, displaying unique features such as curved designs (Figure 6.2) or pendant-like qualities.

Mission La Purísima: The Gable and Deetz excavations, combined with the summer 2019 investigations, produced 606 soapstone pieces at a count of about two pieces per cubic meter, suggesting a much heavier reliance on soapstone than interior or Purisimeño territories. The stone also has shiny inclusions from large quartz chunks or possibly mica. It is more schist-like and comes from low-grade sources with chunky breaks and thick inclusions (Brown 2018). Interior soapstone sources such as those found in the Southern San Joaquin Valley and Sierra Pelona Range have more schist (L. King 1982:127; Romani 1982:169-170) which matches the same pattern at the mission as opposed to Catalina Island soapstone with anthophyllite.

Interestingly, the soapstone assemblage at Mission La Purísima Concepción is not comprised of ollas, but rather of bowls. The same holds true for Mission San Buenaventura (Brown 2018). The bowl vessels gradually increase in thickness toward a flat base that joins the vessel wall at an angle; the function of this design suggests that cooking was done on a flat, stable surface (Adams 2002:218). The shape of these vessels suggests that the foods cooked were not boiled for long periods but, rather, simmered at lower temperatures. This would have been ideal for serving thick pasted soups and stews influenced by early Spanish cuisine. However, while the bowls may have served new uses in the Mission, they continue to display the same Xs and Vs along the rim.

The *comales* in the Mission exhibiting "comfort features" (sensu Adams 2002:19), such as projecting rims and handles with well-burnished sides and upward-lifted edges, making the tools more comfortable to hold. These changes may also suggest a functional shift regarding the foods they were used for cooking. For instance, numerous ethnographic accounts describe the primary use of *comales* as reserved for the cooking of tortillas (Hudson and Blackburn 1983:196–197; King 1982:440; Romani 1982). The stylistic attributes of soapstone griddles identified inside the missions (i.e., opposing rim handles and thick, burnished edges with elevated rims) may have been influenced by Mexican *comales*, suggesting that the griddles' primary function was to cook tortillas.

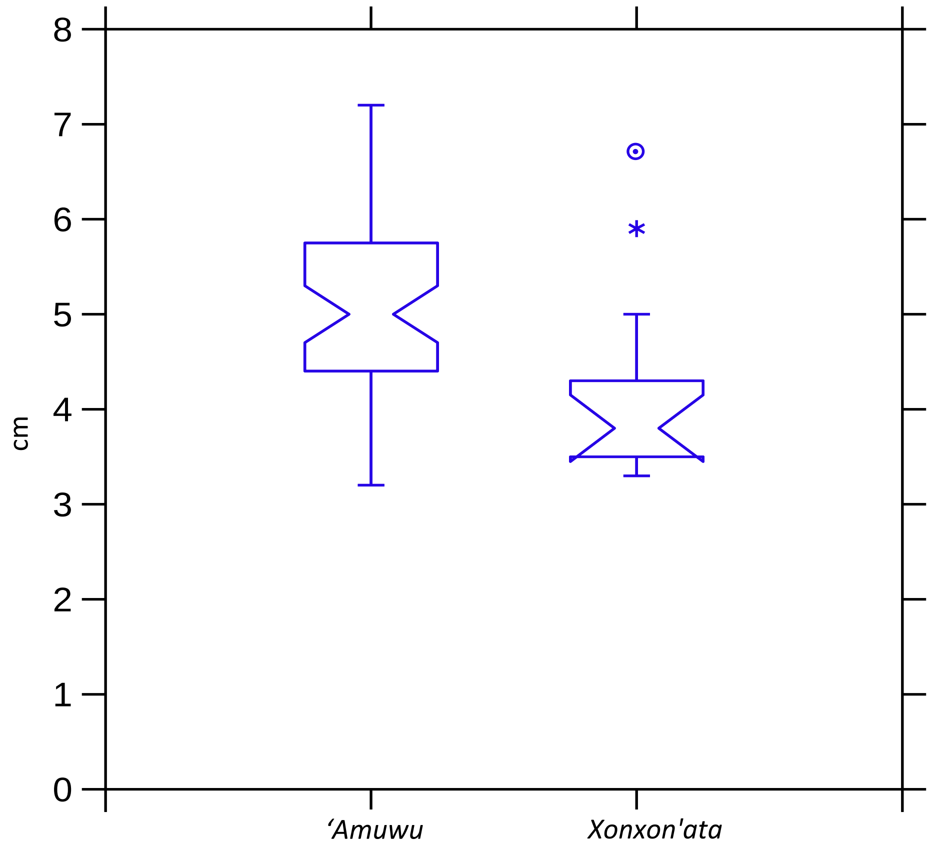
Lithics: Chert is the primary material used for stone tool production among the Chumash. However, there are distinct differences between the use of Monterey or Franciscan chert in differing ethnohistoric villages. For example, *Noqto*, which is located along the Central coast, has a lithic assemblage comprised of 99% Monterey chert (McRae 1999: 112). There is a Monterey chert bedrock formation within the Vandenberg area at Point Arguello, near the site of *Noqto*, making it an easily accessible and reliable resource to the villagers (Dibblee 1988a). The inland village of *Xonxon'ata* also had a high percentage of Monterey chert that made up 79% of the lithic assemblage. Only 9% was of Franciscan chert. Conversely, at two other interior sites there is an opposite pattern. Of 479 flaked stone artifacts at *Soxtonokmu'*, the majority (62%) are of Franciscan chert. Chert from the Monterey formation only made up 26% of the lithic assemblage. The same holds for *He'lxman*. 64% of the flaked stone was of Franciscan chert, and the other 34% was of Monterey (McRae 1999: 112). The Franciscan chert was likely gathered from the formation in the Figueroa Mountain, Los Olivos, and Zaca Lake quadrangles.

Mission La Purísima: Recent archaeological investigations combined with museum research produced 127 (75%) Monterey chert flaked stone artifacts at *'Amuwu*. Only 43 (25%) are Franciscan. This is similar to *Noqto* and *Xonxon'ata*. Like the shellfish assemblage, these data may show that the community of *'Amuwu* follows more of a coastal, Purisimeño tradition with the acquisition of these sources deriving from Point Arguello. The Franciscan chert is more dominant in the earlier assemblages at the mission and may speak to an opening up of restricted trade policies implemented by the Spanish during the Mexican period.

Asphaltum: Asphaltum is not a highly studied artifact class that is consistently reported in archaeological studies of sites in the interior valley or Purisimeño territory. However, a few ethnohistoric villages offer insight into how the substance was used. Previous excavations by Deetz at *Soxtonokmu'* yielded 65 tarring pebbles (Deetz 1963:187). From six randomized selected units in the Deetz collection, McRae (1999:120) found that standardized by count, tarring pebbles represent 2.96 per m^3; standardized by weight, this equates to 165.12 g per m^3. The asphaltum fragments with basketry impressions at *Soxtonokmu'* weigh 1.24 g per m^3.

Some scholars have measured the tarring pebbles which is an important indicator of the types of baskets that were constructed. At *Xonxon'ata*, tarring pebbles average 40 mm long. Most (n=10; 66%) of the pebbles fit into the "large" pebble category, illustrating that the baskets had a large opening, at least larger than other tarring pebbles associated with "long necked water bottles" on San Nicolas Island (Brown and Vellanoweth 2014). Gamble (1982) recorded 651 tarring pebbles from Pitas Point that were under 50 mm. Other tarring pebbles over 50 mm suggest larger water bottles were constructed as well. Glassow et al.

Figure 6.3: Box plot of tarring pebbles from *"Amuwu* and *Xononata*.



(1990:7-72) additionally noted the average thickness of tarring pebbles from *Noqto*, and other archaeological sites in the Vandenberg area. The pebbles there are similar to *Xonxon'ata*, averaging 42.8 mm thick.

Mission La Purísima: Similar to the types of asphaltum that were found in the interior and coastal area surrounding the mission, the asphaltum assemblage at *'Amuwu* primarily reflects the construction of basketry water bottles. Ethnohistoric documents reveal the crucial role baskets served in the Chumash trading system between Chumash inland and island communities and their neighbors, e.g., the Salinan and

Yokuts (Brown et al. 2018; Davis 1961; King 1976; Timbrook 2008). They were exchanged for items such as seeds, skins, and stone implements.

Excavations and museum research in 2019 found that there are 0.83 tarring pebbles per m^3 at the *'Amuwu*. Standardized by weight, this is 56.55 g per m^3. As baskets degrade into many fragments of varying size, baskets can only be calculated by weight. Thus, at *'Amuwu*, asphaltum basketry impressions weigh 1.44 per m^3. *Soxtonokmu'* has more tarring pebbles; however, there is a relatively equal amount of basketry impressions at both sites. Deetz (1963) suggests that the lack of tarring pebbles at Mission La Purísima and more tarring pebbles at *Soxtonokmu'* may suggest that more baskets were traded to the mission (see also King 1976). However, the tarring pebbles from these ethnohistoric villages cannot be positively attributed to the Mission period. I suggest that rather than baskets being traded to the mission, the difference represents the construction of different types of water bottle baskets.

At *'Amuwu*, most of the tarring pebbles (n=35; 64%) fit into the "extra-large" category, between 45 to 65 mm, of the Brown and Vellanoweth classification scheme. The average thickness of the pebbles is 50 mm long. A box plot reveals that Mission La Purísima pebbles are statistically bigger than the pebbles that were recorded from the nearby village of *Xonxon'ata* (Figure 6.3). They are also significantly larger than the average tarring pebble at *Noqto*. These data indicate that larger baskets were produced at *'Amuwu* than in any other surrounding village where tarring pebble lengths were recorded. Mission San Buenaventura also primarily had "extra-large" tarring pebbles. The average length of 236 tarring pebbles was 49 mm (Greenwood 1987:37). The baskets fashioned at these mission communities may be what Hudson and Blackburn (1982:51) identify as "Large water bottles" with a tubular shape capable of storing large quantities of water. Many water bottles of this size have been found in the Cuyama area and interior Santa Barbara County (Hudson and Blackburn 1982:52-53). They can get as wide as 28 cm and as high as 49 cm. Baskets may be larger in the Mission due to the focus on ranching and agriculture. More significant quantities of water may have needed for workers in the field who were away from their homes for long periods.

Historic context spatial comparison: Artifacts specifically used during the colonial period

This section investigates the same local villages around *'Amuwu* previously discussed and includes reports from other California missions. It focuses specifically on the artifacts explicitly used during the Historic period and in other mission contexts. I discuss (1) glass beads, (2) historic shell beads, (3) domesticated animals and plants, (4) metal, and (5) historic ceramics and consumer glass.

Glass Beads: There were 135 glass beads discovered during the 2019 archaeological field excavations. The majority, 75% (n=101), are drawn cane, 11% (n=15) are wire wound, and 3% (n=4) are Prosser-molded (Table 6.1)

In other villages, there are fewer wire wound beads and less variability among the classes of glass beads. *Soxtonokmu'*, for example, yielded 47 (96%) glass cane beads and two (4%) wire wound beads (McRae 1999). According to the Kidd and Kidd (1970) and Karklins (1982) classifications scheme, 82% (n=40) are Class Ia/IIa bead type. There are also four beads (8%) in Class IIa and three (6%) beads in Class If. The only two wire wound beads are Class WIb. At *Xonxon'ata*, all 14 beads are manufactured by drawn cane technology

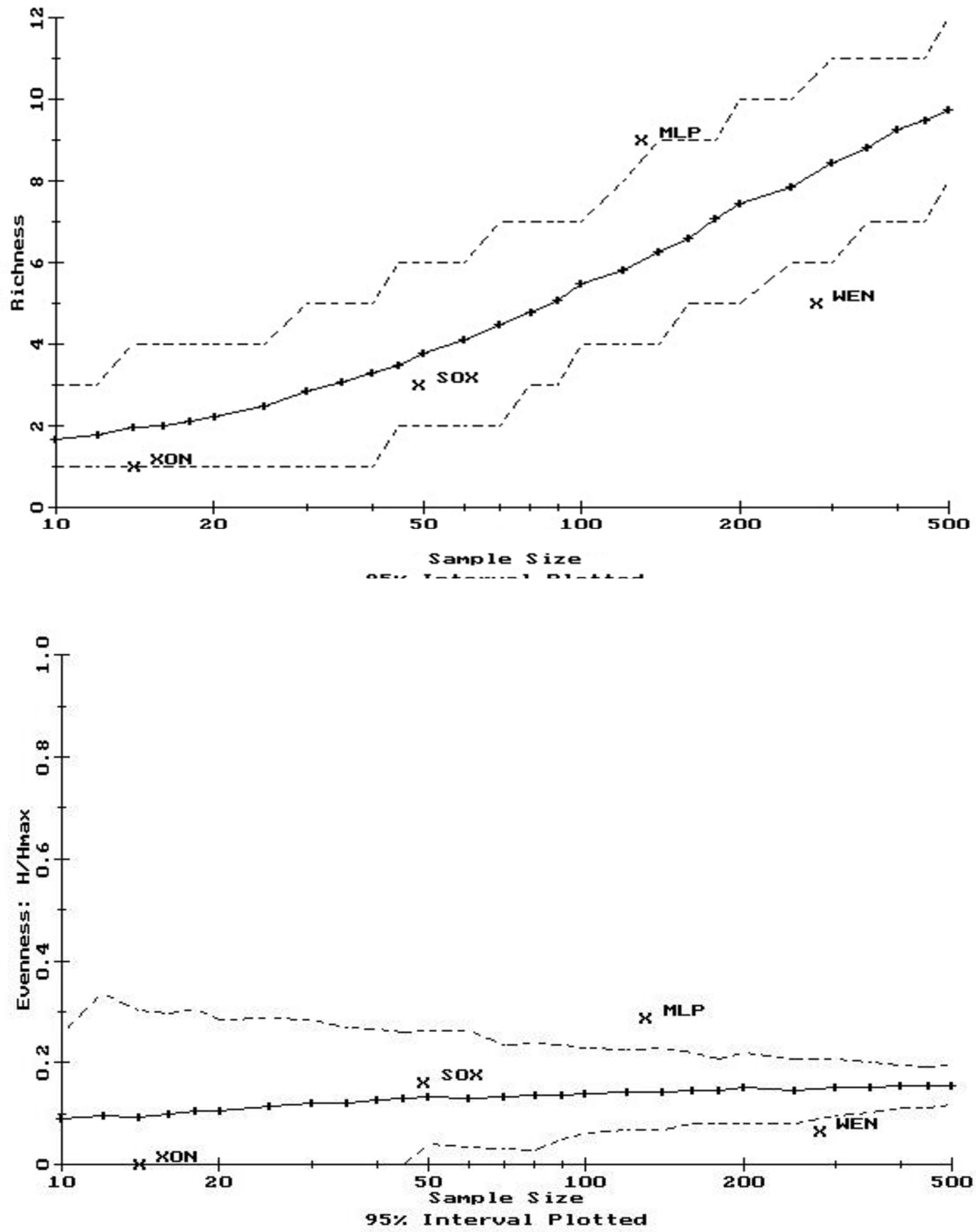
(Hildebrandt et al. 1999). They all fall into the Ia/IIa. Finally, at *Wenexe'l*, 99% (n=280) of the glass beads are drawn cane, and only 1% (n=3) were wire wound. They are categorized in the following ways: Class IIa (n=271), Class IVa (n=5), Class 1Cb (n=1), Class WIc (n=1), and Class WIIm (n=2) (Costello 2014b; Mikkelsen et al. 2014).

When strictly comparing the drawn cane beads and wire wound beads, there is a statistically significant difference (χ^2=20.985, df=2, p<.01) between *'Amuwu* and these outlying historic Chumash villages. Not only does Mission La Purísima have more wire wound beads, while the other sites have more drawn cane beads, but there is a greater diversity among them. A Kintigh DIVERS test that includes all the varietals of all bead types

Table 6.1: Glass beads at *'Amuwu* compared to hinterland villages.

	'Amuwu	*Soxtonokmu'*	*Xonxon'ata*	*Wenexe'l*
Ia	10			
IIa	101	44	14	271
If	1	3	-	-
Iva	4	-	-	5
Icb	-	-	-	1
WIb	4	2	-	-
WIc	-	-	-	1
WId	6	-	-	-
WIIc	1	-	-	-
WIIx	1	-	-	-
WIIIa	2	-	-	-
WIIIc	1	-	-	-
WIIm	-	-	-	2
PMIa	1	-	-	-
PMIc	1	-	-	-
PMId	1	-	-	-
PMIg	1	-	-	-
Total	*135*	*49*	*14*	*280*

Figure 6.4: Kintigh DIVERS test on glass beads comparing Mission La Purísima (MLP) to hinterland communities with a) richness b) evenness.

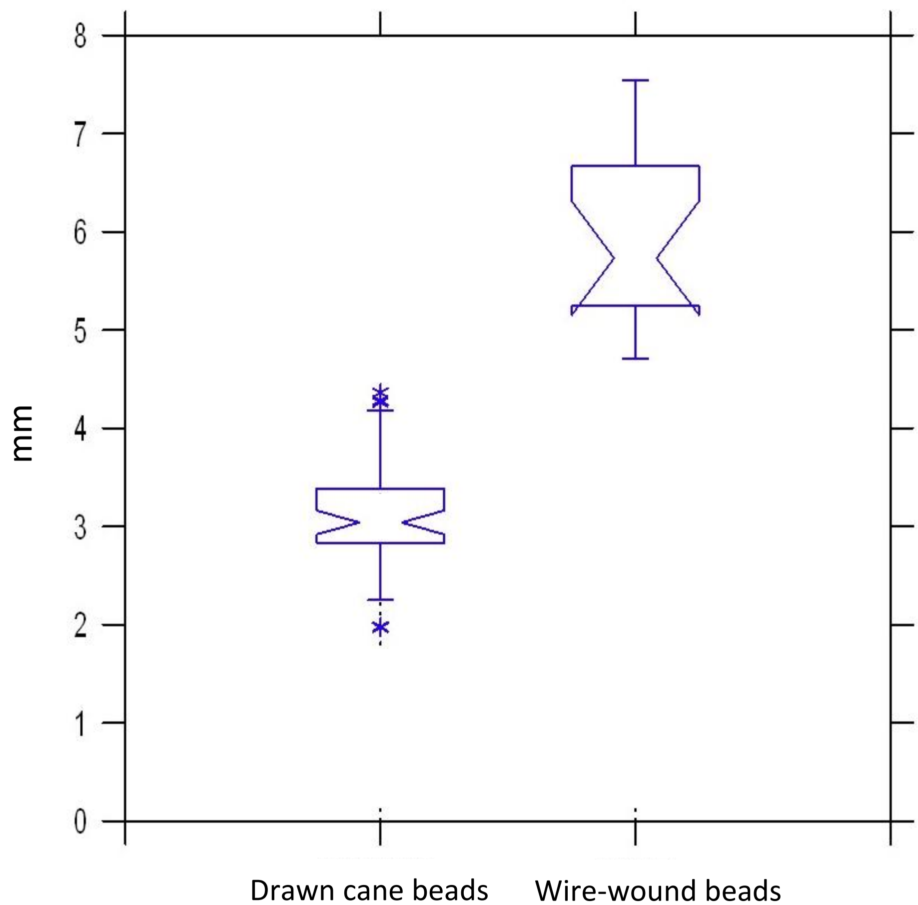


X Xon—*Xonxon'ata*, X SOX- *Soxtonokmu'*, X MLP – Mission La Purísima , X Wen- *Wenexe'l*.

under the Kidd and Kidd (1970) typological system found a statistically significant difference between Mission La Purísima and hinterland communities. Mission La Purísima is statistically richer in terms of the types of glass beads than *Xonxon'ata'*, *Soxtonokmu'*, and *Wenexe'l*. The same patterns hold true when looking at the evenness: Mission La Purísima is statistically more even than *Xonxon'ata*, *Soxtonokmu'*, and *Wenexe'l* (Figure 6.4).

These data suggest that glass beads were consumed and used differently by the Native community inside the mission. The wire wound beads are statistically larger compared to drawn cane beads (Figure 6.5). Artisans had to handcraft each bead individually. Their size

Figure 6.5: Box plot of drawn cane and wire wound beads at *'Amuwu*.



and lengthy manufacturing process suggest a higher value attached to them. The wire wound beads may yet also reveal that there are differences in bead use over time. Meighan (1985) notes that while most wire wound beads were used over long periods of time, a small group of wire wound beads may date from 1820-1850 and post 1850. Unfortunately, none of the wire wound beads from Mission La Purísima Concepción could be typed into Meighan's classification scheme. However, the four Prosser-molded beads are older than the mission (post AD 1832) and speak to a Native community that lived there after the dismantling of the mission system. Recent studies by Dadiego et al. (2021) also found that bead color can represent chronological shifts. Although the small sample size is insufficient for investigating change in glass bead color over time, it is worth acknowledging that later in time, perhaps different glass beads were imported and used in Native exchange systems.

The types of glass beads recovered during recent excavations at Mission La Purísima have similarities and differences to other missions. For example, in the Native dormitories at Mission San Antonio, Meighan (1985:57-58) documented 154 wire wound beads and 98 "seed beads." While more drawn cane beads ("seed beads") were found during the 2019 excavations at Mission La Purísima Concepción, a greater amount of wire wound beads were found in the Chumash Family Apartments and in MU1 compared to the northern section of the midden deposit. The presence of more wire wound beads in the adobe buildings and in the midden deposit directly associated with the building may symbolize their prestige. Indeed, only the largest beads with the most time-consuming manufacturing and coloring processes (e.g., wire wound beads and red beads) were found in the apartment units and in MU1 than the northern section of the midden at Mission La Purísima. This suggests that families who lived in the adobe buildings at both missions may have held higher statuses.

Dietler et al. (2015) did not excavate in the Native adobe apartments at Mission San Gabriel but in the formal garden area of the mission where Native residents resided in traditional homes. The ratio of wire wound glass beads to drawn cane beads is like Mission La Purísima Concepción. In this dissertation, I reported on 116 (88%) drawn cane beads and only 15 (12 %) wire wound beads. Comparably, Mission San Gabriel had 56 (81%) drawn cane beads and 13 (19%) wire wound beads. Mission San Buenaventura also had more drawn cane beads, with over 90% of the beads analyzed falling into this category (Gibson 1976:57). These similarities may be a result of context, with deposits representing midden contexts rather than solely the adobe apartments.

In regard to color, blue and white glass beads tend to be the most predominant colors in local missions. At Mission San Antonio, Meighan (1985:62) identified blue and white beads as the most predominant bead colors, apart from the 101 "New Type" of yellow-brown glass beads that were recorded. At Mission San Gabriel, Dietler et al. (2015:267) noted that 59.5 % of the glass and ceramic beads are blue, green, or blue-green, while another 18.7 % are white. The same is true at Mission La Purísima Concepción, where 46 % of the beads were labeled blue or green, and white beads made up the next highest percentage at 14%. At Mission San Buenaventura, most of the beads were blue and green as well. Gibson (1976:61) notes that bead types C1a-C3a, which are all blue or green, have over 1,245 examples, making up much of the drawn cane bead category. White beads made up the second-largest class in the sample, with 109 examples. Red beads appear less frequently in all these missions and may speak to their higher value. Interestingly, eight of the nine red beads identified at Mission La Purisima were found in the adobe apartments and in MU1—the midden unit directly associated with the adobe apartment.

Historic shell beads: When comparing glass beads to shell beads produced specifically during the Historic period, including Bennyhoff and Hughes' (1987) E3a, H1a, H1b, H2, J1a, and J1b beads, there are significantly more historic Olivella shell beads than there are glass beads in outlying villages, while there is an opposite pattern at Mission La Purísima Concepción with more glass beads than historic Olivella shell beads. At *Xonxon'ata*, for example, there are a total of 69 Olivella shell beads that date specifically during the Mission period and only 14 glass beads (Hildebrandt 1999:55). This equates to about five historic shell beads for every glass bead. At *Soxtonokmu'*, there were 316 historic Olivella shell beads and 49 glass beads, a ratio of 6 historic needle-drilled shell beads to one glass bead (McRae 1999). At *Wenexe'l*, 1,491 H class, needle drilled beads were identified and one historic-era lipped variant (King 2014: 3), but there were only 280 glass beads. This is a similar ratio to the other interior villages: there are about five needle-drilled beads per glass bead. Finally, at *Helo'*, Gamble (2020:67) documents over 4,000 shell beads, and most of them were deposited between AD 1750 and 1803. Only 100 glass beads were recovered from these same excavations and surveys. In the historic cemetery, however, 2,329 glass beads were recovered.

There is an opposite pattern of historic shell bead and glass bead use at *'Amuwu*. Altogether there were only 82 historic needle-drilled Olivella beads, but there were 135 glass beads. This is a ratio of about one needle-drilled bead to one and a half glass beads. Interestingly, the prevalence of historic shell beads at archaeological sites outside the mission, but more significant amounts of Olivella detritus at *'Amuwu* (discussed above), demonstrates something different going on. The shell beads that were produced were not utilized as much by the Native community at the mission, appear to have been manufactured and exchanged for export. This reflects an ongoing and important tradition of maintaining connections with other Chumash communities, other Native communities outside the Chumash homeland, and other missions during the Spanish and Mexican periods.

There were 308 glass beads at Mission San Antonio but only 28 shell beads representing eight different types in the Native dormitories (Meighan 1985:62). This is a ratio of about one shell bead per thirty glass beads. Mission La Purísima Concepción has a ratio of about one shell bead to 1.5 glass beads. As Mission San Antonio represents mostly Salinan peoples, it appears they may not have incorporated shell money beads into their systems of exchange as intensely as their southern neighbors during the Historic period. Or perhaps this has to do with the Mission San Antonio excavation context that focused explicitly on the Native dormitories. The data from the 2019 Apartment Units "AUs," would support the findings at Mission San Antonio. No shell beads were found under the rooftile collapse, but there were eight glass beads. The individuals who lived in the adobe apartments at both missions may have used shell and glass beads differently than the rest of the Native community.

The shell bead and glass bead signature at Mission San Buenaventura is in stark contrast to Mission San Antonio. Gibson (1976:76-77) noted over 19,000 examples of shell beads but only 2,032 glass beads. Unfortunately, many Olivella saucers were not classified within a distinct period (e.g., Middle or Late period; Late period 1, 2, or 3, after King [1990]). The saucers represent the span of hundreds of years in the vicinity of Mission San Buenaventura. The large amounts of shell beads in comparison to glass beads may signify a longer occupational period at the mission and the presence of a pre-colonial village

At Mission San Gabriel, Dietler et al. (2016:266) identified four class H types, including H1a, H1b, H2, and H3. The majority of the beads (n=36) date between AD 1816 to 1834. The second-largest type represents the early mission period, between AD 1770 to 1810. Finally, the third major type of bead identified were H1b beads, which were used from AD 1790 to 1816. Interestingly, at Mission La Purísima Concepción, earlier forms of shell beads date to the period of time before the Mission was established, in AD 1813. For example, H1a (AD 1770-1810) beads are more dominant than H2 (AD 1816-1834) varieties (refer back to table 5.2). The reason for more H1a beads may be due to extensive weathering and the poor condition they were found in due to the depositional context of the midden deposit. As there is no evidence for pre-mission period occupation at the site, the earlier beads may also represent a carrying over of older traditions at the mission rather than a distinct Historic period community that formed there before its operation.

Domesticated Animal and Plant Consumption: There are only 59 identifiable specimens of terrestrial animals at Mission La Purísima, and 93% are domesticated animals: 75% of the domesticates are a cow, and the other 25% is sheep. Indeed, Mission La Purísima Concepción recorded the highest output of cows and sheep between the years AD 1816-1820 than any other mission in the Chumash area (Costello 1989).

Cultigens make up 19% of the macro botanical samples. This category is comprised of Barley (*Hordeum vulgare*), corn (*Zea mays*), cupules and kernels, and wheat (*Triticum* spp.). The microbotanical signature additionally reveals the presence of cultigens. Residue analysis on the interior of one bowl from room four in the James Deetz excavation revealed three clusters of melted rondels, which points to the presence of *Zea mays*. The melted rondels are typical of those noted when heating a maize cob at high heat for many hours in the lab (Cummings 2016:9). The Chumash used the bowls to cook corn into some type of gruel, and it was eaten as a mushy soup.

Previously published data in Chumash villages in the interior and coastal regions do not show the same dependence on domesticated animals and plants for daily dietary needs. For example, at *Soxtonokmu*, there were only two pieces of cow and one horse (McRae 1999:79). The majority (83%) of the faunal was Mule Deer (*Odocoileus hemionus*). At *Xonxon'ata*, no domesticated animals were in the assemblage (Hildebrandt 1999: 77-81). The same is true for the coastal site of *Noqto* (Glassow et al. 1991).

While no domesticated plants were found at these sites, one microbotanical sample from a Chumash olla outside of a mission context yielded evidence of threshed wheat. The olla was excavated from a mixed mission and pre-colonial cemetery in Sunset Valley (CA-SBA-104) in the Los Padres National Forest in Santa Barbara County. Inside were cut wheat stem fragments and calcium oxalate crystals (Cummings 2016). These small pieces of stem are interpreted to have been cut with a threshing sledge based on the angular and curvilinear edges displayed, suggesting that threshed wheat was traded to hinterland villages during the Historic period who used it to cook in soapstone ollas.

In other regions in the Chumash territory, domesticated animals and plants have been identified within Mission period assemblages. The cow bones identified at *Helo'* (CA-SBA-46), for example, were primarily used for bone tools (Gamble 2008:173). At another Chumash village, CA-LAN-229, the historic village of *Ta'lopop*, one feature contained many cow bones (King 2011:34). The feature also had the charred remains of corn, wheat, and beans (King 2011: Fig 2.15). This feature may represent the remains of Native peoples from the *Ta'lopop* community coming back to their home village after being hired by Miguel Ortega of the Rancho Las Vírgenes to tend cattle and irrigate his fields. At present, no such features have been identified in the Santa Ynez or the Vandenberg areas. Rather than suggesting significant changes to Native diet, these finds may signify small communities going back to their villages for ephemeral periods of time.

Missions with reported archaeological data close to Mission La Purísima identified similar findings in regard to the prevalence of cattle consumption by Native communities. Mission San Antonio (Langenwalter and McKee 1985), Mission San Buenaventura (Toren and Romani 1976), and Mission San Gabriel (Dietler et al. 2016) all reported significantly higher quantities of domesticated animals, particularly cattle, than any other terrestrial animal. Indeed, mission padres described the heavy reliance on cattle in the *Interrogatorio* (Questionnaire) sent to mission priests to describe neophyte communities for the Spanish government. At Mission Santa Inés, the closest mission to Mission La Purísima Concepción, they wrote, "for feeding a little over 600 persons…we slaughter every week sixteen head of cattle from the heard" (Geiger and Meighan 1976:86). However, the padres at Mission Santa Inés did not document the persistence of hunting activities as well. The results here, as well as data from the missions discussed above, both confirm the heavy reliance on beef by mission residents but also highlight the continuation of hunting practices.

Metal Objects: Metal is one of the most prevalent artifact classes at Mission La Purísima. It was incorporated into the everyday life of the Chumash at the Mission for architecture, as hardware, and for agriculture, carpentry, livery. Although metal needles don't survive in the archaeological record, historical documents illustrate how they were ordered in enormous quantities and traded to the Chumash (Perissinotto 1998). The Chumash used the thin needle to puncture the perforation hole of Olivella shell beads. This is evident with the large amounts of historic, Class H needle-drilled, bead production detritus but a dearth of metal needles.

Outside of the Mission, there is limited archaeological evidence within the Purisimeño territory and interior Santa Ynez Valley to suggest that tools and other objects made of iron were incorporated into daily life. At *Soxtonokmu'*, Deetz (1963) noted one iron fragment. At *Xonxon'ata*, all the historic materials besides glass beads were more recent in origin (Hildebrandt et al. 1999). Glassow (1990) reported no imported historical materials besides glass beads in Unit 5 at *Noqto*. At the historic village of *Wenexe'l,* only one metal object was found, along with a unique bone "needle case" (Mikkelsen et al. 2014: 238). Even though metal needles were used in these historically occupied villages to produce shell beads, Olivella bead production detritus suggests that this was a small production scale compared to Mission La Purísima.

Metal has been found in larger quantities in historically occupied Chumash villages outside of the Purisimeño territory and interior valley. However, this metal is not used for new forms of labor (agriculture or carpenters' tools) but as tools incorporated into traditional activities. The Chumash used metal tools to preserve and even increase soapstone production, sea-faring canoes, beads, and other objects (Gamble 2008:215). They would also repurpose metal tools such as axes and barrel hoops to serve different purposes (Gamble 2015). Within the historic cemetery of *Helo'*, adzes, spikes, knives, and drills were found associated with redwood planks, suggesting their use in constructing the plank-going canoe, the *tomol* (Gamble 2008:209). In other cemeteries in the Los Angeles area, metal objects suggest occupations as Native *vaqueros* or ranch hands. In Los Angeles, the Solstice Canyon (LAN-210) burial ground yielded saddle parts, spurs, trowels, keys, nails, and other miscellaneous artifacts (King 2011:20). At *Humaliwu'* (LAN-264), there was an iron brit, a spur, and a concho, along with knives, spikes, buckles, and buttons (Bickford 1982). Gamble (2008:109) argues that many artifacts from this cemetery could be associated with ranch hands or Native *vaqueros*, who worked at nearby ranchos before relocating to the missions.

The metal assemblage at Mission La Purísima Concepción is similar to findings in Native residential areas in other mission establishments (e.g., Hoover and Costello 1985:66-74). At Mission San Gabriel, metal was associated with a variety of different types of uses for architecture, clothing, household items, and tools used for both agriculture and livery, which speak to the everyday practices occurring by mission laborers and the way that metal was incorporated into domestic spheres (Dietler et al. 2015:287-288). At Mission Santa Clara de Asís, Panich et al. (2014:476) additionally noted that diagnostic metal, including an iron spur rowel, a brass finger ring, and a small cuprous metal pin, were all recovered in a feature associated with the adobe apartments. This suggests that certain types of metal may have been associated with the more elite class of Native peoples in California missions. During 2019 excavations at Mission La Purísima, two of the only small diagnostic metal pieces—a metal button with flower and copper bell—were found in the Native apartments and in MU1—the midden unit associated with the adobe apartments. These artifacts may also lend supporting evidence to suggest that these residents enjoyed more status.

Historic ceramics and consumer glass: Ceramics and consumer glass was another class of artifacts that made up a large portion of the archaeological assemblage at Mission La

Purísima Concepción. The ceramics were imported from China, Mexico, England and were also locally produced. They come in a variety of forms, including plates, platters, bowls, teacups, and saucers. The consumer glass indicates medicinal and utilitarian purposes and as containers for storing alcoholic beverages. This pattern in the mission lies in contrast to villages outside the mission. At *Soxtonokmu'*, only three pieces of earthenware pottery were recorded (Deetz 1963:187) and one piece of consumer glass. At other sites within a 30-mile radius of Mission La Purísima, the ceramics and glass are from post AD 1850 period sites. Ceramics have also been recorded further south in the Chumash homeland, in the cemetery at *Humaliwu* (CA-LAN-264) in Malibu. Two fragments of Majolica had stylized floral designs on a white background and an apothecary jar believed to be Arabic in origin (Bickford 1982:30).

At the village site of *S'axpilil*, CA-SBA-60, another whole ceramic vessel was found (Figure 6.6; Crabtree and Warren 1977). The earthenware vessel was hand-molded in globular form and displayed a restricted, plain-rimmed mouth. The study of diagnostic pottery in colonial outposts throughout California, such as San Antonio de Padua, illustrates that most earthenware vessels in these colonial establishments were not ollas but bowls, jars, and jars cooking pots. Many of the latter display everted rims and opposing strap handles (Costello 2014a:72–73). This, however, is not the case with the Chumash pottery vessel from CA-SBA-60, which features a restricted orifice and a plain design. Because ceramic materials were not a primary medium with which to fashion vessels in the Santa Barbara Channel region until the Spanish arrived, this pottery jar may provide a glimpse into the individual negotiation of Chumash identity between the past and the present.

Figure 6.6: Chumash earthenware olla from the *S'axpilil* (CA-SBA-60).

Ceramics are a frequently occurring artifact class in mission assemblages. Similar types and forms are found in local missions that were imported from Mexico, China, and Britain, as well as locally produced on the mission grounds. The percentages of ceramic types and their location of production, whether imported or locally made, are vastly different among the missions. For example, at Mission San Antonio, 48 % of the ceramic assemblage are mission-made vessels, while the other 52% are imported (Costello 1985). At Mission San Buenaventura a substantial portion of mission pottery also made up over half of the collections. However, an analysis of the Gabel and Deetz collection found that only 6% of the assemblage was locally made in the mission, and the other 94 % was imported. Costello (1990:308) also noted the paucity of mission made ceramics at Mission La Purísima Concepción. She suggests that this may suggest the absence of a productive ceramic industry, which was compensated for by the increased quantity of imported tableware (Costello 1990:310).

The glass assemblage at Mission La Purísima Concepción is also strikingly different than other California missions. In fact, Dietler et al. (2016:276) notes that glass is one of the least abundant class of artifacts recovered in mission contexts, as identified at Mission San Gabriel, Mission San Buenaventura, Mission Santa Clara de Asís, Mission Santa Cruz, and Mission San Fernando, and Mission Santa Inés. However, at Mission La Purísima Concepción, the glass assemblage was one of the most significant artifact classes recovered in terms of weight. The reason for this discrepancy has much to do with the five whole glass bottles found associated with four whole ceramic vessels in the unique cache under the floor in room 3.

COMPARISON BETWEEN THE NORTHERN AND SOUTHERN AREA OF *'AMUWU*

As discussed in Chapters 3 and 5, the Native residential space serviced the entire Chumash community at the mission, including those who lived in the Chumash Family Apartments and tule-thatched houses. A surface survey in 2019 identified dense deposits in the northern and southern extent of the Native rancheria. Fieldwork confirmed this finding. Of the five midden units placed in the deposit, the unit that was placed to the farthest north (MU5) and the one situated in the backyard of the apartment building, near the *zaguan* or passageway between Buildings A and C (MU1), produced the greatest density of midden materials. However, the units placed between them had significantly less and more restricted deposits, suggesting there were discrete areas of use within the Native rancheria. Moreover, an important discovery was that MU1 has more similarities with the apartment units than

MU5. In the section below, I use multiple lines of evidence to illustrate why MU1 most likely represents the refuse left behind from Chumash residents of the adobe apartments, while MU5 signifies the debris left behind by Chumash residents who lived in their traditional tule-thatched houses.

Shell and Glass beads Varieties

MU1 and MU5 have stark differences regarding the types and diversity of shell and glass beads. For example, MU1 has 55 Olivella shell beads. The majority (n=49) are needle-drilled H beads. Following the Bennyhoff and Hughes (1987) classification scheme, the beads are subdivided in the following ways, including H (n=11), H1 (n=4), H1a (n=10), H1b (n=5), H2 (n=10), and H3 (n=9) categories. Three shell beads are E "lipped" beads, and two beads are J1, "Wall Disk" beads. MU1 also yielded various non-Olivella shell beads: an undifferentiated gastropod (n=1), *Mytilus* (n=1), and red abalone(n=4). In contrast, MU5 is more homogenous than MU1. There are 15 shell beads, and fourteen of them are all class H, Needle-Drilled Disks. The other bead was manufactured of red abalone, and it was very weathered.

Glass beads are also disssimilar between MU1 and MU5. A total of sixty glass beads were identified in MU1. They were manufactured using wire wound (n=7) and drawn cane (n=53) technologies. In MU5, however, there are no wire wound beads. Instead, 10 of the 11 glass beads are drawn cane. The other glass bead is classified as a Prosser-molded, PMI-d.

The greater diversity of glass and shell beads in the southern portion of the Native rancheria closest to the Chumash Family Apartments may signify differences in access to more extensive trade networks and more prestigious items (refer back to Figure 5.2 and 5.3). The drawn cane beads are produced more cheaply and faster than wire wound beads. While the former can make hundreds of different beads from one tube of molten glass, the latter types are made individually (Kidd and Kidd 1970:49). Wire wound beads are also much larger than drawn cane and may have been perceived as more prestigious.

The diversity of beads found in MU1 are like the beads found in the Chumash Family Apartments. Excavations inside the apartment units yielded five drawn cane beads and three wire wound beads. In this southern portion of the midden, while drawn cane beads were also used, wire wound beads were incorporated into the trading system. The northern part of the mission did not have this same pattern. Instead, residents who most likely lived in their tule-thatched houses used drawn-cane beads in their trade systems. While these patterns are compelling, it is important to note that these differences may be a product of small sample size.

Shell Bead Production Detritus

Olivella biplicata fragments were found in every midden unit; however, MU1 and MU5 had the most shell bead detritus. Within the ¼” full sorts, $^{1}/_{8}$" 100g full sorts, and the fast-sorted samples, MU1 produced 91.9 g (n=571) of Olivella detritus and 14.2 g (n=20) whole shells. Based on Barbier's (2019) replicative studies, 91.9 g of detritus represents approximately 153 Olivella needle-drilled beads. Standardized by soil volume (0.58 cm^3), there are approximately 158 g of detritus per cubic meter, representing 264 shell beads per cubic meter, around the Chumash Family Apartments. MU5 has significantly less Olivella detritus and there were no whole shells present. Within the ¼” and $^{1}/_{8}$" and fast-sorted samples, Olivella detritus makes up 21.21 g, representing the manufacturing of approximately 13 Olivella needle-drilled beads. They are standardized by volume, approximately 22 needle-drilled Olivella beads per cubic meter in MU5. In comparison to the apartment units, the midden units had much more shell bead detritus. This is likely because bead production was an activity that occurred outside and near the house rather than inside. Together, these data suggest that there was more bead production activity occurring in the southern area of the Native rancheria, near the Chumash Family Apartments, than to the north.

Ceramics

There were 26 ceramic sherds in MU1 and MU5 combined. Sixteen ceramic sherds were found in MU1, and ten were found in MU5. The ceramics in MU1 represent four different origins: China, England, Mexico, and locally produced pottery. Four sherds are Chinese porcelain imports. Two of them (MNI 1) were pieces to a provincial ware porcelain platter. The other Chinese porcelain sherd was a typical Canton-style with a rim pattern with a border of short diagonal lines (Madsen and White 2011:101). This vessel served as either a plate or a platter. The last Chinese porcelain ware is a bowl, and it has a hint of red paint on the side; however, it does not appear to be of the “Famille Rose” type, as the color is a deeper maroon red. The shard is thicker than other Famille Rose ceramic vessels, which are mostly tea wares. This item is overglazed miscellaneous porcelain.

There are also five pieces of British earthenware. Four sherds are flat pieces of creamware. The other is a whiteware plate with the Painted Peasant design, including elements of green foliage and a red flower. Three other ceramic fragments are from Mexico. Two of the Mexican imports had no markings, while one had black lines and is Galera. Four other sherds are locally produced missionware. All the missionwares were unglazed and, based on their rim, were classified into a hand-molded olla (Cat. no. 545) and a wheel-thrown bowl (Cat. no. 5603).

MU 5 stands in stark contrast to MU1. There is a statistically significant difference ($\chi 2 = 8.8244$, df = 1, $P \leq 0.01$) between the imported and locally made pottery between these two units. Of the ten ceramic sherds in MU5, eight (80%) of them are fragments of mission-made ceramics. The locally-made ceramics had soot and residue on the outside, illustrating their use for cooking. At least six of the vessel pieces were wheel-thrown. The two other pieces include one creamware plate and one Mexican import (Galera) plate with a black-lined curvature decoration.

These findings suggest that the residents in the southern part of the rancheria, around the Chumash Family Apartments, placed more emphasis on presenting foods on plates, platters, and in bowls. The tableware suggest that the residents emphasized individual consumption by providing the diner with their own tableware. However, in the northern part of the midden, more residents used ceramics to cook foods. The lack of tableware and more emphasis on cooking containers suggests that diners in this portion of the village experienced their meals in a more communal fashion. This result may also have to do with access to certain resources. Perhaps Chumash peoples who lived in the Family Apartments had more access to imported tableware, while residents in the northern section of the rancheria could easily acquire mission-made ware.

Foodstuffs

The vertebrate assemblage in MU1 is comprised nearly entirely of domesticated animals and high-quality cuts of meat than compared to MU5. This does not include animals that the Chumash did not eat, such as gophers and woodrats, which were mostly found in the roof-tile collapse with significant krotovina. For example, MU1 has both cows (NISP8) and sheep (NISP 4), which make up 95% of the vertebrate material. Only two other species make up the other 5% of identifiable vertebrates. They are non-domesticated squirrel (NISP 1) and crow (NISP 1). This pattern was identified in the apartment units: cow is 95% (NISP 5), and sheep is 4% (NISP 3). However, while both domesticated cow (NISP 2) and sheep (NISP 4) were identified in MU 5, non-domesticated turtle (NISP 1), California Ground Squirrel (NISP 9), Bobcat (NISP 1), Brush Rabbit (NISP 1) and Jackrabbit (NISP 1) made up a greater representation. There was also domesticated Chicken (NISP 1). This difference between local and domesticated vertebrates is statistically different (χ^2=8.5912, df = 1, P $\leq$ 0.01) between these two units. It attests to different foodway strategies between residents of the apartment and those who lived in their tule-thatched houses.

There is also a difference in the domesticated animal cuts of meat in MU1 versus MU5. Following the food utility index based on the economic utility/meat by Metcalf and Jones (1989), the cuts of meat within MU1 are "high" (n=4), "medium" (n=6), and "low" (n=2). However, MU5 yielded no high cuts of meat. In total, 75% (n=3) of the identifiable domesticated sheep and cow are all "low" on the Metcalf and Jones (1989) scaling system. The other 25% (n=1) is "medium."

While the sample size is small, it bolsters the interpretation that something different is happening in the northern extension of the Chumash rancheria. Families who most likely lived in tule-thatched houses not only relied more heavily on hunting terrestrial animals, but they had different access to lower economic/utility cuts of sheep and cows. This suggests that the residents of the apartment units may have had higher status and healthier diets.

VII. DISCUSSION

Both horizontal and diachronic analyses allowed for tracking change and continuity through time and across space. The Chumash village of *ʼAmuwu* does not fit within the Santa Ynez Valley and Purisimeño broader regional patterns. A fine-grained analysis of both local and imported materials indicates a different social, organizational strategy in the mission. These interpretations are more acutely delineated by comparing distinctions within the Native rancheria. Material signatures around the Native Family Apartments and the northern extension of midden deposit suggest a social distinction between mission residents. I argue in the following section that the more elite class of Chumash, who lived in the Chumash Family Apartments, further maintained social divisions amongst themselves, with evidence for the presence of a Native *alcalde* who occupied one of the rooms. A diachronic investigation attests to an evolving community intertwined with broader colonial systems. A change in social strategies was detected at the end of the Spanish empire and the beginning of the Mexican period, which points to and leveling of social statuses and more freedom of movement across the landscape. These changes and continuities highlight the formation of a new Native community at *ʼAmuwu* and organizational strategies linked to a deeper ancestral past and entangled in new colonial spheres.

OLD, NEW, AND TRANSFORMED PRACTICES

To better understand the social organization of *ʼAmuwu,* it is imperative to contextualize the everyday practices occurring in the mission to broader regional patterns. While historic villages in the hinterland were not occupied simultaneously with the second site of Mission La Purísima Concepción (Johnson 1989), the high density of historic shell beads and glass beads within them speaks to their historic occupation during the early

Mission period, contemporaneous with the first mission—Mission La Purísima Vieja. While archaeological evidence reveals that Native communities living inside and outside the mission maintained threads of continuity, there are significant transformations that explicitly occur in the mission as a result of relocation programs, shared residential space, and broader colonial processes, which did not affect Native communities who lived beyond the mission in the same ways.

Continuity and Transformation

By regionally situating *'Amuwu* within the broader landscape, evidence for the perseverance of practices was documented well throughout the Mission period. Botanical analysis reveals how local seeds, nuts, and corms (e.g., acorns, holly leaf cherry) continued to be a mainstay in Chumash diet. The gathering of intertidal shellfish was especially crucial, and it likely came from ancestral gathering locations in the Vandenberg area. Local raw materials for craft production purposes remained important in everyday life, evident with asphaltum for basketry production, Monterey and Franciscan chert to produce stone tools, soapstone for cooking, and Olivella shells to manufacture beads. The maintenance of Native dietary patterns and traditional industries speaks to sustained Native identities throughout the mid and later part of the nineteenth century. These data further provide evidence of Native social autonomy, in which the Chumash at *'Amuwu* continued to access resources outside the mission, trade with hinterland villages and other missions, and partake in traditional practices.

However, there are clear distinctions when comparing traditional activities inside the mission versus outside the mission. For example, more shellfish was identified at Mission La Purísima Concepción than any other Chumash village in the Santa Ynez Valley, suggesting a mapping on to Purisimeño traditions as opposed to Interior Chumash ones. At the same time, there is less fish, and there is a reduced amount of offshore fish acquired by boat south of Point Conception. These changes likely occurred due to the disruption of older trade networks and the making of new ones. Traditional Chumash industries change as well. There is a greater dependance on soapstone for cooking and an emphasis on the manufacturing of Olivella shell beads in the mission. This is in stark contrast to the general Late period pattern outside the mission.

Clear distinctions within the mission also highlight wholly new practices. Ceramics, metal, and glass were used in ways that created a distinction between *'Amuwu* and broader trends identified in the Late and Historic period. Imported and mission-made ceramics were incorporated into new foodway systems that were caught up with Spanish systems of status hierarchies. The metal was used for architecture, where some mission residents began to live in adobe apartments. Activities such as carpentry, agriculture, and livery demonstrate changes in everyday labor practices. Glass bottles held spirits and other medicinal or household contents. And even though glass beads are discovered both inside and outside the mission, there are statistically more diverse in the mission with less shell beads.

Nonetheless, introduced materials were rearticulated using traditional Chumash meanings and values. Examples include utilized glass flakes and glass that was fashioned into formal projectile points. Eight pieces of flaked glass, two glass projectile points, and one ceramic projectile point were identified within the Deetz and Gabel museum collections. Excavations over the summer of 2019 yielded an additional seven glass flakes. While this represents a relatively small amount of worked glass compared to other historic Native communities such as Metini Village near Fort Ross (see Lightfoot and Gonzalez 2019), it attests to the incorporation of introduced materials for everyday domestic activities in Native ways.

The results outlined above illustrate significant re-organizational strategies when looking at both local and nonlocal industries and practices at the mission compared to the general Late Period pattern in the Santa Ynez Valley and Purisimeño territory. The continuation of practices highlights continuity but also change. Yet these changes and "changing continuities" (Ferris 2009:172-173) happened on a different and more concentrated scale in the mission, which I argue is due to the community's close spatial and residential proximity in a colonial institution that evolved in tandem with broader structures. The following section discusses these significant changes by analyzing the internal structure of *'Amuwu* and diachronic changes at the end of the Spanish empire and beginning of the Mexican era.

STRATA OF SOCIAL STATUS

'Amuwu was not a homogenous entity. Its internal structure was formed through enormous diversity. These complexities are highlighted through distinctions in status, including (1) the ways the Native community used Spanish hierarchical systems in their organizational strategy, (2) traditional ideas of status that mapped onto Spanish hierarchies, and (3) introduced materials that were incorporated into indigenous understandings of status. These internal variations make up the pluralistic community at Mission La Purísima Concepción, setting it apart from Native communities outside the Mission.

Adobe apartments and tule-thatched houses

The previous chapter conducted an intra-site analysis, comparing two units in the southern (MU1) and northern (MU5) sections of the Native rancheria. The southern area of the midden—the location of the Chumash Family Apartments—had (1) greater quantities of shell bead production detritus and shell and glass bead varieties, (2) more imported ceramics comprised of tablewares, and (3) more domesticated animals with higher quality cuts of meat. I argue that these findings indicate different Native-lived experiences linked to status hierarchies. Indeed, status has played an important part in why Native individuals joined missions in the first place (Arkush 2011, Johnson 1989:369; Lightfoot 2005;). Individuals who rose in the ranks of the Spanish mission system were given more rights and responsibilities, such as greater access to prestige goods, more rights and responsibilities, and even land ownership (Haas 2014; Hackel 2005; Johnson 1993; Lightfoot 2005; Voss 2008). These higher status individuals have been linked to residents who lived in the adobe dwellings inside the mission (Brown 2018; Farris and Johnson 1999; Panich et al. 2014).

Traditionally, shell beads were a means by which elite households maintained and controlled access to wealth (Arnold and Graesch 2001; Graesch 2001: Gamble 2008; King 1990). They were used to distinguish between higher-standing individuals and those who occupied a more "commoner" class. The association between elites and the shell bead money system may have carried over into the mission, where residents of the Chumash Family Apartments, who had worked their way up the Spanish hierarchical system, also controlled the production and distribution of shell beads. This was evident with the nearly five times greater amount of shell bead production detritus associated with the apartment building in the southern portion of the rancheria than its northern extent. The residents of the building may have also enjoyed more leisure time to participate in bead-making, while the Chumash who continued to occupy their tule-thatched houses worked more laboriously in daily mission tasks. The greater diversity of shell beads around the Chumash Family Apartments does suggest that the residents who lived there had access to more expansive trading networks; the more expensive varietals of glass beads indicate more wealth and prestige. It is possible that Santa Rosa and San Miguel Islanders who came to the mission between 1813-1816 were the producers of these beads. Using Fernando Librado’s recollections recorded by J.P. Harrington, Johnson (2001:59) documented this continuing practice among islanders at Mission San Buenaventura. Indeed, Gibson (1976:91-92, 97) noted the presence of Olivella detritus and Clam tube bead production among the excavation materials largely recovered from the Chumash adobe apartments at Mission San Buenaventura. The shell beads may have been produced in greater quantities in the Missions and exported to hinterland communities, affecting the scale and significance of shell bead production during the Historic period in Southern California.

The preparation and consumption of food is also different between the northern extension of the rancheria and the area in the direct backyard of the adobe apartments. There is a lack of tablewares and imported earthenware in the northern part of the midden (MU5). Instead, most ceramics are fashioned into locally produced, coarse-textured, utilitarian bowls for food preparation and cooking. The residue and soot buildup on the vessels confirm their practical purposes and everyday cooking needs. Within MU1, however, there was a statistically significant difference in terms of more exotic ceramics fashioned into tablewares, not cooking vessels. The prevalence of soapstone in the form of cooking bowls, ollas, and *comales* within the Deetz and Gable collections, suggests that soapstone was instead used as the primary cooking vessel among residents of the adobe apartments.

Previous research supports these archaeological interpretations. Pavao-Zuckerman and Loren (2012) found that residents who occupied the governor's house at El Presidio de

Los Adaes, located in the former province of Texas, used high-status tableware to replicate elite behavior. The same holds true for Mission La Purísima. Food presentation appears to have reflected hierarchical divisions among the Chumash who lived in adobe-style apartments and those who lived in traditional tule-thatched houses. Other studies across colonial sites reveal similar patterns. Jordan (2009:41) explains that coarse-grained earthenware vessels were used almost entirely by lower-class residents, while elites used imported tablewares. As an alternative to utilitarian brown ware pots, soapstone's primary use for cooking further adds to the mission's nuances of status differentiation. Soapstone has long been linked to Chumash elites and higher status individuals, especially for special occasions such as feasts (Gamble 2015). Brown (2018) further connected the use of soapstone at Mission La Purísima to the privileged Native class that lived in the mission during the Spanish period. The prevalence of soapstone around the adobe apartments may speak to its isolated use for elite families at the mission.

Finally, the foods that the Chumash community ate also denote differences across the Native *rancheria*. When comparing the adobe apartments area to the northernmost extension of the village space—in the proposed area of the traditional tule-thatched houses— MU5 had statistically more small, non-domesticated local animals. In contrast, MU1 had a greater amount of large domesticated animals, specifically sheep and cows. Interestingly, MU1 also had higher cuts of domesticated meat. However, the animal bones in MU5 revealed that they were primarily in the “mediocre” to “lower” cuts of domesticated meat. These data suggest that residents in the apartments had healthier diets, better access to superior cuts of meat, and more reliable access to domesticated foods than other Native individuals that occupied the residential space of *’Amuwu*.

All these lines of evidence suggest that the residents who lived in the adobe apartments had higher statuses than other Chumash individuals at the mission. Panich et al. (2014:475-478) identified a similar pattern at Mission Santa Clara de Asís. The Ohlone who lived in the barracks had preferential access to certain goods than those who lived in their traditional houses. These findings combined with research at *ʼAmuwu* exemplify how status was not dependent on whether Native peoples practiced more "Native" or more "Spanish" lifeways, but rather these distinctions crosscut traditional and colonial realms in the creation of new social identities.

Distinctions within the Adobe Apartments

Before describing distinctions among the Native residents within the Chumash Family Apartments, it is imperative to contextualize previous interpretive dilemmas, particularly concerning the ethnic affiliations previously assigned to the occupants of rooms 3 and 4 in the Deetz excavation area. As discussed in chapters III and IV, these rooms are distinct from the others in the apartments. They feature whitewashed walls, a superimposed plaster floor, and a cache of affluent ceramic and glass artifacts that date to the late 1820s, in addition to three whole *comales*. Deetz (1963:183, 189) proposes that the lack of "Native" artifacts in the rooms, coupled with the unique set of architectural features, supports the idea that a person of European ancestry lived there, which he proposed may have been a soldier. Costello (1990:275) later suggested a Hispanic nurse may have occupied these rooms due to the apartment's associated infirmary building that adjoins the southern portion of the building.

However, since the founding of the Spanish missions in Alta California, great efforts were made to create spatial and social distance between mission laborers and peoples of

Spanish descent. In typical mission plans, as it was at Mission La Purísima, the Native rancheria was located away from where the padres' quarters and the area where the small cadre of soldiers and their families lived. Presidios, where the military force resided, were in separate locations altogether. A single female nurse who intended to the sick seems unlikely to have resided among the residents in the Native apartments. Indeed, some prominent Chumash individuals who lived in the apartment complex are noted as "*enfermeros*" or male nurses, in mission records at Mission La Purísima Concepción (Farris and Johnson 1999:9-20). They may have treated the sick in the associated infirmary. Finally, remanences of pre-colonial local traditions occur within these rooms. The occupants constructed and stored baskets, consumed shell beads, and used soapstone for prepping and cooking food, suggesting some sense of shared culture with the rest of the Native community in the apartments.

Rather than suggesting ethnic differences to the occupants of these rooms based upon the presence of more European artifacts found within them, the material variability may instead represent another axis of social differentiation, such as status. For example, residents of the Chumash Family Apartments held social rankings that distinguished individuals and families (Farris and Johnson 1999). Some *interpretes* aided the priest in preaching to Native speakers, and *sacristans* held charge of the sacristy connected to the church. There was also the principal office of *alcalde*. *Alcaldes* were chief administrators for the missionaries and also represented the interests of the Native community (Haas 2014:36, Hackel 1997; Lightfoot 1995:18). Based on the distinct artifact assemblage combined with the emulative character of these rooms, all within the Native neighborhood at the Mission, it is likely a family of Native *alcaldes* lived in rooms 3 and 4.

An *alcalde* had many daily tasks, including allocating the mission's food resources, organizing community labor, handling local land deals, and running day-to-day mission activities (Haas 1995; Hackel 1997: 364; Lightfoot 2005:104-105). They were known to wear distinctive clothing, carry sticks, ride on horseback, and occupy special housing (Haas 1995; Hackel 1997). Their title gave them a higher level of authority and privilege in the mission, which provided autonomy not only for themselves but for the Native communities they served. They were the head mediators between the wishes of the Native community and the Spanish government and Franciscans.

One significant aspect of rooms 3-7 was that they had whitewashed walls, which have only been identified in other areas of the church and Padre's quarters (Hageman and Ewing 1991) but have never found in the Chumash Family apartments. These whitewashed walls may symbolize an affiliation of the Native resident to a hierarchical order within the mission. In fact, a similar find was identified by Robert Hoover (1977:264) at Mission San Antonio where only one room within the Native adobe apartments had a distinct floor. It was tiled with several geometric designs etched into them. Hoover suggested that the individual who lived within them held a higher status position and was an *alcalde*. The same may hold true for rooms 3 and 4 here.

Historical records shed more light on the actual people that may have lived in these rooms. Based on archaeological and historical accounts, the renovation event that led to the capped floor and the plastered walls in rooms 3 and 4 happened between AD 1816 and 1817. According to mission records, this was likely due to a new *alcalde* that transitioned to the title in AD 1816. Farris and Johnson (1999:14-15) note that Agustín Nipucal was the first alcalde noted on record at the start of the mission in AD 1813. After his passing (only a year later), José Miguel Chionio was recorded in mission documents as an alcalde in AD 1816. The renovation event may have occurred because of a new *alcalde* occupying the room.

As Deetz suggested, perhaps the person who occupied the room was of a different ethnicity. However, as this dissertation demonstrates, the same types of local and nonlocal artifacts found in rooms 3 and 4 are also found throughout the Chumash Family Apartments. At least 110 (MNI) different types of imported tableware from Mexico, China, and England were fashioned into plates, platters, and bowls. As many as 31 vessels were comprised of glass containers that could hold liquor, wine, or water. There were also at least 20 *comales* in the collections. Other locally produced artifacts used in the Chumash technological toolkit, such as flaked stone, asphaltum, and local groundstone, excavated throughout the Native adobe structures were also recovered from rooms 3 and 4. The person or family that lived in them continued to practice storing water in asphaltum-lined basketry bottles, utilizing flaked stone tools for hunting purposes, and primarily cooking with soapstone.

Domestic foodways provide another ideal arena to investigate the ethnic identity of the person(s) who lived in rooms 3 and 4. Features such as hearths can provide insight into the behind-the-scenes food preparation, cooking, and consumption techniques unconsciously manifested through a community's shared cultural traits (Bardolph 2016). Interestingly, a large hearth was found on the uppermost floor in room 4. It was circular, approximately 6 feet in diameter, and comprised of compacted ash (Deetz 1963:182). Similar hearths and associated food debris appear throughout the Native apartments. Deetz noted numerous hearths in the apartments' “floor-to-floor” level and other rooms on the uppermost floor. Hearths were also found in nearly every room in the northern extension of the Chumash Family Apartments (Gabel 1952). The practice of cooking food inside the home was not a typical Spanish dining custom. Instead, settlers cooked food in outdoor firepits or a distinct segregated space known as the *cocina* or kitchen (Smith-Linter 2007). Thus, the hearth in room 4 suggests a shared food consumption practice that links the individual or family who lived there with the rest of the Native community on a deeper and more intrinsic level, likely tied to a similar ethnic identity.

The individual and their family who lived there clearly participated in the same types of practices as the rest of the Native community. Based on these data, it is difficult to argue for an individual occupying a different ethnic identity. Differences based on status offer a more realistic interpretation. Status is a social determinant that cuts across ethnicity. Like other identity categories, it is constantly negotiated, conditional, and subject to change in particular historical situations (Smith 2014; Babić 2005). It plays a significant role in determining how people are socially organized.

Archaeologically, the most significant aspect of rooms 3 and 4 is not only the glass, ceramic, and soapstone cache but also the whitewashed walls and plaster floor. The lime coating on the adobe walls' interior has only been identified in two other areas at Mission La Purísima Concepción: the church and the padre's quarters (Hageman and Ewing 1991:95-96). Thus, the rooms themselves symbolize the dualistic role of the individual who lived there, as spatially situated in the Native rancheria but sharing physical attributes only identified with the missionaries and ecclesiastical mission components. Moreover, rooms three and four are the most centrally located within the mission's layout. They are spatially closer to the heart of mission operations, granting convenient access to the church, agricultural fields, workshops, Infirmary, and *monjerio* (dwellings for unmarried women). The proximity would have been essential to an individual who not only managing the Native community but also had a fundamental role in all the mission's operations.

These distinctions of status have been recorded in mission and historic records. Native *alcaldes*, or mayors, are the epitome of the Spanish status hierarchy at the mission and the most likely person to have occupied these rooms. They speak to the complexities of Native hierarchies at the mission, attesting to the entangled social identities embedded into Spanish social systems while at the same time remaining ethnically tied to Native lifeways.

ASSESSING THE WANING SPANISH FRONTIER

Distinct contexts in the Deetz and Gable collections make it possible to track diachronic continuity, change, and cultural transformation over time. Comparisons of artifacts in the floor-to-floor (AD 1813-1816), floor (AD 1817-1832), and the northern extension of the building (AD 1822) illuminate Native strategies and responses to broader socio-political shifts in colonial administration policies. This includes differential access to local and global goods, more emphasis on diversified labor practices later in time, and elimination of the Spanish hierarchical system to a leveling of social statuses during the later Mexican period. The Chumash Revolt of 1824 may have been sparked as a result of the tumultuous period of transition to Mexican independence. These changes and continuities reflect both a broader shift in colonial policies and at the same time attest to the persistence of indigenous communities throughout the later end of the mission system. They speak to the uncertain trajectory of community formation that is unplanned, innovative, and, all the while, connected to deeper indigenous roots.

Trade networks

Multiple cultural materials indicate significant shifts in trade networks from the Spanish to the Mexican periods. At Mission La Purísima Concepción, material evidence reveals greater access to a wide variety of foreign goods later in time. Mexican imports such as Majolica and lead-glazed ceramics are statistically less in later assemblages. However, there are more British whiteware and transferware dishes and Chinese porcelain soup bowls and platters. There is also more diversity among the glass vessels. The glass comes in various shapes and sizes and served different functions, such as holding liquor and wine (e.g., cups and wine glasses) for everyday household uses and storing medicinal and other miscellaneous contents. Trading shifts at the local level materialized in distinct ways in the archaeological record as well. One significant discovery within the lithic assemblage was the greater diversity of flaked stone sources in the mission's latest component than contexts in earlier components.

Historical records illuminate the reasons behind both local and global trading shifts following the takeover of the Mexican government in AD 1821. At this time, Mexico gained full independence from Spain. As a result, there were new philosophies on governing the mission and the Native communities who resided within them. Under Mexican rule, one governmental policy was to move away from corporate privilege toward privatization (Jackson and Castillo 1995:88). This shift was enacted legislatively in the governing of the mission’s economy. For example, the Spanish system implemented government-controlled trade with access to only a few seaports, such as San Blas in Mexico. However, the Mexican government emphasized merchant-to-merchant trade, leading to more private ships engaging in commerce off California's coast (Dietler et al. 2015: Greenwood 1989:453; Farris 2013).

These changes coincided with technological advancements in England. Ceramic whiteware and transferware dishes were produced more quickly and cheaply than earlier varieties (e.g., ironstone and creamware), which is also why these particular types of ceramics are more visible in the archaeological record at Mission La Purísima Concepción and other California missions later in time (see also Farris 2013).

The Mexican government's relaxation of trade affected access to local resources as well. The flaked stone tools in the earliest building in the Chumash residential zone (Building C) had statistically more diversity in regard to the presence and varieties of Monterey and Franciscan chert. The greater diversity and variety in lithic sources during the Mexican period demonstrates more movement across the colonial landscape later in time. Paul Farnsworth's (1992) pioneering study at Mission Soledad identified similar patterns where the latest assemblages—those occurring in AD 1822—showed more evidence of continuity. He interprets this as a direct result of Mexican California's socio-economic changes since missionaries did not focus on attracting and controlling California Indians as actively as before. At Mission Santa Clara de Asís, Panich et al. (2018) also found that later features had a greater mixture of shell beads and different varieties of local and imported ceramics than the earlier periods, suggesting that Native social networks were expanding later in time. Farnsworth's and Panich and colleagues' findings resonate here: Native American responses to changing colonial strategies led to a resurrection of traditional activities. Local resources became more accessible following the waning Spanish frontier. This shift was likely an indirect result of Mexican policy of expanding trading across the globe and less restriction placed on Mission Indians as they were incorporated into Mexican society.

From corporate to individualized labor

The policy to emphasize privatization over commercial privilege in trading systems also appears with shifts in labor practices. There is a statistically more diverse metal tool assemblage in the latest context at Mission La Purísima Concepción than contexts with earlier components. There is a higher ratio of tools associated with carpentry and livery in the Mexican period than there are tools associated with agriculture, which appear more frequently during the Spanish period. The smaller, hand-held tools (e.g., scissors, hammers, and knives) represent a wide range of activities likely used in the production of hide-and-tallow, accessories, clothing, and other metal and leather goods used for ranching.

Historical accounts support these archaeological interpretations and further illuminate the economic strategies and daily practices that coincide with changing colonial strategies from the Spanish to the Mexican period. In the beginning, the missions sustained themselves through agricultural production to cover colonization costs by reducing expenses of food supply (Jackson and Castillo 1995:15). In reality, there was still support from imperial financing, with at least two-thirds of California's income deriving from New Spain and the remaining one-third coming from Pacific Rim trade (Duggan 2016:25). Nonetheless, agricultural production was a backbone in the early mission economy. By AD 1805, the missions' agricultural production reached new heights. According to David Hornbeck (1989), the increase in cultivating wheat and other staple crops was a strategic shift away from attracting and converting Native Californians to concentrating on missions as an economic venture. During these initial years, agricultural tools were ordered from New Spain to help clear the land, dig irrigations ditches, and cultivate seeds (Duggan 2016:40).

Between AD 1820 and 1830, another transformation occurred in the commercial development of California's missions. Costello's (1989) investigation of wheat yields illustrates that agricultural production sharply declined, while livestock holdings increased. One of the reasons for this shift was the beginning of the rancho's economic focus (Silliman 2004). The hide-and-tallow trade could not compete with large-scale commercial agriculture. However, after AD 1821, as the new Mexican government legitimized foreign trade, there was higher profitability within the hide-and-tallow trade market (Greenwood 1989). Simultaneously, a broader range of tools suggests more diversified tasks used to produce clothing, shoes, and gun parts later in the mission's history.

Under Mexican doctrine, specialized trades were a strategy to move away from government-sanctioned labor while also promoting economic development. These new policies additionally pushed to incorporate Native Americans into Mexican society (Jackson and Castillo 1995:88). However, mission Indians did not have *more* freedom later in time. Duggan (2016) argues that labor increased in California's missions after AD 1810 due to imperial financing termination. As a result, Native laborers were responsible for more labor-intensive work, such as supplying soldiers with goods or producing crafts for the hide-and-tallow trade market. This is why increased tensions between California Indians and colonists spiked after AD 1810 (Duggan 2016) and may further explain the Chumash Revolt in AD 1824. The discovery of a musket ball during the 2019 archaeological investigation might be linked with the Chumash Revolt, perhaps used in battle or collected by a resident after the battle. It speaks to these rising tensions as new government tactics during the Mexican period led to higher labor productivity with more diversified tasks among Mission Indians.

