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BOATS (USE OF)
القوارب (استخداماتها)

Steve Vinson

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Steve Vinson

Boote (Gebrauch)
Bateaux (Usage)

Ancient Egyptian boats are defined as river-going vessels (in contrast with sea-going ships). Their use from late Prehistory through the Ptolemaic and Roman Periods included general transportation and travel, military use, religious/ceremonial use, and fishing. Depending on size and function, boats were built from papyrus or wood. The oldest form of propulsion was paddling, although there is some evidence for towing as well. Sailing was probably introduced towards the end of the late-Predynastic Period.

يتم تعريف المراكب المصرية القديمة كسفن نهرية (تختلف عن السفن البحرية)، استخدام المراكب امتد من عصور ما قبل التاريخ حت العصور البطلمية والرومانية ليشمل المواصلات العامة والسفر والاستخدام العسكري والديني والطقسي والصيد.

لقد شيدت المراكب من البردي أو الخشب بناءاً على حجمها والغرض منها. ويعتبر التجديف من أقدم أساليب الدفع ، على الرغم من وجود أدلة تشر إلى استخدام القطر (الجذب) أيضا. أما بالنسبة للإبحار بالشراع، فمن المرجح أنه بدأ خلال نهاية عصور ما قبل التاريخ.

Boats in ancient Egypt were ubiquitous and crucially important to many aspects of Egyptian economic, political, and religious/ideological life. Four main categories of uses can be discussed: basic travel/transportation, military, religious/ceremonial, and fishing. Examples of each can be traced from the formative period of Egyptian history down to the close of Egypt's traditional culture in the fourth century CE. One terminological problem is to identify a dividing line between "boats" and "ships." For the purpose of this article, the term "ship" is arbitrarily taken to mean craft working entirely or primarily at sea (i.e., on the Red Sea or Mediterranean). Therefore, we confine ourselves here as far as possible to water craft of any size that were intended primarily for service on the Nile.

Types

A large variety of boat types can be identified in ancient Egypt, ranging from small papyrus rafts that might be capable of carrying only a single person (see Landström 1970: 94 - 97), up to extremely large vessels used for transporting exceptionally large cargoes like obelisks (see especially the obelisk barge of Hatshepsut pictured at Deir el-Bahri, which was 120 cubits, or about 60 meters, long; Landström 1970: 128 - 133). Vessels can also be divided into ceremonial/official vessels and

working vessels. Ceremonial/official vessels often had the "*wjȝ*" profile of a divine bark: that is, a long, narrow hull with a bent stern decoration and an upright bow post, best exemplified by the 4th Dynasty Khufu vessel (fig. 1; Lipke 1984 for details; now also Mark 2009). These decorative posts were intended to evoke the tied-off ends of papyrus rafts, evoking Egyptian mythology in which the vessels of the gods appear as papyrus (see further below). Actual working vessels, on the other hand, while adopting a great many sizes and proportions, were typically broader than ceremonial vessels (Vinson 1997), generally lacked purely decorative posts, and typically had greater free-board (that is, the distance from the surface of the water to the upper edge of the hull).



Figure 1. The funerary ship of Khufu.

Prior to the introduction of the sail, probably in the very late Predynastic Period (fig. 2; Vinson 1994: 15 - 16), pictorial evidence suggests that paddling (i.e., with the paddle held in the paddler's hand, not

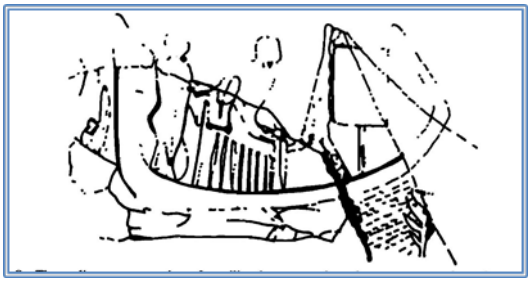


Figure 2. The earliest representation of a sailing boat, carved on the stone censer from Qustul, Nubia.

