

Luistari – A History of Weapons and Ornaments

LUISTARI IV

by

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PREFACE

Presenting the excavation at Luistari in Eura from 1984 to 1992 in this connection marks over 30 years of studying Luistari. I feel that it is enough. I know that I have not told everything about it, but I also feel that someone else can carry on from here. The most important consideration for me was to provide a clear picture of this important complex and to arrange its material for further use.

In addition to descriptions of the inhumation graves excavated between 1984 and 1992, of all the cairn burials and a brief overview of the dwelling site at Luistari, the present volume also presents my summary of a number of essential features of the whole material from Luistari. All the radiocarbon analyses were carried out or forwarded to other bodies by the Radiocarbon Dating Laboratory of the University of Helsinki, and the calibrations were also made there. I wish to thank Dr Högne Jungner, head of the laboratory, for discussions that clarified my points. There are also analyses of material by Tuukka Talvio (coins), Ulla Tupala (bone finds) and Tiina Jäkärä (wood). I extend my warmest thanks to them for participating in this research.

I have drawn most of the plans of the graves myself, but the other maps, plans, drawings and most of the photographs are by Rauno Hilander. Also my daughters, Kati and Raisa Hilander, have helped me in my work. Mr Philip Bingham MA and Mr Jüri Kokkonen MA checked the English manuscript of the grave descriptions and Jüri Kokkonen translated the summary. I express my gratitude to him and all others mentioned here.

I am also indebted to the representatives of the municipality of Eura for a great deal of assistance. The Cultural Fund of the Kalevala Koru company provided grants for analyses and the language checking and translation of this volume. Without their aid it would have been impossible to bring this study to a satisfactory conclusion.

Of the staff of Finland's National Board of Antiquities, I particularly wish to thank Päivi Pykälä-Aho, Leena Ruonavaara, Paula Purhonen, Leena Söyrinki-Harmo, Leena Tomanterä and Tuula Heikkurinen-Montell. The Finnish Antiquarian Society kindly included this volume in its publication programme. My thanks go to Vammalan Kirjapaino printers and Professor Torsten Edgren for their cooperation in the printing of this book.

Helsinki, 20 January 2000

Pirkko-Liisa Lehtosalo-Hilander

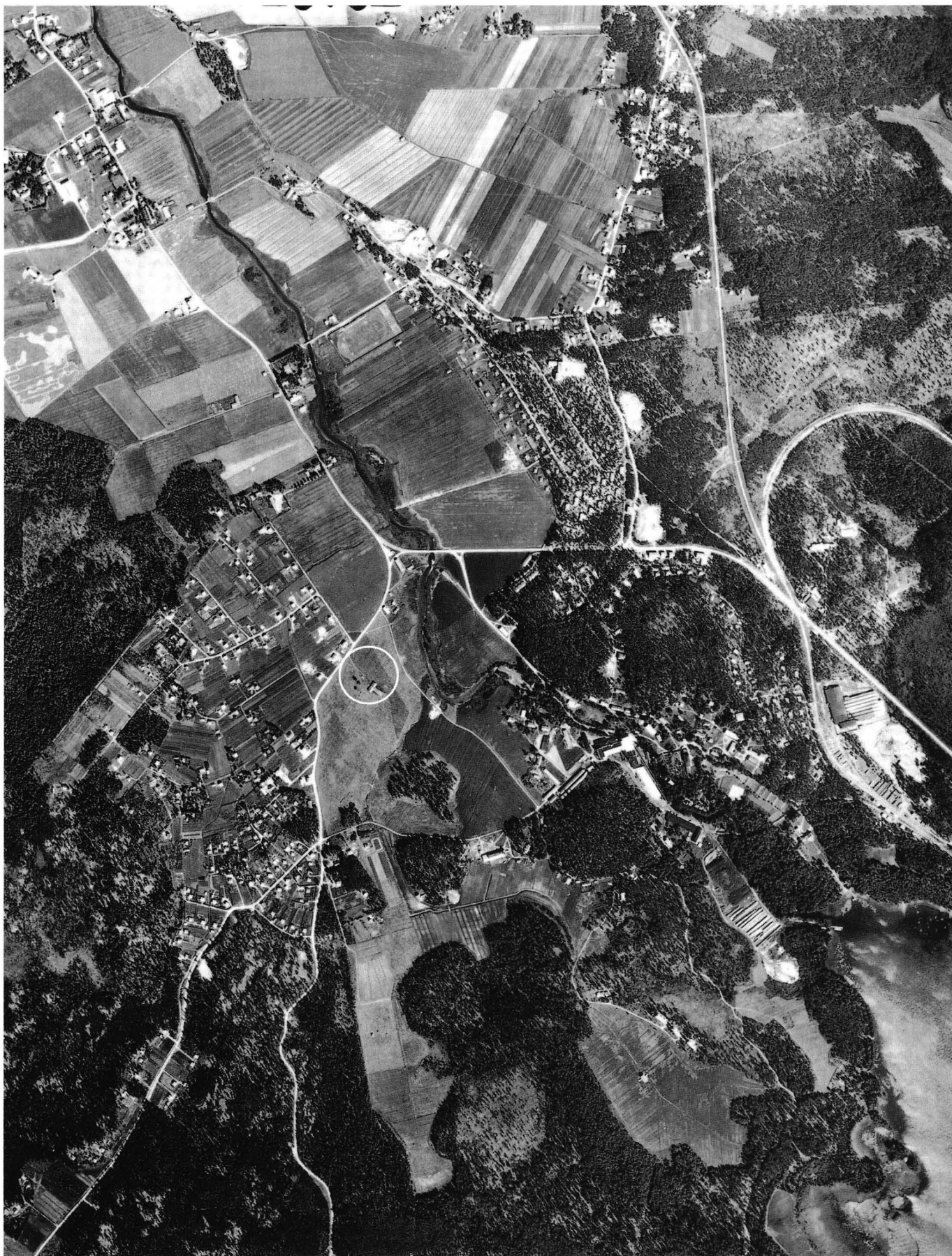
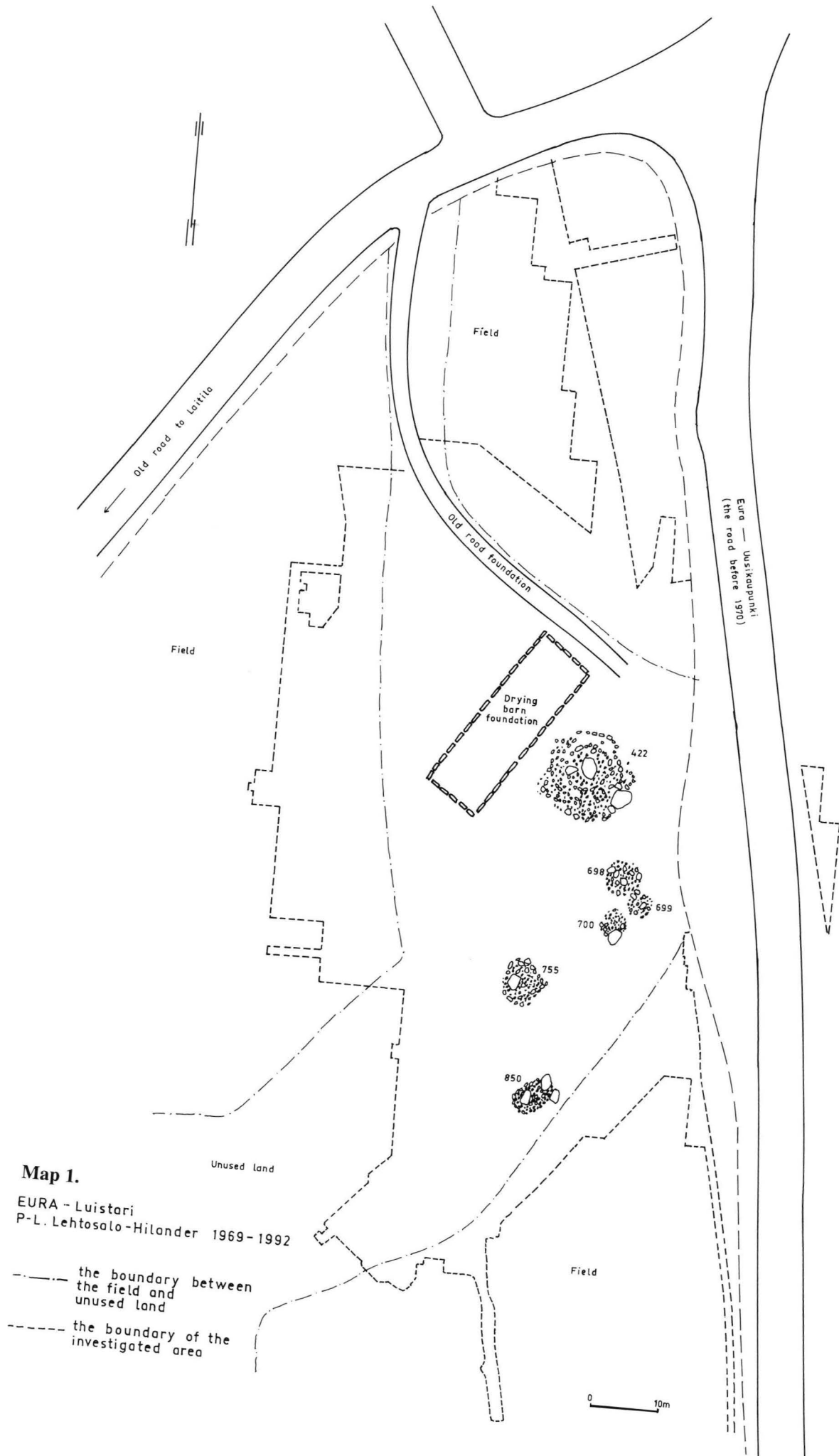
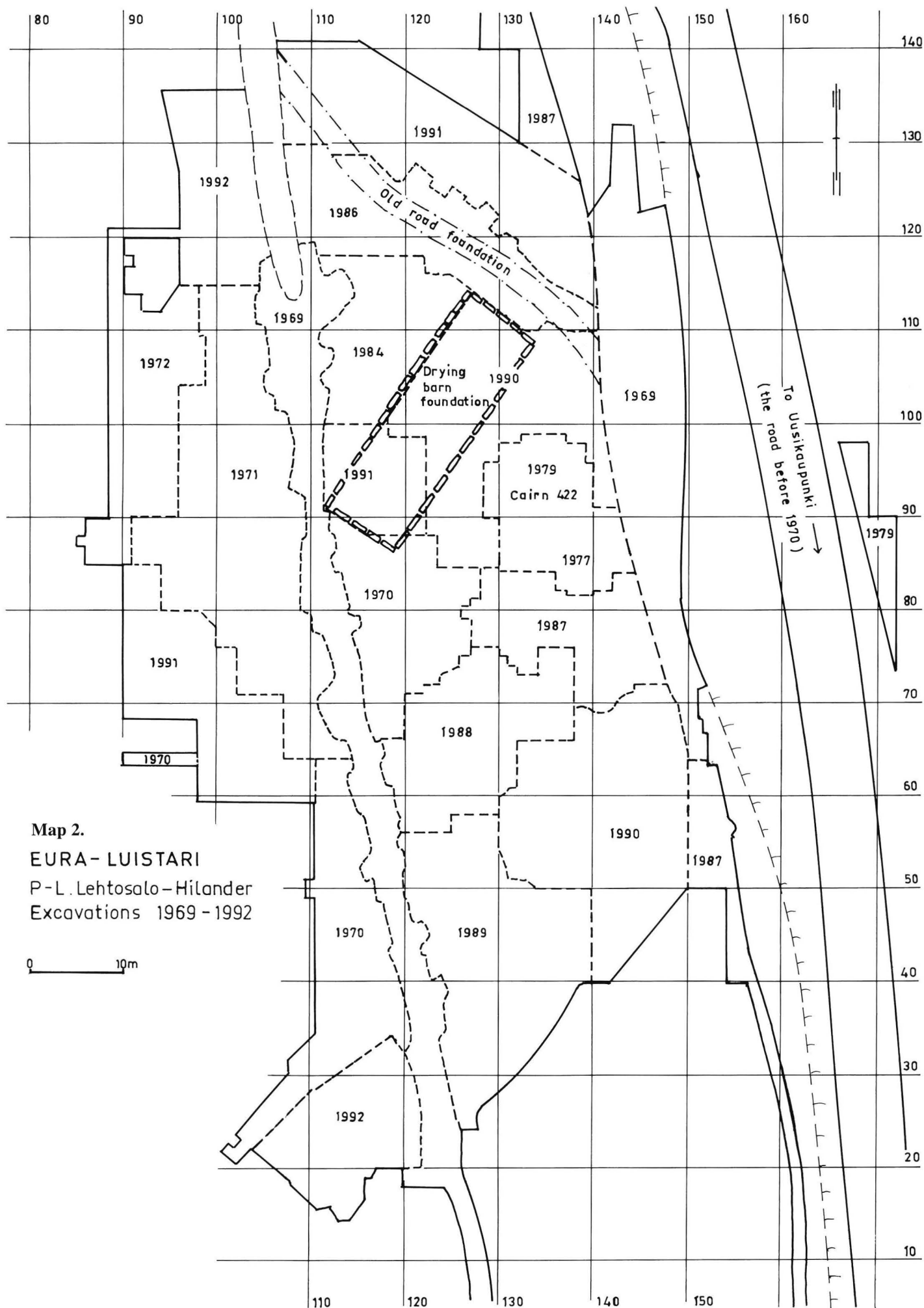


Fig. 1. Aerial photo of Kauttua from 1957 (57126 353, National Land Survey of Finland, Aerial Photo Archive, permission 101/MYY/00). The area of the Luistari site (ringed) is still surrounded by fields and only the old road to Laitila runs to the NW of the site. The large barn inside the ring was demolished about 1960, when the Eura-Uusikaupunki road was built. The barn was situated to the E of cairns 422, 698–700.





INVESTIGATIONS AFTER 1979

The first fieldwork at the Luistari cemetery in Eura was carried out from 1969 to 1972 (finds 17847:1–3 and 18000:1–4730 in the collections of the National Board of Antiquities in Helsinki, i.e. The Finnish National Museum, *Fi. Kansallismuseo* = KM). During those summers 418 inhumation graves were excavated. Later in 1977, excavations were continued as a training excavation project by the Department of Archaeology of the University of Helsinki (finds 20189:1–222), and three more inhumation graves were found. A minor excavation was carried out also in 1979 when cairn 422 from the beginning of the Iron Age was investigated (finds 20552:1–243).

The inhumation graves were published by the author of this book in 1982 (LUISTARI I–III), and the cairn in 1986 (Lehtosalo-Hilander 1986). Material from the dwelling site layer predating the cemetery was partly published in 1977 (Lehtosalo-Hilander 1977), and has also been treated by Unto Salo in his contribution to the history of Satakunta (*Satakunnan historia* I, 2, *Pronssikausi*, 1981). Details of the rich finds from Luistari have also been treated in several minor studies in earlier years (Lehtosalo-Hilander 1973, 1976, 1978, 1979, 1982, 1984a, 1988, 1989, 1990, 1997, 1999; Tomanterä 1978).

Although more than 2000 m² were excavated during those earlier investigations, only a part of the cemetery had been studied, and both the trial excavations and the phosphate analyses revealed that there was much more to be found. Accordingly new investigations were started 1984 and continued 1986–1992 with the financial support of the Academy of Finland and the Eura local authorities. An area of about 6000 m² has now been investigated at Luistari, and more than 1300 inhumation graves, six cairns and a Bronze Age dwelling site have been excavated.

In 1984 106 graves were excavated (finds 22346:1–1105), in 1986 152 (finds 23183:1–1071), all of them in the northern part of the cemetery area. During the summer 1987 the area investigated was rather large, almost 400 m², but only a trial excavation was carried out on a part of it (Tiina Kujanen, finds 23606:1–242). This was necessary because of planned road works in the area. In addition to the area affected by the planned light traffic road works, a part of the central area of the cemetery was investigated. In this area three more cremation cairns (Nos. 698–700) and 33 inhumation graves were found (finds 23607:1–522).

Also in 1988 other than scientific purposes directed the choice of the place of excavations. A power line post support in the middle of the cemetery should be replaced, and it was necessary to excavate the surrounding area before the work began. The investigations comprised an

area of about 260 m², and 76 inhumation graves and a cremation cairn (No. 755) were excavated (finds 24388:1–525).

During the two following summers the excavations were continued south from this area until the border of the cemetery was reached. In 1989 the investigated area was 408 m², and a cairn (No. 850), two large hearths (Nos. 3 and 4) and 72 inhumation graves were excavated (finds 24740:1–657). In 1990 the southern part of the excavation area comprised 425 m², and the number of the inhumation graves was 100. One large (No. 8) and some smaller hearths were also found (finds 25480:2–133, 545–616, 621a–d, 621n–p, 622a–b, 649).

In the last-mentioned year excavations were also continued in the middle of the cemetery in the vicinity of the cairn investigated in 1979. This area between the areas investigated in 1969, 1979, 1984, 1986 and 1987 was still unexcavated, although it was assumed to be one of the most interesting parts of the cemetery. A couple of large trees and the large stone foundation of a drying barn, burnt down at the beginning of the 20th century, covered it, and because of that it was to be feared that most of the graves were disturbed. Some of them were, but 67 graves could be documented in 1990 (finds 25480:1, 134–363, 621e–j, 623–646, 648) and 55 ones in 1991 (26695:1–90, 124–150, 179 ?), some of them partly excavated during the earlier years. In addition, a large number of remains of an older settlement were found in the area excavated in 1990 (finds 25480:364–544, 617–620, 621k,m).

In 1991 excavations were also continued in the most northern and western parts of the cemetery. Although 115 graves were found, they were almost all without finds. It seems that the outermost border of the burials had been reached in the west, but there were remains of the dwelling site there (finds 26695:91–110, 151–170, 179 ?). In the north dwelling-site finds were almost lacking, but some graves continued to the unexcavated area (finds 26695:111–123). The cemetery with furnished graves, however, had been totally investigated also in this direction.

The last excavation year at Luistari was 1992, when the southwestern and northwestern corners of the cemetery area were investigated. In the northwestern area there were very few finds (27177:1–15, 104, 114–119, 151f), but one large hearth (No. 7) was found and 51 unfurnished graves. At the southwestern corner two large hearths (Nos. 5 and 6) were investigated as well as 46 inhumation graves, some of them furnished (27177:16–103, 105–113, 120–150, 151a–e, g–j). After these excavations the cemetery of Luistari can be considered to be totally excavated.

In the following the graves with furnishings, animal bones and/or constructional details, investigated at Luistari in 1984–1992, are described. A description of cairn 422 excavated in 1979 has been added, because it was published earlier only in Finnish and the excavations of 1990 provided new information on it. The dwelling-site material has been given minor attention in this connection, but photographs of the ceramics and the other most important finds are presented, as also the results of the C 14 analyses. Some measurements, differing from the ones in the excavation reports, have been corrected according to the original plans and maps drawn during the excavations.











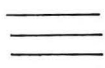










Because of the large number of references to my Luistari publications from the 1982, they will be cited as LUISTARI I, LUISTARI II and LUISTARI III. The catalogue section of the book ‘Viking og Hvidekrist – Norden og Europa 800–1200’ (1992) is referred to as VIKING OG HVIDEKRIST, the work Eesti esiajalugu as EE 1982. All the other works are quoted with the name of the writer and the year of publication. The analyses and articles of the other researchers published in this book are referred to by their names and the year 2000.