Leveling of social status

Mission La Purísima was constructed during a tumultuous time in Alta California's history. The Mexican Revolution had just begun, and new social and economic policies were taking shape. These broader social events may explain why the mission is unlike other mission plans in the Chumash area. Typically, California missions include the residence, workshops, and a church built around a primary central quadrangle. The quadrangle was a controlled space where the padres could supervise mission laborers. It provided a way to easily monitor production activities and other daily work. Mission La Purísima Concepción, however, has no quadrangle. Instead, it has an open design with two linear buildings on the mission's eastern and western portion. Hageman and Ewing (1991:38) explain that this formation follows a "community plan." The decision to not enclosed the plaza may directly result from social changes during the Mexican Revolution. For example, the original inception of the quadrangle was for defensive purposes in case of an attack, illustrating the wariness of Spanish colonizers toward indigenous Californians during the initial phases of the Mission period. However, the fundamental alteration in architectural practices from a quadrangle to a linear "community plan" may have been a direct result of shifting attitudes toward Native peoples as they gained more rights and were seen as equals under new Mexican doctrines. The transformation in spatial practices may have been linked with an evening out of social statuses among the Native community during the Mexican period.

Indeed, archaeological evidence reveals a leveling of Spanish hierarchies and access to greater positions of privilege in the mission. The discovery of a cache in the Native Family Apartments sheds light on this issue. The cache is comprised of at least five whole wine bottles, three whole liquor bottles, three whole *comales*. It was found in a distinct set of rooms that had whitewashed walls and a second floor. As has been previously discussed, these features are unlike the 36 other rooms that make up the Chumash Family Apartments. The glass bottles and ceramic tablewares all date to between AD 1826-1830; however other artifacts found under the second plaster floor, which made a unique floor-to-floor stratigraphic profile, are much earlier than the cache itself. The person(s) who lived in these rooms intentionally buried the prestigious objects and carefully patched the floor after they were stowed away. The floor must have been re-plastered sometime after AD 1826-1830 because Deetz (1963:182) found an in-tact plaster floor during his excavations. It is unlikely that the cache happened much after AD 1830 at the end of the mission's operation. Compared to the other apartment residents, the occupants held some special status. The individual who occupied these rooms was likely an *alcalde* who oversaw the Native community and held close ties to the Mission's Spanish padres.

Why would the elite Chumash who occupied these rooms deliberately hide valuable items under the floor in their apartment? How does this cache relate to the broader social contexts of the Native-lived experience at the Mission over time? To answer these questions, it is essential to compare the different social strategies of the Spanish and Mexican governmental system. Under the Spanish administration, a select group of Native peoples who accepted colonial lifeways could have elevated their social identities (Lightfoot 2005:68; Haas 1995:30; Voss 2008:101– 102). In this privileged class, Native peoples could gain higher-status occupations, receive more rights and responsibilities, and have greater access to prestigious goods (Haas 2014; Hackel 2005; Lightfoot 2005; Voss 2008). They were the ones who lived in the adobe apartments (Farris and Johnson 1999), while the rest of the community lived in their tule-thatched houses.

During the Mexican period, however, all Native Americans were given more rights and responsibilities. This idea was manifested legislatively in two ways. First, the “Plan of Iguala” considered Native Americans living under Mexico to be *nuevas ciudadanos* (new citizens)—a phrase frequently encountered in historical texts after AD 1821 (Farris and Johnson 1999). Under this new Mexican doctrine, indigenous peoples were social equals and could apply for employment, housing, or even land ownership. Second, the support of the Governor, Jose Maria Echeandía, to free Indians from missionary rule in the “Proclamation of Emancipation” highlights these new social conditions under which indigenous peoples could have gained greater freedom and more rights (Johnson 1993; Farris and Johnson 1999). I argue that an *alcalde*, who symbolizes the epitome of an individual with heightened social status during the earlier Spanish period, would feel the pressure to hide their status during this time of social upheaval. Even if the title of “*alcalde*” remained the same from the Spanish to Mexican period and people knew who they were, their roles likely changed in this transition to a position more like a community leader, elder, or “captains.”

The building of ten additional apartment family units, represented by Building C in the Chumash Family Apartments, in AD 1823, suggests that more laborers at Mission La Purísima Concepción were given equal statuses to those who had previously worked their way up the Spanish hierarchal system. The addition of adobe buildings during the Mexican period has been noted in other missions as well. Farris (1991) believed a connection between the emerging images of the mission residents as “new citizens” and the spate of construction in the early AD 1820s. In AD 1822, ten new apartments were completed at Mission Santa Cruz. In AD 1824, twenty units were built at Mission San Juan Bautista (Farris 1991:5). The addition of new buildings at Mission La Purísima Concepción and these other missions may have been a part of a more extensive social process during Mexican rule, as Native Californians gained more status and citizenship.

GENDER: A NUANCED PERSPECTIVE

Among the Chumash, ethnographic and historical accounts portray women as primarily linked to the prepping and cooking of food for the household (Hollimon 1987; Gamble 2008). However, during the Historic period, male cooks were recorded in mission records. For example, at Mission La Purísima, a "*cocinero*" or male cook was noted as a resident who lived within the Chumash Family Apartments (Farris and Johnson 1999:10). Archaeological investigations have yielded no large cooking areas or *cocinas* within the Native apartments to suggest a single cook serviced the Native community. Instead, central hearths have been found in individual Native apartments (Deetz 1963; Gabel 1952). The large amounts of charcoal and charred remains uncovered inside AU1, AU1A, AUB during the 2019 archaeological field season further bolsters the interpretation of cooking food inside individual rooms. Based on these data, it is likely that the male cook noted in the mission records serviced a priest or other Spanish officials, while women continued to maintain their primary role in preparing and cooking food for the nuclear family.

Deetz (1963, 1978) suggested that women's activities at Mission La Purísima Concepción were continuous from the pre-colonial past onward due to the large quantity of groundstone in the apartments (Deetz 1963:180-182). These interpretations rely on groundstone fashioned into the same forms and used for the same purposes as in the pre-colonial past. However, when looking more closely at the groundstone assemblages, the industry undergoes significant change—and so do women's activities. While locally produced pestles and mortars symbolize connections to ancestral ways of preparing food, imported groundstone fashioned into two-handed Mexican manos and metates demonstrate a change in food preparation practices. These activities brought about different practices for processing foods and highlighted more domesticated wheat or corn consumption. The plethora of *comales* with protruding lips and handles, fashioned after typical Mexican *comales*, confirms the importance of domesticated plants and an emphasis on tortilla consumption.

Elizabeth Brumfiel's (1991) study identified similar shifts in Mesoamerica, as women's labor changed from prepping liquid to solid-based foodstuffs. She explains that the preparing of tortillas was particularly labor-intensive for women, beginning with the time needed in grinding the corn, making the base, and finally grilling the tortilla. Feeding a family would take approximately twelve hours a day alone to prepare and cook (Brumfiel 1991:237-238). At Mission La Purísima Concepción, there are over three times the amount of *comales* than bowls or ollas, suggesting that Native women spent more time preparing solid-based foodstuffs. Brumfiel (1991:261) also notes that due to their transportable nature, the adoption of tortillas in Mesoamerica allowed women and men to work further away from home. In ranching and agricultural/ranching based economies, such as mission communities, everyday activities such as plowing the field or looking after the cattle required men to stay away from home for an extended period.

Women have also been ethnographically linked to weaving and the manufacturing of baskets (Brown 2014, 2016; Brown et al. 2018; Craig 1966; Gamble 2008; Hollimon 1987). Like the groundstone industry, the presence of asphaltum-lined basketry water bottles and tarring pebbles highlight continuity in basket production. Other historic baskets that survived in museums worldwide show more complex basketweaving traditions that crosscut change and continuity categories. For example, Chumash women at Mission San Buenaventura were commissioned to weave baskets into Spanish coins, Padre's hats, and Spanish-style or Chinese trinket boxes (Timbrook 2014; Shanks 2010). Although some historic baskets were made into new forms, they still maintained traditional materials and design elements, illustrating that women weavers continued to teach one another in making new types of baskets that remained indigenous innovations (Brown et al., 2018).

Men have been ethnographically linked to hunting wild animals, the butchering of food, and fishing (Brown 2016; Gamble 1983, 2008). Due to the lack of flaked stone tools at Mission La Purísima compared to the outlying Chumash village of *Soxtonokmu'*, Deetz suggested that hunting was relegated to a minor activity. He used this evidence to suggest that men were more enculturated into the Spanish mission system than women. However, when looking more closely at the flaked stone tools and the faunal (vertebrates), traditional male roles were experienced differently among the Chumash community at the Mission. For example, a diachronic approach of lithic assemblages reveals that hunting, and other activities with which flaked stone was utilized, remained relatively consistent from the Spanish period to the Mexican period. Furthermore, there are statistically more wild-caught animals within the tule-thatched houses than domesticated animals. These animals were likely hunted using traditional methods, e.g., a bow and arrow. There was also more flaked stone in the tule-thatched houses, suggesting that differences in the chipped stone tools have more to do with status differentiation in the community dynamics and the mission than it does with a loss of traditional male activities. However, this suggestion does require more archaeological excavation in the northern extension of the rancheria to test this hypothesis.

In conclusion, an analysis of gendered activities illustrates that both men's and women's roles continue and change in the mission. While they are rearticulated in traditional indigenous ways, their practices are a part of making new communities that are integrated into colonial structures, access to foreign goods, and new ways of living. At the most advanced level, the continuation of basketweaving and hunting speaks to the passing of tradition through intimate learning processes and 'communities of practice' that continued throughout the later Mission period. These practices formed by the men and women who did them are simultaneously transformed through new and old overlapping traditions distinct from pre-colonial traditions and outside the mission.

VIII. CONCLUSION

In this dissertation, I identified differences in the patterning of material culture in the Native residential zone at *ʼAmuwu* and within distinct chronological contexts. The way material culture was used suggests a transformation in the social system of Chumash lifeways and identity-based practices linking the Native community to both Spanish and Mexican colonialism. At the same time, evidence for persistence in the mission is ever-present. There is a continuation of traditional practices and links to ancestral identities that span thousands of years in the past and perpetuate into the present day. In the following, I argue that these patterns reveal arguments for and limitations of archaeological approaches that fall under schools of “continuity” and “transformation.”

CULTURAL CONTINUITY

Argument for continuity

The artifact record at *ʼAmuwu* demonstrates that local practices continue throughout the Spanish and Mexican Period. Even though some practices underwent a change, they were rearticulated through indigenous meanings and values. The Native community of *ʼAmuwu* remained embedded in the cultural knowledge of the landscape by continuing to access ancestral gathering locations for resources such as soapstone for cooking, asphaltum for basketry construction, chert for utilitarian purposes, and everyday subsistence pursuits. Evidence for shell bead manufacturing in the mission also sustained social relationships within a broader indigenous network that included groups outside the Chumash homeland and other missions. Most significantly, the Chumash persevere today. They have endured hundreds of years of settler colonialism. Living descendants are linked to the mission's physical space and the cultural landscape of their ancestors.

Limitations of continuity studies

There is persistence inside and outside the mission and diachronically throughout the Spanish and Mexican Period. However, there is also something extraordinary and transformative happening explicitly among the Native community of *'Amuwu*. This transformation is entangled with Spanish and Mexican colonialism—and it is not present at other Mission period sites in the Santa Ynez Valley and Purisimeño territory. Schools of continuity do not allow us to address the stark *contrasts* of continuity and change in Native-lived experiences synchronously across the landscape and the radically different roles of political power and broader governmental policies in identity-making processes when looking at indigenous experiences comparatively. There are significant and real spatial and temporal discontinuities in the material record that beg us to ask *why* there were substantial changes, *how* they were maintained, and *what* brought about these changes in the first place.

SOCIAL TRANSFORMATION

Arguments for transformation

When the community of *'Amuwu* formed at Mission La Purísima Concepción, they brought a distinct organizational strategy that mapped on to Spanish understandings of social hierarchies. I identified evidence for a Native *alcalde* in the Chumash adobe apartments who held a higher ranked position in the Spanish social system. There were also distinctions between the occupants of the adobe apartments who had achieved statuses compared to those who lived in the northern section of the rancheria. The diachronic analysis of artifacts in contexts that post-date AD 1821 also speaks to a shift in the internal structure of the Native community over time. There was an evening out of social statuses and a shift in local and global trade networks under Mexican colonialism. A contextual boundary is thus defined by the Chumash community that formed inside the mission compared to outside the mission.

These distinctive practices and emergent social processes result from forming a new social identity at Mission La Purísima Concepción. This change in the social make-up of Native life entangled with broader colonial structures began its trajectory from the first time the community formed at Mission La Purísima Vieja, in the village known as *Laxshakupi*. It continued when they formed a new community-identity known as *'Amuwu* at Mission La Purísima Concepción. It evolved into many other types of communities in the post-Mission period. In 1835, the Purisimeño community that lived there was recorded as *Pueblo de los Berros* (Farris and Johnsons 1999:3). Some of the Mission residents left to form the post-secularization community of *Saqsiyol* located in present-day Los Alamos (Johnson 1993). It plays out within the current political landscape, including multiple and divergent Chumash groups and one federally recognized band. Indeed, transformation has been a consistent part of Chumash identity and history.

Limitations of transformation studies

What type of identity transformation is occurring in the mission? Is it transculturation, ethnogenesis, *mestizaje*, bricolage, or something else? As discussed throughout this dissertation, there are multiple categories of identity that change at Mission La Purísima Concepción, specifically related to class and gender. Yet, these categories of identity exist in distinct arenas within a broader re-organizational strategy that represents the emergence of a new way of doing things, a new social entity that had developed at the mission. Native identities became enmeshed with Spanish and Mexican ones. One of the most applicable frameworks within the scope of broad, community-level transformation studies is that of ethnogenesis. Scholars who study ethnicity have overcome essentialist perspectives that see it as static and unchanging. Like other identities, ethnicity is fluid and negotiable, and a part of a process that is culturally constructed. However, Chumash descendants share the same ethnic heritage as their ancestors at Mission La Purísima, and deeper into the past. Our words matter and they can directly contest living descendant's notions of identity today. One of the limits of transformation in mission studies is the lack of conversations beyond ethnic identity transformation that help move the study of Native identity construction under colonialism forward, while also considering the perspectives of local indigenous groups.

BECOMING *'AMUWU*

Mission La Purísima Concepción provided an excellent case study to examine theories of *continuity* and *transformation*. A fuller and more richly complex view of colonialism in the early and mid-nineteenth century emerges, although much more ambiguous and nuanced. By tacking back and forth between different methodological scales, conducting a fine-grained analysis of local and non-local material culture, and considering the theoretical frameworks that separate these schools of thought—spatial and temporal boundaries, agency and structure, the *colonizer* and *colonized* side of the equation—it was possible to see how schools of continuity can inform processes of transformation, and vice-versa. A serious consideration of indigenous experiences in the mission system demands this thorough investigation and interpretation of archaeological data. What emerges is a multi-scalar understanding of identity in this unique historical and situational context. The becoming of *'Amuwu* was tied to the creation of new identities linked to the construction of a new place situated within a long history of internal understandings of ancestral land and community. From here, we have a better grasp on identity issues in mission contexts in California that can help move forward conversations of transformation and persistence that continue to resonate in the present day.

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Appendix Ia: Soapstone in Deetz Collection

Cat #	Feature	Room	Context	Description	Cnt	Wt
147-2396	6	6	Floor	Arrow shaft straightener	1	338.00
147-1952	6	2	Floor	Arrow shaft straightener	1	642.00
147-1924	6	2	Fill	bowl fragment	1	123.00
155-285	6	3	floor to floor	bowl fragment	1	60.00
155-191	6	4	floor to floor	bowl fragment	1	322.00
155-207	6	4	floor to floor	bowl fragment	1	268.00
155-207	6	4	floor to floor	bowl fragment	1	145.00
155-207	6	4	floor to floor	bowl fragment	1	147.00
155-207	6	4	floor to floor	bowl fragment	1	260.00
155-207	6	4	floor to floor	bowl fragment	1	90.00
155-207	6	4	floor to floor	bowl fragment	1	139.00
155-207	6	4	floor to floor	bowl fragment	1	171.00
147-2880	6	4	floor-to-floor	bowl fragment	1	390.00
155-230	6	6	pit 2, south of room 7	bowl fragment	1	213.00
155-284	6	3	floor to floor	bowl fragment, burnt	1	422.00
155-251	6	3	floor to floor	bowl fragment, burnt	1	82.00
155-252	6	3	floor to floor	bowl fragment, burnt	1	230.00
155-1214	6	2	Fill	bowl rim	1	365.00
155-123	6	2	Floor	bowl rim	1	146.00
155-207	6	4	floor to floor	bowl rim	1	521.00
155-207	6	4	floor to floor	bowl rim	1	320.00
155-191	6	4	floor to floor	bowl rim	1	90.00
155-207	6	4	floor to floor	bowl rim	1	135.00

147-2625	6	4	floor-to-floor	bowl rim	1	88.00
147-2269	6	6	Floor	bowl rim	1	24.00
147-2268	6	6	Floor	bowl rim	1	30.00
147-2350	6	6	surface to tile	bowl rim	1	37.00
147-1981	6	6	Floor	bowl rim (1)	0	1021.00
147-2141	6	2	Fill	bowl rim (1)	1	72.00
147-1752	6	6	Fill	bowl rim (2)	0	907.50
147-2140 & 2141	6	2	Fill	bowl rim (2)	1	50.00
147-1628	Unit 21	2	Fill	comale fragment	1	230.00
147-1630	Unit 21	2	Fill	comale fragment	1	37.00
147-1631	Unit 21	2	Fill	comale fragment	1	937.00
147-1920	6	2	Fill	comale fragment	1	225.00
147-1921	6	2	Fill	comale fragment	1	170.00
147-1922	6	2	Fill	comale fragment	1	299.00
147-1923	6	2	Fill	comale fragment	1	402.00
147-1925	6	2	Fill	comale fragment	1	525.00
147-1629	Unit 21	2	Fill	comale fragment	1	135.00
155-235	6	2	floor to floor	comale fragment	1	361.00
147-1890	6	3	Fill	comale fragment	1	62.00
147-1893	6	3	Fill	comale fragment	1	209.00
155-250	6	3	floor to floor	comale fragment	1	60.00
147-1681	6	4	floor	comale fragment	1	73.00
147-1684	6	4	floor	comale fragment	1	37.00
155-191	6	4	floor to floor	comale fragment	1	140.00
155-207	6	4	floor to floor	comale fragment	1	254.00
155-207	6	4	floor to floor	comale fragment	1	208.00
155-207	6	4	floor to floor	comale fragment	1	199.00

155-207	6	4	floor to floor	comale fragment	1	118.00
155-207	6	4	floor to floor	comale fragment	1	414.00
155-380	6	4	floor to floor	comale fragment	1	138.00
155-381	6	4	floor to floor	comale fragment	1	118.00
147-2623	6	4	floor-to-floor	comale fragment	1	123.00
147-2624	6	4	floor-to-floor	comale fragment	1	44.00
2878	6	4	floor-to-floor	comale fragment	1	39.44
147-2159	6	5	Floor	comale fragment	1	180.00
147-1753	6	6	Fill	comale fragment	1	569.73
147-1754	6	6	Fill	comale fragment	1	208.00
147-1757	6	6	Fill	comale fragment	1	157.00
147-1761	6	6	Fill	comale fragment	1	15.00
147-1756	6	6	Fill	comale fragment	1	45.00
147-1759	6	6	Fill	comale fragment	1	308.00
147-1750	6	6	Fill	comale fragment	1	609.00
147-1755	6	6	Fill	comale fragment	1	212.00
147-2286	6	6	Floor	comale fragment	1	845.00
147-1980	6	6	Floor	comale fragment	1	982.00
147-1983	6	6	Floor	comale fragment	1	405.00
147-2259	6	6	Floor	comale fragment	1	670.00
147-2381	6	6	Floor	comale fragment	1	569.00
155-146	6	6	Floor 1- Floor 2	comale fragment	1	337.00
155-158	6	6	n/a	comale fragment	1	1089.00
155-1841	6	7	Fill	comale fragment	1	712.00

155-176	6	7	floor	comale fragment	1	520.00
147-2707	6	7	pedestaled artifacts	comale fragment	1	674.00
147-2708	6	7	pedestaled artifacts	comale fragment	1	539.00
147-2617	Feature 8	Room 5	n/a	comale fragment	1	1006.00
147 1264	Unit 21, Stratagraphic Cut 1		n/a	comale fragment	1	17.00
147-2369	Feature 9		n/a	comale fragment	1	57.00
147 1277	Unit 21, Stratagraphic Cut 1		n/a	comale fragment	1	236.00
147-2189	6	5	Floor 2	comale fragment, burnt	1	171.00
155-207	6	4	floor to floor	comale fragment, mostly whole	1	1297.00
155-207	6	4	floor to floor	comale whole	1	1689.00
155-207	6	4	floor to floor	comale whole	1	2045.00
155-117	6	1	Exterior of east wall	miscellaneous	1	6.80
147-1926	6	2	Fill	miscellaneous	1	42.00
147-1889	6	3	Fill	miscellaneous	1	38.00
155-106	6	3	Floor 1- Floor 2	miscellaneous	1	66.00
155-249	6	3	floor to floor	miscellaneous	1	4.40
147-2879	6	4	floor-to-floor	miscellaneous	1	26.00
155-317	6	5	feature 9	miscellaneous	1	158.00
147-2328	6	5	surface to tile	miscellaneous	1	67.00
147-1758	6	6	Fill	miscellaneous	1	3.00
147-1760	6	6	Fill	miscellaneous	1	12.00
147-2258	6	6	Floor	miscellaneous	1	6.32
147-2347	6	6	surface to tile	miscellaneous	1	28.00
147-2223	6	7	Fill	miscellaneous	1	10.00
147-2867	6	7	Fill	miscellaneous	1	3.90
147-2734	6	7	surface to tile	miscellaneous	1	40.00
155-1213	6	2	Fill	olla fragment	1	37.00
147-1982	6	6	Floor	olla fragment	1	585.00
147-2224	6	7	Fill	olla fragment	1	327.00
147-2733	6	7	Fill	olla fragment	1	63.00

147 1278	Unit 21, Stratagraphic Cut 1		n/a	olla fragment	1	379.00
147-2579	feature 9		n/a	olla fragment	1	125.00
147-2225	6	7	fill	olla fragment, burnt	1	523.20
155-1209	6	1	floor to floor	olla rim	1	398.00
147-1892	6	3	Fill	olla rim	1	76.00
147-2649	6	4	floor	olla rim	1	873.00
147-1714	6	3	Fill	olla rim (w/ Vs)	1	725.00
155-324	Feature 9			Olla with asphaltum	1	1535.00

Appendix Ib: Soapstone in Gabel collection.

Cat #	Object Name	Count	Weight
147-B-82.D	bowl frag, burnt	1	100
147-B-137.D	bowl frag, burnt	1	106.41
147-B-194	bowl frag, burnt	1	89.8
147-B-208	bowl frag, burnt	1	28.8
147-B-507	bowl frag, burnt	1	43.2
147-B-576	bowl frag, burnt	1	82.6
147-B-3051	bowl frag, burnt	1	67.4
147-B-63.D	bowl fragment	1	98
147-B-3.D	bowl fragment	1	133
147-B-7.D	bowl fragment	1	12.8
147-B-74.D1	bowl fragment	1	127
147-B-107.D	bowl fragment	1	178.1
147-B-132.D1	bowl fragment	1	60.5
147-B-276	bowl fragment	1	55.3
147-B-286	bowl fragment	1	25.5
147-B-489.D	bowl fragment	1	28
147-B-499	bowl fragment	1	21
147-B-572	bowl fragment	1	42
147-B-579	bowl fragment	1	73.7
147-B-655	bowl fragment	1	33.7
147-B-767	bowl fragment	1	190.1
147-B-839.D	bowl fragment	1	210
147-B-9.D1	bowl fragment	2	104
147-B-1003	bowl fragment	1	65.3
147-B-1309	bowl fragment	3	109.1
147-B-336	bowl fragment	1	124
147-B-1436	bowl fragment	1	220
147-B-1030	bowl fragment	2	103
147-B-1051	bowl fragment	2	270.9
147-B-620.D1	bowl fragment	3	272.1
147-B-768	bowl fragment	4	170.1
147-B-830	bowl fragment	4	623
147-B-882	bowl fragment	2	98.6
147-B-1120	bowl fragment	2	270.46
147-B-608.D1	bowl fragment	7	870
147-B-858	bowl fragment	3	340
147-B-995	bowl fragment	2	438
147-B-937	bowl fragment	5	420

147-B-846	bowl fragment	2	302.61
147-B-846	bowl rim	3	100
147-B-722	bowl rim	1	84
147-B-858	bowl rim	1	61.96
147-B-858	bowl rim	1	212.44
147-B-859	bowl rim	1	62
147-B-3052	bowl rim	1	18.5
147-B-995	bowl rim	1	64.7
147-B-1030	bowl rim	1	26.3
147-B-1051	bowl rim	1	53.6
147-B-1051	bowl rim	1	122.6
147-B-3.D	bowl rim	1	14.3
147-B-7.D	bowl rim	1	51.1
147-B-63.D	bowl rim	1	31
147-B-167.D	bowl rim	1	52.6
147-B-274	bowl rim	1	49
147-B-310	bowl rim	1	11.5
147-B-415	bowl rim	1	46
147-B-446	bowl rim	1	20.3
147-B-489.D	bowl rim	1	17.2
147-B-492	bowl rim	1	18.8
147-B-499	bowl rim	1	9.16
147-B-836	bowl rim	1	52.2
147-B-958	bowl rim	1	85.7
147-B-51.D1	comale fragment	1	38
147-B-81.D1	comale fragment	1	77
147-B-236	comale fragment	1	60
147-B-243	comale fragment	1	59
147-B-292	comale fragment	1	285.6
147-B-303	comale fragment	1	44.55
147-B-454	comale fragment	1	66.9
147-B-484	comale fragment	1	37
147-B-487	comale fragment	1	242
147-B-552	comale fragment	1	32
147-B-582	comale fragment	1	28.6
147-B-588	comale fragment	1	381
147-B-630.D1	comale fragment	1	386.2
147-B-898	comale fragment	1	29
147-B-903	comale fragment	1	156
147-B-1025	comale fragment	1	341

147-B-17.D	comale fragment	1	28.7
147-B-66.D1	comale fragment	1	157.1
147-B-75.D1	comale fragment	1	123.8
147-B-99.D	comale fragment	1	72
147-B-102.D	comale fragment	1	15.3
147-B-108.D	comale fragment	1	35.2
147-B-140.D	comale fragment	1	39.5
147-B-148.D	comale fragment	1	24.7
147-B-261	comale fragment	1	47.2
147-B-267	comale fragment	1	135
147-B-298.D	comale fragment	1	47.6
147-B-310	comale fragment	1	37.1
147-B-313.D	comale fragment	1	68.9
147-B-362.D	comale fragment	1	38.1
147-B-499	comale fragment	1	17
147-B-539	comale fragment	1	11
147-B-574	comale fragment	1	46
147-B-638	comale fragment	1	52.39
147-B-782.D	comale fragment	1	78.1
147-B-810	comale fragment	3	121
147-B-835	comale fragment	1	63.8
147-B-935.D	comale fragment	1	28.4
147-B-939	comale fragment	1	299.1
147-B-1093	comale fragment	2	246
147-B-1106	comale fragment	1	95
147-B-1106	comale fragment	1	163
147-B-1109.D1	comale fragment	1	113.21
147-B-1174.D	comale fragment	1	51
147-B-1882	comale fragment	1	61.2
147-B-146.D1	comale fragment	1	224
147-B-470.D1	comale fragment	1	243
147-B-1070	comale fragment	4	430
147-B-1436	comale fragment	1	85.4
147-B-1051	comale fragment	2	161.7
147-B-3.D	comale fragment	4	344
147-B-92.D	comale fragment	4	284
147-B-354	comale fragment	2	206.7
147-B-367.D	comale fragment	1	64.7
147-B-591	comale fragment	4	500.2
147-B-663	comale fragment	5	371

147-B-705	comale fragment	2	134.8
147-B-706	comale fragment	3	600.1
147-B-797	comale fragment	3	395
147-B-809	comale fragment	1	129
147-B-874	comale fragment	3	131.5
147-B-882	comale fragment	5	350
147-B-882	comale fragment	4	378
147-B-921	comale fragment	5	196
147-B-937	comale fragment	6	350
147-B-1106	comale fragment	2	88.66
147-B-1120	comale fragment	4	166
147-B-608.D1	comale fragment	6	475
147-B-722	comale fragment	4	298
147-B-735.D1	comale fragment	5	430
147-B-823	comale fragment	1	189
147-B-995	comale fragment	4	900
147-B-995	comale fragment	6	420
147-B-995	comale fragment	1	142
147-B-1030	comale fragment	2	305.9
147-B-1070	comale fragment	4	440
147-B-1142	comale fragment	4	868
147-B-1303	comale fragment	1	272
147-B-506	comale fragment	1	33
147-B-846	miscellaneous	12	426
147-B-958	miscellaneous	1	230.1
147-B-217	miscellaneous	1	223.97
147-B-608.D1	miscellaneous	22	420
147-B-722	miscellaneous	10	282
147-B-1030	miscellaneous	7	130.9
147-B-1070	miscellaneous	6	208.6
147-B-3.D	miscellaneous	7	64
147-B-39.D1	miscellaneous	1	1.2
147-B-45.D1	miscellaneous	1	24
147-B-50.D3	miscellaneous	1	11
147-B-100.D	miscellaneous	1	4.2
147-B-127.D	miscellaneous	1	6.6
147-B-131.D	miscellaneous	1	4.8
147-B-138.D1	miscellaneous	1	10.2
147-B-150.D	miscellaneous	1	1.2
147-B-247.D1	miscellaneous	1	12.5

147-B-320	miscellaneous	1	3.4
147-B-342	miscellaneous	1	37.9
147-B-351	miscellaneous	1	4.94
147-B-374.D	miscellaneous	1	22
147-B-452	miscellaneous	1	21
147-B-553.D	miscellaneous	1	9.1
147-B-580	miscellaneous	1	14
147-B-581.D	miscellaneous	3	32.4
147-B-664	miscellaneous	5	90
147-B-705	miscellaneous	8	135
147-B-771	miscellaneous	5	88.1
147-B-780	miscellaneous	2	25.2
147-B-799	miscellaneous	5	16.88
147-B-808	miscellaneous	7	79.8
147-B-836	miscellaneous	1	6.11
147-B-882	miscellaneous	4	39
147-B-921	miscellaneous	4	43.2
147-B-937	miscellaneous	7	102.8
147-B-1013	miscellaneous	1	13.4
147-B-1027	miscellaneous	2	212
147-B-1136	miscellaneous	2	1063
147-B-1143.D1	miscellaneous	1	21.4
147-B-1170	miscellaneous	1	9.9
147-B-1319	miscellaneous	4	72.3
147-B-1340	miscellaneous	1	4.3
147-B-1345	miscellaneous	5	11.3
147-B-1348	miscellaneous	1	34
147-B-1352	miscellaneous	1	56.3
147-B-3051	miscellaneous	8	37.44
147-B-858	miscellaneous	10	217
147-B-1334	miscellaneous	1	1.5
147-B-995	miscellaneous	5	490
147-B-20.B	olla fragment	1	2.8
147-B-3.D	olla fragment	1	18
147-B-14.D	olla fragment	1	13.6
147-B-238	olla fragment	1	8.2
147-B-363.D	olla fragment	1	15.1
147-B-446	olla fragment	1	7.52
147-B-811	olla fragment	1	27
147-B-958	olla fragment	1	3.5

147-B-1003	olla fragment	1	14.7
147-B-3051	olla fragment	2	20.4
147-B-722	olla fragment	1	105
147-B-529	olla fragment	2	49.9
147-B-705	olla fragment	3	87.1
147-B-882	olla fragment	3	136.1
147-B-3052	olla fragment	4	78.19
147-B-995	olla fragment	3	362
147-B-143.D	olla fragment, burnt	2	15.5
147-B-368	olla fragment, burnt	1	48.1
147-B-798	olla fragment, burnt	1	59
147-B-824	olla fragment, burnt	1	131
147-B-921	olla fragment, burnt	1	56.8
147-B-1319	olla rim	1	38.4
147-B-195	olla rim	1	299
147-B-1436	olla rim	1	143
147-B-995	olla rim	4	562
147-B-1051	olla rim	1	27.5
147-B-705	olla rim	1	25.8
147-B-707	olla rim	1	67
147-B-708	olla rim	1	22.9
147-B-1013	olla rim	2	119.2
147-B-1093	olla rim	2	36.5
147-B-608.D1	recycled pendant	1	96
147-B-637	arrow shaft straightener	1	74

Appendix IIa: Flaked stone in Deetz Collection.

Cat#	Feat	Rm	Context	Object Name	Description	Wt	Color	Flk type	Mat
147-1538	Excavation Unit 21, stratigraphic cut 1	1	Fill	flake	chert	0.5	Dark grey/ beige	ter	Monterey
155-342	6	1	fill	flake	chert	2	brown/ light brown	ter	Monterey
155-350	6	1	fill	flake	chert	1	Brown/ light brown	ter	Monterey
147-1905	6	1	fill	retouched flake	chert	0.7	Dark grey/ beige, worked	ter	Monterey
155-348	6	1	fill	core	chert	22	Grey/ white; part of chert core	prim	Monterey
155-355	6	1	fill	biface (possible spearpoint)	chert	4.2	Brown/ light brown	sec	Monterey
155-336	6	1	fill	scraper	chert	9.6	Brown/ light brown	ter	Monterey
155-349	6	1	fill	retouched flake tool	chert	5.7	red/ beige	sec	Monterey
147-1571	Excavation Unit 21, stratigraphic cut 1, no levels	1	Floor	flake	chert	9.8	Dark grey/ black	ter	Monterey
155-352	6	1	fill	hammerstone	volcanic hammerstone	46	black		Volcanic
147-1927	6	2	fill	core	chert	119	Dark grey/ White chert core	cortex	Monterey
155-265	6	2	Floor 1-Floor 2	core	chert	226	Grey/ white	core with cortex	Monterey

155-264	6	2	Floor 1-Floor 2	core	chert	262	Grey/ white	core with cortex	Monterey
147-2152.D	6	2	fill	flake	chert	3.1	light brown/ beige	sec	Monterey
147-1633	Excavation Unit 21, stratigraphic cut 1	2	fill	flake	chert	1.1	Grey/ black	ter	Monterey
147-2142	6	2	fill	retouched flake	chert	12.4	Dark grey/ beige	ter	Monterey
147-1713	6	3	fill	core	chert	20.8	beige	sec	Franciscan
147-1896	6	3	fill	core	chert	145	Dark grey/ White chert core	ter	Monterey
147-1819	6	3	fill	flake	chert	1	black	ter	Monterey
147-1851	6	3	floor	flake	chert	5.3	light brown/ beige	ter	Monterey
155-104	6	3	Floor 1-Floor 2	flake	chert	5.7	Dark brown/ light brown	sec	Monterey
155-289	6	3	Floor 1-Floor 2	flake	chert	8.83	Grey/ white flake	sec	Monterey
147-2858	6	3	floor to floor	flake	chert	6.7	grey/ White	prim	Monterey
155-103	6	3	Floor 1-Floor 2	retouched flake	chert	8	Dark brown/ light brown; cortex; utilized flake	sec	Monterey

155-286	6	3	Floor 1-Floor 2	hammerstone	volcanic hammerstone with battered edge	82	Dark grey		Volcanic
155-192	6	4	Floor 1-Floor 2	flake	chert	13	Grey/ white large chert flake.	sec	Monterey
147-2626	6	4	floor to floor	flake	chert	11	Dark grey-possibly utilized	ter	Monterey
155-197	6	4	floor to floor	flake	chert	9.3	light brown/ beige flake	sec	Monterey
147-1967	6	4	surface to tile	flake	chert	2.54	Beige/ red	ter	Monterey
147-1685	6	4	floor	core	quartz	17	quartz crystal	ter	Quartz
147-2039	6	5	fill	flake	chert	0.3	beige	ter	Franciscan
147-2209	6	5	floor 2	flake	chert	4.5	light brown	ter	Franciscan
147-1762	6	6	fill	flake	chert	17	light brown/ beige	sec	Monterey
147-1763	6	6	fill	flake	chert	2.72	Beige/ light grey; Primary	prim	Monterey
147-1987	6	6	floor	core	chert	405	Dark grey/ White chert core; cortex	sec	Monterey
147-2260	6	6	floor	flake	chert	31	light brown/ beige	ter	Monterey
147-2273	6	6	floor	flake	chert	3.6	Dark grey	ter	Monterey

147-2731	6	7	fill	flake	chert	3.9	Dark grey/ white	ter	Monterey
147-2732	6	7	fill	flake	chert	2	Dark brown/ beigh	sec	Monterey
147-2692	6	7	floor	core	chert	39	Dark grey/ white	ter	Monterey
147-2737	6	7	surface to tile	flake	chert	1.6	light brown/ beige	sec	Monterey
147-2578	6	Feature 9 (floor)		flake	chert	2.2	light brown/ beige	ter	Monterey
147-2125	6	general excavation		core	chert	17.8	Dark grey/ beige	ter	Monterey
147-2126	6	general excavation		flake	chert	9.9	Dark grey/ beige	ter	Monterey
147-2124	6	general excavation		flake	chert	7.1	Dark brown/ light brown	sec	Monterey
147-2127	6	General excavation		core	fine grained volcanic	45	flaked stone cobble	core	Volcanic
147-1265	Excavation Unit 21, stratigraphic cut 1			scraper	chert	11.4	Dark brown/ beige	sec	Monterey

Appendix IIb: Flaked stone in Gabel collection.

	Object Name	Count	Weight	Notes	Flake type	Raw Material
KB1	core	1	34.5	red	core	Franciscan
KB2	core	1	240	red/ grey	core	Monterey
KB3	core	1	249	light brown/ beige	core	Monterey
KB4	core	1	375	beige	core	Monterey
KB5	drill	1	4.17	red	drill	Franciscan
KB6	blade	1	10.38	red	primary	Franciscan
KB7	core	1	35.5	light brown/ beige	primary	Monterey
KB8	flake	1	1.7	red	primary	Franciscan
KB9	flake	1	8.7	brown	primary	Franciscan
KB10	flake	1	2.5	red	primary	Franciscan
KB11	flake	1	13.26	red	primary	Franciscan
KB12	flake	1	12.4	black	primary	Fused Shale
KB13	flake	1	23.5	Dark grey/ green	primary	Monterey
KB14	flake	1	16.38	grey	primary	Monterey
KB15	flake	1	3.82	black	primary	Monterey
KB16	flake	1	2.38	dark brown	primary	Monterey
KB17	flake	1	7.87	grey/beige	primary	Monterey
KB18	flake	1	4.3	red	primary	Monterey
KB19	flake	1	14.6	grey/brown	primary	Monterey
KB20	flake	1	13.28	black/ grey	primary	Monterey
KB21	flake	1	6.1	dark brown/ beige	primary	Monterey
KB22	scraper	1	61	light grey/beige	scraper	Monterey
KB23	flake	1	15.3	red/ grey	secondary	Franciscan
KB24	flake	1	33.3	red	secondary	Franciscan
KB25	flake	1	2.6	red	secondary	Franciscan
KB26	flake	1	5.81	white/ grey	secondary	Monterey
KB27	flake	1	16.71	green/ blue	secondary	Monterey
KB28	flake	1	4.86	grey/beige	secondary	Monterey
KB29	flake	1	2.61	black	secondary	Monterey
KB30	flake	1	17.5	light brown/ beige	secondary	Monterey
KB31	flake	1	35	orange/ beige	secondary	Monterey
KB32	flake	1	4.8	grey/ beige	secondary	Monterey
KB33	flake	1	6.5	orange/ grey	secondary	Monterey
KB34	flake	1	29	black	secondary	Monterey
KB35	utilized flake	1	13.89	brown	secondary	Monterey
KB36	blade	1	19	beige green	tertiary	Franciscan
KB37	flake	1	7.33	dark grey/ beige	tertiary	Monterey
KB38	flake	1	14.2	red	tertiary	Franciscan
KB39	flake	1	2	red	tertiary	Franciscan

KB40	flake	1	1	red	tertiary	Franciscan
KB41	flake	1	5.9	red	tertiary	Franciscan
KB42	flake	1	2.71	dark brown	tertiary	Franciscan
KB43	flake	1	11.7	dark brown	tertiary	Franciscan
KB44	flake	1	4	light blue/ green	tertiary	Franciscan
KB45	flake	1	4.99	brown/ green	tertiary	Franciscan
KB46	flake	1	6.65	orange/ yellow	tertiary	Franciscan
KB47	flake	1	1.5	grey	tertiary	Franciscan
KB48	flake	1	2.3	black	tertiary	Franciscan
KB49	flake	1	7.96	red/ grey	tertiary	Franciscan
KB50	flake	1	2.7	red	tertiary	Franciscan
KB51	flake	1	1.36	orange	tertiary	Franciscan
KB52	flake	1	12.36	black	tertiary	Fused Shale
KB53	flake	1	0.79	brown/ beige	tertiary	Monterey
KB54	flake	1	1.3	light brown/ beige	tertiary	Monterey
KB55	flake	1	1.16	black	tertiary	Monterey
KB56	flake	1	4.2	white/ grey	tertiary	Monterey
KB57	flake	1	2.88	dark brown/light brown	tertiary	Monterey
KB58	flake	1	0.33	dark brown/ red	tertiary	Monterey
KB59	flake	1	0.99	dark brown/ red	tertiary	Monterey
KB60	flake	1	0.75	dark brown/ red	tertiary	Monterey
KB61	flake	1	2.47	brown	tertiary	Monterey
KB62	flake	1	2.5	white/ grey	tertiary	Monterey
KB63	flake	1	0.67	grey/ green	tertiary	Monterey
KB64	flake	1	4.62	brown/ beige	tertiary	Monterey
KB65	flake	1	2.5	black	tertiary	Monterey
KB66	flake	1	2.2	dark grey	tertiary	Monterey
KB67	flake	1	4.7	dark grey	tertiary	Monterey
KB68	flake	1	6	grey/ beige	tertiary	Monterey
KB69	flake	1	2.2	grey	tertiary	Monterey
KB70	flake	1	1.3	grey/ brown	tertiary	Monterey
KB71	scraper	1	7	grey/ beige	tertiary	Monterey
KB72	utilized flake	1	21	red	tertiary	Franciscan
KB73	blade	1	34.7	white	tool	Monterey
KB74	hammerstone	1	162	Dark grey/ green	tool	Monterey
KB75	hammerstone	1	356	grey	tool	Monterey
KB76	biface	1	31	rose	tool	Quartz
KB83	biface	1	17.3	black	tool	Franciscan
KB77	biface	1	4.1	beige	tool	Franciscan
KB82	biface	1	0.36	grey/ beige	tool	Franciscan

KB78	projectile point	1	1.85	beige/ light grey	tool	Franciscan
KB79	projectile point	1	0.74	white	tool	Franciscan
KB80	projectile point	1	0.63	white	tool	Franciscan
KB81	projectile point	1	0.84	white	tool	Franciscan
KB84	scraper	1	41.6	dark grey/ brown	tool	Monterey
KB85	scraper	1	32	black	tool	Monterey
KB86	scraper	1	59	black	tool	Monterey
KB87	scraper	1	23.17	grey/ beige	tool	Monterey
KB88	scraper	1	65	Grey/ red	tool	Monterey
KB89	scraper	1	20	grey	tool	Monterey
KB90	scraper	1	75.5	grey	tool	Monterey
KB91	scraper	1	17.4	grey/ brown	tool	Monterey
KB92	scraper	1	51	grey/ white	tool	Monterey

Appendix IIIa: Asphaltum in Deetz collection.

Ob #	Feature	Room	Context	Object Name	Description	Wt	Lg	Wd	Class
155-354	6	1	fill	cake	asphaltum	74	53	42	Cached (cake)
155-1220	6	2	Floor 1-Floor 2	cake	asphaltum	103			Cached (cake)
155-1221	6	2	Floor 1-Floor 2	cake	asphaltum	172			Cached (cake)
147-2145	6	2	fill	asphaltum chunk	asphaltum	60.6	43	30	Cached (chunk)
147-2146	6	2	fill	asphaltum, chunk or detritus	asphaltum	13.8	31	24	Cached (chunk)
147-1607	Excavation Unit 21, stratigraphic Cut 1	2	no levels	asphaltum, chunk	asphaltum	16.4			Cached (chunk)
147-1608	Excavation Unit 21, stratigraphic Cut 1	2	no levels	asphaltum, chunk	asphaltum, chunk or cake	41	56	51	Cached (chunk)
147-1613	Excavation Unit 21	2	fill	mixing dish	red (green) abalone shell; asphaltum	139.5	120	95	Processing
155-329	6	1	surface to tile	tarring pebble	stone	51	34	37	Processing and Application
155-1201	6	1	fill	tarring pebble	stone; asphaltum	23.7	32	26	Processing and Application
147-1906	6	1	fill	tarring pebble	asphaltum	88	48	42	Processing and Application

147 - 161 4	Excavation Unit 21, stratigraphic cut 1	2	Fill	tarring pebble	stone; asphaltum	12 1	61	41	Processin g and Applicati on
147 - 214 4	6	2	fill	tarring pebble, broken	asphaltum	23	41	20	Processin g and Applicati on
155 - 263	6	2	Floor 1- Floor 2	tarring pebble	stone; asphaltum	12 5	56	49	Processin g and Applicati on
147 - 160 9	Excavation Unit 21, stratigraphic cut 1	2	no levels	tarring pebble	asphaltum ;stone	14 2	62	45	Processin g and Applicati on
147 - 163 4	Excavation Unit 21, stratigraphic Cut 1	2	fill	asphaltum	basketry; asphaltum	5. 2			Technolo gical
147 - 168 3	6	4	floor	asphaltum, cake!	asphaltum	25 1	91	80	Cached (cake)
147 - 224 3	6	5	floor	asphaltum, chunk-cake	asphaltum	15 4	87	75	Cached (cake)
147 - 224 4	6	5	floor	asphaltum, cake	asphaltum	13 7. 2	100	62	Cached (cake)
147 - 198 6	6	6	floor	asphaltum, chunk-cake	basketry; asphaltum	13 6	69	53	Cached (cake)
147 - 168 2	6	4	floor	asphaltum, chunk	asphaltum	45	58	53	Cached (chunk)
147 - 178 9	6	6	fill	asphaltum, chunk	asphaltum	21 .1	37	35	Cached (chunk)

147-1785	6	6	fill	asphaltum, chunk	asphaltum	9.8	39	17	Cached (chunk)
147-2242	6	5	floor	asphaltum, chunk or detritus	asphaltum	12.1	13	22	Cached (chunk)
147-1984	6	6	floor	asphaltum, chunk	asphaltum	37.5	54	48	Cached (chunk)
147-1985	6	6	floor	asphaltum, detritus/ chunk	asphaltum	13	33	26	Cached (chunk)
147-2265	6	6	floor	chunk	asphaltum	24	54	44	Cached (chunk)
147-2247	6	7	floor	asphaltum, chunk	asphaltum	31	69	50	Cached (chunk)
147-1848	6	3	floor	asphaltum chunk	asphaltum	120	59	41	Cached, chunk
147-1788	6	6	fill	asphaltum detritus	asphaltum	7.5			Detritus
147-1784	6	6	fill	asphaltum detritus	asphaltum	1.76			Detritus
147-1786	6	6	fill	asphaltum, detritus	asphaltum	2.4			Detritus
147-2317	6	5	floor	asphaltum, detritus	asphaltum	2.4			Detritus

147-2287	6	6	floor	asphaltum, detritus	asphaltum	8.7	40	22	Detritus
147-2288	6	6	floor	asphaltum, detritus	asphaltum	4.7	26	29	Detritus
147-2289	6	6	floor	asphaltum, detritus	asphaltum	9.5	many small chunks		Detritus
147-2290	6	6	floor	asphaltum, detritus	asphaltum	2.5			Detritus
147-2248	6	7	floor	asphaltum, detritus	asphaltum	4.8			Detritus
147-2246	6	7	floor	asphaltum, detritus	asphaltum	9	lots of small chunks		Detritus
147-1696	6	4	floor	mixing dish	mussel shell; asphaltum	20			Processing and Application
147-1745	6	3	fill	tarring pebble	sandstone; asphaltum	53.7	34	38	Processing and Application
147-1849	6	3	floor	tarring pebble	asphaltum ;stone	133	58	52	Processing and Application
147-1850	6	3	floor	tarring pebble	asphaltum ;stone	87	55	41	Processing and Application
147-2162	6	5	floor	tarring pebble	stone; asphaltum	63	56	46	Processing and Application

147-2254	6	6	floor	tarring pebble	stone; asphaltum	72	48	34	Processing and Application
147-2276	6	6	floor	asphaltum broken tarring pebble	asphaltum	27	24	19	Processing and Application
147-2693	6	7	floor	tarring pebble	stone; asphaltum	125.5	62	46	processing and application
147-1978	6	6	floor	dish	red abalone with syphon holes plugged	519.28	210	173	Technological
147-2026	6	5	fill	Dish	red abalone shell;asphaltum	700.1	183	155	Technological
147-1665	6	4	floor	asphaltum	basketry;asphaltum	6.4			Technological
147-1666	6	4	floor	asphaltum	basketry;asphaltum	6.3			Technological
147-1667	6	4	floor	asphaltum	basketry;asphaltum	1.8			Technological
147-1668	6	4	floor	asphaltum	basketry;asphaltum	2.9			Technological
147-1669	6	4	floor	asphaltum	basketry;asphaltum	1.48			Technological
147-1670	6	4	floor	asphaltum	basketry;asphaltum	2.2			Technological

147-1671	6	4	floor	asphaltum	basketry;asphaltum	0.95			Technological
147-1743	6	3	fill	basketry; asphaltum	basketry;asphaltum	11.7			Technological
147-1898	6	3	fill	basketry; asphaltum	asphaltum, basketry	3.5			Technological
147-2584	6	4	fill	asphaltum	basketry;asphaltum	1.7			Technological
147-2002	6	5	fill	basketry; asphaltum	basketry;asphaltum	2.6			Technological
147-2003	6	5	fill	asphaltum	basketry;asphaltum	2.4			Technological
147-2004	6	5	fill	basketry; asphaltum	basketry;asphaltum	2.29			Technological
147-2005	6	5	fill	basketry; asphaltum	basketry;asphaltum	3.3			Technological
147-2006	6	5	fill	asphaltum	basketry;asphaltum	1			Technological
147-2007	6	5	fill	basketry; asphaltum	basketry;asphaltum	5.9			Technological
147-2008	6	5	fill	asphaltum	basketry;asphaltum	2.2			Technological

147-2009	6	5	fill	asphaltum	basketry;asphaltum	10.1			Technological
147-2024	6	5	fill	asphaltum	basketry;asphaltum	6			Technological
147-2025	6	5	fill	asphaltum	basketry;asphaltum	11.5			Technological
147-2027	6	5	fill	asphaltum	basketry;asphaltum	2.9			Technological
147-2321	6	5	floor	asphaltum	basketry;asphaltum	24			Technological
147-2321.D	6	5	floor	asphaltum	basketry;asphaltum	32			Technological
147-2241	6	5	floor	asphaltum	basketry;asphaltum	8.1			Technological
147-2300	6	6	floor	asphaltum	basketry;asphaltum	2			Technological
147-2604	feature 8	5		asphaltum	basketry;asphaltum	14.8			Technological
147-2605	feature 8	5		asphaltum	basketry;asphaltum	49.5			Technological
147-2876	6	4	floor to floor	asphaltum, cake	asphaltum	100	100	58	Cached (cake)

147-2196	6	5	floor 2	asphaltum, chunk	asphaltum	34	56	56	Cached (chunk)
147-2876	6	5	floor to floor	asphaltum chunks	asphaltum	91	5 chunks likely to a cake		Cached (chunks to a cake)
155-259	6	3	Floor 1-Floor 2	tarring pebble	stone;asphaltum	83.9	50	43	Processing and Application
155-105	6	3	Floor 1-Floor 2	basket impression	basketry;asphaltum	0			Technological
147-2197	6	5	floor 2	asphaltum	basketry;asphaltum	12.4			Technological
147-2198	6	5	floor 2	asphaltum	basketry;asphaltum	1.2			Technological
155-220	6	7	n/a	asphaltum	asphaltum	30	73	30	Cached (cake or chunk)
155-2211	6	7	n/a	asphaltum detritus	asphaltum	6.4			Detritus
155-184	6	7	n/a	tarring pebble	stone	143	71	30	processing and application
155-2209	6	6	n/a	basket impression	asphaltum	13.8			Technological
155-2210	6	6	n/a	asphaltum basket impressions	asphaltum	11.6			Technological

147-2705	6	7	pedestaled	asphaltum	basketry;asphaltum	14.08			Technological
147-2050	6	3	surface to tile	tarring pebble	stone;asphaltum	97.8	50	46	Processing and Application
147-2324	6	6	surface to tile	tarring pebble	asphaltum;stone	67	46	38	Processing and Application
147-2873	6	7	surface to tile	tarring pebble	asphaltum;stone	109	51	42	processing and application
147-2351	6	6	surface to tile	asphaltum	basketry;asphaltum	1.8			Technological
147-2362	6	6	surface to tile	asphaltum, detritus	basketry;asphaltum	2			Technological
147-2365	6	6	surface to tile	asphaltum	basketry;asphaltum	1.2			Technological
147-2872	6	7	surface to tile	asphaltum	basketry;asphaltum	23.3			Technological
147-2130	6	general excavation	n/a	chunk	asphaltum	20.4	37	42	Cached (chunk)
	6	n/a		detritus	asphaltum	2.8			Detritus
147-1274	Excavation Unit 21, stratigraphic Cut 1	n/a		basketry impression	basketry;asphaltum	8.4	61	36	Technological
147-3090	Unknown location			cake	asphaltum	970.4			Cached (cake)

147-3091	Unknown location			chunk	asphaltum	42.4	76	47	Cached (chunk)
155-324	Feature 9			Olla with asphaltum		1535.00			
147-2155	6	3	S.E. corner floor	hopper-mortar	Volcanic	3700			

Appendix IIIb: Asphaltum in Gabel collection.

Object Number	Weight	Notes	Length	Width	Typology
147-B-2.D2	128	cake	8	6	cached
147-B-709	246.7	cake	10	8	cached
147-B-758	379	cake	11	9.3	cached
147-B-946	198	cake	10	9	cached
147-B-477a	289	cake	13	9	cached
147-B-1150	47.3	cake (partially broken)	4.3	5.3	cached
147-B-1049	154	cake (partially broken)	9	8.2	cached
147-B-525	5.5	chunk	3	2	cached
147-B-2.D	26.3	chunk	4.7	3.6	cached
147-B-1072b	13.1	chunk	4	2	cached
147-B-1318	32	chunk	6	5	cached
147-B-3002	53	chunk	4.3	4	cached
147-B-1442	33	chunk	5.2	4.5	cached
147-B-460a	15.3	chunk	4.1	4.1	cached
147-B-549	15.5	chunk	4	3	cached
147-B-556	31	chunk	4.1	3.2	cached
147-B-639a	28	chunk	5	4	cached
147-B-991a	16.4	chunk	5	4	cached
147-B-775	12	chunk			cached
147-B-1017a	7	chunk	4.2	3	cached
147-B-1017	25	chunk	4.2	4	cached
147-B-460	23	chunk	5.5	3	cached
147-B-2.D2	5.6	detritus	2.5	1.2	detritus
147-B-21.D2	2.17	detritus	2	1	detritus
147-B-158	5	detritus	2.5	2.5	detritus
147-B-244.D4	0.2	detritus	n/a		detritus

147-B-293	5.2	detritus	3	2	detritus
147-B-298	2.7	detritus	3	2	detritus
147-B-620	6.6	detritus	3	2	detritus
147-B-404	6.42	detritus	n/a		detritus
147-B-735	2.6	detritus			detritus
147-B-779	22	detritus	3	2.8	detritus
147-B-843.D3	3.1	detritus			detritus
147-B-964	3	detritus			detritus
147-B-991	10	detritus			detritus
147-B-1072c	2	detritus			detritus
147-B-1149	6.2	detritus			detritus
147-B-1196	6.7	detritus	3.5	2	detritus
147-B-1393	3.8	detritus			detritus
147-B-1916	3.6	detritus			detritus
147-B-3004	10	detritus			detritus
147-B-3005	10.5	detritus	2.5	2	detritus
147-B-418.D	41.6	detritus		28	detritus
147-B-1335	1.2	detritus			detritus
147-B-727	13.7	red abalone with asphaltum on the inside	6	4	processing
147-B-709.D	7.75	piece of abalone shell with asphaltum	3.8	3	processing
147-B-720	52	tarring pebble	5	3.2	processing and application
147-B-85a	15.1	tarring pebble	3.8	2.4	processing and application
147-B-736a	117	tarring pebble	6.2	5.2	processing and application
147-B-27.D2	96	tarring pebble	5.6	4.5	processing and application

147-B-35.D2	63	tarring pebble	4.9	4	processing and application
147-B-237	54	tarring pebble	6.5	5	processing and application
147-B-289	79	tarring pebble	5.5	4.5	processing and application
147-B-372	182	tarring pebble	6.1	5.2	processing and application
147-B-461	92.3	tarring pebble	4.8	4.2	processing and application
147-B-477	50.7	tarring pebble	5	3.5	processing and application
147-B-639b	72	tarring pebble	5	4	processing and application
147-B-639c	113	tarring pebble	5.1	4.1	processing and application
147-B-639d	22.4	tarring pebble	3.3	3	processing and application
147-B-667b	19	tarring pebble	3.8	3	processing and application
147-B-667d	52	tarring pebble	5.5	3	processing and application
147-B-710	53	tarring pebble	4	3.5	processing and application
147-B-720a	115	tarring pebble	5.8	4.3	processing and application
147-B-736	39	tarring pebble	4.5	3.5	processing and application
147-B-812	40.5	tarring pebble	4.7	3.5	processing and application

147-B-851	15.6	tarring pebble	3.8	2.8	processing and application
147-B-920	123	tarring pebble	7.2	5.2	processing and application
147-B-945	83	tarring pebble	6.1	4.1	processing and application
147-B-945a	95	tarring pebble	5.8	4	processing and application
147-B-945c	110	tarring pebble	6.4	4.3	processing and application
147-B-946d	47	tarring pebble	4.3	2.3	processing and application
147-B-950	29	tarring pebble	4	3	processing and application
147-B-1024	50	tarring pebble	5	3	processing and application
147-B-1031	56	tarring pebble	5.4	4.2	processing and application
147-B-1050	72	tarring pebble	5.7	5.6	processing and application
147-B-1096.D	56	tarring pebble	5.2	3.8	processing and application
147-B-1148	54.3	tarring pebble	4.2	4	processing and application
147-B-1441	29	tarring pebble	3.9	2.8	processing and application
147-B-608	56	tarring pebble	4.5	4	processing and application
147-B-4.D	88.7	tarring pebble (broken)	5	4	processing and application

147-B-209	16	tarring pebble (broken)	3.2	2.5	processing and application
147-B-630	26.2	tarring pebble (broken)	4	3.2	processing and application
147-B-639e	13.2	tarring pebble (broken)	3.5	2.8	processing and application
147-B-667c	58	tarring pebble (broken)	5	4	processing and application
147-B-736b	37	tarring pebble (broken)	4	3	processing and application
147-B-737	8.5	tarring pebble (broken)	3.2	2.3	processing and application
147-B-737a	8.8	tarring pebble (broken)	3.5	2.5	processing and application
147-B-758a	18	tarring pebble (broken)	3.2	2.1	processing and application
147-B-773	9	tarring pebble (broken)	2.8	2.4	processing and application
147-B-811	56.4	tarring pebble (broken)	5	3.8	processing and application
147-B-945b	60	tarring pebble (broken)	4.8	3.3	processing and application
147-B-979	20	tarring pebble (broken)	3.7	2.2	processing and application
147-B-1072	19.5	tarring pebble (broken)	3.5	4.2	processing and application
147-B-1072a	4.71	tarring pebble (broken)	2.2	2	processing and application
147-B-1096	25	tarring pebble (broken)	4.3	2.8	processing and application

147-B-1131	17	tarring pebble (broken)	3.8	2.5	processing and application
147-B-1164	5.3	tarring pebble (broken)	2.3	2	processing and application
147-B-450.D	95	tarring pebble (broken)	5.5	3.8	processing and application
147-B-904	138	tarring pebble (broken)	7	4	processing and application
147-B-162.D	8	tarring pebble (broken)	2	2.1	processing and application
147-B-684.D	10.1	tarring pebble (broken)	3	2.2	processing and application
147-B-1174	71	tarring pebble (broken)	5.5	3	processing and application
147-B-503	19	tarring pebble (whole)	3.3	2.5	processing and application
147-B-190	213	tarring pebble mother	6.5	5.2	processing and application
147-B-128.D	29.5	basketry impression	5	3.5	technological
147-B-1040	24.1	basketry impression	6.2	5.2	technological
147-B-1058	8.2	basketry impression	3.5	3	technological
147-B-3003	3.9	basketry impression	3.4	2	technological
147-B-1186	1.74	basketry impression			technological
147-B-1915	44	basketry impression	7	5.5	technological
147-B-245.D2	3.22	basketry impression	n/a		technological
147-B-1904	4.3	basketry impression			technological
147-B-1905	4.5	basketry impression			technological

147-B-462	83.4	asphaltum detritus wrapped around a piece of shale	6	6.2	unintentional
147-B-667a	40	cooking stone (with a little bit of tar)	4	3.5	unintentional
147-B-19a	147	FAR with tar	8	5	unintentional
147-B-16.D	52	sandstone fragment with asphaltum	7	6	unintentional
147-B-490	189	sandstone with asphaltum	8	7	unintentional

Appendix IVa: Groundstone (not soapstone) in Deetz collection.

Ob#	Feature	Rm	Context	Name	Des	Wt	Notes
147-1908	6	1	fill	mano	basalt	938	large Mexican mano frag; one grinding side, with ochre
147-2375	6	3	floor to floor	mano	basalt	198	Mexican mano fragment
147-2894	6	3	floor to floor	mano	basalt	105	Mexican mano fragment
155-385	6	3&4	footing	mano	basalt	700	large Mexican mano, lava rock, imported
147-2650	6	4	floor	mano	basalt	1700	large Mexican mano frag; one grinding side
147-2160	6	5	floor	mano	basalt	791	large Mexican mano frag; one grinding side
155-287	6	3	Floor to floor	mano	sandstone	82	part of a broken mano
147-1680	6	4	floor	mano	sandstone	368	lightly used use wear on one end
147-1707	6	3-4, doorway	floor	mano	sandstone		large Mexican mano frag; one grinding side
155-155	6	6	floor 1-2	mano	sandstone	381	flat mano with asphaltum residue on the side
147-2267	6	6	floor	mano	sandstone	1025	large burnt mano; broken

147-2322	6	6	floor	mano	sandstone	913	sandstone mano with asphaltum residue, glued back together
155-221	6	7	n/a	mano	sandstone	1390	large rectangular sandstone mano
147-2380	6	3	floor #1	metate	basalt	992	leg of a Mexican metate; no grinding
147-2227	6	7	fill	metate	basalt	1909	half of a Mexican metate, no legs flat surface;
155-90	6	7	n/a	mortar	sandstone	1029	broken part of a large sandstone bowl
155-1457	6	2	n/a	mortar	sandstone	129	sandstone bowl fragments
147-2375	6	3	Floor to floor	mortar	sandstone	36	sandstone bowl
155-288	6	3	Floor to floor	mortar	sandstone	650	broken part of a large sandstone bowl
147-1891	6	3	fill	mortar	sandstone	548	bowl fragment; sandstone bowl
155-1845	6	7	Fill	mortar	sandstone	90.3	broken sandstone bowl
147-2405	6	7	surface to tile	mortar	sandstone	157	fragment of a bowl
147-2155	6	3	S.E. corner floor	hopper-mortar	Volcanic	3700	asphaltum coated basket hopper mortar, with ring of basket

147-1304	Unit Excavation 21, Stratigraphic Cut			pestle	sandstone	500	half of the top of a sandstone pestle
147-1610	Unit Excavation 21, Stratigraphic Cut	2	Fill	pestle	sandstone	188	95 x 41, nearly whole pestle with battered edge
147-1632	Unit Excavation 21, Stratigraphic Cut	2	Fill	pestle	sandstone	356	top half of pestle, looks like a soapstone bowl
147-2652	6	4	floor	pestle	sandstone	375	small, shaped pestle.
155-162	6	7	roof	pestle	sandstone	631	broken pestle, battered edge
155-173	6	7	pedestal	pestle	sandstone	280	broken pestle, battered edge
147-2709	6	7	pedestaled artifacts	pestle	sandstone	1426	pestle, shaped with asphaltum on bottom
147-1975	6	5	floor	pestle	Volcanic	2900	one whole large pestle
155-153	6	6	floor to floor	pestle	Volcanic	795	broken and battered pestle with asphaltum on one end

Appendix IVa: Groundstone (not soapstone) in Gabel collection.

Catalog #	Type	Material	Count	Weight	Notes
147-B-76.D2	Mano	Basalt	1	206	Mexican mano, rectangular
147-B-137	Mano	Basalt	1	366	Mexican mano, rectangular
147-B-570	Mano	Basalt	1	850	Mexican mano, rectangular
147-B-743	Mano	Basalt	1	1023	Mexican mano, rectangular
147-B-1069	Mano	Basalt	1	207	Mexican mano, rectangular
147-B-1070	Mano	Volcanic	1	233	1/4 of a mano
147-B-557	Metate	Basalt	1	358	Mexican metate; thick part of flat metate
147-B-569	Metate	Basalt	1	650	Mexican metate; thick part of flat metate
147=712	Metate	Basalt	1	187	Mexican metate; thick part of flat metate
147-B-725	Metate	Basalt	1	204	Mexican metate; thick part of flat metate
147-B-999	Metate	Basalt	1	932	Mexican metate; base frag; flat
147-B-1302	Metate	Basalt	1	975	Mexican metate; base frag; flat
147-B-1305	Metate	Basalt	1	1286	Mexican metate; large
147-B-1306	Metate	Basalt	1	1380	Mexican metate; large
147-B-949	Metate	Basalt	1	277	Mexican metate; flat piece
147-B-1320	Metate	Basalt	1	650	Mexican metate; base frag
147-B-1321	Metate	Sandstone	1	500	Piece of local metate
147-B-1322	Metate	Volcanic	1	700.2	Piece of local metate
147-B-474	Mortar	Sandstone	1	555	Piece of local mortar
147-B-475	Mortar	Sandstone	1	107.3	Piece of local mortar
147-B-548	Pestle	Sandstone	1	210	Pestle fragment
147-B-549	Pestle	Sandstone	1	1100	Thick pestle
147-B-550	pestle	Siltstone	1	520	Pestle fragment

Appendix Va: Metal in Deetz collection.

