Naukratis: Greeks in Egypt

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http://www.britishmuseum.org/naukratis

Jewellery and mirrors

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1. Introduction

The jewellery and mirrors from Naukratis comprise a diverse group of objects\(^1\) that testify to the changing fashions of adornment at Naukratis between its founding in c. 630 BC until around AD 300. They display a range of influences from Egypt, Persia, Greece, Cyprus, Phoenicia and Carthage, and some of the later examples show local expressions of broader Roman fashions. Jewellery can be used to signal distinctions concerning gender, status, culture and ethnicity, and it is perhaps this expression of gender that can supply an important corrective to the Naukratis assemblage from the early excavations at Naukratis which are overwhelmingly dominated by early Greek male dedications. This is not straightforward, however, as the objects are not a coherent group, suffering from poor environmental conditions for the preservation of metals or organics, ancient recycling, and modern looting.\(^2\) However, the cataloguing process revealed contextual information for many finds, representing a wide variety of contexts, including domestic, funerary, manufacturing and sanctuary deposits, and which reflect the diverse uses of jewellery by the inhabitants at Naukratis in life and death, and as offerings to the gods.

2. Mirrors

The mirror assemblage comprises the full range of styles and cultural fashions present at Naukratis from c. 630 BC–AD 90, despite the fact that only seven preserved examples are traceable. The largest group comprises plain copper alloy mirrors with a simple projecting tang, which would have been inserted into a wood or ivory handle.\(^3\) The Naukratis plain, tanged copper alloy mirrors are Late Period or Early Ptolemaic in date. One example was made of bronze with a low tin content, which was a common feature of mirrors at this time.\(^4\) One particularly heavy example weighs almost 1kg (Fig. 1),\(^5\) with an even heavier parallel from Thonis-Heracleion interpreted as a votive offering.\(^6\) This type comes from a long Egyptian tradition tracing back as far as the Old Kingdom.\(^7\)

Two further copper alloy mirrors feature engraved decoration that shows connections to Cyprus and Greece. One decorated with a volute at the end of the tang (Fig. 2)\(^8\) is a variant of a type known predominantly from

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\(^1\) Or groups of objects, such as strings or necklaces of beads and pendants. All images are © Trustees of the British Museum, unless otherwise indicated.

\(^2\) Such as the cemetery, which should have produced a large quantity of finds: Among personal ornaments the commonest were bangles, both of iron and bronze, usually of very small size, and some rings; most of the latter were either plain or too damaged to retain any design\(^(\text{Gardner 1888, 28})\).

\(^3\) British Museum, 1886.0401.1743; McManus Galleries, Dundee, 1975-165; Museum of Fine Arts, Boston, 88.749a-b,86.307, RES.86.65 (17 fragments, since deaccessioned).

\(^4\) Recent analysis by Pernicka, revealed that British Museum, 1886.0401.1743 has a very low tin content (less than 8%). Late Hellenistic and Roman period mirrors have a higher tin content (Masson-Berghoff and Pernicka forthcoming).

\(^5\) British Museum, 1886.0401.1743.

\(^6\) Robinson 2010, fig. 19.1 (weight 1.71kg).

\(^7\) Some early examples come from Diospolis Parva (Petrie 1901, 38, pl. XXXI) Qua el-Kabir (Petrie Museum, London, UC17734, UC17785, UC17668) and Badari (UC17754).

\(^8\) Oriental Institute, University of Chicago, E18836. This mirror also has linen embedded onto its surface corrosion.
Archaic and Classical tombs on Cyprus,\(^9\) but with a close 5th century BC parallel from a tomb on Rhodes.\(^{10}\) The second is much thinner, and decorated on the reverse with two moulded concentric bands at the edge, and two near the centre (Fig. 3).\(^{11}\) Parallels from the 4th and 3rd centuries BC come from tombs at Olynthus\(^{12}\) and on Cyprus,\(^{13}\) and the type is common throughout the later Classical and Hellenistic periods in the Mediterranean.\(^{14}\) Some similar bronze discs decorated with concentric bands from Naukratis, which are much smaller (4.2–5cm diameter) than typical mirrors, could be interpreted as weights or votive models.\(^{15}\)

A bronze mirror with a tinned face\(^{16}\) and elaborate silver handle in the form of an uraeus cobra, joined to the mirror with a volute, is the sole Roman period specimen (Fig. 4).\(^{17}\) It was found alongside a hoard of Roman gold jewellery in the town, which can be dated to c. AD 67–98 (discussed below). It is a simpler version of elaborate silver mirrors known from Pompeii,\(^{18}\) although the uraeus cobra handle is unique. The striking cobra (which was once crowned with a headdress, probably a sun disc framed by horns)\(^{19}\) is a representation of l’rt or Uraeus, the protective cobra goddess represented on the crown of the Pharaoh-Emperor, also associated with the cobra goddesses Wadjt of the Nile Delta and Renetutet of the Fayum and subsequently amalgamated as Renetutet-Isis-Hathor, known in Greek as Hermouthis.\(^{20}\) There are further reasons to associate this mirror with an Isis cult, which are discussed below.

Mirrors often held a cultic role in Egypt and were given as dedications, with their round reflective surfaces thought to represent the sun,\(^{21}\) and were also dedicated in Greek temples. Throughout their history in Egypt, mirrors were associated with Hathor,\(^{22}\) and in the Greco-Roman period with Aphrodite. A locally made Late Period terracotta figure of Isis-Hathor (equated with the Greeks with Aphrodite) from Naukratis shows her flanked by both a mirror and alabastron.\(^{23}\) Despite the common association of mirrors with Aphrodite, the excavation of two Aphrodite sanctuaries at Naukratis (the riverfront sanctuary\(^{24}\) and the Aphrodite sanctuary within the

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\(^{9}\) Marion, c. 475–400 BC (Gjerstad et al. 1935, 295) and Amathus c. 600–325 BC (Chavane 1990, 12–13, especially no. 83, pl. V).

\(^{10}\) Kamiros, Fikellura, early 5th century BC (British Museum, 1864,1007.353). See discussion in Oberländer 1967, 128ff.

\(^{11}\) Redpath Museum, Montreal, 2487.

\(^{12}\) Robinson 1941, 172, pl. XXXI, no. 516 (early 4th century BC).

\(^{13}\) A parallel from Amathus (Chavane 1990, 16, pl. VI) comes from a Cypro-Classical I (475–400 BC) tomb with Roman reuse; Hayes (1984, 190, no. 317) dates another Cypriot example to the 4th–3rd centuries BC.

\(^{14}\) A very close parallel, though unprovenanced, is described as ‘Hellenistic’ (Lloyd-Morgan 1981, 24). See Lloyd-Morgan 1975, 80, for distribution of this type.

\(^{15}\) Oriental Institute, University of Chicago, E3458; Bristol Museum and Art Gallery, Bristol, H2000.

\(^{16}\) The corrosion products of this tinned surface contains textile impressions, which were erroneously interpreted as a mirror case by Petrie.

\(^{17}\) British Museum, 1886,0401.1749.

\(^{18}\) Guzzo 2006, 223, no. 390; 101, no. 94.

\(^{19}\) The horns (of Hathor) and sun disk are missing, leaving only the damaged groove where the horns and sun disk were once attached. This headdress was of a different material, probably gilded bronze so as to represent the sun.


\(^{21}\) Husson 1977, 21, 38; Lilyquist 1979, 34.

\(^{22}\) A common Egyptian mirror handle was in the shape of the head of Hathor, with the mirror becoming the disc between her horns (Robinson 2010, 219). A 2nd dynasty mirror comes from the tomb of a priestess of Hathor at Diospolis (Petrie 1901, 38).

\(^{23}\) British Museum, 1886,0401.1543, see chapter on Egyptian Late Period figures in terracotta and limestone, 36.

\(^{24}\) Gardner 1888.
Hellenion\textsuperscript{25} have failed to reveal any mirrors associated with these cults. Only the Roman example could be associated with a dedicatory context at Naukratis.

Mirrors were found in the town,\textsuperscript{26} where they presumably served as functional objects, but also in the cemetery,\textsuperscript{27} where they were used as grave goods.\textsuperscript{28} It was common practice in Egypt to place mirrors close to the body, sometimes inside mummy linen,\textsuperscript{29} and this practice continued through the Ptolemaic period as represented at Naukratis (Fig. 3).\textsuperscript{30} However, mirrors are also commonly found in Greek and Cypriot tombs, so we cannot be certain that this represents the practice of any one specific community present at Naukratis. Some of the mirrors preserved traces of textile within the corrosion products.\textsuperscript{31} For the cemetery examples, this may have come from mummy wrappings or funerary garments,\textsuperscript{32} but for the silver Roman example, this might have come from a bag in which it was stored or dedicated.

3. Finger rings

Finger rings displayed wealth, culture, religion and gender in antiquity, as they do today, yet many had uses beyond ‘simple adornment’, functioning as seals, amulets or keys. The 27 identified finger rings represent a wide range of Egyptian, Cypriot, Phoenician, Greek and Roman fashions covering the period c. 630 BC–AD 200.\textsuperscript{33}

3.1 Decorated bezel rings

Three of the Naukratis rings have decorated bezels; they are all in different forms and made of different materials, but together they demonstrate parallel and interrelated Egyptian, Greek, Cypriot and Phoenician traditions and fashions at Naukratis. A copper alloy open ring with an irregularly shaped hammered bezel\textsuperscript{34} is a common 6th-century BC Mediterranean type that probably originated in Cyprus (Fig. 5).\textsuperscript{35} While other examples are

\textsuperscript{25} Hogarth et al. 1898–9.
\textsuperscript{26} Petrie 1886, 43–4. ‘Some men digging near the bronze house found some toilet trinkets; one brought to me a mirror case and handle and 2 serpents of silver, he did not recognise the material, took 2 francs which I offered. Now I hear that they found a gold chain also, I had suspected a necklace of beads from casts on the mirror case.’ (Petrie Journal 1884–5, 164).
\textsuperscript{27} Several bronze mirrors were found, and one mirror case’ (Gardner 1888, 28). This may refer to Museum of Fine Arts, Boston, 88.749a–b, which is registered as a mirror and its case, but the ‘case’ is probably another, separate, mirror. Redpath Museum, Montreal, 2487 is probably from the cemetery.
\textsuperscript{28} Husson 1977; Lilquist 1979; Robinson 2010.
\textsuperscript{29} Husson 1977, 41.
\textsuperscript{30} Gardner 1888, 27f; Robinson 2010.
\textsuperscript{31} Oriental Institute, University of Chicago E18836; British Museum 1886,0401,1749.
\textsuperscript{32} Mirrors in Greek tombs may also retain traces of textiles, such as an example in a 5th century BC tomb at Salamis (Moullérat and Spantidaki 2009, 16-17).
\textsuperscript{33} Although many rings were too fragmentary or corroded to be certain of their type, date or even original function. Indeed some may represent parts of other objects, such as larger pieces of jewellery or vessels. In some cases, rings have been deaccessioned (due to their poor state) or lost.
\textsuperscript{34} National Museum of Scotland, Edinburgh, A.1886.518.21B.
\textsuperscript{35} There are Bronze Age parallels in Cyprus, possibly surviving through the Iron Age in the Near East before re-emerging in Cypro-Archaic I (Gjerstad 1948, 390) and continuing to Cypro-Classical (silver example from Marion, Gjerstad et al.1935, 291, no. 17a, pl. LII p. 349, no. 55, pl. LXIV), 6th-century BC examples come from Kato (Jacopi 1929, 209, fig. 204, 13) and Tharros (Pisano 1987, 84, pl. 40a).
generally plain, the Naukratis piece has three roughly incised Egyptian hieroglyphic characters on the bezel, which are difficult to read. This ring may be a local Egyptian emulation of a common Mediterranean type, or a local reworking of an imported piece.\(^{36}\)

One of the most unusual pieces is also likely to be a product of similar interactions: a small (1.4cm in length) oval-shaped silver bezel,\(^{37}\) cast using the lost wax method\(^{38}\) (Fig. 6). Probably derived from a widespread type of Phoenician ring, usually of gold, of the 7th to 5th centuries BC,\(^{39}\) this ring most closely resembles in form, scale and material rings found in 6th and 5th century BC tombs in Cyprus.\(^{40}\) However, the spiral decoration in relief has no close parallels on rings of this type. The spiral motif is known from Egyptian scarabs of the Middle Kingdom onwards,\(^{41}\) with impressions found on clay sealings from Late Period and Ptolemaic contexts at Karnak.\(^{42}\) Three spirals were used as a cryptic form of the name of Amun-Ra on Egyptian amulets.\(^{43}\) The presence of four symbols on the Naukratis ring may indicate that this was a reinterpretation or misunderstanding of the original Egyptian meaning. Whilst Phoenician rings generally depict figural motifs such as Egyptian deities, sphinxes or griffins, the geometric design on this ring is most similar to those on scarabs from Cyprus dated to the 7th or 6th century BC.\(^{44}\) However, the intended meaning(s) remain elusive.

