



MARINE UNITS ON THE "WAYS OF HORUS" IN THE DAYS OF SETI I

JEAN YOYOTTE IN MEMORIAM

Orly Goldwasser
Hebrew University, Jerusalem

Eliezer D. Oren
Ben-Gurion University, Beer Sheva

ABSTRACT

Archaeological explorations along the North Sinai corridor unearthed two locally manufactured (fragmentary) vessels of early 19th Dynasty "beer jars" stamped with the cartouches of Seti I alongside a hieroglyph of a ship. A second example of a royal ship with the throne names of Seti I and Harehab was recorded on an Egyptian amphora handle from a New Kingdom fortress elsewhere in this region. This evidence provides a new addition to the known list of royal ships or navel units as well as attesting to the deployment of marine contingents in land-based military activities on the "Ways of Horus" in North Sinai. These sealings contribute to a better understanding of imperial organization of the "Ways of Horus" system during the reign of Seti I and seemingly shed new light on the role played by Harehab in reshaping Egypt's foreign policy.

The battle reliefs of Seti I (Year 1) on the north wall of the great Hypostyle Hall in the temple of Amun at Karnak coupled with a list of toponyms in the Satirical Letter of Papyrus Anastasi I, provide the basis for reconstructing the "Ways of Horus" – Egypt's imperial network in northern Sinai and the major artery of communication with the Levant.¹ These complimentary records list and display graphically some 20 toponyms of forts and wells that extended successively from the Tjaru fortress on the eastern frontier of Egypt to the city of Pa-Canaan (Gaza?) on the Canaanite terminus. Archaeological explorations since 1972 in northern Sinai have attested that these fortified installations represent Egypt's military and administrative organization that was established in the early 19th Dynasty and maintained with little interruption until its withdrawal from the Asiatic province sometime during the late Ramesside period (Ramesses VI).² The Ways of Horus military establishment of the Ramesside dynasties "from the fortress of Tjaru to the [city of] Canaan" was demonstrably patterned after an earlier model that was organized along the Sinai corridor by Thutmose III, apparently already during his joint reign with Hatshepsut.³ The results of a systematic survey and excavations by the Ben-Gurion University expedition, under the direction of Eliezer Oren from 1972–1982, add a new dimension to our understanding of the organization of the Ways of Horus.⁴ The North Sinai expedition explored and recorded between the Suez Canal and Raphia more than 230 sites with

architectural remains of various functional categories – forts, way stations, granaries, industrial installations as well as numerous campsites and seasonal encampments, which are represented by diagnostic New Kingdom / Late Bronze Age ceramics and other artifacts (Figure 1). This rich and diverse data enable us now to delineate the settlement map, determine its organizational pattern, and accurately reconstruct its history. The distribution map of our sites is characterized by site clusters at various points along the Sinai corridor with a clear hierarchical pattern in which forts or central way stations are grouped with ancillary buildings and smaller campsites or seasonal encampments.⁵ Accordingly, various commodities transported for storage in central depots were redistributed to satellite sites within their sphere. In short, the "Ways of Horus" should be viewed as a highly organized and neatly integrated administrative zone within the Sinai land bridge, rather than a "military road," i.e. a desolate desert track strung at various points with military installations.⁶

The present article is concerned with three distinctive stamped Egyptian type vessels from Sites A-343 in the Haruba cluster, and site BEA-10 in the Bir el-Abd cluster, respectively (Figure 1). The Haruba cluster, ca. 10 km east of Wadi El Arish and on the Mediterranean coast, is characterized by a gently undulating topography with active coastal sand dunes rising up to ca. 15 m above their surroundings. Favorable environmental conditions, a high water table,⁷ and rich silt deposits explain the

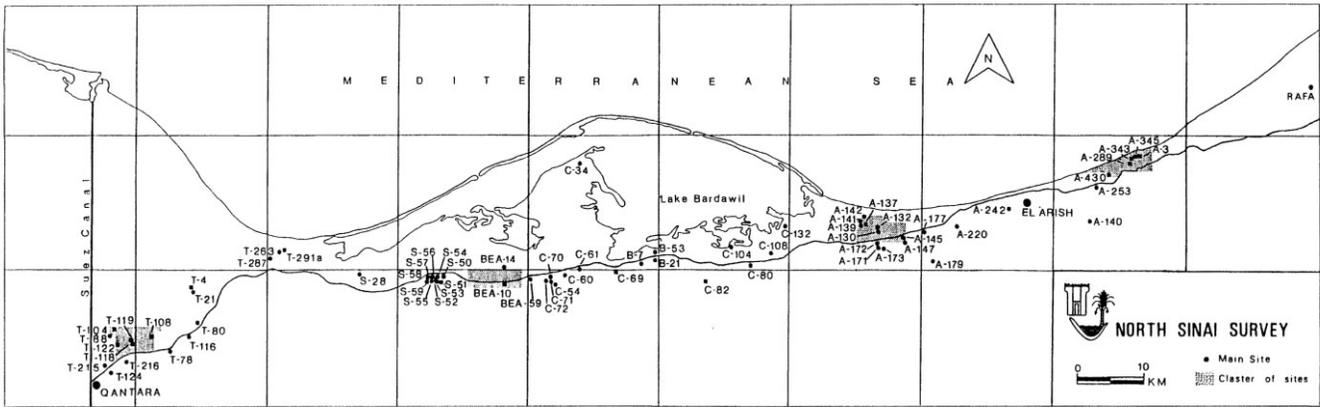


Figure 1: Map of North Sinai survey with NK / LBA sites and clusters (map by P. Loupen)