Object Number	Feature	Room	Depth	Group	Subgroup	Object Name	weight (g)
155-1244	6	7	Test pit 2 south of room 6	Building Materials & Architecture	Architecture	door boss	76
147-1907	6	1	fill	Building Materials & Architecture	Architecture	door boss	68
147-2725	6	7	fill	Building Materials & Architecture	Architecture	door hinge	424
147-1997	6	6	floor	Building Materials & Architecture	Architecture	door hinge	652
155-181	6	7	n/a	Building Materials & Architecture	Architecture	door latch	182
155-182	6	7	n/a	Building Materials & Architecture	Architecture	door latch	115
147-2017	6	5	fill	Building Materials & Architecture	Architecture	key	26
	6	6	fill	Building Materials & Architecture	Construction hardware	bar	62
147-1590	U21; Stratigraphic Cut 1	2	no levels	Building Materials & Architecture	Construction hardware	bar	85
147-1638	U21; Stratigraphic Cut 1	2	fill	Building Materials & Architecture	Construction hardware	bar	61
147-1640	U21; Stratigraphic Cut 1	2	fill	Building Materials & Architecture	Construction hardware	bar	174
147-1936	6	2	fill	Building Materials & Architecture	Construction hardware	bar	442

147-2137	6	2	fill	Building Materials & Architecture	Construction hardware	bar	38
147-2138	6	2	fill	Building Materials & Architecture	Construction hardware	bar	44
147-2139	6	2	fill	Building Materials & Architecture	Construction hardware	bar	22
147-1855	6	3	floor	Building Materials & Architecture	Construction hardware	bar	170
147-2373	6	3	floor-to-floor	Building Materials & Architecture	Construction hardware	bar	190
147-2376	6	3	floor #1	Building Materials & Architecture	Construction hardware	bar	280
147-2377	6	3	floor #1	Building Materials & Architecture	Construction hardware	bar	97
147-2569	6	3	fill	Building Materials & Architecture	Construction hardware	bar	63
147-2667	6	4	floor	Building Materials & Architecture	Construction hardware	bar	76
147-2668	6	4	floor	Building Materials & Architecture	Construction hardware	bar	75
147-2674	6	4	floor	Building Materials & Architecture	Construction hardware	bar	53
147-2307	6	5	floor	Building Materials & Architecture	Construction hardware	bar	233
147-2309	6	5	floor	Building Materials & Architecture	Construction hardware	bar	200
147-2311	6	5	floor	Building Materials & Architecture	Construction hardware	bar	15
147-1792	6	6	fill	Building Materials & Architecture	Construction hardware	bar	18

147-1794	6	6	fill	Building Materials & Architecture	Construction hardware	bar	65
147-1796	6	6	fill	Building Materials & Architecture	Construction hardware	bar	311
147-2000	6	6	fill	Building Materials & Architecture	Construction hardware	bar	102
147-2264	6	6	floor	Building Materials & Architecture	Construction hardware	bar	100
147-2228	6	7	fill	Building Materials & Architecture	Construction hardware	bar	51
147-2685	6	7	floor	Building Materials & Architecture	Construction hardware	bar	85
147-2687	6	7	floor	Building Materials & Architecture	Construction hardware	bar	27
147-2690	6	7	floor	Building Materials & Architecture	Construction hardware	bar	28
147-2691	6	7	floor	Building Materials & Architecture	Construction hardware	bar	33
147-2570.D	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	bar	161
147-2913.D	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	bar	21
147-3041	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	bar	240
147-3042	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	bar	255
147-1284	6	U21; Stratigraphic Cut 1	no levels	Building Materials & Architecture	Construction hardware	bar	252
147-1285	6	U21; Stratig	no levels	Building Materials & Architecture	Construction hardware	bar	262

		raphic Cut 1					
147-2304	6	5	floor	Building Materials & Architecture	Construction hardware	bracket	33
147-2081	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	bracket (wall fixture)	190
147-2016	6	5	fill	Building Materials & Architecture	Construction hardware	nail	11
155-108	6	7	Test pit 2 south of room 7	Building Materials & Architecture	Construction hardware	nail	8
155-109	6	7	Test pit 2 south of room 7	Building Materials & Architecture	Construction hardware	nail	53
155-1846	6	7	fill	Building Materials & Architecture	Construction hardware	nail	5
155-167	6	7	n/a	Building Materials & Architecture	Construction hardware	nail	19
155-170	6	7	roof	Building Materials & Architecture	Construction hardware	nail	23
155-178	6	7	surface test pit	Building Materials & Architecture	Construction hardware	nail	20
147-1914	6	1	fill	Building Materials & Architecture	Construction hardware	nail	3
155-330	6	1	surface-to-tile	Building Materials & Architecture	Construction hardware	nail	2
155-332	6	1	surface-to-tile	Building Materials & Architecture	Construction hardware	nail	12
155-344	6	1	fill	Building Materials & Architecture	Construction hardware	nail	9
155-356	6	1	fill	Building Materials & Architecture	Construction hardware	nail	10

155-361	6	1	surface tile to roof	Building Materials & Architecture	Construction hardware	nail	2
147-1591	U21; Stratigraphic Cut 1	2	no levels	Building Materials & Architecture	Construction hardware	nail	13
147-1935	6	2	fill	Building Materials & Architecture	Construction hardware	nail	9
155-1405	6	2	tile-floor	Building Materials & Architecture	Construction hardware	nail	4
147-1747	6	3	fill	Building Materials & Architecture	Construction hardware	nail	17
147-1748	6	3	fill	Building Materials & Architecture	Construction hardware	nail	28
147-1800	6	3	Fill	Building Materials & Architecture	Construction hardware	nail	23
147-1801	6	3	Fill	Building Materials & Architecture	Construction hardware	nail	9
147-1803	6	3	fill	Building Materials & Architecture	Construction hardware	nail	34
147-1804	6	3	fill	Building Materials & Architecture	Construction hardware	nail	6
147-1857	6	3	floor	Building Materials & Architecture	Construction hardware	nail	6
147-1859	6	3	floor	Building Materials & Architecture	Construction hardware	nail	14
147-1863	6	3	floor	Building Materials & Architecture	Construction hardware	nail	9
147-1867	6	3	floor	Building Materials & Architecture	Construction hardware	nail	14
147-2054	6	3	surface-tile	Building Materials & Architecture	Construction hardware	nail	17

147-2072	6	3	surface-tile	Building Materials & Architecture	Construction hardware	nail	9
155-276	6	3	floor-to-floor	Building Materials & Architecture	Construction hardware	nail	4
155-277	6	3	floor-to-floor	Building Materials & Architecture	Construction hardware	nail	9
155-278	6	3	floor-to-floor	Building Materials & Architecture	Construction hardware	nail	8
155-99	6	3	floor-to-floor	Building Materials & Architecture	Construction hardware	nail	12
147-1659	6	4	floor	Building Materials & Architecture	Construction hardware	nail	9
147-1661	6	4	floor	Building Materials & Architecture	Construction hardware	nail	9
147-1662	6	4	floor	Building Materials & Architecture	Construction hardware	nail	17
147-1968	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	9
147-1970	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	11
147-1971	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	3
147-2178	6	4	fill	Building Materials & Architecture	Construction hardware	nail	3
147-2180	6	4	fill	Building Materials & Architecture	Construction hardware	nail	11
147-2181	6	4	fill	Building Materials & Architecture	Construction hardware	nail	5
147-2183	6	4	fill	Building Materials & Architecture	Construction hardware	nail	3

147-2184	6	4	fill	Building Materials & Architecture	Construction hardware	nail	8
147-2187	6	4	fill	Building Materials & Architecture	Construction hardware	nail	3
147-2597	6	4	fill	Building Materials & Architecture	Construction hardware	nail	8
147-2640	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	7
147-2641	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	9
147-2642	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	22
147-2643	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	28
147-2644	6	4	surface-tile	Building Materials & Architecture	Construction hardware	nail	15
155-372	6	4	FLOOR-TO-FLOOR	Building Materials & Architecture	Construction hardware	nail	12
155-85	6	4	SURFACE	Building Materials & Architecture	Construction hardware	nail	5
147-2011	6	5	fill	Building Materials & Architecture	Construction hardware	nail	6
147-2195	6	5	floor 2	Building Materials & Architecture	Construction hardware	nail	8
147-2208	6	5	floor 2	Building Materials & Architecture	Construction hardware	nail	10
147-2330	6	5	surface-tile	Building Materials & Architecture	Construction hardware	nail	44
147-2356	6	6	surface-tile	Building Materials & Architecture	Construction hardware	nail	4

147-2357	6	6	surface-tile	Building Materials & Architecture	Construction hardware	nail	4
147-2398	6	6	surface-tile	Building Materials & Architecture	Construction hardware	nail	3
147-2686	6	7	floor	Building Materials & Architecture	Construction hardware	nail	19
147-2722	6	7	fill	Building Materials & Architecture	Construction hardware	nail	27
147-2723	6	7	fill	Building Materials & Architecture	Construction hardware	nail	2
147-2724	6	7	fill	Building Materials & Architecture	Construction hardware	nail	47
155-1867	6	7	fill	Building Materials & Architecture	Construction hardware	nail	8
147-2609	6	8	5	Building Materials & Architecture	Construction hardware	nail	11
147-2610	6	8	5	Building Materials & Architecture	Construction hardware	nail	4
147-2082	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	nail	26
147-2088	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	nail	3
147-2089	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	nail	34
147-2091	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	nail	6
147-2092	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	nail	3
147-2579.D	6	n/a	general excavation	Building Materials & Architecture	Construction hardware	nail	15

147-2132	6	Strat cut 2	n/a	Building Materials & Architecture	Construction hardware	nail	9
147-2133	6	Strat cut 2	n/a	Building Materials & Architecture	Construction hardware	nail	6
147-1485	6	U21; Stratigraphic Cut 2	no levels	Building Materials & Architecture	Construction hardware	nail	25
155-389	6	7	tile to floor	Building Materials & Architecture	Construction hardware	nail	6
147-2207	6	5	floor 2	Building Materials & Architecture	Construction hardware	nail	2
155-405	6	1	fill	Building Materials & Architecture	Construction hardware	nail	2
147-2083	6		general excavation	Building Materials & Architecture	Construction hardware	nail (modern) cold headed by machine	26
147-1287	6	U21; Stratigraphic Cut 1	no levels	Building Materials & Architecture	Construction hardware	nail (square)	6
147-2237	6	5	floor	Building Materials & Architecture	Construction hardware	nail [square head]	27
147-1798	6	6	surface-tile	Building Materials & Architecture	Construction hardware	nail [square]	10
147-1913	6	1	fill	Building Materials & Architecture	Construction hardware	spike	23
147-1592	U21; Stratigraphic Cut 1	2	no levels	Building Materials & Architecture	Construction hardware	spike	146

155-1216	6	2	fill	Building Materials & Architecture	Construction hardware	spike	79
155-1224	6	2	floor-to-floor	Building Materials & Architecture	Construction hardware	spike	23
147-1858	6	3	floor	Building Materials & Architecture	Construction hardware	spike	81
147-2071	6	3	surface-tile	Building Materials & Architecture	Construction hardware	spike	62
147-2186	6	4	fill	Building Materials & Architecture	Construction hardware	spike	23
155-194	6	4	FLOOR-TO-FLOOR	Building Materials & Architecture	Construction hardware	spike	13
147-2193	6	5	floor 2	Building Materials & Architecture	Construction hardware	spike	33
147-2335	6	5	surface-tile	Building Materials & Architecture	Construction hardware	spike	2
147-2051	6	3	surface-tile	Building Materials & Architecture	Construction hardware	staple	6
155-218	6	7	floor	Hardware	Construction hardware	washer	0
147-1954	6	2	floor	Hardware	Metal bands and strapping	strap	37
147-1992	6	6	floor	Hardware	Metal bands and strapping	strap	23
147-1993	6	6	floor	Hardware	Metal bands and strapping	strap	17
147-1994	6	6	floor	Hardware	Metal bands and strapping	strap	709
147-1996	6	6	floor	Hardware	Metal bands and strapping	strap	407
147-1999	6	6	floor	Hardware	Metal bands and strapping	strap	31
155-225	6	7	n/a	Hardware	Metal bands and strapping	strap	26

155-231	6	7	Test pit 2 south of room 5	Hardware	Metal bands and strapping	strap	230
147-3043	6	n/a	general excavation	Hardware	Metal bands and strapping	strap	170
155-107	6	7	Test pit 2 south of room 7	Hardware	Metal bands and strapping	strap	47
2131	6	Strat cut 2	n/a	Hardware	Metal bands and strapping	hoop	129
155-323	6	9	5&6	Hardware	Metal bands and strapping	hoop	15
147-2012	6	5	fill	Hardware	Metal bands and strapping	hoop	31
147-2014	6	5	fill	Hardware	Metal bands and strapping	hoop	31
147-2022	6	5	fill	Hardware	Metal bands and strapping	hoop	18
147-2190	6	5	floor 2	Hardware	Metal bands and strapping	hoop	46
155-358	6	1	fill	Hardware	Metal bands and strapping	hoop	194
147-1637	U21; Stratigraphic Cut 1	2	fill	Hardware	Metal bands and strapping	hoop	233
155-122	6	2	floor	Hardware	Metal bands and strapping	hoop	80
147-1645	6	2	fill	Hardware	Metal bands and strapping	hoop	18
155-1231	6	6	fill	Hardware	Metal bands and strapping	hoop	464
155-156	6	6	Floor 1-Floor 2	Hardware	Metal bands and strapping	strap	22
155-2208	6	6	n/a	Hardware	Metal bands and strapping	strap	26
155-331	6	1	surface-to-tile	Hardware	Metal bands and strapping	strap	354
147-1639	U21; Stratigraphic Cut 1	2	fill	Hardware	Metal bands and strapping	strap	118
155-1215	6	2	fill	Hardware	Metal bands and strapping	strap	117

155-245	6	2	floor-to-floor	Hardware	Metal bands and strapping	strap	187
147-2158	6	5	floor	Hardware	Metal bands and strapping	Strap	5
147-2191	6	5	floor 2	Hardware	Metal bands and strapping	strap	4
147-2303	6	5	floor	Hardware	Metal bands and strapping	strap	41
147-2306	6	5	floor	Hardware	Metal bands and strapping	strap	150
147-1790	6	6	fill	Hardware	Metal bands and strapping	strap	26
147-1793	6	6	fill	Hardware	Metal bands and strapping	strap	31
147-2383	6	6	fill	Hardware	Metal bands and strapping	strap	71
155-1861	6	7	fill	Hardware	Metal bands and strapping	strap	2
147-2368	6	9	n/a	Hardware	Metal bands and strapping	strap	28
147-2745	6	n/a	general excavation	Hardware	Metal bands and strapping	strap	2
147-3046	6	n/a	general excavation	Hardware	Metal bands and strapping	strap	35
155-357	6	1	fill	Hardware	Metal bands and strapping	strip	130
155-247	6	2	floor-to-floor	Hardware	Metal bands and strapping	strip	13
155-371	6	4	FLOOR-TO-FLOOR	Hardware	Metal bands and strapping	strip	31
147-2611	6	8	5	Hardware	Metal bands and strapping	strip	24
147-2612	6	8	5	Hardware	Metal bands and strapping	strip	36
147-2613	6	8	5	Hardware	Metal bands and strapping	strip	15
147-2614	6	8	5	Hardware	Metal bands and strapping	strip	76
147-2188	6	4	fill	Hardware	miscellaneous	hook	3
147-1635	U21; Stratigraphic Cut 1	2	fill	Hardware	miscellaneous	hook	14

147-3045	6	6	surface-tile	Hardware	miscellaneous	hook	4
155-175	6	7	roof	Hardware	miscellaneous	hook	6
147-1995	6	6	floor	Hardware	miscellaneous	link	623
147-2740	6	7	surface-tile	Hardware	miscellaneous	link	36
155-1844	6	7	fill	Hardware	miscellaneous	plate	53
147-2135	6	2	fill	Hardware	miscellaneous	plate	23
147-2341	6	5	surface-tile	Hardware	miscellaneous	wire	2
147-2070	6	3	surface-tile	Hardware	miscellaneous	wire	538
155-118	6	1	exterior east wall	Hardware	miscellaneous	wire	1
155-1203	6	1	fill-floor	Hardware	miscellaneous	wire	0
147-1833	6	3	fill	Hardware	miscellaneous	wire	1
147-1835	6	3	fill	Hardware	miscellaneous	wire	2
147-1282	6	U21; Stratigraphic Cut 1	no levels	Hardware	miscellaneous	wire	5
147-1283	6	U21; Stratigraphic Cut 1	no levels	Hardware	miscellaneous	wire	3
147-1281	6	U21; Stratigraphic Cut 1	no levels	Hardware	miscellaneous	wire	2
147-1618	U21; Stratigraphic Cut 1	2	fill	Personal Adornment	Button	copper button	3
147-2201	6	5	floor 2	Personal Adornment	Copper button	Copper button	5
147-1911	6	1	fill	Tool	Agricultural	cleaver	1174

147-2279	6	6	floor	Tool	Agricultural	shovel	894
147-1531	U21; Stratigraphic Cut 1	1	no levels	Tool	Agricultural	shovel (small garden trowel)	160
155-224	6	7	n/a	Tool	Agricultural	shovel blade	755
147-2136	6	2	fill	Tool	Agricultural	sickle	26
147-2310	6	5	floor	Tool	Agricultural	sickle	114
147-2018	6	5	fill	Tool	Agricultural	sickle	133
147-2312	6	5	floor	Tool	Agricultural	sickle handle	66
147-2726	6	7	fill	Tool	Agricultural	Trowel	82
147-1642	U21; Stratigraphic Cut 1	2	fill	Tool	Agricultural	wedge	1058
147-1909	6	1	fill	Tool	Agricultural	wedge	1997
147-1910	6	1	fill	Tool	Agricultural	wedge	1514
147-1856	6	3	floor	Tool	Agricultural	wedge	120
155-177	6	7	exterior wall	Tool	Agricultural	wedge	1200
147-2179	6	4	fill	Tool	Carpenter’s tools	file	14
147-1655	6	4	floor	Tool	Carpenter’s tools	file	85
147-2302	6	6	floor	Tool	Carpenter’s tools	file, looks like Cat No	24

						147-2179	
155-193	6	4	FLOOR-TO-FLOOR	Tool	Carpenter's tools	hammer	316
147-1288	6	U21; Stratigraphic Cut 1	no levels	Tool	Carpenter's tools	hammer	680
155-1843	6	7	fill	Tool	Carpenter's tools	blade	56
155-244	6	2	floor-to-floor	Tool	Carpenter's tools	blade	11
147-1912	6	1	fill	Tool	Carpenter's tools	blade	17
147-2305	6	5	floor	Tool	Carpenter's tools	blade	32
147-1871	6	3	floor	Tool	Carpenter's tools	blade; Olivella shell	68
147-3044	6	n/a	general excavation	Tool	Carpenter's tools	saw blade	114
147-2308	6	5	floor	Tool	Carpenter's tools	screw driver handle	40
147-1593	U21; Stratigraphic Cut 1	2	no levels	Tool	Carpenter's tools	screw driver	100
147-2688	6	7	floor	Tool	Carpenter's tools	scissors	23
147-1636	U21; Stratigraphic Cut 1	2	fill	Tool	carpenter's tools	scissors	33
147-2627	6	4	floor-to-floor	Tool	carpenter's tools	scissors	13
147-2015	6	5	fill	Tool	carpenter's tools	scissors	28
155-142	6	6	pedestal	Tool	Household tool	metal awl	8
147-2874	6	7	surface-tile	Tool	Livery	bit	101

155-343	6	1	fill	Tool	Livery	Horse latch	65
147-2648	6	4	surface-tile	Tool	Livery	Horse latch	84
147-2080	6	n/a	general excavation	Tool	Livery	horse shoe	198
	6	3	floor	Tool	Livery	Stirrup	259
147-1746	6	3	fill	Tool	Other misc. hand tool	handle	116
155-148	6	6	Floor 1-Floor 2	Tool	Other misc. hand tools	blade	200
147-1616	unit 21	2	fill	Tool	Other misc. hand tools	handle	46
147-2572	6	6	floor	Tool	Other misc. hand tools	knife with carved bone handle	10
155-124	6	2	floor	Tool	Other misc. hand tools	tool	3
155-246	6	2	floor-to-floor	Tool	Other misc. hand tools	tool	13
147-1594	U21; Stratigraphic Cut 1	2	no levels	Unidentified metal	n/a	objects	15
155-160	6	1	roof	Unidentified Metal	n/a	metal tool, iron tool fragment	4
155-183	6	7	n/a	Unidentified metal	n/a	misc. metal chunks	56
155-226	6	7	n/a	Unidentified metal	n/a	misc. metal chunks	88
147-1774	6	6	fill	Unidentified Metal	n/a	object	14

147-1836	6	3	Fill	Unidentified Metal	n/a	object	48
147-1860	6	3	floor	Unidentified Metal	n/a	object	31
147-1861/1862	6	3	floor	Unidentified Metal	n/a	object	28
147-1865	6	3	floor	Unidentified Metal	n/a	object	1
147-1899	6	3	fill	Unidentified Metal	n/a	object	6
147-2374	6	3	floor-to-floor	Unidentified Metal	n/a	object	0
147-1656	6	4	floor	Unidentified metal	n/a	object	37
147-1969	6	4	surface-tile	Unidentified Metal	n/a	object	3
147-2182	6	4	fill	Unidentified Metal	n/a	object	4
147-2020	6	5	fill	Unidentified Metal	n/a	object	751
147-2041	6	5	fill	Unidentified Metal	n/a	object	3
147-2042	6	5	fill	Unidentified Metal	n/a	object	3
147-2236	6	5	floor	Unidentified metal	n/a	object	2
147-2313	6	5	floor	Unidentified Metal	n/a	object	5
147-2329	6	5	surface-tile	Unidentified Metal	n/a	object	3
147-2684	6	7	floor	Unidentified metal	n/a	object	9
147-2689	6	7	floor	Unidentified metal	n/a	object	70
147-2615	6	8	5	Unidentified metal	n/a	object	1
147-2383.D	6	n/a	general excavation	Unidentified metal	n/a	object	133
147-2582.D	6	n/a	general excavation	Unidentified metal	n/a	object	10
147-1280	6	U21; Stratigraphic Cut 1	no levels	Unidentified metal	n/a	object	7

147-2192	6	5	floor 2	Unidentified metal	n/a	strap	21
155-393	6	5	floor to floor	Unidentified metal	n/a	strap	5
155-394	6	5	floor-to-floor	Unidentified metal	n/a	strap	2
155-367	6	5	floor-to-floor	Unidentified metal	n/a	unknown	8
155-398	6	5	floor-to-floor	Unidentified metal	n/a	unknown	5
147-2149	6	2	fill	Unidentified metal	n/a	mic. pieces	8
147-1627	U21; Stratigraphic Cut 1	2	fill	Unidentified metal	n/a	misc.	29
147-1286	6	U21; Stratigraphic Cut 1	no levels	Unidentified metal	n/a	misc.	63

Appendix Vb: Metal in Gabel collection.

Object #	Group	Subgroup	Object Name	Object name	Wg ht	C n t
147-B-581	Architectural	Household	door boss	iron;fragment	20.82	1
147-B-1620	Architectural	Household	door boss	door boss	52.96	1
147-B-1229	Architectural	Household	door boss	iron;fragment;hole	59.30	1
147-B-928	Architectural	Household	hinge	iron;fragment	196.80	1
147-B-929	Architectural	Household	hinge	iron;fragment	50.74	1
147-B-641.D3	Architectural	Household	latch	iron;fragment	4.10	1
147-B-1063	Household	Household	key	iron;fragment	37.20	1
513-97-278	Household	Household	key	iron; fragment	42.70	1
147-B-33.D2	Building Materials & Architecture	Construction hardware	nail	iron;fragment	2.00	1
147-B-65.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	3.60	1
147-B-70.D2	Building Materials & Architecture	Construction hardware	nail	iron;fragment	16.24	1
147-B-96	Building Materials & Architecture	Construction hardware	nail	iron;fragment	8.80	1
147-B-360	Building Materials & Architecture	Construction hardware	nail	iron;fragment	8.85	1
147-B-373	Building Materials & Architecture	Construction hardware	nail	iron;fragment	2.50	1
147-B-419	Building Materials & Architecture	Construction hardware	nail	iron;fragment	10.60	1
147-B-421.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	11.10	1
147-B-497	Building Materials & Architecture	Construction hardware	nail	iron;fragment	9.90	1
147-B-564	Building Materials & Architecture	Construction hardware	nail	iron;fragment	6.60	1
147-B-665.D2	Building Materials & Architecture	Construction hardware	nail	iron;fragment	55.60	8
147-B-746.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	19.80	3
147-B-766	Building Materials & Architecture	Construction hardware	nail	iron;fragment	2.90	1

147-B-782	Building Materials & Architecture	Construction hardware	nail	iron;fragment	8.10	1
147-B-798	Building Materials & Architecture	Construction hardware	nail	iron;fragment	47.50	4
147-B-852.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	70.80	7
147-B-852.D	Building Materials & Architecture	Construction hardware	nail	not square	16.00	4
147-B-852.D	Building Materials & Architecture	Construction hardware	nail	iron	13.30	2
147-B-915	Building Materials & Architecture	Construction hardware	nail	iron;fragment	6.85	1
147-B-947	Building Materials & Architecture	Construction hardware	nail	iron;fragment	14.82	4
147-B-967	Building Materials & Architecture	Construction hardware	nail	iron;fragment	24.90	3
147-B-985	Building Materials & Architecture	Construction hardware	nail	iron;fragment	10.43	1
147-B-1000	Building Materials & Architecture	Construction hardware	nail	iron;fragment	4.45	1
147-B-1037	Building Materials & Architecture	Construction hardware	nail	iron;fragment	20.30	4
147-B-1087	Building Materials & Architecture	Construction hardware	nail	iron;fragment	58.40	7
147-B-1149.D2	Building Materials & Architecture	Construction hardware	nail	iron;fragment	13.30	1
147-B-1615.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	7.76	1
147-B-1618	Building Materials & Architecture	Construction hardware	nail	iron;fragment, rusted at base	5.82	1
147-B-1622	Building Materials & Architecture	Construction hardware	nail	iron;fragment	9.70	1
147-B-1623	Building Materials & Architecture	Construction hardware	nail	iron;fragment	5.40	1
147-B-1624	Building Materials & Architecture	Construction hardware	nail	iron;fragment	4.09	2
147-B-1628	Building Materials & Architecture	Construction hardware	nail	iron;fragment	14.80	1
147-B-1629	Building Materials & Architecture	Construction hardware	nail	iron;fragment	13.30	1
147-B-1631	Building Materials & Architecture	Construction hardware	nail	iron;fragment	8.94	1
147-B-1633	Building Materials & Architecture	Construction hardware	nail	iron;fragment	3.20	1

147-B-1634	Building Materials & Architecture	Construction hardware	nail	iron;fragment	5.35	1
147-B-1635	Building Materials & Architecture	Construction hardware	nail	iron;fragment	8.81	2
147-B-1642	Building Materials & Architecture	Construction hardware	nail	iron;fragment	3.52	1
147-B-1647	Building Materials & Architecture	Construction hardware	nail	iron;fragment	4.70	1
147-B-917	Building Materials & Architecture	Construction hardware	nail	iron;fragment	4.47	1
147-B-864	Building Materials & Architecture	Construction hardware	nail	iron;fragment all	5.00	1
147-B-545	Building Materials & Architecture	Construction hardware	nail	iron;fragment	14.40	1
147-B-968.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	6.40	1
147-B-608.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	7.68	1
147-B-282	Building Materials & Architecture	Construction hardware	nail	iron;fragment	16.20	1
147-B-472.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	9.37	1
147-B-601	Building Materials & Architecture	Construction hardware	nail	iron;fragment	292.10	16
147-B-5.D	Building Materials & Architecture	Construction hardware	nail	iron	23.00	3
147-B-327	Building Materials & Architecture	Construction hardware	nail	iron;fragment	42.80	3
147-B-327	Building Materials & Architecture	Construction hardware	nail		15.00	2
147-B-723.D	Building Materials & Architecture	Construction hardware	nail	iron;fragment	4.04	3
147-B-723.D	Building Materials & Architecture	Construction hardware	nail	iron	4.12	1
147-B-1189	Building Materials & Architecture	Construction hardware	nail	iron;fragment	12.95	1
147-B-3043	Building Materials & Architecture	Construction hardware	nail	iron;fragment	66.30	4
147-B-3044	Building Materials & Architecture	Construction hardware	nail		20.00	4
147-B-3045	Building Materials & Architecture	Construction hardware	screw		2.89	1
147-B-3046	Building Materials & Architecture	Construction hardware	spike		28.70	1

147-B-219	Building Materials & Architecture	Construction hardware	spike	iron;fragment	68.00	1
147-B-479	Building Materials & Architecture	Construction hardware	spike	iron;fragment	29.50	1
147-B-489	Building Materials & Architecture	Construction hardware	spike	iron;fragment	133.90	1
147-B-558	Building Materials & Architecture	Construction hardware	spike	iron;fragment	34.40	1
147-B-601.D	Building Materials & Architecture	Construction hardware	spike	iron;fragment	266.70	1
147-B-601.D2	Building Materials & Architecture	Construction hardware	spike	iron;fragment	32.60	1
147-B-622	Building Materials & Architecture	Construction hardware	spike	iron;fragment	38.10	1
147-B-699	Building Materials & Architecture	Construction hardware	spike	iron;fragment	52.60	2
147-B-724.D9	Building Materials & Architecture	Construction hardware	spike	iron;fragment	15.00	1
147-B-745	Building Materials & Architecture	Construction hardware	spike	iron;fragment	80.00	1
147-B-768	Building Materials & Architecture	Construction hardware	spike	iron;fragment	31.10	1
147-B-1023	Building Materials & Architecture	Construction hardware	Spike	iron;fragment	39.70	1
147-B-1646	Building Materials & Architecture	Construction hardware	spike	iron;fragment	13.80	1
147-B665.D2	Building Materials & Architecture	Construction hardware	spike	iron; fragment	30.30	1
147-B-641.D4	Building Materials & Architecture	Construction hardware	staple	iron;fragment	5.80	1
147-B-665.D4	Building Materials & Architecture	Construction hardware	staple	iron;fragment	6.22	1
147-B-800.D2	Building Materials & Architecture	Construction hardware	staple	iron;fragment	7.00	1
147-B-3044	Building Materials & Architecture	Construction hardware	staple	iron;fragment	13.20	2
147-B-703	Building Materials & Architecture	Construction hardware	tack	brass	0.43	1
147-B-537	Button		object	iron;embossed	22.30	1
147-B-1141	Hardware	Construction hardware	chain links	iron;fragment	5.75	1
147-B-1625	Hardware	Construction hardware	chain links	iron;fragment	14.40	1

147-B-1636	Hardware	Construction hardware	chain links	iron;fragment	8.52	1
147-B-1640	Hardware	Construction hardware	chain links	iron;fragment	10.00	1
147-B-3048	Hardware	Construction hardware	chain links	iron;fragment	22.90	3
147-B-252	Hardware	Construction hardware	hook	iron;fragment;hook	9.30	1
147-B-110.D	Hardware	Construction hardware	hook	iron;fragment	6.30	1
147-B-884	Hardware	Construction hardware	hook	iron;fragment	22.01	3
147-B-622.D	Hardware	Construction hardware	hook	iron;fragment	14.40	1
147-B-641.D2	Hardware	Construction hardware	hook	iron;fragment	28.50	3
147-B-665.D5	Hardware	Construction hardware	hook	iron;fragment	11.20	1
147-B-665.D6	Hardware	Construction hardware	hook	iron;fragment	16.30	1
147-B-724.D11	Hardware	Construction hardware	hook	iron;fragment	4.52	3
147-B-746.D2	Hardware	Construction hardware	hook	iron;fragment	12.90	1
147-B-724.D10	Hardware	Construction hardware	hook	iron;fragment	22.80	3
147-B-819	Hardware	Construction hardware	hook	iron; fragment	15.40	1
147-B-1315	Hardware	Metal bands and strapping	strap	building	91.20	1
147-B-345.D	Hardware	Metal bands and strapping	strap	iron;fragment;rivet	53.30	1
421	Hardware	Metal bands and strapping	strap		55.60	3
147-B-884.D	Hardware	Metal bands and strapping	strap	iron;fragment	48.00	4
147-B-665.D3	Hardware	Metal bands and strapping	strap	iron;fragment	62.70	1
147-B-938.D	Hardware	Metal bands and strapping	strap	iron;fragment	68.00	3
147-B-1643.D	Hardware	Metal bands and strapping	strap	iron;fragment	16.20	1
147-B-250	Hardware	Metal bands and strapping	strap	iron;fragment	13.70	1

147-B-369.D	Hardware	Metal bands and strapping	strap	iron;fragment	1.98	1
147-B-553	Hardware	Metal bands and strapping	strap	iron;fragment	14.40	1
147-B-724.D5	Hardware	Metal bands and strapping	strap	iron;fragment	39.00	2
147-B-766.D	Hardware	Metal bands and strapping	strap	iron;fragment	5.60	1
147-B-1629.D	Hardware	Metal bands and strapping	strap	iron;fragment	18.55	1
147-B-1299	Hardware	Metal bands and strapping	strap	iron;fragment	233.11	1
unkown	Hardware	Metal bands and strapping	strap	iron	278.00	9
147-B-1089.D	Hardware	Metal bands and strapping	strap	iron; fragment	10.40	1
147-B-1147	Hardware	Metal bands and strapping	strap	iron;fragment	17.20	1
147-B-641.D5	Hardware	Miscellaneous hardware	hoop	iron;fragment	55.00	1
147-B-852.D2	Hardware	Miscellaneous hardware	hoop	iron;fragment	12.42	1
147-B-724.D2	Hardware	Miscellaneous hardware	plate	iron;fragment	25.60	1
147-B-800.D	Hardware	Miscellaneous hardware	plate	iron;fragment	196.00	1
147-B-1052	Hardware	Miscellaneous hardware	plate	iron;fragment	24.42	1
147-B-5.D2	Hardware	Miscellaneous hardware	plate	iron;lead	74.90	2
147-B-1621	Hardware	Miscellaneous hardware	wire	iron;fragment	2.17	1
147-B-1643	Hardware	Miscellaneous hardware	wire	iron;fragment	22.20	7
147-B-154.D5	Hardware	Miscellaneous hardware	wire	iron;fragment	4.70	1
147-B-416.D	Hardware	Miscellaneous hardware	wire	iron;fragment	4.23	2
147-B-724.D6	Hardware	Miscellaneous hardware	wire	iron;fragment	3.45	3
147-B-746	Hardware	Miscellaneous hardware	wire	iron;fragment	10.00	3
147-B-966	Hardware	Miscellaneous hardware	wire	iron;fragment	18.30	3

147-B-1314	Hardware	Miscellaneous hardware	wire	iron;fragment	15.73	3
147-B-641.D6	Hardware	Miscellaneous hardware	wire	iron;fragment	2.80	1
147-B-1298	Household	Kitchen	kettle	iron;fragment	1200.00	1
147-B-1298.D	Household	Kitchen	kettle handle	iron;fragment	51.70	1
147-B-144.D	Household	Miscellaneous household items	candleholder	iron;fragment	147.96	1
513-97-5	Household	Miscellaneous household items	fork handle, tool		12.70	1
147-B-1086	Tool	Livery	bridle bit	iron;fragment	54.00	1
147-B-324	Tool	Livery	buckle	copper;fragment	32.33	1
147-B-478	Tool	Livery	spur	iron;fragment	67.00	1
147-B-969	Tool	Livery	spur	iron	20.00	1
147-B-3042	Tool	Agricultural	ax head	iron;fragment	1200.00	1
147-B-333	Tool	Agricultural	hoe	iron;fragment	1800.00	1
147-B-818	Tool	Agricultural	pitchfork	iron;fragment	1500.00	1
147-B-1068	Tool	Agricultural	sickle	iron;fragment	198.70	1
147-B-700	Tool	Carpenter's tools	knife blade	iron;fragment	40.80	1
147-B-724.D7	Tool	Carpenter's tools	knife blade	iron;fragment	23.78	1
147-B-1056	Tool	Carpenter's tools	knife blade	iron;fragment	30.60	1
147-B-355.D	Tool	Carpenter's tools	saw blade	iron;fragment	1500.00	1
147-B-549.D	Tool	Carpenter's tools	tip of knife or file, tool	iron;fragment	4.54	1
421	Tool	Carpenter's tools	tool, top of screwdriver	carpinter's tools	47.10	1
147-B-724.D	Tool	Household tools	scissors	iron;fragment	36.52	1
147-B-968	Tool	Household tools	scissors	iron;fragment	8.00	1

147-B-345.D2	Tool	miscellaneous tool	tool, unknown	iron;fragment;loop	54.20	1
147-B-379.D	Tool	miscellaneous tool	tool, unknown	iron;fragment, tool	46.60	1
147-B-352.D	Tool	miscellaneous tool	tool, unknown	iron;fragment	210.80	1
147-B-724.D4	Tool	miscellaneous tool	tool, unknown	iron;fragment	41.80	1
147-B-863	Tool	miscellaneous tool	tool, unknown	iron;fragment	10.30	1
147-B-1077	Tool	miscellaneous tool	tool, unknown	iron;fragment	32.99	1
147-B-1088.D	Tool	Miscellaneous tool	Unknown tool	iron;fragment	37.50	1
147-B-1064	Tool	Miscellaneous tool	Unknown tool	iron;fragment	85.60	1
147-B-1316	Tool	Miscellaneous tool	Unknown tool	iron;fragment	14.70	1
147-B-641.D	Tool	miscellaneous tool	Unknown tool	iron;fragment	900.00	1
147-B-1627	Unidentified metal		object	iron;fragment	24.40	1
147-B-1339	Unidentified metal		object	iron;fragment	4.00	1
147-B-1058.D	Unidentified metal		object	iron;fragment	11.00	1
147-B-343	Unidentified metal		object	iron;fragment	20.62	1
147-B-1641	Unidentified metal		object	iron;fragment	20.01	1
147-B-3047	Unidentified metal		object	iron;fragment	34.50	1
147-B-3046	Unidentified metal		object	iron;fragment	13.30	1
147-B-1088	Unidentified metal		object	iron;fragment	282.50	15
147-B-783.D	Unidentified metal		object	iron;fragment	7.70	1
147-B-327.D	Unidentified metal		object	iron;fragment	3.86	1
147-B-315	Unidentified metal		object	iron;fragment	2.00	1
147-B-420.D	Unidentified metal		object	iron;fragment	141.50	100

147-B-1645	Unidentified metal		object	iron;fragment	4.13	1
147-B-138.D	Unidentified metal		object	iron;fragment	7.80	1
147-B-421	Unidentified metal		object	iron;fragment	51.40	4
147-B-800.D3	Unidentified metal		object	iron;fragment	5.40	1
147-B-1639	Unidentified metal		object	iron;fragment	2.65	1
147-B-852	Unidentified metal		object	iron;fragment	5.84	1
147-B-622.D2	Unidentified metal		object	iron;fragment	5.92	1
147-B-1616	Unidentified metal		object	iron;fragment	13.70	1
147-B-1617	Unidentified metal		object	iron;fragment	4.20	1
147-B-1630	Unidentified metal		object	iron;fragment	4.80	1
147-B-1644	Unidentified metal		object	iron;fragment	5.24	1
147-B-865.D	Unidentified metal		object	iron;fragment	14.06	1
147-B-247.D2	Unidentified metal		object	iron;fragment	25.50	1
147-B-724.D8	Unidentified metal		object	iron;fragment	24.50	1
147-B-968.D2	Unidentified metal		object	iron;fragment;rectangular	48.40	1
147-B-641.D7	Unidentified metal		object	iron;fragment	3.15	1
147-B-916	Unidentified metal		object	iron;fragment	14.50	1
147-B-724.D3	Unidentified metal		object	iron;fragment	48.00	1
147-B-865.D2	Unidentified metal		object	iron;fragment	3.37	1
147-B-918	Unidentified metal		object	iron;fragment	5.42	1

Appendix Via: Glass in Deetz collection

Ob#	fea	rm	context	Group	Subgrp	Description	Notes	wght	cnt
147-1846	6	3	floor	Building Materials & Architecture	Window Glass	glass, clear; flat	flat	0.2	1
147-2863	6	3	floor-to-floor	Building & Architecture	Window glass	glass, clear; flat	flat	4	1
147-2105	6	1	floor	Building Materials & Architecture	Window Glass	clear	flat	7.30	1
155-399	6	2	clean up	Building Materials & Architecture	Window Glass	clear	flat	8.00	1
147-2148	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	4.00	9
147-1940	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	0.20	1
147-1941	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	0.20	1
147-1942	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	3.60	1

147-1943	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	0.10	1
147-1944	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	0.10	1
147-1945	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	0.30	1
147-1939	6	2	fill	Building Materials & Architecture	Window Glass	clear	flat	2.00	1
147-2587	6	4	fill	Building Materials & Architecture	Window Glass	clear	flat	1.60	1
147-2596	6	4	fill	Building Materials & Architecture	Window Glass	clear	flat	0.50	1
147-1962	6	4	surface tile	Building Materials & Architecture	Window Glass	clear	flat	0.20	1
147-1964	6	4	surface tile	Building Materials & Architecture	Window Glass	clear	flat	0.50	1
147-1963	6	4	surface tile	Building Materials & Architecture	Window Glass	clear	flat	0.40	1

155-321	Feature 9	5	drain in room 5 in the Indian Barracks	Building Materials & Architecture	Window Glass	clear	flat	0.40	1
147-2038	6	5	fill	Building Materials & Architecture	Window Glass	clear	flat	8.00	1
147-2114	6	general excavation		Building Materials & Architecture	Window Glass	clear	flat	3.80	1
147-2109	6	general excavation		Building Materials & Architecture	Window Glass	clear	flat	2.20	1
147-2115	6	general excavation		Building Materials & Architecture	Window Glass	clear	flat	2.20	1
147-2116	6	general excavation		Building Materials & Architecture	Window Glass	clear	flat	0.50	1
147-2119	6	general excavation		Building Materials & Architecture	Window Glass	clear	flat	0.40	1
147-2120	6	general excavation		Building Materials & Architecture	Window Glass	clear	flat	0.40	1
147-2121	6	general excavation		Building Materials & Architecture	Window Glass	clear	flat	1.50	1

155-254	6	3	floor-to-floor	Building & Architecture	Window glass	glass, clear; patina; flat	flat	0.53	1
155-111	6	1	exterior of east wall	Building Materials & Architecture	Window Glass	clear/patina	flat	1.50	1
155-345	6	1	fill	Building Materials & Architecture	Window Glass	clear/patina	flat	22.00	1
155-403	6	1	fill	Building Materials & Architecture	Window Glass	clear/patina	flat	23.00	1
155-1205	6	1	fill-floor	Building Materials & Architecture	Window Glass	clear/patina	flat	5.00	1
147-1572	U21	1	floor	Building Materials & Architecture	Window Glass	clear/patina	flat	3.00	1
147-2104	6	1	floor	Building Materials & Architecture	Window Glass	clear/patina	flat	1.40	5
155-333	6	1	surface to tile	Building Materials & Architecture	Window Glass	clear/patina	flat	70.00	1
155-1217	6	2	fill	Building Materials & Architecture	Window Glass	clear/patina	flat	2.00	3

155-242	6	2	floor-floor	Building Materials & Architecture	Window Glass	clear/patina	flat	0.60	1
155-268	6	2	roof	Building Materials & Architecture	Window Glass	clear/patina	flat	4.20	1
147-2630	6	4	surface tile	Building Materials & Architecture	Window Glass	clear/patina	flat	4.10	1
147-1257	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	2.20	1
147-1238	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	3.50	1
147-1241	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	1.20	1
147-1242	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	1.50	1
147-1244	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	2.00	1
147-1249	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	2.00	1

147-1260	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	1.20	1
147-1261	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	1.40	1
147-1291	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	2.10	1
147-1488	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	3.10	1
147-1489	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	2.20	1
147-1490	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	0.80	1
147-1298	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	clear/patina	flat	1.50	1
147-1831	6	3	fill	Building Materials & Architecture	Window Glass	glass, clear;patina flat	flat	2	1
147-1830	6	3	fill	Building Materials & Architecture	Window Glass	glass, clear;patina flat	flat	2	1

147-1626	U21	2	fill	Building Materials & Architecture	Window Glass	light blue	flat	11.20	1
147-1602	U21; Stratigraphic Cut 1	2	no levels	Building Materials & Architecture	Window Glass	light blue	flat	0.50	1
147-1296	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light blue	flat	1.80	1
147-1250				Building Materials & Architecture	Window Glass	light blue	flat	0.43	1
147-1604	U21; Stratigraphic Cut 1	2	no levels	Building Materials & Architecture	Window Glass	light blue/patina	flat	1.80	1
147-1290	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light blue/patina	flat	5.00	1
147-1292	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light blue/patina	flat	3.60	1
147-1293	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light blue/patina	flat	2.50	1
147-1294	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light blue/patina	flat	3.70	1

147-1297	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light blue/patina	flat	1.00	1
147-1299	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light blue/patina	flat	7.60	1
147-1816	6	3	fill	Building Materials & Architecture	Window Glass	glass, light green;flat	flat	2.8	1
147-1900	6	1	fill	Building Materials & Architecture	Window Glass	light green	flat	0.50	1
147-1902	6	1	fill	Building Materials & Architecture	Window Glass	light green	flat	1.10	1
147-1903	6	1	fill	Building Materials & Architecture	Window Glass	light green	flat	0.60	1
147-1533	U21; Stratigraphic Cut 1	1	no levels	Building Materials & Architecture	Window Glass	light green	flat	17.80	12
147-1601	U21; Stratigraphic Cut 1	2	no levels	Building Materials & Architecture	Window Glass	light green	flat	0.20	1
147-1703	6	4	floor	Building Materials & Architecture	Window Glass	light green	flat	1.40	1

147-2036	6	5	fill	Building Materials & Architecture	Window Glass	light green	flat	4.40	1
155-1869	6	7	fill	Building Materials & Architecture	Window Glass	light green	flat	1.20	1
147-1252	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green	flat	0.80	1
147-1254	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green	flat	2.10	1
147-1818	6	3	fill	Building Materials & Architecture	Window Glass	glass, green; gold; flat	flat	1	1
147-1821	6	3	fill	Building Materials & Architecture	Window Glass	glass, green;patina, gold color; flat	flat	0.73	1
147-1702	6	4	floor	Building Materials & Architecture	Window Glass	light green/ patina	flat	4.87	1
147-1704	6	4	floor	Building Materials & Architecture	Window Glass	light green/ patina	flat	0.30	1
147-1705	6	4	floor	Building Materials & Architecture	Window Glass	light green/ patina	flat	0.90	1

147-2622	6	4	floor-to-floor	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.60	1
147-2884	6	4	floor-to-floor	Building Materials & Architecture	Window Glass	light green/ patina	flat	0.50	1
147-1239	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.20	1
147-1240	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	2.10	1
147-1245	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.20	1
147-1246	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	6.20	1
147-1248	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	2.00	1
147-1251	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	2.00	1
147-1253	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.20	1

147-1255	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.00	1
147-1256	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	2.20	1
147-1258	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.70	1
147-1259	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	0.30	1
147-1243	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.00	1
147-1295	U21; Stratigraphic Cut 1		no levels	Building Materials & Architecture	Window Glass	light green/ patina	flat	1.20	1
155-1208	6	1	fill-floor	Building Materials & Architecture	Window Glass	light green/patina	flat	6.50	1
147-2910	6	3	floor-to-floor	Consumer	Liquor and Spirits/ Figured flask	glass, green; square base;	Horizontal Plane: Chamfered rectangular	212	1
147-2047	6	3	surface tile	Consumer	Liquor spirits or Wine bottle	glass, green; lip	Vertical Plane: Neck and finish	20.8	1

147-2713	6	7	surface tile	Consumer	Liquor/ Spirits	green, base	Horizontal plane; rectangular/ Chamfered rectangular	103.00	1
147-2909	6	3	floor-to-floor	Consumer	Liquor/ Spirits	glass, green, base	rounded/ curved/ irregular	576	1
147-2122	6	general excavation		Consumer	Liquor/ Spirits	green, base	Horizontal plane: rectangular base	93.00	1
147-2128	6	general excavation		Consumer	Liquor/ Spirits	green, lip	Vertical plane: Lip, String Rim	26.00	1
147-2907b	6	3	floor-to-floor	Consumer	Liquor/ Spirits	glass, dark green, base	rounded/ curved/ irregular	550	47
147-2112	6	general excavation		Consumer	Liquor/ Spirits	light blue, lip	Vertical plane: Lip, String Rim	3.50	1
155-1698	6	4	floor-floor	Consumer	Liquor/ Spirits	clear, base	Horizontal Plane: rectangular; Vertical: straight	97.50	4
147-2364	6	6	surface tile	Household	ink bottle	clear, whole ink bottle	Horizontal plane: rounded ribbed; Vertical: straight	22.00	1
147-2647	6	4	surface tile	Household	unknown, small	green	Horizontal Plane: Rectangular	30.00	1
147-2741	6	general excavation		Household	oil/cologne bottle	blue	Horizontal plane: round base	18.60	1

155-120	6	1	exterior of east wall	Consumer	unknown	amber	rounded/ curved/ irregular	0.40	1
147-2204	6	5	floor 2	Consumer	unknown	amber	rounded/ curved/ irregular	0.50	1
155-89	6	7	n/a	Consumer	unknown	amber	rounded/ curved/ irregular	50.00	1
147-2052	6	3	surface tile	Consumer	Misc.	amber	rounded/ curved/ irregular	4.2	1
155-327	6	1	surface to tile	Consumer	unknown	clear	rounded/ curved/ irregular	2.50	1
147-2577	Feature 9	5	drain in room 5 in the Indian Barracks	Consumer	unknown	clear	rounded/ curved/ irregular	0.50	1
147-2174	6	4	fill	Consumer	unknown	clear	rounded/ curved/ irregular	12.30	1
147-2037	6	5	fill	Consumer	unknown	clear	rounded/ curved/ irregular	3.00	1
147-1765	6	6	fill	Consumer	unknown	clear	rounded/ curved/ irregular	1.10	1
147-2230	6	7	fill	Consumer	unknown	clear	rounded/ curved/ irregular	6.00	4
147-2670	6	4	floor	Consumer	unknown	clear	rounded/ curved/ irregular	7.00	1
147-2663	6	4	floor	Consumer	unknown	clear	rounded/ curved/ irregular	3.00	1
147-2671	6	4	floor	Consumer	unknown	clear	rounded/ curved/ irregular	1.40	1
147-2235	6	5	floor	Consumer	unknown	clear	rounded/ curved/ irregular	3.00	3
147-2395	6	6	floor	Consumer	unknown	clear	rounded/ curved/ irregular	0.62	1

147-2275	6	6	floor	Consumer	unknown	clear	rounded/ curved/ irregular	1.80	1
147-2319	6	5	floor	Consumer	unknown	clear	Horizontal plane: rectangular (1)	26.00	1
147-2320	6	5	floor	Consumer	unknown	clear	Horizontal plane: rectangular (2)	49.00	1
147-2029	6	5	floor	Consumer	unknown	clear	rounded/ curved/ irregular	40.00	1
155-387	6	7	tile to floor	Consumer	unknown	clear	rounded/ curved/ irregular	25.00	1
147-2213	6	5	floor 2	Consumer	unknown	clear	rounded/ curved/ irregular	2.00	1
147-2203	6	5	floor 2	Consumer	unknown	clear	rounded/ curved/ irregular	1.40	1
155-392	6	5	floor to floor	Consumer	unknown	clear	rounded/ curved/ irregular	4.86	1
155-202	6	4	floor-floor	Consumer	unknown	clear	rounded/ curved/ irregular	2.30	1
147-2883	6	4	floor-to-floor	Consumer	unknown	clear	rounded/ curved/ irregular	0.40	1
155-161	6	7	roof	Consumer	unknown	clear	rounded/ curved/ irregular	1.40	1
155-179	6	7	surface test pit	Consumer	unknown	clear	rounded/ curved/ irregular	0.80	1
147-2048	6	3	surface tile	Consumer	Misc.	clear	rounded/ curved/ irregular	5.1	1
147-2342	6	6	surface tile	Consumer	unknown	clear	rounded/ curved/ irregular	8.20	1

147-2400	6	7	surface tile	Consumer	unknown	clear	rounded/ curved/ irregular	3.00	1
147-2401	6	7	surface tile	Consumer	unknown	clear	rounded/ curved/ irregular	0.80	1
155-253	6	3	floor-to-floor	Consumer	Misc.	clear, patina	rounded/ curved/ irregular	1.22	1
155-152	6	6	floor to floor	Consumer	unknown	clear/patina	flat; thick	0.86	1
155-121	6	1	exterior of east wall	Consumer	unknown	green	rounded/ curved/ irregular	0.50	1
147-1904	6	1	fill	Consumer	unknown	green	rounded/ curved/ irregular	10.00	1
147-1947	6	2	fill	Consumer	unknown	green	rounded/ curved/ irregular	2.20	1
155-1218	6	2	fill	Consumer	unknown	green	rounded/ curved/ irregular	4.00	1
147-1948	6	2	fill	Consumer	unknown	green	rounded/ curved/ irregular	3.30	1
147-1953	6	2	floor	Consumer	unknown	green	rounded/ curved/ irregular	1.70	1
155-1226	6	2	floor-floor	Consumer	unknown	green	rounded/ curved/ irregular	12.00	2
155-91	6	2	roof	Consumer	unknown	green	rounded/ curved/ irregular	6.70	1
155-362	6	4	clean up	Consumer	unknown	green	rounded/ curved/ irregular	8.00	1
147-1711	6	3	fill	Consumer	Misc.	green	rounded/ curved/ irregular	16.6	1
147-1708	6	3	fill	Consumer	Misc.	green	rounded/ curved/ irregular	5.38	1

147-1709	6	3	fill	Consumer	Misc.	green	rounded/ curved/ irregular	10.5	1
147-1712	6	3	fill	Consumer	Misc.	green	rounded/ curved/ irregular	15	1
147-2173	6	4	fill	Consumer	unknown	green	rounded/ curved/ irregular	3.00	1
147-2176	6	4	fill	Consumer	unknown	green	rounded/ curved/ irregular	0.70	1
147-2599	6	4	fill	Consumer	unknown	green	rounded/ curved/ irregular	4.50	1
147-2618	6	4	fill	Consumer	unknown	green	rounded/ curved/ irregular	1.00	1
147-2035	6	5	fill	Consumer	unknown	green	rounded/ curved/ irregular	2.20	1
147-2040	6	5	fill	Consumer	unknown	green	rounded/ curved/ irregular	2.00	1
147-1767	6	6	fill	Consumer	unknown	green	rounded/ curved/ irregular	2.50	1
147-1771	6	6	fill	Consumer	unknown	green	rounded/ curved/ irregular	4.00	1
147-1764	6	6	fill	Consumer	unknown	green	rounded/ curved/ irregular	20.64	1
147-1768	6	6	fill	Consumer	unknown	green	round/ curved/ irregular	2.88	1
147-1769	6	6	fill	Consumer	unknown	green	rounded/ curved/ irregular	3.40	1
147-2728	6	7	fill	Consumer	unknown	green	rounded/ curved/ irregular	1.70	1
147-2868	6	7	fill	Consumer	unknown	green	rounded/ curved/ irregular	1.50	1

147-2729	6	7	fill	Consumer	unknown	green	rounded/ curved/ irregular	2.50	1
147-2869	6	7	fill	Consumer	unknown	green	rounded/ curved/ irregular	2.20	1
147-1839	6	3	floor	Consumer	Misc.	green	rounded/ curved/ irregular	5.5	1
147-1837	6	3	floor	Consumer	Misc.	green	rounded/ curved/ irregular	19	1
147-1843	6	3	floor	Consumer	Misc.	green	rounded/ curved/ irregular	3.11	1
147-1845	6	3	floor	Consumer	Misc.	green	rounded/ curved/ irregular	18.5	1
147-1838	6	3	floor	Consumer	Misc.	green	rounded/ curved/ irregular	3.12	1
147-2665	6	4	floor	Consumer	unknown	green	rounded/ curved/ irregular	2.70	1
147-2298	6	6	floor	Consumer	unknown	green	rounded/ curved/ irregular	1.89	1
147-2299	6	6	floor	Consumer	unknown	green	rounded/ curved/ irregular	1.50	1
147-2386	6	6	floor	Consumer	unknown	green	rounded/ curved/ irregular	3.90	1
147-2399	6	6	floor	Consumer	unknown	green	rounded/ curved/ irregular	0.70	1
147-2676	6	7	floor	Consumer	unknown	green	rounded/ curved/ irregular	1.75	1
147-2682	6	7	floor	Consumer	unknown	green	rounded/ curved/ irregular	13.80	1
147-2205	6	5	floor 2	Consumer	unknown	green	rounded/ curved/ irregular	1.59	1

155-196	6	4	floor-floor	Consumer	unknown	green	rounded/curved/irregular	1.80	1
155-370	6	4	floor-floor	Consumer	unknown	green	rounded/curved/irregular	0.70	1
147-2891	6	3	floor-to-floor	Consumer	Misc	green	rounded/curved/irregular	2	1
147-2912	6	3	floor-to-floor	Consumer	Misc	green	rounded/curved/irregular	2.8	1
147-2916	6	3	floor-to-floor	Consumer	Misc	green	rounded/curved/irregular	32	1
155-101	6	3	floor-to-floor	Consumer	Misc	green	rounded/curved/irregular	3.25	1
155-102	6	3	floor-to-floor	Consumer	Misc	green	rounded/curved/irregular	0.96	1
147-2621	6	4	floor-to-floor	Consumer	unknown	green	rounded/curved/irregular	1.00	1
147-1486	U21; Stratigraphic Cut 1		no levels	Consumer	unknown	green	rounded/curved/irregular	10.20	1
147-1487	U21; Stratigraphic Cut 1		no levels	Consumer	unknown	green	rounded/curved/irregular	10.50	1
155-172	6	7	roof	Consumer	unknown	green	rounded/curved/irregular	0.80	1
147-2645	6	4	surface tile	Consumer	unknown	green	rounded/curved/irregular	5.50	1
147-1959	6	4	surface tile	Consumer	unknown	green	rounded/curved/irregular	2.50	1
147-1960	6	4	surface tile	Consumer	unknown	green	rounded/curved/irregular	6.80	1
147-1965	6	4	surface tile	Consumer	unknown	green	rounded/curved/irregular	1.00	1

147-2646	6	4	surface tile	Consumer	unknown	green	rounded/ curved/ irregular	3.30	1
147-2633	6	4	surface tile	Consumer	unknown	green	rounded/ curved/ irregular	2.00	1
147-2363	6	6	surface tile	Consumer	unknown	green	rounded/ curved/ irregular	1.00	1
147-2345	6	6	surface tile	Consumer	unknown	green	rounded/ curved/ irregular	3.00	1
147-2346	6	6	surface tile	Consumer	unknown	green	rounded/ curved/ irregular	2.40	1
147-2744	6	general excavation		Consumer	unknown	green	rounded/ curved/ irregular	5.80	1
147-2110	6	general excavation		Consumer	unknown	green	rounded/ curved/ irregular	4.50	1
147-2118	6	general excavation		Consumer	unknown	green	rounded/ curved/ irregular	4.60	1
147-2113	6	general excavation		Consumer	unknown	green	rounded/ curved/ irregular	3.30	1
147-2573	Feature 9	5	drain in room 5 in the Indian Barracks	Consumer	unknown	green/patina	rounded/ curved/ irregular	57.00	1
147-2574	Feature 9	5	drain in room 5 in the Indian Barracks	Consumer	unknown	green/patina	rounded/ curved/ irregular	13.00	1
147-2575	Feature 9	5	drain in room 5 in the Indian Barracks	Consumer	unknown	green/patina	rounded/ curved/ irregular	11.00	1
147-2576	Feature 9	5	drain in room 5 in the Indian Barracks	Consumer	unknown	green/patina	rounded/ curved/ irregular	1.50	1

147-2582	Feature 9	5	drain in room 5 in the Indian Barracks	Consumer	unknown	green/patina	rounded/ curved/ irregular	15.00	1
155-319	Feature 9	5	drain in room 5 in the Indian Barracks	Consumer	unknown	green/patina	rounded/ curved/ irregular	4.50	1
147-1820	6	3	fill	Consumer	Misc.	green, patina	rounded/ curved/ irregular	1	1
147-1823	6	3	fill	Consumer	Misc.	green, patina	rounded/ curved/ irregular	1	1
147-2720	6	7	fill	Consumer	unknown	green/patina	rounded/ curved/ irregular	5.00	1
147-2915	6	3	floor-to-floor	Consumer	Misc.	green, patina	rounded/ curved/ irregular	11	1
147-2890	6	3	floor-to-floor	Consumer	Misc.	green, patina	rounded/ curved/ irregular	8.65	1
147-1946	6	2	fill	Consumer	unknown	light blue	rounded/ curved/ irregular	1.00	1
147-2712	6	7	floor	Consumer	unknown	light blue	rounded/ curved/ irregular	28.00	1
147-2634	6	4	surface tile	Consumer	unknown	light blue	rounded/ curved/ irregular	6.40	1
147-2918 &2919	6	3	floor-to-floor	Consumer	Unique bottle base	pink	Horizontal Plane: Round	55	1
147-2919 & 2918	6	3	floor-to-floor	Consumer	Unique bottle base	pink	Horizontal Plane: Round	45	1
147-1815	6	3	fill	Consumer	Misc.	purple, patina	rounded/ curved/ irregular	3.9	1
147-2653	6	4	floor	Consumer	unknown	purple/patina	rounded/ curved/ irregular	1.50	1

147-2911	6	3	floor-to-floor	Consumer	Wine Bottle	glass, dark green; neck and lip	Vertical Plane: Neck and finish	48	1
147-2906	6	3	floor-to-floor	Consumer	Wine Bottle	glass, green, whole bottle	whole bottle	330	35
147-2914	6	3	floor-to-floor	Consumer	Wine Bottle	green, patina; base, neck, and sherds, patina	Vertical Plane: Neck and finish; Horizontal plane: base, circular, with push-up	230	1
147-2913	6	3	floor-to-floor	Consumer	Wine Bottle	green, patina; neck (same as 2914)	Vertical Plane: Neck	78	2
147-2202	6	5	floor 2	Consumer	Wine bottle	green	Vertical plane: probably handle by neck	4.50	1
147-2907a	6	3	floor-to-floor	Consumer	Wine Bottle	green/patina	rounded/ curved/ irregular	670	35
147-1710	6	3	fill	Consumer	Wine bottle	glass, green; part of base	Horizontal Plane: Round; Vertical plane: push-up or kick-up	23	1

147-1772	6	6	fill	Consumer	Wine bottle	green, lip	Vertical plane: Finish, could be from the same bottle as 1772	4.50	1
147-1766	6	6	fill	Consumer	Wine bottle	green	Vertical plane: Neck	5.00	1
147-2730	6	7	fill	Consumer	Wine bottle	green	Vertical plane: Neck and finish	25.00	1
147-3122.D	6	From Indian Barracks		Consumer	Wine Bottle	green	rounded/ curved/ irregular	445.20	1
147-3121	6	From Indian Barracks		Consumer	Wine Bottle	green/ patina	rounded/ curved/ irregular	13.81	1
147-1532	6	3	northwest corner, against wall W	Household	Drinking cup	glass, clear; base	Horizontal Plane: Round; same as 1622. 1917; Vertical plane: Straight	75	1
147-2917	6	3	floor-to-floor	Household	Drinking cup	glass, clear; base	Horizontal Plane: Round; same as 1622	54	1
147-1622	U21	2	fill	Household	Drinking glass	clear	Horizontal Plane: Round	41.40	1
147-1934	6	2	fill	Household	Wine glass stem	clear	Horizontal Plane: Round	55.00	1
147-1773	6	6	fill	Household	Wine stopper	clear	Stopper (Decanter Top)	56.00	1

155-199	6	4	floor-floor	Consumer	unknown	green	rounded/ curved/ irregular	12.00	1

Appendix VIb: Glass in Gabel collection.

Object Number	Group	Subgroup	Description	Diagnostic Notes	Weight	Count
147-B-659.D2	Building Material	window glass	clear	flat	1.47	5
147-B-659.D4	Building Material	Window glass	clear	flat	7.59	13
147-B-908	Building Material	Window glass	clear	flat	1.2	2
147-B-84.D	Building Material	Window glass	clear	flat	1.5	1
147-B-186	Building Material	Window glass	clear	flat	0.77	1
147-B-194	Building Material	Window glass	clear	flat	0.3	1
147-B-213	Building Material	Window glass	clear	flat	0.6	1
147-B-1107	Building Material	Window glass	clear	flat	2.35	7
147-B-1163	Building Material	Window glass	clear	flat	0.6	3
147-B-1607	Building Material	Window glass	clear	flat	0.68	2
147-B-87.D	Building Material	Window glass	clear	flat	0.12	1
147-B-301.D	Building Material	Window glass	clear	flat	0.4	1
147-B-375	Building Material	Window glass	clear	flat	0.2	1
147-B-426	Building Material	Window glass	clear	flat	1.4	1
147-B-435	Building Material	Window glass	clear	flat	0.56	1
147-B-449	Building Material	Window glass	clear	flat	1.1	1
147-B-534.D	Building Material	Window glass	clear	flat	3.5	1
147-B-538.D	Building Material	Window glass	clear	flat	2.3	1
147-B-555.D	Building Material	Window glass	clear	flat	1.7	1
147-B-1043	Building Material	Window glass	clear	flat	1	1
147-B-1092	Building Material	Window glass	clear	flat	2.8	6

147-B-1508	Building Material	Window glass	clear	flat	0.7	1
147-B-1592	Building Material	Window glass	clear	flat	0.18	1
147-B-1596.D	Building Material	Window glass	clear	flat	0.98	1
147-B-1597.D	Building Material	Window glass	clear	flat	0.96	2
147-B-817	Building Material	Window glass	clear	flat	1.39	2
147-B-425.D	Building Material	Window glass	clear	flat	1.91	5
147-B-852	Building Material	Window glass	clear	flat	1.4	3
147-B-114.D	Building Material	Window glass	clear	flat	0.23	1
147-B-1610	Building Material	Window glass	clear	flat	0.4	1
147-B-607.D8	Building Material	Window glass	clear	flat	5	8
147-B-1034	Building Material	Window glass	clear	flat	2	8
147-B-979.D	Building Material	Window glass	clear/patina	flat	1.7	1
147-B-770	Building Material	Window glass	clear/patina	flat	1.3	2
147-B-364.D	Building Material	Window glass	clear/patina	flat	0.87	1
147-B-1148	Building Material	Window glass	clear/patina	flat	0.42	1
147-B-964	Building Material	Window glass	clear/patina	flat	5.3	4
147-B-610.D5	Building Material	Window glass	clear/patina	flat	6.67	6
147-B-714	Building Material	Window glass	clear/patina	flat	5	11
147-B-859	Building Material	Window glass	clear/patina	flat	2.8	3
147-B-938	Building Material	Window glass	clear/patina	flat	2	3
147-B-1184	Building Material	Window glass	clear/patina	flat	1.23	3
147-B-1606	Building Material	Window glass	clear/patina	flat	0.2	1

147-B-1599	Building Material	Window glass	clear/patina	flat	0.33	1
147-B-882	Building Material	Window glass	clear/patina	flat	3.45	5
147-B-635	Building Material	Window glass	clear/patina	flat	2.72	1
147-B-1122	Building Material	Window glass	clear/patina	flat	5.8	3
147-B-1609	Building Material	Window glass	clear/patina	flat	0.63	3
147-B-349.D	Building Material	Window glass	clear/patina	flat	1.78	1
147-B-662.D5	Building Material	Window glass	clear/patina	flat	7.5	8
147-B-793	Building Material	Window glass	clear/patina	flat	4	14
147-B-319.D	Building Material	Window glass	clear/patina	flat	1.3	3
147-B-786.D	Building Material	Window glass	clear/patina	flat	4.5	8
147-B-765	Building Material	Window glass	clear/patina	flat	2.75	6
147-B-198	Building Material	Window glass	clear/patina	flat	1.36	1
147-B-316.D	Building Material	Window glass	light green/patina	flat	0.95	1
147-B-739	Building Material	Window glass	light green, patina	flat	2.2	8
147-B-1011.D	Building Material	Window glass	glass, light green; patina	flat	0.91	3
147-B-275.D	Building Material	Window glass	light blue/patina	flat	1.32	1
147-B-607.D8	Building Material	Window glass	light blue/patina	flat	3.69	8
147-B-356.D2	Consumer	Canning Jar	clear	rounded/ curved/ irregular	1.8	1
147-B-246	Consumer	Drinking cup	clear	rounded/ curved/ irregular	8.7	1
147-B-371	Consumer	Drinking cup	clear	rounded/ curved/ irregular	26.1	1
147-B-736	Consumer	Liquor bottle	brown	rounded/ curved/ irregular	3.43	1
147-B-857	Consumer	Liquor bottle	clear	rounded/ curved/ irregular	11.3	1

147-B-881	Consumer	Liquor bottle	green	rectangular	38.3	12
147-B-1138	Consumer	Liquor bottle	green	rounded/ curved/ irregular	8.6	1
147-B-963	Consumer	Liquor bottle	green	rectangular	13.7	5
147-B-62.D3	Consumer	Liquor bottle	green/patina	rectangular	17	2
147-B-1330	Consumer	Liquor bottle	green/patina	rectangular	229	3
147-B-1145	Consumer	Medicinal	blue	flat, thick	6	1
147-B-735	Consumer	Medicinal	blue	rounded/ curved/ irregular	8.37	1
147-B-423	Consumer	Medicinal	clear	rounded/ curved/ irregular	52.6	1
147-B-84.D	Consumer	Medicinal	clear/patina	rounded/ curved/ irregular	17.4	1
147-B-1606	Consumer	unknown	black	rounded/ curved/ irregular	2.4	1
147-B-1040	Consumer	unknown	blue	rounded/ curved/ irregular	0.33	1
147-B-1164	Consumer	unknown	blue	rounded/ curved/ irregular	0.23	1
147-B-264.D	Consumer	unknown	blue	rounded/ curved/ irregular	0.29	1
147-B-607.D11	Consumer	unknown	blue	rounded/ curved/ irregular	3.15	2
147-B-738	Consumer	unknown	blue	rounded/ curved/ irregular	0.77	1
147-B-1057	Consumer	unknown	blue	rounded/ curved/ irregular	0.27	1
147-B-1125	Consumer	unknown	blue	rounded/ curved/ irregular	0.42	1
147-B-69.D3	Consumer	unknown	blue	rounded/ curved/ irregular	3.2	1
147-B-3025	Consumer	unknown	blue	rounded/ curved/ irregular	0.94	1
147-B-530	Consumer	unknown	blue	rounded/ curved/ irregular	3.4	1
147-B-3027	Consumer	unknown	brown	rounded/ curved/ irregular	2.13	1
147-B-1039	Consumer	unknown	brown	rounded/ curved/ irregular	0.77	1
147-B-84.D	Consumer	unknown	brown	rounded/ curved/ irregular	3	1

147-B-1600	Consumer	unknown	brown	rounded/ curved/ irregular	1.5	1
147-B-95.D	Consumer	unknown	brown	rounded/ curved/ irregular	0.6	1
147-B-3024	Consumer	unknown	brown	rounded/ curved/ irregular	0.7	1
147-B-3027	Consumer	unknown	brown/ patina	rounded/ curved/ irregular	9.7	1
147-B-1056	Consumer	unknown	clear	flat	0.88	1
147-B-740	Consumer	unknown	clear	flat, thick	4.34	3
147-B-937	Consumer	unknown	clear	flat, thick	2.5	1
147-B-1607	Consumer	unknown	clear	rounded/ curved/ irregular	1	1
147-B-1161	Consumer	unknown	clear	rounded/ curved/ irregular	93.41	1
147-B-659.D7	Consumer	unknown	clear	rounded/ curved/ irregular	2.9	1
147-B-3030	Consumer	unknown	clear	rounded/ curved/ irregular	21.8	1
147-B-425.D	Consumer	unknown	clear	rounded/ curved/ irregular	2.8	5
147-B-906	Consumer	unknown	clear	rounded/ curved/ irregular	17.7	2
147-B-301.D	Consumer	unknown	clear	rounded/ curved/ irregular	1.15	2
147-B-607.D9	Consumer	unknown	clear	rounded/ curved/ irregular	20.7	9
147-B-662.D5	Consumer	unknown	clear	rounded/ curved/ irregular	2.98	3
147-B-737	Consumer	unknown	clear	rounded/ curved/ irregular	6.74	4
147-B-796	Consumer	unknown	clear	rounded/ curved/ irregular	9.9	7
147-B-982	Consumer	unknown	clear	rounded/ curved/ irregular	4.14	2
147-B-1109	Consumer	unknown	clear	rounded/ curved/ irregular	2.8	2
147-B-1147	Consumer	unknown	clear	rounded/ curved/ irregular	2.8	2
147-B-610.D7	Consumer	unknown	clear	rounded/ curved/ irregular	2.83	2
147-B-1037	Consumer	unknown	clear	rounded/ curved/ irregular	48.8	2
147-B-1187	Consumer	unknown	clear	rounded/ curved/ irregular	22.5	1

147-B-341.D	Consumer	unknown	clear	rounded/ curved/ irregular	2.4	1
147-B-422.D	Consumer	unknown	clear	rounded/ curved/ irregular	2.43	1
147-B-1011.D	Consumer	unknown	clear	rounded/ curved/ irregular	1.2	1
147-B-1192	Consumer	unknown	clear	rounded/ curved/ irregular	0.8	1
147-B-590.D	Consumer	unknown	clear	rounded/ curved/ irregular	9.77	1
147-B-997	Consumer	unknown	clear	rounded/ curved/ irregular	49	1
147-B-1144	Consumer	unknown	clear	rounded/curved/irregular	11	1
147-B-772	Consumer	unknown	clear	rounded/ curved/ irregular	6.29	1
147-B-850	Consumer	unknown	clear	rounded/ curved/ irregular	14.2	1
147-B-1124	Consumer	unknown	clear	thick	3.02	1
147-B-1140	Consumer	unknown	clear/patina	rounded/ curved/ irregular	1.72	1
147-B-1613	Consumer	unknown	clear/patina	rounded/ curved/ irregular	3.97	2
147-B-3026	Consumer	unknown	clear/patina	rounded/ curved/ irregular	1.34	1
147-B-1602	Consumer	unknown	clear/patina	thick, flat	3	2
147-B-475	Consumer	unknown	green	flat	6	1
147-B-476.D2	Consumer	unknown	green	flat	2.4	1
147-B-696	Consumer	unknown	green	rounded/ curved/ irregular	7.69	1
147-B-1608	Consumer	unknown	green	rounded/ curved/ irregular	9.7	1
147-B-24.D2	Consumer	unknown	green	rounded/ curved/ irregular	1.24	1
147-B-335.D	Consumer	unknown	green	rounded/ curved/ irregular	3	1
147-B-361	Consumer	unknown	green	rounded/ curved/ irregular	1.84	1
147-B-376	Consumer	unknown	green	rounded/ curved/ irregular	4.56	1
147-B-364.D	Consumer	unknown	green	rounded/ curved/ irregular	11.29	1
147-B-659.D5	Consumer	unknown	green	rounded/ curved/ irregular	40	12

147-B-907	Consumer	unknown	green	rounded/ curved/ irregular	17.7	2
147-B-1610	Consumer	unknown	green	rounded/ curved/ irregular	1	1
147-B-853	Consumer	unknown	green	rounded/ curved/ irregular	0.58	1
147-B-214	Consumer	unknown	green	rounded/ curved/ irregular	2	1
147-B-625	Consumer	unknown	green	rounded/ curved/ irregular	22.75	6
147-B-94.D	Consumer	unknown	green	rounded/ curved/ irregular	1.2	2
147-B-193	Consumer	unknown	green	rounded/ curved/ irregular	7.8	2
147-B-203	Consumer	unknown	green	rounded/ curved/ irregular	7.7	1
147-B-268	Consumer	unknown	green	rounded/ curved/ irregular	3.8	1
147-B-505	Consumer	unknown	green	rounded/ curved/ irregular	6.3	2
147-B-526.D	Consumer	unknown	green	rounded/ curved/ irregular	6.84	1
147-B-560.D	Consumer	unknown	green	rounded/ curved/ irregular	2	1
147-B-896	Consumer	unknown	green	rounded/ curved/ irregular	1	1
147-B-970	Consumer	unknown	green	rounded/ curved/ irregular	1.2	1
147-B-1028	Consumer	unknown	green	rounded/ curved/ irregular	7.2	1
147-B-1093	Consumer	unknown	green	rounded/ curved/ irregular	5.6	10
147-B-1145	Consumer	unknown	green	rounded/ curved/ irregular	13.7	1
147-B-1312	Consumer	unknown	green	rounded/ curved/ irregular	3.6	1
147-B-1322	Consumer	unknown	green	rounded/ curved/ irregular	15.7	2
147-B-1594	Consumer	unknown	green	rounded/ curved/ irregular	3.46	1
147-B-1600	Consumer	unknown	green	rounded/ curved/ irregular	1.7	1
147-B-1603	Consumer	unknown	green	rounded/ curved/ irregular	0.5	1

147-B-1611	Consumer	unknown	green	rounded/ curved/ irregular	2.2	1
147-B-1614	Consumer	unknown	green	rounded/ curved/ irregular	2.8	1
147-B-185	Consumer	unknown	green	rounded/ curved/ irregular	9.06	4
147-B-301.D	Consumer	unknown	green	rounded/ curved/ irregular	f1.9	2
147-B-662.D5	Consumer	unknown	green	rounded/ curved/ irregular	28.3	6
147-B-734	Consumer	unknown	green	rounded/ curved/ irregular	8.2	6
147-B-794	Consumer	unknown	green	rounded/ curved/ irregular	12.7	11
147-B-851	Consumer	unknown	green	rounded/ curved/ irregular	13.4	4
147-B-858	Consumer	unknown	green	rounded/ curved/ irregular	10.7	5
147-B-936	Consumer	unknown	green	rounded/ curved/ irregular	8.2	2
147-B-981	Consumer	unknown	green	rounded/ curved/ irregular	8.3	2
147-B-1108	Consumer	unknown	green	rounded/ curved/ irregular	8.8	4
147-B-1123	Consumer	unknown	green	rounded/ curved/ irregular	12.5	3
147-B-1146	Consumer	unknown	green	rounded/ curved/ irregular	2.7	4
147-B-1162	Consumer	unknown	green	rounded/ curved/ irregular	12	2
147-B-1603	Consumer	unknown	green	rounded/ curved/ irregular	1	1
147-B-1605	Consumer	unknown	green	rounded/ curved/ irregular	0.62	1
147-B-1607	Consumer	unknown	green	rounded/ curved/ irregular	0.4	1
147-B-308	Consumer	unknown	green	rounded/curved/irregular	2	2
147-B-607.D10	Consumer	unknown	green	rounded/ curved/ irregular	53.6	4
147-B-797	Consumer	unknown	green	rounded/ curved/ irregular	47	2
147-B-1141	Consumer	unknown	green	flat	0.61	1
147-B-769	Consumer	unknown	green	rounded/ curved/ irregular	3.14	2

147-B-199	Consumer	unknown	green	Flat, thick	7.7	1
147-B-767	Consumer	unknown	green/patina	Flat, thick	54	2
147-B-935	Consumer	unknown	green/patina	rounded/ curved/ irregular	13	1
147-B-659.D3	Consumer	unknown	green/patina	rounded/ curved/ irregular	1.5	2
147-B-319.D	Consumer	unknown	green/patina	flat	2.2	2
147-B-607.D12	Consumer	unknown	green/patina	rounded/ curved/ irregular	18.6	12
147-B-662.D5	Consumer	unknown	green/patina	rounded/ curved/ irregular	12	2
147-B-717	Consumer	unknown	green/patina	rounded/ curved/ irregular	2.5	1
147-B-1035	Consumer	unknown	green/patina	rounded/ curved/ irregular	11.1	6
147-B-1036	Consumer	unknown	green/patina	rounded/ curved/ irregular	4.34	2
147-B-1055	Consumer	unknown	green/patina	rounded/ curved/ irregular	6.84	1
147-B-1186	Consumer	unknown	green/patina	rounded/ curved/ irregular	18.8	6
147-B-1604	Consumer	unknown	green/patina	thick	0.3	1
147-B-734.D3	Consumer	unknown	green/patina	flat	1.2	1
147-B-1090	Consumer	unknown	green/patina	Flat, thick	30	2
147-B-358.D2	Consumer	unknown	green/patina	rounded/ curved/ irregular	2.5	1
147-B-1324	Consumer	unknown	green/patina	rounded/ curved/ irregular	1.56	2
147-B-16.D2	Consumer	unknown	green/patina	rounded/ curved/ irregular	5.68	1
147-B-425.D	Consumer	unknown	green/patina	rounded/ curved/ irregular	26.4	5
147-B-659.D6	Consumer	unknown	green/patina	rounded/ curved/ irregular	2.5	1
147-B-1608	Consumer	unknown	green/patina	rounded/ curved/ irregular	2.7	1
147-B-1185	Consumer	unknown	green/patina	rounded/ curved/ irregular	2.2	2
147-B-132.D2	Consumer	unknown	green/patina	rounded/ curved/ irregular	3.12	1
147-B-301.D	Consumer	unknown	green/patina	rounded/ curved/ irregular	4	2

147-B-460.D	Consumer	unknown	green/patina	rounded/ curved/ irregular	2.89	1
147-B-463.D	Consumer	unknown	green/patina	rounded/ curved/ irregular	17.62	2
147-B-464	Consumer	unknown	green/patina	rounded/ curved/ irregular	38.2	1
147-B-532	Consumer	unknown	green/patina	rounded/ curved/ irregular	17.4	1
147-B-1598.D	Consumer	unknown	green/patina	rounded/ curved/ irregular	9.7	1
147-B-1601	Consumer	unknown	green/patina	rounded/ curved/ irregular	6.39	1
147-B-562	Consumer	unknown	green/patina	rounded/ curved/ irregular	5.5	1
147-B-816	Consumer	unknown	green/patina	rounded/ curved/ irregular	14.9	2
147-B-769.D2	Consumer	unknown	green/patina	rounded/ curved/ irregular	9.31	1
147-B-167	Consumer	unknown	green/patina	rounded/curved/irregular	9.8	4
147-B-798	Consumer	unknown	red	rounded/ curved/ irregular	0.5	1
147-B-3028	Consumer	unknown	white	rounded/ curved/ irregular	1.1	2
147-B-425.D	Consumer	unknown	white	rounded/ curved/ irregular	3	1
147-B-715	Consumer	unknown	white/patina	rounded/ curved/ irregular	1.95	1
147-B-768	Consumer	unknown	white/patina	rounded/ curved/ irregular	3.5	1
147-B-786.D	Consumer	unknown	white/patina	rounded/ curved/ irregular	12.2	4
147-B-1089	Consumer	Wine bottle	green	rounded/ curved/ irregular	28.9	7
147-B-610.D6	Consumer	Wine bottle	green	rounded/ curved/ irregular	217.7	8
147-B-42.D2	Consumer	Wine bottle	green	rounded/ curved/ irregular	25.43	3
147-B-288.D	Consumer	Wine bottle	green	rounded/ curved/ irregular	16.7	1
147-B-500.D	Consumer	Wine bottle	green	rounded/ curved/ irregular	54.8	2
147-B-1180	Consumer	Wine bottle	green	rounded/ curved/ irregular	10.63	1

147-B-224.D	Consumer	Wine bottle	green	rounded/ curved/ irregular	2.6	1
147-B-3029	Consumer	Wine bottle	green	rounded/ curved/ irregular	96.3	12
147-B-240.D	Consumer	Wine bottle	green	rounded/ curved/ irregular	10.89	1
147-B-1137	Consumer	Wine bottle	green	rounded/ curved/ irregular	12	1
147-B-197	Consumer	Wine bottle	green	rounded/ curved/ irregular	7.7	1
147-B-421	Consumer	Wine bottle	green	rounded/ curved/ irregular	25.7	1
147-B-766	Consumer	Wine bottle	green	rounded/ curved/ irregular	43	7
147-B-31.D2	Consumer	Wine bottle	green/patina	rounded/ curved/ irregular	2.36	1
147-B-1110	Consumer	Wine bottle	green/patina	rounded/ curved/ irregular	142	2
147-B-733	Consumer	Wine bottle	green/ patina	rounded/ curved/ irregular	71.4	5
147-B-1139	Consumer	Wine bottle	green/patina	rounded/ curved/ irregular	44	2
147-B-771	Consumer	Wine bottle	green/patina	rounded/ curved/ irregular	46	6
147-B-1091	Consumer	wine stopper	glass clear	thieck, rounded, stopper	15.2	1

Appendix VIIa: Ceramics in Deetz collection.

