Altes Museum Ancient Gold Jewellery

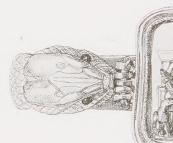
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Altes Museum Ancient Gold Jewellery



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Museum Ancient Gold Jewellery

A selection from the permanent exhibition

Gertrud Platz-Horster

with photographs by Johannes Laurentius

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English translation by Michael Vickers and Mira Hofmann

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Introduction

The works of ancient goldsmiths are a sight to feast one's eyes on, and photographic enlargements reveal their enchanting perfection. This book is motivated in part by the delight felt in the beauty of the objects, and in part by admiration for the way the difficulties in working precious metal have been overcome. In 1998 the jewellery collection was once again displayed in the Altes Museum (Fig. 1), and it is hoped that the book will help visitors towards a deeper appreciation and understanding. In 1970 and 1975, Adolf Greifenhagen published the first complete catalogue of the ancient gold jewellery in Berlin, a two-volume *magnum opus* entitled *Schmuckarbeiten in Edelmetall*, illustrated with first-rate plates made by the process of photolithography. The Antikensammlung subsequently made some important new acquisitions:¹ these included (in 1980) the gold jewellery from Tarentum (No. 42), and (in 1986) the jewellery from the grave of a woman from Haftashan (No. 49). Questions concerning technical aspects

Fig. 1 The Gold Room of the Antikensammlung in the Altes Museum on the Museumsinsel opened 30th May 1998

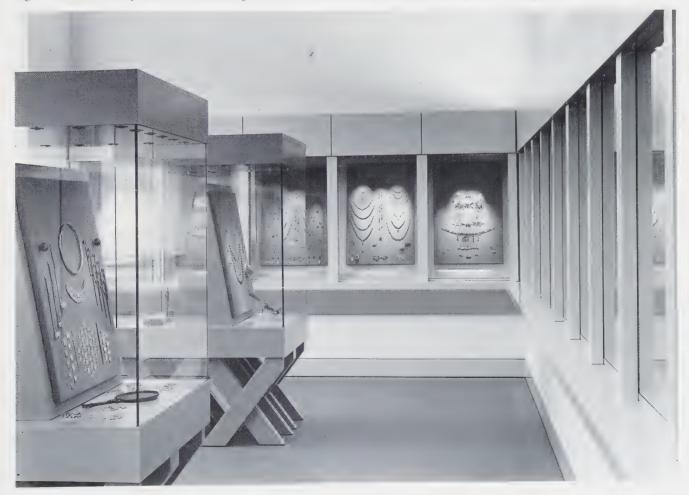




Fig. 2 The collection of Friedrich L. von Gans on the upper floor of the Altes Museum, 1916 to 1939

of goldsmiths' work, as well as the detection and evaluation of forgeries or imitations (for example in the case of the Etruscan jewellery Nos. 19–24),² are today more to the fore. Recent excavations in, for example, northern Greece have led to new insights (Nos. 12, 40), as have the researches of younger scholars (Nos. 1, 28) and the publication of learned catalogues of international exhibitions mounted after the fall of the Iron Curtain (in particular of finds from the Black Sea area) and of *catalogues raisonnées* of major collections.

The gold jewellery in the Berlin Antikensammlung spans a period of three millenia. It begins with the Early Helladic hoard from the Thyreatis in the northeastern Peloponnese (No. 1) and ends with the late antique treasure from Assyut in Upper Egypt. As early as 1764, Frederick the Great acquired some ancient gold rings (No. 32 right) together with the gem collection of Baron Philipp von Stosch. The earliest actual purchase after the establishment of the royal museum in 1830³ came from Etruria, followed by jewellery from Asia Minor, from the islands of Melos, Rhodos and Cyprus, and from Athens, Eretria and Corinth. In 1907 there came an important addition in the form of the acquisition of the Merle de Massoneau collection that originated in south Russia.

It was the donation of the Frankfurt industrialist, Friedrich Ludwig von Gans on 2 March 1912, however, which forms the real basis of the Berlin collection: the 1105 items in his collection encompass terracottas, glass (including the unique glass amphora from Olbia) and in particular gold jewellery; at the time, their value was estimated to be 1.62 million marks. The collection was developed over several years under the expert guidance of Robert Zahn, the director of the Berlin Antiquarium. The Gans collection occupied its own gallery in the Altes Museum between 1916 and the outbreak of the Second World War (Fig. 2).

During the war the Gans collection, all the gold jewellery and silver vessels, and whatever else was exhibited in the Antikensammlung, were taken to western Germany for safe-keeping, and after the war was over they were transferred to the Central Repository in Schloss Celle. There the jewellery collection was severely diminished as a consequence of the theft (which was never cleared up) of over 100 pieces from the von Gans collection as well as all 16 bracelets and torcs from the Petescia treasure, a total weight of øver 3 kilos of gold (see No. 50). After the return of the museum objects sent for safe-keeping, the Antikenabteilung reopened in Spring 1960 in the western Stüler Building opposite Schloss Charlottenburg. Here, a selection of precious objects made of gold and silver was shown in slender showcases on the upper floor (Fig. 3). When the Museum was completely reorganised in 1974, it was possible to make use of the vaults in the basement, and beginning in 1976 the three-roomed Treasury was set up to house Greek, Scythian and Etruscan jewellery (Fig. 4), as well as Roman and late antique jewellery together with the silver hoard from Hildesheim. In 1988 a fourth room was added for the newly acquired vases and gold jewellery from Tarentum (No. 42).

Germany (and as a consequence the Staatliche Museen zu Berlin) was united on 3 October 1990, but the exhibition remained in Charlottenburg until 30 April 1995. On 30 of May 1998 the Antikensammlung could show its reunited holdings in a new setting, but once again in its traditional home, in the Altes Museum on the Museumsinsel. The two side rooms on the *piano nobile* of the Schinkel building, formerly known as the



Fig. 3 Gold and silver in the Antikenabteilung in the western Stüler Building, Charlottenburg, 1960 to 1974

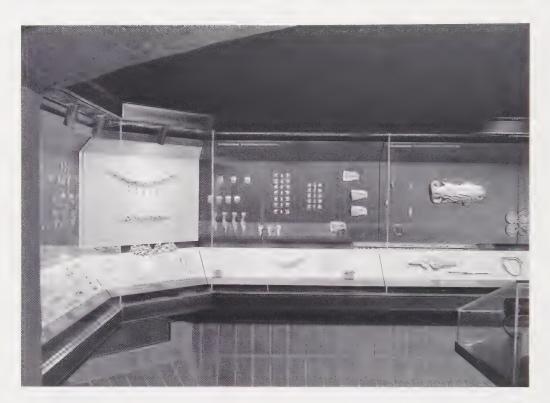


Fig. 4 The Treasury of the Antikenmuseum in the western Stüler Building, Charlottenburg, 1976 to 1995

Etruscan Room and the Greek Room, were dedicated to the presentation of the early jewellery (Section 8), as well as the silver find from Hildesheim and the three Egyptian silver complexes (Section 20). The Roman and late antique jewellery, apart from a case with the grave goods of a young woman (Section 20.7) and another containing the gold treasure from Assyut (Section 20.9), must remain in the safe until the renovation planned for 2005 and use of the entire building by the Antikensammlung.

This picture book describes a selection of the jewellery of the third millenia BC to the time of the emperor Augustus exhibited in the Gold Chamber (Section 8). The contents of the fifteen wall cases are chronologically arranged according to cultures, and in part by forms. Tomb groups are exhibited as completely as possible: *e.g.* Thyreatis (No. 1), Athens (No. 2), Camirus (Nos. 6–8), Ephesus (No. 10), Cetona (Nos. 21–22), Capena (No. 24), Petescia (No. 50). Larger assemblages are to be found in the freestanding double showcases: *e.g.* Vettersfelde (No. 25), Maikop (Nos. 26–27) – between them the largest holdings of Scythian gold outside Russia or Ukraine –, Schwarzenbach (No. 28), Tarentum (No. 42) and Haftashan (No. 49).

We hope that readers of this book will come to appreciate the timeless beauty of ancient jewellery, whether of the originals on exhibition, or of those illustrated here in colour and described in the text.

Berlin, 3 October 2000

- Nos. 12, 17, 23, 30, 37, 42, 49, and 52, below.
- ² These discoveries have come about thanks to close collaboration with the conservators and goldsmiths H.-U. Tietz, E. Formigli and B. Niemeyer.
- ³ For a detailed history of the Berlin jewellery collection, see Greifenhagen I, 9 ff.





1 The Thyreatis Hoard

Early Helladic, c. 2400–2200 BC Tin-free mountain gold Inv. 30987,1–7. Presented by Theodor Wiegand 1925 Section 8.1

The Thyreatis is an area east of Tripolis in the Peloponnese, where three rivers debouch into the Argolic gulf. Some Early Helladic to Mycenaean sites are known on the bay of Astros as well as inland. Theodor Wiegand had probably already acquired the gold hoard "on the spot at first hand" before the First World War.

The find includes not only the jewels exhibited here, but also eight small rosettes made of gold foil, a squashed disc bead, and four individual beads as well as 14 further fragments of gold foil and wire [Inv. 30987,8–13]. This scrap metal and the individual beads and rosettes mark the find out as a gold hoard, probably derived from robbed burials of an earlier date. It is unique on the Greek mainland for the early Bronze Age.

1 Detail (decorative pin with the head of an antelope)

The 64 cm long chain, made up from 77 beads consisting of discs within rings, 16 wire beads and 23 pendants with axe-shaped ends, has been put together in modern times; while they do appear to belong together, the precise arrangement is uncertain. The discs within rings and the hanging chains recall the strings of beads and diadems from "Treasure A" of the large gold hoard which Schliemann excavated at Troy between 1872 and 1890. There are even closer parallels between the individual parts of the chain and finds from Crete and the Cycladic islands. The chain was probably worn as a head decoration, and the vertically hanging short chains with their gold foil pendants will have adorned the forehead, temples and back of the head of the wearer.

The individual pendants, shaped like buttons, cones, droplets, juglets and cross-spirals, probably once occupied the central position of longer metal chains set with precious stones. It is here too that we find the closest comparisons with finds from Crete.

The 13.5 cm long decorative pin surmounted by the



head of an antelope seems to be the alien among the gold find from Thyreatis; perhaps it was imported from Anatolia. The stylized animal's head with its inward curving horns is solid cast with engraved details, while the shaft of the needle has been worked by hammering. Publ.: Greifenhagen I 17ff., pls. 1–2; Antikenmuseum 1988, 297, Case 22,2, Nos. 6–12; C. Reinholdt, in: Jdl 108, 1993, 1–41.

Cf.: W.P. Tolstikow/M.J. Trejster, Der Schatz aus Troja. Exhibition catalogue, Moscow 1996, 80 ff., 208 f., Greek Jewellery 1997, 33, No. 15 (earrings from Poliochni, Lemnos).



2 Heavy fibula

Middle Geometric, 850–820 BC From a grave in Attica Inv. 30553. Presented in 1916 Section 8.2,10

This heavy fibula (clothing pin) has an identical counterpart (they are respectively 8 and 7.8 cm long): the pair were found in 1908 in a grave in Attica, according to information provided by the dealer, together with numerous clay vessels of Geometric style, scarabs and a Phoenician bronze bowl. The contents of the grave have been dispersed.

The fibulae are hammered from solid gold (they weigh 44.10 and 44.02 grams respectively). In each case, the points at which the rhomboid bow was at-

tached to the catch-plate (on which the pin rests), and to the spiral spring and pin, were concealed by means of a sleeve, the seams covered by a row of granules and framed with turned wire.

The bow, catch-plate and stem of each is richly decorated with incised parallel bands of zig-zags, lozenges, and "running dog" and criss-cross patterns. Geometric decoration such as this lies behind the name given to ceramics that came to light 130 years ago in graves in Athens and Attica, and consequently to a whole epoch. After the fall of the Minoan-Mycenaean empires, in the "age of Homer", Attic craftsmen clearly relearned the technique of working gold from Babylonian and Phoenician goldsmiths.

Publ.: Greifenhagen I 21, pl. 4,4–5; Deppert-Lippitz 1985, 56, fig. 22; Antikenmuseum 1988, 299, Case 22,3, No. 3; L'oro dei Greci 1992, 241, No. 43.

3 Diadem with animal frieze

Late Geometric, c. 720 BC From Athens Misc. 7901 = GI 308, acquired 1884 Section 8.2,8

Figural representations only appear in the latest phase of Geometric art. Friezes with wild animals and fabulous oriental creatures attest to continuous contact with the advanced cultures of the Near East. Just as on pottery, gold foil was decorated with figured panels, pressed from behind into the thin metal. Occasionally the mould might slip, as this diadem shows.

The gold strip is 25.5 cm long and *c*. 3 cm wide, but only the rounded-off left end with a hole for mounting is preserved in the original state; two-thirds of the animal frieze on the right is missing. The two square panels with a helmeted lion-woman mark the centre of the diadem; beneath them can be seen the heads of horned goats similarly confronted. To either side there are long rectangular panels containing three groups of lions attacking grazing deer.

It is clear from the broken lines of the frames that the foil slipped several times during the moulding process. Above and below, the gold foil is decorated with concentric semi-circles. Another gold strip, found in 1973 in the cemetery near Anavyssos, Attica, (L.: 41, W.: 2.7 cm) seems to have been stamped using the same mould, or at least part of it was.

Such gold bands are only found in graves, and served as diadems for the deceased, or occasionally as chin- or arm-bands. Five examples were found in 1872 in a tomb in Piraeus Street in Athens [Nos. 1–5 in this showcase, above left = GI 303–307]. Although there is similar ornamentation on pottery vessels from Rhodes and the Cyclades, these gold foil bands seem to be an original invention of Attic goldsmiths.

Publ.: Greifenhagen I 20, pl. 3,5; Antikenmuseum 1988, 299, Case 22,3, No. 12; D. Ohly, Griechische Goldbleche des 8. Jahrhunderts v. Chr. (Berlin 1953) 34f., A 17 fig. 18, 115 f., pl. 9,4; P. Themelis, AM 106, 1991, 45; LIMC VI,1 (1992) s.v. Ker, No. 15 (R.Vollkommer); L'oro dei Greci 1992, 243, No. 50.

GI 303–307 = *Greifenhagen I* 19*ff.*, *pl.* 3,1,2,4 and *pl.* 4,2–3. *Antikenmuseum* 1988, 299, *Case* 22,3, *No.* 7–11.

Cf.: Themelis, op. cit. 37ff., pl. 2 supplement 1–2 (from Anavyssos, Attica). Greek Jewellery 1997, 71, No. 51 (from the Kerameikos in Athens).

On the lion-woman, who later gives way to the Theban sphinx, see R. Vollkommer, AM 106, 1991, 47ff.; idem, LIMC VI,1, s.v. Ker.





4 Three spiral hair ornaments

Late Geometric, 750–700 BC Said to be from a grave near Corinth Misc. 7751,8–9 = GI 403–405. Acquired in Athens in 1882. Section 8.2,15–16

On the basis of grave contexts, it is thought that these spirals made from smooth rounded wire tipped with thin discs (L.: 3 cm), were the pendants of earrings. It is however the case that rings or hooks for attachment to the ear lobe have not so far been found with such spirals (which are well known in Corinth and the surrounding neighbourhood). It is in any case difficult to see how a triple spiral could balance on such a hook. Instead, the roughened surface of both ends of the wires, as well as comparison with later Etruscan spiral hair ornaments (see No. 15, below) give rise to the assumption that the gold spirals served to hold and decorate long strands of hair at the temples. Their low weight (2.86, 5.55 and 5.49 g respectively) would allow both functions.

The ornament of the gold jewellery is limited to a simple scratched cross on the upper surface of the discs. The spiral of one piece (L.: 4.7 cm) is broken; the loose wires were bent straight and wound around each other at a later date.

Publ.: Greifenhagen I 21, pl. 4,7a-b; Deppert-Lippitz 1985, 60, fig. 26; Antikenmuseum 1988, 299, Case 22,3, Nos. 5–6; L'oro dei Greci 1992, 245, Nos. 57–58.

Cf.: *Greek Jewellery* 1997, 71, No. 50 (from Perachora near Corinth).



5 Sheet gold overlay of a double disc fibula

7th century BC Said to be from Greece Inv. 30894. H. Dressel bequest 1920; formerly A. von Lanna collection Section 8.2,13

This overlay (L.: 10 cm) was cut from quite thick gold foil and was originally attached to a double disc fibula, perhaps one made of bronze; the bonding was secured by folding the edge of the sheet gold over the fibula. The material consists of 69 % gold, 29.5 % silver and 1.3 % copper. In the centre of the back of the undamaged disc, a rivet with remains of bronze is still preserved. The gold foil was thus an overlay for a version of the Greek "spectacle fibula".

The two discs are richly decorated: around a central boss are pairs of ever-increasing concentric circles each enclosing friezes with dots: successively 10 bosses, 17 or 18 dot-filled circles, and 32 bosses. The patterns were applied freehand to the sheet metal by means of a punch from behind; as a result the spaces between the bosses and the dot-filled circles vary. The space between the discs is decorated with a perpendicular zigzag-pattern tipped with dot-filled circles.

Heinrich Dressel acquired the gold foil on 28 March 1911 at the Berlin sale of the collection of Baron Adalbert von Lanna of Prague; after Dressel's death in 1920 it was bequeathed to the Berlin Antiquarium. Recently, it was assumed that the gold overlay was identical with a gold fibula discovered on 19 October 1856 in Salzberg near Hallstatt (Upper Austria) in Cremation Burial 505, which Archduke Ferdinand Maximilian (who happened to be present) had taken off with him. The drawing published by E. von Sacken in 1868 shows great similarities with the Berlin specimen, without however the damage to one of the discs and the distinct nicks on one side of the dividing strip; the Salzberg specimen has respectively 9 and 10 bosses on the inner circles of the discs, then 16 dot-filled circles, and 28 bosses in the outer row, all regularly spaced. The dot-filled circles surround three concentric lines, the row of tiny dots around the central boss is missing, and the central space is decorated with a band of crosses. A water-colour in the official excavation log shows 10 internal bosses, 19 dot-filled circles and 35 outer bosses, while a drawing in the excavation log shows 10, 15 and 28.



6

In view of the singularity of the Berlin gold overlay we might perhaps regard these inconsistencies as vagaries of the draughtsmen. It is however inconceivable that the Berlin overlay ever supported a pin of the kind that is shown in all the drawings of the back of the fibula from Hallstatt: the sheet gold is too thin ever to have supported a pin without a metal base. In addition, the turned edge and the rivet unambiguously bear witness that such a strengthening element did indeed exist.

It is difficult to pinpoint the Berlin overlay in either place or time: it might be either Celtic work of the early Hallstatt period or a Greek work of between 650 and 550 BC.

Publ.: Greifenhagen I 25, pl. 6,7; Deppert-Lippitz 1985, 87, fig. 42; Antikenmuseum 1988, 299, Case 22,3, No. 1; L'oro dei Greci 1992, 246, No. 61.

Cf.: E. Freiherr von Sacken, Das Grabfeld von Hallstatt in Oberösterreich und dessen Alterthümer (Vienna 1868) 22, 64, pl. XIV,14; C. Eluère, Les princes Celtes et la Méditerranée. Conference held in association with the Paris exhibition 1987 (1988), 199ff.; eadem, Das Gold der Kelten (Munich 1987) 88; B. Glunz, ArchKorrBl 24, 1994, 283–288.

6 Two disc pendants

Late Geometric, c. 750–700 BC From Camirus on Rhodes Misc. 6486–87 = GI 330–331. Acquired in 1875 Section 8.3,2

The two discs made of thin gold foil (D.: 6.3 and 6.2 cm respectively) form part of a necklace to which the pendant in the form of a half-moon on a ring also belongs (GI 224, in the same case, above left). The discs were threaded by means of the hole on the upper edge of the broad tongue-like extension. The "tongue" is decorated with vertical lines, while the left disc is covered with a central boss, and two rows of zig-zags set within concentric circles. The latter are in turn filled with small dots. The effect was achieved by means of impressing the surface from the front, and with punches from behind. At the centre of the right hand disc there is a six pointed star within a border of dots, surrounded by concentric circles filled successively with birds, zigzag and cable patterns.

Such gold discs are only found on Rhodes, and were clearly used as jewellery for the dead alone. Closely comparable pieces have been found on Cyprus and on the west coast of central Italy. The common ancestor of these sun discs and moon pendants, however, is probably to be sought in the Near East where they were very common from the second millenia onwards. Knowledge of them was probably transmitted to Greek and certral Italian goldsmiths through the agency of the Phoenicians at the end of the Bronze Age.

We see here in microcosm the repertoire of Geometric ornament, familiar from contemporary pottery: friezes of birds (? ducks) also occur on Late Geometric clay vessels from Rhodes and the islands of the Cyclades.

Publ.: Greifenhagen I 27, pl. 7,6–7; Laffineur, AA 1975, 305 ff., figs. 1–2; F.-W. v. Hase, HambBeitrArch V2, 1975, 124, n. 124, pl. 22, bottom right; Deppert-Lippitz 1985, 69, fig. 31a; Antikenmuseum 1988, 301, Case 22,4,1a, Nos. 2–3; L'oro dei Greci 1992, 248, No. 73–74.

7 Decorative plaque with "Mistress of the Beasts"

Early Archaic, c. 650 BC From Camirus on Rhodes Misc. 8943. Acquired in 1900 Section 8.3,8

Camirus was one of the three city-states of archaic Rhodes. The northwestern city shared the island's influence in the Aegean with Ialysus in the northeast and Lindos in the south. The Doric population of the three city-states were part of the so-called Dorian Hexapolis, an alliance formed together with the nearby islands of Cos and Cnidus, and with Halicarnassus on the south-west coast of Asia Minor. Thanks to its geographical situation, Rhodes functioned as a cultural bridge between Cyprus, Asia Minor and Greece.

The rectangular decorative plaque from Camirus (3.7 x 3 cm) shows a frontally standing goddess with large, outspread wings in relief; in each hand she holds a lion by the tail. She is the "Mistress of the Beasts", an oriental goddess related to the Greek Artemis. Her garment, the peplos, is belted high up the waist, and is skilfully decorated with granulation: zigzags above the waist, and diagonal swastikas below. The sides of her long wig too are granulated with zigzag lines, and over her forehead she wears a diadem. Details of the feathers of the wings and the muzzles of the lions are picked out with rows of granulation, and clusters of granules decorate the lions' manes and bodies. The field is framed with strapwork and beaded wire. The jewellery was attached by means of a hook surmounted by a round boss fixed to the upper part of the back.

