Naukratis: Greeks in Egypt

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Altars, sundials, minor architectural objects and models

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1. Introduction

A small group of transportable cultic objects, furniture and minor architectural models and fragments were found in Naukratis. This group includes a range of objects from Greek and possibly Egyptian sanctuaries as well as Egyptian houses. These are treated in four separate sections, each comprising a small group:

- **Altars** include six portable altars and two models of altars;
- **House models** comprise four architectural models;
- **Sundials** include a sundial and two sundial models;
- **Architectural fragments** comprise several objects made of plaster, terracotta and faience.

The altars were used, like incense burners, for burning offerings to the gods in a domestic or public space, such as on the river front. House models were also used as lamp shrines or to burn offerings. The sundials were dedicated within the Apollo sanctuary. The architectural fragments below mostly come from Greek sanctuaries, although some may have come from private residences.

2. Altars

Six small portable altars, four in limestone and two in terracotta, were found in the early excavations at Naukratis. Most altars belong to the portable horned altar type. One ‘altar in the form of column’ likely belongs to a different type. According to the Museum of Fine Arts’ register, it carries the inscription in Greek ‘ΑΠΟΛ and was found within the Apollo sanctuary. Fragments of large Archaic altars from the Greek sanctuaries of Hera and Aphrodite, as well as funerary altars from the cemetery, are discussed in other chapters.

Horned altars were known to Greeks as βωμός κεραμοῦχος. A recent study by Falk argues that the first altars of this type are to be found in Egypt, while the common scholarly opinion sees a Levantine origin. New Kingdom representations of altars topped by four (more or less rounded) projections are documented in various Theban tombs and in the Temple of Amun in Karnak. However, these depictions usually differ from the typical shape of horned altars. Falk has also dated the full-size, more typical horned altar located behind the eastern part of the Amun Temple built by

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1. We would like to acknowledge the help of Manuela Lehmann regarding the architectural models. All images are © Trustees of the British Museum, unless otherwise indicated.
2. Plaster fragments from the Greek temples and altars are discussed in a forthcoming chapter on Greek architecture.
4. Museum of Fine Arts, Boston, S.1312. This piece was not seen by the authors.
5. Recently registered limestone section, see forthcoming chapter on Greek architecture.
6. Plaster fragments discussed in section 5 below.
7. See chapter on Greek and Roman sculpture.
8. In Ancient Egyptian there is no special word for horned altar, but an ideogram representing a horned altar can follow the generic word used for altar in Ptolemaic and Roman inscriptions,ḥn(t): Quaegebeur 1993, 341.
10. Falk 2016, 75. See also other examples: Jéquier 1910, 167–8, note 2; Larché 2009, 149 and notes 63–4. It appears from these representations that the funerary ‘horned’ altars were possibly made out of wood and meant to burn at the same time as the offerings placed on top (Jéquier 1910, 168).
Thutmose III (1479–1425 BC) in Karnak to the reign of this mid-18th dynasty pharaoh. However, this altar is actually of uncertain date, and since it closely resembles the early Ptolemaic horned altar located in front of Petosiris funerary chapel in Tuna el-Gebel, other scholars have interpreted it as a Ptolemaic construction. Horned altars, if one accepts such a term for the New Kingdom examples, were rare and an unusual shape of altar in Late Bronze Age Egypt. They did become a major feature of the religious equipment in the Levant from at least the 10th century BC. They were introduced (back?) to Egypt from the Levant, possibly by Persians or Eastern Greeks, at the end of the 4th or early 3rd century BC, and remained popular throughout the Ptolemaic (See Fig. 1, depicting a yellow full-sized horned altar behind Harpokrates) and Roman periods, until the 4th to 5th century AD.

In Egyptian rituals full-sized horned altars seem to have been principally used to burn food offerings. A scene decorating the door of Ptolemy III Euergetes (246–222 BC) at Karnak shows the pharaoh making an offering to the god Khonsu; between them, a portable horned altar, probably made of metal, supports a pile of roasting meat pieces. Other depictions indicate that little balls interpreted as aromatic resins were burnt at the same time as meat offerings. Two early Roman horned altars found near the temple of Khnum in Elephantine had distinct functions, one for burning food offerings, the other for libations. The burning of meat together with incense, milk and wine libations is also well attested in animal sacrifices that are totally consumed by fire, known as ὀλόκαυστος in Ancient Greek and qrr-sacrifices in Ancient Egyptian. Texts remain ambiguous when it comes to the meaning of these sacrifices: did they serve as divine sustenance, did they represent the symbolic destruction of enemies (usually the enemies of Osiris), or both?