Ob#	Feat	room	context	Description	Ty	Sub	Décor.	Class	Wt
147-2099	6	General Excavation		rim piece	Chinese	Porcelain	Canton	flatware (platter	15.1
147-2108	6	General Excavation			Chinese	Porcelain	Canton	unknown	2.2
147-2107	6	General Excavation			Chinese	Porcelain	Canton	flatware (unknown)	2.8
147-2742	6	General Excavation			Chinese	Porcelain	Canton	Flatware (platter)	3.0
1952.D	6	2	fill	hard paste, Chinese porcelain; blue design	Chinese	Porcelain	Canton	Unknown	1.0
147-2371	6	3	floor 2	porcelain ;glaze, light blue; paint, blue;	Chinese	Porcelain	Canton	Flatware	9.3
155-1229	6	6	fill	porcelain; paint, blue; Chinese	Chinese	Porcelain	Canton	Flatware	3.1
155-1864	6	7	fill	porcelain; paint, blue; Chinese porcelain29.1	Chinese	Porcelain	Canton	hollow are (large vessel)	29.1
147-2904	6	3	floor1-2		Chinese	Porcelain	Canton	lid to serving vessel	500.0
147-2903 (VC)	6	3	Florr1-2	1.00	Chinese	Porcelain	Canton	large canton ware serving dish	880.0

155-201	6	4	floor to floor	porcelain;;paint, blue;	Chinese	Porcelain	Canton	Flatware (plate)	3.7
147-2296	6	6	floor	porcelain; glaze, light blue;paint, blue	Chinese	Porcelain	Canton	Unknown	2.0
155-240	6	2	floor to floor	porcelain; glaze, light blue;paint, blue; Canton, very thin with rim	Chinese	Porcelain	Canton	Unidentifiable	1.5
147-2077	6	3	surface to tile	porcelain; glaze, light blue;paint, blue; Chinese porcelain base sherd with hand painted design	Chinese	Porcelain	Canton	Flatware (plate)	3.0
147-2240	6	5	floor	porcelain; glaze, light blue;paint, blue; Chinese porcelain with light blue design	Chinese	Porcelain	Canton	Flatware (plate)	0.8
147-1652	6	4	floor	porcelain; glaze, light blue;paint, blue; Chinese porcelain; hard paste	Chinese	Porcelain	Canton	Unidentifiable	1.0
147-1844	6	3	floor	porcelain; glaze, light blue;paint, blue; Chinese porcelain with design, hand painted; hardpaste	Chinese	Porcelain	Canton	Flatware	1.3

147-2402	6	7	surface to tile	porcelain; glaze, light blue;paint, blue; Chinese porcelain rim shed; hard paste	Chinese	Porcelain	Canton	Flatware (plate)	28.3
147-2680	6	7	floor	porcelain; glaze, light blue;paint, blue; Chinese porcelain; hand painted; canton ware	Chinese	Porcelain	Canton	Flatware (plate)	2.8
147-2222	6	7	fill	porcelain; glaze, light blue;paint, blue; hand painted design	Chinese	Porcelain	Canton	Flatware (plate)	0.8
147-2711	6	7	surface to tile	porcelain; glaze, light blue;paint, blue; hand painted design; chinese porcelain; canton ware	Chinese	Porcelain	Canton	Flatware (plate)	1.2
147-2660	6	4	floor	porcelain; glaze, light blue;paint, blue; plate bottom; Chinese porcelain	Chinese	Porcelain	Canton	Flatware (plate)	14.7
147-2620	6	4	floor to floor	porcelain; glaze, light blue;paint, blue; plate bottom; Chinese porcelain; canton ware	Chinese	Porcelain	Canton	hollowware (bowl)	7.4

147-2344	6	6	surface to tile	porcelain; glaze, light blue;paint, blue;rim scalloped; Chinese porcelain	Chinese	Porcelain	Canton	Flatware	6.0
147-2861	6	3	floor to floor	porcelain; glaze, light blue;paint, dark blue; Chinese porcelain with hand painted design	Chinese	Porcelain	Canton	Flatware	3.2
147-2862	6	3	floor to floor	porcelain; glaze, light blue;paint, dark blue; Chinese porcelain with hand painted design	Chinese	Porcelain	Canton	Flatware	3.0
147-2103	6	1	floor	porcelain; glaze, light blue;paint, dark blue; Chinese porcelain with hand painted design	Chinese	Porcelain	Canton	Flatware (plate)	2.8
147-2033	6	5	fill	porcelain; glaze,;paint, blue; rim piece; chinese porcelain; handpainted design	Chinese	Porcelain	Canton	Flatware (plate)	1.2
155-337	6	1	fill	porcelain;paint, blue; base of plate or shallow bowl	Chinese	Porcelain	Canton	Hollow are (bowl)	5.4

155-92	6	3	floor 1-2	porcelain;paint, blue; Canton porcelain (looks chinese)	Chinese	Porcelain	Canton	Flatware (platter)	37.0
155-165	6	7	floor	porcelain;paint, orange, gold color, brown; chinese porcelain with painted design, could be a cup	Chinese	Porcelain	Famille Rose	Holloware (cup)	2.4
147-1598	Excavation Unit 21	2	no levels	porcelain;glaze, white; paint, orange, gold color, black, (chinese porcelain	Chinese	Porcelain	Famille Rose	Cup or tea ware	1.8
147-2323	6	6	surface to tile	porcelain;glaze, white; paint, gold color, green; chinese porcelain, handpainted design	Chinese	Porcelain	Famille Rose	Holloware (cup)	25.0
147-1841	6	3	floor	porcelain;glaze, white; paint, gold color, red, green; chinese porcelain with hand painted design in red gold and green; softpaste	Chinese	Porcelain	Famille Rose	Holloware (Teacup)	2.2

155-93	6	3	floor 1-2	porcelain;paint, blue, orange, yellow; chinese rim; Mandarin porcelain sherd	Chinese	Porcelain	overglazed Misc	Holloware (cup)	2.9
147-1597	Excavation Unit 21	2	no levels	porcelain;glazed, light blue;paint, blue; large chinese porcelain rim sherd	Chinese	Porcelain	Hand painted misc.	Flatware (platter)	78.0
147-1813	6	3	fill	Porcelain ;glaze, white; handle fragment	Chinese	Porcelain	Undecorated	Holloware (Cup)	2.7
155-95	6	3	floor 1-2	Porcelain	Chinese	Porcelain	Undecorated	Flatware	7.6
147-2370	6	3	floor 2	porcelain; glaze, light blue; chinese porcelain; hard paste	Chinese	Porcelain	Undecorated	Flatware	6.0
147-2889	6	4	floor to floor	very small white glazed rim piece; bowl or plate	Chinese	Porcelain	Undecorated	Unidentifiable	0.3
155-112	6	Exterior of East wall	n/a	porcelain, very thin, plain	Chinese	Porcelain	Undecorated	unknown	0.2
155-1847	6	7	fill	porcelain; paint, blue; Chinese	Chinese	Porcelain	Unknown	Unknown	2.8
155-335	6	1	fill	porcelain; paint, red; plate bottom	Chinese	Porcelain	Unknown	Holloware (bowl)	13.5
147-3134	From Indian Barracks			cream ware, hand painted, rim	English	Cream ware	hand painted	Hollow ware (cup)	0.6

147-2662	6	4	floor	earthenware; glaze, cream ware; rim;paint, purple	English	Cream ware	hand painted	Hollow are	2.5
2171	6	4	fill	rim sherd plate sherd or rim sherd	English	Cream ware	hand painted	Flatware (plate)	0.5
147-2274+6258:60	6	6	floor	earthenware; glaze, white; paint, orange, brown, blue; cup	English	Cream ware	Hand painted (banded)	cup	2.0
147-2327	6	5	surface to tile	earthenware; glaze, white; paint, orange, brown, green, blue; cup, rim	English	Cream ware	Hand painted (banded)	unknown	39.0
147-2403	6	7	surface to tile	earthenware; glaze, white; paint, orange, brown; banded; brown, yellow stripes on white hard paste	English	Cream ware	Hand painted (banded)	unknown	3.5
147-1599	Excavation Unit 21	2	no levels	earthenware; glaze, light blue; paint, blue; hand painted design	English	Cream ware	Hand painted (Peasant Style)	Hollow are (bowl)	4.6
147-1267	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, cream color;molded; rim; scalloped rim	English	Cream ware	edge decorated	flatware (plate)	11.0

147-2716	6	7	fill	earthenware;glaze, white; molded;burned; molded rim that is scallaped	English	Cream ware	edge decorated	Flatware (plate or platter)	10.5
155-1211	6	2	fill	earthenware; glaze, cream color; plate base; blue transfer	English	Cream ware	transfer ware	Flatware (plate)	3.0
155-1210	6	2	roof	earthenware; blue; plate sherd; blue transfer; plate base, just shaped with step; blue transfer	English	Cream ware	transfer ware	Flatware (pate)	1.7
147-2169	6	4	fill	earthenware;glaze, white; paint, orange transfer print, rim	English	Cream ware	transfer ware	Hollow are (Cup)	7.5
147-2669	6	4	floor	glaze, white; orange transfer	English	Cream ware	transfer ware	Hollow are (Cup)	6.5
155-1206	6	1	fill-floor	earthenware; glaze, cream color	English	Cream ware	undecorated	Flatware (plate)	4.4
155-1202	6	1	fill-floor	earthenware; glaze, cream color; rim; thin; plate	English	Cream ware	undecorated	Flatware (plate)	2.3
155-1223	6	2	floor to floor	earthenware; glaze, cream color; plate sherd	English	Cream ware	undecorated	Flatware (plate)	6.5

147-1619	Excavation Unit 21	2	fill	earthenware;glaze, cream color; plate rim	English	Cream ware	undecorated	Flatware (plate)	9.7
147-1951	6	2	fill	earthenware;glaze, cream color; softpaste porcelain	English	Cream ware	undecorated	Flatware (plate)	2.5
155-266	6	2	floor to floor	earthenware;glaze, cream ware plate sherd rim	English	Cream ware	undecorated	Flatware (plate)	10.8
147-1620	Excavation Unit 21	2	fill	earthenware;glaze, white; small step. Likely to a plate	English	Cream ware	undecorated	Flatware (plate)	1.2
155-88	6	2	surface to roof	earthenware, cream color;glaze, white; English sherd	English	Cream ware	undecorated	Flatware (pate)	1.7
155-256	6	3	floor to floor	earthenware;cream color; white plate sherd	English	Cream ware	undecorated	Flatware (plate)	1.6
147-2860	6	3	floor to floor	earthenware;glaze, cream colored	English	Cream ware	undecorated	Unidentifiable	2.2
147-1721	6	3	fill	earthenware;glaze, cream colored; plate bottom	English	Cream ware	undecorated	Flatware (plate)	26
147-2859	6	3	floor to floor	earthenware;glaze, cream colored; plate bottom	English	Cream ware	undecorated	Flatware (plate)	8.2

147-1842	6	3	floor	earthenware;glaze, cream ware; plate rim; softpaste	English	Cream ware	undecorated	Soup bowl	9.2
155-203	6	4	floor to floor	ceramic;glaze,	English	cream ware	undecorated	Flatware (plate)	0.2
147-1966	6	4	surface to tile	cream glazed sherd; white English	English	Cream ware	undecorated	Flatware (plate)	2.0
147-2654	6	4	floor	earthenware;glaze, CREAM	English	Cream ware	undecorated	Unidentifiable	0.3
147-2657	6	4	floor	earthenware;glaze, CREAM	English	Cream ware	undecorated	Flatware	2.1
147-2658	6	4	floor	earthenware;glaze, CREAM color	English	Cream ware	undecorated	Flatware (plate)	1.5
147-2619	6	4	floor to floor	earthenware;glaze, cream paint, blue; transfer print design	English	White ware	undecorated	Hollow are (plate)	1.2
155-367	6	4	floor to floor	earthenware;glaze, cream; rim sherd, plane; English earthenware	English	cream ware	undecorated	Flatware (plate)	2.0
155-314	Feature 9	5	outside trench	earthenware;glaze, white; sherd	English	Cream ware	undecorated	Flatware (plate)	1.9
155-391	6	5	floor-to-floor	earthenware, creamware, base sherd	English	Cream ware	Undecorated	Flatware (plate)	6.7

147-2163	6	5	floor	earthenware;glaze, cream color; large fragment of plate, large rim	English	Cream ware	Undecorated	Flatware (plate)	65.8
147-2167	6	5	floor	earthenware;glaze, cream ware; base of plate	English	Cream ware	Undecorated	Flatware (plate)	4.5
147-1988	6	6	floor	earthenware;glaze, cream ware; plate frag, rim	English	cream ware	undecorated	Flatware	17.0
155-388	6	7	tile to floor	earthenware;cream color; plain curved sherd to s bowl	English	Cream ware	undecorated	Unidentifiable	0.8
147-2871	6	7	surface to tile	earthenware;glaze, cream color	English	Cream ware	undecorated	Flatware (plate)	1.7
147-2717	6	7	fill	earthenware;glaze, cream color; small frag	English	Cream ware	undecorated	Unidentifiable	1.2
155-1842	6	7	fill	English, Creamware; plate, RIM?	English	Cream ware	undecorated	Plate	30.0
147-2719	6	7	fill	earthenware;glaze, cream color	English	Cream ware	undecorated	Flatware	6.2
147-2094					English	Cream ware	undecorated	hollow are (bowl	5.0
147-2206	6	5	floor 2	earthenware;glaze, light blue;paint, blue;handle; transfer print	English	Pearl ware	transfer ware	Hollow are (Pitcher) handle	8.0

147-2882	6	4	floor to floor	earthenware;glaze, white; paint, blue; rim sherd. Design on the inside	English	pearlware	transfer ware	Flatware (plate)	15.0
147-2034	6	5	fill	earthenware;glaze, light blue; transfer w/flower	English	Pearl ware	transfer ware	Flatware (plate)	2.1
147-1266	Excavation Unit 21	Stratagraphic Cut 1	no levels	earthenware, light blue glaze	English	Peal ware	Undecorated	unknown	2.5
147-1300	Excavation Unit 21	Stratagraphic Cut 1	no levels	earthenware;glaze, light blue; sherd with little place for handle jutting out	English	Peal ware	Undecorated	Cup	4.3
155-401	6	2	clean up	earthenware;cream color; curved rim to bowl or cup, thin	English	Pearl ware	Undecorated	Holloware (Cup)	1.5
155-328	6	1	surface to tile	earthenware;fragment; iron stone; plate; rim frag	English	Pearl ware	Undecorated	Flatware (plate)	1.2
147-1303	Excavation Unit 21	Stratagraphic Cut 1	no levels	earthenware;glaze, light blue	English	Pearl ware	Undecorated	unknown	2.2

147-2343	6	5	surface to tile	earthenware;glaze, light blue;rim	English	Pearl ware	Undecorated	Flatware (plate)	3.7
147-2631	6	4	surface to tile	earthenware;glaze, white; bit of plat base	English	Pearl ware	Undecorated	Flatware (plate)	1.2
147-2220	6	7	fill	earthenware;glaze, white; light blue	English	Pearl ware	Undecorated	Flatware	1.2
147-2635	6	4	surface to tile	earthenware;glaze, white-bluish glaze	English	Pearl ware	Undecorated	Unidentifiable	4.8
147-1568	Excavation Unit 21	1	floor	porcelain;glaze, light blue	English	Pearl ware	Undecorated	unknown	1.6
147-1722	6	3	fill	stoneware, gray;glaze, dark brown;molded; manganese; overglazed	English	Rockingham Pottery	Decorated with protruding floral design	Pitcher	18.5
147-2866	6	7	fill	stoneware;glaze, brown, manganese	English	Rockingham Pottery	Undecorated	Unidentifiable	4.0
147-1717	6	3	fill	stoneware;glaze, dark brown; manganese	English	Rockingham Pottery	Undecorated	Pitcher	16.0
147-1724	6	3	fill	stoneware;glaze, dark brown; manganese	English	Rockingham Pottery	Undecorated	Pitcher	18.1

147-2032	6	5	fill	earthenware;glaze, white; paint, green;molded; rim; scalloped rim	English	White ware	edge decorated	Flatware (plate)	3.5
147-2632	6	4	surface to tile	earthenware;glaze, light blue;molded;paint, blue; scalloped rim	English	White ware	edge decorated	Flatware (plate)	2.2
147-2661	6	4	floor	earthenware;glaze, white; paint, black; scalloped rim; transfer ware	English	White ware	edge decorated	Flatware (plate)	12.0
147-2632	6	4	surface to tile	earthenware;glaze, light blue;molded;paint, blue; scalloped rim	English	White ware	edge decorated	Flatware (plate)	2.2
155-340	6	1	fill	earthenware;glaze, white; design, red	English	White ware	hand painted	Unknown	2.1
2095				rim	English	White ware	Hand painted (banded	hollow are	5.0
155-326	6	1	surface to tile	earthenware;glaze, cream color;design, blue; looks like the pitcher design; Stafforshire	English	White ware	transfer ware	Pitcher ?	3.0
155-338	6	1	fill	blue transfer; transferware; thin rim	English	White ware	transfer ware	Unknown	1.1
155-360	6	1	surface to tile	earthenware;glaze, white; design, blue; transfer	English	White ware	transfer ware	Unknown	4.5

147-1631	Excavation Unit 22	2	fill	black transferware to a plate	English	White ware	transfer ware	Flatware (plate)	1.1
147-1955	6	2	floor	earthenware;glaze, white; paint, blue; English glaze	English	White ware	transfer ware	pitcher?	14.0
155-267	6	2	floor to floor	earthenware; design, red; English staffordware; red transfer print	English	White ware	transfer ware	Flatware (plate)	2.2
155-217	6	3	clean up	earthenware; design, blue; English Stafforshire	English	White ware	transfer ware	unidentifiable	1.2
147-1828	6	3	fill	earthenware;glazed, white; paint, black transfer	English	White ware	transfer ware	Flatware (plate)	0.3
1829	6	3	fill	earthenwarel, white	English	White ware	transfer ware	Flatware (plate)	0.2
147-1809	6	3	fill	earthenware; paint, black, white; soft paste; w/ logo	English	White ware	transfer ware	Flatware (plate)	6.2
147-2172	6	4	fill	earthenware;glaze, white; paint, blue;molded, rim	English	White ware	transfer ware	Flatware (plate)	3.3
2586	6	4	fill	rim	English	White ware	transfer ware	flatware (plate)	4.8

155-1230	6	6	fill	earthenware; paint, blue; looks like to the pitcher in the visitor's center	English	white ware	transfer ware	Hollow are (pitcher?)	1.6
147-2221	6	7	fill	earthenware;glaze, white; paint, blue;molded; rim; hand painted blue	English	White ware	transfer ware	Flatware	1.2
147-2718	6	7	fill	earthenware;glaze, white; small frag; plate or platter	English	White ware	transfer ware	Flatware	1.7
147-2715	6	7	fill	earthenware;glaze, white; paint, red;rim; transfer	English	White ware	transfer ware	Flatware (plate)	1.0
147-1651	6	4	floor	earthenware;glaze, white; paint, black	English	White ware	transfer ware	Unidentifiable	1.8
147-2655	6	4	floor	earthenware;glaze, white; paint, blue; transfer print design	English	White ware	transfer ware	Hollow are (pitcher?)	2.0
147-2297	6	6	floor	earthenware;glaze, white; paint, blue; handpainted floral design	English	White ware	transfer ware	Unidentified	1.5
147-2271	6	6	floor	earthenware;glaze, white; paint, blue;rim; bowl frag; transfer paint	English	White ware	transfer ware	Flatware	5.5

147-2677	6	7	floor	earthenware;glaze, white; molded;paint, blue;rim; handpainted design; plate	English	White ware	transfer ware	Flatware (plate)	2.1
147-2233	6	7	floor	earthenware; paint, dark blue;glaze, light blue; transfer print; same as a few others before	English	White ware	transfer ware	Hollow are (pitcher)	1.3
147-2679	6	7	floor	earthenware;glaze, white; paint, red;rim; red transfer; plate rim	English	White ware	transfer ware	Flatware (plate)	17.0
147-2678	6	7	floor	earthenware;glaze, white; paint, blue;molded; (part of bowl to 2710); painted, rim	English	White ware	transfer ware	Hollow are (pitcher)	11.2
155-164	6	7	floor	earthenware; paint, blue;molded;rim; scalloped; staffordware, - no from reference	English	White ware	transfer ware	Flatware (plate)	2.2
147-2372	6	3	floor 2	earthenware; paint, dark blue, rim	English	White ware	transfer ware	Hollow are, Pitcher?	1.2
147-2902	6	3	floor to floor	earthenare; one whole bowl, soup bowls, blue transfer	English	White ware	transfer ware	Hollow are (bowl) whole	295.1

155-255	6	3	floor to floor	large handel, with flower, staffordware? Different cat No. in item list	English	White ware	transfer ware	Holloware (bowl) or pitcher	25.0
155-377	6	4	floor to floor	earthenware; design, blue; English Staffordshire; plate; blue transfer print	English	White ware	transfer ware	Flatware (plate)	1.3
155-363	6	4	floor to floor	earthenware; design, blue; staffordware	English	White ware	transfer ware	Flatware (plate)	3.2
147-2906 (VC)	6	3	Floor1-2	1.00	"Franklin Pitcher"	white ware	transfer ware	Canton	875.0
147-2367	Feature 9	5	n/a	earthenware;glaze, white; paint, red; red transfer print	English	White ware	transfer ware	Flatware (plate)	4.8
155-219	6	7	n/a	earthenware; design, blue;rim; Staffordware	English	White ware	transfer ware	Plate	1.2
155-74 &198	6	4	no level	earthenware;glaze, white; paint, black; scalloped rim; transfer ware	English	White ware	transfer ware	Flatware (plate)	8.2
155-76	6	4	no level	earthenware; design, red; English staffordware; red transfer print, rim	English	White ware	transfer ware	Flatware (plate)	12.2
155-315	Feature 9	5	outside trench	earthenware; design, blue; English Staffordshire; plate base; blue transfer print	English	White ware	transfer ware	Flatware (plate)	5.5

147-2710	6	7	pedestaled artifacts	earthenware;glaze, light blue;molded;paint, blue;rim; plate; painted blue	English	White ware	transfer ware	Flatware	54.0
155-171	6	7	roof	earthenware; paint, blue;rim; rim to a pitcher-looks like the one in the visitor's center	English	White ware	transfer ware	Hollow are (pitcher?)	0.8
147-2075	6	3	surface to tile	earthenware;glaze, white; paint, black (see also cat 1809); plate rim; black on white	English	White ware	transfer ware	Flatware (plate)	9.0
147-2636	6	4	surface to tile	earthenware;glaze, white; paint, blue; area for large handel; transfer print	English	White ware	transfer ware	Hollow are (bowl)	5.0
147-2333	6	5	surface to tile	earthenware; paint, dark blue; rim piece, same design as 2233; transfer	English	White ware	transfer ware	Hollow are (pitcher?)	1.2
147-2340	6	5	surface to tile	earthenware; paint, dark blue;glaze, light blue; transfer print; same as a few others before; rim piece	English	White ware	transfer ware	Hollow are (pitcher?)	2.3
147-2735	6	7	surface to tile	earthenware;glaze, white; paint, blue;molded; plate rim; painted blue	English	White ware	transfer ware	Flatware (plate)	12.0

147-1272	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, white; blue; printed on both sides	English	White ware	transfer ware	Hollow are (cup or bowl)	2.0
147-1271	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, white; paint, blue;rim; transfer	English	White ware	transfer ware	Flatware (plate)	11.0
147-1273	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware; paint, blue;glaze, light blue; plate	English	White ware	transfer ware	Flatware (plate)	3.2
147-1289	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, white; blue transfer print	English	White ware	transfer ware	Flateware (plate)	31.0
2743		General Excavation		base of plate	English	White ware	transfer ware	Flatware (plate)	11.1
147-2390	6	6	floor	earthenware;glaze,	English	White ware	Undecorated	Flatware (plate)	2.9

147-1605	Excavation Unit 21	2	no levels	earthenware;glaze, white	English	White ware	Undecorated	Unkown	1.2
147-2170	6	4	fill	earthenware;glaze, white	English	White ware	undecorated	unkown	2.8
147-2656	6	4	floor	earthenware;glaze, white	English	White ware	undecorated	Flatware (plate)	2.1
147-2736	6	7	surface to tile	earthenware;glaze, white; molded; plate	English	White ware	undecorated	Flatware (plate)	8.6
147-1270	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, white; plain plate base (4)	English	White ware	undecorated	Flatware (plate)	14.8
147-1565	Excavation Unit 21	2	floor	earthenware;glaze, white; plate base; plain	English	White ware	undecorated	Soupbowl	11.5
147-2076	6	3	surface to tile	earthenware;glaze, white; plate rim;	English	White ware	undecorated	Flatware (plate)	8.2
155-325	6	1	surface to tile	earthenware;glaze, white; pocelain like; burnt	English	White ware	undecorated	Flatware (plate)	21.0

147-1269	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, white; rim; plain plate rim (3)	English	White ware	undecorated	Flatware (plate)	15.0
147-1483	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, white; rim; plate rim (1)	English	White ware	undecorated	Flatware (plate)	12.3
147-1268	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware;glaze, white; rim; plate rim (2); overglazed	English	White ware	undecorated	Flatware (plate)	13.2
147-1812	6	3	fill	earthenware;glaze, white; softpaste	English	White ware	undecorated	Unknown	1.2
147-1653	6	4	floor	earthenware;glaze, white; softpaste	English	White ware	undecorated	Unidentifiable	1.2
147-1824	6	3	fill	earthenware;glazed, white	English	White ware	undecorated	Unidentifiable	1.5
147-1825	6	3	fill	earthenware;glazed, white	English	White ware	undecorated	Unidentifiable	0.5
147-1826	6	3	fill	earthenware;glazed, white	English	White ware	undecorated	Unidentifiable	1.0

147-1827	6	3	fill	earthenware;glazed, white	English	White ware	undecorated	Unidentifiable	0.2
155-313	Feature 9	5	outside trench	earthenware;glaze, white; plate rim	English	White ware	undecorated	Flatware (plate)	4.3
147-2675	6	7	floor	earthenware;glaze, white; burned; flat; residue or asphaltum? plate or platter	English	White ware	undecorated	Flatware (plate)	36.0
147-2387	6	6	floor	earthenware;glaze, plate fragment; there is a step but not a base	English	White ware	undecorated	Flatware (plate)	3.2
155-339	6	1	fill	earthenware;glaze, white; plate rim	English	White ware	undecorated	Flatware (plate)	1.1
155-113	6	Exterior of East wall	n/a	earthenware;glaze, lead, green, orange; Mexican lead glazed pottery, green and organce; glazed intertior and exterior	Mexican Imports	Mexican low-fired earthenware	handpainted	unknown	0.6
147-2881	6	4	floor to floor	earthenware, orange;glaze, orange; rim sherd	Mexican Imports	Mexican low-fired earthenware	handpainted	Holloware	4.2

155-292	6	3	floor to floor	earthenware; design, orange; Mexican; painted	Mexican Imports	Mexican low-fired earthenware	handpainted	Unidentifiable	1.4
155-283	6	3	floor to floor	earthenware;glaze, lead;design, black; Mexican painted	Mexican Imports	Mexican low-fired earthenware	handpainted	Unidentifiable	1.4
147-2219	6	5	floor 2	earthenware, orange;glaze, orange;paint, brown; brown painted earthenware, rim	Mexican Imports	Mexican low-fired earthenware	handpainted	hollowware (bowl or cup)	0.2
155-279	6	3	floor to floor	earthenware;glaze, lead;rim; Mexican; rim	Mexican Imports	Mexican low-fired earthenware	handpainted	Hollowware (shallow bowl)	5.8
155-395	6	5	floor-to-floor	mexican earthenware rim sherd, thin	Mexican Imports	Mexican low-fired earthenware	Undecorated	hollowware (bowl or cup)	0.4

155-94	6	3	floor 1-2	ceramic, orange;glaze, lead; mexican	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	3.5
155-234 or 237?	6	2	floor to floor	ceramic, orange;glaze, lead;rim mexican utility ware; bowl rim	Mexican Imports	Mexican low-fired earthenware	Undecorated	Holloware (bowl)	5.9
155-422	6	4	floor to floor	ceramic, red;glaze, lead; grit tempered; Mexican utility ware	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	4.3
155-423	6	4	floor to floor	ceramic, red;glaze, lead; Mexican utility ware	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	3.4
155-100	6	3	floor 1-2	ceramic;glaze, lead;orange; Mexican	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	0.4

155-378	6	4	floor to floor	earthenware, orange; same as 422; Mexican Utility ware, rim sherd	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	4.3
155-116	6	Exterior of East wall	n/a	earthenware, orange;glaze, lead; Glazed interior, burnt exterior	Mexican Imports	Mexican low-fired earthenware	Undecorated	unknown	1.9
155-143	6	6	pedestal	earthenware, orange;glaze, lead; Mexican glazed ceramic;	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	0.3
155-157	6	6	n/a	earthenware, orange;glaze, lead; Mexican glazed ceramic; rim, bowl	Mexican Imports	Mexican low-fired earthenware	Undecorated	Hollowware (bowl)	6.5
155-281	6	3	floor to floor	earthenware:glaze, lead glazed; Mexican utility ware	Mexican Imports	Mexican low-fired earthenware	Undecorated	Hollowware (bowl)	3.4

155-280	6	3	floor to floor	earthenware;glaze, lead; Mexican	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	3.3
155-257	6	3	floor to floor	earthenware;glaze, lead; Mexican lead glaze, rim; bowl	Mexican Imports	Mexican low-fired earthenware	Undecorated	Holloware (bowl)	4.4
155-75	6	4	no level	earthenware;glaze, lead;paint, orange; Mexican earthenware	Mexican Imports	Mexican low-fired earthenware	Undecorated	Unidentifiable	2.2
147-1949	6	2	fill	earthenware, red;glaze; Mexican glaze; grit tempered	Mexican Imports	Mexican low-fired earthenware	Undecorated	unidentifiable	3.0
147-1950	6	2	fill	earthenware;glaze, orange; Mexican glaze; grit tempered	Mexican Imports	Mexican low-fired earthenware	Undecorated	unidentifiable	4.2

147-1600	Excavation Unit 21	2	no levels	earthenware, orange;glaze, orange; glazed on inside, temper; burnt on exterior	Mexican Imports	Mexican low-fired earthenware	Undecorated	Cooking bowl	1.2
155-1865	6	7	fill	ceramic; paint, black, blue, white; Mexican majolica; Mojalica (Abo/Aranama Polycrome)	Mojalica	Mexican low-fired earthenware	Blue and black painted	Unidentifiable	6.3
147-2389	6	6	floor	earthenware;glaze, white; Mojalica (Abo/Aranama Polycrome)	Mojalica	Mexican low-fired earthenware	Blue and white handpainted design	Unknown	0.6
147-2888	6	3	floor to floor	earthenware, beige;glaze, white; paint, blue; green paint; Mojalica (Abo/Aranama Polycrome)	Mojalica	Mexican low-fired earthenware	Blue paint	Unidentifiable	1.2
147-2404	6	7	surface to tile	earthenware, beige;glaze, white; paint, blue; Majolica; soft paste; Mojalica (Abo/Aranama Polycrome)	Mojalica	Mexican low-fired earthenware	Blue paint	Halloware	1.0

155-151	6	6	floor 1-2	ceramic;design, blue, white; majolica	Mojalica	Mexican low-fired earthenware	blue	Flateware (plate)	2.2
155-149	6	6	floor 1-2	ceramic;design, blue, white; mojolica; Mojalica (Abo/Aranama Polycrome)	Mojalica	Mexican low-fired earthenware	hand painted blue	Unknown	2.1
155-1404	6	2	tile to floor	earthenware; handpainted; paint, blue, green; multicolored; Abo/Aranama Polycrome	Mojalica	Mexican low-fired earthenware	Handpainted	Holloware (bowl)	2.2
2097					Mojalica	Mexican low-fired earthenware	undecorated	unknown	6.7
147-1840	6	3	floor	earthenware, brown;glaze, white; cracked from heat	Mojalica	Mexican low-fired earthenware	Undecorated	Flatware	3.2

155-114	6	Exterior of East wall	n/a	ceramic;glaze, white; Majolica	Mojalica	Mexican low-fired earthenware	Undecorated	unknown	1.3
147-2388	6	6	floor	earthenware;glaze, Abo/Aranama Polycrome	Mojalica	Mexican low-fired earthenware	Undecorated	Unknown	1.6
155-1222	6	2	floor to floor	Abo/Aranama Polycrome	Mojalica	Mexican low-fired earthenware	Undecorated	unknown	3.4
2096				rim; Abo/Aranama Polycrome; yellow green	Mojalica	Mexican low-fired earthenware		flatware (plate or platter)	
147-2905			Floor-to-floor		Mojalica Vase whole	Majolica		Blue paint	875.0
147-1566	Excavation Unit 21	1	floor	earthenware, orange;glazed interior; base	Mission	glazed	Handle area	Hollow are (bowl)	5.9
147-1814	6	3	fill	ceramic;glaze, brown; small	Mission	glazed	Undecorated	Unidentifiable	2.6

147-1563	Excavation Unit 21	2	floor	earthenware, orange;glaze, orange; grit tempered, glazed on inside	Mission	glazed	Undecorated	Hollow are (bowl)	4.8
147-1606	Excavation Unit 21	2	no levels	earthenware, orange;glaze, orange; glazedd intrerior	Mission	glazed	Undecorated	Unknown	1.7
147-1564	Excavation Unit 21	2	floor	earthenware, orange;glaze, orange; glazed interior, handmolded	Mission	glazed	Undecorated	Hollow are (cup)	1.5
147-1570	Excavation Unit 21	1	floor	earthenware, orange;glaze, orange; glazed interior	Mission	glazed	Undecorated	unknown	1.2
147-1567	Excavation Unit 21	1	floor	earthenware, orange;glaze, orange; grit tempered; glazed interior	Mission	glazed	Undecorated	unknown	2.2

147-1535	Excavation Unit 21	1	no levels	earthenware, orange;glaze, orange;paint, brown;handle; glazed interior	Mission	glazed	Undecorated	Holloware (bowl or olla)	3.4
147-1536	Excavation Unit 21	1	no levels	earthenware, orange;glaze, orange; neck of holloware vessel; glazed; hand molded.	Mission	glazed	Undecorated	Holloware (olla)	4.5
155-154	6	6	floor 1-2	earthenware, orange;rim; unglazed ceramic; unknown if handmolded or wheel-thrown	Mission	unglazed	Undecorated	Holloware	6.6
147-1847	6	3	floor	earthenware, brown, unglazed unknown if hand molded or wheel-thrown	Mission	unglazed	Undecorated	Unidentifiable	6.2
147-2893	6	3	floor to floor	earthenware, black; wheel thrown	Mission	unglazed	Undecorated	Holloware (cooking bowl)	8.9
147-1897	6	3	fill	earthenware, brown; wheel thrown	Mission	unglazed	Undecorated	Unidentifiable	2.9
147-2049	6	3	surface to tile	earthenware, brown; burned; unglazed; wheel thrown	Mission	unglazed	Undecorated	Holloware (cooking bowl)	30.0

155-365	6	4	floor to floor	earthenware, burnt mission potter, bowl; wheel thrown	mission	unglazed	Undecorated	Hollowware (cooking bowl)	11.4
155-364	6	4	floor to floor	earthenware, dark brown; mission pottery; burnt? wheel thrown	Mission	unglazed	Undecorated	Hollowware (cooking bowl)	16.0
147-1888	6	3	fill	earthenware, orange; wheel thrown	Mission	unglazed	Undecorated	Unidentifiable	9.5
147-1723	6	3	fill	red earthenware; wheel thrown	Mission	unglazed	Undecorated	Hollowware	16.0
155-353	6	1	fill	earthenware; thick burned, curved; bowl; handmolded	Mission	unglazed	Undecorated	Hollowware (bowl)	93.0
147-1276	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware, dark brown (2); handmolded	Mission	unglazed	Undecorated	Hollowware (cooking bowl)	24.8
147-1275	Excavation Unit 21	Stratigraphic Cut 1	no levels	earthenware, dark brown; base of earthenware pot (1); handmolded	Mission	unglazed	Undecorated	Hollowware (cooking bowl)	24.0
147-1534	Excavation Unit 21	1	no levels	earthenware; unglazed; wheel thrown	Mission	unglazed	Undecorated	unknown	26.0

Appendix VIIb: Ceramics in Gabel collection.

Object Number	Rm	type	Subtype	Decoration	Descrip	Wght	cnt
147-B-610.D4	1.0	Chinese	porcelain	canton	rim	12.64	1
147-B-590		Chinese	porcelain	canton	bowl base	103.60	1
147-B-590		Chinese	porcelain	canton	bowl base	24.72	1
147-B-694.D3		Chinese	porcelain	canton	bowl base	103.60	2
147-B-934.D2	1.0	Chinese	porcelain	canton	rim	76.90	15
147-B-814.D2	1.0	Chinese	porcelain	canton	rim	108.50	6
147-B-304		Chinese	porcelain	canton	sherd	8.65	1
147-B-577		Chinese	porcelain	canton	sherd	11.15	1
147-B-1323		Chinese	porcelain	canton	sherd	15.65	2
147-B-1587		Chinese	porcelain	canton	sherd (bowl)	4.09	1
147-B-734.D2	1.0	Chinese	porcelain	canton	rim	3.25	2
147-B-1558	1.0	Chinese	porcelain	canton	rim	0.67	1
147-B-849.D		Chinese	porcelain	canton	sherds	81.70	23
147-B-856.D3		Chinese	porcelain	canton	sherds	21.32	8
147-B-1556	1.0	Chinese	porcelain	canton	one base and one rim)	117.86	1
147-B-433	1.0	Chinese	porcelain	canton	sherds (one rim)	12.55	2
147-B-3007	3.0	Chinese	porcelain	canton	rim	7.29	3
147-B-962.D2		Chinese	porcelain	canton	base	21.59	6
147-B-1559.D	1.0	Chinese	porcelain	canton	base and rim	18.37	38
147-B-73.D2		Chinese	porcelain	canton	sherd	14.98	2
147-B-713.D2		Chinese	porcelain	canton	sherd	4.10	1

147-B-1033	1.0	Chinese	porcelain	canton	rim	3.07	5
147-B-476		Chinese	porcelain	canton	sherd	4.64	1
147-B-1108	1.0	Chinese	porcelain	canton	sherd (rim)	4.72	1
147-B-295	1.0	Chinese	porcelain	canton	sherd with rim	6.53	1
147-B-1546		Chinese	porcelain	canton	sherds	7.00	2
147-B-422		Chinese	porcelain	canton	sherd	7.70	1
147-B-848		Chinese	porcelain	canton	sherd	2.98	1
147-B-1009.D		Chinese	porcelain	canton	sherd	2.07	1
147-B-692.D	1.0	Chinese	porcelain	canton	rim	1.00	1
147-B-565	1.0	Chinese	porcelain	canton	rim	1.53	1
147-B-132.D		Chinese	porcelain	canton	sherd	6.58	1
147-B-141.D		Chinese	porcelain	canton	sherd	3.20	1
147-B-154.D4		Chinese	porcelain	canton	sherd	0.61	1
147-B-301	1.0	Chinese	porcelain	canton	sherds (one rim)	9.30	1
147-B-1054	1.0	Chinese	porcelain	canton	rim	6.94	2
147-B-84.D2		Chinese	porcelain	canton	sherd	3.92	1
147-B-1542		Chinese	porcelain	canton	sherd	6.80	2
147-B-328		Chinese	porcelain	canton	sherd	2.20	1
147-B-358.D		Chinese	porcelain	canton	sherd	16.42	1
147-B-365		Chinese	porcelain	canton	sherd	2.00	1
147-B-534		Chinese	porcelain	canton	sherd	5.19	1
147-B-827.D	1.0	Chinese	porcelain	canton	sherd + rim	5.60	2
147-B-526		Chinese	porcelain	canton	sherd, base	5.40	1
147-B-335		Chinese	porcelain	canton	sherds	4.00	3
147-B-500		Chinese	porcelain	canton	sherds	10.50	2
147-B-1121.D	1.0	Chinese	porcelain	canton	sherds + rim	18.08	7

147-B-769.D	1.0	Chinese	porcelain	canton	shrds + rim	8.00	3
147-B-560		Chinese	porcelain	canton	sherd	1.20	1
147-B-792	1.0	Chinese	porcelain	canton	sherds + rim	20.20	4
147-B-271		Chinese	porcelain	canton	base	7.41	1
147-B-694.D3		Chinese	porcelain	canton	base	51.91	14
147-B-60.D2		Chinese	porcelain	canton	sherd	13.03	1
147-B-29.D2		Chinese	porcelain	canton	sherd	12.20	1
147-B-326		Chinese	porcelain	canton	sherd	6.37	1
147-B-764.D3		Chinese	porcelain	canton	sherd	31.81	7
147-B-1021.D		Chinese	porcelain	canton	sherd	15.60	2
147-B-607.D4		Chinese	porcelain	canton	sherds and one base	97.23	18
147-B-662.D4		Chinese	porcelain	canton	sherds, base and rim	30.35	11
147-B-1559	1.0	Chinese	porcelain	canton	rim	5.72	1
147-B-872	2.0	Chinese	porcelain	canton	sherds (2 rims)	1.81	4
147-B-880.D4		Chinese	porcelain	canton	sherds	43.30	15
147-B-785.D2		Chinese	porcelain	canton	sherd	11.81	2
147-B-241		Chinese	porcelain	canton	sherd	0.40	1
147-B-483		Chinese	porcelain	canton	sherd	3.50	1
147-B-528		Chinese	porcelain	canton	sherd	1.20	1
147-B-551		Chinese	porcelain	canton	sherd	2.20	1
147-B-1078.D2		Chinese	porcelain	canton	sherd	1.84	1
147-B-3011		Chinese	porcelain	canton	sherd	1.46	1
147-B-3007		Chinese	porcelain	canton	body sherds	21.30	3
147-B-79.D2		Chinese	porcelain	canton	sherd	2.57	1
147-B-249		Chinese	porcelain	canton	sherd	1.06	1
147-B-429		Chinese	porcelain	canton	sherd	2.70	1

147-B-457		Chinese	porcelain	canton	sherd	1.30	1
147-B-734.D2		Chinese	porcelain	canton	sherd	22.44	7
147-B-1108		Chinese	porcelain	canton	sherd	16.78	2
147-B-1539		Chinese	porcelain	canton	sherd	2.30	1
147-B-1557		Chinese	porcelain	canton	sherd	3.22	1
147-B-1581		Chinese	porcelain	canton	sherd	2.14	1
147-B-1582		Chinese	porcelain	canton	sherd	1.71	1
147-B-1597		Chinese	porcelain	canton	sherd	0.71	1
147-B-3012		Chinese	porcelain	canton	sherd	3.34	1
147-B-458	1.0	Chinese	porcelain	canton	sherd (rim)	0.35	1
147-B-624.D2		Chinese	porcelain	canton	sherds	32.80	8
147-B-659.D		Chinese	porcelain	canton	sherds	1.17	2
147-B-907		Chinese	porcelain	canton	sherds	19.12	6
147-B-1574.D2		Chinese	porcelain	canton	sherds	1.60	2
147-B-610.D4		Chinese	porcelain	canton	sherds (1 base)	54.99	15
147-B-713.D2		Chinese	porcelain	canton	sherds 7 body sherds	29.65	7
147-B-109.D		Chinese	porcelain	canton	sherd	0.55	1
147-B-1578	1.0	Chinese	porcelain	canton	sherd rim	0.68	1
147-B-1078.D3	1.0	Chinese	porcelain	canton	sherd (one rim and one base	30.20	7
147-B-1580	1.0	Chinese	porcelain	canton	rim	14.47	1
147-B-880.D4	1.0	Chinese	porcelain	canton	sherds + rim	9.20	2
147-B-607.D4		Chinese	porcelain	canton	sherd	4.16	1
147-B-590		Chinese	porcelain	canton	sherd	2.94	1
147-B-1021.D	1.0	Chinese	porcelain	famille rose	rim	1.10	1
147-B-288		Chinese	porcelain	famille rose	sherd	4.70	1

147-B-289.D		Chinese	porcelain	famille rose	sherd	0.59	1
147-B-814.D2		Chinese	porcelain	famille rose	sherd	6.49	1
147-B-1078.D3		Chinese	porcelain	famille rose	sherd	14.80	1
147-B-3008	1.0	Chinese	porcelain	famille rose	rim	1.62	1
147-B-3008		Chinese	porcelain	famille rose	body sherds	8.39	2
147-B-3008	1.0	Chinese	porcelain	famille rose	rim	2.85	1
147-B-1323		Chinese	porcelain	Overglazed Misc.	sherd	6.62	1
147-B-1054	1.0	Chinese	porcelain	Overglazed Misc.	rim	2.62	1
147-B-849.D	1.0	Chinese	porcelain	Overglazed Misc.	rim	0.84	1
147-B-764.D3		Chinese	porcelain	Overglazed Misc.		1.00	1
147-B-3009	1.0	Chinese	porcelain	Overglazed Misc.	sherd (rim)	1.80	1
147-B-694.D3	1.0	Chinese	porcelain	Overglazed Misc.	rim	5.50	1
147-B-607.D4		Chinese	porcelain	Overglazed Misc.	sherd	1.30	1
147-B-769.D		Chinese	porcelain	Overglazed Misc.	sherd	0.49	1
147-B-799		Chinese	porcelain	Overglazed Misc.	sherd	2.18	1
147-B-856.D3	1.0	Chinese	porcelain	Overglazed Misc.	sherds (1 rim)	0.26	1
147-B-607.D4		Chinese	porcelain	Overglazed Misc.	sherd	15.87	1
147-B-1539		Chinese	porcelain	provincial;	sherd	1.30	1
147-B-1108		Chinese	porcelain	provincial; green	sherd, bowl base	17.65	1
147-B-240		Chinese	porcelain	undecorated	sherd	1.00	1
147-B-109.D		Chinese	porcelain	undecorated	sherd (one base)	3.92	1
147-B-10.D		Chinese	porcelain	undecorated	sherd	2.26	1
147-B-3021	1.0	Chinese	porcelain	undecorated	sherd (rim)	22.02	1
147-B-1009		Chinese	porcelain	undecorated	tea cup handle	0.85	1
147-B-1054		Chinese	porcelain	undecorated	sherd	42.90	1

147-B-90.D2		Chinese	porcelain	undecorated	sherd	6.80	1
147-B-3021		Chinese	porcelain	undecorated	sherd	11.21	1
147-B-3021	1.0	Chinese	porcelain	undecorated	sherd (rim)	1.75	1
147-B-445		Chinese	porcelain	undecorated	sherd (base)	13.50	1
147-B-1108		Chinese	porcelain	undecorated	sherd	0.73	1
147-B-1109		Chinese	porcelain	undecorated	sherd	2.46	1
147-B-262		Chinese	porcelain	undecorated	sherd	1.00	1
147-B-370		Chinese	porcelain	undecorated	sherd	1.20	1
147-B-734.D2		Chinese	porcelain	undecorated	sherd	4.66	1
147-B-907.D		Chinese	porcelain	undecorated	sherd	10.05	1
147-B-1140		Chinese	porcelain	undecorated	sherd	4.14	1
147-B-1004.D2		Chinese	porcelain	undecorated	sherd	2.71	1
147-B-3008	1.0	Chinese	porcelain	undecorated	rim	2.34	1
147-B-123.D		Chinese	porcelain	undecorated	sherd	0.76	1
147-B-275		Chinese	porcelain	undecorated	sherd	3.42	1
147-B-458		Chinese	porcelain	undecorated	sherd	1.15	1
147-B-509		Chinese	porcelain	undecorated	sherd	1.50	1
147-B-1553		Chinese	porcelain	undecorated	sherd	0.90	1
147-B-1561		Chinese	porcelain	undecorated	sherd	2.02	1
147-B-3021		Chinese	porcelain	undecorated	sherd	30.60	3
147-B-3012		Chinese	porcelain	undecorated	sherd	13.80	1
147-B-299	1.0	Chinese	porcelain	undecorated	sherd (rim)	2.73	1
147-B-734.D2	1.0	Chinese	porcelain	undecorated	rim	2.21	1
147-B-734.D2	1.0	Chinese	porcelain	undecorated	rim	5.83	1
147-B-1323		Chinese	porcelain	undecorated	sherd	7.09	1
147-B-694.D3		Chinese	porcelain	undecorated	saucer base	14.30	1
147-B-215		Chinese	porcelain	undecorated	base	19.20	1

147-B-3009		Chinese	porcelain	undecorated	base	34.70	1
147-B-3021		Chinese	porcelain	undecorated	teacup handle	2.82	1
147-B-1143		Chinese	porcelain	undecorated	handle	0.76	1
147-B-3021		Chinese	porcelain	undecorated	sherd	2.37	1
147-B-734.D2		Chinese	porcelain	undecorated	sherds	4.64	2
147-B-1569		Chinese	porcelain	undecorated	sherd	10.64	1
147-B-1563		Chinese	porcelain	undecorated	sherd	2.21	1
147-B-623		stoneware, gray	black glaze exterior	undecorated	stoneware	11.60	1
147-B-341.D2		stoneware, gray	glazed both sides	undecorated	stoneware	60.10	1
147-B-607.D6		English	creamware	edge decorated	sherds	8.01	1
147-B-1547	1	English	creamware	edge decorated	rim	7.18	1
147-B-907.D	1	English	creamware	edge decorated	rim	2.20	1
147-B-3021		English	creamware	edge decorated	sherd	4.20	1
147-B-316		English	creamware	transfer ware	sherds	1.56	1
147-B-1033.D		English	creamware	transfer ware	sherd	0.11	1
147-B-1054.D		English	creamware	undecorated	sherd	2.19	1
147-B-3021		English	creamware	undecorated	sherd	3.20	1
147-B-769	1	English	creamware	undecorated	rim	11.26	3
147-B-319	1	English	creamware	undecorated	Base and rim	10.79	1
147-B-1082.D2		English	creamware	undecorated	sherd	12.60	5
147-B-1082.D2	2	English	creamware	undecorated	rims	2.54	2
147-B-934.D3		English	creamware	undecorated	sherd	10.56	6
147-B-1033.D	1	English	creamware	undecorated	rim	8.20	2
147-B-21.D3		English	creamware	undecorated	sherd	5.97	1
147-B-689		English	creamware	undecorated	sherd	0.28	1
147-B-1009		English	creamware	undecorated	base	11.58	2

147-B-358.D	1	English	creamware	undecorated	rim	5.92	1
147-B-662.D2	1	English	creamware	undecorated	rim	0.67	1
147-B-330		English	creamware	undecorated	sherd	3.20	1.00
147-B-271		English	creamware	undecorated	sherd	2.10	1
147-B-631		English	creamware	undecorated	sherd	2.49	1
147-B-10.D		English	creamware	undecorated	sherd	1.10	1.00
147-B-241		English	creamware	undecorated	sherd	1.18	1
147-B-358.D		English	creamware	undecorated	sherd	5.86	1
147-B-713.D		English	creamware	undecorated	sherd	0.80	1
147-B-792.D		English	creamware	undecorated	sherd	17.05	4
147-B-1121		English	creamware	undecorated	sherd	5.86	3
147-B-1549		English	creamware	undecorated	sherd	0.90	1
147-B-1021		English	creamware	undecorated	sherd	4.20	1
147-B-288		English	creamware	undecorated	sherd	0.56	1
147-B-301		English	creamware	undecorated	sherd	0.51	1
147-B-785		English	creamware	undecorated	sherd	2.62	1
147-B-827		English	creamware	undecorated	sherd	1.50	1
147-B-907.D		English	creamware	undecorated	sherd	10.85	5
147-B-1143		English	creamware	undecorated	sherd	1.44	1
147-B-1559.D		English	creamware	undecorated	sherd	3.61	1
147-B-3015		English	creamware	undecorated	sherd	0.52	1
147-B-202		English	creamware	undecorated	sherd	1.14	1
147-B-364		English	creamware	undecorated	sherd	1.50	1
147-B-433		English	creamware	undecorated	sherd	1.36	1
147-B-1078.D		English	creamware	undecorated	sherd	3.06	1
147-B-1078.D		English	creamware	undecorated	sherd	0.63	1
147-B-1544		English	creamware	undecorated	sherd	0.34	1
147-B-1558.D		English	creamware	undecorated	sherd	0.20	1
147-B-3017		English	creamware	undecorated	sherd	0.54	1
147-B-3018		English	creamware	undecorated	sherd	2.09	1
147-B-528		English	creamware	undecorated	base	2.07	2

147-B-538		English	creamware	undecorated	base	8.40	1
147-B-3021		English	creamware	undecorated	base	5.36	1
147-B-1540		English	creamware	undecorated	base	0.34	1
147-B-3021	1	English	creamware	undecorated	rim	2.03	1
147-B-662.D3	1	English	creamware	undecorated	rim	8.52	2
147-B-785.D		English	creamware	undecorated	sherds	4.47	3
147-B-849.D2		English	creamware	undecorated	sherds	3.44	3
147-B-1108.D		English	creamware	undecorated	sherds	1.59	2
147-B-3021		English	creamware	undecorated	sherds	23.30	6
147-B-694.D	1	English	creamware	undecorated	rim	13.07	6
147-B-880.D3	3	English	creamware	undecorated	rims	17.30	5
147-B-764.D2	1	English	creamware	undecorated	rim	7.69	6
147-B-1575.D		English	creamware	undecorated	sherds	1.19	2
147-B-358.D		English	Whiteware	edge decorated	sherd	1.30	1
147-B-734.D	1	English	Whiteware	edge decorated	rim	2.80	1
147-B-1179		English	Whiteware	edge decorated	sherd	2.50	1
147-B-370		English	Whiteware	edge decorated	sherd	2.40	1
147-B-880.D3	1	English	Whiteware	edge decorated	1 rim	4.80	1
147-B-3014	1	English	Whiteware	edge decorated	rim	2.58	1
147-B-3013		English	Whiteware	handpainted	sherd	0.86	1
147-B-264		English	Whiteware	handpainted	sherd	3.58	1
147-B-1082.D2		English	Whiteware	handpainted	sherd	0.37	1
147-B-785		English	Whiteware	handpainted	sherd	4.64	1
147-B-430		English	Whiteware	handpainted(banded)	sherd	0.80	1
147-B-1547		English	Whiteware	handpainted(banded)	sherd	0.53	1
147-B-1108.D		English	Whiteware	handpainted(banded)	sherd	7.09	2
147-B-264	1	English	Whiteware	handpainted(banded)	sherd w rim	1.13	1

147-B-734.D		English	Whiteware	handpainted(banded)	sherd	0.48	2
147-B-694.D	1	English	Whiteware	handpainted(banded)	rim	1.00	1
147-B-880.D3	2.0	English	Whiteware	handpainted(banded)	sherds (2 rims)	1.90	2
147-B-785.D	1	English	Whiteware	handpainted(banded)	sherds + rim	2.93	2
147-B-567	1	English	Whiteware	handpainted(banded)	rim	1.00	1
147-B-764.D2		English	Whiteware	handpainted(banded)	sherds	5.18	2
147-B-262		English	Whiteware	handpainted(banded)	sherd	0.62	1
147-B-301		English	Whiteware	handpainted(banded)	sherd	1.82	1
147-B-37.D2		English	Whiteware	handpainted(banded)	sherd	1.90	1
147-B-982		English	Whiteware	handpainted(banded)	sherd	0.45	1
147-B-962	1	English	Whiteware	handpainted(banded)	sherds w rim	7.51	6
147-B-1537		English	Whiteware	handpainted(banded)	sherds	1.76	2
147-B-792.D		English	Whiteware	handpainted(banded)	sherd	9.24	1
147-B-1033.D		English	Whiteware	handpainted(banded)	sherd	0.11	1
147-B-1566		English	Whiteware	handpainted(banded)	sherd	0.80	1
147-B-349		English	Whiteware	handpainted(banded)	sherd	1.36	1
147-B-458		English	Whiteware	handpainted(banded)	sherd	0.54	1
147-B-694.D2		English	Whiteware	handpainted(banded)	sherd	0.28	1
147-B-1078.D		English	Whiteware	handpainted(banded)	sherds	5.07	1
147-B-62.D2		English	Whiteware	handpainted(banded)	sherds	4.26	2
147-B-1584	1	English	Whiteware	handpainted(banded)	rim	1.00	1
147-B-1580.D		English	Whiteware	handpainted(banded)	sherd	0.36	1

147-B-607.D6		English	Whiteware	handpainted (peasant)	sherds	8.53	3
147-B-1054.D		English	Whiteware	handpainted (peasant)	sherd	1.63	1
147-B-356.D		English	Whiteware	handpainted (peasant)	sherd	0.80	1
147-B-256		English	Whiteware	handpainted (peasant)	rim	11.78	1
147-B-694.D	1	English	Whiteware	handpainted (peasant)	rim	1.92	5
147-B-566		English	Whiteware	handpainted (peasant)	sherd	3.64	1
147-B-907.D		English	Whiteware	handpainted (peasant)	sherd	1.53	2
147-B-607.D6		English	Whiteware	handpainted (peasant)	sherds	2.00	2
147-B-662.D3		English	Whiteware	handpainted (peasant)	sherd	1.89	1
147-B-1033.D		English	Whiteware	handpainted (peasant)	sherd	1.80	1
147-B-934.D3		English	Whiteware	handpainted (peasant)	sherd	0.70	1
147-B-344		English	Whiteware	handpainted (peasant)	sherd	1.60	1
147-B-428.D		English	Whiteware	handpainted (peasant)	base	10.40	1
147-B-880.D3		English	Whiteware	handpainted (peasant)	sherd	0.70	1
147-B-571		English	Whiteware	handpainted (peasant)	sherd	1.40	1
147-B-734.D		English	Whiteware	handpainted (peasant)	base	6.70	2
147-B-734.D	1	English	Whiteware	handpainted (peasant)	rim	1.39	1
147-B-1078.D		English	Whiteware	handpainted (peasant)	sherd	2.18	1
147-B-323	1	English	Whiteware	handpainted (peasant)	rim	2.10	1
147-B-323		English	Whiteware	handpainted (peasant)	sherds	2.62	2
147-B-734.D		English	Whiteware	handpainted (peasant)	sherd	1.26	1
147-B-1121		English	Whiteware	transfer ware	sherd	1.89	1
147-B-1451		English	Whiteware	transfer ware	sherd	0.10	1

147-B-1082.D2		English	Whiteware	transfer ware	sherd	16.58	7
147-B-849.D2		English	Whiteware	transfer ware	sherd	5.92	4
147-B-463		English	Whiteware	transfer ware	sherd	0.91	1
147-B-849.D2	1	English	Whiteware	transfer ware	rim	3.00	1
147-B-1082.D2	1	English	Whiteware	transfer ware	rim (2 that refit	9.14	2
147-B-1143		English	Whiteware	transfer ware	sherd	16.26	1
147-B-425		English	Whiteware	transfer ware	sherd	2.50	1
147-B-349		English	Whiteware	transfer ware	sherd	1.30	1
147-B-1078.D		English	Whiteware	transfer ware	sherd	0.11	1
147-B-849.D2	1	English	Whiteware	transfer ware	sherds (1 rim)	1.09	3
147-B-418	1	English	Whiteware	transfer ware	sherd	54.22	1
147-B-1583		English	Whiteware	transfer ware	sherd	1.75	1
147-B-1596		English	Whiteware	transfer ware	sherd	0.20	1
147-B-1598		English	Whiteware	transfer ware	sherd	0.58	1
147-B-3021		English	Whiteware	transfer ware	sherd	0.73	2
147-B-934.D3	1	English	Whiteware	transfer ware	sherd	12.52	4
147-B-1570		English	Whiteware	transfer ware	sherd	4.20	2
147-B-1033.D		English	Whiteware	transfer ware	sherd	1.71	4
147-B-834.D		English	Whiteware	transfer ware	sherd	4.18	1
147-B-1108.D		English	Whiteware	transfer ware	sherd	2.35	1
147-B-962		English	Whiteware	transfer ware	sherd	28.71	2
147-B-785.D	1	English	Whiteware	transfer ware	sherd + rim	5.25	2
147-B-1109.D		English	Whiteware	transfer ware	sherd	3.14	1
147-B-764.D2	1	English	Whiteware	transfer ware	rim	3.07	2
147-B-769		English	Whiteware	transfer ware	sherd	2.10	2
147-B-1121	1	English	Whiteware	transfer ware	sherds + rim	5.32	3