A 13-petalled rosette projects slightly beyond the plane of the plaque; each petal is framed with beaded wire and has a small gold sphere at the centre. From the centre of the rosette there emerges a lion's head made from gold foil in high relief, and through the open jaws can be seen its perfectly formed teeth and tongue. From the lower edge of the plaque there hang five pomegranates (a sixth on the right is missing): the middle four from strips soldered on to the back, the one on the left on a simple wire loop.

There is a brooch that differs in only small details, and made from the same mould, in the Ashmolean Museum in Oxford. Two plaques with similar motifs, but more simply made, are to be seen in here the same case [No. 7]. They all come from Camirus, as do yet more plaques in the British Museum in London, the Museum of Fine Arts in Boston, and the Musée du Louvre in Paris. In all, seven moulds of the "Mistress of the Beasts" can be differentiated, and they were all used in an extraordinarily productive goldsmith's



workshop at Camirus in the second half of the 7th century BC.

The oriental "Mistress of the Beasts" attests to the direct influence of Assyrian cults, and of the centuries old Assyrian tradition of gold working, on Rhodian arts and crafts. The Assyrian empire controlled the Near East including the Levant, from the early 9th century BC down to its fall in 612 BC. Its influence on early archaic Greek art was so strong that this epoch is also called "orientalizing".

Ten years ago Iraqi archeologists discovered in the north-west palace of the royal city of Nimrud several undisturbed chamber tombs of Assyrian queens. Among very rich grave goods – bowls, cups, jugs of pure gold, adornments made of gold and precious stones - was a high crown, its centre decorated with a row of fourwinged females half human, half animal, above a series of poppy-buds and poppy-flowers. It was found in Tomb III, which was clearly in use for more than 100 years between c. 850 and 750 BC. The complex gold working technique, as well as the fourwinged hybrid creature made from hammered

gold foil, give an impression of the eastern models which also lie behind the five gold plaques with a "bee goddess" from Camirus [No. 9].

Publ.: Greifenhagen I, 28, pl. 9,1.5.7; Antikenmuseum 1988, 301, Case 22,4,1a, No. 6; Laffineur 1978, 18f., 33ff., 192, No. 3, pl. I,3–4; Deppert-Lippitz 1985, 100 f., pl. V; Benaki Collections 1999, 92, fig. 50.

Cf.: Brooch in Oxford G. 441. Laffineur 1978, No. 91, pl. XI,1. –

Section 8.3, No. 7 = Misc. 8944. Greifenhagen I, 29, pl. 10,1; Laffineur 1978, No. 4. – Section 8.3, No. 9 = Misc. 8946. Greifenhagen II, 28, pl. 9,6; Laffineur 1978, No. 6. – M.S. Basim Damerji, "Gräber assyrischer Königinnen aus Nimrud", JbRGZM 45, 1998 [1999], 3ff.

8 Two plaques with centaurs

Early Archaic, 650–625 BC From Camirus on Rhodes Misc. 8945. Acquired in 1900 Section 8.3,6

These two decorative plaques (4.4 x 3.2 cm) were beaten out over the same mould; they each show a centaur holding up its prey, a fawn, in its left hand; he holds the right hand in front of his chest. The hybrid creature is represented as a naked man wearing a loincloth, with the body and hind-legs of a horse behind.







The large head with its long stepped wig, and the upper part of the torso are shown frontally, while the part below the waist is in profile. A simple stamped edge frames the picture.

There is a smooth, pierced, "tongue" on top of each plaque, to which a deeply curved rosette is fastened: these were cut out free-hand and chased, in one instance with 12 petals, and the other 13. At the side of the "navel" are two holes for attaching the plaques.

Fifteen plaques with centaurs are so far known. All come from Camirus, and all are formed in the same mould. The framing of the pictorial field varies, and some plaques were provided with loops so that they could be lined up on a necklace. After all the careful work of moulding the image, the Rhodian goldsmith has omitted any further granulated or filigree ornament of the kind we saw in the "Mistress of the Beasts" plaque. The twist of the body and the position of the feet show the beginning of motion, a phenomenon that can also be seen in the contemporary "Daedalic" art of Crete and which marks the start of Greek large-scale sculpture.

Publ.: Greifenhagen I, 28 f., pl. 9,2–4; Antikenmuseum 1988, 301, Case 22,4,1a, No. 4; Laffineur 1978, 193, No. 5, pl. II,1 and 3; Deppert-Lippitz 1985, 99, fig. 50; L'oro dei Greci 1992, 249, No. 79.

Cf.: Laffineur 1978, 22, 66 ff., Nos. 12–17, 43–45, 99, 101.

9 Ear pendant with griffin heads

Early Archaic, 650–600 BC Found on the island of Melos GI 141 = Misc. 1845 S. 94.1. Acquired in 1845 from Brassier de St.Simon Section 8.3,10

Here, the goldsmith took a thick piece of wire and formed a long loop and then bent it back at the ends (H.: 6 cm); the elaborate terminals consist of (from the bottom upwards) two small mouldings separated by a fluted node, then a disc decorated with granulated zigzags or lozenges framed by tiny spheres; crowning all is a griffin-head beaten out from sheet gold. The griffins look outwards, their jaws are wide open, and the points of the projecting tongues turn ever so slightly upward. The tongue and the erect ears, made from gold foil, are added separately. Both heads are richly decorated with tiny gold granules, and on the neck there are two spirals of applied wire, as well as granulation. On the forehead is a crowning knob, the surface of which is covered with minute granules.

Scattered clusters of three – or seven – tiny granules, and upturned gold foil tongues in open jaws also occur on gold rosettes with griffins' and lions' heads from Melos now in the National Archaeological Museum at Athens. They were probably originally fastened onto a leather diadem. "Melian rosettes" are also known with human heads, with bulls' and snakes' heads, and with complete birds and bees. Such productions, together with our griffin-head ear pendant, and the looped ear



pendant with a rosette [No. 11 in this case], testify to the high standing of the goldsmith's art on the Cycladic island in the early archaic period.

The apotropaic griffin heads with forehead knobs, upright ears and pointed tongues recall the protomes on the large bronze cauldrons at the Hera sanctuary in Samos [Section 5.1].

Publ.: Greifenhagen II, 46, pl. 38,7–8; Antikenmuseum 1988, 301, Case 22,4,1a, No. 11; Laffineur 1978, 139ff., 231, No. 203, pl. XXIII,4; Deppert-Lippitz 1985, 108, fig. 57; L'oro dei Greci 1992, 250, No. 88.

Section 8.3, No. 11 = GI 140. From Melos. Greifenhagen II, 46, pl. 38,9; Antikenmuseum 1988, 301, Case 22,4,1a, No. 12; Laffineur 1978, 233, No. 204, pl. XXIII,5; Deppert-Lippitz 1985, fig. 58; L'oro dei Greci 1992, 250, No. 87.

Cf.: Greek Jewellery 1997, 72, No. 52; Benaki Collections 1999, 92, figs. 51-52; Laffineur 1978, Nos. 117ff.; R. Hampe/E. Simon, Tausend Jahre Frühgriechische Kunst (Munich 1980) 209, fig. 326; Deppert-Lippitz 1985, 106, figs. 54-56, 59, pl. VI.

10 Hawk fibula

Early Archaic, 650-600 BC "From a grave in Ephesus" Inv. 1963.6. Acquired on the art market in 1963 Section 8.3,3

This hawk fibula (W.: 6 cm) is said to have been found in a woman's grave together with two pairs of small earrings [No. 4] and two hair rings [No. 5], which are in the form of a pair of knuckle-bones (*astragaloi*) soldered together. Other grave goods included a bronze mirror with an engraved animal frieze, and three East Greek pottery perfume vessels in the form of a ram, a duck and a pomegranate.

The gold objects are made out of pale gold, the metal known as electrum, extracted in nearby Lydia. The fibula consists of two pieces of gold foil. The top piece was hammered out, and the edge bent back 2–3 mm; a pin and a catch are fixed on the flat back piece. The right wing of the hawk is somewhat scorched and bent.

The bird of prey hovers with its spread wings decorated with double rows of zigzag granulation; its breast is covered with an arrangement of granules laid in a network of shallow grooves; the legs and claws are likewise marked by rows of granules. The beak and eyes are similarly treated, and over the forehead are triangles done in the same technique. The whole is edged with a double row of granulation.

Similar gold hawk fibulae were found in the foundation deposit of the "Artemision" in Ephesus, built *c*. 560 BC by Croesus, king of Lydia. The connection between the bird of prey and Artemis goes back to her association with the ancient Anatolian goddess Cybele, worshipped throughout Asia Minor as the "Great Goddess". The Berlin hawk fibula is the largest and most carefully manufactured one of its kind. Seven silver fibulae of the same type belong to a 20 piece treasure trove from western Asia Minor in the collection Burton Y. Berry; they are simpler in form, but will have likewise been created in an Ephesian workshop.

Publ.: Greifenhagen I 28, pl. 8,5; Deppert-Lippitz 1985, 97, pl. IV; Antikenmuseum 1988, 301, Case 22,4,1a, No. 14; A. Bammer, ÖJh 58, 1988, 1ff.

Cf.: Bammer, op. cit.; Rudolph, Legacy 71 ff., 75, No. 13. F.1-7.

11 Necklace with pomegranates

Late Archaic, 525–500 BC From Eretria on Euboea GI 11 = Misc. 8399. Acquired in 1893 Section 8.4,5

This necklace (L.: 27 cm) consists of twenty smooth and seven grooved hollow beads, between which six T-shaped members with pomegranates beneath (H.: 3.3 cm) have been placed in modern times. A constant feature is the use of beaded wire; it is used to frame the apertures of the grooved "melon" beads and of the cylinders, as well as the stalks and blooms of the pomegranates. The latter were made in two halves and then put together. The grooves on the surface of the pomegranates are filled with twisted wires. The two middle pendants are especially ornate, being decorated with a series of four tiny plaques, edged with beaded wire and each grouped around a tiny sphere.

Four-leafed rosettes such as these occur on the pendants of necklaces from graves in Eretria in the National Archaeological Museum at Athens. They too have hollow grooved beads and animal head pendants. A necklace in the Berlin Antikensammlung [GI 15 = Section 8.9,7] from Eretria is made up of similar elements. The pomegranate necklace seems to belong to the early production of this goldsmith's workshop on Euboea.

This is confirmed by the necklace worn by the *kore* wearing a *peplos* found in 1972 near Merenda in Attica, a statue of *c*. 540 BC by the sculptor Aristion of Paros and which once adorned the tomb of Phrasikleia. On this necklace there are three hollow pendants with pomegranates alternating with two bag-like pendants. Necklaces with T-shaped pomegranate pendants also adorn a Nike statue and another *kore*, both from Delos and made around 550 BC or in the last quarter of the 6th century BC. They seem to have gone out of fashion by the turn of the century at the latest.



Publ.: Greifenhagen II 15, pl. 4,1; I. Blanck, Studien zum griechischen Halsschnuck der archaischen und klassischen Zeit (Diss. Mainz 1974) 78, 125, fig. 8; Deppert-Lippitz 1985, 118, fig. 66; Antikenmuseum 1988, 303, Case 22,4,1b, No. 19.

Section 8.9,7 = GI 15: Greifenhagen II 15, pl. 4,2 and pl. 5,1–2; Antikenmuseum 1988, 302, Case 22,4,1b, No. 20; L'oro dei Greci 1992, 146, 258, No. 114; Benaki Collections 1999, 96, fig. 56.

Cf.: Deppert-Lippitz 1985, 120, *fig.* 68; *Greek Jewellery* 1997, 100, No. 88.

On Phrasikleia, cf.: E. Mastrokostas, AAA 5, 1972, 298 ff., 311, fig. 13; Blanck, op. cit. 80–1, note 292; F. Naumann, Archäologie in Deutschland 2, 1987, 30 ff.; E. Karakasi, Antike Welt 28, 1997, 509 ff., fig. 6 and colour plate with reconstruction of the painting (and bibliography).

On the Delian statues, cf.: G.M.A. Richter, Korai. Archaic Greek Maidens (1968) pl. 14a, 89, No. 149, fig. 476–9; Blanck, op. cit. 78–9.





12

12 Two pairs of banded earrings

Late Archaic, 510–500 BC Said to be from Chalcidice Inv. 1979.77 and 1979.78. Acquired on the art market in 1979 Section 8.4,2 + 4

These earrings are two pairs of an original four [Nos. 1–4] said to have been found together on the Chalcidice peninsula in northern Greece. These so-called "Macedonian bands", of which only a few were known (for the most part in Greek private collections), were once thought to be bracelets, or garters, or anklets. It was only when eight pairs of such bands were found *in situ* in the large cemetery of Sindos, west of Thessaloniki, in 1980–82, that it was possible to demonstrate that they were used as ear ornaments. The hook on the back of the decorative disc was inserted through the ear lobe and was linked to the bent up loop behind.

The Sindos earrings all come from women's graves, datable by rich grave goods to between 510 and 500 BC. Most are more magnificently worked than ours: the discs bear rosettes with clusters of petals adorned with filigree and granulated ornament; the connections between the discs and the bands consist of granulated hemispheres; the bands consist of two gold wires arranged in a cable pattern, on either side of two wires twisted together: these open up to a succession of circles of increasing size; the points of intersection are crowned by pyramids of tiny granules.

The Berlin examples are designed and decorated in a different way. Two pairs [Nos. 3–4] are made of repoussé gold foil (L.: 14.5 cm): in one case, the disc is decorated with a rosette and the tapering band is covered with overlapping concentric circles; in the other (left), twisted wire frames the disc and divides it into four; in addition there are granules of gold mounted either separately or in small groups. There are instead concentric semi-circles and the areas between them are stamped with fan-shaped arrangements of leaves. The other two pairs [Nos. 1–2] are narrower: one pair (L.: 12 cm) consists of gold foil, and the whole, disc and loop included, is edged with two twisted wires; once more, there are wires at right angles to each other across the disc, and the point of intersection is emphasized by means of tiny granules (right). The fourth pair (L.: 11.4 and 12.4 cm) was made from individual gold wires, soldered flat side by side, and which form an elongated loop at one end and a rounded disc at the other. The cross is placed diagonally over the open disc and is adorned with tiny granules; in one piece, this fragile arrangement is broken.

The Chalcidice group, to which most of the earrings of this type known to date belong, thus differs from the complex and sculptural Sindos group. The fashion seems to have been restricted to the north of Greece and to have been very short-lived.

Publ. Galerie H. Vollmoeller Zurich, Auction 1, 17–18 March 1975, 21, No. 124.

Cf.: R. Laffineur, BCH 103, 1979, 217ff.; idem, BCH 104, 1980, 358ff.; $\Sigma iv \delta o_{5}$ 1985, Nos. 58, 110, 150, 286, 321, 436, 476, 512 with reconstruction; L'oro dei Greci 1992, 180, 268, No. 143.4; Greek Jewellery 1997, 78–9, Nos. 56–7.

13 Gold band with sphinxes

Etruscan, c. 650 BC Inv. 1968.5. Acquired on the art market in 1968 Section 8.5,3

It is quite possible that this gold band (L.: 19.8 cm) originally served as an earring, since all the images are represented horizontally on the sheet metal, and the lower ones are upside down. A narrow tongue with a loop is soldered on at the top, and there is a hook at



the bottom: the tongue could have been pulled through a hole in the ear lobe, and hooked behind into the bent up metal sheet. Such bands, moreover, always occur in pairs; the opposite number of the Berlin band was acquired privately, and is still preserved, undamaged. In each case, the tongues are mounted slightly off-centre, and consequently the rectangular band when closed would have been somewhat narrower on one side.

The thin gold foil metal is completely decorated with pictorial panels and ornamentation: there are three square panels filling the wider part of the band, each occupied by a pair of sphinxes standing on their hind legs on either side of a lotus tree. There is also a narrower panel, with three sphinxes walking to the left between "palmette trees". All the panels are surrounded by a cable-pattern . The upper part of the band (where it gets narrower) contains two friezes of walking sphinxes between lotus trees (although one is upside-down); the lower part of the band just has one frieze with sphinxes, the other is filled with lotus trees. The edges of the sheet metal are bent back along the sides around thin bronze wire, the reason being to provide a certain stability to the thin gold foil; the narrower sides were simply bent back.

The orientalising motifs of the pictorial panels as well as comparable bands from Etruscan graves in Cerveteri, Tarquinia, Palestrina, Vetulonia and Vulci provide firm grounds for the date and origin of these unusual pieces of jewellery.

Publ.: Greifenhagen I 88, pl. 67,2–3 and fig. 70 (collection Moretti); L'oro degli Etruschi 1983, 136, 279, No. 95; Antikenmuseum 1988, 305, Case 22,4,2, No. 19.

Cf.: L'oro degli Etruschi 1983, 127, No. 83, 137, No. 96, 99 f., No. 35–36, 117, Nos. 62–64.

14 "Boat" fibula

Etruscan, c. 630 BC

From the Polledrara cemetery at Vulci Misc. 7868 = GI 272. Acquired in 1882 by Wolfgang Helbig (inv. 7. 5. 1883) Section 8.5,11 This gold fibula was bought through the agency of Wolfgang Helbig in Rome; according to information provided by him, it comes from a *tomba a cassone* in the Polledrara cemetery near Vulci and was found together with a pair of gold hair rings [GI 398/399] as well as 15 Italo-Geometric, Corinthian, Etrusco-Corinthian and bucchero vases [V.I. 2784–2798], dating from between the first quarter of the 7th century and the beginning of the 6th century BC. The hair rings, which resemble those described in the next entry [Section 8.8,1–2], have been missing since the end of the war, as have some of the vases.

The boat shaped fibula (L.: 5.7 cm) belongs to the socalled sanguisuga type (i.e. the bow resembles a leech). Its back is covered with series of delicately wrought strips of gold foil. These ribbed strips are soldered into shallow depressions on the base. These strips are centred on flowers made from the same kind of metal strips. There is a gold grain in the middle of each of the flowers. The underside has a series of intersecting curved motifs made from granules and groups of three granules, and the same ornament occurs on the lower part of the elaborately decorated elongated catch-plate. The upper surface of the catch-plate is decorated with a series of diagonally placed crosses made of more ribbed strips framed by two rows of such strips. The tip of the catch-plate ends in a lion's head terminal, bent over and picked out with rows of delicate granules. A closely related, but somewhat larger fibula [on the right, above No. 8 = GI 271; L.: 8.8 cm] which was acquired in 1865 from the Pourtalès collection, ends in two lion's heads one standing above the other.

Decoration by means of ribbed sheet metal strips and with intersecting curved motifs done with granulation seems only to have been fashionable during the second half of the 7th century BC.

Publ.: Greifenhagen I 89, pl. 67,6 and 68,3, fig. 71; Antikenmuseum 1988, 305, Case 22,4,2, No. 3.

The assemblage: A. Furtwängler, AZ 42, 1884, 65; Hair rings GI 398/399: Greifenhagen I 89, fig. 72 (see below No. 22); Vases: U. Kästner, in: Die Welt der Etrusker. Exhibition Berlin (GDR) 1988, 44, A 2.3, 120, B 4.8.

GI 271 = Greifenhagen I 90, pl. 68,6; Antikenmuseum 1988, 305, Case 22,4,2, No. 4.







15 Three spiral hair ornaments

Etruscan, second half of the $7^{th} - 6^{th}$ century BC GI 394 = Misc. 1843 S. 72.23. From Chiusi, acquired from Campanari in 1843 (top) GI 400 = Misc. 7280. Formerly E. Gerhard collection (below left) GI 395 = Misc. 1843 S. 75.56. From Vulci, acquired from Campanari in 1843 (below right) Section 8.8,1–3

Gold spiral objects like these, with their multiple loops, have often been found in Etruscan graves of the 7th and early 6th century BC. They were worn in pairs as hair ornaments over the ear and probably come from workshops in Chiusi and Vulci. Two of the Berlin specimens are each made up of four conjoined wires: a pair of twisted wires in between a pair of smooth wires. The larger specimen (D.: 1.7 cm) is decorated with four small shields onto which repoussé masks are soldered; the smaller of the two (D.: 1.2 cm) has small discs edged with twisted wire at each end of the spiral. A pair of spiral hair ornaments [GI 398/399, lost since 1947] from the same *tomba a cassone* in the Polledrara cemetery near Vulci as the "boat" fibula No. 14, was very similar to the larger specimen from Chiusi with masks.

The third spiral (D.; 1.2 cm) consists of a flat band which only has this decorative scheme on the outside; the twisted wires are replaced by a ribbed central strip.

Publ.: Greifenhagen I 94, pl. 71,11–13; Antikenmuseum 1988, 311, No. 24.

Cf.: A. Garside (ed.), Jewelry, Ancient to modern, The Walters Art Gallery, Baltimore (1979) 60, No. 173; L'oro degli Etruschi 1983, 126, 276, Nos. 80–82; Magie des Goldes 1996, 41, No. 27.

16 Pair of lion head pendants

Etruscan, 550–500 BC Formerly in the collection of the Bishop of Lichfield Misc. 1843 S. 83 148/149 = GI 416/417. Acquired in 1843 through Campanari Section 8.6,1 The two lion heads (H.: 2; W.: 3; D.: 2.5 cm) are cast, and the prominent canine teeth are individually worked and set in place. Their frightening faces differ slightly in the way in which the folds of skin over the nose are chased and in the markings of the mane. Tiny dots are punched on the out-stretched tongues and between the whiskers. The neck of each is framed with a band of sheet metal bearing two pieces of notched wire. This band, which is soldered on, also holds in place a "lid" behind which are fitted two grooved bands that form loops for suspension on a chain or string. Two pinholes behind the ears are linked to the inner edge of the "lid" and hold the heavy gold heads firmly in place (their weights are respectively 28.4 and 22.1 g).

It is likely that the two lions' heads were part of a necklace that contained many other such pendants.

The unusual way in which the faces of the lions are fashioned is reminiscent of a lion's head in the Shamash temple at Sippar that is probably of neo-Babylonian date (7th century BC) and which is inscribed with the name of the neo-Assyrian king Asarhaddon.

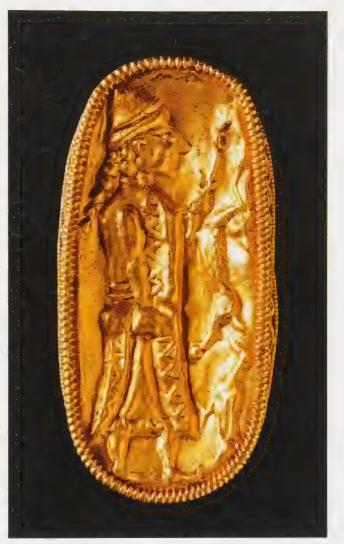
Publ.: Greifenhagen I 92, pl. 71,1–3; Antikenmuseum 1988, 307, Case 22,5, No. 14; L'oro degli Etruschi 1983, 173, 294, No. 157.

