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Gold Jewellery in Ptolemaic, Roman and Byzantine Egypt.

Jack M. Ogden

ABSTRACT

This study deals with the gold jewellery made and worn in Egypt during the millennium between Alexander the Great's invasion of Egypt and the Arab conquest. Funerary jewellery is largely ignored as are ornaments in the traditional, older Egyptian styles. The work draws upon a wide variety of evidence, in particular the style, composition and construction of surviving jewellery, the many representations of jewellery in wear, such as funerary portraits, and the numerous literary references from the papyri and from Classical and early Christian writers. Egypt, during the period considered, has provided a greater wealth of such information than anywhere else in the ancient or medieval world and this allows a broadly based study of jewellery in a single ancient society.

The individual chapters deal with a brief historical background; the information available from papyri and other literary sources; the sources, distribution, composition and value of gold; the origins and use of mineral and organic gem materials; the economic and social organisation of the goldsmiths' trade; and the individual jewellery types, their chronology, manufacture and significance. This last section is covered in four chapters which deal respectively with rings, earrings, necklets and pendants, and bracelets and armlets. These nine chapters are followed by a detailed bibliography and a list of the 511 illustrations.

**Gold Jewellery in Ptolemaic, Roman and Byzantine
Egypt.**

In two volumes

Volume 1 - Text.

Jack M. Ogden

Ph.D. Thesis

Universtity of Durham, Department of Oriental Studies.

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25 JUN 1991

'I am weary and vexed at enumerating the multitude of ornaments'.

Clement of Alexandria, late second century AD.

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PREFACE

This study deals with the gold jewellery made and worn in Egypt during the millennium between Alexander the Great's invasion of Egypt and the Arab conquest. This period is divided into Ptolemaic, Roman and Byzantine. My terminology follows Lewis, who argued against the term 'Graeco-Roman Egypt': 'The historical periods that interest us are called Ptolemaic (or Hellenistic), Roman and Byzantine: let us call them by their right names'.¹ The switch from the late Roman to the Byzantine period has been placed at various dates ranging from the time of Diocletian in the late third century AD to the partition of the Empire in AD 395. In many ways, as far as jewellery is concerned, the former is a more natural break since at this time, perhaps as a result of Diocletian's currency reforms, jewellery became bolder and more opulent.

The jewellery types examined in this study are those that can be considered to be typical of, if not unique to, that worn by the wealthy inhabitants of Egypt during this period. Funerary jewellery is largely ignored as are ornaments in the traditional older Egyptian styles which, I believe, were mainly limited to temple or funerary use. The scarcity of hybrid Egyptian/Classical forms is noteworthy.

A study of this nature must be based on a variety of evidence, notably surviving jewellery, representations of jewellery in wear and also literary references. Egypt, over our period, has provided a greater wealth of such information than anywhere else in the ancient or medieval world. A single volume cannot do justice to all the varieties of ornament and their construction, style and chronology. This survey is thus presented as an preliminary investigation of a very fertile area for future study.

The jewellery from Egypt cannot be studied in isolation. Jewellery from elsewhere in the Near East, South Russia, and Europe must be used for comparison. For example, the links between first century AD goldwork from Egypt and Pompeii are so strong that we must assume a movement of finished jewellery or of craftsmen. Other aspects of Romano-Egyptian goldwork indicate links with Syria and the Levant - particularly after the second century AD. Comparisons between Palmyrene and Romano-Egyptian jewellery are aided by the wealth of representations of jewellery in wear in both areas. The East has traditionally been seen as the source of many Roman jewellery styles - a view first expressed by the Romans themselves. Higgins has said that the jewellery as represented at Palmyra tends 'to be rather ahead of Roman fashions'.² Such East-West diffusionary ideas have also been doubted,³ and, indeed, in the Levant we find a continuing use of Hellenistic motifs and constructional ideas for jewellery that often contrast with the new, starker forms found in Italy and Roman Egypt.

Ptolemaic and Romano-Egyptian gold jewellery survives in abundance in museums and private collections around the world. Sadly, little of this has a precise provenance or context. This means that we can seldom be certain whether a piece of jewellery is from a burial, a hoard or just a stray find. This in

1 Lewis 1970.

2 Higgins 1980: p. 174.

3 Henig 1981: p. 140.

turn limits the conclusions we can draw about the function and circulation of gold in the periods that concern us. Stated provenances can reflect the location of dealers or other middlemen, rather than the place where the find was made. Not so long ago workmen could supplement excavated finds with other pieces, both genuine and fake, to boost their *bakshish*. Astute dealers and illegal excavators were also quick to realise that invented or enhanced provenances help a sale and calm doubts regarding authenticity.

There are many examples of 'enhanced' or confused provenances. The gold jewellery supposedly found in a cache near, if not in, the royal tomb at el-Amarna, includes a Hellenistic ear-stud (fig. 262) and Roman bracelets.⁴ Another case of dealers adding to finds and giving attractive provenances to miscellaneous pieces occurs with the jewellery from the Theban tombs of three girls, usually given the unsubstantiated title 'princesses', who belonged to the harem of Thutmose III. The original find, now mainly in the Metropolitan Museum of Art in New York, was supplemented by fakes and by items of different periods.⁵ Some of the pieces have a Middle Kingdom appearance, whilst one so-called tubular pendant with outer spiral decoration looks remarkably like an early-Byzantine screw-threaded fastener.⁶ The presence of forgeries in the group, long suspected, has now been proved by art historical and scientific investigation.⁷

Accurate dating of jewellery types is also a problem. Jewellery could remain current in the same family for generations and a family 'jewel box' buried for safety and then stumbled across by a lucky archaeologist could contain goldwork with dates ranging over half a century or more.

The various types of jewellery typical of Egypt during our period will be dealt with in the later chapters. The large number of unpublished or partially published jewellery items worldwide make it unrealistic to attempt a corpus. For example the large Omar Pasha Sultan Collection of Ptolemaic and Romano-Egyptian jewellery, though published, is largely unillustrated and, in any case, its present whereabouts is uncertain.⁸ Almost every private collection and auction sale includes some item or other of jewellery from our area and period.

Funerary jewellery and other non-day-to-day ornaments are largely excluded from this study. Even so, it is not always possible to distinguish between jewellery for the living and that for the dead, or even to identify human rather than animal ornaments. Dogs are frequently shown wearing necklets with crescent and other pendants, and Herodotus tells us that the sacred crocodiles at Thebes and Lake Moeris were made to wear gold earrings and bracelets!

4 Martin 1974: pls. 285 - 6 and 298 - 9. Finds from Amarna also include Roman glass and metalwork.

5 Winlock 1948.

6 *Ibid*, plate 13.

7 Lilyquist 1988.

8 Omar Pasha Sultan 1929. There are rumours that the collection was on the market in the 1980s

A work of this nature relies on the help and advice of a great many people and institutions. I am grateful to Professor J. R. Harris for his encouragement and advice through all stages on the manuscript, to Dr J. Rea for discussions regarding some of the papyrological problems, and to many colleagues among Egyptologists and jewellery specialists for their help and advice. Particular mention must be made of Catherine Johns, Simon Schmidt, Dr Girauld Foster, and Derek Content. Dr Bahia Issawi, Under Secretary of State for Petroleum and Mineral Resources, in Egypt, made it possible for me to visit some of the emerald and gold mines in the Eastern Desert in 1989 and was a travel companion whose knowledge and genuine love of the desert made it an unforgettable trip.

Many museum curators have allowed me to study objects in their care and I am grateful to them. Some museums have been less accommodating, but I am thankful to those museum guards who, through kindness or indifference, have allowed me to study and photograph jewellery on display with minimal interference.

Special thanks are due to Eleni Vassilika who put her vast knowledge of Egyptian and Ptolemaic art, plus her ancient and Byzantine Greek at my disposal. I will always be indebted to her for her love and encouragement during the long gestation period of this work - and for her occasional outbreaks of irritation at my slothfulness which helped spur me to completion.

Jack M. Ogden, November 1990.

CHAPTER ONE - INTRODUCTION

Mycenaean Greek traders were ~~been~~ present in Egypt during the second millennium BC, but there is no evidence that a direct trade contact continued during the early centuries of the first millennium BC. Egyptian jewellery of this period almost totally lacks the elaborate granulation and decorative filigree work that characterises contemporary Greek and Phoenician work.

Iron Age Greek involvement began in Egypt in the early seventh century BC. Psammetichus I (664-610 BC) employed Greek mercenaries and encouraged Greek trade with Egypt, especially through the port of Naukratis on the Canopic branch of the Nile. Some non-traditional Egyptian jewellery forms and techniques can be seen in Egypt from this time, but these are in the rather homogenous taste disseminated by the Phoenicians. There is no obviously Archaic Greek jewellery from Egypt.

A limestone statue of a female votary, dating to the first half of the sixth century BC, from the temple of Aphrodite at Naukratis, wears two necklets of Cypriot, but not Classical Greek, type (fig. 1).¹ An elaborate filigree and granulated disk from Egypt (fig. 2), in the Metropolitan Museum of Art New York, can be paralleled in sixth to fifth century BC Etruscan work.² I would agree with Segall that it is 'pre-Ptolemaic'.³ A large hoard of silver jewellery found at Tell Atrīb includes both traditional Egyptian jewellery forms plus ornaments that can best be paralleled in Phoenician work.⁴ This hoard dates to around the sixth century BC.

Petrie noted that 'The goldwork and abundance of small weights at Daphnae [Tell Dafana, a Delta town established by Psammetichus] point to this place as the source of much of the Greek jewellery influenced by Egyptian designs'.⁵ In truth, there is little evidence for any intermingling of Greek and Egyptian forms. For example, one unfinished gold ring from Tell Dafana (fig. 3) is a typical sixth century Egyptian or Phoenician type, not Greek.⁶ Some other gold objects from Tell Dafana are Hellenistic (fig. 4), which either proves the survival of the town after the supposed total destruction by Amasis in the early sixth century BC, or demonstrates the initiative of Petrie's native workmen.⁷

1 Comstock and Vermeule 1976: no. 411. The top necklet is close to one from Paphos in Cyprus (Ogden 1982: fig. 5:12, p. 113) while the cylinder pendant is close to Pierides 1971: pl. 15. The similar pendant illustrated by Deppert-Lippitz 1985: p. 88, (also Berge and Alexander 1985: no. 6) is of doubtful antiquity.

2 Lansing 1940: pl. 16.

3 Segall 1946: pp. 97 ff, fig 10.

4 Engelbach 1924.

5 Petrie 1890: p. 273.

6 Ogden 1982: p. 54 fig. 4:39, bottom left.

7 Ogden 1982: fig. 4:39, bottom right.

Jewellery forms of the Late Period found in Egypt which we might recognise as being 'foreign' include boat-like earrings from Nebêsha,⁸ which closely compare to a type well distributed round the eastern Mediterranean around the seventh to fifth centuries BC.

Classical Greek jewellery is also very rare from Egypt, but this is not surprising. Gold jewellery is rare in fifth and even early fourth century Greece. Most extant 'Greek' jewellery comes from Bulgaria, Asia Minor and South Russia, and much probably belongs in the Hellenistic period. A gold signet ring with an oval bezel engraved with a flying Eros, of typical Greek fifth century type, comes from the Delta (fig. 5). Another signet ring supposedly from Egypt, and of about the same period, shows a cow and calf (fig. 6).⁹ Engraved seals and hard stone scarabs from Egypt dating from the sixth to late fourth centuries BC include a variety of Achaemenid and Graeco-Persian forms.¹⁰

After the arrival of Alexander in Egypt in 332 BC, the jewellery industry of Egypt became almost totally Hellenised. The jewellery-wearing population were probably mainly Greek and the traditional ornaments of Egypt only found favour in the temples and ceremonies of the old Egyptian gods. For the next thousand years the gold worn by the wealthy classes of Egypt reflected, in turn, cosmopolitan Hellenistic, Roman and Byzantine forms. There are only a handful of jewellery types that we can class as characteristic of, or unique to, Egypt. Most of these date from the Roman period.

It might well be supposed that the quantity and quality of jewellery worn during our period will reflect the ups and downs of Egypt's economic climate. To some extent this is true. It is a rule of thumb that intricacy of work is inversely proportionate to the amount of gold generally available. When little gold was available or affordable the goldsmiths compensated by going to town with elaborate filigree and granulation. This is clearly seen during the Ptolemaic period when jewellery became flimsier and more ornate as time progressed, mirroring, we must presume, the known economic decline during that time: compare the top earrings in fig. 18 with fig. 180. The change from the massive 'monolithic' gold constructions of the first century AD to the fashion for lighter, tubular construction in the third century AD must also reflect economic changes in Egypt: compare fig. 7 with fig. 8. I agree with Henig's view of the Roman period, that 'there was a wealthy, jewellery-owning class at all times',¹¹ but I feel less certain that 'jewellery-history does not necessarily throw any light on economic difficulties'.¹² The nature, affluence and relative size of the wealthy, jewellery-owning class can change, but the evidence we have from Ptolemaic, Roman and Byzantine Egypt indicates that goldsmiths kept on plying their trade, adapting with resourcefulness to the contemporary problems and rewards. Nothing has

8 Petrie 1888: pl. 8,18 = *BMCI* 1241.

9 Zahn 1929: no. 1.

10 e.g. Boardman and Vollenweider 1978: nos. 64 from Gîza, 77 from Damanhûr, and 199. See also Petrie 1888: pl. 41, 73 and 74.

11 Henig 1981: p. 140.

12 Henig 1981: p. 140.

changed; a recent survey of the modern retail jewellery business stated: 'It may be fair enough to say that the rich are always with us whereas the poor, in retailing terms, come and go'.¹³

The actual jewellery worn during our period is, in later chapters, divided into basic types such as rings, earrings, necklets, pendants and bracelets. Such neat separation is convenient, but cannot fully described the multiple forms of ornament. In some cases it is impossible to decide whether one particular ornament was a diadem, necklet, or belt, or whether some other enigmatic fragment was part of a necklet or earring. Other types of ornament might well exist in our collections totally mis-described. For example, at the end of the second century AD, Clement of Alexandria referred to 'sandals on which golden ornaments are fastened'.¹⁴

Funerary ornaments are generally omitted in this study, but, again, it is not always possible to distinguish daily from funerary jewellery. For example, the rhomboidal foil fillets often shown on painted funerary portraits right through the Roman period, are usually considered to be a funerary convention, and applied to the portraits at the time of burial (fig. 9). Nevertheless, Clement refers to effeminate men who 'wreath their locks and fringes with gold leaves'.¹⁵

Readers will also note the absence of a chapter on those basic Classical ornaments - fibulae and pins. However, fibulae - brooches - were not a pharaonic ornament and they were never popular even in Ptolemaic and later times. I assume the reason lay in the traditional Egyptian mode of dress which did not require a fastening device. I know of no Hellenistic Greek fibula types from Egypt, and Roman fibulae are rare, even in base metals. A small convex disk brooch, set with emeralds, from Alexandria, is in the British Museum.¹⁶ Perhaps this is like the brooch (*aptodion*) set with five stones described in a papyrus of AD 260.¹⁷ Another mention of a brooch (*peronidion*), weighing eight quarters occurs in a papyrus of AD 127.¹⁸

The only Romano-Egyptian representations of brooches also show disk-forms, and appear to have been male ornaments. A plaster mask of a youth, dating from around the first half of the third century AD, wears a disk brooch on the right shoulder of his *chlamys* (fig. 10) - a garment fastened on the right shoulder and considered to be male attire of high status. The disk shows a facing head in relief, possibly Helios.¹⁹ Another mask of a youth, in a private collection, wears a similar sort of disk on his right shoulder (fig. 11).²⁰ Here the brooch design is a male profile head with a crescent.

13 *The London Evening Standard*, 9th September 1988

14 Clem. Al. *Paed.*, 2.12.

15 Clem. Al. *Paed.*, 3. 3.

16 *BMCJ* 2865.

17 *P.Oxy.* 1273.

18 *P.Oxy.* 496.

19 BM 30723.

20 Grimm 1974: pl 43,1.

Clothing pins are not identifiable with certainty from our period in Egypt. The pins that do exist - and these are predominately in bronze, bone, or ivory - were mainly for the hair. Hair pins can be seen in wear on some Romano-Egyptian portraits (fig. 12), and were evidently considered one of the most basic of female possessions. The Codex Theodosianus of the late fourth century AD ruled that in the event of certain types of divorce, the wife 'must leave everything, even to her last hairpin, in her husband's home.'²¹ The maximum price edict of Diocletian of AD 301 includes prices for ornamental pins which were probably hair pins. Bone pins cost three denarii each while tortoiseshell pins cost four denarii each. Amber pins were mentioned, but the price has not survived.²²

The Galjub hoard of metalworker's tools includes several formers that would appear to be for casting pin terminals (fig. 13). Unfortunately, I know of no finished examples in precious metal with certain Egyptian provenance. Maspero does mention 'hairpins supporting statuettes of Venus' among Romano-Egyptian jewels found towards the end of the nineteenth century,²³ but I do not know where these are now. In Hamburg there is a pin of this type with a suggested Alexandrian provenance, but this is not certain.²⁴

A far more elaborate type of hair ornament in gold is shown in fig. 14. This gold hair decoration consists of a repoussé disk with the head of a maenad, which is surrounded by filigree work and flanked by eight radiating lengths of loop-in-loop chains with gold spool beads (compare fig. 4). These attach to the hollow fluted gold band that passed round the hair 'bun'.²⁵ The style and construction put this fine object in the mainstream of Hellenistic jewellery production, probably of the second century BC. There is another very similar hair ornament, also from Egypt, in a private collection in New York. This is part of an unpublished second century BC hoard which includes snake bracelets and armlets, earrings and an elaborate diadem that matches the 'bun' ornament.

Simpler head ornaments included a variety of diadem types, although many of these were probably intended only for funerary use. More elaborate diadems include a fragmentary example from Naukratis (fig. 15) embossed with figures of Romano-Egyptian deities and an inscription.²⁶ The inscription *Tiberios Klaudios Artemidoros* indicates a first century AD date. A more elaborate diadem type - if indeed that is how they were worn - consists of an oval sheet gold plaque embossed with the head of Medusa. There is one in Amsterdam (fig. 16)²⁷ and two are in Cairo (one can be seen in fig. 17).²⁸

21 *Cod. Theod.* 3.16.1.

22 Crawford and Reynolds 1977: pp. 125-151.

23 Maspero 1895: p. 332.

24 Hoffmann and von Claer 1968: no. 99.

25 Schimmel collection, New York. When I saw this piece before it entered the Schimmel collection, I was told that it had originally come from Egypt.

26 Petrie 1888b: pl. 27 = *BMCJ* 3045.

27 Scheurleer 1987: no. 45a.

28 Mariette 1871: pl. 40; Karo 1901: fig. 1.

The former, and one of the latter, have uraei flanking the Medusa mask, the other Cairo example has an all-over embossed pattern. The Amsterdam diadem and the two in Cairo were found in groups with other jewellery which points to a third century date. The openwork setting at the back of one of the Cairo diadems and the clasp on the chains of the Amsterdam example (fig. 292) certainly indicate a date after the mid second century AD. The Cairo diadems were part of the hoard from Sâ el-Hagar (ancient Sais) that was clearly buried for safe keeping. The complete hoard was illustrated by Mariette in 1871, as reproduced here in fig. 17.²⁹

A variety of gold diadems or tiara-like ornaments were worn in life and this was probably a fashion of Greek rather than Egyptian origin. Euripides *Medea* shows that a gold diadem was considered a suitable wedding gift for a bride, despite the tragic implications of this particular case. Tertullian refers to the use of crowns in marriage ceremonies in his day³⁰ - in the second century AD - and tradition continues in the Eastern Orthodox Church.

A very fine fragment of what was probably a diadem was part of the Castellani sale in Paris in 1884.³¹ This diadem consists of a repeating and well modelled vine leaf motif with 'grapes' made from pearls and green glass. The diadem is illustrated by Schreiber in his work on Romano-Egyptian goldwork.³² This diadem must be Roman, or early Byzantine. It brings to mind one sixth century authority who said that Constantine was the first to wear a diadem decorated with pearls and precious stones³³ - although the Hellenistic examples contradict this statement. One Byzantine papyrus refers to a gold 'stephanos' stolen from the house of a village headman.³⁴

THE PTOLEMAIC PERIOD

The overall wealth of Egypt during the Ptolemaic and later periods largely reflects its strategic importance in the luxury trade with the East. Alexandria was founded by Alexander the Great to facilitate trade with the rest of the Mediterranean and its power increased following the destruction of Carthage in 146 BC. Gemstones and other precious materials continued to be traded through Alexandria right through our period and into Medieval times.³⁵

A major factor was trade with the East and South. Alexander had sent ships from Suez to the Yemen, and before the end of the fourth century BC Nearchus had opened up the sea connections with the Persian Gulf. Under the early Ptolemies, trading ports such as Berenike, Ptolemais, and Myos Hor-

29 Mariette 1871: pl. 40.

30 Tert. *de corona*.

31 Castellani 1884: no. 151.

32 Schreiber 1894: fig. 22. The Egyptian provenance is also noted in Fröhner 1897: no. 52 and Castellani 1884: no. 151.

33 Chronicon Paschale I of AD 527-30.

34 *P.Oxy.* 2058.

35 See for example Kunz 1917: p. 165.

mos were established on the Red Sea coast of Egypt and an attempt was made to overcome piracy and the Yemeni monopoly of the sea-trade. The rise of the Parthian empire in the second century BC seriously impeded the land and sea trade between Egypt and northern India and this, together with the Yemeni presence, kept the volume of trade down until the Roman period. It appears that the wealthy Alexandrian owners of private-enterprise shipping had a monopoly of the luxury trade in gemstones and other products from the East.

Gold jewellery was more abundant in Egypt following the arrival of Alexander the Great, compared with the previous few centuries, but the types are almost entirely Hellenistic rather than Egyptian. The jewellery-owning class was probably predominantly Greek, and the only bastions of traditional Egyptian forms were the temples of the Egyptian gods. There are only a few classes of goldwork that show something of a hybrid style, such as some *udjat*-eye pendants in gold which have Hellenistic-type filigree decoration³⁶. The distinction, if not conflict, between Greek and Egyptian predated Alexander. Herodotus tells us that 'no Egyptian, man or woman, will kiss a Greek' and over 500 years later Clement of Alexandria described his Greek readership as 'you who are altogether better than the Egyptians ... who never cease laughing every day of your life at the Egyptians'.³⁷

The Greek middle classes congregated in the larger towns and probably exploited the Egyptian rural workers tilling Greek-owned land. This inevitably led to the dissatisfaction of the native population and probably aided the decline in the economy of Egypt in the second half of the Ptolemaic period. The surviving goldwork from Egypt reflects this decline and early Hellenistic forms outnumber those of the late Hellenistic period.

The huge increase in foreign trade had little effect on Ptolemaic jewellery, except by contributing to the prosperity of Egypt as a whole. The Ptolemaic jewellers were conservative and few exotic gemstones were used. Emeralds and pearls which came into fashion during the course of the Ptolemaic period were probably obtained from the Eastern Desert and the Persian Gulf. The finest garnets probably came from northern India.

In general, early Ptolemaic jewellery from Egypt tends to be starker, often more massive, than other Hellenistic jewellery. Coloured stones and enamels are less effusively used and there is altogether an air of mannered precision. The commonest surviving ornaments are the animal-headed jewellery (fig. 18) although earrings are far commoner than necklets.

Mid- to late-Hellenistic jewellery is characterised by a tendency towards more delicate, intricate, work with a greater reliance on coloured stones and contrasting shapes and forms. This Hellenistic baroque

36 Clark 1928: fig. 6.

37 Clem. Al. *Exh. to Heaven*, 2.

is as evident in Egypt as elsewhere, but surviving ornaments are not common, and I suspect that the Greek communities in Egypt were less affluent than they had been.

Jewellery from Egypt is marked by a transitional period between late Hellenistic and early Roman which produced a series of jewellery forms, in many cases unparalleled elsewhere - the final flowering of the Hellenistic baroque in a country already under Roman rule.

One indication of the size of the jewellery industry in late Ptolemaic or early Roman Egypt is the large find of goldsmith's tools from Galjub (Memphis) now in the Roemer-Pelizaeus Museum, Hildesheim.³⁸ This hoard included numerous bronze formers for shaping gold as well as chisels and small punches and, possibly, antitypes for casting (fig. 19).³⁹ Thin gold sheet was pressed down over the formers to produce the desired design or shape. The formers could be used again and again. Dates given for the Galjub hoard vary considerably and range through the Ptolemaic period. Possibly the tools were used for more than one generation but, on the basis of the style of jewellery that would have been made from the tools, the hoard cannot have been buried before the end of the second century BC and a first century BC date is more likely. Even an early Roman date cannot be ruled out. The size of the hoard is also noteworthy. A small local jeweller seems unlikely to have had such a huge range of tools, while a major temple workshop would surely have been less likely to have produced such a varied range of purely Hellenistic objects.

The majority of the gold jewellery of Ptolemaic date that now lies in museum or other collections has no precise provenance. However, we must assume that losses of gold were relatively infrequent in antiquity and that the jewellery that has survived comes mainly from burials or concealed hoards.

The burial of jewellery with the dead had been usual for some three millennia in Egypt and was also a Greek custom. In Greece, actual finds from burials are supplemented by a scattering of literary mentions. For example, from Euripides in the fifth century BC: 'Accept these gifts to deck her body, bury them with her',⁴⁰ and 'rich robes to be your final clothing and funeral ornaments to set about you'.⁴¹ Most surviving Hellenistic gold jewellery comes from burials, and in areas where we have a large enough sample, such as at Taranto, gold jewellery can be attested from burials right through the Hellenistic period. This was true whether the body was cremated or interred.

Unfortunately, Ptolemaic jewellery is seldom recorded from burials but this might reflect the nature of the excavations as much as ancient practice. One possible exception is a tomb group of about the third

38 Ippel 1922.

39 See also figs. 13; 373, 380, 413, 414, and 450.

40 *E. Alc.* 618-9.

41 *E. IT.* III.

century ~~AD~~, now in New York. This includes the necklet and griffin earrings in fig. 18. We do have 4BC some gilded terracotta copies of typical Hellenistic jewellery forms, such as winged Nike and elaborate 'boat' earrings (fig. 20), from burials in Egypt.⁴² These terracotta imitations of gold jewellery are commoner from Cyrenaica which, in the mid-Ptolemaic period, was considered fully integrated with Egypt.

Temples, with their usual solid construction and constantly present personnel, were an alternative place to deposit valuables. Hoards found at temple sites might be temple property or temporary deposits for safety.

The most important Ptolemaic hoard, actually group of hoards, of jewellery is that from Tûkh el-Qarâmûs in the Egyptian Delta. Unfortunately the exact origin and composition will probably never be known with certainty. The published objects and objects in Cairo, said to be from Tûkh el-Qarâmûs, have recently been studied and published by Pfrommer.⁴³ Here we can ignore the silverware - which is Pfrommer's main concern - and consider just the jewellery.

On the basis of the sparse published information, and the chronological inferences we can make from the nature of the Cairo Museum Journal d'Entrée numbers, we can note the following. The main group of jewellery was found in Room I of the 'treasury' of the temple in 1905. This group included the typically 'Hellenistic' gold from Tûkh el-Qarâmûs, that is, the Herakles knot bracelet (fig. 21), the snake bracelet (fig. 443), the pair of sphinx bracelets (fig. 467), the pair of griffin bracelets (fig. 466), and, probably, the griffin necklet (fig. 286).⁴⁴ Also found in 1905 were a group of more typically Egyptian gold objects, including the miniature collar in fig. 302, and gold statuettes of Amun and Shu. These are given no provenance, but on the basis of their traditional Egyptian style, and their position in the Journal d'Entrée numbers,⁴⁵ they might well have been a separate group, despite Edgar's general statement that all this jewellery was found together. It is possibly relevant that the miniature collar is matched exactly by another collar in the Metropolitan Museum of Art, New York (fig. 303), said to be part of the Tûkh el-Qarâmûs treasure, and two (?) in a private collection (fig. 304). These miniature collars form a homogeneous group and may be suspected to have been found together.

The 1905 treasure is Hellenistic and can all be placed in the third century BC without problem, but the jewellery found in 1906 is of less certain date. The 1906 jewellery was found in rooms 1 and 2 of the treasury and includes various figures of gods, pendants and other objects, including crescent pendants

42 Breccia 1912: nos. 505, 508, etc.

43 Pfrommer 1987.

44 These objects have the CM JE nos. 38077-38084. All are noted as being from room 1 except the griffin necklet which is not given a provenance.

45 These objects are CM JE 38084 - 86.

(fig. 22) of a type unexpected before the end of the Ptolemaic period (see ch. 8), and an amulet case that I cannot parallel prior to the Roman period. There are also gold beads in the form of sliced cowries (fig. 23) that are best known from the Middle Kingdom, although we can find far later parallels among the sixth to fifth century BC jewellery from Tell Atrîb.⁴⁶ I cannot exclude a late Ptolemaic or even Roman date for the 1906 jewellery and it might be from a later hoard or hoards in the temple, or even relate to some augmentation or switch by the local workers. A group of jewellery in the Ashmolean Museum, also said to come from the Tûkh el-Qarâmûs hoards, includes a gold bracelet of a type usually considered to be Late Hellenistic or Roman (fig. 504), and nine animal-head earrings of forms that range in date from early or mid to late Ptolemaic. If the 1906 treasure is homogeneous, it cannot have been deposited much before the end of the Ptolemaic period.

As Edgar himself noted, the Tûkh el-Qarâmûs hoards are 'another case of stolen treasure, of which no one will ever know the whole story'.⁴⁷

The Tûkh el-Qarâmûs treasure has been linked to a variety of nations, but the uniformity of the weight standards of the 1905 finds does suggest that they were the output of one area. The coins found with the hoard date to c. 300 BC and many have been assigned to Cypriot and Phoenician mints. Possibly this reflects the fact that the 'foreign' coins entering Egypt at that period were just bullion for reminting or reuse. I would like to believe that the jewellery was made in Egypt but quite possibly by craftsmen from other lands - a phenomenon well known throughout the Hellenistic empire. This is in agreement with Edgar's assessment that the jewels were 'the work of early Ptolemaic goldsmiths and silversmiths, native and immigrant'.⁴⁸

About a hundred years ago Maspero wrote: 'The Greek invasion began by modifying the style of Egyptian goldwork, and ended by gradually substituting Greek types for native Egyptian'.⁴⁹ In fact, most of the surviving gold jewellery from the Ptolemaic period is either traditional Egyptian in form or typically Hellenistic, there are very few hybrid forms, and even the syncretistic linking of Egyptian with Greek deities is hardly hinted at in the jewellery until the Roman period.

The main female deities in dynastic Egypt were Isis, Hathor and Nephthys. They continued to be separately revered in the Ptolemaic period, particularly in Egyptian-style art, but for the Greek and other immigrant population, their individuality was blurred. By the Roman period there was often little clear distinction between Isis and other goddesses.

46 Englebach 1924; also from Meroe - Schäfer 1910: pl. 31, nos. 248-250.

47 Edgar 1906c.

48 Edgar 1906.

49 Maspero 1895: p. 332.

Aphrodite's closest theological counterpart was Hathor. When Ptolemy Euergetes II dedicated his annex of the Hathor temple at Philae, the Greek dedicatory inscription identified her as Aphrodite. Plutarch also associated Nephthys with Aphrodite. Isis was identified with Aphrodite and also with Athene, Demeter, Euthenia, Hera, Selene, Ceres and Hygieia, and at the same time, she had absorbed many of the attributes of Nut and Neith.

The popularity of Dionysos in Ptolemaic Egypt led to the equation of this god with Sarapis and Osiris. The elderly Sarapis matched Osiris in his funerary aspect while the young Dionysos reflected him as the god reborn. It has been suggested that the Orphics played a significant part in the assimilation of Dionysos and Osiris as well as of Demeter and Isis.⁵⁰

THE ROMAN PERIOD

Roman merchants had settled in Alexandria in the second century BC but even after the time of Augustus there were few Romans actually living in the Egypt. The majority of the inhabitants were Egyptian, Jewish (mainly in Alexandria), or 'Greek' citizens of one of the *poleis* which, after AD 130, included Antinoopolis (el-Sheikh 'Ibâda). Augustus's creation of large Egyptian estates with absentee landlords quite probably reflected the way he viewed his relationship to Egypt itself. This exaggerated the rift between Hellenistic town and Egyptian countryside.

The discovery of the monsoons in the first century BC, or soon after, and the removal of the Yemeni competition, led to the establishment of a direct Egypt - India trade on a vast scale. Under Augustus, one hundred and twenty ships were sailing to India each year. Casson has noted that direct trade with India was a risky enterprise. The voyage, using the monsoons, could be embarked on only once a year and was possible only for merchants with powerful vessels and finance to pay for the voyage and a boat-full of merchandise.⁵¹

The India and Ceylon trade was important during the second and third centuries AD. We know from a mid second century AD papyrus that goods shipped from India were subject to a 25% tax when they reached the warehouses in Alexandria.⁵² In more recent times, it has been usual for countries supplying precious stones to keep the best, and only export the smaller or poorer stones - this is recounted by Marco Polo, for example. Some evidence that this was so in antiquity is suggested by Philostratus: 'The stones which the Greek commerce imports from the Indies are so small that they are set in necklaces and rings: In India they are big enough to be decanters and coasters, and bowls fit to satisfy four thirsty men at midsummer'.⁵³

50 Le Corsu 1977.

51 Casson 1980: pp. 35 - 36.

52 See for example Casson 1986 and Casson 1989: p. 145.

53 Philost. *Apoll.* 3.27.

It might be expected that the gemstones used in Romano-Egyptian jewellery would be closely tied to the development and expansion of the Red Sea trade and the opening up of direct links with India and Ceylon. In fact, the important sea trade is scarcely reflected in the gem materials in extant jewellery. For example, sapphires from southern India and Ceylon passed up the Red Sea and across to Alexandria *en route* to other parts of the Empire, from the second if not first century AD. However, sapphires seem unknown in jewellery from Egypt until the pale Ceylon stones became popular in the Byzantine period.

The stones most fashionable in Ptolemaic and Romano-Egyptian jewellery were pearls and emeralds. The emeralds came from within the borders of Egypt, while the pearls seem to have been imported from further East. Possibly luxury goods from the Egyptian coast of the Red Sea were treated separately, with regard to their sale within Egypt, from imported Eastern luxuries. Even so, all such categories seem to have been under the command of the same officials. For example, a dedicatory text to the god Pan Euhodos of 130 BC on a marble tablet in the Alexandria Museum, is from a superintendent of the Eastern Desert caravans. This text describes the official as a governor of the Thebaid in charge of the collection of very expensive stones (*polytelous litheias*), and the import of frankincense and the trade to Koptos (Qift), on the Nile.⁵⁴

In general, during the first two centuries AD, the 'jewellery-owning class' in Egypt comprised a surprisingly large number of people including what we might term a semi-rural middle class. This can be illustrated, for example, at Tebtunis (Tell Umm el-Breigât), a village at the south of the Arsinoite nome. One family living there in the first half of the second century AD was that of a certain Kronion, regarding whom some seventy-odd documents have survived. Lewis has called this a 'village family of modest means' and says that 'the family of Kronion was able to live at a level somewhere between abject poverty and easy circumstances'. Kronion, an illiterate, was often very short of money and, like many others of his time who relied on agriculture, went into debt frequently and had to raise loans. Even so, in the documents that have survived it can be seen that he gave at least one daughter a dowry of money plus gold jewellery worth around 520 drachmae, about the same as a year's salary for an agricultural manager or foreman. Of the myriad texts from the period, inventories and lists such as marriage contracts provide a great deal of information regarding the types of jewellery worn, and their weights and values.

Traditional histories of Egypt stress the economic decline of the later second and third centuries AD, and some problems certainly existed. A papyrus of c. AD 250 talks wistfully of the period of Septimius Severus 'when the towns were still prosperous'.⁵⁵ Nevertheless, the economic decay has probably been exaggerated. Up to the early third century there was a class of relatively affluent, local gentry in the

⁵⁴ OGIS, 132. Most recently referred to in Bernand 1972: no. 41.

⁵⁵ SB 7696.

larger villages and the towns. The complaints against women - and men - who wore jewellery, by such observers as Clement of Alexandria, suggest that jewellery was still worn in abundance and that the fashion was already leaning towards the colourful ostentation of later Roman jewellery. The same was presumably true elsewhere in the Roman Empire. Tertullian of Carthage at the very end of the second century wrote 'in the case of women every part of the body is weighted with gold'.⁵⁶

In the first two-thirds of the third century AD there are far fewer surviving literary mentions of jewellery, including dowry lists or wills, but actual jewellery has survived and jewellery is frequently represented in funerary portraits. Obviously, few agreed with Marcus Aurelius that women of the household should be content with 'one hairnet, a pair of earrings, a necklace of pearls, and a diadem to wear when sacrificing'.⁵⁷

The papyrological evidence suggests that spices and other luxuries continued to be imported from the East in the third century AD.⁵⁸ The lack of Roman coins of the third century found in India does not necessarily suggest that trade had greatly decreased by then. Quite possibly the Indian merchants preferred the early, heavier, Roman gold coins, and that these were deliberately hoarded and used in the Eastern trade.⁵⁹ Aurelian's capture of Palmyra in AD 273, following Zenobia's rebellion which practically stopped the Eastern trade via Palmyra, might have made the maritime trade through the Red Sea even more important. Sometime during the second century the control of the trade seems to have passed into the hands of the Axumites where it remained well into the Byzantine period.

The latter end of the third century saw improved economic conditions under Diocletian. A large number of surviving gold ornaments can probably be dated around this period and maybe into the early fourth century. The growing love of flashy, colourful jewellery, perhaps in a way signalling a reawakening of Hellenistic taste, can be most easily documented in the eastern Roman Empire, for example with the Palmyrene sculptures.⁶⁰ However, Henig, referring to the western Empire, has said that: 'There is no evidence that the search for a richer ornamental style had anything to do with Palmyra or the Eastern provinces. It was an indigenous development perceived in Britain as early as it was in Syria'.⁶¹

The first century or so of Roman rule in Egypt is marked by two jewellery traditions although it is too early to determine the extent to which these represent any particular chronological, geographical or social distinctions. The rather baroque 'Ptolemaic' jewellery styles continued well into the first, if not

56 Tertullian *Apol.* 6.

57 Aelius Lampridius, *Severus Alexander*, 41.1.

58 Raschke 1975.

59 One inscription from Palmyra, of AD 193, specifically mentions 'old Roman aureii'. *IGRR.* 3. 1050.

60 Colledge 1976: p. 70.

61 Henig 1981: p. 140.

second, century AD. The animal-head earrings with stone-set hoops are typical examples. However, we also find the starker Roman forms which are well attested at Pompeii, and thus current by at least the mid first century AD. The distinctions are constructional as well as stylistic. An elaborate stone-set ring with snake surround, in the late Ptolemaic taste (such as the ring in fig. 24), might consist of 250 or more separate components including minute grains under 1 mm diameter. On the other hand, the Roman forms tend to use a minimum of components and often an entire ring or earring is hammered out from a single piece of gold. The 'Roman' styles would be made with less potential wastage of gold although they often required a greater weight of gold than the flimsier Hellenistic forms.

Maspero, at the end of the last century, still seemed to detect both Egyptian and Classical traditions in Roman period jewellery, but he saw them as rural versus urban: 'The old patterns however, were still in request in remote provincial places, and village goldsmiths adhered "indifferent well" to the antique traditions of their craft. Their city brethren had meanwhile no skill to do aught but make clumsy copies of Greek and Roman originals.'⁶² Quite possibly the village goldsmiths had a more conservative - even more superstitious clientele. Certainly Romano-Egyptian jewellery shows a far greater leaning to hybrid Egyptian/Classical iconography than the goldwork of the Ptolemaic period. However, 'clumsy copy' is an insult to the magnificent goldwork that has survived from Roman Egypt.

The exceptionally close links between the jewellery styles of first century AD Egypt and those of the Pompeian region must imply that the jewellery, the craftsmen, or the owners travelled. Knowing what we do of the limited number of Romans in Egypt, and the ethnic and social background of many of the craftsmen at Pompeii, it is possible to believe that the 'Pompeian' jewellery styles originated in the East, rather than the converse. The hoard of jewellery from Boscoreale in fig. 25 could just as well have come from Egypt.

The actual origin of most Roman jewellery from Egypt is uncertain. There is a minimal amount of Roman jewellery attested from burials. The absence of jewellery on mummies of the period has been noted by various authorities over the last hundred years.⁶³ Antiquity merchants and the fellaheen often state that jewellery comes from tombs, but such a provenance is seldom demonstrable. For example, a pair of earrings (fig. 26) and a bracelet (fig. 27), now in the British Museum, are said to have been found together in a Roman period tomb at el-Ashmûnein (Hermopolis Magna) in Egypt.⁶⁴ This is unlikely, since the earrings are at least two centuries older than the bracelet which, in turn, is incomplete. It is interesting to compare what Colledge has said regarding Palmyra: 'The Palmyrenes took a great interest in jewellery as the artists depictions show clearly. But the tombs and sites have yielded little. The Palmyrenes seem to have been reluctant to bury ornaments with their dead, for even un-

62 Maspero 1895: p. 332.

63 e.g. Petrie 1889: p. 20; Schwabe 1985: p. 192.

64 *BMCI* 2332-3 and 2822.

looted tombs of moneyed families have produced few pieces.⁶⁵ In contrast, there is ample early Roman jewellery from tombs in Asia Minor and Cyprus.

Part of the reason for this lack of funerary jewellery might lie in Roman tradition. A Roman law from the Twelve Tablets - drawn up in the mid-fifth century BC - tells us that 'gold, no matter in what form it may be present, shall, by all means, be removed from the corpse at the time of the funeral, but if anyone's teeth should be fastened with gold, it shall be lawful either to burn or bury it with the body'.⁶⁶ The Twelve Tablets were never abolished and survived into the Roman Imperial period although they were gradually made obsolete by later Roman codes of law. If we assume that the basic ruling against burying gold with the dead was still enforced in the first century AD, it could also explain the very noticeable lack of early Imperial gold jewellery from Italy. The only major exception is the magnificent and abundant jewellery from Pompeii and its environs which, though mainly found on bodies, was not the result of a voluntary interment. However, we can note that at Julius Caesar's burial, many women in the audience 'offered up the jewels which they wore',⁶⁷ and Propertius, in the first century BC, talks of a beryl-set ring left on the hand of a corpse when placed on the funeral pyre.⁶⁸

There is some jewellery from burials of the early Roman period in Egypt. One tomb in the Delta contained animal head earrings threaded with a banded onyx bead (fig. 28).⁶⁹ These earrings are of a basic Ptolemaic form which survived for a century or so into the Roman era. In the same tomb was a pair of simple hoop earrings with wire drop pendants strung with beads described as malachite, but which appear to be the hexagonal emerald beads that are, I believe, a post-Ptolemaic characteristic.

A sarcophagus of the Asia Minor 'garland' type was found in Alexandria which contained three small gold rings.⁷⁰ Two of these were of typical Roman form but the third ring had a square bezel with a depiction of Osiris flanked by goddesses. The style of the sarcophagus and the Roman rings indicates a second century date.

More elaborate gold jewellery was found in tombs at in Alexandria and their excavator notes that: 'So far as can be ascertained no burial of this type has been discovered on other Roman sites in Egypt'.⁷¹ These burials are also difficult to date. Their excavators placed them in the second century but an early third century date is not impossible. The tombs included that of a woman - said to have been a priestess of Nemesis - with three gold rings set with onyx intaglios. The intaglios depicted Harpok-

65 Colledge 1976: p. 96.

66 Table 10 law 15 - see Scott 1973.

67 Suet. *Jul*, 84.

68 Prop. 4. 7.

69 Clèdat 1912

70 Breccia 1932: p. 31.

71 Rowe 1942.

rates, Ares, and also Leda and the swan (fig. 29), this last subject being the very one that Clement of Alexandria had complained about - 'in the hoop of their rings they cut a representation of the amorous bird that fluttered round Leda ... and use a seal stamped with an impression of the licentiousness of Zeus'.⁷² Another also contained a woman identified as a priestess of Nemesis. Her gold jewellery (fig. 30) included two necklets, one of which had the common type of 'spoked wheel' clasp plate (fig. 289) which was optimistically identified by the publisher as the wheel of Nemesis. Her body was also decorated with gold foil covers for her nipples, navel, each finger nail, eyes, tongue and vagina (this latter being coyly identified by the publisher as a second tongue-cover). Similar gold foil body coverings have been found in other burials in Egypt dated to the second century AD.⁷³ Other sheet gold funerary ornaments from Roman Egypt might include some of the flimsy serpentine snake bracelets (see ch. 9).

It is easy to imagine that enforcement of the old Roman law forbidding the burial of gold with the dead would have suited the Romans *vis-à-vis* Egypt. The Romans would have wanted all the gold they could glean from Egypt and the lands to its south for the mints and treasuries of Rome, not buried under a metre of Egyptian sand. We might suspect additional reasons for not burying gold with the dead. The embalmers of the middle classes in Egypt were often less than diligent in their work. In many cases a mummy has been found by modern excavators to be just a hotchpotch of odd human remains bundled together into the rough semblance of a human shape. If the population of the time was aware of this practice, they must have had serious doubts as to whether a ring on aunty's finger would still be there, under the wrappings, when her mummy was buried. Another point is that much of a woman's jewellery would be her dowry. On her death this would pass to her parents or children rather than be buried with her (see ch. 2). Even today, most members of a family would be upset if grandmother's diamond tiara was buried with her.

Once into the second half of the third century AD, gold coinage began to circulate and, perhaps reflecting the same economic factors, jewellery begins to occur more often in burials.⁷⁴ For example, in grave 476 at Ghita 'the woman appears to have been dressed in her best, wearing all her jewellery, and even the false hair which she had worn while alive'.⁷⁵ This grave can probably be dated to around the mid third century AD. The jewellery found on a mummy in Alexandria is also of third century date.⁷⁶ This group included an emerald-set swivel ring, a necklet with openwork rosette clasp, a ring with an oval plate-like bezel inscribed *epagathos* (fig. 88) and a pair of earrings.

72 Clem. Al. *Exh. to Heaven*, 4.

73 Schäfer 1910: nos 132-4.

74 Possibly the change in practice also reflects Egypt's growing ties with the Eastern Mediterranean, rather than Italy.

75 Petrie 1906: p. 64.

76 Displayed as a tomb group in the Graeco-Roman Museum in Alexandria but no number visible.

Gold-foil burial accoutrements were allowed to be interred and these could range from the gold-foil embellishments on mummy portraits to the complete coverings of some cartonnage masks (fig. 31). Here the amount of gold used was small (but visible to the mourners!). Gold is very malleable and a small amount can be beaten out to produce a very thin foil. Assuming the average thickness of the Romano-Egyptian gold foil was about 0.001 mm,⁷⁷ a painted portrait embellished with some gilding would only require about a quarter of a gram of gold. A gilded mask - such as that in fig. 31 - would have required less gold than the crescent pendant in fig. 22. The cost of this gold would have been around sixty drachmae - about two months' salary for a farm foreman or manager.

The detailed representation of jewels on the portraits and masks, whether gilded or just painted, acted as a substitute for the burial of the real thing. This use of 'substitute' grave goods had been a characteristic of Egyptian burials for some three thousand years. The gilded additions on mummy portraits were usually applied at the time of burial even though the portraits might have been painted and treasured during their owner's lifetime. Reference is made to jewellery purchased for the burial but there is no evidence as to its nature. For example, one late first century AD papyrus from the Fayûm lists funerary expenses and includes, after oil, pot, mask etc., 'a pectoral of four mnaieia [or minas] in weight, 810 obols.'⁷⁸ At this price it cannot have been of gold. Another breast ornament for a woman, presumably funerary, is mentioned in the Zenon archive.⁷⁹

The hypothesis that burial of gold jewellery with the dead was forbidden, or at least unusual, in Roman Egypt leaves us with an apparent problem. If the vast quantity of gold jewellery of the period that has survived is not from burials, where is it all from?

Recorded finds of gold jewellery are frequently from concealed hoards, secreted in pots or similarly hidden. It is something of a curiosity that the published hoards seem to contain a large proportion of bracelets and seldom earrings or even rings. Horace says: 'Why have a huge mass of silver and gold, if it makes you so nervous that you dig a hole in the ground and furtively bury it'.⁸⁰ In the days before safes and bank boxes, hiding precious belongings was the safest form of security. Once war, arguments, or perhaps the local tax man, had passed, the concealed hoard could be regained. In practice, the huge number of hoards found in recent times throughout the ancient world shows that retrieval was not always possible. Ancient comments range from 'I wish I could stumble on a pot of silver',⁸¹ to the other side of the picture: 'The miser salts away his money to find his gold dug up'.⁸² Roman legal

77 Ogden 1982: p. 34.

78 *P.Amh.* 125. The word used for 'pectoral' is στῆθος.

79 *P.Zen.Cairo* 456.1.

80 *Hor. Sat.* 1.1.41.

81 *Hor. Sat.* 2.6.10. See also *Petron. Sat.* 88; *Pers.* 2.11.

82 *Petron. Sat.* Frag. AL651.

experts had to discuss what the position would be if 'treasure belonging to me is buried in your land and you decline to allow me to dig it up'.⁸³ There is some Egyptian literary evidence for the burial of hoards of coins and jewellery. One example is a report of the theft of a hidden jewel casket (see ch. 2). A possible reading of an early second century BC papyrus is: 'find out exactly where he says that the women have found the silver vessels.'⁸⁴ Pots containing jewellery have been excavated in private dwellings and much surviving Romano-Egyptian jewellery has probably come from hoards rather than burials. The Sâ el-Hagar hoard in fig. 1:17 is a good example.

Some surviving hoards probably belonged to working goldsmiths. One such group, of silver not gold, was found at el-Manshâh and illustrates some of the problems encountered with jewellery from Roman Egypt. The hoard included nearly 1300 silver and copper-alloy coins, eight silver bracelets and silver ingots.⁸⁵ The presence of the coins and the ingots strongly suggests that the hoard was that of a jeweller. Several hundred of the coins were cleaned and of these all but one were of Nero, the odd one was of Vespasian. This means that the hoard cannot date to before the last quarter of the first century AD. On the basis of the jewellery styles, however, the hoard might not have been concealed before at a century after this date. The bracelets included twisted bracelets with central tensioning wires which are easiest to match after the second century AD. There was also a snake-headed bracelet which appears to have ears of corn depicted on the heads - a type unknown elsewhere - and a simple animal-headed bracelet - perhaps lion-headed - which would seem to be of earlier date. The silver ingots were of tongue shape and one tested was only 50% pure. The jewellery that was analysed ranged from about 40% to 60% pure. This must mean that the jeweller was deliberately mixing the silver and copper coins - or using debased silver coins - to produce his jewellery. On the other hand, the literary references to Romano-Egyptian silver jewellery always seems to imply that it was considered to be of relatively high purity.

From Roman Egypt we have a plethora of representations of jewellery in wear. Especially important are the large number of funerary portraits and masks which illustrate, often with great precision, varieties of jewellery and the combinations and quantities in which they were worn. In most cases the jewellery depicted in such representations can be closely matched with extant items and several scholars have used depicted jewellery as dating criteria.⁸⁶ In only a few cases do we suspect that the jewels shown were funerary conventions and not representative of the items in day-to-day use. Parlasca has provided a corpus which contains almost all the known examples of painted portraits.⁸⁷

83 *Dig.* 10.4.15.

84 *P.Oxy.* 763.

85 Wainwright 1925.

86 e.g. Edgar 1905b.

87 Parlasca 1969; Parlasca 1977; Parlasca 1980.

Three-dimensional works of art, which range from simple terracotta figurines to monumental stone sculpture, can show jewellery in wear. Often the artists have simplified the forms for the sake of the media in which they are working. Bronzes and terracottas from Roman Egypt quite often depict jewellery. Bronze figures of Aphrodite, often originally part of dowries, are frequently shown with jewellery. For example, one possibly from Lower Egypt, wears anklets, bracelets and earrings (fig. 32).⁸⁸ Another Roman bronze Aphrodite in the same collection, probably from Egypt, wears a necklet with a lunate pendant in addition to armlets and earrings.⁸⁹

Aphrodite Anadyomene is one of the most persistent iconographic images in Romano-Egyptian jewellery, though strangely not seen on coin reverses in that country. The popularity of the form is seen by Ovid's choice of it when he described the manufacture of a ring: '... that splendid representation of Venus posed naked, wringing out her sea-wet hair was a rough and uncut stone once' (fig. 33).⁹⁰ The type stems from a painting by Apelles (a contemporary of Alexander the Great) who painted Aphrodite rising from the waves and wringing the water from her hair. Marble and bronze versions in the round soon became popular, particularly in Egypt where they became the main cult image of Aphrodite and of the deified Queen Arsinoe.⁹¹ A peridot intaglio from Alexandria depicts Aphrodite Anadyomene and might be as early as the fourth century BC (fig. 68).⁹²

The subject was popular in the Roman period, perhaps because Apelles' painting was moved to Rome by Augustus and then Nero replaced it with a new version. In Roman times, Aphrodite Anadyomene was simply a goddess of love and the political implications of the Arsinoe-Aphrodite cult forgotten. Aphrodite Anadyomene was not typically part of the Isis-Sarapis grouping but she joins Isis, Sarapis and Harpokrates in some depictions (e.g. fig. 463). Usually Aphrodite Anadyomene stands alone or is associated with some attribute of Aphrodite such as Eros or doves.

In Egypt, Aphrodite Anadyomene was most closely associated with Hathor, both were protectors of women and goddesses of love and joy. Gems depicting Aphrodite Anadyomene are characteristically blue and she is described as the lady of the blue stone in various texts.⁹³ Two Roman period lapis lazuli intaglios associate their images of Aphrodite Anadyomene with Hathor. One has the inscription *anak athor*, 'I am Hathor' (fig. 33),⁹⁴ while the other invokes Hathor followed by her usual *anoriphrasi*

88 Hill 1949: no. 213.

89 *Ibid* no. 206.

90 Ovid, *Ars. Am.* 3.217 ff.

91 see Gardner 1920.

92 Brandt 1968: no. 354.

93 *OLZ* 53 (1958) p. 423; *Gnomon* 41 (1969) 306.

94 Schlüter *et al* 1975: no. 1705.

epithet.⁹⁵ The word *aroriphrasis* of uncertain meaning, is also used in love charms in the papyri. A 'secret' name of Hathor-Aphrodite was *nephereri*,⁹⁶ which can hardly be anything other than a version of the Egyptian *nfr* meaning radiant. Another text refers to Hathor as 'Mother of the Loves'.⁹⁷ Apuleius tells us that statuettes of Aphrodite were given as wedding gifts,⁹⁸ and bronze figures of Aphrodite were often included in Romano-Egyptian dowry lists. She is also frequently depicted on the bone caskets from Egypt which were sometimes given as marriage gifts.⁹⁹

The deities depicted on Romano-Egyptian jewellery are generally limited to Hathor/Aphrodite, Isis, Nephthys, Sarapis, Harpokrates and Bes, although other deities such as Anubis and Osiris occur. The usual images of these deities are considered later (e.g. in ch. 8) but it is also worth questioning just what they represented to the average inhabitant of Egypt during the Roman period. It seems probable that we should suspect simplicity rather than complexity. Most classical deities were probably seen as versions of traditional Egyptian gods. The vast range of deities on Romano-Egyptian coins, usually identified with Eirene, Homonia, Euthenia, and other goddesses, were probably identified with native deities by the Egyptians.

We can probably assume that fertility played an important role and that such deities as Bes were seen as strongly protective. Nevertheless, the actual 'powers' of the individual deities are largely unknown. Magic and superstition played a large part. One text enquires: 'Does Isis [cease] to make magic? Does Nephthys cease to give health?'.¹⁰⁰ Some goddesses had funerary significance: Isis and Nephthys protected the mummy and, during the Roman period, a dead woman could become Hathor rather than both sexes becoming Osiris as had traditionally been the case.¹⁰¹

There was great conservatism in religious depictions on jewellery in Egypt. For example, the ring from Alexandria mentioned above, chased with a standing figure of Osiris flanked by winged goddesses in traditional Egyptian style, was found in a second century AD sarcophagus. Another gold ring of late third or even fourth century type, probably from Egypt, has a bezel chased with a figure of Harpokrates between two falcons (fig. 34).¹⁰² If anything, jewellery designs seemed to show a gradual return to older Egyptian iconography as the Roman period progressed.

95 Drioton 1947.

96 *P.Mag.* 4. 1265.

97 *SB* 3. 6699 quoted by Bell 1948: pp. 82-97.

98 Apuleius 268. 5-10.

99 Marangou 1976: pp. 41 - 42.

100 Griffith and Thompson 1904: p. 205.

101 Kakosy 1982.

102 *Ars Antiqua* 1961: no. 124.

THE BYZANTINE PERIOD

In the sixth century *Christian Topography* of Cosmas 'Indicopleustes', Sopatros, a merchant, visited Ceylon on business. He sailed with men of Adulis, an Axumite port on the west coast of the Red Sea. Hannestad argues that embarkation from Axumite ports was normal for Byzantine merchants trading with the East at this period, direct trade being virtually non-existent.¹⁰³ We know that the Indian trade flowed smoothly during the time of Justinian but possibly declined after this period. I know of no Byzantine papyri from Egypt which specifically mention any trade in gemstones from the East.

After Diocletian, and for most of the fourth century, Egypt had economic problems and there are very few items of gold jewellery from Egypt that can be securely dated to this period. Fifth century jewellery is also rare in Egypt, as it is from elsewhere in the Byzantine world.

The preservation of the dead by mummification, and with salt,¹⁰⁴ continued into the fourth century AD, yet it was frowned upon by the early Christians. The use of gold foil covering for the various parts of the body, and for elaborate funerary paintings, might be expected to have died out in the fourth century. The early Church fathers abhorred human adornment during life, so we can guess at what their opinion would have been about such luxury *en route* to the afterlife.

Hoardings of jewellery continued to be buried. Paulinus of Nola, in the early fifth century AD, referred allegorically to the wisdom of investing money with a money lender rather than burying it in the earth.¹⁰⁵ Justinian gave 'full power to everyone to seek for treasure on his own premises provided he does so without the practice of wicked arts and sacrifices punishable by law',¹⁰⁶ although treasure could only be searched for on others' land with their consent and a 50:50 split of the proceeds.¹⁰⁷

An important jewellery group that dates to around AD 300, was found in 1930 on the Rue Octavien Auguste at Hadra, Alexandria.¹⁰⁸ The jewellery, found with gold coins ranging from Septimius Severus to Gallienus, included the rings, broken bracelets and necklet element shown in fig. 35), as well as an elaborate chain necklet (fig. 360), one complete bracelet (fig. 494), two gold openwork 'column' beads, and four small circular ingots of gold (fig. 47).

The damaged bracelets and the simple 'cake' ingots strongly suggest that the hoard belonged to a goldsmith who was in the process of melting down or recycling unwanted gold ornaments. The gold coins might also have been raw material (see ch. 3). The coin (actually a medallion) of Gallienus does

103 Hannestad 1957.

104 See Jeffreys and Strouhal 1980: pp. 34-35.

105 Walsh 1966: letter no. 10.

106 *Cod. Iust.* 10. 15.

107 *Ibid.*

108 Breccia 1932: pp. 27 - 29.

mean that the hoard cannot date to before about AD 260. On the other hand the chain necklet is of a type that ~~was~~ was certainly in use as late as AD 280 and other evidence points to a date for them of a generation either side of AD 300. The curious openwork ring composed of a gold tube crimped into a square beaded-like design has exact parallels on the hoop of a bracelet which has a small cross on it which points to a date after about AD 325 (see ch. 9). Of course, if the hoard is the stock-in-trade of a goldsmith it could easily contain objects ranging over a generation or two. On balance a date of around AD 300 is probably as close as we can get.

As with so many hoards from Egypt, it is probable that some of the find 'escaped' onto the market. The necklet elements in the Benaki Museum, Athens, shown in fig. 36 are so similar to that from the Hadra treasure (fig. 35) that it is not difficult to assume that they came from the same article of jewellery.

In the sixth century, on the basis of the surviving papyri, life was again consistently comfortable and the wealth of magnificent gold jewellery is tangible evidence for this. Designs on textiles now supplement the information we can glean about the jewellery of the period (fig. 37).

A few categories of gold jewellery however, are remarkable for their absence. A prime example would be the openwork lunette earrings so well known from Asia Minor (see ch. 7). Byzantine gold rings are also rare from Egypt, with the exception of one class that has been plausibly identified as consular insignia (see ch. 6). I know of no examples of Byzantine marriage rings of certain Egyptian provenance although these are, again, common in other parts of the Byzantine world. One curious feature, not limited to Egypt, is the rarity of gold jewellery that can be securely dated to between about AD 350 and AD 500.

A pivotal group for our understanding of sixth and early seventh century jewellery in Egypt is the hoard supposedly found at Asyût, or perhaps near Antinoë, around 1900.¹⁰⁹ The find, plus apparently some extra objects of earlier date, were mainly divided between the collectors Charles Freer, J. Pierpont Morgan, Friedrich von Gans and Mrs Walter Burns. The Freer share is now in the Freer Gallery of the Smithsonian Institution in Washington, Pierpont Morgan's share went to the Metropolitan Museum of Art, New York, the Gans group are now in West Berlin and Mrs Burns presented her jewellery to the British Museum.

The various ornaments from this find are discussed in the relevant sections in later chapters of this study. The majority of the jewels fit well into a late sixth or early seventh century context and include some of the most spectacular - and skilful - goldwork that has survived from this period (e.g. figs. 38,

109 Dennison 1918.

364 and 365.). On the other hand some of the jewellery said to be from this hoard is undoubtedly earlier in date (e.g. fig. 39).

The superb quality of much of the Asyût jewellery has prompted the suggestion that it was made in Constantinople and exported to Egypt - perhaps for special Imperial presentations.¹¹⁰ On the other hand, many of the objects relate stylistically and technically, to one another and to other stray finds of jewellery from the same period found in Egypt. One particular stylistic feature is the use of small trefoil or quatrefoil rosettes surmounted by grains of gold, that cover solder joints or other strategic points on the ornaments (e.g. figs. 40). This feature seems to be a characteristic of jewellery from Egypt. Thus although the origin cannot yet be stated with any certainty, Egypt seems the most likely candidate. Egypt - particularly Alexandria - had a long and well-earned tradition of fine metalwork which certainly survived - or resurfaced - in Fatimid times.

The reason for the deposition of the Asyût hoard can only be guessed at but, since some of the individual objects can be put in an early seventh century context, burial about the time of the Arab invasions of AD 640 seems a strong possibility.

110 See for example Ross and Brown in New York 1979: pp. 298-9, 310-11.

CHAPTER 2: DOCUMENTARY EVIDENCE

The large number of documents on papyrus that have survived from Egypt not only reflect the favourable burial conditions of the country, but also bear witness to the bureaucratic need for documentation that had been a characteristic of Egypt from the earliest times. Even a brief perusal of papyri shows that good records were kept of gold jewellery. We can see this in the obvious sources, such as surviving dowry lists and wills, and also from evidence like the reports of thefts that show that the owners had detailed inventories of the items they had lost. In certain cases at least two copies were made of a document,¹ while other papyri are compilations or summaries of original documents, such as *P.Mich. 121 recto* discussed below. Some papyri give details and dates covering up to two centuries.²

Information about jewellery can be gleaned from many different types of document. Some papyri give details of the official control over the use, value and distribution of gold and other precious materials. Less formal documents include the private correspondence of jewellers and details of other aspects of the jewellery trade. A letter from Oxyrhynchus (el-Bahnasa) dating to the second century AD includes the statement 'I beg you to buy me a silver signet ring.'³ While the opposite type of transaction is shown by the sad petition of a woman who had sunk to such dire poverty that she had to sell her 'private ornaments.'⁴

JEWELLERY IN MARRIAGE AND DIVORCE DOCUMENTS

Much of our textual evidence regarding jewellery comes from dowry lists. The Talmud says a girl needs a dowry 'so that people will be anxious to woo her'.⁵ Certainly a man's choice of bride could reflect the wealth of her parents and, as Theognis of Megara cynically noted, 'even the finest man is willing to marry a rascal's rascally daughter, if only she brings him money enough'.

Dowries often carefully listed jewellery. For example: '... to whom the said giver contributes as the dowry of her said daughter the bride in common gold on the Oxyrhynchite standard a necklet of the kind called *maniacēs*, having a stone and weighing apart from the stone 13 quarters, a (?)brooch with 5 stones set in gold, weighing apart from the stones 4 quarters, a pair of earrings with 10 pearls weighing apart from the pearls 3 quarters, a small ring weighing .5 quarter ... making the total dowry 1 mnaicion 4.5 quarters of common gold.'⁶ This papyrus dates to AD 260 but hardly reflects the supposed dire poverty of the period.

1 See, for example, *P.Oxy. 905* and *P.Oxy. 3139*.

2 e.g. *P.Oxy. 2186*. See Cockle 1984: p. 114.

3 *P.Oxy. 113*.

4 *P.Oxy. 899*.

5 *Kethuboth*, 52b. See also *Hor. Sat. 2.3.214*.

6 *P.Oxy. 1273*.

The dowry could be given by the mother of the bride, as above, or by her father, by the mother and father together, by the brother or by the bride herself. The parents, or at least the father, probably had control over his daughter's choice of husband (even after marriage in some cases) particularly if the girl was young. The dowry was treated as a loan to the husband who might mortgage his property to provide security.⁷

In Ptolemaic times the dowry, the *pherna* or *phernarion*, usually consisted of coins, the value and nature of which were quoted in the marriage contract. Gold jewellery was rarely included, although a dowry of 311 BC, in Greek, included unspecified 'ornaments'.⁸ Here this dowry was termed *prosphero*. One declaration concerning divorce apparently refers to the return of a dowry which had '4 quarters' of gold, terminology that implies jewellery not coins.⁹

Demotic marriage contracts of the Ptolemaic period mention silver jewellery far more frequently than gold.¹⁰ Demotic jewellery terminology has not been explained and we cannot identify the gold *wj wh3*, the *gswr* ring, or the common *ll-shr* or *rl-shr* necklets.¹¹ The *wj wh3* seem to be the commonest gold ornaments listed in demotic Papyri.¹² A demotic marriage document from Deir el-Ballâs dated to 186 BC, includes 'the list of your bridal property which you have brought to my house with you ... one *shr* necklet, at silver money, 2 *kite*, one ring at silver money, 2 *kite*'.¹³ Demotic papyri give jewellery values in terms of the *kite* which was equated with one half of a stater. The metal of the jewellery is not stated but the ring was probably silver on the basis of its given value.

During the Roman period, dowries included the *pherna*, the *parapherna*, which frequently contained jewellery, and the *prosphero* which was a range of supplementary gifts, such as land or slaves, which might be thought of as an advance inheritance. The *parapherna* included clothes, statuettes of Aphrodite and furniture. Jewellery weights, rather than values, are recorded but, if as appears likely, gold prices were fixed at this period, this ignoring of values has no great significance. An example of a dowry of AD 42 lists the following: '... and the *pherna* given is 200 drachmae of silver, and as *parapherna* without evaluation a gold earring of 4 quarters and a gold crescent pendant of 2 quarters and a gold ring of 1.5 quarters and a silver ring of weight of 2 drachmae of pure silver and a pair of silver

7 e.g. *P.Oxy.* 907 of AD 276; *P.Oxy.* 1034 of the second century AD.

8 *P.Eleph.* 1.

9 *P.Tebt.* 809 of 156 BC.

10 For Ptolemaic marriage contracts in general see Lüddeckens 1960 and Pestman 1961.

11 e.g. *P.Berlin* 13593 of 198 BC, possibly the earliest example of a demotic marriage contract which includes gold jewellery.

12 e.g. *P.Ryl.* 16, 20 & 37.

13 Boston MFA 38.2063a; Parker 1963: pp. 113 ff.

armlets of a weight of 16 drachmae of pure silver and 2 silver bracelets of a weight of 8 drachmae of pure silver ...'.¹⁴

One marriage contract of AD 157/8 has jewellery included in both the *pherna* and the *parapherna*. The former consisted of an armlet and some other item weighing 2 mnaieia on the Oxyrhynchite standard and valued at 600 drachmae, given by the father. The *parapherna*, noted as having been given by the mother, included gold earrings and a statue of Aphrodite.¹⁵

The *prosphero* was rare in Roman Egypt and seldom included jewellery. One occurrence of the term heading a list of jewellery is probably a scribal error for *parapherna*.¹⁶ This papyrus is a compilation of six separate dowry lists which provides an insight into the types of jewellery given in dowries in one town at this period:

	1	2	3	4	5	6	
Gold earrings	4	3	3.5	2	3	nil	Weights in quarters.
Gold crescent	2	1.5	2	5	1.5	nil	" " "
Gold ring	1.5	nil	nil	nil	nil	nil	" " "
Silver armlets	16	8	12	8	12	4	Weights in drachmae
Silver ring	2	nil	nil	nil	nil	nil	" " "
Silver bracelets	8	nil	nil	nil	nil	nil	" " "
Alimentary value	21	11	21	11	11		'Gold pieces' (see below)

Table 1. JEWELLERY AS LISTED IN SIX DOWRIES OF AD 42. (P.MICH. 121, recto.)

The only jewellery in the poorest dowry (no. 6) is a pair of very flimsy silver armlets. The other five dowries all contained a pair of gold earrings, a gold crescent pendant, and silver armlets. The richest dowry (no. 1) also included a gold ring, a silver ring and silver bracelets.¹⁷ In general, earrings were the commonest, and sometimes the only gold ornaments mentioned in Romano-Egyptian dowry lists. The dowry of a reasonably well-to-do bride would usually consist of gold earrings and a gold crescent pendant plus, perhaps, silver bracelets. A pair of silver armlets was probably the minimum dowry. The frequent inclusion of a gold crescent pendant must reflect its association with Isis/Aphrodite. It is unfortunate that the earrings are not defined in more detail.

Stones or pearls set in jewellery were usually expressly excluded from the record of weight though their presence is mentioned in passing. However, a dowry list written in Latin about AD 100, or soon

14 P.Mich. 121.

15 P.Oxy. 3491.

16 P.Mich. recto 121; Boak 1926. See also P.Ryl. 155, introduction.

17 Both rings are called *daktulion*, all the armlets in the papyri are termed *pselia*, and all the earrings *enodion*.

after, included 'a very long earring and some necklaces of the weight of 1.5 quarters and 14 unpolished precious stones ...'¹⁸ Finger rings do not figure in dowry lists as frequently as we might expect, particularly in view of their frequent presence in the pawn lists and the large number of gold rings extant. One fragment of a marriage contract of the time of Domitian (AD 81-96) classes a gold ring as *phenen prosperomenen*.¹⁹

The survival of so many Roman period dowry and marriage documents that list jewellery shows that documentation must have been mandatory. In part, this was due to the need to record the dowry in case of a future separation, but also it must reflect the state's desire to control the circulation of precious metal. Since the gold and silver is usually recorded by weight and stones are only briefly noted, the records were intended to keep tabs on the gold and silver, not to record the more general wealth of the population.

Jewellery is rarely detailed in Byzantine period dowry lists. Presumably the increasing availability of gold obviated the necessity to record its ownership. Now there was once again just a single type of dowry. A late sixth century deed of divorce from Hermopolis mentions the dowry (*proiokos* a synonym for *pherna* - see below) which is distinguished from the bridal gifts (*ednon*).²⁰

On divorce, a wife could reclaim from her husband the dowry or its monetary value. Surviving papyri reflect Roman law on this matter.²¹ A deed of divorce dated AD 151 mentions the return of the monetary value of 'ornaments and clothes'.²² Ptolemaic and Roman marriage documents often included a provision regarding later separation of the couple. For example, in the demotic marriage document from Deir el-Ballâs mentioned above, of 186 BC, the husband promises that in the event of separation: 'I am to give to you the like of your bridal property which you have brought to my house with you, or their value in money'. As we saw above, this bridal property included a necklet and ring. Other documents demonstrate such a return of goods, for example: 'Zois acknowledges that she has received from Antipater by hand from his house the material which he received for dowry, clothes to the value of 120 drachmae, and a pair of gold earrings.'²³

A marriage contract of AD 36 lists the receipt of a dowry which included '40 silver drachmae of the Imperial and Ptolemaic coinage, and for the value [or cost] of one pair of gold earrings, 20 drachmae of silver ...' and then adds: 'If we separate from each other, you shall be empowered to have the pair

18 *P.Mich.* 434. See also Sanders 1938.

19 *P.Oxy.* 795.

20 Rees 1964: no. 29.

21 See *The Rules of Ulpian*, 'Title 6: Concerning Dowry' in Scott 1973: vol. 1, pp. 228 ff.

22 Helsinki 1979: no. 35.

23 See also *P.Fay.* 22.

of earrings at their present value.²⁴ Another marriage contract of the following century refers to the dowry (*pherna*) of gold brought by the bride to her husband whose father 'assents to the marriage, and is surety for the payment of the aforesaid dowry [in the event of separation]'.²⁵ This contract also illustrates something of the recording and archive process: 'This contract is valid being written in duplicate in order that each party may have a copy.' Another papyrus of the late third to fourth century AD, also notes the duplication of the deed.²⁶

In a papyrus of 12 BC a man acknowledges the loan of his wife's dowry (*pherna*) and promises to repay it within thirty days in the event of a separation.²⁷ The stated repayment after separation in the Ptolemaic papyri varied and we have examples ranging from ten days,²⁸ to sixty days.²⁹ Sixty days is most usual in Roman times.³⁰ A good example is a document in the Kronion archive, dated the 30th of August AD 138 which states that 'The jewellery - viz., one mnaieion ten quarters' weight of gold and twenty-eight staters' weight of silver, which all the aforementioned parties agree Kronion received from his sister Taorsenouphis and which he turned into cash for his personal use - Kronion is perforce to return to his sister Taorsenouphis in equivalent jewellery within sixty days from the present day.'³¹ The jewellery itself had been bestowed on Taorsenouphis by her father.³²

An elaborate marriage contract of AD 81-95 includes 4 mnaieia of gold (unspecified but presumably jewellery).³³ In the event of a divorce this gold was to be returned to the woman, apart from a share to any child who chose to remain with their father. If the wife died childless, or if her children died childless, her dowry was to revert to her family. The marriage contract of AD 157/8, mentioned above, ends by stating that in event of a separation, 'the bridegroom shall restore the parapherna at once, in whatever condition they happen to be, without any liability against him for wear or loss'.³⁴ A marriage contract of a century later implies that the husband was liable for wear and waste.³⁵

The dowry was not always easy to regain. One woman, in the second quarter of the first century AD, says that her husband had squandered her dowry of 200 drachmae, ill-treated her and finally left her destitute. She issued a petition to try to have her dowry, plus half again as penalty, restored to her.³⁶

24 *P.Oxy.* 267.

25 *P.Oxy.* 905.

26 *P.Oxy.* 3139.

27 *P.Tebt.* 386.

28 *P.Tebt.* 104, 92 BC.

29 *P.Gen.* 21.

30 *P.Oxy.* 905.

31 *P.Mil.Vogl.* 85 = *P.Kron.* 52. quoted by Lewis 1983: p. 73.

32 *P.Mil.Vogl.* 84 = *P.Kron.* 50. quoted by Lewis 1983: p. 72.

33 *P.Oxy.* 265.

34 *P.Oxy.* 3491.

35 *P.Oxy.* 1273.

36 *P.Oxy.* 281.

This same fine of one and a half times the value can be seen in marriage contracts which cover other eventualities. A marriage contract from Alexandria of 12 BC declares that the groom '... shall not ill-treat her, nor cast her out, nor insult her, nor bring in another wife, or he shall straightway forfeit the dowry increased by half'.³⁷ This dowry had included a pair of gold earrings.

The need to document the liabilities in the event of divorce could seem pessimistic but its necessity might be gauged from a recent parallel: 'It is especially common in Eastern Mongolia for the Mongols to ruin their economy by contracting debts in order to be able to buy jewellery for their daughter's wedding ... Thus it can hardly be wondered at that at least in certain places there are rules definitely fixed as to what shall be restored in case of divorce.'³⁸

Romano-Egyptian dowry practices seem to follow Roman and Hellenistic law closely. It is of interest to compare the above type of dowries with a second century AD papyrus from Israel.³⁹ This marriage contract is mainly written in Greek and refers to the gold and silver ornaments and clothes brought by the bride. The ornaments were recorded at a mutually acceptable 'appraised' value. The Greek text uses the terms *prosphoras* and *proiokos* interchangeably while the Aramaic subscript uses *phema* to refer to the same bridal gifts. (*Proiokos* or *proix* is a Roman synonym for *phema*.) The editors of the papyrus suggest that the different usage of the terms here, compared to Romano-Egyptian practice, reflects Jewish rather than Roman law.

JEWELLERY IN WILLS

When the emperor Aurelian left his signet ring to his wife he apparently acted 'just like a private citizen'.⁴⁰ Although many Ptolemaic and Romano-Egyptian wills have survived, few list bequests of jewellery. For example, the Kronion archive mentioned in the section on dowries, includes the last will and testament of Kronion senior. Here, apart from the furniture, implements and household goods he leaves to his children, the only 'precious' items are silver coins. Jewellery is expressly noted as having already been bestowed on his daughters, presumably at the time of their marriages.⁴¹

There are some exceptions. In AD 156 Acusilaus, who lived at Oxyrhynchus, wrote a will which included the statement: 'I bequeath to my wife ... all that I may leave in the way of furniture, effects, objects of gold [*chrysia*], clothing, ornaments [*kosma*, probably dress ornaments rather than household decorations], wheat, pulse, produce ...'⁴²

37 BGU 1052.

38 Boyer 1952: p. 154.

39 P.Yadin 18. See Lewis *et al* 1989.

40 S.H.A. *Aurel.* III.

41 P.Mil.Vogl. 84 = P.Kron. 50.

42 P.Oxy. 494.

One possible reason for the lack of specific mentions of jewellery in wills is that a woman would expect to receive her dowry from her husband when he died. This is stated in Roman law and a Latin juristic fragment found in Egypt, dating to the fourth or fifth century AD, includes references to the woman's right to inherit her dowry from her husband.⁴³ In the third century AD a widow says: 'and out of this estate I declare my husband owes me from the dowry which was brought to him upon my marriage with him consisting of gold ornaments and clothing and other objects valued at two talents and 3000 drachmae of silver.'⁴⁴ Under Roman law the dowry would be returned to the father of the bride if she died during the marriage, but if her father was not living the husband would then keep the dowry.⁴⁵

A marriage contract of AD 127 noted that if the husband died first and there were no children, the bride could choose to have either 'the gold ornaments included in the dowry at the same weight or their equivalent value.' If the bride died first, without children, the husband 'shall repay the dowry namely ... the 4100 drachmae of silver in 60 days and shall send to the said relations [of the bride] all the rest of her property.'⁴⁶ A will of c. AD 160 also includes objects of gold.⁴⁷

One papyrus from AD 250 makes the statement: 'nothing else has been bequeathed to me by my said brother which is subject to the tax'.⁴⁸ This implies that some items were liable to inheritance tax and, knowing Roman Egypt, we would expect gold jewellery to be included among these.