A later gilded copper ring of c. 350–300 BC displays a more distinctly Greek form and device (Fig. 7).\(^{45}\) The copper ring was initially hammered or cast, and the design was then engraved into the bezel. Finally, the ring was mercury-gilded, in one of the earliest examples of the technique.\(^{46}\) It depicts Eros playing with an iynx-wheel,\(^{47}\) a magic spinning wheel on a string invented by Aphrodite, who taught Eros to use it. Iynx-wheels were used as magic charms ‘to attract lovers and call back faithless lovers’, and iynx-wheels and representations of them were given as votive gifts before marriage or as a lover’s gift during courtship.\(^{48}\) This is perhaps one of the most emotive objects from Naukratis, for such rings retained profound sentimental value and were carried, as in this case, to the grave.

\(^{36}\) See forthcoming chapter on Egyptian inscriptions and inscribed objects.
\(^{37}\) British Museum, 1886,1005.13.
\(^{38}\) Nigel Meeks pers. comm.
\(^{39}\) Including an example from Kamiros (British Museum 1861,1111.10) found with a scarab of Psammelichos I; further examples come from Tharros, Rhodes, Etruria, Sardinia, Spain (Pisano 1987, 83–4, pl. 39k).
\(^{40}\) Two examples from Amathus, one which might have had a scarab or stone inset (British Museum, 1969,0401.38), and another which is plain (1969,0401.174); one example from a tomb in Anefandies with a geometric floral motif from a tomb in Anefandies dated Cypro-Phoenician type (Pisano 1987, 83). See Ogden 1994; Boardman 1970, pl. 723; Ogden 1987, pl. 9, upper left. For mercury gilding analysis see Craddock 1977, 109–110. See Ogden 1990, 134.
\(^{41}\) ‘Iynx’ means ‘yearning’ or ‘craving’.
3.2 Band rings

While ten simple band rings – seven in copper alloy\(^4\) and three in silver\(^5\) – were identified from Naukratis, a combination of poor preservation and their simple form limits interpretation and dating. The large number of rings found by Gardner in the cemetery probably belong to this class,\(^6\) although most simple ring bands currently in museum collections did not come from the cemetery excavation.\(^7\) One example displays distinctive horizontally incised line decoration (Fig. 8),\(^8\) which has Roman parallels in copper alloy from Britain,\(^9\) and in gold from Pompeii.\(^10\)

3.3 Cast bezel rings

Cast bezel rings, in a range of shapes and materials, represent typical rings of the Classical through Roman periods. Two copper alloy examples from Naukratis have pointed elliptical bezels,\(^11\) although corrosion conceals the precise form of the ring and possible inscriptions or decoration on the bezel.\(^12\) These types of copper alloy rings were produced around Greece in 5th and 4th centuries BC.\(^13\) One example, now lost, was listed as from the ‘Scarab Factory’ (a 600–570 BC factory making faience and Egyptian Blue Scarabs in Naukratis),\(^14\) but its context was probably confused or contaminated.

Two heavy cast copper alloy rings with large oval bezels represent distinctly Roman fashions of the 1st or 2nd centuries AD (Figs 9–10). They were following wider fashions, which are also attested in more expensive materials, such as gold.\(^15\) One ring has an undecorated and highly polished bezel (Fig. 9),\(^16\) and was published by Petrie as ‘a mirror ring, to enable a dandy to verify the details of his appearance’,\(^17\) but large bezels were often left plain during the Hellenistic and early Roman period,\(^18\) and plain bezels remain popular into the Byzantine period.

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\(^5\) Breglia 1941, 85, no. 825, pl. XXXVII.7.

\(^6\) Museum of Fine Arts, Boston, 86.817; British Museum, 1982,0602.130 (f from Stonea Grange).

\(^7\) Breglia 1941, 85, no. 825, pl. XXXVII.7.

\(^8\) Museum of Fine Arts, Boston, 86.817; British Museum, 2011,5009.20. A heavily corroded ring (Redpath Museum, Montreal, 2516) may have a protruding bezel of Boardman’s (1970, fig. 217) type XIV of the late 4th century BC or later.


\(^10\) Breglia 1941, 50, nos 158–9, 3rd century BC.
The Roman fashion for iron rings was also followed at Naukratis from the 1st or 2nd centuries AD onwards. Two cast iron rings of this period were found at Naukratis, one of which would originally have had an inlaid intaglio or gem (Fig. 11). In addition, three oval-shaped gem inlays of semi-precious stone and glass (one of which was a convex chalcedony inlay, Fig. 12) were found. These would have been set in a ring in the form of Fig. 11, if not necessarily of that material.

3.4 Functional rings

A small group of later rings had more utilitarian purposes. Petrie recorded the find-spot of a Roman iron key ring (Fig. 13): "An excellent key ring in iron was found near the site of the silver objects [south western area of the town, near the river front]; it was apparently to be worn, having a raised bezel on it, I do not remember seeing such before. By pottery also found there I see the lot is all about the 1st or 2nd century AD." Petrie’s date seems accurate, as such key rings are associated with small jewel caskets and boxes produced during the 1st through 4th centuries AD, although a late 1st century BC date cannot be excluded, due to one parallel from Sudan.

A much later ring cut from a single piece of carnelian from the town was published and illustrated by Petrie. It appears to be an Ottoman archer’s ring, of the 15th–17th centuries AD. These were worn on the thumb to protect the finger from the bow-string when shooting.

4. Pendants, pins, fibulae, earrings and bracelets

A small group of jewellery comprises pendants, pins, fibulae, earrings and bracelets. They cover a diverse range of forms from the Late Period to Roman period, and include pieces from 6th-century BC contexts within the Greek sanctuary of Aphrodite and 1st-century AD dedications from a temple of Isis.

4.1 Pendants

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64 See Ogden 1980, 137.
65 Ashmolean Museum, Oxford, AN1888.192; Redpath Museum, Montreal, 7208a–c.
66 Probably sard or cornelian.
67 Ashmolean Museum, Oxford, AN1888.177 (sard or cornelian), British Museum, 1888,0601.74 (polychrome glass), and Egyptian Museum, Cairo, JE26790 (intaglio, said to be amethyst, carved with a bound bundle).
68 British Museum, 1885,1101.82; Petrie 1886, 39, pl. XX.
69 Petrie Journal 1884–5, 165–6, which has a sketch of the key.
70 Cool 2016, 48. See the discussion of Ogden (1990, 144) on the symbolic association of key shaped rings with marriage and death.
71 Williams 1991, 295, no.21. This ring was found in Qustul tomb Q475, dated by Williams to ‘phase II A’, c. 150–100 BC or later. The author recognises early Meroitic pottery produced during the 2nd and 1st centuries BC within this tomb group and a late 1st-century BC date seems most likely for the whole assemblage.
72 Petrie 1886, 43, pl. xx.29. Identification based on the illustration, because the object could not be located.
73 Compare British Museum, AF.2321, dated 17th century AD. Petrie compared the ring from Naukratis to an agate ring (British Museum, H.59, Dalton 1912, 2342) which is dated to the 15th–16th centuries AD.
While there are few metal pendants from Naukratis, many glass and faience pieces would have served the same function (glass is discussed below). One copper alloy pendant (Fig. 14) comes from a recorded context: ‘over floor (Φ1) in rubbish (Φ5)... bronze ornament’, which refers to the use or fill of the first temple of Aphrodite (context Φ5), dating to c. 600–480 BC. The heavily corroded solid cast disk-shaped pendant has a large boss in the centre and a circle of smaller bosses around the edge, which have been hammered. The strap-loop is made from an integral strip of metal curled around to the back. This pendant has parallels in silver and copper alloy from Lindos and in lead from Thonis-Heraklion. The attachment and central boss is similar to faience beads produced at the nearby Scarab Factory in c. 600–570 BC. The copper alloy pendant was found alongside a gold disk appliqué (Fig. 15), faience bead and amulet, and cosmetic pigment.

A thick cast copper alloy ring decorated with three groups of three projecting bosses (Fig. 16), has undated parallels from Olynthos and Olympia, where they have been interpreted as ornamental ring pendants. However, these could also be (uncomfortable) finger rings. These few metal pendants are dwarfed by the much larger assemblage of amulets and scarabs in various materials. Glass and Roman gold necklaces and pendants are discussed below.

### 4.2 Pins and fibulae

Along with the copper alloy pendant and gold disk appliqué above (Figs. 14–15), two pin fragments are also associated with Aphrodite. An ivory or bone pin with a broken poppy head (Fig. 17) was found within the sanctuary of Aphrodite. This was probably a votive offering to Aphrodite and has close parallels from the Archaic Artemision at Ephesus. The poppy-head pin, gold disk and the pendant above were the only pieces of jewellery from a Greek sanctuary, aside from faience amulets and beads.

A copper alloy pin with a solid-cast figure of Aphrodite (Venus) Anadyomene depicts the goddess naked, standing and holding her hair with raised arms (Fig. 18). Examples of pins with Venus on the head in

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74 Faience discussed in the forthcoming chapter on Scarabs, scaraboids and amulets.
75 Museum of Fine Arts, Boston, RES.88.39; 86.292, probably a similar piece, has since been deaccessioned.
76 Petrie Notebook 74, p.39. Confirmed by EEF distribution list.
77 The latest sherd from this context can be dated c. 500–480 BC (British Museum, 1965,0930,581).
78 Blinkenberg 1931, 107, nos 242, 243.
79 Stolz 2007, 107–8 nos 139, 146–8, figs 238, 251–5. The piece was found in Abukir area T/T1 together with a group of jewellery of various dates thought to have been collected for recycling in the early 8th century AD date.
80 Museum of Fine Arts, Boston, RES.86.305.
81 Museum of Fine Arts, Boston, RES.86.305.
82 Museum of Fine Arts, Boston, RES.87.260; RES.87.259, as well as ceramic objects, bone and ostrich shell.
83 British Museum, 1888.0601.73.
84 British Museum, 1885,1101.88.
85 Robinson 1941, 511, nos 2586–8, pl. CLXVI; Furtwängler 1890, pl. XXIV, no. 458.
86 Redpath Museum, Montreal, 2497; Museum of Fine Arts, Boston, 86.292; Fitzwilliam Museum, Cambridge, E.15.1885. In terracotta see Egyptian Museum, Cairo, JE26829. See the forthcoming chapter on Scarabs, scaraboids and amulets.
87 Museum of Fine Arts, Boston, 88.1048.
88 Hogarth 1908, 186–9, pl. XXXIII.1–14, XXXIV.2–26.
89 Several small bronzes and ‘pin-heads’ in form of figure of Aphrodite Anadyomene, alone or with Cupid, were discovered in Egypt: in Alexandria (British Museum, 1926.0415.27), in Tell Naukratis: Greeks in Egypt | 8
both metal and bone are common in the (early) 1st century AD, with Hellenistic precedents for the representation of Aphrodite. Bone examples with this design are known from AD 79 contexts in Pompeii. One c. 310–200 BC glass object depicting a woman or goddess wearing a wig (discussed with beads below) may also have been a terminal for a hair pin.

