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British Museum Studies in Ancient Egypt and Sudan 24 (2019): 41–70

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Faience objects found in Naukratis were important to Petrie since he was eager to confirm connections between Naukratis and Greece. Many of the pieces have a well-studied distribution pattern in East Greece and the West and belong to distinct categories. Phase I of 'Archaic Greek faience' (650–630/600 BC) is not represented at Naukratis. It is now clear that the amuletic figurines of Phase II are well represented at Naukratis and some at least were made in the scarab factory at Naukratis. Small vessels made during Phase III are surprisingly much scarcer at Naukratis. The numerous faience objects, including scarabs, scaraboids and moulds studied as part of the Naukratis Project have enabled a re-examination of their types and dating. This paper explores the date and production of faience material and the period that the scarab factory was operational at Naukratis.

The study of faience objects in the Greek sphere in the early Iron Age has made considerable progress in the last forty years. Although amulets, scarabs and small unguent containers occur sporadically in contexts in Greece from at least 900 BC, it is easier to distinguish discrete groups of objects produced during the 7th century. Hölbl's encyclopaedic surveys of the material in the Mediterranean (Hölbl 1979; 1983; 1999; 2014), Webb on Archaic Greek faience (Webb 1978); Gamer-Wallert (1978) and Parcerisa (1983) on finds in the Spanish sphere; Skon-Jedele (1994) on Egyptianising material from Greek sites, and Gorton (1996) on Egyptian and Egyptianising scarabs from Punic and other Mediterranean sites all contribute to a much clearer picture of dating, distribution and possible sources of manufacture.

In Naukratis we must consider the East Greek connection to Naukratis' foundation and its continuing trade. The East Greek ceramic assemblage may provide the clearest dating for the earliest Greek activity at the site, but what information can the faience finds provide? How early do they go, and can we establish links with both the Egyptian and the Greek worlds?

We have three bodies of faience material from Naukratis which demonstrate strong links with the East Greek world in the 6th century, and possibly back into the closing years of the 7th century:

- a) the waste debris from a scarab factory identified by Petrie, containing scarabs, scaraboids and the moulds to make them, as well other evidence of workshop activity (Masson 2018);
- b) a number of, possibly locally produced, rather crude figurines of the mixed-style products of Phase II of Archaic Greek faience (Webb 1978, 81–107; Webb 2015b);
- c) a few examples of Phase III faience aryballoids made in a variety of shapes (Webb 2015a).

Objects from this final group are common finds throughout the Mediterranean that combine Greek shapes with themes related to those used in both Greek plastic vases and Egyptian kohl and ointment containers (Webb 1978, nos 840–962). These last groups b) and c) have, in the past, been assigned an origin at Naukratis. But this is now not certain for all.

Other faience material is of Egyptian type, including a large number of extremely simplified

amulets (see Masson 2018), which Petrie says were found in the debris of the scarab factory (Petrie 1886, 38, pl. 2, nos 14–16) with scattered examples of faience objects of Egyptian design and better quality: amulets, vessels – in particular New Year flasks (see below), ritual instruments such as Hathor sistra, necklace elements and others. There are also a few pieces with cartouches or hieroglyphic inscriptions which suggest a different origin and earlier dates, but these are few and unique, and have required careful study before their dating and origin could be determined (Masson 2014; 2018). First of all, what can our pre-existing knowledge of faience production in East Greece (based on Webb 1978) do to help us assess the surviving material from Naukratis?

Archaic Greek faience: Phase I

There is no trace of production or importation of Phase I Archaic Greek faience at Naukratis. The first phase of ‘Archaic Greek faience’ was in production by 650 BC at the latest. Prototype forerunners started from around 700 BC and are known from Cumae burials and elsewhere in the Western Mediterranean and in the Aegean (Webb 1978, nos 209–15, to which we can now add a late Geometric burial from Thebes¹). This characteristic industry produced small, extremely detailed unguent vessels (Webb 1978, 11–71). The focus of their distribution is in East Greece, especially Rhodes, but they are also known in the Western Mediterranean. For the established groups which appear from around 650 BC I have argued (Webb 1978; 2017) for a very strong link with the iconography and production techniques of Egyptian wares, not only in the squatting figure vases which represent a variety of auspicious and good-luck combinations (Fig. 1) but also in the imitations of the low relief decoration on ware such as that produced in Hermopolis Magna (Tuna el-Gebel) (von Bissing 1941a & b; Tait 1963; James 1963–64; Riefstahl 1968; Fazzini 1972; Bianchi 1998a) which are found on pyxides, alabastra and juglets (Fig. 2). However, these vessels were probably manufactured on Rhodes, using imported materials, such as the very fine fabric used for the body/core, and the various metallic glaze colours, such as lead antimony for yellow. If so, we may be able to tie them to a pattern of manufacture and distribution already established on the island of Rhodes: where pottery aryballoids or juglets were made imitating eastern forms (filled with precious contents?) and then exported west (Johansen 1958; Coldstream 1969; Bourogiannis 2009). In parallel with this, or indeed even earlier, we should highlight the large production of Gorton Type XXII scarabs (Gorton 1996, 63–72, especially 72), probably also made in Rhodes, which have a wide distribution in the Greek world from the late 8th century into the first half of the 7th century BC. Much to our disappointment, we have only a few uncertain finds of Phase I of the industry from Egypt (Webb 1978, 18, nos 76–78), and from Naukratis itself, no finds at all, as shown on the distribution map for this phase (Fig. 3; Webb 1980, fig. 3). This lack of finds would appear to be linked to the chronology of the finds from Naukratis: for the small faience vessels of Phase I begin in Late Protocorinthian, 650–640 BC, and do not survive beyond Early Corinthian, 625–600 BC (if even lasting as late as that). The absence of Phase I Archaic Greek faience could be explained thus: either we do not have the earliest layers from Naukratis, or Naukratis was not involved in the trade of the unguents that were contained within them (although we have evidence of 6th-century faience unguent containers) as their production and distribution were concentrated in Rhodes at this time.² However, these weak arguments

¹ Thebes, Boeotia, region called Tachi, Late Geometric Grave, Thebes Museum, 28919/5. Unpublished.

² It is true that finds from elsewhere in the Levant are similarly sparse (Webb 1978, no. 70, Cyprus).

are based on the absence of evidence. A simpler explanation for their absence at Naukratis could be that the scarab factory was not operational until 600 BC (see below), and the site was not founded much before that. To date, the earliest finds from Naukratis comprise *c.* 630–615 BC Early Corinthian pottery (Bergeron 2015a), *c.* 630–600 BC Chian pottery (Bergeron 2015b) and *c.* 620–600 BC Cypriot figurines (Thomas 2015), which is supported by the Saite Egyptian material (Masson 2014; 2018). While some earlier Egyptian scarabs (not made at Naukratis) were acquired by Petrie in Naukratis, they had either been brought to the site in antiquity as models or heirlooms, or much later by the dealers who supplied Petrie with antiquities (Masson 2018, 40).



Fig. 1: Double vase in form of squatting figure presenting jar. Kamiros. British Museum, 1860,0404.75. © The Trustees of the British Museum.



Fig. 2: Pyxis with incised decoration and added colour, 'Low-Relief' Ware. Kamiros. British Museum, 1864,1007.808. © The Trustees of the British Museum.