By the end of the third century AD, mentions of precious metals in wills became more common although mainly in the form of coins. A papyrus recording a theft of jewellery in AD 295, notes that the jewellery had come to a woman from her deceased mother, even though the mother had died intestate.⁴⁹ A 'third century' will of a Roman citizen includes a bequest of 'six ounces of gold and ten pounds of silver'.⁵⁰ These weight units suggest a post-Diocletianic reform date. Many wills date from the sixth - seventh centuries and can include considerable sums of solidi but jewellery is seldom mentioned. One exception is a will of AD 583-4 which includes objects of gold and silver.⁵¹

43 *P.Oxy.* 2089. Also see *P.Grenf.* 107; *Cod. Iust.* 8. 57.2 and *The Rules of Ulpian*, 'Title 6: Concerning Dowry' in Scott 1973: vol. 1, pp. 228 ff.

44 *P.Oxy.* 1274.

45 See *The Rules of Ulpian*, 'Title 6: Concerning Dowry' in Scott 1973: vol. 1, pp. 228 ff.

46 *P.Oxy.* 496.

47 *P.Oxy.* 494.

48 *P.Oxy.* 3609.

49 *P.Oxy.* 1121.

50 *P.Oxy.* 2474.

51 *P.Lond.* 1727.

In the seventh century, one man left his wife various things including female clothing and 'ornaments' but stipulated that if she disputed the will, all she would get would be her own clothes and six solidi.⁵² The writer of the will must have been unaware of the potential legal paradox he was creating!

JEWELLERY IN PAWN DOCUMENTS

The periodic nature of personal finances in an agricultural society is reflected in numerous Romano-Egyptian documents attesting to loans. One way to raise money for such basics as food, was to pawn jewellery and other property.⁵³ When the borrower could repay the loan plus the legally defined interest he would regain possession of his articles.

An early reference to jewellery pledged against a loan of money is a late third century BC letter which says: 'Make your way with ... to the money-lending woman and get the necklet and the muslin at 1200 drachmae and pay the interest from the month of Mecheir to date ...'⁵⁴ It is noteworthy that the money-lender was a woman.

From AD 93 we have mention of a pledge of a pair of heavy gold brooches or pins 'with knobs' which weighed 7.5 mnaieia of tested gold in the local (Arsinoite) standard of weight, for 2160 drachmae in silver.⁵⁵ Part of a letter of the second or third century AD gives instructions to redeem various pawned articles which sound like a dowry: 'Please redeem my property from Sarapion. It is pledged for 2 mnaieia. I have paid the interest up to the month of Epeiph, at the rate of a stater per mnaieion.'⁵⁶ The objects included two armlets and a necklet. The letter adds: 'From Onetor get the two bracelets. They have been pledged since Tybi of last year for eight ... at the rate of a stater per mnaieion ... If the cash is insufficient, sell the armlets to make up the money.'

From the Fayûm comes a second century AD record of a pawn shop. Jewellery is frequently mentioned, particularly rings, and women were the main customers. One woman, for example, left 'three flat pure silver rings and a crescent pendant' as security for a loan. Another pawned a necklet.⁵⁷ One translation describes the rings as 'unengraved',⁵⁸ but the word used is *asem* which, though literally meaning unstruck or unstamped, had the specific meaning of undebased silver (see the appendix at the end of ch. 3).

52 *P.Oxy.* 1901.

53 e.g. *P.Oxy.* 3060.

54 *P.Tebt.* 761.

55 *CPR.* 12.

56 *P.Oxy.* 114.

57 *P.Lond.* 193.

58 Johnson 1936: pp. 458-9.

A third century AD list of pawned jewellery included a pair of armlets, a pair of anklets, a necklace and a spear-shaped ornament (*logcharion*). The same document also lists a pair of armlets, a pair of cups (*phialon* - perhaps earrings of vessel-like form), a pair of anklets, a necklet and another spear-shaped ornament. This latter group of gold jewellery was pledged for 4600 drachmae.⁵⁹ Another list, probably of early fourth century date, includes a gold crescent ornament - using the term *selenarion* rather than the more usual *mniskon* - and, 'from the wife of Valerius', a pair of armlets and a bracelet.⁶⁰

The pawning of jewellery continued right through our period. A papyrus of AD 549 describes the pledging of a pair of earrings.⁶¹ The earrings had been left as security for a debt. The owner was unable to redeem them and so they were sold to the creditor. The owner received back the difference between the value of the earrings and the original debt. Since the owner received back eight solidi, the earrings must have been of considerable importance. We must be able to assume that the earrings were worth at least nine solidi and, if valued on weight of gold, they must thus have weighed at least 40 g. the pair.⁶² In view of the limited variety of earrings known from sixth century Egypt, they might have been like those in fig. 3.16.

LISTS OF TEMPLE PROPERTY AND OFFERINGS

A list of temple property written in AD 213-217 records the type of jewellery that could be dedicated to a temple in Roman Egypt.⁶³ Where possible, this papyrus recorded the names of the dedicators but 'in other cases we are ignorant of the dedicators, because the offerings have been in the temple from antiquity.' Weights of precious metal were usually recorded and the statement that 'the weight is described in the periodical lists' shows that an accurate record was kept as items were presented.

Jewellery and related items listed in this document include -

- '5 rings dedicated by ... son of Didymus'
- 'a statue of ..., of which the bust is of Parian marble and the amulets are of plaster,'
- '10 armlets for a child and 1 ring for a child, making in all... quarters of gold'
- '1 gold ... well cut and decorated with silver, weighing two quarters'
- '2 gold spoons, 1 small gold pen'
- 'A silver bracelet for a child, ... 2 silver armlets, a ... silver crescent'
- 'Fine silver lamps'.

Gold lamps, apparently full of sulphur, were also listed in this same papyrus. Apuleius tells us that

59 *P.Mich.* inv. 1950 - see Husselman 1961.

60 *P.Mich.* inv. 3163 - see Husselman 1961.

61 *P.Lond.* 1720

62 These earrings are described as being in gold of the Greek standard - presumably Constantinopolitan solidi.

63 *P.Oxy.* 1449.

gold lamps were used in the worship of Isis,⁶⁴ and sulphur could be used as a fumigant to remove evil spirits. Lamps played much the same part in temples in those days as candles have since. The majority were of terracotta, but at least one gold lamp has survived, that found at Pompeii and now in Naples.⁶⁵ Clement of Alexandria found it necessary to ask his readers: 'will the lamp not dispense light because it is the work of the potter, not of the goldsmith?'⁶⁶ His words fell on deaf ears if we are to believe even part of the description of the construction of St. Sophia in Constantinople. Here, amongst the myriads of treasures provided by Justinian, we find mention of 'two hundred golden lamps each weighing 40 pounds, six thousand golden *polykandela*, and lamps in the form of a vine ...'⁶⁷ Nearly a thousand years before, Ptolemy II had also presented huge quantities of gold to the temples and royal gifts to temples must have been normal, even if usually on a more modest scale.

THEFTS OF JEWELLERY

When Petronius talked of 'guilty hands fingering criminal gains, snatching at jewels', he was putting into words a fear ever present to goldsmith and jewellery wearer throughout history.⁶⁸ Thefts could range from minor pilfering to robbery with assault. A petition from a certain Hippolos states that his wife and mother both had their jewellery stolen at the bathhouse. A visit to the bathhouse might seem to be a foolish occasion to wear jewellery of any value, but possibly such a visit was one of the few occasions where a woman would be out of the house and have a chance to be seen wearing her jewellery. As Plutarch notes, 'most women, if you strip them of their golden shoes, bracelets, anklets, purple robes and pearls, stay indoors',⁶⁹ Clement suggested that 'women who wear gold seem to me to be afraid lest, if one strip them of their jewellery, they should be taken for servants'.⁷⁰

Another petition of AD 165 states that 'persons unknown armed with swords attacked me like bandits beyond the village of Hiera Nicolaou [near Karanis (Kôm Aushîm)] in front of the watch tower and assaulted me with numerous blows so as to endanger my life. Not only that, but they also stole all the clothes and money I had, and a gold finger ring I had'.⁷¹ A similar accident befell a woman in AD 326 in her own home.⁷²

A papyrus of 156 BC tells us how: 'A slave of Aristogenes son of Chrysippus, of Alabanda, ambassador, has escaped in Alexandria ... he has taken with him 3 octadrachms of coined gold, 10 pearls, an

64 Apul. *Met.* 11. 10.

65 Siviero 1959: no. 341.

66 Clem. Al. *Paed.* 2. 3.

67 *Narratio de S. Sophia*, 23. Translation by Mango 1986: p. 100.

68 Petron. *Sat.* 128.

69 Plu. *Rules for husband and wife*, 30.

70 Clem. Al. *Inst.* 3. 11.

71 *P.Oxy.* 3561.

72 *P.Oxy.* 3620.

iron ring on which an oil flask and strigils are represented and he is wearing a cloak and a loin cloth'.⁷³ It would appear most likely that the slave had absconded with items belonging to his master's household.⁷⁴

A well known Egyptian text of AD 28 refers to the theft of a box of jewellery hidden in a wall of a house. The document is a report to the chief of police by the victim:

'I was having some old walls on my premises demolished by the mason Petesouchos son of Petesouchos. I had left the village to fetch some victuals when Petesouchos, in the course of demolition, found a hoard which had been secreted by my mother in a little box away back in the sixteenth year of [Augustus] Caesar [15 BC] - a pair of gold earrings weighing 4 quarters, a gold crescent weighing 3 quarters, a pair of silver armlets of 12 drachmae' weight, a necklace with silver ornaments worth 80 drachmae, and 60 silver drachmae in cash. Distracting his helpers and my people, he had his young daughter carry off the find to his house. He emptied out the aforementioned objects and then dropped the box, empty, back in my house, where he even admits he found it but claims it was empty.'⁷⁵

From the description of the jewellery the hoard sounds like the mother's dowry. It is remarkable that the contents of the box can be described with their weights forty-three years after they had been hidden. The family must have had a copy of the dowry list or other record and knew of the hoard, even its date of deposition, and its precise contents.

Thefts of jewellery from private houses were quite common and can be documented right through the Roman period in Egypt. From AD 144 we have the sad account from one victim: 'On my return I found that a box which I had in the terrace had been unfastened and that there had been abstracted from it two gold bracelets of the weight of four mnaicia, a gold figure of Bes, and two large silver bracelets'.⁷⁶

From the Byzantine period several records of thefts have survived. For example one papyrus from Oxyrhynchus of the sixth century AD lists objects stolen from the house of the headman of the village. The gold included earrings, a crown or diadem and a ring.⁷⁷ The jewellery is listed by weight in terms of the solidus.

In a late third century case, mentioned above, a woman accused her neighbours of stealing 'a considerable amount of gold' and other property left to her by her mother.⁷⁸ Here, as in some of the other cases cited, the identity of the thief is suspected if not known. Sometimes the thief was caught or apprehended. A deed of surety survives from AD 551 stating that the signatories would make sure that

⁷³ *P.Par.* 10.

⁷⁴ Theft by slaves was not unheard of, see *Hor. Sat.* 1.1.76.

⁷⁵ *P.Ryl.* 125 = *Select Papyri* 278.

⁷⁶ *P.Oxy.* 1272.

⁷⁷ *P.Oxy.* 2058.

⁷⁸ *P.Oxy.* 1121.

the thief would 'give to your worship what remains of the gold , which was stolen by him in your house a few days ago'.⁷⁹ ~~In the sixth century AD a village headman had gold earrings, a diadem and a ring stolen from his house.~~⁸⁰

Insurance against theft was not known but there is evidence in some cases of liability to provide compensation if jewellery was stolen. A papyrus from Philadelphia (Kôm el-Kharâba el-Kebîr) dateable to AD 206, refers to the engagement of 3 castanet players for 6 days. The hirer guaranteed the safety of their 'gold ornaments'.⁸¹

Even goldsmiths were not always beyond reproach. A document of AD 23 is a declaration on oath addressed to a prison governor by Theon who had secured the temporary release of a prisoner arrested for debt. 'I have thirty days in which to restore to you the man whom I bailed out of the public prison in Phaopih of the present year, Sarapion, son of Sarapion, arrested through Billus assistant to the diocetes, on account of a note of hand for a gold bracelet of two mnaieia to Magianus on behalf of Aline, citizen, daughter of Dionysius. If I do not produce him within the said number of days, I will pay [?for] the said two mnaieia of gold without delay ...'⁸² Possibly Sarapion was a goldsmith who had received the gold (or money for the gold) from a customer to work into a bracelet and then defaulted. If an actual bracelet had been loaned or changed hands in some way, surely the document would have recognised the crime as theft rather than debt. Another deed of surety dated AD 610 is for two goldsmiths, but the nature of their crime is not clear.⁸³

The goldsmith, of course, could also have his stock stolen. As a Roman writer notes: 'Let anyone take silver from a booth and his friend lay hand upon the jewels: let one steal gold, another foreign pearls'.⁸⁴ Even temple property was not as sacrosanct as the religious authorities would have hoped. Christian churches were amassing silver and other treasures by the early fifth century,⁸⁵ and a letter of about this time concerns a woman 'who stole the holy treasures of the church of Apsidas'.⁸⁶ Another document, of the sixth century, describes how, at night, the accused stole silver from a convent with the collusion of certain inmates.⁸⁷ This silver was broken up and disposed of to a silversmith who made it into spoons, We do not know whether or not the silversmith acted innocently, or knowingly as a 'fence'. The Coptic story of Saint Claudius and the thieves, set in around AD 600, but popular long

79 *P.Oxy.* 2238.

80 *P.Oxy.* 2058.

81 *P.Cornell.* 9; Westermann 1924.

82 *P.Oxy.* 259.

83 *P.Oxy.* 2420.

84 *Ov. Nux.* 139-142. The authorship is doubted.

85 See for example Walsh 1966: letter no. 16.

86 *P.Oxy.* 1832.

87 *P.Oxy.* 2419.

after, tells of three pagans who were 'partners in theft'. The story recounts how they travelled around from Christian shrine to Christian shrine - in the Antinoe/Asyût area - stealing the valuables, which included gold chalices, silver objects and jewellery.⁸⁸ Eventually their progress was halted by a manifestation the Saint and, of course, the story ends with their conversion. It seems plausible that the story is based on the true exploits of some Byzantine Egyptian equivalent of the Jesse James gang. What is of interest is that once they had amassed a large quantity of precious metal loot they agreed to return home 'until we find a chance to go to Alexandria and sell the things'. This must imply either that Alexandria was the only city with a free market in gold, or that Alexandria was the only city large enough for such loot to be marketed without causing undue attention.

The jewellers, of course, like the silversmith and the spoons mentioned above, reworked the gold into new forms which made its recognition or retrieval more complex. To help sort out such eventualities, Roman laws covered what should happen in cases where stolen silver had been later engraved or where stolen gems were set in new mounts.⁸⁹

The clipping down of coins, a form of theft, was a perennial problem and liable to severe penalties.⁹⁰ One remarkable fourth century papyrus from Egypt actually tells of a meeting to carry out such illegal work: 'Eudaemon to Longinus greeting. I entreat you, sir, to hasten to me and bring, if you please, the crystal [?] and we can clip the cash'.⁹¹

⁸⁸ Drescher 1942. Stories of church thefts abound in Coptic literature and such thefts must have constituted a real and ever present worry.

⁸⁹ *Dig.* 13.1.13 and 10.4.6.

⁹⁰ See for example *Cod. Theod.* 12.7.2.

⁹¹ *P.Fay.* 134. For the ancient clipping of coins in general see Hendy 1985: pp. 316-319.

CHAPTER 3 - GOLD

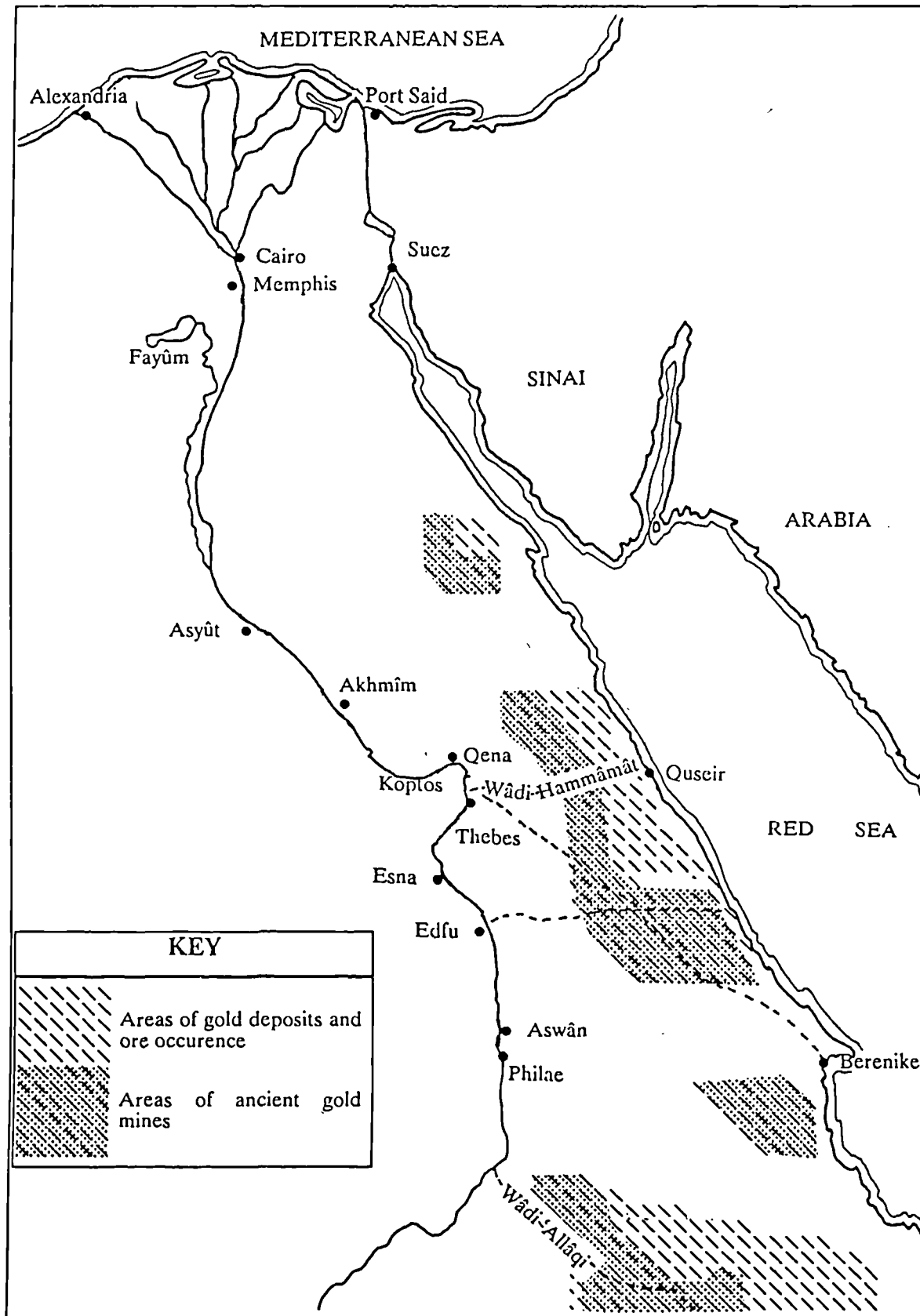
THE SOURCES OF GOLD

Alexander the Great was certainly not the first conqueror to be lured by the gold resources of Egypt and Nubia. Baumgartel has suggested that 'the lure of gold attracted foreigners, first as traders, but eventually to invade Upper Egypt, there to develop the Naqâda II civilization.'¹ To the Mesopotamians and Persians, Egypt was an Eldorado and we can surely add gold to the corn, papyrus and linen that are traditionally said to have been the main commodities sought by the early Greek traders in Egypt.

Of course, the value of the gold to the monarchy lay in keeping control of its exploitation and trade. When direct exploitation was not possible, control of the trading centres was of paramount importance. The nearest mines were those of the Eastern Desert, which had been highly productive in the earlier days of Egypt and which were probably exploited as early as the Naqada I period. These mines lay in the arid, mountainous desert between the Nile and the Red Sea (map 1). Recent geological maps of this region indicate the position of fifty-eight 'ancient or abandoned' gold mines.² Two of the main trade routes met the Nile at Koptos (Qift) and the gold from this region was thus termed 'Koptos gold'.

The mining areas are still scattered with ruined settlements, grinding stones and the other detritus from ancient mining activity (fig. 41). The earliest workings were probably for alluvial gold but by a surprisingly early period, quartz veins containing gold were worked with great efficiency.³ There is scanty literary evidence for Ptolemaic and Roman exploitation of Koptos gold. The Zenon archive of about 257-256 BC indicates some mining activity in the time of Ptolemy II,⁴ and there is a cartouche of Ptolemy III on a temple of Min at a mining settlement at Wâdi Fawâkhir, near the Hammâmât mines on the road between Koptos and Leucos Limen.⁵ There is also a fragment of an ostrakon of this period from the same site.⁶ Mining activity by the later Ptolemies in the Eastern Desert is less demonstrable.

- 1 Baumgartel 1970: p. 480.
- 2 EGS 1983; EGS 1984.
- 3 Klemm forthcoming.
- 4 *PSI*. 601, 9-10.
- 5 Guéraud 1942: p. 19.
- 6 Burkhalter 1979.



Map 1. - Egypt showing gold mining areas

There are numerous Greek inscriptions on the rocks of Wâdi Hammâmât but, to my knowledge, these have not received full study.⁷ There are references to superintendents of various Eastern Desert mines during the Roman period,⁸ and several areas still have abundant sherds. It has been suggested on the basis of pottery finds, that the signs of gold mining in the Eastern Desert are mainly Ptolemaic or earlier.⁹ However, many of the sherds are of Roman date,¹⁰ and first and second century AD ostraca have been found at the mining settlement of Wadi Fawakhir in the Eastern Desert.¹¹ It seems certain that the Romans mined gold in various parts of the Eastern Desert with considerable skill and organisation. The rotational grinding mills used for the gold-bearing quartz, and which Klemm considers to be typically Roman,¹² can be seen at several gold mining areas (fig. 42) - in some cases almost alongside the lunate grinding mills that Klemm defines as Ptolemaic (fig. 43).¹³

The gold mines of Nubia (*Wawat*) and the Sudan (*Kush*) supplemented the dwindling resources of the Eastern Desert. Wawat gold was exploited by the Middle Kingdom. A graffito left by 'the scribe who reckons the gold, Dhuthotpe' can be seen in a most inaccessible wadi in the mountainous desert far to the south east of Aswân and a hundred kilometres from Berenike.¹⁴ This graffito is probably of early Middle Kingdom date and might have been left by a wandering, though official, prospector. The extent of Egyptian control of the Wawat mines probably varied through Egyptian history and the Ptolemaic control of the gold mines of Lower Nubia might date from the time of the Ethiopian campaign of Ptolemy II.¹⁵ The Ptolemies' southern border of Egypt was at el-Maharraqa south of Aswân, where Wâdi 'Allâqi and Wâdi Cabgaba meet the Nile. These were the main access routes to the gold mines. The Nile between Aswân and el-Maharraqa was called the twelve-mile strip (*Dodekaschoinos*) and this had been under Egyptian administration since the mid-first millennium BC. There is little if any evidence for exploitation after about the time of Ptolemy VI, although Ptolemaic control of the twelve-mile strip seems to have been almost continuous and the Nubian mines were probably those described by Agatharchides. Agatharchides visited Egypt in the second century BC and his description of the mines has survived via the writings of Diodorus.¹⁶

The passage in Diodorus begins: 'At the extremity of Egypt and in the territory which adjoins both Arabia and Ethiopia there is a place which has many gold mines, where gold is extracted in large

7 See for example Goyon 1949.

8 See for example Edgar 1913: col. 238.

9 Meredith 1952.

10 Seen on my own visit in 1989. See also Forbes 1971: p. 164; Schürmann 1952.

11 Burkhalter 1979; Guéraud 1942: pp. 141-196.

12 Klemm forthcoming.

13 Klemm forthcoming.

14 de Bruyn 1956.

15 Diod. Sic. 1. 37.

16 Diod. Sic. 3. 12.

quantities but with much hardship and expense.’¹⁷ Agatharchides’ account of the mining conditions and processes is probably a fairly accurate picture of Ptolemaic practice and, since the early Christian writers similarly refer to the wretched conditions in the mines, the picture is also presumably true of the Roman period.

The criminals condemned to the mines by ‘the kings of Egypt’, including some unjustly accused and the relatives of others, were fettered in chains and worked unmercifully. They were watched over by foreign guards so that the language barrier would prevent any possible corruption or leniency. It has been said that the close grouping of the work-force’s huts at the Sudanese mines might reflect the need for close supervision and control and that ‘these rectangular walls and close encampments may mark the scene of Ptolemaic and earlier work, whilst the scattered huts and isolated mills date from the period of Arab occupation.’¹⁸

The mining processes are described as follows:

- a) A skilled worker identified the quartz veins to follow in the tunnels
- b) The ‘physically strongest’ workers (men between puberty and about thirty) attacked the rock with iron hammers, in cramped positions, as they followed the course of the veins. They threw the loosened rocks behind them.
- c) Boys under the age of puberty gathered these rocks and carried them out through the winding galleries and tunnels.
- d) Men over the age of thirty pounded these rocks with iron pestles in stone mortars until they were ground to a small size.
- e) Women and older men put this ground-up rock into mills operated by groups of workers who pushed the handles or spokes.
- f) Skilled workers then took this powder and washed it on sloping wooden washing tables to sluice away mud and lighter minerals. This process was repeated several times and then all the remaining gangue material was dabbed off with sponges. Only the grains of gold remained.
- g) Refiners then placed this gold, with lead, salt, and bran (and tin according to the text, but this makes no obvious sense) into earthenware jars. The jars were sealed with clay and heated in a kiln for five days and nights. The jars were allowed to cool and the gold was recovered in pure form.

This refining technique is a mixture of what we would term cupellation and cementation. Silver or base metals will react with salt to form chlorides which can be absorbed by the jars or volatilised. The

17 Translation in Austin 1981: p. 442-3. The full, relevant text of Agatharchides has been published in various two translations. One by Muller is in Geol. Survey 1953: pp. 23-4. The Loeb version, by Oldfather, is quoted by Notton 1974: pp. 50-56.

18 Geol. Survey 1953: pp. 23-4.

Talmud refers to bran 'for putting on the mouth of a gold refiners pot',¹⁹ and some modern refiners use ordinary flour which will burn to form carbon. The cementation process which uses lead is also described by Pliny.²⁰ Experiments to replicate Agatharchides' method of refining showed that salt alone worked just as well as the mixture given in the text. The process raised the purity of the test alloy from 37.5% gold to 93% gold. The addition of lead produced no benefit.²¹ Notton notes that the pot used in the experiments 'was heated at 800° C. until fuming ceased'. This was found to be after five days - exactly the length of time described by Diodorus Siculus.

Arthur Llewellyn, in a report for the Egypt and Sudan Mining Syndicate, written in 1903,²² compares Agatharchides' description with his own observations at the ancient mines. He refers to the presence of 'the iron cutters and stone mortars of the men; the mills at which the women toiled; the tables of the skilled "Seleangeus"; the furnace of the "cook" and the pots in which he fused his gold; the slags therefrom and even the very charcoal of his fire; all are there save the miserable wretches who wrought the task, and of them there is no tale, except the multitude of lowly mounds which mark the last resting-place of man and woman and child.' Another writer adds to the picture by describing the workings themselves, these, he says 'rarely reach a depth of 150 feet, and the workers seem to have preferred veins varying in thickness from 1 to 3 feet.' He also mentions the crude stairs of large stones into the tunnels and timber props made from acacia wood. The tool marks appear to have been produced by a pointed iron tool hit with a hammer. The washing tables were some 9 feet by 2 feet 6 inches and were built of undressed stone with a rubble filling. The table tops sloped slightly. The refining process was effective since no trace of gold can now be obtained from the slags. 'Mercury does not seem to have been known to the workers, or if known, was evidently not employed as a metallurgical reagent'.²³

The Ptolemies received gold from Kush in trade with Meroe and Strabo refers to Meroitic gold.²⁴ No doubt, some additional gold came from more remote Ethiopian mines.²⁵ The Ptolemies had made contact with the Sudan from early in the third century BC, when Philon went as far south as Meroe and also visited the Topaz Isles in the Red Sea. We know that the amethyst mines of Abu Diyeiba, near Semna, were exploited from the time of Ptolemy VI, so perhaps the gold mines in this region also supplied gold for the Ptolemaic coffers.²⁶ There is evidence for a large number of goldworkers attached to the temple of Isis at Philae and Vercoutter has suggested that this might reflect the local

19 *Shabbath*, 78.

20 Pliny, *HN* 33.19.

21 Notton 1974.

22 Geol. Survey 1953: pp. 13-25.

23 *Ibid.* See also Vercoutter 1959: pp. 120 - 153.

24 Strab. 17. 2. 2.

25 Burchalter 1979; Rostovtzeff 1941: pp. 381-3; Diod. Sic. 1. 37. 5; Hdt. 3. 114; Strab. 17. 2. 2; Pliny *HN* 6. 189.

26 Meredith 1956: pp. 117-120.

refining, consolidation and working of the gold dust or rough ingots brought from the South.²⁷ According to an inscription at Philae, Ptolemy VI, represented as the nome god of Napata, 'brings the gold of his mountains from the lands of Nubia' (fig. 44).²⁸

There is little firm evidence for Nubian gold reaching Egypt between the time of Ptolemy VI and the Roman period. Perhaps this might relate to the cessation of gold coinage issues from the Ptolemaic mint after the second century BC.

The import of gold from Wawat and Kush presumably continued through the early Roman period with some direct exploitation of the nearer mines. The remains of a Roman gold mining settlement can still be seen at Gebeit some fifty miles from the Red Sea coast, level with Râs Abu Shagara.²⁹ However, Newbold has said that the mines at Deraheib in the Wâdi 'Allâqi show probable signs of Ptolemaic workings but that 'with the advent of the Roman occupation (40 BC) records cease and the mines were apparently once more abandoned', they were exploited again by Arabs in the nineteenth century AD.³⁰

There seem to have been good relations and trade between Meroe and Roman Egypt. Graffiti from Philae prove the importance of Philae as a gold working centre. One envoy from Kush visited Philae, *en route* for Rome, in AD 253 and donated gold which was made into a gold vase.³¹ Pliny mentions the presence of gold in the region between 'the temple of Mercury and the island of Meroe'.³²

The kingdom of Meroe came to an end by the mid fourth century AD, but the exploitation of the gold of Wawat and Kush might well have slipped from Roman control before this period. The Nubian gold supply, if not the survival of the kingdom of Meroe itself, had been threatened by the presence of the Blemmyes in Lower Nubia. Diocletian had tried to protect the route from the Wâdi 'Allâqi but even these measures were not enough to prevent a near cut-off of the gold from the fourth century onwards.³³ A fifth century papyrus said to have been found at Philae, paints a graphic picture of the incursions of the Blemmyes and the need for military protection for the local churches.³⁴

27 Vercoutter 1959.

28 Junker 1958: p.269.

29 Campbell Thompson 1908.

30 Newbold 1948.

31 Griffith 1937: insc. Ph. 416.

32 Pliny, *HN* 37. 15.

33 Lombard 1974: pp. 22 and 126.

34 Feissel and Worp 1988.

Ptolemaic Egypt also imported gold from the Mediterranean world, Western Asia, and India but evidence is circumstantial. The geographer Ptolemy, for example, refers to gold mines in India and we may presume that some of this gold reached Egypt via the Red Sea trade.³⁵ Some gold from Syria and Iran reached Egypt as spoils or gifts but, surprisingly, there is an almost complete lack of Persian silver coins found in Egypt whilst, a surprising inscription from Susa, of the time of Darius I, actually mentions 'silver from Egypt'.³⁶ Sea-borne trade with India and East Africa probably came to a near standstill with the rise of Sassanian power in the Yemen at the end of the sixth century.³⁷

In the Roman Empire, most important silver and gold mines had been made state property by the end of Tiberius' reign.³⁸ Detachments of Roman soldiers were stationed at mines and quarries,³⁹ and one late third century papyrus from Oxyrhynchus concerns runaway mine workers from a metals' mine.⁴⁰ We may assume that conditions in the Roman gold mines were pretty much as Agatharchides had described for the Ptolemaic period. Mines throughout the Roman Empire were worked by criminals. In a letter to the Emperor Trajan, the younger Pliny mentions 'people who were sentenced to service in the mines, or the arena, or to similar punishments'.⁴¹ In Roman Egypt, the unfortunate gold miners included persecuted Christians as well as slaves and condemned criminals. Clement of Alexandria sadly notes that 'gold which is hidden, and jewels, are dug up by those among us who are condemned to death'.⁴² Tertullian talks of gold 'tearfully wrought by penal labour in the deadly laboratories of accursed mines' and wryly points out how gold 'passes from torments to ornaments, from punishments to embellishments'.⁴³ Josephus tells us that after the capture of Jerusalem many of those over seventeen years old were sent to the Egyptian mines.⁴⁴

In later Roman times there were some independent gold miners leasing mines. In the Codex of Theodosius it is noted that gold washers had to pay the state eight scruples per year and sell the rest to the treasury.⁴⁵ The Digest of Justinian states: 'A usufructuary ... can search for beds suitable either for quarrying or for mining operations similar thereto, so that he can either work such mines of gold, silver, sulphur, copper, iron and other minerals as were opened by the owner, or he may open them himself, if this does not obstruct agricultural operations ...'⁴⁶

35 Ptolemy, 8. 2. 17.

36 Olmstead 1948: p. 168.

37 Lombard 1974: pp. 22 - 24.

38 Suet. *Tib.* 49.2; Tac. *Ann.* 6.19.

39 Lewis 1983: p. 16.

40 *P.Oxy.* 3571.

41 Pliny, *Ep.* 10. 31.

42 Clem. Al. *Paed.* 2. 13.

43 Tert. *On female dress.* 1. 5.

44 Josephus 4.9.12. See also Eusebius 8 and Aristides 48.349.

45 *Cod. Theod.* 10.19.3, see also Jones 1974: p. 402.

46 *Dig. Iust.* 7. 1. 13.

THE AVAILABILITY AND CIRCULATION OF GOLD

The controlled exploitation of mines and traded gold provided wealth for the state treasuries and mints but does not explain the official mechanism by which gold reached the 'man in the street'. The fifth century BC play *Antigone*, by Sophocles, says: 'Make profit, trade in Lydian electrum, pure Indian gold, that's your chief desire'. Whether it was ever really so easy to deal in precious metals is uncertain and undoubtedly, in Ptolemaic and Roman times, there was a strict state control of the circulation of precious metals, or their price, or both. In Republican Rome there was even stricter control of the private ownership of gold. According to Livy, even a senator was only allowed one ounce of gold from which to make rings for his wife and himself, plus a pendant for his son.

In theory gold can be made available to goldsmiths or their clients in several ways:

- a) As nuggets or grains direct from mines.
- b) As refined ingots produced by the state and made available on the market.
- c) As gold coinage.
- d) As re-circulated gold such as unwanted or damaged jewellery.

The Talmud refers to a gift of gold in dust form sent to a rabbi by a Roman Emperor ⁴⁷ and gold grains and nuggets have been found in pharaonic and Meroitic contexts.⁴⁸ However, there is no certain textual evidence for the general circulation of gold in nugget or dust form in Egypt in Ptolemaic, Roman or Byzantine times. One papyrus describes a receipt of gold, by weight, in a form the editors explain as washed gold nuggets.⁴⁹ The term used is *balanion* and I assume the translator identifies this with *balaneion* a 'bath'. More likely, *balantion* was meant, a usual expression for a purse or sealed container of coins. A Byzantine papyrus from Egypt lists a pharmacist's stock which included 'gold dust' - *chrysookones*.⁵⁰ Perhaps the term means some type of special gilding material since *konia*, as well as meaning dust, can also mean lye, lime, plaster, stucco etc. Even if gold dust was meant it was probably for medical or magical use and not sold in quantities suitable for goldsmiths.

The gold obtained by the state would usually have been melted together and cast into ingots. This aided transport, made it easier to record by weight and reduced pilferage or accidental loss. Large ring-ingots of gold are shown in the scenes of bearers of tribute in New Kingdom wall paintings and similar ring-ingots have been a characteristic of more recent gold trading in Ethiopia.⁵¹

47 'Abodah Zarah 10.

48 e.g. Lucas and Harris 1962: p. 228; Ogden 1982: colour plate 2.

49 *P.Würzb.* 15. West & Johnson 1944: p. 139.

50 *P.Micha.* 36.

51 See for example Koettlitz 1900.

Ingots are quite well known from pharaonic Egypt. Twenty-three gold bars - probably just rough-cast in grooves in wood or sand - were found in the so-called 'crock of gold' at el-Amarna, and 6.5 kilos of gold bars were found at Tôd (fig. 45).⁵² The Amarna ingots weighed between 34.62 and 286.53 g. but without any apparent weight units. These ingots were sadly melted down and no record was made of their composition - they might have provided information as to the use of refining at that period. Other ingots have been recorded with coins in Late Period coin hoards, for example in a fifth century BC hoard from Tell el-Maskhûta in the Delta.⁵³ I know of no Ptolemaic ingots, but gold bars with refiners stamps are known from the late Roman period (fig. 46). These ingots were probably destined for the mints rather than for use in private commerce. According to the Talmud, bars of gold could be included in a woman's dowry, but there is no evidence that this happened in practice in Egypt.⁵⁴ The Hadra treasure of c. AD 300 (see ch. 1) included four small cake ingots, of which three weighed 330 g. and one 320 g. (fig. 47). These were probably just melted-down scrap in the process of recirculation by a goldsmith. The same treasure also included a pair of bracelets in the process of being broken up (fig. 35).

On the other hand, coins are just small ingots issued by the state with official weight and purity guarantees. It seems probable that, from the time of their introduction in the mid first millennium BC, coins were a major source of raw material for jewellers. The availability, weight and purity of the contemporary coinage has had a direct affect on jewellery production in various parts of the world right up to the present time.⁵⁵ One fifth-fourth century BC silver coin hoard from Beni Hasan, contained partly melted coins, two rings, and a silver bead. These had all been concealed in a pot and the hoard has been plausibly identified as the stock-in-trade of a silversmith.⁵⁶ The gold coins of Late Period Egypt - stamped *nub nefer*, 'good gold' - were probably treated as bullion and had neither weight consistency nor general circulation (fig. 48).

Gold has always been recycled and there is ample documentary evidence from the Classical world for the reuse of gold. We might thus imagine that the normal sources of gold for the goldsmith would have been gold coins and unwanted gold items and scrap.

Gold was valued in terms of its relation to silver or copper, so the state could either allow a fluctuating gold price or fix prices and enforce them by controlling all transactions involving gold. In theory gold coinage can have a different value, in terms of silver or copper, from other gold on the market. When

52 Frankfort and Pendlebury 1933: p. 60; de la Roque 1953. pp. 9-10.

53 See Robinson 1947: pp. 115-21.

54 *Kethuboth*, 67.

55 Ogden 1982: p. 175.

56 Milne 1933; Milne 1905.

coins are overvalued in relation to the metal they contain, then they are 'charged' or command a premium and thus provide a state revenue. A gold ingot worth say 10,000 silver denarii, could be minted into coins that could pay for perhaps 11,000 denarii worth of goods.⁵⁷

Goldsmiths' workmanship charges were small in the ancient world, so charged gold coins, if such existed, might have purchased more than their own weight in ready-made jewellery! In such circumstances it would be nonsensical for customer or goldsmith to destroy coins to make jewels if scrap gold, for example, was available. If scrap gold was available on the open market its price could rise until it cancelled out the 'charge' on the coins.

The only way the state could control gold price and circulation, would be to ensure that all transactions involving gold were made via a bank at fixed prices. This is what appears to have happened in Egypt in the Ptolemaic and Roman periods. The relaxation of the controls over the circulation of gold in the Byzantine period led to the inevitable inflation of the gold price.

The Ptolemaic period

Egypt was rich in gold in the early Ptolemaic period. Some came from military activity. An account of Ptolemy III's Syrian war says: 'having sought out all the sacred objects that were removed from Egypt by the Persians and having brought them back to Egypt together with the rest of the treasures from the provinces ...'⁵⁸ Some gold came from exploitation of mines within the sphere of Ptolemaic rule and other gold was obtained by trade. Athenaeus explains that agriculture, by providing a medium for trade, gave greater wealth than gold mines: 'What monarchy ... has ever been so rich in gold? Certainly not any that seized the wealth of the Persians and of Babylon, or worked mines, or owned the Pactolus which carries down gold dust. It is only the Nile, a river truly called "streaming with gold", which with its unlimited provision of food carries down pure gold which is harvested without danger.'⁵⁹

The gold belonged to the state and its distribution depended on the ruler. Theocritus says that in Ptolemy II's treasury: 'the gold does not lie useless in piles like the wealth of the ever toiling ants. Much of it is received by the glorious homes of the gods, where he always offers first fruits together with other offerings, and many are the gifts he has made to mighty kings, many to cities, and many to

57 There is a curious reference in the Talmud as to the value of gold coins. In dowries, gold coins were supposed to be valued at 50% above their metal value although it was noted that in the ordinary course of trade gold aurei were not changed and thus were valued as gold bullion (*Kethuboth*, 67).

58 *OGIS*. 54.

59 Athenaeus, *Deipnosophistae*, 5 = Callixenus of Rhodes, *FGrH*. 627. f2. Translation in Austin 1981: p. 362.

trusted companions.⁶⁰ Préaux has suggested that the accumulation of wealth in the temples is indicative 'd'une certaine apathie économique'.⁶¹

It seems that gold vessels, statuettes of deities and the like were the major end products of the state goldsmiths. There is minimal mention of jewellery - for example when Athenaeus describes the treasures paraded in Alexandria in 271-270 BC, he mainly refers to gold vessels and the crowns or naming statues but does mention in passing 'women wearing expensive clothes and ornaments'.⁶²

Gold probably reached the general market in the form of coins although, in the second century BC, we do hear of banks selling gold *asemon* which was probably in non-coinage form (see appendix at the end of this chapter).⁶³ A letter from Demetrios, probably the Alexandrian mint master, to Apollonios, the *dioiketes* of Ptolemy II, in the autumn of 258 BC, concerns the re-minting of gold.⁶⁴ This shows that foreign gold coins brought to Egypt were supposed to be re-minted by the authorities who, naturally, made a charge for this service. Similarly, when Ptolemy issued his new octadrachm, the older pentadrachms also had to be re-minted. The text is a complaint that when merchants brought in foreign money and pentadrachms of the old issue, in good condition, it was no problem to re-melt and re-mint them. However, older, worn coins, or gold items other than coins, could not be dealt with. Perhaps no assayer was handy to test for purity. The merchants were angry that their gold lay idle and Demetrios noted that they 'cannot easily dispose of it to others even at a lower price'. This statement does suggest that there was an alternative, even if not strictly official, market for gold at the time.

The state probably demanded that all unwanted gold be recycled through the official banks in exchange for coin. Gold required for jewellery would have to be obtained via the banks - presumably mainly in the form of gold coins.⁶⁵ The banks, of course, levied a charge. A third or second century BC letter addressed to the authorities of the Oxyrhynchite nome mentions a tax termed *asemonia*.⁶⁶ This seems to have been a levy charged by bankers (or rather by the state through the banks) on the sale of gold.⁶⁷

There was a network of state banks over all Egypt plus special *kollybisteria* or *kollybistikai trapezai* which were in essence private banks granted or hired out to individuals and regulated as to charges and interest. *Kollybistes* (a small money changer) is the term used in Matthew 21.12 when 'Jesus went

60 Theoc. 17. 73-20.

61 Préaux 1939: p. 262.

62 Athenaeus, *Deipnosophistae* 5 = *Callixenus of Rhodes*, *FGrH*. 627. f2. Translation in Austin 1981: pp. 361-2.

63 *P.Tebt.* 890.

64 *P.Cairo Zen.* 59021. A recent translation is in Austin 1981: pp. 410-411.

65 Préaux 1939: p. 292.

66 *BGU*. 1242.

67 Burchalter 1979. See also *P.Tebt.* 890 of the second century BC.

into the Temple of God ... and overthrew the tables of the money changers.' Burchalter has noted that legislation to control the circulation of precious metal became more and more rigorous during the Ptolemaic period.⁶⁸ This matches the dwindling amount of gold coinage in circulation, and the greater rarity of gold jewellery in private hands, after about the time of Ptolemy VI.

If gold for jewellery purposes was obtained via the banks, we can probably assume that gold availability would mirror coinage circulation and this should be reflected in the Ptolemaic hoards that contain gold coins.

Greek silver coins are well known in hoards from Egypt from about the mid fifth century BC onwards.⁶⁹ Most of these hoards consist of Athenian silver tetradrachms although some include the gold *nub nefer* coins of Nectanebo. In hoards from the last century or so before Alexander we also find cut coins, ingots and fused scrap.⁷⁰

The association of jewellery with coin is rare. Two rings and a silver bead were found with the silver coin hoard at Beni Hasan, as mentioned above. In another case, two silver coins, probably of the mid-fourth century BC, were found at the Gîza pyramids in an earthen ware jar with a granulated gold bead, stone beads and two scarabs.⁷¹

At around the time of Alexander's invasion, and perhaps not unconnected with it, there is an increase in the number of hoards that included gold *nub nefer* coins. After Alexander's arrival the hoards consist of silver from most of his mints. This is true up until Ptolemy II's introduction of the gold octadrachm which was not only the largest gold coin in general production in the ancient world but was almost entirely a product of the Ptolemaic mints (fig. 49). Hoards with octadracms include one of 112 octadrachms of Arsinoe II from 'Upper Egypt'. The octadrachm was minted until the time of Ptolemy VIII. After Ptolemy II, until the end of the third century BC, published silver and gold hoards are about equal in number.

68 Burchalter 1979.

69 A rare sixth century BC hoard is cited in *ZfN*. 1904, 25. For the famous Asyût hoard of Archaic coins, see Price and Waggoner 1975.

70 For the composition of the hoards in general and relevant references see Thompson et al. 1967.

71 Robinson 1950: p. 298.

The later Ptolemies and Cleopatra VII minted no gold, and gold coins do not occur in any hoards between about the mid-second century BC and the arrival of the Romans. One of the latest hoards with gold coins from Ptolemaic Egypt is from Qena, deposited in about 144 BC.

In theory, Hellenistic gold coins were as pure as the refining techniques would allow. In practice, not all coins were of equal purity or of correct weight. One papyrus of the mid second century BC seems to refer to a deficit on Phocian gold coins rejected by the treasurers.⁷² Hellenistic gold jewellery is generally between about 85 and 97% pure.⁷³ My own analyses indicate that early Hellenistic jewellery tends to be purer than late Hellenistic. The former objects are typically over 90% pure, while the latter are mainly between about 80 - 92% pure. Although the finest quality goldwork of the second century BC can average around 94% - 95% pure. We can also note that the copper content of early Hellenistic gold is usually 1.5% or less, which does not suggest deliberate adulteration with copper. Later Hellenistic jewellery can have up to about 6% or so of copper, although the better objects tend to have minimal copper. The general purity of Hellenistic gold is usually less than the 99.8% purity of an Egyptian piece of the Persian period found in an analysis by Bethelot, which would certainly deserve the 'good gold' epithet.⁷⁴ One damaged bull-head earring from Thebes, now in the Brooklyn Museum (fig. 179), contained 82.14% gold, 17.86% silver and a trace of copper.⁷⁵ This earring can be dated to the mid to late Hellenistic period, as the relatively low gold purity might suggest.

The Roman period - circulation

The quantity of jewellery that survives from the first and second centuries AD implies that gold must have been readily available in Roman Egypt. However, at first glance, gold coinage seems an unlikely raw material. The later Ptolemies did not mint gold in Egypt and neither did the Romans until the early fourth century AD. Roman Imperial gold coins were not in general circulation in Egypt until about the time of Gallienus. Thus no new gold coins came into general circulation in Egypt for the best part of 400 years. One of the earliest apparent reference to gold coins used in commerce in Roman Egypt would seem to be records of the spending of 'gold pieces' by priests near Philae in the third century AD.⁷⁶

⁷² *P.Tebt.* 739.

⁷³ Published analyses of Hellenistic gold include Hoffmann and Davidson 1966: p. 49 and Blomberg 1985: pp. 53-62. In neither case is information given as to whether the analyses were surface analyses or made on scraped areas. The former can give higher purities due to deliberate and natural surface effects.

⁷⁴ See Lucas and Harris 1962: p. 490, no 23.

⁷⁵ Williams 1924: no. 81.

⁷⁶ *CIG.* 5005, 5007-10.

Ptolemaic silver tetradrachms were still in circulation in the Roman period alongside Romano-Egyptian silver. We find such mixtures in hoards and a papyrus of AD 42 says 'Received in cash ... 260 drachmae of coined silver of the Augustan and Ptolemaic issues.'⁷⁷ However, it seems improbable that Ptolemaic gold coins survived in any number. They have not been found in Roman contexts and there is minimal literary evidence for their survival. *P.Leid.* 10 mentions unspecified gold coins, and a letter written in the late second century AD seems to refer to the theft of 'gold pieces'.⁷⁸

The 'gold pieces' given as the value of Romano-Egyptian alimentary contracts (see ch. 2) were an accounting convenience, not a reference to actual gold coins. The use is the same as the *deben* in Ptolemaic demotic papyri.⁷⁹ The 'gold piece' was equivalent to 20 silver drachmae and this might relate to an envisaged official gold price of around 20 drachmae per quarter.

Sixty aurei were found in a courtyard of a second century house at Karanis (Aushîm).⁸⁰ The publishers suggest that 'perhaps the hoard was the treasure of a Roman officer, who brought it with him when he left for his station in Egypt. He may have concealed it awaiting the day of his return to his homeland, since it could not be spent locally'.⁸¹ The Karanis hoard included coins of Hadrian, Antoninus Pius, Marcus Aurelius and the two Faustinas. The only other gold coin found at Karanis was one of Valens.

Other hoards with aurei from Egypt are large but less homogeneous than the Karanis hoard. A hoard from Karnak contained about 1200 aurei which ranged from Hadrian to Elagabalus, and a similarly sized hoard, of unknown provenance, ranged from Tiberius to Commodus.⁸² The coin-set necklets from Egypt (see ch. 8) are mainly set with coins of Hadrian or later, although some first century coins are included. Neither the coin necklets nor the hoards, however, date before the end of the second century AD.

We know that the goldsmith or his patron was supposed to obtain gold via the official banks or money-changers. Gold coins seem a likely, if not the most likely, way in which the state would sell gold. Gold coins might thus have played a part in providing gold for jewellers even if they did not circulate in day-to-day commerce.⁸³

⁷⁷ *P.Mich.* 121. 2. 3.

⁷⁸ *P.Merton* 2. 83.

⁷⁹ e.g. *P.Dm.Cairo* 30607-9; *P.Tebt.* 776.

⁸⁰ Haatvedt *et al.* 1964.

⁸¹ *Ibid.*

⁸² West and Johnson 1944: p. 75.

⁸³ A recent survey does say that in Roman Egypt 'Roman aurei were being used, but not in any substantial number, and often as jewellery', Christiansen, 1987: p. 14. But this seemingly refers to coin-set jewellery and is based on Vermeule 1975.

Of course, the state - and ultimately Rome - would prefer to own gold rather than the debased silver money that would be paid for it. Hence the state would exact some surcharge or profit on the sale. The gold, once sold by the state, would be purely for recycling. The patron would have ordered a ring, say, from the goldsmith, to be of a certain weight or cost. The goldsmith would go to the official bank and purchase the required amount of gold, maybe in the form of aurei which, though the standard Imperial Roman coin, was not a negotiable currency in Egypt.

One document of AD 97 deals with a goldsmith's transaction in Roman Egypt and seems to proceed on these lines.⁸⁴ The relevant part of the document is as follows:

Herodes son of Leon to Mysthas son of Menelaus goldsmith. This is acknowledgement that he has received as the price of eight mnaieion of assayed gold on the Arsinoite standard, made up for him in a pair of double-coiled, snakes-head, magical bracelets - which Herodes has taken over a security for the agreed loan - two thousand eight hundred and sixteen drachmae of silver, total 2816 drachmae. If Herodes wishes to alter these ornaments, he shall account for the *apousias* by giving one quarter for each mnaieion of gold, and if he returns [or, perhaps, refuses to accept] he shall similarly give one quarter for each mnaieion, [Mysthas] giving back to him the current price ...

Clearly the client has supplied the money for the gold. The goldsmith then would obtain the gold and produce the bracelets.

The word *apousia*, literally meaning absence, found in this and two other texts relating to jewellers' work, has uncertain meaning here although it is well known in other contexts. For example one papyrus mentions *tripsin kai apousian* - 'wear and loss' - in reference to clothes.⁸⁵ Outside of Egypt we find *apousia* in references to the refining of metals where it seemingly refers to the weight loss on refining and is undoubtedly a deficit of weight or purity.⁸⁶ A weight deficit of gold coinage could be due to original light-weight manufacture or wear during circulation. A silver coin in circulation for nearly a century can lose over a third of its original weight, and gold is even more prone to wear.⁸⁷

In the jewellery contexts, *apousia* is usually translated as 'the inevitable diminution in weight which occurs when metals are melted and worked'.⁸⁸ But this is an improbable interpretation. Ancient gold working techniques do not involve an inevitable loss; besides, one could hardly define the loss due to workmanship in advance. The *apousia* of 1/16 might well have been an official levy or accounting convention, or a means of relating the Roman aureus to the Egyptian drachma-based system. It could be coincidence, but the weight of a quarter based on the Ptolemaic system (i.e. 1/16 octadrachm) is 1/16 less than the weight of a quarter of an aureus. If, in practice, the presence of *apousia* meant that the

84 BGU. 1065. The text is discussed in Johnson 1936: p. 456 no. 285 and, most recently, dealt with by Whitehorne 1983: pp. 331 - 339.

85 P.Oxy. 123.

86 Raven 1950: pp. 1-22; de la Coste-Messeliere 1949: pp. 245 - 247; Kinns 1983: p. 1 ff.; Arist. *Mete.*, 383 b. Livy (32. 2) uses the Latin term *intertrimentum* which Raven 1950 says equals *apousia*.

87 See, for example, Gilmore 1980: p. 91.

88 Notes to CPR. 161. See also notes to P.Oxy. 3121

patron received less gold than he paid for, the literal meaning of the word - absence - seems quite apt. If the coins used as raw material were slightly underweight, the finished item of jewellery would weigh less than the theoretical weight of the coins from which it was made - again an 'absence'.

Our knowledge of Egyptian bureaucracy, plus the assumption that the state required an income from the sale of gold, also makes it possible that *apousia* was a levy charged on the sale of gold to the public. It might be relevant that the *apousia* is defined as a quarter per *mnaieion*, that is 1/16th - a fraction that is by no means unique. After the Roman conquest of Egypt, procedures were needed to cope with a debased silver currency, where old and new coins circulated together. A supplementary charge (*prosdiagraphomenon*) of 1/16 was introduced which probably expressed the difference between theoretical and actual weight.⁸⁹ This was for debased silver, not gold, but Hendy has seen this charge as the forerunner of the *obryza* used at Oxyrhynchus in the Byzantine period to define the difference between the actual and theoretical weight of gold coins. *Obryza* was also defined as 1/16.

Some provision of gold by the state in the form of coins must have been supplemented by recycled gold from private possession. We know that gold jewellery could be sold by private owners. For example in AD 138, when Kronion's divorce was recorded, it was noted that the jewellery given as dowry had been turned into cash.⁹⁰ The recycling of gold scrap, for example, by having a goldsmith rework granny's broken earrings, was probably universal. The cut snake bracelet in fig. 70 might well be an example of a gold ornament due for recycling - perhaps after theft. In Egypt we can expect state intervention and assume that gold sold by members of the public was supposed to be sold to, or through, the state banks. This would provide an open market but with state regulation and control.

There must also have been less official markets in stolen or looted gold. Tomb robbery has a long history in Egypt and in Islamic times there was a systematic plundering of pharaonic tombs. It is hard to imagine that the tombs were less inviolate during the Ptolemaic or Roman periods. The tenth century *Book of the Prefect* gave rules that aimed to reduce saleability of stolen goldwork.⁹¹ We must assume that similar attempts were made in the Roman and Byzantine periods.

89 See for example Hendy 1985: pp. 356-360.

90 *P.Kronion* 50; *P.Mil.Vogl.* 84. Quoted in Lewis 1983: p. 73.

91 Translation in Hendy 1985: pp. 251 - 3.

The Roman period - composition

Roman coins were as pure as the refining methods would allow and aurei were not debased in the same way as the denarius. Metcalf has said that 'Roman gold [coinage] of the first century rarely falls below about 23.5 carats (about 98% fine)'.⁹² The complete destructive analysis of a gold aureus of Nero from the Rome mint showed it to be over 99% pure.⁹³ The high purity of Roman gold coinage seems to have been maintained at least until the end of the second century AD,⁹⁴ and probably right through the third century.⁹⁵

On the basis of a limited number of analyses, it would seem that Romano-Egyptian goldwork is frequently of lower purity than the contemporary Roman gold coinage.⁹⁶ A pair of second or early third century gold earrings said to have been found in Egypt and now in a private collection (fig. 50) are an alloy of about 76% gold, 20.5% Silver and 3.5% copper. Analyses of three pieces of gold foil, seemingly of the Roman period, from excavations at the Bucheum are given by Mond and Myers.⁹⁷ These show 81.3%, 90.6% and 81.0% gold purities. All three have high enough copper levels to indicate that copper was a deliberate addition, even though the precision and accuracy we can give to the analyses is uncertain.

Some new analyses were carried out as part of the present study using energy dispersive X-ray fluorescence in conjunction with a scanning electron microscope. The surfaces of two small Romano-Egyptian rings were analysed (fig. 51). One, with a chased figure, contained about 98% gold and 2% silver with little if any copper. The other, with a palm on the bezel, contained about 93% gold, 4.5% silver and 2.5% copper. Part of the corrugated terminal of a Medusa type of necklet of third century AD date (fig. 52) had 92% gold, and 4% each of silver and copper (the high copper content might be due to the proximity of a solder joint). The back of the medallion on the same necklet contained 96% gold, 2% silver and 1% copper. These analyses of the Medusa necklet were again surface analyses and represent maximum purity of the object, not the composition of the whole. A remarkably similar result was obtained in Stockholm where two typical Romano-Egyptian gold snake armlets were analysed and both had around 96% gold.⁹⁸ Analysis of the interior metal of a similar snake bracelet showed it to have an average purity of about 93% gold.⁹⁹

92 Metcalf 1972: p. 385.

93 Cope 1972: pp. 307 - 313.

94 See for example Meyers 1969: Table 6. Dio Cassius (74.14) might be read as evidence that Antoninus debased some of his gold coins, but there is no analytical proof of this.

95 There is little published information on the purity of third century gold coinage, though see Caley 1950.

96 Research in progress indicates that the same is true in Roman Syria and Asia Minor.

97 Mond and Myers 1934: 1, p. 109 = Lucas and Harris 1962: p. 490, analyses 24-26.

98 Landenius 1978: pp. 37-40. No details of the analytical methods are given and a surface analysis must be assumed.

99 Private collection, unpublished.

The awareness that ancient goldwork can show a remarkable difference in purity between surface and interior prompted some comparative analyses. The surface of the bracelets in fig. 508 was of over 99% purity while the same region, after scraping, showed 94% gold and 3% each of silver and copper. The flimsy earring in fig. 53 had a purity of 97% gold and 3% silver on its surface while the interior (viewed through a fracture) was as low as 85% gold, 10% silver and 5% copper. The small triangular necklet component in fig. 54 similarly allowed the analysis of both exterior and interior surfaces. The content was 96% gold, 3% silver and 1% copper on the outside and 83% gold, 14% silver and 2% copper on the interior. A flimsy sheet gold pendant representing four male deities had a surface composition of 90% gold, 10% silver and negligible copper, while the interior showed 83.1% gold, 14.4% silver and 2.5% copper.¹⁰⁰ These major differences between surface and interior seem far too great to be due to natural weathering processes - 'surface enrichment' - during burial and probably indicate a deliberate surface 'pickling' to improve the colour and appearance of debased gold. The debasement of gold with copper was not a usual feature of the Roman world, but seems to have been quite frequent in Roman Egypt.

If the gold used for jewellery in Roman Egypt was debased, do we assume this was carried out by the state refiners or banks prior to sale, or by the goldsmith? In the latter case, was the client aware of the debasement and was it officially allowed? It seems possible that the various gold standards mentioned in the papyri may refer to variations in purity. The gold alloys, seemingly the later Romano- Egyptian jewellery items, with around 83 - 85% gold represent an adulteration by 1/6 or so. Here the high silver relative to copper in the debased alloys means that the gold coins cannot have been alloyed with Egyptian tetradrachms since these were only about 25% silver to 75% copper. The alloying of coinage gold with pure, or near pure, silver, might be an indication that the debasement was official. Clearly a great many more analyses need to be carried out on Romano-Egyptian jewellery before a clearer picture emerges.

P.Leid. 10 is a collection of jewellery workshop recipes that derive from Ptolemaic and earlier texts.¹⁰¹ As Caley notes the recipes give the impression: 'that they were rather in the nature of reminders for skilled workers rather than detailed descriptions for purposes of general information', and that: 'the owners of the papyrus were chiefly interested in making ornamental jewelry'.¹⁰² A third century date is usually postulated on epigraphic grounds while the references to drachma and mina weights, and the mention of 'Ptolemaic staters', indicate a date prior to the currency reforms of Diocletian. One recipe (no. 17) for 'falsification of gold' appears to describe the addition of some iron to gold. A recipe to test the purity of gold instructs the goldsmith to melt the gold and then, after it has cooled, reheat it and then to examine its colour. If it kept its colour and looked 'like a piece of coin' then it was

100 On the market, unpublished.

101 The best translation is Caley 1926.

102 Caley 1926: pp. 1163 - 1165.

pure. If it turned white it contained silver, if it became rougher and harder it was mixed with copper, and if it blackened and became softer it contained some lead. This test would only give a rough indication of the alloy but this need not suggest a poor level of quality control. Once the gold was shown to be debased, it could be purified. The percentage of base metal present was largely irrelevant but knowledge of its nature would help determine which refining method was needed. The mention of a piece of coin again implies that the Romano-Egyptian jeweller was familiar with gold coins.

Another recipe in the same papyrus (no. 25) tells us how one such purification would have been carried out by the goldsmith. The goldsmith mixed *misy* (probably a natural iron sulphide), alum and salt together in equal amounts and pulverised them with a little water. The gold - probably hammered into sheets - was then coated with this mixture, sealed in an earthenware vessel in a furnace and heated. The gold was then taken out and scoured. The coating is chemically a hydrochloric/sulphuric acid mixture that would certainly remove base metals and silver from the gold. Recipe no. 69 explains the use of a similar chemical etchant to improve the surface colour of a gold object: 'Roasted *misy*, 3 parts; lamellose alum, (and) celandine, about 1 part; grind to the consistency of honey with the urine of a small child and colour the object; heat and immerse in cold water.'¹⁰³ This would have worked like a modern goldsmith's pickle. Some such method must have been used to produce the surface enriched goldwork described above.

The Byzantine period - circulation

Imperial gold coinage began to circulate in Egypt from about the time of Gallienus (AD 260-268) but was treated as little more than bullion. In about AD 286 Diocletian re-standardised the weight of the gold coin - the solidus - at one sixtieth of a pound (in theory 4.55 g.) and about ten years later these gold coins began to be minted at Alexandria. The minting of gold stopped during the time of Licinius' occupation of Egypt in AD 313/4 and was not resumed until the reign of Justin II (565-578). Nevertheless, solidi from other mints remained in circulation in Egypt right through the Byzantine period. On the other hand, there is very little gold jewellery from Egypt that can be dated with any certainty to between the mid fourth and early sixth centuries AD.

The circulation of Byzantine gold coins in Egypt is amply attested in the papyri which deal with loans and other transactions.¹⁰⁴ We often see the phrase 'from hand to hand' which means that gold coins could now change hands without the intermediary of a bank. References to solidi are often very precise. For example a loan of AD 498 refers to 'six unalloyed approved Imperial solidi of gold on the private standard of Oxyrhynchus'.¹⁰⁵ The need to state that coins were of full weight and purity proves that neither could be taken for granted. This seems to have been particularly true of Egypt. From the

¹⁰³ Caley 1926: p. 1159.

¹⁰⁴ e.g. *P.Oxy.* 1891; *P.Oxy.* 1130 and *P.Oxy.* 3599.

¹⁰⁵ *P.Oxy.* 2237.

first half of the sixth century AD we find an edict of Justinian seemingly mainly directed at Egypt, and Alexandria in particular, which relates to the problems in the weights and 'discounts' or charges relating to the coins in circulation.¹⁰⁶

Initially, small payments could be made in solidi by number and the coins were not always weighed. After Constantine, the government would accept in tax payment either solidi or, if weighed, bullion at the same rate.¹⁰⁷ In AD 366-7 only bullion had been accepted¹⁰⁸, while under Justinian both bullion and coin had to be weighed.¹⁰⁹ Gold coins are sometimes referred to as 'of full weight by the scales'.¹¹⁰

The owner of the gold coins, purchased or demanded as tax by the state, probably had to pay for their refining. In AD 369 Valens ordered that if any person was so presumptuous as to voluntarily offer his gold to the mint to be recoined it would be confiscated.¹¹¹ The Emperor relented five years later and allowed privately owned gold already received, to be minted and returned to the owner less a charge of two ounces in the pound - that is 1/6.¹¹² This fee is the same as four carats (*keratia*) in each solidus. This reckoning in terms of one solidus less four carats is common in the papyri and reflects the difference between the 'private' and 'public' standards. When payments are based on multiples of 1 solidus less 4 carats it so happens that X solidi less 4X carats on the private standard will be equal to X solidi less 6X carats on the public standard. Some accounts papyri would have been almost impossible to work out without such a simple short-cut.¹¹³

The various 'standards' mentioned in the papyri are usually considered to have been accounting conventions rather than variations in purities or weights. However, Roman and Byzantine gold jewellery did vary considerably in purity.¹¹⁴ Possibly some standards related to the officially standardised weights in different towns - even though theoretically these might have been the same. Some standards probably related to mints, and thus in turn to variations in weights or purities. For example the 'Greek standard' coins were presumably solidi minted in Constantinople,¹¹⁵ and it cannot be coincidence that references to the 'Alexandrian standard' all date to the periods when solidi were being minted at Alexandria. Other standards related to the conventions of buying and selling gold coins. The 'public standard' might have represented the theoretical high weight and purity of the idealised solidus while

106 See Hendy 1985: p. 344 ff.

107 *Cod. Theod.* 12.7.1.

108 *Cod. Theod.* 12.6.12.

109 *Cod. Iust.* 10.73.1.

110 *P.Micha.* 42, of AD 566.

111 *Cod. Theod.* 9.21.7.

112 *Cod. Theod.* 9.22.8.

113 e.g. *P.Oxy.* 154.

114 For discussions of the standards see West and Johnson 1944: pp. 140-156.

115 *P.Lon.* 1720 of AD 549.

the 'private standard' represented the inclusion of the surcharge when private individuals purchased gold coins. We might picture this as something like the difference between the purchase and selling price of a gold sovereign or Krugerrand in Britain today.

The practicalities of different standards coexisting sounds chaotic. For example, a late sixth century contract tells us that an overseer received his salary in gold on the private standard but had to pay an entrance fee in gold on the Alexandrian standard.¹¹⁶ The actual ratios were simple, but modern translators and editors have usually overlooked the distinction between pure and applied mathematics. For example, one text allows the calculation of three ratios for the public:Alexandrian standards.¹¹⁷ The editors calculate these as 92:93, 129:130 and 444:447, but such ratios, though mathematically precise based on the numbers in the text, are impossible day-to-day working formulae. A closer look shows that each ratio is, with accuracy to the nearest 1/6th of a carat, 144:145. This is 1/6 of a carat per solidus, the public:Alexandrian ratio known from other sources.

From about the time that the Alexandrian mint began to mint solidi, we find gold coins openly used as raw material for jewellery in Egypt. The maximum price edict of AD 301 established the solidus as worth the same, weight for weight, as bullion. In a letter, Paniskos tells his wife to order anklets for their daughter to be made from three solidi.¹¹⁸ In about the fifth century AD, the goldsmith Martyrius pleaded his honesty and said: 'By god, If you give me a solidus I shall not return the ounce a carat short' (see ch. 5).¹¹⁹

The letter from Martyrius continues: 'Moreover, I did many jobs for your brother ... not one (carat?) short except for the *apousia* from them. Enquire again from the goldsmiths of Herakleopolis what *apousia* is.' Clearly the goldsmith is defending his honesty and his appeal to the goldsmiths of Herakleopolis shows that *apousia* was a normal phenomenon that related to some type of weight deficit between the gold given or purchased and the gold received back. In the Roman period *apousia*, as we saw, quite possibly meant the charge on the public purchasing gold from the state. Gold coins freely circulated in the Byzantine period, but a variety of accounting procedures were still used to define premiums and shortfalls. We can probably suppose that *apousia* was either still such a state levy or some sort of an expression to cover the difference between the actual weight of the finished jewellery and the theoretical weight of the solidi provided as raw material. It is also possible that *apousia* represented some type of official debasement of the gold, in which case a connection with the various standards is a possibility.

116 *P.Oxy.* 2239.

117 See notes to *P.Oxy.* 154.

118 *P.Mich.* 218.

119 *P.Vindob.* G 16635 + 25981 + 28594.

An account of the expenditure for making a gold crown for Licinius in AD 316-18 also mentions *apousia*.¹²⁰ 'For the price of gold used to make up the *apousia* of the same ...' The expression 'make up' again suggests some shortfall. The *apousia* is quantified by weight of gold (14 grams, the crown weighed 426 grams) and was paid for at the same gold price as the rest of the gold used. The *apousia* was thus almost 1/30 (possibly 1/32 rounded up to the nearest gram) and was far greater than the cost of workmanship which was only 1/370 of the cost of the gold!¹²¹ The calculation of workmanship in terms of denarii per ounce of gold is paralleled in other texts, such as Diocletian's price edict, and we might expect the *apousia* to be calculated on a similar basis. *Apousia* is so much greater than the workmanship that if loss in manufacture was meant, the potential for fraud would have been irresistible.

With the state accruing gold by purchase and taxation on the one hand, and the populace demanding gold for trade and conversion into ornaments on the other, it is hardly surprising that there was enormous inflation in the gold price relative to the copper coinage during the fourth century. This is reflected in a fourth century letter found at Hermopolis: 'if you find solidi to buy, buy all the money (you can)'.¹²² As Jones has pointed out, the inflation in gold price probably did not worry the upper classes whose 'capital consisted of land or gold'.¹²³ According to *De Rebus Bellicis*, about the time of Constantine, the houses of private citizens were filled with gold. As Hendy notes: 'a claim supported by the nature and quality of many surviving artifacts in the precious metals'.¹²⁴

All this gold probably derived from the reserves of Constantine's defeated rivals (Maxentius and probably Licinius), the confiscation of pagan temple treasures (in c. AD 330), and the institution of new taxes in precious metals.¹²⁵ The fourth century author of *De Rebus Bellicis* says that: 'When the gold and silver and the great quantity of precious stones stored up in the temples from ancient times reached the public, it kindled every man's desire for giving and possessing'.¹²⁶ Precious metal seized from Christian churches might also have gone into circulation since we hear of Diocletian's seizure of church valuables in AD 304.¹²⁷ In AD 374/5 it was necessary to forbid merchants to sell gold to barbarians which implies that merchants would have gold to sell and that, presumably, non-barbarians were allowed to buy it.¹²⁸

120 *P.Oxy.* 3121.

121 See Rea 1986: pp. 79-80.

122 Rees 1964; no. 11.

123 Jones 1974: p. 225.

124 See Hendy 1985: p. 202.

125 *Ibid* p. 284.

126 *Ibid* p. 285.

127 *P.Oxy.* 2673.

128 *Cod. Iust.* 4.63.2. A similar restriction on the export of gold is found in the tenth century *Book of the Prefect*.

The Codex Theodosianus of the mid-fourth century, prescribed capital punishment for anyone found melting down silver or debased silver coins,¹²⁹ but there is no certain evidence that the melting down of gold coins was an offence. The texts that mention coins used as raw material for jewellery do not suggest that the practice was abnormal.

My insistence in associating coinage with gold availability in general is a reflection of ancient thought. Silversmiths (*argyropрати* or *argentarii*) were one of two main classes of banker during the later Roman and Byzantine periods. The *Book of the Prefect* offers a picture of tenth century Constantinople, not fourth to sixth century Alexandria. Still, it gives an interesting view of the goldsmith's trade. The part dealing with banking tells us that the *argyropрати* could 'purchase those things which are appropriate to them: that is, gold, silver, pearls and precious stones.' Rules applied to goldsmiths are also included in the section on banking. In a seventh century document we hear of a banker who had a silversmith under contract.¹³⁰

The Codex Theodosianus ruled that 'solidi collected on whatever account should be restored to a solid mass of refined gold'.¹³¹ Such ingots would help storage and security but were probably not intended for private use. A group of gold ingots, perhaps eighteen, are said to have been found at Abuqîr at the beginning of the twentieth century (fig. 46).¹³² The circumstances of the find are less than certain, but reports of the accompanying coins indicate a late third to early fourth century date. The ingots are bars eighteen to nineteen cm long, stamped and counter-struck with the names of various officials. One bar bears the single stamp *BENIGNV COXIT*, 'refined by Benignus', and two other bars have *ACVEPPSIG* counterstamped over what appears to be ...*ANTIUS... (P)ROBAVIT*.¹³³ *ACVEPPSIG* might be read as either *Ac... Ve...p(rae)p(ositi) sig(naverunt)* or *A(ulus) C(aecilius) Ve(stinus) p(rae)p(ositus) sig(navit)*.¹³⁴

129 *Cod. Theod.* 9.23.1, 9.21.6, 9.21.1.

130 Georgius Presbyter, *Vita S. Theodori Syceotae*, ch. 42. Translation in Mango 1986: p. 143-5.

131 *Cod. Theod.* 12.6.12

132 For bibliography see notes to *BMCI* 3148 & 3149.

133 *BMCI* 3148 and another from the collection of Pierpont Morgan, in Sotheby 1954: no. 1467.

134 See notes to *BMCI* 3148 and the references cited there.

Possibly the bars left the refiner's workshop in the rough state as shown by the Benignus ingot and these were then melted down and recast in the more finished form, which were then stamped by the assayer (*probator*) and counter-stamped by the mint supervisor. The bar with just the refiner's stamp is certainly rougher than the one with the more comprehensive stamps, but the similarities of shape and length do argue against two different stages of melting and recasting. One British Museum ingot has a further stamp *ERM(O)U* in both Latin and Greek, which probably meant the town of Hermopolis.¹³⁵ The Abuqîr ingots have a standardised weight of around 342 to 345 g. which is well over a Roman pound and bears no precise relationship to the weight of the solidus.

The only other group of stamped gold ingots is from the Sirmium mint found at Haromzeker (near Kronstadt) in Romania.¹³⁶ Another ingot from the same mint was supposedly found at Cumae in Italy.¹³⁷ The Sirmium ingots bear a stamp with the heads of three emperors, probably Gratian, Valentinian and Valens. Some of the ingots bear a Christogram within one of the official stamps,¹³⁸ and one ingot is stamped *BASSVSIVSTA DIGMAPROBAVI* - 'Bassus has tested and approved'. The Sirmium ingots have a wider weight range than those from Abuqîr. For example, the complete British Museum ingot weighs 476.15 g., the Naples ingot weighs 375 g., while three examples sold in the Sotheby Palace Sale weighed 373.5, 544 and 588.5 g.¹³⁹

The overall picture in the Byzantine period in Egypt is of a fairly open market for jewellery with the goldsmith able to buy coins, probably bullion, and worked gold and convert it into vessels or jewellery for sale.¹⁴⁰ Nevertheless, sixth and seventh century goldwork is far commoner from Egypt than fourth or fifth century work. This gives some plausibility to Burchalter's suggestion that the fourth century state requisition of precious metals might have made it harder for goldsmiths to obtain raw materials.¹⁴¹ Certainly the huge inflation in the gold price during the fourth century would have affected the jeweller's business.

The early Christian writers, of course, tried to discourage love of gold and silver but even they had to admit the special qualities of the eternal metal and used it to enclose holy relics.¹⁴² Eusebius around

135 *BMCI* notes to 3149.

136 For examples and bibliography see *BMCI* 3146--7. There are also four of these ingots in the Rotunda Museum of the Bank of England, London.

137 Naples Museum no. 126459 = Siviero 1959: no. 520. The stated provenance might be incorrect.

138 e.g. *BMCI* 3146, 3147 and the Naples Museum example.

139 *BMCI* 3146 and Sotheby 1954: nos. 1468-70.

140 For the purchase of gold from the guild of goldsmiths see, for example, *P.Oxy.* 3791.

141 Burchalter 1979: p. 82; Rea 1974; Burchalter cites several early fourth century papyri - *P.Oxy.* 2106 and 3120; *PSI.* 310; *P.Lond.* 315.

142 Walsh 1966: letter no. 31.

AD 300 refers to baptised Christians as 'the pure souls that have been washed like gold by the divine bath',¹⁴³ and other Christian writers described God as the 'highest refiner' and Christian souls as gold 'proved in the furnace of this world'.¹⁴⁴

The Byzantine period - composition

Byzantine solidi minted in Constantinople retained a consistent fineness of between 96 and 98% gold from the time that Constantine minted his first solidus in AD 312 through to the Arab invasion of Egypt in the seventh century.¹⁴⁵ It has been suggested that this figure 'probably represents the maximum level of purity which could be achieved at that period',¹⁴⁶ and indeed the contemporary Byzantine view was that solidi were made from 'pure, unalloyed metal'. However, on the basis of published analyses, Byzantine gold coinage is generally slightly less pure than Roman coinage. A fourth century gold pendant in the Louvre (probably from North Africa, but not Egypt) contains a medallion of Constantine which is of very high purity - over 99% gold (with 0.7% silver and 0.2% copper).¹⁴⁷ Its elaborate pierced-work mount is only about 92.8% pure (it has 6.5% silver and 0.7% copper). This must suggest that the Byzantines were quite capable of refining gold to over 99% purity, but deliberately debased much, if not all, of the gold used for ordinary coinage and jewellery.¹⁴⁸ Whether this debasement was carried out by the banks or by the goldsmiths cannot be determined at present.

Byzantine gold items seem to have compositions in the same range as the solidi often enough to suggest they were made from solidi or from other officially issued gold bullion.¹⁴⁹ The gold cross from Alexandria in fig. 55, of about AD 600, is 95% gold - near enough the same as the solidi. On the other hand some Byzantine jewellery is less pure than the Constantinople solidi. Quite a lot ranges around 91% or 92% pure, such as the medallion mount mentioned above, and it has been suggested that this was a deliberate attempt to produce 22 carat alloy (that is, 91.7% gold).¹⁵⁰ The earrings in fig. 56 and the bracelet in fig. 488 are also of about this purity. Other Byzantine gold objects can have purities of under 90%.¹⁵¹

Gold jewellery of the fourth and fifth century from the far west of the Empire often ranges around 95-97% and that in the Thetford treasure had a mean purity of about 93.3%.¹⁵² Deliberate debasing

143 Eusebius, *Hist. Eccles.* 10.4.64.

144 See for example Walsh 1966: letters nos. 23, 32, 44 etc.

145 Metcalf 1972.

146 Oddy and la Niece 1986.

147 Delbourgo and Lahanier 1980: p. 13. See also Christies 1970: no. 199.

148 A medallion of Gallienus in private hands had a similar very high purity while its gold mount was of noticeably lower purity.