KEY TO GRAVE DESCRIPTIONS, PLATES AND GRAVE PLANS

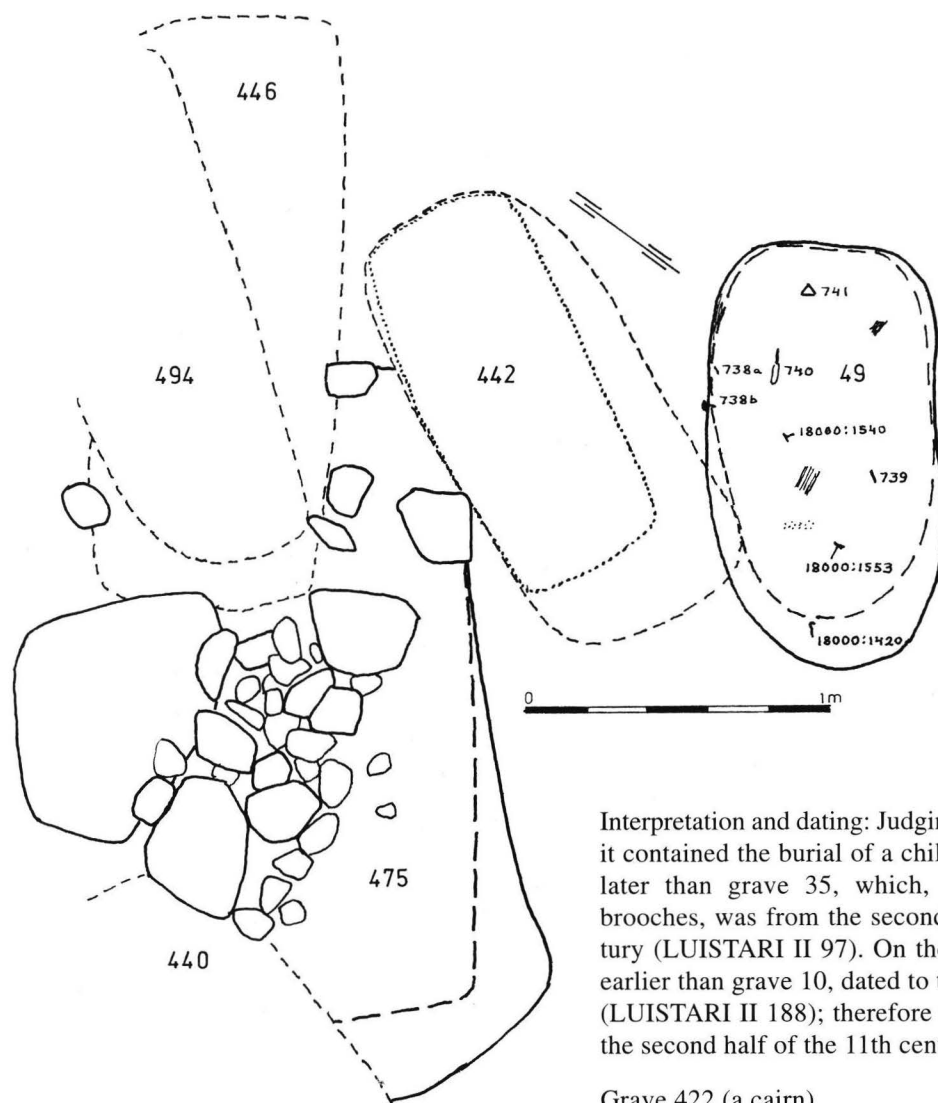
In excavating Luistari, arbitrarily drawn co-ordinates, not linked to any national system of map co-ordinates, were used. The location of graves in the cemetery area is indicated by two figures, the first indicating the north-south line and the second the west-east line at whose intersection the grave is located. By means of these figures the location of individual graves can be found on the general plans. The orientation of the grave is indicated using the international letter signs, and the first point of the compass always indicates where the head of the deceased was probably located.

In the plates, three scales are used: 1:5 (swords), 1:2 (spearheads, sickles, scythes, shears and other tools, bits, clay vessels and most knives), and 1:1 (ornaments, coins, details of garments, items of small size and fragments). Where exception is made to this system, the scale is mentioned on the plate. An attempt has been made in the plates to gather the material from graves rich in finds into coherent groups, and therefore it has not been possible to follow the numerical order throughout. The right plate is best found in the grave descriptions.

The numbers of the finds in the grave plans are sub-numbers of the catalogue of the Section for Prehistory of the National Board of Antiquities; only when there are finds from two or more different excavation seasons in the same grave plan are the principal numbers marked. The following symbols are used in the grave plans:

	boundary of principal graves		bone
	boundary of a grave bottom (principal graves)		burnt bone
	boundary of secondary graves		animal tooth
	boundary of a grave bottom (secondary graves)		human tooth
	a ditch or a pit from recent times		pot sherds
	stained earth		broken clay vessel
	soot-mixed earth		burnt clay
	soot		piece of flint
	pit		piece of quartz
	sootpit		slag
	wood		

THE GRAVES EXCAVATED AT LUISTARI 1979–1992



Grave 49 (partly excavated 1969)

Location 112/111

Orientation SW-NE

Size about 140x80 cm

Depth 80 cm

Pl. 61:1

KM 18000:1545–1554

22346:738–741

When grave 35 was excavated in 1969 the remains of a second grave was revealed in its SE part. This was no more than about 150 cm long, and it was thought to be the northwestern end of a large Viking Age grave continuing towards the SE in the unexcavated area. In 1984 it was observed however that the grave was laid SW-NE, and was about 140 cm long. It was oval in its lower parts and it had a rounded bottom. There were traces of wood on the bottom, and five nails were found on the SE side and in the centre of the grave. Found at the SW end of the grave pit were a knife (22346:740), three potsherds (22346:741) and large amounts of charcoal. In the fill several fragments were found, some of them from artefacts in grave 35 (see LUISTARI I 74–76 and 83).

Interpretation and dating: Judging by the size of the grave, it contained the burial of a child. This grave was clearly later than grave 35, which, according to the round brooches, was from the second quarter of the 11th century (LUISTARI II 97). On the other hand it was made earlier than grave 10, dated to the period 1070–1130 AD (LUISTARI II 188); therefore the most probable date is the second half of the 11th century.

Grave 422 (a cairn)

Location 135/95

Size about 12x11 m

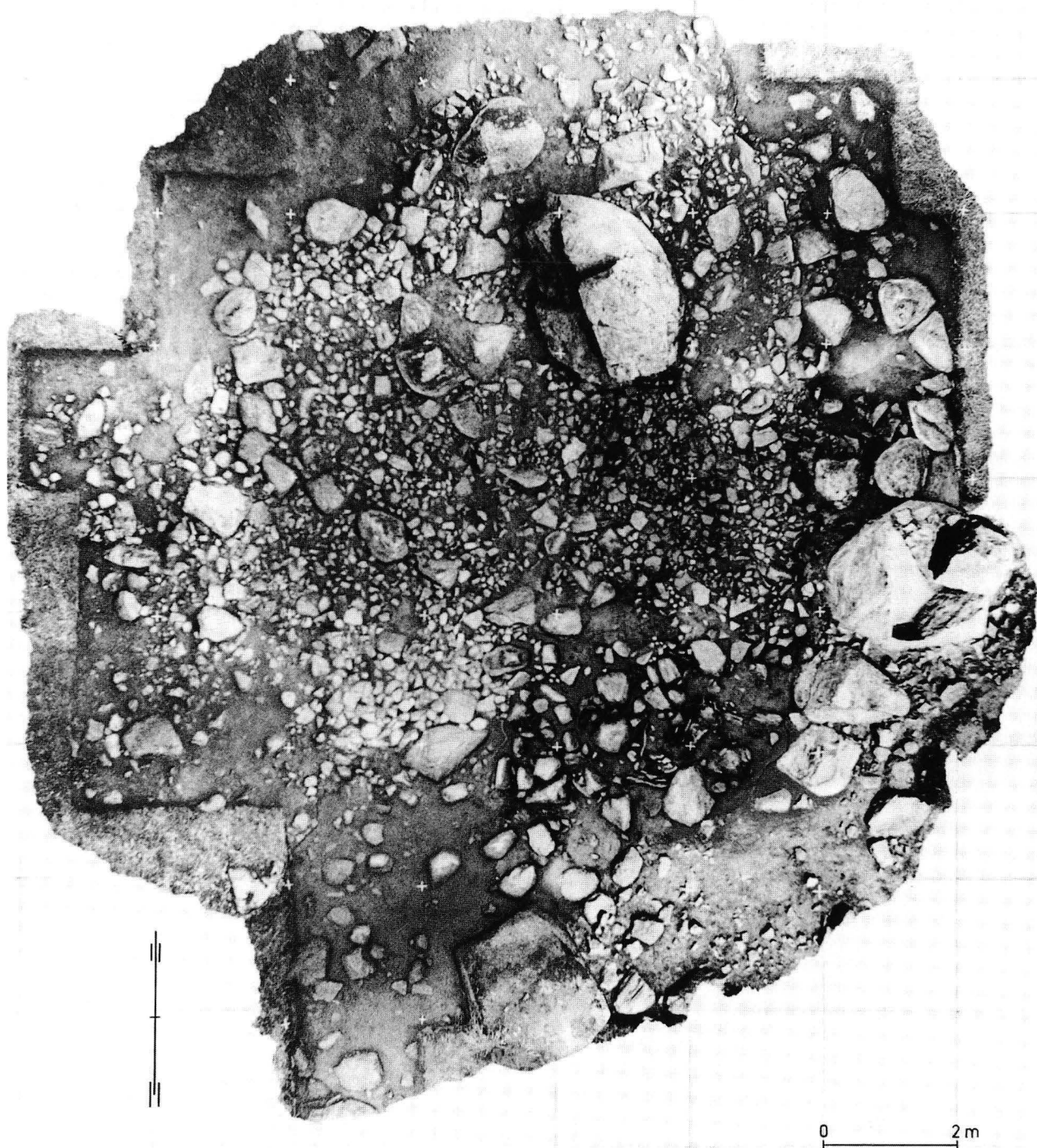
Height 40–180 cm

Pl. 65 :1–13

KM 20189:6; 20552:1–243

Cairn 422 was situated in the middle of the cemetery near the highest part of the Luistari area. In the middle of the cairn there was a large stone reaching more than a meter above soil level, and around it was a circular perimeter about 6 m in diameter. The largest stones in this ring were boulders in their original locations. The area between these had been filled with stone slabs, some of which were about 50 cm in diameter. The smoothest surfaces of the stones had been turned to the outside, giving the ring an almost regular form. In places there were two slabs one on top of each other, showing that an effort had been made to make the surface of the circular perimeter even. On the northern side of the edge-chain a fragmentary stone battle-axe with a re-sharpened blade (20552:10) was found.

The area between the ring and the large central stone had been filled almost uniquely with stones, which differed in size and were mostly red sandstone. The surface

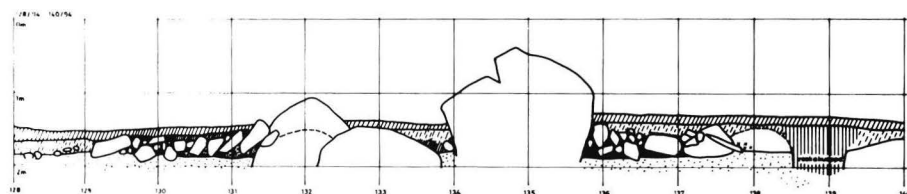
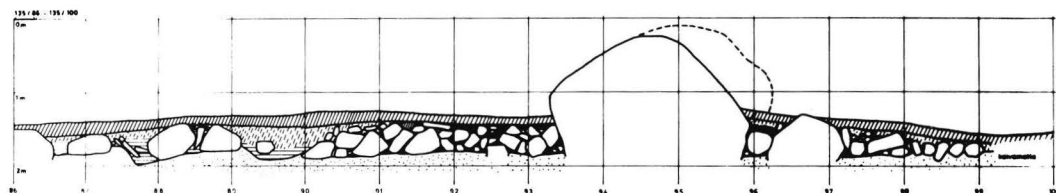
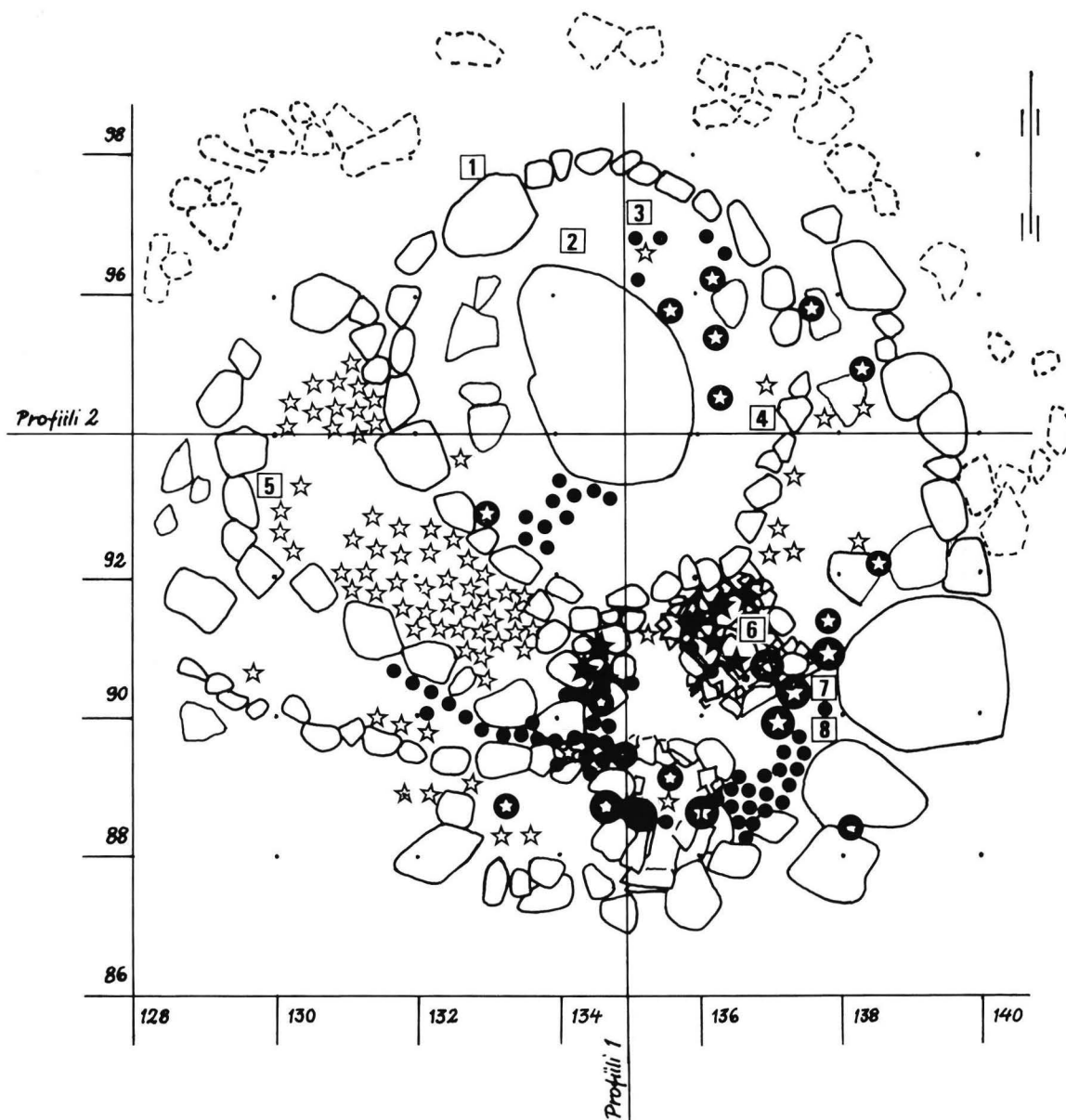


was quite covered by small red slabs, but these were perhaps split from larger stones. The thickness of this stone setting was about 40 cm, and only the highest edge-stones and especially the central stone extended above it.

There was charcoal in the soil to the E and NE of the central stone, and burnt bones were scattered here and there. The most important finds, a bronze double button or mount (20552:12) and a socket fragment of an iron spearhead (20552:13) were found to the N of the central

stone about a metre from each other. The socket fragment was under a rather large stone, the button was in a place where the stone setting was not dense. A bronze plate fragment (20552:7) was found about 30 cm higher up in the fill to the E of the central stone. About 2 kg of slag was found in the same part of the cairn as these artefacts, but within the stone ring there was only 100 g of burnt bone, mostly to the SW of the central stone, where most of the potsherds were also found. There were also some

- | | |
|-------------------------|---|
| 1 stone axe | ☆ 10-30 g of burnt bones |
| 2 bronze button | ★ more than 300 g/1 m ² of burnt bones |
| 3 spearhead fragment | ● 30 g of pot sherds |
| 4 bronze sheet | ☆ 200-1000 g of slag |
| 5 knife fragment | ● 200-1000 g of slag |
| 6 sickle | ● more than 1000 g/1 m ² of slag |
| 7 groove mount fragment | ⊗ stones of the perimeter found in 1990 |
| 8 grinding stone | |



potsherds and bone splinters around the spearhead fragment.

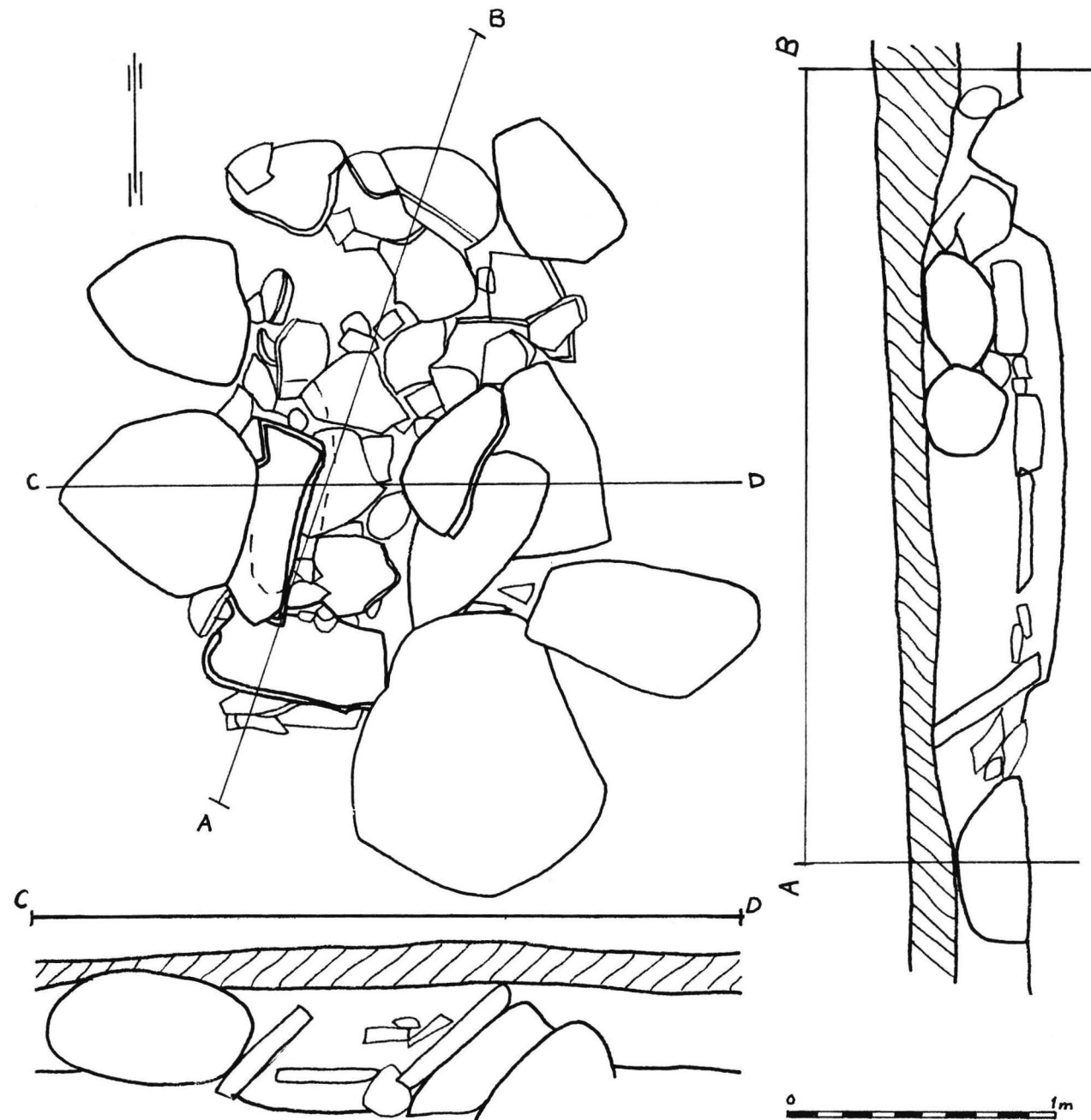
Outside the full stone ring there was part of a second perimeter in the SW, forming roughly a quarter of a circle 10 m in diameter. In the SW, outside of this second ring there was still a part, about 6 m long, of a third perimeter, which was not as regular as the former. The area between the perimeters was filled with a stone setting similar to the one around the central stone, but in the middle of the second perimeter was a stone setting, 4 m² in size, made of even-sized sandstone slabs. Over 2.6 kg of burnt bone were found in the area between the first and the second stone perimeters, but only a fragment of a bronze knife (20552:8) was found in the easternmost part of this area near the second stone row.