147-B-610.D		English	Whiteware	transfer ware	sherd	18.57	11
147-B-607.D6	1	English	Whiteware	transfer ware	rim	3.00	1
147-B-607.D6	1	English	Whiteware	transfer ware	rim	0.80	1
147-B-713.D		English	Whiteware	transfer ware	sherd	10.76	2
147-B-607.D6		English	Whiteware	transfer ware	sherds (1 base)	27.70	14
147-B-325		English	Whiteware	transfer ware	sherd	0.80	1
147-B-785.D		English	Whiteware	transfer ware	sherd	8.94	1
147-B-880.D3		English	Whiteware	transfer ware	sherd	2.40	2
147-B-982		English	Whiteware	transfer ware	sherd	0.72	1
147-B-1021	1	English	Whiteware	transfer ware	sherds (1 rim)	8.81	3
147-B-1054.D	2	English	Whiteware	transfer ware	rim (2)	4.95	2
147-B-445		English	Whiteware	transfer ware	sherd	2.27	1
147-B-1311		English	Whiteware	transfer ware	base	1.96	1
147-B-544		English	Whiteware	transfer ware	sherd	0.42	1
147-B-1004.D	1	English	Whiteware	transfer ware	rim	3.30	1
147-B-3006	1	English	Whiteware	transfer ware	rim	2.65	1
147-B-1545		English	Whiteware	transfer ware	sherd	4.92	1
147-B-3006		English	Whiteware	transfer ware	sherd	0.46	1
147-B-734.D		English	Whiteware	transfer ware	sherd	3.43	3
147-B-734.D		English	Whiteware	transfer ware	sherd	0.69	1
147-B-909		English	Whiteware	transfer ware	sherd	1.72	1
147-B-814		English	Whiteware	transfer ware	sherd	8.60	1
147-B-1121		English	Whiteware	transfer ware	sherd	3.46	1
147-B-1143		English	Whiteware	transfer ware	sherd	2.55	1
147-B-366		English	Whiteware	transfer ware	sherd	1.32	1
147-B-734.D		English	Whiteware	transfer ware	sherd	1.26	1
147-B-1121		English	Whiteware	unknown	handle	3.30	1
147-B-341		English	Whiteware	tea cup handle	handle	2.00	1
147-B-3021	1	English	Whiteware	undecorated	rim	15.20	3

147-B-3021	1	English	Whiteware	undecorated	rim	38.10	1
147-B-962.D2		English	Whiteware	undecorated	base	5.23	2
147-B-907		English	Whiteware	undecorated	base	23.20	1.00
147-B-849.D2		English	Whiteware	undecorated	sherd	4.88	3
147-B-1082.D2		English	Whiteware	undecorated	sherd	10.04	4
147-B-1109.D		English	Whiteware	undecorated	sherd	3.49	1
147-B-212		English	Whiteware	undecorated	sherd	1.56	1
147-B-769		English	Whiteware	undecorated	handle	12.93	1
147-B-424.D		English	Whiteware	undecorated	handle	4.33	1
147-B-1585		English	Whiteware	undecorated	holder	8.32	1
147-B-424.D	1	English	Whiteware	undecorated	rim	2.18	1
147-B-849.D2	1	English	Whiteware	undecorated	rim	6.12	1
147-B-463	1	English	Whiteware	undecorated	rim	3.50	1
147-B-3021		English	Whiteware	undecorated	sherd	22.79	1
147-B-849.D2		English	Whiteware	undecorated	sherd	1.90	1
147-B-289.D		English	Whiteware	undecorated	sherd	0.95	1
147-B-323		English	Whiteware	undecorated	sherd	2.01	1
147-B-349		English	Whiteware	undecorated	sherd	2.18	1
147-B-366		English	Whiteware	undecorated	sherd	2.36	1
147-B-458		English	Whiteware	undecorated	sherd	3.14	2
147-B-498		English	Whiteware	undecorated	sherd	3.80	2
147-B-734.D		English	Whiteware	undecorated	sherd	4.70	2
147-B-907.D		English	Whiteware	undecorated	sherd	1.10	1
147-B-1009		English	Whiteware	undecorated	sherd	3.72	1
147-B-1143		English	Whiteware	undecorated	sherd	0.75	1
147-B-1311		English	Whiteware	undecorated	sherd	2.48	1
147-B-1323		English	Whiteware	undecorated	sherd	1.99	1
147-B-3021		English	Whiteware	undecorated	sherd	20.13	10

147-B-3021	2	English	Whiteware	undecorated	rims	6.74	2
147-B-3021		English	Whiteware	undecorated	base	19.23	5
147-B-1054.D		English	Whiteware	undecorated	base	16.91	1
147-B-734.D	1	English	Whiteware	undecorated	rim	0.40	1
147-B-3021	1	English	Whiteware	undecorated	rim	73.20	1
147-B-3021	1	English	Whiteware	undecorated	rim	21.60	1
147-B-814		English	Whiteware	undecorated	sherds	8.53	2
147-B-662.D3		English	Whiteware	undecorated	sherds	3.06	2
147-B-3006		English	Whiteware	undecorated	sherds	2.35	2
147-B-792.D	1	English	Whiteware	undecorated	rim	10.82	3
147-B-610.D4		English	Whiteware	manganese exterior	sherd	0.60	1
147-B-607.D9	1.0	Mexican Imports	Mexican low-fired	hand painted	rim	10.86	2
147-B-607.D9		Mexican Imports	Mexican low-fired	hand painted	sherd	41.80	22
147-B-89.D2	1.0	Mexican Imports	Mexican low-fired	hand painted	sherd	6.55	1
147-B-998	1.0	Mexican Imports	Mexican low-fired	hand painted	rim	10.00	1
147-B-1582.D		Mexican Imports	Mexican low-fired	hand painted	sherd	1.90	1
147-B-662.D6		Mexican Imports	Mexican low-fired	hand painted	sherd	6.76	3
147-B-1022		Mexican Imports	Mexican low-fired	hand painted	sherd	1.10	1
147-B-1010.D		Mexican Imports	Mexican low-fired	hand painted	sherd	2.60	2
147-B-1085		Mexican Imports	Mexican low-fired	hand painted	sherd	8.85	4
147-B-1121.D2		Mexican Imports	Mexican low-fired	hand painted	sherd	0.40	1
147-B-1536		Mexican Imports	Mexican low-fired	hand painted	sherd	0.42	1
147-B-1537.D		Mexican Imports	Mexican low-fired	hand painted	sherd	0.65	1
147-B-1561.D2		Mexican Imports	Mexican low-fired	hand painted	sherd	1.30	1

147-B-1572.D		Mexican Imports	Mexican low-fired	hand painted	sherd	0.20	1
147-B-982.D		Mexican Imports	Mexican low-fired	hand painted	sherd	1.58	1
147-B-1005		Mexican Imports	Mexican low-fired	hand painted	sherd	0.90	1
147-B-1543		Mexican Imports	Mexican low-fired	hand painted	sherd	1.10	1
1032		Mexican Imports	Mexican low-fired	hand painted	sherd	0.56	1
147-B-1010.D	1.0	Mexican Imports	Mexican low-fired	hand painted	rim	2.65	1
147-B-623		Mexican Imports	Mexican low-fired	hand painted	earthenware, glazed both sides, red/orange	3.00	1
147-B-942		Mexican Imports	Mexican low-fired	hand painted	sherd	22.11	1
147-B-944		Mexican Imports	Mexican low-fired	hand painted	sherd	20.50	2
		Mexican Imports	Mexican low-fired	hand painted	sherd	11.20	6
147-B-926		Mexican Imports	Mexican low-fired	hand painted	sherd	0.60	1
147-B-880.D6	1.0	Mexican Imports	Mexican low-fired	hand painted	rim	2.22	1
147-B-880.D6		Mexican Imports	Mexican low-fired	hand painted	sherd	14.23	9
147-B-623	1.0	Mexican Imports	Mexican low-fired	hand painted	rim	4.07	1
147-B-961	1.0	Mexican Imports	Mexican low-fired	hand painted	rim	1.43	2
	2.0	Mexican Imports	Mexican low-fired	hand painted	rims	2.06	2
147-B-116.D	1.0	Mexican imports	Mexican low-fired	hand painted	sherd	16.30	1
147-B-10.D2		Mexican imports	Mojalica	hand painted	sherd	0.70	1
147-B-223		Mexican Imports	Mojalica	hand painted	base	2.81	1
147-B-934.D	1.0	Mexican Imports	Mojalica	hand painted	rim	1.20	1

147-B-924.D	1.0	Mexican Imports	Mojalica	hand painted	rim	1.02	1
147-B-607.D5	1.0	Mexican Imports	Mojalica	hand painted	rim	2.16	1
147-B-607.D5		Mexican Imports	Mojalica	hand painted	sherd	0.50	1
147-B-659	1.0	Mexican Imports	Mojalica	hand painted	rim	1.99	2
147-B-631.D	1.0	Mexican Imports	Mojalica	hand painted	rim	0.90	1
147-B-1528		Mexican Imports	Mojalica	hand painted	sherd	0.50	1
147-B-962	1.0	Mexican Imports	Mojalica	hand painted	sherd with rim	0.50	1
147-B-566		Mexican Imports	Mojalica	hand painted	sherd	0.90	1
147-B-872.D		Mexican Imports	Mojalica	hand painted	sherd	0.45	1
147-B-1572		Mexican Imports	Mojalica	hand painted	sherd	2.10	1
147-B-1574.D		Mexican Imports	Mojalica	hand painted	sherd	2.25	1
147-B-555		Mexican Imports	Mojalica	hand painted	base	10.29	1
147-B-331		Mexican Imports	Mojalica	hand painted	handle	13.59	
147-B-544		Mexican Imports	Mojalica	hand painted	sherd with base	26.23	1
147-B-872.D		Mexican Imports	Mojalica	hand painted	sherd	1.23	1
147-B-224		Mexican Imports	Mojalica	hand painted	sherd	1.45	1
147-B-872.D		Mexican Imports	Mojalica	hand painted	sherd	3.10	1
147-B-1191.D		Mexican Imports	Mojalica	hand painted	sherd	0.52	1
147-B-849		Mexican Imports	Mojalica	hand painted	sherds	7.31	6
147-B-3019		Mexican Imports	Mojalica	hand painted	sherd	0.73	1
147-B-764.D		Mexican Imports	Mojalica	hand painted	sherd	1.14	1
147-B-834		Mexican Imports	Mojalica	hand painted	sherds	2.62	2

147-B-713	2.0	Mexican Imports	Mojalica	hand painted	rims	3.44	2
147-B-358	1.0	Mexican Imports	Mojalica	hand painted	rim	5.84	1
147-B-1004.D3		Mexican Imports	Mojalica	hand painted	sherd	4.27	1
147-B-101.D	1.0	Mexican Imports	Mojalica	hand painted	rim	5.27	1
147-B-1546.D		Mexican Imports	Mojalica	hand painted	sherd	0.53	1
147-B-607.D5		Mexican Imports	Mojalica	hand painted	sherd	2.55	1
147-B-226		Mexican Imports	Mojalica	hand painted	sherd	3.30	1
147-B-1539.D		Mexican Imports	Mojalica	hand painted	sherd	0.96	1
147-B-1538		Mexican Imports	Mojalica	hand painted	sherd	0.20	1
147-B-249		Mexican Imports	Mojalica	hand painted	sherd	2.37	1
147-B-1575		Mexican Imports	Mojalica	hand painted	sherd	0.88	1
147-B-962		Mexican Imports	Mojalica	hand painted	sherd	0.71	1
147-B-980		Mexican Imports	Mojalica	hand painted	sherd	1.45	1
147-B-607.D6		Mexican Imports	Mojalica	hand painted	sherd	4.72	1
147-B-610.D3		Mexican Imports	Mojalica	hand painted	sherd	4.25	1
147-B-694.D2		Mexican Imports	Mojalica	hand painted	sherds	13.30	6
147-B-205		Mexican Imports	Mojalica	hand painted	sherd	2.15	1
147-B-713		Mexican Imports	Mojalica	hand painted	sherd	16.32	4
147-B-1546.D		Mexican Imports	Mojalica	hand painted	sherd	2.63	1
147-B-610.D2		Mexican Imports	Mojalica	hand painted	sherd	4.91	2
147-B-872.D		Mexican Imports	Mojalica	hand painted	sherd	0.56	1
147-B-694.D2		Mexican Imports	Mojalica	hand painted	sherd	2.58	2

147-B-1082.D3		Mexican Imports	Mojalica	hand painted	sherd	1.00	1
147-B-1082.D3		Mexican Imports	Mojalica	hand painted	sherd	1.72	1
147-B-3020	1.0	Mexican Imports	Mojalica	hand painted	rim	4.67	1
147-B-3022	1.0	Mexican Imports	Mojalica	hand painted	rim	1.00	1
147-B-880.D5	3.0	Mexican Imports	Mojalica	hand painted	rims	3.23	3
147-B-3023		Mexican Imports	Mojalica	hand painted	sherd	1.70	1
147-B-544		Mexican Imports	Mojalica	hand painted	sherd	0.67	1
147-B-631.D		Mexican Imports	Mojalica	hand painted	sherd	8.55	1
147-B-934.D		Mexican Imports	Mojalica	hand painted	sherd	1.20	1
147-B-610.D2	1.0	Mexican Imports	Mojalica	hand painted	rim	2.29	1
147-B-713		Mexican Imports	Mojalica	hand painted	sherd	0.59	1
147-B-610.D2		Mexican Imports	Mojalica	hand painted	sherd	0.75	1
147-B-734	1.0	Mexican Imports	Mojalica	hand painted	rim	2.41	1
147-B-476.D	1.0	Mexican Imports	Mojalica	hand painted	rim	3.50	1
147-B-623		Mexican Imports	Mexican low-fired	undecorated	sherd	5.21	1
147-B-814.D		Mexican Imports	Mexican low-fired	undecorated	sherd	2.29	1
147-B-251		Mexican Imports	Mexican low-fired	undecorated	sherd	1.25	1
147-B-3019		Mexican Imports	Mexican low-fired	undecorated	sherd	30.24	3
147-B-734	1.0	Mexican Imports	Mexican low-fired	undecorated	rim	0.77	1
147-B-607.D5		Mexican Imports	Mexican low-fired	undecorated	sherd	15.20	1
147-B-408		Mexican Imports	Mexican low-fired	undecorated	sherd	0.60	1
147-B-485		Mexican Imports	Mexican low-fired	undecorated	sherd	12.76	1

147-B-494		Mexican Imports	Mexican low-fired	undecorated	sherd	2.83	1
147-B-1082.D3		Mexican Imports	Mexican low-fired	undecorated	sherd	3.34	2
147-B-258		Mexican Imports	Mexican low-fired	undecorated	sherd	1.57	1
147-B-1169		Mexican Imports	Mexican low-fired	undecorated	sherd	0.80	1
147-B-1191.D		Mexican Imports	Mexican low-fired	undecorated	sherd	1.90	1
147-B-1537		Mexican Imports	Mexican low-fired	undecorated	sherd	2.65	1
147-B-1574.D		Mexican Imports	Mexican low-fired	undecorated	sherd	1.18	1
91.D2		Mexican Imports	Mexican low-fired	undecorated	base	4.08	1
147-B-277		Mexican Imports	Mexican low-fired	undecorated	sherds	7.00	2
147-B-610.D2		Mexican Imports	Mexican low-fired	undecorated	sherds	6.07	3
147-B-934.D		Mexican Imports	Mexican low-fired	undecorated	sherds	27.43	8
147-B-734		Mexican Imports	Mexican low-fired	undecorated	sherds	0.76	2
147-B-156.D		Mexican Imports	Mexican low-fired	undecorated	sherds	0.50	1
147-B-631.D	1.0	Mexican Imports	Mexican low-fired	undecorated	rim	1.50	1
147-B-631.D		Mexican Imports	Mexican low-fired	undecorated	base	7.00	3
147-B-880.D5		Mexican Imports	Mexican low-fired	undecorated	sherds	2.38	1
147-B-880.D6	1.0	Mexican Imports	Mexican low-fired	undecorated	rim	10.50	1
147-B-1074		Mexican Imports	Mexican low-fired	undecorated	sherd	0.20	1
147-B-87.D2		Mexican imports	Mexican low-fired	undecorated	sherd	2.20	1
147-B-1059	1.0	Mexican Imports	Mexican low-fired	undecorated	rim	88.70	7
147-B-1545.D	1.0	Mexican Imports	Mexican low-fired	undecorated	rim	3.01	1
147-B-880.D6	1.0	Mexican Imports	Mexican low-fired	undecorated	rim	2.54	1

147-B-1085	2.0	Mexican Imports	Mexican low-fired	undecorated	rim	22.90	2
147-B-1547.D		Mexican Imports	Mexican low-fired	undecorated	sherd	1.22	1
147-B-1085		Mexican Imports	Mexican low-fired	undecorated	sherd	17.84	1
		Mexican Imports	Mexican low-fired	undecorated	sherd	5.89	3
147-B-91.D		Mexican Imports	Mexican low-fired	undecorated	sherd	0.59	1
147-B-323.D		Mexican Imports	Mexican low-fired	undecorated	sherd	0.20	1
147-B-3032	1	Mission-made	glazed	undecorated	rim	21.06	1
266		Mission-made	glazed	undecorated	sherd	7.25	1
147-B-1571.D		Mission-made	glazed	undecorated	sherd	1.40	1
147-B-1551		Mission-made	glazed	undecorated	sherd	1.87	1
147-B-1554		Mission-made	glazed	undecorated	sherd	1.49	1
147-B-123.D2		Mission-made	glazed	undecorated	sherd	3.70	2
147-B-1179.D		Mission-made	glazed	undecorated	sherd	39.00	1
147-B-1553.D		Mission-made	glazed	undecorated	sherd	2.40	1
147-B-91.D		Mission-made	glazed	undecorated	sherd	6.11	1
147-B-1575.D2		Mission-made	glazed	undecorated	sherd	0.70	1.00
147-B-1540.D	1	Mission-made	glazed	undecorated	rim	3.90	1
147-B-10.D2		Mission-made	glazed	undecorated	sherd	0.59	1
147-B-623		Mission-made	glazed	undecorated	sherds	22.80	6
147-B-623		Mission-made	glazed	undecorated	handle	6.95	5
147-B-1010.D		Mission-made	glazed	undecorated	sherd	65.40	1
147-B-1537.D		Mission-made	glazed	undecorated	sherd	0.50	1

147-B-662.D6		Mission-made	glazed	undecorated	sherds	8.53	1.00
147-B-1546.D2		Mission-made	glazed	undecorated	sherd	0.70	1
147-B-607.D9		Mission-made	glazed	undecorated	sherd	26.90	15
147-B-1574.D3		Mission-made	glazed	undecorated	sherd	5.49	3
147-B-1032		Mission-made	glazed	undecorated	sherd	1.70	2
147-B-1576		Mission-made	glazed	undecorated	sherd	0.12	1
147-B-880.D6		Mission-made	glazed	undecorated	sherds	51.90	15
147-B-1547.D		Mission-made	glazed	undecorated	sherd	0.17	1
147-B-1085		Mission-made	glazed	undecorated	sherd	42.20	4
147-B-1059.D		Mission-made	unglazed	undecorated	sherd	1.88	1
147-B-1169.D		Mission-made	unglazed	undecorated	sherd	8.04	1
147-B-1179.D2		Mission-made	unglazed	undecorated	sherd	43.70	1
147-B-1185		Mission-made	unglazed	undecorated	sherd	21.79	1
147-B-866.D		Mission-made	unglazed	undecorated	sherd	25.07	1
147-B-1547.D		Mission-made	unglazed	undecorated	sherd	5.80	1
147-B-3031		Mission-made	unglazed	undecorated	sherd	21.80	1
147-B-3031	1	Mission-made	unglazed	undecorated	rim	35.00	2
147-B-3031		Mission-made	unglazed	undecorated	sherd	6.70	1
147-B-1564		Mission-made	unglazed	undecorated	sherd	5.70	1
		Mission-made	unglazed	undecorated	sherd	15.76	1
	1	Mission-made	unglazed	undecorated	rim	3.44	1
147-B-1047	1	Mission-made	unglazed	undecorated	rim	186.30	5

147-B-109.D2		Mission-made	unglazed	undecorated	sherd	4.86	1
147-B-36.D2		Mission-made	unglazed	undecorated	sherd	4.30	1
147-B-266.D2		Mission-made	unglazed	undecorated	sherd	9.15	1
147-B-694.D4		Mission-made	unglazed	undecorated	sherd	196.84	1
147-B-866		Mission-made	unglazed	undecorated	sherd	62.80	2
147-B-1563.D		Mission-made	unglazed	undecorated	sherd	3.43	1
147-B-662.D6	1	Mission-made	unglazed	undecorated	rim	1.37	1
147-B-623		Mission-made	unglazed	undecorated	sherd	7.00	3
147-B-1554		Mission-made	unglazed	undecorated	sherd	0.64	1
147-B-662.D6		Mission-made	unglazed	undecorated	sherd	35.60	1
147-B-1589		Mission-made	unglazed	undecorated	sherd	6.40	1
147-B-907.D2		Mission-made	unglazed	undecorated	handle	11.40	1
147-B-607.D9		Mission-made	unglazed	undecorated	sherd	13.20	1
147-B-607.D9		Mission-made	unglazed	undecorated	sherd	23.00	10
147-B-607.D9	1	Mission-made	unglazed	undecorated	rim	3.27	1
147-B-897		Mission-made	unglazed	undecorated	sherd	20.50	1
147-B-848		Mission-made	unglazed	undecorated	sherd	78.41	1
147-B-799.D		unknown	unknown	undecorated	unknown	1.34	1
147-B-1304	1.0	unknown	unknown	undecorated	unknown	1.04	1
147-B-785		unknown	unknown		unknown	2.71	1
147-B-1082.D3		unknown	unknown		unknown	6.76	1
147-B-1143		unknown	unknown		unknown	0.76	1
147-B-734		unknown	unknown		unknown	2.69	1
147-B-880.D3		unknown	unknown		unknown	5.95	1

147-B-1545		unknown	unknown		unknown	1.03	1
147-B-1539.D		unknown	unknown		unknown	1.26	1
147-B-1121		unknown	unknown		unknown	3.77	2

Appendix VIII: 2019 Archaeological Catalog (Abbreviated).

Cat #	Unit	Level (cm)	Other Proven	Strat	Lab Sort	Lab Mesh	Class	Object 1	Mod 1	Material	Count	Weight (g	Date
1	Unit 1a	50-60			1/8" field found		Glass	Bead		Glass	1	0.06	10.30.19
2	MU 1	0-20			1/8" fast sort	1/8"	Faunal	Bead		Bone undiff	1	0.1	5.28.19
3	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Shell	1	0.02	5.28.19
4	Unit 1a	60-70			1/8" Field found	1/8"	Glass	Bead		Glass	1	0.06	11.05.19
5	Unit 1a	70-80			1/8" field found	1/8"	Glass	Bead		Glass	1	0.02	7.20.19
6	Unit 1a			1	1/8" field found	1/8"	Glass	Bead		Glass	1	0.03	7.13.19
7	Unit 1b	100-110			18" field found	1/8"	Glass	Bead		Glass	1	0.28	11.5.19
8	Unit 1b	100-110			1/8" field found	1/8"	Glass	Bead		Glass	1	0.03	1.5.19
9	MU 5	20-30			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.04	11.5.19
10	MU 5	20-30			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.05	11.5.19
11	MU 5	30-40			1/8" bulk	1/8"	Glass	Bead		Glass	1	0.03	7.20.19
12	MU 5	40-50			1/8' 100 gram samp.	1/8"	Glass	Bead		Glass	1	0.05	11.5.19
13	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead	Broken	Olivella	1	0.14	5.28.19
14	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead	Asphaltum	Olivella	1	0.03	5.28.19
15	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.04	5.28.19

16	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.05	5.28.19
17	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.05	5.28.19
18	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.08	5.28.19
19	MU 1	0-20			1/8" fast sort	1/8"	Glass	Bead		Glass	1	0.02	5.28.19
20	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.01	5.28.19
21	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.03	5.28.19
22	MU 1	20-40				1/4"	Shell	Bead		Olivella	1	0.06	9.28.19
23	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.14	6.28.19
24	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Red abalone	1	0.14	6.28.19
25	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.05	6.28.19
26	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.07	6.28.19
27	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.06	6.28.19
28	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Red abalone	1	0.01	6.28.19
29	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.07	6.28.19
30	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.01	6.28.19
31	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.06	6.28.19
32	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.02	6.28.19
33	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.07	6.28.19

34	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.03	6.28.19
35	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.07	6.28.19
36	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.03	6.28.19
37	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.08	6.28.19
38	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.03	6.28.19
39	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.03	6.28.19
40	MU 1	20-40			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.02	6.28.19
41	MU 1	20-40			1/8" fast sort	1/8"	Shell	undiff	parasite hole	Mytilus	1	0.05	6.28.19
42	MU 1	40-50				1/4"	Shell	Bead		Olivella	1	0.1	6.28.19
43	Unit 1b	30-40			1/8" Field found	1/8"	Glass	Bead		Glass	1	0.04	5.27.19
44	Unit 1b	28-50			1/8" Field found	1/8"	Glass	Bead		Glass	1	0.48	7.20.19
45	MU 5	40-50			1/8" Field found	1/8"	Glass	Bead		Glass	1	0.07	11.6.19
46	MU 5	50-60			1/4" Field Found	1/4"	Glass	Bead		Glass	1	0.04	7.27.19
47	MU 5	100-110			1/8" Field Found	1/8"	Glass	Bead		Glass	1	0.03	7.27.19
48	MU 4	0-20			1/8" Field Found	1/8"	Glass	Bead		Glass	1	0.03	7.13.19
49	MU 4	0-20			1/4" Field Found	1/4"	Glass	Bead		Glass	1	0.1	7.13.19
50	MU 4	0-20			1/4" Field Found	1/4"	Glass	Bead		Glass	1	0.03	7.13.19

51	MU 4	0-20			1/4" Field Found	1/4"	Glass	Bead		Glass	1	0.02	7.13.19
52	MU 4	0-20			1/4" Field Found	1/4"	Glass	Bead		Glass	1	0.03	7.13.19
53	MU 4	20-30			1/8" 100g sample	1/8"	Glass	Bead		Glass	1	0.03	11.6.19
54	MU 4	20-30			1/8" 100g sample	1/8"	Glass	Bead		Glass	1	0.05	11.6.19
55	MU 4	30-40			1/8" Field Found	1/8"	Glass	Bead		Glass	1	0.04	11.6.19
56	MU 1	40-50				1/4"	Lithic	Bead		Abalone	1	0.12	6.29.19
57	MU 1	50-60			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.07	7.3.19
58	MU 1	40-50			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.08	7.3.19
59	MU 1	50-60			1/8" fast sort	1/8"	Shell	Bead		Red Abalone	1	0.1	7.3.19
60	MU 1	50-60			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.06	7.3.19
61	MU 1	50-60					Shell	Bead		Olivella	1	0.11	6.29.19
62	MU 1	60-70			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.11	6.29.19
63	MU 1	60-70			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.12	6.29.19
64	MU 1	60-70			1/8" fast sort	1/8"	Shell	Bead	sm. columella bead	Gastropod undiff	1	0.31	6.29.19
65	MU 1	60-70			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.07	6.29.19
66	MU 1	60-70			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.05	6.29.19
67	MU 1	60-70				1/4"	Shell	Bead		Olivella	1	0.05	5.29.19
68	MU 1	60-70				1/8"	Shell	Bead		Olivella	1	0.09	6.29.19

69	MU 1	70-80				1/8"	Shell	Bead		Olivella	1	0.05	6.29.19
70	MU 1	70-80				1/8"	Shell	Bead		Olivella	1	0.1	6.29.19
71	MU 1	70-80				1/8"	Shell	Bead		Olivella	1	0.07	6.29.19
72	MU 1	70-80				1/8"	Shell	Bead		Olivella	1	0.01	6.29.19
73	MU 1	70-80				1/8"	Shell	Bead		Olivella	1	0.06	6.29.19
74	MU 1	70-80			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.01	6.29.19
75	MU 1	80-90					Shell	Bead		Olivella	1	0.1	7.5.19
76	MU 1	80-90			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.12	7.5.19
77	MU 1	80-90			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.08	7.5.19
78	MU 1	80-90			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.05	7.5.19
79	MU 1	80-90				1/8"	Shell	Bead		Olivella	1	0.03	7.5.19
80	MU 1	100-110			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.06	7.5.19
81	MU 1		heavy fraction	2	Col. sample	1/8"	Shell	Bead		Olivella	1	0.13	
82	MU 1	Wall Fall				1/8"	Shell	Bead		Olivella	1	0.07	7.27.19
83	MU 1	Wall Fall				1/8"	Shell	Bead		Olivella	1	0.15	7.27.19
84	MU 1	Wall Fall				1/8"	Shell	Bead		Olivella	1	0.03	7.27.19
85	MU 1	Wall Fall				1/8"	Shell	undiff	parasite hole	Red Ab	1	0.13	7.27.19

86	MU 1	0-20			1/8" fast sort	1/8"	Shell	Bead		Olivella	1	0.02	5.28.19
87	MU 5	50-60				1/8"	Shell	Bead		Olivella	1		7.27.19
88	MU 1	60-70				1/8"	???	Bead		???	1	0.02	6.29.19
89	MU 1		heavy fraction	2	Col. sample	9.75L	Glass	Bead		Glass	1	0.01	7.27.19
90	MU 5	20-30			fast sort	1/8"	Shell	Bead		Olivella	1	0.02	
91	MU 5	20-30			fast sort	1/8"	Shell	Bead		Olivella	1	0.05	
92	MU 5	30-40			1/8" bulk	1/8"	Shell	Bead		Olivella	1	0.02	7.20.19
93	MU 5	30-40			1/8" bulk	1/8"	Shell	Bead		Olivella	1	0.07	7.20.19
94	MU 5	30-40			1/8" bulk	1/8"	Shell	Bead		Olivella	1	0.03	7.20.19
95	MU 5	30-40			1/8" bulk	1/8"	Shell	Bead		Olivella	1	0.01	7.20.19
96	MU 5	40-50				1/8"	Shell	Bead		Olivella	1	0.04	7.20.19
97	MU 5	40-50				1/8"	Shell	Bead		Olivella	1	0.08	7.20.19
98	MU 5	40-50				1/8"	Shell	Bead		Olivella	1	0.1	7.20.19
99	MU 5	60-70				1/4"	Shell	Bead		Olivella	1	0.06	7.27.19
100	MU 5	60-70				1/4"	Shell	Bead		Olivella	1	0.07	7.27.19
101	MU 5	60-70				1/4"	Shell	Bead		Olivella	1	0.05	7.27.19
102	MU 4	0-20				1/8"	Shell	Bead		Clam?	1	0.05	7.15.19
103	MU 4	0-20				1/8"	Shell	Bead		Olivella	1	0.06	7.13.19
104	MU 4	0-20				1/8"	Shell	Bead		Mytilus & Asphaltum	1	0.04	7.13.19
105	MU 4	20-30				1/8"	Shell	Bead		Olivella	1	0.02	
106	MU 4	50-60				1/4"	Shell	Bead		Olivella	1	0.04	7.20.19

107	MU 4	Wall Fall				1/8"	Shell	Bead	B.I.P.	Olivella	1	0.07	7.20.19
108	MU 4	Wall Fall				1/8"	Shell	Bead		Clam	1	0.12	7.20.19
109	MU 3	40-50				1/4"	Shell	Bead		Olivella	1	0.01	7.13.19
110	MU 4	30-40				1/8"	Shell	Bead		Olivella	1	0.01	7.13.19
111	MU 3	60-70				1/4"	Shell	Bead		Olivella	1	0.04	7.13.19
112	MU 2	70-80				1/4"	Shell	Bead		Red Abalone	1	0.07	
113	MU 2	80-90				1/8"	Shell	Bead	Fragment	Olivella	2	0.01	
114	Unit 1	50-60				1/8"	Shell	Bead		Olivella	1	0.05	5.27.19
115	MU 1		heavy fraction	1	Col. sample	8.5L	Shell	Bead		Olivella	1		7.29.19
116	MU 1		heavy fraction	2	Col. sample	9.75L	Shell	Bead	Fragment	Red Abalone	1		7.27.19
117	MU 1		heavy fraction	3	Col. sample	10.5L	Shell	Bead		Olivella	1		7.3.19
118	MU 1		heavy fraction	3	Col. sample	10.5L	Shell	Bead		Olivella	1		8.3.19
119	MU 5	0-20					Shell	Bead	Fragment	Olivella	1		7.20.19
120	MU 5	0-20					Shell	Bead		Red Abalone	1	0.03	7.20.19

121	MU 5	0-20					Shell	Bead		Olivella	1	0.02	7.20.19
122	MU 5	0-20				0.03	Shell	Bead		Olivella	1	0.03	7.20.19
123	MU 5	0-20				0.02	Shell	Bead		Red abalone	1	0.02	7.20.19
124	MU 4	30-40			1/8" Feild Found	1/8"	Glass	Bead		Glass	1	0.09	7.13.19
125	MU 4	30-40			1/8" Feild Found	1/8"	Glass	Bead		Glass	1	0.02	7.13.19
126	MU 4	40-50			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.11	7.20.19
127	MU 4	40-50			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.3	7.20.19
128	MU 4	30-40			1/8" Feild Found	1/8"	Glass	Bead		Glass	1	0.05	10.14.19
129	MU 4	30-40			1/8" Feild Found	1/8"	Glass	Bead		Glass	1	0.03	7.20.19
130	MU 4	40-50			1/4" Field Found	1/4"	Glass	Bead		Glass	1	0.03	7.20.19
131	MU 4	40-50			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.03	7.20.19
132	MU 4	40-50			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.36	7.20.19
133	MU 4	40-50			1/8" 100g	1/8"	Glass	Bead		Glass	1	0.02	7.20.19
134	MU 4	40-50			1/8" 100g	1/8"	Glass	Bead		Glass	1	0.03	7.20.19
135	MU 4	50-60			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.12	7.20.19
136	MU 4	50-60			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.02	7.20.19
137	MU 4	50-60			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.06	7.20.19

138	MU4	50-60			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.03	7.20.19
139	MU4	60-70			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.03	7.20.19
140	MU4	70-80			1/4" Bulk	1/4"	Glass	Bead		Glass	1	0.17	7.27.19
141	MU4		heavy fraction		1/8" 10+L column sample	1/8"	Glass	Bead		Glass	1	0.15	8.3.19
142	MU4				1/8" Lot L column shape	1/8"	Glass	Bead		Glass	1	0.03	8.3.19
143	MU4	Wall Fall			1/8" Wall Fall	1/8"	Glass	Bead		Glass	1	0.05	7.20.19
144	MU3	0-20			1/8" Field found	1/8"	Glass	Bead		Glass	1	0.07	7.6.19
145	MU3	20-30			1/8" Full Sort	1/8"	Glass	Bead		Glass	1	0.05	7.6.19
146	MU3	20-30			1/8" Full Sort	1/8"	Glass	Bead		Glass	1	0.02	7.6.19
147	MU3	20-30			1/8" Full Sort	1/8"	Glass	Bead		Glass	1	0.06	7.6.19
148	MU3	30-40			1/8" Bulk	1/8"	Glass	Bead		Glass	1	0.06	7.13.19
149	MU3	30-40			1/4 Field Found	1/4"	Glass	Bead		Glass	1	0.04	7.13.19
150	MU3	40-50			1/4 Field Found	1/4"	Glass	Bead		Glass	1	0.01	7.13.19
151	MU3	40-50			1/4" Field Found	1/4"	Glass	Bead		Glass	1	0.01	7.13.19
152	MU3	70-80			1/8" Field Found	1/8"	Glass	Bead		Glass	1	0.01	7.20.19

153	MU 2	20-30			1/8" Field Found	1/8"	Glass	Bead		Glass	1	0.02	7.6.19
154	MU 2	30-40			1/8" Full Sort	1/8"	Glass	Bead		Glass	1	0.03	8.2.19
155	MU 2	30-40			1/8" 100g	1/8"	Glass	Bead		Glass	1	0.04	11.21.19
156	MU 2	40-50			1/8" 100g	1/8"	Glass	Bead		Glass	1	0.01	7.6.19
157	MU 2	30-40			1/8" 100g	1/8"	Glass	Bead		Glass	1	0.06	7.6.19
158	MU 2	40-50			1/8" Field Found	1/8"	Glass	Bead		Glass	1	0.09	7.6.19
159	Unit 1	50-60			1/8" Bulk	1/8"	Glass	Bead		Glass	1	0.32	5.27.19
160	Unit 1	100-110			1/8" Field Found	1/8"	Glass	Bead		Glass	1	0.42	11.26.19
161	Unit 1		11 floor		Field Found`		Glass	Bead		Glass	1	0.29	7.2.19
162	MU 4			1	Col. sample	9.6 L	Shell	Bead	Broken		1	0.01	8.3.19
163	MU 1	40-50			1/8" Fast sort	1/8"	Glass	Bead			1	0.01	6.29.19
164	MU 1	40-50			1/8" Fast sort	1/8"	Shell	Bead			1	0.03	
165	MU 5		heavy fraction		Col. sample	9.1 L	Shell	Bead			1	0.01	8.3.19
166	MU 5				Col. sample	9.1 L	Glass	Bead		Glass	1	0.01	8.3.19
167	MU 5				Col. sample	9.1 L	Glass	Bead		Glass	1	0.03	8.3.19
168	MU 5	40-50			1/8" 100g	1/8"	Glass	Bead		Glass	1	0.04	
169	Unit 1	40-50			1/8" Bulk	1/8"	Glass	Bead		Glass	1	0.02	

170	Unit 1	107	11 floor		Field Found`		Glass	Bead		Glass	1	0.03	7.2.19
171	Unit 1	100-110			1/8" Bulk	1/8"	Glass	Bead		Glass	1	0.62	
172	MU 2		Stratum 1		1/8" Bulk	1/8"	Glass	Bead		Glass	1	0.05	8.3.19
173	MU 2	20-30					Glass	Bead		Glass	1	0.1	7.13.19
174	MU 3	40-50				1/4"	Glass	Bead		Glass	1	0.12	7.13.19
175	MU 3		Stratum 2		Fast sort		Glass	Bead		Glass	1	0.03	7.27.19
176	MU 3		Stratum 3		Fast sort		Glass	Bead		Glass	1	0.01	7.27.19
177	MU 4		Stratum 1				Glass	Bead		Glass	1	0.01	8.3.19
178	MU 1	0-20			Fast Sort	1/8"	Glass	Bead		Glass	1	0.29	5.28.19
179	MU 1		Surface		5cm from Surface	1/8"	Glass	Bead		Glass	1	0.03	8.3.19
180	MU 1	0-20			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	6.28.19
181	MU 1	0-20			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	6.28.19
182	MU 1	0-20			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.08	6.28.19
183	MU 1	0-20			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
184	MU 1	0-20			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
185	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
186	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.01	6.28.19

187	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.01	6.28.19
188	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	6.28.19
189	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	6.28.19
190	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
191	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
192	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
193	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.05	6.28.19
194	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.04	6.28.19
195	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
196	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.09	6.28.19
197	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	6.28.19
198	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.27	6.28.19
199	MU 1	20-40			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.07	6.28.19
200	MU 1	40-50			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.01	7.13.19
201	MU 1	40-50			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.01	7.3.19
202	MU 1	50-60			1/8" Bulk Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	7.3.19
203	MU 1	50-60			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	7.3.19

204	MU 1	50-60			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	7.3.19
205	MU 1	50-60			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	7.3.19
206	MU 1	50-60			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.04	7.3.19
207	MU 1	50-60			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.05	7.3.19
208	MU 1	50-60			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.1	7.3.19
209	MU 1	50-60			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	7.3.19
210	MU 1	60-70			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.01	6.29.19
211	MU 1	60-70			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.05	6.29.19
212	MU 1	60-70			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	6.29.19
213	MU 1	60-70			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	6.29.19
214	MU 1	70-80			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.32	6.29.19
215	MU 1	70-80			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.26	6.29.19
216	MU 1	70-80			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	6.29.19
217	MU 1	80-90			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.05	7.5.19
218	MU 1	80-90			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.03	7.5.19
219	MU 1	80-90			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.04	7.5.19
220	MU 1	80-90			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1		7.5.19

221	MU 1	80-90			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.08	7.5.19
222	MU 1	80-90			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	7.5.19
223	MU 1	80-90			1/8" Fast Sort	1/8"	Glass	Bead		Glass	1	0.02	7.5.19
224	MU 1	Wall fall			1/8" Fast Sort	6.75 L	Glass	Bead		Glass	1	0.02	7.27.19
225	MU 1		Strat 4		Column sample	6.75 L	Glass	Bead		Glass	1	0.01	8.3.19
226	MU 1		Strat 1		Column sample	8.5 L	Glass	Bead		Glass	1	0.01	7.29.19
227	MU 1		Strat 1		Column sample	8.5 L	Glass	Bead		Glass	1		7.29.19
228	MU 1		Strat 3		heavy fraction	9.75 L	Glass	Bead		Glass	1		7.27.19
229	MU 1		Strat 2		Column sample	9.75 L	Glass	Bead		Glass	1		7.27.19
230	MU 1		Strat 3		Column sample	10.5 L	Glass	Bead		Glass	1		8.3.19
231	MU 1		Strat 3		Column sample	10.5 L	Glass	Bead		Glass	1		8.3.19
232	MU 1		Strat 3		Column sample	10.5 L	Glass	Bead		Glass	1		8.3.19
233	MU 1		Strat 3		heavy fraction	10.5 L	Glass	Bead		Glass	1		
234	MU 1		Strat 3		heavy fraction	1/8"	Glass	Bead		Glass	1		
235	MU 4	40-50			1/4" full sort	1/4"	Glass	Bead		Glass	1	0.21	7/20/2019

236	MU 5	100-110				1/8"	Glass	Bead		Glass	1	0.11	7/27/2019
237	MU 1	20-40				1/4"	Glass	Bead		Glass	1	0.39	9/28/2019
238	MU 1	20-40				1/4"	Glass	Bead		Glass	1	0.32	9/28/2019
239	MU 1	20-40 cmbs				1/4"	Stone	Bead	misc.	Soapstone		0.13g	9/28/2019
240	MU 1	50-60 cmbs					Stone	Bead	misc.	Volcanic		0.13g	6/29/2019
241	MU 5		heavy fraction	1	Col. sample	9.1 L	Stone	Bead	misc.	Soapstone		0.25g	8/3/2019
242	MU 5	60-70 cmbd				1/8"	Stone	Bead	misc.	Volcanic		0.02g	7/27/2019
243	MU 5	40-50 cmbd				1/8"	Stone	Bead	misc.	Steatite		0.03g	7/20/2019
244	MU 1	40-50 cmbs				1/4"	Ceramic	Bead	misc.	Ceramic		2.17g	6/29/2019
245	MU 1	0-20 cmbs			1/8" Fast Sort	1/8"	Bone	Bead	misc.	Bone		0.10g	5/28/2019
246	UNIT 1	130-140 cmbd			1/8" Bulk	1/8"	Bone	Bead	misc.	Bone		0.10g	7/6/2019
247	UNIT 1A	60-70 cmbd				1/8"	Bone	Bead	misc.	Bone		0.02g	N/A
248	UNIT 1B	110-120 cmbd				1/8"	Musketball			Metal		12.54g	8/3/2019
249	MU 1	Wall Fall				1/8"	Button			Metal		0.29g	7/27/2019
250	MU 1	0-20			100g Full Sort	1/8"	Shell		Detritus	Olivella	2	0.18	6/28/2019
251	MU 1	0-20			Field Pulled	1/8"	Shell		Detritus	Olivella	36	8.91	6/28/2019

252	MU 1	0-20			Full Sort	1/4"	Shell		Whole	Olivella	3	2.67	6/28/2019
253	MU 1	20-40			100g Shell ID	1/8"	Shell		Detritus	Olivella	18	0.99	6/28/2019
254	MU 1	20-40 cmbs			1/8" Fast Sort	1/8"	Shell		Detritus	Olivella	4	0.37	6/28/2019
255	MU 1	20-40 cmbs			1/8"Full Sort	1/8"	Shell		Detritus	Olivella	26	5.39	6/28/2019
256	MU 1	20-40 cmbs			1/8" Fast Sort	1/8"	Shell		Whole	Olivella	6	4.5	6/28/2019
257	MU 1	20-40 cmbs			1/8" Fast Sort	1/8"	Shell		Detritus	Olivella	43	11.8	6/28/2019
258	MU 1	20-40 cmbs			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	42	5.89	6/28/2019
259	MU 1	20-40 cmbs			1/4" Full Sort	1/4"	Shell		Whole	Olivella	2	1.03	6/28/2019
260	MU 1	40-50 cmbs			100g Sample	1/8"	Shell		Detritus	Olivella	24	1.05	6/29/2019
261	MU 1	40-50 cmbs			1/8" Fast Sort	1/8"	Shell		Detritus	Olivella	27	1.89	6/29/2019
262	MU 1	40-50 cmbs			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	38	9.7	6/29/2019
263	MU 1	50-60 cmbs			100g Sample	1/8"	Shell		Detritus	Olivella	21	1.43	6/29/2019
264	MU 1	50-60 cmbs			1/8" Fast Sort	1/8"	Shell		Detritus	Olivella	18	1.44	6/29/2019
265	MU 1	50-60 cmbs			1/4" Full Sort	1/4"	Shell		Whole	Olivella	1	0.52	6/29/2019
266	MU 1	50-60 cmbs			1/4" Full Sort	1/4"	Shell		Whole	Olivella	1	2.07	6/29/2019
267	MU 1	50-60 cmbs			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	35	9.07	6/29/2019
268	MU 1	60-70 cmbs			100g Sample	1/8"	Shell		Detritus	Olivella	24	1.05	6/29/2019

269	MU 1	60-70 cmbs		1/4" Full Sort	1/4"	Shell		Detritus	Olivella	43	9.88	6/29/2019
270	MU 1	60-70 cmbs		1/4" Full Sort	1/4"	Shell		Whole	Olivella	4	2.44	6/29/2019
271	MU 1	70-80 cmbs		1/8" Fast Sort	1/8"	Shell		Detritus	Olivella	4	0.44	6/29/2019
272	MU 1	70-80 cmbs		100g Sample	1/8"	Shell		Detritus	Olivella	12	0.76	6/29/2019
273	MU 1	70-80 cmbs		1/4" Full Sort	1/4"	Shell		Detritus	Olivella	25	4.74	6/29/2019
274	MU 1	70-80 cmbs		1/4" Full Sort	1/4"	Shell		Whole	Olivella	1	0.37	6/29/2019
275	MU 1	80-90 cmbs		100g Sample	1/8"	Shell		Detritus	Olivella	26	1.46	7/5/2019
276	MU 1	80-90 cmbs		1/8" Fast Sort	1/8"	Shell		Detritus	Olivella	5	0.32	7/5/2019
277	MU 1	80-90 cmbs		1/4" Full Sort	1/4"	Shell		Detritus	Olivella	23	4.82	7/5/2019
278	MU 1	80-90 cmbs		1/4" Full Sort	1/4"	Shell		Whole	Olivella	1	0.36	7/5/2019
279	MU 1	90-100 cmbs		Field Pulled	1/8"	Shell		Detritus	Olivella	4	0.7	7/5/2019
280	MU 1	90-100 cmbs		100g Sample	1/8"	Shell		Detritus	Olivella	9	0.43	7/5/2019
281	MU 1	90-100 cmbs		1/4" Full Sort	1/4"	Shell		Detritus	Olivella	8	1.47	7/5/2019
282	MU 1	100-110 cmbs		1/4" Full Sort	1/4"	Shell		Detritus	Olivella	4	0.88	7/5/2019
283	MU 2	0-20 cm		1/4" Bulk	1/4"	Shell		Detritus	Olivella	2	0.71	7/6/2019
284	MU 2	40-50 cm		1/4" Bulk	1/4"	Shell		Detritus	Olivella	2	1.7	7/6/2019
285	MU 2	50-60 cm		1/4" Bulk	1/4"	Shell		Detritus	Olivella	2	0.37	7/13/2019

286	MU 2	50-60 cm			1/8" Bulk	1/8"	Shell		Detritus	Olivella	2	0.06	7/13/2019
287	MU 2	60-70 cm			1/8" Bulk	1/8"	Shell		Detritus	Olivella	4	0.21	7/13/2019
288	MU 2	60-70 cm			1/4" Bulk	1/4"	Shell		Detritus	Olivella	1	0.27	7/13/2019
289	MU 2	70-80 cm			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	1	0.23	7/13/2019
290	MU 2	90-100 cm			1/8" Full Sort	1/8"	Shell		Detritus	Olivella	1	0.12	7/27/2019
291	MU 3	0-20 cm			100g Sample	1/8"	Shell		Detritus	Olivella	3	0.36	7/6/2019
292	MU 3	20-30 cm			1/8" Bulk	1/8"	Shell		Detritus	Olivella	8	0.66	7/6/2019
293	MU 3	20-30 cm			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	6	1.62	7/6/2019
294	MU 3	30-40 cm			100g Sample	1/8"	Shell		Detritus	Olivella	16	0.86	7/13/2019
295	MU 3	30-40 cm			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	9	1.19	7/13/2019
296	MU 3	30-40 cm			1/4" Full Sort	1/4"	Shell		Whole	Olivella	1	0.42	7/13/2019
297	MU 3	40-50 cm			100g Sample	1/8"	Shell		Detritus	Olivella	15	0.98	7/13/2019
298	MU 3	40-50 cm			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	5	0.83	7/13/2019
299	MU 3	40-50 cm			1/4" Full Sort	1/4"	Shell		Whole	Olivella	1	0.73	7/13/2019
300	MU 3	50-60 cm			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	2	0.6	7/23/2019
301	MU 3	50-60 cm			1/8" Full Sort	1/8"	Shell		Detritus	Olivella	4	0.16	7/13/2019
302	MU 3	60-70 cm			1/8" Full Sort	1/8"	Shell		Detritus	Olivella	17	1.08	7/13/2019

303	MU 3	60-70 cm			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	4	0.8	7/23/2019
304	MU 3	70-80 cm			1/8" Full Sort	1/8"	Shell		Detritus	Olivella	7	0.35	
305	MU 3	70-80 cm			-	1/8"	Shell		Detritus	Olivella	2	1.06	7/20/2019
306	MU 3	70-80 cm			1/4" Bulk	1/4"	Shell		Detritus	Olivella	2	0.2	Sort date (10-10-19)
307	MU 3	80-90 cm			1/4" Bulk	1/4"	Shell		Detritus	Olivella	1	0.4	Sort date (10-10-19)
308	MU 3	80-90 cm			1/8" 40g Full Sort	1/8"	Shell		Detritus	Olivella	5	0.27	
309	MU 1	40-50 cmbd			1/4" Bulk	1/4"	Shell		Whole	Olivella	1	0.38	6/29/2019
310	MU 5	0-20			1/4" Full sort	1/4" Full sort	Shell	Undiff	none	Mytilus californianus	430	123.25	7/20/2019
311	MU 5	0-20			1/4" Full	1/4" Full sort	Shell	Undiff	none	Haliotis cracherodii	25	23.84	7/20/2019
312	MU 5	0-20			1/4" Full	1/4" Full sort	Shell	Undiff	none	Nucella canaliculata	1	0.4	7/20/2019
313	MU 5	0-20			1/4" Full	1/4" Full sort	Shell	Undiff	none	Tivella MUltorum	1	0.32	7/20/2019

314	MU 5	0-20			1/4" Full	1/4" Full sort	Shell	Undiff	none	Shell Undiff	2	0.33	7/20/2019
315	MU 5	0-20			1/4" Full	1/4" Full sort	Shell	Undiff	none	Leukoma Staminea	1	0.15	7/20/2019
316	MU 5	0-20			1/4" Full	1/4" Full sort	Shell	Undiff	none	Balanus spp.	2	1.17	7/20/2019
317	MU 5	0-20			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus (Hinge)	17	14.4	7/20/2019
318	MU 5	0-20			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	900	47.36	7/20/2019
319	MU 5	0-20			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	18	0.89	7/20/2019
320	MU 5	0-20			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	74	1.22	7/20/2019
321	MU 5	20-30			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus	300	79.94	7/20/2019
322	MU 5	20-30			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus (Hinge)	17	7.25	7/20/2019

323	MU 5	20-30			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus	1	0.49	7/20/2019
324	MU 5	20-30			1/4" Full	1/4" Full sort	Shell	Undiff	none	Megastraea undosa	1	3.77	7/20/2019
325	MU 5	20-30			1/4" Full	1/4" Full sort	Shell	Undiff	none	Haliotis rufescens	1	0.24	7/20/2019
326	MU 5	20-30			1/4" Full	1/4" Full sort	Shell	Undiff	none	Tegula funebralis	1	0.51	7/20/2019
327	MU 5	20-30			1/4" Full	1/4" Full sort	Shell	Undiff	none	Shell Undiff	3	0.81	7/20/2019
328	MU 5	20-30			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	410	19	7/20/2019
329	MU 5	20-30			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus (Hinge)	4	0.1	7/20/2019
330	MU 5	20-30			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	4	0.1	7/20/2019
331	MU 5	20-30			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	42	0.1	7/20/2019
332	MU 5	30-40			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus	500	114	7/20/2019

333	MU 5	30-40			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus (Hinge)	28	24.8	7/20/2019
334	MU 5	30-40			1/4" Full	1/4" Full sort	Shell	Undiff	none	Haliotis cracherodii	8	11.3	7/20/2019
335	MU 5	30-40			1/4" Full	1/4" Full sort	Shell	Undiff	none	Tegula funebralis	1	0.19	7/20/2019
336	MU 5	30-40			1/4" Full	1/4" Full sort	Shell	Undiff	none	Chione undatella	1	1	7/20/2019
337	MU 5	30-40			1/4" Full	1/4" Full sort	Shell	Undiff	none	Shell Undiff	29	3	7/20/2019
338	MU 5	30-40			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	7	0.1	7/20/2019
339	MU 5	30-40			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	419	21.16	7/20/2019
340	MU 5	30-40			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	37	1	7/20/2019
341	MU 5	40-50			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus	316	95	7/20/2019

342	MU 5	40-50			1/4" Full	1/4" Full sort	Shell	Undiff	none	Gastropod sp.	1	0.34	7/20/2019
343	MU 5	40-50			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytilus californianus (Hinge)	18	25	7/20/2019
344	MU 5	40-50			1/4" Full	1/4" Full sort	Shell	Undiff	none	Haliotis spp	2	2	7/20/2019
345	MU 5	40-50			1/4" Full	1/4" Full sort	Shell	Undiff	none	Mytillsepta bifurcata	1	0.06	7/20/2019
346	MU 5	40-50			1/4" Full	1/4" Full sort	Shell	Undiff	none	Haliotis cracherodii	1	0.1	7/20/2019
347	MU 5	0-20			1/4" Full sort	1/4" Full sort	Bone	Mammal	Burn 0	Unidentifiable	205	47.79	7/20/2019
348	MU 5	0-20			1/4" Full sort	1/4" Full sort	Bone	Mammal	Burn 1	Unidentifiable	92	29.17	7/20/2019
349	MU 5	0-20			1/4'Full sort	1/4" Full sort	Bone	Mammal	Burn 2	Unidentifiable	50	37.98	Jul-19
350	MU 5	0-20			1/4"Full sort	1/4" Full sort	Bone	Mammal	Burn 3	Unidentifiable	19	6.29	7/20/2019

351	MU5	0-20			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	235	65.21	7/20/2019
352	MU5	20-30			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	104	25.43	7/20/2019
353	MU5	20-30			1/4" Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	74	19.82	7/20/2019
354	MU5	20-30			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	128	39.91	7/20/2019
355	MU5	20-30			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	17	6.81	7/20/2019
356	MU5	20-30			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	116	38.69	7/20/2019
357	MU5	30-40			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	227	52.04	7/20/2019
358	MU5	30-40			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	119	31.92	7/20/2019
359	MU5	30-40			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	135	41.51	7/20/2019
360	MU5	30-40			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	29	7.81	7/20/2019

361	MU 5	30-40			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	215	53.94	7/20/2019
362	MU 5	40-50			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	118	24.48	7/20/2019
363	MU 5	40-50			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	68	24.18	7/20/2019
364	MU 5	40-50			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	108	39.67	7/20/2019
365	MU 5	40-50			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	34	11.41	7/20/2019
366	MU 5	40-50			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	93	26.88	7/20/2019
367	MU 5	50-60			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	86	22.25	7/20/2019
368	MU 5	50-60			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	30	10.83	7/20/2019
369	MU 5	50-60			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	55	15.41	7/20/2019
370	MU 5	50-60			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	17	5.1	7/20/2019

371	MU 5	50-60			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	64	18.46	7/20/2019
372	MU 5	60-70			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	62	21.09	7/20/2019
373	MU 5	60-70			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	31	12.36	7/20/2019
374	MU 5	60-70			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	42	12.57	7/20/2019
375	MU 5	60-70			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	14	5.41	7/20/2019
376	MU 5	60-70			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	37	9.78	7/20/2019
377	MU 5	70-80			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	38	8.07	7/20/2019
378	MU 5	70-80			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	28	8.17	7/20/2019
379	MU 5	70-80			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	35	8.1	7/20/2019
380	MU 5	70-80			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	8	2.34	7/20/2019

381	MU 5	70-80			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	36	10.6	7/20/2019
382	MU 5	80-90			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	43	9.63	7/20/2019
383	MU 5	80-90			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	11	4.89	7/27/2019
384	MU 5	80-90			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	21	5.6	7/27/2019
385	MU 5	80-90			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	16	7.5	7/27/2019
386	MU 5	80-90			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	31	10.2	7/27/2019
387	MU 5	90-100			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	30	7.5	7/27/2019
388	MU 5	90-100			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	11	4.16	7/27/2019
389	MU 5	90-100			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	25	6.94	7/27/2019
390	MU 5	90-100			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	6	1.28	7/27/2019

391	MU 5	90-100			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	21	5.47	7/27/2019
392	MU 5	100-110			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	30	7.64	7/27/2019
393	MU 5	100-110			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	16	5.04	7/27/2019
394	MU 5	100-110			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	23	5.8	7/27/2019
395	MU 5	100-110			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	10	4.12	7/27/2019
396	MU 5	100-110			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	18	6.92	7/27/2019
397	MU 5	110-120			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	8	1.57	7/27/2019
398	MU 5	110-120			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	7	5.29	8/3/2019
399	MU 5	110-120			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	8	1.81	8/3/2019
400	MU 5	110-120			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	3	0.44	8/3/2019

401	MU5	110-120			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	19	4.99	8/3/2019
402	MU5	120-130			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	5	3.63	8/3/2019
403	MU5	120-130			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	2	0.5	8/3/2019
404	MU5	120-130			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	8	2.25	8/3/2019
405	MU5	120-130			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	6	1.7	8/3/2019
406	MU5	120-130			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	11	3.4	8/3/2019
407	MU5	130-140			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 0	Unidentifiable	4	1.01	8/3/2019
408	MU5	130-140			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 1	Unidentifiable	4	2.02	8/3/2019
409	MU5	130-140			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 2	Unidentifiable	8	4.28	8/3/2019
410	MU5	130-140			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 3	Unidentifiable	2	0.59	8/3/2019

411	MU5	130-140			1/4"Full sort	1/4"Full sort	Bone	Mammal	Burn 4	Unidentifiable	10	3.1	8/3/2019
412	MU5	0-20			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		65.54	7/20/2019
413	MU5	20-30			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		27.12	7/20/2019
414	MU5	30-40			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		32.71	7/20/2019
415	MU5	40-50			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		29.79	20-Jul
416	MU5	50-60			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		23.36	7/27/2019
417	MU5	60-70			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		23.12	7/27/2019
418	MU5	70-80			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		12.15	7/27/2019
419	MU5	80-90			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		7.48	7/27/2019
420	MU5	90-100			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		9.49	7/27/2019
421	MU5	100-110			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		9.01	27-Jul
422	MU5	110-120			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		7.01	8/3/2019
423	MU5	120-130			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		3.64	8/3/2019

424	MU 5	130-140			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		4.02	8/3/2019
425	MU 5	40-50			1/8" 100g	1/8" Bulk	Bone	Mammal		Unidentifiable		20.31	
426	MU 5	50-60			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	173	42.32	7/27/2019
427	MU 5	50-60			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus (Hinge)	12	6.73	7/27/2019
428	MU 5	50-60			1/4" Full Sort	1/4"	Shell	Undiff	none	Tegula funebralis	3	0.56	27-Jul
429	MU 5	50-60			1/4" Full Sort	1/4"	Shell	Undiff	none	Saxidomus nuttalli	1	1.97	7/27/2019
430	MU 5	50-60			1/4" Full Sort	1/4"	Shell	Undiff	none	Shell undiff	1	0.18	7/27/2019
431	MU 5	60-70			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	189	45.22	7/27/2019
432	MU 5	60-70			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus (Hinge)	8	16.32	7/27/2019
433	MU 5	60-70			1/4" Full Sort	1/4"	Shell	Undiff	none	Shell Undiff	1	0.22	7/27/2019
434	MU 5	70-80			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	95	39.94	10/30/2019
435	MU 5	70-80			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus (Hinge)	8	9.24	10/30/2019
436	MU 5	70-80			1/4" Full Sort	1/4"	Shell	Undiff	none	Gastropod	1	0.17	10/30/2019
437	MU 5	70-80			1/4" Full Sort	1/4"	Shell	Undiff	none	Tegula funebralis	1	0.31	10/30/2019
438	MU 5	80-90			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	83	17.64	7/27/2019
439	MU 5	80-90			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus (Hinge)	4	2.33	7/27/2019
440	MU 5	80-90			1/4" Full Sort	1/4"	Shell	Undiff	none	Tegula funebralis	1	0.14	7/27/2019

441	MU 5	80-90			1/4" Full Sort	1/4"	Shell	Undiff	none	Haliotis cracherodii	1	0.9	7/27/2019
442	MU 5	80-90			1/4" Full Sort	1/4"	Shell	Undiff	none	Leukoma staminea	1	0.25	7/27/2019
443	MU 5	80-90			1/4" Full Sort	1/4"	Shell	Undiff	none	Tivela MUltorum	1	0.58	7/27/2019
444	MU 5	80-90			1/4" Full Sort	1/4"	Shell	Undiff	none	Shell Undiff	2	0.53	7/27/2019
445	MU 5	90-100			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	72	13.98	7/27/2019
446	MU 5	90-100			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus (Hinge)	5	2.9	7/27/2019
447	MU 5	90-100			1/4" Full Sort	1/4"	Shell	Undiff	none	Tegula funebralis	2	0.3	7/27/2019
448	MU 5	90-100			1/4" Full Sort	1/4"	Shell	Undiff	none	Haliotis cracherodii	2	0.38	7/27/2019
449	MU 5	90-100			1/4" Full Sort	1/4"	Shell	Undiff	none	Shell Undiff	1	0.1	7/27/2019
450	MU 5	100-110			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	129	36.18	7/27/2019
451	MU 5	100-110			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus (Hinge)	3	4.55	7/27/2019
452	MU 5	100-110			1/4" Full Sort	1/4"	Shell	Undiff	none	Haliotis cracherodii	4	0.36	27-Jul
453	MU 5	110-120			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	46	11.34	8/13/2019
454	MU 5	110-120			1/4" Full Sort	1/4"	Shell	Undiff	none	Shell Undiff	7	1.03	8/13/2019
455	MU 5	120-130			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	36	11	8/3/2019

456	MU 5	120-130			1/4" Full Sort	1/4"	Shell	Undiff	none	Shell Undiff	4	1	8/3/2019
457	MU 5	130-140			1/4" Full Sort	1/4"	Shell	Undiff	none	Mytilus californianus	37	9.68	8/3/2019
458	MU 5	130-140			1/4" Full Sort	1/4"	Shell	Undiff	none	Shell Undiff	4	0.1	8/3/2019
459	MU 5	40-50			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	432	14.34	7/20/2019
460	MU 5	40-50			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	1	0.01	7/20/2019
461	MU 5	40-50			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	44	0.72	7/20/2019
462	MU 5	50-60			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	372	13.9	7/27/2019
463	MU 5	50-60			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	33	0.75	7/27/2019
464	MU 5	60-70			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	359	14.39	7/27/2019
465	MU 5	60-70			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus (Hinge)	6	0.54	27-Jul
466	MU 5	60-70			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	1	0.07	7/27/2019
467	MU 5	60-70			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	36	0.07	7/27/2019
468	MU 5	70-80			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	238	8.86	7/27/2019

469	MU 5	70-80			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus (Hinge)	2	0.16	7/27/2019
470	MU 5	70-80			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	29	0.59	7/27/2019
471	MU 5	80-90			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	168	6.88	7/27/2019
472	MU 5	80-90			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus (Hinge)	1	0.06	7/27/2019
473	MU 5	80-90			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	2	0.79	7/27/2019
474	MU 5	80-90			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	19	0.39	7/27/2019
475	MU 5	90-100			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	100	5.21	7/27/2019
476	MU 5	90-100			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus (Hinge)	2	0.25	7/27/2019
477	MU 5	90-100			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	3	0.09	7/27/2019
478	MU 5	90-100			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	18	0.25	7/27/2019
479	MU 5	100-110			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	201	8.03	7/27/2019
480	MU 5	100-110			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus (Hinge)	1	0.06	7/27/2019
481	MU 5	100-110			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Tegula brunnea	1	0.06	7/27/2019

482	MU 5	100-110			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Leukoma staminea	1	0.03	7/27/2019
483	MU 5	100-110			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Balanus spp.	1	0.12	7/27/2019
484	MU 5	100-110			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Haliotis cracherodii	1	0.08	7/27/2019
485	MU 5	110-120			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	80	5.6	8/3/2019
486	MU 5	110-120			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus (Hinge)	1	0.16	8/3/2019
487	MU 5	110-120			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	5	0.13	8/3/2019
488	MU 5	120-130			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	84	3.32	8/3/2019
489	MU 5	130-140			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Mytilus californianus	85	4.2	8/3/2019
490	MU 5	130-140			1/8" 100g	1/8" Bulk	Shell	Undiff	none	Shell Undiff	1	0.04	8/3/2019
491	MU 5	0-20			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				82	7/20/2019
492	MU 5	20-30			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				438.58	7/20/2019
493	MU 5	30-40			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				54.71	7/20/2019
494	MU 5	90-100			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				2	7/27/2019
495	MU 5	100-110			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				49	7/27/2019

496	MU 1	0-20			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				312.7	8/29/2019
497	MU 1	20-40			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				661.61	6/29/2019
498	MU 1	40-50			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				504	6/29/2019
499	MU 1	50-60			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				351.04	6/29/2019
500	MU 1	60-70			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				89.22	5/29/2019
501	MU 1	70-80			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				142.38	6/29/2019
502	MU 1	80-90			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				49.8	7/5/2019
503	MU 1	90-100			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				6.85	7/5/2019
504	MU 1	100-110			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				30.66	7/5/2019
505	MU 4	0-20			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				55.45	7/13/2019
506	MU 4	20-30			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				56.83	7/13/2019
507	MU 4	30-40			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				255.93	7/13/2019
508	MU 4	40-50			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				45.56	7/20/2019
509	MU 4	50-60			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				54.24	7/20/2019
510	MU 4	60-70			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				5.16	7/20/2019
511	MU 4	70-80			1/4" Full Sort	1/4"	Fired Clay	Fired Clay				10.02	7/27/2019
512	MU 3	0-20			1/4" Full sort	1/4"	Fired Clay	Fired Clay				21.47	7/6/2019

513	MU 3	20-30			1/4" Full sort	1/4"	Fired Clay	Fired Clay				128.39	7/23/2019
514	MU 3	20-30			1/4" Full sort	1/4"	Limestone	Limestone				171.43	7/23/2019
515	MU 3	30-40			1/4" Full sort	1/4"	Fired Clay	Fired Clay				33.01	7/13/2019
516	MU 3	40-50			1/4" Full sort	1/4"	Fired Clay	Fired Clay				0.32	7/23/2019
517	MU 3	50-60			1/4" Full sort	1/4"	Fired Clay	Fired Clay				0.26	7/23/2019
518	MU 3	60-70			1/4" Full sort	1/4"	Fired Clay	Fired Clay				2.53	7/23/2019
519	MU 3	70-80			1/4" Full sort	1/4"	Fired Clay	Fired Clay				7.4	7/13/2019
520	MU 2	0-20			1/4" Full sort	1/4"	Fired Clay	Fired Clay				233.32	7/6/2019
521	MU 2	20-30			1/4" Full sort	1/4"	Fired Clay	Fired Clay				302.33	7/6/2020
522	MU 2	30-40			1/4" Full sort	1/4"	Fired Clay	Fired Clay				18.84	7/6/2019
523	MU 2	40-50			1/4" Full sort	1/4"	Fired Clay	Fired Clay				216.01	7/6/2019
524	MU 2	50-60			1/4" Full sort	1/4"	Fired Clay	Fired Clay				4.71	7/13/2019
525	MU 2	60-70			1/4" Full sort	1/4"	Fired Clay	Fired Clay				2.43	7/13/2019
526	MU 2	70-80			1/4" Full sort	1/4"	Fired Clay	Fired Clay				7.59	7/13/2019
527	MU 2	80-90			1/4" Full sort	1/4"	Fired Clay	Fired Clay				2.45	7/13/2019
528	MU 2	100-110			1/4" Full sort	1/4"	Fired Clay	Fired Clay				3.58	7/27/2019
529	MU 1	0-20			1/4" Full	1/4"	Stone	Flake	Angular debitage	Franciscan Chert	1	4.87g	6/28/2019

530	MU 1	0-20			1/4" Full	1/4"	Metal	Bottle cap			1	3.30g	6/28/2019
531	MU 1	0-20			1/4" Full	1/4"	Metal	square head, but broken, nail			1	6.27g	6/28/2019
532	MU 1	0-20			1/4" Full	1/4"	Ceramic	Unknown		unknown	1	2.34g	n/a
533	MU 1	0-20			1/4" Full	1/4"	Glass	misc. body frag		Consumer glass	1	0.31g	6/28/2019
534	MU 1	20-40			1/4" Full	1/4"	Asphaltum	Shell w/ asphaltum	Mixing dish	Hialltis Rufescens	1	54.2g	6/28/2019
535	MU 1	20-40			1/4" Full	1/4"	Glass	Bottle base		Consumer glass	1	34.34g	6/28/2019
536	MU 1	20-40			1/4" Full	1/4"	Ceramic	Base sherd		Creamware	1	4.99g	6/28/2019
537	MU 1	20-40			1/4" Full	1/4"	Ceramic	Unknown		Unknown	1	.76g	6/28/2019
538	MU 1	20-40			1/4" Full	1/4"	Ceramic	Rim sherd		Mexican low fired clay	2	4.18g	6/28/2019
539	MU 1	20-40			1/4" Full	1/4"	Glass	misc. body frag		Consumer glass	1	.41g	6/28/2019
540	MU 1	20-40			1/4" Full	1/4"	Stone	Tool	broken/utilized	Monterrey Chert	1	1.4g	6/28/2019
541	MU 1	20-40			1/8" 100g	1/8" Bulk	Stone	Comale rim		Soapstone	2	17.5g	6/28/2019
542	MU 1	20-40			1/8" 100g	1/8" Bulk	Glass	frag		Window glass	1	.25g	6/28/2019
543	MU 1	20-40			1/4" Full	1/4"	Ceramic	Rim sherd		Chinese Porcelain	1	1.33g	6/28/2019
544	MU 1	20-40			1/4" Full	1/4"	Stone	Rim sherd		Soapstone	1	7.56g	6/28/2019
545	MU 1	40-50			1/4" Full	1/4"	Ceramic	Rim sherd		Mission ware	1	7.55g	6/28/2019