Portable miniature horned altars in limestone, bronze, terracotta and wood reproduced more or less faithfully the full-size stone altars. They were used in household shrines, as votive offerings in sanctuaries, and in cemeteries, principally to burn incense or perfume. As such, they are often identified as incense burners or censers. However, based on Egyptian textual evidence, it seems that the act of burning incense could

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11 Falk 2016, 70; Wilkinson 2000, 69.
12 The altar is dated to the late 4th–early 3rd century BC. It is the earliest securely dated full-sized stone specimen found in Egypt (Soukiassian 1983, 318, fig. 1).
14 Falk 2016, 69.
15 Green suggested an introduction already in the early Late Period, based on a 7th century BC stela from Abydos (Louvre C114: Munro 1973, pl. 31, fig. 112), but that hypothesis has since been rejected (Quaegebeur 1993, 331–2).
16 See for example the numerous published Egyptian examples of the Ptolemaic and Roman periods (Déonna 1934; Soukiassian 1983; Quaegebeur 1993; Helmbold-Doyé 2010, 133–48).
17 Labrique 2005, 167, fig. 2; Quaegebeur 1993, 338; pl. Va.
19 Soukiassian 1983, 323.
20 Quaegebeur 1993, 342–3.
21 Quaegebeur 1993, 345–7; Yoyotte 1980–1, 42–3.
23 For example, the well-preserved horned altar in front of Petosiris chapel at Tuna el-Gebel measures 2.4m height (including the horns) and 1.43m width: Lefebvre 1923, 13–14.
25 As indicated by the traces left on the top of the small altars: Soukiassian 1983, 326. The function of an incense burner is also attested on an inscription regarding horned altars from Egyptians sanctuaries in Delos (Déonna 1934, 381).
still be symbolically linked to the burning of meat and to the annihilation of the gods’ enemies.26

None of the limestone and terracotta horned altars from Naukratis were found in the cemetery or sanctuaries, but granting provenance was rarely recorded such context cannot be excluded. They all probably came from the town and river front, although it is probable that shrines and temples also once occupied the river front. The limestone altars can be separated into two groups: intricately decorated examples with a square horned top above a column (Figs 2–4),27 and simpler examples with a square horned top above a square body (Figs 5–6). All show traces of charring, resulting from the burning of offerings.

The first object from Naukratis is an 11.5cm high portable horned altar that has a column decorated with rosettes and a now eroded uraeus in relief (Fig. 2).28 Rosettes as well-known Egyptian elements become a common Hellenistic and Roman feature on Greek altars, usually in association with bukrania and garlands decoration.29 Numerous Ptolemaic parallels have been found in the cemetery of Naukratis as terracotta fittings from wooden coffins30 and on a single limestone funerary altar decorated with bulls’ heads and hanging leafy garlands of fruit and flowers.31 Rosettes could also relate to the offering of ‘cakes’ stamped with rosettes, depicted on a range of Ptolemaic terracotta figurines where they are sometimes depicted above a horned altar (Fig. 1);32 some actual stamps are also preserved.33

Representations of snakes are unusual on Greek altars.34 Although the Naukratis example has Greek parallels from Knidos that also depict snakes wrapped around the circumference of the altar,35 the Naukratis altar differs as the snake is only wound once and is a striking cobra. The rearing cobra pertains to the Egyptian iconography repertoire associated with the Uraeus of Isis.36 During the Roman period, the Uraeus cobra is often depicted with horns, a sun disk, and surrounded by vegetation; such representation relates to the goddess of the Fayum Renetetet-Isis-Hathor, also known as Hermouthis.37 There are numerous parallels for this iconography on plaster and terracotta amphora stoppers stamped in c. AD 40–100, found in

26 Quaegebeur 1993, 340–1.
27 With Ptolemaic parallels in terracotta from Egypt (Petrie Museum, UC65207; UC19466), which may come from a much older tradition of incense burners (see Petrie Museum, UC6592).
28 Petrie 1886 pl. XVIII, 11; Smith 1892, 64, no. 104.
29 Altar to the east of Theophrastos agora in Delos (Coullioud-Le Dinahet 1991, pl. XXIic).
30 Gilded terracotta fittings from wooden coffins (Fitzwilliam Museum, Cambridge, GR.19,1887; British Museum 3495, 6, 97, 98). See chapter on Ptolemaic and Roman figurines.
31 A funerary altar found in or near Naukratis (Greco-Roman Museum, Alexandria. 32046; Abd El-Fattah and Seif El-Din 2010 who published Alexandrian parallels; Coulson 1996, 12, pl.VI) is discussed alongside funerary stelae and relief sculpture in the chapter on Greek and Roman sculpture. This example has close Hellenistic parallels from Alexandria, c. 150–90 BC Delos (British Museum, 1847,1220.2; 1825,0713.5; 1847,1220.1; Budde and Nichols 1967, pl. 22, nos 71–2) and c. 200–30 BC Knidos (British Museum, 1888,1003.2; 1888,1003.1).
32 3rd or 2nd century BC examples of Harpocrates with a rosette stamped ‘cake’ above a horned altar (Bailey 2008, 32, no. 3049, see also nos 3053, 3054, and Bes example no. 3091).
33 A 3rd century BC example from Naukratis (Bailey 2008, 160, no. 3602). However, Bailey suggests this was not for stamping cakes, but instead for stucco decoration or coffin fittings.
34 Yavis 1949, §§59, 153.
35 2nd or early 1st century BC marble cylindrical funerary altars from Knidos (Smith 1900, nos 1355–6; British Museum 1888,1003.1; 1859,1226.786).
36 Deonna 1934, 385.
37 Roberts 1995; Hart 1986, 185; Thomas 2011, 13. Such depictions of Renetetet on wine amphora stoppers are also known from the 14th century BC (Hope 1978).
Naukratis and across Egypt. Wooden stamps used to make these have been found in the Fayum. Serpentine representations of Isis and Serapis are also known from marble and limestone relief sculptures and jewellery from 1st century AD Naukratis, with further parallels across Egypt. Portable horned altars decorated with an Uraeus are documented in Roman Alexandria and Hellenistic Delos as well. The association of horned altars with an Uraeus is also documented in Libya, where one side of a small Π-shaped altar from Cyrene depicts a rearing cobra wearing a Hathoric crown, flanked by granaries, while on another side a naked man (a hero?) is seen making a libation using a patera above a horned altar.