Two objects have been catalogued as Hellenistic fibulae, but neither fit well with known types. The first, a circular section in bronze, has small incised circles on top of two curved sides (Fig. 19). If from a fibula, then it must be late in date, but it could also be part of another piece of equipment. The second example is a bronze pin with a convex top and concave underside (Fig. 20), which could alternatively conceivably be a hair pin. This is said to be from the Scarab Factory, although no satisfactory 6th-century BC parallels could be found and so the context may have been confused or contaminated. In addition, a mould for a possible fibula catchplate was found in Naukratis.

4.3 Earrings

Two gold and six copper alloy earrings exemplify some of the Roman fashions present at Naukratis. The first gold earring is in the form of a plain wire hook with a small knob at one end and an oval convex shield at the other (Fig. 21). It is of common 1st-century AD type, and it was probably found with a group of gold and silver votive offerings dating to the period c. AD 67–98 (discussed below), but acquired separately from that group, from locals looting the site, suggesting that other Roman gold jewellery objects acquired in both 1884–5 and 1885–6 seasons may have come from the same original structure.

A second Roman gold earring, found or acquired during the second season of excavations, is a slightly inflated hollow ring terminating with a loop into which the other end is twisted (a hook and eye closure); below are two added granules (Fig. 22). This is a common 2nd or 3rd century AD form, depicted on contemporary Roman mummy portraits, but derived from much earlier precedents.

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Atrib (Walters 1899, no. 1086), unknown site in Egypt (Walters 1899, no. 1096.1 and British Museum 1926,0415.55).
89 d’Ambrosio 2001, 28.
90 Ward-Perkins and Claridge 1976, no 71b, f. Hair pins with full length figures tend to depict Venus, and are usually around 120–30mm long to cope with the elaborate hairstyles of the 1st century AD (Cool 2016, 37).
91 Museum of Fine Arts, Boston, 86.217. Parallels were used as beads, pendants or as hair pins.
92 Museum of Fine Arts, Boston, 86.322.
93 Museum of Fine Arts, Boston, 86.814.
94 Museum of Fine Arts, Boston, 86.670. Other possible jewellery moulds made of stone comprise: British Museum, 1886,0401,1726 (rosettes); Nottingham Castle Museum, NCM 1888-57 (cup and ring fittings); Egyptian Museum, Cairo, JE96717, JE33601 (unidentified); Redpath Museum, Montreal, 2495, 2474.2 and 2474.3 (unidentified).
95 Petrie 1886, 43–4, pl. XXVII; British Museum,1886,0401.1762.
96 Marshall 1911, 304, no. 2635.
97 ‘A man brought me a small gold earring and handed it to me to weigh, quite contented that I booked it as his; the gold was worth 2/- with which he was well content’ (Petrie Journal 1884–5, 166).
99 For further parallels see Davidson and Oliver 1984, 126 nos 148, 149, including an example from Amman which was found with coins of Gallienus (253–66) and Aurelian (270–5). Close parallels from Thonis-Heracleion were dated to the 6th–8th centuries AD (Goddio and Fabre
A copper alloy penannular crescent earring has a wire attachment, presumably for an attached bead pendant (Fig. 23).\textsuperscript{102} Although the crescent shape has a long history, the hollow hammered form with wire bead pendant attachments is distinctly Roman, with parallels in gold dated to the 2nd and 3rd centuries AD.\textsuperscript{103} Further plain copper alloy earrings comprise simple open forms (sometimes squashed together) made of circular sectioned wire,\textsuperscript{104} which have early Roman parallels.\textsuperscript{105} One example had an attachment, perhaps a setting for hanging beads (see Fig. 62).\textsuperscript{106}

4.4 Bracelets

A number of bracelets (see Fig. 24) were discovered by Gardner within the mostly c. 330–250 BC graves of the cemetery at Naukratis: Among personal ornaments the commonest were bangles, both of iron and bronze, usually of very small size, and some rings; most of the latter were either plain or too damaged to retain any design.\textsuperscript{107} However, very few have survived or can be identified.\textsuperscript{108}

Two silver repoussé or mould-made\textsuperscript{109} serpentine representations of Isis and Serapis were found along with the gold objects in the town (Fig. 25).\textsuperscript{110} Although these types of terminals are known from both finger rings and bracelets,\textsuperscript{111} these two most likely come from one bracelet, even if the Isis is larger. The double looped tails are common on such serpentine representations, but also function on these objects as links in the composition, connecting the terminals with the bracelet and other figures.\textsuperscript{112} Other bracelets occasionally have three figures, displaying the complete triad of Isis, Serapis and their son Harpokrates.\textsuperscript{113} Rings and bracelets with terminals of snakes or serpentine deities (usually Isis and Serapis) appear across the Mediterranean throughout the Hellenistic and

2008, 298 no. 44; for pendant attachment see nos 41–2). However, this group comprises collected damaged jewellery of various dates gathered for recycling.\textsuperscript{102} Borg 1996, 171, pls. 78:1, 79:1.\textsuperscript{103} Pisano 1987, 80.\textsuperscript{104} Edinburgh, National Museum of Scotland A.1886.518.21 C.\textsuperscript{105} British Museum 1881,0824.36; 1881,0824.35, 1881,0824.31. Cypriot examples come from Roman context in Tell Dafana (Leclere and Spencer 2014, 81–2, British Museum EA 18250, 18280, 18249).\textsuperscript{106} Museum of Fine Arts, Boston, 88.759, 88.760, 88.761.\textsuperscript{107} Copeland 2011, 98, no. 126 6Q, AD 50–150 context; Tell Dafana (Leclere and Spencer 2014, 82) from Roman context.\textsuperscript{108} Bristol City Art Gallery and Museum, H2205.06, part of a circle of metal with a blob at one end. Alternatively this could be a ring or chain link.\textsuperscript{109} Gardner 1888, 28.\textsuperscript{110} Redpath Museum, Montreal, 2517, is possibly a child’s bracelet (4.2cm diam.). Another ‘bronze bracelet’ sent to Chautauqua was deaccessioned and cannot now be traced.\textsuperscript{111} Schmidt 1997, no. 36, C 588, pl.15, unprovenanced stone mould parallel.\textsuperscript{112} British Museum, 1886,0401.1765 and 1886,0401.1754.\textsuperscript{113} Gold finger rings with a bust of a serpentine Isis and a snake head (British Museum, 1814,0704.1183; Marshall 1907, 42 no. 244); with Serapis, Isis and Harpokrates as human-headed uraei with tails entwined (1839,0921.1090; Marshall 1907, 42 no. 245; Andrews 1990, no. 161); terminals of serpentine Isis and Serapis (1926,0407.12; Marshall 1907, 41, no. 241, pl.VI).\textsuperscript{114} The closest match for the double-loop attachment is found on the gold ring British Museum, 1839,0921.1090: see the Harpokrates figure.\textsuperscript{115} Such as finger ring British Museum, 1839,0921.1090 (Serapis, Isis, Harpokrates) or bracelet Metropolitan Museum, New York, 23.2.1 (Agathodaimon, Isis-Tyche, Aphrodite, and Terenouthis; the four figures vary in size).
Roman periods, but are most common in Egypt. Serpentine Isis and Serapis representations are common on 1st and 2nd century AD limestone (and marble) relief blocks, terracottas, jewellery and amphora stoppers.

5. An assemblage of gold and silver jewellery

Within the south western part of Naukratis, in an area Petrie described as the ‘Roman houses,’ locals found a group of 18 gold and silver objects in 1884–5; however, ‘the lot was divided among finders before I got part of it.’ What Petrie did acquire that year was split between the British Museum and Cairo, where they remain today, but other objects from the lot could conceivably have been sold to Petrie, Gardner or Hogarth at a later date.

The group comprises a number of thin gold plate objects including 4 gold disk appliqués, 2 cones, one hemispherical cup, bells/ bosses each with a hanging attachment loop (sometimes missing), a gold patera in the form of a shell (Fig. 26), an earring (Fig. 21), a necklace with a hemispherical pendant with granular decoration (Fig. 28), a gold chain, a gold amulet of Isis, Nephthys and Harpokrates (Fig. 32) and a gold diadem with an inscription dating the piece to c. AD 67–98 (Fig. 32) and a second fragment (probably also from a diadem) with a Greek dedication (Fig. 31). In addition, two silver fragments from a bracelet or

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114 All acquired in Egypt; a bracelet, Metropolitan Museum, New York, 23.2.1 and two rings, 10.130.1512 and 24.2.29; two rings, Brooklyn Museum (Davidson and Oliver 1984, 154–155, no. 209, 210), British Museum, 1926,0407.12 has no provenance. Note the discussion by Ogden (1990, 237–8), who plots how the Hellenistic Agathodaimon and Agathatyche myths equated with Psos and Thermouthis, become equated with Isis and Serapis from the mid-1st century AD (when they are represented on coins under Nero), making all such serpentine representations of Isis and Serapis as seen on bracelet terminals, rings and amulets, Roman in date.

115 From Naukratis (Oxford, Ashmolean Museum, AN1888.257); British Museum, 2005,0919.1; Walker and Higgs 2000, 61–2, fig. 49; 2001, 124–5, 151), Thonis-Heracleion (Goddio and Fabre 2008, 278, 296, no. 30) and Egypt (British Museum, EA1538).


117 Marshall 1907, 41–42 nos 241, 242, 244, 245.

118 Thomas 2011; Thomas and Tomber 2006; see chapter on Ptolemaic and Roman amphorae and amphora stoppers.

119 ‘South-west of the town at a high part, lying in the loose dust among the houses’ (Petrie Journal, 1884–1885, 156).

120 Petrie 1886, 43; Petrie Journal 1884–1885, 156. See Ogden 1990, 237.

121 British Museum, 1886,0401.1755–1757; Egyptian Museum, Cairo, JE26779–JE26781.

122 British Museum, 1886,0401.1761, 1886,0401.1755, 1886,0401.1756, 1886,0401.1759, 1886,0401.1765, 1886,0401.1758.

123 British Museum, 1886,0401.1757, 1886,0401.1755.

124 British Museum, 1886,0401.1759.

125 British Museum, 1886,0401.1759, 1886,0401.1755, 1886,0401.1757.

126 Egyptian libation-bowls, known as patera in Latin, were often made in the form of shells during the Roman period (British Museum, EA69183). Libation-bowls were called phiale in Greek, although the Latin term patera is preferred for shell form libation-bowls of the Roman period. Alternative, but less likely, interpretations have suggested this gold shell could have been used as an ‘unguents holder’ (Petrie 1886, 44).

127 British Museum, 1886,0401.1762.

128 British Museum, 1886,0401.1763.

129 Egyptian Museum, Cairo, JE26781.

130 Egyptian Museum, Cairo, JE26779. See Ogden 1990, 238 for gold parallels for Isis and Nephthys represented as terminals on a Roman period bracelet from Behnesa and amulets depicting Isis, Nephthys and Harpokrates in Manchester and Athens can be dated no earlier than the mid-1st century AD (Ogden 1990, 208).

131 British Museum, 1886,0401.1765.

132 Egyptian Museum, Cairo, JE26780.
ring in the form of Serapis and Isis (Fig. 25), a silver bell and a tinned copper alloy mirror with a silver handle (Fig. 4) were found. Whilst a small number of individual gold jewellery pieces were found elsewhere in the site, this group comprises the majority of gold and silver objects from Naukratis.

The round appliqués (Fig. 27) have c. 50 BC–AD 100 parallels from the western Scythian region interpreted as harness decoration. A gold disk found within 6th-century BC levels of the first temple of Aphroditie at Naukratis (Fig. 15), discussed above, illustrates precedents for gold disk appliqués from cultic contexts, although we do not know whether they were attached to or whether they had the same function. Hemispherical gold sheet buttons (sometimes interpreted as model bells) have Bronze Age and mid-5th century BC parallels from the Caucasus. One hundred and twenty-four buttons were found within the mid-4th century BC Mausoleum of Halicarnassus, and late Classical or early Ptolemaic examples have been found in Thonis-Heracleion. It is possible that these buttons and disks were rosettes attached to textile stephane headaddresses as seen on some terracottas from Naukratis (see Figs 60–1), and seen on the statue dedicated by Lucius Caecilius Phoebus at the Isis temple in Pompeii.