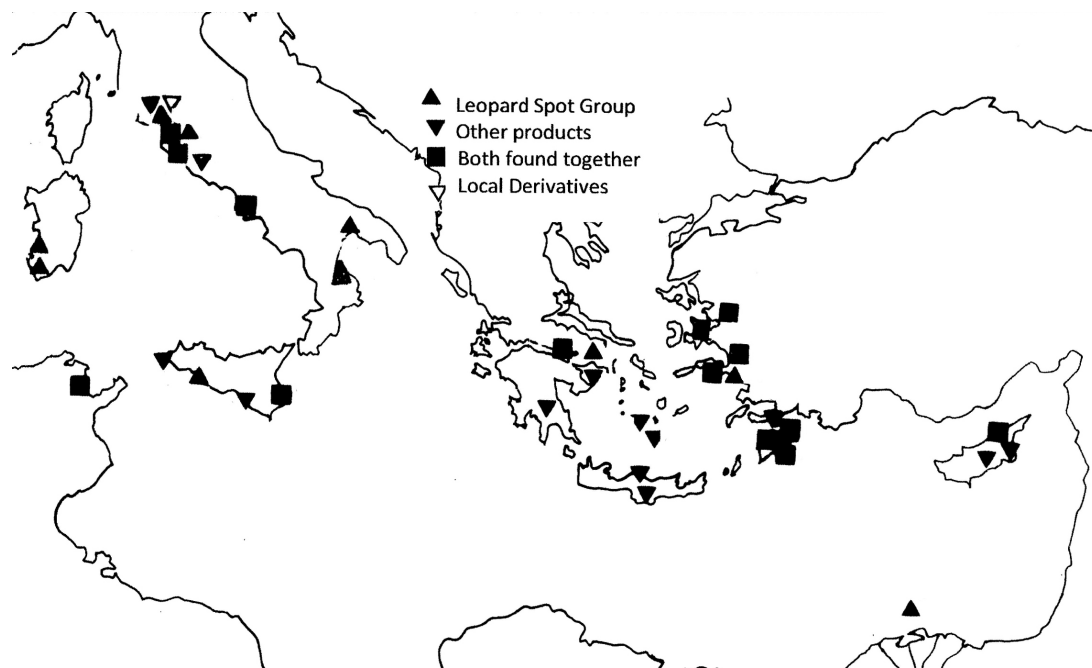


Fig. 3: Distribution map of Phase I of Archaic Greek faience. By author.

Phase II: figurines of amuletic type and small statuettes

A specific class of Phase II small faience figurines with suspension loop attachments, intended as amuletic objects and possibly worn on necklaces (see depictions on Cypriot terracotta statuettes, Blinkenberg 1931, 337, fig. 49; Karageorghis 1999, pl. A, no. 3, cat. no. I[ix] 34; pl. XLVI, cat. no. V[v]93,) are a feature of East Greek and Western Greek contexts, and were specifically made for a market outside Egypt (Webb 1978, 81–107, pls 12–17, fig. 4 for distribution). They were found during Petrie's excavations of Naukratis, particularly within 'the Temple of Apollo ... about the scarab factory and in the town'. Petrie makes a firm distinction between these glazed ware figures, which have a clear distribution in the Greek world, and the standard Egyptian-type amulets (Petrie 1886, 38b, 39a, pl. 2). The British Museum has a well-provenanced selection of these, corresponding to actual published finds from Naukratis. Although a few examples have a clear and well-controlled style, the majority are of a slack and crude manufacture, representing a quite different level of technical ability from the products of Phase I. These figurines depict humans, animals and birds. The humans represent worshippers and/or offering bearers, as they are shown standing in the 'striding' pose, with one foot advanced (with a supporting wedge of material between the legs, and a back pillar), normally playing musical instruments, or accompanied by animals. Their nudity, posture and infilling of supportive material suggest they may have been influenced by Egyptian prototypes as well as sharing strong stylistic and thematic links with Cypriot limestone statuettes of musicians and offering bearers (Fig. 4). Close similarities in the way the suspension loop is pierced through the back suggest that many of these were manufactured in the same workshop in Naukratis. Cypriot limestone figurines can superficially resemble some of these amulets, but do not reproduce the 'striding' pose, with back pillar and rectangular stand, nor the nudity (see discussion in Webb 2015b; 2016; Thomas 2015).



Fig. 4: Amuletic figurines of humans. British Museum, EA 58306, EA 58308, EA 58307. © The Trustees of the British Museum.

The majority conform to the standard ‘striding’ (walking) or ‘presenting’ (kneeling) pose. Parallel with these are nude figures of women, in a frontal pose, standing with feet together (Boston Museum of Fine Arts 88.1110; British Museum 1886,0401.1220, and 1395; Petrie 1886, pl. 2, nos 8, 17; Boston Museum of Fine Arts 88.1110 Webb 1978, 84–85, nos 329, 33; see Webb 2015b and Webb this volume Figure 14). Like many of the male figures, they are naked and have exaggerated secondary sexual characteristics, and like the Cypriot limestones and terracottas, must belong to the Late Period, when figures intended to promote and protect fertility were popular in Egypt (Bulté 1991, 2003). Two intriguing pieces: a naked figure, male, legs crossed on seat, holding an amphora of apparently Phoenician type (British Museum 1888,0601.46; Webb 1978, no. 381, pl. 12); and a musician in the form of a cruder figure with a striped, melon-shaped drum suspended round his neck, possibly of Nubian type (Fig. 5) (British Museum EA 58309; Webb 1978, no. 388, pl. 12), rather nicely represent the diverse population of Naukratis. A cruder class of related figurines is also well represented (Webb 1978, 89–90, Group IV: Block Group), which was widely distributed across the Greek world and the Western Mediterranean. Naukratis finds suggest these also had their origin here (British Museum 1886,0401.1498; Petrie 1886, pl. II, 12; 1886,0401.1503; Petrie 1886, pl. II, 18; Webb 1978, nos 403–4).



Fig. 5: Figurine of drummer. British Museum, EA 58309. © The Trustees of the British Museum.

Related animal and bird figurines with suspension loops form an important part of the Phase II group, with a similar distribution across the Greek world and the Western Mediterranean (Webb 1978, nos 434–550). Despite rarely carrying distinctive insignia, and never hieroglyphic inscriptions, they possibly derive from, reference, or are intended to represent Egyptian deities (Fig. 6). They comprise rams (Amun?), lions (couchant or walking), and falcons (since the falcon figures are rarely depicted wearing the pschent and double-feather crown, these may represent other Egyptian deities apart from Horus). To these can be added variants from East Greece in the form of bulls (Apis), with the solar disc between the horns (Kamiros, British Museum 1861,1024.23, Webb 1978, no. 434, 93, also nos 434–39) and hippopotamuses (British Museum 1861,1024.24, Webb 1978, no. 453, and nos 454–56) and cats for Bastet. It may be possible to add the sow, a very popular amulet in Naukratis, although this is not classified as belonging with the Phase II Black and White group (Webb 1978) and does not often occur in East Greece, but is instead more popular in Carthaginian contexts.