The space between the horns on the top of the Naukratis example is occupied by a shallow bowl, which is characteristic of Roman horned altars. However, the horns are mounted on a column, a feature observed on a few Ptolemaic horned altars, including one from Alexandria which is decorated with Greek deities on the column and attributes of Isis on the horns. A late Ptolemaic or early Roman date could then fit the Naukratis altar.

A second finer 11.9cm fragment of a high horned altar made of soft limestone has horns separated by a small triangle (which is a common attribute on most portable horned altars) on a square base, which crowns an elaborate Egyptian-style capital (Figs 3–4). Egyptian motifs occupy each corner of the horns. These comprise: a stubby double crown (possibly a symbol for the royal god Horus) facing a pine cone or a bunch of grapes; an ibis and a baboon (both animal manifestations of Thoth), each seated in front of a small horned altar; a branch facing a bird with a long curved beak, possibly another ibis; a crown composed of a sun disk framed by horns and ostrich feathers (associated with Isis-Hathor) facing...
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an unidentified element. The iconography, style, and its resemblance to the previous altar, place this example between the Late Ptolemaic and early Roman periods.

Some of the motifs decorating the horns could stand for the usual offerings made to the gods on such altars. A marble relief found on the Velia in Rome illustrates a horned altar, the horns of which serve to hang food offerings: a wreath and a waterfowl. The representations on the horns could have sufficed to magically perpetuate the offerings to the gods when no real offerings were placed on the altar. The Naukratis specimen, however, features mainly divine representations and religious symbols, particularly connected with major deities that were part of the Osirian myth and rituals (Thoth, Isis and Horus?). In the same fashion, a scene on a mid-2nd century AD Isiac altar from Spain depicts together a hawk (Horus?), an ibis (Thoth) and a dog- or jackal-headed figure (Anubis).

In Egyptian contexts, a connection with the cult of Isis has already been observed for a number of horned altars or their depictions, although they were definitely not limited to the Isis cult. Since both of the ornate altars from Naukratis bear symbols of the Isis cult and are probably

53 This was originally incorrectly identified as an ‘Ionic style capital’, ‘said to be from the temple of Apollo at Naukratis’ (Vermeule and von Bothmer 1959, 345).
54 Kater-Sibbes and Vermaseren 1975 (vol. II/3), pl. XVI, add. 12.
55 This is the opinion of Falk concerning a 10th to 9th century BC horned altar in terracotta from Tell Rohov settlement, which has plants (emmer?) roughly incised on each horn (Falk 2016, 74; first published in Mazar and Panitz-Cohen 2007, 209).
56 A full-size white marble altar, but of a different type and relief style (Kater-Sibbes and Vermaseren 1975 (vol II/2), 32, pl. LXXXIII, no. 327).
57 The horned altars in Delos, for example, often bear a dedicatory inscription to Egyptian gods, principally Isis and Serapis, but also Horus and or Anubis (Déonna 1934, 400–1; Soukiassian 1983, 331–2). A few are dedicated to Greek deities such as Zeus and Athena (Déonna 1934, 383–4).
contemporary, they may have been used in the same context. This could possibly be the c. 50 BC to AD 90 Roman shrine or temple dedicated to Isis or the Osirian Triad recently suggested on the south western river front of Naukratis. In this area Petrie described ‘Roman houses’, where a ritual ‘cache’ of silver and gold objects was found, including jewellery and a mirror depicting Isis cult iconography. Subsequent finds may have also come from this temple, including further contemporary jewellery and two relief sculptures, the first depicting a serpentine Isis-Thermouthis and Serapis, and the second a serpentine Dionysos-Serapis and Harpokrates, which also serve as parallels for the iconography depicted on the altar in Fig. 2.

Two plainer cubic portable altars fragments (possibly horned, although this is not preserved) were found at Naukratis. The first, a 9.1cm high example resembles the house models discussed below. It reproduces the shape of an Egyptian naos, a type well attested for Egyptian altars. It recalls the fragment of a portable altar found as a surface find by the British Museum project in 2015 (Fig. 6). They have in common a square depression and four square legs.