In the area bordered by the third perimeter, along the outer side of the second stone row, there were almost

700 g of potsherds but less than 100 g of burnt bone. About 0.5 kg of slag was found in its easternmost part.

To the SE of the central setting were some large fixed stones, which also seemed to form a part of a circular construction. One more curving stone row had been built here, using partly original stones and partly stones brought to the site. This construction continued on the north side of the cairn as a more irregular and sparse stone row excavated in 1990. The part between the central cairn and the northern part of this perimeter was almost stoneless, and because of that it had not been observed in the excavations in 1979. The stone material in the ditches under the large drying barn foundation was quite similar to the material in this cairn, and it is thus possible that it originated from here.

Inside this stone row in the S and SE there was a great deal of iron slag, all in all 17 kg. Almost 400 g of burnt



Grave 422a



Fig. 2. Grave 422a made of sandstone slabs, W view.

bone and more than 600 g of potsherds were also found there. The only metal artefact was a groove-like mount of bronze (20552:9). A cube-stone (20552:11) was found almost a meter to the S of its location

Also here the stone setting was not dense, but there were two constructions worth mentioning. Connecting to the first stone ring, at its SSE side, was a stone setting about 200x175 cm in size and about 40 cm in height. It was made of stone slabs and had almost straight sides. The earth between the stones was quite black and contained rather large charcoal pieces and almost 1.5 kg of burnt bone. On top of the setting a small iron sickle (20189:6) and iron slag were found. The other construction is treated separately under number 422a.

Interpretation and dating: On the basis of the excavation observations the round cairn with the central stone and the perimeter, perhaps also the south setting, were the first construction, and possibly the other stone rows had been added later. Bones of more than one deceased and a dog were found. The artefacts point partly to the late Bronze Age, partly to the early Iron Age (Lehtosalo-Hilander 1986 60–65). The C 14 analysis gave the result 2510 BP \pm 120 (763–465 cal BC).

Grave 422a

Location 135/88

Orientation SSW-NNE

Size about 180x60 cm

KM 20552:161–172

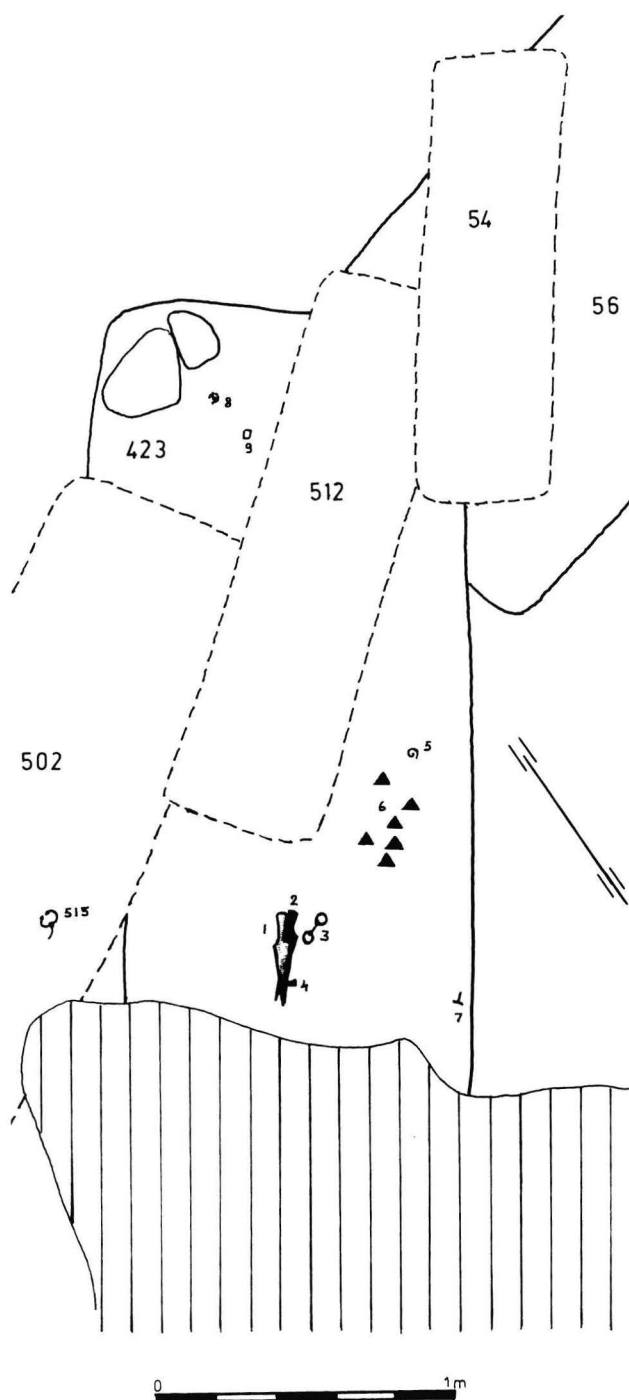
Depth about 60 cm

This grave, which was situated in the southern part of cairn 422, was made of sandstone slabs. These slabs were partly in an upright position, and it seemed as if the grave-pit had been lined with them. In the middle there were two to three flat layers of these, but on the sides the slabs were vertical or slanted slightly. On top of the northern end of the grave there were some stones, 30–60 cm in diameter, and almost 9 kg slag was found between two large stones to the west of the grave. Some potsherds, burnt bone splinters and an animal tooth (:161–172) were discovered in the grave-pit.

Interpretation and dating: In terms of size and construction this pit could have been an inhumation grave, but no unburnt bones of the deceased could be found, and there were no metal artefacts. The construction could be a part of cairn 422, dating from the same period.

near them (knife fragment, ring, nail, spiral ornament and bronze fitting) can also be from another disturbed grave. On the other hand, the artefacts found from the fill of grave 502, especially the silver penannular brooch with rolled ends (22346:515), can be from this grave. Among the potsherds found on top of this grave there is one mixed with asbestos (22346:11).

Interpretation and dating: Without doubt this is the badly disturbed grave of a male. The combination of two spearheads of Petersen type G with silver-plated sockets connects this grave to Luistari grave 349 excavated in 1971 (LUISTARI I 240–241). If the silver penannular brooch with rolled ends (see above) was originally in this grave, it is a further argument for the concomitance of these two graves, situated at a distance of about 15 m from one another. Grave 349 has been dated to Luistari period Viking IV, Later Viking Age, phase 2 (1000–1070 AD; LUISTARI II 187–188), which is probably also the date of grave 423.



Grave 423

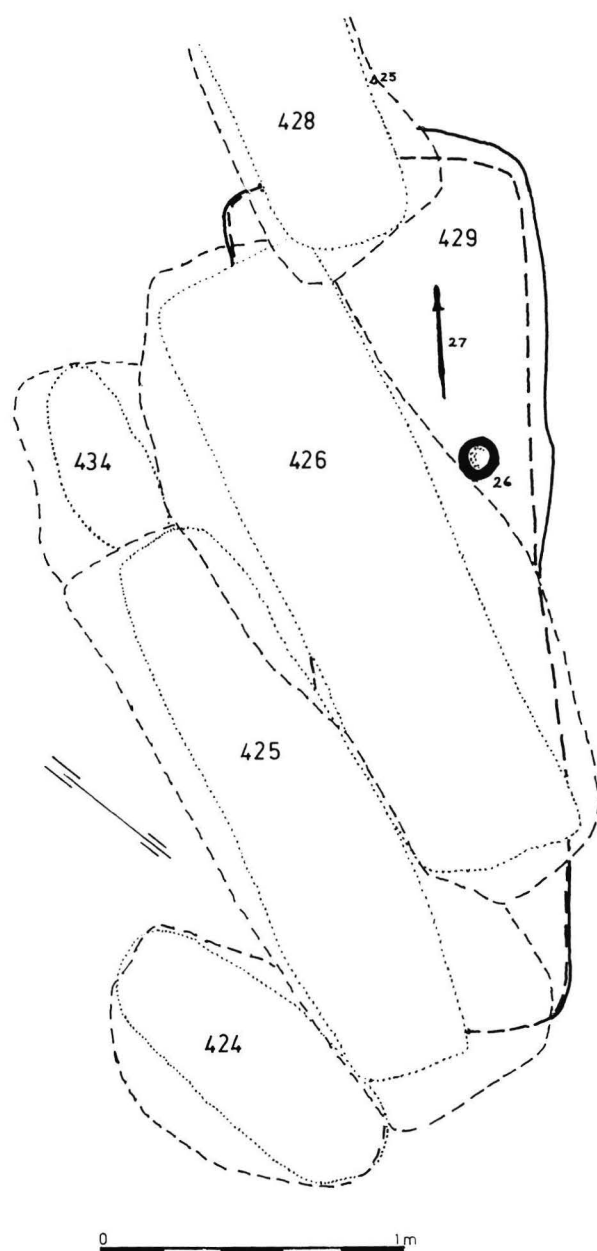
Location 115/115

Orientation SW-NE Pl. 1:423:1–6 (1:502:1–3)

Size 260–270x115 KM 22346:1–11

Depth 55–60 cm

The grave was one of the shallowest in the whole cemetery, and its furnishings were found quite surprisingly in a place where the soil was completely mixed. Only a small part of the grave-pit with no traces of the deceased had been preserved between the later graves as well as a large refuse pit in the northernmost part of the excavation area. Two silver-ornamented spearheads (22346:1,2) and the bits (22346:3) found west of them belong certainly to the grave furnishings, but other artefacts found



Grave 428

Location 113/100

Orientation SSW-NNE

Size 185x40–45 cm KM 22346:25, 26695:1–2

Depth about 100 cm

The grave was in the northern field area, where there was about 30 cm of soil. It was dug through graves 426 and 429, and it was intersected by grave 1067. The grave-pit was quite rectangular in form and its bottom was even. There were no actual finds in this grave, but in the fill were a couple of potsherds and an iron bolt (26695:1–2). A bronze fragment (22346:25) was found on top of the grave. It may be part of a bronze knife.

Interpretation and dating: This grave belongs to the late unfurnished graves of the cemetery. It is probable that the bronze fragment is a dwelling-site find.

Grave 429

Location 114/101

Orientation SW-NE Pl. 2:429:1–2

Size about 290x100 cm KM 22346:26,27

Depth 65–70 cm

Only small parts of this grave had remained under graves 425, 426 and 428. The grave-pit had probably been of even width and with rounded corners; in the preserved parts the bottom was even. There were no traces of the

body of the deceased. It had probably lain in the place where grave 426 was dug. In the preserved western corner of the pit a shield-boss and an angon (22346:26,27) were found. There were no finds in the fill.

Interpretation and dating: The remains are from a Merovingian Period weapon grave. The Finnish angon of type b and the round-topped shield-boss date this grave to the period 650–750 AD (LUISTARI II 19–21, 41). The same combination was found earlier in graves 20 and 52 at Luistari.

Grave 430

Location 114/103

Orientation SW-NE

Size about 130x50 cm KM 22346:28

Depth 40–45 cm

The grave was in the southern part of the excavation area, where there was 30–35 cm of topsoil. Its bottom was only about 10 cm deeper in the ground. The grave was not quite regular in form, broadening slightly to the NE end, which could be due to the fact that grave 435 partly overlay its western part. There were human teeth (:28) at the SW end of the grave, but no other finds were recovered.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave, and its location beside grave 431 and under grave 435 points to a Merovingian Period date.

Grave 431

Location 113/104

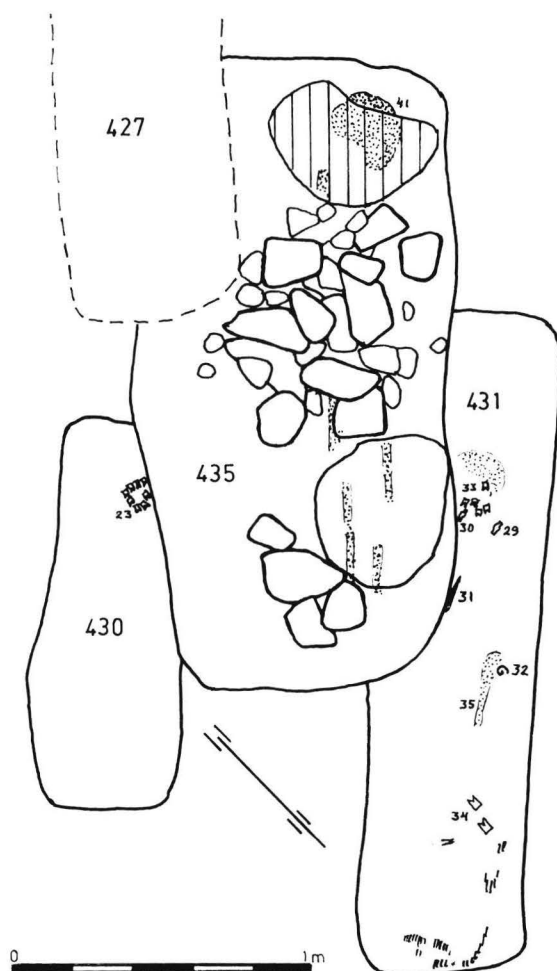
Orientation WSW-ENE Pl. 2:431:1–4

Size about 215x50 cm KM 22346:29–36

Depth 45–50 cm

There were about 30 centimetres of topsoil layers on this grave, and the grave-pit was only 15–20 cm deeper than these. The borders were however quite distinct, and apparently grave 435 had been dug on top of the SE side of this grave. The find layer was nevertheless undisturbed. The grave-pit was of almost even width with rounded corners. At the NE end, at a depth of 40–45 cm, there were small traces of a coffin or some other wooden object, the width of which had been, at least at the end of the grave, no more than about 30 cm. To the SW of these traces were fragments of sheep or goat teeth (22346:34). Of the deceased, who had lain in a supine position, head to the SW, there were teeth, small traces of the skull and a piece of the left femur, preserved in the centre of the grave in connection with a ring (22346:32). To the NE of the skull, about 12 cm from each other, were two small equal-armed brooches (22346: 29,30) side by side. A knife (22346:31) was found about 20 cm to the NE of the brooches on the NW side of the grave. Its tip lay towards the skull. The bottom of the grave was almost even. The fill contained only some potsherds (22346:36).

Interpretation and dating: The pair of small equal-armed brooches indicates a female and dates the grave to the Merovingian Period. The brooches are of the long and slender variant with narrow ends, resembling most



the brooch from the fill of grave 57 (LUISTARI II 86, fig. 24:3); accordingly they belong to the older variants of the type. The location of the grave also points to the earlier part of the Merovingian Period.

Grave 432

Location 112/101
Orientation SW-NE
Size 180–190x50–60 cm KM 22346:37–39
Depth about 70 cm

The grave was situated to the SW of grave 431, and grave 427 overlay its E corner. At its NE end there was a stone setting and among the stones was a decomposed bone. The grave-pit was wider at the SW end and the bottom slanted to the SW and SE. On the SE side there were wood remains 25–30 cm above the bottom. Potsherds and slag were found in the fill, but the burial was unfurnished.

Interpretation and dating: In terms of location the grave may date from the earlier Merovingian Period, but without furnishing it could as well be late. The fact that there were remains of a coffin in the pit points to the later date (cf. LUISTARI I 35).

Grave 433

Location 112/100
Orientation WSW-ENE
Size about 100x40 cm KM 22346:40 (wood sample)
Depth about 35 cm

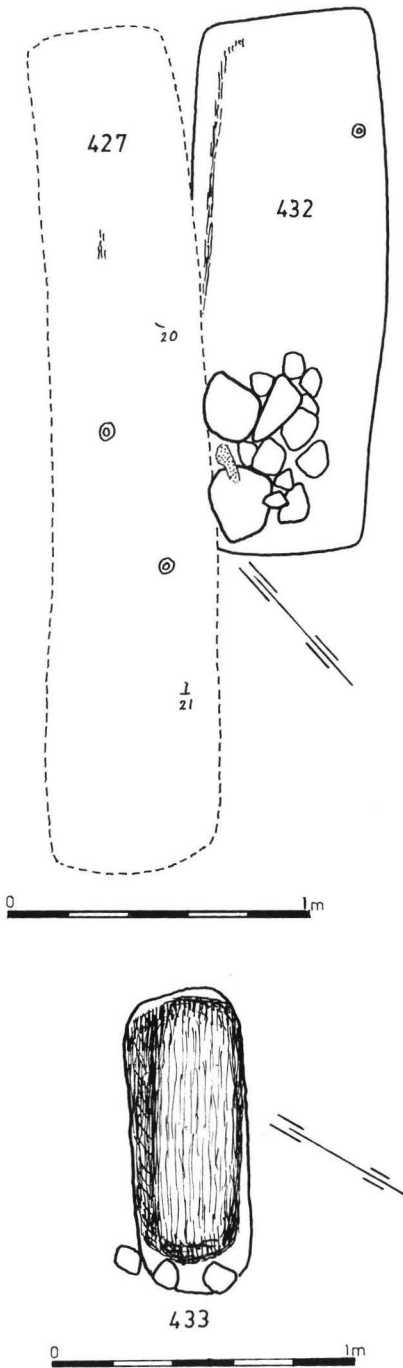
The grave was situated at the very southernmost border of the excavation area in 1984, and its bottom extended only about 10 cm deeper down into the subsoil than the surface soil layers. In this shallow pit there were traces of a small trunk coffin or trough, 90 cm long and 36 cm wide, with the wooden fibres running lengthwise. This “vessel” was of almost even width with rounded ends. To the NE of it were three small stones in a row, but no finds and bones were observed.

Interpretation and dating: This was probably the grave of a small child, and its location points to the Merovingian Period.

Grave 435

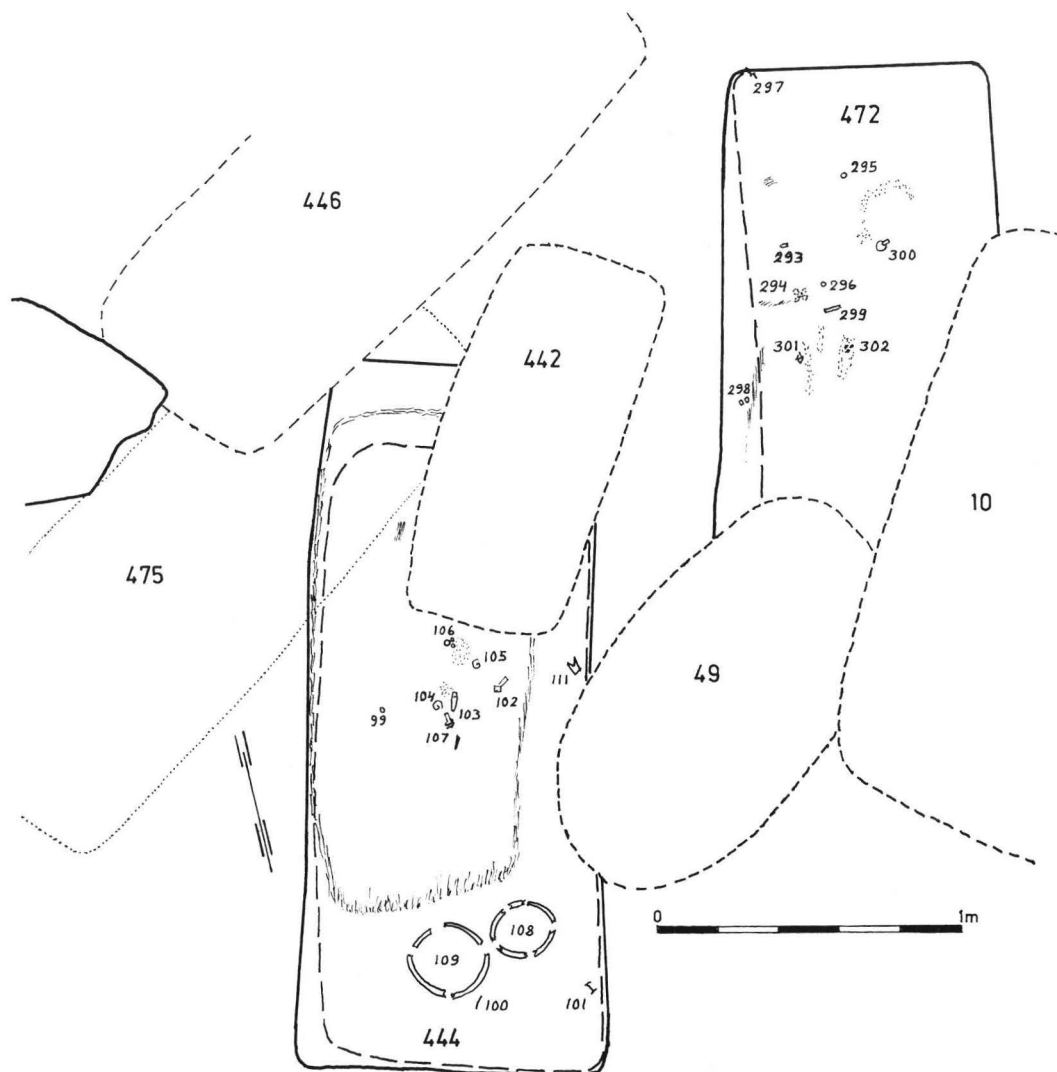
Location 113/103 Grave plan p. 19
Orientation SW-NE
Size 210x100 cm, bottom 195x65 cm KM 22346:41–42
Depth 65–70 cm

The grave was dug on top of graves 430 and 431, and in digging grave 427 its SE corner had been disturbed. A substantial stone setting covered most of the grave-pit area. Its dimensions were about 150 x 90 cm, and the largest stone extended almost up to the surface. The stones were in two layers, and the lowest of them extended to about 10–15 cm above the bottom. The stones were 10–20 cm in diameter, only the biggest stone was ca. 50 cm in diameter. In its upper parts the grave-pit was rather wide with rounded corners, but it tapered to the bottom,



because there was a large fixed stone along the SE side of the grave. To the west of this were a skull and the bones of the lower limbs of the deceased, buried in a supine position, head to the SW. No artefacts were found, only some potsherds in the fill. Traces of a later pit were observed near the skull, but they could hardly have been made by grave robbers.