149 Oddy and la Niece 1986.

150 *Ibid.* Analyses carried out by me confirm this pattern.

151 *Ibid.*

152 Johns and Potter 1983: p. 59.

could be for economic or practical reasons/additions of a small amount of silver renders the gold harder wearing without affecting its ease of workability to any great extent. /;

The alloying of gold seems to have been accepted as a fact of life by the Egyptians. In the fourth century AD, Callimachus' play *Aetia* was known in Egypt. In one passage a wrong marriage is referred to as 'mixing silver with lead' but the right marriage as 'mingling electrum with shining gold'.¹⁵³

WEIGHTS AND VALUES

The Ptolemaic period

Dowry lists that describe gold jewellery with weights or values are scarce before the Roman period and there are few Ptolemaic equivalents to the Roman and Byzantine documents that deal with changes in the gold prices. The best guide that we have is some knowledge of the gold:silver ratios and the known, and consistent, weight of the gold octadrachm at about 27.7 g.

A papyrus of the 28th or 29th year of Philadelphus, about 255 BC, says that the gold octadrachm was nominally worth 100 silver drachmae but actually exchanged at 104.¹⁵⁴ This gives a nominal ratio of 100:8, or 12.5:1, and an apparent market ratio of 13:1. In fact, the octadrachm did not weigh exactly the same as eight silver drachmae and the real rate was thus about 13 1/3:1. The same Zenon papyrus also gives the rate for the old pentadrachm of Soter and Philadelphus as 66 2/3 silver drachmae which is again 13 1/3:1, a ratio traditional in the Persian empire until the conquests of Alexander. The purchaser thus paid a supplement equal to the difference between 13 1/3 and the nominal 12.5. This happens to be 1/16th, a fraction that occurs again and again as a service charge or premium on the purchase of gold.

In most parts of the Hellenistic world the gold:silver ratio had changed to 10:1, quite possibly as a result of the dispersion of the treasures of the Persian empire.¹⁵⁵ Thus, Egypt had its own national valuation of gold which was higher than its neighbours. This higher gold value in Egypt might have meant that the mines in Egypt were not very productive, and certainly shows that Egypt wanted to keep the gold it had, and attract more from outside. According to Lorber, the Ptolemaic octadrachm with its unique weight standard 'was only one of several measures designed to prevent coin from leaving the Kingdom.'¹⁵⁶ Traders bringing gold to Egypt could sell it for more silver than in other countries. This would have led to a drain of silver from Egypt which might have been a main cause of

153 *P.Oxy.* 1011.

154 *P.Cairo Zenon* 59022.

155 Préaux 1939: p. 269.

156 Kimbell 1983: p. 216.

the debasement of the silver coinage and the change to a standard reckoning in copper, rather than silver, from about the time of Ptolemy V onwards (c. 204-181 BC).

The introduction of the *tetartion* or 'quarter' as a weight unit seems to coincide with this change from a silver to copper standard. The quarter was equal to 1/16 of an octadrachm (*mnaieion*) and thus about 1.75 g. - and became the standard unit for weighing jewellery in Roman Egypt.¹⁵⁷ With the switch from silver to a copper standard, a weight based on gold would have been preferable to one based on copper with its fluctuating and low value. The debased Ptolemaic tetradrachms were only 25% silver. Thus, at the nominal silver:gold ratio of 12.5:1, 400 tetradrachms would equal a gold octadrachm. This gives a value of about 25 debased drachmae per quarter - a figure in line with the known Roman period values.

One of the earliest references to the quarter weight is in a papyrus of the second century BC.¹⁵⁸ Here the value of the gold quarter seems to vary between 900 copper drachmae and over twice this amount. This variation must reflect intricacies of business, banking or nomenclature of which we are unaware. These values are all low, based on what we know of the silver:copper ratios of the Ptolemaic period. It is also noteworthy that the terms used in the papyrus for gold and silver are gold *asemon* and silver *asemon*. *Asemon* means 'unstruck' or 'uncoined' for the significance of which see the appendix at the end of this chapter.

The old *kite* weight was sometimes used in documents right through the Ptolemaic and Roman periods. 2 *kite* were the equivalent of 1 stater (1 *deben* = 10 *kite*). One use of *kite* to describe silver jewellery in a demotic papyrus of the Ptolemaic period was given in ch. 2.

Despite the scanty surviving documents from the Ptolemaic period that give weights of jewellery, we must assume that recording weights was a normal procedure as it was elsewhere in the Greek world. The weights of Ptolemaic jewellery might be expected to fall into certain categories. For example, the weights of the gold bracelets from the Tûkh el-Qarâmûs hoard are as follows:

Heavy Herakles bracelet 354 g. (fig. 21)
 Heavy snake bracelet 356 g. (fig. 443)
 Sphinx bracelet 1.123.5 g. (fig. 467)
 Sphinx bracelet 2 129 g.
 Horned lion-griffin 1 177.6 g. (fig. 466)
 Horned lion-griffin 2 178.1 g.

157 The most recent discussion, though superficial, of the 'quarter' gold weight, its likely modern equivalent, and ancient value is to be found in Temporini 1988. We may observe that only a German language publication would attempt to calculate likely ancient units to three decimal places of a gram.

158 *P.Tebt.* 890.

It can be seen that the two single bracelets each weigh the same as the sum of the two matched horned-lion bracelets, that is around 355 g. - about 100 drachmae.

The Roman period - weight denominations

From Augustan times until the late third century AD, gold jewellery is nearly always described by weight rather than value. The denominations are those of the Ptolemaic period, namely a mnaieion composed of 16 quarters. This relationship is defined in various metrological papyri,¹⁵⁹ and can also be calculated from mathematical relationships in papyri. For example, one of the latest papyri to use mnaieia and quarters, lists jewellery which adds up to 20 1/2 quarters and was totalled at 1 mnaieion, 4 1/2 quarters.¹⁶⁰ This papyrus dates from AD 260.

There is little evidence that the Roman pound was used in Egypt to weigh or record gold, even officially, until the time of Diocletian's reform, although one first century papyrus seems to describe one jewellery item in terms of its weight in ounces.¹⁶¹ Gold is also defined in pounds weight in an inscription from Philae of AD 252.¹⁶²

The Ptolemaic octadrachm was termed a mnaieion because it had the same value as a mina of silver. One papyrus confirms that the mnaieion was equal to 8 drachmae,¹⁶³ and we know that the octadrachm coins, and thus the mnaieion, weighed about 27.7g. This is, of course, remarkably close to the 27.3 g. (24 grams) of the Roman ounce. In theory, 8 drachmae made 1 ounce and the papyrus just mentioned actually equates the mnaieion with a Roman ounce. Perhaps, throughout the Roman period, the mnaieion was just a name for the Roman ounce when used to measure gold.

Stones or pearls were excluded from listed jewellery weights. An example of AD 260 lists: 'a pair of earrings with 10 pearls weighing apart from the pearls 3 quarters'.¹⁶⁴ This confirms that accurate weight records must have been made at the time of manufacture. If a gold weight had to be determined for an item of jewellery already set with stones, or combined with another material, only an educated guess could be made. An inventory of the third century AD describes 'a pair of rope patterned [or reeded?] bracelets [or anklets] inlaid with stone, of common gold, estimated at 2 1/2 mnaieia'.¹⁶⁵

159 e.g. *P.Oxy.* 3457; *P.Oxy.* 9, verso.

160 *P.Oxy.* 1273.

161 *PSI.* 730.

162 Griffith 1937: Ph. 416.

163 *P.Oxy.* 3456.

164 *P.Oxy.* 1273 AD 260.

165 Crawford 1955: no 18.

Silver jewellery is described in terms of the drachm weight, for example '2 silver bracelets of a weight of 8 drachmae of good quality silver'.¹⁶⁶ The metrological papyri tell us that there were 8 such drachmae to the ounce and 4 drachmae to the stater. This makes the stater, at half a Roman ounce, equal to the Ptolemaic tetradrachm.

The smallest weight units in lists of jewellery are halves of quarters but the metrological papyri define smaller denominations - the thermos and the carat, which was half a thermos. The carat weight does not seem to have played any part in the day to day recording of jewellery during the Roman period but, since it was well under 0.2 of a modern gram, this is hardly surprising.

The number of carats per mnaieion apparently varied between 128,¹⁶⁷ or 192.¹⁶⁸ Presumably the carat began as 1/24th of the drachm (192 carats per mnaieion) but then, with the abandonment of the Egyptian coin standards, and indeed silver coinage itself, the carat was redefined as 1/24th of the solidus. The value of 128 carats per mnaieion in two of the papyri is unexpected but, since other figures in the same papyri also seem to be 1/3 under the expected values, the papyri might have had some special purpose. One of these papyri also equates a mnaieion with 4 'gold pieces'.¹⁶⁹ If we hypothesise that at some point in the Roman period the quarter was understood to be one quarter of an aureus, the mnaieion would have to be redefined as 4 aurei. On this basis the Neronian aureus at 45 to the Roman pound - introduced in AD 63-4 - would give a quarter that weighed about 1.82 g. The next main change - to the weight-reduced aureus of Caracalla, at 50 to the pound - would give a quarter of 1.63 g. As will be seen below, these weights do occur in jewellery more often than chance would suggest. /a

Since jewellery is carefully recorded by weight to the nearest half quarter, we might expect certain weight patterns. Some relationship to the mnaieion could be reflected in two large rings in the British Museum, of typical Romano-Egyptian type (figs. 57 and 58) They weigh 14.12 g. and 13.93 g. which would be close to half of a mnaieion. A silver ring with a Sarapis bust, also in the British Museum, weighs 3.36 g. - exactly one drachm. Many classes of gold jewellery fit into precise weight relationships that can hardly have been coincidental.

The Roman period - values

Gold jewellery was usually valued in terms of weight. A marriage contract of AD 260 states that in the event of separation, the gold jewellery would be returned 'in accordance with the amount of weight'

166 *P.Mich* 121.

167 *P.Oxy.* 3460 of the second or third century AD and *P.Oxy.* 3455 of the third century AD.

168 *P.Oxy.* 3456 of the third century AD.

169 *P.Oxy.* 3455.

while clothes would be returned 'at valuation'.¹⁷⁰ This would make sense if the gold price was fixed. Regulation 106 of the *Gnomon of Idilogus*, which dates to the early years of Roman rule in Egypt, ^{the} regulated the rate of exchange between silver and copper, and a similar control of gold prices would seem inevitable.¹⁷¹

From Augustus to Septimius Severus there was probably a fixed relationship of 25 denarii to 1 aureus throughout the Roman Empire, even though the aureus changed from 42 to the pound under Augustus to 45 to the pound under Nero. For example, the Talmud tells us that a silver 'denar' was worth a twenty-fifth of a gold 'denar'.¹⁷² In AD 73 we are told that in Egypt 1 aureus was worth 104 drachmae, 1 obol.¹⁷³ We can equate 4 drachmae, a tetradrachm, with the denarius,¹⁷⁴ so we have near enough 25 denarii per aureus. The extra 4 drachmae, 1 obol might represent a surcharge or premium of 1/24. If we can equate one mnaieion with an ounce, and if we assume a constant 25 denarii or 100 drachmae to the aureus, one quarter (i.e. 1/16 mnaieion) would theoretically be worth 22 drachmae when there were 42 aurei to the pound, but 23.44 drachmae after AD 64, when there were 45 aurei to the pound. The former figure best compares with the gold prices given in the papyri.

Gold values are normally given in the papyri in terms of drachmae per mnaieion and the number of drachmae is almost invariably divisible by 16 which suggests an underlying price 'fix' in terms of the quarter.

Jewellery values in the papyri, up to the mid-second century AD, are as follows:

- a) AD 36 - 20(?) drachmae per quarter. This is a 'valuation' of a pair of earrings. If we can assume that the earrings weighed 0.5, 1, 1.5, or 2 quarters and that the value was a whole number of drachmae per quarter, then the value given is the most likely one.¹⁷⁵
- b) AD 93 - 18 drachmae per quarter. This is a loan which values the mnaieion at 288 drachmae.¹⁷⁶
- c) AD 97 - 22 drachmae per quarter. This is the price of gold in a purchase.¹⁷⁷
- d) AD 127 - 20 drachmae per quarter. This is a dowry list,¹⁷⁸ where a value of 1680 drachmae is made

170 *P.Oxy.* 1273.

171 Milne 1930: pp. 169-70. The *Gnomon* is published as *BGU.* 1210. According to West (1941), an AD 149 version of the *Gnomon* does define maximum exchange values of gold in terms of copper.

172 *Baba Mezi'a*, 44-45.

173 *SGU.* 5814, 5816.

174 The weight of the Romano-Egyptian tetradrachms fluctuated but the silver content remained pretty much constant and was near enough that of the Roman denarius.

175 *P.Oxy.* 267.

176 *CPR.* 12.

177 *BGU.* 1065.

178 *P.Oxy.* 496.

up of: 'A pair of (bracelets?) weighing 3 mnaeia 14.5 quarters, a brooch or pin of 8 quarters, a ... of 6 quarters, a chain with 3 green ... of stones, the gold weighing (7).5 quarters, making altogether on the standard of Oxyrhynchus 5 mnaeia (4) quarters.' The restored figures are the only ones possible, assuming there was a round number of drachmae per quarter. This would make a price of 20 drachmae per quarter.¹⁷⁹

The figures do fit into a somewhat logical pattern. The loan value, which we would expect to be the lowest, is 18 drachmae per quarter, the valuations are both 20 drachmae per quarter, while the sale price, which we would expect to be the highest, is 22 drachmae per quarter. It is unfortunate that we do not have more figures to work with to test whether or not this is coincidence. There is, of course, the other possibility that various prices represented localised or short-term variations unknown to us.¹⁸⁰ A selling price of 22 drachmae per quarter is the same as that calculated above for a 42 aureus pound. Perhaps the Augustan aureus remained the theoretical standard even after the aureus had decreased in weight.

Other gold values, or what might be gold values, in the papyri do not always fit so precisely into the patterns just given. A marriage contract of 157/8 AD has 2 mnaeia of gold jewellery 'valued' at 600 drachmae.¹⁸¹ This is close to the 320 drachmae per mnaeion of 127 AD, also a valuation, but is not divisible by 16. Three hundred drachmae per mnaeion is the same as 320 drachmae per mnaeion minus 1/16 - there are parallels for such a reduction as in *apousia*, but this may or may not be relevant here.

One papyrus, written between AD 107 and 112, tells us that gold or gold coinage had fallen from '15 to 11'.¹⁸² This passage is very difficult to explain. It seems unlikely that gold had fallen from 15 drachmae per quarter to 11 drachmae per quarter since this would be around half the expected value - and in itself a huge drop. Besides, just fifteen years later the gold price again seems to have been 20 drachmae per quarter.¹⁸³ West and Johnson interpret the passage to mean that one Roman gram had fallen in value from 15 to 11 drachmae.¹⁸⁴ This would mean a fall from 22.5 to 16.5 drachmae per quarter. This is within the bounds of possibility, but use of grams is unparalleled at this period in Egypt. Alternative suggestions are a change in the silver: gold ratio from 15:1 to 11:1, or a decrease in the value of the aureus from 115 to 111 drachmae.

179 It is interesting that Bolin (1958: p.95) gets to the same value without, seemingly, noting the common divisibility by 16.

180 We can note that the two gold prices at 20 drachmae are from Oxyrhynchus, while that of 22 and 18 drachmae are Arsinoite.

181 *P.Oxy.* 3491.

182 *P.Badeb.* 37.

183 *P.Oxy.* 496.

184 West and Johnson 1944: pp. 90 ff.

During the first and second centuries AD a legionary soldier would expect to earn about 3 drachmae per day while a simple farm labourer could earn about 1/3 drachma per day, his foreman about 1 drachma. Thus, in comparative terms, a legionary soldier could buy a reasonably good gold ring to wear with about a month's pay. A female slave would cost about the same as a pair of medium quality gold snake bracelets. The gold jewellery that Kronion received as dowry (see ch. 1) would cost the equivalent of nearly two years' wages for a farm foreman.

There is little evidence for gold prices during the later second and third centuries AD, but inflation in gold value, at least relative to the more and more debased tetradrachm, is certain. According to West, the traditional 25 denarii per aureus changed to 30 under Commodus in the late second century.¹⁸⁵ One third-century letter quotes a gold price of 1200 drachmae per mnaieion.¹⁸⁶ 1200 drachmae is still divisible by 16, and gives a gold price of 75 drachmae per quarter. The gold:silver ratio also varied during the third century AD.¹⁸⁷ The general chaos of third century coinage production, and lack of documentary evidence, prevent any clearer understanding of gold prices in this period.

A full picture of Romano-Egyptian gold values and their relationship to the local weight units will have to await further study. On the basis of the information available, one hypothesis might be that the quarter weight, originally 1/16 of the Ptolemaic gold mnaieion, was then re-defined as 1/16 of the Roman ounce. When the Roman aureus was reduced to 45 to the pound, the quarter was possibly re-defined as one quarter of the aureus. The same definition remained when the aureus fell to 50 to the pound in the time of Caracalla. This would give a quarter weight that, during the Roman period, changed from about 1.73 g, up to about 1.82 g. It then fell to about 1.64 g.

The Byzantine period - weight denominations

Diocletian's reform of the coinage ended the long life of the tetradrachm and introduced the gold solidus at 60 to the pound and which was itself divided into 24 carats. The change is illustrated by a papyrus of AD 289 which details a loan in 'Ptolemaic silver' coinage but repayment in 'new coinage'.¹⁸⁸ Not surprisingly, at this same time gold items ceased to be weighed in the old Egyptian coin-based standards of mnaieion and quarters. The latest recorded uses of these terms occur about AD 260 - 270,¹⁸⁹ and by the early years of the fourth century the use of the Roman pound and gram was universal. For example, bullion receipts of AD 307-8 give the weight of gold in grams and fractions of grams.¹⁹⁰ Another receipt of AD 308 is for gold of the 'first quality on the Alexandrine standard'.¹⁹¹ This is the first recorded reference in a papyrus to the Alexandrine standard of Byzantine gold

185 West 1941: p. 111.

186 *P.Hamb.* 227.

187 West 1941: pp. 10 - 12.

188 *P.Oxy.* 2587.

189 For example *P.Oxy.* 1273.

190 Bagnall and Lewis 1979: p. 7.

191 *P.Oxy.* 1645.

and dates from within the fairly short period in the fourth century when gold was minted in Alexandria.

The Byzantine period - values

The edict of Diocletian in 301 set the price of gold at 72000 denarii per pound and gold had a constant value whether it was in the form of ingots or coins. The edict also priced *auri neti* at 72000 denarii per pound. This term is usually translated as 'spun gold' (from latin *neo*, greek *νεω* 'to spin') without any explanation. It is just possible that gold braids and embroideries were meant, but recycled gold, is far more likely. The gold:silver ratio was set at 1:12 with 60 gold aurei to the pound, 5 solidi equalled 1 pound of silver and there were 1200 denarii to the solidus. From the same year as the edict of Diocletian, we have the sworn statement by the guild of Silversmiths at Antinoopolis confirming the prices they had charged for silver.¹⁹² These prices are in line with the edict and prove its rapid implementation.

During the course of the fourth century, the state purchased gold on the open market and a rapid and predictable inflation of the gold price ensued. The price of 72,000 denarii per pound soon increased to 100,000,¹⁹³ and then climbed to over 120,000. Clearly there could not be a fixed price for the solidus in terms of the denarius. Constantine issued a new reduced-weight gold coin at 72 to the pound and adjusted the gold:silver ratio to 1:14.4 which kept the gold coins at 5 to a pound of silver.¹⁹⁴ Even so, surviving papyri indicate that, in practice, the gold:silver ratio could fluctuate according to free-market conditions.¹⁹⁵ In AD 397 there were 5 solidi per pound of silver, before falling back to 4 solidi in 422 AD.¹⁹⁶ In AD 528 it was again 5 solidi to a pound of silver.¹⁹⁷

The gold price passed 300,000 denarii per pound by AD 324,¹⁹⁸ and within a generation or so had escalated by a factor of 1,000 or more.¹⁹⁹ To help cope with these huge figures, denarii were counted in myriads, that is 10,000 denarii units. As the end of the fourth century approached, the gold price climbed past 50,000 myriad denarii per pound.²⁰⁰ In the words of a late fourth century observer, 'everyone is looking for solidi and the price is going up every day'.²⁰¹ Although the trend was up, the

192 *P.Oxy.* 38.

193 *P.Oxy.* 2106.

194 See, however, *SP.* 6086

195 Bagnall 1989.

196 *Cod. Theod.* 13.2.1 and 8.4.27.

197 *Cod. Just.* 10.78.1.

198 *P.Oxy.* 1430.

199 See for example Hendy 1985: p. 465; Jones 1974: *PSI* 310; *Archiv. Pap.* 15 (1953), 104; *PER.* 187; *PER.* 37; *SPP.* 20.96; *SPP.* 20.81.

200 *P.Oxy.* 2750.

201 *P.Oxy.* 3401.

price of gold could fluctuate. Another document of the later fourth century states 'The solidus now stands at 2020 myriads, it has come down'.²⁰² A gold price of 2020 myriad denarii would be 145,440 myriad denarii per pound - and this was apparently less than it had been! It is hard to understand how a viable jewellery industry could exist in the wake of this type of inflation in gold values, although those with gold would just become richer - in relative terms - as time went by.

Fifth century economic changes meant a slow-down in the rate of inflation. Gold coinage was now more abundant and copper and silver issues rare. Taxes and other levies were paid in gold so the state had less need to purchase gold on the open market. Gold prices of the fifth century ranged around 3800 - 4000 myriad denarii per solidus, that is 273,600 to 288,000 myriad denarii per pound.²⁰³ The values of solidi at various places are recorded and show both geographical and seasonal variations.²⁰⁴ Silver, which had also shown huge inflation in price during the fourth century, remained fairly steady at around 5 solidi per pound, 4.75 solidi for unworked silver (*argyros argos*).²⁰⁵

A gold price of 288,000 myriad denarii per pound seems to be recorded for the sixth century,²⁰⁶ but then prices started rising again but only doubled within the course of the century. Talents had been used to express gold values in the Ptolemaic period and, while such usage is unusual in the Roman period,²⁰⁷ talents are commoner in Byzantine times, particularly in the sixth and seventh centuries.

APPENDIX - The Romano-Egyptian meaning of *ASEMON*

The term *asemon* in Roman period texts is usually taken to mean uncoined or bullion silver, but the possibility that it could sometimes include gold makes a brief discussion necessary.

During the Ptolemaic period, gold is sometimes referred to as gold *asemon* and used side by side with silver *asemon*.²⁰⁸ Here the term is presumably used as a contrast to coinage. *Asemon* undoubtedly refers to precious metal in other than coinage forms. The term literally means unmarked (*semeion* means a mark, seal, proof, etc.) and is usually translated 'uncoined silver'. The controversy is due to the use of *asemon* in *P.Giss.* 47 c. AD 117 where bullion prices are given. This states that *asemon* was selling at 352 or 362 drachmae and that the price changed every day. The price is roughly in line with what we would expect for the price of a pound of silver bullion but Johnson suggested gold might be

202 *P.Oxy.* 1223.

203 *P.Oxy.* 3628 - 3633.

204 *Ibid.*

205 *Ibid.*

206 *P.Mich.* 15. 740.

207 e.g. *P.Oxy.* 1274.

208 e.g. *P.Tebt.* 890.

meant.²⁰⁹ Caley also suggests that sometimes *asemon* could include gold or gold alloys when used in the Leiden papyrus.²¹⁰

The problem has been dealt with most recently, and at length, by Bolin who, after studying the occurrence of *asemon* in various alchemical texts, and in the works of Ptolemy, the Septuagint and other sources, finds that 'asemon by itself never means "gold" but in a good many cases it means silver'.²¹¹ I have studied his examples and reasoning and, without examining the sources in depth, would agree with this conclusion. However I am not in agreement with his view that *asemon* was just a synonym for *argyron*. In the Roman period *asemon* is more likely to have been used as a contrast to *argyron*.

Up to the third century AD the debased silver coinage of Egypt was termed *argyron*.²¹² Thus, it would only be natural to need another term for the refined or pure metal. The evidence suggests that the term *asemon*, standing alone, took this more specific meaning of 'pure silver' rather than bullion in general.

In the early fourth century AD we find *argyron*, meaning silver money (i.e. debased), used to buy gold and *asemon* (i.e. silver bullion).²¹³ Such uses show that in normal day-to-day use, gold was of a high purity that was taken for granted, while silver could come either in the form of debased coins, confusingly termed *argyron*, or in pure form as bullion which was called *asemon*. Perhaps we can see some similarity to recent English usage when our cupro-nickel coinage is still commonly termed 'silver', while the word 'sterling' is used on its own to mean silver of high and approved quality. In the Talmud there is a reference to coins that were no longer legal tender, but which were treated just like *asemon*.²¹⁴ On the other hand, in another part of the Talmud, the question is asked 'what is *asemon*?' The answer given is that it was some type of token rather than actual coinage.²¹⁵

A recipe (really two adjoining recipes) in the Leiden papyrus (probably of the late third century AD) describes how to produce *asemon* by purifying the debased silver Ptolemaic staters which did, as the papyrus notes, 'contain copper'.²¹⁶ The term *asemon* is used frequently in the recipes of the Leiden papyrus and quite clearly, from the contexts, a white metal is described. Silver seems the most likely

209 Johnson 1936: p. 426, though later he seems to have changed his views - West and Johnson 1944.

210 Caley 1926: notes to recipe no. 3.

211 Bolin 1958: pp. 89-90, and in particular p. 89 n. 7.

212 Mickwitz 1937: p. 141 ff.

213 See Hendy 1985: p. 296 = *P.Cair.Isidor* 89; see also *P.Beatty Panop.* 2. 301 - 4 where *asemon* is used for bullion described by weight and *argyron* used for cash reckoned by value.

214 *Maaser Shemi* 1.2 (52D 4-6).

215 *Baba Mezi'a* 47.

216 Caley 1926: recipe no. 20.

translation - what other white metal would have attracted so many devious methods of imitation and deceit?²¹⁷ Other clues from the same source are that *asemon* was easily tarnished to a black colour - a property of silver, but not of electrum or gold.

I can find no certain indication that *asemon* ever means gold or gold alloys in the Leiden papyrus. Electrum is perhaps a possibility, but I know of few uses of electrum in any part of the Roman Empire and it was certainly not of common enough use to have spawned a host of counterfeits.

The tenth century *Book of the Prefect* refers to silver and gold workers.²¹⁸ Here the purchase of silver items, including jewellery, is described using the term *argyra* but *asemion* is employed in the context of fraud (i.e. debasement) where some inherent and specific ideas of high purity are required. Going back to my earlier parallel, we could tell a modern goldsmith that he might buy and sell 'silver' items but add that it would be illegal for him to debase 'sterling'.

To summarise then, we can say that during the Roman period the term *asemon*, though originally just meaning bullion or non-minted metal, took the specific meaning of unminted silver to act as a contrast to *argyrion* which included the very debased silver coinage. When used on its own in this way *asemon* never meant gold.

²¹⁷ Martelli 1981: pp. 173-178 seems to think that *asemon* was used in recipes instead of *argyros* to avoid legal charges connected with counterfeiting. I prefer the reasons given here.

²¹⁸ Hendy 1985: p. 252.

CHAPTER 4 - THE GEMSTONES

Clement of Alexandria told his readers that only foolish people 'rush after transparent stones',¹ but he was largely ignored. Egyptian and other societies had been admiring coloured stones for over three thousand years. The nature and sources of these have been dealt elsewhere,² this chapter will thus only give a brief survey of the more popular gems as used in Ptolemaic, Romano-Egyptian and Byzantine jewellery.

Justinian ruled that 'pebbles, gems and generally things that persons find on the seashore at once become theirs by natural law'.³ There was probably a long tradition of this type of 'finders-keepers' arrangement for commoner natural products. In the Middle Kingdom tale of the Eloquent Peasant, Khunanup, who lived in the Wâdi en-Natrûn, collected 'goodly products' of this Wâdi to barter in Herakleopolis. These included skins, woods and various types of stone.

The rarer gemstones used in combination with gold for jewellery were probably more strictly controlled by the state, but there is minimal evidence for sumptuary laws during our period. However, the Codex Theodosianus, dated AD 393, does say: 'No actresses of mimes shall wear gems ... of course, we do not forbid them to wear ... gold without gems on their necks, arms and girdles'.⁴

The most popular stone in Hellenistic times was the garnet, the best quality of which probably came from northern India. The trade in Indian, and ultimately Ceylonese, gemstones built up in Hellenistic and later times although some Indian stones undoubtedly reached the Mediterranean world as the result of contacts with the Persian empire. According to Tertullian, the writer Pherecydes (presumably Pherecydes of Athens of the fifth century BC) had described Ariadne as having a garland of gold with 'Indian jewels'.⁵

During the Hellenistic period, pearls and emeralds became popular over most of the Hellenistic empire including Egypt but, seemingly, less so in Syria and the Levant. The early Roman authors dwell the most on emeralds and pearls, and these two stones are common in surviving Roman jewellery from the first and second centuries AD in Italy, Egypt, Asia Minor and Cyprus. In Syria and the Levant,

1 Clem. Al. *Paed.* 2. 13.

2 Harris 1961; Lucas and Harris 1962; Ogden 1982.

3 Dig. 1.8.3.

4 Cod. Theod. 15.7.11.

5 Tert. *De corona*.

garnets and coloured glasses were still preferred, and emeralds and pearls were rare until the later Roman period.

The love of coloured stones increased during the Roman period. In about AD 200, Clement said that 'the stones which silly women wear fastened to chains and set in necklaces' included emerald, amethyst, peridot, jasper and *ceraunites*.⁶ Clement's list of stones is closely paralleled by a tariff list of c. AD 200,⁷ and a list of jewellery from Spain.⁸ Both of these sources also include sapphire (*hyacinthus*) and the tariff list includes *callaina* which is probably turquoise.

So far, the papyri from Egypt remain silent with regard to the valuation of gemstones. In other parts of the ancient Near East we have some information - such as the fact that coral could be worth twice its weight in silver.⁹ We can probably assume that gem materials were originally included in the maximum price edict of Diocletian, but the relevant parts are not attested in published fragments.¹⁰ However, coral seems to be listed, and various types of marble. Maximum prices are also given for hairpins made of wood, tortoiseshell and amber. Pliny certainly suggests that emeralds and pearls were worth way in excess of gold.¹¹ According to an eighth or ninth century account, the gold crosses given by Justinian to St. Sophia weighed 100 pounds, but, because of the costly stones set in them, were valued at the equivalent of 8 times this figure.¹² In the early fifth century AD, Palladius told a story that implies that the price of fine gemstones including emeralds was not fixed and that a large profit could be made by buying and selling them.¹³ The quality and provenance of a stone would affect its price, as it does today. Colour was the major factor and this is reflected in Ovid's statement: 'judge jewels or fine fabrics, a face or a figure, by day'.¹⁴ Juvenal tells us of 'a diamond of great renown made precious by the finger of Berenike'.¹⁵ This is Berenike the sister of Agrippa II, not the Egyptian queen, but no doubt similar illustrious provenances increased values in Egypt just as elsewhere. The valuation of pearl could also depend on local market conditions (see below).

6 *Ceraunites* has been translated as bloodstone (Liddell and Scott) but Pliny quite clearly tells us that *ceraunia* is a 'bright colourless stone' and 'like rock-crystal', *NH*, 37,132-4. Moonstone is another possibility, but rock crystal, moonstone and bloodstone were seldom set in gold in Roman times.

7 *Dig.* 39. See Scott 1973: vol 9, p. 23.

8 *CIL.* 3386.¹²

9 *Rash Hashanah*, 23a.

10 Giacchero 1974 gives a survey of the published texts.

11 Pliny, *HN* 37. 204.

12 *Narratio de S. Sophia*. Translation in Mango 1986: pp. 96 - 102.

13 Palladius, *Chronius and James*, ch. 6.

14 *Ov. Ars. Am.* 1. 251.

15 *Juv.* 6.

Ovid reminded his readers that a fine intaglio was once a rough and uncut stone, and Tertullian wrote that gems 'require slow rubbing that they may shine, and artful underlaying that they may show to advantage, and careful piercing that they may hang'.¹⁶ The polishing, engraving or piercing of gemstones were highly skilled processes. Pearl drillers were described as very highly skilled slaves in Talmudic writings, and the same sources make mention of angels cutting precious stones and pearls.¹⁷ Clement pointed out that 'those who practise the common arts are, in what pertains to the senses, highly gifted' and that perfect sight is best epitomised by 'the engraver of devices on seals'.¹⁸ Palladius in the fourth century AD mentions a priest who was a skilled engraver of gems.¹⁹ From the Fayûm we have mention of gem-cutters in the Byzantine period.²⁰

It appears likely that the customer sometimes provided the jeweller with the stones as well as the gold. This is indicated by a ninth century law of Basil I: 'When anyone takes a gem, marble or other material to set or carve it and breaks it, then if the damage occurred in consequence of the incompetence of the craftsman, such a person shall be liable. If however, the material was faulty he shall not be liable, unless he undertook the risk'.²¹ This must imply a high level of gemmological skill and experience on the part of the craftsman. This law also notes that setting the stone was one of the risky stages in working with gems. An early third century AD Roman law states that: 'A jewel which is inserted in the gold of a different owner ... cannot be claimed in an action on the ground of ownership, but an action for production can be brought to have them detached'.²²

PEARLS

Despite what we are told of Cleopatra's acquaintance with, and somewhat off-hand treatment of, pearls, the evidence suggests that the use of pearls in Egypt was of fairly recent introduction in her time. In the Mediterranean world, pearls first occur as a result of trade contacts with the Persian empire, but they are extremely rare before the Hellenistic period.²³

Pearls have not been found in dynastic Egyptian jewellery. They first become common in Hellenistic jewellery from Taranto and elsewhere dating from about the mid second century BC onwards but are infrequent in Ptolemaic jewellery, and only become common in Egypt in Romano-Egyptian and

16 Ov. *Ars. Am.* 3. 221 - 5; Tert. *On Female Dress*, 6.

17 e.g. *Sanhedrin*, 100 and *Baba Bathra*, 75.

18 Clem. Al. *Strom.* 1, 5.

19 Palladius, *Chronius and James*, ch. 6.

20 PKlein. *Form.* 607.813.

21 Freshfield 1928: 17.9.

22 Dig. 10.4.6 - Paulus on Sabinus 14.

23 The use of pearls in southern Arabia might date back to the second or even third millennium BC; Carter 1986: pp. 305-310.

Byzantine times (fig. 59).²⁴ A mid second century BC reference to pearls in Egypt is given in ch. 2. Pliny says that pearls for jewellery were first known at the time of the wars of Jugurtha (112 - 106 BC) and only came into common use in Rome after the capture of Alexandria in 47 BC. According to Suetonius, Julius Caesar forbade the wearing of pearls 'by those below a certain rank and age'.²⁵ In the first century AD, pearls became far more widespread and they were probably the most popular gem material in Egypt. According to Aelian, they were 'celebrated among fools and admired by women'.²⁶ In the first century AD Seneca says: 'I see pearls, not single ones designed for each ear, but clusters of them, for the ears have now been trained to carry their load.' These cluster earrings are probably of the type known from Pompeii,²⁷ but so far not found in Egypt.

The commonest use of pearls in jewellery in Roman Egypt was for earrings (figs. 198, and 222). Rings set with pearls are only popular from about the third century onwards when ostentatiousness seems to have been more important than practicality (e.g. fig. 133). Pearls were also threaded together and worn as necklets but the threads have usually long since broken and decayed. It is tempting to identify many of the spherical, white beads in mummy portraits and other representations as pearls, but white beads were made of other materials including various glass imitations of pearls, and mother of pearl. A similar observation has been made regarding the Palmyrene reliefs with their myriads of pearl-like ornaments. In fact, pearls are conspicuously absent in first and second century AD jewellery from Syria and the Levant and the lack of pearls among excavated Palmyrene jewellery was commented on by Colledge.²⁸ This absence probably reflects political considerations regarding trade and trade routes rather than a local dislike of pearls.

Pearls are common in Romano-Egyptian jewellery, particularly in the first century AD, and they are also frequently mentioned in papyri. The usual term is *pina* or *peina*,²⁹ and one papyrus specifies earrings with 'real pearls' (*alethinopeinon*).³⁰

The main sources for pearls, as quoted by Classical writers, were the Persian Gulf and India.³¹ The Red Sea is frequently given as the source of pearls in ancient literature but this - the Mare Erythrium - is not the Red Sea of present terminology but the sea all the way around Arabia, including the Persian Gulf. Ancient authorities, including Pliny, speak of the 'Persian Gulf of the Red Sea' as being the main source of pearls. The same source is said to be the best today.³²

24 For other examples of pearl-set jewellery see for example figs. 222, 326, 406, and 415.

25 Suet. *Iul.* 43.

26 Ael. *NA.* 10.13.

27 e.g. Siviero 1959: pl. 190.

28 Colledge 1976: p. 97.

29 e.g. *P.Osl.* 46; *P.Par.* 10; *P.Oxy.* 1273.

30 *P.Rain.* 7.

31 Ogden 1982: pp. 119-121. Bolman 1940 lists most of the ancient writers on pearls although we can add the Talmud, *Rash Hashanah*, 23a.

32 Smith 1972: p. 475.

No ancient authorities specifically mention pearls from the Egyptian coast of the Red Sea although pearls passed via the Red Sea ports and Alexandria *en route* for Rome. As we saw above, Pliny dates the popularity for pearls in Rome from after the time of the conquest of Alexandria. His link with the wars of Jugurtha might relate to the pearls passing across North Africa on the old Carthaginian trade routes.

Clement of Alexandria and Origen, both writers from Roman Egypt, mention pearls. Clement is brief. He merely notes that the pearls were produced in a kind of oyster, like a mussel, and that 'the highly prized pearl has invaded the woman's apartment to an extravagant extent'.³³ Origen goes into far more detail in his commentary on the parable of the merchant seeking pearls.³⁴

Origen describes both 'land' and 'sea' pearls, the former presumably what we term fresh-water pearls. According to Origen, land pearls only came from India and were 'fitted for signet rings and settings and necklaces'. Sea pearls were superior to land pearls and also came from India, 'the best being produced in the Red Sea'. The next best were from Britain and a third quality came from 'the Bosphorus off Scythia'. Origen also describes the diving for pearls and notes that 'the formation of the pearls in India require periods of time'. Indian pearls were white, 'like silver in transparency, shining through as with a radiance somewhat greenish-yellow'. A good pearl was round 'so that it is delightful to behold, worthy to be celebrated'. The mark of the best was a 'smooth surface, very white in colour, very transparent, and very large in size'. British pearls were a more golden colour and somewhat cloudy and duller in sparkle. Those from the Bosphorus were 'darker than those of Britain, and India, and perfectly shiny, soft and small' and 'not found in the "pinna" which is the pearl-bearing species of shell, but in what are called mussels.' There is little in Origen that is not found in other classical authors such as Pliny,³⁵ but the lack of mention of a Egyptian Red Sea origin for pearls by an Egyptian writer is particularly noteworthy.

In recent times the Red Sea between Egypt and Arabia has been a good, though not major, source of pearls. Ancient exploitation has usually been assumed. For example, Kunz and Stevenson refer to the modern pearl fisheries on the Dahlak Islands off Eritrea and say: 'This was the centre of the industry during the time of the Ptolemies and in the early Christian era.'³⁶ These same authorities do note that, in recent times, even the fisheries on the Egyptian coast had been in the hands of Arabs and that 'the native Egyptian has never evinced much fondness for venturing on the sea.' The lack of mention of any sources of pearl in the Red Sea off the coast of Egypt or the Sudan in the Periplus (mid first century AD) must strongly indicate that pearls were not fished there. The nearest pearl source listed in the Periplus is the Persian Gulf.

33 Clem. Al. *Paed.* 2. 13.

34 Origen, *Commentary on Matthew*, 7-10.

35 Pliny, *HN* 9.168 ff.

36 Kunz and Stevenson 1908: pp. 139 and 142.

It seems improbable that pearls existed in the Red Sea off Egypt but were ignored or undiscovered by the earlier Egyptians or Arabs. It is possible that pearls did not occur off the Egyptian coast prior to development of direct sea trade with the East. Oysters, or the trematode worm which enters the oyster and irritates it to form a pearl, might have been carried on the hulls of ships. A deliberate introduction of pearl oysters is also possible, since Pliny and Macrobius tell us that Sergius Orata was 'the first to make oyster beds in the neighbourhood of Baiae'.³⁷ This shows that oysters, if not pearls, were deliberately introduced and 'farmed' in at least some parts of the Roman world.

The one piece of evidence we have for the presence of pearls in the Red Sea off Egypt in Roman times is a dedicatory inscription found at a mining settlement in Wadi Semna. The inscription, dating to between AD 17 and 37, honours a man who, among other positions was 'chief of the overseers of the mines of emeralds (*smaragdou*), peridot (*baziou*), pearls (*margaritou*), and all the minerals of Egypt'.³⁸

Pearls were probably expensive in Ptolemaic or Roman Egypt. Pliny says that 'the topmost rank among all things of price is held by pearls'.³⁹ He actually puts them above emeralds in value, though second to diamonds.⁴⁰ Other Roman authors make frequent allusion to the huge cost of pearls but only Petronius asks: 'Why are Indian pearls so dear in your sight'.⁴¹

The value of pearls depended on their size and quality. Pliny notes: 'Their whole value lies in their brilliance, size, roundness, smoothness and weight',⁴² and Aelian correctly notes that misshapen pearls could not be recut or polished.⁴³

Various recipes were available to whiten pearls if they had become discoloured. In the Stockholm papyrus - probably a third century AD compilation of earlier recipes, and a companion text to Leiden papyrus 10 mentioned in ch. 3 - there is a recipe 'to make brownish pearls white when this is due to smoke'.⁴⁴ The pearls were to be coated with a mixture of honey water and bruised fig root: 'smear the pearls with it and let it harden. Wipe it off with a pure linen rag and the pearls will at once show their whiteness.' Another recipe advised placing the pearls in bitches' milk in a sealed vessel for forty-eight hours.⁴⁵

37 Macrobius *Sat.* 3.15; Pliny, *HN* 9.168.

38 *OGIS*, 660. See also Green 1909; Bernand 1972: no. 41.

39 Pliny, *HN* 9.106.

40 Pliny, *HN* 37.62.

41 Petronius *Sat.* 55.

42 Pliny, *HN* 9.112.

43 Aelian 10.13.

44 The best translation is Caley 1927; the recipe for whitening smoke-discoloured pearls is no. 10.

45 Caley 1927: recipe 11.

The compiler of the Stockholm papyrus also tells us that: 'When perchance a genuine pearl becomes faded and dirty through use, the Indians are accustomed to cleaning it in the following manner. They give the pearl to a rooster as food in the evening. In the morning they search for it again in the excretion and ascertain that the pearl has become clean in the crop of the bird; and, moreover, has acquired a whiteness which is not inferior to the former.'⁴⁶ The Romano-Egyptians were less patient: 'A dark pearl is made white by the following method. Give it to a cock to swallow, cut him open immediately, and you will find that the pearl has become white.'⁴⁷

The Talmud tells us that, as today, a matched pair of pearls exceeded two single pearls in value,⁴⁸ and also that the value of pearls was not fixed. When a pearl was sold, the laws of overcharging could not apply, that is, the buyer had no redress if he thought the price too high.⁴⁹ Another text explains that a pearl could be valued more highly in a town with a ready market, than in a smaller village.⁵⁰ In a story relating the finding of a pearl in a fish,⁵¹ the lucky man is told not to take it to the king, since he would probably be offered a low price, but rather to take it to the treasurers of the temple. He was warned not to quote a price but wait for the treasurers to make an offer.⁵² If the value of pearls was not fixed among Jewish dealers, we must assume that the same was true for the pearl market in general in the Hellenistic and Roman Near East. This is also indicated by Aelian who comments about 'those who trade in pearls', and says that 'many of those who make a livelihood by them [pearls] have become wealthy'.⁵³ A relief in the Egyptian tomb of Petosiris, of around 300 BC, might give us a glimpse of an early pearl or gemstone dealer (fig. 60).

Pliny notes that few pearls exceeded half an ounce in weight and that the two largest ever recorded comprised earrings which belonged to Cleopatra. She dissolved one in vinegar and drank it in order to establish a record price for a banquet. The stated value of this pearl was 10,000,000 sesterces which has been calculated as the equivalent of about 80,000 Roman pounds of gold. No pearl, especially one of such size, would dissolve so quickly in vinegar. Possibly the pearl was swallowed whole (and perhaps recovered later!) or was crushed and the suspension drunk. Crushed pearls, drunk in water, were believed to have medicinal properties.⁵⁴

46 Caley 1927: recipe 60.

47 Caley 1927: recipe 25.

48 *Baba Mezi'a*, 58a.

49 *Baba Bathra*, 77, also *Baba Mezi'a*, 56.

50 *'Arakin*, 18 and 24.

51 An unlikely finding place, perhaps the Jewish writers were not keen to admit that the hero of their story had been eating shellfish.

52 *Baba Bathra*, 133.

53 Aelian 10.13.

54 See the Talmud, *Baba Bathra*, 146.

Pearls were found in a form which required no polishing or cutting, apart from drilling. It would seem that almost every pearl was drilled, even those set in gold. In Roman times pearls tended to be drilled along their widest dimension, even with the most irregular shapes. In the Talmud there are two mentions of servants or slaves carrying out the highly skilled task of drilling pearls.⁵⁵ The very frequent mention of pearls, their working and values in the Talmud and the Bible, might suggest that the Jews made up a large part of the pearl-dealing community in the eastern parts of the Hellenistic and Roman Empires.

EMERALDS

Emeralds made their first appearance in Egypt in Ptolemaic times, although they only became common in the Roman period. This can be seen from the surviving jewellery as well as from the frequent literary mentions. Roman poets and philosophers used images of emeralds to sum up the opulence of their time. Lucretius, for example, describes how 'giant emeralds blaze out from their green depths, set in their gold bezels'.⁵⁶

Emerald is a form of the mineral beryl and some authorities insist on calling the ancient stones beryl. However, all the ancient examples that I have examined, including pale and flawed specimens from Egypt, show a weak chromium spectrum. Thus, according to gemmological convention, these stones are entitled to be called emeralds.⁵⁷

The emerald sources listed by Pliny include Egypt's Eastern Desert and 'Scythia'. Pliny mentions both Koptos and Ethiopian emeralds but these were clearly one and the same since he refers to the Ethiopian ones as 'found at a distance of twenty-five days journeying from Koptos'.⁵⁸ Pliny quotes Juba as his authority for the emerald mines of the Eastern Desert and, since Juba was married to the daughter of Antony and Cleopatra, we should expect him to be reliable. Juba died in AD 23. Strabo and Epiphanius also refer to the emeralds from the Eastern Desert.⁵⁹ The dedicatory inscription found at a mining settlement in Wadi Semna, of the early first century AD, refers to the 'chief of the overseers of the mines of emeralds (*smaragdou*)'.⁶⁰

55 *Baba Mezi'a* 47 and *'Arakin* 14.

56 *Lucr.* 4.1126.

57 *Ogden* 1982: p. 92.

58 *Pliny, NH.* 37.69.

59 *Strabo* 17.45; *Maxwell-Stuart* 1977: pp. 435-444.

60 *OGIS*, 660.

Other writers, including Strabo, give an Indian source for emeralds,⁶¹ but although emeralds do occur in northern India and Pakistan, there is no conclusive proof that they were mined in antiquity. Indeed, Cosmas who wrote in the sixth century AD, described the export of emeralds from Ethiopia to India. Strabo also mentions Arabian emeralds - again probably those from the Eastern Desert - and Clement talks of 'Milesian emeralds' with no mention of emeralds from his native Egypt.⁶²

The emeralds of the Eastern Desert are found in mica and talc schists at Gebel Sikait, Gebel Zubara and Umm Kabo (Map 2). All the areas show extensive ancient workings, both underground tunnels and open-face work on the hillsides (fig. 61). I visited the Sikait and Umm Kabo areas in 1989. There are still many signs of the ancient habitations and workings and small emeralds, though of poor quality, can be picked up in some quantity.⁶³ The emeralds occur in a soft schist, from which they can be easily separated, and are also embedded in quartz, from which they were probably less easily retrieved. MacAlister described the mines in some detail.⁶⁴ 'Along the schists at Sikait alone we visited considerably over a hundred mines, some of which took more than an hour to crawl through ... There are seven or eight groups of mines in different places within a couple of hours or so of Jebel Sikait'. MacAlister also noted how 'the extensive workings show how well organised this search was in days gone by.' and described how 'the ancients simply excavated, in the likely emerald-bearing schist, a network of long and very tortuous passages just large enough to allow the body being dragged through.' This brings to mind not only the 'deep tunnels' Strabo describes at the mines,⁶⁵ but also Clement's statement that precious stones were included in the things 'dug up by those among us who are condemned to death'.⁶⁶ MacAlister travelled from the Nile near Kôm Ombo, rather than Koptos, and, with an entourage partly on camel and partly on foot, reached the emerald mines in just fourteen days (four of which were spent mending wells), half the time that Pliny quotes as the time taken from Koptos. Even in a jeep, the mines are not easy to reach, and the journey through the harsh scenery of jagged mountains and wide, arid wâdis must have been a nightmare for the miners in antiquity.

A recent Italian expedition has described the mines and their geology in some detail and has carried out a wide variety of chemical analyses and other tests on samples of the emeralds.⁶⁷ The Zubara emeralds prove to be somewhat similar to those from the Habachtal region in Europe. Possibly this

61 Strabo, 15.1.69.

62 Clem. Al. *Paed.* 2.13.

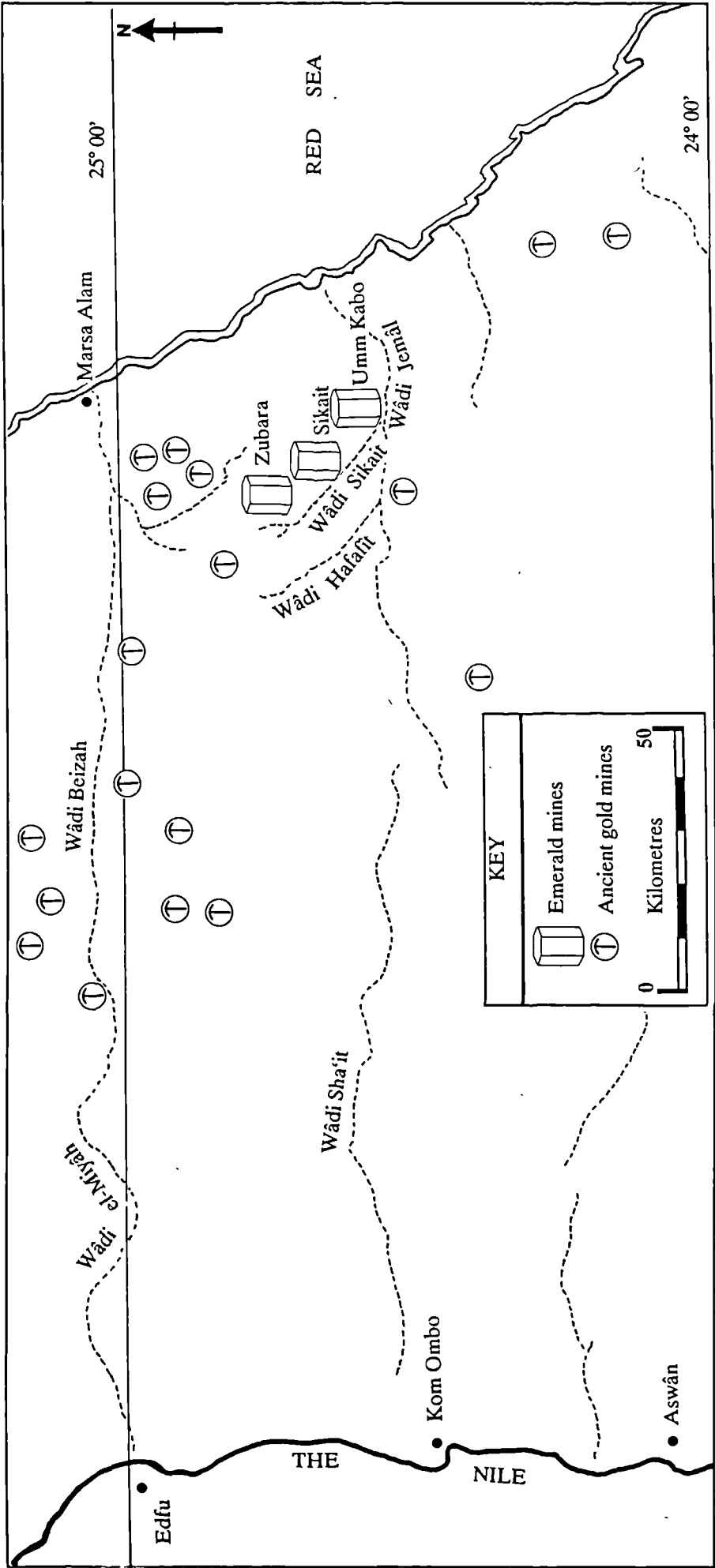
63 Murray has suggested that the Umm Kabo mines were worked only in Islamic times - Murray 1925 - but, as is noted elsewhere, there is a remarkable lack of emeralds in early Islamic jewellery.

64 MacAlister 1900.

65 Strabo, 17.45.

66 Clem. Al. *Paed.* 2.12.

67 Grubessi *et al.* 1990.



research will eventually allow a fuller understanding as to the extent to which Egypt supplied the Roman world with emeralds.

On the basis of the surviving jewellery, we can assume that the mines began to be exploited during the Ptolemaic period though, perhaps, not before the middle of the period. Possibly the mines were discovered by prospectors searching for new gold deposits. A marble dedicatory tablet of the second century BC, in Alexandria, refers to the man in charge of the precious stones from the Koptos mountains.⁶⁸ A rock-cut tripartite temple at Sikait, largely destroyed during the 1980s, is dated to the time of Ptolemy V (204 - 181 BC). Wilkinson erroneously described the eighteenth dynasty working of the mines,⁶⁹ and this has been repeated by several 'popular' writers since. The most extensive workings were certainly in the Roman period and we may assume that the emeralds continued to be mined in early Byzantine times. MacAlister reports that there were 'at least five ruined settlements in the neighbourhood of Jebel Sikait', and suggests, from the variety of buildings, that the settlements were built at different periods and by various peoples. He also refers to hieroglyphic and Greek inscriptions and other graffiti. The increasing incursions of the Blemmyes in the Byzantine period (they had even briefly held Koptos in the third century AD) affected access to the mines and their control. Heliodorus says that the Egyptian mines were productive in the fourth century AD.⁷⁰ In the early fifth century AD, Olympiodorus says he had to have special permission from the Blemmyes' ruler to visit the 'emerald mines from which the emeralds were plentiful for the Egyptian kings'.⁷¹ Cosmas' sixth century reference to the export of emeralds from the Axumites of Ethiopia to India suggests that the exploitation of the emerald mines continued in early Byzantine times but was in Axumite hands.

The absence of emeralds from early Medieval Islamic jewellery is strange, especially since early Arabic texts refer to the emerald mines, and a huge quantity of Byzantine treasures were exported to the Arab world.⁷² The Arab traveller Idrisi says that the Egyptian mines 'crowded with miners' were the only source of emeralds in the world,⁷³ which implies that India cannot have been a serious source.

Hellenistic and Ptolemaic emeralds were usually shaped and polished into rounded cabochons or sphere beads (e.g. figs. 26, 98 and 151). The former were often set in rings, while the sphere beads most frequently occur threaded on the hoops of animal-head earrings. In some cases, the Ptolemaic sphere beads still retain slight traces of the original hexagonal form and often it would seem that the hexagonal crystals were first drilled along their axis and then ground or polished to near-spherical

68 See Mahaffy 1895: pp. 394 ff.

69 Wilkinson 1878: 1, 45.

70 Johnson and West (1949), p. 110-11.

71 See Bekkers edition of Olympiodorus, *Excerpta*, p. 13a.

72 For Islamic references to the Egyptian emerald mines see Schneider and Arzruni 1892.

73 Johnson and West 1949: p. 110.

shape. Perforation before shaping is sensible since the drilling process was more liable to fracture the stone. The emeralds in Roman jewellery are sometimes similarly spherical shaped, but most are left in their natural crystal form as hexagonal prisms (figs. 27 and 62). The natural emerald crystals, as mined, were pierced and sometimes polished slightly, but more laborious working was avoided. The retention of the natural crystal form of emerald is a characteristic of Roman and Byzantine jewellery and I know of no certain Ptolemaic or Hellenistic examples. A similar chronological distinction was proposed by Brunton when describing the Late Period burials at Qâw and el-Badâri.⁷⁴ In the first century AD, the commonest use for prismatic emeralds was on the hoops of animal-head and 'S'-hoop earrings, and threaded as necklets. The latter have seldom survived intact but are often depicted on funerary masks and portraits (e.g. fig. 63). Emerald crystals set in rings are more a feature of third century and later goldwork.

The emeralds in jewellery from the Pompeii region are comparable with those from Egypt but they are employed in a greater range of jewellery types and, perhaps, the overall quality is better. This might indicate that the better emeralds were exported from Egypt and the poorer ones were retained for the local market. Better quality emeralds, used in Ptolemaic jewellery, only seem to come into use again in Egypt after about the third century AD. Emeralds in jewellery from Oplontis, near Pompeii, have been examined gemmologically but with inconclusive results regarding possible provenance.⁷⁵ All we can say with certainty is that sometime towards the late first century BC, or during the early first century AD, a huge number of emeralds, usually of poor quality, came onto the market in Egypt, probably from native mines. The emeralds in first century AD goldwork from Italy, Cyprus, and Asia Minor probably came from the same source.

Emeralds are common in the Roman period from Egypt, Cyprus and Asia Minor and they have been found as far west as Britain. They are rare in early Roman period jewellery from Syria and the Levant. We cannot be certain that Egyptian mines supplied all the emeralds that we find in Hellenistic, Roman and Byzantine jewellery but they were a major, probably the major, source.⁷⁶

The usual term for emerald in Greek and Roman texts is *smaragdus*, usually thought to derive from a Persian word and, in itself, the origin of our word 'emerald'. Pliny lists twelve varieties of *smaragdoi*. Two or three were probably emerald, while the others included malachite and other green minerals.

74 Brunton 1930: p. 27.

75 E. Butini and R. Aliprandi in d'Ambrosio 1987: pp. 69-75.

76 J. R. Harris for example, doubts Ball's assertion that Gebel Zubara and Gebel Sikait were the principal classical source of emeralds; Harris 1961: p. 104.

Emeralds are not mentioned by name in extant Egyptian papyri describing jewellery, although the Romano-Egyptians used *smaragdus* to describe the green colour of garments,⁷⁷ and as a personal name.⁷⁸ In one dowry list, we find a reference to 'fourteen unpolished stones', otherwise unspecified, which might have been emerald crystals.⁷⁹ Another dowry list, of AD 127, includes a gold chain 'with three green ... of stones' - perhaps again emeralds.⁸⁰

Cylindros (literally 'cylinder') is also used in Roman texts, throughout the empire, to describe what is usually believed to be a prismatic emerald crystal. A rare use in a Greek text is in Pseudo-Plutarch which dates to the Roman period.⁸¹ *Smaragdus* and *cylindros* are sometimes listed in the same inscriptions which suggests that the writers believed them to be separate stones, or different varieties or cuts of the same stone.⁸² Pliny uses *smaragdus* throughout his description of emeralds and only uses *cylindros* to describe prase (green quartz) that was 'very commonly cut into cylinders',⁸³ and beryls which the Indians preferred to shape into cylinders rather than gems.⁸⁴ Pliny makes no connection between his *cylindros* and *smaragdus* and quite clearly uses the term *cylindros* to refer to the shape in which named stones were cut, or occurred. Juvenal also gives no clue as to the nature of the *cylindros*, since for him it was merely a reward for a girl prepared to turn a blind eye to her husband's pursuit of other men.⁸⁵ Priscianus includes *cylindri* among the produce of India,⁸⁶ no doubt based on Pliny's account. Perhaps the *cylindri* from India were aquamarines, also a variety of beryl, but I know of no ancient aquamarines that retain their crystal form.

Emeralds possibly had an association with Isis in Roman Egypt. Crescent pendants, probably connected with Isis (see ch. 8), are sometimes set with stones between their 'horns'. These stones are always emeralds or imitations of emeralds. The Isis-crown motifs in mid to late Hellenistic jewellery are almost invariably set with emeralds or emerald-green glass. Traditionally in Egypt Isis was seen as the fertility goddess who made the fields green and she was even described as the 'green Goddess whose green colour is like the greenness of the earth'. One ring of Hermes is described in a magical papyrus as an emerald engraved with a figure of Isis.⁸⁷ St. John, various angels, the Virgin Mary and even Christ, could be depicted dressed in green, a symbol of life, in early Byzantine art. Perhaps emeralds

77 e.g. CPRI. 1.27.8.

78 e.g. P.Hamb. 10, second century AD from Theadelphia (Batn Ihrit); P.Oxy. 472, c. AD 130. See also CIL Rome, *passim*.

79 P.Mich. 434.

80 P.Oxy. 496.

81 Pseudo-Plutarch, *Fluv.*, 19.4.

82 For example CIL. 3386 from Spain.

83 Pliny, *HN* 37. 113.

84 Pliny, *NH*. 37. 78.

85 Juv. 2. 64.

86 Priscianus, *Periegesis*, 969-980.

87 P.Mag. 5, 213-300.

enjoyed a continued significance in Byzantine jewellery, as a symbol of life, a contrast and a compliment to pearls, a white symbol of purity.

Emeralds were imitated in glass and dyed quartz or other stones, and in many cases these imitations are in the form of hexagonal prisms. The Stockholm papyrus gives many recipes for the dyeing of stones to imitate emerald and other gem species.⁸⁸ Due to the fading or decomposition of the dyes with time, few if any certain ancient dyed stones have survived, but white quartzite beads in hexagonal form are extant which from their shape and their crazed state were probably originally dyed in imitation of emeralds. The crazing of quartzite by heat has always been a good way to make stones more absorbent for dyes.

GARNETS

Garnets were used in Egypt from the predynastic period but usually only for small beads and they are not found set in gold in dynastic times. Pliny quotes Archelaus, of the fifth century BC, as saying that poor quality garnets were to be found in Egypt near Thebes.⁸⁹ Various geologists in more recent times have mentioned garnets from the Eastern Desert, Aswân and further south.⁹⁰ Petrie published an alabastron from Kafr Ammar with the inscription *P..AIGYPT A..RAKINON* which quite possibly means that it once held garnets (*anthrakion*) from Egypt,⁹¹ although this type of container was not ideally suited for such contents. Garnets from Egyptian mines were of inferior quality and probably never played much part in the Hellenistic or Greek jewellery industry.

Bright red garnets, probably from India, are the most popular stone in Hellenistic jewellery although they seem to occur less frequently in Ptolemaic jewellery than in contemporary jewellery from Asia Minor or Southern Italy. One magnificent exception is a superb garnet-set Herakles knot diadem or belt presumably from Egypt now in the Cairo Museum (fig. 64).⁹² Garnets were usually employed in the form of spherical beads, or oval or round cabochons (fig. 265). Occasionally drop-shaped stones were used. It is probable that the wine- or blood-red colour of garnets linked them with fertility and Dionysos. Garnet intaglios were popular in Hellenistic rings and one series of flat-topped garnet rings, mostly with intaglio portraits of rulers, has recently been studied by Spier.⁹³ A number of these rings are said to have been found in Egypt, but these are greatly outnumbered by those from Syria and the Levantine coast.

88 Caley 1927.

89 Pliny, *HN* 37.30.

90 Lucas and Harris 1962: p. 394-5; Ogden 1982: pp. 97-99.

91 Petrie and Mackay 1915: pl. 37.

92 CM JE 67881 This ornament has no recorded provenance but came from the collection of King Fuad I and was given to the Cairo Museum in 1936. See Amandry 1953 p. 120 - 121, fig. 72.

93 Spier 1989.

Theophrastus referred to garnets from Carthage and this was repeated by various writers in the succeeding periods - for example, Petronius talks of 'carbuncles from Carthage with fire in their glint'.⁹⁴ Perhaps garnets from Kharga Oasis, or even Egypt, were meant, but, more likely, the garnets came from northern India and passed from the Red Sea across the Sahara on the Phoenician trade routes that avoided Egypt during the period of Persian rule.⁹⁵

Garnets became less popular in the Roman period in Egypt and in Italy and Asia Minor, though they were still the commonest stone in Syria and the Levant. Thus, they hold the opposite position to emeralds and pearls. Presumably this means that garnets were mined in a region of Parthian control during the early Roman period and were not part of the Alexandria trade.⁹⁶

OTHER GEMSTONES

Pliny says that Indian amethysts were the best but he also refers to amethysts from Egypt. The Egyptian amethysts are typically flawed and of a pale, almost pink, hue. Ptolemaic and Roman inscriptions and artefacts have been found at amethyst mines in the Eastern Desert of Egypt,⁹⁷ but amethysts were seldom set in gold in our period and the commonest use was for beads. The most typical are the truncated biconical beads of the late Ptolemaic and early Roman periods, and the pear-shaped beads of the sixth and seventh centuries AD (fig. 65). The truncated bicone beads appeared in Egypt soon after the end of the third century BC, and some of these stones are of remarkably good, dark colour.

Blue sapphire is extremely rare in Hellenistic times. There are no sapphires from Pompeii and I know of no certain Ptolemaic or Romano-Egyptian uses of the stone. Elsewhere, sapphires occur in Roman jewellery from about the second century AD onwards and were included in a list of materials liable for duty in Roman law of about AD 200.⁹⁸ Sapphire was not in common use until the late third, if not the fourth, century AD and was apparently not used in Egypt at all until this time. Byzantine sapphires from Egypt are typically in the form of beads, usually pear-shaped, and cabochon inlays. One cabochon ring-stone of Byzantine date is engraved with a monogram (fig. 66).⁹⁹ A stone-set ornament with 'various sapphires and pearls' is mentioned in a papyrus of AD 484.¹⁰⁰

Lapis lazuli and turquoise, are both strangely absent from Hellenistic and Roman jewellery of all areas including Egypt, although opaque blue glass is sometimes found. The Periplus mentions the import of

94 Petron. *Sat.* 55.

95 Ogden 1982: p. 98.

96 Ogden 1982: p. 98.

97 Fakhry 1947: pp. 25-54; Meredith 1956: pp. 117-20.

98 *Dig.* 39. 4. See Scott 1973: vol 9, p. 23.

99 Petrie 1927: pl. 14, 237.

100 *PSI.* 183.

both turquoise and lapis lazuli into the Roman world from northern India.¹⁰¹ This would presumably be Afghani lapis and Iranian turquoise, there is a curious lack of any mention of the turquoise from Sinai in Roman times. I know of no certain turquoise from our period in Egypt. Examples of lapis lazuli include a pair of gold earrings with lapis lazuli hawk-heads now in the British Museum. Lapis was used - perhaps reused - in Roman Egypt for gnostic gems (see fig. 33), and one magical recipe required 'genuine lapis lazuli'.¹⁰² The Stockholm papyrus, probably compiled in the third century AD, gives a recipe to augment the colour of lapis lazuli with purple dye.¹⁰³ Lapis became more popular in the Byzantine period, but was never common - an example is shown in fig. 409.

Diamond is unknown in Roman jewellery before the third century AD and I know of no examples from Egypt, even though diamonds from India probably passed through the Red Sea and Alexandria. According to Pliny, 'The most highly valued of human possessions, let alone gemstones is the *adamas*'.¹⁰⁴ The name *adamas* included our diamond among a variety of other very hard and rare minerals. The *adamas* which Pliny says came from Ethiopia, were possibly small grains of hard platinoid material.¹⁰⁵

Pliny lists several members of the quartz family which he says came from Egypt. These include a type of reddish sard, a pale greenish stone, banded onyxes of various types, red jasper(?), onyx-marble, and a blue stone somewhat like lapis lazuli but of uncertain identification. From an island in the Red Sea, some sixty miles from the port of Berenike, came *iris*, probably a quartz, possibly rainbow quartz, or perhaps just quartz crystals. The various opaque quartzes were used for intaglio rings (and some bracelet bezels) but were seldom set in other types of jewellery. One exception is the reddish-brown carnelian which was popular in the silver jewellery from Ballâna and Qustul.

Banded onyx beads with black and white, or black, brown and white, layers were popular in later Hellenistic jewellery as were glass imitations of these stones. In Egypt they are sometimes threaded onto the hoops of animal-headed earrings. Barrel or long biconical beads of the same type of onyx occur in Ptolemaic and Nubian contexts and are frequently depicted on mummy masks of the first century AD (figs. 63 and 67).¹⁰⁶ These bead necklets do not seem to be depicted on any of the painted portraits, which might be chronologically significant. Some masks show black-white-black beads while others show black-white-brown beads.¹⁰⁷

101 *Peripl. M. Rubr.* 39. See Casson 1989: p. 194.

102 Griffith and Thompson 1904: p. 81.

103 Caley 1927: recipe 15.

104 Pliny, *HN* 37. 15.

105 Ogden 1977: p. 61.

106 Brunton 1930: p. 23.

107 An example with black-white-brown beads is CM CG 33131.

Peridot, a soft, oily-green variety of olivine, occurs on the island of St John in the Red Sea,¹⁰⁸ and Strabo tells us that this source was discovered early in the Ptolemaic period and that its exploitation was under strict state control. Confusingly, the ancient topaz was peridot, not our mineralogical species topaz. The first century AD dedicatory inscription from the Wadi Semna, mentioned above, refers to the overseer of the mines of peridot (*baziou*). *Bazion* was a variant spelling of *pazion* which, with the addition of the Greek definite article becomes *to pazion*, our word topaz. Peridot was employed in some Roman jewellery, so the absence of peridots set in extant jewellery from Ptolemaic or Roman Egypt is surprising. Possibly, as with sapphires and the better emeralds, the stones were too special to be allowed onto the local market - Pliny certainly implies that peridot was very highly prized.¹⁰⁹ An exception is a peridot intaglio from Alexandria with a figure of Aphrodite Anadyomene, but I am not convinced that this stone is really as early as its attributed fourth century BC date (fig. 68).¹¹⁰ In general, the peridots that have survived from other parts of the Roman Empire are of mid to late third century date.

Organic materials, besides pearls, used in jewellery include coral which occurs in the Red Sea. Coral beads were sometimes worn in Ptolemaic and Roman Egypt. Coral set in gold or silver is almost unknown from most of Ptolemaic or Roman Egypt but coral-set earrings and other ornaments are well attested from the Nubian tombs at Ballâna and Qustul (fig. 69). The Talmud explains how coral was obtained from the Persian Gulf. Boats were sunk by filling them with sand and then they were roped to the coral. The coral was pulled to the surface when the boats were shovelled free of sand.¹¹¹ The process sounds labour intensive, but coral was worth twice its weight in silver. According to the Periplus, coral was one of the few precious materials exported to the East as part of the Red Sea - India trade. Coral from the Red Sea is usually of poor quality and the finer coral on the export market was almost certainly that from the Mediterranean. One third century list of jewellery and silver from Egypt includes precious coral described as being either unworked or unflawed - *koralliou timematos ouk elatton*.¹¹² This fine coral was valued at one hundred drachmae so it must have been of exceptional size or quality. According to Pliny, the Indians prized coral as highly as the Romans valued pearls.¹¹³ This must imply that the Romans valued coral less than pearls. The price edict of Diocletian of AD 301 seems to refer to the price for first and second quality coral, at two thousand and one thousand denarii per pound respectively.¹¹⁴ This is less than half the price of silver but silver prices had probably increased during the course of the third century.

108 Pliny, *HN* 37.108; Diod. Sic. 3.39.

109 *HN* 37.108.

110 Brandt 1968: no. 354.

111 *Rash Hashanah*, 23a.

112 *PSI*. 1128.

113 Pliny, *NH*. 32.21.

114 This is in chapter 34 of the Edict, which deals with plant products, so it possible that some reddish plant product, not true coral is meant. See Giacchero 1974.

Amber, or at least supposed amber, is sometimes recorded from our period,¹¹⁵ but to my knowledge, was never set in gold. The same is true of ivory from African or Indian elephants. A poem fragment from Oxyrhynchus, possibly written by Alcman, refers to nine maidens 'with necklets bright of carved ivory, that shone like [snow]'.¹¹⁶ We must assume that the Oxyrhynchite readers were better acquainted with ivory than with snow!

115 e.g. Petrie 1885: p. 37.

116 *P.Oxy.* 8.

CHAPTER 5 - THE JEWELLERY BUSINESS

The Classical authors, invariably male, made endless cynical comments about women and jewellery. Ovid said: 'We're dazzled by feminine adornment, by the surface. All gold and jewels: so little of what we observe is the girl herself.'¹ Horace tells us in the most direct language that fine jewels cannot compensate for lack of female beauty.² Presumably the jewellers had a less cynical view of their patrons but, even so, the possession and wearing of jewellery was thought to increase allure and status.

A large number of goldsmiths' names are recorded from Egypt, some in papyri that deal with their day-to-day business, others in more formal documents, even criminal proceedings. Unfortunately there is not a single case from our period in which we can link a known goldsmith with a surviving piece of jewellery. Neither can I identify, with certainty, any two items as from the same craftsman or workshop.³ Engraved gems and silverwork were sometimes signed,⁴ but goldwork signed by its maker is just about unknown.⁵ Some ancient goldwork bears scratched letters which might represent the workman, but there are no certain instances from Egypt. A single ball-type earring in the Rhode Island School of Art, unprovenanced but possibly from Egypt, is scratched with the letters BNA. These might be initials of workman or owner.⁶ It is tempting to identify the 'SA' chased on the inside of a Romano-Egyptian snake armlet (fig. 70), with the various goldsmiths called Sarapion, known from the period.

The official stamps, like modern hallmarks, found on Byzantine silverware, are never seen on goldwork. The closest we have are the refiners stamps on some ingots, and the very occasional stamp or initials that might have identified the maker.⁷ I know of no certain examples from Egypt. A hinge-

1 *Ov. Rem. Am.* 343.

2 *Hor. Sat.* 1.2.80.

3 The identification of precious metal workshops has begun in some areas. See for example Williams 1988; Meyers 1982.

4 see for example, Seneca, *Cons. ad. Helv.* 11.3 and Seneca, *De Tranqu. anim.* 1.7.

5 See Ogden 1982: pp. 178 - 9 and Toynbee 1951. See also Harris 1988.

6 Hackens 1976: p. 111. The earrings are mistakenly described and illustrated back-to-front by the publisher.

7 A frequently cited example is Heurgon 1958: pp. 23, 28. However, I am not convinced that this is really an intentional marking. See also Dodd 1961: pp. 3 - 5.

bezel bracelet quite possibly from Egypt, bears two identical stamps in the form of monograms of 'AV' or 'VA' (figs. 71).⁸ The bracelet appears to be ancient, but I would agree with the authors that the stamps are a later addition. Probably the stamps are the 'AV' monograms applied to imported gold items sold in Austria or Austro-Hungary in the nineteenth and early twentieth centuries.⁹

The goldsmith's trade was probably largely hereditary in Ptolemaic and Roman Egypt.¹⁰ Certainly no goldsmiths are mentioned in extant apprenticeship documents.¹¹ Diodorus notes that Ptolemaic craftsmen were forbidden to follow any occupation other than 'that handed down to them from their parents'.¹² An Edict of Constantine of AD 337 says: 'We command that the practitioners of the arts enumerated in the appended list [which includes silversmiths, gilders and goldsmiths], whatever city they may live in, shall be exempt from all public services, on condition that they devote their time to learning their crafts. By this means they may desire all the more to become more proficient themselves and to train their sons'.¹³ One demotic graffito of AD 273, in the temple at Philae, refers to 'Abaryte, goldsmith of Isis, son of a goldsmith for 303 generations'.¹⁴ Even assuming marriage at a very young age, this would date back to the early predynastic period! One letter, quoted below, shows us that two brothers were working together as goldsmiths - perhaps indicating a family tradition of the craft. On the other hand, we hear of an ex-army man becoming a jeweller with no suggestion that he had returned to the family livelihood.

The Talmud describes especially skilled slaves drilling pearls, and while the use of slaves by capitalist industries was not an ancient Egyptian phenomenon, it was probably quite common in Ptolemaic Alexandria and in later periods.¹⁵ In some trades in Roman Egypt, slaves were able to purchase their freedom by saving a proportion of the income they earned from their masters.¹⁶ In one case, in England not Egypt, we know of a slave who was set up as a goldsmith by his previous master.¹⁷ Perhaps he had been serving his master in the same capacity. The tenth century *Book of the Prefect* rules that: 'A slave intending to set up a silversmith's workshop shall be under the guarantee of his own

8 Hoffmann and von Claer 1968: no. 137.

9 Perhaps the 'AV' monogram stamp on a late Roman ring in the British Museum has the same origin - *BMCR* no 649; detail of the stamp shown in Ogden 1982: p. 178, fig. 11.4, where its antiquity was not questioned.

10 This contradicts Jones' view that urban craftsmen were never hereditary in the Eastern Roman Empire. Jones 1974: p. 408.

11 Johnson 1936: p. 388 ff.

12 Diod. Sic. 1.74.

13 *Cod. Theod.* 13.4.2. Other hereditary craftsmen are referred to in *P.Cairo Maspero*, 1, 67020, recto 1, 17 ff.

14 Griffith 1937: Ph. 252.

15 Bell 1917.

16 Lewis 1983: pp. 57-59.

17 Ogden 1982: p. 117.

master'.¹⁸ The same source also limits the amount of gold that could be purchased by a goldsmith 'whether slave or free'.

The few surviving representations of jewellers' workshops are scattered over a 2500 year period and these include the well-known New Kingdom Egyptian wall paintings (fig. 72), and the Pompeian depiction of Putti acting as goldsmiths (figs.73). Goldsmithing techniques changed very little over long periods of time and so the disparate dates of the various representations are not a problem. We can see almost identical scenes in the Egyptian and Pompeian wall paintings, and in more recent prints and watercolours of, for example, nineteenth century Indian jewellers at work (fig. 74).

The only depictions of gold and silversmiths from Egypt that date to around our period are the reliefs in the tomb of Petosiris at Tûna el-Gebel which probably dates to the early Ptolemaic period.¹⁹ The relevant scenes are two on the north wall. These can be 'read' in sequential order beginning, as is normal, with the lowest scene. First, in fig. 75, we see a block of silver being hammered out into thin sheet and a craftsman raising a vessel out of the sheet over a wooden stake. In the scene above, three workmen are chasing in the details of the designs. The next scene above is sadly missing. The lowest scene on the adjoining wall, fig. 76, shows the final burnishing or polishing. Above that, there is the weighing and recording and, over that, the workmen carry their products to a large chest. The scenes show vessels not jewellery, but the procedures would have been much the same and we might doubt if such a workshop would have specialised. The scale of vessels would make them far easier to illustrate on a tomb wall than jewellery.