Cf.: a limestone lion's head. London, British Museum WA 91768. P. Matthiae, Geschichte der Kunst im Alten Orient (Theiss Verlag 1999) 144.

17 Ring with a Priest-king

Etruscan, c. 530 BC From Vulci. Formerly George Percy, Earl of Beverley, Duke of Northumberland collection 1987.8. Acquired on the art market in 1987 Section 8.5,20

This gold ring, found in Vulci in 1830, was for over 150 years in the famous "Beverley Cabinet" of the Dukes of Northumberland in Alnwick Castle in the North of England. Soon after its discovery in the cemetery at Vulci, the Roman gem-cutter Tommaso Cades disseminated plaster casts of the image on the bezel in his



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Impronte Gemmarie; but it is only since its acquisition by the Antikensammlung that the quality of this well preserved, prominently decorated finger ring can be admired by the general public.

The image is done in repoussé (i.e. worked from the back) in a thin gold sheet $(2.2 \times 1.1 \text{ cm})$, which forms the cover plate of a "tube ring", the edge of which is elaborately decorated with filigree ornament. This shape of ring developed from Egyptian and Phoenician "cartouche rings", which reached Etruria via Cy-

prus around the middle of the 6th century BC. The most elaborate of the Etruscan variants consist of a deep "box" of sheet metal whose edge is richly decorated, and which is capped with a skilfully designed pictorial image, likewise in sheet metal. The solid silver ring ($1.8 \times 1.4 \text{ cm}$) was coated with gold foil and was soldered directly on to the side-walls of the hollow "box" (which measures $2.05 \times 1 \text{ cm}$); the latter is made from sheet metal, but the inside still retains some of the black resin which was used to render the cavity more solid.

The image on the bezel shows a dignified male figure standing with his head erect, dressed in a garment which reaches his calf, and wearing pointed shoes and a conical hat. In his left hand he brandishes a sceptre and holds a young deer by the forelegs; a bird fills the space below. With his right hand he grasps, his thumb extended the while, the seam of his coat which bears a zigzag decoration. His large head, with its long nose and pointed chin, is framed with shoulder-length curls and a pigtail. The oval field is enclosed with a frame of notched wire, while on the vertical edge of the "box" there are seventeen S-spirals made of fine wire with granules in the curves, and another frame of notched wire below.

There is quite a large group of some 140 Etruscan cartouche and "box" rings known carrying multiple figure scenes, mainly mythological, but our gold ring with a single human figure in the extended oval field is somewhat exceptional. Only a "box" ring in the National Museum of Naples, also probably from Vulci and apparently found in 1828, is so similar in structure and decoration to the Berlin ring formerly in the Beverley collection, that both were probably manufactured by the same goldsmith. The representation of the hieratically standing man differs only in the attributes in the raised left hand: he holds up a hare by the forelegs, but no sceptre. Both men are characterized as religious dignitaries by their solemn posture, their long hair, their conical hats - tutuli - their pointed shoes and decorated coats. Their different attributes suggest similar, but not identical functions. It may be that on the Naples ring, which is somewhat smaller, a priest about to sacrifice a hare is represented; the man

on the Berlin ring carries a young deer as a sacrificial animal, the bird symbolises further activity as an augur, and the sceptre perhaps represents by contrast secular, political power. Perhaps the two finger rings, which were probably manufactured in Vulci at the same time, served respectively as insignia for a king who was simultaneously the highest priest, and for a high priest.

Publ.: E. Gerhard, BdI 1834, 114, 120, No. 58; G. Platz-Horster, "Ein etruskischer Goldring aus Vulci", in: Die Welt der Etrusker. Internationales Kolloquium 24.–26. October 1988, ed. H. Heres and M. Kunze (Berlin 1990) 301–305, pl. 62,2–3 and 63,1; eadem, in: Die Antikensammlung im Pergamonmuseum und in Charlottenburg (1992) 267, No. 144.

Cf.: L'oro degli Etruschi 1983, 187, 299, No. 183; Platz-Horster, op. cit., fig. 63,2.

18 Pendant with cornelian scarab

Etruscan, c. 500 BC From Bolsena Inv. 30219,489. Presented by Friedrich L. von Gans in 1912 Section 8.5,19

Two thick gold wires arch towards each other, their tapering ends ending in small spirals; at the point of junction three granules and a wire are soldered: the construction recalls an open blossom. On the outer edges of the two bows are notched wires, which stop on the shoulder at a large gold sphere. A substantial ring over the volutes secured by two granules connects the bows with the trapezoidal loop. The latter consists of a horizontal cylinder delineated by three vertical rings with accompanying notched wire. The points of junction are again accentuated by means of granules. The decorative, slightly asymmetrical setting (W.: 3.1 cm), serves as pivot for a cornelian scarab. The long axis of the latter is pierced with a drill hole, through which runs a gold wire each end of which is looped around the bow and soldered.

The scarab (1.29 x 0.88 x 0.67 cm) is carved from a piece of bright orange cornelian. The way in which the beetle's back is arranged with a curved dividing line between upper body and wings, separated by a central ridge, indicates Phoenician work. Similar scarabs have been found in Punic cemeteries on Ibiza and Sardinia, as well as imported goods in Etruscan graves. The elongated oval seal image is slightly damaged on the right edge. It shows the Egyptian god Horus as Harpocrates, the boy with the youth-curl. He sits to the right on his barque surrounded by lotus blooms, and puts his forefinger in a childlike gesture to his lips. The image is framed by a simple line, and the cross-hatching in the lower segment is part of the craft. The young Horus had been hidden from Seth, the murderer of his father Osiris, by his mother Isis in the marshy area of Buto.

The Phoenicians did not only take over the form of the seal, the scarab, from the Egyptians, but the imagery is also strongly influenced by Egyptian art. The singular form of the gold pendant recalls Egyptian examples in the form of a scarab beetle with wings widespread, but touching each other at their inward curving tips. And then on Egyptian amulet pendants in form of a Horus falcon with outspread wings, a lotus flower open downwards connects the wingtips.

It is impossible to say whether the golden pendant from Bolsena is Phoenician or Etruscan work, since comparisons are lacking; the triple-ribbed, trapezoidal cylindrical loop, which is also an element of Phoenician goldwork, apparently first occurs on Etruscan scarabs in the early 5th century BC.

Publ.: Greifenhagen I 92, pl. 70,7.11; E. Zwierlein-Diehl, Antike Gemmen in Deutschen Sammlungen, II Berlin (1969) 67, pl. 33,143; Antikenmuseum 1988, 305, Case 22,4,2, No. 20; U. Gehrig and H.G. Niemeyer, Die Phönizier im Zeitalter Homers (Hannover 1990) 175, Cat. 116, fig. 15; G. Platz-Horster and H.-U. Tietz, JbBerlMus 35, 1993, 14, fig. 13.

Cf.: B. Quillard, Bijoux Carthaginois II. Aurifax 3 (Louvain-la-Neuve 1987) 18 ff., Nos. 62–64, 71, pl. VII a-b, 39 f., Nos. 258–261, pl. XIVf., 78 ff., 122 ff.; The Phoenicians, ed. S. Moscati (Venice, Palazzo Grassi 1988) 372, 629, No. 271; G. Nicolini, Techniques des ors antiques. La bijouterie ibérique du VIIe au IVe siècle (1990) 352 ff., pl. 76 f., 119 ff., 382 ff., pl. 93 ff., Nos. 147 ff. (bibliography); Platz-Horster/Tietz, op. cit. 11 ff., 21 ff., 29 ff.



19 Necklace with Achelous pendant

Etruscan, 550–500 BC; Achelous: Castellani workshop, Rome c. 1870 Said to be from Praeneste/Palestrina Misc. 7306 = GI 10. Acquired from the Castellani collection in 1878 Section 8.6,11

This necklace is made from light-coloured gold, and today measures 35.5 cm in length. There are 28 plain rings flanking 26 cylindrical members, of which 19 are made of gold foil stamped in relief with a series of clubs. Six of the cylinders have a geometric motif done in granules, and on to them are soldered capsules with flat backs and a repoussé ornament of palmettes and double-volutes on the front. From the central and seventh cylinder there hangs the vividly rendered mask of the river god Achelous (H.: 3.2 cm). His beard is done with zig-zag and line patterns, and the eyes and eyebrows are outlined: all in granules placed on the



repoussé gold foil. The horns were inserted separately and encircled with rows of granules. The hair on the front of the head consists of small snail-like twists of wire around gold granules. The space between the horns is decorated with granules arranged in the same geometrical motif as the one on the cylindrical loops.

When seen beneath the microscope, the loop with the Achelous pendant displays all the technical features of the Roman gold workshop of the Castellani: the grains sink into the background, the wires for the snails are drawn (a technique unknown in antiquity), and some of the wires show traces of pliers and files. The ancient model for the mask was the pendant of a long double loop-in-loop necklace from the large jewellery collection of the Roman Marchese G. P. Campana, which had been prepared in 1859 for sale to Napoleon III in the Castellani workshop. Other Achelous pendants, some of which bear the Castellani monogram attest to the popularity of this jewellery motif, as well as to the gradual approach of the Roman gold workshop to antiquity in both technique and style.

All the other pieces of the necklace prove under the microscope to be antique. The granules lie as though they float on the sheet gold and form the geometrical ornament on the loops of the palmette pendants according to what experts call the "Law of the narrowest chamber filling"; i.e. the grains roll into gaps. This more or less solder-free kind of connection came about as the result of a fusion process which only involves the outermost skin of the metal surface; this was moistened beforehand with an aqueous cuprosaline solution, on to which the goldsmith laid the granules.

In antiquity, the individual members of the Etruscan necklace would have been put on an organic thread, but around 1870 they were complemented in the Castellani workshop by one of their characteristic centre-pieces, and having been provided with the popular "findspot" of Praeneste, were sold to the Berlin Antiquarium.

Publ.: Greifenhagen I 87, pl. 66,1.5; L'oro degli Etruschi 1983, 178, No. 162; Antikenmuseum 1988, 307, Case 22,5, No. 13; E. Formigli and W.-D. Heilmeyer, "Einige Fälschungen antiken Goldschmucks im 19. Jahrhundert", in: AA 1993, 321 ff., No. 35; W.-D. Heilmeyer, "I tre Achelooi: falsificazioni ottocentesche di gioielleria antica", in: Formigli, Preziosi 1995, 76 f.

On the technique see: G. Platz-Horster and H.-U. Tietz, "Etruskische Skarabäen-Kolliers", in: JbBerlMus 35, 1993, 40 ff.; Nestler/Formigli, Etruskische Granulation 1993, with earlier literature.

20 Two basket earrings

Etruscan, 550–500 BC/Castellani workshop, Rome c. 1870 GI 195 = Misc. 7257, acquired in May 1877 by Marchese Carlo Strozzi in Florence GI 196 = Misc. 7274, acquired in July 1877 "through Helbig" Section 8.6,2

Although these two basket-earrings were acquired in 1877 in different months from different sources, they have subsequently been regarded as a "pair". In fact, they so resemble each other that it is improbable that the one was made without the example of the other. Beneath the scanning electron microscope it transpired that the better preserved example with a bow (*Right*: D.: 2.3 cm. Wt.: 12.83 grams) was created as the counterpart to the slightly damaged piece (*Left*: D.: 2.2 cm. Wt.: 10.56 grams). Wolfgang Helbig, at the time deputy director of the Instituto Germanico in Rome, arranged for its acquisition three months later by the Berlin Antiquarium.

This type of earrings ("a bauletto") was widespread between 550 and the beginning of the 5th century BC throughout Etruria, and they were probably made in various northern workshops as well as in Vulci. A typical specimen consists of two-thirds of a cylinder, the wall of which is divided into squares with looped flat wire overlain by corded wire; these are filled with plain and granulated gold spheres. The projecting semi-circular shield above is decorated with a palmette between volutes framed by smooth, grained and twisted wire, as well as by two series of balls. Behind this shield a smooth wire hook, intended to go through a hole in the ear lobe, stretches across to the hollow cylinder. The sides are closed with ajouré discs decorated with the calyx of the lotus flower (they are missing at the back). They are surrounded by smooth, twisted, and looped wires.



When a direct comparison is made between the different wires and the sizes of the granules, the modern copy can be easily distinguished from the original: the smooth wires are drawn, and they show evidence of having been pinched with pliers and worked with the file. There are filings between the granules, which sink into the solder; and the sheet metal beneath the lotus calyx on the side was broken through with a rough graving tool.

Publ.: Greifenhagen I 94, pl. 72,2, colour pl. VIII,2; Antikenmuseum 1988, 307, Case 22,5, No. 3; E. Formigli and W.-D. Heilmeyer, "Einige Fälschungen antiken Goldschmucks im 19. Jahrhundert," AA 1993, 300 ff., Nos. 1–2, 329, note 41.

Cf.: *L'oro degli Etruschi 1983, 53, 166 ff., 292, No. 143 ff.; Ch. Trümpler, in: Die Welt der Etrusker. Internationales Kolloquium,*

Berlin 24–26 October 1988, ed. H. Heres and M. Kunze (Berlin 1990) 291ff., pl. 57ff. Concerning the technique cf. No. 19.

21 Pair of disc earrings

Etruscan, 530–500 BC From Cetona near Chiusi GI 413/414 = Misc. 3025/3026. Acquired in 1851 Section 8.6,12

Etruscan goldsmiths were the ultimate masters of the technique of granulation: thousands of granules as small as 0.07 mm in diameter adhere to these disc earrings (D.: 4.6 cm), precisely fused in place, and looking



like matt dust against the gleaming sheet metal. Six concentric zones, each with a different decoration, emanate from a central flower made of rounded wire and looped bands with applied grains of gold. They are surrounded in turn by: (1) a zone of fine matt granulation, (2) looped bands, (3) spiral tubes with applied granules, (4) matt granulation, (5) a broader zone with granulated spheres framed by smooth sickle-shaped elements with granulated filling ornaments between, and (6) a stamped looped band between two spool wires. Along the edge a decorated metal strip joins the repoussé front disc to the smooth back disc, in the centre of which is a pin with a loop.

This pin went through a hole in the ear lobe and fastened in a catch that has not been preserved. Quite how these large gold discs were worn as ear decoration is indicated by illustrations on Etruscan frescoes and reliefs.

The greatest problem facing nineteenth century goldsmiths was how to imitate matt granulation. Another piece in the Antikensammlung [Inv. 30219, 450] with a central "sunflower" has, *inter alia*, unevenly large granules which sink into the solder, as well as drawn wires for the settings of the petals.

Publ.: Greifenhagen I 91, pl. 70,1–2, colour pl. VIII, 4; Antikenmuseum 1988, 307, Case 22,5, No. 1; L'oro degli Etruschi 1983, 54, 171, 293, No. 152; Nestler and Formigli, Etruskische Granulation 1993, cover picture, figs. 11–13, 19.

Inv. 30219,450: *Greifenhagen I 91, pl. 70,4–5; Antikenmuseum* 1988, 307, Case 22,5, No. 2; Formigli and Heilmeyer, AA 1993, 311, No. 8.

Cf.: L'oro degli Etruschi 1983, 170, Nos. 148–151; how such earrings were worn: ibid. 18, pl. V/VI, 54, fig. 9.

22 Two gold necklaces

Etruscan, late 6th century BC

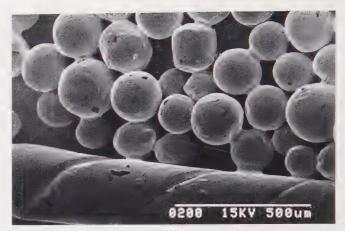
GI 6 = Misc. 3024. From Cetona near Chiusi. Acquired in 1851 GI 7 = Misc. 1843 S. 81 131. Acquired in 1843 by Campanari, from the estate of Hortense de Beauharnais, Queen of Holland Section 8.7,5–6

The longer of the two necklaces [GI 6] comes from the same Cetona grave group as the two disc earrings No. 21. It consists of 35 hollow balls (D.: 12–13.4 mm) and 14 small hoops (D.: 10 mm) made up of large grains of gold. When assembled, it measures 42 cm in length. The beads are hollow, and are each made from two flat polished hemispheres soldered together and the seam disguised. 20 beads were left smooth without decoration; five were once completely covered with matt granulation, but the surface only partially survives as a result of an insufficient use of cupro-saline solution during their manufacture; ten beads are richly decorated with variegated patterns. 14 small hoops made of grains of gold are placed between the central beads.

The shorter necklace, which once belonged to Queen Hortense, daughter of the Empress Josephine and wife of Louis Bonaparte, is today only 21 cm long and can be thus scarcely complete in the way it is currently assembled. What we now see are 15 small beads (D.: 4.1–5 mm) granulated all over, plus one small polished bead (D.: 6.4 mm), alternating with 15 larger richly decorated beads (D.: 9–13.6 mm). In every case, the hole for threading is strengthened with a ring of wire.

Applied wire is used to frame smooth surfaces or to define areas filled with granules. The decorative motifs include opposed bows, pelta shields, tongues, triangles, palmettes, flowers, pointed blades. Two of the beads in the shorter necklace were made in a particularly complex manner: the abbreviated hemispheres with tongue and granulated decoration were connected by means of a wire spiral, the soldering filled with larger grains for extra strength.

All types of beads represented here find close parallels in two necklaces with attached cornelian scarabs



ESM-Photograph of a bead from GI 6 (W. of exposure 1.2 mm)

in the Louvre, Paris and in the British Museum, London. These two necklaces are pastiches made up from original ancient elements respectively in 1859 and before 1872 in the Roman workshop of the goldsmith Castellani. These definitely ancient beads are so similar to those in both Berlin necklaces that it is likely that they were manufactured in the same Etruscan workshops at the end of the 6th century BC, perhaps in Chiusi.

A detailed study of the longer necklace beneath an electron scanning microscope (see Fig. above) has led to new discoveries with regard to the unparalleled art of Etruscan gold granulation: the tiny grains developed from twisted gold wire, cut into pieces 0.16-0.25 mm long and 0.18-0.24 mm in diameter; for the decoration of a bead of 12 mm in diameter the goldsmith needed between 5000 and 6000 granules! To melt the wire, the pieces were placed in a crucible together with powdered charcoal, and when the temperature reached 1100° they are melted into grains; after cooling, they were washed and sorted into sizes with the aid of an elaborate series of sieves; the goldsmith then lifted the granules with a brush and disposed them on the bead, which he had already moistened with a mixture of natural glue and copper (II) sulphate (e.g. powdered malachite = Chrysocolla = "gold glue"); during the application process, the granules attract each other and come close together according to



the "Law of the smallest chamber filling"; after drying, the object was heated in glowing charcoal at 850°: a slight reflection on the surface indicates the moment at which copper from the oxide is reduced to its metallic status; the granules attach themselves to the bead by means of a tiny "neck", and seem to float on the shimmering sheet metal. This reduction soldering without solder lends Etruscan gold granulation its incomparable lightness.

Publ.: Greifenhagen I 87, pl. 66,2–4; Antikenmuseum 1988, 309, Case 22,6,1.2–3; L'oro degli Etruschi 1983, 172, No. 154; G. Platz-Horster and H.-U. Tietz, "Etruskische Skarabäen-Kolliers", in: JbBerlMus 35, 1993, 40 ff., electron microscope picture ibid. 42, fig. 70; G. Platz-Horster in: Formigli and Preziosi 1995, 56 ff.

On manufacturing processes: Formigli, Tecniche 1985, 83ff.; Nestler and Formigli, Etruskische Granulation (Siena 1993).

23



23 Ring with a sacrificing Bacchante

Etruscan, 400-350 BC

Formerly E. Guilhou collection, Paris; R. Harari collection, London Inv. 1990.7. Acquired on the art market in 1990 Section 8.7,9

On the pointed oval bezel of the golden finger ring (21 x 14.7 mm; Wt.: 4.89 grams), a young woman dances to the right; her fluttering garb, indicated as fur by means of fine lines, allows the moving body to shine through; as she dances, she tosses her long hair behind her neck and turns her upper body towards the front, while in her lowered hands she holds a jug and a bowl. The background of the picture is filled with small dots in groups of three. The almond shaped scene is surrounded by, successively, a frame made to look like a series of small balls, a smooth, rounded frame, and finally, a row of tongues.

The bezel (which is flat on the back), was cast and then cold worked with all the details of the picture and the frame. The ring itself, was cut from a strip of sheet metal in the shape of a stirrup, and is flat on the inside and slightly rounded outside (external D.: 21 x 16.7 mm; internal 19 x 14 mm). It was inserted into a groove on either side of the back of the bezel and soldered on. Both the pictorial scene and the shoulders of the ring are much worn through everyday use.

This high relief ring did not function as a seal, as the presence of the bowl in the right (i.e. correct) hand of the woman also indicates. The fact that she is dancing, has her hair loose, and is wearing an animal skin, mark the young woman out as a Bacchante carrying the vessels required for the celebration of a Dionysiac sacrifice. The ring belongs to a group of around 40 Etruscan finger rings known to date which have a pointed oval bezel, and always with a similar border. Sometimes the latter surrounds a pictorial scene in relief or else an "eye" made from a precious stone. The images in relief are limited to representations of heroes or Dionysiac scenes. Some seem to be made according to the same pattern or at least after the same model, and this might help to fix them as having some



kind of cultic unity. The rare known findspots of these rings are to be found in central and southern Italy, but they were clearly manufactured in the traditional centres of goldsmithing of mid-Etruria. Close decorative and stylistic connections with relief pictures on golden bullae from Vulci, Cerveteri and Tarquinia are a point in favour of this view.

Publ.: G. de Ricci, Catalogue of a Collection of Ancient Rings formed by the Late Guilhou (Paris 1912) No. 442; J. Boardman, BSR 34, 1966, 13, No. 33: "second half of the fifth century"; J. Boardman and D. Scarisbrick, The Ralph Harari Collection of Finger Rings (London 1977) 22, No. 27; Auction Habsburg, Feldman, Gold-Important Ancient and Ethnic Jewellery and Work of Art in Precious Metal, Geneva, Hotel des Bergues, Monday 14 May 1990, 192, No. 278.

Cf.: Boardman, "Etruscan and South Italian Finger Rings in Oxford", in: BSR 34, 1966, 10ff.: "The Fortnum Group". Greifenhagen II, pl. 57,13–14: inv. 30491 with a banded agate bezel [in this case, No. 10] and inv. 30490 with a rider relief [war loss: Boardman, op. cit. 12, No. 22, pl. V], both from Capena (see No. 24 below). L'oro degli Etruschi 1983, 242, 318, No. 277 (from Populonia, Museo Nazionale, Naples), No. 278 (with a banded agate bezel; from Cerveteri, Villa Giulia, Rome); M.-L. Vollenweider, Deliciae Leonis. Antike geschnittene Steine und Ringe aus einer Privatsammlung (Mainz 1984) 85 f., No. 132 f. (formerly E. Guilhou collection). Die Magie des Goldes, exhibition Vienna 1996, 67, No. 71 (with a banded agate bezel; from Populonia, Museo Archeologico, Florence).