Interpretation and dating: The deceased was an adult, at least 170 cm tall, but the sex is unknown. The burial was probably later than the first century of the Merovingian Period (see above the dating of grave 431), but definitely earlier than the late unfurnished graves of the cemetery. Judging by the form of the grave-pit and the stone setting it could be from the late Merovingian Period, but the orientation is not correct (cf. LUISTARI I 19–21, 26–27).



Grave 444

Location 113/112

Orientation SSW-NNE Pl. 2:444:1-9

Size 235x100 cm,

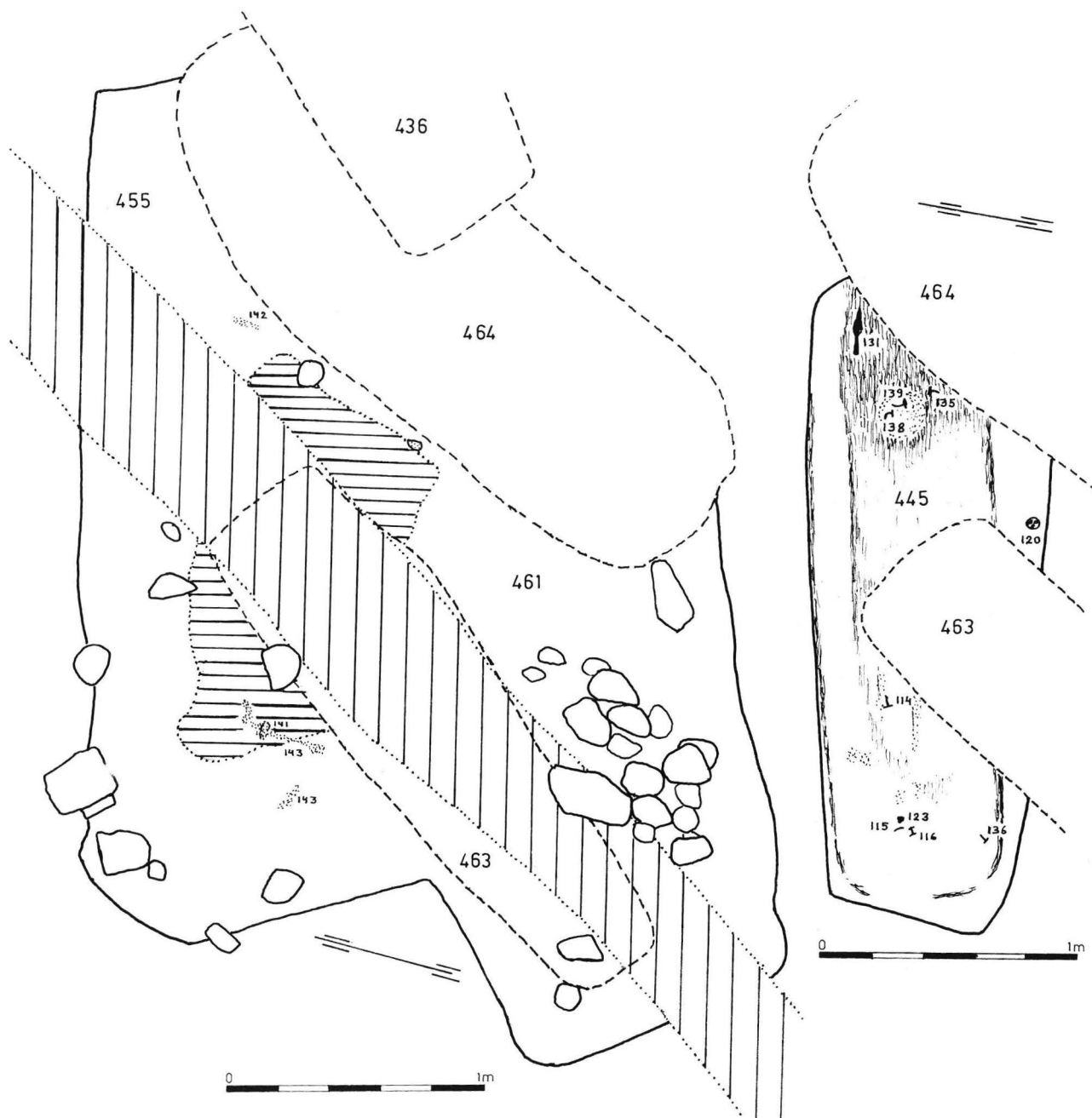
bottom 220x90 cm KM 22346:98-112

Depth about 75 cm

This grave was situated near the excavation area of 1969, where there was about 20 cm of topsoil and about 15 cm of mixed earth under it. The eastern side of the grave-pit appeared after the mixed layer had been removed, but on top of the southern end were at least graves 442 and 475, and the western side had been disturbed in digging grave 49. Grave 444 was, however, deeper than the later graves, and therefore it was not badly destroyed. The grave-pit had almost straight sides and even ends with rounded corners. On the east side were traces of wood to a height of 20 cm from the bottom. Birch-bark had been preserved on metal objects, and there was a thin dark layer on the bottom. There were only very small traces of the deceased in the central parts of the pit, where a silver plate pen-

dant and some beads (:106), a bronze sleigh bell pendant (:102), a pendant whetstone (:103), a small knife (:107) and two finger-rings (:104,105) were found. At the northern end of the grave there were two clay vessels (:108,109) and a rivet (:101). Higher up in the fill some metal objects (:98-100), pieces of goat or sheep teeth (:111), potsherds and slag were found. There was also charcoal in the filling earth.

Interpretation and dating: Judging by the size of the finger-rings the deceased in this large grave was a child. The pendant whetstone points to a male. The flat-bottomed clay vessel is quite similar to the ones found previously in graves 56, 207, 208 and 377 (group II:2d, LUISTARI II 83, 187-188. PLEASE NOTE: The clay vessel groups on pages 187-188 are incorrectly marked. Vessels of group II:2b are marked II:2a, II:2c are marked II:2b and vessels of group II:2d are marked II:2c. The fact that group II:2a is lacking at Luistari accounts for this mistake, cf. pp 77-78, 80). Therefore, this grave seems contemporary with them. It was also located quite near grave 56, coin-dated 1018-1024 AD.



Grave 445

Location 113/107

Orientation WSW-ENE

Pl. 3:445:1-4

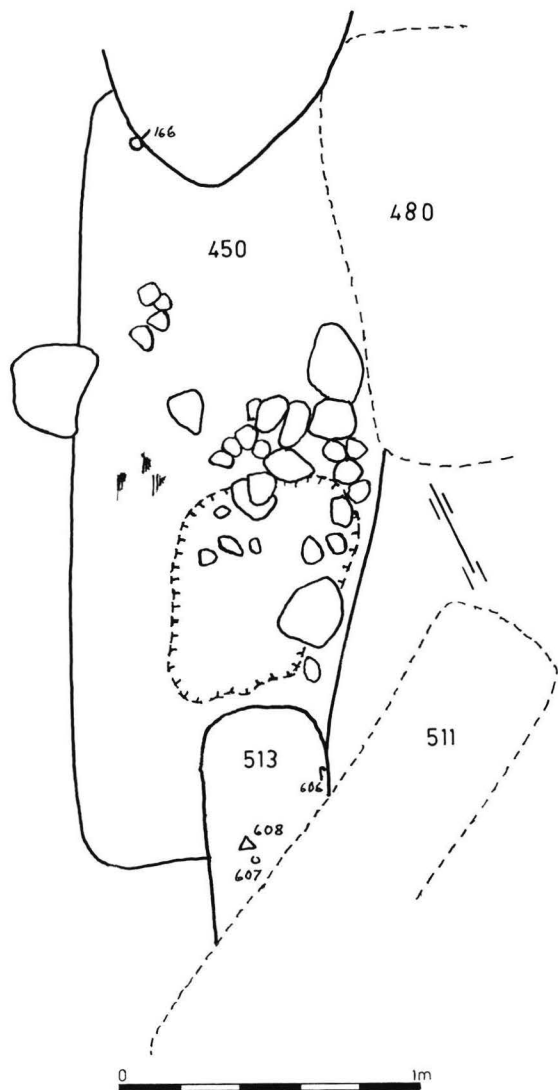
Size about 260x70 cm

KM 22346:113-145

Depth 80-95 cm

This grave was quite near the excavation area of 1969, where there was about 20 cm of topsoil and 15-20 cm of mixed earth. It was dug directly on top of grave 455, and possibly also a corner of grave 461 was under it. All these graves had been disturbed in the digging of graves 463 and 464 and a field ditch overlay all these features. It was, however only 55-60 cm deep. When the topsoil layers had been removed, there was on the central part of the grave a charcoal patch measuring about 140x80 cm with rather large decomposed bones at its western end. There were remains of bones also on other parts of the grave surface. The depth of the soot patch was about 5-10 cm.

Grave 445 could be seen as a darker area on grave 455, but only near the bottom did it begin to show clearly. It was a little broader at the eastern end, the corners were rounded, and at the sides and in the eastern part of the bottom there were traces of wood. The pit was 10 cm deeper in the east than in the west. There was a skull at the eastern end of the grave, but otherwise only small traces of the deceased could be distinguished. The corpse had apparently been disturbed in digging grave 463. Near the skull there were three nails (:135,138,139), one of them inside the skull, and at the foot end of the grave there were a nail and a rivet (:114,116). To the northeast of the skull there was a spearhead (:131), on the southern side in the middle a strap-divider (:120). Some spiral ornaments (:129,130,134,140) were found near the skull. They could have belonged to the dress of the deceased, but others (:121,122,124-126) were found higher up in the fill. Apparently there was material from the earlier



grave 455 in the fill of this grave, because also three beads (:118,119,128) and some iron fragments were found. There were further a potsherd and a piece of slag.

Interpretation and dating: The spearhead indicates a male. It is rather short, socketed and with a rhomboid blade. It is not of a Viking Age type, but belongs to later forms. It is probably a shorter and clumsier variant of the same type as Kivikoski 1973 figs. 1185–1186, dated to the Crusade Period. The strap-divider has counterparts in Gotland in some graves of the 10th century (Thunmark-Nylén 1995 Pl. 201b:17, Ire Gr. 220, Pl. 387a:4, Kopparsvik Gr. 118; the brooches in these graves are funnel-ended penannular brooches, Carlsson 1988 70–71, 189:46.13 [Stenberger grav 114 = Thunmark-Nylén grav 220], 256:85.109). It was possibly a filling-earth find in grave 445. It was found only 10 cm higher up than the spearhead, but it seems to have been outside the coffin.

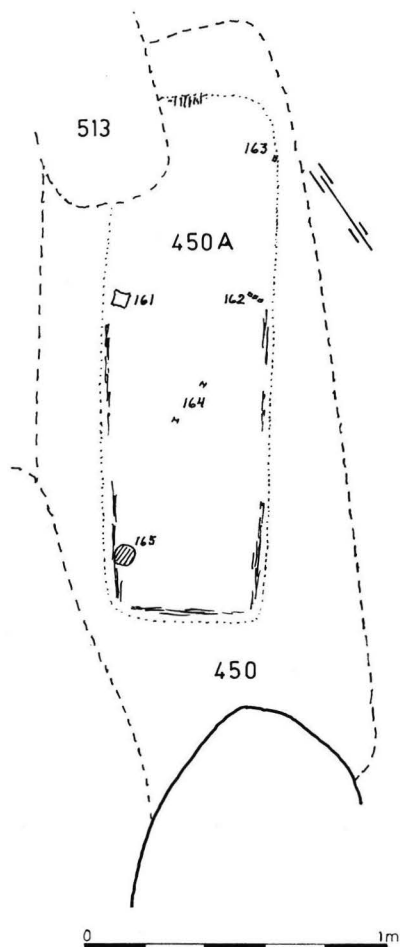
Grave 449

Location 120/106

Orientation SSW-NNE

Size about 260x70–75 cm KM 22346:158–160

Depth 110–120 cm



The grave was situated partly under the drying barn foundation and on top of grave 493, where there was about 15 cm of soil but almost 40 cm of mixed earth. The grave-pit broadened slightly to the NE, where a large stone extended to the bottom. Near the border of this grave and grave 493 pig teeth fragments (22346:159) were found, and there were potsherds, iron slag and a couple of small burnt bone splinters in the fill. The burial was unfurnished.

Interpretation and dating: A late grave.

Grave 450

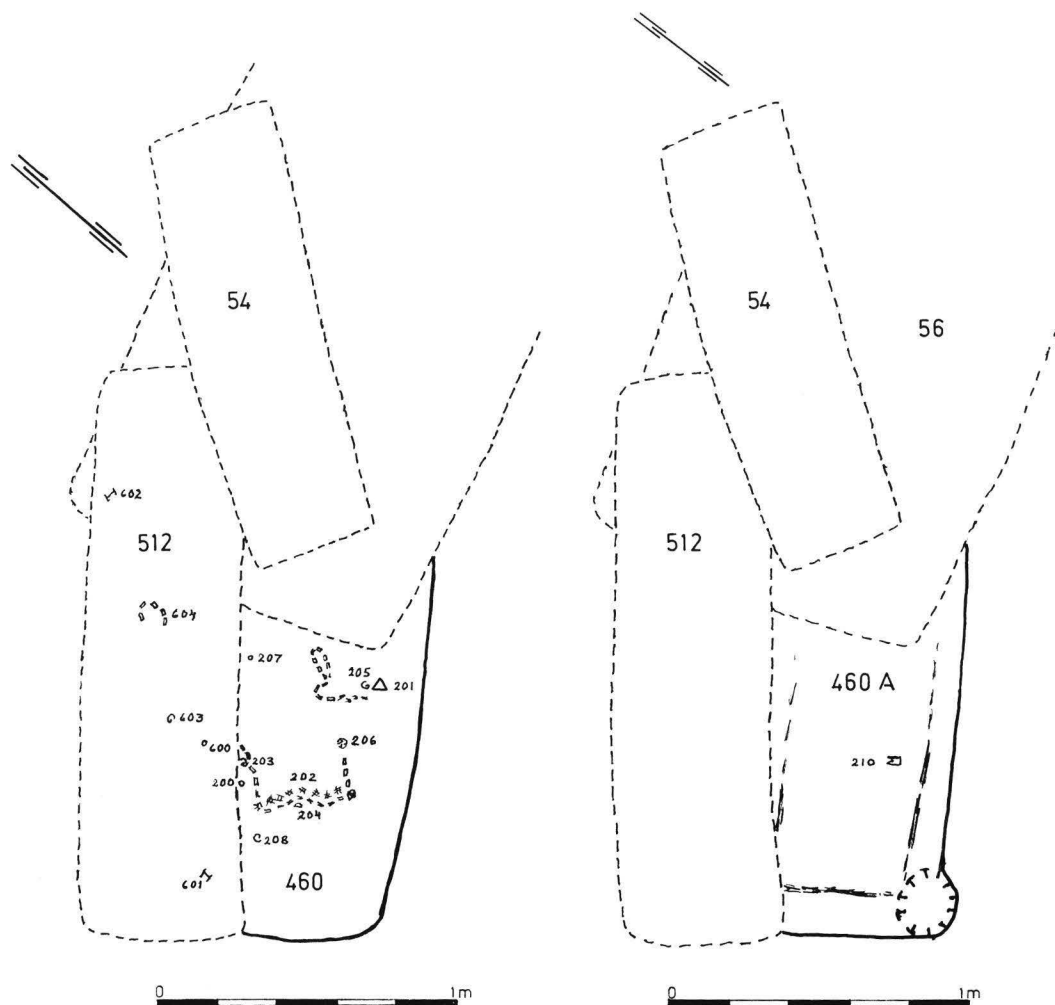
Location 118/116

Orientation SSW-NNE Pl. 3:450:1–4

Size about 230x100 cm KM 22346:161–167

Depth about 60 cm

The grave was situated in the northernmost part of the excavation area, with about 40 cm of topsoil and 10 cm of mixed earth. Its SE part had been disturbed in digging grave 513. The grave-pit was broader at the NE end, rounded at the corners. At the SW end on the bottom there was a deeper pit. On top of the grave, in the middle, there were a darker patch, some charcoal and an irregular stone setting. At the NE end and in the centre, 10 cm from the bottom, there were the first traces of a rectangular wooden coffin about 50 cm broad and at least 110 cm long. At the SW end of the pit no traces of coffin sides could be seen, but on the bottom there were wooden remains about



the armlike extensions. There were sheep or goat tooth fragments at the SW end (:189), a little decomposed bone was found in the NW corner, and near it there were a finger-ring (:188), pieces of beads (:182), a fragment of a sickle (:183) and a spiral ornament (:186). Another fragment of the same sickle (:184) was found about 55 cm farther east, likewise a couple of beads (:185,187). At the north side of the grave there was a potsherd. Most probably the beads (22346:118,119,128) and spiral ornaments (22346:121,122, 125,126,129,130, 134,140) found in the fill of grave 445 were originally in this grave.

Interpretation and dating: Judging by the beads and the sickle this had been a female grave. The beads with zigzag lines and flower-like eyes indicate late Viking Age and Crusade Periods (LUISTARI II 139–141). Accordingly, this grave was probably not very old when it was damaged in the digging of grave 445.

Graves 460 and 460A

Location 114/114

Orientation SW-NE

Size ?

Depth 460 65–70 cm,
460A 85 cm

Pl. 4:460:1–11

KM 22346:200–211

These graves were situated on top of one another quite near the border of the excavation area in 1969, and their SW ends had been destroyed in digging graves 54 and

56. On their SE side there was grave 512, in the fill of which a part of the apron border belonging to grave 460 was found. Also grave 423 had probably been on top of these graves, and they had been dug on top of grave 527. Of the last-mentioned one only a part of the eastern end and two corner-posts, deeper than graves 460A and 512, were preserved. Of grave 460 no more than a corner measuring 100x60–65 cm between the excavated area and grave 512 was preserved, but on the bottom of the pit there were traces of an end of a coffin less than 50 cm wide. Accordingly grave 460A had not been very much broader than the part preserved. Traces of wood appeared about 20 cm from the bottom. Still 10–20 cm higher up the apron border of grave 460 (:202) and three small silver rings (:203,205,208) were found. Also the other finds, beads (:200,207) and a round spiral ornament (:206) were at a height of 25–40 cm from the bottom layer and must be from grave 460. Although the apron hem border was certainly in situ, the upper part of the apron was not undamaged, and apparently the apron had partly been folded double. There was a birchbark layer in some places on top of the apron hem border, and there were traces of shin-bones under it. In the fill were sheep or goat tooth fragments (:210) and potsherds (:201,209).