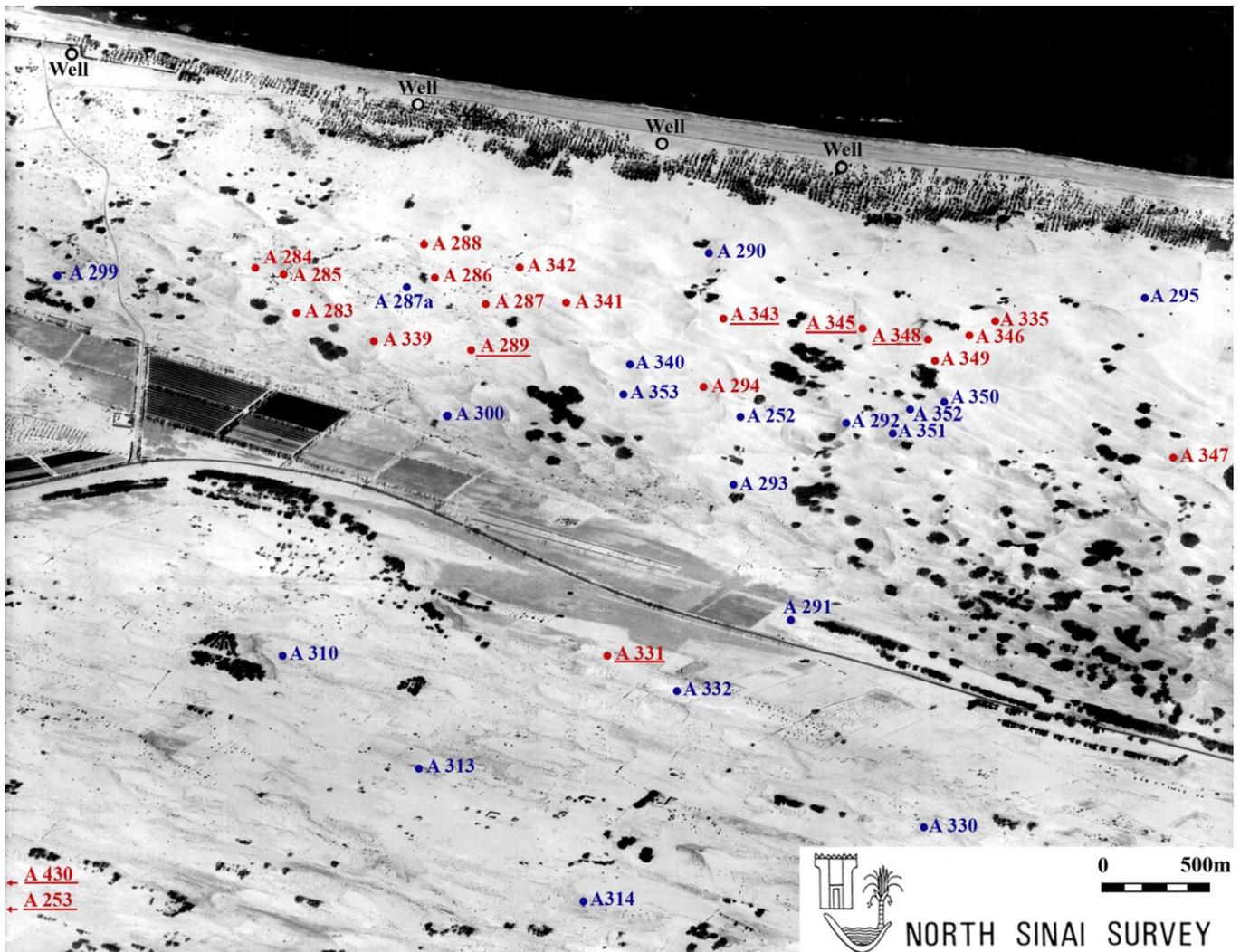


Figure 2: Aerial view of Haruba cluster. NK sites marked in red. Central sites with architectural remains are underlined (North Sinai Expedition Archive 1981/A-999)



Figure 3: Haruba cluster, Site A-343, general view looking north (Photo E. D. Oren)



Figure 4: Haruba cluster, Site A-343, general view looking northeast (Photo E.D. Oren)



Figure 5: Haruba cluster, Site A-343. Detail of robber pit and scattered stone tools and pottery. Exposed section of decayed mudbrick material at bottom of photograph (Photo E.D. Oren)

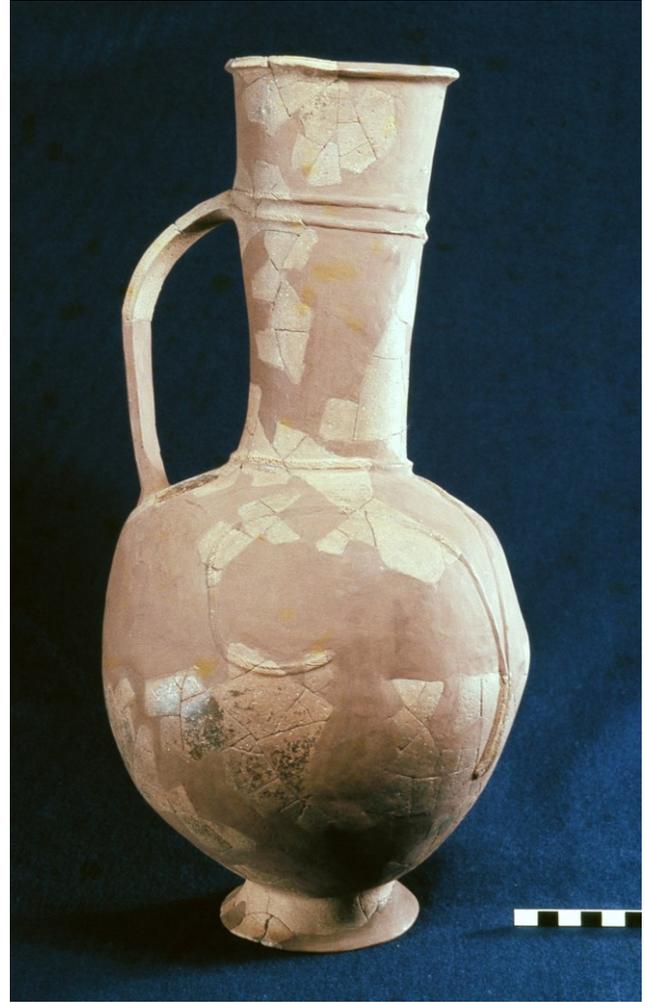


Figure 6: Site A-343. Restored Cypriot Base ring I jug #12772 (Photo A. Fogel)

density of ancient (and modern) settlements since the Chalcolithic period. The Haruba cluster is one of the larger New Kingdom (NK) site complexes along the "Ways of Horus," comprising at least 23 surveyed sites (Figure 2).⁸ Seven of the sites (underlined in red), although largely buried under shifting coastal sand dunes, show various architectural remains. Two of these sites (A-345 and A-289) have been explored intensively by the North Sinai expedition and were designated "type sites" for the mid-18th and 19th–20th Dynasties, respectively. Site A-345 is a major (unfortified?) administrative center including a magazine complex for storing grain and a large potter's workshop nearby, manufacturing a distinctively diversified repertoire of Haruba clay ceramics dated from the reign of Thutmose III – Amenhotep II,⁹ while A-289 is a massive fortress, ca. 2,500 sq. m, with a pylon-like gate.¹⁰ The remaining 16 sites, probably campsites or seasonal encampments, were identified on deflated silt surfaces of compact sandy sediment and in inter-dune depressions. Areas of activity were marked by remains of hearths, ash pits, certain stone

installations, and scattered pottery and stone implements, often mixed with deflated objects of different periods.

Site A-343 (Grid 592260/3450420) was identified in a ca. 4,000 sq. m gently sloping, silty surface in between active sand dune ridges (Figures 3–4). The shallow depression on the southwestern section of the site included an accumulation of deflated artifacts predominantly from the NK/LBA as well as from the Chalcolithic, MB I and Persian periods. Much of the northern sector of the site is covered by a thick deposit of decayed mud brick material. A small robber pit exposed some lined bricks evidencing architectural remains and nearby a few disturbed hearths, ash pits, and stone installations (Figure 5). The surface survey of this section encountered a large scatter of artifacts, including mendable vessels, stone implements, animal bones, and ostrich egg shell fragments. Owing to the almost total cover of A-343 by shifting coastal sand dunes its actual size and structure is not possible to determine. Nevertheless, judging from the nature of the surveyed remains it must have been a major site during the