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58 See full discussion in forthcoming chapter on Jewellery and mirrors. Recent excavations have revealed that this structure was built over and after a phase of land reclamation in c. 100–30 BC. This covered the earlier Late Period river front that silted up following the movement of the Canopic branch of the Nile westwards by almost 90 metres (Pennington and Thomas 2016).
59 ‘South-west of the town at a high part, lying in the loose dust among the houses’ (Petrie Journal, 1884–5, 156).
60 Petrie 1886, 43; Petrie Journal 1884–5, 156; British Museum, 1886,0401.1755–1765; Egyptian Museum, Cairo, JE26779–JE26781.
61 Egyptian Museum, Cairo, JE26779; British Museum, 1886,0401.1765; 1886, 0401.1749; British Museum, 1886,0401.1753, 1886,0401.1754.
62 Isis boss British Museum, 1888,0601.3; gold earring, 1888,0601.2; gilded lead bar 1888,0601.4. This is less certain for the Bes amulet (Egyptian Museum, Cairo, JE33539). See full discussion in forthcoming chapter on Jewellery and mirrors.
63 Limestone relief sculpture of Isis-Thermouthis and Serapis, dated c. AD 1–200 (Ashmolean Museum, Oxford, AN1888,257) and marble relief sculpture of Dionysos-Serapis and Harpokrates, dated c. AD 25–200 (British Museum, 2005,0919.1). See chapter on Greek and Roman sculpture.
64 British Museum, 1909,1201.4.
65 Déonna 1934, 400, fig. 17; Soukiassian 1983, 326–7; figs 22–3.
66 N15.SF1, found as a surface find next to the ancient river front.
There are also two limestone models of altars known from Naukratis. The first is a minute almost cubic altar (Fig. 7) with a depression carved at the top and a relief panel depicting a stylised cruciform figure on the bottom.\(^{67}\) Grids are crudely incised on three sides and what appears to be a caduceus is roughly engraved on another one. The figure recalls Phoenician or Punic works, and particularly the sign of the goddess Tanit.\(^{68}\) The best parallels come from Punic sites located to the south of Sardinia, with 6th to 4th century BC votive stelae from Nora displaying similar frontal cruciform images in the same crude and flat relief style.\(^{69}\) The cruciform figure is interpreted as a variant of the Tanit sign, modified to look more human. At the time, Nora workshops were producing works where human shapes are meant to look more geometric and vice-versa.\(^{70}\) The base on which the figure stands on the Naukratis small altar also compares closely with a 3rd century BC votive stela from Sulcis.\(^{71}\) The caduceus is a frequent sacred symbol on Punic stelae, often associated with the Tanit sign.\(^{72}\) This Greek inspired motif is not adopted in Punic art before the beginning of the 5th century BC.\(^{73}\) The grids recall Ptolemaic and Roman graffiti depicting horned altars found at various sites in Egypt and Nubia, where some display an incised grid.\(^{74}\) This very crude piece was perhaps made by a Punic traveller in Egypt, using a scrap of soft limestone. However, the possibility of a genuine import should not be discarded.

The second altar’s model is a simple miniature horned altar from Hogarth’s excavations (Fig. 8),\(^{75}\) which although small, could still have functioned for burning (small) offerings.

Horned altar fragments in terracotta were also found at Naukratis. A single mould-made palmette acroterion\(^{76}\) fragment from a locally produced red-slipped Nile silt terracotta miniature altar was found with signs of burning (Fig. 9).\(^{77}\) The altar fragment can be dated c. 2nd–1st century BC,\(^{78}\) based upon parallels from Hawara,\(^{79}\) Tuna El-Gebe\(^{80}\), Herakleopolis Magna\(^{81}\) and Egypt.\(^{82}\) A second red-slipped terracotta horned altar (top) fragment, possibly from Naukratis,\(^{83}\) is dated c. 1st–2nd century AD (Fig. 10),\(^{84}\) which

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\(^{67}\) Previously interpreted incorrectly (in the British Museum registers) to represent a herm and symbolic of the Greek god Hermes, no doubt influenced by the caduceus symbol also incised on this model.

\(^{68}\) See for instance the ‘Tanit sign’ decorating a 5th to 4th century BC votive stela from Carthage (Ribichini 2001, 121).

\(^{69}\) Example from the Museo Archeologico Nazionale, Cagliari (Moscati 2001, 375).

\(^{70}\) Moscati 2001, 373.

\(^{71}\) Museo Comunae, San Antioco (Ribichini 2001, 149).

\(^{72}\) For example Ribichini 2001, 133; Moscati 2001, 369–70.

\(^{73}\) Moscati 2001, 366.

\(^{74}\) See examples from the quarries of Gebel el-Silsileh and El-Kab (Nilson 2014, 124; Quaegebeur 1993, 336–7, pl. IV; Wil 1991, 261, pl. LXXVc). A bibliography for Ptolemaic and Roman graffiti representing horned altars is provided by Soukiasian (1983, 320).


\(^{76}\) A Greek architectural roof ornament.

\(^{77}\) British Museum, 1886,0401,1547.

\(^{78}\) Bailey 2008, 84, no. 3270.

\(^{79}\) Petrie Museum, London, UC19387.