Lastly there exists a related group of larger figurines, without suspension loops, which are well distributed in East Greece, and should be roughly contemporary with the smaller figurines with suspension loops discussed above. However, there is only one doubtful example from Naukratis itself (see below). A number in the form of falcons come from the Rhodian deposits of Aegyptiaca, but by far the largest number are found in the excavations of the late 7th- and early 6th-century deposits in the Samos Heraion, especially around the Rhoikos altar, where some may have an Egyptian origin, although local production is a strong possibility (Webb 2016; Webb forthcoming a). Distinct from the smaller figures, which have whitish glaze with black-brown details, these larger figures have their own distinctive coarse core (buff-pinkish) and thickly applied glaze (blue-green). They cannot be compared with large conventional Egyptian amuletic Pataikos figurines (British Museum EA 58315; EA 58814). Such falcons are almost unknown at Naukratis, with only one large falcon identified, and this does not belong with the East Greek finds, nor demonstrate the same high standard of modelling (Fig. 7; Webb 1978, no. 685, British Museum 1886,0401.1505). It shares its dumpy modelling, and roughly painted on ‘tears’, with Cypriot limestone versions of the falcon.



Fig. 6: Figurines of falcon (British Museum, EA 58319) and ram (British Museum, EA 58318). © The Trustees of the British Museum.



Fig. 7: Large (H. 7.8cm) figurine of falcon (British Museum, 1886,0401.1505). © The Trustees of the British Museum.

To sum up, it would seem that the larger figures, the best of which are in the form of finely modelled falcons, should be earlier in date than the smaller figurines with suspension loops discussed above. The finest examples (none from Naukratis) parallel in their observation of detail well-documented Egyptian work, such as the comparable bronze Horus-falcons from both Samos (Jantzen 1972, B 1687, pl. 20) and Saqqara (Emery 1971, pl. VII, 3.). This class of larger faience figurines has an impressive presence in Samos (Webb 2016) and East Greece, Miletos (Hölbl 1999, 2014; Webb forthcoming b) and particularly Rhodes, and includes humans and a variety of animals, and has links with Phoenician Egyptianising ivories as well as Egyptian plastic (Webb 2016; Webb forthcoming a). There are apparently only a few correspondences with Naukratis material.

All these classes await further study, particularly in relation to numbers and quality of the different types, and place of manufacture. As Petrie realised, there is a close relationship between the material found in Naukratis and that from Rhodes, East Greece, and the rest of the Mediterranean, but it is fraught with problems. This is the world of the mixed-style which appears in the Graeco-Cypriot limestone figurines, found in East Greece, Cyprus and Naukratis (Thomas 2015). The ‘glazed ware’ figurines, which Petrie was so intrigued by, mostly date to the 6th century, perhaps as late as 550 BC for some amuletic types. The larger figurines, such as are found in Samos, Miletos and Rhodes in such numbers, clearly date back into the last quarter of the 7th century (Webb 2016; Webb forthcoming b).

Phase III: aryballoi

The final group comprise 6th-century faience Phase III aryballos vases that were also widely distributed across the Mediterranean (Webb 1978, 108–35, fig. 5 for distribution). However, the number actually found at Naukratis has been obscured by antiquities dealers’ ascriptions of a Naukratis provenance. Only one fragmentary aryballos, in the widespread and common form of a hedgehog, is attested amongst the finds from Petrie and Gardner’s excavations at Naukratis in the British Museum (Fig. 8; British Museum EA 68829; Webb 1978, 133, no. 905, pl. 21; Webb 2015a). It has no precise find-spot and is not mentioned by Petrie, but certainly came from the initial excavations.³ Two spherical aryballoi fragments of the same phase, excavated by Petrie in 1885, are now in Boston (Boston Museum of Fine Arts Eg.Inv.3623 and Eg.Inv.3624; Villing et al. 2013–19; Webb 2015a).



Fig. 8: Aryballos in form of hedgehog. British Museum, EA 68829. © The Trustees of the British Museum.

Other examples of these types of small ointment vessel are complete and are noted elsewhere in the British Museum and other collections as coming from Naukratis. But in the case of the British Museum, at least, they do not appear in the original Museum inventory of material given to the Museum by Petrie and EES, nor are they published in subsequent reports of the

³ See Webb 1987, for an in-depth discussion of the hedgehog aryballos as a type.

excavations. One such example is complete, and in the form of a siren (most similar to Webb 1978, no 893.) It does not come from Petrie's excavations (as far as we know) but was purchased by the Reverend Chauncey Murch while he was a missionary in Egypt, and sold to the Museum in 1900, with the provenance of Naukratis (British Museum EA 32593). Less certain are: an aryballos in the form of two horses (Edinburgh, National Museum of Scotland, A.1965.267); and a fine human head aryballos (Boston 03.835. Francis Bartlett Coll. 1903, Webb 1978, no 860, pl. 19.), both said to be from Naukratis, but neither certainly from the excavations. Both are in such an excellent state of preservation that a Naukratis provenance seems most unlikely. Three further hedgehog aryballoi have dubious Naukratis provenances, now in Copenhagen (Mogensen 1930, pl. 52, A 383; Webb 1978, no. 906), New York (Gallatin Collection, 1951, 43, pl. 30; Webb 1978, no. 916) and Edinburgh, National Museum of Scotland (A. 1965.266). Other examples are well distributed in Egypt, from Petrie's excavations at Tell el-Yehudiyeh (CVA, Brussels III, pl. 107; Webb 1978 no. 912), and as far south as Thebes (Webb 1978, nos 907–11), while another three have an Egyptian provenance (Webb 1978, nos 913–15). Others have not turned up amongst the material distributed to other collections, so at the moment the actual number of certain hedgehog aryballoi from Naukratis is only one. This is despite the description of small finds discovered during Hogarth's excavations of 1903 suggesting that there were deposits of debris containing hedgehog aryballoi: 'I noticed one or two fragmentary specimens of hedgehog-vases' (Edgar in Hogarth, Lorimer and Edgar 1905, 134). He apparently did not pick them up, although he did retrieve two fragments of New Year flasks, which he also mentions seeing (Ashmolean Museum, Oxford, AN1896-1908-E.3411 A and B, both labelled clearly 'Hogarth 1903'; Masson 2014; Villing et al. 2013–19). Other types of faience aryballoi with a distribution in Egypt are not found in the material registered from Naukratis.

Made in Naukratis (?): scientific analysis of faience aryballoi

Finally we should note the work done by the pioneer researchers in faience, who carried out a ground breaking survey of Egyptian faience (Kaczmarczyk and Hedges 1983). They used X-ray fluorescence to examine three aryballoi (a–c below) of different types (Webb 1978, nos 794, 907, 950) of Phase III, with firm Egyptian provenances linked to Petrie's excavations (Kaczmarczyk and Hedges 1983, Table C-50, 268, 273–74). Their results indicated to them that Naukratis was not the centre of manufacture for the aryballoi. However, it is now clear that the faience objects they analysed as a control group, though all from Naukratis, were of varying date and did not form a discrete and coherent group for the purposes of comparison.

- a) Spherical aryballos, Memphis, Oxford, Ashmolean Museum 1911. 358 (Webb 1978, no. 794). This example showed a very high level of cobalt, comparable to that in New Kingdom faience.
- b) Locust, Memphis, Ashmolean 1910.784 (Webb 1978, no. 950).
- c) Hedgehog, Thebes, Ashmolean 1872.298 (Webb 1978, no. 907).