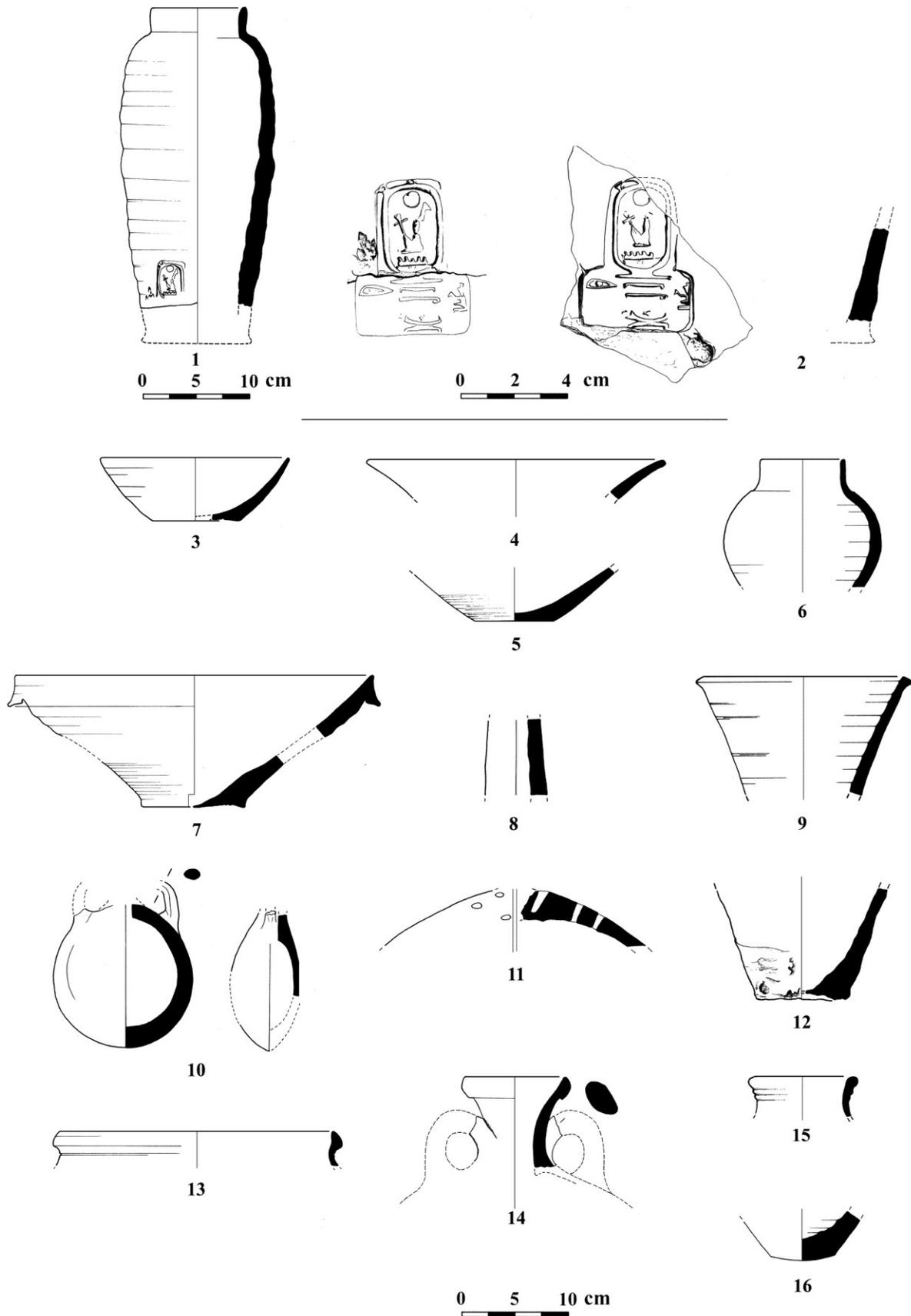


Figure 7: Site A-343. Assortment of locally manufactured Egyptian type ceramics (1-12) and imported Canaanite vessels (13-16) (Drawing P. Kaminski and A. Dodin)

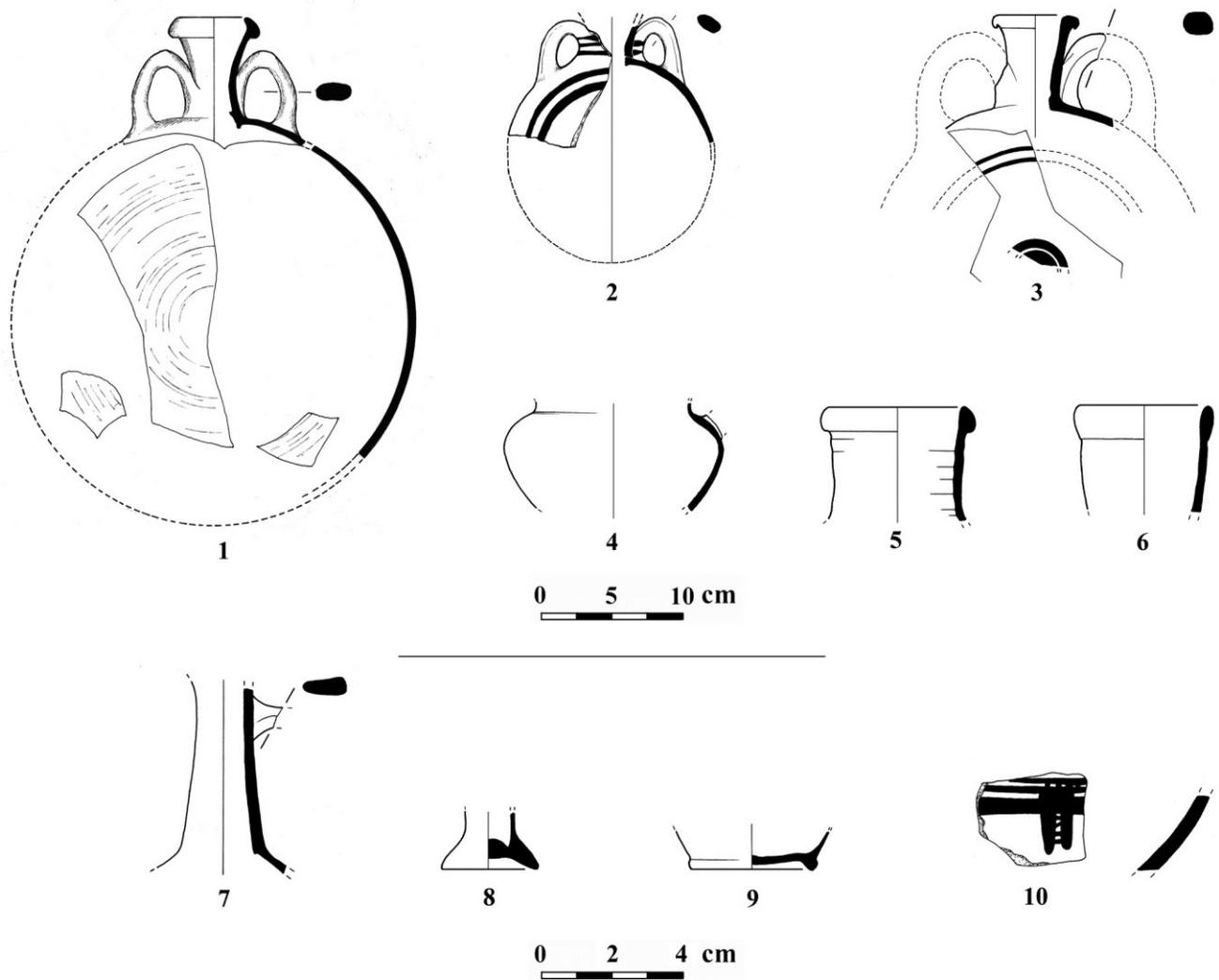


Figure 8: Site A-343. Imported Egyptian (1-6) and Cypriote (7-10) ceramics (Drawing P. Kaminski and A. Dodin)

NK/LBA. The large assemblage of NK/LBA pottery included the mixed remains of two periods of occupation during the 18th–19th Dynasties. The initial phase attributed to the mid-18th Dynasty (Thutmose III – Amenhotep II) is represented by Egyptian type pottery manufactured most likely in the official potter’s workshop of site A-345 nearby. These included characteristic vessels made of alluvial silt as well as the Haruba clay, such as flower pots, carinated jars, tall tubular stands, splash-painted bowls and jars, imported Egyptian ceramics of Nile and marl fabrics, as well as Canaanite and Cypriote imports (Figure 6). Following a short hiatus during the Amarna period site A-343 was reoccupied in late 18th and 19th Dynasty.