Interpretation and dating: It is most probable that the apron and the other finds belong to a different burial than the coffin remains so much lower down in the pit. Ankle-bones were found under the apron hem, which means

that the hem was not high up in the pit because of a disturbance. Accordingly we can separate three constructions earlier than the late grave pit 512: grave 527 with the post-holes, the remains of a small coffin (460A) and grave 460 with an apron hem and small finger-rings covered with birch-bark. Grave 527 is probably from the Merovingian Period (see later on), grave 460 is earlier than grave 56, coin-dated 1018–1024, but there is in both of these graves a similar apron hem, so the difference in age cannot be great (LUISTARI II 159–160 and Table 11). Grave 460A with the small coffin must be older than grave 460, but later than grave 527. If the small clay vessel with hatching and circular impressions, the sherds of which (:201) were found in the fill of grave 460, was originally in grave 460A, this must be from about 1000 AD. The potsherds seem to be from a vessel of group II:2b, dated to the end of the 10th and the 11th century (LUISTARI II 80–82).

Grave 461

Location 112/105	Grave plans pp. 22,24
Orientation ENE-WSW	Pl. 5:461:1–3
Size at least 260x110 cm	KM 22346:212–221
Depth 70–80 cm	

The grave was in the western part of the excavation area near the ground excavated in 1969. There were 20–30 cm of topsoil and about 10–15 cm of mixed earth on top of it. A field-ditch was running over it, and it had been damaged at least in digging graves 445,455,463 & 464. At the SW end of the grave there had been a stone setting damaged in connection with the ditch-digging. The grave-pit was straight-sided and fairly even-bottomed. At the preserved SW end there were quite distinct traces of post-holes extending to a depth of 10 cm below the bottom level. At the NE end there were remains of a skull, some teeth and a small equal-armed brooch (218); about 40 cm SW of the latter a small iron knife (:216) was found. A second knife (:217) was about 20 cm to the north from the first. Other finds, iron nails and an iron fragment (:212–215) were higher up in the filling earth. On top of the grave and in the stone setting slag and pieces of charcoal were found.

Interpretation and dating: The small equal-armed brooch indicates a Merovingian Period female grave. The brooch has widening ends and a middle furrow and it is decorated with lines, indented lists and circular stamps. In spite of its small size and rich ornamentation it hardly belongs to the very oldest of the equal-armed brooches (see LUISTARI II 86), but it may date the grave to the 7th century.

Grave 462

Location 115/108	
Orientation NW-SE	Pl. 5:462:1–7
Size about 320x85–90 cm	KM 22346:222–232
Depth about 100 cm	

The grave was situated in the northern part of the cemetery. On top of it was about 35 cm of topsoil and 10 cm of mixed earth. Its NW end was under a field-ditch and a

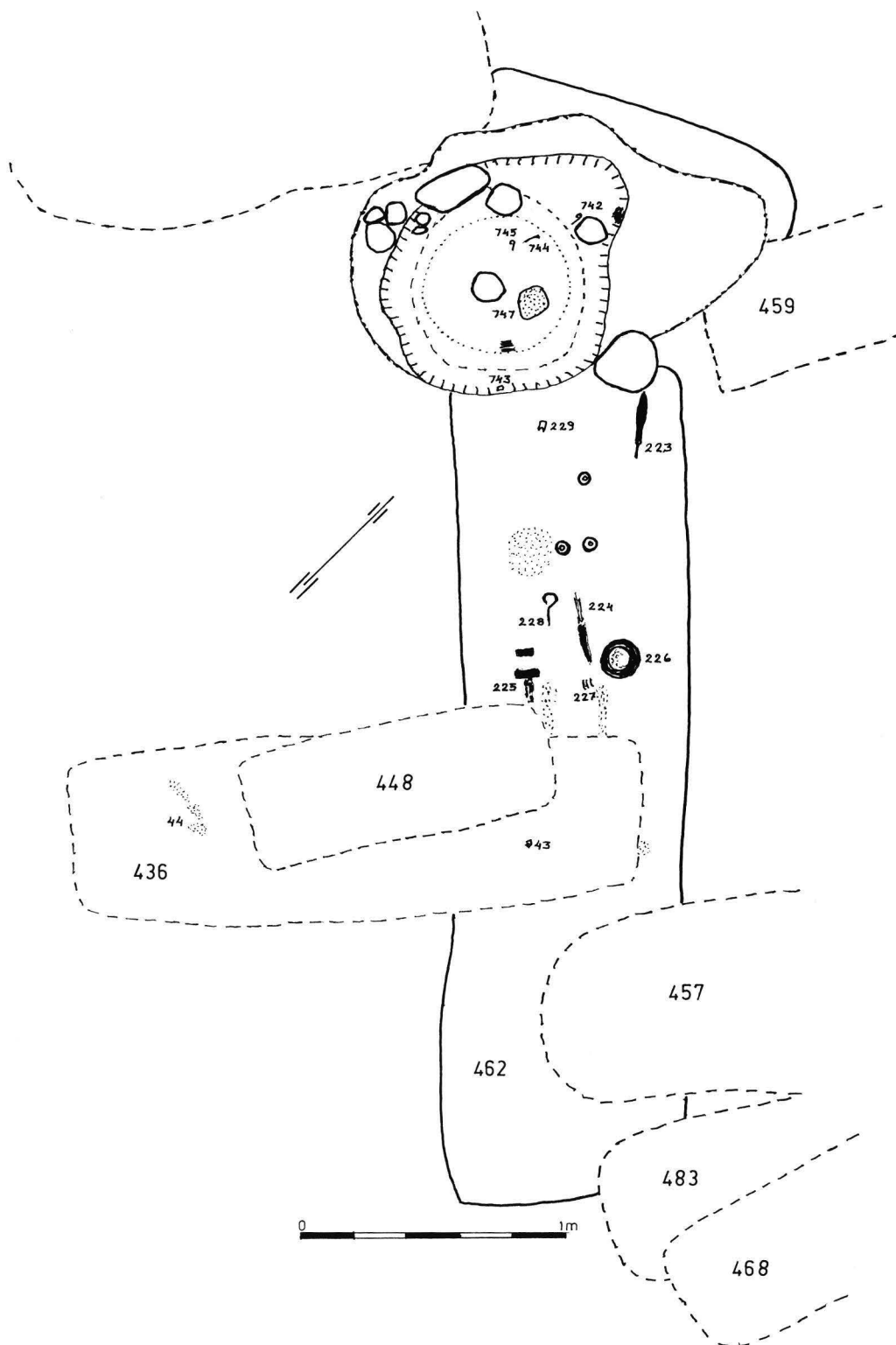
late pit and the SE-end had been disturbed in digging graves 436, 448, 457 and 483. On the other hand this grave had been dug on top of grave 465. At its SE-end there were some large stones, perhaps remains of a stone setting. The grave-pit had straight sides and rounded corners; the bottom was rather even, although the NW end was dug about 10 cm deeper down in the ground than the SE end. On top of the grave there was a bronze mount (22346:222), but otherwise all finds, also slag, were found near the bottom of the grave. There were preserved remains of the skull and thighbones of the deceased, who had lain in a supine position with the head located at the NW end. The grave had been cut off in the middle of the thighbones in digging grave 436, and probably already in connection with this the sword blade had been removed from the grave. The parts of the hilt (:225) had remained in situ in the ground, likewise some rust from the blade. The sword had lain on the right side of the corpse, and on the left side there were a shield-boss (:226) and a seax (:224), near the tip of which a finger-ring (:227) was found. An iron pin (:228) was lying on the chest of the deceased, and a spearhead (:223) was found in the northern corner of the grave-pit. All pieces of slag were at the head end of the grave on the same level with the other finds. A human tooth (:229) was found at the northwesternmost end of the grave, and here and there were decomposed bones and potsherds.

Interpretation and dating: Weapons point to a Merovingian Period male burial. The most important artefacts for the dating are the iron pin and the tanged spearhead with a tapering blade. Large shepherd's crook pins of iron occur in Finland especially in the weapon graves of Cleve's phase II (c. 650–750 AD, Cleve 1943 189–190, 212–214), but the spearheads like the one in this grave belong mostly to the final phase of the Merovingian Period. The same combination was found in grave 33 at Luistari (LUISTARI II 22–23, 108). The orientation of grave 462 indicates also the late Merovingian Period (see LUISTARI I 19, 42–43, LUISTARI II 177). The sword-hilt had apparently been made of some organic material, which had been covered with iron. Part of the casing of both the pommel and the guard had been preserved, and their form seems to be similar to the corresponding parts in the bronze-covered sword-hilts (e.g. Kivikoski 1973 fig. 519; Salmo 1938 94–101, 1952 252). Like these swords, the sword from grave 462 was probably made during the closing phase of the Merovingian Period.

Grave 463

Location 112/106	Grave plans pp. 22, 24
Orientation SSW-NNE	
Size 230x50–65 cm	KM 22346:233–241
Depth 85–90 cm	

The grave was situated in the northern part of the cemetery, where there was about 20 cm of topsoil and 15 cm of mixed earth. It had been dug through graves 445, 455 and 461, and it was almost completely under a field ditch, so that its borders became distinct only at a depth of 55 cm from the soil surface. The grave-pit broadened to



the NE end and shortened to the even bottom. In the middle there was a small stone setting near the bottom level, and wood and charcoal traces surrounded the NE end. In the fill potsherds, artefact fragments (22346:235,239) and bronze spirals (:234,238) were found. In the middle of the pit were two nails (:233,236), in the NE end was one (:237).

Interpretation and dating: This grave intersected grave 445, which was one of the latest furnished graves, so it is from the 12th century at the earliest. Containing a coffin it is special among the late graves.

Grave 465

Location 116/107

Orientation WSW-ENE (?) Pl. 5:465:1-2

Size about 280x110 cm (?) KM 22346:251 (274,275 ?)

Depth about 80 cm

Only a small corner of this grave had been preserved in the area between graves 436 and 462, but in this corner remains of a human skull (22346:251) were found. When graves 457, 468 and 483 had been excavated to the bot-

(22346:262) and a fragmentary pendant whetstone (:260); on the NW-side a small penannular brooch (:253) and an iron knife (:255) were found. A great number of potsherds (:259), burnt clay and bones and slag were scattered in the fill. Outside of the wooden frame there was a number of artefact fragments, e.g. a piece of a silver artefact (:257) and a rather large penannular brooch (:252), which may be from grave 528, disturbed in digging this grave. Some decomposed bone was also found in the fill. A sample of the charred wooden remains in the southern corner of the grave was collected (:267).

Interpretation and dating: Judging by the size of the wooden frame this was a child's burial. The small penannular brooch with flower-shaped ends, rather similar to the one in grave 10 (18000: 1062), dates the grave to the latter half of the 11th century at the earliest (LUISTARI I Plate 1:10:2, LUISTARI II 106).

Grave 467

Location 118/110
 Orientation SW-NE Pl. 61:7
 Size 110x50 cm KM 22346:268–273
 Depth 90 cm

The grave was partly on top of grave 490 and it had been damaged in digging graves 469 and 498. The grave-pit was four-sided with rounded corners and the bottom was even. A bead (22346:268) was found about 50 cm from the soil surface and an iron ring with a bronze mount (:269) was discovered 10–15 cm lower down. Potsherds, slag, a burnt bone splinter and two charred grains were collected from the fill. No bones were preserved.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. Because it overlay grave 490, it is from the 11th century at the earliest. The barrel-like gold folium bead points to the same century (LUISTARI II 138).

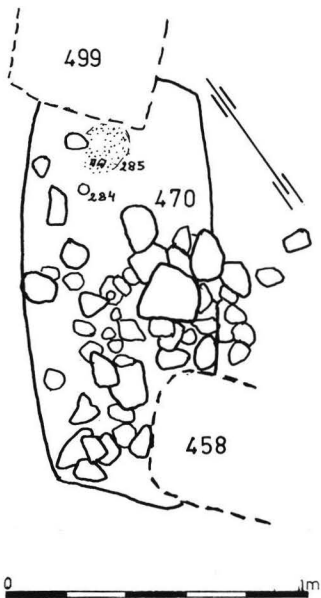
Grave 470

Location 116/110
 Orientation SSW-NNE Pl. 6:470
 Size about 140x60 cm KM 22346:284–285
 Depth 95–100 cm

The grave was situated in the northern part of the cemetery, where there was about 35 cm of topsoil and about 10 cm of mixed earth. It was dug on top of grave 490, and it had been slightly damaged in digging graves 458 and 499. The grave-pit had somewhat tapering ends, straight sides and an even bottom. There was in its upper parts a double stone setting of small stones, which covered about 2/3 of the grave area. On the bottom of the pit, at the NE end, a human tooth was found, and near it there was a little bronze pendant or mount (22346:284). There were several teeth in the eastern corner of the grave, but these could be from grave 490, in connection with which they were listed (see 22346:451).

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. The small round bronze plate, which is slightly bulging, only 23 mm in diameter,

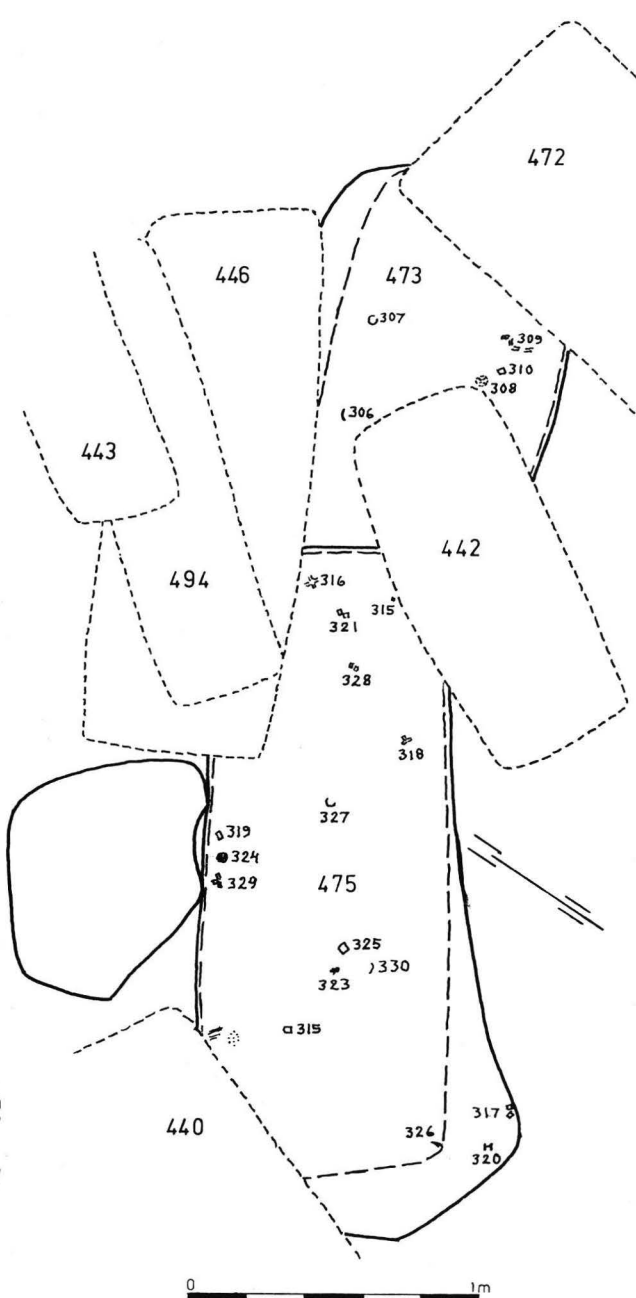
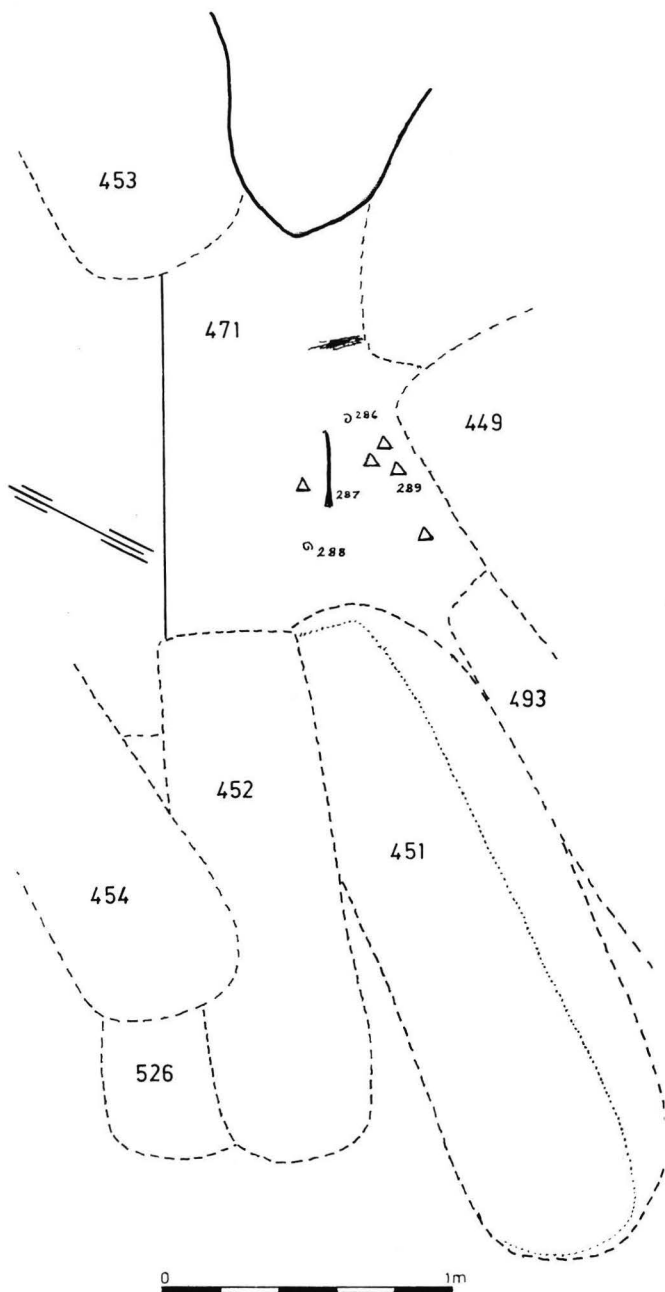
and decorated with radial curvilinear grooves, and which has three holes on the edges, cannot be dated. The grave is however made on top of grave 490, dated by a penannular brooch with poppy-shaped ends to the late Viking Age (see later), and so it cannot be earlier than that date.



Grave 471

Location 120/107
 Orientation WSW-ENE Pl. 6:471:1–3
 Size at least 140x100 cm KM 22346:286–292
 Depth 90–95 cm

The grave was situated near the wall of the burnt drying barn, where there was 20–25 cm of topsoil and about 30–35 cm of mixed earth. It was so badly damaged in digging the later graves that estimates of its original size must be very doubtful. The tip of the spearhead (22346:287) was to the NE, and quite close to it there were a finger-ring (:288) and potsherds (:289). A second finger-ring (:286) was found also thereabouts but about 30 cm higher up in the fill. There was slag, too, and all these finds came from the area between graves 449, 493, 451, 452 and 453. Probably also graves 447 and 526 had extended on top of this grave. The only preserved side of the grave was the NW one; it was quite straight, and the bottom of the grave-pit was even. From the topsoil over the grave a pig's jawbone with teeth (:292) was found.



Interpretation and dating: Judging by the spearhead, which is a narrow pointed variant of Petersen type E (see LUISTARI II 27–29), this is a male burial from the first half of the 10th century or from about 950 AD. The finger-ring found near the spearhead is made of bronze wire of round section, and thus it points also to the 10th century and later (group I:1, LUISTARI II 122, 127).