mounted on, or attached to, the vessel in any way as an oar would be) was the principal method of vessel locomotion, although there is evidence for towing as well (Vinson 1994: 14, fig. 6). With the introduction of the sail, nearly any vessel of any size would appear to have been equipped with mast and sail. However, ceremonial vessels or military vessels, or vessels like the personal "yachts" of dignitaries, for which demonstration of wealth and power, as well as speed and reliability of service were critical, continued to employ large crews of paddlers or rowers. Vessels primarily intended for cargo transportation, on the other hand, appear to have had comparatively smaller crews and to have relied as far as possible on wind power or towing (Vinson 1998a: 15 - 21).

As one might expect, the Egyptians had a large variety of terms for various types of river or ocean-going craft, which can rarely be directly identified with a specific type known to us from the iconographic record. Possibly the most common word was *dpt*, an old term that occurs in both the Pyramid Texts and the Palermo Stone and seems to have been a common word for almost any type of boat or even ship (Jones 1988: 150); the term designates large, sixteen-framed vessels constructed by Sneferu in the 4th Dynasty (Vinson 2002: 92 - 94) and the large Red Sea ship in the Middle Kingdom *Tale of the Shipwrecked Sailor* (e.g., Shipwrecked Sailor 25; Blackman 1932: 42, 8; Simpson 2003c: 48). One interesting and also very old term is the *dwȝ-tȝwy*, or "Praise of the Two Lands" vessel, a term that may have been used to designate large, ceremonial vessels similar to



Figure 3. Old Kingdom transport boats.

the Khufu funerary vessel from the Early Dynastic Period onward (Vinson 2002).

Other descriptive terms include terms based on the numbers eight, ten, and sixteen, which may have been intended to convey a general notion of the size of a craft, based on the number of internal frames (ribs) the vessel had (Vinson 2002: 93 - 94). The term *ḥꜥ*, or "that which stands up," was common from the Middle Kingdom forward and may be a metonym—i.e., a term designating a mast that comes to represent the vessel itself. In the New Kingdom, a common term for a cargo vessel was the *wsḫ*, or "broad" vessel. Some New Kingdom vessel designation may be of foreign origin, particularly the very common *br*, which seems to have originally designated vessels used on the Mediterranean and Red Sea (Vinson 1993: 146 - 147). This name continued to be common into the Ptolemaic and Roman Periods and was rendered by Greek authors beginning with Herodotus as "*baris*." For Greek authors, a *baris* appears to have been a common working Nile boat, and the Demotic word *byr*, which underlies the Greek form, also appears most often in this sense. However, the word appears to designate sea-going ships in the Demotic text of the Rosetta Stone inscription and also appears once in a Demotic docket to a Persian Period Aramaic document, there designating what appears to be a ceremonial vessel (Vinson 1998b: 252 - 253; for further references to these and many other specific types, see Jones 1988: 129 - 151).

Basic Travel/Transportation

The earliest evidence for the use of boats in Egypt usually comes in religious contexts—either funeral (like the common images of boats on Naqada II/Gerzean pots encountered in Predynastic graves) or in rock art that was, presumably, executed for ceremonial/magical purposes (Landström 1970: 11 - 22; Vinson 1994: 13 - 16). That said, the ubiquity of the images would appear to confirm that boats must have been an increasingly important part of the daily life of Egyptians in the late Predynastic Period. The spread of Egypt's Naqada II/Gerzean throughout the Nile Valley would have been greatly facilitated by improved river travel; it is probably no coincidence that images of boats with sails first occur at the very end of the Predynastic Period, or just at the cusp of the period in which a single group of rulers was able to extend political power, economic control, and cultural uniformity throughout the Nile Valley (Vinson 1994: 16).