One other scene in the tomb of Petosiris, in the highest surviving scene on a wall that depicts furniture making and the grinding of incense, shows some small circular objects being poured from a large jar before the watchful eyes of a scribe. One man is holding one of these objects in his fingers and scrutinising it with a care and precision I have not seen elsewhere in Egyptian or Greek art (fig. 60). Perhaps we are looking at the earliest known depiction of a pearl or gemstone connoisseur!

The processes being carried out by several goldsmiths at once in the representations, would have been carried out sequentially, by one or two goldsmiths in a less spacious workshop. There is no certain evidence of specialisation among goldsmiths, although high quality stone cutting and engraving would have been a separate craft. No doubt the simpler and repetitive tasks would have been carried out by the younger and less skilled members of the family or workshop - a normal feature of the jewellery trade in many parts of the world today.

18 Hendy 1985: pp. 251 - 3.

19 Lefebvre 1923. The most recent discussion of this tomb is Nakaten 1982.

The Pompeian representation which shows figures of Eros working in a jeweller's workshop probably gives us the best idea of what a jeweller's workshop would have looked like during our period (figs. 73 a - d). The procedures being carried out include hammering out the gold into sheet, the vital first step (a). We see finer chasing or other decorative work carried out with a small hammer and a chisel or punch (b). To the right of the workshop is the furnace which is being fed air through bellows. On the other side of the furnace, a jeweller carefully solders his work, directing the heat with the aid of a blowpipe (c). The fuel was often charcoal, as is usual today. The Talmud stipulates that charcoal should not be made on a festival since it was technically regarded as a utensil for goldsmiths.²⁰ Pliny also refers to the use of straw or chaff by goldsmiths and Macrobius tells us that: 'For all heat is not of a single and uniform nature... thus the goldsmiths use only a fire made from straw when they shape the gold, because other kinds of fire are regarded as unfit for working this particular material.'²¹

The final stage in the Pompeian wall painting shows a customer, or less likely, the owner of the workshop, being shown pieces which are weighed in front of her (fig. 73d). It was normal for jewellery to be recorded and sold by weight.

The jeweller in Greek and Roman Egypt was both maker and seller of his wares. His trade was carried out from a workshop-cum-shop that could be part of a private house, or from a separate premises. Some craftsmen carried out trade from market stalls which could be rented from the town council.²² One surviving document of 18 BC is the transfer for a jeweller's shop in Alexandria, probably sited in the agora in the city centre and regarded as private property.²³

This papyrus says:

'Agreed to cede to Evangelus, or to whomsoever he might order, through the record office at the porch, the goldsmith's workshop, the tables built for the trade, and ... belonging to him in the inner circle of the square stoa on the street (?) leading westwards'.

The expression used here for goldsmith's workshop is *ergasteridion chrusochoun*. Another document relating to a jeweller's premises comes from the village of Euhemeria (Qasr el-Banât) in the Fayûm and dates from AD 128:

From ..., registered in the ward of Horion Hiera, and from Gaius Longinus Priscus, honourably dismissed from the army as he claims, we wish you to cede to us for a further term of four years from the month of Sebastus of the present thirteenth year of our lord Hadrian Caesar the goldsmith's industry at the village of Euhemeria at an annual inclusive rental of 264 drachmae in silver, which we shall pay in equal instalments on the tenth, twentieth and thirtieth of each month ...²⁴

20 Bezah 32a.

21 Pliny, *HN* 37, 60; Macro. *Sat.* 7.16.

22 Lewis 1983: p. 47.

23 BGU 1127; Fraser 1972: p. 30.

24 *P.Lond.* 906.

This rental would have probably been the equivalent of several months' income for a skilled craftsman. Buchalter has argued that this 'rent' was in fact the fee payable to the authorities for the privilege of trading. This would be the *chrysochoike* tax mentioned in a papyrus of the third century BC.²⁵ It would have been simpler and safer for the state to levy an annual set tax rather than try to collect a tax on each transaction, although the *apousia* might well have been an additional levy paid on the purchase or sale of gold.

The dromos of a temple also provided a convenient centre for banks, goldsmiths and other merchants. The siting of banking activities within a temple is well known from the New Testament when 'Jesus went into the temple of God, and cast out all them that sold and bought in the temple, and overthrew the tables of the moneychangers, and the seats of them that sold doves.' In the great synagogue at Alexandria people 'did not, however, sit together promiscuously, but the goldsmiths by themselves, silversmiths by themselves, ... so that if a stranger came, he associated himself with his profession in order to get his livelihood.' It has been suggested that the temple might have served as huge merchants' hall with prayers and readings going on all through the day.²⁶ The description must date to before the destruction of the synagogue by Trajan following the revolt of AD 116.

Tinker-goldsmiths probably carried out repairs and adaptations to jewellery in the smaller rural communities. Certainly the letter from the goldsmith Martyrius, quoted later in this chapter, implies some scorn for the work done in the smaller villages. We hear of some itinerant craftsmen in Roman Egypt,²⁷ but not specifically goldsmiths. Itinerant goldsmiths worked in other parts of the Greek and Roman world and there were laws dealing with their control. We can get a picture of such a trader in an unflattering description by Gregory of Nyssa in the fourth century AD: 'They say he began life as a tinker and had the grimy trade quite at his fingertips, sitting under a goat's hair tent, with a small hammer and a diminutive anvil, and so earned a scanty and laborious livelihood'.²⁸ Two representations of a Mongolian silversmith, earlier this century, give an idea of such a craftsman (figs. 77).

The basic requirements of the jeweller were modest; a small anvil, a brazier or similar heat source, tongs, perhaps a crucible, hammers and a selection of small chisels and chasing tools. Such a small repertoire of equipment has remained pretty much the same in many parts of the world to this day. The island of Ndao in Indonesia is noteworthy because every man on the island is a goldsmith! The Ndaonese smith produces very fine work with simple tools and raw materials: 'An assortment of tongs, pincers and pliers, a hammer, a miniature anvil, a blowing pipe, a black assay-stone and a small

25 *P. Petrie* 117. See Buchalter 1979

26 *Sukkah*, 51b; Goodenough 1953: 2, pp 84 - 85.

27 e.g. a weaver in *P.Oxy.* 736.

28 Gregory of Nyssa, *Contra Eunomium*, 1.6.

scale make up a basic kit that can be carried anywhere. Most of the gold and silver come from old coins that still circulate in eastern Indonesia.²⁹

Even jewellers with a permanent workshop could sometimes visit a customer. Aristophanes' *Lysistrata*, first performed in 411 BC, gives an idea of the practice, despite the unsubtle double meanings:

'Consider, off we trip to the goldsmith's to leave an order: "That bangle you fashioned last spring for my wife is sprung. She was thrashing around last night, and the peg popped out of the bracelet ... if you get the time, please stop by the house in a bit and see if you can't do something, anything, to fit a new peg into the fastener of her bangle."

Many examples of Romano-Egyptian jewellery show signs of repairs and a fair proportion of a jeweller's livelihood probably derived from repair and alteration work. As Lucretius notes, 'a ring on someone's finger is made thin by wear'.³⁰

Perhaps the most intimate view we get of the day-to-day trade of a jeweller in Byzantine Egypt comes from a letter, recently reassembled from three fragments, in the National Library in Vienna. This was written by Martyrius, a goldsmith, probably of the Herakleopolite nome, to Pharion, one of his clients. A fifth century AD date has been suggested.³¹

'To my most esteemed lord brother Pharion, Martyrius goldsmith, greetings. On my return from Alexandria I discovered your wife's anklets at my place, and my brother says that you are placing me under distraint for damages. So I examined the anklets. I found that they do not even have any granulation and they show great wear. Enquire from your wife whether perhaps, since the time that I worked on them for you, someone else perhaps (?) worked on them, whether he worked on them in the village or had the work done through another goldsmith. Moreover, I did many jobs for you. Thanks be to God ... For see, ... I was not able to strengthen (?) them. If you know that we have arrived at deadlock, send word and I shall provide for you your same (quantity of) bullion. For see, your wife's armlets also, see, are not worn. They are (as?) new. I shall not return the ounce a carat short! Moreover, I did many jobs for your brother ... not one (carat?) short except for the *apousia* from them. Enquire again from the goldsmiths of Herakleopolis what *apousia* is. Please do not bring us to deadlock. I cannot finish the double armlets which I have in my possession, because I am afraid that I may suffer the same treatment. But if you want, I will finish your jobs willingly. Let me know, so that I may finish and send them back to you. And with God's help, if you come, you will have an opportunity to bring me to the holy (place?) and take a pledge of good faith from me as you wish'.

'I pray for your health for many years, my lord brother.'

It seems that Pharion had complained either of shoddy workmanship on, or a deliberate removal of gold from, a pair of anklets and was claiming damages from Martyrius. Martyrius disputed this and suggested that Pharion's wife might have given the anklets to some other goldsmith, perhaps a local tinker in the village, and that this was the cause of the trouble. Many modern goldsmiths will recognise the scenario.

29 Fox 1978: pp. 24-7.

30 Lucretius 1.311.

31 CPR. 161 = *P.Vindob.* G 16635 + 25981 + 28594.

Goldsmiths worked in most towns and many of the larger villages. Alexandria was probably an important centre - we have the references to the synagogue there, the 'lease' for the goldsmith's workshop cited above, and also references to a guild of goldsmiths in that city.³² The magnificent goldwork and the women wearing 'much gold jewellery' displayed in the procession of Ptolemy IV probably reflects the output of a local industry.³³ However, Strabo calls Alexandria the world's greatest trading-centre, not production centre, and Fraser has suggested that trade, rather than production provided Alexandria's prosperity.³⁴

Most precious metal finds in Egypt are from the Delta or further south, rather than from Alexandria.³⁵ Strabo tells us that Memphis had a population second only to Alexandria,³⁶ and Fraser suggests that much of the 'Egyptian-flavoured Greek work which is characteristic of the early Ptolemaic finds' might have been produced by Memphite goldsmiths.³⁷ The hoard of goldsmiths' tools and models from Galjub, near Memphis, is evidence for fine metalwork in the Hellenistic style being made in the area during the late Ptolemaic, or even early Roman, periods. A second century AD papyrus might refer to a goldsmith's workshop at Memphis.³⁸

Other tools from Egyptian sites include two small burnishers, one of flint the other quartz, both set in bronze handles. These were found at Tanis in a private house dated by Petrie to the second century AD (fig. 78).³⁹ According to Petrie, these implements were far too expensive for a common workman's tools, but I see no reason why they might not have been used by a gold- or silversmith.

Goldsmiths' guilds are known to have existed at Alexandria, Oxyrhynchus, Herakleopolis and probably other centres and there are frequent textual references to goldsmiths from the Fayûm right through the Ptolemaic, Roman and Byzantine periods. These range from the second century shop lease from Euhemeria quoted above, to names on humble mummy tickets.⁴⁰ In the Byzantine period we have references to goldsmiths from Herakleopolis, Antinoopolis, Aphroditopolis, Panopolis, Hermopolis, and Arsinoe. Further south in Egypt there are fewer goldsmiths recorded during our period, but enough to establish their presence at Thebes, Dendera, Philae and some other towns.⁴¹

32 *CIL* I 1307; Leontius, *Vita S. Ioann.* 22.

33 Rice 1983.

34 Fraser 1972: p. 143.

35 *Ibid* pp. 136-7.

36 Strabo 17. 1. 32.

37 Fraser 1972: p. 137.

38 *BGU* 2, 434.

39 Petrie 1889b: p. 44, pl. 12.

40 See for example the lists in Reil 1913: pp. 50-59; Johnson and West 1949, pp. 116-7.

41 *Ibid.* Also Burkhalter 1979.

The letter from the goldsmith quoted above, which deals with the repair to a gold bracelet, was a plea of innocence regarding supposed faulty workmanship. Presumably the customer had some legal recourse in the event of fraud or failure. Nevertheless, the legal obligations of goldsmiths in Roman law fall far short of modern ideas of consumer protection and fair trading. For example: 'A thing said by a vendor by way of exaggerating his wares is treated as not said, and as constituting no engagement.'⁴²

One legal authority asserted that if something sold as gold turned out to be bronze 'the sale is valid because the parties were agreed as to the subject sold, though mistaken about its composition.' Another legal authority preferred to consider the sale void, but added: 'It is different when the thing sold is really gold, but of poorer quality than the buyer thought; in that case the sale stands.'⁴³ The problem was illustrated by reference to a sale between two members of the public: 'Suppose an heir bought from his co-heirs, at a very high price a bracelet, described as being of gold but afterwards found to consist in great part of alloy. It is certain that the sale is good because there is some gold in it. For if a thing which I took to be pure gold contains an admixture of gold, that will support a sale: but if bronze be sold as gold, the sale is void.'⁴⁴ Petronius notes that a banker had a difficult profession because he had to be able to spot the brass under the silver and Persius asks: 'Can you tell the true from specious, are you alert for the false chink of copper beneath the gold?'⁴⁵ Jewellery-buying members of the public must have needed similar skills.

Support or protection for the jeweller was best supplied by a guild which would combine the function of trade union with that of a consumer protection organisation. In Martyrius' plea of innocence he appeals to the higher judgement of the guild of goldsmiths at Herakleopolis, which, as we saw, could also directly advise his client. During the time of Diocletian's persecutions of Christians we are told how a new convert wished to have a gold cross. 'He convened the whole guild of goldsmiths and silversmiths and asked them, "Can you make me an object such as I shall order?" Frightened by the man's stern looks, they consulted with each other and introduced before him their best craftsman, called Mark, saying, "He will fulfil your wish, Sir."⁴⁶

There is no evidence for goldsmiths' guilds in the Ptolemaic period but the Roman emperors allowed organised guilds in Egypt more freely than in most parts of the Empire.⁴⁷ Guilds also had the practical advantage of making taxation and other bureaucratic controls simpler to enforce. In the Roman

42 *Dig. Iust.* 4.4.

43 *Dig. Iust.*, 18.1.

44 *Dig. Iust.*, 18.1.

45 *Petron. Sat.* 56 ff; *Pers.* 5.105.

46 *Passio S. Procopii* 4. Translation in Mango 1986: pp. 144-5.

47 Johnson 1936: pp. 393 ff; Préaux 1939: p. 264.

period we hear of guilds of goldsmiths at Alexandria, Herakleopolis, and at Oxyrhynchus,⁴⁸ and there must have been similar at Memphis and elsewhere. We have no specific details of their organisation but any group of craftsmen engaged in similar work - whether in adjoining shops forming a 'jewellery district' or in a closed community like the Jewish craftsmen in the Alexandrian synagogue - would be much like a guild. The control that the synagogue might have over Jewish goldsmiths would mainly be that defined in Jewish law. For example, to avoid falsification in weighing, 'A gold balance [must] be suspended in the air three fingers from above and three fingers above the ground.'⁴⁹

From about the time that Diocletian's edict of AD 301 fixed commercial prices, and throughout the fourth century, we have several papyri which relate to commodity prices. From AD 332-6 we have a fragment of a declaration by the guild of goldsmiths at Oxyrhynchus confirming the selling price of gold and silver.⁵⁰ A more complete papyrus from a few years later, lists the selling price of gold (in the form of solidi) and bullion silver, at monthly intervals over a thirteen month period.⁵¹ The pricing of gold in terms of the solidus is further proof that this coin was the usual form of jeweller's raw material.

Successful jewellers, like the pearl-dealers in the previous chapter, could probably become fairly well-to-do members of middle-class society. One fifth century AD Egyptian letter to the goldsmith Aphungios says 'Since your charity has pleased God it is our duty to praise your honoured state, brother.'⁵² Theodosius II, in AD 436, ruled that silversmiths along with sellers of precious stones and other merchants were not allowed to attain any official position in society.⁵³ This presumably implies that they had the wealth to do just that. Money was possibly the incentive for one Egyptian goldsmith to move to Italy to work in the first or second century AD.⁵⁴ In the early third century, Severus Alexander 'imposed a very profitable tax on ... silversmiths, goldsmiths, and workers in the other crafts',⁵⁵ although an earlier edict had already included goldsmiths among those who 'pay the occupation tax'.⁵⁶

The goldsmith made his money by charging for his workmanship. We can probably assume that the gold cost and the workmanship were regarded as separate when it came to arriving at a price for an article. The official view comes from Roman law:

'If a goldsmith agrees to make me rings of a certain weight and fashion out of his own gold for, say, 200 denarii it is a question whether the contract is purchase and sale or letting and hiring. Cassius [Cassius Longinus, mid first century] says the material is bought and sold, the labour

48 e.g. *P.Oxy.*, 3768, c. AD 332-6.

49 *Baba Bathra*, 89a-89b.

50 *P.Oxy.* 3768. See also *P.Oxy.* 3624.

51 *P.Oxy.* 3773.

52 *P.Oxy.* 1870.

53 Hendy 1985: p. 242; *Cod. Iust.*, 12.57.12.

54 Breccia 1911: no. 318 p. 51.

55 *SHA. Alex. Sev.* 24.5.

56 *P.Phil.* 1, line 18-34. AD 103/7



is let and hired, but most writers hold that there is only a purchase and sale. If I provide the gold and agree to pay him for his work, the contract is clearly a letting and hiring.’⁵⁷

Two main inferences can be drawn from this debate: namely that either goldsmith or client could supply the gold and that jewellery could be ordered in terms of weight and style. If the customer supplied the gold, it is clear that the workmanship costs would be paid by the customer and must have been calculated separately. It seems most unlikely that the 200 denarii was just for workmanship since they would pay for about eight gold aureii.

The Romano-Egyptian papyrus of AD 97 which described the acquisition of a pair of spiral snake-head bracelets (quoted in ch. 3),⁵⁸ was apparently in line with Roman law. In simple terms, a client called Herodes was buying a pair of snake-head bracelets from the goldsmith Mystas. Herodes gave Mystas 2816 silver drachmae with which to buy the gold and thus needed the signed acknowledgement that Mystas owed him the bracelets. If Herodes wished to have the bracelets re-made into some other ornaments, he would still have to pay for the so-called *apousia* (perhaps a state imposed fee on the sale or working of gold) that was calculated as 1/16 of the gold value. If Herodes, either at the time of delivery or later, did not wish to keep the bracelets, Mystas guaranteed to give him back the current value of the gold less, again, the *apousia*. There is no mention of a fee for the workmanship. We must assume that the Mystas charged for his work but, since this was probably paid after completion, it might have played no part in the above contract.

A clear distinction between gold cost and workmanship is illustrated by Plautus’ play *Menaechmi* written c. 190 BC.⁵⁹ This is a dialogue, rich in innuendo, between Menaechmus and a maid:

Maid: Please Menaechmus dear, give me some earrings. Have them made to weigh 2 nummi

...

Menaechmus: Surely, you give me the gold and I’ll pay for the work.

Maid: Oh please, You give the gold and I’ll pay you back later.

Menaechmus: No, you give it, later I’ll pay you back double.

The cost to make the earrings is not disclosed, but it is clear that gold cost and workmanship were separate considerations and that the latter was relatively small. It is not easy to provide a clear suggestion of the likely level of workmanship charges that might have been involved. Mystas, for example, could probably have made a typical pair of gold snake bracelets in a day - two days at the most. If we assume he had such a job, or the equivalent, once a week, he would have had a turnover of some 140,000 drachmae per year. On this basis, a charge equal to about 1% of the gold price would have provided a reasonably good living.

Cases where the customer supplied the gold to the jeweller, as opposed to giving the goldsmith the money to buy the gold, can only be documented in Egypt after the time of Diocletian, when gold coins

57 Poste 1975: 3.147. See also de Zulueta 1946.

58 BGU 1065. See also Johnson 1936: p. 456, no. 285 and Whitehorne 1985: pp. 331 - 335.

59 Plaut. *Men.* 3.3.

became readily available. Even so, we can assume that scrap gold or damaged items were remade at all periods - even though the transaction was supposed to be recorded officially, as implied in the contract with Mystas. Plautus, again in *Menaechmi*, shows the practice outside of Egypt when the maid says that her mistress 'would like you to take this bracelet along to the jewellers. She wants you to have an ounce of gold added to it and have it remade.'

It is probable that both gold price and workmanship charges were fixed in Ptolemaic and Roman Egypt, even though the purchaser could haggle over the prices of certain classes of metal goods. A letter from Koptos of AD 117 says: 'Regarding the bronze jug with the donkey figure, I would have sent it to you straight away if it was for sale at 24 drachmae. If you wish to pay 40 drachmae, the price the dealer finally agreed after much haggling on my part, let me know.'⁶⁰

The situation regarding workmanship charges are clearer once we get into the fourth century. The maximum price edict of Diocletian, in AD 301, fixed gold prices and the charges that a goldsmith could make for his work. The simpler work was rated at 50 denarii per ounce, while the so-called subtle work was charged at 80 denarii per ounce. These charges would give the craftsmen a profit margin of only 0.83% and 1.33% respectively. Goldbeaters received 250 denarii per pound - around 0.35%. Silver is cheaper and lighter than gold and so workmanship charges were quoted differently. Silverwork was divided into 3 grades which were charged at 75, 150 and 300 denarii per pound - giving a profit margin of 1.25%, 2.5% and 5% respectively. A somewhat similar pricing system could be seen with Navaho silversmiths' work earlier this century; the normal means of payment was so much per ounce of silver. Necklets and bracelets, for example, commanded 50 cents per ounce and rings, being more fiddly, commanded 75 cents per ounce. There was an additional charge of 25 cents per each stone setting.⁶¹

After Diocletian's edict, gold prices changed rapidly - they rose some 500% between AD 301 and c. AD 318 - and working charges did not stay level with this inflation. When a crown was made for Licinius, the total goldsmith's charges of 1776 denarii worked out at 100 denarii per ounce of gold.⁶² This gave the goldsmith a profit margin of only 0.27%!

60 *P.Giss.* 47.

61 See Kunz 1917: p. 22.

62 *P.Oxy.* 3121. The exact figure should have been 1775 denarii but this was rounded up to give a total divisible by three because the cost was being divided, see Rea 1986: pp. 79-80.

CHAPTER 6 - RINGS

WEARERS OF RINGS

In Ptolemaic Egypt, signet rings were worn by priests and, perhaps, by important members of society. Decorative rings, which became more common as the Ptolemaic period progressed, were probably worn by those who could afford them. In Roman tradition, however, ring ownership had been more strictly defined. By the time of the Roman conquest of Egypt, in the first century BC, gold-ring ownership, once a knightly badge of office, had been extended to patricians, those of free birth, and special cases such as famous actors. The laws still thwarted the ambitions of some of the *nouveaux riches*, Trimalchio for example wore gilded rings, but wanted to be depicted on his funerary monument wearing gold.¹

It must have been difficult to enforce Roman laws that limited gold ring ownership in newly conquered Egypt, or indeed in other lands. Perhaps the gradual relaxation of the laws, as documented by many writers,² was prompted by the need to make the laws workable throughout the Empire. Throughout the Roman Near East, rings implied privilege and wealth. For example, the epistle of James points out the contrast between 'a man with a gold ring', who was shown respect, and 'a poor man in vile raiment' who was told 'stand there or sit here under my footstool'.³ When the prodigal son returned home, his father immediately commanded his servants to 'put a ring on his hand, and shoes on his feet'.⁴

In the last decade of the second century AD, Clement of Alexandria noted that 'now even the soldiers wish to be decked with gold',⁵ and I assume this refers to Septimius Severus's pronouncement, in AD 197, that allowed all soldiers to wear gold rings.⁶ A Roman law of the third century AD tells us that 'even women can obtain the right to wear a gold ring'.⁷ Finally, in AD 539, Justinian gave freedmen the right to wear gold rings (note the plural) but did say 'even if he has been given the right to wear gold rings (*jus anulorum*), I should say that he ought to show respect to his patron though he is qualified for all the functions attached to free birth'.⁸

In an Empire that glittered with gold rings, earrings, necklets, bracelets and other jewels, legal restrictions against their ownership are strangely out of place. It would have made more sense if the laws ap-

1 Petron. *Sat.* 71.

2 For example see Pliny *HN* 33. 4-9; Ov. *Ars Am.* 3. 445; Hor. *Sat.* 2.7.8 - 10.

3 Jas. 2:2-4.

4 Luke 15:22.

5 Clem. Al. *Paed.* 2. 13.

6 Hdn. 3.8.4.

7 *Dig. Iust.* 40. 10. 4.

8 *Dig. Iust.* 2. 4. 10. See also Justinian *Const.* 6.7.1.

plied to signet rings, rather than to rings in general. In Plautus' play *Casina*, Lysidamus offers his wife's maid 'some sandals and ... a gold ring for your finger and lots of nice things'.⁹ Thus, in theory, in around 200 BC, a Roman female slave could own a gold ring.

TERMINOLOGY

Pollux of Naukratis was a compiler of vocabularies who flourished in the second half of the second century AD. His love of words is indicated by his list of thirty-three terms of abuse to apply to tax collectors - an appealing repertoire in Egypt. The main terms that Pollux and earlier writers apply to rings are *daktulion* (or *daktulios* or *daktulidion*) and *sphragis* (or *sphragidion*).¹⁰ Rings are very seldom mentioned in papyri, but these are the terms normally used. *Sphragis* probably always applied to signet rings, while *daktulion* could probably mean any type of ring. According to Pollux, rings with 'seals or stones' (*semantra e lithous*) were termed 'device rings' (*episemous daktulious*).¹¹ Other terms for rings are rare in the papyri. A second century AD jewellery list mentions an *epikondulion*, that is a ring to be worn on the knuckle,¹² and a marriage contract of AD 260 includes a *daktulidion mikron*,¹³ translated as 'a small ring', but possibly a ring specifically for the little finger (this finger was known as *mikron*). A papyrus of the late-third century BC reads 'I have given to Harpeheimis three rings [*kirkous*] to give you',¹⁴ but perhaps these were not jewellery.

According to Pollux, a ring worn on the first finger was termed *korianon*, literally 'coriander', an uncertain allusion.¹⁵ Similarly, the ring worn on the little finger was termed simply *akares* which is slang for 'little' or 'tiny'.¹⁶ Pollux derived most of his lexicon from earlier Greek writers and even though these same two words are later noted by Hesychius of Alexandria, they have not appeared in day-to-day papyri.

The normal Latin term for a ring was *anulus* with rather unimaginative variants - such as *anulus pronubis*, a betrothal ring, and *anulus polypsephus* for a ring with 'many stones'.¹⁷ Pliny and later Isodore, in the early seventh century AD, give three other terms for rings but none has so far occurred in papyri. The *ungulus* was possibly set with a stone as precisely as a human nail to the finger, an apt description for the Hellenistic and Roman rings with neat burnished or 'rubbed-over' setting. The *samothracious* ring was gold-plated iron.¹⁸ Lucretius says: 'I have even seen some rings from

9 Plaut. *Cas.* 719.

10 Poll. 5. 100.

11 Poll. 5. 100.

12 *P.Osl.* 46.17.

13 *P.Oxy.* 1273.

14 *P.Tebt.* 760.

15 Poll. 5. 101.

16 Poll. 5. 100.

17 *CIL.* 3386.

18 Pliny, *HN* 33. 23.

Samothrace dancing ... when the magnet stone was placed beneath them'.¹⁹ A third ring-type, the *thynnius*, must have originated in Bithynia, but it has not been identified.

The parts of a ring had different names. For example, the gem set in a ring was called the *psephos*, the setting for a stone was termed *sphendone*, literally a 'sling', and the bezel itself could be called, in Latin, *pala* - a spade. Again, none of these terms has occurred in papyri.

CHOICES OF FINGERS

The nomenclature used to describe the fingers is not standardised and some confusion is inevitable. In this study the hand is considered to have four fingers plus a thumb. The finger next to the thumb is termed the first finger, so our 'wedding ring finger' is the third finger and the little finger is the fourth (fig. 79).

The enigmatic *daktulidion mikron* and the *epikondulion* are about the only words mentioned in papyri which might indicate particulars of finger position. Roman texts from outside of Egypt provide more information. For example, we hear of a ring with two diamonds on a little finger, (*digito minimo*), and an emerald set ring on the *digito summo*, either the first finger or the upper joint of a finger.²⁰ Pliny, like Pollux, describes our second finger, as the middle finger²¹ Both Macrobius and Isodore counted the thumb as the first finger. Macrobius termed the thumb *pollex* and our third finger *medicinalis*.²² Pollux is more precise, he refers to the little finger, the 'next-to-middle finger' (*paramesos*), and the middle finger. His word for the index finger is *lixanos* which literally means 'licking',²³ the thumb is either the *anticheir*, as above, or 'the big one' (*megas*)²⁴ The use of similar terms in day-to-day Roman Egypt is shown by papyri which include details of scars on the hands as a means of identification.

Wall paintings and reliefs from dynastic Egypt do not show rings in wear apart from a relief in the Fitzwilliam Museum, Cambridge (fig. 80) and its companion piece in Brooklyn.²⁵ Evidence as to how rings were worn comes from mummies and decorated sarcophagi. Williams has said that rings were normally worn on the right hand in the earlier period,²⁶ but the left hand was pre-eminent by the mid New Kingdom. For example, Tutankhamun wore just two rings when he was buried, on the second and third fingers of his left hand (fig. 81). During the twenty-first dynasty, sarcophagi can show rings

19 Lucr. 6. 1044.

20 CIL. 3386.

21 Pliny, HN 33. 6.

22 Macrobi. 7. 1.

23 The term also occurs in *P.Lips.* 12. 9.

24 Pollux, 2. 145.

25 Brooklyn 1960: no. 74.

26 Williams 1924: p. 76.

on anything from no fingers to every finger. The significance is often tantalising. For example, the mummy of Henettawy from early in the reign of Psusennes I, has no rings depicted on her outer coffin, one ring on each finger on the inner coffin and two rings on each finger on the innermost mummy-cover. Her actual mummy had two rings - both on the third finger of her left hand.²⁷ Elsewhere in the ancient Near East the prophet Jeremiah refers to the signet ring on God's right hand.²⁸ Egyptian deities, however, are not shown wearing finger rings at any point in Egyptian art history, from predynastic to Roman times. The same is true of deities in Palmyrene art.

In Iron Age Greece, most rings were functional signets worn by men and women and usually on the third finger of the left hand (fig. 82). Even in Hellenistic and Roman times, when more rings began to be worn, the third finger of the left hand remained the ring finger *par excellence*. The original popularity of the third finger of the left hand is noted by Pliny: 'It was the hand and what is more the left hand, that first won for gold such high esteem' and 'It had originally been the custom to wear rings on one finger only, the one next to the little finger'.²⁹ Classical traditions suggested that the importance of the third finger of the left hand derived from Egypt. Aulus Gellius, in the second half of the second century AD, wrote:

'I have heard that the ancient Greeks wore a ring on the finger of the left hand which is next to the little finger. They say, too, that the Roman men commonly wore their rings in that way. Apion in his Egyptian history says that the reason for this practice is, that upon cutting into and opening human bodies, a custom in Egypt which the Greeks call anatomy or dissection, it was found that a very fine nerve proceeded from that finger alone of which we have spoken, and made its way to the human heart; that it therefore seemed quite reasonable that this finger in particular should be honoured with such an ornament, since it seems to be joined, as it were united, with that supreme organ, the heart.'³⁰

The practice of wearing wedding rings on the left-hand, third finger harks back to this tradition (see below).

Pliny noted what other writers observed, that the number of rings worn increased over a period of time: 'Afterwards people put them on the finger next to the thumb ... and next it pleased them to give the little finger also a ring'. He pointed out that the middle finger 'is the only finger exempted'.³¹ This choice of fingers - including the general neglect of the second finger of both hands - matches the practice as shown by funerary masks and portraits right through Roman period Egypt. The same is true of Late Period sarcophagi and, incidentally, also on Palmyrene reliefs. There are, of course, exceptions.

27 The coffins and mummy are in the Metropolitan Museum of Art, New York. The two rings are nos. 25.3. 192-193.

28 Jeremiah 22:23.

29 Pliny, *HN* 33. 4.

30 Gell. *NA* 10.10. Much of this is restated in Macrobi. *Sat.* 7. 13.

31 Pliny *HN* 33. 6.

Some early Romano-Egyptian masks and mummy cases show rings worn on all fingers (fig. 83) and a fragmentary Roman period plaster figure of a seated man from Kharga Oasis shows him wearing rings on the second and fourth fingers of his left hand (fig. 84).³² According to Pliny, a personal signet was too important to be worn on the little finger.³³

The general avoidance of the second finger - what the Romans called the *digitus infamis* - was partly due to superstition (the same is true among the Hindus). Blood from the second finger was efficacious in certain Egyptian erotic spells,³⁴ and, in the sixth century AD, a ring placed onto the second finger was believed to cure sneezing or hiccupping.³⁵ The avoidance of the right hand was also partly due to superstition. For example, Trimalchio switched his ring from his left to right hand at a moment of apparent ill omen.³⁶ The right hand is certainly less commonly shown with rings than the left in Romano-Egyptian funerary depictions. Generally men wear no rings on their right hand and women, from the first to the third century AD, normally only wore a snake ring on the right hand - usually on the third finger.

Rings for the upper joints of the fingers are well represented in Roman Egypt. The special word for a ring worn on the knuckle - *epikondulion* - implies that these rings were recognisable as such and not just odd rings too small to wear further down the finger. At Palmyra it has been said that 'The most noticeable change of fashion with regard to finger rings in the third century AD was the wearing of them on the middle as well as the basal joints of the finger.'³⁷ Whether or not the fashion was only prevalent in Syria after AD 200, it was of far greater antiquity in Egypt and can be seen, for example, in some pre-Ptolemaic burials. In Italy we often see rings worn on the upper joints of fingers on terracotta and marble sarcophagi of the third to first centuries BC. We also hear of the practice. Trimalchio wore a ring on the little finger of his left hand and another on the top joint of the next finger.³⁸ Quintilian in the second half of the first century AD considered such wear by men bad taste. This is repeated in the writings of Clement of Alexandria, in the late second century AD, who tells us that 'men are not to wear the ring on the joint; for this is feminine; but to place it on the little finger at its root'.³⁹ As Romano-Egyptian portraits and sculptures show, his advice was not always followed (fig. 85).

32 Metropolitan Museum of Art, New York. unpublished.

33 Pliny, *HN* 33. 6. 25.

34 Griffith and Thompson 1904: *passim*.

35 Marcellus Empiricus, *De Medicamentis*, cap 17.

36 Petron. *Sat.* 15. 74. See also Macrobius. *Sat.* 7. 13.

37 Mackay 1949: p. 181.

38 Petron. *Sat.* 32.

39 Clem. Al. *Paed.* 3. 11.

Ancient gold rings were usually made to fit a particular finger. I have seen very few ancient gold rings, or indeed Medieval and Renaissance ones, that exhibit any indication that they had been modified in size. With many categories of ring, such as those of hollow sheet-gold or with enamelling, sizing would have been impossible. With solid rings, the shanks could be hammered out or a new section could be soldered in, but ancient examples of such alterations are rare.⁴⁰ Soldering would have been avoided if the ring was hollow or stone-set. If rings were usually made to a particular size, how were the necessary measurements taken and recorded?

INSCRIPTIONS ON RINGS

Hellenistic gold rings with inscriptions rather than representational devices are rare from Egypt (one ring with a monogram is discussed below) and inscribed rings are most typically of the Roman and Byzantine periods. The commonest inscriptions are wishes for the welfare of the wearer and invocations to deities. In the Roman period the inscriptions are invariably chased and are made up of lines, lines and dots, or just dots (figs. 86). In the Byzantine period chasing was still normal, but engraving was possibly used for the deeper designs on some gold rings.⁴¹

The best known inscription on Roman gold rings from Egypt, Cyprus and, to lesser extent, other parts of the Roman world, is ΕΠΑΓΑΘΩ - *epagatho*.⁴² *Epagatho* is usually translated as 'with good wishes'. Since many of the surviving rings with this inscription show signs of wear, we can agree with Marshall that not all were funerary,⁴³ and but not with Le Blant's suggestion that the rings might have been votive.⁴⁴ King's assertion that this inscription was associated with competitive games is also unlikely, especially as the majority of such rings are women's sizes.⁴⁵ I agree with Henkel that the rings were typically worn by the living, but feel that the inscription meant more than the Greek equivalent of the Latin *Utere Felix*, a favourite Roman motto also known rings, silver spoons and other personal possessions, although not so far recorded on rings from Egypt.⁴⁶

The inscription *epagatho* is sometimes found on Egyptian rings in conjunction with palm leaves. On some rings this motto might have been interchangeable with a figure of Sarapis or, perhaps, a mummy. In other parts of the Roman world, the inscription *epagatho* occurs combined with a figure of Sarapis on lead tesserae.⁴⁷ In Roman Egypt, the palm seems to have been associated with Sarapis. The in-

- 40 CM CG 52314, a gold ring set with a lapis intaglio of the head of Sarapis, might show signs of sizing in antiquity.
- 41 For a description of the two techniques and their use in antiquity see Ogden 1982: pp. 44-46.
- 42 e.g. *BMCR* 601, 615; CM CG 5216. For a Western European example see Henkel 1913: no. 69.
- 43 *BMCR* p. xxx.
- 44 le Blant 1896: p. 39.
- 45 King 1877. Recently repeated and quoted in Taylor and Scarisbrick 1978: p. 37.
- 46 e.g. Oman 1930: no. 102. For other uses of the motto see Sherlock 1984; Harris 1986.
- 47 See Le Blant 1896: p. 9.

scriptions *epagatho* and *epaphrodite* on a pair of gold bracelets in Chicago might show that in reality *epagatho* related to the Agathodaemon which was identified with, if not identical to, Sarapis (see ch. 9).

Rings with *epagatho* are frequently of the polygonal hoop type (see below) or of a rounded angular type (fig. 86) and probably date mainly from the mid second to the mid third centuries AD. The polygonal hoop type of ring was in use by the mid second century AD.⁴⁸ A detail of the ring in fig. 86 shows that, as with most ancient rings, the inscription was applied with a chasing tool tapped with a hammer, rather than engraved.

The inscription *epagatho* also occurs on double rings,⁴⁹ and plain heavy rings, but apparently not on engraved gems. We do occasionally find *epagatho* on jewellery other than rings. For example an unpublished cylindrical amulet case pendant from Egypt had this inscription applied in granulation and filigree.⁵⁰

The inscription EYTYXI, *eutuchi*, also occurs on some polygonal hoop rings from Egypt (fig. 89),⁵¹ but is far rarer than *epagatho*. The reverse is true of rings from Syria. *Eutuchi* means 'fare well' - in the sense of 'good luck', not 'goodbye'!

Rings with written invocations to deities are commoner from the later, rather than early, Roman period. For example, two rings of mid third to early fourth century AD type, have inscriptions that invoke Sarapis. These rings each have a circular 'tablet' bezel with plain circular section wire hoop. There are gold granules on each side of the hoop where the hoop joins the bezel. One of these rings, in the collection of University College, London, is inscribed *Eis Zeus Sarapis* (fig. 87).⁵² The very similar ring in the British Museum, unfortunately without provenance,⁵³ is inscribed with *mega to onoma tou Sarapis*. Neither ring is inscribed in reverse so they were not signets. Marshall suggests that the British Museum ring was dedicatory but, more probably, the rings were worn as amulets to encourage the protection of Sarapis. Several intaglios are known with each of these inscriptions, often with a figure of Sarapis.⁵⁴ This type of ring with tablet bezel flanked by grains, is a well known late-Roman or early Byzantine form. The presence of an inscription to Sarapis suggests that these two examples can hardly date from much after the early fourth century AD. A very similar ring, but larger, in Alexandria Museum is inscribed *epagatho* (fig. 88). This was found on a female mummy with an

48 A silver example is in the recently found Snettisham hoard, now in the British Museum, which is dateable to soon after AD 155.

49 BMCR 600.

50 Another example, unprovenanced, can be seen in Drouot 1959: plate 4.

51 Segall 1938: no. 158 might well be from Egypt.

52 Petrie 1927: no. 125.

53 BMCR 629.

54 Le Blant 1896: nos. 202 - 206, 211 - 216.

emerald-set swivel ring and other jewellery of third century AD date. Again, this suggests a connection between Sarapis and the inscription *epagatho*.

Roman rings with the names of the owners are less certainly attested from Egypt, but one polygonal ring from Saqqâra has the inscription *Serenillas* which Marshall plausibly says is the name of the owner in the genitive.⁵⁵

Byzantine inscribed rings are far more common than those of the Roman or Ptolemaic periods and the inscriptions are mainly religious. Perhaps this is due to the nature of Christianity: God was now accessible on an intimate level by direct personal prayer without need for the intercession of a priest. Although some Byzantine inscribed rings were used as signets, many, if not the majority, were amulets or insignia, designed to be read, not to be viewed in impression. The well-known class of Byzantine rings inscribed 'may the Lord help *N*' are not well represented from Egypt, but examples include a silver ring in Cairo, described as enamelled, inscribed *K(uri)e Boith(ei) Ioannou* 'may the Lord help John'.⁵⁶ Enamelled gold rings with similar types of inscription are well known elsewhere in the Byzantine world. Another silver ring, from Akhmîm, has inscriptions to the Virgin Mary and the Archangel Michael (see below).⁵⁷ Also from Akhmîm is a bronze ring with an inscription to St. George.⁵⁸ One gold ring, once in a collection in Alexandria, bears the inscription *Eis theos o nikon ta kaka*.⁵⁹ This inscription can be interpreted as 'the sole god who conquers evil' - not necessarily just a Christian sentiment.

The commonest type of personal name inscription on Byzantine rings has the letters of the name arranged as a monogram. The best known precious metal examples from Egypt depict an eagle with outstretched wings below a cruciform or other monogram (fig. 89). Most of the rings are man-sized. The type has been discussed most recently by Ross in connection with an example in Washington with a monogram possibly for Kosmas.⁶⁰ The designs compare with those on lead seals of the sixth to seventh centuries some of which belonged to honorary consuls. Ross suggests that this class of ring would have been worn by an honorary consul and that the ring in Washington may have belonged to an ex-consul called Kosmas who is known to have been in charge of customs in Cilicia (the given provenance of the ring) during the reign of Constans II. Thus we might tentatively agree with Ross that the eagle and

55 *BMCR* 618.

56 Strzykowski 1904: p. 337, no. 7047, pl. 38. See also Petrie 1927: p. 18 nos. 185, 187, etc.

57 Forrer 1893: pp. 19-30, pl. 13, 6.

58 *Ibid.* p. 19, fig. 15.

59 Maspero 1908: pp. 246-258. Ex coll. Vinga, Alexandria.

60 Ross 1965: no. 70.

cruciform monogram was a 'popular one for consular insignia in the late sixth and seventh centuries', but it must be stressed that orientation of the letters in the monogram shows that these rings were not intended as signets. The same is true of many Byzantine monogram rings. Ross dates the type to after a *novella* of Justinian in AD 538 which created the order of honorary consuls.

Examples of monogram and eagle rings from Egypt include one in the Victoria and Albert Museum (fig. 89).⁶¹ The monogram might be for *Komita*. A very similar ring from Akhmîm was in the Côte collection.⁶² Another ring of the type in the Benaki Museum might also have an Egyptian provenance.⁶³ The monogram in this case is interpreted by Segall as *(I)oanou*, 'John'.⁶⁴ Another Egyptian example, with a square bezel and of silver, is in the collection of University College, London (fig. 90).⁶⁵ This monogram, not of cruciform type, is interpreted as *Phocas* by Petrie. Other unprovenanced examples include a gold one in Virginia,⁶⁶ and one in silver, now in Athens.⁶⁷

Other types of monogram ring are known from Egypt, though seldom in gold. One silver-gilt ring from Akhmîm bears a monogram, probably for *irene*.⁶⁸ This literally means 'peace' but could equally have been the owner's name, certainly the small size of the ring would suit a female wearer. I know of no Byzantine gold rings with names written out in full from Egypt but, bronze rings with names are quite common.⁶⁹

CHARACTERISTIC RING TYPES FROM EGYPT

This section will deal with the types of ring that can be considered to be either unique to Egypt or particularly well represented from Egypt. Rings known from Egypt, but of more general Hellenistic, Roman, or Byzantine types, are briefly covered in the subsequent sections.

It is noteworthy that there are few early Ptolemaic or Byzantine rings from Egypt that are types unique to Egypt. Rings with hieroglyphic inscriptions are rare from the Ptolemaic period and almost unknown from Roman times. Examples that do exist were probably always for temple use. A form attested in the Ptolemaic period, although deriving from Late Period rings, has a characteristic rectangular plaque-like bezel with deeply cut hieroglyphs - like miniature sunk relief. One fine example is a gold ring once in the Harari collection belonged to the priest Totoes (fig. 91). This bears an

61 Oman 1930: no. 208.

62 Côte 1906: p. 16.

63 Segall 1938: no. 260 (wrongly numbered 258 on plate 50).

64 Compare Zacos and Vegler 1972: no. 249.

65 Petrie 1927: pl. 13, 179.

66 Ross 1969: pp. 12-31, no 32.

67 Amandry 1963: no 227.

68 Forrer 1893: pl. 13, 7.

69 See for example Petrie 1927: no. 188.

inscription giving his titles as 'Prophet of the two Gods Euergetes, Philopater and Epiphanes ...', that is he served under Ptolemy III and Berenike II, Ptolemy IV and Ptolemy V.⁷⁰ Other examples exist in various museum and private collections. The deep cutting and minute, intricate chasing of some of these rings, and on some of their Late Period counterparts, cast some doubt as to their practicality as seals. Two almost identical gold rings with bezels engraved in hieroglyphs with the name of Antoninus Pius,⁷¹ and a similar ring with epithets for a Ptolemy, probably Ptolemy III,⁷² are probably early twentieth century fakes. They appear to be engraved not chased (a point made by Petrie) in a very non-ancient way. They also compare to other fake signets with cartouches of such rulers as Ramesses II. This is a shame: it would be nice to be able to agree with Petrie's romantic origin for the University College ring: 'There can be little doubt that this was the official seal of the Prefect AD 138-161. This may have gone astray when a prefect was murdered by the mob, in this reign.'⁷³

One possible example of a Roman ring with hieroglyphs, in the Louvre, is a typical late Roman angular form, but with the deeply cut hieroglyphic seal of Iahhotpe (fig. 92).⁷⁴ This is supposedly of the New Kingdom, but the ring mount would be unique in the pre-Roman world.

Box-bezel rings

This type of ring has, as the name suggests, a rectangular box-like bezel set, in most cases, with an emerald. The hoops are typically formed from pairs of tapered gold tubes which join at the back of the ring in a Herakles knot. The sides of the bezels are decorated with triangular and lozenge patterns of granulation. The shanks are embellished with a variety of applied decoration in granulation and filigree. Often the knot at the back of the ring is set with a small stone and sometimes the filigree has, or had, enamel. An example of a box-bezel ring, with enamel, in the Cairo Museum is illustrated in fig. 93.

Many of the known examples of this type of ring were recently assembled by Hackens as part of the publication of an unprovenanced specimen, now in the collections of the Rhode Island School of Design (fig. 94).⁷⁵ This ring is set with a piece of glass which is, perhaps, not the original.

70 Boardman and Scarisbrick 1977: no. 96.

71 Petrie 1927: ring no. 115 and Scheurleer 1987: no. 31.

72 Tait 1986: no. 578.

73 Petrie 1927: p. 9, notes to no. 115.

74 Delange 1990: pp. 10-11.

75 Hackens 1976: pp. 94-96.

Rings of this type with certain or probable Egyptian provenance are:

- 1) An emerald-set ring in Cairo (fig. 93). The stone is not set with green jasper, as sometimes reported;⁷⁶
- 2) A ring from the Gallery Bachstitz bought from a dealer in Asyût;⁷⁷
- 3) A ring in the Ashmolean Museum, Oxford, now set with an oval amethyst rather than the original rectangular stone;⁷⁸
- 4) A garnet-set ring in Munich (fig. 95).⁷⁹ The Egyptian provenance, not listed by Hackens, is clearly recorded by Karo.⁸⁰

Similar rings, without recorded provenance, include a bezel with missing shank in Berlin,⁸¹ and the one in Rhode Island (fig. 94). Karo also mentions a similar ring once in the Goluchow collection.⁸² The only box-bezel ring that I am aware of with a provenance outside of Egypt is one in Naples Museum which supposedly comes from Canosa,⁸³ but not all Naples Museum provenances are accurate. On balance we can probably say that the form is typical, if not unique, to Egypt but there is no reason to believe with Segall that the Egyptian examples were all Alexandrian products.⁸⁴

The rings are in the late Hellenistic tradition and are usually dated to the second to first centuries BC. Certainly the multi-component type of construction, the use of enamel, garnets and polished, rather than crystal, emeralds, all point to late Hellenistic work. However, in Egypt these 'Hellenistic' features probably survived into the first century AD and there is some evidence that the box-bezel rings might be as late as the mid first century AD. The Rhode Island ring (fig. 94) has wavy ribbon wire on the shank. To make this wire, a gold ribbon-like strip was coiled into a tube, flattened and then unwound.⁸⁵ Wavy ribbon is most typically a late Roman and early post-Roman decorative effect. Earlier examples are very rare although there is one crude example from Pompeii.⁸⁶ Apart from this ring, I know only of the ring discussed here, a very fragmentary earring from Egypt now in the Brooklyn

76 CM CG 52293 = Vilímková 1969: fig. 90b. Although Vernier notes that this ring was obtained by exchange, a non-Egyptian origin is improbable.

77 Zahn 1921: pl. 2, no. 57.

78 Ashmolean Museum, no. 1892.1600.

79 Staatliche Antikensammlung, no. 11004. See Greifenhagen 1975: p. 76, figs 10-11. Most recently illustrated in Wolters 1983: p. 118, figs. 102, 104.

80 Karo 1901: no. 6, p. 212.

81 Greifenhagen 1975: pl. 57, 12.

82 Karo 1901; Froehner 1897: pl. 9, 56.

83 Siviero 1959: no. 115, pl. 118.

84 Segall 1964: pp. 167 ff. The common Alexandrian provenance was doubted by Pfeiler-Lippitz 1972: p. 113.

85 Williams 1924: p. 142, pl. 38, 80d; Thouvenin 1972: p. 441.

86 Siviero 1959: pl. 198 b.

Museum, again probably of early Romano-Egyptian date,⁸⁷ and a small garnet-set pendant from Syria or the Levant, in a private collection, which can hardly be much later than the first century AD. Box bezel rings are very close in constructional terms to the snake rings covered in the next section and must date to the same period.

Stone settings with snake surround

These rings typically have an oval stone setting surrounded by four entwined serpents. The stones are cabochon emeralds or garnets, set in a bezel with a surround of one or two rows of granules. Two lengths of wire, each with a head at both ends, form the doubled wavy shank and then continue as the main foreparts of the snakes. Separate wires provide tails for the snakes (figs. 96 and 97). Some of the more elaborate rings have small rosettes of grains and additional, smaller set stones. The most elaborate of these rings can contain upwards of three hundred separate gold components!

I know of fewer than ten examples of these rings, but all those with known provenance come from Egypt and the type is probably uniquely Egyptian.⁸⁸ A very similar ring from the Delta, now in Boston, has only two snake heads.⁸⁹ Again, Segall's suggestion that they are all Alexandrian is too categorical, particularly in view of their representation on cartonnages from Akhmîm. One gold and green glass ring in Cairo is a slightly damaged and much simpler version of the type.⁹⁰

The small number of surviving examples and the close similarities in their construction and form, suggest that they were all made within a relatively short time span - perhaps one or two generations. The construction and concept of assembly are in the late Hellenistic tradition and include the use of cabochon emeralds and garnets, the multi-component construction, the granulated setting surrounds, and a general rather baroque overall appearance. In technique and construction they closely resemble the box-bezel rings (see above) and they must be of about the same period. On this basis I would tend to date the rings to the late Ptolemaic and early Roman periods and, perhaps, suggest a more limited span between the mid first century BC and the mid first century AD. However, rings of this type are clearly shown on painted mummy cases from Akhmîm that are usually dated to the early second century AD.⁹¹

87 Davidson and Oliver 1984: no. 55; Williams 1924: no. 80; Ogden 1982: p. 56. Davidson and Oliver's statement that this wavy ribbon is peculiar to Egypt is totally untrue; it was very popular throughout the Roman empire.

88 Published examples of this type of ring known to me include *BMCR* 771 and 772; Segall 1938: nos. 161 and 162; Omar Pasha Sultan 1929: no. 802; Christies 1987: lot 12; Zucker 1984: p. 61, pl 69.

89 MFA, Edwin E. Jack Fund. Illustrated in Hoffmann 1971: p. 203, fig. 181.

90 CM CG 52209. Better seen in Vernier 1907: pl. 1,3.

91 Grimm 1974: pp. 96-100; CM CG 33270-1.

Edgar dated the Akhmîm mummy cases to the late Ptolemaic to early Roman period while the British Museum dates them as late second century AD. These cases typically depict voluptuous, diaphanously clad women, arms by their sides. The forms recall many of the terracotta figures of Isis. The cartonnages are often shown with serpent rings on the third finger of the right hand (fig. 98)⁹² In one instance a ring of this type is shown on the second finger of the right hand (fig. 99).⁹³ An alternative type of ring shown on a cartonnage might represent stylised snakes or Isis plumes.⁹⁴ The same class of Akhmîm cartonnages cases is also prime evidence that animal-head earrings remained in vogue into the second century AD. Obviously, the accepted dating of these cases needs careful reconsideration.

Snake and serpentine rings

Snake jewellery frequently figures in recent artists' concepts of Egyptian female ornament but snake jewellery was not limited to Egypt, nor was it an Egyptian tradition. Bracelets with a variety of animal heads including snakes, are found from the eighth century BC in Western Asia, and thence spread to Greece in about the fifth century BC. In dynastic Egypt snake ornaments are rare apart from some earrings and the occasional representation of 'Bes' with a knotted snake 'belt'.⁹⁵ Snake rings or bracelets were not traditional Egyptian ornaments prior to Ptolemaic times.

Snake jewels must have had a host of amuletic connotations. They were associated with the healing snakes of Asklepios and most folklores include snakes as guardians. According to Pseudo-Aristotle, Alexander the Great fought with snakes guarding the precious stone mines in India. Snakes were also the guardians and guides of the underworld. The Egyptian cobra or uraeus was the symbol of the sun and of kingship. The association between snake and sun was widespread in the Old and New Worlds and reiterated as late as the writings of Macrobius in the early fifth century AD.⁹⁶ Christians and Jews also viewed the snake as a manifestation of the devil. Clement of Alexandria said that 'the serpent allegorically signifies pleasure crawling on its belly'.⁹⁷ He made a specific attack on serpent ornaments: 'Now women are not ashamed to wear the most manifest badges of the evil one. For as the serpent deceived Eve, so also has ornament of gold maddened other women to vicarious practices, using as a bait the form of the serpent and by fashioning lampreys and serpents for decoration'.⁹⁸

92 Scheurleer 1987: no. 43.

93 CM CG 33270.

94 Edgar 1905: p. 113 (description of CM CG 33271.

95 For example, a thirtieth dynasty limestone statue, now in the Louvre, N437, and a handful of bronze and faience statuettes of Bes.

96 Macrobi. 1. 20.

97 Clem. Al. *Exh. to Heaven*, 11.

98 Clem. Al. *Paed.* 2. 12.

Some of the snakes represented in Ptolemaic and Romano-Egyptian jewellery are the Egyptian cobra (*naja haje*). This snake raises its hood - that is extends its rib cage - when disturbed or annoyed. Snake rings or bracelets seldom show a snake with extended 'hood' and the identification is less certain, but the careful depiction of the 'head shields' should allow recognition of the species. Rings with animal-heads other than snakes are unusual from Egypt, but there is one ring with gazelle or deer heads.⁹⁹

Single-snake rings: These rings were made by hammering out the head, body and tail of a snake from a single length of gold rod or wire. The ring is bent into one or more coils and the head can double-back on itself or lie along the axis of the finger. The tail can be straight, wavy or curlicue. Types of snake ring are illustrated schematically in fig. 100.

The rings made from thin wire and with several coils are mainly of Ptolemaic date and are often called 'Alexandrian' without substantiation.¹⁰⁰ Another Hellenistic type has a wider more ribbon-like body, sometimes of flattened 'D' section.

The early Romano-Egyptian snake rings depicted on masks and portraits are usually the coiled type but surviving rings of the period tend to have more massive, circular section bodies with a single coil and a well delineated head that overlaps a straight or wavy tail. One example has a secondary diminutive snake head at the end of the tail - a Romano-Egyptian phenomenon more frequently encountered with snake bracelets.¹⁰¹ The later Romano-Egyptian rings tend more to flatter bodies and heads.

Penannular rings with snake-heads at each end - facing each other - are rarer in Egypt than at Pompeii or in the rest of the European Roman world.¹⁰² One massive ring from Egypt has cobra-heads with extended hoods (fig. 101),¹⁰³ but I know of no other examples. Rings with confronted snake heads that support a motif or stone setting are dealt with in the next sub-section.

Funerary portraits and cartonnages almost invariably show snake rings worn on the third finger of the right hand of women (fig. 31). Perhaps this was almost universal: a bronze snake ring was found on the

99 Oriental Institute, Chicago. no. 19516. The origin and authenticity of this ring requires greater investigation. There are also some rings converted from ancient animal-head earrings in recent times, e.g. CM CG 52304.

100 e.g. Sotheby 1981b: no. 201.

101 *BMCR* 952.

102 Segall 1938: no. 145 might well be from Egypt.

103 Private collection, unpublished.

right hand of a woman buried at Saft el-Hina,¹⁰⁴ and Henkel talks of a simple bronze spiral ring on the third finger on the body of a woman found in Mainz.¹⁰⁵ One coiled snake ring in the British Museum, probably of late Ptolemaic date, is composed of such thin gold sheet that it might have been for funerary use, even though it was found in a jar with silver and stone beads.¹⁰⁶

The Roman period snake rings date mainly from the first to second centuries AD. The rings can be dated by the occurrence of identical forms at Pompeii,¹⁰⁷ and in dateable graves,¹⁰⁸ and on the basis of their depiction on mummy masks - such as those from Hawâra (e.g. fig. 31).¹⁰⁹ The same masks depict other early Roman jewellery types.

Variant snake rings: Rings with two confronted snake-heads which support a stone setting, a crescent, or some other motif, although well known in many parts of the Empire,¹¹⁰ are uncommon in Egypt. There are however some rings of typical swivel type, but where the hoop terminates in two snake heads (see below). One ring now in the British Museum, said to be from Alexandria (fig. 102),¹¹¹ has a snake headed-hoop that flanks a crescent-shaped setting containing a garnet. The heads are also set with pear-shaped garnets (one now missing).

Variant terminal types include uraei, hawk-headed snakes and fluted, melon-like knobs. An elaborately knotted uraeus and sun-disk ring in Berlin is shown in fig. 103. This probably dates to the late Ptolemaic or early Roman period.¹¹² Another uraeus ring, in Athens, is of a simpler coiled form (fig. 104).¹¹³ Some rings combine uraei terminals with other motifs, for example one ring in Leiden has one terminal as a uraeus with sun-disk, while the other ends in a conventional snake head. This ring is a version of a type that usually has deity-bust terminals (discussed in the next sub-section.), and which probably dates to the first century AD. A gold uraeus with sun-disk that formed a terminal to a ring or perhaps a small bracelet was recently on the London market.¹¹⁴

104 Petrie 1906: pl. 38, 54.

105 Henkel 1913: notes to no. 1846.

106 BMCR 956; Petrie 1889: pl. 12, 29.

107 e.g. Siviero 1959: pls. 168 - 170.

108 Otschet 1894: p. 61 fig. 83. From a first century grave in the Crimea.

109 Other representations on mummy masks include CM CG 33126 and CM CG 33128.

110 e.g. Henkel 1913: no. 344 (silver).

111 BMCR 814.

112 Greifenhagen 1975: pl. 57. This is unprovenanced.

113 Segall 1938: no. 142.

114 Christies 1979: no. 84.

Some ring terminals take the form of hawk-headed snakes. Two, from Alexandria, are in the British Museum,¹¹⁵ while another, in a private collection, is hollow and was perhaps only for funerary use. Hawk-headed snakes are depicted transporting the mummy on some Romano-Egyptian cartonnages.¹¹⁶

Some silver rings and bracelets of serpentine snake form, have fluted melon-like terminals rather than snake-heads (figs. 105 and 440).¹¹⁷ I see no reason to agree with Petrie that they must be later than the snake-headed types and thus of the mid second century AD¹¹⁸ - they are undoubtedly contemporary - but I am at a loss to explain their significance.

Rings with terminals in the form of sea monsters or dragons are found in the Hellenistic world and one probably has an Egyptian provenance.¹¹⁹ A provenanced example from Bulgaria, provides a mid-third century BC date for the type.¹²⁰

Deity bust terminals

These rings take a variety of forms but are all composed of a rod-like length of gold wire, with the bust of a deity at each end, which is bent into a loop or spiral. The two main varieties of these rings are shown in fig. 7. The busts were hammered out of the ends of the rod, not separately made and attached. On some rings ancient strengthening and repairs can be seen.

In type (a) the ring is a spiral of one or two coils with the terminals bent back on themselves to produce a serpentine effect. Bracelets and snake rings of similar form are well known from the Hellenistic and Roman world. In type (b) the hoop coils only once round the finger and the terminals loop round so that they lie side-by-side along the finger. A separate thin wire usually passes through the loops of the terminals and is bound round the shoulders, to add rigidity. This extra wire is missing from some rings (apparently all of which are, or have been, in French collections!) One ring, now in

115 *BMCR* 243 and 246.

116 See Mysliwiec 1980: pp. 171-2.

117 Petrie 1927: pl. 5, 64; Christies 1979: lot 49.

118 Petrie 1927: p. 8.

119 Omar Pasha Sultan 1929: no. 807. This terminal type and its significance has been discussed by Hoffmann and Davidson 1965: p. 68, and by Amandry 1953: pp. 117-8, reconsidered in Amandry 1963: p. 254.

120 Venedikov and Gerassimov 1975: no. 202.

the British Museum, has an extra bust of Harpokrates soldered to the ring (fig. 58).¹²¹ On some rings one female bust has an integral smaller figure of Harpokrates (fig. 106).

Bracelets or armlets with deity bust terminals are known (see ch. 9), however armlets with the same type of coils and construction as type (b) rings are rare. One silver example was sold at auction in London in 1987 (see fig. 460).¹²²

There are some variant forms as shown. In one case, a version of type (a) in the Canellopoulos Collection, the busts were bent back to lie up and down the finger.¹²³ On another ring, in the Metropolitan Museum of Art, the busts have a loop. One ring, in Hamburg, has one terminal missing.¹²⁴

The two main types of deity bust ring were recently discussed by Davidson and Oliver.¹²⁵ To their list of type (a) rings, we can add one ring from the Guilhou collection,¹²⁶ and another recently on the market.¹²⁷ To the type (b) rings they record, we can add at least five more.¹²⁸ Thus, to contradict Davidson and Oliver, the two types are more or less equal in number and there are sure to be further examples in museums or private hands.

The iconography of the rings is typically Romano-Egyptian. Isis, with her double plume crown and often the knotted garment, occurs paired with a bearded Sarapis. Another common pair consists of a goddess with two corn ears on her head, and another goddess with a modius (as in fig. 107).¹²⁹ Type (b) rings can have a bust of Harpokrates, as child or royal prince, between either of these pairs. When the two goddesses are shown,¹³⁰ Harpokrates is joined to the bust of the goddess with the corn ears which confirms her identification as Isis as mother of Harpokrates. The other goddess must be Nephthys,¹³¹ thus the rings depict one of the commonest triads. A pairing of Osiris with a goddess is seen on some rings, here Osiris is depicted with sun disk and cross-hatched mummy wrappings (fig.

121 *BMCR* 245.

122 Christies 1987: no. 140.

123 Laffineur 1980: fig. 135.

124 Hoffmann and Von Claer 1968: no. 106.

125 Davidson and Oliver 1984: pp. 154 - 5.

126 Sambon 1905: no. 154.

127 Sotheby 1989b: no. 21.

128 Berge and Alexander 1985: pp. 3-32, no. 113; Drouot 1934: no. 63; Louvre 1133; Private collection; and Christies 1971: no. 232.

129 The Christies ring (see previous note) was also of this type.

130 The two examples of this are Schäfer 1910 no. 145 = Egyptian Museum, Berlin, inv. no. 7998 (see also Berlin 1967: no. 1046) and Bibliothèque Nationale, Paris, Cabinet des Médailles No. 504.

131 See for example Jucker 1962: p. 323.

108).¹³² A mummiform Osiris seems typical for the Roman period - he is depicted the same way on gnostic gems.

Deity-bust rings, particularly of type (a) have obvious counterparts amongst rings with snake heads. Wilkinson illustrates a type (b) ring with two uraei with sun-disks,¹³³ and two other rings, in Leiden and the British Museum, have one terminal in the form of a snake head, the other a uraeus with sun-disk. Other variations include a ring in the British Museum which has a hoop in the form of a serpentine zig-zag wire, into which is looped a length of gold wire; one end terminates in a snake head and the other in the body of a cobra that transforms into the head and shoulders of the goddess with the polos (fig. 57). Rings with a doubled bust (both female deities) at one end and a coiled snake-like tail at the other are also known.¹³⁴

From the few examples where weight is recorded, we can perhaps postulate a weight unit based on a mnaicion of around 28 g. For example we have published weights of 13.93 g., 14.12 g., and 13.8 g.¹³⁵

The provenanced deity-bust terminal rings are, with one possible exception, from Egypt and the type can be considered a uniquely Egyptian form. The possible exception is a ring, formerly in Berlin but now lost, that was originally in the Massoneau Collection in South Russia although Greifenhagen called it 'wohl ägyptisch-griechische Arbeit'.¹³⁶ No rings of this type have been found in dateable contexts and there are no certain depictions of them in wear on masks or portraits. Nevertheless, the type is almost certainly of the first century AD and Romano-Egyptian rather than late Ptolemaic. They are typical of the one piece construction of early Roman jewellery from Egypt.

Rings with circular bezels

This class of ring has a pleasing, geometrical compactness. The shank widens at the shoulders to the full width of the flat, circular bezel and, apart from this bezel, the rings have a circular profile when seen from the side (fig. 109).

The circular, or near circular, bezels are characteristically chased to depict triads and Romano-Egyptian deities.¹³⁷ Five rings now in the British Museum give an idea of the possible varieties. We see Aphrodite Anadyomene with a diminutive Eros and flanked by worshippers(?) (fig. 110), Isis before Osiris Canopus (from Alexandria) (fig. 111), Ptah and Isis (from Alexandria), a seated Osiris with Isis

132 Sotheby 1989b: no. 21 had similar terminals.

133 Wilkinson 1878: p. 342, fig. 448, 13.

134 In the Canellopoulos collection, Athens (Laffineur 1980: no. 122) and another formerly in the Hirsch collection (Ars Antiqua 1959: no. 150), also illustrated in Jucker 1961: fig. 99.

135 Respectively *BMCR* 245, *BMCR* 244 and the Hirsch example in the previous note.

136 Greifenhagen 1970: pl. 26,22 = Berlin Misc 11863, 70.

137 Rings with triads include CM CG 52295; de Ricci 1912: no. 422; and Segall 1938: no. 149.

and Nephthys (much damaged), and Isis with disk and horn crown and a uraeus in her hand.¹³⁸ The shallow engraving and often cursory style indicate that they were not signets.

This ring-type is typically Egyptian of the Roman period. The style of the engraving compares with, though is generally better than, the rings in the next two sections. The large size of some of the rings suggests they were worn by men.

The basic shape of the rings finds antecedents in Hellenistic and, perhaps, Meroitic jewellery and a similar shape, though not construction, is found at Pompeii. The rings probably date to the first century AD and might have survived into the second. The simple construction and clean contours are typically of this period, as is the preoccupation with stylised representations of mixed Hellenic and Egyptian deities. In Ptolemaic times images were either Hellenistic or traditional Egyptian, seldom hybrid. In many ways the deities in the circular field recall the reverses of some Romano-Egyptian coins which are dateable to the mid to late first century AD. The published weights of the rings might indicate a weight unit of just over 1.8 g (see ch. 3). The heaviest ring at 29.4 g. might represent a *mnaieion*; one quarter (a sixteenth of a *mnaieion*, see ch. 3) would be about 1.84 g - just half the weight of the lightest of the British Museum rings.

A variety of other gold rings with circular bezels are also known from Egypt which lack the solid construction and elegant form of those discussed above. One example in the Louvre, made from sheet gold, has a bezel design that consists of three figures, a fully clothed goddess, Aphrodite Anadyomene, and a male (?) figure with a staff. There is also a small altar and what might be an elaborate crown above Aphrodite's head.

Incised amulet-rings

One of the simplest, and presumably originally the cheapest, type of gold ring from throughout the Roman Empire, has a tapered shank that rises to a flat oval bezel (fig. 51). The rings were formed from a single piece of gold and usually have a soldered overlap joint in the back of their shanks, though this is seldom easily discernable. The bezel designs were usually chased, but sometimes cut in a simple, shallow, form of engraving.

Most of these rings appear to be of high purity gold but others, from their pale, more 'lemony' colour, probably have an extra, intentional silver content, perhaps 15% or more. These variations in purity could reflect geographical or chronological differences. Analyses of two rings in fig. 51 were given in ch. 3.

138 These rings are, respectively, *BMCR* 117 to 121. Their weights are 8.28 g., 9.07 g., 3.69 g., 7.97 g., 29.4 g.

In the Roman empire as a whole, the commonest bezel design is that variously described as a palm branch or an ear of corn (fig. 51 left). An ear of corn had obvious fertility significance, while the palm had varied symbolism depending on the religion of the wearer. Epiphanius explained that, in Egypt, the palm could be associated with either Sarapis or Christ.¹³⁹ The Christian connotations could either derive from the palm as a symbol of victory and thus the victory of immortality, or stem from the palm as a symbol of Dionysos expressing fruitfulness, new birth and the source of life. We also hear of a rabbi who had a ring with the design of a palm branch,¹⁴⁰ and Goodenough has pointed out that 'especially in Palestine, the menorah is often drawn like a palm branch, and which of such representations [on lamps] are supposed to represent palm branches and which menorahs is often quite impossible to say.'¹⁴¹ On balance, the palm rings in early Roman Egypt probably mostly related to the cult of Sarapis.

The rings we can consider to be typically, though not uniquely Romano-Egyptian, have a variety of bezels designs that depict one of the usual Egyptian or Romano-Egyptian deities, including Sarapis, Anubis and Harpokrates, (fig. 51 right).¹⁴² A very light example (0.95 g.), with Sarapis, is in the Cairo Museum.¹⁴³ Other less usual subjects include Ptah and a variety of deities so cursorily chased as to be totally unidentifiable. The rings were unusable as signets and must have been worn as amulets.

The type was popular in the first century AD and many examples with corn-ears or palms have been found in the Pompeian region. The type also survived into the second, if not third century AD. This class of ring is concurrent with, and closely related in construction and bezel designs, to the multiple-bezel rings in the next section.

Multiple bezel rings.

Multiple-bezel rings have a long history in the Near East. New Kingdom Egyptian examples are known and include both signet and decorative rings. The type is found through the first millennium BC and includes Phoenician double-bezel signet rings, usually of silver, and Hellenistic decorative rings which are frequently set with garnets. Multiple bezel rings were popular throughout the Roman world from Western Europe through to Egypt. The bezels can be plain gold, have incised or chased designs in gold, or be stone-set. Two to seven bezels are known, two or three are the most usual, more than four are rare. The all-gold type are the commonest in Egypt, while those from Syria, the Levant and Asia Minor are more usually set with coloured stones or glass.

139 Epiph. *Adv. Haeres.* 64. 1.

140 Goodenough 1953: vol. 2, p. 214. See also Kunz 1917 who quotes Ozar Yisrael V p. 6 col 1.

141 Goodenough 1953: vol. 1, p. 158.

142 e.g. *BMCR* 137 - 141.

143 CM CG 52310.

The most characteristic Romano-Egyptian rings of this type consist of two or more amulet rings joined side-by-side which, when worn, give the illusion of several rings on the same finger. Usually the separate bezels and shoulders taper to a single shank at the back of the rings (fig. 6:32) but sometimes the rings are made from separate rings soldered together. The bezels of the simplest rings lie side-by-side and are seldom soldered to each other. In other cases the bezels and parts of the shoulders are separated by filigree, granulation, or a combination of both. The most usual Egyptian type has a line of beaded, or sometimes twisted, wires flanked by granules at regular intervals and, often, a single large grain between the two bezels (fig. 113).¹⁴⁴ Comparable rings from Pompeii show that all these types coexisted.

The rings from Egypt usually bear the characteristic Romano-Egyptian deities such as Isis, Sarapis and Harpokrates but these are often so cursorily chased that their identification is impossible (figs. 114 - 116). For example, even Petrie did not hazard an identification of the deities depicted on one ring, and called it 'rude work'.¹⁴⁵ Marshall makes much the same comment about a quadruple example in the British Museum, which, he says, 'is of the rudest execution. The designs apparently represent Egyptian deities, but only Anubis can be distinguished'.¹⁴⁶ Such rings are clearly of no practical use in sealing and, again, must have been worn as amulets. We can probably assume that the repertoire of designs was so stereotyped that they could be stylised to little more than miscellaneous scratches without loss of 'power'. Some rings of the same form are left plain.

Examples from other parts of the Roman world, are usually either plain or engraved with palm leaves. However, rings from Cyprus with two bezels can include stylised representations of the temple of Aphrodite at Paphos,¹⁴⁷ and rings with cursory Romano-Egyptian deities turn up as far afield as Syria and the Rhine.¹⁴⁸

Multiple bezel rings were popular throughout Egypt and provenances include Damanhûr, Girga, Thebes and an unspecified Delta site.¹⁴⁹ Three rings from Damanhûr, now in the British Museum, show a distinct weight relationship relative to the number of their bezels which suggests a base unit of about 1.8 g. (two are shown in fig. 6:37):

BMCR 167 with 4 bezels weighs 7.19 g. = 4 x 1.8.

BMCR 170 with 3 bezels weighs 5.37 g. = 3 x 1.8.

BMCR 173 with 2 bezels weighs 3.69 g. = 2 x 1.8.

144 e.g. Christies 1979: no. 37; Ogden 1982b: nos. 34 and 65; Petrie 1927: no. 123; *BMCR* 966; *CM CG* 52317.

145 Petrie 1927: p. 10, no. 122.

146 *BMCR* 167.

147 Pierides 1971: pl. 27, 17-18; *BMCR* 168.

148 e.g. Henkel 1913: no. 110, from Cologne and de Ridder 1911: no. 2852 from Tortosa in Syria.

149 *BMCR* 172, 967 and 966 respectively.

Other rings show a similar weight unit, for example, a triple-bezel ring in the Cairo Museum which weighs 5.4 g. (3 x 1.8).¹⁵⁰ Another group might be based on a weight unit of about 1.68 g. - *BMCR* 169 weighs 1.68 g and *CM CG* 52317 weighs 3.35 g. (= 2 x 1.68). Unfortunately, not all the multiple bezel rings fit into such a neat weight relationship, but complete coincidence seems unlikely.

Multiple bezel rings from Egypt show a marked variation in gold colour, and thus purity. More detailed study might demonstrate some relationships between construction, provenance, weight and purity. To my knowledge, silver rings of this type are not recorded from Egypt.

It is not always possible to distinguish multiple bezel rings from a series of separate rings when they are depicted on *cartonnages*. However, enough likely representations exist to indicate a first century AD date. What appear to be double rings account for about 40% of the rings worn on the left hands of first century AD gilt masks of women from Hawâra. The considerable wear on some surviving rings (e.g. fig. 114), show that they were for day-to-day wear, not for funerary use.

The rings are probably mainly mid to late first century AD, although the type survived into the second, if not third century AD. First century popularity is proved by the rings from Pompeii. A double-bezel ring, each with a palm leaf, was excavated at Tekiya with ball earrings, other ornaments, and coins up to Domitian, thus it was buried after AD 81.¹⁵¹ A double ring set with two intaglios and with a serpentine wire separating the bezels, was found in a first century grave at Ayios Nikolaos in Crete with other jewellery and a coin of Vespasian.¹⁵²

Another form of double-bezel ring is known from Egypt. Here the bezels meet at the shoulders in a plinth-like motif and, in general, these rings are more massive and of far better quality work than the more usual types described above. One example in Amsterdam depicts Aphrodite Anadyomene and Isis on the two bezels (fig. 118).¹⁵³ Another ring of almost identical form, recently on the market, depicts Isis in two guises (fig. 119).¹⁵⁴ First Isis is shown in traditional Egyptian style with vulture headdress and cow-horns, then in Hellenistic style holding a sistrum. Since Aphrodite Anadyomene related to Hathor, as did the sistrum, we might see both rings as depicting essentially the same pair of deities. The plinth-like shoulder motif is known on some other rings from the ancient Near East, including gem-set double-bezel rings. The form also recalls the hinged shoulders on some late Hellenistic decorative rings (see below). On balance the two gold rings must date to the closing century of the Ptolemaic era or, perhaps, just into the Roman period.

150 *CM CG* 52299.

151 Mano-Zissi 1957: pl. 3.

152 Davaras 1985: pp. 130-216.

153 Allard Pierson Museum, Amsterdam, no. 7022 = Scheurleer 1987: no. 35.

154 Sotheby 1989: no. 141.

Raised busts

These rings have a tapering, rounded shank rising to a flat oval bezel onto which is soldered, at an oblique angle, the bust of a deity (fig. 120). The gold busts are hammered and chased out of solid gold, not cast, and compare in style and technique with the deity-bust terminals discussed above. The bust is usually aligned across the finger but, occasionally, it lies along the axis of the finger.¹⁵⁵ A few rings with double busts are known but these are more frequent in base metal than gold. (The bronze raised-bust rings are invariably cast.)

The bust is typically that of Sarapis but some other deities are seen. A gold ring in the Metropolitan Museum of Art, New York, has the bust of a male deity wearing a *nemes* and a *hemhem* crown, possibly Harpokrates or an Egyptianised Dionysos (fig. 121).¹⁵⁶ Another ring, sadly unprovenanced, has the attached bust of Tyche.¹⁵⁷

The raised-bust type of ring is best known from Egypt but is not unique to that country. On the basis of their construction and iconography, they can be dated to the first and, maybe, early second centuries AD. Equivalent rings from Cyprus have been dated to this same period.¹⁵⁸ Similar rings from outside of Egypt have a greater range of figural subjects and materials. Amber rings of related type are quite well known. Two in the British Museum, both unprovenanced, have been dated by Strong to the late first to early second century AD.¹⁵⁹ One was found in a Yugoslavian tomb, apparently of Hadrianic date. There is a marble ring in Alexandria with the frontal bust of Sarapis in high relief (fig. 122).¹⁶⁰ This ring has been dated to the first century BC but it must relate to the gold rings from Egypt and the rings of amber and other materials from elsewhere in the Roman Empire. The origin of the type might lie ultimately in the faience rings from Late Period Egypt which have raised busts or figures of a deity in the round.

Another ring-type has complete figures of deities, made from sheet gold, attached flat against the bezels. These must be related to the solid bust rings and are, perhaps, contemporary.

Rings with applied sheet-metal busts

Another type of ring with applied figural motifs has a circular bezel bordered with plain and/or beaded wire. Soldered to the bezel is an embossed sheet gold motif, usually the busts of Sarapis, Isis

155 *BMCR* 239.

156 *MMA*. 26.7.833.

157 Hornbostel 1977: no. 426.

158 e.g. Pierides 1971: pl. 34, 1-2 from Nea Paphos.