The pottery corpus of the later phase of site A-343 consisted of shallow bowls with a flat base (Figure 7:3–5) and globular jars (Figure 7:6) that relate typologically to Egyptian Nile E and D fabrics, but were made locally of alluvial clay.¹¹ Like in the early phase, the most common petrographic group is characterized by the Haruba clay – very calcareous silty marl, rich in iron oxide, and

tempered with coastal sand grains.¹² In addition to the stamped beer jars (Figure 7:1–2) this group included deep bowls with a ledge rim (Figure 7:7), tall stands (Figure 7:8), perforated lids (Figure 7:11), and pilgrim flasks (Figure 7:10). The abundance of Haruba clay vessels in the later phase alongside jars stamped with royal cartouches attest to the continuous activity of official potter’s workshops in the Haruba cluster through the 19th Dynasty as well.¹³ Imported Egyptian marl clay vessels included Marl D cream-slipped, burnished amphorae (Figure 8:5–6), pilgrim flasks (Figure 8:1), and a cup (Figure 8:4), as well as Marl A2 and A4 pilgrim flasks (Figure 8:2–3). It should be noted that at least 25% of the assemblage is imported Canaanite pottery, e.g., a cooking pot (Figure 7:13), a pilgrim flask (Figure 7:14), and typical LB IIB, heavy stump-based amphorae (Figure 7:15–16). The group of Cypriote imports comprised a BR II bowl, juglet, and bottle, as well as normal style WS II bowls decorated with a ladder pattern (Figure 8:7–10).¹⁴ The assemblage above is closely paralleled at sites like the Tomb of Maya at Saqqara and stratum

A at Ezbet Helmi, dating from the late 18th Dynasty, during the reign of Haremhab, to the early 19th Dynasty. The stamped beer jars provide a *terminus post quem* for the later phase of A-343.¹⁵

The "Beer Jars" from Site A-343 (Inv. 11896, 10553, Figure 7:1–2) are tall and slender in shape with a short upright neck and flat base (missing).¹⁶ It should be noted that unlike the average contemporary beer jar with a typical wide, rounded upper body,¹⁷ our vessel is taller and like typical late NK (20th Dynasty) profiles: its shape is noticeably more slender, slightly widening toward the rounded shoulder.¹⁸ Aston has pointed out that the late Ramesside, tall and slender version of beer jars may have occurred earlier. However, most known "classic" beer jars attributed to the late 18th–19th Dynasties¹⁹ are diagnostically of the shorter version (see below).

The vessel designated as a "beer jar" is one of the ubiquitous Egyptian jar types, both in shape and manufacturing techniques, and is found in large numbers in almost every NK site – domestic, cultic or funerary context, throughout Egypt, Nubia, and North Sinai.²⁰ The medium-size beer jar, usually fabricated of Nile silts (Nile B or E), is carelessly manufactured and evidently associated with mass production. This classic utilitarian vessel is often markedly asymmetrical, its wall surface is usually rough, and pronounced ribbing is common. Much like the so-called "flower pot," the most noticeable feature of beer jars is the crudely made, thick and heavy string-cut base with deep finger impressions, which is frequently intentionally perforated before firing. This class of pottery (Holthoer Type BB4), first appears in the early 18th Dynasty, becoming common during the late 18th and 19th Dynasty, and continues with some modification well into the late Ramesside period and beyond. Noticeably, by the late 19th–20th Dynasty the body is distinctly more slender and tapers steeply toward narrow base; the short cylindrical neck is higher with a plain rim.²¹

The content of beer jars remains unknown and their function is disputed. Holthoer proposed that such distinct vessels, along with "flower pots," may be associated with beer-brewing processes for the bread and beer offerings, according to *hṯp di nsw* funeral formula.²² This hypothesis is doubtful because in NK Egypt and Nubia beer jars are by far more numerous in domestic than in funerary or ritual contexts, and thus advocating a utilitarian household function, probably related to Egyptian practices in food, bread and/or beer production.²³ Noticeably, like in domestic assemblages, both pottery types are seldom recorded side by side in the same tomb deposit and, what is more, by the time when beer jar Type BB4 reached the peak of popularity, during the late 18 and 19th Dynasty flower pots became conspicuously scarce and disappeared altogether.²⁴ Finally, the characteristically rough appearance of the beer jars and the fact that these, like flower pots, are often intentionally perforated at their base before firing, implies that such vessels were apparently not manufactured for drinking purposes.

The two beer jars stamped with royal cartouches of Seti I from A-343 (Figures 7:1–2, 9–12) are so far the only examples known out of many thousands of such vessel types encountered

throughout NK Egypt, Nubia, and northern Sinai. Moreover, except for wine amphorae, utilitarian pottery in general and such crudely manufactured vessels in particular, do not occur with stamped sealings, let alone with royal cartouches. It is also worth noting that both vessels were impressed with the *same* stamp seal. This is evident from identical dimensions and details including the imprint of a dent on the upper left corner of the cartouche (Figures 9–10). The occurrence at the same site of locally manufactured vessels bearing an identical sealing with royal cartouches most likely indicates that site A-343 served during the early 19th Dynasty as an administrative center with an official potter's workshop that was authorized to use royal stamp seals.

Site BEA-10 probably provides a third example of a stamped vessel referring to a navel unit on the "Ways of Horus." The Bir el-Abd site cluster (Figure 1), south of the Bardawil lagoon and ca. 60 km east of the Suez Canal, is represented by 11 built settlement sites with various architectural remains and at least 30 campsites. The central site – BEA-10 (Grid 495480/3430300), occupies an area of about 8 acres, including the remains of a fortified building complex, a spacious long magazine building, an excellently preserved grain magazine with four cylindrical silos (Figure 13), as well as the remains of what seem to have been a water reservoir.²⁵ Petrographic analyses indicated that, like at Haruba, the Bir el-Abd cluster manufactured its respective Egyptian type ceramics made of specific marl clay.²⁶ Stratigraphic and ceramic evidence suggests that central site BEA-10 was continuously inhabited from the mid-18th through 19th Dynasty and, like A-343, the last phase is dated from the late 18th to the early or late 19th Dynasty. The stamped amphora handle (Figure 14) made of the typically eastern Delta fabric, Marl F, belongs to the slender wine amphora with a body narrowing to a pointed base.²⁷

SEAL NO. 1 (FIGURES 9-12) HARUBA CLUSTER A-343 #10553, #11896

Impressions of this seal appear twice on the site (see above): Once on a sherd of a beer jar, and a second on the lower body of another beer jar that could be reconstructed. The stamp shows a narrow upper part that includes a cartouche, while the lower enlarged part opens into a rectangular-shaped space.²⁸

The upper part contains the royal name *Mn-M3t-Rc*, the throne name of Seti I, enclosed within the cartouche. The lower part contains a small, two-line inscription. The first line of the inscription may be read *ir pt t3* — "creator of heaven and earth." This reading was first suggested to co-author Goldwasser by the late Jean Yoyotte. The last sign on this line would then be a classifier, that of the seated king, thus making the sentence into a royal title.

The second line constitutes a single, elaborately carved hieroglyph — a ship — situated in the middle of the line. There is a relatively large space above the ship, where the stamp is very faint. The cartouche and the small inscription following it, together comprise a single unit. The ship on the second line acts as a uniting classifier for the entire inscription. Yoyotte suggested that we have



Figure 9: Site A-343. Stamped fragment of beer jar #10553 (Photo A. Fogel)



Figure 10: Site A-343. Restored beer jar (#11896) with upper part of stamped cartouche (Photo A. Fogel)

here a name of a royal vessel: *Mn-M3^ct-R^c* — "the creator of heaven and earth."