\(^{80}\) Heimbold-Doyé 2010, fig. 4.

\(^{81}\) 3rd century AD House K (Petrie 1905, pl. 52a, no.167).

\(^{82}\) Fischer 1994, 440, no.1217.

\(^{83}\) British Museum, 1909,1201,18, Bailey 2008, 84, no. 3271, ‘Found Unregistered… Naukratis was thought to be a possible source’.

\(^{84}\) Bailey 2008, 84, no. 3271 who cites numerous early Roman parallels from cemeteries in Alexandria (Ballet and Harlaut 2001, 357, fig. 8:127–8; Bayer Niemeier 1988, nos 722 and 724; Habachi 1936–7, 283, fig. 11), Hawara cemetery (Petrie 1911, pl. XV.7, Petrie Museum
was also discoloured by burning when it was used. Also in terracotta, a range of Hellenistic stoves found at Naukratis may have been used to make burnt offerings, if not exclusively so. With the exception of the miniature Punic-style altar, these portable altars have numerous Ptolemaic and Roman parallels from across Egypt and Cyprus.

Collectively these altars, and the architectural models discussed below, represent Egyptian domestic religious activity in the house, in a small shrine, or on the river front. An account of the ritual riverfront of Naukratis is described by Coptic sources recording the martyrdom of Saint Epimachus in AD 303, when he was tried, tortured, then executed 'on the dried-up river’ near Naukratis, where the ‘altars for pagan sacrifices were erected.

3. Architectural models

The four architectural house models found at Naukratis (Figs 11–14) were of great interest to Petrie, who records finding two of them in his journal: 'A piece of a model house in limestone and a corner showing two windows and two ventilators, and all lined over to show courses of brick, with stone lintels to the windows.' All probably date to the period of the late 7th to 5th centuries BC, as apparently confirmed by the discovery of one example in the town area within a deposit of 'tolerably early date.' The first example (Fig. 11) is a 13.2cm high corner-fragment of a hollow model of a tower house carved in limestone. The courses of mud-bricks are indicated by incised lines and two windows are depicted, each with a sill and a lintel (wood or stone?). Below one window is a rectangular incision that may have indicated a timber to support the floor. At least two storeys were represented, and the complete original was likely four or more storeys, with numerous parallels known. Whilst there are no traces of burning on this fragment, the hollow model could have contained a lamp, like the example below.

Figure 9 Terracotta horned altar fragment dated c. 2nd–1st century BC. British Museum, 1886,0401.1547

Figure 10 Terracotta horned altar fragment dated c. 1st–2nd century AD. British Museum, 1909,1201.18

Figure 11 Limestone model of a tower house, possibly used as a lamp shrine, dated c. 630–400 BC. British Museum, EA68816

UC44996; Willems and Clarysse 2000, 256, nos 179–180; Herakleopolis Magna (Nachtergael 1987, pl. III, fig. 10; Petrie 1905, pl. LIIA.162; Petrie and Currely 1905, 26–7, 4), and from Roman Egypt (Dundon 1990, nos 935–40; Fischer 1994, no. 1218; Fless 1997, 77, no. 65). A plaster mould for altars was acquired in Medinet el-Fayum (Weber 1914, no. 470).

See chapter on Portable stoves and braziers.

Parallels from Hawara (British Museum, 1888,0920.48 and Petrie Museum, London, UC44996), Oxyrhynchus (Petrie Museum, UC19395, UC19387, UC65004), the Fayum (British Museum, 1888,0920.49), Tuna El-Gebel (Helmbold-Doyé 2010, fig. 4) and Giza (British Museum, EA443).

For example, close Hellenistic and early Roman parallels of portable horned altars used to burn incense or perfume were found in tombs as well as in houses at Salamis (Chavane 1975, 119–23, nos 368–73; Yon and Rapilou 1991, 172–3; pl. LIII).

The account is based on a later, 5th to 6th century AD Coptic papyrus (Rossi 1888, 235; von Lemm 1910, 1461–64; van Esbroeck 1966, 399–442). The author may have been making a general reference to the presence of the river front housing altars (within sanctuaries), rather than a description of lone altars erected on the river front.

British Museum, EA68816; EA27526; Egyptian Museum, Cairo, TRI9/3/24/6; JE28784. See Petrie 1886, 40, pl. XVIII, no. 3.

Petrie Journal 1884–5, 104.

Petrie 1886, 40, pl. XVIII.3; Egyptian Museum, Cairo, TRI9/3/24/6.

British Museum, EA68816; Petrie 1886, 40, pl. XVIII.1. The discovery of this piece was recalled by Petrie: 'A piece of a model house in limestone & a corner showing two windows & two ventilators, & all lined over to show courses of brick, with stone lintels to the windows’ (Petrie Journal 1884–5, 104).