159 Strong 1966: nos. 119 - 120.

160 Alexandria 3384, most recently illustrated in Wildung and Grimm 1978: no. 153.

and Harpokrates. Two examples are shown in figs. 123 and 124. One is in the British Museum,¹⁶¹ and the other is in a private collection. They weigh respectively, 8.81 g. and 7.32 g. A similar type of ring with the applied head of Sarapis was on the market a few years ago, described as 'Alexandrian'.¹⁶² A ring of the same type, in the Louvre, has the applied figure of a crocodile (?) within two rows of beaded wire.

Although the rings with Sarapis and Isis are no doubt typical of Egypt, rings of similar construction are known elsewhere. For example, a gold ring found near Cologne, has a depiction of Minerva and the inscription *Opt(io) leg(ionis) (primae) M(inerviae) P(iae) F(idelis)*.¹⁶³ The shape of these rings, their technique, and the choice of depiction suggest that they are Roman, of the first to third centuries AD.

Herakles knot rings

Rings with bezels in the form of Herakles knots are known from the Hellenistic world and an example from Alexandria is shown in fig. 125.¹⁶⁴ The sheet gold construction and style suggest a Hellenistic date. Knot rings of the Roman period are of simpler construction and are well distributed in both gold and silver.¹⁶⁵ Typically, the wire or twisted wires of the shank continue to form the knotted bezel. An example from the Nile Delta is shown in fig. 126.¹⁶⁶ Sometimes knot rings have small granules of gold on the sides of the knot, a decorative feature best known in Egypt.

A more elaborate type of knot ring, that might be unique to Egypt, is composed of two wires, a beaded one inside a plain one. The shank is composed of three or four twisted wires and the joint between shank and bezel is covered by a gold sheet collar. Two very similar examples of this type of ring are shown in figs. 127 and 128. The one from the British Museum was found at Tell Atrîb.¹⁶⁷

The simpler Herakles knot rings have been found at Pompeii and must have been in vogue in the first century AD, although the form could have lasted long time. The more elaborate knot rings in figs. 127 and 128 are generally dated to the early Ptolemaic period,¹⁶⁸ although this seems to be based on noth-

161 *BMCR* 235.

162 Ede 1973: no. 1.

163 Henkel 1913: no. 84.

164 *BMCR* 913.

165 Henkel illustrates several from the Rhineland, e.g. Henkel 1913: nos. 1799, 329, and 330. (See also p. 47 fig. 22.). Others are published from Cyprus and Pompeii - see Pierides 1971: pl. 29, 6, and 9; Battaglia 1980: no. 81; Siviero 1959: pl. 171d.

166 *BMCR* 959.

167 *BMCR* 958.

168 Coche de la Ferté 1956: caption to pl. 22, 1; Higgins 1980: pl. 53e.

ing more than the known popularity of the knot in Hellenistic jewellery. The construction and assembly suggest a Roman date when stark designs in plain wire paired with beaded wire were popular, although Herakles knot earrings of somewhat similar construction are known from the late Hellenistic period.¹⁶⁹ The rings also compare very closely with a bracelet in the Metropolitan Museum of Art, New York (see fig. 503), and on this basis I would prefer a third century AD, rather than earlier, date.

Swivel-set rings

The earliest swivel rings were scarabs tied to the finger with threads or gold wire, a fashion which had appeared in Egypt by the Middle Kingdom. The type developed into the typical Egyptian scarab-set rings and was adopted by the Phoenicians, Greeks and Etruscans. Ptolemaic or Romano-Egyptian swivel rings set with scarabs or seals are, however, very rare, although a Byzantine ring from Akhmîm, with a rotating double-sided bezel, is described below.¹⁷⁰

A well known Roman ring type consists of a hoop with a raised swivel-type setting holding a bead, most typically a prismatic emerald (fig. 129). The beads are held in place by two pegs soldered on uprights each side of the setting or by a thin wire that passes right through the stone and is wrapped round the setting. The latter is most typical of Roman Egypt. Another characteristic of most of the rings from Egypt, and far less usual elsewhere, is a hollow, tubular shank. A swivel ring of Romano-Egyptian type is said to have been found in France and dated to the Merovingian period,¹⁷¹ and a simpler swivel ring was found at Scafati in Italy.¹⁷²

There are, of course, variants. One ring in London, for example, has a hollow but angular section hoop with applied scroll work on the shoulders (fig. 130).¹⁷³ A different type of swivel ring, again with prismatic emerald bead, in the Brooklyn Museum, has a shank made from two wires twisted together.¹⁷⁴ The ring in Cambridge mentioned above has a hollow beaded shank. In a few cases the hoops take the form of a snake ring with snake-heads flanking the setting. One in the Cairo Museum has a circular

169 There are three pairs in an unpublished second century BC find group from Asia Minor. For the general type see *Münzen und Medaillen* 1981: no. 27

170 One Roman period swivel ring in Cambridge, from Thebes, is now set with a Late Period scarab (Fitzwilliam Museum, E. 60.1955).

171 Côte 1905: pp. 190-200, no. 1.

172 Siviero 1959: pl. 235d.

173 *BMCR* 836. See also Drouot 1959: pl. 5.

174 Davidson and Oliver 1984: no. 215. The emerald is confusedly described as 'barrel shaped, but shows signs of having once been cut hexagonally'.

section hoop composed of twisted wires,¹⁷⁵ while one in Athens has a flatter, one-piece hoop, but with well modelled snake-heads.¹⁷⁶ Both rings are set with prismatic emeralds.

Emeralds in their natural crystal form are usual in Egyptian rings of this type,¹⁷⁷ but they are not universal. The ring in fig. 130, from Alexandria, is set with what has been called faceted green glass, probably imitating an emerald,¹⁷⁸ and a ring in Athens is set with an emerald sphere-bead.¹⁷⁹ Some rings are set with pearls - such as one from Alexandria¹⁸⁰ - and in the Cairo Museum there is a swivel ring set with a carnelian bead.¹⁸¹

Three of the five swivel rings in the British Museum have a provenance - Alexandria in each case. The published weights for this type of ring could support a unit of around 1.6 g. as noted for the multiple-finger rings described in the next section with which they must be contemporary.

The style of these rings, and their close constructional similarity to the multiple-finger rings support Petrie's mid second to mid third century AD date.¹⁸² A third century date is also supported by an unpublished group of jewellery, from a mummy, now in Alexandria Museum. This group includes an emerald-set swivel ring of typical Egyptian type, a chain necklet with openwork filigree rosette clasp and a third century ring with the bezel inscribed *epagatho* (fig. 88).

Multiple finger rings

A remarkable type of Roman ring has multiple hoops which allowed simultaneous wear on two or three fingers. These rings usually have settings for stones and often have additional filigree or granulated decoration (figs. 8 and 131 - 133). The type is typically Eastern and most hail from Asia Minor, Syria or Egypt. Thirty-three published examples have been recently studied by Lightfoot.¹⁸³ To Lightfoot's arguments regarding the likelihood that the rings were worn, not funerary trappings as some authorities have suggested, we can add that several of the rings show considerable signs of wear. The discomfort of wear has been greatly exaggerated.

175 CM JE 58429.

176 Benaki Museum no. 30024. Not published in Segall 1938.

177 For example Petrie 1927: no. 120; Segall 1938: nos. 166 and 167; *BMCR* 835, 837, and 838; de Ricci 1912: no. 258.

178 *BMCR* 836. The stone should be re-examined - perhaps it is emerald.

179 Segall 1938: no. 166.

180 *BMCR* 839.

181 CM CG 52300.

182 Petrie 1927: p. 10, no 20.

183 Lightfoot 1985: pp. 11-22.

Most of these rings are made to fit on two fingers and sometimes the hoops are slightly graded in size to facilitate this. One ring, almost certainly from Egypt, now in the Benaki Museum, Athens, fitted on three fingers (fig. 134).¹⁸⁴

Lightfoot lists five rings with certain Egyptian provenance and to these we can add three complete rings and a fragmentary, one all in the Cairo Museum.¹⁸⁵ The Egyptian rings frequently share constructional characteristics. These are hollow tubular shanks, as in the swivel rings described in the previous section, and a double scroll motif made from a gold wire or sheet placed between the hoops. The three unpublished Cairo rings share these features and the fragment is tubular. Most of the multiple finger rings from Egypt incorporate one or more swivel-type settings, which usually contain emerald crystal beads.

On the basis of construction and style, four unprovenanced rings listed by Lightfoot can probably also be given an Egyptian origin. These are the Benaki triple ring,¹⁸⁶ a ring formerly in the Guilhou collection (fig. 8),¹⁸⁷ a ring recently sold in Zurich,¹⁸⁸ and a ring formerly in the Franks collection and now in the British Museum (fig. 133).¹⁸⁹

Six of the nine published rings from, or probably from, Egypt, have published weights. Five of these seem to be based on a unit of about 1.6 g. allowing for wear and the presence of stones (L = Lightfoot's number):

L24 weighs 6.38 g. = 1.6 x 4

L26 weighs 3.20 g. = 1.6 x 2

L29 weighs 4.70 g. = 1.6 x 3

L30 weighs 3.20 g. = 1.6 x 2

L31 weighs 4.90 g. = 1.6 x 3

Only L32 at 5.45 g. bears no obvious relationship.

184 Segall 1938: no. 169. De Ridder seemingly describes a quadruple ring from Amrit in Syria but since no illustration is given, its form or function cannot be determined (de Ridder 1911: no. 2113). A flexible, three-shank ring is in the British Museum but this was probably folded up and worn on one finger (*BMCR* 983. Also see Pollak 1903: no. 462).

185 Unpublished: two bear the numbers CM JE 47363 and CM JE 90842, the fragment is CM JE 47369.

186 Lightfoot 1985: no. 33. = Segall 1938: no 169.

187 *Ibid.* no. 31.

188 *Ibid.* no. 24.

189 *Ibid.* no. 26 = *BMCR* no. 842.

A weight unit of 1.6 g., or thereabouts, might be seen as 1/4 of the aureus at fifty to the pound introduced by Caracalla and so defined in the reform of Aurelian some fifty years later in c. AD 270 (see ch. 3). If so, we might date these rings to the first two thirds of the third century AD. A late second to third century date is indicated by their similarity to the swivel rings and by their construction. Lightfoot notes one double ring found in a necropolis in Turkey which contained second and third century coins.¹⁹⁰

Double finger rings are represented in wear on at least two painted masks (e.g. fig. 135).¹⁹¹ In each case the rings are worn on the second and third fingers of the left hand of a woman. A female mummy case in Cairo just might show a triple ring in wear but possibly three separate rings were intended (fig. 136).¹⁹² The Louvre mask also shows other jewellery including a pair of well represented mulberry type earrings, a pair of overlap-twist bracelets and what appear to be a pair of hinged-bezel bracelets. On the basis of this associated jewellery, a third century date seems most probable and ties in with the Severan date that Grimm gives the Louvre mask.

A two-finger ring in Pforzheim is said to be from Lower Egypt,¹⁹³ no others have any stated provenance within Egypt. The mask in Frankfurt that shows a double ring was found at Tûna el-Gebel, while the cartonnage in Cairo Museum that may show a triple ring, comes from Saqqâra.

The significance of multiple finger rings is uncertain. Some connection with love or betrothal is a possibility and it might be relevant that of the thirty-three multiple finger rings described by Lightfoot only two contain engraved gems and both these are small cameos depicting Eros. In India in more recent times double finger rings were supposedly given to wives by men leaving for war - perhaps a sort of symbolic chastity belt. I am unsure how we could interpret the Benaki triple finger ring!

Polygonal hoop rings

A well-known Roman ring type is made from a wide, slightly tapering gold sheet, bent and soldered into an octagonal or hexagonal hoop (fig. 137). These rings range from flimsy to very heavy, and some of the former were possibly funerary. Polygonal rings often bear inscriptions, usually *epagathos* (see above), or representations of deities, sometimes both. Typical bezel designs include Sarapis, Aphrodite Anadyomene (fig. 138), and Isis nursing Harpocrates (fig. 139). The representations are often very crude and in general the shallowness of the designs and their orientation show that these

190 Lightfoot 1985: p. 21.

191 These are Louvre 21360 and Frankfurt/M., Liebieghaus no. M.471.

192 CM CG 33280.

193 Battke 1963: no. 8.

rings were never intended as signets. The inscriptions are arranged so as to be across the finger, the figures are normally at right angles to the axis of the figure. In a few cases the bezels are left plain.¹⁹⁴

The two inscribed polygonal hoop rings in the British Museum with certain Egyptian provenance both weigh exactly 1.81 g. A ring showing Sarapis in the same museum but unprovenanced, also weighs exactly 1.81 g.¹⁹⁵ A massive polygonal hoop ring in the Cairo Museum, with the inscription *archin biena*,¹⁹⁶ weighs 14.8 g - near enough 8 times 1.81. Once again, weight correlations that can hardly be coincidental.

These polygonal hoop rings can probably be dated to the mid second to mid to late third centuries AD. The shape is represented in the new Snettisham find which can be dated to soon after AD 155. Several rings with polygonal hoops, engraved with palm branches, were found in the Lyons treasure with coins up to Septimius Severus.¹⁹⁷

OTHER RING TYPES FOUND IN EGYPT

The following sections will deal briefly with some of the Hellenistic, Roman and Byzantine ring types that are recorded from Egypt, but not typical of, or limited to, that country. Magical rings are considered separately for the sake of convenience.

Hellenistic ring types

Pre-Ptolemaic gold signets were mainly limited to temple or court. In the fifth century BC, Herodotus explained how a priest marked the Apis bull 'by twisting round his horns a band of papyrus which he seals with wax and stamps with his signet'.¹⁹⁸ Most signets are Egyptian types and, as noted in ch. 1, only a handful of Classical or earlier Greek signet rings have been recorded from Egypt (figs. 5 and 6).

In the Ptolemaic period signet rings continued to be used by the temples and priests. In a mid third century BC papyrus from Egypt, priests explain the loss of the temple signet: 'they said they did not trust it to the high-priest, lest when he obtained possession of it he should write a letter accusing them all and seal it with the actual seal.'¹⁹⁹ A decree of Ptolemy III and Berenike dated to 238 BC, ruled that 'the priesthood of the Benefactor gods [i.e. Ptolemy and Berenike] should also be engraved on the

194 e.g. Petrie 1927: no. 129.

195 BMCR 196.

196 CM CG 52312.

197 Henkel 1913: vol. 1, p. 204; Comarmond 1844.

198 Hdt. bk. 2.

199 P.Hib. 72.

rings they [the priests] wear.²⁰⁰ A gold signet ring with an inscription that includes the names of Ptolemy III and Berenike plus those of Ptolemies IV and V was mentioned above (fig. 91).

A hoard of 330 clay sealings found in a pot at Edfu consisted almost entirely of Egyptian subjects such as busts of Isis and hawk-headed Horus, but also included some mixed Egyptian/Hellenistic subjects such as Isis/Demeter.²⁰¹ One seal was of Ptolemy X which would date the hoard to the end of the Ptolemaic period. The choice of subjects might mean that the sealings were from a temple rather than a private deposit. Nevertheless, there was an increased personal use of signets in Egypt under the Ptolemies. A letter from Promethion to Zenon in 256 BC refers to 'perfume in 21 vases which have been sealed with my finger ring'.²⁰² One seal impression from a papyrus dated to 181 BC possibly has a portrait of the writer himself, one Lysimachus.²⁰³ The growing popularity of signets can probably be seen as a combination of the Greek fashion for private signets with the bureaucratic demands of Egypt.

Surviving Ptolemaic signet rings are often of Hellenistic type with oval or circular, flat bezels which bear designs in intaglio - usually chased not engraved. Scarab-set rings seldom postdate the Late Period but there is no logic in Pieper's view that Greek signets replaced scarabs in Ptolemaic times because duplicate scarabs were common but seals were always unique!²⁰⁴ One funerary scarab ring set with an amazonite (green feldspar) scarab might be of early Ptolemaic date.²⁰⁵

Few Hellenistic all gold signets have a certain Egyptian provenance, and those that do usually have typical Hellenistic subjects on their bezels. Examples include a gold ring with a circular bezel depicting a draped female before an altar (fig. 140). This was found in an untouched grave at Kafr 'Ammâr which should probably be dated to as late as the mid second century BC.²⁰⁶ The ring is perhaps of earlier Hellenistic type but it is very worn and as Petrie suggests, might have seen long use. This ring was

200 *OGI*. 56. Translation in Austin 1981: pp. 366-8. A similar phrase was probably on the Rosetta Stone of time of Ptolemy V, see Austin 1981: p. 227.

201 Milne 1916: pp. 87 ff.

202 *PSI*. 333.

203 Westermann *et al.* 1940: p. 192, no. 122.

204 Pieper 1934: pp. 245-252.

205 Williams 1924: no. 23. In the Metropolitan Museum of Art, New York, there is a hollow gold ring of second to third century Roman type set with a scarab of Queen Tiy but this scarab is probably a recent addition.

206 Petrie and Mackay 1915: 39, 18-24; Petrie 1927: ring no. 114 = UC 8707. Also illustrated in Ogden 1976: pl. 23g.

found near the left hand of a woman whose jewellery also included a necklet of sheet-gold Herakles-knot beads, a type that is also early Hellenistic.²⁰⁷

A less worn and more visually intriguing gold ring, said to be from Alexandria, has a circular bezel with a design of a mouse bound to a column with two ears of corn in its mouth (fig. 141).²⁰⁸ This ring is probably late fourth to early third century BC. A ring with an oval bezel from Egypt is chased with a figure of a dancing maenad holding a thyrsos (fig. 142).²⁰⁹ This design is well known on Greek rings of the late fourth to early third century BC,²¹⁰ and survived right through the Ptolemaic period - we are told that Cleopatra wore a signet with an image of a maenad.²¹¹

A unique ring, in a private collection but said to have been found near Alexandria, bears a monogram within a wreath (fig. 143). The style of the ring is early Hellenistic and the monogram closely resembles those found as mint masters' monograms on Ptolemaic coins and some connection is possible.²¹² The symmetrical nature of the design means that it may have been a seal or just an emblem.

The ring from Alexandria in fig. 144,²¹³ is of a type well known in Southern Italy where it is dated to the early third century BC. The shallow chasing and convex form typical for these rings implies that they were ornamental rather than for sealing, while the characteristic use of the Eros motif might suggest they were love gifts.

Hellenistic signets in silver or base metals are seldom recorded from Egypt, but a gilded bronze ring bearing a figure of winged Eros was found at Naukratis.²¹⁴ This ring is of the early Ptolemaic period, if not just pre-Ptolemaic. Some of the clay seal impressions of Ptolemaic date might have been produced with all-metal signet rings.²¹⁵

207 Petrie 1927: pl. 2.10.

208 *BMCR* 89; Boardman 1970: no. 751.

209 Ogden 1982b: no. 30.

210 e.g. Boardman 1970: nos. 684, 685 and 708.

211 *Anthology*, 9, 752 see also 9, 748.

212 Kunz has said that 'the symbols used as mint marks on ancient coins are often reproductions of the seals of the chief magistrates of the city or district...' Kunz 1917: p. 129.

213 Breccia 1912: no. 527.

214 Now in the British Museum, *BMCR* 1258; Boardman 1970: no. 723 = Gardner 1888: 2, pl. 17, 7.

215 e.g. Petrie 1927: pl. 13.

A series of all-gold rings with depictions of Ptolemaic rulers have survived from Egypt. These include one in the Canellopoulos collection,²¹⁶ and two rings in the Louvre (figs. 145 and 146).²¹⁷ Kyrieleis identified all three as Ptolemy VII who, on the basis of current Ptolemaic scholarship, is better defined as Ptolemy VIII.²¹⁸ This would date the rings to the mid second century BC. Of the two Louvre rings, one depicts Ptolemy in normal Hellenistic guise, (fig. 145) the other shows him wearing the crown of Upper and Lower Egypt and a broad collar (fig. 146).²¹⁹ It is possible that some of the gold signet rings with depictions of Sarapis and Isis were also intended to represent Ptolemaic rulers,²²⁰ although some rings with these subjects are of Roman date.

Mid to late Hellenistic gem-set signets, predominantly flat-topped garnets, are far better represented from Syria than Egypt.²²¹ One example, from Alexandria, has a garnet portrait identified as Ptolemy IX.²²² Boardman has said that 'Alexandria and Egypt under the Ptolemies, seem to have stimulated local studios of gem and ring engraving. This we have to judge less from the finds made in Egypt than from the many surviving portraits of the Ptolemies and their ladies.'²²³ Only about six of the fifty odd rings of this type collected by Spier have a supposed Egyptian provenance.²²⁴ A heavy gold ring with a superb garnet intaglio of Athena Parthenos is also said to have come from Egypt.²²⁵ / 9

A particularly fine ring from Egypt has a carnelian intaglio with a portrait, perhaps Arsinoe II as Demeter (fig. 147).²²⁶ Similar types of rings with high stepped settings can contain unengraved stones as shown in fig. 148.²²⁷ A related ring form, perhaps typical of Egypt, has a raised cameo representation, usually of a Ptolemaic ruler. These are made from a wide range of materials, including marble, bone, and bronze, but apparently not gold. The type has been most recently discussed by Paul

216 Laffineur 1980: no. 127.

217 Coche de la Ferté 1956: pl. 26, 3 - 4.

218 Kyrieleis 1975: p. 62-3.

219 Other rings with Egyptian iconography include fig. 119 and Froehner 1897: no. 7.

220 e.g. *BMCR* 95 and *CM JE*. 67885.

221 Spier 1989.

222 Jucker and Willers 1982: no. 133 = Spier 1989: no. 4.

223 Boardman 1970: pp. 361-2.

224 Spier 1989: p. 35.

225 Burlington House Exhibition 1903, pl 110, no. O.66. Formerly in the Tyskiewicz, Morrison and Wyndham Cook collections.

226 *BMCR* 367.

227 Sotheby 1981: no. 196. The Alexandrian provenance might not be certain.

Denis who, on the basis of portrait identification, dates them to the third century BC, perhaps mainly to the second half.²²⁸

The Cairo Museum possesses a heavy gold ring which originally held an inserted stone profile portrait.²²⁹ This type of ring was a popular Hellenistic and early Roman type. Hellenistic rings with applied sheet gold silhouette figures and heads are also known and one, possibly from Egypt, has a large circular bezel with the confronted profile heads of Isis and Sarapis (fig. 149).²³⁰ This has been dated to the second century BC but a later, even Roman date, is possible.

Decorative rings set with gems, usually cabochon garnets and emeralds, became popular in the late Hellenistic period. Fig. 150 shows an example of a typical late Hellenistic ring-type with a pointed elliptical garnet, from Egypt and now in the Ashmolean Museum. A fine mid to late Hellenistic gold ring set with a cabochon, unengraved, emerald, found at Memphis, is shown in fig. 151.²³¹ A more elaborate emerald-set ring from Egypt is shown in fig. 152.²³² Here figures of Paris decorate the shoulders and the bezel is joined to the shank by hinge-like fastenings. Hellenistic rings with comparable figural shanks are known.²³³ Simpler rings with stepped bezels attached by 'hinges' are well recorded from the late Hellenistic Period although provenanced examples are rare.²³⁴ The stones set in these rings include garnet,²³⁵ amethyst,²³⁶ and what is called 'topaz' but is more likely citrine.²³⁷

Roman ring types

More of the population wore rings in the Roman period than had in Ptolemaic times but there are no signet-ring types that I would characterise as being uniquely or even typically Romano-Egyptian.

The state was not alone in trying to limit the wearing of rings. Clement of Alexandria in the late second century AD could allow men to wear a signet on the little finger of the left hand, but instructed his readers that non-functional signets were 'to be cast off'.²³⁸ On the Sabbath, according to Jewish law, women were not supposed wear jewellery including 'a finger-ring which has no signet' although legal debates revolved round whether a signet was really an ornament or utensil and even whether a

228 Denis 1984.

229 CM CG 52292.

230 Ward *et al.* 1981: no. 52.

231 CM CG 52206 = Vilímková 1969: pl. 90 a.

232 BMCR 721.

233 e.g. one with figures of Eros from the Cesnola Collection, now in the Metropolitan Museum of Art. 74.51.4074. Illustrated in Oliver 1966: pp. 269-284, fig. 18.

234 One from Pelinna in Thessaly is illustrated in Miller 1979: pl. 26, a - b.

235 Turin 1962: no. 848 = Turin Museum of Antiquities no. 5480.

236 Moses undated: fig. 9.

237 Formerly Hirsch collection, published Greifenhagen 1967: pp. 81-90, fig. 7.

238 Clem. Al. *Paed.* 3. 11.

ring with a signet might be defined as a male ornament while rings without signets were women's ornaments.²³⁹

Herodotus referred to wax seals (see above) and Ovid noted the practice of licking the stone to prevent it sticking to the wax.²⁴⁰ There are few ancient references to clay or mud seal impressions other than references to appended seals on some papyri. It is perhaps worth noting that the numerous seal impressions in lead that have survived from the Roman Empire must have been made with a seal of iron or stone set in iron. Molten lead sticks to copper or silver and, as any jeweller knows, causes problems if it comes into contact with gold.

Pliny notes that some gold rings were made hollow to save jarring and cracking the stone if they were dropped.²⁴¹ He contrasts them with solid rings where weight was an asset to their owner. Roman hollow gold rings were usually filled with sulphur - as pointed out by Artemidorus.²⁴² Artemidorus describes solid rings as 'made of solid beaten metal' which supports my own view that solid gold rings of the Hellenistic, Roman and Byzantine periods were usually hammered and soldered, seldom if ever cast.

The signets found in Egypt are of universal Roman forms, made in either hollow or solid gold and usually set with an intaglio. Onyx and agate were the most popular stones for intaglios. All-gold rings include a massive one of the first or second century AD, found at Tell er-Rub' and now in the Cairo Museum,²⁴³ This bears a deeply carved male head, probably Sarapis, facing left.

There is, however, an apparent distinction between the rings with depictions of typical Romano-Egyptian deities and those with the Roman pantheon. The former are typically all-gold and so poorly incised that they were probably amulets rather than functional signets. The latter are usually intaglio-set rings and these tend to show Graeco-Roman deities and symbols, such as Herakles and Aphrodite. It might be relevant that a design chased on a gold ring would have been worked by the goldsmith who made the ring while engraved gems were obtained from specialist engravers. It is also worth pointing out the distinction between typical Hellenistic and typical Roman depictions. Hellenistic rings show a variety of divine symbols and demigods like Victory and Eros, but never the great Olympians like Zeus

239 *Shabbath* 57a and 60a.

240 *Ov. Am.* 2. 15.

241 Pliny, *HN* 33.25.

242 *Artem.* 2.5.

243 CM CG 52313, wt. 15.6 g.

himself. In Roman times deities of all levels were depicted on rings. It is of interest that the first century AD jurist Ateius Capito still claimed that 'it was sacrilegious to engrave representations of the gods on rings'.²⁴⁴

The variety of signets used in Roman Egypt is shown by the clay seal impressions found on documents which range from customs receipts to orders for arrests. Some seals bear the portraits of the Emperor,²⁴⁵ while Clement of Alexandria frowned on signets with portraits of the wearer's lover, which implies that some people owned just that.²⁴⁶ One papyrus of AD 156 had various seals appended and described by their owners.²⁴⁷ These depicted images of Thonis,²⁴⁸ Hermes, Sarapis, Apollo and Herakles. In a study of thirty-nine seals appended to Oxyrhynchus documents (which included the above), Bell gave the relative occurrences as: eight of Sarapis, six of Athena, five each of Harpokrates and Hermes, two each of Zeus and Herakles, and one each of Amun, Helios, Dionysos, Silenus, Isis, Aphrodite, Tyche and Thonis.²⁴⁹ The low number of representations of Isis relative to Athena is, perhaps, unexpected, however Milne does note that 'Athene is the Greek goddess who occurs most frequently on Alexandrian coins'.²⁵⁰ With the exception of Sarapis and Harpokrates, the Romano-Egyptian pantheon is rarely seen on intaglios. Sarapis and Harpokrates were, of course, widely popular elsewhere in the Roman world. For example, we are told that Charlemahe had a signet with the head of Sarapis!²⁵¹ Of course some typically Egyptian motifs do occur on intaglio-set rings from Egypt, such as the ibis engraved on a nicolo, and Osiris Canopus on a garnet, both in gold rings in the Metropolitan Museum of Art, New York.²⁵²

A later Roman type of ring, of the mid to late third, even early fourth, century, has an oval or circular bezel set with a flat intaglio, mounted on a thick wire hoop (fig. 153). The type is fairly well represented from Egypt. One example set with a bloodstone intaglio of an eagle is shown in fig. 154. Often two or more granules decorate the joint between shank and bezel. The intaglios can be of jasper or carnelian. Few rings of this general type are provenanced, but one from Antinoopolis is in the Cairo Museum.²⁵³ This contains a carnelian intaglio with a fishing scene. The same basic form, but all-gold, can bear an inscription and this type has been mentioned above.

244 See Macrob. *Sat.* 7.13

245 See *P.Tebt.* 290 and also *P.Oxy.* 2576, also Boak 1933.

246 Clem. Al. *Paed.* 3. XI.

247 *P.Oxy.* 494.

248 According to Herodotus, Thonis was the mythical guard of the Canopic mouth of the Nile (Hdt. 2.113). Perhaps a Osiris Canopus or similar was meant.

249 Bell 1948: pp. 82-97. Examples of documents with seals impressions include *P.Oxy.* 491, *P.Oxy.* 492, and *P.Oxy.* 646.

250 Milne 1927: p. xxvii.

251 Kunz 1917: p. 140.

252 For canopic type representations on rings see also Segall 1938: no. 148.

253 CM CG 52305.

Decorative gem-set rings of the early Roman period are, in most cases, of the same form and construction as the intaglio rings. It is only in the late Roman and early Byzantine periods that we find more flamboyant decorative forms. A well-known type from Syria has high, often open sided, settings and these are occasionally recorded from Egypt. Fig. 155 shows a splendid example from the Nile Delta which is now in the British Museum.²⁵⁴ This is set with one green glass and one rectangular emerald, one setting is empty. The use of green glass for the oval setting and the crystal-form emerald for the rectangular setting is in keeping with late Roman practice of avoiding cutting an emerald. A simpler ring, of similar type, set with a reddish stone (perhaps jasper) is in the Cairo Museum (figure 6:76).²⁵⁵ Other flamboyant decorative rings of late Roman type from Egypt include several with hoops composed of openwork wavy filigree. One of these has a incurved hexagonal shaped bezel which is matched by the settings on many of the hinged-bezel bracelets (fig. 157).²⁵⁶ Marshall calls this shape 'peculiar to Egypt'. A silver ring with bezel of similar, though more ornate form, was found in a burial at Qustul in conjunction with a coin of AD 363-4 (fig. 158).²⁵⁷

Gold rings set with coins are quite well known throughout most of the Roman Empire but are seldom recorded from Egypt. Two examples said to be Egyptian, were on the market in 1959 (figs. 159 and 160).²⁵⁸ One example is a typical Roman tapered shoulder type with fluting. This weighed 17.35 g. and contained a gold quinarius of Antoninus Pius. The other, said to be from Abuqir, had leaf-shaped shoulders with a fine pierced openwork design. This was set with an aureus of Septimius Severus. The coins do not provide a firm date for the rings, only a terminus post quem, and both rings are probably of the later third or early fourth century AD. It has been suggested that coin set rings were presented to army officers by the emperor,²⁵⁹ but this seems unlikely in the cases where the coins are undoubtedly far earlier than the rings - for example a late Roman ring in the British Museum set with a coin of Caracalla.²⁶⁰

Byzantine ring types

A characteristic Byzantine signet ring, derived from the late Roman ring type, has a circular, or sometimes quatrefoil or square, tablet-like bezel set on a circular section thick gold wire hoop. This is the form generally used for the 'Honorary Consul' and other monogram rings described above (see fig.

254 *BMCR* 793.

255 *CM JE* 42897.

256 *BMCR* 819.

257 Emery 1948: pl. 20 d and pp. 52-3.

258 *Ars Antiqua* 1959: nos. 152 and 153.

259 Kent and Painter 1977: pp. 26-7.

260 *BMCR* 263.

89). These tablet-bezel rings can have a variety of different figural bezels including images of a betrothed couple under a cross or before Christ, figures of saints, monograms or inscriptions. One ring in the Benaki collection with a figure of the archangel Michael might well be from Egypt.²⁶¹ Bronze versions of tablet-bezel rings are well known from Egypt.²⁶² Bezel designs range from simple crosses to such subjects as an eagle standing on the back of a lion.²⁶³ An iron ring of the same type in the British Museum has a mounted figure, possibly St. George.²⁶⁴

There are also gold rings with completely undecorated bezels. Examples from Egypt include one with a circular bezel which weighed 9.8 g, perhaps two solidi,²⁶⁵ and one with a square bezel with a supposed 'Alexandrian' provenance.²⁶⁶ It seems unlikely that all plain rings were unfinished, but their original significance is unknown.

One silver ring from Akhmîm has a circular silver plaque-like bezel that is free to rotate on the ends of the shank.²⁶⁷ One side bears a figure of the Virgin Mary, the other a figure of the archangel Michael, each figure is surrounded by a line of inscription.

Intaglio-set Byzantine rings are generally less common than the all-metal types and this is particularly true in Egypt. One example, said to be from Alexandria, is set with an oval garnet intaglio of a wolf.²⁶⁸ and another ring of basically the same type, with a garnet intaglio, was found at Ballana (fig. 161).²⁶⁹ The hoop is not filigree, as Emery stated, but is a band of gold with a pierced-work diamond pattern, bordered by beaded wire. This ring type is of the fifth to sixth centuries AD.

Magical rings

Many Romano-Egyptian rings were worn for their amuletic properties and, as suggested above, the cursory figures of deities cut onto ring bezels probably served much the same function as images of the same deities worn as pendants. Other rings had applied amuletic figures or symbols. Such rings range from a small gold ring from Alexandria, probably early-Roman, with an applied crescent amulet on its bezel (fig. 162),²⁷⁰ to rings in the form of a gold hoop attached to a small figure of a deity. Two gold rings of this latter type from Egypt are in the Louvre, one with a seated Harpokrates is shown in fig.

261 Segall 1938: no. 259.

262 Petrie 1927: nos. 180 - 199.

263 *BMCR* + nos. 134, 135, 138, and 144.

264 *BMCR* + no. 118.

265 Private collection, unpublished. For a silver example see Schäffer 1910: no. 156

266 Ede 1975: no. 1.

267 Forrer 1893: pl. 13, 6.

268 *BMCR* 563.

269 Emery 1948: pl. 20 h.

270 *BMCR* 248.

163, the other has a figure of Neith.²⁷¹ Other similar rings with uncertain provenance include one in a private collection in New York and a silver one, with a figure of Harpokrates, formerly in a German private collection.²⁷² These rings are of late Ptolemaic or early Roman date.

Some rings did not merely gave the protection of a deity, but imbued the wearer with specific supernatural powers. For male wearers the desired result was usually power over women. For example there was the ring which you put 'on your finger after reciting these charms to it, and walk to any place, and any woman whom you shall take hold of, she [gives herself (?)] to you.'²⁷³ The manufacture of another ring involved recipes not out of place in the opening scene of Macbeth - the ring was to be made of the parts of various animals including a 'wild she-cat' and a drowned animal. Once made, the ring had powers somewhat similar to the one mentioned above - 'If you wish to bring a woman to you at any time, you place the ring on the upper part of a lamp, which is lighted; you say, 'Bring N. daughter of N. to this place in which I am, quickly in these moments of today'. Then she comes at once.'²⁷⁴ It is interesting to speculate whether the choice of ingredients, including the wild she-cat, related to the hoped-for results.

More than just sexual gratification could be invoked by placing the heart of an animal in a gold ring: 'put it on your hand; then it gives you great praise, love and respect.'²⁷⁵ Another magical papyrus refers to a blue jasper with a gnostic scene set in a gold ring. If the wearer was pure, they could obtain anything they chose. It is specifically noted that the same effect would be true if the design was engraved directly onto the gold of the ring rather than on the jasper.²⁷⁶ This type of substitution is also shown by the description of a ring set with a stone engraved with Poseidon which would 'have all the powers associated with the emerald'.²⁷⁷ A ring of Hermes had to be made of 'very precious emerald' and sanctified over a fire of vine wood.²⁷⁸ The stone was probably a double-sided intaglio, a scarab engraved on the top, Isis below. The possible association of emerald with Isis and fertility was noted above.

Gold rings set with gnostic engraved gems are rare and the nature of the original settings for the myriad surviving gnostic gems is uncertain. One exception from Egypt is set with an oval haematite intaglio showing a uterus symbol within an ouroboros and the name IAO (fig. 164).²⁷⁹ The name is equivalent to the Hebrew JAHWEH and is not written in reverse. This means that, like most gnostic intaglios, the ring was not intended as a signet. I know of no surviving seal impressions with gnostic

271 Ziegler 1980: p. 39.

272 Lullies 1955: no. 290.

273 Griffith and Thompson 1904: p. 97.

274 Griffith and Thompson 1904: p. 193.

275 Griffith and Thompson 1904: p. 203.

276 PGM II, 71-76, quoted by Goodenough 1953: vol. 2, p. 291.

277 Mely and Ruelle 1898: p. 175.

278 P.Lond. 46, 225-235.

279 Christies 1979: no. 43.

devices. A simple small gold ring from Egypt, recently on the market, had an intaglio design showing the head of Sarapis bordered by the gnostic inscription PAOICPCCAKOI.

Betrothal rings

Rings identifiable as betrothal rings are scarce from Egypt but since some signets and other rings were used for the purpose, a brief summary is needed here.

A betrothal ring combined the function of our engagement and wedding rings. There is no evidence that a ring had any significance in marriage in dynastic Egypt or, indeed, elsewhere in the early Near East. The betrothal ring is not mentioned in the Talmud and its use in the Jewish marriage ceremony probably derived from Roman or Christian practice.²⁸⁰

A Greek or Roman origin for the betrothal ring is most probable. A ring given as a love pledge first occurs in Roman literature in the second century BC - although this was from a woman to a man.²⁸¹ We know that rings were given as love gifts, without implying matrimony, right through the Roman period. In the late second century AD, Clement of Alexandria reminded his readers that although a wife was permitted to wear a gold ring this was not just an ornament but was a functional seal for special items in her care.²⁸² A passage by Tertullian might suggest that marriage rings, though used by pagans, were not usual in Christian marriages,²⁸³ although this seemingly contradicts Clement.

According to Pliny the *anulus pronubus* was sent as a gift to a woman at the time of betrothal.²⁸⁴ Ovid, in a long poem about the gift of a ring as a love token, says 'I wish you a warm welcome and immediate installation behind her second knuckle, fit her as snugly as she fits me...' ²⁸⁵ The sending of a betrothal ring might well be referred to in a papyrus of the fourth century AD from Antinoopolis in Egypt which is a letter concerning the arrangements for a wedding written by the groom to his future mother-in-law. The letter, begins 'I salute you and the mistress, my bride', and continues 'Let me know whether you received the golden ring from Dorotheus, the assistant of Anysius, together with the pearl of Arethusius the teacher, so that you may buy perfumes.'²⁸⁶ Possibly the ring - maybe pearl-set - was en route to the bride and was a sign to begin the wedding preparations.

Despite Ovid's affirmation that a ring destined for the finger of a girl had no worth except the love of the giver,²⁸⁷ it is a moot point whether the presentation of a ring represents the purchase of the bride

280 Goodenough 1953: vol. 12, p 125, and vol. 6, pp. 152-153.

281 Plaut. *Miles* 4. 1.

282 Clem. Al. *Paed.* 3. 11.

283 Tert. *De Idol.* 16.

284 Pliny, *HN* 33. 12. See also Juv. 6. 25 and *Dig.* 24. 1. 36.

285 Ov. *Am.* 2. 15. Compare the Cairo ostrakon with its similar Freudian allusions.

286 P. *Ant.* 94.

287 Ov. *Am.* 2. 15.

or the endowing on her of worldly wealth! In the fourth century, Augustine had to point out that a priest should not hesitate to wed a couple even if they were too poor to give rings to each other, since 'earnest-money is a matter of decorum not necessity'.²⁸⁸

When we take Pliny's statement that 'it had originally been the custom to wear rings on one finger only, the one next to the little finger' in conjunction with Tertullian's assertion that the only ring worn by women in earlier days was the wedding band, it seems inescapable that the wedding ring would normally have been worn on the third finger of the left hand. We can tie this in with what was said above about the ancient idea of a vein linking this finger with the heart - a concept that passed into Jewish and Christian tradition. For example, the same reasons for wearing the wedding ring on the third finger are given by Isidore Bishop of Seville in the seventh century,²⁸⁹ and continued to be cited even in Renaissance Europe.²⁹⁰ lin

From the end of the third century AD onwards, literary mentions of marriage rings become commoner and from about this same period we begin to find rings with the inscription *omonoia* (Latin *concordia*), often in conjunction with a depiction of clasped hands or with a pair of figures or faces, or clasped hands alone. Most of these later Roman rings were probably betrothal rings, although rings with clasped hands do occur from as early as the first century AD.²⁹¹ Unfortunately there are very few clasped-hands rings with certain Egyptian provenance. One such ring - said to be from Cairo - is shown in fig. 165, the raised bezel indicates a late third if not fourth century date.²⁹² This ring is of fairly thin sheet gold and I doubt whether it could have been worn on anything like a day-to-day basis. On some clasped-hand rings with the hands carved in cameo stone, there is a distinct difference in scale between the hand on the viewer's left and that on the right. Presumably they were intended to represent female and male hands. In some cases the female hand wears a ring on the third finger, in the cases of the Cairo ring, the female hand has a bracelet. lc

Omonoia in Greek means harmony or togetherness and *omonoia nymphos* meant allied by marriage. From the fifth century BC onwards, the word *omonoia* appeared on Greek coins and referred to some political show of friendship. Clasped hands served much the same function on Roman coins, such as a tetradrachm from Egypt of AD 127/8.²⁹³ A representation of Antoninus Pius and Faustina with hands

288 August. *Ep.* 119 ad Jan. 18.

289 Isod. *De eccles.* Off 30. 8.

290 See Kunz 1917: pp. 196-197.

291 Siviero 1959: no. 352.

292 British Museum, MLA 1971,8-2,4.

293 See for example Jucker 1962: p. 323.

clasped and the inscription *concordia*, might be the earliest use of the motifs to imply marriage.²⁹⁴ Rings with clasped hands were still used in the Roman world at least as late as c. AD 400,²⁹⁵ and there is a reference to the type by Pignorius.²⁹⁶

By the beginning of the sixth century, the typical marriage ring was the tablet-bezel type - a simple narrow gold shank (sometimes of octagonal profile) with a circular or octagonal bezel. The octagonal shape has been linked to the traditional ground plan shape of Christian baptistries.²⁹⁷ These Byzantine wedding rings usually show the man and woman facing each other - either just their heads or in full figure. In the latter case then can have their hands clasped but clasped hands alone are no longer used. Christ usually stands behind or between the couple - replacing the figures of Juno or Concord found in Roman art prior to about AD 400.²⁹⁸ Though this general shape of Byzantine ring is known from Egypt, I know of no marriage rings of this type with certain Egyptian origin.

Possibly some Roman period rings in the forms of keys (either functional or stylised) were also betrothal rings. The keys to the domestic stores were given to a woman when she first entered her husband's house after marriage and were surrendered on divorce.²⁹⁹ Thus some symbolic association between keys and marriage seems unavoidable. A key ring is shown on the second century BC terracotta sarcophagus of the Italian lady Seianti Thanunia in the British Museum - she wears it on the third finger of her left hand.³⁰⁰ Key rings are also represented on Palmyrene relief sculpture - the wearers are women and the rings are worn on the third finger of the left hand, although sometimes on the upper joint. Palmyrene relief sculptures of women frequently show keys being worn suspended from fibula. Possibly such an ostentation was again a symbol of the married state. Key rings, both functional and stylised, are known from Roman Egypt, typically in bronze.³⁰¹ I know of no Romano-Egyptian literary mention of key rings or certain depictions of them in wear. Keys hanging from fibulae are similarly not a Romano-Egyptian phenomenon,³⁰² although we do often see keys held by Anubis or worn on his jackal's collar. These were the keys to death and the afterlife - a somewhat different symbolism from the keys of marriage!

294 Kantorowicz 1960: fig. 12.

295 e.g. Johns and Potter 1983: no. 10; Kent and Painter 1977: no 140 = BM (C&M) 1911.10 - 26.1. A silver ring found in the UK with coins up to about AD 395.

296 Pignor. *Epist.* 19.

297 Kantorowicz 1960: p. 13.

298 Kantorowicz 1960: p. 8.

299 See for example Ambros *Epist.* 6. 3.

300 BM Terracottas, D786.

301 e.g. Petrie 1927: pl. 11, 21-26 and pl. 13, 170 - 171; Petrie 1888b: pl. 20.

302 However Brunton (1948: p. 92) does refer to what he terms a 'key-like' ornament hanging from an earring found in grave 847 at Matmar in Egypt, dating to c. AD 400.

CHAPTER 7 - EARRINGS

INTRODUCTION

Earrings first appeared in Egypt after the beginning of the second millennium BC. Middle Kingdom wear is unproved, but earrings were worn by the 'pan-grave' people and the Hyksos. However, earrings only became popular in the New Kingdom, when they first are depicted in wall paintings and other media.

The popularity of earrings continued into the Third Intermediate Period. In the twenty-first dynasty Tiye is shown wearing the rosette earrings typical of her period on her coffins and even in her Book of the Dead. We can compare the large size of the depicted rosettes (fig. 166), with the actual holes in her ear-lobes (fig. 167). Gold rosettes have not survived, but some large faience rosette earstuds might well be of this period.

Wilkinson said that there is no evidence for earring wear in Egypt between the twenty-fifth dynasty and Hellenistic times.¹ However, Late Period female coffins frequently show pierced ears or stylised rosette earrings.² Actual earrings of the Late Period include swollen lunate and boat-shaped earrings, both silver and gold, that probably relate to East Greek prototypes.³ The silver jewellery hoard from Tell Atrîb contained many earrings, mostly of lunate type.⁴ This hoard is probably of the sixth to fifth century BC since it includes small beads made of helicoid coils of wire, as are typical of Etruscan and Phoenician work, and fragments of two animal-headed bracelets. Other Greek forms of the period, such as the double hook and spiral types, are not recorded from Egypt although they are sometimes represented in Greek art found in Egypt.⁵

Large three- or four-lobed globular earrings are well known from Egypt (figs. 168),⁶ but probably originated in Western Asia where the concept of multi-lobed 'leech' or boat earrings had a long history. They are usually dated to the Ptolemaic period or later, but Petrie's Late Period date is more probable.⁷ In technical terms, the granulation and serpentine filigree work on several examples (as in fig. 168),⁸ is not Hellenistic in concept but relates to archaic Etruscan and Assyrian work. Petrie found

1 Wilkinson 1971: p. 194.

2 e.g. MMA O.C.6B. The twenty-sixth dynasty coffin of Shebebwon from Deir el-Bahri, now in the Metropolitan Museum of Art, New York, appears to show only the left ear pierced, perhaps a unique occurrence.

3 e.g. *BMCJ* 1241 from Nebesha = Petrie 1888: pl. 8, 18.

4 Engelbach 1924: pp. 178- 185.

5 e.g. on a terracotta head from Naukratis - *BMCJ* p. 96, fig. 21.

6 Petrie 1927: p. 8, nos 161-2 4 = Petrie 1911: pl. 31; There are many examples in the Cairo Museum, e.g. CM CG 52368-9, 52462-52476, and 52443-52449,

7 Petrie 1911: p. 24, pl. 31; Petrie 1927: p. 11 no 161-2.

8 e.g. Greifenhagen 1975: pl. 73, 17; CM CG 52473 and 52475.

multi-lobed earrings in the same sixth century BC context as leech-like earrings with granulated cylinder pendants terminating in hollow, flattened spheres (fig. 169).⁹ This latter type of earring, and variants, have been found in other sixth century contexts at Mendes and Memphis,¹⁰ and with sheet gold appliques of undoubted Assyrian or Achaemenid type.¹¹

Earrings became commoner in Egypt in Ptolemaic times but the forms were, almost without exception, typically Hellenistic. Traditional Egyptian iconography of the period shunned earrings. For example, no goddess or queen is shown wearing earrings on the reliefs at Philae, but Arsinoe III can be shown with Hellenistic earrings on gold octadrachms.

Early Romano-Egyptian earrings either derive from Ptolemaic forms, or are similar to those from the Pompeian region. They lack the fiddly decoration of their contemporaries from Syria and the Levant, but also seem more elegant than the more austere earrings from Asia Minor. This relationship is seen with other jewellery types and shows that Egypt had a stronger link with first century Italy than she did with most of her Eastern Mediterranean neighbours.

Earrings were the most essential of head ornaments and are shown in wear on over 95% of female funerary portraits from Roman Egypt. Earrings can be shown without accompanying necklets - in over 10% of cases - but necklets were very seldom worn without earrings. The absence of earrings on some portraits is strange. Women of high enough social level to have painted funerary portraits might be expected to have money for earrings - of silver or base metals if not gold. Poor Roman and Coptic graves at Mustagidda show that non-gold earrings were worn by many, if not most, women and children, though by no means always in pairs.¹² One five year-old child buried at Mustagidda wore a single bronze earring whilst a 'Coptic period' woman at the same site had one earring in her left ear and two in her right ear.¹³

Hellenistic earring designs usually allude to Aphrodite or Dionysos, but most early Roman earrings are more abstract and owe as much to geometry and engineering as to myth. Choice of earrings in Roman Egypt probably reflected economics as much as aesthetics. For example, the computer analysis of the jewellery shown in funerary portraits did reveal favoured combinations, something noted by Petrie at Hawâra,¹⁴ but these could easily be explained as a natural economic effect. The more expensive, heavier earrings - such as the ball earrings - would tend to be worn with gold necklets, while simpler earrings - such as the S-hoops - were normally worn with cheaper, bead necklets.

9 Petrie 1911: p. 24, pl. 31; CM CG 52441-2 from Memphis

10 Karo 1901; Petrie 1911: p. 24, pl. 31.

11 CM on display numbered 4133 (also numbered CM JE(?) 40373).

12 Brunton 1937: pp. 139 - 142.

13 Brunton 1937: p. 140.

14 Petrie 1911: p. 12.

Deeper significance is only hinted at. For example, the three coffins of the family of Cornelius Pollius from Thebes, in the British Museum, all have representations of goddesses on their lids and bases. In the lid she always wears animal-head hoop earrings (fig. 170), on the base always S-hoop earrings (fig. 171). Sadly, this neat pattern is not true of all such coffins.

WEAR BY MEN

Men had worn earrings during the New Kingdom - Tutankhamun had several pairs - but the practice largely ceased from the Third Intermediate Period onwards. There are exceptions, such as a recently excavated block from Edfu (displayed on site but unpublished) which shows a twenty-fifth dynasty pharaoh wearing earrings (fig. 172). This scene was later usurped by Psammetichus. Earring wear by men was also extremely unusual in Iron Age Greece and 'the lousy Aretemon' who had once worn 'buttons of wood hung in his ears for rings', was an exception.¹⁵ Men, including rulers, only continued to wear earrings in Western Asia - though sometimes only in one ear. Gods sometimes wear simple tapering hoop earrings in provincial Palmyrene art of the Roman period.¹⁶

The Hellenistic Greeks and the Romans associated male earrings with slaves or Easterners. Blacks and Phoenicians are sometimes depicted with earrings in Hellenistic art and in the *Satyricon* Giton says 'why not... bore holes in our ears to imitate Arabs'.¹⁷ A Roman bronze figure of a deformed, or at least caricatured, male, wearing earrings is in the Museum of Fine Arts,¹⁸ and a young satyr possibly wears an earring in a wall painting from Pompeii.¹⁹ The only Ptolemaic reference to men wearing earrings I know of is a papyrus of 129 BC which describes a slave: 'about 35, of medium height fair skinned rather curly-haired, broad faced, straight nosed, ears large and prominent and the left one pierced'.²⁰ Note, as in recent Asiatic practice, it is the left ear. Grown men and gods are not shown wearing earrings in Ptolemaic art although this occurs occasionally in Meroitic art. There are no Romano-Egyptian references to men wearing earrings and Clement of Alexandria only refers to women in his tirade against earrings.²¹

Even nowadays, Egyptian boys can wear earrings up to about the age of eight, and this has been a long tradition in many parts of Africa. Ptolemaic evidence for the practice is limited to a number of lime-

15 Anacreon of Teos, c. 500 BC.

16 Colledge 1976: p. 150-152.

17 Petron. *Sat.* 102.

18 Comstock and Vermeule 1971: no. 143.

19 Most recently illustrated in *Rediscovering Pompeii*. (Rome 1990) pp. 237 - 9, no. 164.

20 PSI. 1016.

21 Clem. Al. *Paed.* 3.9.

stone plaques, probably trial pieces, which represent a male child with simple hoop earrings, possibly the young Ptolemy III (fig. 173).²² In the recent discoveries of second century AD Roman period burials at the oasis of Dûsh (some fifty miles south of el-Khârga), the body of an eighteen month old boy had as simple bronze animal-head earring.²³ Despite reports to the contrary, there are few if any Romano-Egyptian mummy masks or portraits showing earrings worn by children that are conclusively male. One exception might be a portrait of Trajanic date, from Hawâra, which has been said to show a boy with a simple gold ring in his right ear (fig. 174).²⁴ However, the gender of this portrait is not certain since the bead necklet is also an unusual feature on a male. Possibly young male children continued to wear simple earrings in the poorer communities but, unfortunately the sex of the mummies of children from such burials is seldom recorded.

Byzantine men also did not wear earrings. Ross refers to earrings being worn by Honorius on the diptych of Probus of the early fifth century,²⁵ but to my mind, these 'earrings' are the ornate ends of the ties for his magnificent tiara-like diadem. In AD 626, Heraclius gave a pair of pearl earrings to Ziebel, a male ruler of a South Russian kingdom. But, again to contradict Ross, this more likely reflects the known use of earrings by Russian men at the time, than a Byzantine fashion. There is no evidence for the wearing of earrings by Christian males and it is amusing to note that in the judgement scenes on the Medieval mosaics at Torcello, the damned men wear earrings, the saved do not.

MODE OF WEAR

Earrings were usually worn by passing a hook or stud through a hole pierced in the lobe of the ear. Ear pendants that were held to the ear by a chain passing over the ear have not been documented in Egypt apart from an unsubstantiated statement by Petrie.²⁶

The hole or slot in the ear was pierced with a sharp point or knife. According to early Semitic practice, the ear was placed against a block of wood and pierced with an awl.²⁷ Greek references to the piercing of ears are rare,²⁸ and the nearest we get in Roman times are Tertullian's mention of ears

22 e.g. Fitzwilliam EGA 4338. 1943; MFA, Boston 07.281; MMA, New York, 23.2.36. There is another, unnumbered, in the Cairo Museum. I am grateful to E. Vassilika for the suggested identification. There are also occasional male terracotta heads from Egypt - probably of Ptolemaic or Roman date - that show earrings.

23 Aspropoulos 1990: p. 4.

24 CM CG 33227 = Petrie 1889: pl 11; Parlasca 1969: no. 58.

25 Ross 1959.

26 Petrie 1927: p. 11, no. 150. For the ancient practice see Ogden 1980, and the comments in Boyer 1952: pp. 124 ff.

27 For references in the Talmud see *Yebamoth* 104a and *Kiddushin* 22a-b.

28 e.g. *Hom. II.* 14. 182.

defaced with 'finely-cut wounds'²⁹ and Pliny's typically cynical mention of the 'fashion of making wounds in the ears'.³⁰ When earrings were not worn, a thread could be passed through newly pierced ears to prevent them from healing up. The antiquity of this practice is shown by the Talmud's ruling that such threads were allowed on the Sabbath, but earrings were not.³¹

A child could be very young when she was subjected to the 'tortures of innocent infancy, learning to suffer with its earliest breath, in order that from those scars of the body - born for the steel! - should hang I know not what (precious) grains'.³² Cyprian similarly talks of the piercing of the ears of 'childhood still innocent and without knowledge of the evil of the world'.³³ Earrings have been found *in situ* on the ears of very young children, for example in the burial of an eighteen month old boy at Dûsh, mentioned above, and at Matmar where earrings were found on the ears of children as young as two years old.³⁴

There were strong early Christian (and Jewish) rules against self mutilation, and it is not surprising that Clement of Alexandria, in about AD 195, tried to counter the wearing of earrings: 'The word prohibits us from doing violence to nature by boring the lobes of the ear',³⁵ and, in much the same vein, 'let not their ears be pierced, contrary to nature, in order to attach to them earrings and eardrops'.³⁶

Connotations of vanity offended Christians, Jews, and others, on religious and economic grounds. Ovid reflects something of the censorious spirit when says 'burden not your ears with precious stones which the dusky Indian gathers from the green water'.³⁷ This is underlined by Petronius: 'From round her neck she took a little gold locket, which she called her "lucky box". From it she extracted two earrings and in her turn gave them to Fortunata to look at. "A present from my good husband," she said, "and no one has a finer set." "Hey", said Habinnas, "You cleaned me out to buy you a glass bean. Honestly, if I had a daughter, I'd cut her little ears off."³⁸ In the Carpens Museum in Rome, there is, or was, a Latin cinerary urn belonging to a woman with the title of *auriculae ornatricis* - apparently a slave devoted to helping her mistress with the care and wear of earrings.³⁹

29 Tert. 1.10.

30 Pliny, *HN* 12. 1.

31 *Shabbath*, 57a-b and 65a.

32 Tert. 1.10.

33 Cyprian, *De Hab. Virg.* ch.14.

34 Brunton 1948.

35 Clem. Al. *Paed.* 3. 11.

36 Clem. Al. *Paed.* 2. 2.

37 Ov. *Ars. Am.* 3.

38 Petron. *Sat.* 67.

39 Gruter 1707: p. 579.

The mode of wear for a selection of Classical earring types is shown in fig. 175. There has been far too much confusion in the past regarding modes of wear and some earring types are almost invariably illustrated upside down in publications. The S-hook fastener (fig. 175c), whether bearing a simple small dome or a whole edifice of gold and stones, worked on the same principle. Sometimes the tail was pushed up behind the hook or even twisted round it. The S-hook type is a Roman period characteristic and more usual in Egypt and at Pompeii than either 10d or 10e. On the basis of a limited statistical study it would seem that 10e is most typical of Syria and the Levant, 10d most popular in Asia Minor. Both 10d and 10e are fairly permanent forms of fastening that imply continuous wear, unlike 10c which is readily removed on a day-to-day basis if needed. / /

As a final word, it should be noted that ancient earrings were made to be worn and their weight distribution and balance was not arbitrary. An ancient earring will balance at the point of the hoop that passed through the ear. Forgeries are seldom so well planned or executed.

GREEK AND ROMAN TERMINOLOGY

Terms for earrings have not been identified with any certainty in Demotic marriage contracts of Ptolemaic date. But jewellery such as 'one pair of *wh3* of gold' probably meant earrings of some sort.⁴⁰

Roman writers generally use the term *crotalia*, Greek *krotalia*, to describe earrings. *Crotalum* is a rattle or castanet and Pliny explains how the women of his time have earrings from which hang two or three pearls 'they call them castanets, as if they enjoyed even the sound and the mere rattling together of the pearls'.⁴¹ These *crotalia* were presumably the earrings with a horizontal bar supporting two or more pearl pendants (as in figs. 217 and 218). *Crotalia* is not used in Romano-Egyptian papyri but earrings termed *cottatia* do occur and a link has been suggested.⁴² The conversation in Plautus' play regarding the purchase of earrings by Menaechmus for a maid (see ch. 5) uses the term *stalagnia*, literally 'drops', but this word is not found elsewhere.

The usual term for earring in the papyri is *enodion* or *enotion*; the former is more usual in general, but the latter more typical for Latin papyri.⁴³ An *enotion p(e)rlon(gum)* - a very long earring, presumably what we would call a drop earring - is listed in a Latin papyrus from the Fayûm,⁴⁴ and a Greek papyrus mentions a pair of *enotion alethinopeinon* - that is earrings with real pearls.⁴⁵ The Greek *el-*

40 *P.Tur.* 2129. Translation of relevant part in Pestman 1961: p. 92.

41 Pliny, *HN* 9. 114.

42 *PSA* 730.

43 e.g. *P.Mich.* 7.434; *P.Petr.* 3. p. 37; and *SB.* 7260. 2b8, 3a2.

44 Sanders 1938.

45 *P.Rain.* 7.

lobion has not so far been recorded in papyri from Egypt, but Clement uses this term when quoting Nicostratus.⁴⁶

One list of jewellery from a third century AD pawnbroker's accounts includes a 'pair of *phial(on)*'.⁴⁷ Some type of earrings of bowl or dome shape might be meant - especially as the list does not include any other mention of earrings. The term *sigla*, meaning some type of earring, is found in a papyrus of the sixth century AD,⁴⁸ and is a term noted by Pollux and Hesychius.

The Egyptian lexicographer Pollux named various other earring forms, but these do not reflect current usage in his time. His terms include *strobilas*, that is cone or pine-cone shaped earrings, *botrydia* presumably grape-like clusters, *kentaurides* or little centaurs, *ippokampia* or little hippocamps, *amphoreys*, presumably the well-known amphora shaped earrings, and *aplastra* which Hesychius in about the fifth century AD interprets as figures of gods. It is not hard to picture the Greek earrings forms that these might describe.

EARRING TYPES CHARACTERISTIC OF EGYPT

There are few types of earring that can be considered to be uniquely Egyptian during our period and so the present section will describe those types which are particularly well known from Egypt. The types are arranged in approximate chronological order according to their introduction.

This study is hampered by the singular lack of interest in earrings over the last century.⁴⁹ Earrings have fared far worse than rings, and are often poorly described and unillustrated in archaeological reports and catalogues. It is not unusual to find descriptions such as: 'A box containing nine assorted earrings including one with a bust of Isis...' This was among 'A collection of Greco-Egyptian gold jewellery from Alexandria, fifth-second century BC' that was sold in New York in 1962. Only six out of eighty ornaments were illustrated and none was described.⁵⁰

Animal head hoops

Hoop earrings with animal-head terminals are the commonest surviving type of gold earring from the Hellenistic world. The type possibly derived from Etruscan, not Persian forms, and first appeared in Egypt at the beginning of the Ptolemaic period. The essential form is a tapering hoop, usually of twisted wires, which terminates in the head of an animal. The earliest examples are sturdy and stark in the mannered, early-Hellenistic style. This simplicity lessened with the growing love of coloured stones, and the later forms are in the flamboyant-but-flimsy taste of the late-Hellenistic baroque.

46 Nik Fr. 33 CAF 2, p. 501 ff; Clem al. *Paed.* 2.

47 *P.Mich.* inv. 1950, see Husselman 1961.

48 *P.Masp.* 340. 77.

49 The only real exceptions are Hadaczek 1903 and Allason-Jones 1989.

50 Sotheby 1962.

There are four basic types of animal-head earrings from Egypt:

a) *Plain type*. This is typically of the late fourth to third century BC, rarely later. In Ptolemaic Egypt the heads are typically lion (fig. 176), lion-griffin (fig. 177), or ibex (fig. 178), less commonly bull. The collars are sometimes decorated with filigree spirals and usually terminate in a series of tongues. The hoops are composed of two or more wires twisted together or a spiral of finer wires which, if very fine, are wrapped around a wire or sheet gold former. The end of the hoop passes either into the mouth of the animal (lion and lion-griffin) or into a transverse loop soldered below the muzzle of the animal (some lion-griffins, ibex and bull).

b) *Decorated type*. These are usually third to mid second century BC and have bull or ibex heads. They are often flimsier and less well made than type (a) although the construction is much the same. The difference lies in the addition of stones, usually garnets, set over the forehead or between the horns (fig. 179). The fastening loops can be either along, or at right angles to, the muzzle of the animal. This class of earring is far less common in Egypt than in Asia Minor.

c) *Bead and collar type*. This gradually developed in the course of the Hellenistic period, but is most typical of the second to first century BC. Most have bull heads (figs. 180 and 181). The characteristic is the spherical gold or stone bead that forms part of the collar. When the collar includes a stone bead this is threaded onto a wire which passes from the hoop into the head. This wire sometimes emerges under the muzzle to form the fastening loop, when this happens the fastening loop is along the axis of the muzzle. In the earliest forms, the spherical nature of the collar is barely discernable and there is little difference from type (a). Some ibex-head earrings from Egypt are of this latter type.

d) *Stone-bead type*. This type dates from the second or first century BC to the first, or even second, century AD, is mainly limited to Egypt and Cyprus, and has dolphin (fig. 182), or goat heads (fig. 183), (in Egypt very rarely maenad heads). On type (d) earrings a bead or beads replace the collar rather than being an integral part of it. The beads can be of emerald, banded onyx, garnet, glass, or gold and range from a single bead to four. The earrings with single beads are possibly the earliest form (fig. 184) and might originate in the second century BC. The beads are interspersed with gold spacers composed of granules or short spool-like tubes. The emerald beads can be spherical or remain in their natural crystal form. The latter are probably all Roman. There seems to be no correlation between the type of heads and the choice of beads to decorate the hoop. Most earrings have a fastening loop parallel to the axis of the muzzle. The hoops can be the same as on type (a), but the later versions of the series can have hoops composed of tubes, conjoined wires, twisted square wires and tapering wires with granulated decoration. The wire that passes from the hoop, through the beads, can exit underneath the head where it forms, or joins, the fastening loop, or it can emerge through the top of the animal head.

These earrings with beads are very frequently depicted on first and, perhaps, second century AD cartonnages (fig. 185). The period of use of type (c) and type (d) earrings probably overlapped since part of a type (d) earring with a dolphin head was found with a bronze type (c) bull-head earring in a house at Tanis.⁵¹ We would expect such an overlap to occur in about the first century BC and, indeed, Petrie dated the house 'to the end of the Ptolemaic period'.

The types of heads were, in the main, limited to a small variety of animal species and these differed with time.

Lion-head: The lion-head earring is probably the oldest form. The Etruscan precedents all seem to be lion-headed, as are almost all those of Hellenistic date from Italy.⁵² The lion-head earrings of type (a) are well dated to the late-fourth and third centuries BC by finds in other parts of the Hellenistic world.⁵³ The type might have survived into later Hellenistic times.⁵⁴ These earrings come in a wide range of diameters - down to about 1 cm.

Lion-head earrings, a variety of type (d), with elongated onyx beads, were excavated in the Delta (fig. 28).⁵⁵ The use of the banded onyx bead suggests a date of first century BC/AD while a pair of hoop earrings with wire pendants with lyre-like scroll and emerald crystal beads from the same tomb, are certainly a Roman type - perhaps second century AD. The elongated form of the earring can be compared to a pair of earrings from Olbia,⁵⁶ and is echoed in the triangular form of some other animal-head hoops.⁵⁷

51 Petrie 1889b: pl. 12, fig. 45.

52 At least one earring with a griffin head has a supposed Italian provenance - Ruxer and Kubczac 1974: p. 72 no. 24. Various ibex-headed earrings have Italian provenances including one in the National Museum of Reggio Calabria.

53 For example from Kourion (tomb 80) in Cyprus with a silver drachma of Alexander the great, *BMCJ* 1728-29; From late fourth - third century tombs at Amphipolis, Daux 1959: pp. 567-793.

54 e.g. Dusenbery 1959: pp. 163-70, figs. 1-13.

55 Clédat 1912: pl. 3.

56 *BMCJ* 2445/6.

57 Christies 1979: pl. 1, 8.

The Ptolemaic lion-head earrings invariably have hoops that pass into the mouth of the animal. The lion-headed snake swallowing its own tail was a potent symbol for the sun and the visual similarity between earrings of this sort and a depiction on a magical papyrus from Egypt (fig. 186) can hardly be coincidence. Even in the fifth century AD, Macrobius said that 'the lion seems to derive its essential qualities from the natural properties of the sun',⁵⁸ and Horapollon described the lion as having 'a great head, and fiery eyeballs, and a round face, and about it hairs like rays in imitation of the sun'.⁵⁹

Griffin-head: The griffin was a mythical, winged beast with either an eagle or a horned-lion head. Eagle-headed griffins were a popular motif in Aegean and East Greek jewellery from an early period.⁶⁰ Nevertheless, the griffin as employed on Ptolemaic jewellery is always the lion-griffin. It has been suggested that the eagle-headed griffin was considered to be a symbol of Persia. The horned-lion, the traditional enemy of eagle-headed griffins, was thus more appropriate for the Macedonian dynasty and appeared as a coin reverse.⁶¹ Lion-griffins were popular in Scythian art and a superb example can be seen on the gold scabbard from Kelermes.⁶² The lion-griffin had disappeared as a Hellenistic coin-motif by 317 BC,⁶³ but the lion griffin earring probably survived at least into the second century BC.⁶⁴

Lion-griffin earrings from Egypt are all of type (a) and are probably of the late fourth to mid third century BC.⁶⁵ As with all the gold animal-head earrings, the griffin heads are composed of sheet gold, never cast. In at least some of the examples, the heads are composed of two pieces of sheet gold and the seam passes longitudinally round the head - along the crest, down the nose and under the muzzle.

58 Macrobius, *Sat.* 1.21.

59 Horapollon, *Hieroglyphics*, 1. 17. Probably written in the fourth century AD.

60 A bird-headed, winged quadruped appears in the Middle Kingdom at Beni Hasan, *Beni Hasan II*, pl. 4, and a later relative is among the 80,000 hieroglyphs used in the Ptolemaic period. The Beni Hasan example is named *sfr* and it is tempting to connect this with both the winged *seraph* of Jewish and Christian tradition and with the *srrf* whose 'beak is that of the falcon, his eyes those of a man, his limbs of a lion', that is mentioned in an Egyptian magical text: Griffith and Thompson 1904: p. 23 n.

61 Hill 1923.

62 Often illustrated, see for example Piotrowski 1986: pl. 33.

63 Hill 1923.

64 Lion-griffins, with or without horns, still occurred in Romano-Egyptian decorative art. Picard 1939: p. 3 ff.

65 *BMCJ* 1784 found in Cyprus (Curium tomb 69) with coin of Alexander the Great. Also earrings found with an early Ptolemaic coin (Zurich 1964).

The eyes are usually formed of circles of applied beaded wire and beaded wire sometimes also delineates the mouth. The collars of the griffin-head earrings are generally decorated with linked spirals of fine twisted wire filigree. The hoops of the griffin-head earrings from Egypt are always of fine wire spirally bound.

There are two main forms of griffin-head earrings. One has a central ridge or crest running along the top of the head (fig. 18),⁶⁶ whilst the other has a flat, square gold sheet on top of the head, usually ornamented with filigree or granulation - like a 'mortar-board'.⁶⁷ Examples from Egypt with this 'mortar-board' include a magnificent pair in Leiden (fig. 177).⁶⁸ On Ptolemaic earrings of the plainer 'ridged-head' type the hoops pass into the open mouth (this is not true with all the Cypriote examples), the earrings with 'mortar boards' have hoops that pass into a loop soldered under the muzzle. The two types were probably contemporary since tomb 69 at Curium, in Cyprus, contained one earring with tail in mouth, and one with a loop.⁶⁹

Griffin-head earrings are known from Egypt, Cyprus, South Russia and even Syria. Higgins' suggestion that they were a Cypriot creation is unproven. Hackens has given a list of many published examples but this is by no means complete.⁷⁰ Specific provenances within Egypt include Alexandria,⁷¹ and Saqqâra.⁷² Lion-griffin earrings include the largest animal-head earrings from the ancient world - some are over 5 cm. in diameter.

Ibex-head: Earrings with ibex-head terminals are very well known from Ptolemaic Egypt, but also from Cyprus and Asia Minor which counters Mrs Williams' suggestion that they were an Egyptian speciality.⁷³ The heads typically have rounded, bambi-like features, circular eyes and horns that arch back over the head (figs. 18 and 178). The heads are here termed 'ibex' as this seems the most likely identification. Williams called the animals *gazella dorcas*, that is the gazelle, but since then the identification of the gazelle-like animals in Egyptian art has been debated at some length.⁷⁴ The facial marking usually depicted on the gold earrings - the stripe across the cheek, below the eye - is common to both gazelles and the *capra aegagrus* (known as the wild bezoar goat or 'Syrian ibex') The facial

66 Crested types with Egyptian provenance include a pair in the Metropolitan Museum of Art, New York. See: Clark 1935: fig. 1. no. 35.6.1 and 2. An example from Thebes is illustrated in Wilkinson 1878: vol. 2, fig. 448, 10.

67 One unprovenanced single earring has a rosette rather than a square plaque Schefold 1960: no. 589.

68 Leiden 1981 no. 45 (no. I 1941/12.2). I assume these are the pair formerly in the Bachstitz collection - Zahn 1921: pl 3,12.

69 Murray 1900: pl. 13, 21.

70 Hackens 1976: pp. 77 - 79.

71 Hilton Price 1897: no. 1172.

72 CM CG 52517.

73 Williams 1924: p. 134.

74 For the most recent discussion and references see Osborn 1987: pp. 243-4. See also Wachsmann 1987: p. 91.

stripe is not present on the Egyptian ibex (*capra nubiana*). The adult Syrian ibex also has a beard and it must be significant that the attachment loop under the muzzle of the animal-head earrings usually takes the same position as would the beard (fig. 187). If the attachment loop was at least partially representative of a natural feature of the animal it might explain why the lion-head earrings all have hoop to mouth, while the ibex-head earrings always have hoop to loop.

The collars on the ibex earrings are the same as those used on the earlier lion-head types although the proportions of the heads make for narrower collars. Most of the early Ptolemaic examples from Egypt have hoops made from a central gold rod or bar spirally bound with four or more fine wires. Occasionally the hoops are made from three or four tapered wires twisted together.

Ibex-head earrings are recorded from many parts of Egypt including the Delta, Saqqâra, Abydos and Thebes. In other parts of the Hellenistic world, examples have been found in later fourth century contexts.⁷⁵ Types with garnets set between the horns and with tapered plain or tubular hoops, are better known from Asia Minor and Cyprus than Egypt. However, one pair from Egypt, in private hands, had a hoop composed ~~of~~ two hollow tubes twisted together and garnets set between the horns. A variant form with a hollow, sheet gold hoop is in the British Museum and probably also dates to the third or second century BC.⁷⁶

Bull- and calf-head: Most bull- or calf-head earrings are of type (b) or (c). Type (b) examples from Egypt include one pair from Abydos (fig. 188),⁷⁷ and one from Thebes (fig. 179).⁷⁸ The latter has a sideways loop, a hoop composed of fine binding wires over a tapered sheet-gold tube, an ornate scroll filigree collar, and enamel eyes. Chemical analysis showed the composition to be 82.14% gold and 17.86% silver (see ch. 3). A type (c) bull, with a gold sphere collar from Saqqâra is now in Brooklyn (fig. 181).⁷⁹ Another very damaged bull-head earring from Saqqâra, also in Brooklyn,⁸⁰ was set with stones and has a sideways loop. Only the head remains but this is decorated with wavy ribbon which would suggest that it might belong to the early Roman period.

The bull had always symbolised physical and sexual power, and even in Roman Egypt Clement told his readers that 'the bull was a symbol of strength and power'. The earrings probably had Dionysiac significance, particularly in view of the wreaths and collars of vine leaves that decorate several of them. In some cases the bull-heads have a bridle made from applied twisted wire filigree. The pair from

75 Davidson and Oliver 1984: p. 51.

76 Tait 1986: no. 206.

77 CM CG 52528-9.

78 Davidson and Oliver 1984: no. 56.

79 Davidson and Oliver 1984: no. 54.

80 Davidson and Oliver 1984: no. 55.

Abydos has rings on the tops of the heads for supporting pendants (fig. 188).⁸¹ This feature is seen on some animal-head earrings from Asia Minor. In wear, the pendants would hang down below the ear.

Dolphin-head: Dolphin-head earrings are typically of type (d) although a few transitional types between (c) and (d) occur - such as one in Berlin with a single garnet bead (fig. 184).⁸² The beads threaded on the hoops include emeralds, onyxes, garnets, pearls and glass. Some combine prismatic emeralds with pearls and these are probably of Roman rather than late-Ptolemaic date.⁸³ The glass beads include imitation onyxes and beads which incorporate a layer of gold foil. These 'gold in glass' beads, although a characteristic of Ptolemaic and Roman Egypt, were probably not common much before the second century AD.⁸⁴

The size of the dolphin heads can vary; some are large,⁸⁵ while many others, perhaps mainly the later ones, are remarkably small (fig. 189). The examples with single beads are, perhaps, early. The small-headed type tend to have plain tapered hoops, sometimes decorated with granulation. Some earrings with very small dolphin heads are a hybrid form between the usual animal-head hoops and the S-hoops described in the next section. Dolphin-head earrings lasted into the Roman period and can be seen depicted on cartonnages and painted coffins.⁸⁶

Goat-head: Goat-head earrings are all of type (d) (fig. 183) and are commonly depicted on Roman period masks from Middle Egypt (fig. 185). The choice of beads is the same as for the dolphin-head earrings and the same remarks apply regarding date although the diminutive size of some of the dolphin earrings is not matched here.

Other heads: A variety of other heads are recorded on earrings from Egypt. These include sheep,⁸⁷ although in some cases, perhaps, goats were intended, while one pair, once on the market, is of doubtful age.⁸⁸ Lynx head earrings are well known from Greece, Asia Minor and the Levant and each area had its own variety. However lynx headed earrings are rare from Egypt. One example from Thebes (fig.

81 CM CG 52528-9.

82 Greifenhagen 1975: pl. 45, 2.

83 Hilton Price 1897: no. 1167, from Tell Basta (Bubastis).

84 Boon 1977.

85 e.g. Greifenhagen 1975: pl. 45, no. 2.

86 e.g. MMA 00.2.19; BM 2958 from Edfu.

87 e.g. a head without hoop now in Brooklyn - Davidson and Oliver 1984: no. 57.

88 Sotheby 1962, in 'A Collection of Greco-Egyptian jewellery from Alexandria'. My doubt is based only on the photograph.

190),⁸⁹ with finely made hoop, open mouth and inlaid eyes, is similar to an earring from Delos which can be dated to between c. 122- 69 BC. Another example from Egypt is in the Louvre.⁹⁰

Maenad-head hoops are very well recorded from the Levant and Cyprus but are most unusual from Egypt. A large example in the Egyptian department of the Metropolitan Museum of Art, New York, is described as being of 'Syrian type'.⁹¹ This form dates to the late Hellenistic or even early Roman period.⁹²

A very unusual pair of earrings - and incidentally a rare example of the jewellery that shows a fusion of Egyptian and Hellenistic forms - has lapis lazuli hawk heads (see ch. 4). The hoops are of fragile tapered sheet gold and so these earrings might have been funerary. Nevertheless, lapis was a rare stone at that period (see ch. 4).⁹³

Animal-head earrings of types (a) and (c), in bronze, are not uncommon from Egypt. I have seen examples of type (d) earrings with dolphin heads made of gilded copper but I know of no published examples. The bronze earrings were probably cast using the lost-wax process or directly from a mould like that shown in fig. 191. The gold animal-head earrings are invariably made up from separate components of sheet, wire, and granules, never cast.