By the Old Kingdom, images of boats carrying every-day cargo, especially food-stuffs, is common in Egyptian tomb art, and Egyptian texts of many types—literary as well as documentary—record the use of boats for basic transportation (fig. 3). Especially common in the written record are mentions of grain transport (e.g., from the Ramesside Period, the Turin Taxation Papyrus, Vinson 1995; or the Amiens Papyrus, see Vinson 1998a: 52; Janssen 2004) and the transportation of stone (Vinson 1998a: 25 -

26), both as raw material for construction or in more-or-less worked forms like columns or obelisks (see also Carlens 2003; Wirsching 1999). Both grain and stone were of prime interest to large governmental and/or temple bureaucracies, so their prominence in the written and iconographic record is to be expected. Nevertheless, many other types of cargo can be documented, including bread, cattle, vegetables, fish, and wood. The evidence for this sort of basic transportation of every-day commodities is extremely rich, particularly in the New Kingdom, from when two transport vessel's logs are preserved (Janssen 1961), along with numerous papyri and ostraca that document shipping of all kinds (for a substantial sampling, see Vinson 1998a: 201 - 203). Transport shipping on the Nile is even more copiously documented in the Ptolemaic and Roman Periods, in both Greek and in Demotic sources (for substantial bibliography, see Vinson 1998a: 198 - 201).

Military Use of Boats

The connection of boats with warfare can be traced back to the Predynastic Period. Possibly the earliest image of boats connected to combat in Egyptian art is the Gebel el-Arak knife handle, an ivory knife handle apparently of Naqada II/Gerzean date, which shows two rows of boats of contrasting designs underneath two registers of men fighting (Vinson 1994: 16 - 18, with fig. 9). Because the boats in the upper of the two rows shows hulls that strongly resemble craft depicted on contemporaneous representations from Mesopotamia, the Gebel el-Arak knife handle was once thought to provide strong evidence for the theory of the infiltration into Egypt around 3100 BCE of a "Dynastic Race," perhaps from in or near the region of Sumer (Bass 1972: 13; Bénédite 1916: 31 - 34; Petrie 1920: 49). Supposedly, the maritime invaders of this "Dynastic Race" will have sailed southeast (!) down the Persian Gulf, circumnavigated Arabia, entered Egypt on the western Red Sea coast, portaged their boats through the Eastern Desert (where numerous allegedly "foreign" boat petroglyphs were found, see Winkler 1938: 38 - 39), and then, over time, come to dominate the indigenous, Predynastic Egyptians and imposed on them a centralized, literate state.

However, the "Dynastic Race" model, first proposed in the late nineteenth century (in the hey-day of the highly-racially-conscious British imperial project in Egypt, see Vinson 2004), has long been abandoned on multiple grounds (Hoffmann 1979: 339 - 342). It is therefore hard to know exactly what to make of the Mesopotamian-looking vessels on the knife handle, which are quite unparalleled in other known examples of Predynastic Egyptian nautical art. It seems likely that the Mesopotamian imagery seen here is the result of a range of Mesopotamian cultural importations into late Predynastic Egypt, probably via Syria, reached by Sumerians during the Uruk Expansion of the late fourth millennium BCE (Moorey 1987). Military conflict between fleets commanded by Predynastic Egyptians and invading Uruk-era Mesopotamians is probably not the explanation. On the other hand, whoever executed the Gebel el-Arak image was certainly familiar with the notion that boats could be used in warfare.

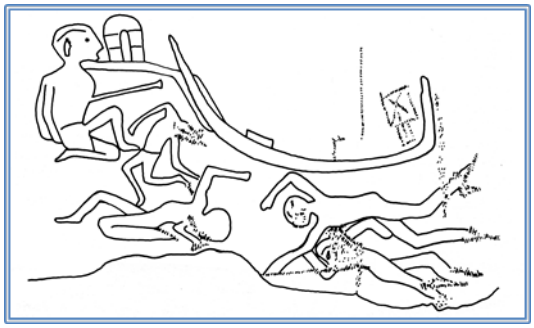


Figure 4. Petroglyph dated to the reign of the 1st Dynasty king Djer.