The necklace has a hemispherical pendant ornament surrounded with a double band of granular decoration (Fig. 28). AD 79 parallels from Pompeii and Oplontis have similar hourglass-shaped chain links and pendants. Other hemispherical pendants with granular decoration were also found at Thonis-Heracleion. In the second season at Naukratis another broadly contemporary gold boss pendant was acquired (Fig. 29), which could conceivably have come from the same context. The boss has four attachment loops for chains, and stamped decoration representing in the centre the feather of Isis between two crescent horns above a sun disk. The iconography firmly links this with the cult of Isis, and terracotta figures of Isis are sometimes depicted wearing such jewellery (see below Fig. 63).

Two fragments of gold sheet, probably both from diadems, bear dedicatory inscriptions which provide the best dating evidence for this group. The smaller gold sheet (Fig. 30) has a Greek dedicatory inscription reading...ισχαρπ. λ...[ΑρηΠαγαθων ((for) Epagathos), a common name attested...

133 Petrie 1886, 44, pl.XXVIII; British Museum, 1886,0401.1753, 1886,0401.1754. See Ogden 1990, 237.
134 British Museum, 1886,0401.1751.
135 British Museum, 1886,0401.1749.
136 British Museum, 1886,0401.1761, 1886,0401.1755, 1886,0401.1756, 1886,0401.1760, 1886,0401.1759. Once attached to (since lost) textile stephane or similar headaddresses.
138 Museum of Fine Arts, Boston, 88.1060.
139 Stolz 2007, 71, fig.C84; (for the Bronze Age see Stolz 2007, 71, fig.C83).
140 Bundegaard Rasmussen 1998, 69, no. 171, pl. 8:5.
141 Stolz 2007, 71, nos 53.1–3, figs 94–97 Area T/T1. The form ‘may also have continued into later periods’ (ibid.).
143 British Museum, 1886,0401.1763; Ogden 1990, 183 who calls this a domed clasp.
144 Stefanelli 1992, inv. 113551; no. 39, fig. 85; Roberts 2013, 292, fig. 383.
145 Stolz 2007, 86 nos 73–74 (figs 137–140), found within a disturbed 6th to 8th century AD ‘context’ that included a group of gold jewellery of various dates gathered for recycling.
146 British Museum, 1888,0601.3. Also see the silver bar 1888,0601.4 and earring 1888,0601.2 may have been part of the original lot found in 1884–5.
147 Boston, Museum of Fine Arts, 88.931.
148 Egyptian Museum, Cairo, JE26780.

Naukratis: Greeks in Egypt | 12
across Egypt from Alexandria to Elephantine during the 1st century AD, although most known instances actually refer to a single individual, an estate manager in Euhemeria in the Fayum in c. AD 94–110. A fine filigree and granulation decorated gold amulet case, also inscribed Epagathos, may be linked with the Isis and Sarapis cult.

The second sheet (Fig. 31) has a series of holes around the edge for attachment to a leather or textile foundation. The left part of the sheet was impressed with the name Τιθέριος Κλαύδιος Αρτεμιδώρος (henceforth Tiberius Claudius Artemidorus), and is probably also a dedication. The name indicates the status and ethnos of the individual, as the Roman tria nomena (three-part name) is distinctive of individuals who had Roman citizenship. The nomen (Tiberius) and cognomen (Claudius), had been taken from either the emperors Nero or Claudius, and so most likely refer to an individual who had acquired Roman citizenship during their reign, or a freedmen of the Emperor (imperial freedmen are well attested in Egypt, where they ran imperial estates). For this reason the name provides a specific terminus ad quem of c. AD 41–68 (the reigns of Nero and Claudius).

The name Artemidorus was a common prenomen, particularly in Alexandria and the Nile Delta, but was also popular across the eastern Mediterranean. There are no other attestations of the full name Tiberius Claudius Artemidorus known from Egypt, although there are numerous sources (from Turkey, Greece and Italy) that record an athlete of the Pankration from Tralleis, modern Aydin in Turkey, who was active in c. AD 67–98, although this is not necessarily the same Artemidorus as mentioned in the inscription. In AD 69 he was Olympic champion, and gained the title of periodoneikes. He had wins in the Asias Koina of Smyrna, at Olympia, Periodos, Ephesus and Alexandria, and visited Rome. Visiting Alexandria first to perform in competitions, Artemidorus later visited in his official managerial capacity as an officer. At an

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\[149\] With nearly 100 attestations, the name Epagathos is particularly popular in Egypt during the period AD 86–184. This name is particularly well represented within papyri written and found in Euhemeria (Grenfell and Hunt 1900, P. Fay. 110; 111; 112; 120; 122).

\[150\] Ogden 1990, 212, this unprovenanced piece was sold in Paris in 1959.


\[152\] Thomas 2011.

\[153\] The nomen Tiberius and cognomen Claudius are well represented in Egypt (Thomas 2011). Artemidoros was a common name in Egypt, with c. 700 attestations from the 6th century BC to the 6th century AD. There are no other attestations in Egypt of Tiberius Claudius Artemidorus, a Κλαύδιος Ἀρτεμιδώρος (Claudius Artemidorus) is mentioned twice in a papyrus found in the Fayum, written in Krokodilopolis in AD 124 (Wessely 1921, 4, 5 and 24), but that is unlikely to be the same individual.


\[155\] The earliest mention of Artemidoros is in Pausanias, when he failed to win at Olympia in AD 67 (when Emperor Nero took part in the Olympics), in the boy’s category of the pankration. In one year he won the Asias Koina of Smyrna, in the boys’, teenagers’ and men’s age groups (τριαδεκά, ἀτενίοι and ανήδροι) categories of the pankration (τριαντρίδον). His athletic feats are discussed by Pausanias (8.14.2–3): ‘The feat of the Rhodian wrestler at Olympia was in my opinion surpassed by Artemidoros of Tralleis. He failed in the boy’s pancratium at Olympia, the reason of his failure being his extreme youth. When, however, the time arrived for the contest held by the Ionians of Smyrna, his strength had so increased that he beat in the pancratium on the same day those who had competed with him at Olympia, after the boys the beardless youths as they are called, and thirdly the pick of the men. His match with the beardless youths was the outcome, they say, of a trainer’s encouragement, he fought the men because of the insult of a man pancratiaist. Artemidoros won an Olympic victory among the men at the two hundred and twelfth Festival (69AD).’ (translation by Jones 1933, see also Habicht 1985).

\[156\] Thomas 2011.

\[157\] Moretti 1957, Olympioniki 799. R.E. II 1329.

\[158\] Gouw 2009.
advanced age he continued to be involved in athletics in an administrative capacity, becoming Xystarch, and was appointed high priest of the athletes’ association during the reign of Nerva, when he erected a statue of himself in the baths of Ephesus, dedicated to Artemis and Nerva. So famous was his strength that Martial in an epigram said: ‘stronger than even Artemidorus when he won in the contest.’

The function of the Tiberius Claudius Artemidorus diadem may be inferred by the four preserved embossed figures (Fig. 31) in high relief that comprise (from the left):

1. The sun-god Helios on a raised disk, wearing a radiated crown.
2. Hawk-headed Horus as Emperor wearing the crown of Upper and Lower Egypt, a toga(?), and holding a patera in his lowered right hand; his left hand is raised.
3. Demeter-Isis wearing the two feathers of Isis (rising above her head), a girt chiton, and himation drawn over her head as a veil. She holds a torch in her left hand.
4. The fragmentary upper part of a goddess (perhaps Hera) wearing chiton, himation and high ornamented stephanè on her head.

Marshall concluded that this was a priest’s crown depicting the deities he served, citing the ‘way priests dedicated to the service of the Augusti wore crowns with representations of them.’ Petrie suggested the diadem and associated jewellery belonged to Artemidorus’ wife, although the Epagathos dedication and range of both ritual equipment (bells and the shell patera) and dedicated objects are more consistent with objects from a temple cache. The persistent references to Isis, Serapis and Horus (or Harpokrates) suggest these were dedications (by various people) from a temple for the Osirian triad, if not specifically Isis. The diadem may have been a victor’s crown, dedicated in thanks for victory. Although it is possible that this group was redeposited from its original temple context,

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156 Officer in charge of the gymnium.
157 The inscribed base of a statue of Artemidorus dated AD 96–8 was discovered during the 1897 excavations of the harbour spa in Ephesus (I. Eph. 1124, Ephesus Museum in Vienna). The inscription, dedicated by the athlete in honour of the goddess Artemis and Emperor Nerva, records the managerial posts held by Artemidorus following his athletics career.
158 Martial VI.77, 3.
159 Marshall 1911, xiv.
160 See Marshall (1911, 364) for discussion, parallels and Classical sources.
161 Petrie 1886, 43–4, pl. XXVII, XXVIII.
the damage sustained was supposedly caused by the division process of the local looters. As the objects were probably complete when discovered, they are unlikely to have been an ancient hoard or stored for recycling. If instead we consider this was found within its original context as a ritual cache, two possible conclusions emerge. First, that these are from a cache from a c. 50 BC to AD 90 temple of Isis (or the Osirian Triad). Second, that other gold and silver objects acquired by Petrie, Gardner and Hogarth, which also represent this triad of deities (Fig. 32) or their followers such as Bes (Fig. 33), may have originally been part of this same group, but which had been separated or cut up by the finders.

The area where the gold and silver jewellery was found has a complicated construction history and a long tradition of ritual activity. The riverfront neighbourhood was home to a string of ancient temples, with the sanctuary of Aphrodite and the bronze cache (also related to sanctuary activity) to the south, and the Hera, Apollo and Dioskouroi sanctuaries to the north, originally built next to the river. Recent excavations have revealed along the Late Period river front a group of eight Isis-Hathor (and related Egyptian) figures (dated to c. 450–330 BC). As the river front silted up, the bank moved westwards and a wide strip of land was reclaimed in c.100–30 BC, providing a terminus post quem for the construction of a series of buildings including houses and warehouses, amongst which the gold group were found. The religious iconography on some of these Roman objects (and the cultic significance of the area) suggest these once had a ritual function. All the objects within this group, as well as the attestations of the names Tiberius Claudius Artemidorus and Epagathos of Euhemeria, generally agree with a date in the late 1st century AD, or the beginning of the 2nd century AD, when they were probably deposited as a cache within the temple of Isis (or the Osirian Triad) within which they were dedicated and used. This temple was founded no earlier than the end of the 1st century BC, or the 1st century AD. We do not know the layout of this temple or how long it was operational for, although this ritual riverfront landscape is vividly described in the account of the martyrdom of Saint Epimachus during the Great Persecutions of Diocletian, who on the 3rd Hātūr in AD 303 was tried by the governor Polemius, then tortured and executed ‘on the dried-up river’ near Naukratis, where the altars for pagan sacrifices were erected.

6. Beads

A large number of beads were found at Naukratis, with c. 377 individual beads contained in 109 catalogue entries reflecting museums’ registers.
To this assemblage one can add four examples found within Leonard’s excavations of Ptolemaic levels of the ‘South Mound’ within the south-west corner of the Amun-Ra sanctuary. Gardner stated that ‘beads were very rare’ from his excavations in the cemetery. However, one must conclude that the excavation methods of Petrie, Gardner and Hogarth resulted in the minimal retrieval of beads, as a combination of contextual excavation methods combined with sieving are required to be certain to retrieve all beads from an archaeological deposit. For the purposes of the present discussion, the beads are split into five groups by material, which are also broadly chronological.

1. Egyptian turquoise faience beads (most 620–330 BC);
2. Ornamented glass beads (most 600–330 BC);
3. Coral beads (5th century BC) and semi-precious stone beads (most 30 BC–AD 200);
4. Monochrome and polychrome glass beads emulating semi-precious stones (most 30 BC–AD 200);
5. Shell, bone, wood and metal beads of various dates.