See Busch-Sperveslage (1999, 11–26, figs 1–4).
The second example (Fig. 12)\textsuperscript{94} is a 13.9cm high house (or shrine) model with a terrace carved from limestone. The doorway and terrace are blackened by soot. The Egyptian style doorway is decorated with black and red painted lines across the lintel and pillars. The two windows are depicted with simple cross-shaped wooden shutters. This piece is probably Late Period, based on its style and context\textsuperscript{95} with good parallels.\textsuperscript{36}

The third example (Fig. 13)\textsuperscript{97} is a 10cm high house (or shrine) model with a terrace carved from limestone. The doorway has an Egyptian style lintel with traces of red paint and is blackened by soot. The two windows are depicted with wooden shutters, a lattice on one side and irregular pattern on the other.

The fourth example (Fig. 14)\textsuperscript{98} is a 20.3cm high house model with a terrace carved from limestone. It has a doorway and three windows covered with wooden shutters. The doorway is decorated with red and black lines. A low parapet surrounds the terrace roof with a small structure, possibly a shrine, on the roof. This smaller structure also has three shuttered windows and a doorway of Egyptian design with lintel. Blackened traces remain around the smaller structure and inside the model that may have been caused by soot.

Petrie suggested they operated as portable altars, specifically as a ‘lamp shrine’ (a model which holds or supports a lamp for ritual purposes),\textsuperscript{99} in the home. A festival of lamps (Lychnokaile), in which such ‘lamp shrines’ may have been used is mentioned by Herodotus.\textsuperscript{100} This function is most likely considering the traces of burning found in these examples,\textsuperscript{101} and their similarity with Persian period (simple) portable altars (not found at Naukratis) used for burnt offerings from Tell el-Her\textsuperscript{102} as well as the Ptolemaic horned altars from Naukratis discussed above. Yet some house models have doorways that are too small to place a lamp inside. In these cases a lamp may have been placed on top of the model instead. Parallels, made out of stone or the (probably later) terracotta examples, are well known from across Egypt.\textsuperscript{103} The tendency in the late Ptolemaic and Roman periods to merge shrine models with both figures and lamps (not

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\item \textsuperscript{94} British Museum, EA27526; Petrie 1886, 40, pl. XVIII.3; Busch-Spersville 1999, 22, fig.12; Stead 1994, 10, fig. 10; Shaw and Nicholson 2002, 293. The discovery (probably acquired as no find-spot is recorded) is recalled by Petrie: ‘a model of a shrine or small temple in limestone 5½ high, a window on each side, the two upper lights pierced through, the four lower cut deep. The door way painted; a sort of half shelter on the top’ (Petrie Journal 1884-5, 156).
\item Petrie 1886, 40, pl. XVIII.3; Green 1987, 25, fig. 37. See also Egyptian Museum, Cairo, TR19/3/24/6, and bibliography below.
\item Egyptian Museum, Cairo, TR19/3/24/6
\item Egyptian Museum, Cairo, JE28784. See Petrie 1886, 40, pl. XVIII, no. 3; Rostowzew 1911; Busch-Sperrvine 1999, 21–2, fig. 11.
\item Petrie 1886, 40, pl. XVIII.3; Egyptian Museum, Cairo, TR19/3/24/6.
\item Herodotus II.62.1–2.
\item Petrie 1886, 40, pl. XVIII.3
\item Marchi 2014, 85–7, fig.121. They are similar in form, if simpler in design.
\item British Museum, EA4262; Petrie Museum. UC14513 (Memphis); UC33428; UC50613; UC50615. Published examples from across Egypt (Busch-Sperrvine 1999, 11–26; de Garis Davies 1929, 250, fig. 14; Desroches-Noblecourt 1938, 17–25, pls. I–II; Dunand 1900, 333; Engelbach 1931, 120–2; Kemp 2006, 354; Marouard 2014, 118–21, figs 8–10; Pillet 1940, 28–30, figs 1–3 and 37–8, figs 6–7, Ricke 1966, 119–123; Rostowzew 1911; Shaw and Nicholson 2002, 293; Strothl 1992, 73, fig. 78; Weber 1914, 255, pl. 41). Petrie already recognised the limestone shrines were earlier in 1886 (Petrie 1886, 40). Specifically on tower houses and the evidence from models, see Lehman (2015, 74-109).
\end{itemize}
always successfully) perhaps explains how house models may have been used in combination with both figures and lamps.  

House models also offer us a glimpse into the domestic architecture of Late Period Naukratis, otherwise only suggested by plan or comparison with other sites. Although the examples from Naukratis were probably found within the town, contemporary parallels (of painted limestone shrines) from the falcon catacombs in Saqqara illustrate that these could also be dedicated in sanctuaries or placed in burials.

4. Sundials

One sundial (Fig. 15), a model (Fig. 16) and putative model of a sundial (Fig. 17) were all found by Petrie within the Apollo sanctuary and are likely votive offerings to Apollo. Petrie recorded one of them in his journal: ‘yesterday an archaic alabaster figure, headless & footless, was found, and a small limestone dial was picked out of the rubbish’ in the sanctuary of Apollo. Parallels discussed below suggest it is very unlikely that these can be Late Period dedications unlike the majority of finds from the sanctuary of Apollo, including the archaic alabaster figure found with the sundial.