24 Two pairs of a grappolo earrings

Etruscan, 350–300 BC

"The Excavations at Capena"

Inv. 30483 and 30486. Acquired in 1914 from Sangiorgi, Rome Section 8.8,10/12

(*A grappolo*: "like a bunch of grapes"). The three-dimensional construction of these large earrings (H.: 5.5 cm) is complicated and can only really be understood when they are seen from the side: a swelling,

curved, tube is made from two pieces of sheet gold, the seam at the side is covered up with beaded wire. The narrow end of the tube is closed off with a hollow sphere, and beaded wire frames the thicker end. The shield made of sheet gold is arched at the top, while at the bottom it is cut in an "M"-shape; the tube was inserted through the semicircular opening in the middle. The shield is richly decorated with groups of granules in concentric curves, with smooth, twisted and granulated wire, and nine repoussé hemispheres with central nipples. The base of the central opening is decorated with rosettes, and the two supports of the curved shield with two large hollow spheres with groups of tiny hollow balls at the sides and connecting small bowls with embossed omphaloi. The three large hollow spheres below are made separately, again connected with small hollow spheres; this group is soldered finally to the lower part of the curved tube and secured with a small omphalos bowl. Banqueting women in Etruscan funerary frescoes wear such large-scale ear decoration.

The second pair of *a grappolo* earrings is, despite its smaller size (H.: 3 cm) additionally decorated on the smooth tube with palmette petals in applied-filigree. Pyramids made of four hollow balls are soldered on to the bottom, flanked by thick set groups of small hollow spheres.

Six pairs of earrings said to come from the "excavations at Capena" are shown in this case: two further pairs *a grappolo* as well as the simple form of curved tubes with applied wire and soldered on pyramids of hollow spheres or small bowls [upper left].

Publ.: Greifenhagen I 96, pl. 73,1.4; Antikenmuseum 1988, 311, Case 22,6,2, Nos. 17+12; E. Formigli, "La tecnica di costruzione degli orecchini a grappolo", in: Preziosi in Oro (Siena 1995) 27ff., fig. 40.1–4, pls. 1–3.

Cf.: L'oro degli Etruschi 1983, 63, fig. 11, 223, 311, Nos. 239 and 241; Formigli, Tecniche 1985, 44, pls. Lff.; Magie des Goldes 1996, 62, No. 65, 69, No. 76.

On the remaining gold jewellery from Capena, see Greifenhagen I, p. 91, pl. 69,13, p. 96, pl. 73,2.3.5.9; II, p. 76, pl. 57,13–14; Antikenmuseum 1988, 305, Case 22,4,2, No. 2 and 311, Case 22,6,2, Nos. 11, 16, 18, 19.



25 "The Vettersfelde fish"

Scythian, c. 500 BC Found near Vettersfelde (mod. Witaszkowo, Poland) on 5 October 1882 Misc. 7839 = GI 2. Inventory 22. 1. 1883 Section 8.18A

The richest finds of ancient gold come from the grave mounds of Scythian princes in southern Russia and modern Ukraine. The Antikensammlung possesses the most important holdings of Scythian gold after the Hermitage in St Petersburg and the Museum in Kiev. Surrounded by works of the Greek goldsmith's art, Greek influence, but especially the independent style of the Scythians, becomes clear.

The European Scythians belong to a people of ridernomads, who between the 7th and 3rd centuries BC spread as far as Siberia and China while remaining in contact with the ancient Near East. The Scythians'

most intensive and fruitful connections, however, were with their neighbours to the west, viz. the Thracians and Greeks. Herodotus of Halicarnassus travelled in Scythian lands around 450 BC and in the fourth book of his Histories describes with amazement and disgust their exotic way of life, their scorched earth policy in war, human sacrifice, for example at the funeral ceremony for a dead king, and their magnificent grave-gifts. Herodotus assumed that the origin of the gold which they used in abundance, was in the deposits-still productive today-of eastern Kazakstan and the Altai mountains; it is also conceivable, however, that fluvial gold may have been imported from nearby Colchis, in modern Georgia. The Greeks met the greater part of their grain requirements thanks to the Scythians; they on the other hand employed the skill of Ionic Greek goldsmiths, who in turn influenced local arts and crafts.

"The Vettersfelde fish", which once formed part of the decoration of a shield, is an outstanding example of such cross-fertilization in the so-called Scythian Animal Style. It was found on October 5th 1882 by a farmer on the property of Prince Heinrich zu Schönaich-Carolath south-east of Guben in the Niederlausitz (now in Poland). In addition to the 41 cm long and 608.5 gram fish of pale gold, the sensational hoard also included: a large quatrefoil decorative plaque and a dagger with sheath, both richly decorated with animals, a woven chain (L.: 71 cm, probably belonging to the sword), an ear-pendant and another pendant, a "whetstone" in a gold mount (a talisman?), a solid gold bracelet, and a large closed gold ring with a diameter of 21 cm and weighing the same as the fish (lost in the War) as well as sundry small pieces.

It was not simply the discovery of such a large gold hoard that was so sensational, but even more surprising was the findspot around 1500 km north-west of the home area of the European Scythians on the Dnieper and the north coast of the Black Sea, where similar gold objects had been excavated ever since the early 18th century. There princely burial mounds (Kurgan, in Russian) gave up the rich offerings, whereas the Vettersfelde gold came to light in the course of ploughing; subsequent excavations the following summer provided no evidence for a funeral. More recent finds in Poland have shown that the Scythians did indeed push that far northwest. This unique and short-lived invasion of the settlements of the so-called "Lausitz Culture" occurred around 500 BC.

The fish is made in repoussé from thick gold sheet and is decorated on the front with different kinds of chasing. The side fin divides the body into two relief zones: in the upper zone, a panther kills a boar and a lion a deer, above them (but damaged) a leaping hare; in the lower zone, a bearded seaman, wielding a fish in his left hand, leads a shoal of fish; in the middle of the tail, which ends in rams' heads, an eagle spreads its feathers. The large eye of the fish once shone with coloured glass. On the back, four loops (and three more which have been torn off) indicate how the fish was once attached to a solid mount, probably a round shield with iron fittings; such was the setting of the gold deer shield emblem of Kostromskaya Stanica in the area of Kuban. The culture of the Scythian nomads was not a literate one, and so any assumptions regarding the totemistic significance of the Vettersfelde shield emblem must be hypothetical: the ruler of the sky (the eagle), of the sea (the old seaman) and of the earth (the lion and panther) may transmit their power to the princely army commander. The slight traces of wear and tear on all pieces in the hoard point to a short period of use. The severe damage, however, suggests that the gold sheet metal reliefs were hurriedly torn from a shield (the fish) and from body armour (the quatrefoil), were mixed up with the other weaponry and jewels and carried off with them.

Publ.: Greifenhagen I 61ff., pls. 39–41, fig. 55; Z. Bukowski, "Charakteristik der sogenannten skythischen Funde aus Polen", in: ZfArch 8, 1974, 52 f., 63; From the Lands of the Scythians. Ancient Treasures from the Museums of the USSR 3000 BC – 100 BC (New York 1975) 153 ff. (D. v. Bothmer); A. Greifenhagen, "Centenarium eines Goldfisches", in: AW 13.3, 1982, 3 ff.; C. Beurdeley, Sur les routes de la Soie (1985) 29, pl. 21; Antikenmuseum 1988, 321, Case 22,10, No. 1; G. Platz-Horster, in: Antikensammlung 1998, 34 f., No. 12; W.-D. Heilmeyer, in: Die griechische Klassik. Idee oder Wirklichkeit. Exhibition catalogue Berlin 2002, 122f., No. 26f.

Cf.: L. Galanina, in: Skythen, Bonn 1997, 76, No. 4 (the deer of Kostromskaya Stanica). On the interpretation of the "whetstone", see J. Kalasnik, ibid. 165 f. on No. 71. Sheet gold on wood in the form of a fish, chanfron of a horse (L.: 34.3 cm): E.D. Reeder, Scythian Gold. Treasures from Ancient Ukraine (Baltimore 1999) 138, No. 33.

26 Metal mount: a sea eagle devours a fish

Scythian, c. 450 BC Probably from Maikop in the Kuban area Inv. 30221e1. Acquired in 1913 Section 8.18B,15

In 1913 the Berlin Museums acquired a Scythian gold hoard of more than 100 substantial pieces: jewellery, an *enkolpion* and small plaques for textile decoration, needles, metal mounts for drinking horns, small bells



for the adornment of horses, a silver bowl with a gold *omphalos*, as well as of more than 1000 small stars, crosses and buttons for sewing on garments. Despite the information supplied by the Armenian dealer, the objects probably come from Maikop in the Kuban area of the northern Caucasus, as the origin of a few pieces which ended up in New York and Philadelphia indicates. Together with the gold a large number of bronze and silver objects and glass beads, etc. was acquired. It is doubtful whether they belong to the same assemblage as the gold objects, but their alleged findspot was said to be in Maikop as well. The bronzes are for the most part horse harness, but there are also two bowls,

two mirrors [one of which is exhibited] and handles of tools, of which an especially fine one in the form of a *hippocamp* (sea-horse) is exhibited. Thanks to the reunion of the Berlin Museums some at least of the various pieces of the complex can be shown together. It remains an open question, however, how many grave contexts the rich and varied offerings came from.

Among the metal mounts for drinking horns, the four roughly trapezoidal mounts with sea eagles that are sinking their talons into fish, are the largest (L.: 11.2 cm, W.: 7.3 cm). All four are done in repoussé in thick sheet metal on the same mould, differences in the details of the modelling arising from the chasing

and engraving of the feathers, scales and fins. The upper short side of the mount is bent back and may have lined the mouth of a large *rhyton* made from cow's horn or wood. Four round-headed rivets are situated in holes on the long sides for fastening the gold relief below.

The sea eagle sinks its talons into the back of a long fish, its curved beak pushes against the head of the stationary swimmer. The eagle's tail feathers are stylized as a palmette, which recurs as a filling between the tail fins of the fish. This detail is especially important for establishing the origin and chronology of the whole complex from the Kuban. It turns up again on an eagle killing a hare; the group decorating a metal mount for a drinking horn of similar shape and size (10.3 x 8.3 cm), which was excavated in 1876 among the rich grave offerings of an aristocrat in No. 4 of the "Seven Brothers" Kurgans on the Taman peninsula at the western extremity of the Kuban. The similarities in decoration and technique between these and further metal mounts from Kurgans 4 and 2 of the "Seven Brothers" group, as well as from Kurgan 17 at Nymphaeum and the Berlin mounts sheets are so great, that one can assume that they were made in the same workshop.

Publ.: Greifenhagen I 55 ff., 57, pl. 31,1 bottom = pl. 31,4, colour pl. VIII,1; From the Lands of the Scythians. Ancient Treasures from the Museums of the USSR 3000 BC – 100 BC (New York 1975) 156 f., No. 5 (P. O. Harper); Antikenmuseum Berlin 1988, 319, Case 22,9, No. 5.

Cf.: E. Vlasova, in: Skythen, Bonn 1997, 90 f., No. 18. Other metal mounts: F. Turkhan-Wille, in: Aus den Schatzkammern Eurasiens. Meisterwerke antiker Kunst. Kunsthaus Zürich 1993, 75, No. 30 f. – Seven metal mounts with stylized eagle beaks and palmettes from Zavadskay Mogila, Kurgan No. 1 of the 5th century BC in the lower Dnieper region are fitted onto a reconstructed bowl rather than a drinking horn: Gold der Steppe. Archäologie der Ukraine, edd. R. Rolle et al. (Schleswig 1991) 308, No. 98 a; Scythian Gold. Treasures from Ancient Ukraine, ed. E. D. Reeder (Baltimore 1999) 167, No. 54.

27 Mount for a drinking horn

Scythian, c. 450 BC Probably from Maikop in the Kuban area Inv. 30221h1,k2,i1. Acquired in 1913 Section 8.18B, 21 right

The large gold hoard which probably came from Maikop in the Kuban area in the northwestern foothills of the Caucasus (see No. 26), included four gold drinking horns of different sizes, two rims with similar animal friezes, and two rather dissimilar lions' head terminals. One of the rims (D.: 6.5 cm, H.: 2.1 cm), together with the more richly decorated lion's head (L.: 3 cm), could be fitted to the longest drinking horn (L.: 19.5 cm), although it is not altogether certain that they do in fact belong together on account of the way in which the sheet metal was bent and crushed.

The gold sheets are the mounts for a natural cow's horn, of a kind that are still used today in the Caucasus for drinking wine. The upper edge of the drinking horn made from a sheet which is smooth and strongly tapering, is decorated with beaded wire. Similar wire also frames the upper part of the rim; nine small panels are soldered on to it, frieze-like: reclining deer with heads turned back are done in repoussé, their antlers end in the stylized heads of birds of prey. The lion's head terminal is also done in repoussé in two halves which are soldered together; details such as the three rows of the flame-like mane, the eyelids, and the whiskers are finely engraved, and the canine teeth in the widely opened mouth are inserted separately; the neck is trimmed with two rows of beaded wire.

Drinking horns with lions' head terminals are to be found in Kurgans Nos. 2 and 4 of the "Seven Brothers" group, where the closest parallels to the mounts adorned with struggling animals (cf. No. 26) occur, thus providing support for the view mentioned above that they come from the same workshop.

Publ.: Greifenhagen I 59, pl. 35,1 top + pl. 35,3 + pl. 36,1.3.5; From the Lands of the Scythians. Ancient Treasures from the Museums of the USSR 3000 BC – 100 BC (New York 1975) 156f., No. 6: lion's head (P.O. Harper); Antikenmuseum 1988, 323, Case



22,10, No. 4,5,6; Pfrommer 1990, 284 FK 155, 337 TA 71 (lion's head: "from a bracelet or torc").

Cf.: F. Turkhan-Wille, in: Aus den Schatzkammern Eurasiens. Meisterwerke antiker Kunst. Kunsthaus Zürich 1993, 71, No. 27; E. Vlassova, in: Skythen, Bonn 1997, 82, 89 on No. 18. – The mouth and tip of a 5th century BC gold rhyton are decorated with a double frieze of stylized birds' heads and a single lion's head. This rhyton was discovered in 1984 in the Zaporozhe Region on the lower Dnieper in Ukraine: L'oro di Kiev. Toreutica e oreficeria dal Museo storico dei Preziosi dell'Ucraina. Exhibition Florence 1987, 53 N.15; Gold der Steppe. Archäologie der Ukraine, edd. R. Rolle et al. (Schleswig 1991) 318, No. 120c; Reeder, Scythian Gold, 243*f*., No. 116 (reconstruction with an additional frieze: deer heads and boar). – Cf. No. 28.

On deer with their heads turned backwards, and whose antlers end in the shape of another animal, see the gold plaques from Kurgan 17 at Nymphaeum near Kerch (see above on No. 26): M.I. Artamonov, Treasures from Scythian Tombs in the Hermitage Museum, Leningrad (London 1969) 38 f., pls. 102 and 105; Gold metal mounts from Ispanova Mogila, Nicopolis: L'oro di Kiev, 57, No. 19. Gold der Steppe, 68. Reeder, Scythian Gold, 152, No. 44.

28 "The Schwarzenbach Bowl"

Early Celtic, La Tène A, c. 400 BC Found in 1849 at Schwarzenbach, "Princely burial" 1 TC 5686 = GI 4. Formerly Böcking collection. Acquired in 1858 Section 8.18B,1

The arrangement of the gold foil onto a hemispherical brass bowl goes back to Adolf Furtwängler. In 1887, a new, patinated, bowl was used as the basis for mounting the gold foil rim with its bronze core (upper diameter 12.1 cm) and grooved lower moulding; on its sides he attached the openwork gold band of two zones of lotus and palmette ornament (L. of the beading at the top 37.7 cm; max. L. of the associated decorative frieze 31.5 cm, H.: 7,1 cm), and at the bottom, a disc made of sheet gold (D.: 6.75 cm) with a stamped pattern of pendant palmettes and upright lyres, connected to a triple whirl and framed with beading. For the purposes of this arrangement, the disc (which had once been rather more curved) was crushed, stretched and flattened with the result that the hole in the centre became irregular on account of the overlapping gold foil. The hole in the bottom of the modern bowl was useful for the museum installation; in 1976 a new hole was made in the back at a point where there was no gold foil. A careful examination conducted by Dirk Krausse in 1996 - taking account of Eduard Gerhard's initial 1856 publication - first substantiated doubts as to whether the individual parts really belong to the same vessel, and whether the sheet gold was ever originally mounted on a bowl at all.

The fragments of gold foil were found while ploughing on October 22nd 1849 in Schwarzenbach, Kreis St. Wendel in modern Saarland; the farmer first uncovered a bronze pointed amphora [Fr 674, on the left side of the case], containing ashes and well preserved bones; there were also a bronze "Schnabelkanne", burnt pots and the remains of weapons (now lost), as well as 60 or so pieces of gold sheet metal scattered around. The cremated remains of the deceased (which had been burnt on a funeral pyre on the spot) had been laid to rest in the amphora, a precious import from Etruria, as well as also the lost "Schnabelkanne". The individual gold mounts that were *not* assembled by Furtwängler – two discs like the one at the bottom of the bowl each equipped with a knob, two narrow bands with tips that joined, four large and two small masks, four palmettes in three different sizes, four curved tongues with palmette and lyre decoration, as well as straight and curved sheet metal strips both smooth or with meander decoration – were used to adorn two drinking horns: the larger disc lined the lid, the smaller one the point of a cow horn, probably cut down; the masks, palmettes, tongues and decorative strips with small holes and eyes were pinned onto the sides of the horn, while the hinge was probably associated with a lid. [See the hypothetical reconstruction on Perspex, in this case.]

Numerous examples of the gold decorative revetments of such drinking horns have been found in Celtic princely burials in the Saar-Mosel area; in the large princely tomb at Eberdingen-Hochdorf (Kreis Ludwigsburg) it was possible to reconstruct on the rear wall of the burial chamber eight drinking horns made from cows' horns suspended from wire handles, and a ninth one of notable size made from wrought iron with gold and bronze mounts suspended at the head of the funerary couch.

The openwork lotus and palmette decoration (upper frame D.: 12 cm) of our bowl is probably to be related to such an enormous drinking horn: it could have decorated the tapering area somewhat below the mouth, as on the large drinking horn from the princely grave of Eigenbilzen (prov. Limburg/Belgium). The smooth gold foil rim lining, which has a frieze of buds below on the inside, could have been placed with the grooved moulding at the mouth of the drinking horn: the vertical interior wall would pass smoothly over the supporting material, while the external concave inlay (which becomes broader at the bottom, lower D.: 12.8 cm) requires a swelling profile at the mouth of the horn to give it the necessary foothold. Clearly this zone was made special use of, since several vertical cracks in the gold covering were already strengthened in antiquity with rivets that were driven laterally into the bronze core. The decorative disc at the bottom of the new bowl, which was once curved with a projecting



knob, could have decorated the centre of a lid, perhaps made from wood.

In any case, all the gold foil mounted on the bowl in modern times seems to have once belonged to a single drinking horn, since the friezes of buds on the inner edge of the rim, at the upper edge of the lotus and palmette band, and at the outer edge of the "lid" disc, the framing rows of dots included, were pressed over the same mould. This kind of decoration does not occur on any other gold foil from the find at Schwarzenbach. These, and all other gold pieces in the assemblage, were probably made in the same Celtic goldsmith's workshop, since there is considerable repetition of motifs and manufacturing techniques to connect them.

The use of drinking horns probably spread from the rider nomads of south-east Europe (see Nos. 26–27, above) to Thrace, Greece and Italy from the early 6th century BC until the time of the Celts. It was possible to reconstruct two smaller (and one larger) drinking horns from Grave 1 at Schwarzenbach with finely decorated gold foil, and both these and the two old-fashioned Etruscan sympotic vessels represented in the find throw light on the luxury of Celtic princes; together with the practice of banqueting, they also imported the expensive wine and the appropriate sympotic furniture from their southern neighbours.

Publ.: Greifenhagen I, 85, pl. 62,1-3, fig. 63; Antikenmuseum 1988, 295, Case 22,1, No. 4; O.-H. Frey, "Die Goldschale von Schwarzenbach", in: Hamburger Beiträge zur Archäologie I,2 (1971) 85 ff.; A. Haffner, "Die westliche Hunsrück-Eifel-Kultur", Röm.-Germ. Forsch. 36 (Berlin 1976) 47, 200 ff., fig. 48, No. 15, pls. 140-144; C. Eluère, Das Gold der Kelten (Munich 1987) 132, 138, figs. 102–103; W. Kimmig, "Edelmetallschalen der späten Hallstatt- und frühen Latènezeit", in: ArchKorrBl 21 (1991) 241 ff., 243 f., pl. 36,1a+b; O.-H. Frey, in: Hundert Meisterwerke keltischer Kunst. Schmuck und Kunsthandwerk zwischen Rhein und Mosel, edd. R. Cordie-Hackenberg et al. (Trier 1992) 20, fig. 7,3; D. Krausse-Steinberger, ibid. 113, 116 (see No. 19) O.-H. Frey, in: H.-E. Joachim, Waldalgesheim. Das Grab einer keltischen Fürstin (Bonn 1995) 177 f.; O.-H. Frey, "Der Fürstenhügel und seine Erforschung", in: F.-R. Herrmann, Die Keltenfürsten vom Glauberg. Archäolog. Denkmäler in Hessen 128/129 (Wiesbaden 1996) 55 f., figs. 61 and 106; D. Krausse, Hochdorf III. Das Trinkund Speiseservice aus dem späthallstattzeitlichen Fürstengrab von Eberdingen-Hochdorf (Kr. Ludwigsburg) (Stuttgart 1996) 199-218, 409, list 9, Nos. 17-18; W.-D. Heilmeyer, in: Die grie-

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chische Klassik. Idee oder Wirklichkeit. Exhibition catalogue Berlin 2002, 122, No. 25c.

Cf. on the Hochdorf drinking horns, see Krausse, Hochdorf III, 34ff., fig. 14ff., 65ff., 444ff., Nos. 4–11 (drinking horns made of cows' horn with gold and bronze fittings, gold rim bands D.: 11–14 cm), 448, No. 12, fig. 222 (wrought iron drinking-horn with gold and bronze fittings, L.: 123 cm, D.: of mouth 14.5 cm). – On the drinking horn of Eigenbilzen, see ibid. 190, fig. 151, 408, No. 10 (gold sheet L.: 21.5 cm, W.: 5.7 cm).