6.1 Egyptian faience beads

Turquoise faience beads are the most common beads preserved from Naukratis, accounting for 40 of the catalogue entries. During the Late Period, faience beads were used in necklaces, waistbands, girdles, bracelets, anklets and bead fringes. The abundance of faience beads in Naukratis is due to their general popularity in Late and Ptolemaic period Egypt, and their specific production in the Scarab Factory in c. 600–570 BC. They were readily available to the inhabitants of Naukratis and have been found in the town, cemetery and sanctuaries. Petrie stated that for the scarabs, amulets and beads ‘we can hardly avoid attributing all these figures to the factory’. Each type of faience bead discovered at Naukratis had at least one example found within the Scarab Factory strata, and more were found within the re-deposited ‘burnt stratum’ waster deposit from the Scarab Factory alongside scarabs, amulets, and their moulds. It is highly likely that all these types were manufactured there.

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174 Gardner 1888, 28.
175 Leonard 1997, 297–8, pl. 7.16, MC#27, MC#46, MC#64B, MC#76.
176 Xia 2014, 132; Petrie 1888, 22.
177 ‘Among them are pieces of a curious mottled paste, brown or grey and white, in close streaks running through the mass; it was glazed blue on the outside. Many small Egyptian figures (double eye, hawks, Ptah, Anubis, snake, beads, etc.) were also found in the disturbed stuff; and as moulds for sacred eyes and Bes were found in the stratum, we can hardly avoid attributing all these figures to the factory’ (Petrie 1888, 38). For a comprehensive discussion on this production see the forthcoming chapter on Scarabs, scaraboids and amulets which also discusses Egyptian style spacer beads (Ashmolean Museum, Oxford, AN1896-1908-E.E.670).
178 However other types of beads were sometimes strung with these examples that are not of faience and thus were not necessarily produced at Naukratis. Some of these examples remained within Petrie’s collection, now in UCL: Petrie Museum, London. UC73690a–c. (Xia 1946, 130–1, pl. XI, PN55c; pl.XIII. PD21g, no.1590). The scarab factory context recorded by Xia (labelled ‘Factory Nauk’), was lost when the collection was moved during the Second World War. See also McLean Museum and Art Gallery, Greenock, 1987.293.
179 This is recorded in a letter by Petrie: ‘Nebireh 28 Feb[nuary] 1885 Dear M’ Poole,… Catalogue of objects collected from the burnt stratum with scarabs.…. Various Egyptian objects, double eyes, hawks, Ptah, Anubis, snakes, beads, &c in poor and faded blue glazed ware’ (Petrie Letter XVI f70).
The wide variety of forms represented at Naukratis comprises rectangular (or oval), rosette, spheroid, disk, melon, tubular (or barrel) and (rare) stamped eye beads.

Rectangular beads are often decorated with a serrated edge and a double cross incised on both sides (Fig. 34).\(^1\) Late Period parallels are known from Memphis,\(^1\) and they have also been found within a 4th-century BC context in the Amun-Ra sanctuary at Naukratis.\(^2\)

Rosette beads have a disk shape with a loop attachment so they hung (and possibly functioned) like pendants (Fig. 35).\(^3\) Parallels have been found in c. 450–350 BC contexts.\(^4\)

Popular and simple spherical or oblate (flattened) spheroid beads (Fig. 36)\(^5\) were not only found in the 6th century BC Scarab Factory context, but also in mid-2nd to early 1st century BC\(^6\) and late 1st-century BC Amun-Ra sanctuary contexts in Naukratis.\(^7\) Rare flattened forms are classed as disk beads (Fig. 37).\(^8\)

Melon beads (Fig. 38)\(^9\) were primarily made of Egyptian Blue and have been found in the c. 600–570 BC Scarab Factory.\(^10\) Glass parallels were dedicated in Greek sanctuaries.\(^11\) The popular, and widely distributed, Roman period derivative form was apparently not found at Naukratis.\(^12\)

Segmented tubular, tubular and barrel shaped turquoise beads were probably also part of this production, but have not been found within the Scarab Factory (Fig. 39).\(^13\) Narrow cylinder beads were commonly used to make a bead net covering, probably for a mummy.\(^14\) One large group of cylinder beads, found with rectangular spacer beads, was found at Naukratis, probably from a Late Period grave.\(^15\)

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1. Museum of Fine Arts, Boston, 86.809, RES.86.321; McLean Museum and Art Gallery, Greenock, 1987.453; University of Pennsylvania Museum of Archaeology & Anthropology, Philadelphia, E64; all are said to come from Scarab Factory.
2. Nicholson 2013, 280–282, fig. II.30, F–435. The context contains Late Period pottery, but was disturbed in the Roman period.
3. Leonard 1997, 297, pl. 7.16; MMC. 22. This bead was found within Phase NW2A, previously dated erroneously to the early 3rd century–early 2nd century BC.
4. Museum of Fine Arts, Boston, RES.88.297; RES.86.305; RES.86.296; see also one of 86.215 without a provenance may have been of this production.
5. Persian Period fortress at Migidol/Tell el-Herr (Marchi 2014, 91, fig. 126h).
7. Leonard 1997, 297, MMC. 23; MC#27. Phase N2 was previously dated erroneously to 3rd century–early 2nd century BC.
8. Leonard 1997, 298, MMC. 25 and MMC. 24; MC#76 and MC#64b. Phase N3 is probably late 1st century BC–1st century AD in date, with residual Ptolemaic material within. This phase was previously dated erroneously to the (mid) 2nd century–1st century BC.
12. Not represented in Naukratis, but glass melon beads have been found within the Archaic Artemision at Ephesus (Hogarth 1908, pl.XLV.3).
13. Egyptian faience melon beads, probably produced in Egypt, were common across the Roman Empire in the 1st and 2nd centuries AD (Cool 2016, 41–6), and copied in glass (Beck 1928, 10; Xia 2014, 23, GD6).
14. Ashmolean Museum, Oxford, AN1896-1908-EE.671, which includes types produced at Naukratis as well as these forms.
15. Xia 2014,130.
Simple spherical or barrel-shaped beads with impressed circles and spots (Fig. 40)\textsuperscript{196} copy New Kingdom glass eye beads that continued to be popular during the 25th dynasty.\textsuperscript{197} Their production in faience is unusual and parallels are rare and poorly dated,\textsuperscript{198} yet their presence at the Scarab Factory in Naukratis may represent a short-lived attempt in faience to emulate the highly popular (imported) stratified eye glass beads discussed below.

Faience beads were common within the Egyptian part of the town, specifically in the area of the sanctuary of Amun-Ra. Only two were found within the sanctuary itself, in the north-west corner,\textsuperscript{199} with a few more from within the casemate structure.\textsuperscript{200} Ptolemaic faience beads have also been found within the Ptolemaic levels of the sanctuary.\textsuperscript{201} More examples come from outside the Amun-Ra sanctuary, with a considerable number found just west of the Great Temenos,\textsuperscript{202} and 22 beads\textsuperscript{203} from a group of 30 scarabs and beads found just north of the Great Temenos.\textsuperscript{204} This last group also includes an imported glass stratified eye bead (discussed below), and a (c. 100 BC–AD 100) gilt glass bead.\textsuperscript{205} A string of probably 6th or 5th century BC faience spherical beads was found in the cemetery, although the grave group cannot be reconstructed and the identity of the deceased is not known.\textsuperscript{206}

Egyptian faience beads were also found in areas commonly associated with the Greek inhabitants of Naukratis, such as 6th or 5th century BC levels of the eastern town area, where they were found alongside Archaic Greek pottery and material from a range of industries.\textsuperscript{207} A faience barrel

\textsuperscript{196} University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, E64 and McManus Galleries, Dundee, 1975-105.
\textsuperscript{197} Xia 2014, 25–6, 119, 128, 141. The method was reintroduced (briefly) during the Roman period.
\textsuperscript{198} Xia 2014, 131, 143, PDS3. Dated ‘Late Period’ and ‘Greco-Roman’.
\textsuperscript{199} Griffith records discovered two more in the north west corner of the sanctuary of Amun-Ra (in ‘Area 7’) when excavating on 07/01/1885: ‘…from this earth have been picked out a small bronze Harpokrates with the left hand raised to the mouth 2 beads several clay figures and a very roughly moulded glass scarabaeus (sic.)’ (Petrie Notebook 150, 1885, 11).
\textsuperscript{200} Petrie stated on 15/01/1885 concerning the casemate structure: ‘the few things that have been found, beads, coin, and a jar handle in chambers, and some bits of figures around the platform are all late Greek and early Roman’ (Petrie Journal 1884–1885, 84).
\textsuperscript{201} Leonard 1997, 297–8.
\textsuperscript{202} Griffith records discovering during his excavations on the 07/01/1885 as: ‘considerable number of Egyptian porcelain [sic. he means faience] beads’… ‘outside enclosure wall on W[est] side. There are now 2 gangs of men in this part. The first, of 12 men, has been employed for 2 days in sinking a deep wellpit in a small open space [i.e. without standing walls]. The result has been the finding of a considerable number of Egyptian porcelain beads together with small figures of deities, sacred eyes, and needles scraps of bronze (Petrie Notebook 150 1885, 9).
\textsuperscript{203} Ashmolean Museum, Oxford, AN1896-1908-EE.671 (11 beads); AN1896-1908-E.E.516 (11 beads and an amulet). Hogarth was probably not counting the spacer bead AN1896-1908-E.E.670. The provenance is recorded in Hogarth’s 1903 box list.
\textsuperscript{204} Collections of (mostly) faience beads were found in the south of Naukratis in 1903. When Hogarth excavated a trench ‘just N(orth) of the “Great Wall”’ (of the Great Temenos) he records ‘9 scarab and other beads’ (Hogarth 1903 Diary 2/51903) and a further ‘21 beads and amulets’ (Hogarth 1903 Diary 6/5/1903). Hogarth does not mention finding any beads in 1899, but two spacer beads in the Egyptian Museum, Cairo, JE33599, come from Hogarth’s first season.
\textsuperscript{206} McManus Galleries, Dundee, 1975-105. Whilst the beads are consistent with a Late Period context, a later reuse of these beads cannot be excluded as the cemetery contained numerous early Hellenistic burials (see Gardner 1988).
\textsuperscript{207} A few inches higher a deposit of pottery at the middle of the east side of the cleared area (about the lower word Iron on pi. xli.), at level 345, contained more BS with rouge-red facing, polished, a flat cup and a small neckless vase; a little drab aryballos, and M2 base of a bowl with gorgon’s head, which type is very common at Naukratis. A bronze weight filled with lead, and a soft yellow paste eye and bead covered with blue wash, were also found here. (Petrie 1886, 22).
bead was found within the Greek sanctuary of Aphrodite. \(^{208}\) For many further faience beads, no precise find-spot can be reconstructed. \(^{209}\)

### 6.2 Ornamented glass beads

A range of ornamented glass beads, decorated with spots (eyes) or lines (spirals and chevrons), were discovered in Naukratis. Ornamented glass beads account for 11% of the datable to between 620 and 150 BC beads found at Naukratis, although most of these are 6th century BC or Persian Period eye beads. Most ornamented glass beads were produced using the stratified technique, where rods of different coloured glass are melted and then ‘drawn’ or ‘wound’ around a core in successive layers. Although the technology was developed in the Bronze Age, it continued to be popular until the end of the 1st millennium BC. Few glass ornamented beads were produced in the early 1st century AD, following a decline in demand and materials across the Roman Empire. \(^{210}\)

The vast majority of the ornamented glass beads from Naukratis are stratified eye beads (Figs 41–2). Over time, various methods of producing eye beads were employed, but the Naukratis examples were all made using the stratified glass technique. \(^{211}\) Complex and labour-intensive, this technique involved adding various layers of coloured glass bars or sheets into a matrix. \(^{212}\) Stratified eye beads had been produced in Egypt since the 18th dynasty \(^{213}\) but were particularly common in the Eastern Mediterranean from c. 760–330 BC, with many examples known from Archaic Greek sanctuaries. \(^{214}\) The complexity of the layering and the crowded designs (Fig. 42) suggest the Naukratis examples are almost exclusively c. 600–330 BC variants. Eye beads produced during the Hellenistic \(^{215}\) and Roman periods \(^{216}\) used the 1st century BC mosaic glass rod ‘cut-off method’ \(^{217}\) and 1st century AD marvering specked spots method. \(^{218}\) Neither of these techniques could be identified within the Naukratis bead assemblage.