As it seems that the space above the body of the boat accommodated a large sign, it appears that a large sail,  may be the best fit, also according to the remains.²⁹ Such a ship hieroglyph appears,



for example, as classifier for the word *skdwt* ("sailing") in the sentence "Sailing on the Great Green" which opens the report of Hatshepsut on the Punt expedition.³⁰ However, the depiction of a ship with a military standard, like the one

from the tomb of Nebamun , would also be a good fit in the space.³¹ Another

possibility could also be the combined sign for *wi3 nsw*  ("royal ship") in this case a combined logogram, and not a classifier.³²

In the listing of royal ships compiled by Jones,³³ no royal ship carrying such a name is known. Yet, there is no reason to believe that we possess information of all royal vessels and their specific names during the 19th dynasty. Thus, our seal may carry a new name for a royal ship or naval unit from the reign of Seti I, which is otherwise unknown.

SEAL NO.2 –(FIGURE 14) BIR EL-ABD CLUSTER, BEA-10 #330

Site BEA-10 (see discussion above) seems to provide another example of a seal impression recording the name of a ship's contingent of the time of Seti I on the "Ways of Horus."

The long oval imprint on the Egyptian-made amphora handle reads *Mn-M3^ct R^c dsr-hprw-R^c*. Below an additional low flat sign may be discerned, perhaps a basic boat hieroglyph - .



Mn-M3^ct-R^c is the throne name of Seti I and *dsr-hprw-R^c* is the throne name of Haremhab, the last king of the 18th Dynasty, and the "godfather" of Ramesses I and Seti I. A combination of two different royal names cannot make a single royal cartouche, and the possible reconstruction of a basic ship hieroglyph below suggests that we should again be looking for a name of a ship.

In the list of royal ships by Jones, a ship named *dsr-hprw-R^c* is indeed known from the days of Seti I. The vessel is mentioned only once, in Papyrus Rollin, in a timber account for ships. The timber is collected on behalf of the state from different petty officials.³⁴

In this administrative papyrus, the ship is called *p3-wi3 nsw dsr-hprw-R^c* — "The royal ship *dsr-hprw-R^c*".³⁵ This may be an abridged form of the full name *Mn-M3^ct-R^c dsr-hprw-R^c*, with a logographic writing for *wi3 nsw*, or alternatively a ship classifier.

An example for a similar abbreviation of a military unit name can be found on the stela of the naval standard-bearer, Khetef, who lived during the reign of Ramesses II. In his stela, the name of the



Figure 11: Site A-343. Reconstructed beer Jar (#11896) and sealing (Photo A. Fogel)

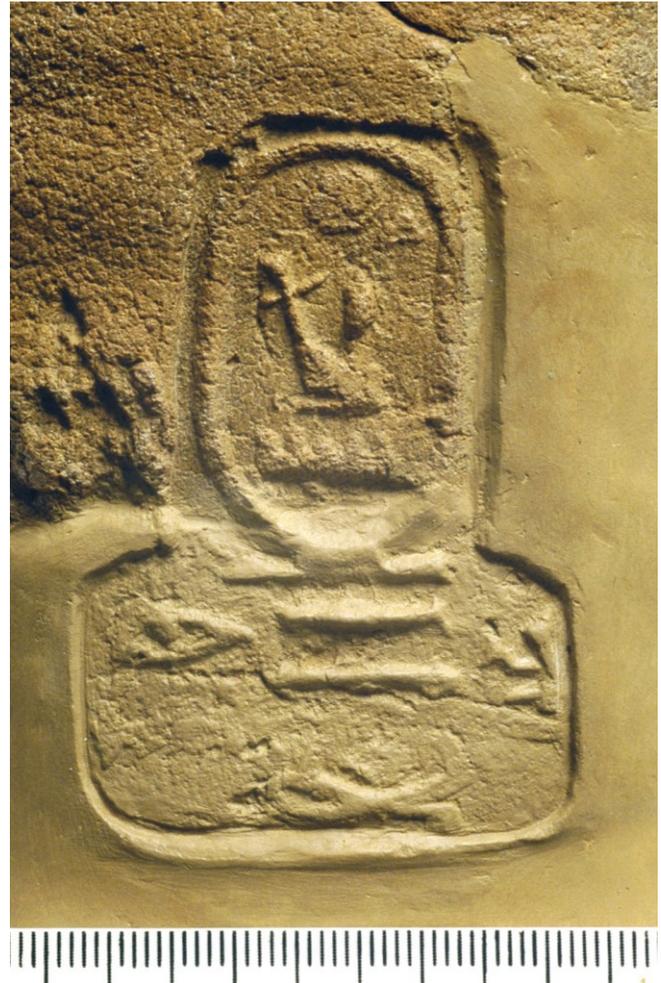


Figure 12: Site A-343. Detail of reconstructed sealing on beer jar #11896 (Photo A. Fogel)

ship's contingent under his command appears twice. In the upper part it appears in full (*R^c*)-*mss mry 'Imn shtp 'Itn* — "Ramesses beloved of Amun who pacifies the Aten." The base contains the abbreviated form of the name *shtp 'Itn*.³⁶

Nebamun from the 18th dynasty is known to have served on a ship that carried the full name *wi3 nsw mry 'Imn* — "(The) Royal ship beloved of Amun." However, when the same ship is mentioned on one of his funerary cones, the name is shortened and is given as *mry 'Imn*, "Beloved of Amun," written *'Imn mry* with a ship classifier.³⁷

Thus, we may assume that the full official name of the vessel mentioned in the Rollin administrative papyrus as *dsr-hprw-R^c* might have actually been *Mn-M3^ct-R^c dsr-hprw-R^c* as it appears on our handle. The first part of the name, as in the case of Ramesses II, refers to the ruling king, while the second part goes back to the Haremhab, the general and then king who enthroned the father of Seti I, thus creating the 19th dynasty.

The only other example known to us from North Sinai of a stamped seal carrying a naval unit's name comes from Tell el-Borg on Egypt's eastern frontier and nearby the site of Tjaru. The seal

impressed on an Egyptian amphora handle was read by Van Dijk as *Nb-hprw-R^c* - the throne name of Tutankhamun. Yet, the hieroglyph below the royal name, on the bottom of the seal, is clearly a boat (!) and not a house.³⁸

Of interest, another rare seal impression also dated to Seti I, recently surfaced in Israel. Ventura and Siegelman published a seal impression on a handle of an Egyptian amphora from Tell el 'Idham, situated in Haifa Bay.³⁹ The seal reads *Mn-M3^ct-R^c pr Mn-hprw-R^c*. Here we find a combination of the throne name of Seti I with a name of a temple or estate (*pr*) named after the throne name of Thutmose IV. Ventura suggests the institution should be in Canaan, but it may well be situated in Egypt, as the amphora seems to be an Egyptian import. An institution by this name is indeed known from the Delta region.⁴⁰

DISCUSSION

To date, impressions on beer jars are virtually unknown in neither Egypt, nor elsewhere in Nubia, Canaan or Sinai (see above). The method of the sealing of amphora handles is well

known during the New Kingdom, yet they mostly depict royal cartouches. Significantly, amphora sealings bearing names of marine units are thus far recorded only at sites along the “Ways of

Jaffa, situated 4 km inshore near the southern bank of the Yarkon river. It is probable that during the time of Smenkhkare this site was still accessible by ship.⁴⁵



Figure 13: Site BEA-10. Granary with cylindrical silos (Photo E.D. Oren)

Horus” (see above). It is very plausible that this singular phenomenon is connected to some specific administrative reorganization on the Sinai road during the days of Seti I as may be inferred from his famous relief at Karnak Temple.⁴¹

Special attention may be given to the name on the seal impression on the amphora’s handle that combines the two royal names — that of Seti I, followed by Haremhab. The *raison d’être* of such a combination could be, as suggested above, a homage to Haremhab, who enthroned the father of Seti I, namely Ramesses I, but it may also have had a more specific reason. Recent research and new readings of Hittite texts have shed new light on the quite belligerent activity of an Egyptian high official named *’Arma’*a by the end of the 18th dynasty in the Levant. Jared Miller has revived his identification with Haremhab, the Egyptian general that finally became King of Egypt.⁴²