Ancient accounts claim sundials were introduced to Greece from Babylonia by Anaximander of Miletus, in c. 580 BC, and that sundials are apparently referred to by Herodotus in c. 430 BC. These are distinct from Ancient Egyptian Dynastic sundial forms, not represented at Naukratis, but instead Greek forms adopted (and adapted) in Egypt from the Ptolemaic period onwards. Accounts of them were exceptionally rare before the 3rd century BC and there are no archaeological examples known to date from before that time. Hemispherical Greek sundials (Hemispherium) were in use by the 3rd century BC, reaching Rome in 293 BC. However, the two certain examples from Naukratis are of the more common and later Hemicycillum type introduced during the Hellenistic period, which have a cut away front, marked with 12 hour lines.

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104 See a 1st century BC Aphrodite-Hathor in a shrine flaked by torch-wielding erotes as part of a lamp from Naukratis (British Museum, 1888.0601.149; Bailey 1975, 279, Q609). See also contemporary examples probably from Alexandria (Bailey 1975, 280, Q610–Q611). See also Bailey 2008, 81–84.

105 Stead 1994, 10, fig. 10; Shaw and Nicholson 2002, 293.

106 Thomas and Villing forthcoming; see Goddlo and Masson-Berghoff 2016, 44, fig. 28 for reconstruction.

107 Green 1987, 25, fig. 37.

108 British Museum, 1886.0401.1477.

109 British Museum, 1886.0401.1476. is a good, if non-functioning model of a sundial, (one could not have used this to tell the time), whilst fragment 86.167 (Museum of Fine Arts, Boston), is only a tentative identification (it could alternatively be a model of an altar).

110 British Museum, 1886.0401.1476. (Petrie 1886, pl. XVIII, no. 5); 1886.0401.1477 (Petrie 1886, 16, pl. XVIII, no. 6).


112 See the discussion by Gibbs on the accounts of both Herodotus (2.109.3) and Diogenes Laertius (Gibbs 1976, 6).

113 Salmass 2013, 353–79; Salmas 2014, 419–46.


115 Gibbs 1976, 7.

116 Pliny NH 7.213.

117 Mills 2000, 3–11; Salmas 2014, 436–8. The sundial eventually developed from the ‘Hemicycillum’ into the conical sundial (Hüttig 1998, 135, fig. 1).
The first example from Naukratis is a small Hemicyclium Greek sundial, 7.5cm wide, carved from limestone (Fig. 15). It is complete, except for the missing metal gnomon (needle) that would have been affixed to the slot at the center of the radial hour lines.\(^{118}\) Parallels are relatively rare, but are known from Alexandria,\(^ {119}\) other sites in Egypt,\(^ {120}\) and a number of Greek and Roman sanctuaries including the sanctuary of Aphrodite at Amathus.\(^ {121}\) They are generally dated between the 3rd century BC and the 4th century AD.\(^ {122}\)

The second example (Fig. 16) is a model of a Hemicyclium sundial on a stand, only 5.4cm high, carved from soft limestone. Although it is damaged, it too may have had a slot to accommodate a (now lost) gnomon (needle). Faint traces of the radial lines remain, although this is probably too small to have functioned accurately.

The third example (Fig. 17) depicts a stand, 7.4cm high with a flat surface incised with lines radiating from the centre. Whilst this may represent a model of an early flat sundial type, which had already been introduced to Egypt from Babylonia\(^ {123}\) before Naukratis was founded, its date and subject are uncertain. There is no place to fix a gnomon (although the centre is worn), so its identification as a sundial model remains tentative. Collectively the evidence suggests that sundials from Naukratis were all dedications to Apollo, and may have been set up within the sanctuary as seen at Pompeii.\(^ {124}\)

### 5. Architectural fragments

A number of architectural or furniture fragments were found at Naukratis. They include plaster reliefs, fired elements of terracotta and faience and fragments of Ptolemaic or Roman mosaic floor, recorded by Leonard's excavations within the south western corner of the Great Temenos,\(^ {125}\) and Kom Hadid in the eastern part of the settlement.\(^ {126}\) Green-blue faience tiles were rare, with a single example depicting a running figure,\(^ {127}\) probably of Ptolemaic age.\(^ {128}\) Fragments of furniture comprise terracotta feet from the cemetery,\(^ {129}\) terracotta stoves,\(^ {130}\) a marble furniture foot,\(^ {131}\) and a possible

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\(^{118}\)British Museum, 1886,0401,1477.

\(^{119}\)British Museum, 1936,0309,1; see also parallel from the Mareotis area, near Alexandria (Gibbs 1976, 307).

\(^{120}\)Petrie Museum, UC36147 and 1st to 2nd century AD example from Hawara (UC16500; Gibbs 1976, 306, no. 3087; Petrie 1911, 20–1, pls 15, 23).

\(^{121}\)See Fourrier and Hermary (2006, 150–1, fig. 489, pl.43.1–2), for comparison and references for parallels from Kouklia, Episkopi, Lamasol, Tenos, Athens, Claros, Pompeii, Knidos, Imbros and the Near East. For an earlier catalogue of sundials see Gibbs 1976.

\(^{122}\)Gibbs 1976, 5, 7.