546	MU 1	40-50			1/4" Full	1/4"	Stone	Flake	secondary debitage	Monterrey Chert	2	.54g	6/29/2019
547	MU 1	40-50			1/4" Full	1/4"	Glass	misc. body frag		Consumer glass	1	.16g	6/29/2019
548	MU 1	40-50			1/4" Full	1/4"	Glass	frag		Window glass	1	.35g	6/29/2019
549	MU 1	40-50			1/4" Full	1/4"	Asphaltum	detritus			1	.09g	6/29/2019
550	MU 1	40-50			1/4" Full	1/4"	Ceramic	Body sherd		Creamware	2	3.56g	6/29/2019
551	MU 1	40-50			1/4" Full	1/4"	Ceramic	Body sherd		Chinese Porcelain	2	8.79g	n/a
552	MU 1	40-50			1/4" Full	1/4"	Ceramic	Rim sherd		Painted Peasant	1	2.63g	6/29/2019
553	MU 1	60-70			1/4" Full	1/4"	Ceramic	Body sherd		Chinese Porcelain	1	4.5g	6/29/2019
554	MU 1	60-70			1/4" Full	1/4"	Metal	Wire			1	2.39g	6/29/2019
555	MU 1	70-80			1/4" Full	1/4"	Asphaltum	detritus			8	2.15g	6/29/2019
556	MU 1	60-70			1/4" Full	1/4"	Stone	Olla Rim frag		Soapstone	1	21.13g	6/29/2019
557	MU 1	60-70			1/4" Full	1/4"	Ceramic	Body sherd		Creamware	1	2.66g	6/29/2019
558	MU 1	80-90			1/4" Full	1/4"	Stone	frag		Soapstone	1	7.48g	7/15/2019
559	MU 1	50-60			1/4" Full	1/4"	Ceramic	Body sherd		Golera	1	0.62g	6/29/2019
560	MU 1	50-60			1/4" Full	1/4"	Ceramic	Rim Sherd/Body Sherd		Missionware	2	12.49	6/20/2019
561	MU 1	50-60			1/4" Full	1/4"	Stone	flake	Tertiary debitage	Monterey Chert	1	.57g	6/29/2019

562	MU 1	50-60			1/8" fast sort	1/8" bulk	Glass	frag		Window glass	1	0.09	7/3/2019
563	MU 1	100-110			1/4" Full	1/4"	Ceramic	Body sherd	Wheel thrown	Missionware	1	6	7/5/2019
564	MU 1	20-40			100g Full sort	1/8" bulk	stone	flake	pressure flake	Monterey Chert	1	0.02	6/28/2019
565	MU 1	90-100				1/8" mesh	Metal	misc			1	0.01	7/5/2019
566	MU 1	20-40			100g Full sort	1/8" bulk	Glass	flake		consumer glass	1	0.02	6/28/2019
567	MU 1	60-70			100g Full sort	1/8" bulk	Glass	frag		window glass	1	0.05	6/29/2019
568	MU 1	60-70			100g Full	1/8" bulk	Glass	flake	pressure flakes	consumer glass	2	0.02	6/29/2019
569	MU 1	20-40			100g Full sort	1/8" bulk	Metal	frag			1	0.08	6/28/2019
570	MU 1	60-70			100g Full sort	1/8" bulk	Metal	frags			4	0.12	6/29/2019
571	MU 1	50-60			100g Full sort	1/8" bulk	Glass	frag		window glass	1	0.09	6/29/2019
572	MU 1	50-60			1/4" Full	1/4"	Asphaltum	detritus			5	4.53	6/29/2019
573	MU 1	20-40			100g Full	1/8" bulk	Fired Clay	Fired Clay			18	0.58	6/28/2019
574	MU 1	40-50			100g Full	1/8" bulk	Fired Clay	Fired Clay			36	1.21	

575	MU 1	50-60			100g Full	1/8" bulk	Fired Clay	Fired Clay			30	2.17	7/18/2019
576	MU 1	70-80			100g Full	1/8" bulk	Fired Clay	Fired Clay			8	0.42	6/29/2019
577	MU 1	80-90			100g Full	1/8" bulk	Fired Clay	Fired Clay			27	1.06	7/5/2019
578	MU 1	90-100			100g Full	1/8" bulk	Fired Clay	Fired Clay			9	0.36	7/5/2019
579	MU 1	20-40			1/8" fast	1/8" bulk	stone	flake	Tertiary debitage	Monterey Chert	1	0.14	6/28/2019
580	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	27	31.83	6/28/2019
581	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Mytilus californianus	162	82.8	6/28/2019
582	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Chione spp. hinge	1	0.45	6/28/2019
583	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Decapoda spp	1	0.18	6/28/2019
584	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Tegula sp	5	2.49	6/28/2019
585	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Balanus spp	1	0.41	6/28/2019
586	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Haliotis cracherodii	27	11.63	6/28/2019
587	MU 1	0-20			1/4" full	1/4"	Shell	Undiff		Misc gastropod	1	0.16	6/28/2019
588	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Mytilus californianus	250	175.74	6/28/2019
589	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Haliotis spp	14	3.41	6/28/2019
590	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Agropecten sp	2	3.69	6/28/2019

591	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Leukoma staminea	1	0.8	6/28/2019
592	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		clam undiff	1	0.13	6/28/2019
593	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Balanus spp	6	0.46	6/28/2019
594	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Tegula sp	1	0.11	6/28/2019
595	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	35	18.8	6/28/2019
596	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Mytilus californianus	654	207.24	6/28/2019
597	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	42	44.71	6/28/2019
598	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Shell undiff	43	4.17	6/28/2019
599	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Balanus spp	18	4.89	6/28/2019
600	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Chione undatella	3	1.02	6/28/2019
601	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Pollicipes polymerus	3	0.32	6/28/2019
602	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Tegula funebralis	2	0.42	6/28/2019
603	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Gastropod with asphaltum	1	0.11	6/28/2019
604	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Tivela MUltorum	1	1.02	6/28/2019
605	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Haliotis cracherodii	16	12	6/28/2019
606	MU 1	20-40			1/4" full	1/4"	Shell	Undiff		Leukoma staminea	1	1.01	6/28/2019
607	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Mytilus californianus	786	194.95	6/29/2019

608	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	25	32.78	6/29/2019
609	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Haliotis cracherodii	2	0.47	6/20/2019
610	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Pollicipes polymerus	9	1.19	6/29/2019
611	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Chione undatella	2	0.64	6/29/2019
612	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Tegula funebralis	4	0.6	6/29/2019
613	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Balanus spp	6	4.25	29-Jun
614	MU 1	50-60			1/4" full	1/4"	Shell	Undiff		Haliotis cracherodii	40	23.08	6/29/2019
615	MU 1	60-70			1/4" full	1/4"	Shell	Undiff		Mytilus californianus	250	194.14	6/29/2019
616	MU 1	60-70			1/4" full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	33	34.83	6/29/2019
617	MU 1	60-70			1/4" full	1/4"	Shell	Undiff		Haliotis cracherodii	28	39.89	6/29/2019
618	MU 1	60-70			1/4" full	1/4"	Shell	Undiff		Tegula funebralis	4	1.27	6/29/2019
619	MU 1	60-70			1/4" full	1/4"	Shell	Undiff		Balanus spp	11	6.87	6/29/2019
620	MU 1	60-70			1/4" full	1/4"	Shell	Undiff		Pollicipes polymerus	14	2.06	6/29/2019
621	MU 1	70-80			1/4" full	1/4"	Shell	Undiff		Mytilus californianus	601	71.24	6/29/2019
622	MU 1	70-80			1/4" full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	15	10.36	6/29/2019
623	MU 1	70-80			1/4" full	1/4"	Shell	Undiff		Tegula funebralis	3	1.02	6/29/2019
624	MU 1	70-80			1/4" full	1/4"	Shell	Undiff		Haliotis cracherodii	6	2.38	6/29/2019

625	MU 1	70-80			1/4" full	1/4"	Shell	Undiff		Pollicipes polymerus	4	0.55	6/29/2019
626	MU 1	80-90			1/4" full	1/4"	Shell	Undiff		Mytilus californianus	288	79.69	10/26/2019
627	MU 1	80-90			1/4" full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	17	24.61	10/26/2019
628	MU 1	80-90			1/4" full	1/4"	Shell	Undiff		Haliotis cracherodii	28	18.4	10/26/2019
629	MU 1	80-90			1/4" full	1/4"	Shell	Undiff		Shell undiff	57	6.25	7/5/2019
630	MU 1	80-90			1/4" full	1/4"	Shell	Undiff		Tegula funebralis	4	0.63	10/26/2019
631	MU 1	80-90			1/4" full	1/4"	Shell	Undiff		Balanus spp	8	1.71	10/26/2019
632	MU 1	80-90			1/4" full sort	1/4"	Shell	Undiff		Saxidomus nuttalli	1	0.18	10/26/2019
633	MU 2	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 0		42	9.8	7/6/2019
634	MU 2	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn1		52	17.29	7/6/2019
635	MU 2	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 2		26	9.55	7/6/2019
636	MU 2	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 3		13	2.8	7/6/2019
637	MU 2	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 4		64	20.84	7/6/2019
638	MU 2	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 0		42	8.09	7/6/2020
639	MU 2	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 1		28	7.68	7/6/2019
640	MU 2	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 2		27	8.97	7/6/2019
641	MU 2	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 3		18	6.98	7/6/2019

642	MU 2	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 4		38	13.1	7/6/2019
643	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 0		72	13.99	7/6/2019
644	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 1		47	10.42	7/6/2019
645	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 2		42	8.53	7/6/2019
646	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 3		38	9.78	7/6/2019
647	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 4		48	9.87	7/6/2019
648	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 0		54	5.6	7/13/2019
649	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 1		22	5.89	7/13/2020
650	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 2		22	6.27	7/13/2019
651	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 3		24	7.84	7/13/2019
652	MU 2	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 4		24	7.84	7/13/2019
653	MU 2	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 0		18	5.19	7/13/2019
654	MU 2	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 1		8	1.55	7/13/2019
655	MU 2	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 2		11	2.84	7/13/2019
656	MU 2	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 3		8	2.76	7/13/2019
657	MU 2	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 4		13	3.22	7/13/2019
658	MU 2	50-60			1/4"full	1/4"	Bone	Mammal	Burn 0		107	8.2	7/6/2019

659	MU 2	50-60			1/4"full	1/4"	Bone	Mammal	Burn 1		111	5	7/6/2019
660	MU 2	50-60			1/4"full	1/4"	Bone	Mammal	Burn 2		46	7.41	7/6/2019
661	MU 2	50-60			1/4"full	1/4"	Bone	Mammal	Burn 3		80	18.85	7/6/2019
662	MU 2	50-60			1/4"full	1/4"	Bone	Mammal	Burn 4		38	3.84	7/6/2019
663	MU 2	60-70			1/4"full	1/4"	Bone	Mammal	Burn 0		35	4.57	7/13/2019
664	MU 2	60-70			1/4"full	1/4"	Bone	Mammal	Burn 1		11	1.99	7/13/2019
665	MU 2	60-70			1/4"full	1/4"	Bone	Mammal	Burn 2		10	3.11	7/13/2019
666	MU 2	60-70			1/4"full	1/4"	Bone	Mammal	Burn 3		16	4.28	7/13/2019
667	MU 2	60-70			1/4"full	1/4"	Bone	Mammal	Burn 4		18	3.42	7/13/2019
668	MU 2	70-80			1/4"full	1/4"	Bone	Mammal	Burn 0		21	3.65	7/13/2019
669	MU 2	70-80			1/4"full	1/4"	Bone	Mammal	Burn 1		7	1.24	7/13/2019
670	MU 2	70-80			1/4"full	1/4"	Bone	Mammal	Burn 2		11	2.47	7/13/2019
671	MU 2	70-80			1/4"full	1/4"	Bone	Mammal	Burn 3		12	4.3	7/13/2019
672	MU 2	70-80			1/4"full	1/4"	Bone	Mammal	Burn 4		24	5.76	7/13/2019
673	MU 2	80-90			1/4"full	1/4"	Bone	Mammal	Burn 0		31	5.96	7/13/2019
674	MU 2	80-90			1/4"full	1/4"	Bone	Mammal	Burn 1		13	3.98	7/13/2019
675	MU 2	80-90			1/4"full	1/4"	Bone	Mammal	Burn 2		8	4.04	7/13/2019

676	MU 2	80-90			1/4"full	1/4"	Bone	Mammal	Burn 3		9	2.92	7/13/2019
677	MU 2	80-90			1/4"full	1/4"	Bone	Mammal	Burn 4		10	2.06	7/13/2019
678	MU 2	90-100			1/4"full	1/4"	Bone	Mammal	Burn 0		8	0.35	7/27/2019
679	MU 2	90-100			1/4"full	1/4"	Bone	Mammal	Burn 1		4	0.85	7/27/2019
680	MU 2	90-100			1/4"full	1/4"	Bone	Mammal	Burn 2		2	0.37	7/27/2019
681	MU 2	90-100			1/4"full	1/4"	Bone	Mammal	Burn 3		1	0.1	7/27/2019
682	MU 2	90-100			1/4"full	1/4"	Bone	Mammal	Burn 4		4	0.67	7/27/2019
683	MU 2	100-110			1/4"full	1/4"	Bone	Mammal	Burn 3		2	0.26	7/27/2019
684	MU 2	100-110			1/4"full	1/4"	Bone	Mammal	Burn 4		2	1.06	7/27/2019
685	MU 2	0-20			1/8"100g	1/8" Bulk	Bone	Mammal				78 g	7/6/2019
686	MU 2	20-30			1/8"100g	1/8" Bulk	Bone	Mammal				27.37 g	7/6/2019
687	MU 2	30-40			1/8"100g	1/8" Bulk	Bone	Mammal				16.14 g	7/6/2019
688	MU 2	40-50			1/8"100g	1/8" Bulk	Bone	Mammal				32.98 g	7/6/2019
689	MU 2	50-60			1/8"100g	1/8" Bulk	Bone	Mammal				16.39 g	7/13/2019
690	MU 2	60-70			1/8"100g	1/8" Bulk	Bone	Mammal				13.82 g	7/13/2019

691	MU 2	70-80			1/8"100g	1/8" Bulk	Bone	Mammal				10.29g	7/13/2019
692	MU 2	80-90			1/8"100g	1/8" Bulk	Bone	Mammal				8.49g	7/13/2019
693	MU 2	90-100			1/8"100g	1/8" Bulk	Bone	Mammal				.8g	7/27/2019
694	MU 3	0-20			1/8"100g	1/8" Bulk	Bone	Mammal				2.15g	7/26/2019
695	MU 3	20-30			1/8"100g	1/8" Bulk	Bone	Mammal				25.67g	7/6/2019
696	MU 3	30-40			1/8"100g	1/8" Bulk	Bone	Mammal				24.79g	7/13/2019
697	MU 3	40-50			1/8"100g	1/8" Bulk	Bone	Mammal				18.66g	7/13/2019
698	MU 3	50-60			1/8"100g	1/8" Bulk	Bone	Mammal				10.96g	7/13/2019
699	MU 3	60-70			1/8"100g	1/8" Bulk	Bone	Mammal				12.32g	7/13/2019
700	MU 3	70-80			1/8"100g	1/8" Bulk	Bone	Mammal				6.17g	
701	MU 3	80-90			1/8"100g	1/8" Bulk	Bone	Mammal				1.54g	
702	MU 3	0-20			1/4"Full	1/4"	Bone	Mammal	Burn 4		13	5.41g	7/6/2019
703	MU 3	0-20			1/4"Full	1/4"	Bone	Mammal	Burn 3		1	.09g	7/6/2019
704	MU 3	0-20			1/4"Full	1/4"	Bone	Mammal	Burn 2		4	1.79g	7/6/2019

705	MU 3	0-20			1/4"Full	1/4"	Bone	Mammal	Burn 0		7	3.28g	7/6/2019
706	MU 3	0-20			1/4"Full	1/4"	Bone	Mammal	Burn 1		4	1.71g	7/6/2019
707	MU 3	20-30			1/4"Full	1/4"	Bone	Mammal	Burn 0		64	11.65g	7/23/2019
708	MU 3	20-30			1/4"Full	1/4"	Bone	Mammal	Burn 1		9	1.1g	7/23/2019
709	MU 3	20-30			1/4"Full	1/4"	Bone	Mammal	Burn 3		15	4.41g	7/23/2019
710	MU 3	20-30			1/4"Full	1/4"	Bone	Mammal	Burn 2		36	11.2g	7/23/2019
711	MU 3	20-30			1/4"Full	1/4"	Bone	Mammal	Burn 4		43	13.22g	7/23/2019
712	MU 3	30-40			1/4"Full	1/4"	Bone	Mammal	Burn 3		13	2.66g	7/13/2019
713	MU 3	30-40			1/4"Full	1/4"	Bone	Mammal	Burn 1		14	3.21g	7/13/2019
714	MU 3	30-40			1/4"Full	1/4"	Bone	Mammal	Burn 2		25	7.45g	7/13/2019
715	MU 3	30-40			1/4"Full	1/4"	Bone	Mammal	Burn 4		29	8.48g	7/13/2019
716	MU 3	30-40			1/4"Full	1/4"	Bone	Mammal	Burn 0		97	20.51g	7/13/2019
717	MU 3	40-50			1/4"Full	1/4"	Bone	Mammal	Burn 2		11	2.56g	7/13/2019
718	MU 3	40-50			1/4"Full	1/4"	Bone	Mammal	Burn 1		16	2.82g	7/13/2019
719	MU 3	40-50			1/4"Full	1/4"	Bone	Mammal	Burn 3		3	.35g	7/13/2019
720	MU 3	40-50			1/4"Full	1/4"	Bone	Mammal	Burn 4		18	6.47g	7/13/2019
721	MU 3	40-50			1/4"Full	1/4"	Bone	Mammal	Burn 0		52	9.26g	7/13/2019

722	MU 3	50-60			1/4"Full	1/4"	Bone	Mammal	Burn 3		6	2.1g	7/23/2019
723	MU 3	50-60			1/4"Full	1/4"	Bone	Mammal	Burn 0		59	10.59G	7/23/2019
724	MU 3	50-60			1/4"Full	1/4"	Bone	Mammal	Burn 4		25	6.85g	7/23/2019
725	MU 3	50-60			1/4"Full	1/4"	Bone	Mammal	Burn 2		15	2.7g	7/23/2019
726	MU 3	60-70			1/4"Full	1/4"	Bone	Mammal	Burn 2		24	6.49g	7/23/2019
727	MU 3	60-70			1/4"Full	1/4"	Bone	Mammal	Burn 0		39	8.81g	7/23/2019
728	MU 3	60-70			1/4"Full	1/4"	Bone	Mammal	Burn 4		42	14.39g	7/23/2019
729	MU 3	60-70			1/4"Full	1/4"	Bone	Mammal	Burn 1		11	2.71g	7/23/2019
730	MU 3	60-70			1/4"Full	1/4"	Bone	Mammal	Burn 3		7	1.03g	7/23/2019
731	MU 3	70-80			1/4"Full	1/4"	Bone	Mammal	Burn 0		93	10.14g	7/20/2019
732	MU 3	70-80			1/4"Full	1/4"	Bone	Mammal	Burn 3		19	2.6g	7/20/2019
733	MU 3	70-80			1/4"Full	1/4"	Bone	Mammal	Burn 4		17	4.52g	7/20/2019
734	MU 3	70-80			1/4"Full	1/4"	Bone	Mammal	Burn 2		11	3.16g	7/20/2019
735	MU 3	70-80			1/4"Full	1/4"	Bone	Mammal	Burn 1		17	5.61g	7/20/2019
736	MU 1	40-50			1/4" Full	1/4"	Shell	Undiff		Mytilus Californianus	1042	284.97	6/29/2019
737	MU 1	40-50			1/4" Full	1/4"	Shell	Undiff		Tegula	15	4.31	6/29/2019
738	MU 1	40-50			1/4" Full	1/4"	Shell	Undiff		Mytilus Californianus (Hinge)	33	49.68	6/29/2019

739	MU 1	40-50			1/4" Full	1/4"	Shell	Undiff		Pollicipes pollicipes	30	4.06	6/29/2019
740	MU 1	40-50			1/4" Full	1/4"	Shell	Undiff		Balanus spp	14	3.16	6/29/2019
741	MU 1	40-50			1/4" Full	1/4"	Shell	Undiff		Haliotis spp	24	33.05	6/29/2019
742	MU 1	70-80			1/4" Full	1/4"	Metal	Nail			1	5.02	6/29/2019
743	MU 1	90-100			1/4" Full	1/4"	Shell	Undiff		Mytilus californianus	109	28.68	7/5/2019
744	MU 1	90-100			1/4" Full	1/4"	Shell	Undiff		Pollicipes pollicipes	4	0.56	7/5/2019
745	MU 1	90-100			1/4" Full	1/4"	Shell	Undiff		Tegula	1	0.3	7/5/2019
746	MU 1	90-100			1/4" Full	1/4"	Shell	Undiff		Balanus spp	1	0.09	7/5/2019
747	MU 1	90-100			1/4" Full	1/4"	Shell	fragment	mixing dish	Haliotis spp	1	7.82	7/5/2019
748	MU 1	90-100			1/4" Full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	10	21.76	7/5/2019
749	MU 1	60-70			1/4" Full	1/4"	Shell	Undiff		Mytilus californianus	9	0.84	6/29/2019
750	MU 1	80-90			1/4" Full	1/4"	Shell	Undiff		Mytilus californianus	4	1.3	7/5/2019
751	MU 1	80-90			1/4" Full	1/4"	Shell	Undiff		Pollicipes pollicipes	1	0.14	7/5/2019
752	MU 1	80-90			1/4" Full	1/4"	Shell	Undiff		Balanus spp	2	0.36	7/5/2019
753	MU 1	80-90			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	2	0.04	7/5/2019
754	MU 1	80-90			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	310	14.4	7/5/2019
755	MU 1	80-90			1/8" 100g	1/8"	Shell	Undiff		Undiff	2	0.03	7/5/2019

756	MU 1	100-110			1/4" Full	1/4"	Shell	Undiff		Mytilus californianus (hinge)	3	0.83	7/5/2019
757	MU 1	100-110			1/4" Full	1/4"	Shell	Undiff		Mytilus californianus	44	12.24	7/5/2019
758	MU 1	100-110			1/4" Full	1/4"	Shell	Undiff		Haliotis spp	3	0.43	7/5/2019
759	MU 1	100-110			1/4" Full	1/4"	Shell	Undiff		Pollicipes pollicipes	2	0.4	7/5/2019
760	MU 1	100-110			1/4" Full	1/4"	Shell	Undiff		Tegula funebralis	1	0.52	7/5/2019
761	MU 1	100-110			1/4" Full	1/4"	Shell	Undiff		Balanus spp	2	0.25	7/5/2019
762	MU 1	100-110			1/4" Full	1/4"	Shell	Undiff		Haliotis cracherodii (hinge)	1	0.52	7/5/2019
763	MU 1	0-20			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	1	0.1	6/28/2019
764	MU 1	0-20			1/8" 100g	1/8"	Shell	Undiff		Undiff	1	0.03	6/28/2019
765	MU 1	0-20			1/8" 100g	1/8"	Shell	Undiff		Haliotis spp	17	0.49	6/28/2019
766	MU 1	0-20			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	25	1.04	6/28/2019
767	MU 1	20-40			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinge)	1	0.02	6/28/2019
768	MU 1	20-40			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	4	0.08	6/28/2019
769	MU 1	20-40			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	554	22.33	6/28/2019
770	MU 1	20-40			1/8" 100g	1/8"	Shell	Undiff		Undiff	55	1.15	6/28/2019

771	MU 1	20-40			1/8" 100g	1/8"	Shell	Undiff		Haliotis spp	28	0.8	6/28/2019
772	MU 1	40-50			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	500	26.93	6/29/2019
773	MU 1	40-50			1/8" 100g	1/8"	Shell	Undiff		Undiff	8	0.23	6/29/2019
774	MU 1	40-50			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinge)	10	0.49	6/29/2019
775	MU 1	40-50			1/8" 100g	1/8"	Shell	Undiff		Pollicipes pollicipes	6	0.14	6/29/2019
776	MU 1	40-50			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	15	0.35	6/29/2019
777	MU 1	40-50			1/8" 100g	1/8"	Shell	Undiff		Decopoda spp	1	0.07	6/29/2019
778	MU 1	40-50			1/8" 100g	1/8"	Shell	Undiff		Haliotis spp	6	0.46	6/29/2019
779	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	100+	25.45	6/29/2019
780	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinge)	3	0.2	6/29/2019
781	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Haliotis spp	3	0.09	6/29/2019
782	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	2	0.07	6/29/2019
783	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Pollicipes pollicipes	7	0.21	6/29/2019
784	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Undiff	48	2.03	6/29/2019
785	MU 1	70-80			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	254	23.29	6/29/2019
786	MU 1	70-80			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinge)	5	0.35	6/29/2019
787	MU 1	70-80			1/8" 100g	1/8"	Shell	Undiff		Haliotis spp		1.42	6/29/2019

788	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Balanus spp		0.07	7/5/2019
789	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Tegula		0.09	7/5/2019
790	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Pollicipes pollicipes		0.01	7/5/2019
791	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinge)		0.04	7/5/2019
792	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Haliotis spp		1.48	7/5/2019
793	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Tivella MUltorum		0.13	7/5/2019
794	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinge)		7.71	7/5/2019
795	MU 1	90-100			1/8" 100g	1/8"	Shell	Undiff		Undiff		4.78	7/5/2019
796	MU 1	100-110			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus		0.8	7/5/2019
797	MU 1	100-110			1/8" 100g	1/8"	Shell	Undiff		Pollicipes pollicipes		0.11	7/5/2019
798	MU 1	60-70			1/8" 100g	1/8"	Shell	Undiff		Undiff		13.94	6/29/2019
799	MU 1	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus		14.12	6/29/2019
800	MU 1	60-70			1/8" 100g	1/8"	Shell	Undiff		Haliotis spp		1.2	6/29/2019
801	MU 1	60-70			1/8" 100g	1/8"	Shell	Undiff		Pollicipes pollicipes		0.03	6/29/2019
802	MU 1	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinge)		0.34	6/29/2019
803	Unit 1A			1	1/8"	1/8" bulk	Shell	Undiff		Undiff		0.43	7/13/2019

804	Unit 1A			1	1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		1.79	7/13/2019
805	Unit 1A			1	1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus (hinge)	1	1.25	7/13/2019
806	Unit 1A			1	1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus (hinge)	6	21.23	7/13/2019
807	Unit 1A			1	1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		15.88	7/13/2019
808	Unit 1A	60-70			1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		0.94	7/10/2019
809	Unit 1A	60-70			1/8"	1/8" bulk	Shell	Undiff		Haliotis		0.21	7/20/2019
810	Unit 1A	70-80			1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		1.2	7/20/2019
811	Unit 1A			1	1/8"	1/8" bulk	Shell		Detritus	Olivella		0.18	7/13/2019
812	Unit 1A	50-60			1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		0.12	
813	Unit 1A			1	1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		4.47	7/19/2019
814	Unit 1A	80-90			1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		0.83	7/20/2019
815	Unit 1A	50-60			1/8"	1/8" bulk	Shell	Undiff		Mytilus californianus		0.08	7/20/2019
816	MU 4	0-20			1/4" full sort	1/4"	Shell	Undiff		Haliotis cracherodii	5	3.31	7/13/2019

817	MU 4	0-20			1/4" full sort	1/4"	Shell	Undiff		Pollicipes pollicipes	1	0.11	7/13/2019
818	MU 4	0-20			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	58	12.88	7/13/2019
819	MU 4	0-20			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus (hinge)	2	0.95	7/13/2019
820	MU 4	20-30			1/4" full sort	1/4"	Shell	Undiff		Haliotis cracherodii	6	2.83	7/13/2019
821	MU 4	20-30			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	51	12.81	7/13/2019
822	MU 4	20-30			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus (hinge)	1	0.26	7/13/2019
823	MU 4	20-30			1/4" full sort	1/4"	Shell	Undiff		Tegula funebralis	1	0.24	7/13/2019
824	MU 4	20-30			1/4" full sort	1/4"	Shell	Undiff		Pollicipes polymerus	1	0.17	7/13/2019
825	MU 4	20-30			1/4" full sort	1/4"	Shell	Undiff		Pollicipes pollicipes	1	0.21	7/13/2019
826	MU 4	30-40			1/4" full sort	1/4"	Shell	Undiff		Haliotis cracherodii	6	0.96	7/13/2019
827	MU 4	30-40			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	78	17.03	7/13/2019
828	MU 4	30-40			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus (hinge)	1	0.73	7/13/2019
829	MU 4	40-50			1/4" full sort	1/4"	Shell	Undiff		Haliotis cracherodii	6	3.39	7/20/2019
830	MU 4	40-50			1/4" full sort	1/4"	Shell	Undiff		Pollicipes pollicipes	1	0.04	7/20/2019
831	MU 4	40-50			1/4" full sort	1/4"	Shell	Undiff		Tegula funebralis	3	0.45	7/20/2019
832	MU 4	40-50			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	148	29.53	7/20/2019
833	MU 4	40-50			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus (hinge)	3	0.98	7/20/2019

834	MU 4	50-60			1/4" full sort	1/4"	Shell	Undiff		Balanus spp	2	2.11	7/20/2019
835	MU 4	50-60			1/4" full sort	1/4"	Shell	Undiff		Tegula funebralis	1	0.37	7/20/2019
836	MU 4	50-60			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	130	25.85	7/20/2019
837	MU 4	50-60			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus (hinge)	7	18.68	7/20/2019
838	MU 4	60-70			1/4" full sort	1/4"	Shell	Undiff		Haliotis cracherodii	4	25.32	7/20/2019
839	MU 4	60-70			1/4" full sort	1/4"	Shell	Undiff		Chione californiensis	1	0.62	7/20/2019
840	MU 4	60-70			1/4" full sort	1/4"	Shell	Undiff		Balanus spp	3	0.87	7/20/2019
841	MU 4	60-70			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	72	16.33	7/20/2019
842	MU 4	60-70			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus (hinge)	4	10.29	7/20/2019
843	MU 4	70-80			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	46	2.3	7/27/2019
844	MU 4	80-90			1/4" full sort	1/4"	Shell	Undiff		Tegula funebralis	1	0.36	7/27/2019
845	MU 4	80-90			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	36	9.7	7/27/2019
846	MU 4	90-100			1/4" full sort	1/4"	Shell	Undiff		Mytilus californianus	45	15.24	7/27/2019
847	MU 4	90-100			1/4" full sort	1/4"	Shell	Undiff		Balanus spp	1	0.12	7/27/2019
848	MU 4	90-100			1/4" full sort	1/4"	Shell	Undiff		undiff	5	0.75	7/27/2019
849	MU 4	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	10	5.97	7/13/2019
850	MU 4	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	59	20.44	7/13/2019

851	MU 4	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	9	1.27	7/13/2019
852	MU 4	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	71	21.01	7/13/2019
853	MU 4	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	46	8.3	7/13/2019
854	MU 4	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	10	3.79	7/13/2019
855	MU 4	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	11	6.15	7/13/2019
856	MU 4	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	7	4.21	7/13/2019
857	MU 4	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	46	17.73	
858	MU 4	20-30			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	34	7.38	7/13/2019
859	MU 4	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	67	18.99	
860	MU 4	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	18	4.29	
861	MU 4	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	8	0.77	
862	MU 4	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	66	21.67	
863	MU 4	30-40			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	151	31.69	
864	MU 4	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	80	20.92	7/20/2019
865	MU 4	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	32	10.73	7/20/2019
866	MU 4	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	9	2.83	7/20/2019
867	MU 4	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	84	20.63	7/20/2019

868	MU 4	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	249	48.08	7/20/2019
869	MU 4	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	20	7.55	7/20/2019
870	MU 4	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	21	7.71	7/20/2019
871	MU 4	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	60	16.74	7/20/2019
872	MU 4	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	43	32.53	7/20/2019
873	MU 4	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	11	5.79	7/20/2019
874	MU 4	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	15	6.56	7/20/2019
875	MU 4	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	7	0.61	7/20/2019
876	MU 4	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	37	8.35	7/20/2019
877	MU 4	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	52	13.2	7/20/2019
878	MU 4	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	50	8.26	7/20/2019
879	MU 4	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	2	2.52	7/20/2019
880	MU 4	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	8	2.47	7/20/2019
881	MU 4	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	3	0.58	7/20/2019
882	MU 4	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	4	1.69	7/20/2019
883	MU 4	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	51	18.53	7/20/2019
884	MU 4	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	12	3.58	7/20/2019

885	MU 4	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	4	3.32	7/20/2019
886	MU 4	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	15	3.28	7/20/2019
887	MU 4	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	31	20.54	7/27/2019
888	MU 4	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	13	11.1	7/27/2019
889	MU 4	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	4	0.83	7/27/2019
890	MU 4	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	12	9.33	7/27/2019
891	MU 1	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	146	66.06	6/29/2019
892	MU 1	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	101	24.07	6/29/2019
893	MU 1	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	215	115.47	6/29/2019
894	MU 1	50-60			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	232	78.4	6/29/2019
895	MU 1	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	250	79.36	6/29/2019
896	MU 1	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	46	12.97	6/29/2019
897	MU 1	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	214	85.61	6/29/2019
898	MU 1	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	176	35.21	6/29/2019
899	MU 1	60-70			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	367	109.57	6/29/2019
900	MU 1	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	99	33.35	6/29/2019
901	MU 1	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	155	44.65	6/29/2019

902	MU 1	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	32	5.8	6/29/2019
903	MU 1	70-80			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	161	47.86	6/29/2019
904	MU 1	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	77	26.7	7/5/2019
905	MU 1	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	197	72.37	7/5/2019
906	MU 1	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	30	8.24	7/5/2019
907	MU 1	80-90			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	154	45.32	7/5/2019
908	MU 1	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	1	33.06	7/5/2019
909	MU 1	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	21	6.15	7/5/2019
910	MU 1	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	45	26.21	7/5/2019
911	MU 1	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	36	9.32	7/5/2019
912	MU 1	90-100			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	43	10.95	7/5/2019
913	MU 1	100-110			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	5	8.25	7/5/2019
914	MU 1	100-110			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	9	5	7/5/2019
915	MU 1	100-110			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	9	2.39	7/5/2019
916	MU 1	100-110			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	8	4.51	7/5/2019
917	MU 1	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	18	12.57	6/28/2019

918	MU 1	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	28	31.19	6/28/2019
919	MU 1	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	9	13.94	6/28/2019
920	MU 1	0-20			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	106	61.12	6/28/2019
921	MU 1	20-40			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	629	144.64	6/28/2019
922	MU 1	20-40			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	195	67.36	6/28/2019
923	MU 1	20-40			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	504	162.85	6/28/2019
924	MU 1	20-40			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	435	124.62	6/28/2019
925	MU 1	20-40			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	722	217.92	6/28/2019
926	MU 1	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 0	Unidentifiable	379	147.4	6/29/2019
927	MU 1	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 1	Unidentifiable	220	105.99	6/29/2019
928	MU 1	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 2	Unidentifiable	342	66.18	6/29/2019
929	MU 1	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 3	Unidentifiable	111	29.14	6/29/2019
930	MU 1	40-50			1/4" full sort	1/4"	Bone	Mammal	Burn 4	Unidentifiable	452	153.12	6/29/2019
931	MU 4	0-20			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		29.71	7/13/2019
932	MU 4	20-30			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		16.73	7/13/2019
933	MU 4	30-40			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		22.62	7/9/2019
934	MU 4	40-50			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		13.31	7/20/2019

935	MU 4	50-60			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		24.29	7/20/2019
936	MU 4	60-70			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		23.46	7/20/2019
937	MU 4	70-80			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		5.02	7/20/2019
938	MU 4	80-90			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		5.54	7/20/2019
939	MU 1	0-20			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		1.21	7/5/2019
940	MU 1	20-40			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		23.43	6/28/2019
941	MU 1	40-50			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		25.7	6/29/2019
942	MU 1	50-60			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		28.13	7/18/2019
943	MU 1	60-70			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		27.23	6/29/2019
944	MU 1	70-80			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		26.95	6/29/2019
945	MU 1	80-90			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		13.22	7/5/2019
946	MU 1	90-100			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		13.85	7/5/2019
947	MU 1	100-110			1/8" 100g	1/8"	Bone	Mammal		Unidentifiable		0.36	7/5/2019
948	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		Saxidomus nuttalli	1	0.32	7/6/2019
949	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		N. canan culata	1	1.4	7/6/2019
950	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	14	0.57	7/6/2019
951	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		Undiff	2	0.27	7/6/2019

952	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		Balanus spp	2	2.68	7/6/2019
953	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		Pollicipes polymerus	1	0.15	7/6/2019
954	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	5	7.23	7/6/2019
955	MU 2	0-20			1/4" Full sort	1/4"	?	Undiff		sheeps head	1	0.12	7/6/2019
956	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		undiff	1	0.1	7/6/2019
957	MU 2	0-20			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	110	26.96	7/6/2019
958	MU 2	20-30			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	4	10.31	7/6/2019
959	MU 2	20-30			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	70	12.295	7/6/2019
960	MU 2	20-30			1/4" Full sort	1/4"	Shell	Undiff		Saxidomus nuttalli	1	1.03	7/6/2019
961	MU 2	20-30			1/4" Full sort	1/4"	Shell	Undiff		Haliotis cracherodii	13	4.82	7/6/2019
962	MU 2	20-30			1/4" Full sort	1/4"	Shell	Undiff		Undiff	3	2.29	7/6/2019
963	MU 2	30-40			1/4" Full sort	1/4"	Shell	Undiff		Tegula	1	0.19	7/6/2019
964	MU 2	30-40			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	1	0.22	7/6/2019
965	MU 2	30-40			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	120	25.49	7/6/2019
966	MU 2	30-40			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	5	4.45	7/6/2019
967	MU 2	30-40			1/4" Full sort	1/4"	Shell	Undiff		Undiff	11	0.72	7/6/2019
968	MU 2	40-50			1/4" Full sort	1/4"	Shell	Undiff		Haliotis cracherodii	7	0.12	7/6/2019

969	MU 2	40-50			1/4" Full sort	1/4"	Shell	Undiff		Balanus spp	1	0.15	7/6/2019
970	MU 2	40-50			1/4" Full sort	1/4"	Shell	Undiff		Tegula	1	0.02	7/6/2019
971	MU 2	40-50			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	149	18.21	7/6/2019
972	MU 2	40-50			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	4	2.74	7/6/2019
973	MU 2	40-50			1/4" Full sort	1/4"	Shell	Undiff		Undiff	11	0.34	7/6/2019
974	MU 2	50-60			1/4" Full sort	1/4"	Shell	Undiff		Haliotis cracherodii	2	1.94	7/13/2019
975	MU 2	50-60			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	64	45.35	7/13/2019
976	MU 2	50-60			1/4" Full sort	1/4"	Shell	Undiff		Undiff	2	0.25	7/13/2019
977	MU 2	60-70			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	56	12.15	7/13/2019
978	MU 2	60-70			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	2	0.59	7/13/2019
979	MU 2	70-80			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	42	10.97	7/13/2019
980	MU 2	70-80			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	2	2.72	7/13/2019
981	MU 2	70-80			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	2	0.28	7/13/2019
982	MU 2	80-90			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	28	11.43	7/13/2019
983	MU 2	80-90			1/4" Full sort	1/4"	Shell	Undiff		Chione californiensis	1	0.19	7/13/2019
984	MU 2	80-90			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	1	0.3	7/13/2019
985	MU 2	90-100			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	5	0.7	7/13/2019

986	MU 2	90-100			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	9	0.84	7/13/2019
987	MU 2	100-110			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	11	0.8	7/27/2019
988	MU 3	0-20			1/4" Full sort	1/4"	Shell	Undiff		Chione spp.	1	0.38	7/6/2019
989	MU 3	0-20			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	12	6	7/6/2019
990	MU 3	0-20			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	17	4.55	7/6/2019
991	MU 3	20-30			1/4" Full sort	1/4"	Shell	Undiff		Balanus spp	1	0.2	7/6/2019
992	MU 3	20-30			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	12	0.96	7/6/2019
993	MU 3	20-30			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	60	11.26	7/6/2019
994	MU 3	20-30			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	2	0.54	7/6/2019
995	MU 3	30-40			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	3	2.91	7/13/2019
996	MU 3	30-40			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	2	2.17	7/13/2019
997	MU 3	30-40			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	78	13.15	7/13/2019
998	MU 3	40-50			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	5	1.99	7/13/2019
999	MU 3	40-50			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	2	1.53	7/13/2019
1000	MU 3	40-50			1/4" Full sort	1/4"	Shell	Undiff		Undiff	6	0.69	7/13/2019
1001	MU 3	40-50			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	42	6.02	7/13/2019

1002	MU 3	50-60			1/4" Full sort	1/4"	Shell	Undiff		Saxidomus nuttalli	1	0.4	7/23/2019
1003	MU 3	50-60			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	1	0.04	7/23/2019
1004	MU 3	50-60			1/4" Full sort	1/4"	Shell	Undiff		Undiff	2	0.01	7/23/2019
1005	MU 3	50-60			1/4" Full sort	1/4"	Shell	Undiff		Chiton	2	0.07	7/23/2019
1006	MU 3	50-60			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	2	1.69	7/23/2019
1007	MU 3	50-60			1/4" Full sort	1/4"	Shell	Undiff		Balanus spp	158	14.95	7/23/2019
1008	MU 3	60-70			1/4" Full sort	1/4"	Shell	Undiff		Tegula	1	1.88	7/23/2019
1009	MU 3	60-70			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	8	7.86	7/23/2019
1010	MU 3	60-70			1/4" Full sort	1/4"	Shell	Undiff		Haliotis	2	1.73	7/23/2019
1011	MU 3	60-70			1/4" Full sort	1/4"	Shell	Undiff		Balanus spp	1	0.18	7/23/2019
1012	MU 3	60-70			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	35	14.83	7/23/2019
1013	MU 3	70-80			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	1	0.17	7/20/2019
1014	MU 3	70-80			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	45+	14.84	7/20/2019

1015	MU 3	80-90			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus (hinges)	4	4.46	10/16/2019
1016	MU 3	80-90			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	27	4.66	10/16/2019
1017	MU 2	0-20			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	118	5.17	7/6/2019
1018	MU 2	0-20			1/8" 100g	1/8"	Shell	Undiff		Haliotis cracherodii	5	0.24	7/6/2019
1019	MU 2	0-20			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	2	0.11	7/6/2019
1020	MU 2	0-20			1/8" 100g	1/8"	Shell	Undiff		Undiff	6	0.11	7/6/2019
1021	MU 2	20-30			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	2	0.12	7/6/2019
1022	MU 2	20-30			1/8" 100g	1/8"	Shell	Undiff		Haliotis cracherodii	16	0.26	7/6/2019
1023	MU 2	20-30			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	223	8.02	7/6/2019
1024	MU 2	20-30			1/8" 100g	1/8"	Shell	Undiff		Undiff	7	0.15	7/6/2019
1025	MU 2	30-40			1/8" 100g	1/8"	Shell	Undiff		Undiff	2	0.04	7/6/2019
1026	MU 2	30-40			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	115	5.28	7/6/2019
1027	MU 2	40-50			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	102	13.29	7/13/2019

1028	MU 2	40-50			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	2	0.99	7/13/2019
1029	MU 2	40-50			1/8" 100g	1/8"	Shell	Undiff		Chione californiensis	1	0.42	7/13/2019
1030	MU 2	50-60			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	171	5.5	7/13/2019
1031	MU 2	50-60			1/8" 100g	1/8"	Shell	Undiff		Haliotis	2	0.04	7/13/2019
1032	MU 2	50-60			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	1	0.08	7/13/2019
1033	MU 2	50-60			1/8" 100g	1/8"	Shell	Undiff		Undiff	1	0.01	7/13/2019
1034	MU 2	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	1	0.03	7/13/2019
1035	MU 2	60-70			1/8" 100g	1/8"	Shell	Undiff		Haliotis	1	0.03	7/13/2019
1036	MU 2	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	179	5.61	7/13/2019
1037	MU 2	70-80			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	116	4.51	7/13/2019
1038	MU 2	70-80			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	2	0.12	7/13/2019
1039	MU 2	70-80			1/8" 100g	1/8"	Shell	Undiff		Haliotis	2	0	7/13/2019
1040	MU 2	80-90			1/8" 100g	1/8"	Shell	Undiff		limpet spp	1	0.17	7/20/2019

1041	MU 2	80-90			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	2	0.04	7/20/2019
1042	MU 2	80-90			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	81	2.85	7/20/2019
1043	MU 2	90-100			1/8" 100g	1/8"	Shell	Undiff		Haliotis	2	0.03	7/27/2019
1044	MU 2	90-100			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	26	0.86	7/27/2019
1045	MU 2	100-110			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	7	0.29	7/27/2019
1046	MU 3	0-20			1/8" 100g	1/8"	Shell	Undiff		Haliotis	22	0.74	7/6/2019
1047	MU 3	0-20			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	35	1.57	7/6/2018
1048	MU 3	0-20			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	1	0.14	7/6/2019
1049	MU 3	20-30			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	220	14.97	7/6/2019
1050	MU 3	20-30			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	3	0.19	7/6/2019
1051	MU 3	20-30			1/8" 100g	1/8"	Shell	Undiff		Haliotus	16	0.82	7/6/2019
1052	MU 3	30-40			1/8" 100g	1/8"	Shell	Undiff		Haliotus spp	3	0.02	7/13/2019
1053	MU 3	30-40			1/8" 100g	1/8"	Shell	Undiff		Tegula	2	0.07	7/13/2019

1054	MU 3	30-40			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	210	8.14	7/13/2019
1055	MU 3	40-50			1/8" 100g	1/8"	Shell	Undiff		Haliotis cracherodii	4	0.15	7/13/2019
1056	MU 3	40-50			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	193	7.67	7/13/2019
1057	MU 3	50-60			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	175	6.58	7/13/2019
1058	MU 3	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	101	12.03	7/13/2019
1059	MU 3	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus (hinges)	2	0.12	7/13/2019
1060	MU 3	70-80			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	193	5.21	7/13/2019
1061	MU 3	80-90			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	40	1.45	7/13/2019
1062	MU 4	0-20			1/8" 100g	1/8"	Shell	Undiff		Haliotus cracherodii	5	0.14	7/13/2019
1063	MU 4	0-20			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	139	6.93	13-Jul
1064	MU 4	0-20			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	3	0.08	7/13/2019
1065	MU 4	20-30			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	106	5	7/13/2019
1066	MU 4	20-30			1/8" 100g	1/8"	Shell	Undiff		Shell undiff	16	0.27	7/13/2019

1067	MU 4	20-30			1/8" 100g	1/8"	Shell	Undiff		Haliotis cracherodii	2	0.05	7/13/2019
1068	MU 4	30-40			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	121	4.25	10/9/2019
1069	MU 4	30-40			1/8" 100g	1/8"	Shell	Undiff		Haliotis cracherodii	9	0.35	10/9/2019
1070	MU 4	30-40			1/8" 100g	1/8"	Shell	Undiff		Shell undiff	11	0.24	10/9/2019
1071	MU 4	40-50			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	162	5.05	7/20/2019
1072	MU 4	50-60			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	150	7.65	7/20/2019
1073	MU 4	50-60			1/8" 100g	1/8"	Shell	Undiff		Pollicipes polymerus	1	0.04	7/20/2019
1074	MU 4	50-60			1/8" 100g	1/8"	Shell	Undiff		Shell undiff	12	0.29	7/20/2019
1075	MU 4	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	360	12.58	10/21/2019
1076	MU 4	80-90			1/8" 100g	1/8"	Shell	Undiff		Mytilus californianus	22	1.09	7/27/2019
1077	MU 4	0-20			1/8" 100g	1/8"	Shell		Detritus	Olivella	6	0.58	7/13/2019
1078	MU 4	0-20			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	1	0.44	7/13/2019
1079	MU 4	20-30			1/8" 100g	1/8"	Shell		Detritus	Olivella	7	0.44	7/13/2019

1080	MU 4	20-30			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	4	0.52	7/13/2019
1081	MU 4	30-40			1/8" 100g	1/8"	Shell		Detritus	Olivella	5	0.42	10/9/2019
1082	MU 4	30-40			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	4	0.55	7/13/2019
1083	MU 4	40-50			1/8" 100g	1/8"	Shell		Detritus	Olivella	4	0.5	11/20/2019
1084	MU 4	40-50			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	9	2	7/20/2019
1085	MU 4	50-60			1/8" 100g	1/8"	Shell		Detritus	Olivella	1	0.07	7/20/2019
1086	MU 4	50-60			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	2	0.37	7/20/2019
1087	MU 4	50-60			1/4" Full Sort	1/4"	Shell		Whole	Olivella	1	0.26	7/20/2019
1088	MU 4	60-70			1/8" 100g	1/8"	Shell		Detritus	Olivella	7	0.28	10/20/2019
1089	MU 4	60-70			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	3	0.82	7/20/2019
1090	MU 4	70-80			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	1	0.38	7/27/2019
1091	MU 4	80-90			1/8" 100g	1/8"	Shell		Detritus	Olivella	1	0.08	7/27/2019
1092	MU 4	80-90			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	1	0.38	7/27/2019

1093	MU 4	90-100			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	2	0.28	7/27/2019
1094	MU 5	130-140			1/8" 100g	1/8"	Shell		Detritus	Olivella	2	0.09	8/3/2019
1095	MU 5	70-80			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	3	0.82	10/30/2019
1096	MU 5	40-50			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	10	1.94	7/20/2019
1097	MU 5	120-130			1/8" 100g	1/8"	Shell		Detritus	Olivella	2	0.11	8/3/2019
1098	MU 5	50-60			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	6	1.49	7/27/2019
1099	MU 5	110-120			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	5	1.17	8/13/2019
1100	MU 5	120-130			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	3	1.65	8/3/2019
1101	MU 5	90-100			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	1	0.28	7/27/2019
1102	MU 5	60-70			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	4	1.11	7/27/2019
1103	MU 5	100-110			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	1	0.36	7/27/2019
1104	MU 5	0-20			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	14	4.32	7/20/2019
1105	MU 5	20-30			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	3	1.47	7/20/2019

1106	MU 5	30-40			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	4	0.57	7/20/2019
1107	MU 5	100-110			1/8" 100g	1/8"	Shell		Detritus	Olivella	2	0.11	7/27/2019
1108	MU 5	90-100			1/8" 100g	1/8"	Shell		Detritus	Olivella	2	0.03	7/27/2019
1109	MU 5	80-90			1/8" 100g	1/8"	Shell		Detritus	Olivella	7	0.42	27-Jul
1110	MU 5	0-20			1/8" 100g	1/8"	Shell		Detritus	Olivella	23	1.21	7/20/2019
1111	MU 5	20-30			1/8" 100g	1/8"	Shell		Detritus	Olivella	12	0.63	20-Jul
1112	MU 5	30-40			1/8" 100g	1/8"	Shell		Detritus	Olivella	8	0.53	7/20/2019
1113	MU 5	40-50			1/8" 100g	1/8"	Shell		Detritus	Olivella	18	0.76	7/20/2019
1114	MU 5	50-60			1/8" 100g	1/8"	Shell		Detritus	Olivella	12	0.53	7/27/2019
1115	MU 5	60-70			1/8" 100g	1/8"	Shell		Detritus	Olivella	14	0.93	7/27/2019
1116	MU 5	70-80			1/8" 100g	1/8"	Shell		Detritus	Olivella	14	0.61	7/27/2019
1117	MU 5	110-120			1/8" 100g	1/8"	Shell		Detritus	Olivella	3	0.07	8/3/2019
1118	MU 1	40-50			1/4" Full Sort	1/4"	Shell		Detritus	Olivella	6	0.61	6/29/2019

1119	MU 5			1	Col. Sample	9.1 L	Shell		Detritus	Olivella	1	0.11	8/3/2019
1120	UNIT 1	110-120			1/8" Bulk	1/8"	Shell		Whole	Olivella	1	1.3	7/5/2019
1121	UNIT 1	60-70			1/8" Bulk	1/8"	Shell		Detritus	Olivella	1	0.09	6/27/2019
1122	UNIT 1	30-40			1/8" Bulk	1/8"	Shell		Detritus	Olivella	2	0.42	5/27/2019
1123	UNIT 1B	50-60			1/8" Bulk	1/8"	Shell		Detritus	Olivella	1	0.04	7/20/2019
1124	UNIT 1B	70-80			1/8" Bulk	1/8"	Shell		Detritus	Olivella	1	0.1	7/31/2019
1125	UNIT 1	Surface			1/8" Bulk	1/8"	Shell		Whole	Olivella	1	1.9	5/26/2019
1126	UNIT 1B	100-110			1/8" Bulk	1/8"	Shell		Detritus	Olivella	3	0.72	8/3/2019
1127	UNIT 1B	110-120			1/8" Bulk	1/8"	Shell		Detritus	Olivella	4	0.71	8/3/2019
1128	UNIT 1B	110-120			1/8" Bulk	1/8"	Shell		Whole	Olivella	2	1.74	8/3/2019
1129	UNIT 1B			1A	1/8" Bulk	1/8"	Shell		Whole	Olivella	1	1.38	7/19/2019
1130	UNIT 1B			1A	1/8" Bulk	1/8"	Shell		Detritus	Olivella	2	0.4	7/19/2019
1131	UNIT 1B			AB	1/8" Bulk	1/8"	Shell		Detritus	Olivella	2	0.58	7/19/2019

1132	UNIT 1B	130-140			1/8" Bulk	1/8"	Shell		Detritus	Olivella	1	0.19	8/3/2019
1133	UNIT 1B			1A	1/8" Bulk	1/8"	Shell		Whole	Olivella	1	2.83	7/19/2019
1134	UNIT 1A			1	1/8" Bulk	1/8"	Shell		Detritus	Olivella	3	0.2	7/13/2019
1135	UNIT 1A	70-80			1/8" Bulk	1/8"	Shell		Detritus	Olivella	1	0.08	7/20/2019
1136	UNIT 1	100-110			1/8" Bulk	1/8"	Shell		Whole	Olivella	1	0.95	7/2/2019
1137	UNIT 1B	100-110			1/8" Bulk	1/8"	Shell		Detritus	Olivella	1	0.21	7/20/2019
1138	UNIT 1	20-Oct			1/8" Bulk	1/8"	Shell		Whole	Olivella	1	0.28	5/26/2019
1139	UNIT 1	20-Oct			1/8" Bulk	1/8"	Shell		Detritus	Olivella	1	0.16	5/26/2019
1140	MU 1	60-70			1/8" 100g	1/8"	Shell		Detritus	Olivella	1	0.07	6/29/2019
1141	MU 1	50-60			1/8" 100g	1/8"	Shell		Detritus	Olivella	1	0.04	10/7/2019
1142	MU 1			1	Col. Sample	8.5L	Shell		Detritus	Olivella	8	1.27	7/29/2019
1143	MU 1			1	Col. Sample	8.5L	Shell		Whole	Olivella	1	0.52	7/29/2019
1144	MU 1			3	Col. Sample	10.5L	Shell		Detritus	Olivella	19	3.41	8/3/2019

1145	MU 1			4	Col. Sample	6.75L	Shell		Detritus	Olivella	4	0.21	8/3/2019
1146	MU 1			2	Col. Sample	9.75L	Shell		Whole	Olivella	1	0.27	7/27/2019
1147	MU 1			2	Col. Sample	9.75L	Shell		Detritus	Olivella	10	1.14	7/27/2019
1148	MU 4			1	Col. Sample	9.6L	Shell		Detritus	Olivella	1	0.36	
1149	UNIT 1A			1	1/8" Bulk	1/8"	Shell	Undiff		Haliotis cracherodii	1	1.12	7/13/2019
1150	MU 1	50-60			1/4" Full sort	1/4"	Shell	Undiff		Tegula spp.	4	0.92	6/29/2019
1151	MU 1	70-80			1/8" 100g	1/8"	Shell	Undiff		Balanus spp	2	0.089	6/29/2019
1152	MU 1	40-50			1/4" Full sort	1/4"	Shell	Undiff		Leukoma staminea	2	2.38	6/29/2019
1153	MU 1	20-30			1/8" 100g	1/8"	Shell	Undiff		Undiff	1	0.11	6/29/2019
1154	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Undiff	4	0.22	10/7/2019
1155	MU 1	80-90			1/4" Bulk	1/4"	Shell	Undiff		Parapholas californica	1	0.22	10/26/2019
1156	MU 1	80-90			1/4" Bulk	1/4"	Shell	Undiff		Leukoma staminea	1	0.319	10/26/2019
1157	MU 1	50-60			1/8" 100g	1/8"	Shell	Undiff		Leukoma staminea	1	0.06	10/26/2019

1158	MU 1	60-70			1/4" Bulk	1/4"	Shell	Undiff		Gastropod spp.	1	0.03	6/29/2019
1159	MU 1	20-30			1/8" 100g	1/8"	Shell	Undiff		Chione spp.	1	0.04	6/29/2019
1160	MU 1	60-70			1/4" Bulk	1/4"	Shell	Undiff		Tresus Nuttali	2	0.3	6/29/2019
1161	MU 1	60-70			1/8" 100g	1/8"	Shell	Undiff		Mytillisepta bifurcata	5	0.08	6/29/2019
1162	MU 1	60-70			1/4" Bulk	1/4"	Shell	Undiff		Tivela MUltorum	1	1.59	6/29/2019
1163	MU 1	70-80			1/8" 100g	1/8"	shell	Undiff		Nucella Emarginata	2	0.08	6/29/2019
1164	MU 1	70-80			1/4" Bulk	1/4"	Shell	Undiff		Strongylocentrotus purpuratus	2	0.19	6/29/2019
1165	MU 1	60-70			1/4" Bulk	1/4"	Shell	Undiff		Leukoma staminea	2	1.16	6/29/2019
1166	MU 1	70-80			1/4" Bulk	1/4"	Shell	Undiff		Acorn Barnacle	1	0.12	6/29/2019
1167	MU 1	60-70			1/4" Bulk	1/4"	Shell	Undiff		Mytillisepta bifurcata	1	0.3	6/29/2019
1168	MU 1	70-80			1/8" 100g	1/8"	Shell	Detritus		Olivella	1	0.07	6/29/2019
1169	MU 1	40-50			1/4" Bulk	1/4"	Shell	Undiff		Chione spp.	1	0.48	6/29/2019
1170	MU 1	40-50			1/4" Bulk	1/4"	Shell	Undiff		Tivela MUltorum	2	6.56	6/29/2019

1171	MU 5	80-90			1/4" Bulk	1/4"	Shell	Undiff		Tivela MUltorum	1	0.58	6/29/2019
1172	MU 5	20-30			1/4" Bulk	1/4"	Shell	Undiff		Tivela MUltorum	1	0.27	7/20/2019
1173	MU 5	50-60			1/4" Bulk	1/4"	Shell	Undiff		Tivela MUltorum	1	1.97	7/27/2019
1174	MU 5	100-110			1/4" Bulk	1/4"	Shell	Undiff		Tegula spp.	4	0.36	7/27/2019
1175	MU 5	80-90			1/4" Bulk	1/4"	Shell	Undiff		Mytillisepta bifurcata	1	0.25	7/27/2019
1176	MU 5	30-40			1/4" Bulk	1/4"	Shell	Undiff		Leukoma staminea	1	1.01	7/20/2019
1177	MU 5	0-20			1/4" Bulk	1/4"	Shell	Undiff		Pollicipes polymerus	2	0.33	7/20/2019
1178	Unit 1	Surface			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		1	0.12	5/25/2019
1179	Unit 1	0-10			1/4" Bulk	1/8"	Bone	Mammal	Burn 3		1	1.5	5/25/2019
1180	Unit 1	0-10			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		6	2.08	5/28/2019
1181	Unit 1	20-Oct			1/4" Bulk	1/8"	Bone	Mammal	Burn 0		11	5	5/26/2019
1182	Unit 1	20-Oct			1/4" Bulk	1/8"	Bone	Mammal	Burn 1		1	1.91	5/26/2019
1183	Unit 1	20-Oct			1/4" Bulk	1/8"	Bone	Mammal	Burn 2		2	2.71	5/26/2019

1184	Unit 1	20-Oct			1/4" Bulk	1/8"	Bone	Mammal	Burn 3		2	1.43	5/26/2019
1185	Unit 1	20-Oct			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		2	1.36	5/26/2019
1186	Unit 1	20-30			1/4" Bulk	1/8"	Bone	Mammal	Burn 0		6	3.21	6/27/2019
1187	Unit 1	20-30			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		7	1.23	6/27/2019
1188	Unit 1	30-40			1/4" Bulk	1/8"	Bone	Mammal	Burn 0		20	4.35	5/27/2019
1189	Unit 1	30-40			1/4" Bulk	1/8"	Bone	Mammal	Burn 1		5	1.11	5/27/2019
1190	Unit 1	30-40			1/4" Bulk	1/8"	Bone	Mammal	Burn 2		4	0.95	5/27/2019
1191	Unit 1	30-40			1/4" Bulk	1/8"	Bone	Mammal	Burn 3		2	0.7	5/27/2019
1192	Unit 1	30-40			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		5	1.55	5/27/2019
1193	Unit 1	40-50			1/4" Bulk	1/8"	Bone	Mammal	Burn 1		1	1.11	6/27/2019
1194	Unit 1	40-50			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		1	0.47	6/27/2019
1195	Unit 1	50-60			1/4" Bulk	1/8"	Bone	Mammal	Burn 0		10	7.9	5/27/2019
1196	Unit 1	50-60			1/4" Bulk	1/8"	Bone	Mammal	Burn 2		1	0.94	5/27/2019

1197	Unit 1	50-60			1/4" Bulk	1/8"	Bone	Mammal	Burn 3		1	0.15	5/27/2019
1198	Unit 1	50-60			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		4	4.33	5/27/2019
1199	Unit 1	60-70			1/4" Bulk	1/8"	Bone	Mammal	Burn 0		1	0	6/27/2019
1200	Unit 1	60-70			1/4" Bulk	1/8"	Bone	Mammal	Burn 2		2	0.03	6/27/2019
1201	Unit 1	60-70			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		2	0.31	6/27/2019
1202	Unit 1	70-80			1/4" Bulk	1/8"	Bone	Mammal	Burn 0		13	1.27	6/29/2019
1203	Unit 1	70-80			1/4" Bulk	1/8"	Bone	Mammal	Burn 1		2	0.69	6/29/2019
1204	Unit 1	70-80			1/4" Bulk	1/8"	Bone	Mammal	Burn 2		2	1.77	6/29/2019
1205	Unit 1	70-80			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		3	0.32	6/29/2019
1206	Unit 1	110-120			1/4" Bulk	1/8"	Bone	Mammal	Burn 0		6	2.66	7/5/2019
1207	Unit 1	110-120			1/4" Bulk	1/8"	Bone	Mammal	Burn 1		5	1.85	7/5/2019
1208	Unit 1	110-120			1/4" Bulk	1/8"	Bone	Mammal	Burn 2		9	13.04	7/5/2019
1209	Unit 1	110-120			1/4" Bulk	1/8"	Bone	Mammal	Burn 3		9	4.51	7/5/2019

1210	Unit 1	110-120			1/4" Bulk	1/8"	Bone	Mammal	Burn 4		8	3.62	7/5/2019
1211	Unit 1	120-130			1/8" Bulk	1/8"	Bone	Mammal	Burn 0		6	3.04	7/5/2019
1212	Unit 1	120-130			1/8" Bulk	1/8"	Bone	Mammal	Burn 1		4	1.4	7/5/2019
1213	Unit 1	120-130			1/8" Bulk	1/8"	Bone	Mammal	Burn 2		4	13.49	7/5/2019
1214	Unit 1	120-130			1/8" Bulk	1/8"	Bone	Mammal	Burn 3		5	3.24	7/5/2019
1215	Unit 1	120-130			1/8" Bulk	1/8"	Bone	Mammal	Burn 4		4	1.09	7/5/2019
1216	Unit 1	130-140			1/8" Bulk	1/8"	Bone	Mammal	Burn 0		1	0.11	7/6/2019
1217	Unit 1	130-140			1/8" Bulk	1/8"	Bone	Mammal	Burn 1		3	0.62	7/6/2019
1218	Unit 1	130-140			1/8" Bulk	1/8"	Bone	Mammal	Burn 2		4	1.05	7/6/2019
1219	Unit 1	130-140			1/8" Bulk	1/8"	Bone	Mammal	Burn 3		3	1.41	7/6/2019
1220	Unit 1	130-140			1/8" Bulk	1/8"	Bone	Mammal	Burn 4		11	2.63	7/6/2019
1221	Unit 1	90-100			1/8" Bulk	1/8"	Bone	Mammal	Burn 0		14	10.87	7/2/2019
1222	Unit 1	90-100			1/8" Bulk	1/8"	Bone	Mammal	Burn 1		4	0.58	7/2/2019

1223	Unit 1	100-110			1/8" Bulk	1/8"	Bone	Mammal	Burn 0		19	4.35	7/2/2019
1224	Unit 1	100-110			1/8" Bulk	1/8"	Bone	Mammal	Burn 1		3	0.25	7/2/2019
1225	Unit 1	100-110			1/8" Bulk	1/8"	Bone	Mammal	Burn 2		4	11.18	7/2/2019
1226	Unit 1	100-110			1/8" Bulk	1/8"	Bone	Mammal	Burn 3		23	5.88	7/2/2019
1227	Unit 1	100-110			1/8" Bulk	1/8"	Bone	Mammal	Burn 4		8	7.34	7/2/2019
1228	Unit 1	140-150			1/8" Bulk	1/8"	Bone	Mammal	Burn 0		13	0.98	7/6/2019
1229	Unit 1	140-150			1/8" Bulk	1/8"	Bone	Mammal	Burn 2		1	0.18	7/6/2019
1230	Unit 1	140-150			1/8" Bulk	1/8"	Bone	Mammal	Burn 3		3	0.86	7/6/2019
1231	Unit 1	110-120					Stone	Tool	Utilized flake	Monterey Chert	1	27.75	7/5/2019
1232	Unit 1	30-40				1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.19	5/27/2019
1233	Unit 1	30-40				1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.83	5/27/2019
1234	Unit 1	30-40				1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.17	5/27/2019
1235	Unit 1	30-40				1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	1.09	5/27/2019

1236	Unit 1	0-10				1/4"	Glass	Flake		Consumer Glass	1	0.6	5/26/2019
1237	Unit 1	60-70				1/4"	Glass	Flake	patina	Consumer Glass	1	1.23	6/27/2019
1238	Unit 1	70-80				1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.61	6/29/2019
1239	Unit 1	20-Oct				1/4"	Glass	Flake	Flaked	Consumer Glass	1	3.82	5/27/2019
1240	Unit 1	20-30				1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.62	
1241	Unit 1	30-40				1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.17	5/27/2019
1242	Unit 1	90-100				1/8"	Stone	Flake	Primary	Volcanic	1	0.28	7/2/2019
1243	Unit 1	Feature 1				1/8"	Stone	Tool	Abrader?	Limestone	1	5.33	6/29/2019
1244	Unit 1	20-30				1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.82	6/27/2019
1245	Unit 1	50-60			1/8" Full sort	1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.09	
1246	Unit 1	70-80				1/8"	Stone	Flake	Secondary	Monterey Chert	1	0.09	6/29/2019
1247	Unit 1	20-30				1/4"	Glass	Flake/Tool?	Flaked	Consumer Glass	1	1.28	6/27/2019
1248	Unit 1	90-100				1/8"	Glass	Shatter		Consumer Glass	1	0.47	7/2/2019

1249	Unit 1A			1		1/8"	Stone	Flake	Primary	?	1	0.7	7/13/2019
1250	Unit 1A	50-60					Stone	Flake	Secondary	Monterey Chert	1	1.69	7/20/2019
1251	Unit 1A	60-70			1/8" Bulk	1/8"	Stone	Flake	Tertiary	Chert Undiff	1	0.16	7/20/2019
1252	Unit 1B	70-80			1/4" Full	1/4"	Glass	Flake	Flaked	Consumer Glass	1	3.88	7/31/2019
1253	Unit 1B			AB	1/4" Full Sort	1/4"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.58	7/19/2019
1254	Unit 1B			AB	1/4" Full	1/4"	Glass	Flake	Flaked	Consumer Glass	2	0.65	7/19/2019
1255	Unit 1B	110-120			1/4" Full	1/4"	Stone	Tool		Monterey Chert	1	35.04	8/3/2019
1256	Unit 1B	120-130			1/4" Full	1/4"	Stone	Flake	Primary	Fransiscan Chert	1	0.33	8/3/2019
1257	MU 2	20-30			1/8" 100g	1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.25	7/6/2019
1258	MU 2	20-30			1/8" 100g	1/8"	Glass	Flake		Consumer Glass	1	0.25	7/6/2019
1259	MU 2	30-40			1/8" Bulk	1/8"	Glass	Flake		Consumer Glass	1	0.74	
1260	MU 2	30-40			1/8" Bulk	1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.09	7/6/2019
1261	MU 2	40-50			1/4" Bulk	1/4"	Stone	Flake	Secondary	Fransiscan Chert	1	8.04	7/6/2019

1262	MU 2	60-70			1/8" 100g	1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.13	7/13/2019
1263	MU 2	60-70			1/4" Full	1/4"	Stone	Flake	Secondary	Monterey Chert	1	43.95	7/13/2019
1264	MU 2	70-80			1/4" Bulk	1/4"	Stone	Flake	Tertiary	Monterey Chert	1	0.18	7/13/2019
1265	MU 2	100-110			1/4" Bulk	1/4"	Stone	Flake	Primary	Fransiscan Chert	1	0.55	7/27/2019
1266	MU 3	20-30			1/8" <100g	1/8"	Glass	Flake		Consumer Glass	1	0.001	7/6/2019
1267	MU 3	30-40			1/4" Full	1/4"	Stone	Flake	Secondary	Undiff	1	0.06	7/13/2019
1268	MU 3	40-50			1/8" 100g	1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.02	7/13/2019
1269	MU 4	0-20			1/8" Bulk	1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.03	
1270	MU 4	20-30			1/4" Bulk	1/4"	Stone	Flake	Tertiary	Porphyritic Volcanic	1	9.16	7/13/2019
1271	MU 4	30-40				1/4"	Stone	Flake	Tertiary	Monterey Chert	1	1.36	
1272	MU 4	40-50				1/8"	Stone	Flake	Tertiary	Fransiscan Chert	2	0.07	7/20/2019
1273	MU 4	40-50			1/4" Bulk	1/4"	Glass	Flake		Consumer Glass	1	6.68	7/20/2019
1274	MU 4	40-50			1/4" Bulk	1/4"	Stone	Flake	Secondary	Monterey Chert	1	0.24	7/20/2019

1275	MU 4	40-50			1/4" Bulk	1/4"	Stone	Flake	Tertiary	Fransiscan Chert	1	7.78	7/20/2019
1276	MU 4	60-70			1/8" 100g	1/8"	Glass	Flake		Consumer Glass	1	0.02	10/21/2019
1277	MU 5	20-30			1/4" Bulk	1/4"	Stone	Flake	Secondary	Monterey Chert	1	1.29	7/20/2019
1278	MU 5	20-30				1/4"	Glass	Flake		Consumer Glass	1	0.01	
1279	MU 5	20-30			1/8" 100g	1/8"	Stone	Flake	Tertiary	Monterey Chert	2	0.1	7/20/2019
1280	MU 5	30-40				1/4"	Stone	Flake		Monterey Chert	1	3.4	20-Jul
1281	MU 5	30-40				1/4"	Stone	Flake	Tertiary	Monterey Chert	1	0.5	7/20/2019
1282	MU 5	40-50			1/8" 100g	1/8"	Stone	Flake	Tertiary	Fransiscan Chert	1	0.01	
1283	MU 5	40-50			1/8" 100g	1/8"	Stone	Flake	Tertiary	Monterey Chert	1	0.01	
1284	MU 5	40-50				1/4"	Stone	Flake	Secondary	Monterey Chert	1	0.01	7/20/2019
1285	MU 5	70-80			1/4" Full	1/4"	Stone	Flake	Tertiary	Monterey Chert	1	1	10/2/2019
1286	MU 5	100-110			1/4" Full	1/4"	Glass	Flake		Consumer Glass	1	0.01	7/27/2019
1287	1B			1A	full sort	1/8"	Bone	Mammal	Burn 1		5	6.52	7/19/2019

1288	1B			1A	full sort	1/8"	Bone	Mammal	Burn 2		6	5.66	7/19/2019
1289	1B			1A	full sort	1/8"	Bone	Mammal	Burn 3		1	1.23	7/19/2019
1290	1B			1A	full sort	1/8"	Bone	Mammal	Burn 4		3	3.37	7/19/2019
1291	1B			1A	full sort	1/8"	Bone	Mammal	Burn 0		6	12.72	7/19/2019
1292	1B			1B	full sort	1/8"	Bone	Mammal	Burn 1		10	1.43	7/20/2019
1293	1B			1B	full sort	1/8"	Bone	Mammal	Burn 2		3	1.42	7/20/2019
1294	1B			1B	full sort	1/8"	Bone	Mammal	Burn 3		5	1.39	7/20/2019
1295	1B			1B	full sort	1/8"	Bone	Mammal	Burn 4		11	2.28	7/20/2019
1296	1B			1B	full sort	1/8"	Bone	Mammal	Burn 0		5	1.79	7/20/2019
1297	1			AB	full sort	1/8"	Bone	Mammal	Burn 4		1	3.77	7/19/2019
1298	1B			AB	full sort	1/8"	Bone	Mammal	Burn 0		6	3.74	7/19/2019
1299	1B	50-60			full sort	1/8"	Bone	Mammal	Burn 2		5	3.55	7/20/2019
1300	1B	50-60			full sort	1/8"	Bone	Mammal	Burn 3		1	0.17	7/20/2019

1301	1B	50-60			full sort	1/8"	Bone	Mammal	Burn 4		1	0.12	7/20/2019
1302	1B	50-60			full sort	1/8"	Bone	Mammal	Burn 0		4	0.96	7/20/2019
1303	1B	50-60			full sort	1/8"	Bone	Mammal	Burn 2		2	1.61	7/19/2019
1304	1B	50-60			full sort	1/8"	Bone	Mammal	Burn 4		2	1.31	7/19/2019
1305	1B	50-60			full sort	1/8"	Bone	Mammal	Burn 0		7	1.5	7/19/2019
1306	1B	60-70			full sort	1/8"	Bone	Mammal	Burn 2		9	11.38	7/27/2019
1307	1B	60-70			full sort	1/8"	Bone	Mammal	Burn 0		6	1.48	7/27/2019
1308	1B	70-80			full sort	1/8"	Bone	Mammal	Burn 1		5	0.43	7/30/2019
1309	1B	70-80			full sort	1/8"	Bone	Mammal	Burn 4		2	0.54	7/31/2019
1310	1B	70-80			full sort	1/8"	Bone	Mammal	Burn 0		9	2.32	7/31/2019
1311	1B	80-90			full sort	1/8"	Bone	Mammal	Burn 2		5	3.64	7/31/2019
1312	1B	80-90			full sort	1/8"	Bone	Mammal	Burn 3		8	1.82	7/31/2019
1313	1B	80-90			full sort	1/8"	Bone	Mammal	Burn 4		6	5.5	7/31/2019

1314	1B	80-90			full sort	1/8"	Bone	Mammal	Burn 0		33	7.35	7/31/2019
1315	1B	90-100			full sort	1/8"	Bone	Mammal	Burn 2		10	7.53	7/31/2019
1316	1B	90-100			full sort	1/8"	Bone	Mammal	Burn 3		3	2.03	7/31/2019
1317	1B	90-100			full sort	1/8"	Bone	Mammal	Burn 4		5	1.28	7/31/2019
1318	1B	90-100			full sort	1/8"	Bone	Mammal	Burn 0		6	1.49	7/31/2019
1319	Unit 1A	Strat 1			1/8" Full Sort	1/8"	Ceramics	Englishware	Undecorated	Whiteware	1	0.2	7/13/2019
1320	Unit 1A	70-80			1/8" Full Sort	1/8"	Ceramics	Mojalica	painted	purple and green	1	3.3	7/20/2019
1321	Unit 1B	Strat AB			1/8" Full Sort	1/8"	Ceramics	Englishware	Transferware	Whiteware	3	3.62	7/19/2019
1322	Unit 1	110-120			1/8" Full Sort	1/8"	Ceramics	Mojalica	painted	purple and green	2	0.46	7/15/2019
1323	Unit 1B	Strat 1A			1/8" Full Sort	1/8"	Ceramics	Englishware	Transferware	Whiteware	1	0.58	7/19/2019
1324	MU 4	Not noted			100 g sample	1/8"	Ceramics	Englishware	Transferware	Whiteware	1	0.21	7/13/2019
1325	MU 2	50-60			1/4" full sort	1/4"	Ceramics	Englishware	Transferware	Whiteware	1	0.22	7/13/2019
1326	Unit 1	Surface			1/8" Full Sort	1/8"	Ceramics	Englishware	Transferware	Whiteware	1	2.15	8/25/2019

1327	Unit 1	40-50			1/8" Full Sort	1/8"	Ceramics	Englishware	Transferware	Whiteware	1	4.87	6/29/2019
1328	MU 4	0-20			100 g sample	1/8"	Ceramics	Englishware	Transferware	Whiteware	2	0.57	7/13/2019
1329	MU 2	0-20			1/4" full sort	1/4"	Cermaincs	Mexican Import	low-fired, lead glaze		1	2.1	7/6/2019
1330	MU 4	90-100			1/4" full sort	1/4"	Cermaincs	Mexican Import	low-fired, lead glaze		1	6.13	7/27/2019
1331	MU 5	0-20			1/4" full sort	1/4"	Cermaincs	Mexican Import	low-fired, lead glaze		1	5	7/20/2019
1332	Unit 1A	Strat 1			1/8" Full Sort	1/8"	Ceramics	Chineseware		Porcelain	1	1.4	7/13/2019
1333	Unit 1B	70-90			1/8" Full Sort	1/8"	Ceramics	Chineseware		Porcelain	1	2.52	7/31/2019
1334	MU 4	40-50			1/8" Full Sort	1/8"	Ceramics	Chineseware		Porcelain	2	0.31	7/20/2019
1335	Unit 1A	Strat 1			1/8" Full Sort	1/8"	Ceramics	Englishware		Creamware	1	0.11	7/13/2019
1336	Unit 1	20-Oct			1/8" Full Sort	1/8"	Ceramics	Englishware		Creamware	1	0.65	5/26/2019
1337	Unit 1	0-10			1/8" Full Sort	1/8"	Ceramics	Englishware		Creamware	1	0.52	5/26/2019
1338	Unit 1	30-40			1/8" Full Sort	1/8"	Ceramics	Englishware		Creamware	1	0.12	7/27/2019
1339	MU 4	30-40			1/4" full sort	1/4"	Ceramics	Englishware		Creamware	1	2.19	n.d.