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\(^{208}\) Museum of Fine Arts, Boston, RES.87.259 (deaccessioned).

\(^{209}\) A group of beads, amulets and scarabs from Naukratis (World Museum, Liverpool, 9.9.86.89) were given a 28th dynasty date, presumably by the EEF, but no record of the context of discovery can be found. It is likely that these too were from the Scarab Factory. A large variety of different beads (of Late Period, Ptolemaic and Roman date) were registered in Boston, Museum of Fine Arts, 86.215.

\(^{211}\) Possibly affected by a reduction in the production of glass cane used for mosaic glass in the Neronian period (Cool 2016, 41).

\(^{212}\) Ten examples: Ashmolean Museum, Oxford, AN1896-1908-E:516; Bristol Museum and Art Gallery, H1322; University of Pennsylvania Museum of Archaeology & Anthropology, Philadelphia, E64.

\(^{213}\) Xia 2014, 25.

\(^{214}\) Such as Ephesus (Hogarth 1908, pl. XLY).

\(^{215}\) Xia 2014, 127–9, includes dynasty 25 within the Late Period, though it is more commonly placed at the end of the Third Intermediate Period; Eisen 1916, 17.

\(^{216}\) Still in use, if not necessarily produced, in AD 79, following a severe decline in popularity during the early 1st century AD, they were still rarely in use in Pompeii (Cool 2016, 40 fig. 2,10 nos 87–9, see also Dubin 2007, 328).

\(^{217}\) During the 1st century BC, a similar but less labour-intensive eye bead was produced using the ‘cut-off method’, which involved slicing a bead off a mosaic glass rod (Xia 2014, 25, 141). At Pompeii, the earlier method using slices of glass mosaic cane pressed into a matrix is attested in contexts dated c. 80 BC–AD 50 (Cool 2016, 39).

\(^{218}\) A later, cheaper, variant involved marvering specked spots (or ‘crumbs’) applied to the exterior of the matrix; this was used in Pompeii between AD 30–79 (Cool 2016, 39).
Eye beads account for 93% of Late Period decorated glass beads in Egypt and c. 91% at Naukratis.²²¹ Their popularity on necklaces and earrings²²² was due to their perceived magical protective amuletic qualities, explaining their presence in burials as pairs placed beneath the head of the deceased.²²³ Also at Naukratis a number of beads were found as grave goods, including eye-beads.²²⁴ Petrie discovered a group of eye beads within the Scarab Factory area, operational mainly during the period c. 600–570 BC.²²⁵ However, this Scarab Factory 'context' also includes complicated crowded stratified eye bead variants (Fig. 43)²²⁶ that are commonly dated 525–330 BC,²²⁷ raising the possibility of contamination or that production continuing into later centuries. The majority have no clear provenance.²²⁸

A red and white spiral line tubular glass bead (Fig. 43)²²⁹ was found within a group of 22 beads comprising Late Period and Roman beads²³⁰ in the region of the Amun-Ra sanctuary.²³¹ A green and white spiral line bead was found in the cemetery.²³² Two feathered polychrome barrel beads without a known context (Fig. 44)²³³ are probably of Ptolemaic date.

6.2.1 Phoenician beads and pendants

A large cylindrical face bead in almost colourless glass with multi-coloured details depicting three faces (two in white, one in yellow) is of a type associated with Phoenician or Punic manufacture (Fig. 45). Phoenician face beads have a wide distribution across the Mediterranean, from the 7th

²¹⁹ Although eye-beads declined in popularity during the Hellenistic and Roman periods, eye and mosaic beads account for 12.8% of all glass beads across Egypt (Xia 2014, 129, 141).
²²⁰ Earlier stratified eye beads may have been re-used in the Roman period as some early examples were strung with Roman beads. However, these are unlikely to be the original strings, but instead represent separate isolated finds registered together by museums. For example strings Ashmolean Museum, Oxford, AN1896-1908-E.E.516 and Bristol Museum and Art Gallery, H1322 comprise Late Period and Roman beads. Some of these beads may have come from earrings.
²²¹ Of the 25 ornamented glass beads, 20 are eye beads (either strafid or crowded eye beads, figs 41–42) probably all of Late Period production date, two spiral glass beads (Fig. 43) either of Late Period or Hellenistic date, two feathered polychrome beads (Fig. 44) probably of Hellenistic date and a single face bead also probably of early Hellenistic date (Fig. 45).
²²² Hung from bronze earrings during the Persian period (Xia 2014, 132).
²²⁴ Bristol City Art Gallery and Museum, H1322 probably came from the cemetery and from a number of different graves.
²²⁵ University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, E64; Petrie 1886. 38. Eleven bead records (individual or strings of beads) are listed as coming from the Scarab Factory (Petrie Museum, London UC73690b-c; Museum of Fine Arts, Boston RES.86.296; RES.86.321; RES.86.320; RES.86.305; RES.86.297; 86.809; McLean Museum and Art Gallery, Greenock 1987.453; 1987.293), although this is probably only a small proportion of what was found there.
²²⁶ Two examples from this context (University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, E64) and a further eight of this type found in Naukratis (Bristol City Art Gallery and Museum, H1322; Petrie Museum, London, UC54637; Museum of Fine Arts, Boston, G.967). 'Compound eye' variants are not represented at Naukratis.
²²⁷ Xia 2014, 126–9; GD26b–c; GD27b, dated to the 'Persian period', 6th century BC, and citing Etruscan parallels.
²²⁸ Museum of Fine Arts, Boston, G.967; Petrie Museum, London UC54637.
²³⁰ Xia 2014, 141.
²³¹ Hogarth diary 02/05/1903. On this context, see Masson-Berghoff 2015.
²³² Bristol City Art Gallery and Museum, H1322.
to 3rd centuries BC, though this specific type was produced from c. 400–200 BC in Carthage.\(^{234}\)

A mould-formed blue glass ‘pendant’ with a female face on each side was recorded by Petrie as coming from the town (Fig. 46).\(^{235}\) Parallels either have a suspension loop for use as a pendant,\(^{236}\) or a metal shaft inserted into the bottom to create a hair pin.\(^{237}\) While Haevernicky dates the group strictly to the 4th century BC,\(^{238}\) excavated examples from Acanthus (Greece),\(^{239}\) Alexandria\(^{240}\) and Hagoshrim (Israel)\(^{241}\) suggest that they are produced c. 330–200 BC.\(^{242}\) Widely distributed across North Africa, Spain, Italy, Sardinia, the Levant and the Black Sea coast, these are commonly associated with Punic manufacture on the basis of a concentration in the Punic sphere. In consequence, the female figure has been identified as Isis,\(^{243}\) whilst the bearded males on other beads have been identified as Baal-Hammon and Eshmun-Melquart\(^{244}\) or Silenus.\(^{245}\) However, the distinctive layered wig resembles the diagnostic Isis locks found on Isis-Hathor figures of the Ptolemaic period; the bearded male could then be taken to represent Serapis. Irrespective of production place, this example may have been interpreted by the wearer as one of a range of deities. A later production of glass pendants moulded in the round, probably from an unrelated workshop, are widespread in the eastern Mediterranean from the end of the 3rd century BC through to the 1st century AD and commonly depict Egyptian deities of the Osirian Triad;\(^{246}\) Petrie may have found one of these, but it is now lost.\(^{247}\)

6.3 Stone, coral and amber beads

Changing fashions and access to different markets determined which stones and other materials were perceived as precious and were used at Naukratis. Mediterranean pink coral had been exported as beads across the ancient world since at least 6000 BC,\(^{248}\) but was particularly popular during the Persian period in Egypt.\(^{249}\) Two groups of pink coral beads were found within 5th century BC levels of the eastern part of the town (Fig.

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\(^{234}\) Tatton-Brown (1981, 154) dates their production to 400–200 BC; Seefried (1982, 145) extends this down to 150 BC. See also Dubin 2007, 48, no. 35 for a close parallel.\(^{235}\) Museum of Fine Arts, Boston, 86.217; Petrie 1886, 43.\(^{236}\) British Museum, 1856,1223.1691.\(^{237}\) Both the pendants and hairpins were manufactured in the same way, leaving a vertical hole in the neck. Examples from the Kerch region now in the Louvre retain the metal pin (Arveiller-Dulong and Nenna 2011, 301).\(^{238}\) Haevernicky 1968, 648, dates other excavated examples from Ullastret (Spain), Carthage, Motya, and Al Mina to the 4th century BC.\(^{239}\) From an early 4th century BC grave (Trakosopoulos 2002, 80, fig. 4).\(^{240}\) Breccia 1912, 101, no. 318, fig. 64. From the Sciabti Necropolis, which Kassab Tezgor (2007, 17) dates to 330–200 BC.\(^{241}\) Yeivin 1966, found with a coin of Juba II dated to 340–216 BC.\(^{242}\) See also Arveiller-Dulong and Nenna 2011, 301.\(^{243}\) Carreras Rossell 2003, 23; Arveiller-Dulong and Nenna 2011, 301.\(^{244}\) Arveiller-Dulong and Nenna 2011, 301.

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\(^{246}\) Trakosopouloou 2002, 81.\(^{247}\) Nenna 1999, 141; Fischer and Jackson-Tal 2003 35–40.\(^{248}\) Petrie (1886, 43), in his description of glass objects, mentions ‘another head, that of a negro, in the same glass [as the blue pendant discussed above] was also found (now at Bulak)’. This probably refers to an object similar to British Museum 1893.1219.15, but there is no known record that might correspond to this piece.\(^{249}\) Dubin 2007, 30.\(^{250}\) Xia 2014, 131.
A single irregular coral bead, not from either group, is also known.\(^{251}\)

Onyx or agate (Fig. 48) and amber (Fig. 51) were used during the Roman period, and emeralds (or beryls, Fig. 52) became highly fashionable in early Imperial Rome, after the Augustan period. Demand was met by the emerald mines of Mons Smaragdus in the Eastern Desert of Egypt, and high-quality emeralds were imported from India through the Erythraean Sea ports of Aila, Clysma, Myos Hormos and Berenike. As in (predominantly early-mid 1st century AD) Pompeii,\(^{252}\) genuine emerald beads were polished into rounded rectangular (tabular) shapes, or left with their natural hexagonal or octagonal crystal sections (Fig. 53).\(^{253}\) Low quality beryls (and green glass copies) were produced as spherical beads.\(^{254}\) Both forms were popular on necklaces and hanging earrings.

Another popular group of stones perceived as valuable during the Roman period were silicate stones known as chalcedony. These include banded agate (Fig. 48) (including onyx) and the deep red cornelian.\(^{255}\) A single teardrop-shaped agate bead may be a glass copy,\(^{256}\) although two poor quality spherical chalcedony (layered agate or red-brown cornelian) beads were found.\(^{257}\) Rock crystal was also apparently worked at Naukratis,\(^{258}\) although generally copied in clear glass.\(^{259}\)

A single spherical lapis lazuli bead probably came all the way from Afghanistan (Fig. 49).\(^{260}\) A single irregular and unfinished raw red garnet (Fig. 50)\(^{261}\) is probably also Roman,\(^{262}\) and was possibly imported from the Indian subcontinent.\(^{263}\) Red glass or red garnet globular beads were popular from the Hellenistic period onwards, with parallels from Thonis-Heraklion.\(^{264}\)

A complete necklace comprising amber and glass beads from Petrie’s first season has been dated 50 BC–AD 337 (Fig. 51).\(^{265}\) Unusually, there is no

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\(^{250}\) British Museum, 1886.0401.1716: ‘A necklace of coral beads was found on the east side of the town, at about the level of the fifth century B.C.; the beads are long and cylindrical, well-formed and drilled with a small hole. This is the first coral necklace I have heard of from Egypt. A few beads, similar, but rather fresher in colour, were also found in the town, and are now in Bulak [Egyptian Museum, Cairo, JE26804.1–6]; a couple of beads were in the best necklace which I found at San of Ptolemaic age, and stray beads have occasionally been brought over from Egypt.’ (Petrie 1886, 40).