Animal-head earrings are one of the most commonly depicted types. In the Hellenistic period they can be seen worn by women on mirror cases and in some portraits in the round. The type was obviously acceptable in the highest circles - one bronze ring from Egypt bears a profile portrait bust in relief, possibly of Arsinoe, wife of Soter, wearing animal-head hoop earrings.⁹⁴ In other cases, such as in fig. 192, a well-to-do private lady wears such earrings in conjunction with a snake bracelet on her upper arm.

Earrings are seldom shown on Ptolemaic period sarcophagi of women. Exceptions include masks in Cairo and Manchester which show pairs of all-gold animal-head earrings (fig. 193).⁹⁵ A mask from Hawâra which has a pair of animal-head earrings with stone beads might also be late Ptolemaic.⁹⁶ The udjat- eye diadems, as seen in fig. 193, for example, are typical of female masks of the Ptolemaic

89 Davidson and Oliver 1984: no. 40.

90 de Ridder 1924, no. 211 (from Egypt 1868).

91 MMA 26.7.1360.

92 Nichols 1962.

93 British Museum. Earrings described as gold wire snakes with lapis figures of hawk-headed Horus were in the Londesborough and Hilton-Price collections. Hilton Price 1897: no. 1171.

94 Petrie 1927: no. 323.

95 Manchester no. 210.2120.

96 Grimm 1974: pl. 4.1

period. Male masks have, instead, winged sun-disks. *Udjat* diadems also appear on some masks from Upper Egypt which are of first or second century AD date.

Animal-head earrings are not shown on any painted funerary portraits or on masks from Hawâra or Meir. They are shown on masks from Akhmîm and on painted coffins from Thebes - such as those of the family of Cornelius Pollius now in the British Museum (fig. 170).⁹⁷ They are worn in conjunction with other jewellery including serpentine bracelets, onyx bead necklets, fringed strap necklets, and chains with crescent pendants. They do not seem to be worn in conjunction with more typically 'Roman' jewellery such as serpent armlets.

S-shape hoop

S-hoop earrings are simple in concept and technique (fig. 175b). One end of a wire passes through between one and four beads and then wraps round the hoop. Examples survive in base metals as well as in gold, and one lead pair with glass beads are still attached to the mummified ears (fig. 194). Emeralds and pearls were the favourite stones, but we also find banded onyx (fig. 195), glass, and gold and silver sphere beads (fig. 196). The latter were possibly used as alternatives to pearls - silver can be pickled to a very white, pearl-like appearance.⁹⁸

S-hoop earrings, though best represented from Egypt, were worn throughout the eastern Roman Empire. They are recorded from Greece, Cyprus, Asia Minor and the Levantine coast, although they are seemingly not shown on Palmyrene sculpture. Further west they are rare but one pair was supposedly found in Germany.⁹⁹ An earring from Pompeii, with two pearls and an emerald, is probably of this type, but the end of the hook is lost.¹⁰⁰

The earliest dateable S-hoop earrings are from Taranto, of about 80 BC.¹⁰¹ The basic construction occurs on some earlier Italian earrings with human heads (fig. 197),¹⁰² and Zouhdi has mentioned a Vil-

97 BM 6705-7, 6950A etc.

98 The specific gravity of silver is about four times that of pearl. If silver was intentionally used to make imitation pearls, it could be argued that pearls must have been worth at least four times their weight in silver.

99 Clemen *et al.* 1930: no. 6a.

100 Siviero 1959: no. 290.

101 de Juliis 1984: no. 134 = Taranto Archaeological Museum no. 12.235. A simple pair of S-hoop earrings was supposedly found in a child's tomb in Greece with other jewellery which dates to the early Hellenistic period - Amandry 1963: no. 136 - but the homogeneity of the group cannot be assured.

102 Cristofani and Martelli 1983: no 256.

lanovan prototype but gives no reference.¹⁰³ The derivation of S-hoop earrings from Hellenistic animal- or human-headed forms is possible and hybrid dolphin-head earrings exist (fig. 198).¹⁰⁴ These are probably of the late first century BC to first century AD. S-hoop earrings dateable to the first century AD include those found in a tomb at Athens,¹⁰⁵ and two pairs from first century graves at Ayios Nikolaos in Crete, one in conjunction with a coin of Vespasian.¹⁰⁶

The simple type of stone-set S-hoop earring from Egypt always has one or more beads, although Cypriot versions can be without beads.¹⁰⁷ The ends of the hoops sometimes twist round the hoop, in other cases they arch up above the hoop.

A more elaborate version, from Bubastis (Tell Basta), forks into a lyre-like form with three wires which originally probably held pearls interspersed by the small gold rings still present (fig. 199).¹⁰⁸ These earrings are also decorated with the small rosettes of granules so often seen in early Romano-Egyptian goldwork. Similar earrings are known from a grave in South Russia, found with coins of Kotys I (AD 45 - 71),¹⁰⁹ and from Cyrenacia.¹¹⁰

A complex form of S-hoop earring is characterised the elaborate binding where the wire passing through the beads is joined to the hoop (figs. 196 and 200). The binding seems to serve no practical purpose, possibly it was intended to represent a very stylised dolphin head. This style of S-hoop earring has a tapered hoop. The hoops can be beaded or can be so swollen that the earrings look like miniature saxophones. Some of these earrings are solid, some hollow. The end of the hook usually passes below, and parallel to, the lower hoop of the earring, and can terminate in a small fused ball. In another form, the end of the hoop arches up over the earring.¹¹¹ The combination of complex binding and the tail of the hoop passing under the earring, seems to be characteristic of Egypt. These earrings are typically threaded with emerald crystals, pearls or imitations of these.

This elaborate type with complex binding occurred from the first century AD onwards. The characteristic tail doubling back under the hoop is clearly shown on masks and portraits (figs. 201 and

103 Zouhdi 1971.

104 There is a pair un-numbered on display in the Cairo Museum. See also Amandry 1953: nos. 306/7.

105 See Deltion 1978: p. 22, pl. 13.

106 Davaras 1985: pp. 130-216.

107 e.g. Cesnola 1903: pl. 23, nos 18, 19, and 21.

108 *BMCJ* 2624-5.

109 *Comptes Rendus de la Commission Impériale Archéologique* 1881 pp. 46-7. See also Greifenhagen 1975: pl. 48, 9-10.

110 Becatti 1955: no. 501.

111 e.g. CM Temp. 9.11.30.5.

202).¹¹² On the masks these earrings are shown in conjunction with serpentine or beaded bracelets, and emerald crystal and banded onyx bead necklets. On the mask in fig. 203, the separately applied earrings have been lost, leaving a ghost-like image.

S-hoop earrings continued to be depicted on painted portraits in Egypt right through to the third century. If Parlasca's dating of the later portraits is correct, use continued up to the mid fourth century (fig. 202). In general, there are few dateable examples of S-hoop earrings with complex binding from Egypt. One pair were found in the tomb of a child at Medamûd with other jewellery which is dated to the second century AD.¹¹³ Other items in the tomb - such as a ring and a torc with crescent pendant - would suggest a late second, if not third, century date. A third century date is also suggested by a possible find group in the Cairo Museum which included S-hoop earrings and a double finger ring. One unprovenanced example in Rhode Island, with hollow swollen hoop and three pearls, is unreliably reported to have been found with a solidus of Constantius II (326-361 AD).¹¹⁴

Very flamboyant examples of S-hoop earrings with granulation and filigree have been found in East Thracian graves dateable from coins to after c. AD 125.¹¹⁵ The 'tails' of the hooks do not extend below the hoop on these Thracian earrings. S-hoop earrings with granulation and filigree are rare from Egypt. Wilkinson illustrates one particularly elaborate example from Thebes.¹¹⁶ and another, simpler, earring with a filigree scroll in the hoop, was part of a small group of gold jewellery, probably from Egypt, sold in 1979.¹¹⁷

S-hoop earrings coexisted side-by-side with animal-head terminal types. For example the British Museum collections include the mummy and sarcophagus of Cleopatra, daughter of Soter, dating to the early Roman period. The painted mummy shroud of Cleopatra shows her wearing S-hoop earrings while Nut, on the lid of the sarcophagus, has animal-headed earrings. It is noteworthy that here, as in several other instances, the S-hoop earrings are depicted in triangular shape. I know of no actual earrings in this form although some have been bent into odd shapes in modern times. Other modern 'adaptations' include the lotus pendants hung on a pair of earrings in the British Museum.¹¹⁸

With only two possible exceptions, the Hawâra portraits with S-hoops all date to before about the mid second century AD. The only masks with S-hoops that are dated to after this period are from er-Rûbîyât (and possible three from Akhmîm). The portraits from er-Rûbîyât show that all the women

112 Parlasca 1980: no. 648; CM CG 33 131. See also portrait MMA 09.181.5 and mask MMA 00.2.10.

113 Louvre E13893-E13898. IFAO 1981: nos. 343 - 348.

114 Hackens 1976: no. 56.

115 Istanbul Archaeological Museum no. 5487 and 5499 = Ergil 1983: nos. 115 and 116. See also Mansel 1941: 120 ff.

116 Wilkinson 1878: 2, p. 342, fig. 448, 21.

117 Christies 1979b: no. 124, pl. 34.

118 *BMCJ* 2399-2400 from Bubastis.

without necklets wear S-hoop earrings, while these earrings are only worn by 64% of women with one necklet and 50% of those with two necklets. On Hawâra portraits S-hoop earrings were generally worn with bead necklets and seldom, if ever, with gold chains. The opposite is true of ball earrings. These statistics must suggest that S-hoop earrings, usually decorated with stones, were generally cheaper than the all-gold ball earrings. Hence emeralds and pearls cannot have been worth much more than their own weight in gold.

The basic S-hoop construction was easily adapted to other earring types. One version has a little crimp on the wire to support the pearl, and some of these have pendants, a feature not seen on the true S-hoop forms from Egypt (fig. 204).¹¹⁹ These variant S-hoop types are probably mainly late first to second century AD. Bar and pendant earrings (see below) can also be constructed on the S-hoop principle.

S-hoop earrings recall the form of a uraeus cobra - particularly those depicted hanging from the horns of deities (fig. 205). This is probably fortuitous, but snake motifs are rare in pharaonic jewellery apart from uraei ear decorations, for example, on several ear studs from the tomb of Tutankhamun, the ear studs on the head of Queen Tiy and a representation of Hathor from the time of Sety I (fig. 206). I have also seen very simple uraeus hook earrings on the market, almost certainly of pre-Ptolemaic date.

Leech earrings and their variants

Hollow, tapered leech-like earrings are well represented from Egypt. The ones of our period typically have overlapped and twisted ends and some are made from the most surprisingly thin gauge of sheet gold. The basic form was long lived and precise dating is impossible. Tapered hoops appear on the Ptolemaic limestone plaques which probably depict the young Ptolemy III (see above). The simple form would suit wear by a child - indeed, simple tapered hoop earrings were found on the ears of a four year-old child at Matmar.¹²⁰ A cartonnage mask from er-Rûbîyât, now in Edinburgh, wears simple tapered hoop earrings (fig. 207), as does one in New York (fig. 208). The Edinburgh mask is of a type which probably dates to within a generation either side of the Roman conquest, the New York one is Ptolemaic. Plain and tapered hoop earrings are included in Colledge's list of earring types depicted on Palmyrene sculpture between about AD 50 and 125.¹²¹

The simplest hollow leech earrings (as in figs. 53 and 209) are among the most common gold jewels to have survived from Egypt, but few come from recorded or dateable contexts. One pair, and one single example, were found in a burial at Saft el-Hina with two small granulated gold sphere pendants,

119 Christies 1979: no. 17. See also Petrie 1927: no. 210.

120 Brunton 1948: p. 92.

121 Colledge 1976: p. 150 - 152.

probably ear pendants, and a bronze double-headed snake ring of serpentine shape.¹²² Petrie dated the burial to the beginning of the Ptolemaic period, mainly on the basis of the sphere pendants which he compared with a vase pendant found in a Cypriot tomb with a coin of Alexander the Great.¹²³ However, not only did the Cypriot tomb contain three separate burials of different dates, but the pendants are also not comparable. The little Curium vase pendant is typical of the mannered precision of early Hellenistic goldwork. The Saft el-Hina pendants, with their thin gold and little clusters of granules, illustrate the final flicker of late Hellenistic baroque which is typical of the eastern Mediterranean in the first century BC to the first, even second, century AD. Hollow hoop earrings of identical form to the simple Egyptian ones, are known from a Nabataean cemetery at Mampsis which can be dated to the early first century to the mid second century AD.¹²⁴

The construction of the simplest hollow types is as shown in fig. 210. A piece of gold was hammered out into a thin sheet and rolled up round a filling material. The gold foil of the earring in fig. 53 was only 0.04 mm thick (just twice the thickness of cooking foil) and the filling material was sand. Even today metalworkers fill tubes with sand to prevent them from collapsing when being bent. Fillers with low melting temperatures, such as sulphur or wax, would not stand the heat of soldering. The earring was bent into a hoop after the overlap seam was soldered up; this distorted and wrinkled the inner edge, but the worst of the irregularities were burnished out. The earring in fig. 53 contained just 0.4 g. of gold and theoretical calculations of the volume of the gold and the original filler, showed that, when complete, the gold would have accounted for only about one third of the total weight of the earring. Even so, the gold of this earring was debased with silver and copper to a purity of only about 85% (see ch. 3). Obviously there must have been problems in recording the weight of such filled and impure jewellery. Another similar pair of complete earrings from Egypt, in private hands, weighed 4.5 g. but the gold foil was still so thin that the surfaces were as crinkly as reused cooking foil.

The hollow tapered hoops formed the basis for other, more elaborate types. Some have applied filigree or set stones, while the most elaborate can have pendants. A type of leech earring with a garnet on the front, best known from Syria but also recorded from Egypt, has been dated to the first to early second century AD.¹²⁵ More elaborate versions, with applied decoration and sphere pendants, are perhaps most typical of the second century AD. Again these are mainly Syrian, but one pair has been given a supposed Egyptian provenance.¹²⁶

122 Petrie 1906: grave 663, pls. 37a and 38.

123 Petrie 1927: p. 12.; Murray 1900: pl. 13,8.

124 Rosenthal 1973: pp. 80 - 7.

125 El-Chehadeh 1972; Rosenthal 1973.

126 Sotheby 1980: no. 237.

Similar leech-like hoops with overlapped and twisted terminals form part of some of the earrings with inverted pyramid drops, which are of second to third century date. A pair of leech earrings with ram-head drops, now in the Royal Ontario Museum (fig. 211),¹²⁷ has been dated to the Third Intermediate Period. However this seems too early and a Ptolemaic date is possible. Other similar earrings from Egypt are sometimes seen on the market.¹²⁸

Ball earrings

Ball earrings consist of a gold sphere surmounted by a smaller sphere, disk or stone setting which partially hides the hook (e.g. fig. 212). The hook is typically an S-shaped hook, a form that first occurs during the course of the first century AD. In most cases a line of two or more granules of gold decorate the joint between upper and lower parts of the earring. Another pair of ball earrings from Egypt is shown in fig. 213. These have a large sphere made from thin sheet gold surmounted by a circular setting inlaid with green glass. An almost identical pair from Boscoreale was in the Guilhou collection (fig. 25).¹²⁹ The hollow spheres are typically filled with sulphur and the back of the sphere is usually left open (fig. 213). The wire of the hook passes through the top of the earring and then winds round a vertical beaded wire (soldering the hook to the top surface of the gold sphere would be too weak). An alternative version, with a completely enclosed lower sphere, is also known from Egypt. The Pompeian and Egyptian examples all seem to have S-shaped hooks whilst the ball earrings from Cyprus, Asia Minor and Syria can sometimes have closed fastenings.¹³⁰ From Boscoreale we have a pair with stone settings and a lower part which is made of a cluster of spheres rather than a single one.¹³¹

Ball earrings are known from throughout the Eastern Mediterranean, from South Russia, Italy and as far west as Spain and even Britain.¹³² The overall shape has been thought to imitate that of an insect, fruit, shell, chestnut or even sea urchin, but no certain identification can be made, nor should an original representational intention be assumed.¹³³ Higgins has linked the ball earrings, and the closely related bracelets (see ch. 9), with a late Etruscan fashion but, as he notes, there is a curious lack of any

127 Needler and Graham 1953: pl. 2, 11. There is also a pair in Leiden.

128 Merrin Gallery, New York, 1989.

129 Present whereabouts unknown - Sambon 1905: no. 164.

130 e.g. *BMCI* 2620-2621.

131 Sambon 1905: no. 165 = Walters Art Gallery 57.1914 a, b, see Baltimore 1979: no 299.

132 For bibliography see Higgins 1980; Pfeiler 1970: pp 17-18; Davidson and Oliver 1984: p. 89. The British example is a recent find from Colchester - Catherine Johns private communication.

133 See de Ridder 1911: p. 89.

intermediate form.¹³⁴ The examples from Egypt were suitable for day-to-day wear and the thin, gold-foil funerary versions found in Cyprus and perhaps elsewhere, have not been attested in Egypt.

From the Pompeian region and Cyprus we have examples of ball earrings where the gold spheres are covered with small raised dots.¹³⁵ This is presumably the type shown on two painted portraits, both from Hawâra and dating to around AD 50 - 75 (e.g. fig. 214).¹³⁶ From the Pompeian region we also have a more decorated type where the lower sphere is replaced by a cluster of pearls or emeralds or small circular settings inlaid with garnets or mother of pearl disks.¹³⁷ This type has not been recorded from Egypt.

The presence of the various types in the Pompeian region mean they were coexistent and in fashion during the third quarter of the first century AD. This is supported by other dateable finds. Ball earrings have been found in Cyprus, with first century BC coins and an early first century AD lamp and glass beaker.¹³⁸ Others were found at Siphnos, with a denarius of Vespasian of AD 75,¹³⁹ and also at Beit Jibrin, south of Jerusalem, with coins dating up to the time Hadrian.¹⁴⁰ Ball earrings with S-hooks, slightly domed disks with beaded borders, and a row of grains on the intersection, were found at Tekiya with coins indicating a burial of not earlier than around AD 85.¹⁴¹ These earrings were found with a double-bezel ring and overlap-twist bracelets, plus other metalwork.

There are more than twenty Romano-Egyptian funerary portraits that illustrate ball earrings in wear and indicate their popularity from about the time of Claudius, in the middle of the first century AD (e.g. fig. 215). Most of the portraits showing ball earrings come from the Fayûm although two, now in East Berlin, came from Saqqâra.¹⁴² None is from Antinoopolis. Much the same is true of the masks. Ball earrings are frequently shown on the polychrome and gilded cartonnage masks from the Fayûm of the first century AD (fig. 310).¹⁴³ Here they are most commonly worn in conjunction with serpentine snake bracelets and strap and stone-set necklets. Sometimes they are worn with triad pendants. Ball earrings are not shown on any of the masks from Meir, although they are depicted on two masks

134 Higgins 1980: p. 174.

135 Siviero 1959: pl. 185, 186; d'Ambrosio 1987: no 2; Cesnola 1903: pl. 23, 25.

136 East Berlin 10974 = Parlasca 1969: no. 67 and a portrait now lost, illustrated in Parlasca 1969: no. 73 = Petrie 1911: pl. 8.

137 See Siviero 1959: pls. 187 - 193; d'Ambrosio 1987: no. 5.

138 Karageorghis 1969.

139 Brock and Mackorth-Young 1949.

140 Svoronos 1907: pl. 7.

141 Mano-Zissi 1957.

142 Parlasca 1969: no. 17 = East Berlin 11652; Parlasca 1969: no. 18 = East Berlin 11653.

143 e.g. Grimm 1974: pls. 11,3; 13,1; 15,2; 73,4; 74,4; Parlasca 1966: pls. 7, 2; 7, 3.

from Balansûra, just north of Hermopolis.¹⁴⁴ Ball earrings do not occur on any of the later plaster or stucco masks.

On the basis of the representations, and the few dated finds from outside of Egypt, it appears that ball earrings came into vogue in Egypt in about the mid-first century AD and stayed in fashion for some three generations or so, that is until around AD 100 - 120. This corresponds with the dating for the type proposed by Edgar,¹⁴⁵ and also fits in with evidence of the Palmyrene reliefs. Here, what have been identified as ball earrings, are most often shown between AD 50 and AD 150, although occasionally found later.¹⁴⁶

Only six of the masks with ball earrings listed by Parlasca might have post-first century dates. Five are given second, or late first to second, century dates and these include the only three portraits from er-Rûbîyât with ball earrings.¹⁴⁷ The sixth instance is a mummy shroud from Hawâra which Parlasca dates to the second quarter of the fourth century (fig. 216).¹⁴⁸ However the ball earrings and serpentine bracelets on this portrait strongly support a first century date, as originally proposed by Petrie.¹⁴⁹

Bar and drop

The term bar and drop can cover a range of earring types worn right through the Roman period. The simplest consists of a horizontal gold bar or scroll, above which is a single pearl or gold dome. Under the bar hang two or more pendants which typically bear pearls (five pendants are about the maximum). The earrings tended to get more elaborate with time, the bar became more ornate and the simple upper pearl or dome was replaced by a stone setting or other decoration (fig. 217). The simplest bar and drop earrings are constructed on the same principle as the S-hoop earrings. This is shown in fig. 218, an earring which has four pendants.¹⁵⁰ Most first and second century earrings have

144 CM CG 33156 and CM CG 33197.

145 Edgar 1905b.

146 Colledge 1976: pp 70 and 150-152.

147 Parlasca 1969: no. 99 = National Gallery, London no. 3931; Parlasca 1969: no. 102 = National Gallery Prague no. 0.1420; Parlasca 1969: no. 122 = East Berlin no. 31131/32.

148 Parlasca 1980: no. 584 = National Gallery, London no. 1266.

149 Petrie 1913: pl. 5.

150 Similar earrings from Egypt, with three drops, include CM CG 52560 and Williams 1924: no. 57.

some version of an S-hook fastener and the pendants are usually simple wires with pearls threaded on them. An all gold version with a rigid triple drop is shown in fig. 219.

Earrings with rectangular box settings above the drops are known from surviving examples and from representations (fig. 220),¹⁵¹ and survived into Byzantine times. The type with the a triangle above a gold bar, as in fig. 221, is another variation.

Earrings with an openwork rosette above a scroll-like bar are most typically from Syria and the Levant,¹⁵² with others, slightly different in construction and proportions, from Asia Minor. Examples from Egypt include one in Brooklyn (fig. 222).¹⁵³ Perhaps there is one depiction of this type in wear.¹⁵⁴ Similar rosettes can support a single pearl,¹⁵⁵ or other more elaborate pendants. The openwork rosette forms first occur in the second century AD but are most typically third and, perhaps, fourth century.

Bar and drop earrings first appeared in Egypt in the second half of the first century AD. They were also popular at this same period in Pompeii and Higgins says the form was introduced in the Roman world in the mid first century AD.¹⁵⁶ These simple types survived into the second century AD.¹⁵⁷ Bar and drop earrings are often shown on funerary portraits (fig. 223), including limestone sculpture - as in fig. 224.¹⁵⁸ Two- and three-drop forms are equally represented in the first century, but triple-drops were commoner in the second century and later. Simple bar and drop earrings are frequently shown on funerary portraits but are very rarely illustrated on cartonnage masks. One exception is the mask of a woman from el-Hiba now in the Cairo Museum.¹⁵⁹ This mask can probably be dated by its context to around the time of Trajan. Bar and drop earrings are also shown on masks from Balansûra, in Middle Egypt just north of Hermopolis (fig. 225).¹⁶⁰

Parlasca's dating of the later Roman portraits indicates that bar and drop earrings were rare in the third century but common in the fourth, however I am not convinced that all of Parlasca's fourth century portraits are really quite so late. A third century fashion for bar and drop earrings is suggested by

151 Examples of actual earrings include Petrie 1927: nos. 207 and 209.

152 The type is discussed Rahmani 1976: pp. 77 - 88.

153 Williams 1924: no. 56; Segall 1938: no. 137 might also be from Egypt but its closest parallels are from Asia Minor.

154 Parlasca 1980: no. 600. The two portraits mentioned by Williams really illustrate the plainer pearl, bar and drop type.

155 e.g. Needler and Graham 1953: pl. 11 top left - said by Williams (1924) to be from Egypt. Also Christies 1979: pl. 2.

156 Higgins 1980: pp. 175, 178-9; *BMCI* p. xlii.

157 Deppert-Lippitz 1987: pp. 179 - 192.

158 From Oxyrhynchus, Rijksmuseum van Oudheden, Leiden no. F1972/8.1.

159 CM CG 33217 = No. 101 from El-Hiba, 1903 Grenfell and Hunt excavations.

160 CM CG. 33167 and CM CG. 33209.

the conjunction of these earrings with a Medusa-head necklet (e.g. fig. 223). The fine funerary portrait in fig. 445 shows a pair of pearl bar and drop earrings worn in conjunction with an emerald bead and gold loop-in-loop chain necklet, a snake bracelet and snake ring (see also figs. 282 and 339).

Bar and triple drop earrings are depicted on limestone sculptures from Oxyrhynchus and are worn in conjunction with overlap twist, and hinge-bezel bracelets, and chain necklets with small crescent pendants (fig. 224).¹⁶¹ This combination of jewellery types would again indicate a third century date. On the basis of the representations of bar and drop earrings on Palmyrene sculptures, Colledge has said that the type was most popular in Palmyra after c. AD 125.¹⁶²

An earring form often depicted on masks, and on some sculpture from Egypt, appears to consist of a spherical bead - perhaps most often a pearl - above a vertical wire which bears another bead. Quite possibly these earrings were a single-pendant version of the earrings described here - like the earring in fig. 226. Earrings of similar form, were commonly depicted on Palmyrene sculpture after about AD 150 and were the commonest type in the third century.¹⁶³

Hoop and pendant earrings

Circular wire hoops with hanging wire pendants bearing one or more beads were popular throughout the Roman period in Egypt, but few come from accurately dateable contexts. For example, one excavated wire hoop with vertical wire pendant (once threaded with a stone bead) was merely dated as 'Roman'.¹⁶⁴ The type has been found in the Pompeian region which establishes their popularity in the first century AD.¹⁶⁵ A tomb at Kôm Abû Billo in the Delta, contained a burial with simple hoop and drop earrings. This same tomb contained several separate bodies but the presence of coins of c. AD 268, points to a late third century date.¹⁶⁶ A pair of simple hoop earrings with lyre-like scrolls on the wire pendants and threaded with emerald crystal beads (fig. 28), were found in a tomb with animal head earrings that must belong to the Roman period and before about the mid second century AD.¹⁶⁷ Another example has recently been found by the Canadian expedition at Tell el-Maskhûta,¹⁶⁸ and examples are quite common in collections (fig. 227). The scroll-like ornament is also seen on necklet clasps, and is mainly a second or third century feature.¹⁶⁹

161 e.g. Leiden Museum no. 1972/8.1. See Schneider and Raven 1981: no. 159.

162 Colledge 1976: p. 150-152.

163 Colledge 1976: p. 71.

164 Petrie and Mackay 1915: pl. 52,6.

165 Siviero 1959: pl. 194 c.

166 Edgar 1906b: pp. 143-4.

167 Clédat 1912: pl. 3.

168 Cairo Museum, no reference available.

169 *BMCJ* 2715.

The addition of the scrolls to the pendants illustrates the general trend towards more ornate - but often flimsier - jewellery forms as the Roman period progressed. Other features on pendants of the second century and later earrings include corrugated tubes (fig. 228), spirals of wire (fig. 229),¹⁷⁰ and oversize and ornate suspension loops. The suspension loop is sometimes almost as large as the earring hoop itself and is typically decorated with filigree and granulation on both inner and outer curves of the loop, which itself is made of tube. This is hardly a practical type of suspension loop - as the considerable wear on some example shows. The vertical part of the pendant is decorated with long spirals of binding wire - a decorative rather than practical feature - or corrugated tubes. Below the beads is a spiral of wire. The beads, now often missing, include glass imitation emeralds and pearls. Fig. 230 shows a range of such earrings, from simple to elaborate. The most elaborate is perhaps one in Cairo Museum, here the tubular part of the pendant takes the form of a club of Herakles. Other variations include stone settings on the pendants, including a simple version of the 'fog-lamp' setting, and one with a rosette.

Petrie excavated two pairs and several single ^{Lenep:} of these earrings with ornate pendants in burials at Ghita.¹⁷¹ One of the pairs, that from grave 367, is now in the Metropolitan Museum of Art, New York (fig. 231). The pottery in the graves was of the third to fourth century AD and a mid third century date has been proposed for the burials. The ornate but flimsy construction of the earrings and such features as the 'fog lamp' type of stone setting, support a third century date. These earrings with outsized suspension hook might be the forerunners of the early Byzantine earrings with large pendant loops soldered to the hoops (e.g. fig. 246).

I have not been able to identify the simplest hoop and pendant types with certainty on any funerary portraits or cartonnages, although some of the more cursorily drawn earrings might be of this type. The long, elegant earrings depicted on some later funerary depictions, such as one in the Cairo Museum (fig. 232), might be the earrings with exaggerated suspension loop. A portrait in the Walters Art Gallery (fig. 233) shows long pendant earrings with pearls and a red stone in a gold setting, plus a necklet with a coin-set pendant. I would not expect a coin-set pendant to be depicted before the final decades of the third century AD. Long pendant earrings threaded with pearls are often shown on Coptic textiles but these are probably of the sixth century AD and represent the single pendant earrings described below in the section on Byzantine hoop earrings.

Gold hoops could be threaded with a whole variety of pendant types, including openwork filigree rosettes and triangular pendants with repoussé imitations of granulation. In some cases, earrings with a variety of stone-set and other pendants have a hook rather than hoop.

170 e.g. Williams 1924: no. 59.

171 Petrie 1906: pl. 40.

Mulberry and pyramid drops

Earrings with rigid pendants in the form of grains, single, in grape-like clusters, or in inverted pyramids, had a 2500 year history in the Near East. The simple types are often referred to today as 'mulberry' earrings and their fruit-like appearance was also recognised in antiquity.¹⁷² The type, with one or more grains, was perhaps a Western Asiatic invention, but is amongst the earliest substantiated earrings from Egypt.¹⁷³

First millennium BC examples from Egypt are rare but a hoard containing some 50 kilos of silver jewellery and scrap from Tell Atrîb includes some complete and broken examples of tapered hoop earrings with single and cluster grain drops.¹⁷⁴ This treasure is almost certainly the scrap or stock-in-trade of a silversmith and stylistic and technical criteria suggest a date between the sixth and fourth centuries BC. I know of no certain Ptolemaic examples, but more elaborate Hellenistic earring pendants with inverted granulated pyramids or cones might be considered a related form.

The simplest type - a tapered wire hoop with a small cluster of granules - is documented from the Roman period in Egypt but not from dateable contexts (fig. 234 top). For example, one from Naukratis, with a four-grain cluster,¹⁷⁵ and a similar earring from Saqqâra,¹⁷⁶ are undated but compare closely to examples from Jordan found in burials with coins as late as AD 270- 275.¹⁷⁷

Two single earrings from Egypt have cone-like drops of clusters and represent an intermediate form between the usual mulberry type and the inverted pyramid type described below (fig. 234 bottom).¹⁷⁸ One of these earrings has a hollow tube hoop, the other a flattened sheet. Like the Naukratis and Saqqâra earrings, they both have hook-and-eye closures which would suggest a Roman date. Two masks from Antinoopolis depict earrings with clusters of grains worn in conjunction with torcs with square pendants (fig. 235). Grimm dates these masks to the second quarter of the third century AD and says that depictions of such torcs in wear are typical of Antinoopolis.¹⁷⁹

172 See for example, in the Talmud, *Kelim*, *Mishnah* 8; Liddell and Scott under *triglenos*.

173 e.g. Frankfort and Pendlebury 1933: pl 43,4, (from the so-called 'crock of gold'); Brunton 1948: graves 1287, 715, 760, 1220, 1242, 1278; Brunton 1937: grave 10201; Peet 1914: grave s29 (this perhaps a nose ornament).

174 Engelbach 1924.

175 *BMCJ* 2501.

176 Williams 1924: no. 66; Davidson and Oliver 1984: no 147.

177 Davidson and Oliver 1984, notes to no. 148.

178 Christies 1979: pl 2, part of no. 9.

179 Grimm 1974: pls. 98 and 99.

One of the commonest Romano-Egyptian types consists of a hollow tapered hoop, or a tapered flat sheet of gold, below which is soldered an inverted three sided granulated pyramid (figs. 236 - 238).¹⁸⁰ The type is characterised by the pyramids which are hollow and three-sided (fig. 239). In some cases each pyramid is composed of sheet-gold triangles covered with granules. In other cases the granules are arranged in flat sheets without a sheet-metal backing. Presumably these pyramids were produced by positioning the individual grains in a triangular formation on a flat sheet of charcoal during soldering. This type of unsupported sheet of granules is also found on Syrian earrings of the second to third centuries AD.

The earrings with the hollow tapered hoop tend to be the better made and more stylish than those with sheet metal hoops. The hollow hoops are made the same way as the tapered hoop earring described above. The seam is on the inner curve.¹⁸¹ The terminals of the hollow hoops are usually overlapped and twisted round each other, or left as simple overlapped wires without twisting. Several earrings of this type have a hinged ear wire but I assume this is a recent adaptation.¹⁸² The pyramid drop is either attached directly to the hoop or a short corrugated tube can intervene.¹⁸³ The bottom of the pyramid is usually decorated with a vertical drop of larger grains and, in some cases, each corner of the pyramid is decorated with an added grain or grains. Variants include a simple earring in Cairo.¹⁸⁴

More elaborate examples include two pairs decorated with pearls that are threaded onto a gold wire and bound onto the front of each earring (fig. 240).¹⁸⁵ Neither pair has any provenance within Egypt. We might be able to find parallels for the combination of pearls on pyramid earrings in some representations (fig. 241).¹⁸⁶

Some earrings have pendants in the form of inverted cones, not pyramids. One type of inverted cone earring, without terminal sphere, has a corrugated sheet hoop (fig. 242).¹⁸⁷ Another rather crude type of earring is shown in fig. 243. Here the pendant, in sheet gold imitating granulation, is filled with what

180 e.g. CM CG 52506 (purchased, no provenance); Christies 1983: no. 147 (others supposedly from the same find have also been on the market e.g. Schulman 1986: no. 2075). All these examples show a considerable degree of ancient wear.

181 See description of Williams 1924: no. 51. A visible example of this is the published photo of CM CG 52507.

182 e.g. Tait 1986: no. 205; CM CG 52504-7.

183 Segall 1938: 138.

184 CM CG 52551.

185 CM CG 52504-5. Also Sotheby 1912: no. 436.

186 MMA 25.3.219 b and CM CG 49099.

187 e.g. MMA. 10.130.1519 a and b, plus the occasional example on the market.

Petrie terms a paste-like substance. The inverted pyramid or cone earrings do not seem to be represented in silver,¹⁸⁸ but copper examples are known. The sheet copper was punched to give the appearance of individual granules.¹⁸⁹

Earrings with granulated pendants - ranging from two or three grains to an inverted pyramid or cone constructed of small grains - are often represented in wear on Romano-Egyptian masks and portraits. Here, the evidence suggests that these earrings were popular from sometime in the early second century AD through to the third century or even later (fig. 244).¹⁹⁰ (Parlasca's dating of the portraits would make mulberry earrings popular right through to the latter part of the fourth century.) Mulberry earrings are frequently shown on Palmyrene reliefs where they seem most popular between about AD 50 and AD 150, but survived through the second and perhaps third centuries.¹⁹¹ Romano-Egyptian funerary portraits show pyramid-drop earrings in conjunction with Medusa necklets, hinge-bezel bracelets and double finger rings.¹⁹² These associations all point to a third century date.

Some earrings with pyramid drops have been found in excavations in Egypt but without precise dating.¹⁹³ Earrings with stated provenances include Saqqâra,¹⁹⁴ and Cairo,¹⁹⁵ but provenance here might reflect dealer rather than findspot.

When published, the weights of the standard pyramid drop types seem to range between about three and five grams each. The pair from a burial in the Delta weighed 4.7 g. each.¹⁹⁶ Single examples in Brooklyn, Berlin, and London weigh, respectively, 3.57 g., 3.75 g., and 3.3 g.¹⁹⁷

Byzantine hoop earrings with fixed suspension loops

A characteristic Byzantine earring type of the sixth and seventh centuries AD has a slightly tapered circular hoop onto the lower edge of which is soldered one or more loops. The loops can stand alone as decorative elements or act as suspension loops for various types of pendant. The hoops can be solid or, less usually, hollow. The top end of the hoop usually ends in a point while the lower end terminates in a loop, sometimes decorative, or a small spherical socket. The rings soldered to the hoop usually have a grain or grains of gold at their points of attachment which provided structural support to the

188 Although Petrie 1927: no. 179 could be part of such.

189 Petrie 1927: nos. 180, 181, and 182.

190 Second century examples include Parlasca 1969: nos. 225, 232, etc.

191 Colledge 1976: pp. 150-152 and Tanabe 1986: *passim*.

192 e.g. Parlasca 1980: no. 650; Münzen und Medaillen 1981: no. 123; Grimm 1974: pl. 95, 1.

193 e.g. Clédat 1912; Petrie 1888: pl. 41.

194 Williams 1924: no. 51.

195 *BMCI* 2601.

196 Clédat 1912.

197 Williams 1924: no. 51; Greifenhagen 1975: pl. 50, no. 12; *BMCI* 2601.

solder joint. When the rings hold pendants, they are usually left unsoldered - unsoldered rings are typical of much Byzantine jewellery.

Single pendant types: The pendants are usually rigid lengths of wire threaded with a number of pearls (fig. 245), although some have chain pendants (fig. 246). The fog-lamp type of stone setting - as in fig. 247 - is quite common. On the earring in fig. 245 the free end of the suspension loop wraps around the earring hoop,¹⁹⁸ this is unusual.

This general type of earring has been dated to the fourth to fifth century AD,¹⁹⁹ but their construction and style compare closely to the multi-drop earrings described below, and, indeed, both varieties have been found in the same grave in Turkey.²⁰⁰ They were probably most popular in the sixth to seventh century but were in use at least by the mid fifth century AD - a pair were found, with other jewellery and silver spoons, in a box in a house at Ratiaria which was destroyed during the Hunnish invasions in the mid fifth century AD.²⁰¹

Hoop earrings with long, pearl-set pendants are commonly depicted on Coptic textile. For example, Ariadne wears them on a late sixth century textiles now in the Louvre. Similar earrings can be seen on the ears of a dancer on another textile in the same museum (fig. 248).²⁰² The dancer's earrings each have one pearl, Ariadne's have two.

Multi-pendant types: The earrings with several chain pendants have been found in many parts of the Byzantine world but, as Ross has said: 'The Egyptians seem especially to have favoured such earrings, at least more have survived in that region than in any other'.²⁰³ The type can be dated fairly accurately to the sixth to early seventh century AD on the basis of earrings found with coins or coin-set jewellery.²⁰⁴ This earring form might have been in use by the mid fifth century AD.

The pendants are typically chains which, in Egypt, are normally either open figure-8 loop-in-loop chains (fig. 249), or tight doubled two-fold loop-in-loop chains (fig. 250). Most of the earrings have three chain drops, but some have four. One elaborate example with five pendants was in the Rosenberg Collection.²⁰⁵ The pendants usually terminate in single pearls - often of some size - but one ear-

198 Christies 1979: not illustrated.

199 Baltimore 1979: nos. 442-3.

200 Ergil 1983: nos. 137-8.

201 Giorgetti 1988.

202 du Bourguet 1984: p. 10.

203 Ross 1959.

204 The dating evidence is summed up in Ross 1959. See also Davidson and Oliver 1984: no 261

205 von Falke 1929: no. 103.

ring from Damanhûr, now in Ontario, has one pendant with a pearl and an amethyst.²⁰⁶ The most elaborate pendants have three chain drops, each with a gold cross with green glass inlay, plus an amethyst (fig. 251).²⁰⁷

A common elaboration is a small openwork filigree sphere bead placed between the end of the chain and the pearls. A pair from the Fayûm is shown in fig. 252. Examples in the Cairo Museum include earrings with three and four drops.²⁰⁸ These openwork filigree beads seem a characteristic of Egyptian earrings. A pair of triple drop earrings, with a fastening loop that is decorated with beaded wire and which possibly had added pearls, is shown in fig. 250. These were previously in the Stafford collection and probably originated in Egypt. Ross called this pair 'one of the very finest pairs of all the earrings with gold wire chains and pearl drops'.²⁰⁹

Depictions of multi-drop earrings in wear are not common, but one major exception is the Coptic wool tapestry in Dumbarton Oaks which shows Hestia Polyolbos wearing gold and pearl earrings with four drops (fig. 253).²¹⁰ One of her female attendants wears a similar pair, but with just three pendants.

Many of the characteristics of the Byzantine hoop earrings tie them in with sixth and seventh century Byzantine goldwork. If we assume the correct dating of the Carthage and Piazza de Consolazione treasures to around AD 400, there seems to have been an almost total stagnation in jewellery styles and techniques between the early fifth and the mid seventh century AD.

Triangular: Two pairs of similar ornaments from Egypt have a hoop with fixed suspension loop, as the above earrings, but support triangular openwork pendants set with pearls (see figs. 254 and 255).²¹¹ Both earrings have the 'fog-lamp' type stone settings on the pendants. The Cleveland earrings have small trefoil rosettes on the pendants concealing some of the solder joins between the filigree. These rosettes and their function are exactly matched on several objects in the so-called Asyût treasure.

206 Needler and Graham 1953: pl. 11.

207 Baltimore 1979: no. 446. Probably from Egypt as supposedly obtained from the Egyptian dealer Khawam.

208 CM CG 52437 - 52440.

209 Ross 1959. They are now in an English private collection.

210 Ex Bliss Collection, Dumbarton Oaks, no. 29.1. See for example Wessel 1963: pl. 132.

211 Segall 1938: no. 240, Cleveland Museum of Art 47.178-179 = Bull. Cleveland Mus. Art 347 1947 p. 174. Ex. Hirsch collection, said to have found in the Fayûm (Also Baltimore 1947: no. 484).

A related form of earring, where the triangular upper section is composed of an openwork dolphin or scroll design, is also known from, and perhaps mainly limited to, Egypt.²¹² Two pairs were in the so-called Asyût treasure and are now in London and Washington,²¹³ and another pair was purchased by the Cairo Museum in 1888.²¹⁴ The pair in the British Museum (fig. 56) was analysed and found to consist of 91% gold, 7% silver and 2% copper.²¹⁵ This is a fairly typical composition for Byzantine gold jewellery.

Hoops with ornamental loops: This type of earring relates to, and is probably contemporary with the above forms, but the loops are decorated with granules or filigree and were never intended to bear pendants. Hoops with between one and three pendants are quite well known from the Levant but, to my knowledge, they have not been recorded from Egypt. The hoops are often decorated with hollow beaded wire and sometimes have domes on their fronts.²¹⁶

Miscellaneous

A wide variety of other earring types have been recorded from Egypt. One class of earring that is relatively common consists of a tapered leech-like hoop which bears one or more heads of Isis or another female deity on the front. A Ptolemaic date is usually suggested and seems probable. One example is in Cairo,²¹⁷ and one was illustrated by Wilkinson.²¹⁸ The type appears on the market from time to time - one example was mentioned at the beginning of this chapter.²¹⁹ One with two conjoined heads was on the market in the 1960s (fig. 256).²²⁰

A unusual figural earring from Egypt is shown fig. 257.²²¹ This consists of a gold and emerald figure of a hawk surmounted by double plumes. The multi-piece construction, cabochon emerald and the serrated edge to the setting point to a late Ptolemaic date. The closest parallels I know of are an earring

- 212 In the 1970s there was a pair on the European market without provenance. There was also an unprovenanced pair in Poland - Ruxer and Kubczak 1974: nos. 40 - 41.
- 213 Dennison 1918: nos. 18-19 and 20-21. The former are now in the British Museum (MLA. 1916.7-4.4), the latter in the Freer Collection at the Smithsonian.
- 214 CM CG 52510-1.
- 215 Oddy and Niece 1986.
- 216 Davidson and Oliver 1984: nos. 238 - 248.
- 217 CM CG 52451.
- 218 Wilkinson 1878: fig. 448, 20.
- 219 See also Münzen und Medaillen 1970: no. 34.
- 220 Sotheby 1964: no. 11.
- 221 Ogden 1982b: no. 86.

from Cyprus,²²² and an unprovenanced earring in Athens.²²³ The type clearly relates to other late Hellenistic earrings with dove or other bird drops. A unusual, and perhaps not ancient, pair of duck earrings from Egypt were in the Chateau Golochów collections.²²⁴

An ornament from Tell Basta, consisting of the figure of a dolphin set with pearls and a hexagonal emerald was in the Hilton Price Collection (fig. 258).²²⁵ Possibly this was an earring similar to those worn by Isis on a mid third century panel - perhaps one of a pair of doors from a shrine - now in the J. Paul Getty Museum (fig. 259).²²⁶ However, necklets composed of linked dolphins of identical type are known (e.g. fig. 323), and the Hilton Price ornament might better be identified as part of one of these.

Simple hoop earrings are known from all periods and some are threaded with pearls, stone beads or glass. Other hoops have attached decoration such as filigree spirals,²²⁷ or disks and granulation (e.g. fig. 260). The gold earrings with filigree spirals relate to a well known class of copper alloy earrings.²²⁸ A sheet-gold hoop earring in Brooklyn supports wires holding two green glass imitations of emerald crystal.²²⁹

A group of masks possibly of the fourth century AD show women wearing earrings with amphora-like pendants. To the front is a row of pearls (fig. 241)²³⁰. These earrings might be like the pyramid drop earrings with pearls described above (see fig. 240). An earring type where the tapered hoop meets at a median ridge is well very known in Sassanian contexts, but a few examples have also been recorded from Egypt. One with two rigid pendants is in the Brooklyn Museum (fig. 261).²³¹ A similar type of earring in the Metropolitan Museum of Art New York bears a scaraboid but this is probably a more recent addition.

OTHER EARRING TYPES FOUND IN EGYPT

This section will deal briefly with those earring types which, though recorded from Egypt, are more typical of other parts of the ancient world.

222 Cesnola 1903: pl 20, 15.

223 Amandry 1963: no. 155 bis.

224 Froehner 1897: no. 60.

225 Hilton Price 1897: no. 1167.

226 Thompson 1982: no. 8. I am grateful to Professor J. R. Harris for pointing out the possible original function of these panels that now flank a funerary portrait.

227 e.g. Petrie 1888: pl. 41, 5.

228 e.g. Williams 1924: nos. 53-54.

229 Williams 1924: no. 65.

230 CM JE 49099 and MMA. 25.3.219; CM CG 33.276 and CM CG 33279.

231 Williams 1924: no. 64 = Davidson and Oliver 1984: no. 163. Also CM CG 52552.

Hellenistic forms

Animal-head hoops are the only Hellenistic earring form that is common in Egypt. The gold boat earrings, so well known from the Greek colonies in South Italy, have not been confirmed from Egypt. Segall suggested an Alexandrian origin for an elaborate boat earring in the Walters Art Gallery which is surmounted by a squatting sphinx, based on the mixture Greek, Phoenician and Egyptian motifs.²³² This attribution of such a mixture of styles to Alexandria would be considered less certain today. Disk earrings, either alone or with pendants, are also rare from Egypt. The best known Hellenistic disk earring from Egypt was found at el-Amarna with other jewellery, including Roman gold bracelets, and has always been stubbornly dated to the Amarna period (fig. 262).²³³ This earring is of the stud rather than hook type. A close Hellenistic parallel is in the Canellopoulos collection in Athens.²³⁴

An elaborate gold disk, which originally supported a central pendant with a pair of flanking pendants - probably chains, was said to have been found at el-Zaqâzîq (fig. 263).²³⁵ This type of disk-earring is a well known late fourth to third century BC Hellenistic type, but the precise provenance is uncertain as the disk was supposedly found in the same woman's tomb as the fragment of a dolphin necklet of about the third century AD (fig. 322). Gilded terracotta imitations of disk earrings have been found in Alexandria (fig. 20).²³⁶

Earring hoops bearing small figures of Eros were popular in the late Hellenistic and early Roman period over most of the eastern Mediterranean but, again, Egyptian examples are rare. Egyptian Eros hoops include one from Elephantine, now in West Berlin (fig. 264), and one with a figure of Eros holding a patera and oenochoe, now in the Louvre.²³⁷

Figural pendants hanging under a rosette are another Hellenistic earring type that is strangely rare from Egypt. An earring pendant described as *a figure of Eros sitting on a carnelian dolphin* was once in the collection of Dr. Eddé of Alexandria and might well have had an Egyptian provenance.²³⁸ Zahn described an earring with a figure of Eros under a rosette, Isis crown and acanthus motif as possibly Alexandrian, but perhaps just because of the presence of the Isis crown.²³⁹ Earrings with Isis crown motifs first appear in about the mid second century BC throughout the Hellenistic world. A pair of rosette disk earrings with hanging figures of Eros are part of a group of second century BC jewellery from Egypt, now in a private collection in New York.²⁴⁰ Here the rosette is surmounted by a small calf

232 Segall 1946; Baltimore 1979: no. 237.

233 RSM 1883.49.11 and 12; Martin 1974: nos. 285-6. Total weight 24.66 g.

234 Laffineur 1980: no. 64.

235 Now in Dresden; Schreiber 1894: no. 50.

236 Breccia 1912: no. 505.

237 Greifenhagen 1975: pl. 43, 13; de Ridder 1924: no. 156. Another was Christies 1979: no. 12.

238 Drouot 1911: no 361.

239 Zahn 1929: no. 47, pl. 44. See also Charpentier 1956: no. 21 bis.

240 Unpublished.

or bull-head identical to those seen on some animal-head hoop earrings, an unusual feature although, on the basis of microscopic examination, quite original.

A fine pair of late Hellenistic earrings is said to come from el-Ashmûnein in Egypt (fig. 26).²⁴¹ They each consist of a disk with a central rosette at the middle of which is a pearl. Above the disk is an acanthus and honeysuckle motif with traces of enamel. Below the disk hangs an amphora-shaped pendant with emerald bead 'body' and dolphin handles. To each side of the amphorae hang triple drops which look like loop-in-loop chain but are actually twisted wire ropes. The precise provenance is uncertain since the earrings were said to have been found in a tomb with part of a bracelet set with prismatic emeralds that is more likely late Roman (fig. 27). Another pair of earrings in the British Museum is of very similar type although they are linked by a long chain. These are set with garnets not emeralds, and are surmounted by stylised Isis crowns (fig. 265).²⁴² No provenance is given for these earrings in the British Museum catalogue, indeed they are currently displayed with finds from the Greek colonies in South Italy, but they were originally described as being from Egypt.²⁴³ Both these pairs of earrings can be paralleled in technique and style with earrings found in South Italian burials dateable to the second half of the Hellenistic period.²⁴⁴

Roman types

The simple hoop and dome earrings (as figs. 175d and e), so popular in Asia Minor in the second century AD, are largely absent from Egypt. This is also true of the earrings with box settings, S-hook fasteners, and drop pendants, also of the second century AD. The square stone-set earrings depicted on some first century AD cartonnages could be of related type (fig. 266).

The very elaborate versions of the dome and hoop earrings, with large domes and pendants composed of clusters of hollow spheres and granulation, are most typically Romano-Syrian, but one pair in the Metropolitan Museum of Art, New York, has a supposed Egyptian provenance.²⁴⁵ Another related but simpler pair, in a private collection, is also supposedly from Egypt (fig. 50). These earrings contained only about 76% gold, with just over 20% silver and 3.5 % copper.²⁴⁶

241 *BMCJ* 2332-3.

242 *BMCJ* 2331.

243 Froehner 1898: no. 183.

244 e.g. de Juliis 1984: nos. 164ff.

245 Clark 1928: fig. 8.

246 A related pair of earrings from Syria has a similar debased composition. (Recent unpublished analysis.)

An earring type with some similarities to the last, but probably of late Hellenistic date, has been recorded from Egypt (fig. 267). Two pairs were found in the neck of a jar on the floor of a house at Memphis, probably of late Ptolemaic date.²⁴⁷ One earring went to the Metropolitan Museum of Art, New York,²⁴⁸ one to Liverpool (though not listed in the handlist) and a pair to Manchester. Another pair, in the Benaki Museum (fig. 268),²⁴⁹ is dated, less plausibly, to the 'Late Imperial' period. Another unprovenanced example was in the Gans collection,²⁵⁰ and a pair of earrings from South Russia is probably related.²⁵¹ A transitional type between these late Hellenistic earrings and the full-blown Syrian second century AD forms is exemplified by a single earring formerly in the Rosenberg Collection.²⁵²

A type of lunate earring consisting of a hollow tubular hoop with a fringe of granulated triangles and various additional filigree and granulation, is recorded from Syria and Egypt (fig. 269).²⁵³ El-Chehadeh has dated the Syrian examples to the second half of the first to the early second century AD.²⁵⁴ Others have been found in Nabataean cemeteries dateable to between the first to mid second centuries AD.²⁵⁵ None of the Egyptian earrings comes from a dateable context - a pair in the Metropolitan Museum of Art, New York is merely called Graeco-Roman²⁵⁶ - but the flimsy-but-fussy construction would well suit a mid to late Roman date.

Conical pendants with granulated decoration and a fringe of pearl-set wire drops around their lower edge, are known from the Levant and Egypt (fig. 270),²⁵⁷ but several are in private collections and are unpublished.²⁵⁸ It is probable that most of these pendants were originally from earrings, they would not hang correctly if worn around the neck.

247 Petrie *et al.* 1910: pl. 38,3.

248 MMA 10.161.1.

249 Segall 1938: no. 130.

250 Jaeger 1928: no. 50.

251 Schefold 1960: no. 592.

252 von Falke 1929: part no. 93, illustrated pl. 6 (on the right).

253 Egyptian examples include CM CG 52590 - 52593; Segall 1938: nos. 124, 248 and 249 are related forms, possibly also from Egypt.

254 El-Chehadeh 1972.

255 Rosenthal 1973.

256 Clark 1928: pp. 249 - 252, fig. 9.

257 Examples from Egypt include Williams 1924: no. 69 (from Saqqâra) and Christies 1979: no. 81.

258 The type has recently been discussed by Davidson and Oliver 1984: no. 197 and Hackens 1976: no. 46.

Byzantine forms

The number of varieties of early Byzantine earrings is curiously limited. It is thus particularly strange that one of the most popular forms - an open-work lunate sheet - is almost absent from Egypt. I know of no gold examples with certain Egyptian provenance although some, like one in the Benaki Museum, might well have originated in Egypt (fig. 271),²⁵⁹ and a single example formerly in Poland is said to be probably from Egypt.²⁶⁰ Copper alloy versions of the type, some of embossed sheet, some composed of openwork filigree typically assembled with lead/tin solder, are known from Egypt.²⁶¹ The lunate type in gold is best known from Asia Minor and Cyprus and often depicts peacocks flanking a vessel. Roman iconography sometimes showed peacocks drinking the wine of Dionysos from gadrooned vessels. This same motif passed into early Christian iconography as the symbols of immortality drinking the fluid of immortality.²⁶²

One pair of openwork filigree earrings of lunate form threaded with pearls, is now in Berlin (fig. 272).²⁶³ In style these relate to the above mentioned lunate earrings. The Berlin earrings are unprovenanced, but their design incorporates the small quatrefoil rosettes that are a characteristic of much early Byzantine goldwork from Egypt (see ch. 1). On this basis, and on the basis of the assembly techniques, a sixth to seventh century Egyptian origin is, in my view, likely. A pair of copper alloy and glass-bead earrings of very similar form, from Egypt, was recently on the market (fig. 273).²⁶⁴

259 Segall 1938: no. 242.

260 Ruxer and Kubczak 1974: no. 42.

261 e.g. Brunton 1930: pp. 29-30, pl. 47.

262 See Goodenough 1953: vol. 8, pp. 53 and 55.

263 Greifenhagen 1975: pl. 52, 12.

264 Sotheby 1989b: no. 14 (see plate on page 9, top.)

CHAPTER 8 - NECKLACES AND PENDANTS

INTRODUCTION

This chapter can only present an overview of the wide range of necklet and pendant types worn in Egypt over our period. Related ornaments are also included, since it is sometimes impossible to distinguish diadems or girdles from necklets - especially when they are fragmentary.

Funerary portraits and masks show many necklet types in wear although their identification sometimes requires an acquaintance with artistic conventions (fig. 274). In some other media, such as stone, bronze, terracotta and textiles, neck ornaments are not always so precisely rendered. Necklets are shown on over 90% of funerary portraits of women throughout the Roman period. In the first century AD most women are depicted with just one or two necklets, but in subsequent centuries more were worn - often two or three and, in some cases, up to six (fig. 275). Much the same phenomenon has been noted at Palmyra.¹ Some neck ornaments shown on sarcophagi and portraits were certainly mere funerary conventions and were not representative of jewellery worn in life. This is particularly true of the broad collars, the naos-pendants (fig. 276), and other traditional forms that continued to be shown on funerary depictions well into the Roman period. As usual, the male depictions are far more conservative than the female ones.

Juvenal described a nouveau riche woman with 'a long gold chain on her bare neck',² but, in general, necklaces attracted little attention from ancient authors. Jewish laws forbade the wearing of necklets on the Sabbath and, predictably, early Christian writers frowned on necklets as a manifestation of vanity and noted the similarity between necklets and fetters. In second century Egypt, Clement enquired 'do not all necklets which they call *katheter* occupy the place of chains?',³ and, in Carthage, Tertullian spoke of necks 'beset with pearl and emerald nooses'.⁴

TERMINOLOGY

Kathema (or *katheter*, as used by Clement above) was the most usual Romano-Egyptian term for necklets. An alternative word was *alysidion*, probably a neck-chain. A papyrus of AD 127 lists an *alysidion* with three green-stone ornaments.⁵ An enigmatic use of the same term occurs in a letter of the second century AD from a husband to his estranged wife.⁶ Here the wife is quoted as explaining how her husband 'sold the chain and himself put me in the boat.' Perhaps this means that he had cast her away -

1 Colledge 1976: pp. 150-152.

2 Juv. 6. 594.

3 Clem. Al. *Paed.* 2. 13.

4 Tert. 1. See also Cyprian, *De hab. virg.* 14.

5 *P.Oxy.* 496. The *alysidion* in *P.Hibeh*, 121 might not have been a jewellery chain.

6 *P.Oxy.* 528.

metaphorically, put her in a boat after removing the tether. On the other hand it is possible that necklets were a form of betrothal gift and a symbol of marriage. This was true in India prior to the recent introduction of the wedding ring. A classical link between necklets and marriage is hinted at by Artemidorus who explained that if a woman dreamt of a necklace 'lost, broken or falling apart' it signified the loss of her marriage or children.⁷

A more general Greek word for necklet was *peritrachelion*, literally 'round the neck'. A second century papyrus mentions a *peritrachelion asteridion* - a necklet with star design⁸ - and a marriage contract of AD 260 includes a '*peritrachelion* of the type called *maniakes*',⁹ possibly a torc (see below). A fifth century list of stolen jewellery includes a gold *chalaston*, literally a festoon and presumably a type of necklet.¹⁰ A Latin term for a little chain was *catellus*, which is used in a first century marriage contract from Egypt.¹¹ This same papyrus, and another Latin marriage contract of about AD 100, list a type of jewellery termed *cottatia*.¹² This has been equated with *collaria*, a collar, but connection with *crotalia*, 'earrings, has also been proposed. Unexpectedly, the weight of the *cottatia* is described in ounces rather than the usual quarters, which suggests that it was not gold or silver.

WEAR BY MEN

The wearing of necklets by men is a well-known feature of pharaonic Egypt, and traditional Egyptian art still showed men with necklets and collars right through the Roman period. Male wear of neck ornaments was less of a Greek tradition, but, for example, Euripides tells us that 'the sight of a man with embroidered pants and a golden chain so fluttered her [Helen of Troy] that she left Menelaus'.¹³ In the Roman world, Artemidorus considered that it was unseemly for men to wear necklets.¹⁴ However, necklets with bullae pendants were worn by boys and, perhaps, torcs became a male badge of office in the later Roman period (see below). Torcs with oval or rectangular pendants, can be seen worn by men and boys on late Roman funerary portraits from Egypt - and also on Palmyrene reliefs - and young children perhaps wore a variety of necklets in Roman Egypt (fig. 449). The amulet case was typically worn by men - perhaps mainly boys and youths.

THE COMPONENTS

The simplest, and most popular necklets of the Ptolemaic and Roman periods were beads which, as early Jewish literature tells us, were strung on flax, wool or gold wire links.¹⁵ Only the latter are of concern here although the most characteristic gemstones used for beads were dealt with in ch. 4.

7 Artem. 2. 5.

8 *P.Hamb.* 1.10.

9 *P.Oxy.* 1273.

10 *PSI.* 183.

11 *PSI.* 730.

12 Sandars 1938; *PSI.* 730.

13 Eur. Cyc. 182 - 7.

14 Artem. 2. 5.

15 *Kelim, Mishnah*, 8.

composed of stone beads on gold-wire links are well known from most Hellenistic and Roman contexts but are surprisingly rare from Egypt. Ptolemaic examples include such typically Hellenistic types as the spool-beads threaded on links of loop-in-loop chain (fig. 14), but there are no examples we could consider to be local Egyptian varieties rather than general Hellenistic types. This is true of nearly all wearable gold jewellery that survives from the Ptolemaic period. The commonest bead-link necklets from Roman Egypt are of emeralds (fig. 277 - compare fig. 274), and the garnet and sapphire versions known from Asia Minor and elsewhere, are absent. A greater variety of stone beads was employed in Byzantine times in Egypt and a necklet in the Benaki Museum, probably from Egypt, is threaded with emeralds, amethysts and sapphires.¹⁶

So-called 'simple chains' consist of a series of circular or oval links that each need to be soldered during assembly. This could easily lead to solder fusing the chain and so simple chains were rarely used in antiquity. Ancient chains are typically of the loop-in-loop type made up from pre-soldered links. The main types of loop-in-loop chains found in our period in Egypt are shown in fig. 278. Of these, perhaps only the very open link chains of the third century AD (fig. 279) could be considered an Egyptian characteristic. A few other link types are seen, such as the unsoldered figure-8 shape in fig. 278c, which, from the clasp type used with it, is probably of third century or later date. The flattened type of link (figs. 291 - 293) is another type well known from Roman Egypt.

There is little sure guidance for dating loop-in-loop chains. The figure-8 loop-in-loop link (fig. 278e) is as common in the first century AD - as on the simple necklet from Naukratis (fig. 280) - as it is in the sixth (fig. 249). The tight multiple, loop-in-loop chains (fig. 281) are better known in Egypt in the Byzantine period than in the Ptolemaic or Roman. Often the clasp or terminals are a better guide to period than the chain type but, again, there are no chain-necklet types that are unique to Roman Egypt apart, perhaps, for the Medusa necklets. The figure-8 loop-in-loop chain, with simple dome clasp, from Naukratis in fig. 280, could come from almost anywhere in the early Roman world.

Not all chains were for the neck. Long chains that crossed the chest can be seen in representations from Hellenistic to Byzantine times. For example, on some portraits (fig. 282) and on female terracotta statuettes from the Fayûm dated to the second century AD (fig. 283) (these figures can be clothed or naked).¹⁷ Some of the long and doubled Romano-Egyptian chains might have been of this type (e.g. fig. 4), while the finest example from Egypt is one of c. AD 600, composed of pierced-work disks (fig. 284).¹⁸

16 Segall 1938: no. 223.

17 e.g. British Museum EA 1877.11-12.34; Museo Archeologica, Florence (illustrated in Dennison 1918: p. 150 fig. 43); Weber 1914: pl. 22.

18 British Museum, MLA 1916.7-4.1.

The most characteristic necklet terminals in Hellenistic times took the form of animal-heads, but the concept was found from an early date in Egypt. For example, a beautiful loop-in-loop chain and scarab necklet of Queen Ahhotpe, c. 1550 BC, has duck-head terminals (fig. 285).¹⁹ Nevertheless animal-heads are the most usual terminals on Hellenistic period necklets from all areas and there are no forms that are unique to or even characteristic of Egypt.

A fine Hellenistic necklet from Egypt comes from the Tûkh el-Qarâmûs treasure (fig. 286). The solidly constructed loop-in-loop chain and the boldly modelled griffin heads are in the typical style of the early Hellenistic period (for the use of the griffin-head motif see ch. 7). The heads are fastened to the chain by a gold wire (fig. 287) rather than by soldering, a type of mechanical fixing common in Hellenistic jewellery. The heads are linked by two simple, unsoldered circular wire rings, and it is possible that the necklet originally had, or was intended to have, a more elaborate centrepiece.

The more flimsy and ornate styles of the later Hellenistic period are exemplified by a calf-head necklet with gold spool-beads in Cairo and necklets with ibex-head terminals with garnet beads, now in New York (fig. 18)²⁰ and the Louvre. Animal-head terminals continued to be employed on Roman and Byzantine necklets from Egypt and elsewhere. Snake heads were particularly common on third century AD necklets, while in Byzantine times lion heads were again popular.

One of the commonest centrepieces in Hellenistic necklets and other jewellery types, takes the form of a Herakles knot. Frequently these are set with garnets - though those from Ptolemaic Egypt are more typically all-gold (a superb exception is shown in fig. 64). One Herakles knot centrepiece, supposedly from Alexandria, is in the Cleveland Museum of Art (fig. 288).²¹ This centrepiece was described as a pendant but it is not, and the chain from which it now hangs was probably not part of the same object originally. The centrepiece has a small figure of Eros or Dionysos in its centre, a motif well known on other Herakles knots from Egypt and elsewhere - examples from Egypt include the centrepiece of the Tûkh el-Qarâmûs bracelet (fig. 21).²² The association of Eros or the young Dionysos with Herakles knots is not surprising. The Herakles knot often takes the form of knotted serpents,²³ and, according to one story, Dionysos sprang from the union of Zeus and Rhea in the form of serpents. Segall has said that, since two snakes helped Alexander in his search for the Amun oracle, he

19 CM CG 52670, often illustrated, e.g. Aldred 1971: pl. 56.

20 Clark 1935: fig. 1.

21 CMA 47.505. Previously the Jacob Hirsch Collection, see Wunderlich 1948. See also *BCMA* 34, 9 (1947).

22 The motif is common elsewhere, for example *BMCI* 2001; Amandry 1953: no. 217 and p. 123, fig. 73; Amandry 1963: p. 245, fig. 144; Muslubas and Meriçboyu (undated); Alexander 1928: fig 26.

23 Diminutive snake-heads can be seen on several gold and other examples. e.g. Pollak 1903: no. 329 (now in the Fitzwilliam Museum, Cambridge).

deliberately caused an association between himself and Dionysos by choosing the Herakles knot as a emblem of his birth.²⁴ An association between Dionysos and the Herakles knot would explain the invariable choice of 'wine-red' garnets when the knots are stone-set. It is also possible that a resemblance was noted between the Herakles knot and the form of the female vulva. The Herakles knot centrepiece was a primarily a Hellenistic fashion, but necklets with Herakles knots are shown on some Romano-Egyptian terracotta statuettes.²⁵

Roman and Byzantine necklet centrepieces most commonly take the form of a circle. The types include a sheet-gold dome (fig. 280), a spoked wheel (fig. 289) and elaborate openwork filigree (fig. 290). The spoked wheel has been linked to the sun, to the wheel of love as mentioned by Plautus,²⁶ and to the wheel of Nemesis (see ch. 1). The gold dome is most typical of the first century AD, while the spoked wheel - often in beaded wire - is found from throughout the Roman period. A convex openwork style of clasp, typically on flattened loop-in-loop chain, is seen on many Roman necklets (fig. 291). Examples include one on a diadem or chest decoration in Amsterdam (fig. 292), and on a multi-chain ornament in Cairo (fig. 17). The style and construction, features such as the truncated onyx on the Amsterdam example, and associated finds, point to a late second or third century AD date.²⁷ Clasps with Medusa or Dionysos masks were also popular at the same period (fig. 293), and one particular form is described below. Romano-Egyptian necklets of the third century AD frequently have clasps with dolphin motifs (e.g. figs. 320 and 322).

The simple wheel and other filigree circular clasps of the early Roman period developed into far more complex forms in the later Roman and early Byzantine periods. Typical examples include that on a necklet in the Dumbarton Oaks collection in Washington (fig. 290). Silver chain necklets are not common from antiquity, but one example with openwork filigree clasp, from Egypt is shown in fig. 294.

The trapezoid form was popular in Byzantine jewellery, particularly for necklet components. One of the ends of what must have been a magnificent emerald and gold necklet, now in Cairo, is shown in fig. 295. The type of openwork and the form of the small set-garnets in the spacers point to a date within a generation either side of AD 300. A similar form is shown by a pendant from Egypt, now in the British Museum (fig. 296). This is probably to be dated a century or more later than the Cairo necklet. A magnificent necklet composed of openwork elements of trapezoid type was part of the Asyût treasure (figs. 65 and 297). The curved terminal plates on this necklet can be compared to another necklet ter-

²⁴ Segall 1946.

²⁵ e.g. Sotheby 1977: no. 333.

²⁶ Plautus *Cist.* 2,1.

²⁷ We can compare the clasp on a necklet from the Annecy treasure now in Geneva, which was found with coins of Alexander Severus and which cannot have been deposited before about AD 220. See Henkel 1913: pl. 79.

minal or pendant in Cairo (fig. 298). A closely related necklet from Egypt is shown in fig. 299. This also has pierced-work trapezoidal sections and curved terminal plates.²⁸

A pair of gold boat ornaments in the Louvre are probably the terminals from a multi-strand necklet (fig. 300). Lloyd has argued against a Saite dating and prefers to see a mixed Classical and Egyptian style and thus 'a Hellenistic or even Roman date'.²⁹ To my mind, on the basis of style and technique, a Romano-Egyptian date is unlikely and even a Ptolemaic date by no means certain. Some Greek influence on pre-Ptolemaic Egyptian art is a possibility, but bird-head stern-post ornaments were by no means a Greek speciality. Boats with bird-heads are quite commonly depicted on Roman engraved gems,³⁰ and boats with bird head prows are shown in Egyptian art as early as the fifth dynasty.³¹

NECKLETS

The broad collar

The pharaonic broad collar was still depicted in Ptolemaic and Romano-Egyptian traditional art, for example in temple reliefs and on some sarcophagi, but wear, if any, was probably limited to ritual use in temples. A fragment of a gold broad collar with hawk-head terminals, now in the Cairo Museum (fig. 301),³² is possibly of Ptolemaic date. This is suggested by the filigree work on the gold *udjat*-eye motifs. If the figural gold repoussée plaques displayed in Cairo, mounted on the same plinth, are from the same find, a post-pharaonic date is certain. The only other surviving gold broad collars, probably of the Ptolemaic period, are four miniature examples, two, if not all of which, were part of the Tûkh el-Qarâmûs treasure (figs. 302 - 304).³³

Strap necklets

'Straps' consist of two or more loop-in-loop chains fastened side by side. They occur from about the eighth century BC in Western Asia and in the seventh century on Rhodes, but are most typical of Etruscan and Hellenistic jewellery. The chains were usually assembled by mechanical means to avoid the risk of fusing the components during soldering. The two main methods of construction are shown

28 Rosenberg 1922 - photographed when in the hands of a dealer in Cairo in 1903.

29 Lloyd 1972: pp. 307-8.

30 An actual Roman bronze fitting for a ship in the form of a tapering cylinder with two large ducks' heads was once on the market - Sotheby 1973: no. 125.

31 e.g. a fragmentary Egyptian tomb relief in Baltimore - Steindorf 1946: no. 263. An as yet unpublished gold bowl from the recently discovered royal tombs at Nimrud, is decorated in an Egyptianising, if not Egyptian, style which depicts somewhat similar boats amid a Nilotic scene. The bowl must date to around the eighth century BC.

32 CM JE 22076.

33 CM CG 53669, Metropolitan Museum of Art (Dick Fund, 1949) and two in a private collection. The MMA example is published as being from the 1905 Tûkh el-Qarâmûs treasure in Clark 1935.

in fig. 305. Both methods were used for Hellenistic straps; interweaving (fig. 305 right) is typical for the Roman types.

Hellenistic gold strap chains are very rare from Egypt but a magnificent exception is the ornament with garnet-set Herakles-knot centrepiece, now in the Cairo Museum (fig. 64). The drops bear garnet and carnelian beads. This type of jewellery, usually described implausibly as a diadem, is well-known from the Hellenistic world. The closest parallel is in the Benaki Museum, possibly also from Egypt, although the Cairo example has less filigree.³⁴ Another Hellenistic style strap necklet with a typical fringe of 'spear-head' pendants, has been described as 'Alexandrian' but, judging from the photograph, its authenticity is doubtful.³⁵ A gilded terracotta funerary imitation of a strap necklet, with matching earrings, has been found in Alexandria,³⁶ and there are some possible contemporary representations, such as a statue of a woman with a strap necklet with amphora pendant fringe.³⁷

One section of strap from Egypt, now in the Metropolitan Museum of Art, New York, is probably of Ptolemaic date and is Egyptian not Hellenistic in character (fig. 306).³⁸ The chains are held together by linking wires at irregular intervals. The purpose of this chain is uncertain, but the orientation of the one remaining terminal suggests that it was supposed to hang vertically. A Ptolemaic date is indicated by the use of filigree, probably to hold enamel, and the particular iconography of the pharaoh as a sphinx.³⁹

A characteristic Romano-Egyptian necklet consists of a strap of two, three or four, doubled loop-in-loop chains 'interwoven' together (fig. 307). The terminals are usually rounded box-like motifs decorated with a coiled uraeus within a border of beaded wire (fig. 308). Some of the necklets have a fringe of very small amphora-like pendants made from small spheres of gold. These necklets end in rings without any type of hook and possibly they were worn pinned from shoulder to shoulder - like many Hellenistic fringe necklets. The small amphora pendants are not like Hellenistic amphora pendants which presumably related to Dionysos, but they do bear a close resemblance to the situla sometimes held by Isis in some Romano-Egyptian depictions (fig. 309).⁴⁰

34 Segall 1938: no. 28.

35 *Ars Antiqua* 1962: no. 147.

36 Breccia 1912: no. 505.

37 Adriani 1961: nos. 39 and 40.

38 MMA 30.8.421.

39 Eleni Vassilika, private communication.

40 See also a Roman bronze Isis in the Minneapolis Institute of Art no. 68.9.5.

The Roman strap type is well recorded from Egypt,⁴¹ although the dating is often erratic and in some cases marriages have occurred - such as the added Medusa-head disk on a necklet once sold in Paris.⁴² The necklet in the British Museum in fig. 308 has a crescent pendant with a coiled uraeus that matches that on the clasps.

The Romano-Egyptian straps are typical of the early Roman period and the funerary masks that depict the necklets are of the first century AD (fig. 310).⁴³ On the masks, fringe necklets are shown in conjunction with crescent pendants, sigmoidal snake bracelets, ball earring and S-hoop earrings. All of which support a first century AD date. Possibly some of the surviving Romano-Egyptian straps were diadems, as shown in some portraits of the mid first century AD (fig. 311).⁴⁴

Closely related necklets from Egypt have a single length of loop-in-loop chains and a fringe of amphora pendants, the clasps are usually of simple box or corrugated type (fig. 312). Three published examples of single loop-in-loop chains with coin pendants and box clasps with applied uraei are probably fake.⁴⁵

Another type of Hellenistic and Roman strap necklet is made of larger and more open links that were soldered side-by-side. An example from Egypt, with a fringe of gold bead pendants, is in the National Museum, Athens (fig. 312 top),⁴⁶ and another is in the British Museum (fig. 313).⁴⁷ The nearest date-able parallel for the construction, is the well known emerald- and pearl-set necklet from Pompeii, now in Naples.⁴⁸ This is further evidence for the close connections between Italy and Egypt in the early Roman period and an indication of a first century AD date for the type. Other necklets of similar construction and style are known but without certain provenance.⁴⁹

The spear-head pendants that typically fringe the Hellenistic strap necklets, have been identified with the *logchotos* ('spear-head') pendants on necklets listed in the temple inventories from Delos.⁵⁰ A

41 Examples include Museum of Fine Arts, Boston 01.8153; Petrie 1927: no. 8; CM JE 30046 = Ruxer and Kubczak 1972: pl 45,3; *BMCJ* 2716; Ariadne 1983: no. 113; Jaeger 1928: no. 23 (clasps illustrated face down), the same necklet is also included in Summa 1981: no. 116.

42 Drouot 1957: no. 108.

43 e.g. CM CG 33126, 33127, 33130, 33131, and CM JE 68803 = Grimm 1974: pl. 110,3; Manchester 1766, 1769; MMA 11.155.5 and 19.2.6.

44 e.g. Parlasca 1969: nos. 69 - 71.

45 These are *BMCJ* 2735 and Greifenhagen 1975: pl. 28, 1 and 2.

46 Formerly in the Dimitriu collection, purchased in Egypt. Nat. Mus. Athens no. 1558 = Ruxer and Kubczak 1972: pl. 48.

47 The small hollow gold pendant in the form of a naked woman is held onto the necklet by a twist of wire and is probably not originally from the necklet.

48 Siviero 1959: no. 164.

49 e.g. *BMCJ* 2715 (The amethyst and bit of ancient earring now present as a pendant are not original to the necklet); Sotheby 1922: no. 106.

50 *BMCJ* p. xxxvii.

similar identification for the *logchotos* pendants mentioned in some Roman period papyri from Egypt is less certain since small spear-head pendants are not extant from the Roman period.⁵¹

Chain link and bead necklets.

A type of necklet frequently shown on funerary portraits, and known from a handful of surviving examples, consists of short lengths of open loop-in-loop chain interspersed by emerald beads threaded on gold wire links. The emerald beads characteristically retain their natural crystal form. One example, now in the Metropolitan Museum of Art, New York is shown in fig. 277. This also has a small crescent pendant. On the portraits these necklets are sometimes depicted in conjunction with, and worn above, a Medusa necklet which thus indicates a third century date (fig. 274). The portraits that show these necklets all come from the Fayûm, but Parlasca's dating of them all into the fourth century AD must be surely be incorrect. The same type of necklet is known from Pompeii which proves that the form was at least in use by the second half of the first century AD.⁵²

Lattice necklets

These necklets consist of a lattice-work of chains and pendants forming a decorative festoon round the neck. Roman period examples can be seen on some portraits and masks (fig. 314),⁵³ but I know of no surviving necklets with a certain Egyptian provenance. One lattice necklet in the Benaki Museum was originally in the Borelli Bey collection in Alexandria, but was supposedly found in Istanbul.⁵⁴

Lattice-like necklets are better known from the Byzantine period. A fine example, from the Fayûm or slightly further south at Oxyrhynchus, has a series of twisted wire links, (presumably originally threaded with pearls) linked to small, slightly concave domes of gold with beaded wire borders (fig. 315). The inner row are plain flat disks with beaded-wire borders and along the lower edge of the necklet hang sheet gold amphorae, crosses, cockerels and 'leaves'. One terminal is an open-work scroll disk, the other a flat disk with beaded wire border and central single granule. A similar necklet in Berlin is believed to have been part of the Asyût treasure.⁵⁵ This necklet still retains its pearls and has interspersed emerald crystals. Both necklets are late sixth to early seventh century AD. Ross has argued that their provenance, plus the literary evidence of goldsmiths working at Oxyrhynchus and in the Fayûm, could mean these were local products. I agree and think that, in general, we should assume a local origin unless there is very good reason not to do so.

51 *P.Mich* Inv 1950, third century AD; *P.Osl.* 2.46, second century AD.