1340	MU 5	40-50			1/4" full sort	1/4"	Ceramics	Englishware		Creamware	1	3	7/20/2019
1341	MU 4	20-30			100g sample	1/8"	Ceramics	Missionware	Hand molded	Fired Clay	1	3.28	7/13/2019
1342	MU 5	90-100			1/4" full sort	1/4"	Ceramics	Missionware	Hand molded	Fired Clay	2	6.27	7/27/2019
1343	MU 4	60-70			1/4" full sort	1/4"	Ceramics	Missionware	Wheel thrown	Fired Clay	1	15.87	7/20/2019
1344	MU 5	70-80			1/4" full sort	1/4"	Ceramics	Missionware	Wheel thrown	Fired Clay	1	0.88	10/2/2019
1345	MU 5	70-80			1/4" full sort	1/4"	Ceramics	Missionware	Wheel thrown	Fired Clay	1	2.98	10/2/2019
1346	MU 5	30-40			1/4" full sort	1/4"	Ceramics	Missionware	Wheel thrown	Fired Clay	4	30.39	7/20/2019
1347	MU 2	40-50			1/4" full sort	1/4"	Ceramics	Unknown			1	0.33	7/13/2019
1348	MU 4	20-30			100g sample	1/8"	Ceramics	Unknown			1	0.22	7/13/2019
1349	MU 4	60-70			1/4" full sort	1/4"	Ceramics	Unknown			1	4.62	7/20/2010
1350	Unit 1	100-110			1/8" Full Sort	1/8"	Lithic	Bowl Rim	Burned	Soapstone	1	72.11	n.d.
1351	Unit 1	100-110			1/8" Full Sort	1/8"	Lithic	comal Fragement	Burned	Soapstone	1	46.06	n.d.
1352	Unit 1	120-130			1/8" Full Sort	1/8"	Lithic	comal Fragement		Soapstone	2	102.08	7/5/2019

1353	Unit 1B	80-90			1/8" Full Sort	1/8"	Lithic	Comal rim	Burned	Soapstone	1	42.99	7/31/2019
1354	Unit 1	100-110			1/8" Full Sort	1/8"	Lithic	bowl fragment		Soapstone	1	28.88	7/5/2019
1355	Unit 1A	not noted			1/8" Full Sort	1/8"	Lithic	Fragement		Soapstone	4	2.58	7/13/2019
1356	MU 5	30-40			1/4" full sort	1/4"	Lithic	Fragement		Soapstone	1	0.9	7/20/2019
1357	Unit 1	130-140			1/8" Full Sort	1/8"	Lithic	Fragement		Soapstone	1	0.29	7/6/2019
1358	MU 3	60-70			1/4" full sort	1/4"	Lithic	Fragement		Soapstone	1	0.52	7/23/2019
1359	MU 4	0-20			1/4" full sort	1/4"	Lithic	Fragement		Soapstone	1	12.68	7/13/2019
1360	MU 4	20-30			100 g sample	1/8"	Lithic	Fragement		Soapstone	2	0.07	7/13/2019
1361	MU 5	80-90			1/4" full sort	1/4"	Lithic	Fragement		Soapstone	1	0.1	7/27/2019
1362	Unit 1	90-100			1/8" Full Sort	1/8"	Asphaltum	Basket Impression	Technology		1	40.36	7/2/2019
1363	Unit 1	50-60			1/8" Full Sort	1/8"	Asphaltum	Basket Impression	Technology		1	3.81	5/27/2019
1364	Unit 1	20-Oct			1/8" Full Sort	1/8"	Asphaltum	Basket Impression	Technology		1	0.81	5/26/2019
1365	Unit 1	40-50			1/8" Full Sort	1/8"	Asphaltum	Basket Impression	Technology		1	1.63	6/27/2019

1366	Unit 1	feature 1			1/8" Full Sort	1/8"	Asphaltum	Detritus			1	4.86	6/29/2019
1367	Unit 1	40-50			1/8" Full Sort	1/8"	Asphaltum	Detritus			5	6.25	6/27/2019
1368	Unit 1A	strat 1			1/8" Full Sort	1/8"	Asphaltum	Detritus			2	0.83	7/19/2019
1369	Unit 1B	50-60			1/8" Full Sort	1/8"	Asphaltum	Detritus			2	0.15	7/19/2019
1370	MU 2	100-110			100 g sample	1/8"	Asphaltum	Detritus			1	1.26	7/27/2019
1371	MU 3	40-50			100 g sample	1/8"	Asphaltum	Detritus			3	3.56	7/13/2019
1372	MU 4	70-80			1/8" 100g	1/8"	Asphaltum	Detritus			5	0.35	n.d
1373	MU 4	0-20			1/4" full sort	1/4"	Asphaltum	Tarring Pebble			1	17.08	7/13/2019
1374	MU 4	80-90			1/4" full sort	1/4"	Asphaltum	Basket Impression	Technology		1	4.91	7/27/2019
1375	MU 4	0-20			1/4" full sort	1/4"	Asphaltum	Detritus			2	1.1	7/13/2019
1376	MU 4	40-50			1/4" full sort	1/4"	Asphaltum	Detritus			73	30.25	7/20/2019
1377	MU 4	20-30			1/8" 100 g	1/8"	Asphaltum	Detritus			21	5.77	7/13/2019
1378	MU 4	30-40			1/8" 100 g	1/8"	Asphaltum	Detritus			2	2.27	n.d

1379	MU 5	90-100			1/4" full sort	1/4"	Asphaltum	Detritus			2	2	7/27/2019
1380	MU 5	30-40			1/4" full sort	1/4"	Asphaltum	Detritus			1	0.56	7/20/2019
1381	MU 5	50-60			1/4" full sort	1/4"	Asphaltum	Detritus			2	3.84	7/20/2019
1382	UNIT 1B	Roof			1/4" full sort	1/4"	Shell	Undiff		mytilus californianus (hinge)	1	1.54	7/27/2019
1383	UNIT 1B	Roof			1/4" full sort	1/4"	Shell	Undiff		mytilus californianus	15	1.64	7/27/2019
1384	UNIT 1B	Roof			1/4" full sort	1/4"	Shell	Undiff		columella	1	0.03	7/27/2019
1385	UNIT 1B	Wall fall			1/8" 100g	1/8"	Shell	Undiff		mytilus californianus	18	3.63	8/3/2019
1386	UNIT 1B	Strat 1A			1/8" 100g	1/8"	Shell	Undiff		haliotis	3	1.55	7/19/2019
1387	UNIT 1B	Strat 1A			1/8" 100g	1/8"	Shell	Undiff		mytilus californianus	6	2.45	7/19/2019
1388	1B	70-80			full sort	1/4"	Shell	Undiff		haliotis cracherodii	3	2.33	7/31/2019
1389	1B	70-80			full sort	1/4"	Shell	Undiff		mytilus californianus	12	2.39	7/31/2019
1390	1B	80-90			full sort	1/4"	Shell	Undiff		mytilus californianus	40	6.73	7/31/2019
1391	1B	90-100			full sort	1/4"	Shell	Undiff		mytilus californianus	15	3.73	8/3/2019

1392	1B	90-100			full sort	1/4"	Shell	Undiff		leukoma staminea	1	0.7	7/31/2019
1393	1B	100-110			full sort	1/4"	Shell	Undiff		tegula spp	1	0.66	8/3/2019
1394	1B	100-110			full sort	1/4"	Shell	Undiff		mytilus californianus	39	16.08	8/3/2019
1395	1B	110-120			full sort	1/4"	Shell	Undiff		tegula spp	1	0.17	8/3/2019
1396	1B	110-120			full sort	1/4"	Shell	Undiff		mytilus californianus (hinge)	3	13.91	8/3/2019
1397	1B	110-120			full sort	1/4"	Shell	Undiff		mytilus californianus	32	15.66	8/3/2019
1398	1B	120-130			full sort	1/4"	Shell	Undiff		leukoma staminea	2	1.55	8/3/2019
1399	1B	120-130			full sort	1/4"	Shell	Undiff		tegula spp	1	0.22	8/3/2019
1400	1B	120-130			full sort	1/4"	Shell	Undiff		mytilus callifornianus	15	4.39	8/3/2019
1401	1B	130-140			full sort	1/4"	Shell	Undiff		mytilus callifornianus	20	6.35	8/3/2019
1402	1B	50-60			full sort	1/4"	Shell	Undiff		mytilus callifornianus	17	3.93	7/20/2019
1403	1B	50-60			full sort	1/4"	Shell	Undiff		mytilus callifornianus (hinge)	1	0.86	7/20/2019
1404	1B	50-60			full sort	1/4"	Shell	Undiff		haliotis cracherodii	1	0.08	7/20/2019

1405	1B	50-60			full sort	1/4"	Shell	Undiff		mytilus californianus	4	3.02	7/20/2019
1406	1	50-60			1/8" bulk	1/8"	Shell	Undiff		haliotis cracherodii	1	6.55	
1407	1	50-60			1/8" bulk	1/8"	Shell	Undiff		haliotis cracherodii	1	0.6	
1408	1	60-70			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	12	1.11	6/19/2019
1409	1	1			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	27	11.37	5/26/2019
1410	1	40-50			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	1	0.11	6/27/2019
1411	1	11			1/8" bulk	1/8"	Shell	Undiff		columella misc	1	0.15	7/2/2019
1412	1	60-70			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	6	0.17	6/27/2019
1413	1	70-80			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	1	0.18	6/29/2019
1414	1	40-50			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	8	2.68	
1415	1	90-100			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	5	6.9	7/2/2019
1416	1	1			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	2	0.86	
1417	1	20-Oct			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	15	4.95	5/26/2019

1418	1	3			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus (hinges)	4	1.26	5/27/2019
1419	1	3			1/8" bulk	1/8"	Shell	Undiff		polyplarophora spp	1	0.05	5/27/2019
1420	1	3			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	43	7.05	5/27/2019
1421	1	30-40			1/8" bulk	1/8"	Shell	Undiff		undiff	1	0.01	
1422	1	50-60			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	25	3.14	5/27/2019
1423	1	70-80			1/8" bulk	1/8"	Shell	Undiff		balanuss spp	1	0.19	6/19/2019
1424	1	70-80			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	11	1.6	6/29/2019
1425	1	20-Oct			1/8" bulk	1/8"	Shell	Undiff		haliotis cracherodii	3	0.18	5/26/2019
1426	1	110-120			1/8" bulk	1/8"	Shell	Undiff		columella misc	1	0.27	7/5/2019
1427	1	110-120			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	4	12.1	7/5/2019
1428	1	110-120			1/8" bulk	1/8"	Shell	Undiff		nucella emarginata	1	0.26	7/5/2019
1429	1	110-120			1/8" bulk	1/8"	Shell	Undiff		haliotis cracherodii	1	2.25	7/5/2019
1430	1	110-120			1/8" bulk	1/8"	Shell	Undiff		leukoma staminea	1	0.52	7/5/2019

1431	1	110-120			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	2	0.14	7/5/2019
1432	1	110-120			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	88	13.9	7/5/2019
1433	1	70-80			1/8" bulk	1/8"	Shell	Undiff		columella misc.	1	0.42	6/29/2019
1434	1	10			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	29	7.95	7/2/2019
1435	1	140-150			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus (hinges)	1	0.44	7/6/2019
1436	1	120-130			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	24	11.37	7/5/2019
1437	1	140-150			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	4	1.66	7/6/2019
1438	1	120-130			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	1	0.78	7/5/2019
1439	1	120-130			1/8" bulk	1/8"	Shell	Undiff		gooseneck barnacle	1	0.15	
1440	1	120-130			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	3	0.31	7/5/2019
1441	1	120-130			1/8" bulk	1/8"	Shell	Undiff		haliotis cracherodii	1	4.07	7/5/2019
1442	1	130-140			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus (hinges)	5	3.46	7/6/2019
1443	1	130-140			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	47	12.62	7/6/2019

1444	1B	1B			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	7	0.73	7/20/2019
1445	1B	1B			1/8" bulk	1/8"	Shell	Undiff		mytilus californianus	1	0.14	7/20/2019
1446	1B	1B			1/8" bulk	1/8"	Shell	Undiff		tegula spp	1	0.3	7/14/2019
1447	1B			AB	full sort	1/4"	Shell	Undiff		mytilus californianus	8	2.57	7/19/2019
1448	MU1	20-40			1/4" Bulk	1/4"	Shell	Undiff		nucella emarginata	1	0.04	2/5/2020
1449	1B	110-120			1/4" Full sort	1/4"	Shell	Undiff		Saxidomus nuttalli	2	0.25	8/3/2019
1450	1B	110-120			1/4" Full sort	1/4"	Shell	Undiff		Chione undatella	1	0.34	8/3/2019
1451	1	11 Floor			-	-	Shell	Undiff		Mytilus californianus	3	2.57	7/2/2019
1452	1	11 Floor			-	-	Shell	Undiff		Mytilus californianus	176	28.18	7/2/2019
1453	1	11 Floor			-	-	Shell	Undiff		Mytilus californianus	6	17.01	7/2/2019
1454	1	11 Floor			-	-	Shell	Undiff		Balanuss spp	1	0.2	7/2/2019
1455	1	4			1/8" bulk	1/8"	Shell	Undiff		Mytilus californianus	69	12.04	5/27/2019
1456	1	4			1/8" bulk	1/8"	Shell	Undiff		Mytilus californianus (hinges)	2	0.85	5/27/2019

1457	1	20-Oct			1/8" bulk	1/8"	Shell	Undiff		tegula spp	1	0.37	
1458	1B	90-100			1/4" Full sort	1/4"	Shell	Undiff		Mytilus californianus	42	30.6	7/31/2019
1459	1	3			1/8" bulk	1/8"	Shell	Undiff		undiff	2	0.4	5/27/2019
1460	1	5			1/8" bulk	1/8"	Shell	Undiff		undiff	7	0.64	
1461	1	50-60			1/8" bulk	1/8"	Shell	Undiff		undiff	2	0.09	
1462	1B	90-100			1/4" Full	1/4"	Bone	Mammal	undiff		17	14.24	7/31/2019
1463	1B	100-110			1/4" Full	1/4"	Bone	Mammal	undiff		37	14.27	8/3/2019
1464	1B	100-110			1/4" Full	1/4"	Bone	Mammal	Burn 2		7	6.28	8/3/2019
1465	1B	100-110			1/4" Full	1/4"	Bone	Mammal	Burn 3		11	4.98	8/3/2019
1466	1B	100-110			1/4" Full	1/4"	Bone	Mammal	Burn 4		9	4.36	8/3/2019
1467	1B	110-120			1/4" Full	1/4"	Bone	Mammal	undiff		14	2.43	8/3/2019
1468	1B	110-120			1/4" Full	1/4"	Bone	Mammal	Burn 2		11	17.45	8/3/2019
1469	1B	110-120			1/4" Full	1/4"	Bone	Mammal	Burn 3		12	6.75	8/3/2019

1470	1B	110-120			1/4" Full	1/4"	Bone	Mammal	Burn 4		5	1.89	8/3/2019
1471	1B	120-130			1/4" Full	1/4"	Bone	Mammal	Burn 0		7	9.78	8/3/2019
1472	1B	120-130			1/4" Full	1/4"	Bone	Mammal	Burn 2		3	13.04	8/3/2019
1473	1B	120-130			1/4" Full	1/4"	Bone	Mammal	Burn 3		3	1.7	8/3/2019
1474	1B	130-140			1/4" Full	1/4"	Bone	Mammal	undiff		2	2.99	8/3/2019
1475	1B	130-140			1/4" Full	1/4"	Bone	Mammal	burn 2		2	0.98	8/3/2019
1476	1B	130-140			1/4" Full	1/4"	Bone	Mammal	burn 3		2	4.81	8/3/2019
1477	1B	130-140			1/4" Full	1/4"	Bone	Mammal	burn 4		2	2.93	8/3/2019
1478	1B	Wall fall			1/8" Full	1/8"	Bone	Mammal	undiff		3	1.16	8/3/2019
1479	1B	Wall fall			1/8" Full	1/8"	Bone	Mammal	burn 1		1	0.12	8/3/2019
1480	1B	Wall fall			1/8" Full	1/8"	Bone	Mammal	burn 2		3	1.06	8/3/2019
1481	1B	Wall fall			1/8" Full	1/8"	Bone	Mammal	burn 3		3	3.19	8/3/2019
1482	1B	Wall fall			1/8" Full	1/8"	Bone	Mammal	burn 4		1	0.84	8/3/2019

1483	1B	90-100			1/4" Full	1/4"	Shell	Undiff		Chione undatella	1	0.28	7/31/2019
1484	1B	120-130			1/4" Full	1/4"	Shell	Undiff		Olivella detritus	1	0.32	8/3/2019
1485	1B	120-130			1/4" Full	1/4"	Shell	Undiff		Leukoma staminea	1	3.18	8/3/2019
1486	1	130-140					Shell	Undiff		Leukoma staminea	1	0.319	7/6/2019
1487	1	50-60			1/8" Bulk	1/8"	Shell	Undiff		Chione spp	3	1.04	5/29/2019
1488	MU 4	20-30			1/8" 100g	1/8"	Metal	fragments			6	0.23	7/3/2019
1489	MU 5	60-70			1/4"	1/4"	Metal	Bent nail			1	1.86	7/27/2019
1490	MU 5	30-40			1/4"	1/4"	Metal	Macine cut			3	2.73	7/20/2019
1491	MU 5	0-20			1/4"	1/4"	Metal	Fragments			3	1.2	7/20/2019
1492	MU 5	20-30			1/8" 100g	1/8"	Metal	Fragments			3	0.1	7/20/2019
1493	MU 4	0-20			1/4" Bulk	4-Jan	Metal	Nail/ Fragments			3	0.83	7/13/2019
1494	MU 4	20-30			1/4" Bulk	1/4"	Metal	Fragments			2	3.92	7/13/2019
1495	MU 4	40-50			1/4"	1/4"	Metal	Fragments			5	0.77	7/20/2019

1496	MU 4	30-40			1/4" Bulk	1/4"	Metal	Fragments			10	9.75	
1497	MU 4	70-80			1/4" Bulk	1/4"	Metal	Fragments			2	0.4	7/21/2019
1498	MU 4	0-20			1/8" 100g	1/8"	Metal	Nail/ Fragments			12	1.19	7/13/2019
1499	MU 4	70-80			1/8" 100g	1/8"	Metal	Fragments			2	0.26	
1500	MU 3	20-30			1/4" full sort	1/4"	Metal	Barbed Wire			2	2.38	7/23/2019
1501	MU 3	0-20			1/4" Bulk	1/4"	Metal	Fragments			2	0.51	7/26/2019
1502	MU 3	20-30			1/4" full sort	1/4"	Metal	Fragments			2	0.46	7/26/2019
1503	MU 3	20-30			1/8" <100G Full sort	1/8"	Metal	Fragments			9	0.61	7/6/2019
1504	MU 3	0-20			1/8" <100g Full Sort	1/8"	Metal	Fragments			3	0.13	7/26/2019
1505	MU 3	60-70			1/4" Full sort	1/4"	Metal	Fragments			2	0.47	7/23/2019
1506	MU 3	40-50			full sort		Metal	Nail/ Fragment			29	17.64	7/13/2019
1507	MU 3	30-40			1/8" 100g	1/8"	Metal	Fragments			4	0.26	7/13/2019
1508	MU 3	50-60			1/4" full sort	1/4"	Metal	Fragments			3	0.26	7/23/2019

1509	MU 3	40-50			1/8" 100g	1/8"	Metal	Fragments			16	0.72	
1510	MU 3	60-70			1/8" Bulk	1/8"	Metal	Fragments			1	0.11	7/13/2019
1511	MU 2	20-30			1/4"	1/4"	Metal	Fragments			1	8.81	7/16/2019
1512	Unit 1	30-40			1/8"	1/8"	Metal	Nail			1	2.73	5/27/2019
1513	Unit 1	20-Oct			wall fall		Metal	Wire			1	2.84	
1514	Unit 1	20-Oct					Metal	Nail			1	2.01	
1515	Unit 1	30-40			1/8"	1/8"	Metal	Clumped up wire			4	18.56	5/28/2019
1516	Unit 1	100-110			field pulled	1/8"	Metal	Hardware/ possible tool			1	168.25	7/2/2019
1517	Unit 1	50-60					Metal	Fragments			1	0.36	5/27/2019
1518	Unit 1	Feature 1			1/8"	1/8"	Metal	misc			1	0.2	6/29/2019
1519	Unit 1	110-120			1/4" full sort	1/4"	Metal	misc			2	0.38	7/15/2019
1520	Unit 1	120-130			1/4"	1/4"	Copper	MIsc			1	0.39	7/5/2019
1521	Unit 1	130-140			1/8"	1/8"	Metal	misc			2	0.84	7/6/2019

1522	1B			1A	1/4" full sort	1/4"	Metal	Fragments			13	19.02	7/16/2016
1523	1B			AB	1/4" full sort	1/4"	Metal	Nail			80	201.78	7/19/2019
1524	1B	80-90			1/4" full sort	1/4"	Metal	Nail	too rusted to tell if square head		1	13.27	7/31/2019
1525	1B				1/8" full sort	1/8"	Metal	Wire			1	0.32	8/3/2019
1526	Unit 1			1	1/8"	1/8"	Metal	Nail			2	1.35	7/13/2019
1527	1B			1A	1/8" full sort	1/8"	Metal	Nail			1	1.87	7/19/2019
1528	1B			1A	1/8" full sort	1/8"	Metal	Fragment			1	1.34	7/19/2019
1529	1B	90-100			1/4" full sort	1/4"	Copper	Fragment	MIsc Hardware		1	7.19	7/31/2019
1530	1B	80-90			1/4" full sort	1/4"	Metal	Fragment			3	0.63	7/31/2019
1531	1B	50-60			1/4" full sort	1/4"	Metal	Nail			2	4.64	7/20/2019
1532	1B			1A	1/4" full sort	1/4"	Metal	Nail	small broken		1	1.74	7/19/2019
1533	1A	70-80					Metal	Nail			1	0.9	7/20/2019
1534	1B			AB	1/4" full sort	1/4"	Metal	Fragment			65	110.23	7/19/2019

1535	1B	Roof		2	1/8" full sort	1/8"	Fired Clay				1	1.11	n.d.
1536	1B	80-90			1/8" full sort	1/8"	Fired Clay				3	7.11	7/31/2019
1537	MU 2	40-50			100 g sample	1/8"	Fired Clay				7	1.28	7/6/2019
1538	MU 3	0-20			100 g sample	1/8"	Fired Clay				1	0.06	7/26/2019
1539	MU 3	20-30			100 g sample	1/8"	Fired Clay				33	1.17	7/6/2019
1540	MU 3	20-30			1/4" full sort	1/4"	Fired Clay				3	0.33	7/26/2019
1541	MU 5	40-50			100 g sample	1/8"	Fired Clay				6	0.21	n.d.
1542	MU 5	50-60			1/4" full sort	1/4"	Fired Clay				6	1.44	7/20/2019
1543	MU 4	20-30			100 g sample	1/8"	Fired Clay				47	2.43	7/13/2019
1544	MU 4	40-50			100 g sample	1/8"	Fired Clay				15	0.53	7/20/2019
1545	MU 4	80-90			100 g sample	1/8"	Fired Clay				4	0.33	n.d.
1546	Unit 1	Feature 1			1/8" full sort	1/8"	Glass		Window Glass		12	5.34	6/29/2019
1547	Unit 1	20-Oct			1/8" full sort	1/8"	Glass		Window Glass		1	0.22	5/26/2019

1548	Unit 1	20-30			1/8" full sort	1/8"	Glass		Window Glass	3	0.59	5/27/2019
1549	Unit 1	40-50			1/8" full sort	1/8"	Glass		Window Glass	4	0.73	6/27/2019
1550	Unit 1	50-60			1/8" full sort	1/8"	Glass		Window Glass	1	0.16	n.d
1551	Unit 1	50-60			1/8" full sort	1/8"	Glass		Window Glass	1	0.01	5/29/2019
1552	Unit 1	130-140			1/8" full sort	1/8"	Glass		Window Glass	1	0.17	7/6/2019
1553	Unit 1a	Strat 1		1	1/8" full sort	1/8"	Glass		Window Glass	1	0.13	7/13/2019
1554	Unit 1a	Strat 1		1	1/8" full sort	1/8"	Glass		Window Glass	1	0.02	7/13/2019
1555	Unit 1b	Roof Collapse		2	1/8" full sort	1/8"	Glass		Window Glass	4	1.68	7/29/2019
1556	Unit 1b	50-60			1/8" full sort	1/8"	Glass		Window Glass	2	0.28	7/20/2019
1557	Unit 1b	90-100			1/8" full sort	1/8"	Glass		Window Glass	1	0.31	7/31/2019
1558	Unit 1b	120-130			1/8" full sort	1/8"	Glass		Window Glass	1	0.08	8/3/2019
1559	Unit ib	110-120			1/8" full sort	1/8"	Glass		Window Glass	1	1.09	8/3/2019
1560	MU 4	0-20			1/4" full sort	1/4"	Glass		Window Glass	2	0.47	7/13/2019

1561	MU 4	0-20			1/8" 100g	1/8"	Glass		Window Glass	1	0.03	7/13/2019
1562	MU 4	20-40			1/8" 100g	1/8"	Glass		Window Glass	1	0.33	7/13/2019
1563	MU 4	40-50			1/8" 100g	1/8"	Glass		Window Glass	1	0.6	7/20/2019
1564	MU 4	70-80			1/4"full sort	1/4"	Glass		Window Glass	1	0.08	7/27/2019
1565	MU 2	50-60			1/4"full sort	1/4"	Glass		Window Glass	1	0.13	7/13/2019
1566	MU 5	30-40			1/4" full sort	1/4"	Glass		Window Glass	1	0.21	7/20/2019
1567	MU 5	60-70			1/4" full sort	1/4"	Glass		Window Glass	1	0.1	7/27/2019
1568	n/a	30-40			1/4" full sort	1/4"	Glass		Consumer Glass	1	7.94	7/13/2019
1569	MU 2	80-90			1/8" 100 g	1/8"	Glass		Consumer Glass	1	1.58	7/19/2019
1570	MU 2	50-60			1/4" full sort	1/4"	Glass		Consumer Glass	1	0.36	n.d
1571	MU 5	0-20			1/4" full sort	1/4"	Glass		Consumer Glass	1	1	7/20/2019
1572	MU 5	30-40			1/4" full sort	1/4"	Glass		Consumer Glass	1	2.66	7/20/2019
1573	Unit 1	20-Oct			1/8" full sort	1/8"	Glass		Consumer Glass	1	3.77	5/26/2019

1574	Unit 1	20-30			1/8" full sort	1/8"	Glass		Consumer Glass	1	0.48	6/27/2019
1575	Unit 1	30-40			1/8" full sort	1/8"	Glass		Consumer Glass	1	0.57	5/27/2019
1576	Unit 1	30-40			1/8" full sort	1/8"	Glass		Consumer Glass	1	0.3	5/27/2019
1577	Unit 1	30-40			1/8" full sort	1/8"	Glass		Consumer Glass	11	17.51	5/27/2019
1578	Unit 1	120-130			1/8" full sort	1/8"	Glass		Consumer Glass	1	0.38	7/5/2019
1579	Unit 1a	n/a		1a	1/8" full sort	1/8"	Glass		Consumer Glass	16	56.81	n/a
1580	Unit 1a	n/a		1	1/8" full sort	1/8"	Glass		Consumer Glass	1	4.97	7/13/2019
1581	Unit 1a	n/a		1	1/8" full sort	1/8"	Glass		Consumer Glass	1	0.03	7/13/2019
1582	Unit 1a	n/a		1	1/8" full sort	1/8"	Glass		Consumer Glass	1	10.63	7/13/2019
1583	Unit 1a	n/a		1	1/8" full sort	1/8"	Glass		Consumer Glass	1	0.08	7/13/2019
1585	Unit 1b	n/a		1a	1/8" full sort	1/8"	Glass		Consumer Glass	1	1.17	7/19/2019
1586	Unit 1b	n/a		ab	1/8" full sort	1/8"	Glass		Consumer Glass	3	70.69	7/19/2019
1587	Unit 1b	n/a		ab	1/8" full sort	1/8"	Glass		Consumer Glass	34	126.06	7/19/2019

1588	MU 5	40-50			1/8" full sort	1/8"	Ocre		frag		1	0.001	n/a
1589	Unit 1b			1a	1/8" full sort	1/8"	Plastic (modern)	button			1	0.14	7/19/2019
1590	Unit 1b	80-90			1/8" full sort	1/8"	Metal	button			1	2.35	7/31/2019
1591	Unit 1b			1a	1/8" full sort	1/8"	Asphalt (modern)				2	0.32	7/19/2019
1592	Unit 1	30-40			1/8" full sort	1/8"		Slag			2	18	5/27/2019
1593	Unit 1a			1	1/8" full sort	1/8"	Wood				2	0.57	7/13/2019
1594	1	90-100			1/8" full sort	1/8"	fired clay	Teja			1	45.51	7/2/2019
1595	Unit 1b	80-90			1/8" full sort	1/8"	Lithic	Bowl rim frag			2	254.03	7/31/2019
1596	Unit 1	100-110 (Floor)			1/8" full sort	1/8"	Lithic	Fired treated pebble			1	5.66	7/2/2019
1597	MU 2	40-50			1/4" full sort	1/8"	Lithic	Fired treated pebble			1	61.96	7/6/2019
1598	UNIT 1	40-50				1/8"	Shell	Bead		Olivella	1	0.07	6/27/2019
1599	MU 1	30-40			100 g sampe	1/8"	Seeds		Burnt		2	0.02	6/28/2019
1600	MU 1	60-70			100 g sampe	1/8"	Seeds		Burnt		3	0.04	6/29/2019

1601	MU 2	60-70			100 g sampe	1/8"	Seeds		Burnt		1	0.04	7/13/2019
1602	MU 2	80-90			100 g sampe	1/8"	Seeds		Burnt		2	0.06	7/13/2019
1603	MU 3	40-50			100 g sampe	1/8"	Seeds		Burnt		1	0.01	7/13/2019
1604	MU 4	50-60			100 g sampe	1/8"	Seeds		Burnt		1	0.01	7/20/2019
1605	MU 4	60-70			100 g sampe	1/8"	Seeds		Burnt		2	0.02	10/21/2019
1606	MU 4	80-90			100 g sampe	1/8"	Seeds		Burnt		1	0.01	n.d.
1607	MU 5	20-Oct			100 g sampe	1/8"	Seeds		Burnt		7	0.18	7/20/2019
1608	MU 5	20-30			100 g sampe	1/8"	Seeds		Burnt		3	--	7/20/2019
1609	MU 5	30-40			100 g sampe	1/8"	Seeds		Burnt		1	0.01	7/20/2019
1610	MU 5	40-50			100 g sampe	1/8"	Seeds		Burnt		10	0.08	n.d.
1611	MU 5	40-50			100 g sampe	1/8"	Seeds		Burnt		2	0.02	7/20/2019
1612	MU 5	40-50			1/4" full sort	1/4"	Seeds		Burnt		1	0.1	7/20/2019
1613	MU 5	50-60			1/4" full sort	1/4"	Seeds		Burnt		1	0.07	7/20/2019

1614	MU 5	50-60			100 g sampe	1/8"	Seeds		Burnt		17	0.14	7/27/2019
1615	MU 5	60-70			100 g sampe	1/8"	Seeds		Burnt		11	0.14	7/27/2019
1616	MU 5	70-80			100 g sampe	1/8"	Seeds		Burnt		1	0.01	n.d.
1617	MU 5	80-90			100 g sample	1/8"	Seeds		Burnt		3	0.05	7/27/2019
1618	MU 5	90-100			100 g sample	1/8"	Seeds		Burnt		16	0.21	7/27/2019
1619	MU 5	120-130			100 g sample	1/8"	Seeds		Burnt		3	0.01	8/3/2019
1620	MU 5			I	col sample	9.1 L							8/3/2019
1621	MU 4			I	col sample	9.6 L	LF						8/3/2019
1622	MU 3			I	col sample	12.65 L	LF						7/27/2019
1623	MU 2			I	col sample	8.9 L	LF						8/3/2019
1624	Unit 1B			1B	soil sample	11.1L	LF						n.d.
1625	Unit 1B			II	soil sample	7.75 L	LF						7/27/2019
1626	MU 3			II	col sample	5.75L	LF						7/27/2019

1627	Unit 1B	90-100		II	col sample	11.9 L	LF						7/31/2019
1628	Unit 1B	110-112		III	soil sample	8L	LF						8/3/2019
1629	MU 2			II	col sample	9.5 L	LF						8/3/2019
1630	MU 3			III	col sample	10.1L	LF						7/27/2019
1631	MU 4			II	col sample	7.75L	LF						8/3/2019
1632	MU 5			II	col sample	10.2L	LF						8/3/2019
1633	Unit 1	0-10			1/8" full sort	1/8"	Charcoal				2	0.11	5/26/2019
1634	Unit 1	0-10			1/8" full sort	1/8"	Walnut Shell				1	1.76	5/26/2019
1635	Unit 1	20-Oct			1/8" full sort	1/8"	Walnut Shell				1	1.96	5/26/2019
1636	Unit 1B	Strat 1A		1A	1/8" full sort	1/8"	Walnut Shell				1	0.24	7/19/2019
1637	Unit 1	20-30			1/8" full sort	1/8"	Charcoal				1	0.05	6/27/2019
1638	Unit 1	30-40			1/8" full sort	1/8"	Charcoal				3	0.4	5/27/2019
1639	Unit 1	70-80			1/8" full sort	1/8"	Walnut Shell				4	0.49	6/29/2019

1640	Unit 1	50-60			1/8" full sort	1/8"	Charcoal				4	0.74	5/27/2019
1641	Unit 1	60-70			1/8" full sort	1/8"	Walnut Shell				1	3.96	6/27/2019
1642	MU 1	40-50			1/4"	1/4"	Charcoal				112	10.96	6/29/2019
1643	MU 1	0-20			1/4"	1/4"	Charcoal				11	3.38	6/28/2019
1644	MU 1	0-20			1/4"	1/4"	Acorn Shell				1	0.32	6/28/2019
1645	MU 1	20-40			1/4"	1/4"	Charcoal				57	7.07	9/28/2019
1646	MU 1	50-60			1/4"	1/4"	Charcoal				55	7.52	6/29/2019
1647	MU 2	60-70			1/4"	1/4"	Charcoal				122	9.26	5/29/2019
1648	MU 2	80-90			1/4"	1/4"	Charcoal				84	4.73	7/5/2019
1649	MU 1	90-100			1/4"	1/4"	Charcoal				42	2.83	7/5/2019
1650	MU 1	0-20			1/8" 100g	1/8"	Charcoal				3	0.05	7/5/2019
1651	MU 1	20-40			1/8" 100g	1/8"	Charcoal				88	0.89	6/28/2019
1652	MU 1	40-50			1/8" 100g	1/8"	Charcoal				148	1.68	6/29/2019

1653	MU 1	70-80			1/4" full sort	1/4"	Charcoal				31	1.12	6/29/2019
1654	MU 1	100-110			1/4"	1/4"	Charcoal				22	1.21	7/5/2019
1655	MU 1	60-70			1/8" full sort	1/8"	Charcoal				45	0.45	6/29/2019
1656	MU 1	70-80			1/8" full sort	1/8"	Charcoal				195	2.36	6/29/2019
1657	MU 1	80-90			1/8" full sort	1/8"	Charcoal				225	3.1	7/5/2019
1658	MU 1	10-110			1/8" full sort	1/8"	Charcoal				40	0.85	7/5/2019
1659	MU 1	50-60			1/8" full sort	1/8" bulk	Charcoal				80	3.09	7/18/2019
1660	MU 2	0-20			1/4" bulk	1/4"	Charcoal				20	3.05	7/6/2019
1661	MU 1	20-30			1/4" bulk	1/4"	Charcoal				26	2.28	7/6/2019
1662	MU 2	30-40			1/4" bulk	1/4"	Charcoal				43	3.46	6/7/2019
1663	MU 2	40-50			1/8"	1/8"	Charcoal				40	3.88	7/6/2019
1664	MU 2	50-60			1/4" bulk	1/4"	Charcoal				43	4.72	7/13/2019
1664	MU 2	50-60			1/4" bulk	1/4"	Charcoal				43	4.72	7/13/2019

1665	MU 2	60-70			1/4"	1/4"	Charcoal				46	4.35	7/13/2019
1666	MU 2	70-80			1/4" bulk	1/4"	Acorn Shell				1	0.03	7/13/2019
1667	MU 2	50-60			1/8" 100g	1/8"	Charcoal				471	5.73	7/13/2019
1669	MU 2	70-80			1/8" 100g	1/8"	Charcoal				326	3.89	7/13/2019
1670	MU 2	80-90			1/4" bulk	1/4"	Charcoal				31	2.94	7/13/2019
1671	MU 2	100-110			1/4" bulk	1/4"	Charcoal				5	0.42	7/27/2019
1672	MU 2	70-80			1/4" bulk	1/4"	Charcoal				34	3.07	7/13/2019
1673	MU 5	90-100			1/4" Bulk	1/4"	Stone	Flake	Tertiary	Monterey Chert	1	0.45	7/27/2019
1674	Unit 1	30-40			1/4" bulk	1/4" bulk	Glass	Flake/ Tool Fragment?		Consumer Glass	1	0.66	5/27/2019
1675	MU 2	90-100			1/4"	1/4"	Charcoal				36	1.81	7/27/2019
1676	MU 2	100-110			1/8" 100g	1/8"	Charcoal				26	0.33	7/27/2019
1677	MU 2	90-100			1/8" 100g	1/8"	Charcoal				65	0.72	7/27/2019
1678	MU 2	40-50			1/8" 100g	1/8"	Charcoal				126	3.71	7/6/2019

1679	MU 1	100-110			1/8" full sort	1/8"	Seed				1	0.07	7/5/2019
1680	MU 2	0-20			1/8" 100g	1/8"	Charcoal				127	2.3	7/6/2019
1681	MU 1	90-100			1/8"	1/8"	Charcoal				146	2.85	7/5/2019
1682	MU 2	20-30			1/8" 100g	1/8"	Charcoal				261	3.93	7/6/2019
1683	MU 2	30-40			1/8" 100g	1/8"	Charcoal				302	3.29	7/6/2019
1684	MU 2	80-90			1/8" 100g	1/8"	Charcoal				156	1.92	7/13/2019
1684	Unit 1a	n/a		1	1/8" full sort	1/8"	Glass		Consumer Glass		1	0.76	7/13/2019
1685	MU 3	30-40			1/4" full sort	1/4"	Charcoal				38	2.74	7/13/2019
1686	MU 3	40-50			1/4" full sort	1/4"	Charcoal				11	0.89	7/13/2019
1687	MU 3	50-60			1/4" full sort	1/4"	Charcoal				21	2.42	7/23/2019
1688	MU 3	60-70			1/4" full sort	1/4"	Charcoal				33	3.02	7/23/2019
1689	MU 3	70-80			1/4" bulk	1/4"	Charcoal				8	0.27	
1690	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	4	33.94	6/29/2019

1691	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	15	2585.05	6/29/2019
1692	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	8	1161	6/29/2019
1693	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	2	627.03	6/29/2019
1694	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	22	254.03	6/29/2019
1695	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	86	1881.95	6/29/2019
1696	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	20	2239	6/29/2019
1697	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	13	3410.43	6/29/2019
1698	Unit 1	Feature 1			1/8" full sort	1/8"	Tejas			Fired Clay	63	4286.2	6/29/2019
1699	Unit 1	0-10			1/8" full sort	1/8"	Tejas			Fired Clay	11	164.32	5/29/2019
1700	Unit 1	20-Oct			1/8" full sort	1/8"	Tejas			Fired Clay	50	505.04	5/29/2019
1701	Unit 1	20-30			1/8" full sort	1/8"	Tejas			Fired Clay	31	687.67	6/27/2019
1702	Unit 1	30-40			1/8" full sort	1/8"	Tejas			Fired Clay	29	21.97	5/27/2019
1703	Unit 1	30-40			1/8" full sort	1/8"	Tejas			Fired Clay	36	431.35	5/27/2019

1704	Unit 1	40-50			1/8" full sort	1/8"	Tejas			Fired Clay	40	1000	6/27/2019
1705	Unit 1	50-60			1/8" full sort	1/8"	Tejas			Fired Clay	2	3.85	5/27/2019
1706	Unit 1	50-60			1/8" full sort	1/8"	Tejas			Fired Clay	56	1063	6/27/2019
1707	Unit 1	50-60			1/8" full sort	1/8"	Tejas			Fired Clay	11	1095	6/27/2019
1708	Unit 1	60-70			1/8" full sort	1/8"	Tejas			Fired Clay	8	60.02	6/29/2019
1709	Unit 1	60-70		1	1/8" full sort	1/8"	Tejas			Fired Clay	29	972.21	6/29/2019
1710	Unit 1	70-80			1/8" full sort	1/8"	Tejas			Fired Clay	19	656.7	6/29/2019
1711	Unit 1	80-90			1/8" full sort	1/8"	Tejas			Fired Clay	43	1941.44	6/29/2019
1712	Unit 1	130-140			1/8" full sort	1/8"	Tejas			Fired Clay	2	22.194	7/6/2019
1713	Unit 1	80-90			1/8" full sort	1/8"	Tejas			Fired Clay	4	11.49	n.d.
1714	Unit 1	80-90			1/8" full sort	1/8"	Tejas			Fired Clay	43	1892	7/2/2019
1715	Unit 1	110-120			1/8" full sort	1/8"	Tejas			Fired Clay	22	190.96	7/5/2019
1716	Unit 1	90-100 (floor)			1/8" full sort	1/8"	Tejas			Fired Clay	21	753.35	7/2/2019

1717	Unit 1	150-160			1/8" full sort	1/8"	Tejas			Fired Clay	4	276.6	n.d
1718	Unit 1	140-150			1/8" full sort	1/8"	Tejas			Fired Clay	4	36.63	7/6/2019
1719	Unit 1	120-130			1/8" full sort	1/8"	Tejas			Fired Clay	17	93.31	7/5/2019
1720	Unit 1A			1	1/8" full sort	1/8"	Tejas			Fired Clay	54	483.48	7/13/2019
1721	Unit 1A			1	1/8" full sort	1/8"	Tejas			Fired Clay	18	353.55	7/19/2019
1722	Unit 1A	50-60			1/8" full sort	1/8"	Tejas			Fired Clay	11	141.71	7/20/2019
1723	Unit 1A	60-70			1/8" full sort	1/8"	Tejas			Fired Clay	29	491.61	7/20/2019
1724	Unit 1A	70-80			1/8" full sort	1/8"	Tejas			Fired Clay	12	303.96	7/20/2019
1725	Unit 1A	80-90			1/8" full sort	1/8"	Tejas			Fired Clay	5	86.26	7/20/2019
1726	Unit 1A	80-90			1/8" full sort	1/8"	Tejas			Fired Clay	8	26.67	7/20/2019
1727	Unit 1B			2	1/8" full sort	1/8"	Tejas			Fired Clay	110	2932.96	7/27/2019
1728	Unit 1A			1	1/8" full sort	1/8"	Tejas			Fired Clay	7	3.11	7/13/2019
1729	Unit 1B			1A	1/4" full sort	1/8"	Tejas			Fired Clay	1	66.97	7/19/2019

1730	Unit 1B			1A	1/8" full sort	1/8"	Tejas			Fired Clay	3	327	7/19/2019
1731	Unit 1B			1A	1/8" full sort	1/8"	Tejas			Fired Clay	41	728	7/19/2020
1732	Unit 1B			AB	1/4" full sort	1/4"	Tejas			Fired Clay	86	2424	7/19/2019
1733	Unit 1B	50-60			1/4" full sort	1/4"	Tejas			Fired Clay	22	1735.7	7/20/2019
1734	Unit 1B	50-60			1/4" full sort	1/4"	Tejas			Fired Clay	12	359.29	7/20/2019
1735	Unit 1B	70-90			1/4" full sort	1/4"	Tejas			Fired Clay	12	79.22	7/31/2019
1736	Unit 1B	80-90			1/4" full sort	1/4"	Tejas			Fired Clay	6	176	7/31/2019
1737	Unit 1B	90-100			1/4" full sort	1/4"	Tejas			Fired Clay	5	31.58	7/31/2019
1738	Unit 1B	100-110			1/4" full sort	1/4"	Tejas			Fired Clay	13	487.17	8/3/2019
1739	Unit 1B	110-120			1/4" full sort	1/4"	Tejas			Fired Clay	5	63.54	8/3/2019
1740	Unit 1B	120-130			1/4" full sort	1/4"	Tejas			Fired Clay	4	155	8/3/2019
1741	Unit 1B	130-140			1/4" full sort	1/4"	Tejas			Fired Clay	4	5.39	8/3/2019
1742	Unit 1B			1B	1/8" full sort	1/8"	Tejas			Fired Clay	11	128.38	7/20/2019

1743	Unit 1B				1/8" full sort	1/8"	Tejas			Fired Clay	7	140.48	8/3/2019
1744	Unit 1B	Feature 1		2			Tejas			Fired Clay	25	2727.79	7/27/2019
1745	Unit 1B	Feature 1		2			Tejas			Fired Clay	13	2160.03	7/27/2019
1746	Unit 1B	Feature 1		2			Tejas			Fired Clay	15	2703.27	7/27/2019
1747	Unit 1B	Feature 1		2			Tejas			Fired Clay	1	802.07	7/27/2019
1748	Unit 1B			2			Tejas			Fired Clay	51	2975.21	7/27/2019
1749	Unit 1B			2			Tejas			Fired Clay	15	3570.91	7/27/2019
1750	Unit 1B	Feature 1		2			Tejas			Fired Clay	1	1304	7/31/2019
1751	Unit 1B	Feature 1		2			Tejas			Fired Clay	9	4407.54	7/27/2019
1752	MU 1			I	soil sample	8.25	LF						7/27/2019
1753	MU 1			II	soil sample	9.75	LF						7/27/2019
1754	MU 1			III	soil sample	10.5	LF						8/3/2019
1755	MU 1			IV	soil sample	6.75	LF						8/3/2019

1756	Unit 1	11 (100-110)	Floor		1/8"	1/8"	Fruit Pit		Burnt				7/2/2019
1757	MU 1	100-110			Fast sort	1/8"	Seed		Burnt				7/5/2019
1758	Unit 1	60-70			1/8" full sort	1/8"	Charcoal				2	0.07	6/27/2019
1759	Unit 1	70-80			1/8" full sort	1/8"	Charcoal				8	0.39	6/29/2019
1760	Unit 1B	80-90			1/8" full sort	1/8"	Charcoal				22	2.06	7/31/2019
1761	Unit 1	100-110			1/8" full sort	1/8"	Charcoal				42	5.2	7/2/2019
1762	Unit 1	90-100			1/8" full sort	1/8"	Charcoal				21	4.55	7/2/2019
1763	Unit 1	Feature 1			1/8" full sort	1/8"	Charcoal				5	0.63	6/29/2019
1764	Unit 1	100-110			1/8" full sort	1/8"	Charcoal				7	0.08	7/2/2019
1765	Unit 1	110-120			1/8" full sort	1/8"	Charcoal				10	0.91	7/5/2019
1766	Unit 1	120-130			1/8" full sort	1/8"	Charcoal				4	1.47	7/5/2019
1767	Unit 1	130-140			1/8" full sort	1/8"	Charcoal				6	0.51	7/6/2019
1768	Unit 1A	80-90			1/8" full sort	1/8"	Charcoal				3	0.09	7/20/2019

1769	Unit 1A	50-60			1/8" full sort	1/8"	Charcoal				4	0.2	7/20/2019
1770	Unit 1B	Roof		2	1/8" full sort	1/8"	Charcoal				7	0.74	7/27/2019
1771	Unit 1A	Strat 1		1	1/8" full sort	1/8"	Charcoal				4	0.2	7/19/2019
1772	Unit 1B	Strat AB		AB	1/8" full sort	1/8"	Charcoal				2	0.78	7/19/2019
1773	Unit 1B	130-140			1/8" full sort	1/8"	Charcoal				12	0.46	8/3/2019
1774	Unit 1B	120-130			1/8" full sort	1/8"	Charcoal				21	2.1	8/3/2019
1775	Unit 1A	50-60			1/8" full sort	1/8"	Charcoal				5	0.1	n.d
1776	Unit 1B	110-120			1/8" full sort	1/8"	Charcoal				22	4.88	8/3/2019
1777	Unit 1B	Start 1A		1A	1/8" full sort	1/8"	Charcoal				2	0.1	7/19/2019
1778	Unit 1B	90-100			1/8" full sort	1/8"	Charcoal				25	1.98	7/31/2019
1779	Unit 1B	70-90			1/8" full sort	1/8"	Charcoal				2	0.03	7/31/2019
1780	Unit 1A	70-80			1/8" full sort	1/8"	Charcoal				3	0.29	7/20/2019
1781	Unit 1B	Strat 1B		1B	1/8" full sort	1/8"	Charcoal				8	0.34	7/20/2019

1782	Unit 1B	90-100			1/8" full sort	1/8"	Charcoal				6	1.26	7/31/2019
1783	Unit 1B	100-110			1/8" full sort	1/8"	Charcoal				30	6.22	8/3/2019
1784	MU 4	20-30			100 g sample	1/8"	Charcoal				52	0.83	n.d
1785	MU 4	80-90			100 g sample	1/8"	Charcoal				164	2.05	n.d
1786	MU 4	50-60			100 g sample	1/8"	Charcoal				449	6.36	7/20/2019
1787	MU 5	40-50			100 g sample	1/8"	Charcoal				309	3.06	n.d
1788	MU 5	70-80			100 g sample	1/8"	Charcoal				63	1.77	n.d
1789	MU 3	80-90			100 g sample	1/8"	Charcoal				40	0.39	n.d
1790	MU 3	70-80			100 g sample	1/8"	Charcoal				78	0.73	n.d
1791	MU 4	0-20			100 g sample	1/8"	Charcoal				40	0.85	7/13/2019
1792	MU 5	70-80			100 g sample	1/8"	Charcoal					2.14	7/27/2019
1793	MU 5	60-70			100 g sample	1/8"	Charcoal					3.61	7/27/2019
1794	MU 3	0-20			1/4" full sort	1/4"	Charcoal				4	0.57	7/26/2019

1795	MU 3	50-60			100 g sample	1/8"	Charcoal					1.47	7/13/2019
1796	MU 3	60-70			100 g sample	1/8"	Charcoal					2.25	7/13/2019
1797	MU 4	80-90			1/4" full sort	1/4"	Charcoal				34	3.74	7/27/2019
1798	MU 3	40-50			100 g sample	1/8"	Charcoal					2.92	7/13/2019
1799	MU 5	50-60			100 g sample	1/8"	Charcoal					5.6	7/27/2019
1800	MU 3	30-40			100 g sample	1/8"	Charcoal					9.05	7/13/2019
1801	MU 3	20-30			1/4" full sort	1/4"	Charcoal				21	2.47	7/23/2019
1802	MU 4	60-70			1/4" full sort	1/4"	Charcoal				48	7.05	7/20/2019
1803	MU 5	80-90			100 g sample	1/8"	Charcoal					1.82	7/27/2019
1804	MU 3	0-20			100 g sample	1/8"	Charcoal				18	0.16	7/26/2019
1805	MU 3	20-30			100 g sample	1/8"	Charcoal					2.31	7/6/2019
1806	MU 4	30-40			100 g sample	1/8"	Charcoal				128	1.83	10/9/2019
1807	MU 4	40-50			100 g sample	1/8"	Charcoal				209	2.53	7/20/2019

1808	MU 4	60-70			100 g sample	1/8"	Charcoal				5	0.05	10/21/2019
1809	MU 5	0-20			100 g sample	1/8"	Charcoal				432	6.77	7/20/2019
1810	MU 5	20-30			100 g sample	1/8"	Charcoal				99	1	7/20/2019
1811	MU 5	30-40			100 g sample	1/8"	Charcoal				223	4	7/20/2019
1812	MU 5	40-50			100 g sample	1/8"	Charcoal				364	4.1	7/20/2019
1813	MU 5	90-100			100 g sample	1/8"	Charcoal				222	2.97	7/27/2019
1814	MU 5	100-110			100 g sample	1/8"	Charcoal				139	1.95	7/27/2019
1815	MU 5	110-120			100 g sample	1/8"	Charcoal				73	1.08	8/3/2019
1816	MU 5	120-130			100 g sample	1/8"	Charcoal				99	1.03	8/3/2019
1817	MU 5	130-140			100 g sample	1/8"	Charcoal				46	0.65	8/3/2019
1818	MU 4	50-60			1/4" full sort	1/4"	Charcoal				72	17.73	7/20/2019
1819	MU 4	40-50			1/4" full sort	1/4"	Charcoal				91	6.87	7/20/2019
1820	MU 4	30-40			1/4" full sort	1/4"	Charcoal				52	5.34	n.d

1821	not noted	100-110			1/4" full sort	1/4"	Charcoal				50	4	7/27/2019
1822	MU 3	80-90			1/4" full sort	1/4"	Charcoal				6	0.18	n.d
1823	MU 4	70-80			1/4" full sort	1/4"	Charcoal				32	5.44	7/27/2019
1824	MU 4	90-100			1/4" full sort	1/4"	Charcoal				35	3.52	7/27/2019
1825	MU 4	20-30			1/4" full sort	1/4"	Charcoal				18	0.99	7/13/2019
1826	MU 4	0-20			1/4" full sort	1/4"	Charcoal				8	0.57	7/13/2019
1827	MU 5	0-20			1/4" full sort	1/4"	Charcoal				51	5	7/20/2019
1828	MU 5	20-30			1/4" full sort	1/4"	Charcoal				59	3.49	7/20/2019
1829	MU 5	30-40			1/4" full sort	1/4"	Charcoal				74	9.95	Jul-19
1830	MU 5	40-50			1/4" full sort	1/4"	Charcoal				96	7	7/20/2019
1831	MU 5	50-60			1/4" full sort	1/4"	Charcoal				48	4.54	7/20/2019
1832	MU 5	60-70			1/4" full sort	1/4"	Charcoal				31	3	7/27/2019
1833	MU 5	70-80			1/4" full sort	1/4"	Charcoal				48	5	10/2/2019

1834	MU 5	90-100			1/4" full sort	1/4"	Charcoal				13	1	7/27/2019
1835	MU 5	80-90			1/4" full sort	1/4"	Charcoal				25	2	7/27/2019
1836	MU 5	110-120			1/4" full sort	1/4"	Charcoal				10	0.96	7/27/2019
1837	MU 5	120-130			1/4" full sort	1/4"	Charcoal				15	1	7/27/2019
1838	MU 5	130-140			1/4" full sort	1/4"	Charcoal				5	0.1	8/3/2019
1839	Unit 1B	60-70		1			Tejas			Fired Clay	45	186.63	
1840	Unit 1B	70-80					Tejas			Fired Clay	10	2418.69	7/31/2019
1841	Unit 1B	70-80					Tejas			Fired Clay	12	930.86	7/27/2019
1842	Unit 1B	70-80					Tejas			Fired Clay	8	1913.87	7/31/2019
1843	Unit 1B	70-80					Tejas			Fired Clay	7	1705.51	7/31/2019
1844	Unit 1B	90-100					Tejas			Fired Clay	7	542.85	7/31/2019
1845	Unit 1B	90-100					Tejas			Fired Clay	5	1962.23	8/3/2019
1846	Unit 1B	100-110					Limestone	Mortar			1	986.61	8/3/2019

1847	Unit 1A	50-60					Bone	Mammal	Burn 1		3	0.4	7/20/2019
1848	Unit 1A	60-70					Bone	Mammal	Burn 1		2	1.388	7/20/2019
1849	Unit 1A	80-90					Bone	Mammal	Burn 1		2	0.86	7/20/2019
1850	Unit 1A			1	1/8"	1/8"	Bone	Mammal	Burn 1		7	2.18	7/13/2019
1851	Unit 1A	70-80					Bone	Mammal	Burn 1		2	0.41	7/20/2019
1852	Unit 1A			1	1/8"	1/8"	Bone	Mammal	Burn 1		3	0.8	7/19/2019
1853	Unit 1A			1			Bone	Mammal	Burn 1		5	1.9	7/19/2019
1854	Unit 1A	50-60					Bone	Mammal	Burn 2		6	1.35	
1855	Unit 1A	60-70			Bulk		Bone	Mammal	Burn 2		5	3.17	7/20/2019
1856	Unit 1A	80-90					Bone	Mammal	Burn 2		5	1.98	7/20/2019
1857	Unit 1A	70-80					Bone	Mammal	Burn 2		2	0.9	7/20/2019
1858	Unit 1A			1	1/8"	1/8"	Bone	Mammal	Burn 2		12	5.77	7/13/2019
1859	Unit 1A			1			Bone	Mammal	Burn 2		4	10.79	7/19/2019

1860	Unit 1A			1	1/8"	1/8"	Bone	Mammal	Burn 2		4	0.69	7/13/2019
1861	Unit 1A	80-90					Bone	Mammal	Burn 1		4	0.46	7/20/2019
1862	Unit 1A	60-70			Bulk		Bone	Mammal	Burn 3		1	0.7	7/20/2019
1863	Unit 1A	50-60					Bone	Mammal	Burn 4		3	0.8	7/20/2019
1864	Unit 1A			1			Bone	Mammal	Burn 3		1	0.05	7/13/2019
1865	Unit 1A	80-90					Bone	Mammal	Burn 3		4	0.13	Jul-19
1866	Unit 1A	70-80					Bone	Mammal	Burn 3		5	2.22	7/20/2019
1867	Unit 1	Feature 1			1/8"	1/8"	Bone	Mammal	Burn 3		1	0.68	6/29/2019
1868	Unit 1A			1			Bone	Mammal	Burn 3		3	0.57	7/19/2019
1869	Unit 1A	50-60					Bone	Mammal	Burn 4		4	0.63	
1870	Unit 1	Feature 1			1/8"	1/8"	Bone	Mammal	Burn 4		6	2.38	6/29/2019
1871	Unit 1A	60-70			Bulk		Bone	Mammal	Burn 4		3	1.01	7/20/2019
1872	Unit 1A	80-90					Bone	Mammal	Burn 4		3	0.33	7/20/2019

1873	Unit 1A			1	1/8"	1/8"	Bone	Mammal	Burn 4		6	1.2	7/13/2019
1874	Unit 1A	70-80					Bone	Mammal	Burn 4		6	1.13	7/20/2019
1875	Unit 1A	80-90					Bone	Mammal	Burn 4		4	0.23	7/20/2019
1876	Unit 1A			1			Bone	Mammal	Burn 4		6	2.04	7/19/2019
1877	Unit 1A			1	1/8"	1/8"	Bone	Mammal	Burn 4		20	7.86	7/13/2019
1878	Unit 1	Feature 1			1/8"	1/8"	Bone	Mammal	Undiff		3	0.49	6/29/2019
1879	Unit 1A			1	1/8"	1/8"	Bone	Mammal	Undiff		8	1.61	7/13/2019
1880	Unit 1A	60-70			Bulk		Bone	Mammal	Undiff		17	1.65	7/20/2019
1881	Unit 1A	70-80					Bone	Mammal	Undiff		9	2.54	7/20/2019
1882	Unit 1			1			Bone	Mammal	Undiff		13	2	7/19/2019
1883	Unit 1A			1			Bone	Mammal	Undiff		8	2.14	7/13/2019
1884	Unit 1	4			1/8"	1/8"	Shell		Detritus	Olivella	2	0.48	5/27/2019
1885	MU 5	30-40			1/4" full sort	1/4"	Shell				1	1885	7/20/2019

1886	Unit 1	90-100			1/8"	1/8"	Shell	undiff		Haliotis rufescens	1	985.51	7/6/2019
1887	Unit 1B	80-90			1/4" Full	1/4"	Bone	Mammal	Burn 0		1	1.16	7/31/2019
1888	Unit 1B	70-80			1/4" Full	1/4"	Bone	Mammal	Burn 0		5	7.95	7/31/2019
1889	Unit 1	110-120			1/8"		Bone	Mammal	Burn 0		6	1.73	7/5/2019
1890	Unit 1	140-150			1/8"		Bone	Mammal	Burn 0		2	4.06	7/6/2019
1891	MU 2	60-70			1/4" Bulk	1/4"	Bone	Mammal	Burn 0		2	1.08	7/13/2019
1892	MU 2	40-50			1/4"		Bone	Mammal	Burn 0		6	7.65	7/13/2019
1893	Unit 1	80-90			1/8"		Bone	Mammal	Burn 0		1	0.04	6/29/2019
1894	Unit 1	40-50			1/8"		Bone	Mammal	Burn 0		2	0.11	
1895	Unit 1	100-110			1/8"		Bone	Mammal	Burn 0		4	0.23	7/2/2019
1896	Unit 1	20-30			1/8" Full	1/8"	Bone	Mammal	Burn 0		1	0.24	6/27/2019
1897	Unit 1	130-140			1/8"		Bone	Mammal	Burn 0		3	0.62	7/6/2019
1898	Unit 1	60-70			1/8"		Bone	Mammal	Burn 0		3	4.74	5/27/2019