The new readings by Miller shed new light on Haremhab’s different activities, which most probably included military campaigns as well. In his Memphite tomb Haremhab claims that “his name was famous in the land of the Hittites when he was traveling to the north.”⁴³ He was the general and the strong man behind the scenes probably during the reigns of Smenkhkare, and later Tutankhamun. And indeed, seal impressions of Akhenaten, Semenkhkare, and Tutankhamun, stamped on amphora handles and bullae, and on a ring of Haremhab, were discovered in Tell el-Borg in North Sinai, maybe signaling military activity during this period.⁴⁴

Goldwasser has published a seal impression of Smenkhkare on an amphora handle from Tell Jerishe, 5 kilometers north of

The rare finds of objects related to this ephemeral king may be connected to preparations by Haremhab for various activities in the Levant, diplomatic or military. It may well be that Seti I saw Haremhab as the “godfather” of the new policies in the East. Perhaps the “combined name” of the unit *Mn-M3t-Rc dsr-hprw-Rc* can be seen in the light of tribute payments to the general and king who opened a new era in the military administration and foreign relations with the Levant by the end of the 18th dynasty.

If indeed the above seal impressions belong to Egyptian royal ships, this raises the question of what were sailors doing on the “Ways of Horus”?

It seems that the answer lies in the double nature of the Egyptian naval units. For example, the regiment *Rc n hk3w* — “Sun of rulers” of the days of Ramesses II — is known to be the name of a war ship as well as an infantry unit. Faulkner writes that “the regiment ‘Sun of Rulers’ was a

company of what we call ‘marines’, inasmuch as they were undoubtedly attached to a ship of that name, but I imagine that, like the marines who serve in our modern navies, most of their active service in time of war would be as infantry in the field . . .”⁴⁶ In this case, groups of the sailor-soldiers would make their way by foot through the “Ways of Horus” to the northern Levant, or were stationed in the fortresses.

Examples of “marines” are known already from the 18th dynasty.⁴⁷ Schulman suggests that the personnel of a ship’s contingent were regular land-based soldiers who underwent a special training after which they were assigned to a ship belonging to the army.⁴⁸ The conspicuous example is that of *wi3 nsw Itn thn* — “The royal ship the shining Aten.” An infantry unit of the same name is documented during the reign of Amenophis III.⁴⁹

Another “double character” of Egyptian ship’s contingent was underlined by Chevereau, namely that of “warriors-merchants.” He suggested that at least during the Late Period, the majority of the ships were used in times of peace for commercial missions.⁵⁰

The impressions of these two new seals from the excavated sites in Sinai, shed new light on the administration of the army during Seti I’s days, providing us with new information about the types of units that marched or were deployed on the “Ways of Horus.” It also contributes to a more accurate understanding of the important role played by the “godfather” of the 19th dynasty, Haremhab, in rebuilding Egyptian foreign policy and in opening a new page in the relations of Egypt and the Levant at the end of the Amarna period.

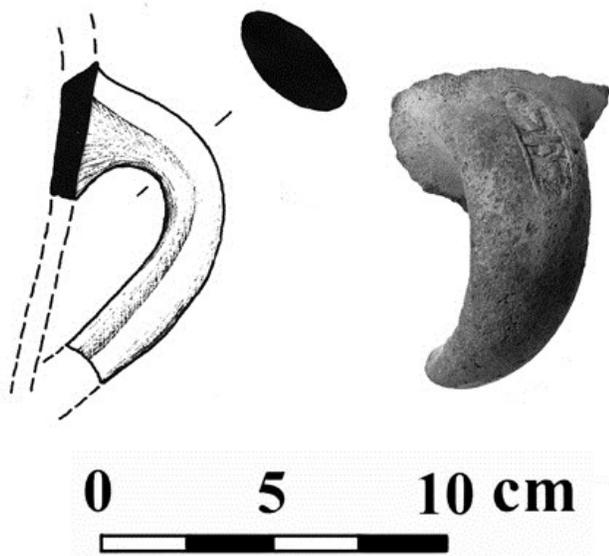


Figure 14: Site BEA-10. Egyptian amphora handle, above (#330) with stamped cartouche, right (Photo V. Feffer)



0 2 cm

BIBLIOGRAPHY

- Abd el-Maksoud, Mohamed, *Tell Heboua (1981–1991). Enquête archéologique sur la Deuxième Période Intermédiaire et le Nouvel Empire à l'extrémité orientale du Delta* (Paris: Editions Recherches sur les Civilisations, 1998).
- Abd el-Maksoud, Mohamed, "Tjarou, porte de l'Orient," in Dominique Valbelle and Charles Bonnet (eds.), *Le Sinai durant l'antiquité et le Moyen-Age: 4000 ans d'histoire pour un désert: actes du colloque "Sinai" qui s'est tenu à l'UNESCO du 19 au 21 Septembre 1997* (Paris: Editions Errance 1998), 61–65.
- Aston, David A., "Tell Hebwa IV – Preliminary Report on the Pottery," *Egypt and the Levant* VI (1996): 179–197.
- Aston, David A., *Die Keramik des Granungsplatzes Q1, Teil 1: Corpus of Fabrics, Wares and Shapes* (Mainz: Philipp von Zabern, 1998).
- Aston, David A., *Pottery from the late New Kingdom to the early Ptolemaic Period. Elephantine XIX* (Mainz: Philipp von Zabern, 1999).
- Aston, David A., "The Pottery from H/VI Süd Strata a and b. Preliminary Report," *Egypt and the Levant* XI (2001): 167–196.
- Aston, David A., "New Kingdom Pottery Phases as Revealed Through Well-dated Tomb Context," in Manfred Bietak (ed.), *The Synchronization of Civilizations in the Eastern Mediterranean in the Second Millennium B.C.E.: Proceedings of the SCIEM 2000 – EuroConference, Haindorf May 2– 7, 2001* (Wien: Osterreichischen Akademie der Wissenschaften, 2003), 135–162.
- Aston, David A., "Amphorae in New Kingdom Egypt," *Egypt and the Levant* XIV (2004): 175–213.
- Aston, David A., "Cypriot Pottery and its Imitations from Hebwa IV," in Mayer Gruber et. al., (eds.), *All the Wisdom of the East. Studies in Near Eastern Archaeology and History in Honor of Eliezer D. Oren* (Fribourg: Academic Press, 2012), 13–56.
- Aston, David A. and Edgar Pusch, "The Pottery from the Royal Horse Stud and its Stratigraphy. The Pelizaeus Museum Excavation at Qantir / Per-Ramesses, Sector QIV," *Egypt and the Levant* IX (1999): 39–75.
- Bergoffen, Celia J., "Overland Trade in Northern Sinai: The Evidence of the Late Cypriote Pottery," *Bulletin of the American Schools of Oriental Research* 284 (1991): 59–76.
- Bietak, Manfred et. al., "Ausgrabungen in dem Palastbezirk von Avaris. Vorbericht Tell el-Dabaa/aEzbet Helmi 1993–2000 mit einem Beitrag von Angela von den Driesch und Joris Peters," *Egypt and the Levant* XI (2001): 27–120.
- Bourriau, Janine, *Umm el-Ga'ab: Pottery from the Nile Valley before the Arab Conquest*, Fitzwilliam Museum Publications (Cambridge: Cambridge University Press, 1981).
- Burke, Aaron A. and Alice Mandell, "Egyptian 'Flowerpots' from Kaplan's Area A Excavations: Cultural and Historical Implications," in Martin Peilstöcker and Aaron A. Burke (eds.), *The History and Archaeology of Jaffa I* (Los Angeles: Cotsen Institute of Archaeology Press, 2011), 261–270.
- Chevreaux, Pierre-Marie, *Prosopographie des cadres militaires égyptiens de la Basse Époque: carrières militaires et carrières*