Kaczmarczyk and Hedges expressed the opinion that these aryballoi were not made in Naukratis, after their analysis of other faience from the site, but that they must come from another centre in Egypt where Greek influence was strong. Overall their technique and use of glaze colouring did not suggest production outside Egypt. Kaczmarczyk and Hedges argued that

the iron oxide used for the black/brown colouring was in contrast with an earlier (Egyptian) reliance on manganese oxide, suggesting that the reducing atmosphere favoured by Greek potters was being employed in the firing process for the 6th-century aryballoi. Whether this was because iron oxide was more readily available in the vicinity of Greek iron foundries, or because Greek manufacturing techniques influenced the faience manufacture, is not known. Finds of hematite ore, iron slag and quantities of chisels and tools suggested to Petrie that he had found the sites of iron furnaces in Naukratis (Petrie 1886, 39a; see Thomas 2017). Von Bissing was dismissive of this idea (von Bissing 1951, 50). Petrie also suggested there were traces of iron-working at Tell Defenneh, Daphnae, although this is not certain (Petrie 1888, 56b–57a, 77–79; Boardman 1999, 134). Recent research has shown that the area excavated by Petrie at Tell Defenneh was not a ‘fort’ but formed part of an Egyptian temple set in a much more extensive complex of buildings (Leclère 2007). The location and dating of the finds of iron tools could belong to workshops for their repair (Leclère, Spencer and Villing 2013) within a general workshop area in the southeast of the precinct, associated with Saite pottery. Recent analysis of comparative groups of amulet and scarab seals from Naukratis and Kamiros (Meek et al. 2016) has demonstrated that the use of iron oxide as compared with manganese oxide is less diagnostic.

The scarab factory

One of the most interesting bodies of faience material from Naukratis comprises the finds from the scarab factory. The debris is described in general terms by Petrie in a letter to Frederick Poole dated 28 February 1885,⁴ and further in *Naukratis* I (Petrie 1886, 35–37). It consisted of a bed of earth, the yellowish colouring of which Petrie attributed to the decomposition of the discarded material, and in which were mixed fragments of pottery and debris of various types, which indicated workshop activity. There is mention of a scarab maker’s house (Petrie Journal 1884–85, 94, EES Archive XVIIId, 47), and the label ‘scarabs’ next to a rectangular building on the plans of Naukratis published both by Petrie (Petrie 1886, pl. 41) and Gardner (Gardner 1888, pl. 4), plans which appear to be identical except for a change in the conventions used for walls. However, there does not seem to be any reference to this structure in the text of either volume. Therefore we need perforce to concentrate on the debris and its contents. Another source of confusion is the use of the term ‘house’ to imply a place dedicated to workshop activity.

The debris contained large numbers of moulds. In Petrie’s initial mention in his Journal (as above), he states ‘of the first 32 moulds discovered, 17 were damaged by the paste sticking in them’. By the end of the season he gives the total figure as 678 (‘I might have collected more of the ordinary kinds without difficulty, had there been any object in so doing’ [Petrie 1886, 37b]), of which we have located 381 (Masson 2018, 5–6, chart 2) within the collections that received Naukratis material. Some of these moulds come from the later excavations and from other areas of the site, such as the Hellenion (Masson 2018, 6–7). We should perhaps assume that this difference in the tally is due to the choked moulds and possibly also duplicates being disposed of. Since Petrie only reproduced the impressions (modern) in his plate (Petrie 1886, pl. 37, lower half, nos 1–19) it is proving very instructive to study the actual moulds.

The majority of the moulds are made of a smooth, pale red Nile silt clay which takes a fine impression, apparently taken from a terracotta(?) original. These moulds are very uniform in

⁴ EES Archive XVI, F70.

their clay, technique and the truncated cone-shape of the back of the mould, often with two indentations where the wet clay had been gripped to make the initial impression, and to aid their use. There is, however, quite a variety in their size. A smaller number are made of a grey-brown dirty-looking clay, and certain of these appear to have the device cut directly into the mould. Most of the moulds have no ducts at the side, implying that the mould was used to make only one part of the scarab, the back. Where there is a channel running across it this would exist to form the channel for suspension, or, less likely, to lead away excess material. However, I have already seen several examples with ducts, though these are made of the dirty brown clay, so Petrie's statement (Petrie 1886, 37b) that he found only one 'in the town', suggests that these do not come from his initial excavation of the factory. These may have come from a different part of the site, from later excavations, or perhaps from another site altogether. Gorton disagrees with Petrie, and is certain, despite the lack of ducts, that some of the scarab types have an impressed device (Gorton 1996, 92), for which a separate mould would have been needed. No such stamps have been found. Moreover, many of the moulds have a concave, dished upper surface (to aid the extraction of the impressed lump of material?), and would not have made a neat flat join with another mould supplying the device on the face. Petrie states that it was unusual for Egyptian moulds not to have a duct, but many moulds from Tell el-Amarna do not (see Petrie 1894, 30, pl.16; Nicholson 1998, no. 185). In any case, the Amarna amulets did not have pierced suspension holes, but had loops attached for hanging. Note also the similar pale red clay (Nile silt) of these New Kingdom examples illustrated by Nicholson, which suggests that the grey-brown clay of the separate group may reflect a difference in firing technique or indeed find-spot.

a) The most common mould was designed to reproduce the scarab back, in a variety of sizes, and range of details. The best show all the main features – the clypeus, prothorax and central line for the elytra, plus in many cases the winglets, or humeral callosities which are shown as small triangles on the outer corner of the wing cases. Others only represent the clypeus/prothorax at the head end of the beetle, and are otherwise plain (Fig. 9); (Petrie 1886, pl. 37, nos 1–5). However, it is of interest to point out here that the sides of the mould are without exception vertical and smooth, to aid the extraction of the scarab, and in this case details of the legs, which in some cases are quite complex, would have to have been added afterwards.

b) Another series of moulds, very numerous, were used to stamp out heads of blacks/Africans for scaraboids, replacing the scarab back with a human head (Fig. 10), and these could also be both moulded and modelled in a wide range of styles (Fig. 11). Not many of the most clearly moulded scaraboids have been found at Naukratis itself, although they are a feature of sites in the Mediterranean (see Petrie 1886, pl. 37, no. 100, British Museum EA 66493, no. 126, EA 66502 [see Fig. 10]; Masson 2018, fig. 27 and 76; Carthage, Vercoutter 1945, nos 451, 456–9, 462–4, 466; Amrit, Gorton 1996, 123, no. 15; Samos, Webb 2016, 99, pl.16, no. 13; Tocra, Boardman and Hayes 1966, 165, no. 92; Olbia, Alexceeva 1975–8, fig. 2; Athens market, Spier 1992, 15, no. 8). Only 16 black African head scaraboids, most probably from factory debris, were found at Naukratis, compared with 161 moulds (Masson 2018, 8–10).

c) Mould(s) in the form of a couchant lion in a crudely truncated style (Petrie 1886, pl. 38, no. 6, British Museum EA 26903) were also found and also in the shape of a curled-up lion (Petrie 1886, pl. 38, no. 7), both designed to form scaraboids with a device (usually crude) added on the flat base. The products of both of these moulds have been found: couchant lions in considerable

numbers in the Naukratis factory (Fig. 12; Petrie 1886, pl. 37, nos 50, 64, 69, 80, 92, 99 and 104) and elsewhere in the Mediterranean, particularly, Carthage (Gorton 1996, 103, 105; Vercoutter 1945, nos 510–13, 516–19; and Olbia (Matthieu 1926, 69, no. 7) For the second shape, the curled-up lion (like a cat), see Petrie (1886, pl. 37, no. 110) and Gardner (1888, pl. 18, no. 38). Examples are found among other groups of scarabs of Naukratite type. See from Aegina Furtwaengler 1906, 433, no 20; the Sounion deposit, unpublished, Athens National Museum (not listed in Theodoropoulou-Polychroniadis 2015), and from Lindos (Blinkenberg 1931, no. 1387, pl. 59).