1899	MU 5	110-120			1/4"		Bone	Mammal	Burn 0		2	5.09	7/27/2019
1900	MU 5	60-70			1/4"		Bone	Mammal	Burn 2		1	0.9	7/20/2019
1901	MU 5	130-140			1/4"		Bone	Mammal	Burn 1		1	2.05	8/3/2019
1902	MU 5	120-130			1/4"		Bone	Mammal	Burn 0		5	0.9	8/3/2019
1903	MU 5	70-80			1/4"		Bone	Mammal	Burn 4		3	2.88	7/20/2019
1904	MU 5	70-80			1/4"		Bone	Mammal	Burn 0		7	9.6	7/20/2019
1905	MU 1	0-20			1/4"		Bone	Mammal	Burn 0		4	0.43	6/28/2019
1906	MU 2	30-40			1/4"		Bone	Mammal	Burn 0		4	1.05	7/6/2019
1907	MU 2	100-110			1/4"		Bone	Mammal	Burn 0		2	0.21	7/27/2019
1908	MU 2	0-20			1/4"		Bone	Mammal	Burn 0		1	0.26	7/6/2019
1909	MU 2	90-100			1/4"		Bone	Mammal	Burn 0		4	1.25	7/27/2019
1910	MU 3	20-30			1/4"		Bone	Mammal	Burn 0		10	13.25	7/23/2019
1911	MU 2	20-30			1/4"		Bone	Mammal	Burn 3		1	1.94	7/6/2019

1912	MU 3	0-20			1/4"		Bone	Mammal	Burn 0		2	0.43	7/6/2019
1913	MU 3	30-40			1/4"		Bone	Mammal	Burn 1		2	4.09	7/13/2019
1914	MU 5	70-80			1/4"		Bone	Mammal	Burn 2		1	3.45	7/20/2019
1915	MU 5	60-70			1/4"		Bone	Mammal	Burn 3		2	7.28	7/20/2019
1916	MU 5	90-100			1/4"		Bone	Mammal	Burn 0		7	15.76	7/27/2019
1917	MU 1	20-40			1/4"		Bone	Mammal	Burn 3		1	0.84	6/28/2019
1918	MU 2	20-30			1/4" Bulk	1/4"	Bone	Mammal	Burn 4		2	1.03	7/6/2019
1919	MU 3	30-40			1/4"		Bone	Mammal	Burn 2		5	2.65	7/13/2019
1920	MU 4	20-30			1/4" Bulk	1/4"	Bone	Mammal	Burn 1		1	6.02	7/13/2019
1921	MU 3	30-40			1/4"		Bone	Mammal	Burn 4		2	0.82	7/13/2019
1922	MU 4	60-70			1/4"		Bone	Mammal	Burn 0		1	0.05	7/20/2019
1923	MU 5	60-70			1/4"		Bone	Mammal	Burn 0		14	18.04	7/20/2019
1924	MU 1	20-40			1/4"		Bone	Mammal	Burn 0		4	4.78	6/28/2019

1925	MU 2	20-30			1/4"		Bone	Mammal	Burn 0		7	2.51	7/6/2019
1926	MU 3	30-40			1/4"		Bone	Mammal	Burn 0		7	15.32	7/13/2019
1927	MU 3	70-80			1/4"		Bone	Mammal	Burn 0		1	0.14	
1928	MU 3	70-80			1/4" Bulk	1/4"	Bone	Mammal	Burn 2		1	0.46	
1929	MU 4	70-80			1/4" Bulk	1/4"	Bone	Mammal	Burn 0		2	7.69	
1930	MU 5	60-70			1/4"		Bone	Mammal	Burn 4		4	6.57	7/20/2019
1931	MU 4	40-50			1/4"		Bone	Mammal	Burn 0		8	10.02	7/20/2019
1932	MU 1	20-40			1/4"		Bone	Mammal	Burn 0		2	8.44	
1933	MU 1	20-40			1/4"		Bone	Mammal	Burn 2		2	8.8	
1934	MU 2	50-60			1/4"		Bone	Mammal	Burn 0		10	29.53	7/13/2019
1935	MU 3	70-80			1/4" Bulk	1/4"	Bone	Mammal	Burn 4		1	0.6	
1936	MU 2	70-80			1/4"		Bone	Mammal	Burn 4		1	0.24	7/13/2019
1937	MU 5	100-110			1/4"		Bone	Mammal	Burn 4		1	1.29	

1938	MU 5	100-110			1/4"		Bone	Mammal	Burn 0		6	7.26	7/27/2019
1939	MU 2	80-90			1/4"		Bone	Mammal	Burn 2		1	1.83	7/13/2019
1940	MU 3	40-50			1/4"		Bone	Mammal	Burn 0		7	3.75	7/13/2019
1941	MU 3	40-50			1/4"		Bone	Mammal	Burn 1		2	1.46	7/13/2019
1942	MU 4	40-50			1/4"		Bone	Mammal	Burn 2		1	1.97	7/20/2019
1943	MU 2	70-80			1/4"		Bone	Mammal	Burn 0		3	1.55	7/13/2019
1944	MU 3	40-50			1/4"		Bone	Mammal	Burn 4		3	1.22	7/13/2019
1945	MU 2	80-90			1/4"		Bone	Mammal	Burn 0		1	0.2	7/13/2019
1946	MU 4	70-80			1/8"		Bone	Mammal	Burn 4		1	0.01	
1947	Unit 1B	110-120			Full Sort	1/8"	Bone	Fish		Unidentifiable	3	0.82	8/3/2019
1948	Unit 1B	100-110			Full Sort	1/8"	Bone	Fish		Unidentifiable	4	0.14	8/13/2019
1949	Unit 1B	100-110			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.12	8/13/2019
1950	Unit 1B	100-110			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.41	8/13/2019

1951	Unit 1B	90-100			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.04	7/31/2019
1952	Unit 1B	90-100			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.09	7/31/2019
1953	Unit 1B	120-130			Full Sort	1/8"	Bone	Fish		Unidentifiable	2	0.07	8/3/2019
1954	Unit 1B	120-130			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.05	8/3/2019
1955	Unit 1	20-30			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.12	6/27/2019
1956	Unit 1	110-120			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.13	7/5/2019
1957	Unit 1	110-120			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.03	
1958	Unit 1	120-130			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.18	
1959	Unit 1	110-120			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.08	
1960	Unit 1	120-130			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.24	
1961	Unit 1	110-120			Full Sort	1/8"	Bone	Fish		Unidentifiable	2	0.14	
1962	Unit 1	100-110			Full Sort	1/8"	Bone	Fish		Unidentifiable	1	0.07	
1963	MU 3	60-70			1/4"Bulk	1/4"	Bone	Mammal	Burn1	Unidentifiable	1	1.51	7/23/2019

1964	MU 3	60-70			1/4"Bulk	1/4"	Bone	Mammal	Burn 2	Unidentifiable	1	0.71	7/23/2019
1965	MU 3	60-70			1/4"Bulk	1/4"	Bone	Mammal	Burn 4	Unidentifiable	2	3.51	7/23/2019
1966	MU 1	60-70			1/4"Bulk	1/4"	Bone	Mammal	Burn 0	Unidentifiable	20	12.38	6/29/2019
1967	MU 1	60-70			1/4"Bulk	1/4"	Bone	Mammal	Burn 4	Unidentifiable	6	1.8	6/29/2019
1968	MU 5	20-30			1/4"Bulk	1/4"	Bone	Mammal	Burn 0	Unidentifiable	23	31.56	7/20/2019
1969	MU 5	20-30			1/4"Bulk	1/4"	Bone	Mammal	Burn 1	Unidentifiable	2	4.12	7/20/2019
1970	MU 5	20-30			1/4"Bulk	1/4"	Bone	Mammal	Burn 3	Unidentifiable	5	8.52	7/20/2019
1971	MU 5	20-30			1/4"Bulk	1/4"	Bone	Mammal	Burn 4	Unidentifiable	3	9.97	7/20/2019
1972	MU 5	20-Oct			1/4"Bulk	1/4"	Bone	Mammal	Burn 1	Unidentifiable	7	7.54	7/20/2019
1973	MU 1	20-40			1/4"Bulk	1/4"	Bone	Mammal	Burn 0	Unidentifiable	12	22.2	5/29/2019
1974	MU 1	20-40			1/4"Bulk	1/4"	Bone	Mammal	Burn 1	Unidentifiable	1	1.57	5/29/2019
1975	MU 1	20-40			1/4"Bulk	1/4"	Bone	Mammal	Burn 3	Unidentifiable	3	4.62	5/29/2019
1976	MU 1	20-40			1/4"Bulk	1/4"	Bone	Mammal	Burn 4	Unidentifiable	1	1.3	5/29/2019

1977	MU 1	60-70			1/4"Bulk	1/4"	Bone	Mammal	Burn 3	Unidentifiable	6	6.74	6/29/2019
1978	MU 3	70-80			1/4"Bulk	1/4"	Bone	Mammal	Burn 0	Unidentifiable	5	3.55	7/20/2019
1979	MU 4	80-90			1/4"Bulk	1/4"	Bone	Mammal	Burn 1	Unidentifiable	1	0.2	7/27/2019
1980	MU 4	30-40			1/4"Bulk	1/4"	Bone	Mammal	Burn 0	Unidentifiable	1	3.49	7/27/2019
1981	MU 5	20-Oct			1/4"Bulk	1/4"	Bone	Mammal	Burn 0	Unidentifiable	18	8.68	7/20/2019
1982	MU 5	20-Oct			1/4"Bulk	1/4"	Bone	Mammal	Burn 4	Unidentifiable	4	7.03	7/20/2019
1983	MU 5	80-90			1/4"Bulk	1/4"	Bone	Mammal	Burn 0	Unidentifiable	9	7.08	7/20/2019
1984	MU 5	80-90			1/4"Bulk	1/4"	Bone	Mammal	Burn 1	Unidentifiable	1	1.36	7/20/2019
1985	MU 5	80-90			1/4"Bulk	1/4"	Bone	Mammal	Burn 3	Unidentifiable	1	3.05	7/20/2019
1986	MU 5	80-90			1/4"Bulk	1/4"	Bone	Mammal	Burn 4	Unidentifiable	2	4.41	7/20/2019
1987	Unit 1	0-20			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.81	5/25/2019
1988	Unit 1	40-50			1/8"full sort	1/8"	Bone	Mammal		Identifiable	3	0.14	6/27/2019
1989	Unit 1	90-100			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	13.81	7/2/2019

1990	Unit 1	100-110			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	2.58	7/2/2019
1991	Unit 1	100-110			1/8"full sort	1/8"	Bone	Mammal		Identifiable	4	0.31	7/2/2019
1992	Unit 1	100-110			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.23	7/2/2019
1993	Unit 1	110-120			1/8"full sort	1/8"	Bone	Mammal		Identifiable	3	0.57	7/5/2019
1994	Unit 1	120-130			1/8"full sort	1/8"	Bone	Mammal		Identifiable	3	0.32	7/5/2019
1995	Unit 1	120-130			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	3.53	7/5/2019
1996	Unit 1	120-130			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	1.57	7/5/2019
1997	Unit 1	130-140			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	23.13	7/6/2019
1998	Unit 1	130-140			1/8"full sort	1/8"	Bone	Mammal		Identifiable	2	0.13	7/6/2019
1999	Unit 1	140-150			1/8"full sort	1/8"	Bone	Mammal		Identifiable	2	0.04	7/6/2019
2000	Unit 1	80-90			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	1.65	6/29/2019
2001	Unit 1	20-30			1/8"full sort	1/8"	Bone	Mammal		Identifiable	2	0.44	6/27/2019
2002	Unit 1B				1/8"full sort	1/8"	Bone	Mammal		Identifiable	2	0.17	7/20/2019

2003	Unit 1B	50-60			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.19	7/19/2019
2004	Unit 1B	70-80			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.1	7/31/2010
2005	Unit 1B	80-90			1/8"full sort	1/8"	Bone	Mammal		Identifiable	11	2.13	7/3/2019
2006	Unit 1B	90-100			1/8"full sort	1/8"	Bone	Mammal		Identifiable	3	1.3	7/31/2019
2007	Unit 1B	90-100			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.55	7/31/2019
2008	Unit 1B			1A	1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.19	7/19/2019
2009	Unit 1B				1/8"full sort	1/8"	Bone	Mammal		Identifiable			
2010	Unit 1B	roof collapse		2	1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.14	7/27/2019
2011	Unit 1B	90-100			1/8"full sort	1/8"	Bone	Mammal		Identifiable	1	0.19	7/2/2019
2012	Unit 1B	wall			1/8"full sort	1/8"	Bone	Mammal		Identifiable	8	0.43	8/3/2019
2013	Unit 1	30-40			1/8"full sort	1/8"	Bone	Mammal		Identifiable	4	0.26	
2014	MU 2	30-40			1/4"full sort	1/4"	Bone	Mammal		Identifiable	4	3.62	7/6/2019
2015	MU 2	40-50			1/4"full sort	1/4"	Bone	Mammal		Identifiable	1	0.15	7/13/2019

2016	MU 2	70-80			1/4"full sort	1/4"	Bone	Mammal		Identifiable	1	0.09	7/13/2019
2017	MU 2	100-110			1/4"full sort	1/4"	Bone	Mammal		Identifiable	1	0.11	7/27/2019
2018	MU 3	20-30			1/4"full sort	1/4"	Bone	Mammal		Identifiable	1	2.04	7/23/2019
2019	MU 4	30-40			1/4"full sort	1/4"	Bone	Mammal		Identifiable	2	0.21	
2020	MU 4	60-70			1/4"full sort	1/4"	Bone	Mammal		Identifiable	4	0.46	7/20/2019
2021	MU 5	40-50			1/4"full sort	1/4"	Bone	Mammal		Identifiable	8	5.55	7/20/2019
2022	MU 5	50-60			1/4"full sort	1/4"	Bone	Mammal		Identifiable	6	3.13	7/20/2019
2023	MU 5	70-80			1/4"full sort	1/4"	Bone	Mammal		Identifiable	4	1.1	7/20/2019
2024	MU 5	80-90			1/4"full sort	1/4"	Bone	Mammal		Identifiable	2	0.15	7/20/2019
2025	MU 2	50-60			1/4"full sort	1/4"	Bone	Mammal		Identifiable	3	0.93	7/13/2029
2026	MU 4	20-30			1/8"100g	1/8"	Glass	Bead		Glass	1	0.08	7/13/2019
2027	Unit 1	100-110			1/8" full sort	1/8"	Bone	Mammal		Identifiable	2	16.39	7/2/2019
2028	MU 5	90-100			1/4" full sort	1/4"	Bone	Mammal		Identifiable	1	3.78	7/27/2019

2030	UNIT 1B						Lithic	Pestle		Volcanic	1	too large	
2031	UNIT 1B						Lithic	Grindstone		Sandstone	1	too large	
2032	Unit 1	100-110			1/4" full sort		Glass	shatter		Consumer glass	1	0.27	3/14/2020
2033	MU 1	20-40	1/4"				Bone	fish		Actinopterygii	3	0.34	6/28/2019
2033	MU 1	20-40	1/4"				Bone	fish		Actinopterygii	1	0.45	6/28/2019
2033	MU 1	20-40	1/4"				Bone	fish		Actinopterygii	23	1.976	6/28/2019
2033	MU 1	20-40	1/4"				Bone	fish		Actinopterygii	1	0.29	6/28/2019
2033	MU 1	20-40	1/4"				Bone	fish		Actinopterygii	9	0.45	6/28/2019
2033	MU 1	20-40	1/4"				Bone	fish		Scorpaenidae	1	0.31	6/28/2019
2033	MU 1	20-40	1/4"				Bone	fish		Scorpaenidae	2	1.11	6/28/2019
2034	MU 1	40-50	1/4"				Bone	fish		Actinopterygii	21	1.4	6/29/2019
2034	MU 1	40-50	1/4"				Bone	fish		Actinopterygii	1	0.06	6/29/2019
2034	MU 1	40-50	1/4"				Bone	fish		Actinopterygii	2	0.11	6/29/2019

2034	MU 1	40-50	1/4"				Bone	fish		Actinopterygii	2	0.07	6/29/2019
2034	MU 1	40-50	1/4"				Bone	fish		Actinopterygii	1	0.21	6/29/2019
2034	MU 1	40-50	1/4"				Bone	fish		Scorpaenidae	2	0.53	6/29/2019
2034	MU 1	40-50	1/4"				Bone	fish		Sphyraena argentea	1	0.52	6/29/2019
2035	MU 1	50-60	1/4"				Bone	fish		Actinopterygii	1	0.1	6/29/2019
2035	MU 1	50-60	1/4"				Bone	fish		Actinopterygii	2	0.36	6/29/2019
2035	MU 1	50-60	1/4"				Bone	fish		Actinopterygii	11	1.26	6/29/2019
2035	MU 1	50-60	1/4"				Bone	fish		Actinopterygii	2	0.23	6/29/2019
2035	MU 1	50-60	1/4"				Bone	fish		Scorpaenidae	1	1.25	6/29/2019
2035	MU 1	50-60	1/4"				Bone	fish		Sebastes	1	0.21	6/29/2019
2036	MU 1	60-70	1/4"				Bone	fish		Actinopterygii	1	0.01	6/29/2019
2036	MU 1	60-70	1/4"				Bone	fish		Actinopterygii	9	0.29	6/29/2019
2036	MU 1	60-70	1/4"				Bone	fish		Actinopterygii	3	0.15	6/29/2019

2036	MU 1	60-70	1/4"				Bone	fish		Actinopterygii	1	0.07	6/29/2019
2037	MU 1	70-80	1/4"				Bone	fish		Actinopterygii	2	0.22	6/19/2019
2037	MU 1	70-80	1/4"				Bone	fish		Actinopterygii	2	0.19	6/19/2019
2037	MU 1	70-80	1/4"				Bone	fish		Actinopterygii	1	0.11	6/19/2019
2037	MU 1	70-80	1/4"				Bone	fish		Heterostichus rostratus	1	0.11	6/19/2019
2037	MU 1	70-80	1/4"				Bone	fish		Scorpaenidae	1	0.13	6/19/2019
2038	MU 1	80-90	1/4"				Bone	fish		Actinopterygii	9	0.72	7/5/2019
2038	MU 1	80-90	1/4"				Bone	fish		Actinopterygii	3	0.19	7/5/2019
2038	MU 1	80-90	1/4"				Bone	fish		Scorpaenidae	1	0.36	7/5/2019
2038	MU 1	80-90	1/4"				Bone	fish		Sebastes spp.	1	0.19	7/5/2019
2039	MU 1	90-100	1/4"				Bone	fish		Actinopterygii	1	0.06	7/5/2019
2039	MU 1	90-100	1/4"				Bone	fish		Actinopterygii	3	0.25	7/5/2019
2040	MU 1	100-110	1/4"				Bone	fish		Actinopterygii	2	0.17	7/5/2019

2040	MU 1	100-110	1/4"				Bone	fish		Scorpaenidae	1	0.5	7/5/2019
2041	MU 1	0-20	1/8"				Bone	fish		Actinopterygii	4	0.1	7/5/2019
2042	MU 1	20-40	1/8"				Bone	fish		Actinopterygii	11	0.24	6/28/2019
2042	MU 1	20-40	1/8"				Bone	fish		Clupeidae	1	0.01	6/28/2019
2043	MU 1	40-50	1/8"				Bone	fish		Actinopterygii	8	0.22	6/29/2019
2044	MU 1	50-60	1/8"				Bone	fish		Actinopterygii	12	0.21	7/18/2019
2044	MU 1	50-60	1/8"				Bone	fish		Clupeidae	1	0.01	7/18/2019
2044	MU 1	50-60	1/8"				Bone	fish		Embiotocidae	1	0.02	7/18/2019
2045	MU 1	60-70	1/8"				Bone	fish		Actinopterygii	15	0.42	6/29/2019
2045	MU 1	60-70	1/8"				Bone	fish		Actinopterygii	1	0.03	6/29/2019
2046	MU 1	70-80	1/8"				Bone	fish		Actinopterygii	15	0.45	6/29/2019
2046	MU 1	70-80	1/8"				Bone	fish		Clupeidae	1	0.01	6/29/2019
2047	MU 1	80-90	1/8"				Bone	fish		Actinopterygii	4	0.07	7/5/2019

2048	MU 1	90-100	1/8"				Bone	fish		Actinopterygii	14	0.31	7/5/2019
2049	MU 5	20-Oct	1/4"				Bone	fish		Actinopterygii	2	0.14	7/20/2019
2049	MU 5	20-Oct	1/4"				Bone	fish		Actinopterygii	1	0.08	7/20/2019
2049	MU 5	20-Oct	1/4"				Bone	fish		Scombridae	1	0.05	7/20/2019
2049	MU 5	20-Oct	1/4"				Bone	fish		Sphyraena argentea	2	0.92	7/20/2019
2050	MU 5	20-30	1/4"				Bone	fish		Actinopterygii	2	0.11	7/20/2019
2050	MU 5	20-30	1/4"				Bone	fish		Scorpaenidae	3	0.63	7/20/2019
2051	MU 5	30-40	1/4"				Bone	fish		Actinopterygii	2	0.16	7/20/2019
2051	MU 5	30-40	1/4"				Bone	fish		Actinopterygii	2	0.15	7/20/2019
2051	MU 5	30-40	1/4"				Bone	fish		Sarda lineolata	1	0.59	7/20/2019
2051	MU 5	30-40	1/4"				Bone	fish		Scorpaenidae	1	0.21	7/20/2019
2051	MU 5	30-40	1/4"				Bone	fish		Sphyraena argentea	2	0.69	7/20/2019
2052	MU 5	40-50	1/4"				Bone	fish		Actinopterygii	2	0.12	7/20/2019

2052	MU 5	40-50	1/4"				Bone	fish		Actinopterygii	2	0.2	7/20/2019
2052	MU 5	40-50	1/4"				Bone	fish		Actinopterygii	4	0.34	7/20/2019
2052	MU 5	40-50	1/4"				Bone	fish		Actinopterygii	1	0.04	7/20/2019
2052	MU 5	40-50	1/4"				Bone	fish		Sarda lineolata	1	1.05	7/20/2019
2053	MU 5	50-60	1/4"				Bone	fish		Actinopterygii	1	0.09	7/20/2019
2053	MU 5	50-60	1/4"				Bone	fish		Actinopterygii	3	0.2	7/20/2019
2053	MU 5	50-60	1/4"				Bone	fish		Actinopterygii	1	0.12	7/20/2019
2053	MU 5	50-60	1/4"				Bone	fish		Scomber japonicus	1	0.17	7/20/2019
2053	MU 5	50-60	1/4"				Bone	fish		Scorpaenidae	1	0.97	7/20/2019
2053	MU 5	50-60	1/4"				Bone	fish		Sphyraena argentea	1	0.4	7/20/2019
2054	MU 5	60-70	1/4"				Bone	fish		Actinopterygii	3	0.35	7/20/2019
2054	MU 5	60-70	1/4"				Bone	fish		Actinopterygii	1	0.17	7/20/2019
2054	MU 5	60-70	1/4"				Bone	fish		Paralabrax spp.	1	0.29	7/20/2019

2055	MU 5	70-80	1/4"				Bone	fish		Scorpaenidae	1	0.09	7/20/2019
2056	MU 5	80-90	1/4"				Bone	fish		Scorpaenidae	1	0.38	7/20/2019
2057	MU 5	90-100	1/4"				Bone	fish		Actinopterygii	2	0.17	7/27/2019
2057	MU 5	90-100	1/4"				Bone	fish		Scorpaena argentea	1	0.29	7/27/2019
2057	MU 5	90-100	1/4"				Bone	fish		Sphyraena argentea	1	0.23	7/27/2019
2058	MU 5	100-110	1/4"				Bone	fish		Actinopterygii	1	0.13	7/27/2019
2058	MU 5	100-110	1/4"				Bone	fish		Scomber japonicus	1	0.23	7/27/2019
2059	MU 5	120-130	1/4"				Bone	fish		Scomber japonicus	1	0.28	8/3/2019
2060	MU 5	0-20	1/8"				Bone	fish		Actinopterygii	7	0.25	7/20/2019
2061	MU 5	20-30	1/8"				Bone	fish		Actinopterygii	9	0.36	7/20/2019
2061	MU 5	20-30	1/8"				Bone	fish		Scomber japonicus	1	0.01	7/20/2019
2062	MU 5	30-40	1/8"				Bone	fish		Actinopterygii	1	0.05	7/27/2019
2062	MU 5	30-40	1/8"				Bone	fish		Actinopterygii	9	0.3	7/27/2019

2063	MU 5	40-50	1/8"				Bone	fish		Actinopterygii	9	0.19	7/20/2019
2064	MU 5	50-60	1/8"				Bone	fish		Actinopterygii	13	0.36	7/27/2019
2064	MU 5	50-60	1/8"				Bone	fish		Scomber japonicus	1	0.01	7/27/2019
2065	MU 5	60-70	1/8"				Bone	fish		Actinopterygii	9	0.22	7/27/2019
2065	MU 5	60-70	1/8"				Bone	fish		Clupeidae	1	0.01	7/27/2019
2066	MU 5	70-80	1/8"				Bone	fish		Actinopterygii	5	0.13	7/27/2019
2067	MU 5	80-90	1/8"				Bone	fish		Actinopterygii	4	0.09	7/27/2019
2067	MU 5	80-90	1/8"				Bone	fish		Actinopterygii	1	0.04	7/27/2019
2067	MU 5	80-90	1/8"				Bone	fish		Actinopterygii	1	0.02	7/27/2019
2068	MU 5	100-110	1/8"				Bone	fish		Actinopterygii	6	0.15	7/27/2019
2068	MU 5	100-110	1/8"				Bone	fish		Actinopterygii	1	0.04	7/27/2019
2068	MU 5	100-110	1/8"				Bone	fish		Actinopterygii	1	0.04	7/27/2019
2069	MU 5	110-120	1/8"				Bone	fish		Actinopterygii	2	0.01	8/3/2019

2070	MU5	120-130	1/8"				Bone	fish		Actinopterygii	5	0.1	8/3/2019

Appendix IV: 2019 shell beads

Unit	Cat #	Species	Visual Bead Type	Vertical Diameter / L	Horizontal Diameter /W	Curvature	Min Thickness	Max Thickness	Min. Perforation	Perforation Shape	Perforation Wear/ Damage	Shelf	Primary Edge Finish	Edge Finish 2	Condition	Color	Comments
MU1	83	Olivella	E	6.6	7	3.5	1.2	2.6	1.2	CYL	Chip-out		Chipped	Rolled	Poor	Ivory	Needle drilled at wall callus intersection, blank from high on callus
MU1	26	Olivella	E2a	6.7	5.7	3.4	0.7	1.7	1.1	CYL		Absent	Ground		Poor	Ivory	Full thick lipped, slightly small for subtype
MU1	73	Olivella	E2a1	6.9	5.6	1.9	0.7	1.1	1.3	CYL		Absent	Vent Bevel	Rolled	Poor	White	Made from small shell, with remnant of callus on edge, where vent flattening occurs. Perf low, some basal aperture remains, making similar to a type E2a1

MU1	20	Olivella	G1	4.2	4.4	-	-	-	1.3	VC	Weathered	Absent	-		Poor	White	Highly weathered no intact edges
MU1	13	Olivella	H	-	-	-	-	-	-	-		Absent	-		-	-	Bead is broken into several small pieces unable to take dimensions
MU1	14	Olivella	H	5.6	5.5	-	-	-	-	-		Absent			Poor	White	Asphaltum on both sides highly weathered unable to see perf.
MU1	21	Olivella	H	5.2	-	-	-	-	-1.5	CYL?	Damaged	Absent	-				Broken, highly weathered, unable to get clear measurements for most dims, edge fin unclear
MU1	30	Olivella	H	4.4	-	1	0.6	0.8	1	CYL		Absent	-		Poor	White	Bead is very small and thin. Bead broke as measurements were being taken

MU1	38	Olivella	H	4.7	5.5	1.9	1.2	1.6	1	CYL		Edge	-		Poor	White	Highly weathered, epidermis layer 30% weathered away
MU1	72	Olivella	H	4	4	-	0.6	-	1.2	CYL		Absent	Rough	Rolled	Poor	White	Very weathered, very irregular, probably damaged, but some edges near intact. Cannot subtype
MU1	79	Olivella	H	4.5	4.8	1.7	1.2	1.6	0.6	VC		Absent	Rough		Poor	White	Highly weathered, unshaped, perf is steeply-conical, almost cyl. May be damaged h1, probably h2 or 3
MU1	84	Olivella	H	-	5.2	1.7	0.8	1	0.9	CYL		Absent	Chipped	Damaged	Poor	Ivory	Damaged on one edge, portion missing.
MU1	115	Olivella	H	-5.9	-4.9	1.3	0.5	0.8	1.1	CYL	Weathered	Absent	-	Damaged	Poor	White	Very weathered, edges damaged

MU1	118	Olivella	H	-6.8	-6.1	1.6	0.9	1	1.5	CYL		Edge	Rough	Weathered	Poor	Ivory	Irregular, top edge is rough/unfinished shelf scar, unbroken edges weathered, small bit of bead frag in bag--fragile.
MU1	36	Olivella	H	5.6	-	-	-	-	-1	-		Absent	-		Poor	Ivory	Possible broken bead in production
MU1	15	Olivella	H1	5.8	5.9	1.3	0.8	0.9	1	-	Weathered	Absent	Rolled		Poor	White	Broken, perf and edges highly weathered. Probably needle-drilled
MU1	82	Olivella	H1	6.6	5.7	2	1.1	1.2	1	CYL		Absent	Rolled	Damaged	Poor	Beige	Bead is broken
MU1	86	Olivella	H1	4.5	5.2	1.4	0.8	1	1	VC	Chip-out/Damaged	Absent	Rolled		Poor	White	Edges and perf heavily weathered, possible string wear dorsal side

MU1	117	Olivella	H1	-	-	-	-	-	-1.4	CYL		Absent	Flat	Damaged	Poor	White	Broken in 3 pieces, largest is about 40% of bead, has flat edge finish and clearly cylindrical perf (size estimated by rearranging fragments)
MU1	16	Olivella	H1a	6.6	6.5	1.8	0.7	1	1	CYL		Absent	Rolled		Fair	Ivory	
MU1	17	Olivella	H1a	6.1	6.1	1.3	0.9	1	1.1	CYL		Absent	Rolled		Poor	Ivory	
MU1	22	Olivella	H1a	6.1	6.7	2.1	0.8	1	1	CYL		Absent	Rolled	Rough	Fair	Ivory	
MU1	25	Olivella	H1a	6	5.7	1.5	0.9	1	1.1	CYL		Absent	Rolled	Chipped	Poor	Beige	
MU1	27	Olivella	H1a	6.6	6.5	1.5	0.8	1.1	1.1	CYL		Absent	Rolled		Poor	Ivory	
MU1	29	Olivella	H1a	6.1	5.9	1.7	0.7	1	1	CYL		Absent	Rolled		Poor	Ivory	Possible dorsal retouch or erosion around the hole
MU1	35	Olivella	H1a	7	6.8	2.3	1	1.2	1	CYL		Absent	Rolled		Poor	Ivory	
MU1	40	Olivella	H1a	4.5	4.4	1	0.7	0.9	1	CYL		Absent	Rolled		Poor	Ivory	
MU1	77	Olivella	H1a	6.5	6.4	2	1	1.4	1	CYL		Absent	Rolled		Poor	White	
MU1	80	Olivella	H1a	6.3	6.2	1.7	0.8	0.9	1	CYL		Absent	Rolled		Poor	White	

MU1	31	Olivella	H1b	7.1	6.2	1.9	0.7	0.9	1.1	CYL		Absent	Rolled	Chipped	Poor	White	Asymmetrical with alternating rolled and chipped edge sections
MU1	32	Olivella	H1b	6.1	4.8	1.1	0.6	0.9	1.2	CYL		Absent	Rolled	Chipped	Poor	Ivory	Very weathered.
MU1	66	Olivella	H1b	5.9	5.8	1.8	0.8	1.1	1.2	CYL	Chip-out	Absent	Chipped	Flat	Good	Ivory	Perf offset, small chip-out around perf.
MU1	67	Olivella	H1b	6.4	5.5	3	0.8	0.9	1.2	CYL		Edge	Rolled	Chipped	Poor	White	Very curved, from small shell, close to columella, but none present, similar to type E2b
MU1	70	Olivella	H1b	7.4	7.1	2.3	0.9	1.6	1.2	CYL		Absent	Flat	Chipped	Good	Ivory	Slightly irregular, thick at fasciole end, chipping is minor and dispersed, remnant not removed by almost full grinding
MU1	23	Olivella	H2	8	-	2.8	1.1	2.5	1.2	CYL		Absent	Chipped	Rolled	Poor	Ivory	Parietal wall remnan

																	t on face
MU1	33	Olivella	H2	6.2	6.3	1.7	1.1	1.3	1	CYL		Absent	Chipped	Rolled	Poor	White	Hole is slightly ventral-conical, maybe retouch or drill wander.
MU1	34	Olivella	H2	5.3	4.6	1.2	0.8	0.8	1.1	CYL		Absent	Rolled	Chipped	Poor	White	Visually like E bead on p. 36 of Milliken and Schwitalla
MU1	58	Olivella	H2	6.8	6	2.2	1	1.5	1	CYL	Chip-out	Absent	Chipped	Rolled	Fair	White	Perf is irregularly-chipped, not just vertically.
MU1	60	Olivella	H2	5.9	5.3	1.7	0.9	1	1	VC/DR		Absent	Chipped	Flat	Fair	White	Perf may be cyl with wear, surface not distinct/smooth
MU1	61	Olivella	H2	7.3	7.6	2.2	1.3	1.4	1	CYL	Damaged	Absent	Chipped	Flat	Fair	White	
MU1	63	Olivella	H2	8	7.7	2.5	1	1.1	1.1	CYL		Absent	Chipped		Fair	White	Slightly rectiloid, perf off-vert, evenly chipped around perimeter
MU1	69	Olivella	H2	6.6	6.3	1.7	0.7	0.9	1	CYL		Absent	Chipped	Flat	Fair	Ivory	Two flat edge sections separated by chip

MU1	71	Olivella	H2	6.3	5.6	1.9	1	1.2	1	CYL		Absent	Chipped	Flat	Good	Ivory	Very irregular, deep chips on edges
MU1	78	Olivella	H2	5.5	5.5	1.7	0.9	1	1.1	CYL		Absent	Rough		Poor	Beige	
MU1	18	Olivella	H3	7.5	6.1	1.8	0.6	0.8	1.1	CYL	Chip-out	Full	Rough		Poor	Ivory	
MU1	37	Olivella	H3	7.1	6.1	1.9	1.1	1.2	1	CYL		Absent	Rough		Poor	Ivory	
MU1	39	Olivella	H3	5.8	4.7	1.6	0.8	1.1	1	CYL		Absent	Rough		Fair	Ivory	
MU1	42	Olivella	H3	6.9	6.4	2.5	1	2	1	CYL		Absent	Rough	Chipped	Poor	Ivory	Mostly rough, unworked edges, some finer chipped sections.
MU1	62	Olivella	H3	8.4	6	2.5	0.8	2.2	1.1	CYL		Absent	Rough		Fair	White	Rough, semi-lipped bead from area including partial lower columella, very irregular, unfinished, not entirely wall bead in form. Like an outlier type e but thin, without identifiable upper columel

																	la. Dorsal grinding apparent around perf.
MU1	65	Olivella	H3	7.4	5.8	1.7	0.8	1.1	1	CYL		Edge	Rough	Chipped	Good	Ivory	Rectiloid, some chipping on bottom edge, otherwise unformed
MU1	68	Olivella	H3	7.4	7.3	2.2	1.1	1.2	1.3	CYL		Absent	Rolled	Flat/Chipped	Poor	White	Slightly irregular, large, roll/flat edges were probably rgh/unfinished, but is too worn.
MU1	76	Olivella	H3	8.2	7.1	2.4	1	1.1	1.2	CYL		Absent	Rough		Good	Ivory	Ovoid, irregular edges.

MU1	81	Olivella	H3	8.2	8	2.2	1.3	1.8	1.1	CYL		Absent	Rough		Poor	Beige	Large, thick wall bead, rough edges, irregular, some poss. chipping, may be damage.
MU1	57	Olivella	J1	6.2	5.9	2	1.3	1.5	1.5	VC		Absent	Rolled		Poor	White	Thick disk - distal portion of perf looks cylindrical but prox/ventral portion of perf is conical
MU1	75	Olivella	J1	7	5.7	2	1.3	1.7	1.3	VC/DR		Absent	Rough		Good	Ivory	Very irregular, rectangular bottom, appears chert drilled, rough like type g8
MU2	113	Olivella	H	-	-	-	-	-	-	-		-			Poor	White	Fragmented bead, not typable
MU3	111	Olivella	H	6.1	-6.2	1.6	1	1.1	1.5	CYL		Absent	Vent Bevel	Chipped	Poor	Beige	Coated in ochre-stained pitch on all surfaces except broken edge on side.

MU4	103	Olivella	E	6.5	4.5	2.6	1.2	3.3	1.4	CYL		Absent	Rolled		Fair	White	Small variant, needle drilled, but clearly includes basal folding and funneling toward the basal lip portion of the shell. Most visually like e2a1, full thick-lipped
MU4	105	Olivella	H	5	5.8	1.4	0.7	0.9	1.2	VC		Absent	-		Poor	White	Very weathered, irregular, straight top edge possibly broken or shelf remnant
MU4	106	Olivella	H	5.7	5.5	1.4	1	1.2	1	-	Weathered	Absent	-		Poor	Ivory	Very weathered, possible asphaltum on ventral and in perf, surfaces heavily etched. Likely a type h disk, but edge finish

																	not determinable.
MU4	109	Olivella	H	-	-	-	-	-	1.5	CYL	Weathered	Absent	-		Poor	White	Disk fragment, just under half, perf dia. approx.
MU4	110	Olivella	H	3.7	-	-	-	-	2	-		-	-				Extremely weathered half of a wall bead with large perf (dia. Estimated)
MU4	107	Olivella	H3							-							Bead in production, broken in half during drilling across perf, very weathered
MU5	91	Olivella	H	6	6.1	1.6	1	1.2	1.1	CYL/DR	Weathered	Absent	Rough		Poor	White	Highly weathered, irregular shaped.

MU5	119	Olivella	H	-	-	-	-	-	-	VC	Weathered	Absent	-		Poor	White	Extremely weathered less than half of a wall bead, remnant perf looks vc but may be weathered cyl
MU5	121	Olivella	H	-	-5.5	-	-1	-	1.1	VC	Weathered	Absent	-		Poor	White	Just over half of a wall disk, very weathered. May have broken during drilling? VC is closer to cylindrical than typical for chert drilled-probably needle-drilled.
MU5	90	Olivella	H1	5.1	-	-	0.8	-	-	-	Weathered	Absent	Rolled		Poor	White	Highly weathered, broken in half
MU5	92	Olivella	H1	5.1	4.4	1	0.7	0.8	1	CYL		Absent	-		Poor	White	Bead is highly weathered, edges damaged

MU5	94	Olivella	H1	6.4	5.9	1.4	0.8	0.9	1.2	VC/DR	Weathered	Absent	Rolled	Damaged	Poor	Beige	Ochre present on face of bead
MU5	95	Olivella	H1	5.2	4.5	1.2	0.8	1	1.2	CYL	Weathered	Absent	Rolled	Damaged	Poor	White	Highly weathered, edges decaying and damaged on two sides
MU5	96	Olivella	H1	6	6.4	1.5	0.7	0.8	1.2	CYL	Weathered	Absent	Rolled	Rough	Poor	White	Edges highly weathered, one straight, probably unfinished edge where fasciole removed.
MU5	97	Olivella	H1	6.6	6.7	2.1	1.3	1.9	1.2	CYL/VR		Edge	Chipped	Rolled	Poor	Ivory	Irregular, thick shelf rem along top, perf very off-center, vc to cyl, very weathered. Some ventral flattening--probably excav/screening damage

MU5	99	Olivella	H1	6.5	6.5	1.8	0.8	1	1.3	CYL	Chip-out	Absent	Rolled	Chipped	Fair	White	All surfaces moderately weathered, perf slight vc, square-ish silhouette. Slight ventral flattening probably screening damage.
MU5	87	Olivella	H1a	3.5	3.3	-	-	-	1	CYL		Absent	Rolled	Ventral Bevel	Burned	Grey	Very small, ventral grinding on edges. Burnt. Broke while measuring curvature
MU5	93	Olivella	H1a	7.6	7.1	2.2	0.9	1.1	1.1	VC		Absent	Rolled	Damaged	Poor	Beige	Dark ochre staining on dorsal, and remnant of ochre-colored pitch on upper dorsal, wrapping around edge slightly, edges slightly

																	damaged.
MU5	122	Olivella	H1a	5.6	5.2	1.6	0.9	1.2	1.1	CYL		Absent	Rolled		Poor	White	
MU5	98	Olivella	H1b	7.2	7.3	2.2	1.2	1.4	1	CYL	Weathered	Absent	Rolled	Chipped	Fair	White	Moderately weathered, perf slightly vc, edged alternate ground and chipped
MU5	100	Olivella	H1b	6.4	6.4	2.1	1.1	1.3	1.3	CYL	Chip-out	Absent	Rolled	Chipped	Poor	White	Slightly weathered, irregular, perf offset. Some ventral flattening damage probably screening/excavation

MU5	101	Olivella	H1a	6.5	6.5	1.6	0.9	1	1	CYL		Absent	Flat	Chipped	Fair	White	Very round exc. flat bottom edge where fasciole removed, minor damage to edges, slight weathering
MU4	162	Olivella	H	5.2	4.8	-	-	-	-	-		-	-		Poor	White	Highly weathered, broken in half
UNIT1	1598	Olivella	H1	6.2	6.2	2	1	1.5	1.1	CYL	Weathered	Edge	Rolled	Rough	Poor	White	Highly weathered, straight/unfinished edge along top at shelf-removal. Perf highly damaged, possible dorsal retouch.
UNIT1	114	Olivella	H1a	6.1	6.6	2.1	0.7	1.2	1	CYL		Absent	Rolled	Rough	Poor	Ivory	

Appendix X. Glass Beads

CAT #	Unit	Level (cm)	Lab Sort	Lab Mesh	Count	Weight (g)	Diameter (mm)	Length (mm)	Perforation (mm)	Size	Manufacture	Shape	Munsell #	Munsell Name	General Color	Decoration	Patination/ Luster	Diaphaneity	Structure	Type-Variety
1	AU1	50-60	1/8" field found		1	0.06	3.01	3.55	1.02	S	Drawn	tubular	N 9.5	Bright White	White	none	iridized patination	op	simple	Ia
4	AU1	60-70	1/8" Field found	1/8"	1	0.06	4.17	3.04	0.92	S	Drawn	tubular	10.0BG 4/8	Turquoise	Green	none	dull/matte	tr	simple	Ia
5	AU1	70-80	1/8" field found	1/8"	1	0.02	1.41	2.76	1.01	VS	Drawn	circular	7.5B 6/2	Light Grey Blue	Blue	none	dull	op	simple	IIa
6	AU1	Strat 1	1/8" field found	1/8"	1	0.03	2.19	2.5	0.64	S	Drawn	circular	2.5PB 5/2	Dusty Blue	Blue	none	dull/matte	op	simple	IIa
7	AU1	100-1	1 8" field	1/8"	1	0.28	4.75	6.71	2.43	M	Wound	doughnut	7.5PB	Royal Blue	Blue	none	iridized patination	tr	simple	WIb

		10	found										2/10							
8	AU1	100-110	1/8" field found	1/8"	1	0.03	2.6	3.38	1.09	S	Drawn	circular	10.0B 6/3	Mist Blue	Blue	none	dull	op	simple	IIa
9	MU5	20-30	1/8" Fast Sort	1/8"	1	0.04	2.29	3.52	0.96	S	Drawn	circular	n/a	Clear	Clear	none	iridized patination	tsp	simple	IIa
10	MU5	20-30	1/8" Fast Sort	1/8"	1	0.05	2.75	3.33	1.08	S	Drawn	circular	6.25PB 3/12	Ultramarine	Blue	none	iridized patination	tr	simple	IIa
11	MU5	30-40	1/8" bulk	1/8"	1	0.03	2.74	3.12		S	Drawn		10.0YR 5/8	Butterscotch	Yellow					IIa
12	MU5	40-50	1/8' 1000 grams amp.	1/8"	1	0.05	2.19	3.07		S	Drawn		7.5YR 4/4	Maple	Brown					IIa
19	MU1	0-20	1/8" fast sort	1/8"	1	0.02	3.62	0.9	1.6	VS	Drawn	flat disk	N 9.5	Bright White	White	none	matte	op	simple	IIa

43	AU1	30-40	1/8" Field found	1/8"	1	0.04	2.18	3.2	0.99	S	Drawn	circular	N9.5	Bright White	White	none	dull/matte	op	simple	IIa
44	AU1	28-50	1/8" Field found	1/8"	1	0.48	7.25	6.49	1.45	L	Wound	oval; barrel shaped	Core: 2.5R 2/6 ; Ext. 10.0YR 5/10 //7/8	Core=Garnet; Ext. Topaz/Amber	Red	overlaid paint; matted and metallic	dull/matte	op	compound	WIIIa
45	MU5	40-50	1/8" Field found	1/8"	1	0.07	2.28	4.32	1.38	S	Drawn	circular	N1	Lamp Black	Black	none	dull	op	simple	IIa
46	MU5	50-60	1/4" Field Found	1/4"	1	0.04	2.93	3.34	1.21	S	Drawn	tubular	5.0PB 3/4	Moonstone Blue	Blue	none	dull	op	simple	Ia
47	MU5	100-110	1/8" Field Fou	1/8"	1	0.03	2.03	2.94	0.81	S	Drawn	tubular	N9.5	Bright White	White	none	dull; matte patination	op	simple	Ia

			nd																	
48	MU4	0-20	1/8" Field Found	1/8"	1	0.03	2.08	3.32	1.14	S	Drawn	circular	N1	Lamp Black	Black	none	dull	op	simple	IIa
49	MU4	0-20	1/4" Field Found	1/4"	1	0.1	4.19	3.94	1.57	S	Drawn	tubular	N9.5	Bright White	White	none	dull	op	simple	Ia
50	MU4	0-20	1/4" Field Found	1/4"	1	0.03	2.35	2.9	1.2	S	Drawn	circular	7.5PB2/5	Dark Blue	Blue	none	shiny	tr	simple	IIa
51	MU4	0-20	1/4" Field Found	1/4"	1	0.02	1.87	2.75	1.03	VS	Drawn	circular	10.0B2/4	Dark Navy	Blue	none	shiny	tr	simple	IIa
52	MU4	0-20	1/4" Field Found	1/4"	1	0.03	1.69	2.88	0.83	VS	Drawn	circular	7.5G3/8	Dark Emerald Green	Green	none	dull	tr	simple	IIa

53	MU4	20-30	1/8" 100g sample	1/8"	1	0.03	2.57	2.77	0.87	S	Drawn	circular	N9.5	Bright White	White	none	dull	op	simple	IIa
54	MU4	20-30	1/8" 100g sample	1/8"	1	0.05	2.72	3.9	1.29	S	Drawn	circular/donut	10B 2/4	Dark Navy	Blue	none	matte w/slight iridized patination	tr	simple	IIa
55	MU4	30-40	1/8" Field Found	1/8"	1	0.04	2.72	2.9	1.45	S	Drawn	circular	10.0G 5/10	Emerald Green	Green	none	iridized patination	tr	simple	IIa
88	MU1	60-70	1/8"	1/8"	n/a	0.02														*missing
89	MU1	Strat 2	Columns sample	1/8"	n/a	0.01	1.29	2.07	0.6											*missing
124	MU4	30-40	1/8" Field F	1/8"	1	0.09	3.15	4.32	1.42	S	Drawn	round	Ext: 7.5R 3/	Ext: Brick Red;	Red	red glass over gre	matte/dull	op	compound	IVa

			ound										8 ; Int.: 10.0Y 7/5	Int: citron		en glass				
125	MU4	30-40	1/8" Field Found	1/8"	1	0.02	1.85	2.61	0.86	VS	Drawn	circular	10.0BG 4/8	Turquoise	Green	none	dull	tr	simple	IIa
126	MU4	40-50	1/4" Bulk	1/4"	1	0.11	2.72	3.4	1.08	S	Drawn	circular	10.0R 3/2	Taupe Brown	Brown	none	dull/matte	op	complex	IVa
127	MU4	40-50	1/4" Bulk	1/4"	1	0.3	5.17	6.54	2.55	M	Wound	round	6.25PB 3/12	Ultramarine	Blue	none	shiny	tr	simple	WId
128	MU4	30-40	1/8" Field Found	1/8"	1	0.05	2.28	3.17	0.85	S	Drawn	circular	10.0GY 5/10	Grass green	Green	none	matte; iridized patination	tr	simple	IIa
129	MU4	30-40	1/8" Field Found	1/8"	1	0.03	2.66	3	0.89	S	Drawn	circular	n/a	Clear	Clear	none	iridized patination; matte	tsp	simple	IIa
130	MU4	40-	1/4" Fiel	1/4"	1	0.03	2.54	2.6	0.87	S	Drawn	circular	n/a	Clear	Clear	none	dull	tsp	simple	IIa

		50	d Found																
131	MU4	40-50	1/4" Bulk	1/4"	1	0.03	1.82	3.01	0.75	VS	Drawn	circular	7.5PB 2/5	Dark Blue	Blue	none	dull	tr	simple	IIa
132	MU4	40-50	1/4" Bulk	1/4"	1	0.36	5.68	6.99	2.8	L	Wound	donut	5.0BG	Light Blue Spruce	Blue	none	dull	tr	simple	WId
133	MU4	40-50	1/8" 100g	1/8"	1	0.02	1.7	3.2	1.28	VS	Drawn	circular	N1	Lamp Black	Black	none	iridized patination	op	simple	IIa
134	MU4	40-50	1/8" 100g	1/8"	1	0.03	2.02	3.53	1.29	S	Drawn	circular; donut	10.0P 2/4	Eggplant	Purple	none	iridized patination	op	simple	IIa
135	MU4	50-60	1/4" Bulk	1/4"	1	0.12	4.86	5	1.72	M	ceramic/prosser	round	5.0YR 2/4	Deep Brown	Brown	none	matte;dull	op	compound	PMIa
136	MU4	50-60	1/4" Bulk	1/4"	1	0.02	1.97	3.52	1.45	VS	Drawn	tubular	n/a	Clear	Clear	none	iridized patination	tsp	simple	Ia
137	MU4	50-60	1/4" Bulk	1/4"	1	0.06	2.78	3.63	1.35	S	Drawn	circular	N1	Lamp Black	Black	none	dull	op	simple	IIa
138	MU4	50-60	1/4" Bulk	1/4"	1	0.03	1.85	3.52		VS	Drawn	circular	N9	White	White	none	iridized patination			IIa

139	MU4	60-70	1/4" Bulk	1/4"	1	0.03	1.78	2.87	1.32	VS	Drawn	circular	7.5G 5/6	Jade Green	Green	none	dull	tr	simple	IIa
140	MU4	70-80	1/4" Bulk	1/4"	1	0.17	5.36	4.85	1.96	M	ceramic/prosser	round; olive pit	2.5Y 2/2 base; 2.5Y 9/3	Dark Brown with speckled light ivory	Brown	none	heavy patina	op	simple	PMIc
141	MU4		1/8" 10+ L columns sample	1/8"	1	0.15	3.4	5.42	1.58	M	Drawn	circular; donut	5.0Y 9/2	Pearl	White	none	dull	op	simple	IIa
142	MU4		1/8" Lot L columns shape	1/8"	1	0.03	1.78	3.45	1.34	VS	Drawn	circular	2.5Y 2/2	Dark Brown	Brown	none	iridized patination	op	simple	IIa
143	MU4	Wall	1/8" W	1/	1	0.	2.81	3.	1.28	S	Drawn	circular	N 9.5	Bright	White	none	dull	op	sim	IIa

		Fall	all Fall	8"		05		37						White					ple	
144	MU3	0-20	1/8" Field found	1/8"	1	0.07	2.49	5.19	1.79	M	Drawn	circular; donut shaped	6.25PB 3/12	Ultramarine	Blue	none	dull	tr	simple	IIa
145	MU3	20-30	1/8" Full Sort	1/8"	1	0.05	2.89	3.39	1.23	S	Drawn	circular	6.25PB 3/12	Ultramarine	Blue	none	dull	tr	simple	IIa
146	MU3	20-30	1/8" Full Sort	1/8"	1	0.02	1.36	3.65	0.59	VS	Drawn	flat disk	N 9.5	Bright White	White	none	dull	op	simple	IIa
147	MU3	20-30	1/8" Full Sort	1/8"	1	0.06	2.99	3.77	1.27	S	Drawn	circular	n/a	Clear	Clear	none	dull; iridized patination	tsp	simple	IIa
148	MU3	30-40	1/8" Bulk	1/8"	1	0.06	3.04	3.42	0.85	S	Drawn	circular	n/a	Clear	Clear	none	dull; iridized patination	tsp	simple	IIa
149	MU3	30-40	1/4 Field Found	1/4"	1	0.04	1.91	3.25	0.81	VS	Drawn	circular	5.0Y 9/2	Pearl	White	none	dull	op	simple	IIa
150	MU3	40-50	1/4 Field	1/4"	1	0.01	1.53	2.43	0.93	VS	Drawn	circular	n/a	Clear	Clear	none	dull	tsp	simple	IIa

			Found																	
151	MU3	40-50	1/4" Field Found	1/4"	1	0.01	1.58	2.61	1.13	VS	Drawn	circular	6.25PB 3/12	Ultramarine	Blue	none	iridized patination	tr	simple	IIa
152	MU3	70-80	1/8" Field Found	1/8"	1	0.01	1.79	3	0.93	VS	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	op	simple	IIa
153	MU2	20-30	1/8" Field Found	1/8"	1	0.02	2.22	3.46	1.22	S	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	tr	simple	IIa
154	MU2	30-40	1/8" Full Sort	1/8"	1	0.03	3.09	2.4	0.87	S	Drawn	tubular	10.0YR 4/8	Golden Brown	Brown	none	dull	tr	simple	Ia
155	MU2	30-40	1/8" 100g	1/8"	1	0.04	2.32	3.36	1.24	S	Drawn	circular	N1	Lamp Black	Black	none	dull; dark Brown patination	op	simple	IIa
156	MU2	40-	1/8" 10	1/8"	1	0.01	1.91	2.78	0.68	VS	Drawn	circular	5.0B	Robin's Eg	Blue	none	dull; light tan pati	tr	simple	IIa

		50	0g										6/6	g Blue			nation			
157	MU2	30-40	1/8" 100g	1/8"	1	0.06	2.81	2.81	1.48	S	Drawn	circular	N 9.5	Bright White	White	none	dull; iridized patination on interior	op	simple	IIa
158	MU2	40-50	1/8" Field Found	1/8"	1	0.09	4.13	3.54	1.19	S	Drawn	tubular	5.0Y 9/2	Pearl	White	none	dull; iridized patination	op	simple	Ia
159	AU1	50-60	1/8" Bulk	1/8"	1	0.32	6.01	6.49	2.53	L	Wound	round	6.25PB 3/12	Ultramarine	Blue	none	dull	tr	simple	WId
160	AU1	100-110	1/8" Field Found	1/8"	1	0.42	5.99	6.52	2.13	L	Wound	round barrel	10.0YR 7/8 // 5.0YR 5/1	Amber // Dark Shadow Blue	Yellow	overlaid paint	dull; patinated	op	complex	WIIIc
161	AU1	11th floor	Field Found		1	0.29	4.89	6.54	2.67	L	Wound	round	6.25PB 3/12	Ultramarine	Blue	none	dull	tr	simple	WId
163	MU1	40-50	1/8" Fast	1/8"	n/a	0.01														*misi

			sort																	ng
166	MU5		Col. sample	9.1L	1	0.01	2.62	1.31	1.43	VS	Drawn	circular	10.0B 6/3	Mist Blue	Blue	none	dull; patinated	op	simple	IIa
167	MU5		Col. sample	9.1L	1	0.03	4.19	2.17	0.99	S	Drawn	circular/donut	N 9.5	Bright White	White	none	dull; patinated	op	simple	IIa
168	MU5	40-50	1/8" 100g	1/8"	1	0.04	3.16	2.2	1.44	S	Drawn	circular	10.0GY 5/8	Deep Grass Green	Green	none	dull; patinated	tr	simple	IIa
169	AU1	40-50	1/8" Bulk	1/8"	1	0.02	2.71	2.15	1.27	S	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	op	simple	IIa
170	AU1	107	Field Found		1	0.03	2.89	2.64	0.84	S	Drawn	circular	2.5B 5/5	Medium Turquoise Blue	Green	none	dull	op	simple	IIa
171	AU1	100-110	1/8" Bulk	1/8"	1	0.62	5.69	9.43	1.09	L	Drawn	oval faceted	2.5R 2/6	Garnet	Red	none	shiny	tr	simplr	If
172	MU2	Strat1	1/8" Bulk	1/8"	1	0.05	3.41	3.25	1.29	S	Drawn	circular	6.25PB	Ultramarine	Blue	none	dull	tr	simple	IIa

													3/12							
173	MU2	20-30	1/8" Field Found	1/8"	1	0.1	5.48	2.52	n/a	S	Wound	donut	7.5B 3/3	Dark Shadow Blue	Blue	overlaid decoration	shiny	op	complex	WIIIc
174	MU3	40-50		1/4"	1	0.12	4.32	3.33	1.78	S	Drawn	round	2.5Y 6/8	Mustard Gold	Yellow	none	dull	op	simple	IIa
175	MU3	Strat2	Fastsort		1	0.03	2.66	3.06	1.49	S	Drawn	circular	5.0B 4/6	Medium Blue	Blue	none	dull	tr	simple	IIa
176	MU3	Strat2	Fastsort		1	0.01	2.24	3.06	1.17	S	Drawn	circular	N1	Lamp Black	Black	none	dull	tr	simple	IIa
177	MU4	Strat1	Stratum1		1	0.01	1.39	2.04	0.91	VS	Drawn	circular	6.25PB 3/12	Ultramarine	Blue	none	shiny	tr	simple	IIa
178	MU1	0-20	1/8" fastsort	1/8"	1	0.29	6.92	4.05	2.65	M	Wound	donut	2.5R 5/8 (N8 patina)	Light Wine; oyster white patina	Red	none	shiny	tr	simple	WId
179	MU1	Surface	Surface coll	1/8"	1	0.03	2.87	2.14	1.23	S	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	op	simple	IIa

			ection																	
180	MU1	0-20	1/8" Fast Sort	1/8"	1	0.03	2.88	3.17	1.07	S	Drawn	circular	7.5B 7/6	Light Sky Blue	Blue	none	dull	op	complex	IIa
181	MU1	0-20	1/8" Fast Sort	1/8"	1	0.03	3.57	1.76	1.27	VS	Drawn	circular	7.5G 5/6	Jade green	Green	none	shiny	tsp	simple	IIa
182	MU1	0-20	1/8" Fast Sort	1/8"	1	0.08	3.4	4.25	1.56	S	Drawn	round	Ext: 7.5R 3/8 ; Int.: 10.0Y 7/5	Ext: Brick Red; Int: citron	Red	red glass over green glass	matte/dull	op	compound	IVa
183	MU1	0-20	1/8" Fast Sort	1/8"	1	0.02	3.04	2.16	1.16	S	Drawn	circular	6.25PB 3/12	Ultramarine	Blue	none	dull	op	simple	IIa
184	MU1	0-20	1/8" Fast Sort	1/8"	1	0.02	3.02	2.23	1.35	S	Drawn	circular	N9	White	White	none	dull	tsp	simple	IIa
185	MU1	20-	1/8" Fa	1/8"	1	0.02	3.22	2.32	1.29	S	Drawn	circular	6.25PB	Ultrama	Blue	none	shiny	tr	simple	IIa

		40	st Sort										3/12	rine						
186	MU1	20-40	1/8" Fast Sort	1/8"	1	0.01	2.74	2.2	0.96	S	Drawn	circular	N1	Lamp Black	Black	none	dull	op	simple	IIa
187	MU1	20-40	1/8" Fast Sort	1/8"	1	0.01	2.91	1.88	0.92	VS	Drawn	circular	10.0BG 4/8	Turquoise	Green	none	shiny	tr	simple	IIa
188	MU1	20-40	1/8" Fast Sort	1/8"	1	0.03	3.06	1.94	1.41	VS	Drawn	circular	10.0GY 4/8	Deep Grass Green	Green	none	shiny	tr	simple	IIa
189	MU1	20-40	1/8" Fast Sort	1/8"	1	0.03	2.7	1.88	0.89	VS	Drawn	circular	10.0GY 4/8	Deep Grass Green	Green	none	shiny	tr	simple	IIa
190	MU1	20-40	1/8" Fast Sort	1/8"	1	0.02	2.92	1.89	0.97	VS	Drawn	circular	N9.5	Bright White	White	none	dull	op	simple	IIa
191	MU1	20-40	1/8" Fast Sort	1/8"	1	0.02	3.13	1.81	1.01	VS	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	op	simple	IIa

192	MU1	20-40	1/8" Fast Sort	1/8"	1	0.02	2.96	2.19	0.98	S	Drawn	circular	N9	White	White	none	shiny	tsp	simple	IIa
193	MU1	20-40	1/8" Fast Sort	1/8"	1	0.05	3.82	1.85	1.56	VS	Drawn	circular	10.0GY4/8	Deep Grass Green	Green	none	dull	op	simple	IIa
194	MU1	20-40	1/8" Fast Sort	1/8"	1	0.04	3.59	2.59	1.07	S	Drawn	circular	5.0Y9/2	Pearl	White	none	dull	op	simple	IIa
195	MU1	20-40	1/8" Fast Sort	1/8"	1	0.02	2.58	1.67	1.09	VS	Drawn	circular	10.0GY5/10	Grass Green	Green	none	dull	tsp	simple	IIa
196	MU1	20-40	1/8" Fast Sort	1/8"	1	0.09	3.57	3.86	1.18	S	Drawn	tubular	N1	Lamp Black; inky exterior patina	Black	none	extremely patinated; inky Black/purple appearance	op	simple	Ia
197	MU1	20-40	1/8" Fast S	1/8"	1	0.02	3.26	2.39	0.75	S	Drawn	circular	2.5B6/7	Bright Aqua Blue	Blue	none	heavy patina	op	simple	IIa

			ort																	
198	MU1	20-40	1/8" Fast Sort	1/8"	1	0.27	5.32	6.72	2.24	M	Wound	donut	2.5R 5/8 (N8 patina)	Light Wine; oyster white patina	Red	none	shiny	tr	simple	WId
199	MU1	20-40	1/8" Fast Sort	1/8"	1	0.07	4.26	1.73	1.23	VS	Drawn	circular	N1	Lamp Black	Black	none	dull	op	simple	IIa
200	MU1	40-50	1/8" Fast Sort	1/8"	1	0.01	2.81	2.03	0.73	S	Drawn	circular	2.5B 6/7	Bright Aqua Blue	Blue	none	dull	tr	simple	IIa
201	MU1	40-50	1/8" Fast Sort	1/8"	1	0.01	2.37	2.33	0.87	S	Drawn	circular	2.5B 6/7	Bright Aqua Blue	Blue	none	dull	tr	simple	IIa
202	MU1	50-60	1/8" Bulk Fast Sort	1/8"	1	0.03	4.18	2.09	1.28	S	Drawn	circular	n/a	Clear	Clear	none	dull	tsp	simple	IIa
203	MU1	50-60	1/8" Fast	1/8"	1	0.02	3.15	1.82	1.41	VS	Drawn	circular	N1	Lamp Black	Black	none	shiny	op	simple	IIa

			Sort																	
204	MU1	50-60	1/8" Fast Sort	1/8"	1	0.02	2.25	1.52	0.59	VS	Drawn	circular	N1	Lamp Black	Black	none	shiny	op	simple	IIa
205	MU1	50-60	1/8" Fast Sort	1/8"	1	0.03	3.15	2.32	1.12	S	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	matte/dull	op	simple	IIa
206	MU1	50-60	1/8" Fast Sort	1/8"	1	0.04	3.58	2.38	1.42	S	Drawn	circular	N1	Lamp Black	Black	none	matte/dull	op	simple	IIa
207	MU1	50-60	1/8" Fast Sort	1/8"	1	0.05	3.86	2.55	1.01	S	Drawn	circular	N1	Lamp Black	Black	none	matte/dull	op	simple	IIa
208	MU1	50-60	1/8" Fast Sort	1/8"	1	0.1	5.73	3.16	1.07	S	Wound	oblong	7.5B 8/2	Pale Blue	Blue	overlaid paint and internal swirl	matte/dull	op	complex	WIIx
209	MU1	50-60	1/8" Fast S	1/8"	1	0.02	3.13	2.03	1.02	S	Drawn	circular	10.0B 6/3	Mist Blue	Blue	none	matte/dull	op	simple	IIa

			ort																	
210	MU1	60-70	1/8" Fast Sort	1/8"	1	0.01	3.04	1.81	0.85	VS	Drawn	circular	2.5YR 2/2	Dark Rose Brown	Red	none	matte/dull	op	simple	IIa
211	MU1	60-70	1/8" Fast Sort	1/8"	1	0.05	3.67	2.67	1.35	S	Drawn	tubular	10.0BG 4/8	Turquoise	Green	none	matte/dull	tr	simple	Ia
212	MU1	60-70	1/8" Fast Sort	1/8"	1	0.03	2.91	1.84	1.06	VS	Drawn	circular	N1	Lamp Black	Black	none	matte/dull	tr	simple	IIa
213	MU1	60-70	1/8" Fast Sort	1/8"	1	0.03	3.12	2.04	0.95	S	Drawn	circular	N1	Lamp Black	Black	none	matte/dull	op	simple	IIa
214	MU1	70-80	1/8" Fast Sort	1/8"	1	0.32	6.5	6.02	2.76	L	Wound	round	7.5YR 4/4 (N1)	Maple with Lamp Black striations	Brown	inlaid	matte/dull	op	complex	WIb
215	MU1	70-80	1/8" Fast Sort	1/8"	1	0.26	6.84	4.35	2.2	M	Wound	round	2.5Y 7/8	Light Gold	Yellow	none	matte/dull	tr	simple	WIb

216	MU1	70-80	1/8" Fast Sort	1/8"	1	0.03	2.69	2.09	0.53	S	Drawn	circular	7.5G 3/8	Dark Emerald Green	Green	none	dull	tr	simple	IIa
217	MU1	80-90	1/8" Fast Sort	1/8"	1	0.05	2.3	2.94	0.95	S	Drawn	circular	7.5G 3/8 // 10.0YR 3/4	Dark Emerald Green; Deep Brown patina	Green	none	dull/matte	tr	simple	IIa
218	MU1	80-90	1/8" Fast Sort	1/8"	1	0.03	3.3	2.44	1.55	S	Drawn	circular	n/a	Clear	Clear	none	shiny; patination	tsp	simple	IIa
219	MU1	80-90	1/8" Fast Sort	1/8"	1	0.04	3.37	2.45	1.36	S	Drawn	circular	N1	Lamp Black	Black	none	shiny	op	simple	IIa
220	MU1	80-90	1/8" Fast Sort	1/8"	1		3.02	2.54	1.36	S	Drawn	round	5.0R 3/10	Ext: Barn Red Int: citron	Red	red glass over green glass	dull	op	compound	IVa
221	MU1	80-90	1/8" Fast S	1/8"	1	0.08	4.28	3.13	1.38	S	Drawn	cylinder	6.25PB 3/12	Ultramarine	Blue	none	dull	tr	simple	IIa

			ort																	
222	MU1	80-90	1/8" Fast Sort	1/8"	1	0.02	2.79	1.98	0.85	VS	Drawn	cylinder	n/a	Clear	Clear	none	dull	tsp	simple	IIa
223	MU1	80-90	1/8" Fast Sort	1/8"	1	0.02	3	1.6	0.8	S	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	tr	simple	IIa
224	MU1	Wall Fall	1/8" Fast Sort	6.75L	1	0.02	2.89	2.32	0.97	S	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	tr	simple	IIa
225	MU1	Strat4	Column sample	6.75L	1	0.01	1.97	1.06	0.52	VS	Drawn	circular	6.25PB 3/12	Ultramarine	Blue	none	shiny	tr	simple	IIa
226	MU1	Strat1	Column sample	8.5L	1	0.01	1.98	1.45	0.46	VS	Drawn	circular	N 9.5	Bright white	White	none	matte	op	simple	IIa
227	MU1	Strat1	Column sam	8.5L	1		3.17	1.17	1.04	VS	Drawn	circular	N 1	Lamp Black	Black	none	shiny	op	simple	IIa

			ple																	
228	MU1	Strat3	heavy fraction	9.75L	1		3.04	2.56	1.31	S	Drawn	circular	10.0BG 3/6	Turquoise	Green	none	dull	tr	simple	IIa
229	MU1	Strat2	Columns sample	9.75L	1		3.15	1.77	0.97	VS	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull	tr	simple	IIa
230	MU1	Strat3	Columns sample	10.5L	1		2.45	1.93	0.98	VS	Drawn	circular	N/A	Clear	Clear	none	shiny/patina	tr	simple	IIa
231	MU1	Strat3	Columns sample	10.5L	1		3.68	1.98	1.74	VS	Drawn	circular	N1	Lamp Black	Black	none	shiny	op	simple	IIa
232	MU1	Strat3	Columns sample	10.5L	1		2.5	2.71	0.83	S	Drawn	circular	2.5Y 6/8	Mustard Gold	Yellow	none	dull	tr	simple	IIa
233	MU1	Str	hea	10.	1		4.36	3.	1.98	S	Drawn	circular	10.0G	Deep Gr	Gre	none	shiny	tr	sim	IIa

		at3	vy fraction	5L				35					Y 4/8	ass Green	en				ple	
234	MU1	Strat3	heavy fraction	1/8"	1		2.85	1.25	0.72	VS	Drawn	circular	2.5B 7/2	Dusty Aqua Blue	Blue	none	dull/matte	op	simple	IIa
235	MU4	40-50	1/4" full sort	1/4"	1	0.21	4.71	8.43	1.5	M	Wound	oblate/biconical	5.0R 4/12	Rose Brown	Red	inlaid	dull/matte	tr	simple	WIIIa
236	MU5	100-110		1/8"	1	0.11	6.71	2.81	1.72	M	ceramic/prosser	oblong/irregular	10.0YR 3/4	Deep Brown	Brown	none	patinated with coppery Gold flake	n/a	simple	PMId
237	MU1	20-40		1/4"	1	0.39	8.7	5.75	1.62	L	ceramic/prosser	cylinder/barrel disk	10YR 5/10	Topaz	Blue	overlaid/inlaid emerald	patinated with coppery flake		composite	PMIg
238	MU1	20-40		1/4"	1	0.32	7.54	6.24	1.81	M	Wound	spherical	7.5YR 4/4 (5.0Y 8/12	Maple with Buttercup striations	Brown	inlaid	dull	tr	compound	WIb

Uncovering the Indigenous Past at Mission La Purísima Archaeological Field School 2019