On the distribution of the drinking-horns, see Krausse, Hochdorf III, 95 ff., 311 ff.

29 Spiral with head of a lion-griffin

Cypro-classic II, 400–350 BC From Cyprus GI 406 = Misc. 8601. 1897 taken over from the Egyptian department Section 8.13,3

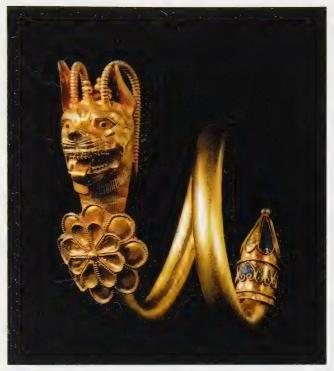
A double spiral made from thick bronze wire is covered with a substantial layer of smooth gold sheet metal (H.: 4.2 cm). At one end, a conical tube is surmounted by the three-dimensional head of a horned lion-griffin. The latter is made in two pieces each stamped in a mould, then chased and decorated with beaded wire. The crest and the teeth are done by means of granules (though the canines consist of small sharp pins), and the ears and tongue are added in thin sheet gold. The neck has three rows of hair, the details of which are chased, and the whole rests on a band decorated with beaded wire in the form of a series of arches, within which are the remains of green and blue enamel. A double rosette, framed with beaded wire and containing a granule in the centre, covers the extension. At the other end sits a bud-like member covered with tongues and hearts in filigree. Again, the florals are filled with blue enamel.

Such spirals were probably worn as ear decoration (see No. 33 below), and they always occur in pairs: the counterpart of the Berlin spiral is in the Oriental Department of the Louvre. Double (or more) spirals with the applied heads of lion-griffins, lions or griffins, especially prolific in tombs at Kourion and Amathus, reveal the art of the Cypro-classical goldsmith at its peak. They would all appear to be the speciality of a single workshop.

Publ.: Greifenhagen II 45, pl. 38,4–5, colour pl. III,3; Antikenmuseum 1988, 327, Case 22,13a, No. 1; Pfrommer 1990, 146, note 979; G. Platz-Horster, in: S. Brehme et al., Ancient Cypriote Art in Berlin (Nicosia 2001) 178, No. 193.

Counterpart: Paris, Musée du Louvre, Dépt. Ant. Orientales, Inv. AM 564bis. Art Antique de Chypre au Musée du Louvre (Paris 1992) 161, No. 197.

Cf.: *R. Laffineur, Amathonte III, Testimonia 3, L'orfèorerie (Paris 1986) 69, No. 419, fig. 98, No. 420 (from the rich sarcophagus II of Tomb A 256 at Amathus; see p. 94); Williams/Ogden 1994, 238 f., No. 173 f. (from Kurion). V. Karageorghis et al., Ancient Art from Cyprus. The Cesnola Collection. The Metropolitan Museum of Art (New York 2000) 239, No. 389; Williams/Ogden 1994, 232, No. 165 (from Amathus, British Museum, London).*



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30 Bracelet with goats' heads

Achaemenid-Persian, c. 400 BC Inv. 1978.1. Acquired in 1978 from a Swiss private collection Section 8.14,4

The solid gold ring (weight 101 g) was first cast in the form of a straight by means of the lost wax technique, and then bent into an irregular oval shape – with an inward kink opposite the animals' heads, typical in Achaemenid bracelets (external D. across: 7.14 cm, H.: 5.5 cm, including head 6.5 cm; internal D.: across 6.12 cm, H.: 4.8 cm). The wax mould was divided into three for the heads; the goldsmith modelled everything in the mould beforehand: the horns, ears, eyes, hair, beard, nostrils etc. Traces of casting can still be seen between the horns and ears. A few surface details

only were worked afterwards: the structure of the horns, tear-ducts and the spiral curls which fan out along the goats' chins. Over the years, the engraving has been worn away, and especially so at the top, on the horns.

Such golden bracelets always occur in tombs in pairs; its twin still belongs to the lady who sold us our piece. The beard, typical for Achaemenid goats' head bracelets, is especially finely rendered on our specimen with fan-like rows of chased spiral curls. Achaemenid animal head bracelets made of solid gold are widespread beyond the area originally under Persian rule, and then became the models for local production in the Black Sea area, Cyprus and Greece; the Greek examples, however, often consist of a bronze core covered with gold foil (see No. 37, below).



30 (Detail)



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Publ.: Antikenmuseum 1988, 329, Case 22,13b, No. 4.

Cf.: Deppert-Lippitz 156, fig. 107 (Basel art market); Pfrommer 1990, 96, fig. 16, 36-37, 113, 346 TA 167 and TA 168: from Vouni, Cyprus; ibid. 346 TA 164: from Sardis, in Pforzheim; ibid. 346 TA 166: from Vani, in Tbilisi, Georgia. A.M. Ckonia, "A propos des bracelets en or trouvés à Vani", in: Actes du VIIe Symposium de Vani, 26.-30. IX. 1994, 165 ff.; Unterwegs zum Goldenen Vlies. Archäologische Funde aus Georgien, eds. A. Miron and W. Orthmann (Munich 1995) 298, No. 276, 130, fig. 123; O. Lordkipanidze, "Vani. Ein antikes religiöses Zentrum im Lande des Goldenen Vlieses (Kolchis)", in: JbRGZM 42, 1995 [1996], 372, colour pl. V,2. A pair of bracelets from a rich woman's grave No. 6 at Vani, which also contained a gold omphalos-bowl, a diadem, two pairs of earrings, two more with chains used as temple ornaments, a polychrome pectoral, three necklaces and two more bracelets with calf and panther heads, see Unterwegs zum Goldenen Vlies 296 ff., Nos. 272-277, 279-280; Lordkipanidze op. cit. 365 f., 372, 379, colour pls. I 3-5, Il 2-3, III 5, IV 1-2, V 1 and 4, VI 1.

See too the pair of ribbed bracelets with wild goats' heads [No. 5 in this case], acquired by Theodor Wiegand in Sardis/Lydia in 1904 (cf. Nos. 1, 35, 37): Antikensammlung Inv. 30989. Greifenhagen II 41, pl. 35,1–2; Antikenmuseum 1988, 329, Case 22,13b, No. 5.

31 Earring with "Mistress of the Beasts"

Greek, 470–460 BC From Corinth GI 149 = Misc. 8520. Acquired in 1895 Section 8.9,5

The golden earring (H.: 5.9 cm) consists of two parts: a rosette and a group of figures suspended from it. It is not altogether certain that they belong together since the linking hooks are modern. The rosette has three layers of petals: eleven rounded ones outside, then a star with five, and inside a three-petalled flower that used to be closed; all the petals are edged with beaded wire. The pendant hangs by a small loop on the head of the frontally standing goddess who wears a severe-style peplos; she holds in her hands an apple and a wreath made from beaded wire, like the wreath on her head. On each side of the goddess stands a lion on its



hind legs; the front legs rest on her shoulder and the heads look outwards. The whole group stands on an Ionic capital. Below it is a downward-facing flower made of five rounded petals, enclosing five pointed petals and a bud. A wire beneath the feet of the goddess runs down through the capital and appears again beneath the blossom, perhaps for another pendant. Goddess, lions and capital are made from two pieces of stamped sheet gold, to which the wire tails of the lions are attached.

The "Mistress of the Beasts" (cf. the Early Archaic decorative plaque from Camirus, No. 7) is here conflated by means of the wreath and apple attributes with the goddess Aphrodite. The cut-out petals edged with beaded wire recall Rhodian pins and three-dimensional rosettes from Melos. Earrings, supposedly from Ephesus, carried on the practice of multi-layer petals. Two pins from the Peloponnese have heads decorated even more richly with fully rounded animals and plants, including lions similar to ours, which on one needle also flank an Ionic capital. A pair of earrings from Eretria has beneath the open rosette a lively group of Peleus and Thetis with a lion, a snake and water; stylistically, this pair is closest to the Berlin earring.

Cf. earrings from Ephesus: Deppert-Lippitz 1985, 153, *fig.* 104; *pins from the Peloponnese: ibid.* 155, *No.* 106; *earrings from Eretria: Greek Jewellery* 1997, 103, *No.* 91.

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32 Two seal rings

Left: Western Greek, c. 430 BC Said to have been found in Sicily Misc. 8419 = FG 285. Acquired in 1893 together with FG 286 and FG 290 Right: Ionic, c. 440/430 BC Formerly in the Philipp von Stosch collection FG 287. Acquired in 1764 by King Frederick the Great of Prussia Section 8.9,16 + 17

Around the mid-fifth century the shape of the bezels of Greek gold seal rings (which had been rhomboid) became a pointed oval. The engraved image was placed on the upper, curved, surface. The shank became square in cross-section, a feature which-together with a broadening of the shoulder-made for a stronger junction with the bevelled reverse of the bezel. This is sturdier than on earlier gold rings and allowed for a deep, sculptural engraving of the seal. In the early 4th century BC a flat bezel became the norm, providing a certain strengthening of the junction with the shank; the flat bezel was set off from the ring with the consequence that a larger area was created for the seal, which became increasingly rounder, the shape that was canonical for the heavy gold rings fashionable in the Hellenistic period.

The artists who made the two "classical" seal rings used the depth of the slightly curved bezels for sculptural representations which fill the available area (it was only recently that the realistic representation of human features had been discovered). The Silen's mask (left) is viewed frontally. His head is bald but wreathed; he has pointed horses' ears, and a long, finely composed beard. He is characterized as a wild creature by his furrowed forehead, his emphatically jutting eyebrows, and his pointed nose. The shank is round and open at the bottom (outer D.: 2.2 x 2 cm, inner 1.8×1.7 cm; Wt.: 4.69 grams).

The likeness of an elderly man in profile (right) is an exercise in contrasts: between on the one hand the sensitive smoothness of the high, furrowed forehead, the deepset eye, the pointed aquiline nose, the jutting cheek bones and the full lips, and on the other the hastily rendered clumps of hair (two stick out from the

Publ.: Greifenhagen II 46, pl. 38,12–13; Antikenmuseum 1988, 303, Case 22,4,1b, No. 21; Pfrommer 1990, 251, note 2064; L'oro dei Greci 146, 258, No. 113.



top of his head in a decidedly unruly manner), the hatched eyebrow and the beard engraved with fine lines. The individuality of the characterization is emphasized by the genital organs in the recess between neck and chin: probably a "speaking image" for the name of the owner of the seal. The solid gold ring (outer D.: 2.2×2.2 cm, inner 1.7×1.8 cm) is made from light-coloured gold or electrum (Wt.: 5.93 grams). Both the costliness of the material and the excellence of the engraving place the ring on the same level as the works of the best seal engraver of the age, namely Dexamenos of Chios, well known from several signed gems.

Publ.: Boardman, GGFR 418, No. 513 and Nos. 506, 219 and 284, *fig.* 220; *Greifenhagen II* 71*f.*, *pl.* 54,10.16 and *pl.* 54,11.17.

On the ring shape, see Boardman, GGFR 213, fig. 217 Type III.

Cf.: the gold ring from a grave at Nymphaeum/Crimea, in Oxford. Boardman, GGFR 219, 298, pl. 670; J. Boardman/M.-L. Vollenweider, Ashmolean Museum Oxford. Catalogue of Engraved Gems and Finger Rings I (1978) 30, pl. 23,131; M. Vickers, Scythian Treasures in Oxford (1979) 11, 46, pl. 17b-c, fig. 10. On Dexamenos, see Boardman, GGFR 194ff., pl. 466ff.; P. Zazoff, Die antiken Gemmen. HdArch (1983) 132ff., pl. 31; M. Henig, Classical Gems. Ancient and Modern Intaglios and Cameos in the Fitzwilliam Museum Cambridge (1994) 33, No. 53.

33 Two Spiral Earrings

East Greek, c. 400 BC Misc. 11863,133/134. Acquired in 1907, formerly in the Merle de Massoneau collection Section 8.9,13

The two spiral earrings are not a pair, but differ slightly in size, weight and decoration. Cylindrical bands of sheet gold were placed over the ends of the thick, round, gold rods, which have been bent into a spiral: these bands are decorated with triangles done by means of granulation, and spirals in filigree, framed by smooth and plaited wires; on top, are pyramids made of granules tipped with a larger gold grain. The earring on the left weighs 13.9 grams (H.: 2.7 cm), but the one on the right (H.: 2.9 cm) is almost twice as heavy at 23.5 grams. The granule-pyramids are also larger on the latter (one tip is damaged), the filigree spirals are divided by beaded wire, and are framed with more beaded wire between bands of smooth wire.

As images on coins indicate, such spirals could be worn in the earlobe, the pyramids pointing upwards. In a cist grave discovered at Panticapaeum in 1854, in a Kurgan on the north slope of Mt. Mithridates (see No. 36), there lay a pair of earrings almost identical with our left earring on either side of the head of a female skeleton; in this case, the core is of copper, and the covering gold foil. Similar conditions govern both the findspot and technique of the ear spirals from a woman's grave in Nymphaeum in the Crimea. On the other hand we might well assume–in particular on account of the considerable weight–that girls wore such adornments in the hair, attached by means of a string or wire.

This type of spiral earring with pyramidal terminals which is especially prevalent in the Crimea and in the area of the northern Black Sea, occurs as early as the beginning of the 5th century BC in Thrace, variations are found in Lycia on the south coast of Turkey, on Cyprus (see No. 29), and in Greece.

Publ.: Greifenhagen I, 43, pl. 20,6–7; Antikenmuseum 1988, 313, Case 22,7a, No. 2; Pfrommer 1990, 146, note 978.

Cf.: M. Vickers, Scythian Treasures in Oxford (1979) 10, 42, pl. XIc (woman's Grave IV at Nymphaeum/Crimea); Williams/Ogden 1994, 34, fig. 30, 152, No. 93. J. Kalasnik, in: Skythen, Bonn 1997, 140 ff., No. 51 (from Panticapaeum, Hermitage, St. Petersburg); ibid. 47 (from Kyme, British Museum London; with pyramids also on the lower coils), lit. on earlier comparisons from Xanthos, Duvanli und Marion/Cyprus; Deppert-Lippitz 129, fig. 80 (from Duvanli, Plovdiv); D. Williams, in: A. Calinescu, ed., Ancient Jewelry and Archaeology (1996) 118, note 14, fig. 1; Greek Jewellery 1997, 108, No. 96 (from Mesembria, Komotini).

34 Ring bezel with Thetis and sea-horse

East Greek, c. 350 BC Said to be from Taranto Inv. 1966.8. Acquired in 1966 from C.L. Morley Section 8.9,19

The flat oval bone (?) bezel bears figures on both sides made from thin gold foil. The attachment was done in modern times. On the front, we see Thetis riding a sea dragon, on her way to deliver new armour to her son Achilles. She holds a helmet on her knees, and a large shield with a Gorgoneion on her left shoulder. We should restore the missing head of the sea monster between the helmet and Thetis' head. Three dolphins have been disposed, somewhat haphazardly, around the goddess. On the back, three dolphins play around a sea horse with a high, curved, wing. The thin gold foil of its upper leg is bent back: in its squashed state it obscures the object of indeterminate form in front of its chest, which in fact probably belongs to the missing head of the sea dragon on the other side. This fragment shares the same reddish traces of burning as those which run from Thetis' lower right arm and lap and spoil the clarity of the decoration.

The bezel is surrounded by a broad strip of sheet gold, which once held sheets of clear glass on both sides as protection for the images. The mount $(3 \times 2.4 \times 0.5 \text{ cm})$ is richly decorated with a smooth wave pattern between twisted wires, as well as smooth and beaded wire. There is a gap of 2 mm at the top of the metal mount, one end going slightly under the other; the metal no longer holds the bezel firmly, and the spaces are filled with earth. The gap at the top gives access to an 8 mm deep drill hole in the bezel, into which one end of the missing ring shank fitted; the other end was accommodated at the bottom in a shallow cavity drilled in the organic bezel. To achieve this, the wire decoration was pushed to one side and the mount pierced.

Another mounted Thetis in gold foil on blue glass $(2.5 \times 2.2 \text{ cm})$ from grave B at Homolion/Thessaly is better preserved thanks to the protective clear glass:

both the head of the sea dragon and the indentations below the edge of the shield are wonderfully well preserved, and the stamped gold foil done in sculptural relief. Both pictures are so similar - from the curly hair, the finely pleated garment, and the pointed foot of the goddess to the dragon's scales and the feathers of the plume on the helmet that they must come from the same mould. At the back of the Homolion ring an Eros rides on a dolphin. The glass bezels have no settings, but a hole is drilled through the long axis as on a scaraboid; an axial pin holds the silver shank of the ring. A comparison with the Homolion Nereid indicates that her Berlin counterpart should be more upright, so that the sea dragon's tail, and the upper body, neck and head of the Nereid lie along the central axis.

The three dolphins around the Berlin Thetis may in fact belong to the sea horse scene on the other side: a small glass "scaraboid" $(1.6 \times 1.5 \text{ cm})$ in the Hermitage in St Petersburg has on the flat reverse (also on blue glass) a slightly more elongated sea dragon surrounded by six fishes. Here too, the pictures on both sides were protected by clear glass. The three-layered sheets of glass are set in gold sheet metal, whose decorative wire, as well as the setting of the handle, is rubbed and heavily worn. The mount could not prevent the glass at both ends of the central groove from breaking, caused by the peg which is attached to a swivelled gold hoop. The surface of the front is slightly convex, and shows two dancing girls in short, belted, garments. The ring was found in 1858 in the stone-built Grave 2 of the Pavlovsky Kurgan in the Panticapaeum necropolis in the Crimea; it was one of three gold rings on the left hand of the buried woman. Its heavy wear shows that it was in use for quite a long time.

We first know of clear glass being used as



protection for gold foil on the throne and the Nike on the hand of the colossal chryselephantine statue of Zeus, made by Pheidias at Olympia some time after 430 BC. About 100 years later small plaques of clear glass cover gold foil images on the legs of the couches (*klinai*) in the so-called grave of Philip at Vergina. Ring bezels of gold sandwich glass occur a generation earlier, and there are good reasons to believe that they were produced in the eastern Mediterranean, or else in the northern Black Sea area.

Publ.: Greifenhagen II 75, pl. 56,13–15, colour pl. III, 1–2; S.G. Miller. Two Groups of Thessalian Gold (Berkeley 1979) 19, note 113, Pl. 11a+b; L'oro dei Greci 1992, 164, 264, No. 128; G. Platz-Horster, in: Die griechische Klassik. Idee oder Wirklichkeit. Exhibition eatalogue Berlin 2002, 568, No. 428

On the Paeloesky-Kurgan ring from the Panticapaeum necropolis, see: M.I. Artamonov, Treasures from Scythian Tombs in the Hermitage Museum, Leningrad (London 1969) 73, fig. 274 f.; Miller, ev. cit., 20, note 118, pl. 11e+f; L'oro dei Greci 1992, 164, 264, No. Williams/Ogden 1994, 171, No. 108; I. Saverkina, in: Skythen. Bonn 1997, 180 f., No. 83; N. Kunina, Ancient Glass in the Hermitage Collection (St Petersburg 1997) 81, fig. 46 f., 260, No. 68 (comparison): Platz-Horster, op. cit., 568ff., No. 429. – On the oklasma dance of the girls, see I. Saverkina, in: Skythen, Bonn 1997, 199 f., No. 98 f; Platz-Horster, op. cit., 572, No. 430.

On the ring from Grave B at Homolion, Thessaly, see: Miller, op. cit., 18 f., pl. 11c; Deppert-Lippitz 1985, colour pl. 16; L'oro dei Greci 1992, 264, No. 126.2; Platz-Horster, op. cit., 564–568, No. 421

Cf. also: the "conglomerate" scaraboid (1.6 x 1.3 cm) with Europa on the Bull in gold foil: Gli ori di Taranto 307, No. 265; blue glass on a screel ring, with Ganymede surrounded by flowers in gold foil: Sotter: s London, 10 July 1992, 12, Lot 318; biconvex clay bulla with central groove (2.43 x 1.87 x 0.84 cm), quadriga (front) and sea horse (back) in gold foil protected by clear glass: J. Spier, Ancient Gems and Finger Rings. The J. Paul Getty Muscum (1992) 41, No. 71.

On clear glass on the statue of Zeus see: W. Schiering, "Glas für alte Gottin in: Antike Welt 30 (1999) 39.ff.; G. Platz-Horster, Herstellung und Wert von Glas-Skarabäoiden", in: Annales du 14e Congrès AlHV Venezia-Milano 1998 (2000) 25.ff.; eadem, Zum Handel von Glas zwischen dem Nahen Osten, dem Mittelmeer- und dem Schwarzmeergebiet im 1. Jahrtausend v. Chr.", in: VIII. Internat. Symposium Vani/Georgia Sept. 1999 (in press).

35 Gold wreath with olives and cicada

East Greek, 330–300 BC From Asia Minor Inv. 30219,497. Present by F.L. von Gans in 1912 Section 8.11,1

This splendid *Stephanos* was offered in 1924 to Theodor Wiegand the then Director of the Berlin Antikensammlungen on his 60th birthday ("Theodor Wiegand zum 60. Geburtstag dargebracht"). In antiquity, however, our gold olive wreath did not function as a prize of honour, but as adornment for the dead. This is indicated by the excellent preservation of its paper thin leaves and by comparison with other gold wreaths found in grave contexts. The evergreen leaves of the olive tree explain their sepulchral use, widespread in the Greek cultural area; myrtle wreaths occur there too, while wreaths of oak leaves were confined to the area controlled by the Macedonians.

The frame of the wreath consists of two wire branches, wrapped in sheet metal (D.: 18.5 cm): at the front they are bent into loops, into which the flower stem is inserted; at the back the overlapping ends are joined together by means of gold wire wrapped around them; the actual ends have small sheets soldered over them in order to resemble a naturally cut surface. Twigs bearing leaves, and individual leaves, grow from small holes in both branches; at the junctions thin wires are wrapped, bearing between them 20 beads made from sheet gold and 18 of emerald - unripe and ripe olives. The flower in the centre of the front of the wreath (D.: 3.3 cm) consists of three superimposed 8petalled rosettes, which diminish in size. On it sits a cicada with six legs made from round wire; the back of the insect with closed wings was fashioned by means of hammering.