Grave 472

Location 111/111	Grave plan p. 21
Orientation S-N (?)	Pl. 6:472:1–5
Size at least 160x80 cm	KM 22346:293–305
Depth about 60 cm	

The grave was situated in the northern part of the cemetery, quite close to the 1969 excavation area, where there was 20–25 cm of topsoil and about 15 cm of mixed earth under it. The northern part of the grave had been dam-

aged in digging graves 10, and 49 and later the drainage ditch. The grave had probably been almost rectangular in form and its bottom was quite even. There were rather slight traces of wood at the sides, and on the bottom indefinite remains of decomposed bones were found. At the S end of the grave-pit there was a rock crystal bead (22346: 295), nearer the middle a silver coin (:300), a second bead (:296), spiral ornaments (:293, 294, 297, 298, 301), a bronze rim mount (:299) and iron fragments (:302) were found. In the fill there were potsherds, iron slag and a piece of tinder flint. A part of the finds could be from grave 473, which seems to have been damaged in the digging of this grave.

Interpretation and dating: According to the dating of the silver coin (Ethelred Long Cross 997–1003, Talvio 2000:1) this badly damaged grave, probably female, was later than the beginning of the 11th century. It was, however, earlier than graves 10 and 49.

Grave 473

Location 111/110

Orientation WSW-ENE Pl. 6:473:1–4

Size at least 135x80 cm KM 22346:306–911

Depth about 60 cm

Only a small part of the grave had been preserved between graves 442, 446, 444, 472 and 475, whereby it is difficult to say anything about its original size. Perhaps the grave-pit had been oval in form. The bottom seems to have been quite even. At the NW-side there were remains of wood, and in the preserved part a silver coin (22346:307), a strap mount (:310), an iron rod fragment (:306), spiral ornaments (:308,309) and a couple of potsherds were found.

Interpretation and dating: It is possible that this was a child's grave. The silver coin (Ethelred Long Cross 997–1003, Talvio 2000:2) dates it to the 11th century. It was however earlier than grave 472.

Grave 474

Location 114/112

Orientation NW-SE Pl. 6:474

Size at least 120x45 cm KM 22346:312–314

Depth 65 cm

The grave was situated in the N part of the cemetery near the area excavated in 1969. Its NW end had been damaged in the digging of grave 512 and possibly also some other graves, and the SE end was partly covered by grave 440. The grave-pit had possibly been almost rectangular in form, and the bottom was even. A weight (22346:312), bronze spirals (:313) and an ornamented potsherd (:314) were found in the fill, but the burial seems to have been unfurnished.

Interpretation and dating: This was possibly a child's grave, but the original length of the grave-pit is uncertain. The spherical weight points to the beginning of the 11th century at the earliest (LUISTARI II 71–72).

Grave 475

Location 113/111 Grave plans pp. 13, 30

Orientation SW-NE Pl. 6:475:1–8

Size about 220x95 cm KM 22346:315–334

Depth about 65 cm

The grave was situated to the S of the last-mentioned grave, and on top of it was about 20–25 cm of topsoil and about 15 cm of mixed earth. It was dug on top of graves 444 and 473, and it had been disturbed in digging graves 440, 442, 446 and 494. The middle of the grave, however, had remained intact, and on top of it there was an imposing stone setting. The largest stone was however aside from the grave, and most probably it had not been brought to the place. The size of the stone setting was about 120x70 cm, and the stones were 10–40 cm in diameter. Between them were large amounts of charcoal and slag. The grave-pit was broader in its upper parts in the NE, but close to the bottom it was almost rectangular. The bottom was quite even. The finds were mostly in the middle of the grave under the stone setting. There

were a couple of bronze mounts (22346:315, 325), an iron sleigh-bell pendant (:324), a bronze plate fragment (:319), small bronze ring fragments (:323), a spiral ornament (:329) and two iron rods (:326,330). At the SW end there were fragments of spiral ornaments and pieces of iron artefacts (:316,318,321,322, 327), at the NE end a bronze rivet and spiral fragments (:320,317,328) were found. On the northern side of the stone setting there were traces of decomposed bone, but on the bottom of the grave there were only small bone remains near the SE side. Also quite slight traces of wood were observed. No more than a potsherd and a burnt piece of bone were found in the fill, but there were seven lumps of slag in it.

Interpretation and dating: The small bronze ring fragments possibly are from toe-rings, and so this may be a child's grave. The grave was on top of graves 444 and 473, dated to the beginning of the 11th century, and so it must be later than that. The cross-shaped spiral ornaments are different from the ones found earlier (LUISTARI II fig. 43:11,19), but one of them (22346:329) is similar to the ornament found in grave 472 (22346:294). Accordingly, these two could be contemporaneous.

Grave 476

Location 115/111

Orientation SW-NE

Size at least 125x70 cm KM 22346:335–340

Depth 85–90

The grave was to the E of the last-mentioned grave, and overlay by about 35 cm topsoil and 20 cm mixed earth. It had been damaged in digging graves 440, 501, 522 and 523. The grave-pit seems to have been almost rectangular in form and even-bottomed. An iron rivet (22346:335), iron fragment (:336), potsherds, a burnt bone splinter and slag were found in the preserved S corner of the pit, and there was decomposed bones on the bottom. Charcoal was observed in the surface layers.

Interpretation and dating: Possibly a child's grave. Grave 523 on top of this dates from the late Viking Age (see farther on), and so this must be earlier.

Grave 478

Location 120/117

Orientation SW-NE Pl. 8:478:1–2

Size about 125x50 cm KM 22346:345–350

Depth about 100 cm

The grave was situated in the northern part of the cemetery and it was partly on top of graves 480 and 484. It had been disturbed in digging grave 481. The grave-pit had straight sides, slightly rounded corners and an even bottom. In the fill a stone disc (22346:346), a nail (:347), a spiral ornament (:345), an iron artefact fragment (:348), a potsherd and a burnt bone splinter were found.

Interpretation and dating: Judging by the size of the grave, this is a child's burial. Because it was not only on top of grave 480, dated to the end of the 10th century, but intersected also the unfurnished and very deep grave 484, it must be from the time of the unfurnished burials.

Grave 480

Location 120/117

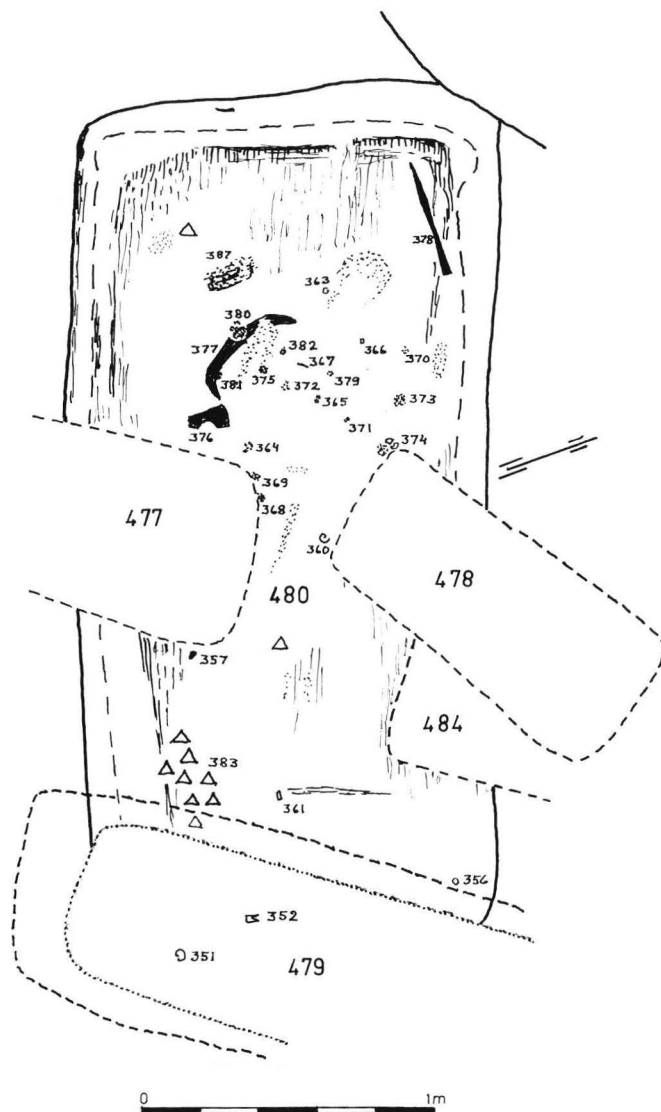
Orientation W-E Pl. 7:480:1–20 (7:479)

Size at least 300x145 cm KM 22346:356–394

Depth about 90 cm

The grave was situated in the northern part of the cemetery, where there was about 30 cm of topsoil and 10–15 cm of mixed earth. Although there were several graves on top of it, it was observed rather early during the excavations. The grave-pit had straight sides and rounded corners, and its bottom slanted to the east. At the western end, where the grave was undamaged, there were distinct traces of wood on the sides to the height of about 35 cm, and they were also observed on the bottom. At the eastern end, where the grave had been disturbed in digging graves 477–479, 481 and 484, the traces of wood were more indistinct. Apparently the deceased was lying on its side, head to the W and face to the NE. According to the location of the bones, the corpse had lain in the direction NW-SE, although the orientation of the grave was almost W-E. There was a spearhead (22346:378) north of the skull; close to the shoulders to the south of the corpse a scythe and an axe (:377, 376) were placed, and to the W of these were remains of a dog (:387). On top of the artefacts were rib fragments of a cattle or a horse (:388). Bordering on grave 478 were the remains of a purse with a fragmentary amber bead and a silver coin fragment (:374), and about 40 cm to the SE of it a bronze ring (:360) was found. Close to the S of the skull there was a ring made of a flat bronze rod, and near the upper part of the body there were several spiral ornaments (:364, 366, 368–373, 375, 379–382). Only one spiral (:361) was found at the foot end of the grave. In the fill were a small silver ring (:356), fragments of bronze mounts (:358, 362, 365), pieces of iron artefacts (:357, 359, 367), a couple of burnt bone splinters, slag and a piece of tinder-flint. Potsherds found at the foot end of the grave were most probably from a clay vessel damaged in digging grave 479, but some pieces were found also from the fill. On top of the grave, bordering on grave 479, a small artefact (:1025) resembling a painter's grinding stone was found.

Interpretation and dating: Judging by the spearhead, axe, scythe, purse and also the dog, this was a man's grave. The coin fragment (Ibn Nuh Mansur, 976–997 AD, Talvio 2000:3) dates it to the last quarter of the 10th century at the earliest. The impressive spearhead (length 395 mm) with an accentuated junction (LUISTARI II 31–32) and the straight-backed bearded axe (Vuolijoki 1972 8–9, 64 fig. 6) are well in keeping with this dating. If the unusually large (42x 42.5 mm) penannular brooch with flower-shaped ends (22346: 351), found in the fill of grave 479, was originally in this grave, the dating could be later. It is however worth noting that all the other brooches of the same type at Luistari, six in number, are considerably smaller, 28–38 mm in diameter. Although their dating to the latter half of the 11th century and later would be correct (LUISTARI II 106, see also graves 466 and 1056 in this study), this one may be earlier. Kivikoski



(1973 97 fig. 706) assumed some of the brooches of this type to be from the Viking Age.

Grave 485

Location 122/113

Orientation SW-NE Pl. 8:485:1–7

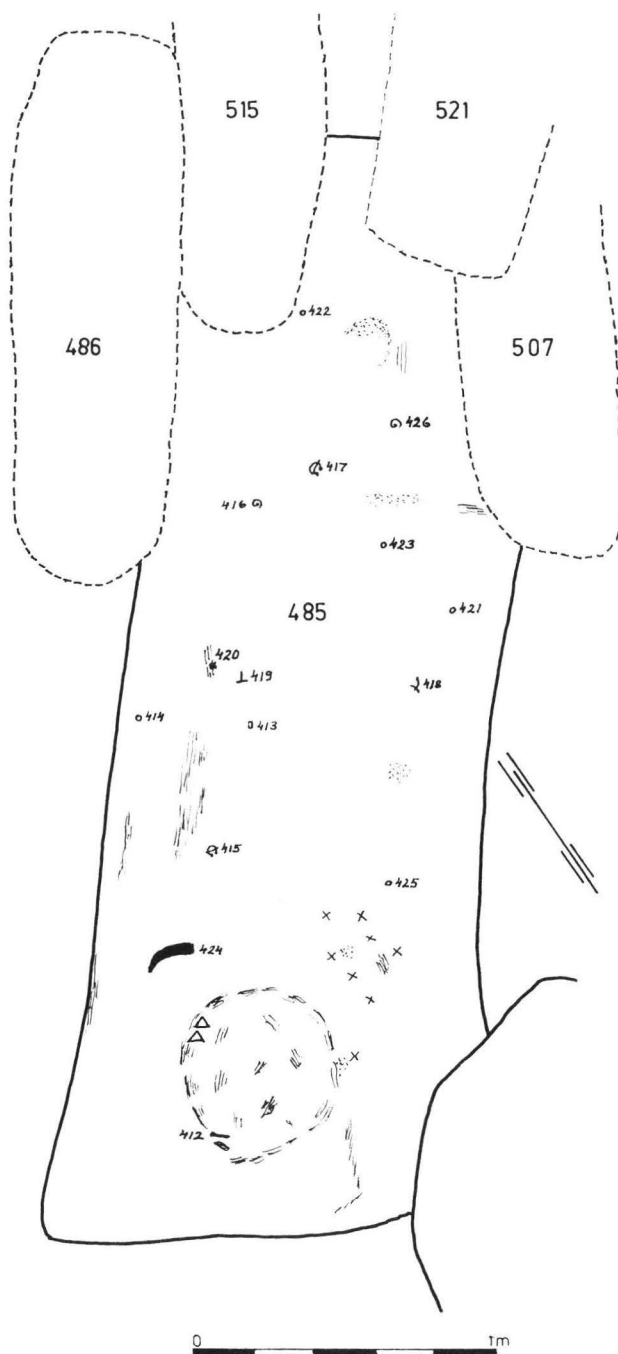
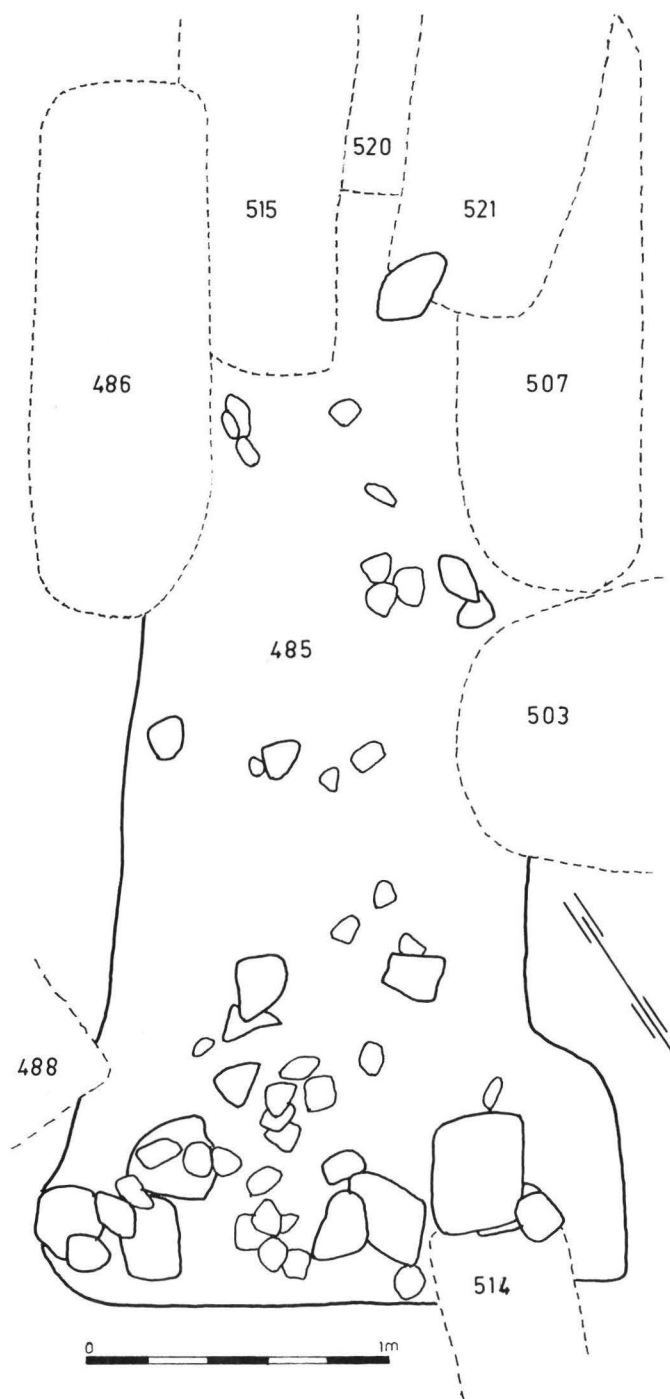
Size about 370x135–

190 cm

Depth 100–110 cm

KM 22346:405–431

The grave was situated in the northern part of the cemetery, where there was 15–30 cm of topsoil and 10–25 cm of mixed earth. It had been damaged in digging graves 486, 488, 503, 507, 514, 515 and 521. Moreover, two pits had been dug through its NE part. One of these was about 50 cm in diameter, its bottom was quite even and about 20 cm deeper down in the ground than the grave bottom. The other, situated to the N of the former, was smaller and shallower, about 20 cm in diameter and 7 cm deeper than the grave bottom. At the NE end of the grave there was a row of rather large stones, and to the SW from these



there was a scattered setting of smaller stones, probably disarranged with the digging of the pits mentioned above. The grave-pit was broader at the location of the stones, and it tapered only slightly to the bottom, which was somewhat uneven because of stones. At the SW end of the grave remains of a skull were found, but otherwise traces of bones were small, and they were observed about 20–30 cm above the bottom level. About 20 cm to the N of the skull there was a fragment of a finger-ring (22346:426), a part of which was found in grave 507 (:543). A second ring (:416) was found 50 cm to the E of it more than 25 cm higher up in the fill. Between these, almost at the same level as the last-mentioned ring, a small penannular brooch (:417) was found. Another similar brooch (:415) was found about 130 cm to the NE at quite the same level, which was almost 20 cm higher up

than the skull remains. There were beads (:405,406) already in the upper layers, and also farther down they were scattered, but principally however in the SW half of the grave (:414,421–423, 425). At the NE end on the bottom half a sickle (:424) was found. The sickle had probably been broken in digging one of the later pits. Other finds, fragments of bronze artefacts (:410,411, 413), iron pieces (407–409,412), potsherds and pieces of burnt clay were also found scattered in different parts of the grave. Only one spiral ornament (:420) was observed at the SE side of the pit. Very small burnt bone pieces (:430) were found in a rather consistent area at the NE end of the grave, and on top of the SW end there were remains of bovine teeth (:431). Only small traces of wood by the SE side and at the NE end were observed, but in the middle of the grave on both sides there were two nails (:418,419)

about 60 cm from each other and on just the same level, which was about 10–15 cm above the bottom. Accordingly, it is possible that there had been wooden constructions in the grave, however small their traces.

Interpretation and dating: Although the brooches were found so far apart from each other, the textile remains fastened in them point to the fact that they belonged originally to a female overdress fastened at shoulders. The brooches are almost identical, with small flat end-knobs and flat ring decorated with transverse lines. Salmo (1956 71–72) dates his group 16, in which these nearest belong, to 12th and 13th centuries. Without doubt grave 485 is one of the latest furnished graves at Luistari, although it has Viking Age traits.

Grave 488

Location 123/112
Orientation S-N Pl. 8:488
Size 220x50 cm KM 22346:439–440
Depth 100–105 cm

The grave was almost completely under graves 487 and 492; only small parts of both ends were preserved. These indicated that the grave had been narrow and almost rectangular. Its NW-corner had been dug on top of grave 485. A bronze weight (22346:439) and a couple of potsherds were found in the preserved N end of the grave.

Interpretation and dating: A weight may indicate male sex. The grave was later than grave 485, dated to the 12th century.