- sacerdotales en Egypte du XIe au IIe siècle*, avant J.C. Antony (Paris: Cybele, 1985).
- Clère, Jacques J., "Nouveaux documents relatifs au culte des colosses de Ramsès II dans le Delta," *KEMI* 11 (1950): 24–46.
- Davies, Norman de Garis, *Two Tombs of Officials of Tutmosis the Forth (Nos. 75 and 90)* (London: Egypt Exploration Society, 1923).
- Düring, Norbert, *Materialien zum Schiffbau im Alten Ägypten* (Berlin: Achet-Verlag, 1995).
- Faulkner, Raymond O., "Egyptian Military Standards," *The Journal of Egyptian Archaeology* 27 (1941): 12–18.
- Foerster, Frank and Heiko Riemer (eds.), *Desert Road Archaeology in Ancient Egypt and Beyond* (Koln: Heinrich – Barth Institut, 2013).
- Gardiner, Alan H., "The Ancient Military Road between Egypt and Palestine," *The Journal of Egyptian Archaeology* 6/2 (1920): 99–116.
- Gardiner, Alan H., *Ancient Egyptian Onomastica* (London: Oxford University Press, 1947).
- Goldwasser, Orly, "A Cartouche of Semenkhekare from Canaan," *Göttinger Miszellen* 115 (1990): 29–32.
- Goren, Yuval, et. al., "The Archaeological and Ethnoarchaeological Interpretation of a Ceramological Enigma: Pottery Production in Sinai (Egypt) during the New Kingdom Period," *KVHAA Konferenser* 34 (1995): 101–120.
- Hoffmeier, James K. (ed.), *Excavations in North Sinai: Tell el-Borg I* (Winona Lake, Indiana: Eisenbrauns, 2014).
- Hoffmeier, James K. and Mohamed Abd El-Maksoud, "A New Military Site on 'The Ways of Horus': Tell el-Borg 1999–2001: A Preliminary Report," *The Journal of Egyptian Archaeology* 89 (2003): 169–197.
- Hoffmeier, James K. and Jacobus van Dijk, "New Light the Amarna Period from North Sinai," *Journal of Egyptian Archaeology* 96 (2010): 1–15.
- Hoffmeier, James K. and Stephen O. Moshier, "A Highway out of Egypt: The Main Road from Egypt to Canaan," in Frank Foerster and Heiko Riemer (eds.), *Desert Road Archaeology in Ancient Egypt and Beyond*, Africa Præhistorica 27 (Koln: Heinrich – Barth Institut, 2013), 485–510.
- Holthoer, Rostislav, *New Kingdom Pharaonic Sites: The Pottery*, (Stockholm: Scandinavian University Books, 1977).
- Hummel, Rexine, "A Report on the Ceramics Recovered from Tell el-Borg," in James K. Hoffmeier (ed.), *Excavations in North Sinai: Tell el-Borg I* (Winona Lake, Indiana: Eisenbrauns, 2014), 364–435.
- Jones, Dilwyn, *A Glossary of Ancient Egyptian Nautical Titles and Terms* (London and New York: Kegan Paul International, 1988).
- Landström, Björn, *Ships of the Pharaohs; 4000 Years of Egyptian Shipbuilding* (New York: Doubleday, 1970).
- Keel, Othmar, *Corpus der Stempelsiegel-Amulette aus Palästina /Israel von den Anfängen bis zur Perserzeit* (Freiburg: Universitätsverlag, 1997).
- KRI = Kenneth A. Kitchen, *Ramesside Inscriptions: Historical and Biographical*, 8 Vol. (Oxford: B. H. Blackwell, 1968–1990).
- Martin, Geoffrey T., *The Memphite Tomb of Horemheb, Commander-in-chief of Tut'ankhamun* (London: Egypt Exploration Society, 1989).
- Martin, Mario A. S., *Egyptian-Type Pottery in the Late Bronze Age Southern Levant* (Wien: Osterreichischen Akademie der Wissenschaften, 2011).
- Miller, Jared L., "The Rebellion of Hatti's Syrian Vassals and Egypt's Meddling in Amurru," in Alfonso Archi and Rita Franchia (eds.), *Studi Micenei ed Egeo-Anatolici XLIX 2008 Congresso Internazionale di Ittitologia, Roma 5–9 Settembre 2005* (Roma, CNR- Istituto di Studi Sulle Civiltà Dell'eggeo e del Vicino Orient, 2007), 533–554.
- Minault-Gout, Anne et. al., *Une résidence royale égyptienne: Tell Abyad à l'époque Ramesside* (Paris: Pups, 2012).
- Nagel, Georges, *La céramique du Nouvel Empire à Deir el Médineh* (Caire: l'Institut français d'archéologie orientale, 1938).
- Naville, Edouard, *The Temple of Deir el Bahari*, Vol. III (London: Egypt Exploration Fund, 1898).
- Oren, Eliczer D., "The 'Ways of Horus' in North Sinai," in Anson F. Rainey (ed.), *Egypt, Israel, Sinai: Archaeological and Historical Relationships in the Biblical period* (Tel Aviv: Tel Aviv University Press, 1987), 69–119.
- Oren, Eliczer D., "Northern Sinai," in Ephraim Stern (ed.), *The New Encyclopedia of Archaeological Excavations in the Holy Land*, Vol. 4 (Jerusalem: The Israel Exploration Society, 1993), 1386–1396.
- Oren, Eliczer D., "The Establishment of Egyptian Imperial Administration on the 'Ways of Horus': An Archaeological Perspective from North Sinai," in Ernst Czerny et al (eds.), *Timelines: Studies in Honour of Manfred Bietak*, Vol. II (Leuven: Peeters, 2006), 279–292.
- Renfrew, Colin, *The Emergence of Civilization: The Cyclades and the Aegean in the Third Millennium BC* (London: Methuen, 1972).
- Renfrew, Colin, "Trade as Action at a Distance: Question of Integration and Communication," in Jeremy A. Sabloff and Carl C. Lamberg-Karlovsky (eds.), *Ancient Civilization and Trade* (Albuquerque: University of New Mexico Press, 1975), 3–59.
- Rose, Pamela J., *The Eighteenth Dynasty Pottery Corpus from Amarna* (London: Egypt Exploration Society, 2007).
- Rzeuska, Teodozja I., "An Offering of a Beer Jar or a Beer Jar as an Offering? The Case of a Late Old Kingdom Beer Jar with an Inscription from West Saqqara," in David A. Aston et. al., (eds.), *Under the Potter's Tree. Studies on Ancient Egypt Presented to Janine Bourriau on the Occasion of her 70th Birthday* (Leuven: Peeters, 2011), 829–842.
- Schulman, Alan R., *Military Rank, Title and Organization in the Egyptian New Kingdom* (Berlin: Verlag Bruno Hessling, 1964).
- Urk. = Wolfgang Helck, *Urkunden der 18. Dynastie. Abteilung IV, Heft 19: Historische Inschriften Thutmosis' IV und biographische Inschriften seiner Zeitgenossen* (Berlin: Akademie-Verlag, 1956).
- Spalinger, Anthony R., *War in Ancient Egypt*. (Oxford: Blackwell, 2005).

Szafranski, Zbigniew E., "Seriation and Aperture Index 2 of the Beer Bottles from Tell el-Dab'a," *Egypt and the Levant* VII (1998): 95–119.

Valbelle, Dominique, "La (Les) route(s)-d'Horus," in Catherine Berger et. al., (eds.), *Homages a' Jean Leclant*, Vol. 4: Varia (Caire: Institut francais d'arche'ologie orientale, 1994), 379–386.