Fig. 9: Modern impressions of scarab backs from British Museum scarab moulds. © The Trustees of the British Museum.



Fig. 10: Modern impressions of scaraboids in the form of the heads of Africans from British Museum moulds. © The Trustees of the British Museum.



Fig. 11: Mould-made and hand-cut scaraboids in the form of the heads of Africans. Reverse showing stamped and incised signs. British Museum, EA 66493, EA 66432, EA 66445, EA 66513, EA 35981. ©The Trustees of the British Museum.



Fig. 12: Couchant lion scaraboids. British Museum, EA 66472, EA 66478. © The Trustees of the British Museum.

Amulets

There were also moulds for amulets in a limited range of types, and two 'wasters' which are not assigned a precise find-spot at Naukratis (British Museum 2013,5012.11 found unregistered, and Oxford Ashmolean AN 1886.452 which was excavated 1884–85). These appear to confirm the

production of certain Egyptian types of amulet in Naukratis, but they do not necessarily belong with the scarab factory material. This has been studied further by Masson (2018, 41–85).

- a) Bes heads which occur in duplicated, sometimes identical forms (Petrie 1886, pl. 38, no. 14; British Museum 1888,0601.747; 1920,0417.2; Fig. 13). The disposal of duplicates may explain the discrepancy between the currently located 381 moulds and Petrie's original total of 678.
- b) Another popular design was the wedjat eye, which could be moulded as a simple rectangular eye, which was perhaps double-sided, as both moulds found have ducts at the side (Petrie 1886, pl. 38, no. 17; British Museum 1888,0601.748). One of these moulds was made of the crude grey-brown dirty-looking clay mentioned above (Fig. 14; British Museum 1920,0417.1).
- c) Another variation on the wedjat eye (see b above) are amuletic bullae (Fig. 15; British Museum 1920,0417.6 and 7), which have a reeded suspension loop incorporated into the mould. Perhaps this also was double-sided. The details were probably cut directly into the mould.
- d) The broken mould (upper part only) of a small Bes figure, with a flat back (Petrie 1886, pl. 38, 15, British Museum 1896,0610.33). Bes amulets with plain flat backs of a very similar design are known from the Samian Heraion (Webb 2016, nos 109–12).
- e) Two unique large moulds. One is in the form of the goddess Sekhmet (H. 9cm), the other a rather flat version of a Menat (H. 7.1cm); they are both said to have come from the 'scarab factory' (Boston MFA, Eg.Inv.3856; Eg.Inv.3855). However, these well-executed and detailed moulds do not correspond to the other material found in the scarab factory, nor to the small and crudely executed Egyptian amulets which were found there, so this provenance seems doubtful. (The Boston inventory ascribes all its amuletic material to the 'scarab factory' despite some being clearly of later date.)



Fig. 13: Two identical moulds for simplified Bes heads. British Museum, 1888,0601.747; 1920,0417.2. © The Trustees of the British Museum.



Fig. 14: Simple wedjat eye moulds and impression. British Museum, 1896,0610.31, 1920,0417.1. © The Trustees of the British Museum.



Fig. 15: Wedjat eye bullae moulds and impressions. British Museum, 1888,0601.748, 1920, 0417.7 © The Trustees of the British Museum.

It is the author's opinion that the extremely simplified versions of the wedjat eye (c) and small Bes figures (d) are not genuine Egyptian amulets (however, see discussion in Masson 2018). This factory, of course, was not the source for the plentiful amulets (be they Egyptian or Near Eastern products) that appear earlier in the 8th/7th century across the Mediterranean. Other amulets of Egyptian type excavated at Naukratis include extremely crude and over-glazed examples that presumably correspond to Petrie's 'many small Egyptian figures' (Petrie 1886, 38a). There are very few correspondences with the moulds from the factory (see Masson 2018, 5–12). In addition, it is not possible to say exactly which of the finds of Egyptian amulets belong to the group found with the factory debris. Petrie himself comments of the 'Horus hawk figurines' that they range in date from 'as early as the Polemarchus vase, and as late as the third century BC' (Petrie 1886, 14a) and states clearly that the glazed ware figurines are 'of light friable sandy ware, glazed in imitation of Egyptian work'. Despite distinguishing between these glazed ware figurines and the normal Egyptian-type amulets in his text, he does not identify the Egyptian faience amulets which were found within the scarab factory debris.

The scarabs and scaraboids

Many of the glazed scarabs and scaraboids made in the moulds were also found. Petrie remarks on their glaze of blue, sometimes green, and especially a very bright yellow, which he does not think can be merely decomposed green⁵ (Fig. 16). There were also a large number made of 'soft blue paste' (Egyptian Blue). The analysis of these pieces is discussed by Masson (2018, 17–31) and scientific analysis (ion beam PIXE and PIGE) undertaken to gather accurate quantitative compositional data of both core and the outer glaze layer is discussed by Meek et al. (2016). I highlight a few key points here.



Fig. 16: Typical products of the scarab factory EA 66453, EA 66446, EA 55454, EA 66447, EA 66497, EA 66498, EA 66496, EA 66494. © The Trustees of the British Museum.

⁵ Possibly indicating the use of yellow from lead antimoniate, as in Phase I vases from East Greece?

The great variety of techniques and style represented, with both stamped/impressed and scraped/incised decoration (see Fig. 16), is described in Andrée Gorton's survey of the evidence (Gorton 1996, 71–131). She emphasises the enormous output of the factory, and the mass production techniques used both for the back of the scarab itself, and for the device, which (she thinks) were both mould-made. This she attributes to Greek involvement. The correspondence of the scarabs – with their distinctive shapes and material – and the distribution of finds made outside Egypt is more complex. I shall not be examining this here. However, there is a problem that many apparently similar scarabs are much earlier in date – 7th and even 8th century BC (Masson 2018, 17). This suggests to Gorton that the industry was introduced to Naukratis from elsewhere, from the Delta or from outside Egypt (Gorton 1996, 91, 180). Gorton's overall classification relied on Petrie's initial publication, and material then accessible to her, and the complete Naukratis digital catalogue of material means some revisions are now necessary (Masson 2018, 17–23).

Dating the factory using scarab cartouches

Petrie analysed the faience scarabs for their royal names (Petrie 1886, 37a & b). However, it is now clear there was a problem with his identification of Psamtek/Psammetichus I. The signs for Psamtek can represent any of the three Psamtek pharaohs: I (664–610 BC), II (595–589 BC) or III (526–525 BC). Psamtek III is unlikely (Gorton 1996, 129), although a sistrum handle bearing the name of Psamtek III was acquired by Hogarth from the sebakhin (Hogarth, Edgar and Gutch 1898–99, 41; Cairo JE 33537). One occurrence is on a group of mediocre technique, together with others bearing the Horus name of Psamtek II, Menibre, as well as Amun-Ra, Padubastis, while yet others have an imitation of a royal name Menkheperre, Kheperre, in a distinctive cruciform composition (Gorton 1996, 129–30, Type XXXVI). Parallels for all these exist in Naukratis, and a date in the 6th century seems to be confirmed by the parallel appearance of Psamtek II's Horus name (Menibre).