In the 1st Dynasty, a petroglyph connected to king Djer at the site Gebel Sheikh Suliman appears to show Nubian captives or slain surrounding a boat, which perhaps indicates a water-borne expedition into Nubia (fig. 4; Vinson 1994: 20, fig. 11). The 6th Dynasty autobiography of Weni reports the use of boats to launch a sea-borne attack somewhere off the coast of Syria-Palestine (?) at a place he calls "Antelope Nose" (Strudwick 2005:

355). Boats must have been used frequently for military operations, but depictions of such are surprisingly scarce. One excellent, but rare, example is a group of three rowed river boats shown in a wall painting from the 11th Dynasty Theban tomb of an official of Mentuhotep I named Intef (Vinson 1994: 35, fig. 25). Aside from the rowers, the boats also carry archers and soldiers armed with shields and battle-axes. Who the enemy is, however, is unfortunately unclear.

At the end of the First Intermediate Period, the Kamose Stela describes Egyptian troops under the Theban king Kamose moving northward in a battle fleet from Thebes to attack the Hyksos at Avaris (Simpson 2003a: 346 - 348). From the very early 18th Dynasty, the autobiography of Ahmose, son of Ebana, who had made his career in the military serving aboard combat vessels, describes fighting from Nile boats both at Avaris (under the command of Kamose's younger brother Ahmose, who finally defeated the Hyksos and reestablished centralized rule in Egypt as first king of the 18th Dynasty) and two invasions of Nubia in which Nile boats were used to convey Egyptian armies (under the commands of Amenhotep I and Thutmose I; Lichtheim 1976: 12 - 15; Simpson 2003a).

The only naval engagement actually portrayed in Egyptian art is the great battle against the People of the Sea in the funerary temple of Ramesses III at Medinet Habu (fig. 5; Vinson 1994: 45, fig. 32), which appears to have taken place in the Nile Delta, not in the open sea. It is not, however, clear that any of the vessels involved are actually "Egyptian," if by that we mean a vessel built, crewed, and commanded by Egyptians. It is notable that the ships on both sides of the battle are rigged with a new, non-Egyptian technology called "brails" (Venetian-blind-like cords that permitted rapid shortening and easy reshaping of sails), and the attire of the great majority of "Egyptian" marines suggests that they could be ethnically or culturally connected to the invading Sea Peoples. If so, it could be that the "Egyptian" fleet is actually a mercenary fleet (Vinson 1993: 146 - 147).

With the demise of the New Kingdom, boats certainly continued to be used for military purposes on the Nile. The great stela of the Nubian king Piankhy describes the fleet used to move his troops against his Libyan enemies in the Egyptian Delta, and the Libyan fleet that tried to stop Piankhy (Ritner 2003: 372). In the Saite Period, Egyptians along with Greek and Carian mercenary soldiers sailed south for a campaign against the Nubians; one expedition is commemorated by Greek and Carian graffiti on the colossal statues of Ramesses II at the rock-cut temple of Abu Simbel (Hansen 1984; see also Herodotus 2.161, translation in Grene 1987: 202 - 203).

Religious/Ceremonial Use of Boats

The use of boats or images of boats for religious purposes is found throughout Egyptian history, from the Predynastic Period down to the end of Egypt's traditional culture in the fifth century CE. One of the Egyptians' central religious images was that of the continuous voyage of the sun god Ra through the sky in his two barks, the day bark and the night bark. The continual motion of the solar barks betokened the continued functioning of *maat*, the basic moral foundation of the entire universe, including the celestial realm (Assmann 2006: 193 - 194). One image of a blessed afterlife included joining Ra in his bark. Those traveling with Ra were assured of rebirth, as the Sun in his bark emerged every morning from the sky goddess Nut (Hornung 1984: 37). As a result, images of boats are ubiquitous in tomb art, especially in the vignettes accompanying the underworld books in many royal tombs of the Egyptian New Kingdom, which show the many stages of the night voyage of the Sun (Hornung 1984: 1991). In fact, the very first painted Egyptian tomb, Hierakonpolis Tomb 100 from the Gerzean/Naqada II Period, has a boat procession for its principle theme (fig. 6; Vinson 1994: 14, fig. 5). There is no direct proof that the boats depicted in the Hierakonpolis tableau represent the bark of Ra or any associated barks, and many other interpretations have been offered, including