Ventura, Raphael and Azriel Siegelman, "Salvage Excavations at Tell El-Idham and an Egyptian Sealing of Seti I," *Atiqot* 47 (2004): 101–108.

Yoyotte, Jean and Jesus Lopez, "L'organisation de l'armée et les titulatures de soldats au nouvel empire Egyptian," *Bibliotheca Orientalis* XXVI (1969) 3–19.

NOTES

- 1 Gardiner 1920; Oren 1987. For the toponym "Way(s)-of-Horus" see Valbelle 1994.
- 2 Oren 1993; Abd El-Maksoud 1998; 1998a; Hoffmeier and Moshier 2013; Hoffmeier 2014; Dothan and Brandl 2010; Minault-Gout 2012.
- 3 Redford 1979; Oren 2006.
- 4 For detail see Oren 1987; 2006, 280–283.
- 5 This pattern may be analogous to Renfrew's "central redistribution model", Renfrew 1972, 465–466; 1975, 46–48.
- 6 For roads in Egyptian deserts see recently Foerster and Riemer 2013.
- 7 At least nine wells were actively used during our explorations. The major ones are indicated in Figure 2.
- 8 Our observations on the availability of ancient sites in such sand-dune terrain suggest that they represent nearly 60% of the actual site count.
- 9 Oren 1987, 2006.
- 10 Oren 1987, 84–106; 1993, 1390–91; 2006, 282–83.
- 11 We are grateful to David Aston for his expert advice on the pottery from Haruba.
- 12 Goren et. al., 1995.
- 13 The Haruba clay flower pots on Figure 7:9, 12 may well belong to the early phase of A-343.
- 14 Bergoffen, Celia J., "Overland Trade in Northern Sinai: The Evidence of the Late Cypriote Pottery", *Bulletin of the American Schools of Oriental Research* 284 (1991): 59-76.
- 15 E.g., Aston 2001, 187, fig. 10, top left and bottom right; 2004, 182, fig. 3, Types A3a-b, 189, fig. 7, Type B1(b/d).
- 16 Dimensions: 32 cm height, diameter of base 10 cm, and rim 9 cm, max diameter of upper body is 13.5 cm.
- 17 Averaging dimensions: 26 cm height, diameter of base 7 cm and 10 cm of rim; maximum diameter of upper body is 18 cm.
- 18 See for example the 20th dynasty jar from Stratum Ba at Qantir, Aston and Pusch 1999, 42, p. 56, no. 2.
- 19 Bourriau's New Kingdom Phase 3b = Ay to Ramesses II / Merenptah.
- 20 Aston estimated that beer jars must have been produced in their "millions," Aston 2001, 169–171.
- 21 For discussion and parallels, see Aston 1998, 182–4, nos. 523–6 (Qantir); 1999, 26–27, nos. 4–12, 57–58 (Elephantine); 2001, 169–171, notes 24–40, fig. 8, bottom left (Saqqara) and fig. 2: 5 (Ezbet Helmi); Aston 2003, 147–152, fig. 7:b; 2012, 21, 54, no. 158 ((Hebwa IV, North Sinai); Holthoer 1977, 86–88, pl. 18, Type BB4 (Nubia); Rose 2007, 243, Type SH 8.3, no. 410

(Tell el-Amarna); Nagel 1938, figs. 11:19, 29: 246 (Deir el-Medineh); Hummel 2014, pl. 20:1–2 (Tell el-Borg, North Sinai); for locally manufactured Egyptian-type beer jars in Canaan, see Martin 2011, 51–57.

- 22 Holthoer 1977, 83, 86. Bread and beer are invariably mentioned in the offering formula recited for the dead. "Beer bottles" are well-known in Old Kingdom – Middle Kingdom Egypt. Iconographic representations of such vessels are depicted in tomb paintings and painted wooden models of the Middle Kingdom tombs (especially in the Theban area, i.e., Beni Hasan) on scenes showing making bread and brewing beer; see Bourriau 1981, 63; 1988; Szafranski 1998, 96–97. Symbolic handmade "beer jars" were frequently found in Old Kingdom – Middle Kingdom tomb deposits, providing important observations on funerary practices; see recently Rzeuska 2011.

23 Aston 1998, 182.

24 See recently Burke and Mandell 2011, 261–270.

25 Oren 1987, 78–84.

26 Goren et. al., 1995.

27 For Aston's Type B1c/d, see Aston 2004, fig. 7.

28 It is an unusual form of a stamp seal.

29 For a possible reconstruction of such sea-going ships, see Landström 1970, 139, no. 407.

30 Naville 1898, pl. LXXII.

31 The arrangement of the elements on this seal may be compared to the presentation of the ship standard in the tomb of Nebamun, see Davies, 1923, pl. XXVI, also Faulkner 1941, pl. IV, Fig.8.

32 See for example, Davies 1923, pl. XXVIII, lower scene.

33 Jones 1988, 231–239, and also Düring 1995, 145. However, this combination is similar to names of ships such as $\text{ḥ}prw-R^c smn-Bwy$. The name $\text{ḥ}prw-R^c$ is the throne name of Amenophis II, thus the name of the ship reads " $\text{ḥ}prw-R^c$ — who makes the double land (= Egypt) endure", Jones 1988, 232, no.6.

34 Jones 1988, 239 and discussion in Spalinger 2005, 52–53.

35 KRI I, 263, line 15.

36 KRI III, 265, 5, 7 (Louvre C95). A military unit by this name is already known from the days of Tutankhamun, see Yoyotte and Lopez, 1969, 18, no. 492j, and also Schulman 1964, 166, 497.

37 URK IV, 1629, 16. The representation of the ship-standard in his tomb shows that it was carrying a royal name on the deck, see Davies 1923, pl. XXVI.

38 Hoffmeier and Van Dijk 2010, 202 with fig 15. Van Dijk reads, somehow reluctantly, the sign on the bottom

as *pr*-“estate” and puts a question mark after the reading. In our opinion it is a clear boat hieroglyph.

³⁹ The Tell el-Idham is situated in the Haifa bay. Baruch Brandl suggested that the amphora is of Egyptian origin, see Ventura and Siegelman 2004, especially 105–17 and 104 for the origin of the amphora.

⁴⁰ Ventura and Siegelman 2004, 16, after Gardiner 1947, 155–158.

⁴¹ Gardiner 1920.

⁴² Miller 2007.

⁴³ Martin 1989, 80, pl. 91.

⁴⁴ Hoffmeier 2006, 13 with fig. 11; Hoffmeier and Maksoud 2003, 180–181, and Hoffmeier and Van Dijk 2010, 199–205. A strong fortress was built in Avaris in the time of Tutankhamun, see Bietak et. al., 2001, 101–102.

⁴⁵ Goldwasser 1990.

⁴⁶ Faulkner in a letter cited by Clère 1950, 45, note 1.

⁴⁷ Clère 1950, 25, 43–44; Faulkner 1941.

⁴⁸ Schulman 1964, 19–20, 74–75. However Clère writes already in 1950, 45 “. . . dans certains cas, un même nom était donné à un groupe de soldats et à un bateau qui servait à leur transport par eau, l’un et l’autre étant rattachés à une manifestation définie de la personnalité royale, caractérisée par une épithète particulière ajoutée à l’un des noms royaux. . .” In the Battle of Kadesh a boat standard indicates the presence of a contingent of marines in the division of Prah though they are acting as ordinary infantry, see, Faulkner 1941, 15. On the tight relations of army and navy, see Spalinger 2005, 55–56.

⁴⁹ Clère 1950: 44.

⁵⁰ Chevereau 1985, 272.