In another group defined by Gorton (Fig. 17), she considers doubtful the identification of the cross-shaped symbol between two circles as Wahibra, the prenomen of Psamtek I (Gorton 1996, 93, Type XXVIII, B; Petrie 1886, pl. 37, nos 71, Louvre 9, 75–77, British Museum EA 66477 and 65–68, British Museum EA 66471). In any case the prenomen name of Psamtek I, Wahibra, is also used by Apries (589–570 BC) as his nomen, a cause of confusion. I will discuss this problem and its solution by using another class of faience objects below.

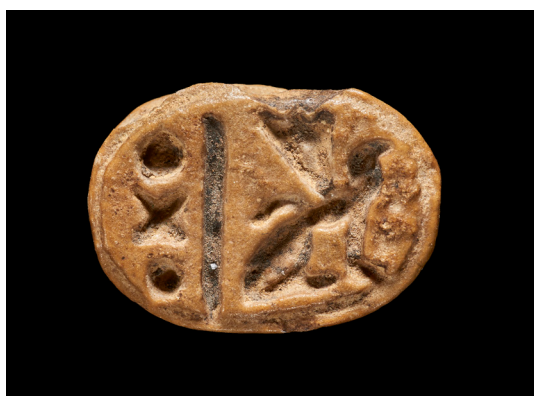


Fig. 17: Scarab with circle-cross-circle debased cartouche and seated sphinx. British Museum, EA 66477. © The Trustees of the British Museum.

Of particular interest is a very fine scaraboid (British Museum 1886,0401.1651, EA 23713; Petrie 1886, pl. 37, no. 79) which has a longitudinal perforation, an elaborate rope design modelled in relief all around the edge, and an unusual inlay technique, of a very finely textured faience. It is larger than the other scarabs and scaraboids from Naukratis and its inlay technique appears unusual, without parallel from the site. One side bears a boldly modelled goose (of Ra?) in inlay technique with two wings, one upright above its back, the other stretched out in front, with its elements inlaid in brown, as well as in the alternating cells of the surrounding block pattern round the edge (Fig. 18); and on the other side, signs are scooped out in a very distinctive technique which spell Psamtek, as used as the nomen of both Psamtek I and II, plus a miniature version of the cartouche itself. Can we be sure that this is intended to be the nomen of Psamtek I (664–610 BC)? For a close comparison, see the flat-backed scaraboid from Vulci, (Hölbl 1979, no. 338, pl. 83, 3; British Museum 1850,0227.62), which reproduces the vertical *Nb* on the right, but repeats the squatting figure twice with different attributes, possibly Ptah and Sekhmet. The device is also lacking the cartouche. It clearly shows the same style and technique of cutting out the figures. The technique and conception are so similar that they must both have been made by the same hand. Vulci has yielded at least seven other examples of scarabs from the Naukratis factory, a larger number than those from any other source, so we might be able to make the association between the two, and to assign them to a 6th-century context. However, Petrie was certain that this fine piece (Petrie 1886, 37a pl. 37, no. 79) should be identified with Psamtek I. By contrast, von Bissing (1951, 41, 65–66) argued strongly that the use of *hs* (the vase *Hes*) on Petrie's no. 53 (1886, pl. 37), and on similar, but non-Naukratite scarabs, assigned to Psamtek I, and published by Petrie (1917), indicates 'the laudable, the glorified', an epithet of the dead, kings as well as private people. So he eliminated Psamtek I. In fact Petrie's no. 53 (1886, pl. 37; see also no. 82 from the factory debris), which is rather crudely cut, was misinterpreted by von Bissing, since it actually contains the sign combination that stands for the name *Neferibra* which is the prenomen of Psamtek II (Fig. 19; British Museum EA 66463). Petrie continued his discussion by saying that his nos 80 and 81 (Petrie 1886, pl. 37) also belong to Psamtek I. Although both contain the name Psamtek, no. 80, from the factory debris (British Museum EA 66478), is one of a series of couchant lion scaraboids, for which Petrie also found two moulds (see Fig. 12; British Museum 1896,0610.16 & 17; Masson 2018, fig. 23). These lion scaraboids are widely distributed in Greek, Carthaginian and Black Sea contexts. They belong with the generality of the factory's products (Petrie 1886, pl. 37, nos 50, 64, 69, 92, 99, 104), which demonstrate selective and meaningless use of different elements of the name *Psamtek* and other garbled royal signs in the same poor style and are most likely to be of 6th-century date. Petrie's drawing of the device on no. 80 (1886, pl. 37) gives it more clarity and a superior technique than it actually possesses.

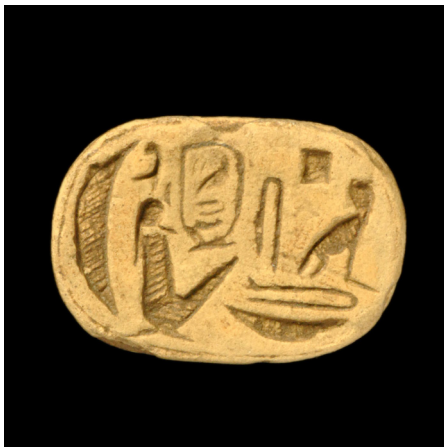


Fig. 18: Face of fine scaraboid bearing signs for Psamtek, and the goose which stands for Sa – ‘Son of’ – normally linked with Ra. British Museum, EA 23713. © The Trustees of the British Museum.



Fig. 19: Scarab with hieroglyph devices Nefer-Ib-Re and falcon. British Museum, EA 66463 (Petrie 1886, pl. XXXVII, no. 53). © The Trustees of the British Museum.

The other element of Psamtek I's name is *Wahibra* (Apries). Von Bissing states with confidence that none of the published scarabs bear the distinguishing name Apries belonging to Psamtek I; i.e. those with the name *Psamtek*, (Petrie 1886, pl. 37, nos 79, 80, 81) do not have this name as well, and neither does the steatite example (Petrie 1886, pl. 38, no. 183). *Wahibra* only appears isolated on two steatite examples from Naukratis, though without a specific find-spot and not from the ‘scarab factory’ (Petrie 1886, pl. 38, nos 184–85). Gorton also suggests that the combination of an owl with a disc and an elongated symbol might well be a debased form of Nekau's (610–595 BC) name (Gorton 1996, 93).

At Naukratis we have cartouche names which are not certainly of Psamtek I, although they are clearly *Psamtek*. The small number with *Wahibra* alone, on steatite, either the premen of Psamtek I or the nomen of Apries (589–570 BC), do not come from the factory and cannot therefore be used to date the faience production. One scarab (Petrie 1886, pl. 37, 53), claimed by von Bissing as a crucial piece of evidence about the dead Psamtek I being honoured, turns out to represent *Neferibra*, unmistakably representing the premen of Psamtek II (595–589 BC). Gorton argues that the majority of these are ‘imitations and debased interpretations of Egyptian hieroglyphs’ (Gorton 1996, 93). Just as in Group B the makers of the scarabs and scaraboids continued to use the names of pharaohs of earlier dynasties, so these identifications are only valid as confirming a general dating linked to a specific Saite pharaoh, which can serve as a general *terminus post quem*. They can be contemporary with the pharaoh they reference, or post-date his reign.