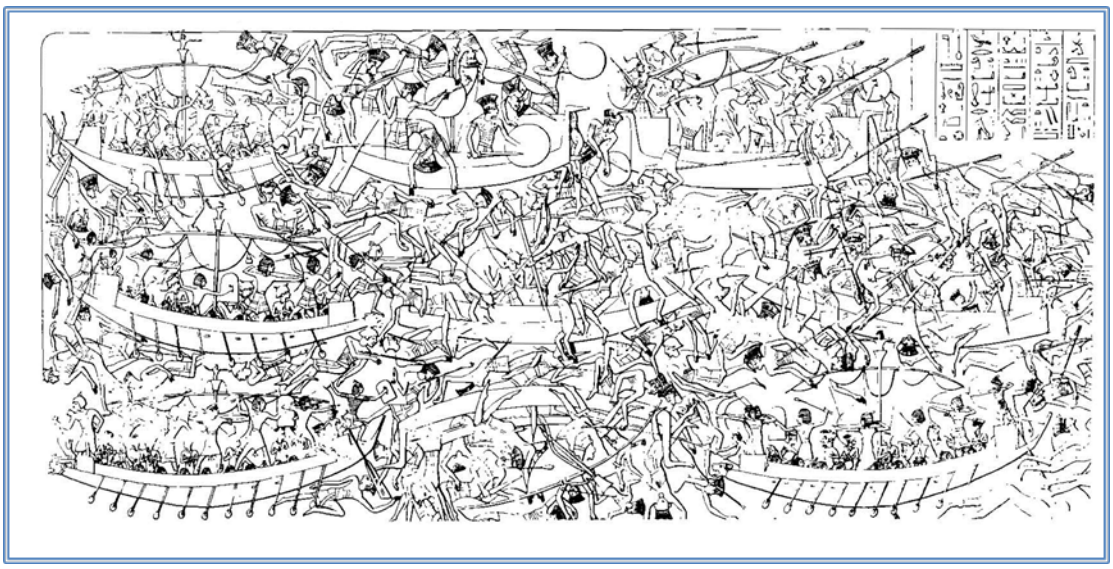


Figure 5. The relief at Medinet Habu of the naval battle against the Sea Peoples.

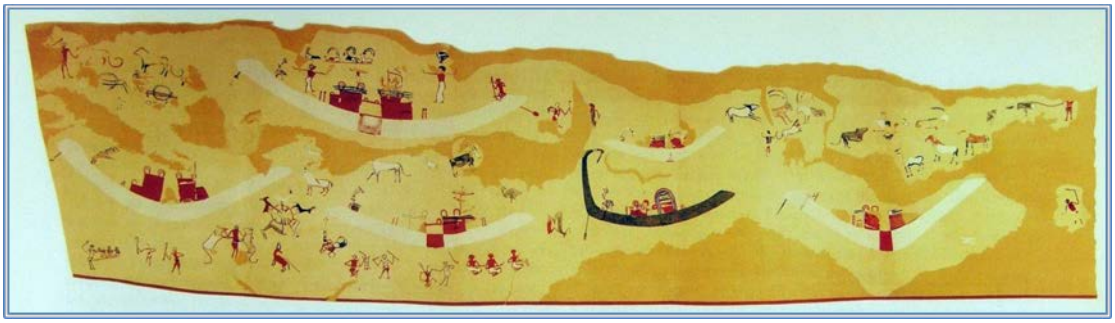


Figure 6. Boat procession from Hierakonpolis Tomb 100 (the "Decorated tomb").