52 Siviero 1959: nos. 186 and 187.

53 e.g. CM CG 33153.

54 Segall 1938: no. 231 = Drouot 1913: no. 410.

55 Greifenhagen 1970: no. 50, 2.

Another related necklet, said to have been found in Egypt,⁵⁶ is shown in fig. 316. This probably also bore pearls on the lower row of links. The style of clasp indicates a Byzantine date though possibly earlier than the two necklets mentioned above.

Torcs

A torc is a rigid, rather than flexible, penannular necklet typically made from a plain or twisted metal rod or tube or two or more wires twisted together. Torcs are not as alien to Egypt as the literature has suggested and there are many Middle Kingdom, 'pan grave' and New Kingdom examples. Nevertheless torcs are more usually associated with Western Asia. In the Persian period in Egypt, we can see a statue of Ptahhotpe wearing an animal-headed bracelet and a torc with ibex-terminals that is totally Achaemenid in style (fig. 317).⁵⁷ Perhaps significantly, Ptahhotpe wears his torc over, and partially obscuring, a necklet and inscribed pendant of more traditional Egyptian form.

Once into the Hellenistic period torcs became far more commonly depicted in most parts of the Empire, though seemingly not in Egypt. Examples range from the snake-headed torc worn on a superb Aphrodite-head *balsamarium* now in Copenhagen,⁵⁸ to a South Arabian alabaster relief which shows a woman wearing an ibex-headed torc.⁵⁹ Possibly, in Egypt, the animal-headed torc continued to have Persian, or at least foreign, connotations. On the front of the first pylon of the temple at Edfu, Ptolemy XII is depicted smiting his foes in traditional Egyptian fashion. One of these foes wears an animal-headed torc (fig. 318).

The only torcs I know from Ptolemaic Egypt are of Egyptian rather than Persian or Hellenistic style, that is the terminals are at the back. Four examples from Dendera, now in the Cairo Museum, are of gold wires, or thin rods, threaded with an assortment of plaques, amulets and beads of characteristic Egyptian, rather than Hellenistic, form.⁶⁰ One of these torcs has duck-headed hook terminals. The gold amulets on the torcs include a variety of usual forms - such as Bes, *udjat*-eyes, the Horus hawk and Taweret - but also a most unusual Hathor-headed hawk. Plaques on two of the torcs show offerings to Hathor, the chief deity at Dendera, by her son Ihy. Another of the torcs bears a naos-shaped plaque showing the Theban triad, Amun, Mut and Khons. A Ptolemaic date is suggested by the use of enamel on the *udjat*-eye pendants and the iconography of the offering plaques. These torcs were

56 Once in a private collection but stolen in the mid 1980s.

57 Brooklyn 1960: no. 64. A twenty-seventh dynasty head of a Persian in Florence (Museo Egizio no. 11900) also wears a collar with lion-head terminals.

58 Copenhagen National Museum, Dept. Oriental and Classical antiquities, no. 6557, see *JRGM*. 6 (1959), pp. 110-127

59 This relief is Qatabian and thus is probably contemporary with the Ptolemaic period. Costa 1978: no. 31.

60 CM CG 53187-189, 53193.

probably part of the temple regalia or the insignia of the priesthood. I know of no other certain Ptolemaic torcs although Petrie alludes to them.⁶¹

In the later Roman and Byzantine periods the torc became more common, especially in base metals including bronze, iron and even tin. Base metal torcs have been found in situ on the bodies of children of Byzantine date. In one case, an iron torc was threaded with various pendants including four crosses.⁶² Most of these base metal torcs can probably be dated to the sixth to seventh centuries AD. A bronze example in the Petrie Museum has a central disk with a male head, Petrie identified this as a head of Phocas and, if so, we must concur with his early seventh century dating.⁶³

We see women wearing torcs in third or fourth century funerary depictions,⁶⁴ and in other media. For example, a fine Coptic textile in the Cleveland Museum, dated to the fourth to fifth centuries AD, shows a woman wearing what appears to be a thick torc with a stone-set pendant (fig. 37). A heavy twisted rod torc with a rectangular openwork pendant set with an emerald is in the Benaki Museum and might well be from Egypt.⁶⁵ This dates to the second half of the third century AD or, perhaps, into the fourth century.

We also see men wearing torcs although, perhaps, boys and youths rather than older men. For example, a group of four similar funerary depictions of men from Deir el-Bahri show three with an traditional Egyptian pectoral, one with a torc. The latter is the only one shown without moustache and beard.⁶⁶ Palmyrene reliefs show torcs being worn by young male children and perhaps by older youths or fully grown men.

One twisted wire torc from Egypt is set with a simple pendant composed of an amethyst bead.⁶⁷ This is probably of sixth or seventh century date. Far grander torcs of this same period include the three magnificent examples with coin-set centrepieces described below. These coin-set torcs must have been important ornaments - perhaps wedding gifts or insignia of rank. Speidel has suggested that in the late Roman army, torcs were a badge of office worn either by the very brave, or by standard bearers - who were possibly only drawn from among the bravest soldiers.⁶⁸

61 Petrie 1927: p. 4.

62 Brunton 1937: p. 141.

63 Petrie 1927. no. 39.

64 e.g. Berlin (West) no. 13162 = Grimm 1974: pl. 98, University College London, no. 19624, both also wearing mulberry drop earrings.

65 Segall 1938: no. 110. There are similar, unpublished, examples from Asia Minor.

66 Grimm 1974: pl. 112 & colour plate E.

67 Christies 1979: no. 78. This reappeared on the market in 1990 more tightly bent to form a bracelet.

68 Speidel 1985: pp. 283-7.

The *maniakes* type of necklet mentioned in the papyri might well be a torc. Liddell and Scott translate the term as 'necklet, torc worn of gold by Persians and Gauls', and cite many occurrences from the third century BC to the sixth century AD.⁶⁹ The torc was undoubtedly the best known neck ornament among the Celts and Persians. A Romano-Egyptian marriage settlement of AD 260, includes 'a necklet of the type called maniakes, having a stone and weighing apart from the stone 13 quarters'.⁷⁰ This would weight 22 g. or so, and could well be a torc of gold wire or thin rod with a pendant set with a stone.

Linked motifs

The commonest form of these necklets has a series of hollow gold motifs joined in a line by means of loop-in-loop links affixed to the back (figs. 319 and 320). The type occurs throughout the Roman Empire. The motifs usually take the form of a symmetrical double-bird - perhaps intended as ducks. The clasps often depict dolphins. A good example of probable, but not certain, Egyptian provenance, is in the Dumbarton Oaks Collection (fig. 320). Other unprovenanced necklets with double-bird motifs include one in private hands,⁷¹ and an ornament, described as a bracelet but more likely a fragment of a necklet, from the Oppenheimer Collection.⁷² A necklet of very similar type was also found at Taxila and also a copper alloy former, perhaps for shaping this type of motif.⁷³

Other motif types include a double leaf as on a necklet, probably from Egypt, now in the Dumbarton Oaks Collection.⁷⁴ Here the motifs are threaded together and this necklet now includes other ancient and modern components.

Necklets of the linked-motif type are possibly shown on some mummy portraits (fig. 321),⁷⁵ and this would support the third century date for the type as suggested by Greifenhagen and Zahn,⁷⁶ and indicated by their construction. The only example I know of from a dateable find came from Nicolaevo in Bulgaria with mid third century coins.⁷⁷ The various other published dates, ranging from Cretan-Mycenaean to the sixth cent AD, should be rejected.

Necklets composed of linked dolphins are represented by two fragments from Egypt. Three dolphins, forming part of a necklet, came from Tell Basta and are now in Dresden (fig. 322),⁷⁸ and a more elaborate example, set with garnets emerald and pearls is in the Cairo Museum (fig. 323). This latter is

69 The term could also include clothing collars, see notes to *P.Oxy.* 1289.

70 *P.Oxy.* 1273.

71 Zurich 1964.

72 Christies 1936: no. 152 = Christies 1903: no. 209.

73 Marshall 1951: pls. 180, 105 - 8 and 194, 77.

74 Ross 1965: no. 9.

75 University College, London no. 14692 and perhaps Parlasca 1966: colour pl. D2.

76 Greifenhagen 1975: p. 35.

77 Filow 1914: pp. 1-48.

78 Schreiber 1894: p. 301, fig. 21.

linked by a series of cotter-type pins with garnet-set tops (fig. 324), this would give the directional flexibility suitable for a necklet but not for a bracelet. A single dolphin motif, also from Tell Basta, might be an earring or part of the same necklet as the Dresden fragment (see fig. 258). The construction of these necklets indicates a mid third to early fourth century date. The dolphin motif occurs frequently in Hellenistic and Roman iconography. The dolphin was associated with Dionysos and Aphrodite, and through her, linked with Eros. In general, fish might have been phallic and fertility symbols, particularly in Egypt. The mullet, with its migration up and down the Nile, related to the inundation and thus fertility. The red fish 'who will be happy in my fingers', in the ancient Egyptian song of the harper, needs no further explanation!

A related necklet from Egypt, consisting of a series of motifs of uncertain type, is in a private collection (fig. 325). Possibly very stylised dolphins are meant. The clasps take the form of stylised Isis crowns. A third century date would also fit here. A somewhat similar necklet is in the Heraklion Museum.⁷⁹

Linked stone-settings

Necklets consisting of a series of linked plaques or stone settings are commonly shown being worn by women on Romano-Egyptian masks and portraits and also on Palmyrene reliefs. Some of these were clearly magnificent items of jewellery with numerous stone settings (fig. 136) but, sadly, none of the most magnificent has survived complete, although individual links - such as those in fig. 326, from the Fayûm - give an idea of how spectacular some of the ornaments must have been.

Simpler links gold settings containing stones or glass have survived, though seldom complete. A typical and complete example of the type from Egypt was sold at auction in Paris in 1957.⁸⁰ This necklet consisted of thirteen square and rectangular gold settings containing what were called 'feldspath' but were almost certainly emerald crystals. Between each setting was a small circular setting with a cabochon garnet. The terminals were triangular in shape with a hook and loop and each was set with a small oval cabochon garnet. A fragment of a very similar necklet in Cairo is set with prismatic emeralds and bright red carnelians.⁸¹ Here the settings are linked together by cotter pins, the caps being set with garnets (fig. 327). This necklet can be compared with the necklet visible in fig. 136. Odd sections of related necklets are not uncommon (fig. 328) but many are very flimsy and might have been funerary. For example, the links in fig. 54, are made from gold only 0.04 mm. thick filled with calcite plaster and set with glass. These show no signs of wear and the holes suggest that they were strung on thin threads and thus were probably not strong enough to be worn. Most surviving examples are probably of the third century AD.

79 Heraklion Museum no. 564.

80 Drouot 1957; no. 105.

81 CM CG 52151.

Medusa necklets

Necklets with disk-like central motifs with masks occur from the Hellenistic period onwards and can be seen, for example on a fourth century BC Egyptian statue.⁸² Various clasps with Medusa or, perhaps, sometimes Dionysos masks, can be seen on a variety of necklets from Roman Egypt (fig. 293). However the best known necklets with central mask disks are Medusa necklets which are one of the most characteristic necklets from Roman Egypt. These necklets typically consist of an open loop-in-loop chain with a circular centrepiece which bears an embossed frontal head of Medusa or sometimes Helios.⁸³ A typical example is shown in fig. 329. One ornament in the British Museum has two Medusa-head disks.⁸⁴ One of these probably belongs to another necklet in the same collection.⁸⁵

The heads were probably shaped by working them into a die rather than by hand but I have not been able to identify any two or more disks as having been produced with the same die. The decorative embellishments, namely the filigree surrounds to the Medusa mask and the grains, rosettes or small domes placed round their circumference, can differ from disk to disk (see figs. 330 - 334). The filigree decoration usually consists of beaded or plain wires, ranging from one to three or more, or wavy ribbon (sometimes two side by side). In some instances, the sheet gold of the disk is embossed with lines imitating applied filigree. Other applied decoration consists, at its simplest, of small gold grains applied at the points where the attachment loops meet the disk. Alternatives include four such grains arranged, as it were, north, south, east and west, hemispherical domes, again either two or four, or four small rosette shapes. Most have hooks linked into rings soldered to terminals of the chains. The chains themselves are almost invariably of rather open loop-in-loop chain with corrugated terminals. Fancier chains and terminals are sometimes seen (fig. 332).

Surviving Medusa necklets range from substantial to flimsy but those examined all show signs of wear and sometimes ancient repairs. The type was thus worn and not just for funerary use. One possible exception, in an American collection, has a flimsy gold-foil head of Medusa or Dionysos on a loop-in-loop chain of sheet gold links.⁸⁶ Greifenhagen considered this necklet to be a funerary gift, probably from Roman Egypt, but, to my mind, the various components might not belong together.

More than thirty Medusa necklets from Egypt are extant, although some have modern repairs or alterations. For example, one Medusa-type disk joined onto a strap-type necklet with uraeus terminals

82 Adriani 1961: no. 40.

83 For an example of a Helios disk see Laffineur 1980: p. 437 no. 141. This necklet has lost its original fastening and an earring had been added as a hook in recent times.

84 *BMCJ* 2736*.

85 *BMCJ* 2736.

86 Greifenhagen 1967: pp. 81-90.

was sold in Paris in 1957.⁸⁷ Surviving Medusa necklets are almost invariably from Egypt, a possible exception is a necklet supposedly from South Russia (Olbia).⁸⁸ Some necklets have a pendant on their backs. These are usually crescents (figs. 52 and 279) or busts of Isis or Sarapis (fig. 329), but some are stone-set.⁸⁹ In some cases there is a second, smaller figured disk on the backs of the necklets, in which cases the clasps are at the back.⁹⁰

The necklet illustrated in figs. 52 and 330 weighed a total of 35.4 g., the medallion weighed 8.1 g. and the chain 27.3 g. Energy dispersive X-ray fluorescence analysis of the collar and the back of the Medusa showed that it was between 92% and 96% gold (see ch. 3). This necklet clearly received a lot of wear in antiquity. The patch of sheet gold inside the nose (figs. 335 and 336) might have been a thoughtful reinforcement at the time of manufacture. Repairs to the fastening ring was made after it had worn through, or was in danger of doing so (fig. 331).

Medusa necklets are recognisable on about three dozen mummy portraits, most of those with provenances come from er-Rûbîyât, but there is one example each from Asyût, Saqqâra, Hawâra and el-Lâhûn. This would imply a fairly wide popularity within Egypt. The necklets are only worn by women, often with one other necklet - most usually an emerald bead necklet or emerald beads interspersed with gold links (fig. 337). The majority of the portraits with Medusa necklets also show S-hoop earrings, about a quarter bar and drop earrings and two wear mulberry drop earrings. Shrouds depicting Medusa necklets confirm their contemporaneity with mulberry earrings and also with over-lap twist bracelets (fig. 338).

On the basis of the accepted dating of the portraits, the Medusa necklets should be placed to around AD 275-400 with most coming from between about AD 300-375. On all other criteria, I cannot believe that the Medusa necklets can belong any later than the late third century AD. Once again we are in a situation where either we accept that some of the painted portraits dated to the fourth century by Parlasca and others are mis-dated by up to a century, or that they depict jewellery types that were out of date by the same length of time. A third century date is supported by related necklets from elsewhere in the Roman world - for example those in the St. Genis and Annecy treasures.⁹¹

87 Drouot 1957: no. 108. Another recent adaption was Christies 1975: no. 157.

88 Naumann 1980: no. 16.

89 Ruxer and Kubczak 1972: pl. 39, 3 = CM CG temp. no. 24.11.21.5.

90 e.g. Delange 1990: p. 21.

91 Henkel 1913: vol. 2, pl. 79.

‘Chinese lantern’ necklets

A necklet type best known from Egypt is composed of thin ribbons of gold folded into a flexible plait, rather like ‘Chinese lantern’ paper decorations (fig. 339). The simplest ornament of this type is a diadem in the Metropolitan Museum of Art, New York, made from two gold strips folded together, with a central lotus-like rosette (fig. 340).⁹² This diadem might have been for funerary use since rosette-like stars on diadems occur on male funerary portraits (fig. 341). In the Museum of Fine Arts, Boston, there is a fourth century AD funerary crown woven from papyrus (fig. 342).⁹³

A fragment of a necklet with pendants in a private collection (fig. 343) is composed of four interplaited strips. On the basis of its pendant type, this must be of late third century date at the earliest.⁹⁴ The elaborate necklet with medallion pendant illustrated in fig. 344, said to be from Egypt, was in a Swiss collection before being sold at auction.⁹⁵ The pendant medallion of Gordian III, of AD 242, points to a mid third to early fourth century date for the necklet but, although the terminals suggest a similar date, I am not certain that the medallion and necklet started life together.

‘Chinese lantern’ necklets without certain Egyptian provenance, include one with serpent-head terminals, once in the Gans Collection,⁹⁶ and another, with lion-heads, formerly in the Tyskiewicz collection and now Baltimore.⁹⁷

There seems little doubt that the ‘Chinese lantern’ ornaments generally belong to around the mid third to fourth century AD. The Ptolemaic date given to the diadem in the Metropolitan Museum of Art is uncertain. The use of turquoise and carnelian cloisonné inlay would be more expected in the Ptolemaic or earlier periods than from the Roman period. The lotus-form funerary diadem could well relate to the lotus flowers painted over the foreheads on Late Period coffins. The Chinese lantern pendants from the Maikop find from South Russia,⁹⁸ are traditionally dated to about the fifth century BC, but I am not alone in suspecting a far later date for some of the Maikop jewellery. However, the recently discovered, but unpublished, gold from the royal tombs at Nimrud includes what appears to be a ‘Chinese lantern’ diadem. This dates to about the eighth century BC. There are also similarly constructed, but far more recent, ornaments from India.

92 Rogers Funds, 1945. MMA 10.130.15. Illustrated in Clark 1935.

93 MFA 50.388.

94 Christies 1979: no. 79, I originally dated this fragment to the second or third century AD.

95 Jucker and Willers 1982: no. 181 = Christies 1987: no. 149.

96 Zahn 1921: pl. 8 no. 33.

97 Baltimore 1979: no. 327.

98 Ogden 1982: p. 58 and fig. 4:52.

Coin-set pendants and necklets

Coin-set ornaments, witnesses to the opulence of the late Roman and early Byzantine times, are well attested from Egypt. Vermeule has assembled many examples of coin pendants from the ancient world,⁹⁹ but his list is not complete and almost half of those he lists with Egyptian provenance are probably fake.¹⁰⁰ Without the fakes, the evidence for a Hellenistic or early Roman fashion for coin-set jewellery greatly diminishes and apart, perhaps, from the odd pierced coin, coin pendants are probably a third century and later phenomenon.¹⁰¹ The use of coins was part of the current taste and need not reflect inflation or other economic problems as proposed by Vermeule.¹⁰²

Coins should seldom be used to date the jewellery in which they are set - third century AD mounts are often set with first or second century coins.¹⁰³ An extreme case is a hoard from Matara in Ethiopia. This contained necklets, crosses and other gold jewellery which on the basis of style and context could hardly date to before AD 500.¹⁰⁴ Fourteen pendants in the find were set with Antonine coins. In the Digest of Justinian, Pomponius is quoted as saying: 'A bequest can be made of the usufruct in old gold and silver coins which are habitually used as ornaments'.¹⁰⁵ This is traditionally taken to refer to coin-set jewellery but Pomponius flourished in the time of Hadrian, and Sabinus, whom he quotes, lived in the first century AD. The original text: *Nomismatum aureorum vel argenteorum veterum, quibus pro gemmis uti solent, usus fructus legeri potest* might be better understood to mean coins used as raw materials for jewellery (see ch. 3).

Possibly pre-Diocletian coins were mainly used as ornaments after Diocletian's reform; perhaps they were exempt from laws regarding defacing. After the mid fourth century or so, medallions, seldom coins, were used in jewellery until some time in the sixth century when Byzantine coins began to be set. I know of no pre-Constantine coins in sixth or seventh century mounts.

99 Vermeule 1975: pp. 5 - 32.

100 Vermeule 1975: nos. 2,3 and 9.

101 There are rare examples of earlier coin-set jewellery, such as two rather crude rings made by soldering shanks to gold coins of Panticapaeum that were found *in situ* on the right hand of a woman in a late fourth-century BC burial in the Ukraine - Mielczarek 1986.

102 See also Henig 1981. For coin -set jewellery see also Rasmussen 1945.

103 Even coins of Alexander the Great are sometimes found in late Roman settings - for example one in Beirut - D. Baramki. *The Archaeological Museum of the American University of Beirut*. Beirut, 1967, pl. 24, p. 78.

104 Anfray 1964.

105 Dig. 7.1.28.

Coin pendants

Coin-set pendants are known from Egypt but are not an Egyptian speciality. Examples from Egypt include a coin of Quietus (AD 260/1) in a beautiful open, scrollwork mount now in the Cairo Museum. Benaki Museum (fig. 345). There is an almost identical pendant mount holding a coin of Hadrian in the Benaki Museum which is quite probably from Egypt (fig. 346).¹⁰⁶ The disparity of coin dates relative to the identical mounts proves that coins were often set long after their date of issue. The type of mount can be a useful indication of the date of mounting but, obviously the mounts cannot be dated on the basis of the coins in them.¹⁰⁷

A necklet from Egypt, formerly in the Pierpont Morgan Collection and now in the Metropolitan Museum of Art, consists of a doubled figure-8 loop-in-loop chain threaded with two hexagonal section column beads and two coins in gold mounts (fig. 347). Both coins are of Alexander Severus and one can be dated to AD 226.¹⁰⁸ The ends of the chain are joined by a twist of wire and the original configuration and components of the necklet are uncertain. Probably the necklet originally contained at least another coin and column bead although we cannot be certain that both pendants were originally strung together - their mounts are in very different styles. The mount of the smaller coin could well fit into a later third century context. The pierced-work of the larger pendant is more easily paralleled in fourth century work.¹⁰⁹

The combination of elaborately mounted coins separated by hexagonal-section column beads can be seen on a more complete necklet from Abuqîr in Egypt, now in the Atkins Museum of Fine Arts, Kansas City (fig. 348).¹¹⁰ The latest of the twelve coins in the necklet is of Gordian III (AD 238-244) but the elaborate mounts suggest a late third, if not fourth century date. The hexagonal section 'column beads' were used over a long period and occur again, for example, on a necklet from the late sixth century Mersin treasure now in the Hermitage.¹¹¹ The portraits in figs. 233 and 349 were almost certainly intended to represent coin pendants, as was the limestone bust in fig. 350.

A large openwork pendant from Egypt contains a medallion of Honorius (AD 395-423) and thus can hardly date before the very end of the fourth century AD (fig. 351).¹¹² This pendant proves that the

106 Segall 1938: no. 106.

107 Petrie (1920) attempted to suggest a chronological order based on coin-mounts but deduced this from the set coins. This approach will separate Roman from Byzantine mounts but not much more.

108 Dennison 1918: no. 8 = Vermeule 1975: no. 28.

109 The term *opus interrasile* is often used for this type of pierced decoration, but I have argued elsewhere that there is little to commend this Latin term - Ogden and Schmidt forthcoming in *Jewellery Studies* 4 (1990).

110 Published in *BCMA* 34,9 (1947) ex Hirsch coll. Vermeule 1975: no. 29

111 Hermitage W.96, illustrated in Banck 1966: pl. 104, a.

112 Greifenhagen 1970: pl. 45.

finely pierced type of openwork survived right through to the end of the fourth century and, possibly into the fifth. Similar pierced work found in late contexts elsewhere, such as the fibulae in the Childeric and Reggio Emilia treasures (the latter dated by coins up to c. AD 477) do not necessarily prove that the fibulae were made as late as that, and indeed an early fifth century date has been proposed.¹¹³

Pendants consisting of settings containing imitation coins - usually made from thin gold sheet - are quite well known from throughout the Roman world. An example from Egypt (fig. 352) has a pendant so flimsy that it was possibly just for funerary use and might not have belonged originally on the sturdier chain. Two imitation coin-like pendants from Egypt, now in Paris, are formed from sheet gold. One has a profile female head on the front and Osiris on the reverse, while the other has, respectively, a profile male head and a figure of Isis (fig. 353).¹¹⁴ The borders surrounding the pendants are embossed with a wreath (round the male) and a scroll design (round the female). The apparent intention to imitate coin-set pendants, suggests a mid-third century or later date for the Paris pendants while the 'pagan' gods on the reverses would not be expected much after the early fourth century. A fourth century or later date is likely for a broken sheet gold pendant with pierced surround and central embossed 'imitation' coin now in the Walters Art Gallery.¹¹⁵ Ross recorded the provenance of this coin as Abuqîr in Egypt.¹¹⁶ An Egyptian origin is confirmed by the presence of the missing suspension loop and part of the border in the Cairo Museum (fig. 354).

A chain with a circular pendant with a facing male bust, possibly an emperor, in high relief, has an openwork surround that recalls the mounted coins (fig. 355).¹¹⁷ The combination of the sturdy openwork setting with the applied sheet gold figures of Osiris flanked by two hawks on the back, again indicates a mid third century to early fourth century date. It seems possible that in such iconography of the Roman period in Egypt, Osiris represented the Emperor.

The gold necklet with a mounted coin of Domitian of AD 91, and its two companion pieces formerly in the Gans collection and now in Berlin, are almost certainly fake.¹¹⁸

113 See K. R. Brown in Weitzmann 1979: pp. 303-4.

114 de Ridder 1924: nos. 750, 751.

115 Baltimore 1979: no. 331.

116 Ross 1955.

117 Kansas City no. 56-78. Formerly in the Hirsch collection and published in *BCMA* 34,9 (1947). Also Grimm 1974: pl. 135.

118 *BMCJ* 2755; Greifenhagen 1975: pl. 28, 1 and 2.

Multi-chain coin collars

One group of coin necklets of the third to fourth centuries AD is characterised by four strands of loop-in-loop chain passing into two sliding globular beads. The sliding construction allowed the necklet to be expanded to pass over the head (figs. 356 - 358) The slider beads typically have embossed relief designs, often with lozenge-shaped compartments with various combinations of rosettes, shells, and quatrefoils. Plain types have raised concentric circles.

Four complete examples of these necklets have been published, of which three have known Egyptian provenance. The Walters Art Gallery in Baltimore has a necklet 'from Egypt' with seven coins ranging up to that of the elder Faustina of around AD 140 (fig. 356).¹¹⁹ A necklet in the Metropolitan Museum, New York, bears coins up to about AD 227 and is said to be from Memphis (fig. 357).¹²⁰ Another necklet, in Vienna, with coins up to AD 238, also has an Egyptian provenance (fig. 358).¹²¹ This last necklet was illustrated by Rosenberg in 1903 while it was in the hands of a dealer in Egypt (figs. 299 and 359).¹²² At that time only three coin pendants were in place - rather than four - and that on the left contained an extremely rare aureus of Commodus. Possibly this coin was switched for the commoner coin of Aurelius before or after it left the Egyptian dealer's hands - or the necklet originally had five or more pendants. The mount on the Commodus/Aurelius coin has an acanthus and trefoil motif matched almost exactly by the mounts on the Hadrian coin pendant in Athens and the Quietus in Cairo (figs. 345 and 346).

The only complete coin collar without a certain Egyptian provenance is that now in Chicago which contains three coins up to Probus (AD 276-282).¹²³ This collar has been attributed to Syria but without any apparent foundation.¹²⁴ The mounts have intricate but basic chisel-cut pierced work.

Parts of similar necklets ranging from almost complete examples to the odd bead, include a necklet from Hadra, Alexandria which had everything apart from the coin pendants (fig. 360). It is worth noting that the coin pendants could only have been removed by damaging them. Coins found with the Hadra necklet dated up to AD 268.¹²⁵

119 Formerly Schiller collection (Zahn 1929: no. 111), now Walters no. 57.1600 = Baltimore 1979: no. 328.

120 MMA 36.9.

121 Illustrated in Forrer 1907: p. 518, also in Gerlach 1971: pl. 100, 3.

122 Rosenberg 1922.

123 Chicago no. 2262, cat. 239195.

124 Hackens and Winkes 1983: no. 36.

125 Breccia 1932: pl. 21.

Another chain with slider-beads and one large sheet gold bead is in the Schüller collection in Germany (fig. 361). An Anatolian provenance has been suggested, perhaps on the basis of the dealer it came from, but an ultimate Egyptian origin has also been mooted.¹²⁶ Ornaments found in Hungary at Rabakovacsi include mounted coins and beads but no chains,¹²⁷ and a single slider-bead decorated with shells, acanthus leaves and masks, but without provenance (fig. 362), was sold in London in 1964.¹²⁸ Three unprovenanced 'turned' beads in the Walters Art Gallery are very similar to those on the New York and Vienna necklets,¹²⁹ but identical beads are also seen on some other types of necklet such as one with ram-head terminals and large openwork filigree disk pendant formerly in the Gans collection.¹³⁰

The dates given to the multi-strand slider necklets vary and it has sometimes been assumed that the necklets are the same date as the coins they contain. More recently it has been argued that the New York and Baltimore collars date to around AD 225 while the more complex work of the Chicago example places it a little later.¹³¹ However the known necklets must surely fit into a limited chronological framework. The necklet with the latest coins is that in Chicago which cannot date to before about AD 280. On technical grounds the pierced-work column beads of the Hadra find, and the pendant frames on the New York and Vienna necklets, point to a late third if not fourth century date. The central coin pendant on the New York necklet has a suspension loop in the form of a diminutive finger ring. This same feature can also be noted on gold bells in the Tarsus treasure in the British Museum and in part of a Syrian find now in Berlin. The Tarsus treasure (which included coins up to Gordian III) and the Berlin group both include fine pierced-work decoration which is usually seen as fourth century. Two of the coins on the Chicago necklet have mounts with the eight-pointed star decoration. This is reminiscent of, but in a different technique from the mount on the Honorius medallion and Alexander Severus coin mentioned above. On balance we can probably place the slider type of coin necklet to a generation or so either side of AD 300.

The presence of finger ring-shaped suspension loops on coin necklets and bells might indicate some connection with marriage. The possibility of some connection between coin jewellery and marriage in Byzantine Egypt could be suggested by recent practice in several parts of the Near East and Asia. It could be relevant that in Coptic art, Aphrodite and other naked goddesses are often shown with large circular pendants, possibly representing coin-set ornaments (fig. 363).

126 Bonn 1973: p. 257, no. 414.

127 Thomas 1968. fig. 9.

128 Sotheby 1964: no. 15.

129 Baltimore 1979: 329; nos. 57.602, 57.604, 57.605.

130 Zahn 1921: pl. 9, no. 34. No provenance.

131 Hackens and Winkes 1983: pp. 133-136.

Coin-set 'torcs'

Rigid, tube-like torcs with coin-set pectorals and hanging medallions are the most magnificent of coin-set jewellery from the ancient world and seem to have been an Egyptian speciality. Three examples are known to me and these are in Berlin, New York and in private hands (figs. 364 - 366). The two in museums were part of the so-called Asyût hoard,¹³² and the one in private hands might have the same origin; it is certainly from Egypt and is said to have been owned by the same family for several generations.

Since this privately owned necklet is unpublished, it is worth describing it in some detail (fig. 366). It has an external diameter of 21 cm. The hoop is in the form of a hollow tube of cruciform section with ribbing, possibly a stylised imitation of a heavy link chain (this is closely matched by the hoops of a pair of bracelets from the Asyût hoard now in Berlin - fig. 499). The tube is about 7 mm. wide. The gold lion-head terminals are almost spherical in shape and similar in style and technique to those on an armband in the Dumbarton Oaks Collection.¹³³ To the mouths of each lion are soldered rings forming a hinge-type attachment for the centrepiece. The hinge pins were of copper alloy which is not unusual at this period. On the underside of each head is a triangular trap door to allow the escape of air when heated for soldering. As the necks of the terminals are open the trap doors were unnecessary. The cage-work collars between heads and torc are more typical of Hellenistic jewellery and it is even possible that they were reused by the Byzantine goldsmith.

The centrepiece is lozenge-shape and set with seven gold coins with strip, beaded wire and ajouré-scroll work surrounds. The latest coin is that of Maurice Tiberius of c. AD 582. The centre coin has an elaborate surround of twenty-two small trefoil flowers. Similar but larger trefoils cover the junctions between the coin settings. The edges of the coins have been hammered out to provide a flatter, wider flange for affixing the surround. The coins are soldered into place - not mechanically held as in the third and fourth century mounts. The backs of the coin surrounds are far deeper than the coins themselves - thus giving an illusion of solidarity. The backs of the settings are separated from each other by gold beads of near-spherical shape. Hinge rings on each side of the centrepiece match those on the hoop. On the lower edge of the centrepiece is the hinge attachment for the missing pendant. The hinge has neither copper corrosion products nor a screw thread.

The trefoil flower heads on this necklet (fig. 40) link it to many other items in the Asyût hoard and to other items from Egypt.¹³⁴ This trefoil decoration might be taken as typical of Egyptian work of the period.

132 Dennison 1918: nos. 1-4.

133 Ross 1965: no. 45. See also Zahn 1929: no. 112.

134 For example, a pair of earrings now in Cleveland (fig. 255), a pair of bracelets in Dumbarton Oaks, (Ross 1965: no. 46, here fig. 498) and two crosses from Egypt (e.g. fig. 404).

The coin-set torcs can be approximately dated by the coins. The New York necklet contains coins at least as late as the mid sixth century AD while the Berlin and privately owned examples must belong to after AD 582. The trefoil motif is also seen on a bracelet containing coins up to Heraclius and thus with an earliest possible date of c. AD 615 (fig. 498). The coin-set torcs thus belong to a generation or so after AD 580. We might suggest that the jewellery in the Asyût hoard was concealed, or lost, when the Arabs invaded Egypt.

The large medallion in the centre of the Berlin pectoral has, on its reverse, the legend 'Lord protect the wearer' which, in the Greek, quite clearly identifies the wearer as a woman. If we can assume this type of coin-set torc was worn by women, we have another possible connection between coin-set jewellery and marriage.

Linked coin belts.

Gold girdles made of a series of linked coins are a feature of the eastern Mediterranean in the sixth and seventh centuries BC. Complete examples like that from Kyrenia in Cyprus show how magnificent such girdles could be.¹³⁵ To my knowledge, no complete examples have survived from Egypt but a variety of fragments have. Three medallions in the Freer collection from the Asyût group formed the centre of a girdle (fig. 367) and possibly a group of six framed solidi, formerly in the Pierpont Morgan Collection,¹³⁶ were from this same ornament (fig. 368). Certainly the mounts are very similar and all show traces of copper corrosion products in the hinges.

Another part of a girdle of linked solidi from Egypt was in the Omar Pasha Sultan Collection (fig. 369),¹³⁷ and this was almost certainly part of the same object as a previously unprovenanced girdle fragment in Baltimore (fig. 370).¹³⁸ Grierson has given an Egyptian provenance to another centrepiece, probably from a girdle, but this is a mistake since the origin is known to be Syria.¹³⁹

PENDANTS

This section covers figural and other pendants, most of which had protective or other qualities although we do not know how important these were. Hoffmann has said that religion was so interwoven with Hellenistic daily life that a girl could wear her Eros earrings or Aphrodite pin without conscious-

135 Grierson 1956.

136 Now in the British Museum.

137 Omar Pasha Sultan 1929: no. 738.

138 Baltimore 1979: no. 330.

139 Grierson 1956: p. 59 n. 12; de Ridder 1911: no. 1416.

ly thinking of those deities.¹⁴⁰ Much the same comment was made by Bonner regarding engraved gnostic gems.¹⁴¹ Motifs could mean different things to different people, and, as Goodenough noted, 'no symbol ever lost religious value by having plural implications'.¹⁴² Vine and ivy leaves, for example, were Greek symbols of Dionysos and still considered such in the second century AD.¹⁴³ These symbols probably had fertility powers for their wearers regardless of their religion - an amulet in the form of a vase with a grapevine growing out of it was found in a Jewish grave in Palestine between the thighs of a female skeleton.¹⁴⁴ To the Christians the vine was a powerful symbol since Christ was 'the true vine'.¹⁴⁵ We can still see Hellenistic scrolling vines in modern Greek Orthodox church decoration.

The religious motifs of our period could be mixtures of Egyptian, Greek, Roman and Christian symbolism. Most combinations were based on the syncretistic linking of Egyptian and Greek deities - classical writers, for example, equate Ptah with Hephaistos and Anubis with Hermes. Older Egyptian gods lost favour, Amun-Re, for example, was largely forgotten by the beginning of the Ptolemaic period and all the various solar cults became grouped together in the Osiris and then Sarapis cult. Syncretism of deities and their attributes on a large scale is more typical of the Roman period as more and more Egyptian deities were compressed to fit within the standard Sarapis/Isis cult. By the third century AD Sarapis himself had become a solar deity and almost indistinguishable from Helios. Then, in turn, there was only a small iconographical step from Helios to Christ.

Figures of deities.

In jewellery of our period, the commonest deity motifs are Isis, Sarapis, Osiris, Harpokrates and Aphrodite Anadyomene. However, syncretism, the blurring of attributes, and the small scale of many ornaments, can hinder precise identification. Most of the small and often flimsy, figural pendants mirror forms found in the ubiquitous terracottas and, like the terracottas, they are probably mainly of the Roman period. Often the figures stand alone and have small loops on their backs for attachment. The figures are typically of thin sheet gold, some extremely flimsy. The better examples can be made in the round while the simplest have open backs. The flimsiest can only have been for funerary use. The sheet gold was probably pressed over a bronze former - much like that in fig. 380.

A common gold pendant or amulet type takes the form of a goddess dressed in chiton and mantle, wearing a modius or corn ears on her head (figs. 371 and 372). She often holds a staff or other object. The figures with corn ears are probably to be identified with Isis/Demeter whilst those with modius

140 Hoffmann and Davidson 1965: p. 13.

141 Bonner 1950: p. 6.

142 Goodenough 1953: vol. 5, p. 73.

143 Clem. Al. *Exh. to Heaven*, 2.

144 Goodenough 1953: vol. 2, p. 235.

145 John 15:1.

could be the equivalent of Hathor/Aphrodite/Nephthys. The traditional symbol of Nephthys that appears on her headdress can appear quite modius-like, especially when moulded in faience.

Isis existed in many forms and one small gold figure, described as 'Alexandrian', shows the goddess holding a thyrsos and staff and with a snake round her wrist.¹⁴⁶ This might well represent Isis Hygieia, that is Isis as healer, who is depicted in such a guise on gems and coins. Small busts of Isis, comparable in style and technique to those used as ring and bracelet terminals, also occur as small pendants. We see them on the back of Medusa necklets, for example, which suggests they remained popular throughout the Roman period.

Aphrodite - linked to both Hathor and Isis - appears both clothed and naked. Disks with representations of the bust of Aphrodite, often with Eros on one shoulder, are well known from Hellenistic and early Roman times. The Galjub hoard, which probably dates to the first century BC, contained several bronze formers for making medallions with the bust of Aphrodite. One example, shown in fig. 373, was used to make a gold medallion set with a carved stone head.¹⁴⁷ A gold medallion of just this type was found at Delos in a context that suggests an early first century BC date.¹⁴⁸ A medallion from Egypt, with a figure of Aphrodite seated on a throne, with Eros over one shoulder, is shown in fig. 374.¹⁴⁹ This has three rings for attachment to chains or for sewing to material. Circular medallions are well known in Hellenistic jewellery and often depict Aphrodite. Axmann has recently collected all the known examples - including the many fakes.¹⁵⁰ Probably many of these medallions were actually intended for hair ornaments as in fig. 14.

Small gold pendants in the form of Aphrodite Anadyomene naked, at least from the thighs up, her hands wringing out her hair, are common from Roman Egypt and most of them probably date to the first and second centuries AD (fig. 375). Some are fairly substantial but most are flimsy and might well have just been for funerary use. Size and quality of work vary greatly. The type is also known from Roman Syria but not, to my knowledge, from Asia Minor. There seems little doubt that the small depictions in jewellery of a naked woman always represent Aphrodite. Bieber considered it impossible to determine whether sculptures of a naked woman represented a goddess or mortal,¹⁵¹ but Clement of Alexandria noted that 'if one sees a statue of a naked woman without an inscription, he understands it to be golden Aphrodite'.¹⁵²

146 Sotheby 1970: no. 52.

147 Ippel 1922: no. 60.

148 Lévy 1965: no. 2.

149 *BMCJ* 2883. = Schreiber 1894: fig. 51.

150 Axmann 1986.

151 Bieber 1961: p. 143-4.

152 Clem. Al. *Exh. to Heaven*, 4.

Small hollow gold pendants of Baubo in the form of a naked woman with her legs splayed apart (fig. 376), though to modern eyes most lascivious, were fertility amulets of the Roman period.

The commonest male-deity pendant from our period shows Harpokrates. The popularity of the child god Harpokrates can easily be judged from the huge number of terracotta figurines that have survived of him. Like the terracottas, most of the gold pendants are probably Romano-Egyptian and, like the other deity pendants, they are often of very flimsy hollow gold. Unfortunately, though common, they have received little attention. For example, an auction of 'Greco-Egyptian jewellery from Egypt' included 'A group of seven pendants, mostly in the form of Harpocrates'.¹⁵³ Not one was illustrated.

The two main Romano-Egyptian forms match those of the terracottas and are a youthful, usually naked, standing figure with finger to mouth (fig. 377), and a military type in Roman soldier's dress carrying a shield (figs. 378 and 382). The naked, youthful type usually exhibits a Praxitelian pose, sometimes resting against a column and sometimes holding a staff or other motif. For example, two gold ornaments formerly in the Hilton Price Collection, show Harpokrates with his right hand to his mouth while holding a cornucopia in his left hand.¹⁵⁴ It has been suggested that the finger to mouth gesture was interpreted as a sign of self-nourishment as well as being understood as a typical child posture and a sign of silence. All these reinforced the idea of the self originated, self nourishing child who is both 'the primal light, and the final mystic silence'.¹⁵⁵ The military version represented the child Horus as the avenger of his father.¹⁵⁶ This military Horus is sometimes shown with a hawk head.

The Egyptian Harpokrates was associated with the Hellenistic Eros and could share many of the same iconographic repertoire. We see Harpokrates riding a goose and in various combinations with animals. Two small oval plaques with figures of a naked youth with an animal or animal skin over his shoulder come from Egypt (fig. 379). These might show Harpokrates or Dionysos. Oval formers in the Galjub hoard of goldsmith's tools might have been used to produce somewhat similar objects (fig. 380).

The depiction of Harpokrates rising from a lotus is common on engraved gems but, although examples in gold exist from pharaonic times,¹⁵⁷ Ptolemaic and Roman examples are strangely rare. One example, that might well be of Ptolemaic or Roman date, is an embossed sheet gold pectoral of typical trapezoid 'pylon' shape that bears a representation of Harpokrates seated on a lotus (fig. 381), that is

153 Sotheby 1962: nos. 1 and 2.

154 Hilton Price 1897: no. 285.

155 Goodenough 1953: vol. 2, p. 272.

156 Bénédict 1904.

157 For example in Boston MFA E8.876, from the time of Ramesses II.

as the divine child rising from his mother. Two gems showing Harpocrates on the lotus, are inscribed with the word *aroriphrasis* which was the usual epithet for Aphrodite Anadyomene.¹⁵⁸ Presumably in both cases the relationship is to birth or rebirth since Harpocrates is rising from the lotus whilst Anadyomene is rising from the waves.¹⁵⁹ There was a strong solar imagery, Harpocrates was the first ray of the rising sun. As the young sun-god, Harpocrates was readily identified with the young Helios.¹⁶⁰ Helios, associated with the traditional Egyptian sun-god, had been worshipped in Egypt in the Ptolemaic period, but only became widely popular during the time of the Roman Empire.¹⁶¹ The head of radiate Helios appearing from the centre of a crescent, the symbol of Isis, cannot be other than a representation of the birth of the young sun-god.

Pendants in the form of figures of Sarapis, again usually of thin gold sheet and mainly of the Roman period, are well known from Egypt (fig. 382), but are not limited to that country. A fine gold head of Sarapis, *formerly in the Bachstitz catalogue and now in Leiden*,¹⁶² is probably of the early Roman period but is of uncertain use. This weighs 14.38 g. which might relate to half a mnaicion of around 28 g.

Pendants in the form of triads or other groups of deities had a long history in Egypt. A superb gold and lapis representation of Osorkon II, as Osiris, between Isis and Horus, came from Tanis.¹⁶³ Faience triad amulets of Isis, Harpocrates and Nephthys were very common in the Late Period, though perhaps mainly as funerary ornaments. Triad pendants are clearly depicted on some Romano-Egyptian masks of the first century AD (fig. 383) and many of the flimsy gold examples might have been funerary ornaments.

Gold triad pendants are most typical of the Roman period. The most popular mirrored the Late Period forms and depicted Harpocrates between Isis and Nephthys. A particularly fine example is shown in fig. 384. This is made of thin sheet gold. The front was almost certainly modelled over a former - perhaps of bronze - but the back is plainer. The hollow pendant has the usual triangular trap-door on its back to allow the escape of air during soldering, and the pendant was filled with a reddish clay, not the sulphur typical for Roman jewellery from most other parts of the Empire. A well-modelled pendant of this type is clearly seen on the mask in fig. 383. Since Harpocrates represented the re-birth of the sun-god, this type of triad pendant symbolised birth, death and resurrection. Some-

158 Delatte and Derchain 1964: nos. 141 & 141 bis.

159 The iconography of the young god rising from the lotus is also a feature of Buddhism.

160 el-Khachab 1971; Goodenough 1953: vol. 2, pp. 269 ff.

161 Hoffmann 1963.

162 Zahn 1921: pl. 11, no. 89; Scheurleer 1987: no. 32.

163 Paris 1987: no. 46 = Louvre E 6204.

times Isis and Nephthys are shown at the head and feet of the mummy, guarding the dead in their rebirth much as they traditionally guarded childbirth.¹⁶⁴

Another fine example from Egypt (though perhaps not a pendant) is in Manchester (fig. 385).¹⁶⁵ The figures here are a cloaked Harpokrates, a female deity with stephane and holding a cornucopia and another female deity holding a sceptre and with two ears of corn on her head. The goddesses were identified by Robinson as Persephone and Demeter, but Isis and Nephthys are more likely. The base of the triad is decorated with a beaded wire border and filigree scrolls which impart a definite Hellenistic feel to the piece. However Robinson's early Hellenistic date is certainly too early. Robinson himself notes that a draped Harpokrates 'is most unusual before the Graeco-Roman period' and the scroll decoration on the is easily matched on other objects, such as the pendant in fig. 386. It might be of relevance that in Palmyrene sculpture the concept of the triad group is not found much before the mid first century AD.¹⁶⁶

Another gold example, with the figures within a rectangular frame, is in the Benaki Museum.¹⁶⁷ Characteristically, Harpokrates is in the centre with Isis to his left and Nephthys to his right. In reference to the triad in Palmyrene art, Colledge has remarked that the central figure is the most important, that to the viewer's left the second-most important and that to the viewer's right the least important.¹⁶⁸ This means that the centremost figure has his or her most important colleague to their right - the prime position as numerous biblical and other ancient texts demonstrate.

A more puzzling identification problem surrounds some other groups. Several pendants take the form of three or more draped female figures (fig. 386).¹⁶⁹ There are no obvious attributes to relate them to particular deities and perhaps they are best identified as Muses, Charities or Nymphs. One pendant, now attached to a fragment of open, probably third century AD chain, shows the three draped figures within a circle, which might link it to the solar cult (fig. 387).

There are two draped groups of four figures in the Benaki Museum which can probably be assumed to have an Egyptian provenance (fig. 388).¹⁷⁰ In each case the figures seem to be, from left to right, a bearded male, a female, another bearded male and then a figure which on at least one of the pendants is a youth holding a shield. The last is certainly Harpokrates in his military guise, and the most likely

164 Griffiths 1982: pp. 232 - 6.

165 Robinson 1937: p. 79.

166 Colledge 1978: p. 44.

167 Segall 1938: no. 212.

168 Colledge 1978: p. 44.

169 A particularly fine example is Hirsch 1957: no. 100.

170 Segall 1938: nos. 210 and 211.

identification of the female would be Isis. The males seem to have slightly different headdresses but they are not easily discernable - possibly the left-most figure wears a crescent and that second from the right, a modius or a sun disk. We must assume that this latter deity is Sarapis. The other might be Osiris Canopus. Another similar quartet can be seen on a plaque in the British Museum.¹⁷¹ Here the headdress of the two males differ from each other more clearly. One seems to have a feather head-dress, the other a sun disk.

The triad of Isis, Sarapis, and their son Harpokrates achieved universal importance during Roman times especially in the third century under the Antonines.¹⁷² This was the official cult in Alexandria and also in many other areas including the Fayûm.¹⁷³ Nevertheless, though the triad is represented on some ring bezels, gold amulets of this triad are seemingly unknown.

Another type of group is seen on a gold pendant plaque in the Louvre which consists of a flat rectangular sheet of gold with rounded corners. This is embossed with an Isis-headed cobra, Sarapis (or Nilus) reclining on a couch, and a figure of Isis with Harpokrates.

Figures of Anubis - the Egyptian jackal-headed god - are known from the Roman period. He is usually shown in Roman dress with the head of a dog (fig. 389), and is sometimes in conjunction with other deities on gold jewellery. Anubis was characteristically an Egyptian funerary god, but he was also sometimes a lunar deity and can be depicted with a lunar disk on his head.¹⁷⁴

The god Bes was popular in Ptolemaic and Roman times, gold examples include a pendant in New York.¹⁷⁵ Ptolemaic representations in gold are not common (some are threaded on the torc from Dendera described below), but under Roman rule, little gold figures of Bes were popular. One of the commonest forms was with armour, shield and sword - perhaps an Egyptianised Mars. Many of the surviving examples are of flimsy sheet gold which, as with other hollow deity pendants, could suggest funerary use. The openwork 'scroll disk' centrepiece and corrugated terminals suggest a third century date. Bes pendants are shown in wear in some pharaonic art but not, to my knowledge, in Roman times. A mid second century papyrus from Oxyrhynchus records the theft of a gold Bes pendant.¹⁷⁶

171 *BMCJ*. 2979, unprovenanced but most likely from Egypt since the type is almost unknown elsewhere.

172 el-Khachab 1963.

173 el-Khachab (1971) says the same triad was important at Philae but there seems to be no reference to Sarapis in the Ptolemaic temples at Philae - Eleni Vassilika, private communication.

174 Ritner 1985.

175 MMA 40.9.12.

176 *P.Oxy* 1272. See ch. 2.

Bes pendants related to childbirth and the protection of children. Certainly Bes is usually understood as a protector of childbirth when he is shown on gnostic gems.

A variety of other traditional Egyptian deities continued to be worn as pendants in Ptolemaic and Roman times. For example, there are two gold pendants of Taweret and one of Sekhmet in the Victoria and Albert Museum that are described as Ptolemaic. A statue of Dionysos-Sarapis in Alexandria wears a pendant that might represent Osiris.¹⁷⁷

Representations in the traditional Egyptian style continued to depict traditional amulets. A hard green-stone statue of a man dated to the late fourth to early third century BC, is depicted wearing a chain with a pendant in the form of a standing figure of Onuris.¹⁷⁸ Plutarch says that 'The amulet of Isis, which she hangs about her neck, means when interpreted "A true voice"'.¹⁷⁹ Perhaps this related to the symbol of the goddess Maat which stood for justice. Diodorus tells us that small pendants of Maat were the insignia of judges,¹⁸⁰ and a breccia statue of a vizier, dating to the time of Nectanebo I, wears a chain with a pendant in the form of Maat.¹⁸¹ A gold Maat pendant on a loop-in-loop chain, now in the British Museum, might possibly be of Ptolemaic date (fig. 390). Some funerary masks of the first century AD show men wearing naos-type pendants with the four sons of Horus or other deities, but these were funerary conventions and not representative of jewellery in day-to-day wear.¹⁸²

Egyptian amulet and pectoral types.

Of all the traditional Egyptian amuletic symbols, only the *udjat*-eye - the eye of Horus - continued to find much favour in Ptolemaic gold jewellery and by the Roman period even that was largely forgotten. Other traditional amuletic devices are almost limited to those engraved on gnostic gems.¹⁸³ Traditional amulets, however, continued to be depicted in temple reliefs and on other formal art.

In the Cairo Museum there are four torcs from Dendera two of which are threaded with a variety of amulets including gold *udjat*-eyes.¹⁸⁴ One of these torcs includes a single *udjat* on traditional Egyptian proportions but the other torc is threaded with two *udjat*-eyes which are in the rather stumpy style that we see in Meroitic goldwork. All three have enamelled eyes, a feature seen on Meroitic goldwork and unknown on pre-Ptolemaic goldwork. The pair of eyes is also bordered by a type of decorative twisted

177 Adriani 1961: vol 2, no. 160 = Alexandria Museum no. 23925.

178 Louvre E 11075.

179 Plut. *De Is. et Os.*, para 68.

180 Diod. 1. 75.

181 Louvre E 17379.

182 e.g. Grimm 1974: pl. 112,1 and colour plate E.

183 For an *udjat* on a gnostic gem see Pieper 1934b: p. 141 pl. 22,b.

184 CM CG 53187 - 53189 and 53193.

wire filigree that, outside of Italy, is a Hellenistic period characteristic. It seems probable that these torcs should be dated to the Ptolemaic period.

Hellenistic-type filigree also decorates a fine gold *udjat* in New York which has applied filigree work in the form of a vine scroll and has small rosettes covering the joins between the eye and suspension loops.¹⁸⁵ Another gold *udjat* with filigree decoration, and apparently some traces of enamel, is in the Louvre and this is probably also to be dated to the Ptolemaic period.¹⁸⁶ The popularity of *udjat*-eyes in the Ptolemaic period is shown by the frequent depiction of gold *udjats* on the foreheads on Ptolemaic coffins of women (figs. 193 and 208). *Udjat*-eye amulets in faience and other materials are often found on the foreheads of mummies.

The *sa* hieroglyph, a symbol of protection, survived into the Roman period. Goodenough notes that it is still used by Moslems of North Africa, and in at least one case was believed to be an indication of marriage.¹⁸⁷ However I know of no gold examples that are of certain Ptolemaic or Roman date. Some cartonnages of the Roman period show heart amulets worn as pendants and heart amulets are often shown on the neck of the child god Harpocrates in Ptolemaic, and even Roman, temple reliefs. The necklet pendant in fig. 381 is of heart-shaped form. Winged scarab pectorals are also shown in funerary depictions right through the Roman period (fig. 391),¹⁸⁸ and a fine inlaid winged scarab pectoral now in the Egyptian Museum, Berlin might well be of Ptolemaic date.¹⁸⁹

A common Late Period amulet takes the form of the human-headed *ba*-bird with outstretched wings. Wilkinson says that the later types differ from the New Kingdom examples in being seen from above with the head in relief. She distinguishes three types - those with inlaid strip wings, feather cloisonnes and the plain foil equivalent. All these types might well have survived into the Ptolemaic period but, so far, there is little clear guide as to dating - as with much traditional Egyptian iconography. The only varieties that can be dated with some certainty to the Ptolemaic period are those with filigree enamel decoration. Examples include one in a private collection (fig. 392) and one in Cairo.¹⁹⁰

Pectorals are typically painted on traditional mummy cases of the Ptolemaic and Roman periods but were probably a funerary convention rather than a rendering of a jewel-type worn in life. Pectoral pendants are shown on male rather than female portraits, and this fits in with the view that male masks and portraits were more conservatively Egyptian than female ones.

185 Clark 1928: fig. 6 = MMA 30.8.377.

186 Louvre E 22821 Another example is in the Victoria and Albert Museum, London.

187 Goodenough 1953: vol. 2, p. 281.

188 e.g. CM CG 33276 (Male) from Deir el-Bahri = Grimm 1974: pl. 112, 3; Louvre no. E. 14542 bis = Grimm 1974: pl. 110, 1.

189 Christies 1988: no. 179.

190 CM temp. 26.11.21.23.

Amulet cases

Hollow cylindrical pendants, made to contain inscribed charms or miscellaneous items of supposed magical efficacy, were worn in the Middle Kingdom in Egypt and by the Phoenicians. The Middle Kingdom and Phoenician examples hung vertically, the Roman, Byzantine and Islamic amulet cases were worn horizontally, hanging from one or two suspension loops (fig. 393). I know of no certain Ptolemaic amulet cases and they only became popular in late Roman times. They have been found throughout the Roman Empire.

The cases are typically cylindrical tubes of sheet gold sealed with end caps. They can contain a sulphur filling (probably practical not magical) or a variety of 'magical' charms ranging from inscribed papyrus to objects or materials of special significance. One amulet case in the British Museum, unprovenanced, contained a mass of white silk.¹⁹¹ I have found fibres in some amulet cases from the eastern Roman Empire but in such small quantities that their presence might be accidental.

Judging from mummy portraits and masks,¹⁹² the main wearers of amulet cases in late Roman times were male children (fig. 394),¹⁹³ and, since they are often worn in conjunction with pendants of Isis and Sarapis, they may have had some link with the Sarapis cult. It might be relevant that Artemidorus speaks of a man who dreamed he was wearing round his neck, like an amulet case (*skutis*), the name of Sarapis cut upon a brass plate (*lepis*).¹⁹⁴ The presence of the inscription *epagathos* on at least one example from Egypt (a broken but originally fine example with filigree and granulation) might be another link with the Sarapis cult.¹⁹⁵

Inscriptions placed inside amulet cases could serve a variety of purposes. For example a gold plate, perhaps intended for an amulet case, is mentioned in a papyrus of the third century AD. This was inscribed with a specific charm against tonsillitis.¹⁹⁶ Byzantine examples, as might be expected, could offer the same protections against tangible and intangible worries but were couched in Christian terms. An amuletic papyrus of the fifth or sixth century AD measures 30.2 x 3 cm. and thus is the right size to be rolled up and placed in an amulet case. It was certainly worn by its owner - '... Jesus, heal now your servant, who wears your holy name, of every sickness and (every) fever and every ague and

191 *BMCI* 2981 See *BM Pap.* 1893: p. 98 line 452. The power of coloured threads is seen in Petronius *Satyricon* where they are bound round the neck. There is a similar Buddhist practice.

192 e.g. mask BM 22108 from Hawara.

193 This is in contrast with the amulet cases of the Middle Kingdom where ownership, when demonstrable, is always female, Williams 1924: p. 51.

194 Artem. 5. 26.

195 A similar amulet case with applied filigree inscription saying *epagathos*, unprovenanced, was sold in Paris in 1959 - Drouot 1959: pl. 4.

196 *P.Oxy.* 3068.

every headache(?) and every witchcraft and every evil spirit. In the name of the Father, the Son and the Holy Spirit.¹⁹⁷

Crescents

Gold crescent pendants have survived from Roman Egypt in relatively large numbers and portraits. Masks and coffins throughout the Roman period frequently show crescent pendants worn by women - never by men. They are usually shown suspended from short choker-like gold chains or bead necklets (e.g. fig. 214) but on some early Romano-Egyptian masks and wooden sarcophagi, crescents hang from long black and white onyx-bead necklets.

Crescent pendants are also one of the commonest ornaments mentioned in Romano-Egyptian dowry lists and might have belonged to the bride since early childhood. In Plautus' *Epidicus*, a slave says to the girl Philippa: 'don't you remember my bringing you a little gold crescent on your birthday'.¹⁹⁸ In the fourth century AD Gregory Nazianzenus describes 'moon-shaped plates of gold, silver or cheaper materials which foolish old women fasten upon infants'.¹⁹⁹ In Plautus' play *Rudens*, Palaestra refers to 'a gold amulet that my father gave me the day I was born' but the type of amulet is not specified.

In theory, the crescent could depict either cow's horns or the crescent moon. The nurturing aspect of the cow or the 28 day lunar period both reflect women's fertility. In general, in Ptolemaic and Roman Egypt, the crescent was a lunar one and a symbol of Isis or Isis/Aphrodite. It was worn as a love and fertility charm, a symbol of Isis, but combined with some of the attributes of Hathor/Aphrodite. Plutarch provides a charming reason for the connection of the crescent with love: he says that the moon takes the form of a crescent when it is near the sun and this symbol of celestial proximity caused the crescent to be associated with love affairs.²⁰⁰ Crescent moons were also a common Roman funerary symbol,²⁰¹ but there is no evidence that crescent pendants were ever regarded as funerary jewels.

In the papyri, crescent pendants are usually termed *meniskon* which derives from the same stem as our 'month', 'moon', etc.²⁰² In published papyri, *meniskon* is usually translated 'moon-shaped brooch'

197 P. Turner 49.

198 Plaut. *Epid.* 5.1.632.

199 Ed. Migne PG 36, 907 b-c.

200 Plut. *De Is et Os.* 368a, 372d.

201 Cumont 1942.

202 See for example, *P.Ryl.* 125.17 (first cent AD); *P.Mich* 121; *P.Hamb.* 10.45; Isaiah 3.19; and Tertullian in connection with this passage, also Judges 8.21 (worn by camels!) and, from fourth century BC Delos, *IG I1* (2) 147 B10.

but there is no justification for this; indeed the ninth century AD lexicographer Photius describes the *meniskon* as a necklace ornament. The alternative term *selenarion* also occurs in some papyri and, again, clearly relates to the moon.²⁰³

Crescent pendants had a long history in the Near East. The earliest type, found in Western Asia from about 1600 BC onwards, has a wide span, usually with a wide suspension loop, which probably depicts cow or bull horns. The type is rare in second millennium Egypt although one example was found at el-Amarna.²⁰⁴

The commonest late Hellenistic crescent is of sheet metal, sometimes set with garnets or other stones. This type is seldom if ever recorded from Egypt, but is well-known from Greece, Asia Minor and Syria, and it survived into Roman times.²⁰⁵ One crescent from Egypt (fig. 395), with small applied sheet and filigree rosettes and grape-like clusters of grains, does have rather a Hellenistic look to it,²⁰⁶ but is probably early Roman.

The most typical Romano-Egyptian crescents have 'horns' of tapered circular or diamond section which can form an almost perfect circle. The most basic decoration includes a granule where the loop is attached to the crescent, but the more elaborate examples have applied granulation and filigree work forming small rosettes, uraei and other motifs (figs. 396 and 397). On some, beaded wires can flank the suspension loops.²⁰⁷ A very elaborate example in the Louvre has three uraei, granulated rosettes, a stone setting and a horizontal band of filigree. The rosettes of granules which are often placed at the points of the crescent might represent stars. One clay sealing among 330 of them found in a pot at Edfu, shows a bust of Isis wearing a disk crown above an inverted crescent with a star at each end.²⁰⁸

The simple crescent pendants were particularly popular in Romano-Egyptian times. Crescents are most frequently shown on first century AD masks and portraits, worn on chain necklets and sometimes in conjunction with, and sometimes on, emerald and gold link necklets (figs. 274 and 277). The dowry lists that mention crescent pendants are similarly mostly of the same period. This simple type of crescent had developed during the Hellenistic period and two examples, on gold chains, were found in

203 e.g. *P.Mich* inv. 3163, a fourth century jewellery list from Egypt.

204 The late Hellenistic date given to one in Brooklyn is probably far too late. Davidson and Oliver 1984: no. 74. See also Williams 1924: p. 184, no. 123. This pendant weighed 1.35 g. and is described as very worn.

205 For a Roman period example from Turkey see Mansel 1941: pp. 120 ff.

206 Christies 1979: no. 76.

207 Christies 1979: nos. 74 and 75. Sotheby 1912: no. 457 - reverse shown. Schäfer 1910: no. 147.

208 Milne 1916: no. 41. One of the seal impressions can be dated to the time of Ptolemy X.

a hoard of jewellery and coins from a house on Delos that was probably deposited between 88 and 69 BC and almost certainly between 122 and 69 BC.²⁰⁹ A simple gold crescent is amongst the Tûkh el-Qarâmûs goldwork, which should mean a late fourth to early third century BC date (fig. 22).²¹⁰ However, this hoard includes various objects that I would consider to be of Roman date. Perhaps this treasure was not concealed until the early Roman period or, quite possibly, Roman period goldwork was added to the find at the time of its discovery (see ch. 1).

I know of no simple crescents from dateable Roman period contexts in Egypt, but the type was very popular at Pompeii and a fairly plain small gold crescent with individual grains on the tips of the points and with beaded wire flanking the suspension loop was found in a tomb in Thrace dateable, by the accompanying coins, to after c. AD 120.²¹¹

Crescents survived into the third century in Egypt and frequently hung on the backs of necklets such as the Medusa-mask type. Some of the later crescents are composed, not of a single tapering wire, but of a number of wires side-by-side. An example is shown in fig. 279.

Some simple crescents of the Roman period have a small emerald crystal bead, or a glass imitation of the same, between their points. This combination of emeralds with crescents seems common throughout the Roman world and must help establish an association between Isis, crescents and emeralds. Some pendants combine crescents with other symbols such as shells.

Other pendant forms from Roman Egypt combine crescents with an overall disk-like appearance. In the simplest, a thin circular crescent borders a circular plate of sheet gold which most typically bears an embossed head or similar motif. One Egyptian example has a central radiate head presumably to be identified with Helios (fig. 398).²¹² A necklet formerly in the Gans collection included a necklet of stone-set, disk-like pendants.²¹³ The child in the portrait in fig. 399 appears to be wearing a necklet with a series of pendants of this type. Perhaps we can imagine that the crescent represented the mother goddess, i.e. Isis, while the head coming forth from it was the young sun-god. Similar disk-like crescents occur as ring and bracelet bezels in Roman jewellery from Asia Minor. Here the crescent is usually flanked by serpent-headed terminals. Another type of disk-like crescent has elaborate applied filigree and granulation work with the same combinations of uraei and rosettes as the simple crescents. Two fine pendants of this type are in the Ashmolean Museum (fig. 400). These disks are probably of around the first to mid second centuries AD.

209 Lévy 1965.

210 Pfrommer 1987: pl. 30f.

211 Mansel 1941.

212 Drouot 1957: no. 86.

213 Jaeger 1928: no. 58.

Crosses

Few gold crosses pre-date the fourth, if not fifth, century AD and in Egypt there is little evidence for the use of pectoral crosses before the sixth century. The crosses found in Egypt are, with one exception, identical in general form to those from elsewhere in the Byzantine world, particularly from Asia Minor.

The most typical cross of the sixth and seventh centuries AD had flaring arms ending in circles. The circles could contain small busts of saints, set stones or various motifs. A gold cross in the Coptic Museum in Cairo has a central figure of Christ with small busts at the end of each arm.²¹⁴ Werner argues for a similar Egyptian origin for an almost identical unprovenanced gold cross that had been on the German market and is now in the Dumbarton Oaks Collection (fig. 401).²¹⁵ The back of the Dumbarton Oaks cross has a small triangular 'trap door' to allow air to escape from the hollow cross during soldering. Another gold cross, from Alexandria, is a simpler version of the same design (fig. 55).²¹⁶ A cross of similar basic form, but set with emeralds (only one of which remains) was part of the so-called Asyût treasure (fig. 402).²¹⁷ Dennison noted the somewhat paler colour of the gold of this cross which would suggest a lower purity than the 95% gold of the Alexandrian cross (see ch. 3). A version of this type of cross, but with more petal-shaped arms and a central cruciform inlay, is in the Alexandria Museum.²¹⁸

Crosses of the flared-arm type could date from any time up to, and perhaps even after, the Arab invasion of Egypt. For example, a hollow gold cross of typical Byzantine type with circle and lotus-like arms, was found at Pusztatóti in Hungary in a grave with a coin of Constantius IV of the year AD 669-70.²¹⁹ A bronze former for making a cross, said to have come from Egypt, is now in the Virginia Museum. Ross dates this former to the seventh century AD.²²⁰

A simpler type of Byzantine cross had conical arms. One example in the Benaki Museum is shown in fig. 403.²²¹ A more elaborate cross in the same Museum (fig. 404), and an almost identical cross in Egypt, are each decorated with a quatrefoil rosette that link them to several other Byzantine gold jewels from Egypt, including several pieces from the Asyût treasure.²²² The cross in Cairo was found

214 Werner 1936.

215 Ross 1965: no. 15; Werner 1936.

216 BM MLA AF356.

217 Dennison 1918: no. 35, now in Berlin.

218 Seemingly unpublished.

219 Hampel 1905: p. 349, pl. 266.

220 Ross 1969: pp. 12-31, no. 35. Other bronze formers for crosses include one in the Byzantine Museum, Athens no. 547 and one published in Ross 1962: no. 66.

221 Segall 1938: no. 274.

222 Segall 1938: no. 273; el Khachab 1958.

with twenty gold solidi of Justinian I, Justin II and Tiberius II and cannot have been concealed before around AD 580. This provides further dating evidence for the 'rosette' group as a whole. A similar type of cross, without quatrefoil, was in the Matara treasure from Ethiopia.²²³ A related Byzantine cross-type with tapering square section arms is not well represented from Egypt - it is best known from Syria and Asia Minor - but one example was found in the graves at Ballana and Qustul in ~~southern Egypt~~ (fig. 405).²²⁴ /Nubia

A beautiful gold cross of unique design, said to have been found at Hadra, Alexandria, is in the Dumbarton Oaks Collection (fig. 406).²²⁵ This cross is composed of hollow sheet metal forming a cruciform scroll-like design which resembles, perhaps intentionally, stylised pairs of dolphins (Ross's description of the cross as 'cast in gold' is clearly an error). The pairs of 'dolphins' flank a large pearl and the square central motif is set with blue glass. The top of the pendant has a hinge-type of suspension loop with a screw fastener which originally also bore pearls. This cross was obtained with a necklet set with glass imitations of lapis lazuli, and although the cross can be fitted exactly onto the necklet, I share Ross's view that the workmanship is very different and thus they were possibly not originally intended to be worn together. However, they do share the use of blue glass and the marriage of the two pieces might be an ancient one. Another fine gem-set pendant, illustrated in fig. 407, clearly incorporates a cruciform motif and has small rosettes on the suspension hinge.

Crosses are quite frequently depicted in Coptic art and are worn by men, women and even mermaids.²²⁶ A fourth century limestone grave stele of a young boy from Antinoopolis (el-Sheikh 'Ibâda) shows him wearing a cross on a necklet,²²⁷ and a painted plaster figure of a Coptic woman depicts a heavy bangle and a pectoral cross (fig. 408).²²⁸

Shells

Shells and imitation shells had been worn as beads and pendants from the earliest times and by the Bronze Age, if not earlier, had acquired fertility significance. This significance probably derived from the visual similarity between some shells and the female genitalia, (a similarity reflected in the two meanings of the ancient Greek *kteis*). In dynastic Egyptian times, the cowrie shell was the commonest fertility symbol (e.g. fig. 23), but in the Classical world, the bivalve, typically a scallop or oyster, was more usual.

223 Anfray 1964.

224 CM JE 70478.

225 Ross 1965: no. 14.

226 See for example Wessel 1963: pl. 44 etc.

227 Recklinghausen Ikonenmuseum 589 = Brunner-Traut *et al.* 1984: no. 153.

228 MMA 12.185.4.

The shell became one of Isis-Aphrodite's more important attributes and the birth of Aphrodite on a shell was depicted from the fifth century BC onwards.²²⁹ The association of shells with Isis/Aphrodite occurs in Roman Egypt, for example some Romano-Egyptian female figurines in terracotta are shown holding a shell over their pubic region.²³⁰ The image of Aphrodite on her shell occurs in early Christian iconography.

The scallop shell remained a common motif right through early Byzantine times although neither Roman nor Byzantine shell pendants are common from Egypt. Small embossed shell motifs do, however, decorate other objects such as beads and bracelets. Earrings incorporating shell-motifs are also known.

The only shell-pendant that I know of from Egypt is on a magnificent necklet 'said to be from Egypt' in the Dumbarton Oaks Collection (fig. 409).²³¹ The necklet is a very finely made sixth to seventh century type, with long biconical beads. The pendant shell is carved from lapis lazuli and set in a gold frame. Inside the shell is an applied gold figure of Aphrodite Anadyomene type. Below the shell hang three pendants of figure-8 loop-in-loop chain, one of which retains its original stone. The presence of such a pagan motif in Byzantine art from Egypt might seem unexpected. However, the birth of Aphrodite from the water was linked to the idea of rebirth from the waters of baptism, a concept expressed in a sixth century text from Egypt.²³² In the sixth century AD John of Ephesus said that even the personification of Constantinople on solidi was taken by the general public to be Aphrodite.²³³ The long biconical beads seen on this and other Byzantine jewellery, are well known from the sixth and seventh centuries AD, although they were in use by the mid fifth.²³⁴

A similar, though simpler, pendant comes from Boscoreale and thus dates to before the eruption of Vesuvius in AD 79. This hangs from a loop-in-loop chain and was found in conjunction with another necklet of figure-8 links and two pairs of ball type earrings (fig. 25).²³⁵ A small figure of a goddess, probably Isis Tyche, stands in the shell which, in turn, is decorated with small rosettes of grains. A shell pendant can be seen on a painted funerary shroud in the National Portrait Gallery, London (fig. 216). This shroud has been dated to the later Roman period, but I would prefer agree with Petrie's original dating to the first century AD. The presence of ball earrings and serpentine snake bracelets is unexpected much after the mid second century AD.

229 The earliest literary mention is in Plaut. *Rudens*, 3.3.42.

230 e.g. Weber 1914: pl. 18, 178. Also Petrie 1905: pl. 45, 4.

231 Ross 1965: no. 12.

232 du Bourguet 1984: pp. 8-9.

233 John of Ephesus, 3.14.

234 Giorgetti 1988: pp. 30-38.

235 Sambon 1905: no. 160.

Miscellaneous

The above sections have dealt only with the more usual pendant types found in Egypt. A huge variety of other forms are also known, many of which are better represented from other parts of the eastern Mediterranean.

In the Hellenistic and early Roman period there were several varieties of simple stone-set gold pendants. Typically these were set with garnets and they took such forms as pear-shaped drops and disks. Examples from Egypt are rare, but one garnet-set pear-shaped pendant of typical mid- to late-Hellenistic type, is described as coming from Egypt (fig. 410).²³⁶ A circular crescent-disk pendant set with a 'ruby-red' stone and green enamel was in the Graf collection,²³⁷ and this can be compared with the elaborate disk-like crescents with stone-settings, described above (as in fig. 400).

Three circular pendants decorated with granulation and, in one case, with a Bes mask, are part of the Tûkh el-Qarâmûs treasure (fig. 411) Pendants of this type are rare examples of some fusion between Egyptian and Classical forms. Granulation work is rare in dynastic Egypt .

Club-shaped pendants from necklets or earrings are not well recorded from Egypt. A necklet of hexagonal emerald beads interspersed with sixteen granulated gold club pendants, with an Egyptian provenance, was in a French collection (fig. 412).²³⁸ Earrings with club pendants have been found in burials outside of Egypt that range from the late second to the fourth century AD.²³⁹ The club motif, itself, had a longer history - there was bronze former for a club ornament, though probably a bracelet - among the Galjub find that is probably of first century BC date (fig. 413).²⁴⁰ This club is of the realistic knobbly type that we see depicted on some Hellenistic coins of the *third and second century BC*. It is usually assumed that the symbolism of the club related to Herakles' gift of his club to Queen Omphale. Such a connotation as a love-gift would have been amplified by its Freudian imagery.

The fist with thumb extended between first and second finger is a well known pendant form in late Hellenistic or early Roman jewellery. A bronze former for making this type of ornament was amongst the Galjub find from Egypt (fig. 414).²⁴¹ I know of no certain examples in gold from Egypt but they are quite common in cheaper materials such as wood, bone and glass. The Galjub former - and several gold examples from the Levant - show the hand with a serpentine snake bracelet. This must prove that

236 Laffineur 1980: no. 116.

237 Schreiber 1894: fig. 23.

238 Drouot 1957. no. 106.

239 Charlesworth 1977; Tzanova 1981.

240 Ippel 1922: no. 13.

241 Ippel 1922: no. 49 (3 cm. long).

the hands were intended be female, probably of Isis or Aphrodite. Certainly the pendants would have been related to fertility - as is the same hand gesture to this day, in many parts of the world.

A limestone funerary statue of a dog from Asyût, dated to the 'late period' wears a loop-in-loop chain with a bell pendant.²⁴² However I know of no surviving gold bell pendants from Egypt, although they are known elsewhere in the Roman world. Bronze bells have been found in considerable numbers in the Roman East,²⁴³ and bells are frequently shown worn on bracelets on the left wrists of women in Palmyrene art.²⁴⁴ In Palmyra boys could also wear bell amulets on necklets.

Amphora pendants are not often recorded from Roman Egypt, but a necklet with a central amphora of gold and lapis and small pointed amphorae to each side was part of a private collection, sold in 1957,²⁴⁵ which had an Egyptian provenance. Small openwork amphorae often hang from third century and early Byzantine chains (figs. 281 and 290).

Sheet gold pendants in the form of a flat tear-drop shape are a characteristic Byzantine form. They usually have pierced open-work designs and date to the sixth to seventh centuries AD. They are rare from Egypt (as are the lunate earrings of similar technique) and are more typical of Cyprus and Asia Minor. One fine, small example from Egypt, with chisel-cut scroll design, still retained the outer border of pearls strung on a gold wire (fig. 415).²⁴⁶ A pair of openwork filigree pendants of this type, but made of a copper alloy, hung from a pair of earring hoops found at Luxor.²⁴⁷ A more leaf-like pendant, point-down and with a slight twist to the point, is well known in surviving Byzantine goldwork, but again not so far from Egypt. However, one such pendant might be shown on a late Roman funerary mask of a man (fig. 416).²⁴⁸

APPENDIX - FORGERIES OF NECKLETS.

Over the last century a wide variety of gold fakes have been produced in Egypt. Some of the types have already been mentioned in passing, but one group of forgeries needs describing in a little more detail - mainly because they have often been published as genuine even in recent years. The forgeries, typically necklets and bracelets, share stylistic and technical details which suggest a common origin.

242 Louvre E 11657.

243 Mackay 1949.

244 Colledge 1979: p. 150-152.

245 Drouot 1957: no. 109.

246 Christies 1979: no. 80.

247 Strzygowski 1904: no. 7041.

248 Trier no. 19137 = Grimm 1974: pl. 109, 3.

This was probably Alexandria some sixty years ago. Apart from the stylistic criteria, the forgeries can be condemned on various technical grounds - such as the use of drawn wire.²⁴⁹

Examples of this group of forgeries that I have traced so far include:

- 1) A necklet in the Cairo Museum (figs. 417).²⁵⁰
- 2) Two necklets and a pair of bracelets in the Metropolitan Museum of Art, New York (figs. 418). I recently had the chance to examine these objects and agree with the MMA research laboratory in condemning them as fake. The coin set in the necklet is, apparently, cast.²⁵¹
- 3) A group that were in the hands of a dealer in Los Angeles, but apparently purchased (as modern) in Egypt quite recently (figs. 419).
- 4) A group (possibly the same as the last) which were given by the Egyptian government to English royalty sometime in the 1930s. These were shown to the British Museum and identified as copies. Royalty thanked the Egyptians for the kind gift of the 'reproductions' causing horror, embarrassment and their rapid return!
- 5) A necklet set with a Ptolemaic coin sold in Paris in 1956 (fig. 420).²⁵²
- 6) Two other necklets in the same auction as (5) (fig. 421).²⁵³
- 7) A necklet with circular pendant still in the hands of a dealer in Egypt.
- 8) A necklet in The National Gallery of Victoria, Australia (fig. 422).²⁵⁴
- 9) A coin-set belt very similar to those in the Metropolitan Museum of Art, New York, and Cairo. This was formerly in the possession of Howard Carter.²⁵⁵

All the above are probably from the same workshop and show close relationships in various ways. A characteristic of many of the pieces seems to be the dog-tooth rows of granulated triangles and the

249 For technical criteria in forgery detection see Ogden 1982.

250 Published as genuine in el-Khachab 1964. = CM JE 89612. Formerly in the royal collection in the Quba Palace.

251 This jewellery has often been published as genuine, e.g. Clark 1935; Pfeiler-Lippitz 1972.

252 Charpentier 1956: no. 58.

253 Charpentier 1956: no. 59.

254 *RMIT Perspectives* (Royal Melbourne Institute of Technology) 1, 1 (1988), p. 8.