\(^{123}\)See the discussion by Gibbs on the accounts of both Herodotus (2.109.3) and Diogenes Laertius (Gibbs 1976, 6).

\(^{124}\)Gibbs 1976; Fourrier and Hermey 2006, 150–1.

\(^{125}\)Leonard 1997, 407, pl.7,8, MC#77 (Material Culture no.77).


\(^{127}\)British Museum, EA68830. However it is impossible to identify the scene with certainty.

\(^{128}\)Compare with British Museum, 1924,1201,82 from Naukratis, which could also be from a tile or a vase. Also see complete square-moulded glazed composition tile depicting a bearded sphinx, dated c. 3rd century BC, from Coptos (British Museum, 1924,0510,30; Petrie 1896, 19, pl. XXIII, 18; Cooney 1953, 19, no. 9).

\(^{129}\)Two webbed, clawed feet are probably fittings from an item of funeral furniture or a tomb monument (University of Pennsylvania Museum of Archaeology & Anthropology, Philadelphia, E118; Museum of Fine Arts, Boston, RES.87.158). Parallels from Alexandria have been dated
fluted glazed furniture fitting. Marble and limestone temple architecture and relief sculpture are discussed in other chapters.

Architectural elements made from terracotta were rarely collected during the early excavations at Naukratis (although tiles were found in recent excavation). As with other categories of finds, architectural fragments were not collected unless they displayed relief or painted decoration, or, in the case of a limestone block from the great Temenos, graffiti. Roof tiles and bricks were not collected by Petrie, Gardner or Hogarth, with the possible exception of a stamped tile, and a possible brick; however, numerous examples were encountered during the British Museum’s recent excavations near the Hera sanctuary along the ancient river front. Another terracotta fragment displays moulded bead and reel decoration. The only certain piece is a terracotta antefix corner (Fig. 18) with acanthus decoration that was handmade from (presumably local) Nile silt fabric.

A group of plaster antefix masks (or less likely, low quality limestone) were found at Naukratis. A mask of Dionysus (?) with hair in tight curls (Fig. 19) was probably found by Hogarth within Chamber 63 in the Hellenion. Two examples of Egyptian stucco wall work in the Fitzwilliam Museum, were given by the Egypt Exploration Fund in 1887, coming from Gardner’s second season at Naukratis. These comprise a bull’s head (Fig. 20), which has lost most of its smooth surface-coating and brown pigmentation, and a satyr or Silen head (Fig. 21) with a red-brown beard and brown eyes. The bull’s head has traces of fillets or ribbons bound round both its horns and probably came from a bull’s-head-and-garland motif. The satyr or Silen head was mounted in the angle between ceiling and wall decorated with acanthus leaves. Both belong to the Egyptian, Alexandrian style, stucco wall decoration of the Ptolemaic and (early) to the ‘probably Roman’ period (Seif el-Din 1998, 176–7, fig. 14), but are likely to be Ptolemaic in this case. See chapter on Ptolemaic and Roman figures.

See chapter on Portable stoves and braziers.

Relief sculpture is discussed in the chapters on Greek and Roman sculpture and Egyptian sculpture; while inscribed blocks are discussed in the chapter on Greek and Latin inscriptions on stone; for lighting see Lamps in terracotta and bronze; for the Egyptian temple see The decoration of the temple of Amun. For the Greek temple architectural fragments see Koenigs 2007 and the forthcoming chapter on Greek architecture.

Another terracotta fragment displays moulded bead and reel decoration. The only certain piece is a terracotta antefix corner (Fig. 18) with acanthus decoration that was handmade from (presumably local) Nile silt fabric.


Figure 20 Plaster antefix mask from a bull's-head-and-garland motif. Dated c. 100 BC–AD 100. Fitzwilliam Museum, Cambridge, GR.61.1887. © The Fitzwilliam Museum, Cambridge. Photography by British Museum staff

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Imperial periods. Ptolemaic and Roman levels in Kom Hadid have also revealed fragments of painted wall lime plaster, including a piece with an architectural moulding of egg and dart.

Budde and Nicholls suggest Egyptian work (probably) of Imperial date (Budde and Nicholls 1967, no.179–180, pl.60, who compare with nos 71, 72 and 179; see also parallels: Pagenstecher 1913, I.A.97 no. 5, pl. 42; Ponger 1942, 88 f., no. r82, pls 38–9).

Leonard 2001, 205–216, nos 67–83, 269–73, pls 3.35–42. Dated by Leonard to the 2nd or 1st century BC and pre-Augustan. The ceramics from this area include both Ptolemaic and Roman pieces and most contexts that were excavated include Roman material of at least the 1st century AD. Residual late Ptolemaic pottery was found in reasonable quantities within these deposits which sit above a Ptolemaic building. See forthcoming chapter on Ptolemaic, Roman and Byzantine pottery.

Figure 21 Plaster antefix mask of a satyr or Silen head and acanthus leaves, mounted between ceiling and wall. Dated c. 100 BC–AD 100. Fitzwilliam Museum, Cambridge, GR.61.1887. © The Fitzwilliam Museum, Cambridge.

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