\(^{252}\) Cool 2016, 39.

\(^{253}\) Redpath Museum, Montreal, 2510; British Museum, 1886,0401.1714; Bristol City Art Gallery and Museum, H1322; Petrie Museum, London, UC54537. See Xia 2014, 140, 142.


\(^{255}\) Xia 2014, 142.

\(^{256}\) Probably too fine to be a glass fake, but uncertain. Redpath Museum, Montreal, 2506.12. A good parallel comes from Pompeii (Cool 2016, 39–40, no.64).

\(^{257}\) Redpath Museum, Montreal, 2506.15, 2506.07; quartz or onyx: 2506.18.

\(^{258}\) A fragment of a rock crystal from which beads were cut (preserving the remains of bored holes) is in the British Museum (1886.0401.1478).

\(^{259}\) British Museum, 1888,0601.74.

\(^{260}\) Redpath Museum, Montreal, 2506.11.

\(^{261}\) Unlikely to be a garnet-coloured glass bead, because it is so irregular in shape.\(^{262}\) It was registered with a group of unfinished Roman beads of the 1st century AD.

\(^{263}\) Pliny, Hist. nat. 37.7,25, but also Ogden 1992, 29.

\(^{264}\) Stolz 2007, nos 153–7, figs 261–7; 114, no.173–5, figs 296–8. From an early 8th-century AD workshop in area T1/T1 recycling older jewellery.

\(^{265}\) Museum of Fine Arts, Boston, 86.214. ‘A string of 53 beads of glass, amber and stone as found,’ with a note by Amelia Edwards saying that they are on the original string.
mention of this complete necklace in Petrie’s excavation reports.\(^{266}\) The string of 49 beads comprises 22 amber beads of various irregular shapes, one rectangular flat amber-coloured bead broken in half, nine small green glass cylinder beads,\(^{267}\) two black double ring beads, one single black ring bead, two blue barrel glass beads and 12 yellow conical beads. The irregular form is characteristic of amber beads of the Roman period, when the material became popular.\(^{268}\) The separate find of an individual flattened spherical amber bead has both Archaic\(^{269}\) and Roman parallels.\(^{270}\) Xia argues that the sudden increase in amber beads during the Roman period was caused by Roman expansion and trade that added Baltic amber sources to the Mediterranean sources already available in earlier periods.\(^{271}\) Amber was popular because of the magical and protective properties it was thought to possess.\(^{272}\) One bead from Naukratis resembles either low grade amber or black resin,\(^{273}\) another material popular in the Roman period which was used in place of more expensive amber.

### 6.4 Monochrome and imitation banded glass beads

Monochrome and banded (layered) polychrome glass beads were produced in response to changing fashions to imitate more expensive semi-precious stones such as banded agate and beryls in the 1st century AD.\(^{274}\) Although the quality of some copies is poor, it is not always possible to distinguish the semi-precious stone and glass imitations. One fine example of a truncated cubic bead of common Roman type is either made of rock crystal, or more likely, glass (Fig. 52). These were commonly made of glass, copying cut gems of rock crystal in the form of pentagondodekahedra dice.\(^{275}\) This example is pierced, without markings on the facets that would be expected on dice.

A late Hellenistic or Roman bead, with gold leaf sandwiched between blown glass, displays two important innovations in late Hellenistic glass manufacture. Gilded glass and glass blowing were developed at the end of the Hellenistic period, and these beads are commonly dated c. 50 BC–AD 200.\(^{276}\) One was found just north of the sanctuary of Amun-Ra by Hogarth in 1903, with 21 beads and numerous amulets\(^{277}\) of earlier Late Period and Ptolemaic types.

The Julio-Claudian and Flavian fashion for emeralds and beryls spread to Naukratis, where, as in Italy,\(^{278}\) they were copied in glass. Emerald green

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\(^{266}\) Could Amelia Edwards have conflated these with beads from another site Petrie excavated in 1885?

\(^{267}\) Also Roman type, see Xia 2014, 141, see GD64b–d.

\(^{268}\) Xia 2014, 139, 143–4.

\(^{269}\) Archaic Artemision in Ephesus (Hogarth 1908, pl. XLVIII).

\(^{270}\) Xia 2014, 144, R11.

\(^{271}\) Xia 2014, 139.

\(^{272}\) Cool 2016 for parallels from graves; see Pliny Hist. nat. 37.12.

\(^{273}\) Redpath Museum, Montreal, 2531.

\(^{274}\) Cool 2016, 41; Xia 2014, 139.

\(^{275}\) Xia 2014, 140, 154, 169, pl. Ill, GN77.

\(^{276}\) Dublin 2007, 56, 339; Xia 2014, 139, who notes late Ptolemaic glass beads are frequently erroneously dated to the Roman period. However, this blown example probably does fall into the Roman period.


\(^{278}\) Emeralds were the most fashionable semi-precious stone beads at Pompeii in the mid-1st century AD, and were also copied in glass there (Cool 2016, 39–41).
was the most common colour (23.8%) of glass beads in Roman Egypt,\textsuperscript{279} with parallels from nearby Thonis-Heraklion.\textsuperscript{280} A workshop at Naukratis may have produced these fake emeralds in the form of spherical beads,\textsuperscript{281} trapezoidal beads (heptagonal and octagonal beads imitating the natural form of beryls; Fig. 53),\textsuperscript{282} (cabochon inlay setting from) pendants (Fig. 54)\textsuperscript{283} and gems.\textsuperscript{284} While these were usually monochrome, polychrome banded examples were also produced to resemble lower-grade beryls, and were used alongside genuine semi-precious stones such as amber.\textsuperscript{285} Such beads were used on necklaces, bracelets, earrings and anklets.

Glass copies of chalcedony beads were particularly popular, especially those resembling banded agate (Fig. 55), in the Parthian and Roman periods.\textsuperscript{286} Examples of Roman copies found at Naukratis include blue and white banded glass barrel beads\textsuperscript{287} that were not drilled or finished,\textsuperscript{288} a deep red imitation cornelian\textsuperscript{289} and a pale blue rectangular bead.\textsuperscript{290} Unfinished and undrilled examples were found alongside glass ‘counters’, which seem to represent a glass industry in Naukratis,\textsuperscript{291} possibly recycling the more readily available colourless or ‘aqua’ glass available during the 1st century AD.

### 6.5 Shell, bone, wood and metal beads

A number of bead-shaped objects were found at Naukratis, some of which have subsequently been identified as bone hinges and furniture fittings. Gardner claims to have found bone beads at Naukratis, for example, within Grave C4: ‘Bottom of bowl, cowries, bone beads, shells, piece of lead and claw of lobster’,\textsuperscript{292} although these cannot now be located. Surviving shell beads comprise six cowries with cut backs (Fig. 57).\textsuperscript{293} Other materials include a single small ‘wooden’ bead (possibly made from a seed),\textsuperscript{294} and a pair of hexagonal bronze beads in a common Persian period form (Fig. 56).

\textsuperscript{279} Xia 2014, 139.
\textsuperscript{280} Stolz 2007, 113, no. 172, figs 294–5.
\textsuperscript{281} Museum of Fine Arts, Boston, RES.88.28, 86.215; 86.214, G.963; Egyptian Museum, Cairo, JE33552; Redpath Museum, Montreal, 2508; see Xia 2014, 144–5.
\textsuperscript{282} Redpath Museum, Montreal, 2509.1 (Xia 2014, 140).
\textsuperscript{283} Petrie Museum, London, UC73730. Parallel from Pompeii, AD 79 (Roberts 2013, 142, fig. 155.
\textsuperscript{284} British Museum, 1886.0401.1708, previously dated to the 4th century BC (Walters 1926, no. 581), and said by Petrie to be Phoenician (Petrie 1886, 43, pl. XX, no. 13). However, there are parallels in Pompeii produced in the 1st century BC and AD (Cool 2016, 48–54).
\textsuperscript{285} Museum of Fine Arts, Boston, 86.214. See Xia 2014, 141.
\textsuperscript{286} Dubin 2007, 52; Xia 2014, 141.
\textsuperscript{287} Museum of Fine Arts, Boston, 86.215; Redpath Museum, Montreal, 2506.13, 2506.20, 2506.06, 2506.19, 2506.22a–c (three fragments). Two examples were incorporated within necklace strings of beads: Museum of Fine Arts, Boston, 86.214; Petrie Museum, London, UC54637.
\textsuperscript{288} Redpath Museum, Montreal, 2514.
\textsuperscript{289} Redpath Museum, Montreal, 2506.16; Museum of Fine Arts, Boston, 86.215.
\textsuperscript{290} Redpath Museum, Montreal, 2506.14. See also 2506.21, said to be ‘jasper’ but probably also glass.
\textsuperscript{291} Putative ‘pill maker’ found at Naukratis (British Museum, 1909,1201.13), resembles tools used to make roman glass beads. It appears to be made from a dense glazed composition, or glazed stone. See chapter on Tools and weapons.
\textsuperscript{292} Gardner 1888, 26.
\textsuperscript{293} British Museum 2012.5016.19, 31–34, 38.
\textsuperscript{294} Petrie Museum, London, UC54644b.
\textsuperscript{295} Museum of Fine Arts, Boston, 86.245.
6.6 Bead fashions at Naukratis

The beads found at Naukratis belong to three main groups: Egyptian turquoise faience (mainly Late Period), imported ornamented glass (mainly Late Period) and the semi-precious stone beads also copied in glass (Roman). There are few examples of distinctly Persian fashions (metal and pink coral beads) and Punic or Phoenician imports are limited to two examples. Instead, the assemblage is dominated, as it is across Egypt until the Ptolemaic period, by faience and Egyptian blue frit paste beads. Popular throughout Egypt during the Late Period, these were also manufactured at Naukratis, possibly for export as well as local consumption. During the Late Period, faience beads account for around 93% of beads used in Egypt, and 67.5% of the beads at Naukratis (Fig. 58). Faience beads were found within the ‘Egyptian’ areas of the settlement to the south, but would have been worn with a range of faience (and also stone, bone and gold) Egyptian amulets, pendants and scaraboids, and so should not be considered in isolation.

Stone and metal beads during the Late Period account for around 2.3% and 1.9% of beads in Egypt and 0.8% and 1.2% at Naukratis respectively. Other materials were generally rare in Egypt (1.4%). There was a distinct fashion for pink coral across Egypt during the Persian period and at Naukratis we see a much higher prevalence (19.5%) of pink coral beads than in the rest of Egypt. However, the coral bead assemblage (with a single exception) comes from just two necklaces from 5th century BC contexts.

In Naukratis, and across Egypt, eye beads (specifically stratified eye beads), account for almost all the ornamented glass beads used in the Late Period and Ptolemaic period. Imported ornamented glass beads were unusually common at Naukratis (11%) during the Late Period and early Ptolemaic period, compared with the rest of Egypt (1.4%) at this time (Fig. 58). Ornamented glass beads continue to be popular into the Ptolemaic period, although at Naukratis this is followed by a significant reduction in the range, quantity and quality of the bead assemblage.

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296 Based upon the large Petrie Museum corpus (Xia 2014, 127). As with Naukratis these are mainly blue/green (62.7%). The faience bead bias within the Petrie Museum may be caused by the large quantity of mummy bead nets within the Petrie collection that were popular in the Petrie Museum.