the idea that the boat procession might be part of a Predynastic *heb-sed* ritual (Williams et al. 1987). However, the funerary context of the tableau makes the possibility of an association with the bark of Ra an appealing one. And in fact, one of the boats in the scene includes the image of a figure seated under a baldachin of the type that, in later Dynastic boat art, often encloses either a dead figure (e.g., the funerary boat models of Mekhet-Ra; see Winlock 1955: pls. 45 - 49), or else Ra in one of his manifestations (e.g., an image of Amun-Ra in his bark from the 3rd hour of the *Book of Gates* in the tomb of Ramesses I; see Hornung 2001: fig. 191). Further, recent discoveries by John Darnell of Yale University of petroglyphs, presumably of late Predynastic date, that show boats traveling upside down suggest possible connections to the notion of metaphysical boats traveling in an inverted, night-time world even at this remote period (Darnell fc.).

In the 1st Dynasty, the practice of burying boats with deceased kings and dignitaries began—a practice archaeologically documented from the 1st, 4th, and 12th Dynasties (Ward 2000: 39 - 80, 84 - 102, 2003; for the discovery in the summer of 2012 of a new 1st Dynasty boat at Abu Rawash, dated to the reign of King Den, see now also Ahram Online for 25 July 2012). Whether the boats buried in the 1st Dynasty were actually working vessels is unclear, since none of them has been completely excavated. However, the 4th Dynasty boats connected with the pyramid

of Khufu were magnificent specimens of shipbuilding, and could certainly have sailed on the Nile. The first of the two surviving Khufu vessels was excavated and reassembled in the 1950s. The second, far less-well preserved, has been the subject of a project to excavate and restore it undertaken by Sakuji Yoshimura of Waseda University since 2011.

Both Khufu vessels were built of Lebanese cedar in the typical *wjꜣ*-shape associated with divine boats and typical of ceremonial vessels built for gods and pharaohs (Lipke 1984). This design, especially with its decorative posts, seems intended to evoke the papyrus boats connected with the gods in Egyptian mythology. In the Pyramid Texts, either the green color or the actual papyrus construction of divine boats is mentioned with some frequency (Miosi 1975: 39 - 42, 86 - 92, 128 - 131; the boat-types *wꜣḏ* and *wꜣḏ-ʿn*, which Miosi takes as "green" and "beautiful in green" respectively, might as easily be taken to refer literally to papyrus). And at the far end of Egyptian history, a Demotic magical spell from the late Roman Period (prob. c. third century CE) refers to Osiris "upon his boat (*rms*) of papyrus (*ḏwf*) and faience" (Griffith and Thompson 1904: 57 [7.31]).

As noted above, it may be possible to link the Khufu vessels specifically to the category of *dwꜣ-tꜣwy*, or "Praise of the Two Lands" vessels, known from textual sources as early as the 2nd Dynasty (Vinson 2002). According to the Palermo Stone, a number of such vessels had been built by Khufu's father Sneferu, and the vessels' descriptions are consistent with the actual characteristics of the Khufu vessels on a number of points, including shape, construction material, and general size. It has been long argued whether the Khufu vessels were "solar" barks—that is, intended to identify the king with the sun god Ra in the next world—or whether they were his own ceremonial vessels, buried with him as a ritual offering. In fact, these possibilities need not have been mutually exclusive, and we have no reason to suppose that the vessels could not have been understood to serve multiple functions in varying contexts.

Aside from the ceremonial use of boats by kings, non-royal individuals used boats for religious purposes, particularly in pilgrimages. Among the best-documented of these was the so-called "Abydos voyage," a ceremonial, posthumous boat voyage to worship Osiris at Abydos that is documented from the Middle Kingdom into the New Kingdom, most especially in tomb reliefs (Kees 1956: 230 - 252; Yoyotte 1960: 30 - 40). It is not clear whether this was often or even ideally a real voyage, or whether the images of the "Abydos voyage" that appear in Middle and New Kingdom tombs were thought of as a sufficient substitute for an actual pilgrimage. On the other hand, use of boats is certainly documented for many other pilgrimages, including a Greco-Roman festival of the goddess Bastet described in Herodotus, 2.60 (translation in Grene 1987: 157). This famous description describes pilgrims raucously sailing down the Nile to Bubastis, singing, clapping, playing musical instruments and—most notoriously—sexually exposing themselves to on-shore spectators (Morris 2007: 219 - 221; Yoyotte 1960: 48 - 49).