An oak wreath from a grave north of Troy on the Dardanelles is closely related in the way in which it is constructed: it too has "cut surfaces" on the ends of the branches, and a cicada over both loops. An olive wreath from the Kekuvatski Kurgan has the same construction of branches and ribbed leaves, but only gold fruits;



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ditto a wreath from Mogilanska Mogila in Bulgaria, but here the loops at the front are empty. An olive wreath from the stone cist burial No. 5 (found in 1883) in the Great Blisniza on the Taman peninsula lacks any fruits at all. Two wreaths from early Seleucid period graves near Uruk in Mesopotamia have gold olives, and the ends of the branches overlap; a wreath from Grave B at Derveni resembles them. The thin ends of an olive wreath from Mytilene are joined with a "Heracles [reef] knot". Wreaths from funerary contexts indicate an origin for the type towards the end of the 4th century BC. Publ.: Greifenhagen II 11, pl. 1,1–2, colour pl. I,1; Antikenmuseum 1988, 317, Case 22,8, No. 3; F. Pedde, in: Baghdader Mitt. 22, 1991, 530, note 27, pl. 63a.

Cf.: Williams/Ogden 1994, 165, No. 105; J. Kalasnik, in: Skythen (Bonn 1997) 173 (Hermitage St Petersburg, from the Kekuvatski Kurgan); I. Marazov, Ancient Gold: The Wealth of the Thracians. Treasures from the Republic of Bulgaria (New York 1998) 200, No. 141 (from Mogilanska Mogila, Vratsa Historical Museum); Williams/Ogden 1993, 180f., No. 115. J. Kalasnik, in: Skythen (Bonn 1997) 199 (Hermitage St Petersburg, from the third woman's grave found in 1883 at the Great Blisniza; cf.: A. Schwarzmaier, "Die Gräber in der Großen Blisniza und ihre Datierung", in: Jdl 111 [1996] 105 ff.); Pedde, op. cit., 521 ff., pl. 62 a-b (from two tumuli near Uruk, Iraq Museum Baghdad); L'oro dei Greci 1992, 276, No. 149,2; Derveni 1997, 89, 101 B 138, pl. 20 (from Grave B at Derveni, Thessaloniki Archeological Museum); Catalogue of Ancient Gold Jewellery. The Property of The Hermitage Museum Leningrad, Sotheby's London, 9 Nov. 1931, 12, No. 57, Pl. IV (from Mytilene).

Oak wreath with cicada: Williams/Ogden 1994, 106 f., No. 60, fig. 35 (*British Museum London, from the Dardanelles*).

On the significance of wreaths made from different varieties of vegetation in the cult of the dead, see: M. Blech, Studien zum Kranz bei den Griechen (1982) 93 ff., 426 f., No. 6 (list of Hellenistic wreaths).

36 Ring with lion heads

East Greek, 350–300 BC Said to be from Mt. Mithridates near Kerch Inv. 11863,4B. Acquired in 1907, formerly Merle de Massoneau collection Section 8.9,18

This ring (W.: 2.5 cm) has a flexible band made from four woven strings of gold wire, and is said to have been found with a necklace made in the same fashion [Inv. 11863,4A; L.: 33.5 cm], on Mt. Mithridates near Kerch (see No. 33, above). The gold wire "rope" runs into collars topped with sculptural lion heads, which hold the oval box-bezel in their mouths. The box-bezel is framed with beaded wire and decorated along the sides with an Ionic kymation done in filigree. A palmette of smooth wire with a central rosette adorns the upper side, two opposed spirals growing from palmettes the back. An almost identical ring with a rigid band [No. 20 in the same case], was acquired in Nikolayev near ancient Olbia on the Black Sea.

Box-bezel rings with a similarly rich decoration, but with figures in stamped gold foil and playful spirals on the sides, some of them with palmettes at the point of junction with the ring, come from Rhodes, Sicily and southern Italy. They belong to separate stylistic groups, but bear witness to the widely spread common "language" of Greek craftsmanship in the early Hellenistic period.



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Publ.: Greifenhagen I 49, pl. 26,18–19; D. Williams, "Three groups of fourth-century South Italian Jewellery in the British Museum", in: RM 95, 1988, 88, note 23. – Necklace Inv. 11863,4A: Greifenhagen II 31, pl. 26,4.

Cf. the finger ring from Nikolayev, formerly in the F.L. von Gans collection, Inv. 30219,515: Greifenhagen I 41, pl. 17,6–7.

Cf. from southern Italy: Williams, in: RM 95, 1988, 75 ff., pl. 32,2–3, pl. 34,1–2, pl. 38,3–4; Williams/Ogden 1994, 205, No. 136, 211, No. 143; J. Spier, Ancient Gems and Finger Rings. The J. Paul Getty Museum Malibu (1992) 41, No. 70. – Cf. from Rhodes: M. Maaskant-Kleibrink, Catalogue of the Engraved Gems in the Royal Coin Cabinet The Hague (The Hague 1978) 80, No. 21, pl. 9; Williams op. cit. 89, note 26. – Cf. from Lipari, Contrada Diana, Scavo 36: L. Bernabò Brea/M. Cavalier, Il Castello di Lipari e il Museo Archeologico Eoliano (Palermo 1977) 207, tomba 562, fig. 198; idem, Meligunis Lipára, vol. VII (1994) 95 f., tomba 2125k, 235 f., 238, No. 5, pl. 104,6–7 [information from A. Schwarzmeier].



37 Bracelet with lion heads

North Pontic, c. 350 BC From Samsun, Trabzon Vilayet Inv. 1987.3. Acquired from the estate of Theodor Wiegand Section 8.14,3 The ribbed bracelet with lion heads terminals (weight 60.4 grams) was acquired by Theodor Wiegand, formerly Director of the Berlin Antikensammlung (see Nos. 1 and 35, above), in Samsun probably before the First World War. The curved rod of the bronze core has a smaller diameter than the surrounding gold foil (external D.: 7.9 cm across, H.: 7.5 cm; internal D.: 6 x 5.7 cm). This surrounding sheet metal was grooved diagonally, then folded inwards and pushed over the bronze core. Parts of four of the six beaded wires with spiral notches, which originally lay in the grooves, remain in situ.

Each half of the lion heads with triple fringed manes was done in repoussé in a separate mould, the eye sockets were probably inlaid with coloured eyes, the tongue can be seen in the wide open mouth. The mane is framed with a collar made of beaded wire, and smooth and twisted wire. Beneath the collar the heads are soldered on to sheet metal sleeves, the smooth surfaces of which are decorated with palmettes atop double-spirals all done in filigree. The lower edges of the sleeves are again finished with wire, followed by a ring of tongues. An indication that the lion heads were once closer to each other is provided by the fact that one of the sleeves has slid back (by about 1 cm) on the hoop of the bracelet.

Animal head bracelets of the north Pontic area, strongly influenced by Achaemenid models (see No. 30, above), develop in the early 4th century BC and under Greek influence a broad neck-band with filigree decoration and a ring of tongues; also new is the hoop made from thick twisted gold wires or with spiral grooves on gold sheet metal laid over a bronze core, or made of glass with wire wound around. Only a few burial contexts are known, but such bracelets were probably worn by men as well as by women, presumably in pairs.

Publ.: K.A. Neugebauer, Antiken aus deutschem Privatbesitz (1938) 50, No. 230, pl. 94; Pfrommer 1990, 98, 102, 337 TA 66.

Cf. the pair of glass bracelets with lions' heads, Metropolitan Museum New York: Greifenhagen II 19, on pl. 8,8, fig. 1 right; Pfrommer 1990, FK 201, 339 TA 98, fig. 16,15, pl. 17,4; Williams/Ogden 1994, 46, fig. 39.

Cf. Metropolitan Museum New York, said to be from Eretria: Hoffmann/Davidson, Greek Gold (1965) 170, fig. 61b; Greifenhagen II 50, fig. 46, text on pl. 41,2; Search for Alexander 146, No. 83; Deppert-Lippitz 191, fig. 140; Pfrommer 1990, 335 TA 41 (probably modern). Private collection, Germany: Hoffmann/Davidson, Greek Gold (1965) 167 ff., fig. 61 a.e; Pfrommer 1990, 339 TA 85 (if genuine).

Cf. also the lion heads from a torc from southern Russia, Antikensammlung Misc. 11863,58: *Greifenhagen I* 42, pl. 19,1–3.

38 Pair of disc earrings with Nikai

East Greek, 330–300 BC Said to be from a grave on Kalymnos Misc. 10823a+b. Acquired in 1907 together with the gold ring Misc. 10823c. Section 8.10,8

Although the account of the discovery of these earrings in the Museum's accession register that they, together with a gold finger ring, "are said to come from a grave on Kalymnos; bought from a sponge-trader from Kalymnos in Berlin" is exotic, it is probably trustworthy–for all that the Berlin of the early 20th century was a world away from the island in the Dodecanese, north of Kos. In addition, the earrings are so similar in construction, decoration and technique to another pair from Kyme [No. 7, above], as well as three other pairs from the "Kyme Treasure" in the British Museum, that they were probably manufactured in the same workshop or else in one that worked in a comparable manner on the Asia Minor mainland nearby.

The rich earrings (H.: 5.7 cm) consist of discs (D.: 2.4 cm) with figures hooked on to loops at the back. The edges of the discs are curved upwards and are decorated with, in turn: notched wire, beaded wire and a cable pattern between smooth wires; they are partly overlaid by flowers of filigree, which grow in the spandrels of delicate spiral tendrils made from fine notched wires; in the centre of each disc arises a flower with gold petals, capped by a tiny rosette surmounted by a tiny gold ball. On each earring, a Nike playing the game of knucklebones is fastened by means of suspension loops on her outspread wings to the disc above; she crouches on a pyramid of spheres surmounted by a capital whose abacus is decorated in filigree. The pyramids are each made up of four double rows of quite large hollow spheres connected by beaded wire, then a cone of beaded wire and further large hollow balls at the tip. Loops at the back of the wings of the Nikai support four small chains, the two inner ones carrying dolls, and the outer two, dancers with flowing garments. All the figures are stamped from gold sheet metal. There are delightful details of goldsmith's work: witness the tiny astragaloi on the outstretched right hands of the Nikai, the heads in-





clined in contemplation of the game, and the fine engraving of their wings that describe the curve of the disc.

Publ.: Greifenhagen II 50, pl. 40,4, colour pl. III,5; Antikenmuseum 1988, 313, Case 22,7a, No. 15; Pfrommer 1990, 274, note 2444. Finger ring Misc. 10823c: Greifenhagen II, pl. 55,7–9.

Cf.: *GI* 165/166 = Misc. 7035 from Kyme. Greifenhagen II 49, pl. 40,1; on the earrings from the "Kyme Treasure" see Williams/Ogden 1990, 96 f., No. 49 f.; on the find complex see next entry; D. Williams, in: A. Calinescu, ed., Ancient Jewelry and Archaeology (1996) 119 f., fig. 2, note 27.

39 Necklace with Heracles knot

East Greek, c. 300 BC Misc. 3079 = GI 26. Acquired in 1854 from H.P. Borrell, British Consul in Smyrna Section 8.10,5

The broad necklace (L.: 34 cm; W.: 4 cm) consists of two bands of identical length, made up of five series of woven "loop-in-loop" cables. The bands support in



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their centre a Heracles (reef) knot made from two woven interlocking loops held in place by a sheet metal lying underneath; an elongated flower with a central rosette lies in the axis of the knot. The connection between the knot and ribbons is strengthened by means of flat sleeves decorated with double rosettes and palmettes in filigree. The loose ends are adorned with hollow biconical beads of gold foil covered with palmettes in filigree; the thin metal is reinforced and the ends and central seam decorated with notched wire. A woven cord emerges from the other end of the bead, and supports respectively four and five free-hanging chains. On these are suspended by means of quite substantial rings small "sunflowers", discs growing from leaves, with triangles of granuli between concentric rings of wire. The fastener is fashioned from flat sheet gold sleeves, the upper surface of which is decorated with the frontal head of a goddess wearing a polos. The ends of the sleeves are closed by means of sheet metal lids each fitted with a substantial ring. The Heracles knot starts its triumphant progress as a decorative element with the beginning of Macedonian power under Alexander the Great, and disappears with its fall after the battle of Pydna in 168 BC. There is a likely reference to the descent of Macedonian kings from the family of the Heraclidae, and from Heracles himself. From time immemorial, apotropaic power was attached to the Heracles knot (Heracles tied up the skin of the Nemean Lion with it).

The necklace is similar in technique and style to various necklaces from a large hoard from Kyme on the west coast of Turkey that was acquired in 1876 and 1878 in Smyrna for the British Museum (see above No. 38). They may well have been manufactured in the same workshop, which suggests that the find spot of the Berlin necklace was probably not far away from the place in which it was bought, in western Asia Minor.

Publ.: Greifenhagen II 16, pls. 6,1–2 and 7,1; The Search for Alexander, edd. N. Yalouris et al., Exhibition Boston 1980, 144, No. 81; Antikenmuseum 1988, 313, Case 22,7a, No. 17; Pfrommer 1990, 305 HK 57, pl. 2,2 (early 3rd century BC).

On the "Kyme Treasure" cf.: Williams/Ogden 1994, 92 ff.; Pfrommer 1990, 224, note 1569, 241 FK 71, note 1870; D. Williams, in: A. Calinescu, ed., Ancient Jewelry and Archaeology (1996) 117 ff.; cf. also a necklace from Mytilene, Metropolitan Museum New York: Williams/Ogden 1994, 118, No. 69.

On the history and interpretation of the Heracles knot see Pfrommer 1990, 4 ff., 77 ff.

40 "Fan wheel" fibula

Macedonian, 330–300 BC From the environs of Thessaloniki Inv. 30219,453. Presented by F.L. von Gans in 1912 Section 8.9,10

This fibula belongs, together with two pairs from the same workshop, to the so-called Ganymede hoard from Macedonia, found before 1912 in the environs of Thessaloniki, and acquired in 1937 from the second

collection of Friedrich L. von Gans by the Metropolitan Museum in New York. Edward Gans acquired the counterpart to the Berlin fibula; it is somewhat squashed and bent, and three twisted wires are fastened to the cheek hinge, perhaps a hint as to the way the original six fibulae were worn (cf. the "Bukiovtsy hoard," below). Similarly, three pairs of closely related gold fibulae came to light in 1962 in Grave Z at Derveni, which again resemble fibulae from the Macedonian double grave A/a at Beroea, which is dated to *c*. 330–325 by a stater of Alexander III.

The bow of the gold fibula (W.: 4.3 cm) carries five small "fan wheels", together with smooth and twisted wire rings. The flat heart-shaped catch plate is decorated on the underside with a double volute made from smooth wire; above it a repoussé acanthus and rosette. The front is decorated with two "towers" made up of hollow spheres on a cylinder made from sheet metal strips, finished with twisted wire (see detail); the foreparts of a griffin above the foreparts of a horse sit between the "towers". Both the spheres and animal protomes were made in two halves moulded in sheet metal. The pin is now lost, but its base was lodged in a small square box at the other end of the bow; pieces of sheet metal are soldered on to it, bearing the head of the goddess Bendis with lion skin, framed by a row of repoussé dots, and surrounded by applied twisted wire.

The "fan wheel" fibulae developed from Macedonian "knot" fibulae, which from the end of the sixth century BC onwards occur in pairs in tombs, for example at Sindos near Thessaloniki (see No. 12, above). A splendid *parure* in silver of the Thracian variant of these bow fibulae, originally consisting of six fibulae, connected by means of long "double loop-in-loop" chains with heads, rosettes and fruits attached to them, belongs to the late 5th/early 4th century BC "Bukiovtsy hoard" (Mizia), discovered in Bulgaria in 1935.

Publ.: Greifenhagen II 89, pl. 65,1–3,7; Deppert-Lippitz 1985, 198, fig. 146; Antikenmuseum 1988, 313, Case 22,7a, No. 12; Pfrommer 1990, 257, note 2152. – For its counterpart: R. Jaeger, Die Sammlung Eduard Gans (P. Cassirer/H. Helbing, Berlin, Auction Dec. 1928), No. 20; "The Edward Gans Collection of Ancient





40 (Detail)

Jewelry", in: The Summa Galleries Inc., Auction I, Sept. 18, 1981 Beverly Hills, No. 112; E. Gans, Berlin Banker to California Numismatist, 1887–1987 (Berkeley 1987) 218.

On the "Ganymede hoard" from near Thessaloniki, Metropolitan Museum New York, see R. Zahn, Galerie Bachstitz II (1921) 25 ff., No. 91, pl. 22 f.; G.M.A. Richter, "The Ganymede Jewelry", in: BMetrMus. 32, 1937, 290 ff.; Pfrommer 1990, 255 FK 106, note 2126 (mid-3rd century BC); Williams/Ogden 1994, 74 ff., 78 f., No. 33, fig. 10e.

On Grave Z at Derveni see: Derveni 1997, 121 ff., 128 Z 5–7, figs. 27 and 143, 184, 221. On the fibulae from Beroea see: The Search for Alexander, edd. N. Yalouris et al., exhibition Boston 1980, 130, No. 55. – Cf. also the contemporary variant, the "barrel" fibula: Greifenhagen II 89, pl. 65,4–6; Benaki Collections 1999, 164f., No. 50f.

On the Macedonian knot fibulae cf.: Greifenhagen II 90, pl. 65,7-8; $\Sigma i \nu \delta o \varsigma$ 1985, 46, No. 63, 78, No. 114, 89, No. 132 f., 294, No. 484 f., 298, No. 494 f., 308, No. 516, 311, No. 523; B. Tsigarida, "Fifth-Century BC Jewellery from the Cemeteries of Pydna, Macedonia", in: D. Williams, The Art of the Greek Goldsmith

(London 1998) 48 ff., fig. 6,1–3; Greek Jewellery 1997, 94 No. 78; Benaki Collections 1999, 145, No. 39 (Lit.).

On the "Bukiovtsy hoard" see: I. Marazov ed., Ancient Gold. The Wealth of the Thracians. Treasures from the Republic of Bulgaria (New York 1998) 199, No. 140; L'oro dei Greci 1992, 201, 279, No. 154. Cf. also: $\Sigma i v \delta o \leq 1985$, 220, No. 351 f.; Williams/Ogden 1994, 52, No. 6.

41 Earring with lion heads

Tarentine, c. 250 BC Inv. 30219,408. Presented by F.L. von Gans in 1912 Section 8.13,2

The design of the lion heads on this pair of earrings is somewhat playful: the mane carefully arranged in a series of twirls, set off from the face by means of a row of



small impressions; the furrows on the forehead running in parallel to the S-shaped eyebrows, the whiskers almost in mirror-image and connected to the wrinkles on the back of the nose; the large teeth in the corners of the mouth, and the protruding tongue played by a single shining garnet, together with the garnets in the eye sockets, in the point above the forehead, and in the ears; the combination of these features gives the lion mask a bizarre rather than a frightening aspect. The small lion head on the other end of the horn-shaped bow is similarly worked, and it too was stamped in two symmetrical halves, joined together and carefully chased afterwards; here, though, the inlays of the eyes are missing.

The back of the small lion head is closed with a disc of gold sheet metal, from the centre of which a tube extends to the bow of the earring; both parts were once connected by means of a pin that could be pushed across through carefully aligned holes. The large earring was probably attached to the ear lobe at this point. The bow consists of a tapering sheet of metal, smooth towards the bottom but wrapped with twisted wire above the ear lobe. The sleeve of the lion head extends above it, decorated with a crown of filigree wire and a central flower, filled with the remains of enamel, framed by beaded wire, and finished below with a frieze of elongated ovals made of filigree.

These large earrings (H.: 4.3 cm) recall in their complex construction around a curved tube, the Etruscan *a grappolo* earrings of the second half of the 4th century BC (see No. 24, above). They occur in Etruscan graves, and even more frequently in south Italian contexts, especially in the area of Taranto. Among double headed earrings this pair in Berlin is especially resplendent on account of the garnets inlaid *à cabochon*, and the once colourful enamel inlays on the collars of the lion heads. This speaks for a date of manufacture in the late 3rd century BC.

Publ.: Greifenhagen II 57, pl. 45,10–11, colour pl. IV, 1; Deppert-Lippitz 1985, 224, fig. 161; Antikenmuseum 1988, 327, Case 22, 13a, No. 8; Pfrommer 1990, 377 OR 307, pl. 24,1 and pl. 30,26.

Cf.: Gli ori di Taranto 141, 181, Nos. 107–113; *Pfrommer* 1990, 376 OR 299*ff. Greifenhagen II* 56, pl. 45,5; *Pfrommer* 1990, 377 OR 306, pl. 24,2. *Williams/Ogden* 1994, 215, No. 148 (from south Italy, Metropolitan Museum New York). L'oro degli Etruschi 312, No. 247; *Pfrommer* 1990, 376 OR 297 (from Cerveteri in Rome, *Villa Giulia, and a similar example from Capua in London). Pfrommer* 1990, pl. 23,7–9, 375 OR 287 (from Cumae in Munich), 376 OR 291 (from Capua in London) and 377 OR 309 (London, formerly Hamilton collection).

On the south Italian type, see Pfrommer 1990, 154ff., fig. 26; P.G. Guzzo, Oreficerie dalla Magna Grecia (Taranto 1993) 96f. classe VI B, 256f.





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42 The gold jewellery from Taranto

Hellenistic, 230–210 BC Said to have been found around 1900 in Taranto Inv. 1980.17–22. Acquired on the art market in 1980 Section 8.16A,1–6

The splendid gold jewellery was probably the *parure* of a rich Tarentine woman, with which she was buried in the late 3rd century BC. The interplay of gold and precious stones in the eight-piece set is especially cap-

tivating on the unusually long chain with a large "Heracles knot" (L.: 111 cm): 51 pairs of gold wire links alternate with 50 links made from cut garnet; the conical cornelian terminals set in gold sleeves are attached to the looped knot by means of movable hinges; the knot consists of long, curved, pieces of garnet enclosed in sheet gold decorated with beaded wire.

The pure gold necklace (L.: 36 cm) consists of a triple loop-in-loop woven arrangement, from which 114 short beaded wires decorated with small spheres are suspended; fine filigree wires adorn the tongue-







shaped clasp. The two cast snake bracelets (D.: 6.5 cm) have a central ridge on the curved outer side, and the figure-of-eight heads and tails of the reptiles are engraved with scales. The finger ring made from spiral wire (external W.: 1.9 cm) ends in two snake heads each set with a pair of garnets. For the earrings (H.: 5.6 cm), hovering Nikai were elaborately worked as pendants from rosettes with garnet-filled centres. The goldsmith cast the naked female bodies in a mould, then surrounded them with a billowing wind-blown garment of sheet gold. Then were attached: the wings to the back, the sash over the arms, a bowl and small box in the hands, diminutive footwear and the hook at the head.