This concatenation of names suggests that we are looking at a grouping which must represent Psamtek II (*Neferibra*), and his successor Apries (*Wahibra*), not Psamtek I. This was, of course, the point that von Bissing wanted to make (von Bissing 1951, 47, 66). The absence of Nekau II, who reigned between Psamtek I and Psamtek II, on these scarabs supports this argument. (But see comment above on Gorton's tentative identification of Nekau's name.)

Dating cartouched aryballoi

There is another group of faience material which may help us decide what significance these observations have. These are the cartouched aryballoi, which belong to Archaic Greek faience Phase III (Webb 1978, 114–19 and 123–25). Their use of simple three-element cartouches can be compared with a group of small New Year flasks which bear cartouches of Psamtek II, Apries and Amasis (Webb 1978, 116, pl. 18), although it has been pointed out to me that the cartouche of Psamtek II occurs on a small flask identical in its broad collar to the flask with the name of Apries (Webb 1978, pl. 18, no. i, 116, cf. with no. iv). The further existence of New Year flasks with the name of the daughter of Psamtek II, *Ankhneseferibra*, who held the office of God's Wife at Thebes during the reigns of both Apries and Amasis (586–525 BC), would seem to confirm this date range (Lansing and Hayes 1935, 4–5, fig 2; Caubet and Pierrat-Bonnefois 2005, 147–51).

The cartouched aryballoi comprise three nearly contemporary groups that employ the name of Apries or Amasis (Webb 1978, 117–19, no 764). Skon-Jedele added that the Ialysos aryballos (now cleaned) bears both of Apries' cartouches (Skon-Jedele 1994, 2619; Fig. 20). Other appearances of the single cartouche with three signs, standing in one case for Wahibra, are on an alabastron of Greek 6th-century BC form (Geneva no. MF 3696; Webb 1978, pl. 18), while Neferibra, for Psamtek II, on a fine juglet in the Louvre (Louvre E 10910), marks an earlier series of Egyptian production.



Fig. 20: Cartouched aryballos of Apries. Cartouched aryballos with double cartouche of Apries, Ialysos Votive Deposit. Rhodes Museum, Inv. no. 10875. © Rhodes Museum. Photograph by the author by permission of the Rhodes Museum.

- a) One example with both names of Apries: Haaibra and Wahibra (Webb 1978, no. 764; Skon-Jedele 1994, no. 4842, 2617–24; see Fig. 20).
- b) Three examples with Apries: Wahibra clearly executed (Webb 1978, nos 763–64, and helmeted head form no. 840, to which two more examples can be added: Metropolitan Museum, New York 17.194.2279, and Amsterdam, Allard Pierson Museum, inv. 850, Ducat 1957, 233).
- c) Four examples with Apries with variant sign: alternative versions of Wahibra employing the variant second sign, Gardiner P4 in place of Gardiner V29 coiled rope, Webb 1978, 115, nos 766–69; British Museum EA 13175; see Fig. 20).⁶
- d) Three examples with Amasis' name: cartouches containing the name Khnemibre of Amasis (Webb 1978, nos 770–72).

In the case of the aryballoi we have a sequence of royal names which, because of the presence of Wahibra, could be linked either with Psamtek I, or Apries. However, because of the existence in the same sequence of Amasis' prenomen, Khnemibra, as well as both names of Apries (Skon-Jedele 1994, no. 4842), and the undoubted link with other faience aryballoi produced in the 6th century BC, we must identify Wahibra as belonging to Apries, Amasis' immediate predecessor (Webb 1978, 114–19, 123–25; Caubet and Pierrat-Bonnefois 2005, 157, nos 419–20). This shows the popularity of such inscriptions from the first quarter of the 6th century into the reign of Amasis.

Connections between the Naukratis scarabs and cartouched aryballoi can be made concerning the use of stylistically similar depictions of seated griffins and monkeys beside a palm tree. Seated griffins with uplifted wings are known from Naukratis scarabs (Petrie 1886, pl. 37, nos 132 and 133) and are very close to those either side of the Wahibra cartouche on a helmet vase (Louvre MNB 1143; Webb 1978, no. 840, 124) and known from two further helmet aryballoi (Webb 1978, nos 841 and 842) and also on a cartouched aryballos from Cyprus with Amasis' name (Dikaios 1946, 7, pl. I, d; Dikaios 1953, 129, pl. 33; Cyprus Today 2012, 12–13). The device representing a pair of monkeys either side of a palm tree is known from two Naukratis scarabs (Petrie 1886, pl. 37, no. 136, ram-headed scaraboid; Gardner 1888, pl. 17, 9, British Museum EA 36058 blue paste scarab) and reappears under the handle on a fine cartouched aryballos named for Apries (Webb 1978, no. 764; Skon-Jedele 1994, no. 4842, 2617–24; Kousoulis and Morenz 2007, 188–90).

These links suggest contemporaneity in the 6th century BC associated with the names of both Apries and Amasis. They also suggest a close relationship between the workshops making the cartouched aryballoi and scarabs. This does not necessarily mean that the aryballoi were also being made at Naukratis, as Archaic Greek faience Phase III aryballoi are apparently so rare there (discussed above). As similar scarab mould types are known from Sais (Wilson this volume) and Tanis (Louvre unpublished), we may be looking at a generalised koine, an accepted stylistic language, which was widespread in Lower Egypt in the 6th century BC when trade with the Greek market was so important. This distinctive style was recognised as marketable throughout the Delta area and Upper Egypt, as well as outside Egypt.

⁶ The suggested substitution of the new sign for *W3h*, which makes sense of certain of the cartouches on these aryballoi, was made to me by Professor Herbert Fairman (Webb 1978, 115) and can also be seen in certain scarabs which bear an approximation to Wahibra (Blinkenberg 1931, nos 1382, 1388; Cerveteri, see Hölbl 1979, no. 110).

New Year's flasks

Other faience finds at the factory were the necks of what Petrie calls 'pilgrim-bottles', i.e. New Year flasks. He describes their distinctive fine yellow paste (Petrie 1886, 37b). Eleven examples are now known (Masson 2014) with five probably coming from the scarab factory (Masson 2018, 77). Fragments in the Ashmolean, Oxford come from the later excavations of Hogarth, from a find-spot noted by Edgar in 1905 that was possibly debris from the factory (Hogarth, Lorimer and Edgar 1905, 134; Ashmolean Museum, AN1896-1908-E.3411 B; AN1896-1908-E.3411 A). A later find from the Coulson and Leonard 1980–81 fieldwork season is now in Cairo (Egyptian Museum, JE 97797).

The elaborate necks and mouths of some New Year flasks are of a particular well-developed 6th-century Saite type (Goyon 1972; Bianchi 1998b) that form a highly elaborate papyrus bundle column and capital, flanked by small monkeys for the handles (when preserved). Numerous parallels (Figs 21 and 22) are known (Masson 2014), including one from the Bord Djedid cemetery, Carthage (which bears both cartouches of Amasis' name – *Amasis* and *Sineith*, Cagnat 1907, 280–87, figs 284, 285) and incised flasks with a similar mouth, neck and broad collar from East Greece with Hathoric themes (Kamiros, Rhodes British Museum 1861,0425.29).