Boat models were often buried with dead aristocrats and kings. Some of these models were similar to other so-called "daily life" models that appear intended to assist the deceased in maintaining his accustomed lifestyle in the next world. But many such models were specifically "solar" or "funerary" in their design and must have been intended to evoke myths of the gods traveling in their barks, and the hope that the deceased would join them. The exceptionally fine fleet of Mekhet-Ra, today shared between the Metropolitan Museum of Art in New York City and the Egyptian Museum of Cairo, illustrates the height of what Middle Kingdom Egyptian boat modelers could achieve. The vessels are notable for their painted and constructed detail, especially their rigging, although, like the vast majority of Egyptian boat models, the hulls of the Mekhet-Ra fleet were carved out of solid blocks of wood, not built of individual planks in such a way as to fully imitate working boats (for the sole known exception, a Middle

Kingdom model found at Lisht, see Ward 2000: 103 - 106). However, the funerary context of the Mekhet-Ra boats are responsible for such details as the figures of Mekhet-Ra receiving offerings under a baldachin ("yachts" T, U, V, and W; Winlock 1955: pls. 45 - 49), or sniffing a lotus-blossom (Winlock 1955: pls. 37 - 39), as well as the specific, *wjꜣ*-shaped forms of the funeral /solar vessels ("yachts"). A collection of boat models was also recovered from the tomb of Tutankhamen, but these 18th Dynasty models are, it must be said, decidedly inferior to the Mekhet-Ra models in liveliness and realism of execution (Jones 1990; see also Reisner 1913).

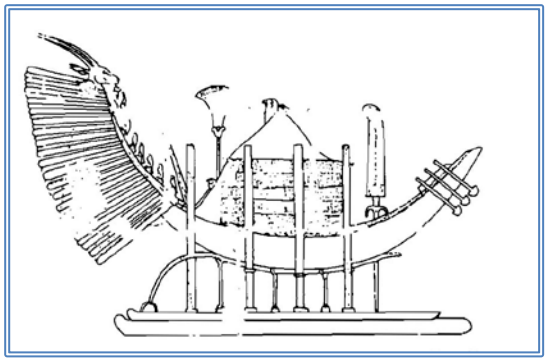


Figure 7. Ceremonial bark of the Memphite god Sokar.

Even more important than the ceremonial barks of kings were those of gods. Portable boat models were central to many cultic practices, and the holy-of-holies of Egyptian temples were often bark-shrines, places where these cultic models would be placed between symbolic voyages within or outside of the divinity's home temple (fig. 7). However, some gods, notably the state god Amun in the New Kingdom, possessed full-scale river boats. The bark Amun-User-Hat, or "Amun-Mighty-of-Prow," is known from multiple New Kingdom sources, both textual and iconographic (Jones 1988: 232 - 233). Perhaps most famously, the bark figures in the terminal New Kingdom/early Third Intermediate Period *Tale of Wenamun*, which recounts the experiences of a (fictional) priest dispatched to Lebanon to purchase cedar for a renovation of the bark (Lichtheim 1976: 224 - 230; Wente 2003: 116 - 124). A second important sacred vessel was the Neshmet bark of Osiris, which appears to have been involved in a water-borne ritual drama at Abydos, in which boats manned by "confederates of Seth" attempted—always unsuccessfully—to attack and murder Osiris (see the Middle Kingdom Ikhernofret stela, Simpson 2003b).