The goldsmith who made the hair net (D.: 9.4 cm, H.: 6.7 cm) was the most adventurous: employing an older medallion with a youthful Medusa head (see No. 44 left) worked three-dimensionally from the back, he constructed a more-or-less hemispherical network consisting of seven rows of 25 gold wire arches, standing on two base strips adorned with central "Heracles knots". The points of junction are set with garnets; they also adorn the centre of the rosettes on the base ring, alternating with larger rhomboid stones and droplets framed with beaded wire. The connecting "Heracles knot" is similar to the one on the long chain, but is fixed and worked so as to be visible only from the front.

Analyses of the garnets and of the gold, as well as detailed comparative studies of the wire and soldering techniques employed, show that the individual pieces in the assemblage were not manufactured at the same time nor in the same workshop, but that they were all made at Taranto between c. 230 and 210 BC. This date is supported by a Tarentine silver stater struck between 212 and 209 BC attached to a necklace with a triple loop-in-loop woven arrangement like the one described above, which also comes from Taranto. The differential wear on the jewellery suggests that a wealthy Tarentine woman completed the set gradually; in this way we have a closed picture of first quality goldsmiths' work of the high Hellenistic period. Perhaps she had - following the latest fashion - had the customary diadem remade into a rigid gold net for her high chignon. The few comparative pieces from contexts in Thessaly and Egypt point to the exceptional social position of the owner.

Publ.: Gli ori di Taranto 452 corr. CXXII, 1–7, 176, No. 98, 247, No. 172 f.; Antikenmuseum 1988, 291, Nos. 1–6; E. Formigli/W.-D. Heilmeyer, "Tarentiner Goldschmuck in Berlin", 130./131. BWPr 1990; Pfrommer 1990, 231 f. FK 41; P.G. Guzzo, Oreficerie dalla Magna Grecia (1993) 320, Taranto Nos. 43–48; The Western Greeks. Classical Civilization in the Western Mediterranean, ed. G. Pugliese Carratelli (London 1996) 479, 733, No. 300; G. Platz-Horster, in: Antikensammlung 1998, 36, No. 13.

Cf. the loop-in-loop-chain with a silver stater from Taranto, Antikensammlung Inv. 30219,312: A. Greifenhagen, AA 1961, 103, No. 48, fig. 39 (lost in the War); Greifenhagen II 98, pl. 68,7–8; Guzzo, Magna Grecia 203, No. 5.

Cf. a hair net with a medallion of Artemis, formerly Stathatos, National Museum Athens: L'oro dei Greci 1992, 196, No. 150.1; with a Maenad medallion, formerly Schimmel, Metropolitan Museum New York: Williams/Ogden 1994, 254, No. 197; with a medallion of Athena: Benaki Collections 1999, 207, No. 69; with a medallion of Aphrodite, Getty Museum Malibu: M. Pfrommer, Alexandria. Im Schatten der Pyramiden (Sonderband Antike Welt 1999) 128, fig. 174a-c.

43 Diadem with masks and rosettes

East Greek, c. 200–150 BC From Abdera in Thrace Inv. 30219,371. Presented by F.L. von Gans in 1912 Section 8.11,3

The diadem comes from a gold hoard east of Kavala in the area of Abdera; the hoard originally also contained a snake bracelet, a bracelet with lynxes' heads, an earring with the foreparts of a sphinx, a rosette-and-amphora earring, as well as a pair of plain earrings. Of these, only the last mentioned and the diadem came back to the Antikensammlung after the War.

The unusual decorative band (L.: 56 cm) consists of 15 small rectangular panels, two bow-shaped terminals, and a chain of pendants suspended from the nine central panels. All the links are made from thick gold foil. They have prominent edges, framed inside with notched wire; internally, the panels are divided into two squares with beaded wire. In one square, there is soldered a male or female mask of the New Comedy, surrounded by four rosettes with stamens made of gold granules of a kind which occur elsewhere within the field. The other square contains either a large three-layered flower, whose stamens are missing, or a large garnet in an oval setting made from beaded wire, surrounded by four ivy leaves with remains of coloured enamel and berries made of granules of gold. On all four corners of the backs of the panels there are soldered some small horizontal tubes to take the string on which they are threaded. In addition, there are projecting wire suspension loops soldered on some of the panels to support the pendants. The latter consist of five tassels hanging from a single heart shaped casing for a garnet inlay; from each of these there is suspended a garnet sphere encased in gold flowers, and thence three chains which end in miniature versions of the garnet-in-flower elements. The heart-shaped capsules are attached crosswise by means of chains set with rosettes and shields with projecting bosses, and hooked above into the loops soldered below the small rectangular panels. The ogival terminals of the diadem are adorned with large garnets set in beaded wire on a floral wreath, surrounded by small blooms and berries; on the back, there are two small tubes for the string and a loop for the fastener.

The ornate construction and original colour (thanks to the garnets and enamel) of the diadem bestow a certain radiance upon this unique decorative band. Since both the pendants and their connection to the small rectangular panels are clearly incomplete, and the string is quite naturally lost, the order of the links must be arbitrary. It is also possible that a "Heracles knot" crowned the centre of the diadem, as the few comparative pieces and terracotta statuettes suggest. The sphinx on the earring from the Punjab (see No. 48, below) wears a similar diadem.

Publ.: Greifenhagen I 35 ff., pl. 14–15, colour pl. I (with a detailed explanation of the production techniques); Antikenmuseum 1988, 317, Case 22,8, No. 1; Pfrommer 1990, 243 FK 77, 14, fig. 2,21 (flower).

On origin and history of the hoard see: Greifenhagen I 34ff., pl. 13,7–11.

Cf.: Benaki Collections 1999, 202, No. 67 (from Thessaly); Pfrommer 1990, 215 ff. FK 21, pl. 12,3. Pfrommer 1990, 309 HK 99 (Hermitage St. Petersburg, from the Artyuchov-Kurgan). Pfrommer 1990, 314 HK 144 (Antikensammlung Munich, from Kerch, formerly Loeb collection).

44 Three decorative discs

Hellenistic, c. 320–150 BC Above: from south Russia. Inv. 30219,458 Left: Inv. 30219,457. Right: Inv. 30219,456 Presented by F.L. von Gans in 1912 Section 8.12,16–18

These three ornately decorated circular gold shields served as the central clasps for chains, which went across the chest and passed through loops on the backs. This kind of chain, known as the *periamma*, was an invention of the Hellenistic period (see No. 48, below). Such a cross band with medallions at the centre and at all four corners lay *in situ* on the skeleton of a young girl in a grave in Patras lavishly equipped with gold jewellery, and dated *c*. 150–125 BC.

The upper disc (D.: 4.5 cm) has a smooth edge with simple wire spirals; the central emblem, which was pressed into a mould, shows in high relief the bust of Aphrodite, the love-goddess wearing a diadem, veil and necklaces; a small Eros looks over her left shoulder. Comparable discs have turned up in south Russian graves of the early 2nd century BC.

The Medusa mask is soldered separately on to the decorative disc on the left (D.: 4.4 cm) and surrounded by snakes; tendrils, palmettes, flowers and birds, which cover the shield in a delicate network of various filigree wires, grow out of a large acanthus calyx; the edge is bent upwards and is framed with filigree, a cable-pattern, and thick beaded wire. The playful tendrils in delicate filigree wire on this piece of jewellery recall the work of a goldsmith who worked in Taranto in the second half of the 4th century BC and who is called the



"Santa Eufemia Master" after the findspot of an assemblage of jewellery.

The decorative disc on the right (D.: 4.8 cm) bears as its central emblem a Middle Hellenistic Medusa mask with a pathetic expression, flowing snake curls and wings; beneath her chin are snakes tied in a knot, framed by the scales of her aegis made from arches of delicate beaded wire. A cable pattern set with granules between smooth wires and a spool wire beyond frame the edge. Style and ornament connect this decorative disc with the medallion of a hair net probably manufactured in Egypt in the first half of the 2nd century BC.

These three decorative discs of the same shape and with the same function, but expressing the style and decoration of three distinct and distant artistic centres, reveal the busy exchange, the *koiné* of the Hellenistic world.





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Publ.: Greifenhagen I 40, pl. 17,1 and II 97, pl. 68,2–3; Antikenmuseum 1988, 325, Case 22,12, Nos. 22–24.

Cf.: *Pfrommer* 1990, 265, note 2292. D. Williams, "Three groups of fourth century South Italian jewellery in the British Museum", in: RM 95, 1988, 80 ff., 91, note 47; Williams/Ogden 1994, 206 ff., No. 137 ff.; ibid. 254, No. 197. On the hair net, see: M. Pfrommer, Alexandria. Im Schatten der Pyramiden (Sonderband Antike Welt 1999) 128, fig. 174a; see above on No. 42. On the periamma from Patras see: I.A. Papapostolou, "Hellenistische Gräber aus Patras I", in: ArchDelt 32, 1977 [1982], 281 ff., 302 ff., pl. 103 f.; G. Platz-Horster, "Gold fürs Jenseits", in: JbBerlMus 42, 2000, 7 ff.

45 Two necklaces and an earring with zoomorphic terminals

Hellenistic, 250–150 BC Outer necklace: from Smyrna. Inv. 30219,316 Centre: Inv. 30219,315. Both presented by F.L. von Gans in 1912 Section 8.12,6–7 Inner necklace: from Egypt. Misc. 8949 Presented by F.W. von Bissing in 1900 Section 8.13,24

The outer necklace (L.: 37.5 cm) comes from Smyrna and consists of double wire chain links on which are mounted spherical cornelian, emerald and gold beads, together with twisted wire rings. Collars made from larger beads of emerald lead to fasteners adorned with calves' heads; beneath the mouth of one is a large hook, and in the mouth of the other is a loop for an oval garnet encased in a gold mount.

The shorter necklace (L.: 25 cm) is made up of small gold and cornelian bobbins, connected by means of circular loops; the collars enclose cornelian beads, and support fasteners of antelopes' heads, again fitted with a hook and a loop respectively.

The solitary earring (D.: 2.1 cm) with its twisted stem broadens to a collar set with a garnet bead between two granulated wire rings. This in turn supports an expressive dolphin's head which holds in its mouth a tiny gold bead; beneath it is a twisted wire loop to take the tip of the curved stem. Necklaces and earrings with animals' heads probably spread from Macedonia into the Hellenistic world from the late 4th century BC onwards, and from the late 3rd century BC they are increasingly enriched with colourful stones. Earrings with dolphin heads are until now only known from Ptolemaic Egypt and Cyprus.

Publ.: Greifenhagen II 19f., pl. 9,6–7, pl. 10,6–7 and 56, pl. 45,2; Antikenmuseum 1988, 325, Case 22,12, Nos. 15–16 and 327, Case 22,13a, No. 22. Inv. 30219,316: Pfrommer 1990, 322 TK 23, pl. 16,1.6. Misc. 8949: Pfrommer 1990, 359 OR 69, 179, fig. 34.

Cf.: Jewellery – Ancient to Modern. The Walters Art Gallery, Baltimore (1979) 85, No. 260. Rudolph, Legacy 1995, 160, No. 34.A. Greek Jewellery 1997, 120, No. 113. M. Pfrommer, in: D. Williams, ed., The Art of the Greek Goldsmith (London 1998) 82, fig. 10,6. Benaki Collections 1999, 198, No. 65.

46 Earrings with glass doves

Hellenistic, 200–150 BC Found in 1895 in Grave B in the Scocchera Hypogeum at Canosa, Apulia Inv. 30219,399. Presented by F.L. von Gans in 1912 Section 8.13,9

This colourful pair of earrings comes from a woman's grave discovered in 1895 at Canosa near Bari in a large Hypogeum. The assemblage consisted of large female terracotta figurines, richly decorated pottery vessels, a mosaic glass bowl, a clear glass skyphos, the remains of a golden sceptre, and a further pair of earrings with cornelian doves on elaborate gold discs, but they soon were scattered throughout the world.

These earrings are exceptional in that the bodies of the doves (L.: 1.5 cm) made from gold sheet metal are covered with strips of green, blue and white glass. The sheet metal was roughened with a punch the better to carry the glass. The latter is, however, today partly weathered to a grey colour and has partly flaked off. Eyes and beak, wings and tail feathers were carefully left unglazed and they shine gold, surrounded by twisted wire; small granules mark the eyes, and a





rosette with small granule adorns the breast. A loop over the extension for the tail-feathers takes the smooth wire bow.

The earrings with cornelian doves from the same grave are today in the Benaki Museum Athens, the glass skyphos is in Paris, the glass bowl is in Corning, and the terracotta figurines and pottery vessels are in New York, Bari, Naples, Rouen and Copenhagen. It is not certain whether the grave goods come from a single or larger burial.

Publ.: A. Oliver, Jr., "The reconstruction of two Apulian Tomb Groups", in: Antike Kunst 5, Beiheft 1968, 16ff., 19f., 24, pl. 1,3 and 12,1; idem, in: Journal of Glass Studies 11, 1969, 14ff.; Greifenhagen II 57, pl. 46,1; Gli ori di Taranto 188, No. 124, 454 corredo CXXV,2; Antikenmuseum 1988, 327, Case 22,13a, No. 10; E.M. De Juliis, "Ipogeo Scocchera B", in: Principi imperatori vescovi. Duemila anni di storia di Canosa, ed. R. Cassano (Bari 1992) 231 ff., Cat.3.2.14, 236, No. 11: he dates the whole complex to the 3rd century BC on the basis of a jug that was not found until 1979 in the Dromos to the Hypogeum; P.G. Guzzo, ibid., 530, Cat. 3.3.5, No. 2; idem, Oreficerie dalla Magna Grecia (1993) 251 V A *b*, 258 VII B 4, 302 s.v.; Guzzo confirms de Juliis' dating. Since a recent study by O. Dally the chronology of both the jug type and that of the whole find is doubtful.

On the earrings: Gli ori di Taranto 176, No. 99; Benaki Collections 1999, 222, No. 77. – On the mosaic-glass-bowl: S.M. Goldstein, Pre-Roman and Early Roman Glass in the Corning Museum of Glass (Corning, New York 1979) 176, No. 460. – On the terracotta figurines: T. Fischer-Hansen, Catalogue Campania, South Italy and Sicily, Ny Carlsberg Glyptotek 1992, 98 ff., Nos. 77–80. M.L. Ferruzza-Giacommara, "Quattro statue di terracotta provenienti da Canosa", in: Studia Varia from the J. Paul Getty Museum, 1 (Malibu, California 1993) 71 ff., 79.

On the glass skyphos, De Juliis, op.cit. 237, No. 13 cf.: L. Mercando, "L'ellenismo nel Piceno", in: Hellenismus in Mittelitalien, Kolloquium Göttingen 1974 (1976) ed. P. Zanker, 168, Ancona Tomba XXX, Fig. 66 (coins down to 181 BC); N. Kunina, Ancient Glass in the Hermitage Collection (St Petersburg 1997) 259, No. 57.

Cf. Earrings with glass doves: Greifenhagen II 58, pl. 46,3 and 10–11 [in this show case, Nos. 8 and 10]. L'oro degli Etruschi 1983, 230, 312, Nos. 251 ff.



47 Pair of "leech" earrings (?)

Late Hellenistic, Egypt? Inv. 30219,448. Presented by F.L. von Gans in 1912 Section 8.12,22

Three objects in the shape of leeches (L.: 4.6 x W.: 3.2 x D.: 2.6 cm) each made from two thin gold foil sheets are not soldered continuously on the long sides, and are in addition connected with each other beneath their tips by means of two platforms, on which there are two loops. The "leeches" are densely covered with horizontal rows of thin, curved, strips of gold foil; between them lie narrow loops of smooth wire with a granule in each "eye". At front and back they are articulated with two spectacle volutes and a central ridge of smooth wire, plentifully adorned with granules of gold. The tips are closely wrapped with wire.

The function of these very light (Wt.: 13.8 and 16 grams) and fragile objects is uncertain: the loops are small, wide, and have sharp edges; they lie across the platforms and

could have been threaded with two parallel (leather?) straps. Or perhaps the loops served as hinges for a hoop fastened on both sides with a pin. The gold foil of these eyelets is, however, so delicate that they are partly torn out; and one of the platforms is already missing.

In the "second von Gans collection" there was a pair, with a single "leech" each, with practically the same decoration, but without any mounting on the back, supposedly from Egypt. In the Cairo Museum there are some pieces of jewellery whose findspots are unknown, which are comparable in shape and also–at least in part–in decoration, and which are called "melon-earrings", even though only one has a "hinge" on the back. They are described as "Greco-Roman", the above-mentioned pair as "late Hellenistic or later".

The lack of comparative material from specific datable contexts renders the classification of this singular jewellery rather difficult. Characteristics such as the lavish filigree finish, the curved foil strips, the delicately soldered granules, and the lightness of what are in fact rather substantial objects are reminiscent of the work of early Babylonian or Phoenician goldsmiths. Not only do the basic shapes of "ship" and "leech" earrings recall our pieces in detail, but features such as the closely wrapped tips, adornment with narrow filigree loops and spectacle volutes, and the prodigal use of granulated filling ornament occur as early as the late 8th century BC. These earrings often carry longitudinal decoration; it is only on early "leech" earrings that horizontal ridges occur, together with granulation.

Publ.: Greifenhagen II 106, pl. 73,17–19; Antikenmuseum 1988, 325, Case 22,12, No. 26.

Cf.: *R. Zahn, Galerie Bachstitz, 's-Gravenhage vol. II (1921) 6, No. 17, pl. 2 ("from Egypt"; 2.9 x 1.4 cm). E. Vernier, Cat. Général des Ant. Égyptiennes du Musée du Caire. Bijoux et Orfèvreries vols. I-II (1907–09) 157 ff., No. 52471 ff., pl. 31 and 36 (judging by the inventory numbers of Nos. 40325 ff., the earrings were all bought at the same time).*

Cf.: Nicolini, Techniques 289ff., pls. 41ff., Nos. 58–61. – "Leech" earrings from Ephesus: F.H. Walters, Cat. of Jewellery, Greek, Etruscan, and Roman in the British Museum (London 1911) 72, pl. IX, No. 942ff. "Caterpillar" earrings with pomegranates, supposedly from Iran, 7th-6th century BC?: F. Naumann, Antiker Schmuck (Kassel 1980) 32, pl. 11,42.

48 Earring with a sphinx protome

East Greek-Parthian, c. 150 BC Acquired from the Punjab/North India Inv. 31330. Acquired in 1932 Section 8.9,25

The forepart of a winged Sphinx forms the sculptural decoration of this earring (H.: 3.5 cm). Its bow consists of a sheet metal tube covered with wires arranged in cable patterns, and soldered in place. It leads from the back of the animal body to an opening in the head. In contrast with the vigorously rendered animal belly, with outstretched lion's paws, the upper part of the mythical creature is of Aphroditic beauty with a slightly inclined head. The hair is put up and framed by an ornate band, from which are suspended two discs with granules which hang over the forehead.

Besides her circular earrings and temple-rosettes, the sphinx wears a multi-beaded chain around her neck, and one between her breasts, crossed and with a round central fastener. The rich body decoration consists of separately applied foil and granulated ornament. The high, curved, wings of impressed foil are defined by means of twisted wire, and are made separately and secured by means of a strut.

The chain that crosses over the breasts – the *periamma*, often wrongly taken to be a diadem when found out of context – was a new form of jewellery of the Hellenistic period. Images of sphinxes, sirens, erotes and of the love goddess Aphrodite indicate how it was worn. Such a band has in fact been found *in situ* on the breast of a young girl in a rich grave at Patras of *c*. 150 – 125 BC; the central medallion shows in embossed gold foil Heracles struggling with the Hydra, and there are masks of Medusa at the four ends of the gold bands.

Publ.: Greifenhagen II p. 59, pl. 47,5–6; Antikenmuseum 1988, 313, Case 22,7a, No. 9; Pfrommer 1990, 194ff., 389f. OR 472, pl. 26,8–9, pl. 30,75.

Cf. a more simple pair, said to be "from Antiocheia/Syria": Antikensammlung Berlin Inv. 1960.14. Greifenhagen II 59, pl. 47,7–8; on the art market, ibid. pl. 47,9–10; Pfrommer 1990, 196, 390 OR 473–475.



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On the breast chain see: Deppert-Lippitz 1985, 216, fig. 152; F. Naumann-Steckner, "Greek Jewellery and its Representation", in: The Art of the Greek Goldsmith, ed. D. Williams (London 1998) 95 ff., pl. 13, fig. 13,3–4; Pfrommer 1990, 9, 17 ff., 31 f., pl. 3,1–5 (Heracles knot). On the breast band from Patras see: I.A. Papapostolou, "Hellenistische Gräber aus Patras I", in: ArchDeltion 32, 1977/1982, 281 ff., 302 ff., No. 5, 436, pl. 103 f. [information from A. Schwarzmeier]. Cf. No. 44. – On the diadem see above No. 43.



49 (Detail)

49 The grave jewellery of a woman

Seleucid-Parthian, c. 150–100 BC From Haftashan, Iran Inv. 1986.36–43. Acquired in 1986 from the F.-J. Bach collection Section 8.16B,1–10

This eleven piece gold assemblage comes from the west Persian province of Kermanshah, situated on the eastern border of Mesopotamia, the cradle of European culture. After the death of Alexander the Great the area belonged to the Seleucid empire; in 160 BC, its eastern part fell to the Parthians, the heirs of the Persian empire; in 64 BC, its western part became the Roman province of Syria. The gold assemblage reflects a

situation of changing political influences and their cultural consequences.

The most important piece in the complex is a gold pin (H.: 12.5 cm, Wt.: 34.3 g) topped by the figure (H.: 2.9 cm) of an enthroned mother-goddess wearing a diadem and holding a child in her arms, rather in the tradition of the First Mother well known in ancient oriental cultures, although her appearance owes much to the art of the Hellenistic goldsmith.

The lowest of the three necklaces (L.: 36.6 cm) follows an early Hellenistic type of "spear head" pendants, developed with the addition of beads and cornelian talismans. The sixty-nine individual parts of the large necklace have been strung together in modern times (L.: 62 cm), since the original organic string has disappeared; the various parts–small gold tubes, rosettes and squares with sickle- and drop-shaped pendants in filigree settings for garnet, cornelian and amethyst find parallels in the Seleucid-Parthian jewellery. The other "double loop-in-loop" necklace (L.: 33.6 cm) with a large, lavishly set piece of banded agate in the centre was a type which stayed popular until Roman times.