These are distinct from the earlier 7th-century type with low relief decoration in the form of the Hathor cow or the goddess Nebethetep (Metropolitan Museum, New York no. 30.8.214) and related marsh scenes, coloured with additional yellow and black-brown, known from East Greece. Further examples are known from Kamiros, Rhodes (Mus. Inv. 14682 a & b; Jacopi 1932–33, 325, pl. XIII, 329 no. 2); Ialysos Rhodes (Mus inv.7082; Maiuri and Jacopi 1928, 77, fig. 59); Ialysos, Firenze Arch (Museum no 80037, unpublished), the Artemision of Ephesus (Hogarth 1908, pl. 44, 6) and Samos (Webb 1978, C 19, 148, fig. 30, pl. 8; see Skon-Jedele 1994, 2593–2605 and Webb 2016, 52–56, notes 304–41, nos 70, 71, 72 for full discussion). None of this 7th-century type has been found at Naukratis.



Fig. 21: New Year flask necks. British Museum, EA 27558, EA 58326. © The Trustees of the British Museum.



Fig. 22: New Year flask neck showing elaborate lotus flower decoration underneath flaring mouth. British Museum, EA 58327. © The Trustees of the British Museum.

Other dating evidence

The evidence outlined above appears to confirm Gorton's argument that the Naukratis scarab factory, and all its finds, cannot be earlier than the beginning of the 6th century (Gorton 1996, 92). This dating is, however, based on parallels found outside Egypt, from across the Mediterranean. Many of these dates are only approximate. Two further avenues of investigation may provide greater precision: further analysis of scarabs found outside Egypt and the dating of other finds found within the scarab factory.

Further analysis of scarabs in Greece could be significant, for example those from the Samos Heraion excavations of votive deposits, around the Rhoikos altar (Webb 2016), or graves on Samos (Webb 2016, 99; Boehlau 1898, girl's grave, no. 45, 46, 161, including five scarabs; Gercke and Löwe 1996, 62–63; Felgenhauer 1996, 171–73, Kassel S79 a–f) where Boehlau identifies them as 'Naukratischer Fabrik' (but not Egyptian Blue). The grave, a single burial, contained three plastic vases: a siren, a leg vase, and a pomegranate (Ducat 1966, siren 54, 144; leg vase 139, 135, 179 no. 19; pomegranate 143, 179, n. 19) that would date the contents to between 590 and 560 BC (Gercke and Löwe [1996] date them to 560 BC). In technique of manufacture and signs, these scarab types are similar to Naukratis production, and include a black African scaraboid.⁷

Similarly, the rich burials from Kamiros, Rhodes contain relevant material. Burial 178 from the Makri Langoni cemetery contained four Naukratite scarabs as well as a selection of related faience figurines and Corinthian and plastic aryballoi and other ceramics which can be dated to 575–550 BC (Jacopi 1931, 312–19; Hopper 1949, 226); while Burial 180 contained sixteen scarabs (Jacopi 1931, fig. 362). From the Papatislures cemetery, Burial 6 contained four naked faience figurines, one male, three female, and a single scarab of Naukratite type decorated with a walking lion and Maat feather (Jacopi 1932–33, figs 30–31) where the type of female figurine

⁷ Depicting goose walking to left, sun (*R*^o) above its back, and feather of Maat in front (Gercke and Löwe 1996, 61–71, specifically 62–63 nos 45, 18–23; see also Höcker 1987/88, no. 21A; Felgenhauer 1996, 171–73, no. 71).

found corresponds exactly to one from Burial 178 above.

Petrie specifies that the finds from the scarab factory included a very large proportion of varied types of pottery, and dating the plentiful finds of East Greek pottery found there could help date the factory, which he seems to suggest was dominated by Chian finds (Petrie 1886, 22). Unfortunately it is not possible to identify the material from the factory, as this information was not retained. Only one 'piece of an early white-faced Naukratite bowl' with 'ΦΡΟΔΙ' painted on it (a dedication to Aphrodite) is explicitly identified by Petrie as coming from the pottery from within 'the scarab house' (Petrie 1886, 16, pl. v, 37), which suggests this was probably mixed with residual material from the adjacent Sanctuary of Aphrodite (which Petrie had not yet identified). This mixed deposit was later described by Edgar, who found a great number of scarab moulds mixed with 'Naukratite' pottery, who nevertheless opines that 'the fact that a good deal of Naukratite pottery was found along with the scarabs is far from being a proof that the two were contemporary' (Hogarth, Lorimer and Edgar 1898–99, 50, specifically nos 25, 26, 28, 48). Subsequently Möller attempted an identification of all the pottery types listed by Petrie found in the scarab factory debris (Petrie 1886, 17–20, 22),⁸ relating them to modern pottery categories (Möller 2000, 114). Möller concluded that the production of Egyptian faience in Naukratis dated from the late 7th century into the second half of the 6th century BC.

Conclusions

Petrie confidently asserted both a beginning and an end date based upon his measurement of strata (level in inches), correlated with dates linked to certain Egyptian pharaohs recorded on scarab cartouches (Petrie 1886, 21, 39a). He records the level of 335 for the scarab factory, with a beginning date of 600 BC because the founding level of the town (300) he dates to early in the reign of Psamtek I, about 650 BC. He observes that level 320 is perhaps half a century later. Elsewhere he states 'the scarab stratum of 580 BC is about 330 level'. He assumes 'the age of the close of this deposit can be safely fixed at about 570 BC and hence the pottery and other objects probably range from that year back to about 600 BC' (Petrie 1886, 22b). This assumption is based on the absence of evidence: there are no scarabs bearing the name of Amasis and so assignable to the reign of that king, 570–526 BC (Petrie 1886, 5a). The presence of New Year flask types within the scarab factory, elsewhere dated to the reigns of Apries and Amasis, suggests that this assumption may be wrong.⁹

Von Bissing (1951, 65–66) argues that the scarab factory cannot be dated before the beginning of the reign of Psamtek II, c. 595–589 BC, because there are no scarabs of Psamtek I or Nekau. He states that 'the factory opened only under Psamtek II, and ceased work when the Persians invaded Egypt'. Von Bissing explained the absence of material bearing the names of Amasis and his successor with the unlikely suggestion that the Persians ordered the destruction of objects (including wasters?) bearing the name of the vanquished Psamtek III and his predecessor Amasis.

Möller argues for a date from 635–525 BC (Möller 2000, 115, 153) based upon Petrie's pottery

⁸ He employs the typology he has already established, which uses letters and numerical subgroups for each category described for the site as a whole.

⁹ Note despite the Louvre miniature New Year flasks being similar typologically, they bear two different royal names: Amasis/Khenemibra and Psamtek II /Neferibra (Webb 1978, pl. XVIII, nos i and iv; Masson 2007, 614). Also it is not certain that the royal name found on scarabs can be assumed to be contemporary with the product. But they can't be earlier.

typology (which cannot be checked) of a deposit that was probably mixed with that from the (yet to be identified) Aphrodite Sanctuary. This longer production period would push the earliest production and distribution to the earliest Greek presence in Naukratis, during the reign of Psamtek I. I am at the moment unable to corroborate or contradict it, though it seems to go against all the dating correlations that I have been able to establish for the material from the factory. To date, the material from the workshop suggests the majority of the material falls within the period 600–570 BC, although later material seems to be present (Masson 2018) including assemblages of certain mixed style figurines, amulets and scarabs without cartouches, which can be dated down to 575–550 BC. (Webb this volume.)

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