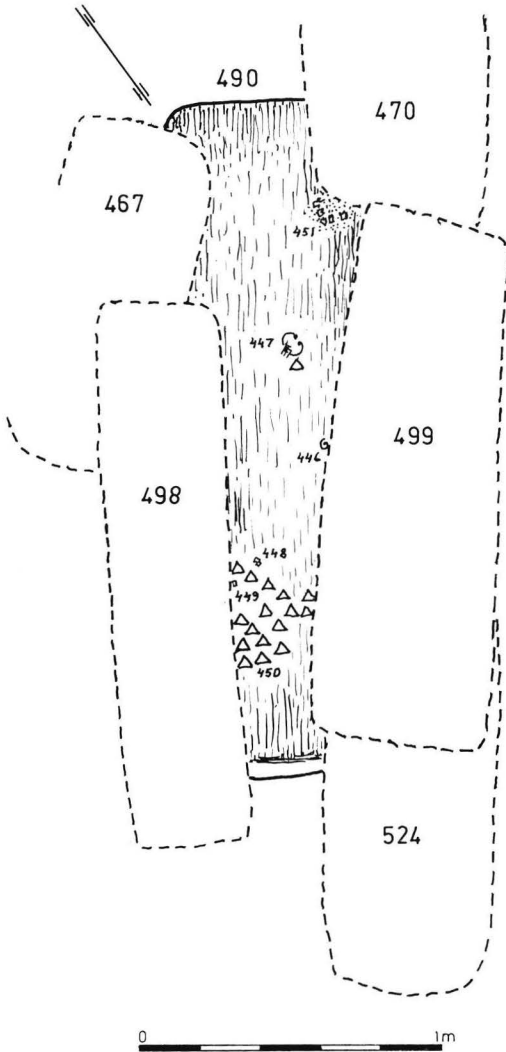
Grave 490

Location 117/110
Orientation SSW-NNE Pl. 8:490:1–4
Size 230 x at least 60 cm KM 22346:446–451
Depth 85 cm

The grave was situated in the northern part of the cemetery, where there was 35–40 cm of topsoil and 10–15 cm of mixed earth. No more than a strip of the middle part of the grave had been preserved; the NW side was covered by graves 470, 499 and 524, the SE side by graves 467 and 498. At the SW end of the grave, bordering grave 470, there was a heap of teeth, which could belong to the deceased in this grave. About 40 cm to NE of them there was a bronze brooch (22346:447), on top of which there was a layer of birch bark, and in connection with which there were also textiles. About 80 cm to the NE of the brooch, a flat-bottomed, cord-impressed clay vessel broken in pieces (:450) and a couple of bronze spiral ornaments (:448,449) were found. A bronze finger-ring (:446) was found considerably higher up in the fill near grave 499. On the bottom a dark layer was seen clearly, and at the NE end a wooden border was observed about 5 cm above the bottom, which was quite even.

Interpretation and dating: The rather large (51 mm) penannular brooch with poppy-shaped ends may indicate a male burial (see Salmo 1956 56). Just like the brooch, the clay vessel of group II:2d, almost similar to the ones in graves 56, 207, 208 and 377, points to the period

around 1000 AD or to the first half of the 11th century (LUISTARI II 83, 105).



Grave 492

Location 123/111
Orientation SW-NE Pl. 8:492
Size 180–190x40–50 cm KM 22346:453–456
Depth about 100 cm

The grave was situated in the NE part of the cemetery, where there was about 20 cm of topsoil and about 25 cm of mixed earth. It was on top of graves 487 and 488. The grave-pit broadened to the NE end, the NW side was longer than the SE one, so that the NE end was slanting. The bottom was uneven because of the stones. On top of the SW end of the grave there were remains of vertebrae, ribs and milk-teeth of a foal (:455). A stone disc (22346:453), potsherds and slag were found in the fill.

Interpretation and dating: Apparently this was a very late grave, because it was the fourth in order, and the first, grave 485, was dated to the 12th century. It is quite possible that the stone disc was not originally in this grave, and the remains of the foal can also be from some other connection.

Grave 495

Location 112/109

Orientation SW-NE

Size 290x85–90 cm

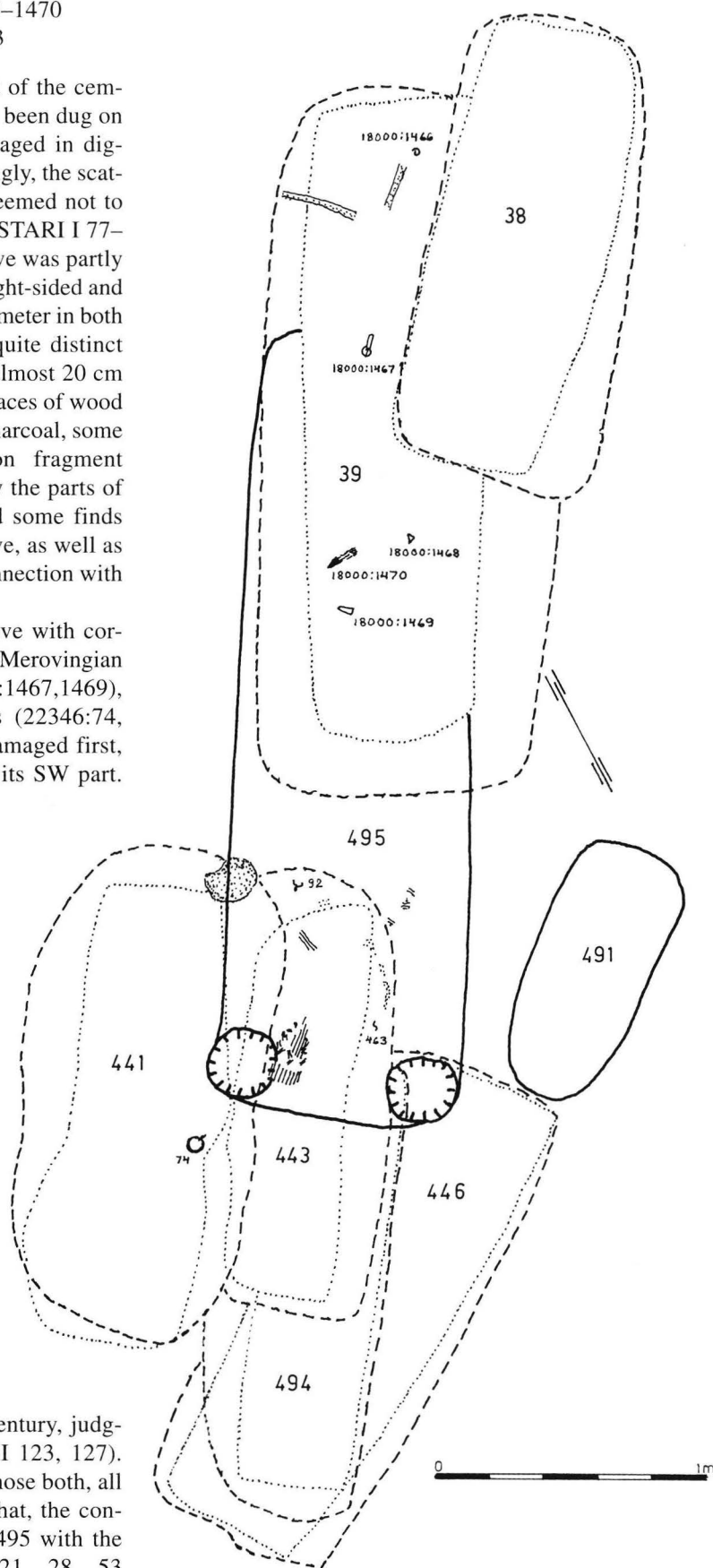
KM 18000:1467–1470

Depth 80–85 cm

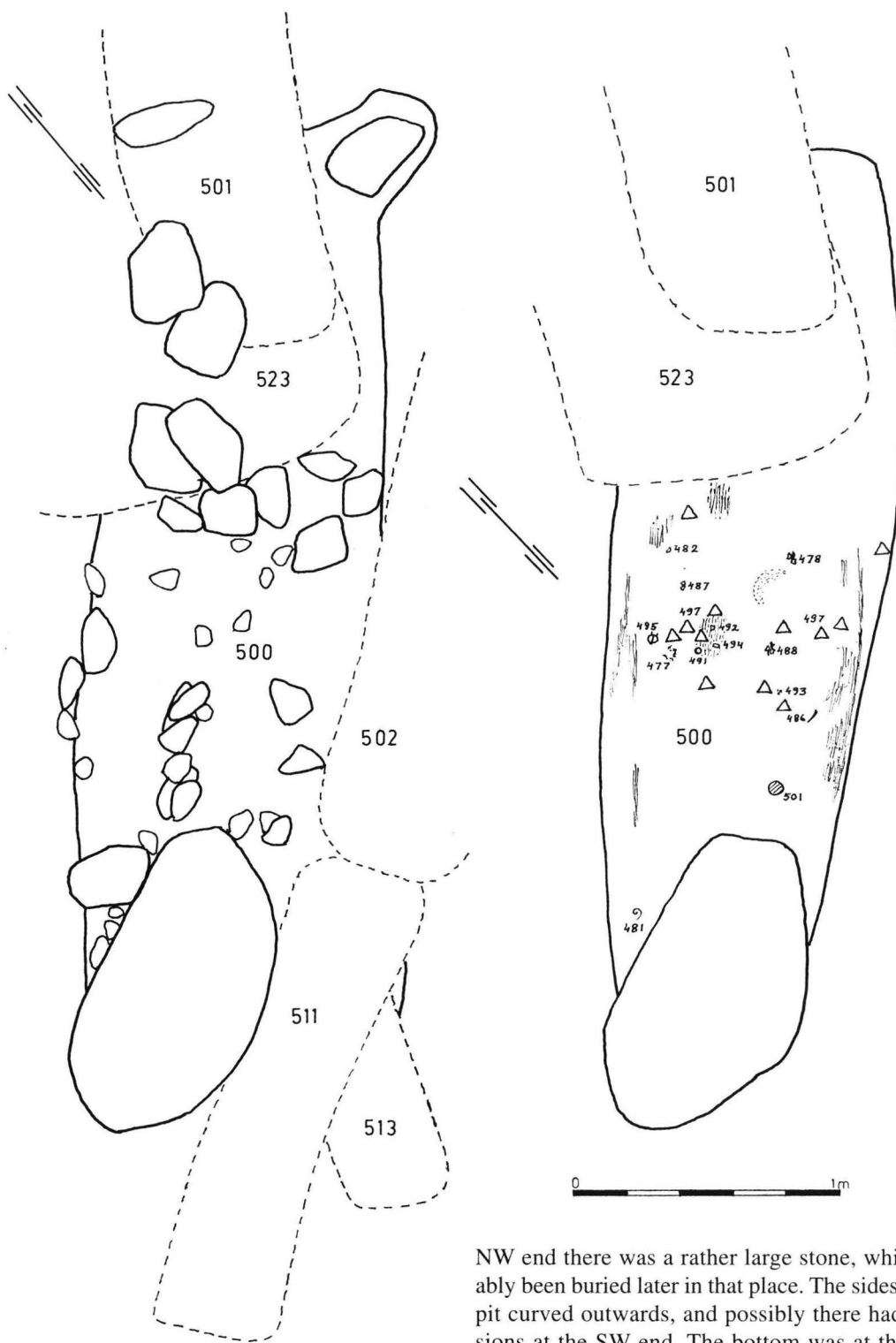
22346:74,92,463

The grave was situated in the northern part of the cemetery, and graves 441, 443, 446 and 494 had been dug on top of it. Apparently it had also been damaged in digging grave 39 investigated in 1969. Accordingly, the scattered bones and finds in grave 39, which seemed not to be in keeping, find an explanation (see LUISTARI I 77–78, 1982b 123). At the bottom level, the grave was partly undamaged, and it seemed to have been straight-sided and even-bottomed with posts about 25 cm in diameter in both corners in NE end. The dark marks were quite distinct under the later graves, and these extended almost 20 cm farther down from the bottom level. Small traces of wood were observed at the SE side of the grave. Charcoal, some decomposed bone and a S shaped iron fragment (22346:463) were found in the fill. Possibly the parts of bits (:74,92) from graves 441 and 443 and some finds from grave 494 are originally from this grave, as well as the main part of the finds listed earlier in connection with grave 39.

Interpretation and dating: The oldest grave with corner posts at the NE end (495) was probably a Merovingian Period male burial. At least the belt (18000:1467,1469), the knife (18000:1468,1470) and the bits (22346:74, 92,463 ?) had been in it. This grave was damaged first, when grave 39 was dug directly on top of its SW part.



That occurred some time during the 11th century, judging by the ring (18000:1466, LUISTARI II 123, 127). When still later graves were dug on top of those both, all the finds scattered in the fills. In spite of that, the construction with posts alone connects grave 495 with the early Merovingian Period graves 20, 21, 28, 53 (LUISTARI I 32, 42–43).



Grave 500

Location 117/114

Orientation SW-NE

Pl. 9:500:1-14

Size about 400x80-105 cm KM 22346:473-502

Depth about 90 cm

The grave was situated in the northern part of the cemetery, where there was 35-40 cm of topsoil and about 10 cm of mixed earth. On top of the SW end of the grave were graves 501 and 523; the NW corner had been damaged in digging graves 502 and 511. A scattered stone setting covered almost the whole grave area, and at the

NW end there was a rather large stone, which had probably been buried later in that place. The sides of the grave-pit curved outwards, and possibly there had been extensions at the SW end. The bottom was at the NE end almost 20 cm deeper than at the SW end. There were distinct remains of wood by the sides of the grave-pit about 20-25 cm above the bottom level, and also on the bottom there appeared in parts a wooden layer. In connection with the artefacts birch bark was observed. Finds began to appear high up in the upper layers, and apparently the assemblage was badly scattered. Remains of the skull were observed in the middle of the grave, and near and about there were the most important finds, a knife (22346:476), bronze-ornamented leather pieces and silver coin and plate fragments (:478,482, 487), a weight (:491), a strap buckle (:495), bronze chain fragments

(:477) and remains of an ornamented clay vessel (:497, 506). A bronze finger-ring (:481) was found at the NE end of the grave at the foot of the large stone mentioned above. Spirals, bronze fragments and especially iron pieces were scattered at different levels. Rather high in the upper layers a stone disk (:501) was found. In addition, there were a couple of burnt bone splinters, slag and a stone flake.

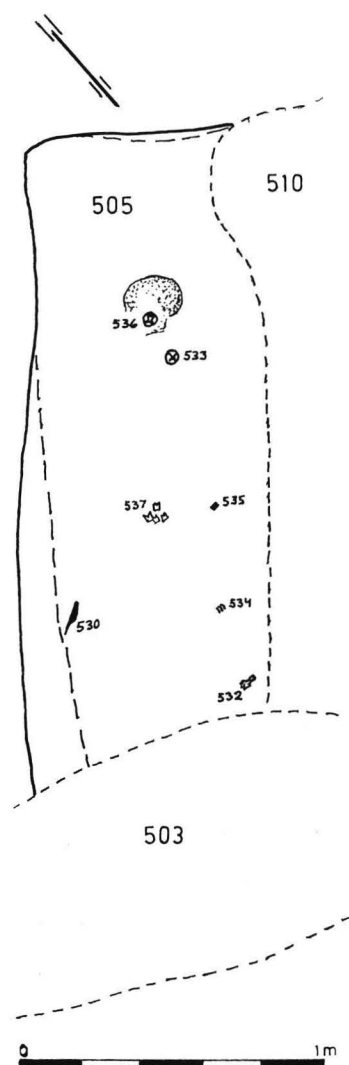
Interpretation and dating: Judging by the remains of the belt and the purse, this was a male burial. The clay vessel is of dark and burnished surface and decorated with a hatched band on the shoulder. It belongs to group II:2b, almost resembling the vessel found in grave 25. Like most other vessels of this group it was probably made at the 11th century (LUISTARI II 80–82, fig. 22:14). The small silver fragments are from Western European coins of the same century (Talvio 2000:4–6). Grave 500 was overlain by grave 523, in which there was still a clay vessel. This may date grave 500 to the earlier part of the 11th century (see description of grave 523).

Grave 505

Location 120/113	See p. 38
Orientation SW-NE	Pl. 8:505:1–5
Size at least 200x75 cm	KM 22346:528–540
Depth 85–90 cm	

The grave was situated in the northern part of the cemetery, where there was 30–35 cm of topsoil and about 10–15 cm of mixed earth. Grave 503 was on top of its NE end, and grave 510 covered its NW side. On top of its SW end was a pile of scattered stones, 30–50 cm in diameter, which had probably been more together originally. At the beginning the SW end border of the grave was indistinct, but deeper down the grave-pit seemed almost rectangular and the bottom was quite even. In the SW part, about 40–45 cm from the end of the grave, remains of a skull were observed, and in the middle of the grave, about 10 cm higher up there were human teeth; 15 cm higher still some large bones and a rather large potsherd (22346:531) were found. Beneath the skull there was a round brooch (:536), and a similar one (:533) was found 20 cm to NE from it, but almost 20 cm higher up. Probably the corpse had been lying on its side. About 80 cm to NNE from the brooches there was a finger-ring (:534), and about 20 cm to the N of it a crayfish Brooch (:532) was found. A fragmentary knife (:530) was lying in the middle of the grave on the SE side. In addition to the finds mentioned only a couple of iron pieces (:529,535), a fragment of a belt-buckle (:528) and a potsherd were found.

Interpretation and dating: The two similar brooches indicate a female burial. These brooches are round, of open-work and decorated with circles and ringed dots. Similar ones have been dated to the first half of the 7th century or still earlier (Nerman 1975 38, 1969 fig. 903–913; Meinander 1950 102). The crayfish brooch also belongs to the early variants (cf. Kivikoski 1973 fig. 396), and the three-ridged spiral finger-ring may derive from multi-ridged bracelets and finger-rings, dated to the 6th



and 7th centuries (Cleve 1943 96–99). Without doubt we have here one of the earliest inhumation graves at Luistari.

Grave 508

Location 117/112	Grave plan p. 43
Orientation SSW-NNE	
Size about 180x50 cm	KM 22346:548–554
Depth 100 cm	

The grave was situated in the northern part of the cemetery, where there was 35–40 cm soil and 10–20 cm of mixed earth. It had been made on top of graves 506, 522 and 523. The grave-pit was even-sided, rounded in corners and even at the bottom. At the NE end, there were traces of wood about 25 cm above the bottom. A couple of bovine teeth (22346:552,553) were found at the SW end, and there were small bronze fragments (:549,550), a bronze spiral (:548), a barbed point fragment (:551), perhaps from an angon, and a potsherd (:554) in the fill.

Interpretation and dating: A late grave.

Grave 509

Location 118/114

Orientation SW-NE

Size 215x75,

bottom 180x40–60 cm KM 22346:555–560

Depth 115–130 cm

The grave was situated to the NE of grave 508 on top of graves 482 and 506. It shortened and narrowed to the bottom and its sides curved slightly outwards. The bottom was uneven because of a large stone. On the NW side and at the NE end there were wood remains 30–40 cm above the bottom. A half of a belt buckle (22346:555), a bronze spiral (:556), a spiral ornament (:558), an iron chain fragment (:557), potsherds (:560) and tooth fragments of a goat, sheep or a bovine (:559) were found in the fill.

Interpretation and dating: A late grave.