255 I am grateful to Nicholas Reeves for bringing this example to my attention.

rather box-like construction of the centrepieces. (5) and (6) might at first seem the odd ones out but compare, for example, the pendant on the necklet in fig. 418 with those in fig. 421. The terminals of (6) are close to those in one of the necklets in (3), while (5) has a chain close to (8). The side of clasps of necklet (3), as illustrated in fig. 419, shows serpentine filigree decoration that is very close to (8).

This 'school' of forgeries seems to have first appeared in the early 1930s and I have heard it said that they were made by a Greek working in Alexandria. The Metropolitan Museum of Art acquired their group in 1934. Some of the forms might have been inspired by jewellery from Tutankhamun's tomb - for example the curious curved hinges. The strands of loop-in-loop chain separated by lateral beads, as in (1) and (3) might derive from a series of bracelets found by the Boston Museum of Fine Arts excavations at Meroe in the Sudan in 1923.²⁵⁶

Another fake necklet, produced at about the same time as the above but seemingly by a different workshop, was brought by Hirsch from a Cairo dealer and is now in the Cleveland Museum of Art.²⁵⁷ The necklet was 'said to be from Leontopolis'. According to Cooney the openwork was all cast - totally improbable for an ancient piece - and it is set with amethysts and an emerald cameo of a lion. The appealing connection between the lion of Leontopolis and the design on the necklet should have been an immediate cause for scepticism, even ignoring the necklet's un-ancient appearance and construction.

²⁵⁶ Dunham 1924: p. 11.

²⁵⁷ CMA no. 47.506. Published as genuine in *BCMA*, 34, 9 (1947) and in more detail by Cooney 1965.

CHAPTER 9 - BRACELETS, ARMLETS AND ANKLETS

INTRODUCTION

A recently published papyrus from Oxyrhynchus provides us with Sappho's description of 'the fair and bright-eyed Andromache with many golden bracelets'.¹ The image would have appealed to local audiences since gold bracelets were much favoured by the wealthy population and have survived in some quantity. Nevertheless bracelets are amongst the hardest of jewel types to put into context, and few are from published excavations. Painted portraits seldom include the arms or hands, but masks, funerary shrouds and sculptures provide some evidence.

Textual references regarding the wearing of bracelets are also scarce compared to the wealth of information about rings and even earrings. Little of relevance has survived apart from basic mentions in dowry and other lists and even then the terms are not easy to translate. Pollux noted that the terms used do not always differentiate between bracelets, armlets - worn above the elbow, and anklets.² Similarly, in many cases we cannot be sure into which category a surviving ornament should be placed.

Two common terms are *pselion* and *klanion*. The former is usually translated as armlet and the latter as bracelet. The term *pselion* was in use by about 400 BC and has been described as a favourite ornament of the Persians, which might indicate a rigid rather than flexible ornament - perhaps like our term 'bangle'. *Pselion* occurs in papyri from the late Ptolemaic and Roman periods,³ and refers to an ornament worn by women. *Klanion* had variants such as *klalia*,⁴ *klaniaas*,⁵ and *klanon*,⁶ but we have little idea as to the type of bracelet this word specified. Only on rare occasions do we find more specific definitions such as *cheropselion*,⁷ which literally means 'hand armlet' and thus presumably a bracelet, and *podopselion*, literally 'foot armlet', presumably an anklet.⁸ One fifth century papyrus uses the term *dipselion* which must be translated as double armlet.⁹ Examples of armlets are known which consist of two or more armlets joined side by side (e.g. fig. 511). This same papyrus also uses the term

1 *P.Oxy.* 1232. The fragment is from Sappho bk. 2.

2 Poll. 5. 99.

3 e.g. *BGU* 1101; *P.Oxy.* 259; *P.Oxy.* 114.

4 *P.Oxy.* 114.

5 *P.Oxy.* 796; *P.Teb.* 417.

6 *P.Hamb.* 10; *P.Osl.* 46.

7 *P.Oxy.* 3491; *P.Hamb.* 1.10; *P.Oxy.* 2002.

8 *P.Mich.* 1950; *P.Osl.* 46.

9 *CPR.* 22; *CPR.* 161.

periskelidia which literally means 'round the leg' and probably means anklets or, less likely, thigh bands.¹⁰

The *pericheira* of a fourth century papyrus are clearly bracelets.¹¹ These *pericheira* are mentioned in the same list as a pair of *klaleon* (an alternative for *klanion*).¹² Presumably their presence in the same list means that the terms applied to distinct types of ornament, but so far they cannot be identified. Numerous other words for bracelets or armlets are found in classical literature, but have not so far been seen in the papyri.¹³

Judging by the commonness of snake armlets and bracelets in Romano-Egyptian times - they comprise the majority of surviving gold arm ornaments from the period - we should expect a special term for them. Possibly this was *pselion* as discussed later in this chapter. The term *pselion magianon* - 'magical armlet' - which occurs in some papyri,¹⁴ probably also referred to a serpent or snake armlet. One term that occurs in papyri from the third century BC up to the third century AD, is *peridexion* which is usually translated as 'bracelet for the right arm or hand'.¹⁵ The literal translation of this word is certainly 'around the right-hand side', or such like, and its context in the papyri means that it was a gold ornament. The equation of this term with any surviving type of ornament is uncertain and there is no equivalent description for an ornament for the left-hand side, even though the left arm was seemingly favoured when only one armlet was worn.¹⁶ Bracelets were almost invariably worn in pairs in Hellenistic and Roman times but such symmetry was slightly less important for armlets. The only ornaments that were limited to the right-hand side, and typical of it, are snake rings, invariably worn on the second or, more often, the third finger of the right hand (e.g. figs. 98, 99, 438, 445). Perhaps a *peridexion* was just such a ring.

Bracelets and armlets were generally, but not always, female ornaments. The depiction of men wearing bracelets seems more characteristic of the Byzantine than the Roman period in Egypt. When Suetonius listed the ways in which Caligula ignored male conventions he included his wearing of bracelets.¹⁷ Some male children wear bracelets on Palmyrene reliefs and outside of Palmyra some male gods wore bracelets but generally they were reserved for women.¹⁸ Presumably small male

10 Also used in *CPR*. 8. 52 and listed by Pollux 5.99. See also notes to *CPR*. 22 and Liddle and Scott

11 *P.Mich.* 3163. Also listed by Pollux, 1. 185.

12 See also *P.Oxy.* 114; *P.Oxy.* 796; *P.Teb.* 471.

13 These include *peribrachion* in Poll. 5.99.10. *Cyr.* 6.4.2, and *Dion. Hal.* 10.36; *Perikarpion*, also in Poll. 5.99, *sphigkter*, in Plaut, *Men.* and *akrocheirion* used by *Prisc. Inst.* 5.15.

14 *P.Osl.* 46; *P.Berlin* 1065.

15 See for example *P.Osl.* 46; *P.Hamb.* 10.

16 This can be seen from representations and burials, e.g. Brunton 1930: p. 28.

17 *Suet. Calig.* 52.

18 Colledge 1976: p. 150-152.

children could also wear bracelets in Egypt. In Hellenistic and Roman art, Eros is often shown wearing bracelets and other jewels and the same is true of Harpokrates in Egypt.

The fashion for anklets has not been well documented. We can probably assume they were normally worn by women, although Clement of Alexandria does refer to men having gold ornaments which 'they fasten to their ankles'.¹⁹ As noted above, anklets are clearly mentioned in some papyrus lists and there are also representations of anklets in wear from Roman Egypt (figs. 423 - 425). Anklets are shown on cartonnages in the first century AD in Egypt and these are usually of twisted form, sometimes with animal-head terminals. Anklets are most frequently mentioned in Romano-Egyptian texts in the third century AD. At Palmyra, Colledge has said that 'a feminine penchant for anklets manifests itself briefly between c. AD 100 and 150'.²⁰ Some late Roman sarcophagi shows women wearing two pairs of anklets. When the detail is fine enough we can see that the anklets were again usually twisted. Some ornaments traditionally described as bracelets would be better shown to advantage if worn on the ankles. Examples include the bird-head ornaments (probably geese) shown in figs. 470 and 471 and the tubular 'bangles' with gold shells on their edges, in fig. 426.²¹

Descriptions of anklets do not survive from Egypt and other Classical sources are little more forthcoming. One brief mention is in Petronius' *Satyricon* where Fortunata wore 'twisted anklets' (*periscelides tortae*). When Herodotus described the ornaments worn by Libyan women he described the bronze ornaments around each of their legs using the term *pselion*.²²

BRACELETS, ARMLETS AND ANKLETS CHARACTERISTIC OF EGYPT

Overlap twist

The overlap-twist type of bracelet is characterised by a hoop which extends at each end into a long wire that winds round the opposite terminal. A typical, simple pair is shown in fig. 427. The hoop can be made with a circular section (either solid or tubular), from several rods or tubes twisted together (fig. 428), or from a flat or slightly convex or angular-section band (fig. 429).

A more elaborate variety has additional spiral plates of coiled wire. This type probably evolved slightly later than the simple type but both remained in use, side by side, into the third and possibly fourth century AD.

19 Clem. Al. *Paed.* 3. 3.

20 Colledge 1976; pp. 150 - 152.

21 Dennison 1918: nos. 22 - 23. Petrie dated these shell ornaments to the Roman period - Petrie 1920.

22 Herod. 4. 168.

Basic forms

The basic overlap-twist type of bracelet had appeared by the end of the Hellenistic period and can be seen, for example, in the Delos find of the early to mid first century BC.²³ Here the ends of the bracelets are tapered, whereas the Roman examples tend to be un-tapered, or less obviously tapered. A pair of heavy tubular bracelets in London has been given a possible Ptolemaic date but without any evidence.²⁴ In general, overlap-twist bracelets were worn right through the Roman period, but we have none from certainly dateable contexts within Egypt itself. Examples in bronze, of circular section rod, were found with other bronze items in a well, or from the chamber above it, at Diospolis Parva. Unfortunately even the known stratigraphy and coin finds did not allow a closer dating than 'Roman period'.²⁵ The type also found in silver, but is rare.

Early first century AD Roman use is not easy to demonstrate and there are no overlap-twist bracelets from Pompeii. However, overlap-twist bracelets, with both plain and twisted hoops, were found at Tekiya with coins up to Domitian (AD 81 - 96) and with ball earrings and a double ring with a palm leaf design.²⁶ This would point to a late first to early second century date. Overlap twist bracelets are worn by a goddess on a Palmyrene relief dated to between AD 50 and AD 125.²⁷ It is of interest that here the overlapped part of the bracelet is worn on the inside of the wrist. Later second or early third century use is proved by the presence of this type of bracelet in the Lyons treasure which probably dates to a decade or so either side of AD 200.²⁸

Six gold bracelets, including a solid rod overlap-twist bracelet, a hollow tube overlap bracelet and an overlap-twist bracelet with flat ribbon-like hoop and spiral twisted plates, are said to have been found in the same Egyptian burial.²⁹ A twisted hollow tube bracelet with hinge fastener and granulated diamond-shaped catch plate - much like that in fig. 472 - was in the same group and this indicates a third century date. Some of the twisted overlap bracelets are composed of open tubes with a central tensioning wire exactly as found on the typically third century hinged-bezel bracelets and hinged bracelets discussed below (fig. 476).³⁰

Overlap-twist bracelets, both plain and twisted, are depicted on masks and shrouds in conjunction with Medusa necklets (fig. 338),³¹ double finger rings (figs. 135 and 136),³² and hinged bezel bracelets.

23 Levy 1965: fig. 17.

24 Petrie 1927: pl. 2, 27.

25 Petrie 1901: p. 56, pl. 42.

26 Mano-Zissi 1957.

27 Colledge 1976: pp. 150 - 152 = Damascus Museum 16441. See also Tanabe 1986: no. 123.

28 Comarmond 1844.

29 This group, on the market in the mid 1980s, was originally studied by H. W. Muller but has never been published.

30 e.g. CM CG 52020.

31 e.g. Parlasca 1966: pl. 47, 4.

32 Grimm 1974: pl. 95, 1.

This proves their popularity in the third century AD. A limestone sculpture of a woman, now in Alexandria, shows her wearing two plain overlap-twist bracelets on each wrist in addition to a necklet with either a coin pendant or a coin-like pendant (fig. 350 and 430).³³ The pendant type again points to a third century date.

Overlap-twist bracelets are far too common in collections and on the market to allow a full listing here. The solid rod examples usually have the ends of the rods hammered out into the wire to form the twisted terminals. The tubular bracelets can have their ends hammered out in the same way but, frequently, the terminal wires are separately made and soldered into the ends of the tubes (fig. 431). Manufacturing these bracelets of tube, rather than of solid rod of the same diameter, saved about 75% of the gold - a worthwhile saving in a country with a high relative gold price and low workmanship charges. On the basis of what we have seen for rings, we might expect the hollow bracelets to be more typical of the second half of the Roman period.

With the Syrian exception mentioned above, these bracelets were worn with the overlapped part on the outside of the wrist and Egyptian funerary representations show that they were worn in pairs and with up to three on each wrist. Sometimes they were worn in combination with other bracelets. In some cases the two bracelets making up a pair were made with their spiral terminals wound in opposite directions - thus making a true mirror-image pair. A pair in the Benaki Museum are like this (fig. 428). Some of the heavier, larger examples were certainly for the upper arm and quite probably for men, although I know of no representations of them in Romano-Egyptian depictions of men.

Bracelets with spiral plates

The bracelets with spiral plates (as in fig. 432) coexisted with the simpler overlap-twist bracelets and the same hoop varieties occur. As with the overlap-twist bracelets, dated finds are all from outside of Egypt. Finds include that from Tekiya, with coins up to Domitian and thus of the late-first or maybe early-second century AD.³⁴ A pair of similar bracelets, in bronze, were found with S-hoop earrings in a find-group from Eastern Thrace dateable to after c. AD 125 on the basis of coins.³⁵ A find from St. Genis, near Geneva,³⁶ contained such bracelets and also spoons and rings of third century type. A hoard with third century ring and spoon types, formerly in the Gans collection, also included four overlap-twist gold bracelets with spiral plate.³⁷

33 Alexandria Museum R746.

34 Mano-Zissi 1957.

35 Mansel 1941: pp. 120 ff.

36 Henkel 1913: pl. 79.

37 Zahn 1921: pl. 31, no. 93.

Some tubular examples have spiral plates which are also composed of tubes, not solid wires,³⁸ A version I have only seen from Egypt, on bracelets with flat or rounded section hoops, has separately applied spiral plates. The spirals of wire are soldered to circular sheet-gold panels which are, in turn, soldered to the ends of the hoops (fig. 433).³⁹

Parlasca's dating of some of the portraits implied that the type lasted through the fourth century. There is little corroboration for his dating of the later portraits on the basis of the other jewellery shown. However iron bracelets of simple overlap-twisted type and spiral plate type were found in the Egyptian burial of a woman that has been dated to AD 300-320.⁴⁰

Snake and other figural terminals

The long history and the possible significance of snake jewellery was touched upon in the section on snake rings in ch. 6. Bracelets with snake and other heads are known from around the eighth or seventh centuries BC in the eastern Mediterranean and Greece. Bracelets in the form of snakes are well known among Hellenistic goldwork and they continued to be popular into Roman times. Higgins suggests that the form did not outlive the first century AD,⁴¹ but, as will be shown below, bracelets with snake head terminals continued in one form or another right through the Roman period.

Snake bracelets, despite the traditional Egyptian symbolism of the cobra, have not been found in Egypt prior to Ptolemaic times, and even then they only occur in a form that is most distinctly Hellenistic and closely paralleled in other parts of Alexander's empire. On the other hand, a fragmentary limestone male sculpture from Naukratis, of Cypriot sixth century BC type, does appear to be wearing coiled snake armlets.⁴²

Perhaps we can equate *pselion* of the texts with snake armlets or bracelets. We have at least two names for snake bracelets in Greek, *drakon*⁴³ and *opheis*. *Opheis*, relating to *ophis* - 'a serpent' - undoubtedly refers to a serpent or serpent-like form and its use to describe a bracelet type is attested as late as Philostratus (third century AD) and also Hesychius (probably fifth century AD), though, of course, this term might well have then been obsolete as it does not seem to be attested in the papyri. The lexicographer Moeris, writing in the second century AD, tells us that *opheis* is the Attic equivalent of *pselion*.⁴⁴ If Moeris is right, we can probably be correct in thinking that *pselion* typically

38 e.g. CM JE 34723.

39 e.g. CM CG 55298 and 52014.

40 Tomb group in the Metropolitan Museum of Art.

41 Higgins 1980: p. 181.

42 Petrie 1888b: pl. 1, 2.

43 For *drakon* see, for example, Alcman, quoted in Campbell 1967: p. 21.

44 See Liddell and Scott under *ophis*.

referred to an armlet or bracelet of snake-like form, although it might also have been used in a wider sense for other bangle-like ornaments.

In one papyrus, reference is made to *pselion magianon zeugei dikampo(n) drakontokephalon* which has most recently been translated as 'a pair of double-coiled snakes' headed magical bracelets'.⁴⁵ This text does show that *pselion* included snake-head ornaments in at least some instances and indeed later in the same papyrus they are referred to as just *pselion magianon*. As we saw above, The term *pselion magianon* also occurs in another papyrus and perhaps, again, refers to a serpent bracelet.

Some magical or religious significance is also implied by Clement of Alexandria's abhorrence of the type. This Christian writer tells us that 'the serpent allegorically signifies pleasure crawling on its belly',⁴⁶ and then makes a specific attack on serpent ornaments 'now women are not ashamed to wear the most manifest badges of the evil one. For as the serpent deceived Eve, so also has ornament of gold maddened other women to vicarious practices, using as a bait the form of the serpent and by fashioning lampreys and serpents for decoration'.⁴⁷

The association of the snake with a fertility goddess seems to have been general throughout world history. Hellenistic and Roman figures of Aphrodite often show her wearing a serpentine armlet on her left arm and sometimes on her left thigh. In Egypt Isis is often linked with a snake and is frequently shown holding one in Ptolemaic and Roman art - often on her left. Cleopatra's death from a snake can hardly be ignored here and according to Roman writers it was either Cleopatra's left breast or left arm that was bitten by the asp.⁴⁸

A Hellenistic type of snake bracelet in which the coils are joined side-by-side to form a ribbon-like band round the wrist is known from Egypt. One example, missing its head, was on the market in 1979,⁴⁹ and a complete example with a supposed Alexandrian provenance is in a private Swiss collection.⁵⁰ A set of superb matching armlets and bracelets of this type are part of a second century BC find group from Egypt in a private collection in New York. It is hoped that this group will be fully published in due course.

Coiled snake bangles and armlets

The snake bracelets and armlets considered in this section consist of a simple penannular hoop or helically coiled hoop. The heads lie facing across the wrist and the serpent-like sigmoidal curls of the

45 Whitehorne 1983.

46 Clem. Al. *Exh. to Heaven*, 11.

47 Clem. Al. *Paed.* 2.13.

48 Lewis 1983: p. 9.

49 Christies 1979: no. 45.

50 Zimmermann 1978: no. 149.

bracelets in the next section are absent. The tail, when present, can be straight, wavy, or coiled around the adjoining body hoop. This latter construction is known at Pompeii but not, to my knowledge, from Egypt. The tail can end in a smaller snake-head - sometimes diminutive, in other cases quite big (fig. 434).⁵¹ This smaller head at the end of the tail seems a purely Egyptian phenomenon. These armlets are extremely well known from Egypt and can be seen in most museum and private collections. There were originally worn in pairs but have seldom survived as such.

The main varieties are shown schematically in fig. 435. Typically the construction is fairly substantial, the hoop is usually solid and of circular section, although later types can have hoops of twisted wires or tubes.⁵² In Egypt the form with the straight tail is less common than that with a wavy tail.⁵³ The opposite appears to be true at Pompeii, although the presence of both types here proves their contemporaneity.

A cast blank rod or heavy gauge sheet was shaped by hammering into the basic snake form and then details such as head-shields, scales etc. chased on. These details are usually deeply chased and the scales typically rendered by cross hatching on the head and tail. The mouth is often realistic with open mouth, teeth and tongue. The underside of the head is usually marked with chased lines and, occasionally the under-belly is chased with transverse lines. Some of the finer examples have inlaid stones in the eyes and, sometimes, on the top of the head.⁵⁴

In some cases the heads are hollow which can mean loss of the open mouth and the presence of a small 'breathing' hole to allow the escape of air, under the head. The sheet gold of the hollow head was hammered out from the body and then soldered closed. The wavy tail, if required, was produced by hammering from the sides, possibly into a groove. This was usually done after the scale pattern or cross-hatching was applied. In a few cases the sides of the waves were flattened with an abrasive block, perhaps to allow them to sit against the neighbouring coils. In some case the tail is tack-soldered to the side of the coil - a feature sometimes found in Italy as well as Egypt.⁵⁵ We can note that if the armlets were tack-soldered, the exact circumference of the arm must have been noted in advance.

All the available evidence from first century AD Egypt suggests that these ornaments were worn as armlets not bracelets. They can be seen in wear on various first century AD cartonnages (fig. 436, also fig. 31),⁵⁶ and similar wear is attested elsewhere in the Roman Empire in the first century AD - for ex-

51 e.g. Segall 1938: no. 176; CM CG 52015; MMA 18.2.19 - 20.

52 e.g. Sotheby 1912: no. 432.

53 e.g. Sotheby 1981: no. 190.

54 Segall 1938: no. 176; CM CG 52114.

55 e.g. a fine pair of bracelets from Boscoreale now in the Louvre - Louvre Bj 976-977. Barate 1986: p. 49. Egyptian examples include those in New York - MMA 18.2.19 - 20.

56 e.g. Manchester 20638 = Petrie 1911: pl. 13,5; Brooklyn Museum, 69.35 = Grimm 1974: pl. 15, 1.

ample on a marble statue of Cybele from Rome, now in the J. Paul Getty Museum.⁵⁷ Representations show that the snake armlets were worn in pairs, with the heads uppermost facing towards the body. In all the representations, the coils lie tight together and the more open coils of some snake bracelets in collections might be the result of modern attempts to make them look more impressive.

One fine fragment of an armlet - probably cut up in antiquity for reuse - bears the chased initials *SA* (fig. 70). These initials could be interpreted in various ways - as the name of the owner or maker, or as some abbreviated votive or dedicatory inscription. The initials appear to have been put on the bracelet at its time of manufacture. It is tempting to identify the initials as part of the name of Sarapis or a personal name based on Sarapis. We know of several goldsmiths called Sarapion in Roman Egypt.

The coiled snake bracelet and armlet is of ancient origin and versions are known from Hellenistic contexts and are depicted in art of the same period. One gold example, from Ancona, is probably of the fourth to third century BC.⁵⁸ Bracelets of this type are shown worn on the wrists of some sarcophagi from Italy - such as one from Chiusi of the late second century BC now in the Louvre.⁵⁹ Nevertheless, the Egyptian examples with their circular section rod-like bodies are typically of the Roman period and there is no apparent reason to date any of them to the Ptolemaic period - as has been done.

First century AD use is certain from the depictions and from the close parallels at Pompeii. However, this type of bracelet also seems to have survived into the third, if not fourth, century AD. A group of Romano-Egyptian jewellery in the Allard Pierson Museum in Amsterdam included a fairly crude snake bracelet (fig. 437) as well as hinged bezel bracelets and other jewel types that can be dated to the third century AD. The size of this example means that some were now worn as bracelets not just armlets. The only Egyptian representation of such a bracelet in wear that I know of is on a funerary painting in Moscow which is almost certainly of third century date (fig. 438).⁶⁰

The survival of the basic snake form into the third century AD is also shown by several other assemblages of jewellery. For example, the Sâ el-Hagar hoard (ancient Sais), now in the Cairo Museum (fig. 17), was said to have been found as a buried hoard rather than in a grave.⁶¹ The hoard, if all contemporary, can hardly date to before the later second, or even the third, century AD. Jewellery in this hoard included two pairs (?) and one single snake armlet, elaborate necklets with flat loop-in-loop chains and Medusa-disk terminals, fluted gold beads, a large 'diadem' with central Medusa head, and

57 57AA19; Vermeule and Neuberburg 1973: no. 58.

58 Maiuri 1962: no. 107.

59 MA 2350.

60 Parlasca 1980: no. 633.

61 Mariette 1871: text to plate 40.

other loop-in-loop chain necklets. The diadem is a type that must be of late second century AD at the earliest.⁶² Another group of jewellery, said to have been found together in Egypt, includes a snake bracelet as well as a bracelet with a twisted hoop with hinged fastening - again of third century AD type.⁶³

Most, if not all, the substantial snake bracelets and armlets were intended to be worn - indeed some show considerable signs of wear. However, funerary versions made of thin sheet gold also occur, but are rare.⁶⁴ Some of the snake bracelets are of considerable weight; over 150 g. per bracelet is not unusual. A pair of such heavy bracelets would have been worth the same as an important house and might have equalled ten years' salary for a farm foreman!

The long survival of the snake armlets in Egypt - and the survival of other substantial jewellery types, such as the overlap-twist bracelets - might be due to the continued wear for several generations. This would have kept the style in fashion. A hybrid form in the Benaki Museum takes the form of a single-coiled snake-head bracelet (fig. 439), but the hoop is hinged and the head is fastened to the tail by a length of chain (possibly not original). The fastening loop in the tail is partly concealed by a triangular granulated motif of a type which would indicate a third century date.⁶⁵

Gold snake bracelets in the form of a penannular hoop with a snake-head at each end are well known from many parts of the Roman Empire, but are rare in Egypt (although silver examples are commoner).⁶⁶ Gold finger rings of the same form are known from Egypt. The bracelet type with hoops of twisted tubes or wires are a later form, probably mainly third or fourth century. Silver armlets or bracelets with overlapped ends terminating in melon-like forms, not snake-heads, are known from Egypt (fig. 440), and can be paralleled in both finger rings and sigmoidal snake bracelets.⁶⁷

Two-headed snake bracelets are better known from Egypt with twisted hoops. These are perhaps mainly of the third century AD and typically bracelets not armlets.⁶⁸ One example in Athens is composed of thin sheet gold skilfully shaped to imitate two rods twisted together (fig. 441).⁶⁹ A snake bracelet in Cairo has a twisted hoop and hook and eye fastener (fig. 442). In the third century we also find snake-head bracelets where the heads are linked by a hinge-like fastener. These are versions of the hinged bracelets and will be considered below.

62 The snake bracelets in the hoard are CM CG 52114 - 52118.

63 Private collection, unpublished.

64 Benaki Collection, on display in Athens but seemingly unnumbered; CM JE(?) 48019.

65 Segall 1938: no. 175.

66 One gold example is Christies 1979: no. 46.

67 Christies 1979: no. 49.

68 e.g. Segall 1938: no. 186.

69 Segall 1938: no. 187. Presumably this has a bronze core.

Sigmoidal bracelets

These ornaments are characterised by the realistic way in which the heads, and sometimes tails, form 'S'-shaped coils (figs. 443 and 444). The heads typically face up or down the arm, not across the arm. The hoops are characteristically of flat or slightly curved section. The tails can form intricate curlicues. The basic form is well known from the Hellenistic period and is quite often illustrated in Hellenistic art - as on South Italian sarcophagi where women wear them on their upper arms.

Surviving examples from dateable contexts are not common, but silver examples were found in a tomb at Limnatis in Cyprus with Hellenistic pottery,⁷⁰ and a pair of silver-gilt armlets was included in the Kralevo treasure from Bulgaria which dates to the late fourth to early third century BC.⁷¹ The only example from Egypt with known context is that from the Tûkh el-Qarâmûs hoard (fig. 443).⁷² This armlet is set with a heart-shaped garnet in its head and also has stone-set eyes. Edgar has said that this 'serpent-bracelet with jewelled eyes and forehead is a splendid example of the kind, immeasurably superior to the flat and formal type which became so popular in Egypt in the first century AD.'⁷³ The Tûkh el-Qarâmûs armlet weighs 356 g., the equivalent of about a hundred drachmae. Vernier notes that this bracelet has a small stamped mark, like a human mask, on the inside near the tail - this can be seen in fig. 443. Marks of this type are very unexpected on ancient gold - particularly of the Hellenistic period - and the presence here is both unparalleled and difficult to explain.⁷⁴

This type of bracelet with the curlicue tail and the serpentine head facing up the arm, continued to be worn into the Roman period. Examples are recorded from the Pompeian region,⁷⁵ and are known also from Egypt. Gold examples include one in New York (fig. 444) and a more attenuated version from Memphis that was in a private collection in Berlin.⁷⁶ This latter bracelet was supposedly part of a find made by the fellaheen, the rest of which is in Cairo. As far as I can determine, the find also included a fine pair of overlap-twist bracelets in Cairo.⁷⁷ A funerary painting of the third or fourth century AD shows a bracelet of this type in wear, although I would assume by this time it was purely a funerary convention (fig. 445). Silver examples from Egypt include one in the Cairo.⁷⁸ A stone casting mould for a bracelet of this general type is in Brussels Museum (fig. 446). Such a mould is unlikely to have

70 *Arch Reports* Suppl. to *JHS*, 1975-76 p. 56.

71 Ginev 1983. See also Amandry 1953: nos. 219, 220 and 255.

72 CM CG 52094.

73 Edgar 1906: pp. 57-62.

74 The 'owl' stamps on a gold wreath in Rhode Island are turn-of-the century stamps noting that the item had been offered for sale in France, not ancient as believed by Hackens (1976: pp. 139 - 141.)

75 Siviero 1959: notes to no. 202.

76 Karo 1901: fig. 2.

77 CM CG 52134-5.

78 CM JE 44877.

been used for gold, but rather for silver or copper alloy. Variations of the form also occur, such as one with a hoop composed of twisted gold rods.⁷⁹ In this latter case the head seems to have been separately made and soldered to the hoop.

The sigmoidal snake armlet was closely associated with Aphrodite and other fertility goddesses. Snakes played a part in several of the creation myths and a link between snakes and procreation would hardly surprise the post-Freudian world. Aphrodite frequently wears serpent armlets in Hellenistic and Roman art. A superb marble Aphrodite now in Alexandria Museum illustrates this well (fig. 447).⁸⁰ Similar armlets can also be seen on a goldsmith's former for a disk showing Aphrodite and Eros (fig. 373). This is from the Galjub hoard and probably dates from the first century BC.⁸¹ Another former in the same hoard is for making a pendant of the *fika* type showing a clasped hand with the tip of the thumb protruding between the first two fingers (fig. 414). Here again, a serpent bracelet is in evidence, which suggests that these hand pendants, known to be fertility amulets, were supposed to represent the hand of Aphrodite.⁸² Eros and Harpokrates are also very commonly shown with sigmoidal armlets, thigh ornaments, or even anklets, in Hellenistic and Roman Art. A good example from Egypt is a second century painting from the Fayûm now in Cairo Museum (fig. 448).⁸³

Double-ended funerary bracelets

The basic form of this type of ornament is shown in fig. 449. Surviving examples are of flimsy sheet gold and were probably funerary ornaments of the Roman period. Gold examples from Egypt include a pair from the Delta, now in Cairo (fig. 449),⁸⁴ and a pair once in the Gans collection. Another pair is in Mainz, but these have no certain provenance.⁸⁵ The Cairo examples are of thin sheet gold, the heads are hollow and were made from separate pieces of sheet and soldered on. A goldsmith's former from the Galjub hoard was probably for making the heads for bracelets just like these (fig. 450).⁸⁶

The flimsy gold armlets presumably derived from the more substantial Hellenistic armlets which took the form of two snakes with their tails knotted together - the knot sometimes set with a garnet. The sheet gold Egyptian bracelets are generally far too light-weight for wear and were probably purely for

79 Christies 1987: no. 147.

80 Alexandria Museum no. 29456. Found in 1973 in Sidi Bishr. Another example is Vermeule and Neuerburg 1973: no. 19.

81 Ippel 1922: no. 60.

82 Ippel 1922: no. 49.

83 CM CG 31568.

84 CM CG 52123 - 4. See Karo 1901: fig. 2.

85 Deppert-Lippitz 1984: colour pl. 2, 2.

86 Ippel 1922: no. 95.

funerary purposes. That these bracelets have survived in pairs in nearly every case, does indicate that they have been found *in situ* on bodies. Outside of Egypt, flimsy bracelets of similar type have been found in Hellenistic burials in Greece.⁸⁷

In Egypt, examples of sturdier construction are only well known in silver and compare with rings of the same form (fig. 451).⁸⁸ A silver variety terminates in fluted melon-like terminals rather than snake-heads. This terminal-type is also found with in other snake-bracelet type and with rings (see fig. 440). Petrie assumed these were later than the snake-head varieties and thus of about AD 150,⁸⁹ but a ring of similar form found in tomb 663 at Saft el-Hîna is dateable to the first century BC/AD. Serpentine, double-headed silver snake bracelets with true snake-heads (fig. 451) were found in the same hoard - at Tell el-Balamûn - as bracelets with melon-like terminals.⁹⁰

One of the few more substantial gold double-headed, bracelets of this type is shown in fig. 452, but even this might have been too delicate for day-to-day wear. In Roman funerary symbolism we do see snakes on the wrists of women.⁹¹ First century AD cartonnages from Egypt frequently show these double-headed snake-bracelets worn on the wrists of women (figs. 453 and 454) indeed the gilt female masks from Hawâra almost invariably wear such bracelets. Occasionally we see these bracelets in other media, such as a funerary limestone niche-statue of a woman, now in Alexandria Museum (fig. 455).⁹² This funerary use has been explained as reflecting the Egyptian belief in snakes as symbols of rebirth due to their periodic shedding of skin.⁹³

The portraits that show these bracelets also included funerary symbols such as wreaths, grapes, sprigs of foliage or chalices, which means that the portraits were painted after death. When painted on wooden sarcophagi, the depictions are often very stylised (fig. 456) and even on the fine cartonnages errors are quite frequent, for example in fig. 31 where the coils on the left wrist are impossible. Rosettes are sometimes added, as in fig. 454.⁹⁴ On the cartonnages these funerary bracelets are worn in conjunction with non-funerary jewel types such as crescent pendants, ball earrings, tapered armlets, etc.

87 Papapostolou 1984.

88 See also a pair in better condition, said to be from Alexandria, Sotheby 1981b: nos. 203a, b.

89 Petrie 1927: pl. 5, 64.

90 The hoard is now divided between Cairo, The Metropolitan Museum of Art and the Carnarvon Collection at Highclere. The most unusual bracelets in the hoard are the wavy hoops with complex, knotted snake bezels described below.

91 Cumont 1942.

92 Alexandria Museum no. 21990.

93 Brooklyn 1983: notes to no. 80.

94 CM CG 33131.

There is little evidence that the funerary forms lasted into the late Roman period although one funerary portrait on linen (fig. 216), dated by Parlasca to the fourth century AD, does show them.⁹⁵ However the presence of the ball earrings make an earlier Roman date far more likely and Petrie's original dating to the late first century AD makes more sense in terms of the jewellery depicted.⁹⁶

Other snake-head bracelets

A type of snake bracelet known in silver has two heads - either snakes or uraei - which both point in the same direction along the arm (fig. 457). These are typically made from circular section silver rod and are substantial enough for wear. Some are very small and thus might have been intended for children. Most of the bracelets with uraeus terminals have a loop,⁹⁷ the snake-headed examples are mainly without loop.⁹⁸ I know of no representations of this type of bracelet in wear. The form closely compares to those with Isis/Sarapis heads and the gold rings discussed above and the presence of the type in the Tell el-Balamûn hoard shows their contemporaneity with other first century AD bracelet types. The minute size of some of the Tell el-Balamûn bracelets (as in fig. 457) is remarkable; one is only about 3 cm. in diameter and would barely fit a baby.⁹⁹

A stone casting mould for a bracelet of this general type, with uraeus terminals, is in Berlin (fig. 458).¹⁰⁰ This mould was almost certainly not used for gold, but might have been used for silver or, even more likely, bronze versions. It can be noted that this mould produced terminals with uraei but without the loop in their bodies - such a loop would have been almost impossible to cast.

Another type of elaborate snake bracelet known from Egypt and, seemingly, only in silver, consists of a wavy serpentine hoop of silver rod which meets at the front in elaborate figure-of-eight and Herakles knot scrolls with snake-heads and fine silver wire bindings. These bracelets could be produced without any need for soldering. There are several examples - of varying degrees of complexity - in the Metropolitan Museum of Art New York (fig. 459),¹⁰¹ in Cairo, and in the Carnarvon Collection at Highclere Castle.¹⁰² It would appear that all of these were found together, buried in a pot, at Tell el-Balamûn.¹⁰³ According to Carter, the pot and jewellery dated from the very end of the Ptolemaic period, but I see no reason why it might not also be early Roman and the bracelet types represented fit easily into the first century AD. The type could relate to the gold bracelets as shown in figs. 463 and

95 Parlasca 1980: no. 584

96 Petrie 1913: pl. 5.

97 e.g. Metropolitan Museum of Art, New York (from the Tell el-Balamûn hoard).

98 e.g. Sotheby 1971: no. 71.

99 MMA 26.7.1459.

100 Möller 1924: pl. 46.d.

101 MMA 26.7.1454 - 1474.

102 H 267.

103 I am grateful to Nicholas Reeves for telling me about the Highclere examples and for providing a copy of Howard Carter's unpublished report of the find (among the Carter papers in the Griffith Institute - Carter MSS 4.1-3).

464. The wire binding also brings to mind the elaborate bindings on some of the S-hoop earrings (e.g. fig. 196). The Metropolitan Museum of Art alone includes about a dozen examples, some fragmentary. Most of the bracelets take the same basic form, with a bezel that is essentially formed of knotted snakes with uraei interspersed in the loops. All the bracelets are made without recourse to soldering - they are assembled by twisting and fine binding wire. Most, if not all, of the bracelets originally opened (the bezels hinge in two parts) and the largest would fit on the upper arm of a large man. On the other hand, the smallest of the bracelets in the hoard (see above) are almost too small even for a child. Perhaps the Tell el-Balamûn bracelets and armlets were for cult statues rather than wear by the living or dead.

Isis/ Sarapis and other terminals

The transformation of the snake-heads into Sarapis or Isis heads - as common with bracelets as with rings - points to a link with the Sarapis/Isis cult and a relationship to the Agathodaemon and Agathatyche myths. The Hellenistic pair Agathodaemon and Agathatyche, equated with the Egyptian Psois and Thermouthis, became Sarapis and Isis. Isis was thus invoked as Agathatyche and associated with Agathodaemon. Isis/Agathatyche and Sarapis/Agathodaemon could both be shown with either human or snake heads.¹⁰⁴ Isis/Thermouthis/Agathatyche - probably usually just thought of as Isis - was frequently shown as a serpent from the waist down or as a dilated cobra with an Isis crown. Sarapis/Agathodaemon was sometimes represented with a snake body or as a non-dilated cobra with an Egyptian royal crown.

Most, if not all, the bracelets and rings with combined serpent/ deity terminals belong to the Roman rather than Ptolemaic period. The official popularity of the concept in Egypt can be seen from the reverse type of Romano-Egyptian coins. For example, an Isis head on a serpent seemingly first occurs in the time of Trajan and was then reused under Aurelius. The serpent with a Sarapis head was introduced by Hadrian and also used by Antoninus Pius and Marcus Aurelius. The uraeus serpent wearing the Isis headdress, and also the Agathodaemon, first occurs on coins under Nero and were then common until Caracalla. This official recognition of the forms as coinage designs might mean that the bracelets and the similar rings, should be dated to the mid first to second centuries AD.

As with most jewellery from Roman Egypt, few of the bracelet types discussed here have been found in dateable contexts. Exceptions include two silver bracelet terminals, one with an Isis/uraeus, the other a Sarapis/uraeus, which came from Naukratis. According to Petrie these were broken up from a pair by the Arab finders but had been found in conjunction with a chain of mid to late first century

104 Dunand 1969.

type (fig. 280) and the Tiberius diadem (fig. 15) which cannot date to before the mid first century AD.¹⁰⁵ A more elaborate version, also in silver, with added wire binding forming a knot can be closely compared to a well-known ring type (fig. 460, compare fig. 107).¹⁰⁶

Other combinations of terminals on bracelets include one snake-head and one uraeus,¹⁰⁷ a gold bracelet with one snake-head and one Isis bust, and various examples with two deities (fig. 461).¹⁰⁸ This latter type was made from a single piece of gold rod - the example in fig. 461 was composed of gold about 88% pure, with 10% silver and 2% copper. The busts were hammered out from behind and then chased with the details. This is the same manufacturing process as for the related finger rings. A bracelet in gold from Behnesa in Egypt has forked ends and thus four terminals. One end has two busts of female deities (Isis and Nephthys?), the other has a snake-head and a bull-head with sun-disk (fig. 462).¹⁰⁹

The most elaborate type of bracelet that can be dealt with in this section consists of wavy serpentine hoops with a central elaborate bezel representing knotted serpents surmounted by figures. I know of two gold examples; one is in the Metropolitan Museum of Art, New York (fig. 463), the other in the Benaki Museum, Athens (fig. 464). The general form of the hoop can be compared with the ring in fig. 57. The New York bracelet has depictions of Agathodaemon (the un-dilated cobra), Isis, Aphrodite Anadyomene and Agathatyche (the crowned uraeus). The figures of Agathodaemon and Agathatyche are actually the ends of the knotted snake bodies forming the bezel. The significance of their grouping with Isis and Aphrodite Anadyomene is uncertain. The Benaki bracelet has a far more understandable iconography; here two snakes terminating in the busts of Isis and Sarapis (and thus presumably identified as Agathatyche and Agathodaemon) flank a kantharos which is surmounted by two ears of wheat. The kantharos with wheat would symbolise fertility - perhaps even the young Dionysos or Harpokrates - and would be well placed springing from the coils of the knotted serpents.

Other animal head terminals

Bracelets consisting of penannular hoops with each end terminating in an animal head are a well known Hellenistic type and the antecedents can be seen in earlier Greek art and in Iraq and Iran from about the ninth century BC onwards. Hellenistic examples are well distributed and have been found from as far apart as Iran and South Italy.

105 Petrie 1888b: pl. 27.

106 Christies 1987: no. 140.

107 Segall 1938: no. 183.

108 e.g. Christies 1987: no. 146; Sotheby 1989: no. 21.

109 CM CG 52109.

Animal-head bracelets were probably introduced into Egypt in the Persian period. A well-known statue in the Vatican,¹¹⁰ shows an official in Persian garb, wearing animal-head bracelets (fig. 465), and a similar bracelet was probably represented on the broken-off wrist of the statue of Ptahhotpe in Brooklyn, a treasurer under Darius I in Egypt, thus of about 500 BC.¹¹¹ The terminals from two silver lion-head bracelets were part of the Tell Atrîb treasure that probably dates to around the sixth century BC.¹¹²

Several gold animal-head bracelets have survived from the Ptolemaic period but they are not common. A bracelet from a pair in the Tûkh el-Qarâmûs treasure is shown in fig. 466.¹¹³ This bracelet has a hoop composed of four gold tubes twisted into a spiral. The terminals take the form of snarling lion-griffin-heads with collars decorated with twisted-wire filigree scrolls, beaded wire and pointed petal-like tongues. The heads appear to have been soldered on, rather than fastened to the hoops by mechanical joints. The overall form and construction is typically Hellenistic but the vibrant ferocity of the griffin-heads has more of an Eastern look. The two bracelets weigh 177.6 g. and 178.1 g. a total of 355.7 g. - the same, near enough, as the snake bracelet in the same treasure (fig. 443).

Another pair of bracelets from the Tûkh el-Qarâmûs treasure have plain gold hoops of solid, circular-section rod which end in the foreparts of 'little sphinxes with neatly dressed hair in the Ptolemaic fashion' (fig. 467).¹¹⁴ Vernier considered that the sphinxes were cast separately and soldered to the hoops but, judging from the available photographs and examination through the case in the Cairo Museum, I can see no indications of a join between sphinxes and hoop. The wings, however, are separately made from heavy sheet gold, with chased details, and are soldered onto the sides of the bodies. As noted above, the two sphinx bracelets weigh 129 g. and 123.5 g. Other animal-head bracelets are occasionally given Egyptian - often Alexandrian - provenances, but in some cases provenance or even authenticity is uncertain. For example, a pair of animal-head gold bracelets from the Delta which are stylistically difficult to accept.¹¹⁵

Animal-head bracelets from Egypt in materials other than gold include a calf-headed bracelet from Edfu in which the hoop was a rod of bronze or copper, gilded.¹¹⁶ This type of gilded-hoop bracelet is particularly well known from Cyprus. Another bracelet in the Cairo Museum, from Mît Rahîna, is of

110 Vatican 196. See Brooklyn 1960: p. 77.

111 Brooklyn 1960: no. 64.

112 Engelbach 1924.

113 CM CG 52097.

114 CM CG 52095-6.

115 Coche de la Ferté 1950.

116 CM CG 52148.

silver and has ram-head terminals.¹¹⁷ This bracelet is given a 'Graeco-Roman' date by Vernier but the compact stylised form might possibly be just pre-Hellenistic. A bronze rod bracelet with gilded terracotta lion-head terminals, from Alexandria, was purely for funerary use.¹¹⁸

Animal-head bracelets continued in use into the Roman and Byzantine periods. A pair of gold bracelets with lion head-terminals from Egypt, now separated, is shown in figs. 468 and 469. The complete example was formerly in the Kennard and Gans collections and is now in Leiden (fig. 468).¹¹⁹ Its mate, with one lion-head missing, is in the Walters Art Gallery, Baltimore (fig. 469).¹²⁰ Each bracelet consists of nine hollow gold tubes wrapped round a gold former, forming a spiral hoop. The hoop terminates in gold sheet and beaded wire collars onto which are hinged the lion-heads flanking a gold sphere. The Baltimore bracelet is dated by Oliver to the second or third century AD. Certainly the hinged central motif is not Hellenistic and the style of the lion-heads can be paralleled in late Roman jewellery. Similar bracelets, though of far cruder work and purportedly from Iran, have been seen on the market.¹²¹

Bracelets with bird-heads occur from the early first millennium BC in Western Asia. However, the only type I know of from Egypt is of Roman date and these have twisted hollow hoops and goose-head terminals (figs. 470 and 471). As with other bracelet types, the twists on the hoops of two paired bracelets can be in opposite directions to make a true mirror-image pair. I am aware of three pairs of these: in The Metropolitan Museum of Art, New York (fig. 471), those formerly in the Schiller collection (fig. 470),¹²² and those in the Omar Pasha Sultan collection.¹²³ Though usually called bracelets, their design is hardly suited for such wear and they might better be thought of as anklets. Precise dating can only be a guess, but they are presumably of the first to third centuries AD. The goose was sacred to Isis,¹²⁴ which presumably explains the significance of these ornaments. The word *chenamrion*, which literally means a young wild goose, is used to describe a woman's ornament in a fourth century papyrus from Egypt,¹²⁵ but we do not know what this was.

Hinge fasteners and hinged bezels

Most of the bracelet types described above were rigid or semi-rigid and were not provided with any type of fastener. The types of bracelet described here are characterised by the presence of a fastener of hinge-like construction held closed by means of a peg. The peg could be a simple gold rod held in place by friction, a split pin prevented from coming right out of the fastener by a small peg (fig. 472),

117 CM CG 52587.

118 Breccia 1912: no 531.

119 Zahn 1921: pl. 15, no. 50.

120 Baltimore 1979: no. 335.

121 e.g. Christies 1983: no. 107; Christies 1985: no. 110.

122 Zahn 1929: no. 84.

123 Omar Pasha Sultan 1929: no. 771.

124 Witt 1971: p. 70.

125 *P.Lond.* ined. 2199.

or a peg with a knob that would hold the peg in place as long as there was some tension on the bracelet. The split pin was by far the most usual.

Hinge fastener

In this class of bracelet the twisted hoop usually has corrugated tubular terminals held closed by a hinge fastener. A simple example is shown in fig. 473. The hoops are characteristically made from tubes which, being unsoldered, take on a slightly flattened oval cross-section (fig. 476). To support this rather flexible construction, a tensioning wire - usually of square-section - passes round the interior of the hoop and is soldered to the terminals at each end. In some cases the twisted tubes can be tack-soldered at points along the inner curve of the hoop. A few of the more substantial bracelets of this type appear to lack the central tension wire. The hinge is sometimes covered by a decorative motif, such as an 'S'-scroll of filigree or a diamond-shaped panel of granulation work. The fasteners are most typically of the split pin type and their heads can be plain, domed, have a crown-like structure or a small pyramid of granulation. A more elaborate variation has snake-head terminals, such as those in fig. 474.¹²⁶ The type is rare in silver but examples do exist.¹²⁷

This form of bracelet fits well with the mid to late Roman goldsmithing traditions and, although no examples come from certain contexts within Egypt, a very late second or third century date seems most likely. This is supported by a bracelet of similar type found in the Nikolaevo treasure from Bulgaria which included third century coins and is dated to c. AD 249.¹²⁸ A closely related bracelet type was found in the Teatro Regio Treasure in Parma with coins up to Gallienus.¹²⁹ The tensioning wire is found in some coiled gold bracelets of late Hellenistic date.

Some examples from Egypt are part of hoards that also indicate a third century date. For example, a bracelet with corrugated cylinder terminals and diamond shaped granulated hinge-cover in the Allard Pierson Museum (fig. 472) was found with a hinged bezel bracelet (see next section) and diadem which both are third century or perhaps late second century AD types.¹³⁰ Another almost identical bracelet, also with a granulated diamond-shaped catch plate, is part of a group said to have been found in Egypt. This group includes five other gold bracelets including a pair of bracelets somewhat similar to those described here, a solid overlap-twist bracelet, a hollow tube overlap bracelet and an overlap-twist bracelet with flat ribbon-like hoop and spiral twisted plates. This group, on the market in the mid 1980s, was originally studied by H. W. Muller but has never been published. I believe Muller's

126 Examples include CM CG 52103; Greifenhagen 1975: pl. 35 (no provenance); and Christies 1987: no. 126.

127 e.g. CM JE 49153.

128 Filow 1914 = Arch. Museum Sophia, no. 4783.

129 Bologna 1958: nos. 134 - 149.

130 Scheurleer 1987: pp. 66 - 69.

dating to between about 100 BC and AD 150 is untenable if the group is homogenous. One example of the snake-head bracelets with hinge fasteners and granulated catch-plates, in Mainz, has been dated by Deppert-Lippitz to the second half of the second century AD, but no evidence is presented.¹³¹

Hinge bezel

One of the best known Egypt bracelet types has a twisted hoop with a central circular or star-shaped bezel set with a stone (figs. 475 and 71). The stars can be six-¹³² or eight-pointed.¹³³ The hoops are like those of the bracelets described in the previous section and characteristically consist of three or more tubes twisted together. Again, the individual tubes are not soldered up but take a slightly flattened, open form. In a few cases the hoops might be of twisted wires rather than tubes.¹³⁴ Since the tubular construction had little strength, the bracelets had a central tension wire, again typically of square section (fig. 476).

The hoops almost invariably terminate in corrugated tubes. The bezel is joined to the hoop by means of hinges. One is permanent, the other has a removable pin or peg which allows the bezel to open. In one case the hinge is decorated with applied busts of Sarapis and Isis,¹³⁵ in another shells flank the central motif (fig. 477).¹³⁶

Most of these bracelets are set with an oval conical sardonyx or an alternative stone of reddish or brown colour. There are few exceptions. An example in the British Museum is supposedly set with the 'remains of white paste' which is presumably either a decomposed glass imitation of sardonyx or the sulphur used as a bedding material for the missing stone. One rather flimsy example from 'Lower Egypt' is set with an amethyst.¹³⁷ Some examples on the market have had other stones set in them in recent times - for example a pair on the market in the 1970s were set with one carnelian and one amethyst scarab. It was, of course, normal for bracelets to be worn in matched pairs (e.g. fig. 475).

In general, the tops of the bezels surrounding the stone are either flat burnished gold or have a tongue-like surround giving a rosette-like pattern. The openwork scroll design on a pair in the Benaki Museum makes them the most elaborate of the type (fig. 478).¹³⁸

131 Deppert-Lippitz 1984: fig. 9.

132 e.g. CM CG 52101.

133 e.g. CM CG 52102.

134 A possible example is CM CG 52101.

135 Segall 1938: no. 193.

136 Segall 1938: no. 194.

137 Hilton Price 1897: no. 1027.

138 Segall 1938: no. 192.

A variant type has snake-head terminals or, in one case, one snake-head terminal.¹³⁹ The bracelet with a single snake-head terminal is unexpected - and indeed its pair (fig. 478) does not have a snake-head terminal. Some type of repair or adaption in recent history is possible and this pair, of particularly massive and ornate construction, deserves closer examination.

When provenance is recorded, it is typically in the Delta. In general these hinged-bezel bracelets form a homogenous group but a few variants are recorded. One, in the Benaki Museum, Athens, has the bezel in the form of a Herakles knot rather than a circle or star (fig. 479).¹⁴⁰ The construction of the hoop and the hinges and the presence of the conical onyx show its close connection with the more normal forms, and in massiveness and colour it closely resembles the elaborate hinge bracelets in the same museum.¹⁴¹

Hinge-bezel bracelets can be dated on the basis of construction and their similarity to other bracelets, to the third century AD. The type is not unique to Egypt, though most typical of this country. An example in the Lyons treasure shows that they were being worn by about the year AD 200.¹⁴² Another from a European treasure was found with 'third century coins'.¹⁴³

Further east, at Dura Europos, the type is also found in a third century context. A bracelet in the Benaki collection is set with a dark green jasper intaglio of Sarapis which is said to be based on a coin design of Philip the Arab and hence must date to after AD 248.¹⁴⁴ Lepage suggests that this form of hinged bezel disappeared from fashion before the end of the third century and I see no reason to disagree with this.¹⁴⁵ Deppert-Lippitz has dated a typical bracelet of the hinge-bezel type, in Mainz, to the mid-second to third century AD, but I know of no certain indication that the type was current much before the beginning of the third century AD.¹⁴⁶ A pair of gem-incrusted silver bracelets of related form were found on the wrists of a queen in tomb 47 at Ballana (fig. 480) which is probably of fourth century date.

139 *BMCI* 2815; Segall 1938: nos. 190 and 192.

140 Segall 1938: no. 193. The technical and condition similarities between this bracelet and Segall 1938: no. 194 are remarkable and further study of them both is long overdue.

141 Segall 1938: no. 192.

142 Comarmond 1844.

143 From the Villardu treasure, formerly in the Guilhou collection. Sambon 1905: no. 207.

144 Segall 1938: no. 191.

145 Lepage 1971: p. 4.

146 Deppert-Lippitz 1984: fig. 10.

Forerunners for the idea of a hinged bezel can be found from Hellenistic times onwards. One bracelet with a hinged, circular bezel, with snake-head terminals, is part of the curious first century AD Petes-cia treasure, now in Berlin, and a silver snake bracelet with the heads supporting a hinged bezel with a profile bust is part of a first century silver find in the Rheinisches Landesmuseum, Bonn.¹⁴⁷ A related gold bracelet, with stone-set oval bezel and snake-head terminals, was found with a second or third century AD hoard of jewellery in south Wales.¹⁴⁸

Hinge-bezel bracelets are sometimes depicted on funerary masks and in other media. One instance is the mask in the Cairo Museum which might also depict a triple-finger ring (fig. 136). This supports a third century dating for the type. Hinge-bezel bracelets are also shown on some limestone sculptures from Oxyrhynchus (fig. 481). In all these cases the bezels seem to be worn on the outside of the wrist. However, one fragment of a Palmyrene relief shows that in at least some cases the hinged bezel part of a bracelet could be worn on the inside of the wrist.¹⁴⁹

The symbolism of the hinge-bezel bracelets is still uncertain. The central motif could represent the sun, the young sun-king - such as Dionysos or Harpokrates - or a kantharos or other vessel which also had fertility significance. Of course all these are not mutually exclusive and even a representation of a lotus - the birth place of the young god - might have been intended. Some bracelets have a dog-tooth setting for the stone in the middle of the star-shaped bezel (e.g. fig. 477) and this gives even more of a lotus-like appearance. An interesting fake based on the hinge-bezel type - but bearing the cartouche of Amenemhet III - was sold in Switzerland in 1959.¹⁵⁰ Here the bezel was deliberately made to look like a lotus flower - perhaps the forger was on the right lines!

A simple type of bracelet with the usual twisted hoop and corrugated terminals in the British Museum, has a bezel in the form of two conjoined disks.¹⁵¹ This bracelet is unprovenanced but is clearly of about the same period as the hinge-bezel bracelets and must be considered a variant.

Bracelets with 'shrine' bezels

In 1974 Coche de la Ferté published a gold bracelet in the Bibliothèque Nationale that has a possible, but not certain Egyptian provenance.¹⁵² This bracelet, shown in fig. 482, consists of a wide hoop with openwork floral and scroll motifs and a figure of semi-naked Aphrodite. The separate bezel, attached by a hinge type of fastening, is in the form of a shrine with four columns. In the centre of the shrine is a

147 Böhme undated: fig. 29.

148 *BMCI* 2787.

149 Tanabe 1986: pl. 364.

150 *Ars Antiqua* 1959: no. 24.

151 *BMCI* 2812.

152 Coche de la Ferté 1974.

small bronze figure of Harpokrates surmounted by a shell. On the platform below the columns is the applied filigree inscription *EYTOKI* followed by what appears to be the Greek letter Ψ on a slant.

The presence of the pierced-work hoop, with separate hinged bezel, obviously relates this bracelet to a variety of other late Roman and Byzantine bracelets. However there is a whole class of these bracelets with 'shrine' bezels and they deserve separate discussion.

Examples collected by Coche de la Ferté include one in the auction of the collection of 'Madame X' in Paris in 1952, probably from Egypt (fig. 483),¹⁵³ and one from Syria in another French collection.¹⁵⁴ Coche de la Ferté also notes a gold ring of identical construction and style in a Swiss collection.¹⁵⁵ This ring also has the inscription *eutoki* and is said to be from Egypt. To these parallels assembled by Coche de la Ferté, we can add a pair of bracelets from Egypt in the Field Museum of Natural History in Chicago (fig. 484),¹⁵⁶ and another bracelet from Egypt formerly in the Castellani collection.¹⁵⁷

The Chicago bracelets, apparently the only surviving pair of the type, show two different deities. One bracelet depicts Sarapis flanked by falcons while the other depicts a draped female deity, presumably Isis, flanked by animals. The former has the inscription *epagatho* - yet another association of Sarapis with this motto - while the female deity has *epaphrodito*. It is likely that *epaphrodito* relates to Aphrodite with *epi* being the preposition meaning 'for', 'on behalf of', etc. If we assume *epagatho* is the male equivalent, we must surely take this term to mean not just the literal 'for the good', as it is usually translated, but a more specific reference to the Agathodaemon, a male protective 'spirit' assimilated with Sarapis in Roman Egypt. If this is true, the apparent close relationship between Sarapis and the inscription *epagatho*, noted elsewhere in this study, makes very obvious sense.

The inscription *eutoki* on the Bibliothèque Nationale bracelet, and the ring, is taken by Coche de la Ferté to be the imperative of a verb *eutokein* meaning 'have an easy delivery', in the sense of childbirth. This is possible, but a simpler 'be fertile' is an alternative that might be more expected on jewellery. The Ψ following this word on the bracelet is interpreted as an abbreviation for *psuche*.

The bracelets with shrine-like bezels represent a group, but are by no means all of the same date. The Chicago and Castellani bracelets are of the Roman period and quite possibly early Roman. The Bibliothèque Nationale bracelet, on the other hand, is unlikely to predate the fourth century AD. Various flimsy sheet gold motifs in the form of shrines known from Egypt might well have been centrepieces from similar bracelets. A pair of gold hoops in University College London, (fig. 485)

153 *Ibid* pl. 8, 3.

154 *Ibid* pl. 20.

155 *Ibid* pl. 18, 1-2.

156 Berge and Alexander 1985: no. 46 = Chicago Field Museum of Natural History no. 24998. 1-2.

157 Castellani 1884: no. 125.

seem to be missing bezels which, on the basis the Castellani and Chicago bracelets, might have been of this type. The bracelets with serpentine hoops in Athens and New York (figs. 463 and 464) might be related.

Byzantine hinged bezel bracelets

This class of Byzantine bracelet might be thought of as the successors of the Roman hinged bezel and 'shrine' bezel bracelets. The best known examples consist of a wide hoop, often elaborately decorated, to which is attached by a hinge fastening, an ornamental square or circular bezel. Eight examples with known or probable Egyptian provenance are shown in figs. 486 - 491. Two pairs and a single example are from the so-called Asyût treasure (figs. 486, 487 and 490). The British Museum bracelet (fig. 488) is one of a pair from the Tyszkiewicz collection said to have been bought in Cairo, but which, according to Dalton were said to have been found in Syria.¹⁵⁸ The Egyptian origin is quoted by Froehner, the pair must have been separated when they left the Tyszkiewicz Collection, one finally reaching the British Museum, the other, presumably still in the Goluchów collection in Poland.¹⁵⁹ Garrucci makes no mention of the origin and Dalton's source for the ultimate Syrian provenance is unknown to me.¹⁶⁰ The bracelet in fig. 491 is in a private collection in Egypt,¹⁶¹ and an Egyptian origin can probably be assumed for the Benaki pair (fig. 489).¹⁶² The dating of the bracelets varies from the early fourth to the late sixth century AD.

The bracelet with the simplest hoop (fig. 496) has an elaborate stone-set bezel that compares closely with bracelets from Syria and elsewhere with pierced-work hoops of a type that can probably be considered to be fourth century - for example a treasure from North Africa which dates to the fourth century, after c. AD 324.¹⁶³ The arrangement of the stones on the Egyptian bracelet might be taken to represent a cross if we ignore the pearls on the corners - other bracelets with stone-set bezels are far more obviously crosses. The presence of a cross, if it is such, implies a date of after about AD 325.

The pair of bracelets from the Asyût treasure now in the Metropolitan Museum of Art, New York (fig. 487)¹⁶⁴ has an outer border of a peculiar type of ornamented tube work which is, to my knowledge, only paralleled by the construction of a ring in the Hadra treasure (fig. 494), and another unprovenanced ring once on the market (fig. 495). It seems unlikely that this unusual decorative motif would occur at disparate times. The Hadra treasure cannot date to much after the early fourth century AD, while the presence of the small cross in the pierced design on the back of the bracelets must

158 Dalton 1901: no. 279. British Museum AF 351.

159 Froehner 1897: no. 198.

160 Garrucci 1872: pl. 479, fig. 24.

161 Cairo 1944.

162 Segall 1938: no. 266.

163 Christies 1970: no. 202, most recently discussed in Buckton 1984.

164 MMA 17.190.1668/9. The bracelets are published as Dennison 1918: nos. 26 and 27.

mean a date after AD 325 or so (fig. 493). The style of the pierced work also supports a fourth century date.

On the basis of technique and form I would suggest a similar fourth, perhaps fifth century date for the Benaki bracelet in fig. 489 and also for that from a private collection in Egypt (fig. 491). It should be noted that the Benaki and New York bracelets all have six-pointed rosettes or stars in the centres of their bezels.

The more obviously iconographical nature of the British Museum bracelet (fig. 488), with its facing image of the Mother of God, indicates a later date, probably in the sixth or early seventh century AD. The presence of the Mother of God in this position might support the view expressed above, that the bezels on the earlier hinge-bezel bracelets also symbolised the birth place of the young god. The peacocks flanking a vessel on the open-work hoop are also reminiscent of the designs on many of the lunate pierced-work earrings of this same period. I do not know where the pair to this bracelet is. The bezels from a pair of bracelets of similar though less ornate form are in Cairo (fig. 492).

The stone-set bracelets as in fig. 490 are less easy to date. The style of the stone-settings could indicate anything between about AD 300 and 600. The pierced work on the back of the bezel has an open, scroll-like fluidity that is easily paralleled in other Byzantine jewellery from Egypt. It is very different in style and execution from the typically tighter, more intricate pierced work of most fourth century work from elsewhere in the Byzantine world. The pierced work on the bracelet can be compared with that seen in figs. 65, 284, 297 and 359).

Part of a bracelet from el-Ashmûnein threaded with emeralds is probably also to be considered in this section (fig. 27). The bracelet has always been considered to be a complete ornament, but microscopic examination of its construction, fastening and the presence of some patina-like discolouration (possibly from a silver hinge pin) indicate that a hinged bezel is missing. The construction cannot be equated with any bracelet of known date, although the use of beads threaded on wires held at intervals by loops is best known on sixth century Byzantine work, such as around the perimeter of earrings, on raised ring bezels, and on the bracelets in fig. 490. The good colour of the emeralds also suggests a date after the mid third century AD. The simplicity of the goldwork suggests to me a date nearer to the mid third century than to the sixth.

Another pair of stone-set bracelets from the Asyût treasure is of essentially hinge-bezel type although the hoop is composed of a more organic swathe of vine motifs (fig. 496). In design this bracelet falls between the rather baroque garishness of the early Byzantine jewellery and the more mannered regularity of the sixth century ornaments. Like many of the earlier bracelets, the bezel has a six-

pointed rosette design. More certain dating is, at present, impossible. The vine motif itself was popular throughout the Byzantine period. Petrie considered that these bracelets were probably made before AD 300,¹⁶⁵ but this is too early.

The most imaginative bracelet of hinge-bezel type is that shown in fig. 497.¹⁶⁶ This magnificent ornament, said to be from Hadra, has two leopards flanking a square bezel with a high calyx-like stone setting. The stone is now missing. The setting might have represented the lotus, birth place of the young god and a symbol of the Virgin Mary into modern times. Leopards are a common decorative motif in Byzantine metalwork - for example as legs on lamp stands. The pierced-work back of the bezel and calyx-like setting are both most easily matched in sixth to early seventh century Byzantine jewellery, and the mannered, naturalistic style of the ornament would also suit such a date.

Two closely related pairs of bracelets - quite possibly from the same workshop - are shown in figs. 498 and 499. The hoops are hollow tubes with embossed decoration while the hinged bezels are set with coins or imitation coins. The bracelets in Dumbarton Oaks (fig. 498) are each set with five coins,¹⁶⁷ while the pair from the Asyût treasure, now in Berlin (fig. 499), are set with medallions imitating coins.¹⁶⁸ The Dumbarton Oaks bracelets are said to be from the Fayûm or Oxyrhynchus but are quite possibly from the Asyût Treasure. Their coins give an earliest possible date of c. AD 615. Ross assumes the bracelets must have been made prior to the Arab invasion of AD 640. Both pairs of bracelets are decorated with small trefoil rosettes that closely relate them to a whole series of sixth to early seventh century goldwork from Egypt.

OTHER BRACELET TYPES FOUND IN EGYPT

Pompeian hemisphere type

A published gold double hemisphere motif in the Cairo Museum,¹⁶⁹ is almost certainly a section from one of the hemisphere bracelets best known from the Pompeian region, and not part of an earring as described by Vernier (fig. 500). There are also parts of two similar bracelets in Cairo though, seemingly, unpublished (fig. 501). A complete bracelet in the Benaki collection is composed of very similar sections to the Cairo examples (fig. 502).¹⁷⁰ The hemisphere type of bracelet has always been considered a uniquely Italian type, but the identification of three, if not four, from Egypt is of importance in our understanding of Egyptian-Pompeian connections.

165 Petrie 1920: p. 10.

166 Ross 1965: no. 47.

167 Ross 1965: no. 46.

168 Griefenhagen 1970: pl. 52, 5 and 6.

169 CM CG 52561.

170 Segall 1938: no. 184.

The two Cairo parts of the pair - they do not belong to the same bracelet since they both have hinge fasteners with the fastening peg - the small Cairo fragment and the Benaki bracelet all have the same acanthus-like decorative motif and twisted wire. This uniformity is missing in the Pompeian examples. The Cairo fragmentary pair have peg and knob fastening while the Benaki bracelet has a split pin fastener. This might suggest different workshops. The peg with knob type of fastening is usual on the Pompeian bracelets, and survived at least into the third century AD.¹⁷¹ On the Cairo fragmentary pair, the hemispherical sections are linked to each other by unsoldered rings so that final assembly needed no potentially damaging soldering.

The type clearly dates to the second half of the first century AD. I know of no representations of these bracelets in wear on Romano-Egyptian funerary masks or portraits.

Bracelets with Herakles knot motifs

The use of the Herakles knot as a centrepiece for necklets or bracelets dates back at least as far as the Middle Kingdom in Egypt. The knot is believed to have had fertility significance. The presence of a small figure of Eros or Dionysos in the centre of several Hellenistic knots reinforces this view. One myth has Dionysos being born from two knotted snakes and, indeed, some of the knots are deliberately intended to represent knotted snakes.

A fine Herakles knot bracelet - or more probably armlet - from Egypt was included in the Tûkh el-Qarâmûs treasure (fig. 21).¹⁷² This is of typical Hellenistic construction, c. 3rd century BC. Vernier says that the palmette and filigree reflect Persian influence, but both these features are purely Hellenistic and the type of twisted wire filigree actually harks back, via the Greeks, to Etruria, not Persia. The knot has a central figure of Eros and is held to the hoop by gold wire. This joint is not intended to be opened by the wearer and the ornament was probably worn on the upper arm.

Another knot bracelet that has been considered to be of Ptolemaic date is one in the Metropolitan Museum of Art, New York (fig. 503).¹⁷³ This consists of two hoops side-by-side, each composed of four tubes twisted together. These coiled hoops are tacked-soldered at irregular intervals and each has a central square-section 'tension' wire. The bracelet does not open. A Ptolemaic date is possible, but on constructional grounds I would prefer a Roman date. The tubular twisted hoop with central 'tension' wires and cylindrical collars suggests close links with the hinge-bezel bracelets discussed above, and thus a third century AD date.¹⁷⁴

171 For example they occur on some hinge-bezel bracelets, e.g. CM JE 35678.

172 CM CG 52093.

173 Lansing 1940: fig. 18.

174 Also compare Segall 1938: no. 193 and *BMCJ* 2767.

Tapered hoops

An armlet form commonly shown on first century AD masks consists of a tapering hoop, the front of which is decorated with an inset stone or other motif (fig. 310). These are shown in wear in conjunction with other first century jewel types including serpentine bracelets, ball earrings and various types of rings.

From Egypt itself, extant examples are almost unknown. One supposedly formed part of the Tùkh el-Qarâmûs treasure (fig. 504).¹⁷⁵ This has the bust of Isis and, to my mind, might better be dated to the later-Hellenistic if not the Roman period. This would not be the only goldwork in the treasure to be other than early-Hellenistic. A pair of simple gold armlets of hollow tapered form, from Egypt, is in the Benaki Museum.¹⁷⁶ These have neither depiction nor stone setting, but bear the inscriptions *klauaprokl?* in punched dots. I cannot hazard a guess as to the meaning of this, although a connection of the first part with *klausis*, 'weeping' or 'mourning', might be possible - in which case the bracelets must have been funerary, which would be consistent with their thin sheet-gold construction.

This general armlet type is frequently shown on first century AD Egyptian funerary masks and actual examples are well known from the Pompeian region.¹⁷⁷ The most recently published examples are from Oplontis and excavated in villa 'B', possibly the villa of L. Crassus Tertius.¹⁷⁸ Six were found in situ on skeletons. Three of these contain, or had contained, stones. The other two were decorated with applied oval appliqué of embossed sheet gold with a beaded wire surround. These appliqué both depicted Eros and Aphrodite though in different poses. It would seem that the armlets were not always worn in pairs. The two examples with appliqué were found on separate skeleton - one on a left arm, the other on a right arm. One skeleton did wear one on each arm, set with emeralds; one emerald was in its natural crystal form, the other an oval cabochon. Another example, now missing its stone, was found on the left arm of a skeleton. All these armlets were made from sheet gold filled in at least one case, and probably all cases, with sulphur. As far as we can see from the Egyptian masks, some of these armlets were all gold, some were stone-set. In one case, one armlet is set with a red stone, its pair with a green stone.¹⁷⁹

These tapered bracelets were presumably mainly worn by women, but a white marble statue of Hermanubis from Ras es-Soda in the Alexandria Museum wears such a bracelet on his upper right arm. This sculpture is dated to the second century AD.

175 Now in the Ashmolean Museum, Oxford, no. 1926.98. See Hoffmann and Davidson 1965: no. 64.

176 Unnumbered and not in catalogue.

177 Breglia 1941: nos. 877 - 909 etc; Siviero 1959: nos. 231 - 237 etc.

178 d'Ambrosio 1987.

179 Chicago Field Museum of Natural History no. 30003.

Embossed hollow bracelets

This class of bracelet consists of hollow tubes of sheet gold with embossed relief decoration. There are two main types, those taking the form of a series of spheres - like enlarged beaded wire - and a second type which has a more massive and regular, usually 'D'-shaped, cross section. The surfaces are characteristically embossed with a variety of motifs including floral designs and masks. Both types of bracelet are recorded from Egypt and examples of this first type include one in Cairo (fig. 505)¹⁸⁰ and one in the Benaki Museum.¹⁸¹ This type is also widespread and provenances range from France to Syria.

The second type of bracelet is known in Egypt from one complete example and a fragmentary pair from Hadra (figs. 35 and 506).¹⁸² A more elaborate version is shown by the front part of a bracelet now in Berlin, which is said probably to come from Egypt (fig. 507).¹⁸³

These bracelet types were thoroughly studied by Belting-Ihm as part of the publication of a bracelet of the first type in the Römische- Germanisches Museum in Mainz.¹⁸⁴ To Belting-Ihm's list of parallels, we can add several of the second type of bracelet, mostly from Asia Minor, including a pair recently acquired by the British Museum,¹⁸⁵ another pair recently on the market in New York, a single bracelet once on the market in New York.¹⁸⁶ and a pair in the Burton Berry Collection in Bloomington, Indiana.¹⁸⁷ Another pair, from Yugoslavia, is in Vienna.¹⁸⁸

Belting-Ihm proposes a long life for the type, starting in the second half of the third century AD and ending in the late fourth, perhaps even fifth century AD. This dating is plausible. The pair in Bloomington is supposedly part of a jewellery find that includes rosette, bar and drop earrings which are typical of the third to early fourth century AD, although the homogeneity of this 'find' is doubtful. The presence of the complete bracelet and the fragments of a pair in the treasure from Hadra, Alexandria supports an early date since this treasure included rings of third century type and third century coins. However the Hadra treasure also included a ring (fig. 494) that is easier to parallel technically in the early fourth century.

Belting-Ihm points out the close similarity between the embossed designs on some of the bracelets and that on some of the 'slider' beads on the multi-chain coin necklets (see ch. 8), which again points to a

180 CM JE 45286.

181 Segall 1938: no. 318.

182 Breccia 1932.

183 Greifenhagen 1975: pl. 35, 6-7.

184 Belting-Ihm 1963.

185 So far unpublished.

186 Ariadne 1983: no 99.

187 Rudolf 1973: no. 129.

188 Vienna 1973: no 279-80. Vienna KHM no. VII 846-7.

mid third to early fourth century AD date. Bracelets in the Beaurains treasure also strongly point to this same date range. A similar date is also indicated for the Baltimore bracelet on the basis of the Syrian treasure with which it was supposedly found.¹⁸⁹

The pair of bracelets now in the British Museum do include crosses among the shells, birds and leaves of the embossed decoration so, if these are indeed Christian crosses, a date after about AD 325 is indicated.

The only indication of far earlier dates are two bracelets which include coin-like motifs. A bracelet once in Lyons has a medallion said to depict Lucius Verus.¹⁹⁰ If so, this would indicate a late second century date - too early to my mind. The front part of a bracelet, possibly from Egypt, now in Berlin (fig. 507), has 'imitation' coins that depict Caracalla and Plautilla, thus of about AD 210. Perhaps we must assume that imitations of coins in jewellery were, like actual coins, a fashion from the second half of the third century AD, even though depictions of earlier rulers could be employed.

Miscellaneous

A gold bracelet consisting of hinged club-like form was in the Collection du Feu Omar Pasha Sultan, Cairo.¹⁹¹ Though this type has been considered to be Islamic, the same form in bronze with traces of gilding was found with a large quantity of other bronze 'scrap' in an amphora in a second century BC wreck off the coast of Israel.¹⁹² Club-like bracelets are also to be seen among the jewellery from Herculaneum, which thus predate AD 79,¹⁹³ and in the Petescia treasure now in Berlin.¹⁹⁴

A very fine pair of bracelets from Egypt is shown in fig. 508. These each consist of a hoop composed of two heavy serpentine wires, their intersections being covered by gold domes. The circular bezels on the front of each bracelet consist of round gold disks to which are applied busts of two female deities one with two ears of corn, the other with a modius. The disks are decorated with two concentric rows of beaded wires and four applied gold hemispherical domes. The bracelets weigh 65.2 g. and 66.2 g. and are made from gold about 94% pure (see ch. 3). The style of the busts certainly places these bracelets in the Roman period, the positioning of the domes on the disks recalls the domes on some of the third century AD Medusa necklets, while the massive and simple construction is more in keeping with the first century AD. The high purity might also favour an early Roman date. A cruder version of the same type of bracelet was on the London market in the 1960s (fig. 509).¹⁹⁵

189 Greifenhagen 1970: pl. 60 (in text volume).

190 Fontenay 1887: p. 281. See also Lepage 1971: p. 5, fig. 7.

191 Omar Pasha Sultan 1929: no. 727.

192 Misch-Brandl 1985: no. 22.

193 Siviero 1959: no. 163, pl. 132a, b.

194 Greifenhagen 1970: pl. 58, 2-3.

195 Sotheby 1965: no. 79.

The rectangular plaque embossed with Romano-Egyptian deities, in fig. 510, might well be a bracelet since it was clearly attached by hinge fittings at each end. Although now flat, it was originally curved. The deities include the usual Isis, Nephthys and Harpokrates, in the centre, but these are flanked by two less usual gods - a human-headed one and a crocodile-headed one. Above the deities, and reaching down above the diminutive Harpokrates, is a serpent. The crocodile god is presumably Sobek, who was worshipped at a number of temples in Egypt. From its style and construction, this bracelet is of the Roman period, while the strong Romano-Egyptian syncretistic iconography might point to an earlier rather than later Roman date.

The most spectacular and unusual Romano-Egyptian bracelets I know of are the pair in fig. 511. These each consist of three bands separated by small dolphins and other motifs. The fronts are set with domed greenish glass and the backs have hinged sections closed with sliding split-pin fasteners. The style and construction are Roman, perhaps third century. These bracelets are in the same private collection as the beautiful necklet in fig. 325 and a common origin is quite possible - they certainly share some stylistic features. A very similar bracelet, though of flimsier construction and said to be from Asia Minor, was on the market in London in 1990.

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