Large-scale ceremonial barks continued in use in major Egyptian temples well into the Ptolemaic and Roman Periods. Herodotus described boats used in the Persian Period during rites connected with Osiris (see Herodotus 2.171, translation in Grene 1987: 205 - 206; Lloyd 1988: 209). From the Ptolemaic Period, the Apis Embalming Ritual describes a procession of the deceased Apis to the "Lake of Kings" near the Memphite Sarapeion. Following this procession, the cadaver of the Apis was laid out on the lake's shore, while priests standing on a papyrus bark (*wjꜣ*) recited the appropriate ritual texts. These procedures were intended to suggest both the Osirian and solar aspects of the Apis bull and his impending metempsychosis and rebirth (Vos 1993: 160 - 162). A fascinating late Roman Demotic graffito from the Temple of Philae records the graffitist's donation of a large amount of pitch for the purpose of water-proofing the sacred bark of Isis (Graffito Philae 417, ls. 7 - 8, Vinson 1996: 200, note 18).

Fishing

Pictorial evidence shows that fishing boats were generally small, able to be operated by one to five persons. Vessels might be rafts made of papyrus bundles (e.g., as seen in the papyrus models Y from the Middle Kingdom tomb of Mekhet-Ra; Winlock 1955: 102 - 103, and pl. 52) or made of wood (excellent illustration in the Ramesside tomb of Ipy, TT217; Davies and Gardiner 1936: pl. 96). Many illustrations of fishing from boats show fishermen using various types of nets, sometimes (as in the two Mekhet-Ra papyrus boat models) with two craft working together. Other methods used from boats or rafts were spearing and line-fishing (see in general van

Elsbergen 1997). Depictions of fishing are especially common in the Old Kingdom, but can be found in the Middle and New Kingdoms as well; documentary evidence for commercial fishing continues on into the Ptolemaic and Roman Periods, when there is at least some evidence for women involved in the occupation (Vinson 1998a: 91).

Bibliographic Notes

For the general operation of Nile River boats, including issues of boat types, crew sizes, types of cargoes, social status of persons working on boats, and types of occupations connected to Nile River ships and shipping, see Vinson (1998a), although the discussion is limited to the Ramesside through the Ptolemaic and Roman Periods. For two Egyptian texts connected with daily operation of a boat in the Ramesside Period, see Janssen (1961). Landström (1970) is oriented towards nautical technology, but contains much interesting material on the actual use of boats. Two short books on Egyptian boats and ships contain considerable material on use as well: Vinson (1994) and Jones (1995). Jones (1988), although strictly speaking a glossary, is full of bibliographical and other incidental information of use. On fishing specifically, see van Elsbergen (1997).

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External Links

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First Dynasty funerary boat discovered at Egypt's Abu Rawash. (Internet resource: http://english.ahram.org.eg/News/48641.aspx. Accession date: 25 July 2012.)

Institute of the Solar Boat (Nonprofit Organization)

The second solar boat of King Khufu. (Internet resource: http://www.solarboat.or.jp/performance_e.html. Accession date: July 2012.)

Image Credits

Figure 1. The funerary ship of Khufu. (http://en.wikipedia.org/wiki/File:Gizeh_Sonnenbarke_BW_2.jpg; CC BY-SA 3.0.)

Figure 2. The earliest representation of a sailing boat, carved on the stone censer from Qustul, Nubia. Drawing by Harold Dinkel. (After Williams 1980: 16.)

Figure 3. Old Kingdom transport boats. (After Lepsius 1850 - 1851: B1. 104b.)

Figure 4. Petroglyph dated to the reign of the 1st Dynasty king Djer. Drawing by Harold Dinkel. (After Arkell 1950: fig. 1.)

Figure 5. The relief at Medinet Habu of the naval battle against the Sea Peoples. (Epigraphic Survey 1930: pl. 37. Courtesy of the Oriental Institute of the University of Chicago).

Figure 6. Boat procession from Hierakonpolis Tomb 100 (the "Decorated tomb"). (After Quibell and Green 1902: pls. LXXV - LXXV III.)

Figure 7. Ceremonial bark of the Memphite god Sokar. Drawing by Harold Dinkel. (After Epigraphic Survey 1940: pl. 221.)