The earrings consist of small Erotes, from which hang amphoras made from wine skins, closely covered with granulation (H.: 6.3 cm; Wt.: 18 grams each). These earrings with oversized heads of Erotes and suspended vessels are a Seleucid peculiarity. But the smaller of the two finger rings (external D.: 2.2×2 cm, internal: 1.5 cm, bezel 1.7 x 1.4 cm) with a convex garnet, engraved with a Greek helmet, follows wholly western models. The iron inlay of the larger ring (external D.: 2.4×2.3 cm, internal: 1.9 x 2 cm) is so much corroded, that it has ruptured the gold setting, and no decoration is visible any more. The 113 cm long, narrow gold band with holes at each end perhaps served as decoration for the upper arm or leg.

The oval sheets of gold foil (L.: 13.4 cm and 6.9 cm) covered the eyes and mouth of the corpse; both were smoothed with the same hammer. Such gold sheets often occur in Parthian graves and clearly define the gold-find from Haftashan as jewellery for the dead.

The individual pieces of jewellery are not contemporary, nor do they come from the same workshop;



they also show differential wear and tear. Only the large necklace and the earrings can be attributed to the area in which they were found; the other parts of the find were probably inherited or bought from traders. The burial can be dated by the latest parts of the find, namely the late Hellenistic Erotes earrings, to the 1st century BC. A deceased female with such rich and elaborate grave goods of gold and precious stones probably belonged to the local upper class.

Publ.: W.-D. Heilmeyer, "Der Goldfund von Haftashan", in: Jahrbuch Preußischer Kulturbesitz 24, 1987, 229ff.; P. Calmeyer, "Gute Geister", in: Archaeologia Iranica et Orientalis. Miscellanea in Honorem Louis Vanden Berghe, ed. L. De Meyer/E. Haerinck, vol. II (Gent 1989) 605ff., pl. IV (earrings without amphora pendants); Pfrommer 1990, 291 FK 181, 191, 365 OR 146, pl. 30,70; G. Platz-Horster, in: Antikensammlung 1998, 38, No. 14.

On the earrings cf.: Antikensammlung GI 92–97, acquired in 1856 in nearby Hamadan. Greifenhagen II 54, pl. 43,14–23; Calmeyer, op. cit. pl. I a-f, II a interprets the Erotes as Fravashis, winged apotropaic creatures of Median folk religion.

Cf.: *Rudolph*, *Legacy* 157, *No.* 33, 160, *No.* 33.*C*. 1–2 (gold foil objects), 162, *No.* 35.*A*. (chain). *Greek Jewellery* 1997, 142, *No.* 139.

On the shape of the ring, cf.: Greifenhagen I 34, pl. 13,3–5; II 75, pl. 57,1 [Case 8.12 Nos. 25–27].

50 Two rings from the Petescia hoard

Late Hellenistic-Roman, c. 50 BC to AD 20 Found in Petescia, modern Turania, north of Rome, in 1875 Misc. 7051 and Misc. 7066 = FG 11067. Acquired through W. Helbig in Rome in 1876 Section 8.15,15 and 13

The Petescia hoard, found in a village in the Umbrian Sabine mountains, was the most important purchase made for the jewellery collection of the Berlin Antiquarium in the 19th century. The entry in the accession register for May 1876 contains 38 items [Misc. 7041–7078]. Six pairs of bracelets, two single bracelets, and one pair of torcs – these 16 gold objects weighing more than 3 kilos were all stolen from the Central

Repository at Schloss Celle in 1946/47; drawings which W. Helbig had done in Rome in March 1876, and which are now kept in the German Archaeological Institute in Rome, record more precisely than pre-war photographs the decoration and construction of these rings (see the endpapers of this book). A gold laurel wreath and 13 gold finger rings with Cameos, gems or cut stones–aquamarines, emeralds, garnets and chrysoliths–are preserved as well as a solid gold finger ring, a silver bracelet, the silver head of a *fulcrum*, two fragmentary silver beakers with remains of Erotes decoration, a silver shell pyxis, a silver frog employed as a pendant, and two small objects made of amber.

The heavy gold ring was solid cast and chased afterwards (external D.: without head 1.7×2.17 cm, internal D.: 1.3×1.6 cm, bezel 1.55×1.24 cm, Wt.: 14 grams). The ring, round outside, flattened within, becomes broader towards the shoulders; into the flat oval of the upper part is inserted a separately cast and rather prominent disc with a bust of Jupiter. The fully worked head is seen in three quarter view, and in the Hellenistic tradition has long, billowing locks, a beetling brow, deep set eyes and a full beard; the chest is draped. The most closely related objects are late Hellenistic finger rings from Egypt in gold and marble and set with busts of Serapis.

The large finger ring set with a cornelian onyx is the only one among the 13 from the Petescia hoard which is sufficiently big for a man's finger (externally 2.53 x 3.4 cm, internally 1.8 x 2.35 cm, bezel 3.25 x 2.27 cm; Wt.: 10.08 grams). The oval cameo shows in low relief a group of a Satyr and Nymph, where the cornelian red contrasts with the milky white ground. The young Satyr with pointy ears sits frontally with legs apart on a rock spread with an animal skin, and pulls at the corner of the garment of the Nymph dancing in front of him. In so doing, he reveals to the onlooker a delightful view of a nude from the rear beneath the gossamerthin dress. The Nymph throws her right arm upwards, turns her nicely coiffured head towards her partner and lowers her left hand down to the cloth of her garment just over his erect penis. The Satyr steps with his right foot on a rattle, while with the left he appears to strike the rhythm. Despite the movement, the group is



entirely oriented towards the viewer, the erotic game is aimed at the voyeur, and the actors themselves are oblivious. – The cameo with its elongated stone, its group composition that goes back to Hellenistic sculptural models, its refined and mannered carving as well as its massive ring setting dates to around the middle of the 1st century BC.

It belongs-next to the largest ring with Medusa cameo-to the earliest objects of the Petescia hoard; the necklaces and bracelets, most of the finger rings – including a cornelian cameo with the portrait of the empress Livia –, the golden wreath and the silver vessels were created in the Augustan or early Tiberian period. The enormous value of the pure gold, that was used for the (lost) necklaces and bracelets alone, the especially clear precious stones, and the first class craftsmanship that was expended on them point to imperial patronage, although the quality of the silver objects is not nearly in the same league.

Publ.: Greifenhagen I 77ff., pl. 58,7+9, pl. 59,6 and 59,4, colour pl. VII, 3; Antikenmuseum 1988, 355, Case 24,1b, Nos. 16 and 23; L. Pirzio Biroli Stefanelli, L'oro dei Romani (1992) 23, figs. 11–13, 231, Nos. 10 and 12; T. Springer, "Ein Hort von Dona Militaria", in: Acta Praeh. et Arch. 25, 1993, 265ff.; G. Platz-Horster, in: Archäologischer Kalender 1998, Verlag Philipp von Zabern Mainz, 25. Mai – 7. Juni 1998; G. Alvino, "Turania", in:



La Valle del Turano sulle tracce dell'antico (Rieti 1999) 19 f., figs. 3 and 7.

On the find as a whole and the circumstances surrounding its purchase, see: G. Platz-Horster, "Der Schatzfund von Petescia", in: Prospettiva, In memoria di Mauro Cristofani, ed. B. Adembri (Rome, in press).

On the Jupiter ring, cf.: E. Vernier, Cat. Général des Ant. Égyptiennes du Musée du Caire. Bijoux et Orfevreries vols. I-II (1907–09) 105, No. 52296, pl. 26 (gold ring). Götter und Pharaonen, Exhibition Essen 1978, No. 153 (a votive ring made of marble). B. Nardelli, I cammei del Museo Archeologico Nazionale di Venezia (Roma 1999) 31, No. 3 (chalcedony cameo): early 1st century AD, and see the review by G. Platz-Horster, in: Gnomon 74, 2002, 58f.

On the Satyr and Nymph ring, see: O.M. Dalton, Cat. of the Engraved Gems of the Post-Classical Periods, British Museum London (1915) 21, pl. VII,133. The onyx cameo, said to be 16th century work inscribed COCTPAT for "Sostratos" was acquired in 1815; it requires an ancient model which corresponds compositionally, with the one found at Petescia in 1875.

51 Pendant with a frog of rock crystal

Sarmatian, 1st century AD? From southern Russia. Formerly Merle de Massoneau collection, Yalta Misc. 11863,13 a 1. Acquired in 1907 Section 8.12,21

A rock crystal frog in gold harness (L.: 3.35 cm) is designed as a pendant for a necklace. The stone (2.2 x 1.75 x 1.13 cm) is rough cut and but slightly polished afterwards; the eye sockets were made deeper by means of a cylindrical drill; the coloured inlays for the eyes that probably were once there are missing; the left foreleg of the animal has been broken off. A hole has been bored through the frog along its longitudinal axis to take a double gold wire; the ends are wound around a gold foil cone at the mouth, a loop made from two twisted wires between three smooth wires is soldered on to the top of the cone. On the creature's



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back, double gold wires are placed beneath a gold foil saddle-cloth; the latter approximates in form and structure to a goat- or lambskin and is framed by two opposing volutes of twisted wire and a small loop (roughly punched out); on the sides a strap made from two twisted wires between three smooth wires holds the cloth under the belly, while two twisted wires on either side of a smooth wire lead around the neck, and are soldered to the base of the cone in front of the mouth.

The cursory engraving of the stone and the simple goldsmith's work with its emphatic wires and roughly executed soldering suggest a later dating than that hitherto proposed. The combination of rock crystal and a gold mount, as well as the robust gold work and the large loops, are features that occur on the jewellery of the Sarmatians to the north-east of the Black Sea. Perhaps this singular piece, which was acquired in southern Russia, can be attributed to a tribe of those rider nomads, who between the 3rd century BC and the 3rd century AD controlled the steppe between Bug and Don in succession to the Scythians (see Nos. 25–27, above).

The frog-the symbol of fertility and of life-served as a pendant probably to keep evil away.

Publ.: Greifenhagen I 41, pl. 18,2 ("4th/3rd century BC"); Antikenmuseum 1988, 325, Case 22,12, No. 20; L'oro dei Greci 1992, 165, 265, No. 129 (compared with a gold ring of the late 5th century BC from Megara Hyblaea in Syracuse).

Cf. the Sarmatian fibula in the shape of a dolphin made in gold and rock crystal from the Nogajcik Kurgan near Cervonoe in the Crimea: Gold der Steppe. Archäologie der Ukraine, edd. R. Rolle et al. (Schleswig 1991) 325, No. 146 (1^{st} century BC – 1^{st} century AD); Scythian Gold. Treasures from Ancient Ukraine, ed. E.D. Reeder (Baltimore 1999) 323, No. 169 (end of 1^{st} /beginning of 2^{nd} century AD). On simple gold-work with emphatic eyelets see for example: a flask from the Kurgan near Cugunno-Krepinka, Doneck: ibid. 329, No. 159 (1^{st} century AD).

Cf. the rock crystal frog, "3rd millennium or later": Christie's London, Fine Antiquities, Tuesday 13 Dec. 1988, 12, No. 143 (H.: 1.7 cm); rock crystal cicada with bronze reins, from the grave of a young woman, found north of Rome, dated by a coin to the early Tiberian period. Antikensammlung Berlin Inv. 30891qq: G. Platz-Horster, in: Römisches im Antikenmuseum, ed. K. Vierneisel (Berlin 1978) 184 ff., 191, No. 294; Antikenmuseum 1988, 269, Case 20,3b, No. 57. See also the next entry here.

On the frog as a grave offering, see: R. Lullies, "BATPAXOI", in: Theoria. Festschrift für W.-H. Schuchhardt (1960) 145, note 20: frogs of "faïence" and amethyst in southern Russian graves; O. Neverov, Antike Kameen in der Staatlichen Ermitage (Leningrad 1988) 480 f., No. 481 f. – P. Lévêque, Les grenouilles dans l'antiquité: cultes et mythes des grenouilles en Grèce et ailleurs (Paris 1999) 31ff. [information from M. Vickers].

52 Rock crystal alabastron in a gold mount

Said to be from a grave near Apamea, Syria Early Roman imperial, c. 30 BC – 20 AD Inv. 1981.17. Acquired on the art market in 1981 Section 8.15,5

This unguent vessel made from rock crystal has survived from antiquity in an almost undamaged state, complete with its gold suspension chain. Perhaps the delicate flask served to hold the perfume of a wealthy Roman woman. From a single block of transparent rock crystal the stone-cutter succeeded in making a thin-walled and fragile vessel with high neck and a broad body (H.: 7.5 cm, D.: 4.5 cm, total Wt.: 55.9 grams); the delicate handles, which curve upwards from the shoulders to the rim, have at their highest point a small spur to hold the gold rings of the mount in place. Two gold "double-loop-in-loop" chains lead from these to a further ring, from which a similar chain hangs down for the golden lid, and which is attached to a larger gold ring by means of a further length of chain, indicating that the piece of jewellery could be worn. The cylindrical plug with the lid fits firmly into the neck of the alabastron; at the point at which its lower edge stops, there is a light brown soil discoloration inside the vessel. The small projection beneath is frosted; perhaps it had been recut on account of a broken foot. - A second intact amphoriskos of rock crystal (H.: 9 cm, D.: 4.9 cm), today in the Abegg-Stiftung in Riggisberg/Switzerland (fig. on p. 90), is said to come from the same context. Here too, the complete gold mount with lid and suspension chain is preserved. Its cylindrical body stands on a flat foot, on the angular handles the loops for the gold rim-cap as well as the rings for the suspension chain are fastened.

Precious objects of rock crystal seem to be popular grave offerings, in particular for funerals of young females in the early Roman imperial period; in the grave of a young woman [see Section 20.7] found to the north of Rome, dated by a coin to *c*. AD 20, there were deposited—in addition to a miniature silver service, mirrors, jewellery, writing implements and knucklebones–two small flasks, a sea urchin box, a cicada, a shell, and a polyhedron of rock crystal, a small agate flask, three small marble plates, a walnut and a manikin of amber. Four unguent vessels, a shell, a ball, and a polyhedron of rock crystal were found in 1935 in a grave of the early 1st century AD in Puglia near Arezzo, where a girl lay wearing a gold embroided tunic, a gold wreath, an amber chain, and golden finger ring. A *skyphos*, a small flask and a nut of rock crystal were placed with a young woman in a sarcophagus of the second half of the 1st century AD discovered in Vetralla in 1887.

The small unguent flasks – called *vas amphorale* by the Roman author Pliny the Elder in his book *Naturalis Historia* 37.10 – form the largest group among surviving vessels made of rock crystal. The comparative material, mostly from graves of the early Roman imperial period in Italy all have quite thick walls; thin-walled vessels with gracefully curved handles and high thumb supports are still in the tradition of delicately finished precious stone cultivated in Hellenistic art centres such as Alexandria in Egypt.

Publ.: W.-D. Heilmeyer, Jahrbuch Preußischer Kulturbesitz 18, 1981, 165 ff., fig. 30; Antikenmuseum 1988, 353, Case 24,1a, No. 1. – The rock crystal amphoriskos in the Abegg-Stiftung in Riggisberg/Switzerland, Inv. Nr. 9.45.81, is otherwise unpublished; thanks are due to H.-C. Ackermann for permission to publish it here.

Cf.: the rock crystal alabastron (H.: 10.6, D.: 3.4 cm) formerly in the John Hunt collection, Drumleck near Dublin/Ireland, Antikensammlung Berlin Inv. 1987.1 [No. 6 in this case]. - Grave gifts for a young woman, found north of Rome, dated by a coin to the early Tiberian period. Antikensammlung Berlin Inv. 30891: G. Platz-Horster, in: "Römisches im Antikenmuseum", ed. K. Vierneisel (Berlin 1978) 184 ff., Nos. 240–304; Antikenmuseum 1988, 269, Case 20,3b, Nos. 28–78. – On the girl's grave in Puglia near Arezzo, see Magie des Goldes 1996, 76 ff., Nos. 94–100. – On the woman's grave of Vetralla see G. Bordenache Battaglia, Corredi funerari di età imperiale e barbarica nel Museo Nazionale di Roma (Rome 1983) 49ff., rock crystal 68ff., Nos. 25-27, figs. 22-24, gold jewellery, a figural group of amber, a small genius cucullatus, a turtle, a hare, a small flask with vine leaves as well as tools, small flasks and bulls of glass, tools of ivory and bone, and the remains of two small wooden boxes.





Cf.: H.-P. Bühler, Antike Gefäße aus Edelsteinen (Mainz 1973) 53 ff., Nos. 36–38, 42–48, 56; only one flask (ibid. 49, No. 28) with a golden plug and neck-ring, probably 1st century BC, see too Parke-Bernett Galleries Inc. New York, The Melvin Gutman Jewelry Part III, 15. Dec. 1969, 74, No. 144. In addition, see: C. Gasparri, in: ArchClass 27, 1975 [1977] 350 ff.; A. Oliver Jr., "Rock Crystal Vessels in Antiquity", in: Muse 7, 1973, 29 ff. – D. Alcouffe, in: Der Schatz von San Marco in Venedig, ed. H. Hellenkemper (Cologne 1984) 139 f. – On the amphoriskos in the Abegg-Stiftung with the "elbow-shaped handles" cf.: Oliver, op. cit. 31 ff.; Bühler, op. cit. 53, No. 36, pl. 13. -Two sardonyx alabastra, found in 1985: A. Apakidze and V. Nikolaishvili, An Aristocratic Tomb of the Roman Period from Mtskheta, Georgia. The Antiquaries Journal London 74, 1994, 16 ff., 46 no. 49 and 50 (with gold lid on chains), Fig. 31a, 32.

On the origins and use of rock crystal see: G. Devoto/A. Molayem, Archeogemmologia (Rome 1990) 91 f., 191, 228 s.v. quarzo ialino; G. Piccottini, in: Germania 72, 1994, 475 ff.; G. Devoto, "Il versabile Cristallo di Rocca", in: BollNum 25, 1995, 139 ff.; M. Vickers, in: JRA 9, 1996, 48 ff.; A. Krug, 137. BWPr (1998) 18 f., notes 61 ff.

Amphoriskos in the Abegg-Stiftung Riggisberg

Appendix

Index of abbreviations

Antikenmuseum 1988

Antikenmuseum Berlin. Die ausgestellten Werke (Berlin 1988)

Antikensammlung 1998

Die Antikensammlung: Altes Museum – Pergamonmuseum, Staatliche Museen zu Berlin. Ed.: B. Knittelmayer and W.-D. Heilmeyer (Mainz 1998)

Benaki Collections 1999

Greek Jewellery from the Benaki Museum Collections, ed. E. Georgoula (Athens 1999)

Boardman, GGFR

J. Boardman, Greek Gems and Finger Rings. Early Bronze Age to Late Classical (London 1970)

Deppert-Lippitz 1985

Barbara Deppert-Lippitz, Griechischer Goldschmuck (Mainz 1985)

Derveni 1997

Π. Γ. ΘΕΜΕΛΗΣ / Γ.Π. ΤΟΥΡΑΤΣΟΓΛΟΥ, ΟΙ ΤΑΦΟΙ ΤΟΥ ΔΕΡΒΕΝΙΟΥ (ΑΘΗΝΑ 1997)

Formigli, Preziosi 1995

Preziosi in Oro, Avorio, Osso e Corno. Arte e tecniche degli artigiani etruschi. Internat. Colloquium Murlo/Toscana 1992, ed. E. Formigli (Siena 1995)

Gli ori di Taranto

Gli ori di Taranto in Età Ellenistica, ed. E.M. De Juliis (Milan 1984)

Greek Jewellery 1997

Greek Jewellery. 6,000 Years of Tradition. Exhibition Thessaloniki, Villa Bianca (Athens 1997)

Greifenhagen I

Adolf Greifenhagen, Schmuckarbeiten in Edelmetall. Antikenabteilung Berlin. Vol. I: Fundgruppen (Berlin 1970)

Greifenhagen II

Adolf Greifenhagen, Schmuckarbeiten in Edelmetall. Antikenabteilung Berlin. Vol. II: Einzelstücke (Berlin 1975)

Laffineur 1978

Robert Laffineur, L'orfèvrerie rhodienne orientalisante. École Française d'Athènes XXI (1978)

L'oro degli Etruschi 1983

Mauro Cristofani e Marina Martelli, L'oro degli Etruschi (Novara 1983)

L'oro dei Greci 1992

L'oro dei Greci, testi di D. Musti, M. Benzi, L. Rocchetti, P.G. Guzzo, G. Calcani, F. Catalli (Novara 1992)

Magie des Goldes 1996

Die Magie des Goldes. Antike Schätze aus Italien, ed. W. Seipel (Vienna 1996)

Pfrommer 1990

M. Pfrommer, Untersuchungen zur Chronologie früh- und hochhellenistischen Goldschmucks. Istanbuler Forschungen vol. 37 (1990)

Rudolph, Legacy

W. Rudolph, A golden Legacy. Ancient Jewelry from the Burton Y. Berry Collection (Bloomington, Indiana 1995)

Σίνδος 1985

 Σ IN Δ O Σ . Catalogue of the Exhibition in the Archaeological Museum Thessaloniki, ed. A. Despini (1985)

Skythen, Bonn 1997

A. Alekseev et al., Zwei Gesichter der Ermitage, vol. I: Die Skythen und ihr Gold. Exhibition catalogue Bonn 1997

Williams/Ogden 1994

D. Williams/J. Ogden, Greek Gold. Jewellery of the Classical World (London 1994)

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Staatliche Museen zu Berlin -Preußischer Kulturbesitz

For the postal addresses, phone & Fax numbers, and e-mail addresses of the Berlin public archaeological collections - Archäologische Sammlungen of the Staatliche Museen zu Berlin (PK) - following the reorganisation of the Berlin museums, see below:

Internet address: www.smb.spk-berlin.de

ÄGYPTISCHES MUSEUM UND PAPYRUSSAMMLUNG Museum entrance: Schloßstr. 70 14059 Berlin-Charlottenburg Postal address: Bodestr. 1–3 10178 Berlin-Mitte Phone: 030/2090-50 Fax: 030/2090-5102 E-mail: aemp@smb.spk-berlin.de

ANTIKENSAMMLUNG

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	Am Lustgarten
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	Fax: 030/2090-5202
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MUSEUM FÜR ISLAMISCHE KUNST

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	Fax: 030/2090-5402
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Museum für Vor- u	nd Frühgeschichte
Museum entrance:	Schloß Charlottenburg,
	Langhansbau
Postal address:	Spandauer Damm 19
	14059 Berlin-Charlottenburg
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	Fax: 030/326 748 12
	E-mail: mvf@smb.spk-berlin.de

Skulpturensammlung und Museum für Byzantinische Kunst

Museum entrance: Monbijoubrücke (Bode-Museum) Postal address: Bodestr. 1–3 10178 Berlin-Mitte Phone: 030/2090-50 Fax: 030/2090-5602

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	E-mail: vam@smb.spk-berlin.de