297 These are discussed in the forthcoming chapter on Scarabs, scaraboids and amulets; Redpath Museum, Montreal, 2497.3; Museum of Fine Arts, Boston, 86.292; Fitzwilliam Museum, Cambridge, E.15.1885. In terracotta see Egyptian Museum, Cairo, JE26829.

298 Ibid.
The bead assemblage changed significantly in the 1st centuries BC–AD, following the development of technologies and techniques, the opening of new markets, and changing fashions. The majority of beads used in Roman Egypt were made of glass (around 73.3%), with only 4.5% of faience. At Naukratis, this figure is 56% and 3.2% respectively (Fig. 58). While the proportion of stone beads remained approximately the same across these periods, the stones selected changed. During the Roman period there was a clear preference for layered agates and emeralds (or beryls) and these stone types were copied in glass.

![Figure 58 Bead materials by period. Egyptian data from Xia’s study of the Petrie museum collection (Xia 2014) compared with the Naukratis data.](image)

### 7. Adornment in Naukratis

The population of Naukratis followed a range of fashions that are testament to the diverse community living there and the range of cultural influences, materials and objects they had access to. While the assemblage is disparate, styles and fashions distinct to Egyptian, Greek, Cypriot, Phoenician/Punic and Roman communities are present for the period c. 630 BC–AD 200. This provides a useful corrective for other classes of object which exhibit a distinctly early Greek and male character (such as the Greek inscriptions, part of an epigraphic habit), or those finds that lead scholars to consider what is unusual about Naukratis (such as the Greek sanctuaries) as opposed to what is similar to other Egyptian settlements in the Nile Delta (such as the southern part of Naukratis, with its Egyptian sanctuaries, domestic architecture and Egyptian objects).

Traditional Egyptian fashions during the Saite and Persian periods are well represented, specifically within the bead and mirror assemblage, and many of these styles continued into the Ptolemaic period. The copper alloy mirrors represent a long tradition of production in Egypt, as do the faience beads, many of which were produced at Naukratis. The beads copied types developed during the New Kingdom (and in some cases, earlier) and emulated designs present on the scaraboids and amulets also produced there. Although these are the most common material, they are under-

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299 Xia 2014, 139. Based on the large corpus at the Petrie Museum.
300 Unlike our assemblage at Naukratis, generally non-traditional Egyptian jewellery from across late 7th and 6th century BC Egypt was predominantly Phoenician inspired (Ogden 1990, 4-5).
represented when compared to Egypt as a whole. The reason for this is that only a single bead net was found at Naukratis, whilst contemporary parallels from Egypt are dominated by the bead nets from elite Egyptian mummified bodies of Late Period cemeteries.\(^{301}\) No Late Period cemetery has been discovered at Naukratis, with the graves excavated by Gardner dated mainly to the early Ptolemaic period.

While many of the beads produced in Naukratis are of types that were typical across Egypt during this period and were used by the local population, others were exported. Those faience objects not found within the Scarab Factory were concentrated within what appears to be a predominantly ‘Egyptian quarter’ (around the sanctuary of Amun-Ra), with Griffith, Petrie, Hogarth and Leonard all discovering examples in the area.

Distinctly foreign objects comprise Cypriot or Greek style mirrors, ornamented glass beads, Cypro-Phoenician and Greek rings and a small group of 6th century BC jewellery offerings found within the Saite period temple of Aphrodite. Some of the ornamented glass beads, specifically the popular stratified glass eye beads (probably all imported), were popular in Egypt during the Late Period and were found in the ‘Egyptian quarter’ with other Egyptian objects. However, they were unusually common at Naukratis, and although this may be partially explained by the greater availability of imported goods (from the Eastern Mediterranean) at Naukratis, many must represent beads brought and used by the foreign population of Greeks (and to a lesser degree Cypriots and Phoenicians). Distinct Persian Period fashions are represented by pink coral and metal beads. Their presence at Naukratis may again indicate foreign owners or merely easier access to imported goods for the local Egyptian elite, as these fashions were followed across Egypt at this time.

Any attempt to categorize Egyptian, Greek and Cypro-Phoenician objects is futile when considering that objects have been produced in hybrid styles or as derivations or interpretations of the designs of other cultures, and were subsequently reinterpreted for the population of Naukratis following a long tradition of emulation. The silver ‘Cypro-Phoenician’ bezel ring bearing the (misspelled?) cryptic name of Amun-Ra is a perfect example of an object that could have belonged to a member of any of Naukratis’ varied communities. Similarly, whilst a ‘Cypriot’ copper alloy mirror with engraved volutes could have been derived from Egyptian papyriform-handled mirrors, a contemporary ring derived from Cypriot types bears an Egyptian hieroglyphic inscription. Perhaps signalling similarities was intentional, because the borrowing and re-interpretation of foreign designs had value within this community. The role of magic and religion cannot be underestimated, and it is perhaps not surprising that the predominantly traditional Egyptian assemblage of scarabs, scaraboids and amulets (which would also have been used on necklaces and rings) dwarfs the jewellery assemblage.\(^{302}\)

Taken together, the Late Period communities of Naukratis displayed a remarkable mixing of Egyptian, Greek, Cypriot and Phoenician features.

\(^{301}\) Xia 2014, 127.
\(^{302}\) See the forthcoming chapter on Scarabs, scaraboids and amulets.

Naukratis: Greeks in Egypt | 27
Even when glass pendants or beads have been categorized as of Punic production, their discovery within c. 300 BC contexts at Naukratis should not be a surprise, for such objects have been found across the Levant and North Africa, but also Italy and Greece. More distinctly Greek is the mercury gilded Eros ring from the cemetery, where deep red ochre used as ‘rouge’ was found within a c. 425–400 BC red-figure pyxis. In addition to jewellery, horn and bone pins, as well as metal scoops and kohl sticks, were also found within the cemetery. Limestone Archaic Cypriot (Fig. 59) and terracotta Classical Greek figurines (Figs 60–1) indicate how the women of Naukratis may have worn thick black kohl eye-liner, red ochre on their lips and jewellery (note also the gilded rosettes from the stephane of Figs 60–61 which may illustrate one of the ways gold disks found at Naukratis may have been worn).

Jewellery and mirrors are poorly represented at Ptolemaic Naukratis, despite being the best-represented period in the cemetery, and the focus of Leonard’s excavations in Ptolemaic domestic levels in Kom Hadid at the east of the site and the South Mound within the south-west corner of the Amun-Ra sanctuary. Although excavators record the discovery of mirrors, bracelets, rings, rouge and beads within the cemetery, only a few objects were retained. The absense of these finds is probably due to the poor state of preservation of many finds from the cemetery as clearly stated by Gardner. From the domestic areas, the bead assemblage shows the continued use of traditional Egyptian faience beads, albeit reduced in range. Because the technology remained much the same, aside from the distinctly high quality Scarab Factory beads, other faience beads from the site can only be generally dated to the Late Period or Ptolemaic period. We do not see any evidence that faience beads (or any other faience objects) were produced at Naukratis in the mid-Ptolemaic period or later. The faience amulet industry probably stopped in the 4th century BC, whilst faience vessel production probably stopped during the 3rd century BC. Demand was possibly met by other Egyptian sites such as Kom Helul in Memphis. At this time few ornamented glass beads were imported. This dearth of mid- to late-Ptolemaic production is also reflected in the scarab and amulet assemblage. The small sample size of Ptolemaic material may however also be explained by the context of discovery. While Late Period materials were found within rich distinctly Greek or Egyptian contexts, the Ptolemaic material represents mundane poor quality continuity of Egyptian forms and subjects, which is also apparent in the terracotta industry post 300–270 BC.

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303 British Museum, 1888,0601.718; a further sample of pigment (1888,0601.80) is loose. Another sample sent to Chautauqua is now lost. Gardner EES 1886 lecture.
304 See full publication in Tools and weapons chapter and the forthcoming chapter on Shell and bone artefacts and faunal remains.
305 Although the contextual information is best recorded thanks to Leonard’s excavations (1998: 2001).
306 Among personal ornaments the commonest were bangles, both of iron and bronze, usually of very small size, and some rings; most of the latter were either plain or too damaged to retain any design’ (Gardner 1888, 28).
307 See chapters on Ptolemaic and Roman faience vessels and the forthcoming chapter on Scarabs, scaraboids and amulets.
309 See the forthcoming chapter on Scarabs, scaraboids and amulets.
310 See chapter on Ptolemaic and Roman terracotta figures.
A distinct change in the jewellery repertoire occurs towards the end of the 1st century BC. This change was driven by technological advances in glass manufacturing that coincided with new fashions that developed during the Augustan period as a result of the changed geopolitical situation. Just as the sudden prevalence of amber beads coincided with Roman expansion and trade with new Baltic amber sources, the demand for emerald and lower-grade beryl, as well as chalcedony (which includes banded agate, onyx and cornelian), was driven by Rome’s new access to the emerald mines of Egypt and trade links with India. This demand could not be met, so these materials were imitated in glass. The development of kilns both increased and improved the production of transparent, aqua, cameo and coloured glass, whilst the development of techniques, such as gilded glass, blowing and moulding enabled a more complicated range of objects to be produced more rapidly and cheaply. The increased production and distribution enabled a whole new industry of glass recycling, which ultimately led to a significant and rapid devaluation of this once elite and exclusive material. Part of this industry was undertaken at Naukratis, probably during the early to mid-1st century AD, when unfinished and undrilled examples of layered glass and faux emeralds were found. This workshop seems to have worked with a combination of glass beads and inlays (probably produced locally) and semi-precious stones in order to make jewellery, possibly gems, and inlaid vessels and furniture.

The Roman fashion for large heavy oval bezel rings of bronze and – specifically Roman – iron spread to Naukratis, which also yielded a variety of earrings (with or without hanging bead strings) in copper and gold. Their contemporary use is apparent on Roman period mummy portraits (Fig. 62), which depict women wearing pieces of jewellery and beads just like those found at Naukratis. Indeed, most of the Roman period pieces at Naukratis would not look out of place in Pompeii, or much of the Roman Empire.

Thanks to the spread of the Isis cult across the Roman Empire, jewellery depicting the Osirian Triad (Isis, Serapis and Horus) is often found outside of Egypt. However, there is one significant group that deserves particular mention: the gold hoard of c. AD 70–100. This coherent group of late 1st century AD gold and silver objects comprises a range of jewellery and ritual equipment in both Roman and Egyptian style, which were dedicated by at least two different individuals. Found within a Roman structure at the western end of the settlement, an area that, as we now know, had formerly been the river bank reclaimed with a substantial pottery deposit containing pottery dating c. 100–30 BC. The consistent references to Isis, Serapis and Horus on these objects and the dedicatory inscriptions suggest the objects come from a Roman period Isis temple possibly located at this spot not very far from the much older Aphrodite and Hera temples on the Archaic-period river front of Naukratis (Fig. 63). This chance find confirms the continued significance of Naukratis, long after Alexandria took its role as the primary Mediterranean port of Egypt.

Figure 62 Detail of mummy portrait of a woman from Hawara, Egypt. Note the gold circular hoop earrings with pendant pearls and necklace of emerald beads linked with gold and a twisted gold chain necklace, c. AD 160–80. British Museum EA74710

Figure 63 Terracotta figure of Isis-Hathor (Aphrodite-Hathor) wearing two crossing chains joined with a rosette, dated c. 300–100 BC. Museum of Fine Arts, Boston, 88.931. Photograph © Museum of Fine Arts, Boston

311 Cool 2016; see game-counters in Tools and weapons chapter.
312 Strabo 16.2.
313 British Museum excavation 2015–6 in this area Trenches 8, 13, 14.
The two dedicants of the gold pieces had Greek names that were common in lower Egypt and Alexandria during the 1st century AD, although one was a Roman citizen (confirmed by his *tria nomina*) and probably not born in Egypt. The privileged status Naukratites enjoyed during Roman rule under the *gnomon idios logos* was tied to their perceived Greek ethnic identity, yet the fashions they displayed during this period (as far as we can see) borrow directly from wider Roman trends and older Egyptian traditions.