Grave 510

Location 120/114

Orientation SW-NE

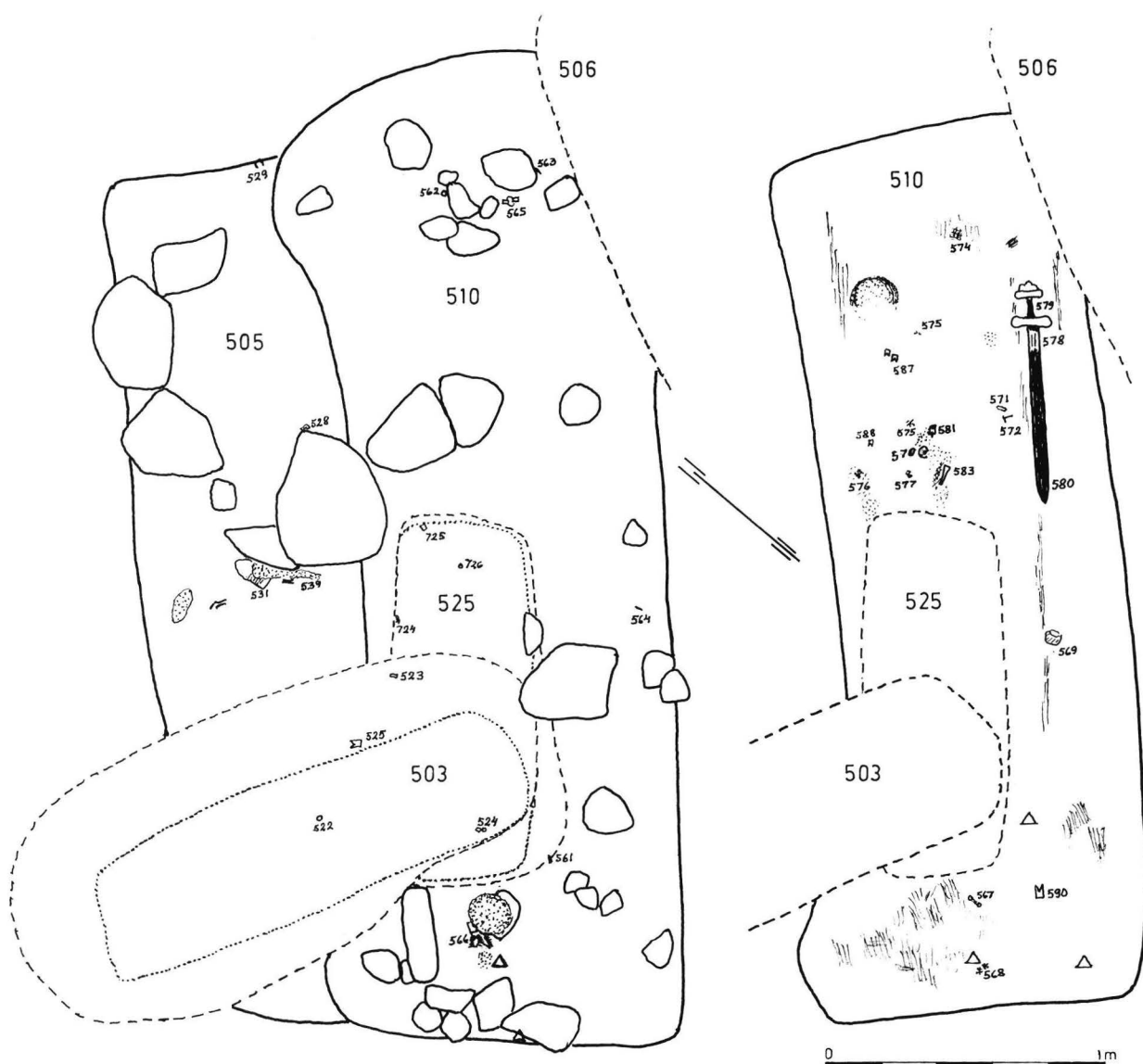
Pl. 10:510:1–13

Size 350x135 cm,

bottom 315x105–120 cm KM 22346:561–594

Depth about 110 cm

The grave was situated in the northern part of the cemetery, where there was 35–40 cm of topsoil and 10–20 cm of mixed earth. It had been dug on top of the NW side of grave 505, and this grave was partly intersected by graves 503, 506 and 525. At the NE end of the grave there was a stone setting made of stones set on edge. In the middle the grave-pit was of even width, at the ends it shortened to the bottom, and on the SE side there were small protrusions at the ends. The first traces of wood appeared about 25 cm above the bottom level on the SE side, and they continued rather distinctly about 15 cm far-



ther down. On the NW side there were much fewer traces of wood, but on top of the sword there was plenty of wood, and at the NE end of the grave on the bottom there were in places 2–3 cm of decomposed wood. The deceased was lying near the SE side of the grave head to SW, where traces of the skull and some teeth were found near the bottom level. About 40 cm to NE of them parts of a belt (22346:581–584) and a finger-ring (:570) were found. On the left side of the corpse there was a sword (:578), and under it a second finger-ring (:580). Near by the sword there was the only nail (:572) found in this grave. In the SW end also most of the spiral ornaments (:574–577) were found. About 30–35 cm higher up there was a strap-divider (:565) near the SW end, and still higher up a bead (:562) and an iron rod (:563) were found. In the middle of the grave, about 15 cm from the bottom, there was a fragment of a cube-stone (:569). There was a second skull at the NE end of the grave about 40 cm above the bottom level, and quite near it the remains of a crumpled bronze vessel (:566) were found. In the vicinity of these there were large potsherds, iron pieces (:561, 567), slag, decomposed bones, a bovine tooth (:590) and a spiral ornament (:568). There were further a couple of burnt bone splinters and a quartz flake in the fill. Quite a lot of charcoal was observed at the SW end of the grave-pit. Because grave 525 was dug in the place where the lower parts of the deceased in this grave should have been, the artefact fragments (:725,726) found in the fill of grave 525 may belong to this grave.

Interpretation and dating: The stately sword and the belt parts indicate that this is a male burial. The sword is of Petersen type S with a silver-plated hilt (Lehtosalo-Hilander 1988 204–205, fig. 3), and it dates the grave to the 10th century (Petersen 1919 146–148; Müller-Wille 1972 94–98, figs. 30:3, 32:1). The finger-ring with double-spiral ends (22346:580), found under the sword, fits well with this dating (LUISTARI II 123, 127), but it has wider ring and richer ornamentation than other rings of the same type.

The finds in the NE end of the grave pose a mystery. There were scattered fragments of two clay vessels there, but fragments of the same vessels were also found in the fill or on top of graves 485, 503, 504, 505 and 515. Further on top of the NE end of grave 510 a human skull and remains of a bronze vessel were found. Had all the vessels been in grave 510 and been damaged in digging grave 525? From where was the skull then? Had grave 505, damaged in digging grave 510, been a double grave (the skull in grave 505 was in situ) or had there been still another grave under grave 510? The clay vessels belong to groups II:1c and II:2c (LUISTARI II 77–83), and so they could well have been in grave 510. The metal vessel is so crumpled that it is almost impossible to ascertain its form. It could have been a kettle like the one in grave 345 (LUISTARI I Plate 93:7, LUISTARI II 76). In that case its parts had scattered widely. Crumpled bronze vessel fragments were found in grave 1029 (25480:308) and fragments of an iron kettle or bucket handles (cf. Arbman 1940 Pl. 211:1,2) were in the fill of graves 441 (22346:76), 563 (23183:226), 575 (23183:297), 668

(23183:630) and 670 (23183: 640, 649, 668, 672, 682). They are at least from two different vessels. All the fragments in grave 670 are apparently from the same handle, but it is not sure that the others belong together; they can be from two or more different vessels. Possibly one of them is the one found in grave 510.

Grave 511

Location 118/115
 Orientation SW-NE Pl. 11:511:1–2
 Size about 185x45 cm KM 22346:595–599
 Depth about 90 cm

The grave was situated in the northern part of the cemetery, where there was 35–40 cm of topsoil and about 10 cm of mixed earth. It was dug at least on top of graves 500 and 513. The grave-pit had straight sides and ends and an even bottom. In the fill there were some stones, but no actual stone setting was observed. At the SW end of the grave, on the bottom, was a nail (22346:597), and from the fill of this end a weight (:596) and a finger-ring (:595) were found. Scattered in the filling earth there were potsherds and a lump of slag.

Interpretation and dating: Excluding the nail the finds are probably from the earlier graves 500 and 513. This belongs to the late unfurnished graves.

Grave 512

Location 115/114
 Orientation SW-NE Pl. 11:512:1–4
 Size about 185x55 cm KM 22346:600–605
 Depth about 80 cm

The grave was situated in the northern part of the cemetery close to the border of the excavation area in 1969, where there was about 20 cm of topsoil and about 10 cm of mixed earth. It had been dug on top of graves 56, 423, 460, 502 and 527, and probably grave 54 had been on top of it. The grave-pit had straight sides and ends and an even bottom. A bead (22346:600), two iron rivets (:601, 602), a bronze ring (:603), bronze spirals (:604) and potsherds were found in the fill.

Interpretation and dating: Because this grave was on top of so many other graves, it is evident that it must be one of the latest in the cemetery. The finds probably derive from the earlier graves; also the rivets were found so high up in the grave-pit that they may be fill finds.

Grave 513

Location 117/115 Grave plan p. 23
 Orientation SSW-NNE Pl. 11:513:1–2
 Size 160x40 cm ? KM 22346:606–609
 Depth about 75 cm

The grave was situated in the northern part of the cemetery, where there was about 40 cm of topsoil and 10 cm of mixed earth. It was dug on top of grave 500 and the SE-corner of grave 450, and it was intersected by grave 511. Traces of the grave were not observed on the other side of grave 511, which means that its length was not

more than 160 cm. The grave-pit was of even width with rounded ends and bottom. In it was found a fragment of a firesteel (22346:606), a bronze finger-ring (:607) and potsherds.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. It was on top of grave 500, and so it must be from the 11th century at the earliest. The fragmentary firesteel of oval form and the finger-ring of round section fit well with this dating (LUISTARI II 73, 122, 127). The potsherds are from a flat-bottomed vessel, probably of group II:2c (LUISTARI II 78).

Grave 516

Location 112/117

Orientation SW-NE

Pl. 11:516:1–15, 12:516:1–11

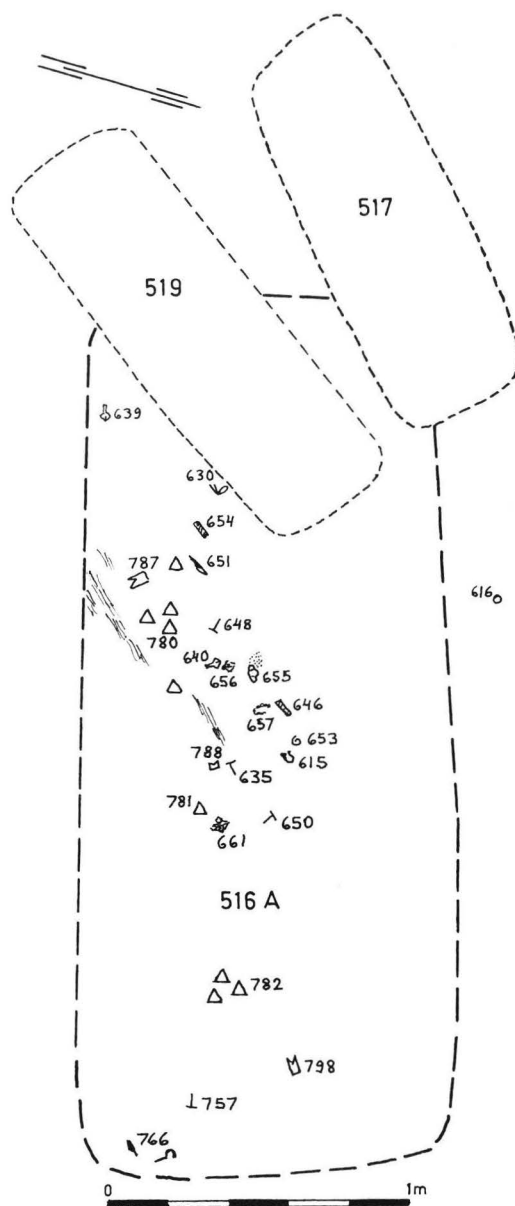
Size 280x110 cm,
bottom 260x85 cm

KM 22346:612–658

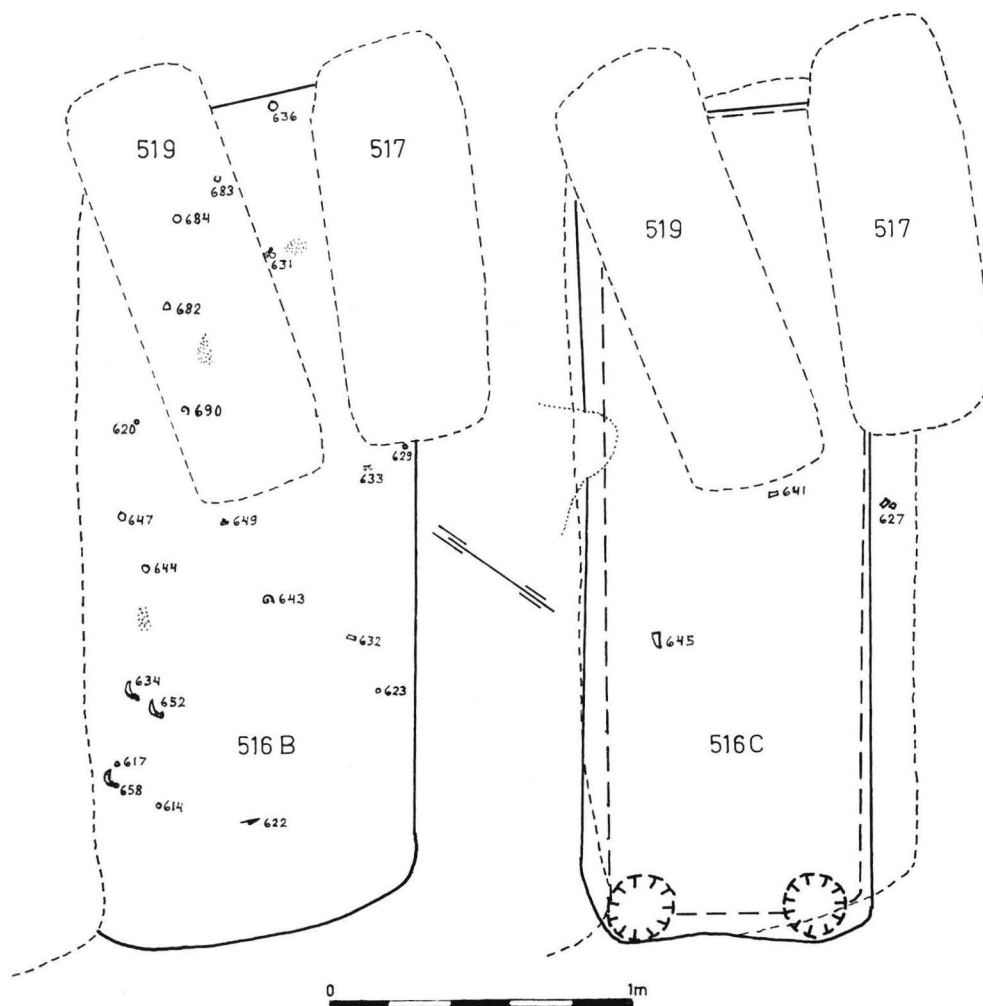
Depth 90–95 cm

The grave was situated in the northern part of the cemetery, where the soil was quite mixed; the borders of the grave were distinct only at the bottom level. At least graves 517 and 519 had been dug on top of this, but probably there had also been others completely mixed up. The form of the grave-pit was at the bottom level almost rectangular, and at the NE end there were distinct traces of posts. These were round, 15–20 cm in diameter, and they extended about 10 cm deeper down from the bottom level. There was about 30–40 cm of topsoil on the grave, and directly after the removal of the surface layer the finds, especially spirals and spiral ornaments (:612,613,619, 625,626,628,637,638,656) began to appear. At different levels there were also beads (614,617,620,623,629), coins (636,644,647) and bracelet fragments (627,641,645). A weight (:616) was found high up in the mixed earth, likewise a bear-tooth pendant (:634), but two others (652,658) were near the bottom level. At the bottom were two finger-rings (:643,653), a bronze chain fragment (:657), a couple of sleigh-bell pendants (:639,640), a knife and fragments of a sheath (:651), a bronze rivet (:649), a couple of whetstones (:646,654) and a sword pommel (:655). Also three nails (:635,648,650) were found, all at the SE-side of the grave. A couple of these were near the bottom, the third about 20 cm higher up in the fill.

Interpretation and dating: It is apparent that here finds from several graves have been mixed up. The fragments of a concave-convex bracelet (Kivikoski 1973 fig. 453) must be from a Merovingian Period female burial (516C). The sword pommel in five parts, the fragmentary lyre-shaped firesteel, the whetstones, the knife fragment, the spherical weight (Kivikoski 1973 fig. 824) and possibly also the sleigh bells (Kivikoski 1951 fig. 908) are probably from a late Viking Age male grave (516A), but most finds must derive from a female grave of the same time (516B). There are silver coins, beads of glass and faience, bear's tooth pendants (Kivikoski 1973 fig. 801), a bronze chain, finger-rings (groups I:1 and II:2a, LUISTARI II 123–126), a knife in a sheath with a bronze tip mount (type Kivikoski 1973 fig. 963), a knife handle



pendant (LUISTARI I Plate 26:56:14) and spiral ornaments. All the coins are perforated for hanging, so that they are parts of a woman's neckband. They give a dating to the 11th century (England, London, Ethelred II, Long Cross, about 997–1003 AD; Germany, Strasbourg, Bishop Wicelin, 1001–1029 AD; Germany, Regensburg, Konrad II as Emperor 1027–1039 AD; see Talvio 2000:7–9). The sword pommel has a curved lower side and it is somewhat like the pommel Kivikoski 1973 fig. 839, but it has larger middle part and sharp ridges between the parts (see also Kazakevičius 1996 figs. 57, 60, 63). It is of bronze and covered by a layer of some white metal, not silver. I have not found an exact parallel, but it probably dates from the same time as type Z and the Curonian type T1, which Kazakevičius (1996 58, 77–78, 137, 140) dates from the late 10th to the 13th century. In Finland type Z is considered a type of the 11th century (Cleve 1978 164).



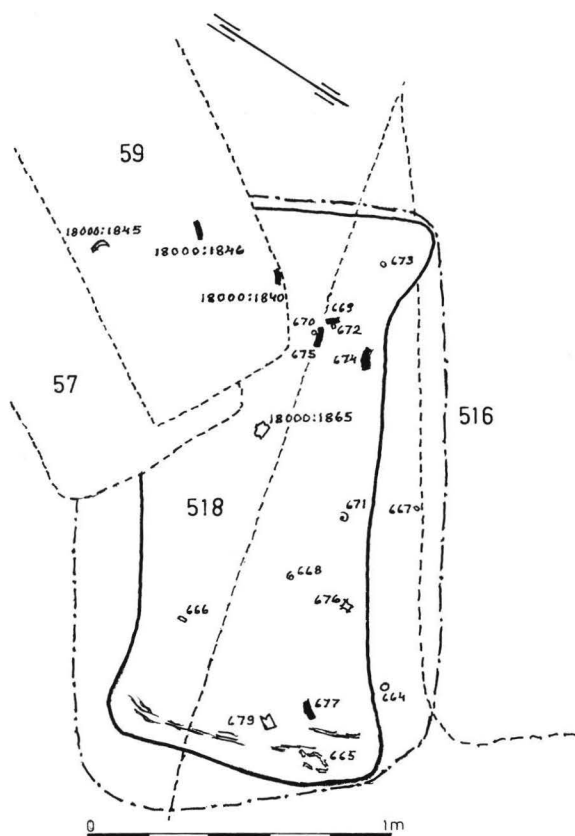
Grave 518

Location 113/116

Orientation WSW-ENE Pl. 12:518:1-8

Size at least 190x75-90 cm KM 22346:661-672,759,

Depth about 90 cm :761,766,787,798



The grave was situated to the SE of the former, and it was almost in the same direction. Accordingly, it could only be distinguished from the area of grave 516 about 10 cm above the bottom level. Its S corner had apparently been damaged in the digging of graves 57-59 investigated in 1969. The grave-pit had even sides in the middle, but in the preserved corners there were protrusions to the sides. Distinct traces of wood were observed at the NE end of the grave, but only a little decomposed bone was found in the fill. Some of the finds, like a silver coin (:664), silver finger-ring (:668), cross-shaped bronze mount (:661), a fragment of a sickle or a knife (:669), one of the beads (:667) and fragments of a spiral border (:663,665,666) were found 30-40 cm above the bottom level. Animal teeth (:679,787,798) were at both ends about 25 cm above the bottom. Near the bottom level at the SW end there were a couple of beads (:670,673), fragments of a scythe or a sickle (:674,675) and a bronze spiral (:672). A bronze finger-ring (:671) was found in the middle of the grave, and to the NE of it there were a cross-shaped bronze pendant (:676) and two spirals

(:678). Quite at the NE end there was one more fragment of the sickle (:677). To the NE of the grave bottom end at the 20 cm higher level there were fragments of shears (:766), a spiral ornament (:759) and a bronze spiral (:761). It is possible that the grave extended farther in this direction at the higher level, but the border of the dark soil was so tortuous here that there could be several grave corners.

Possibly some of the finds in the fill of grave 516 were from this grave, and also in the fills of graves 57 and 59, excavated in 1969, there is material from this grave, at least the sickle and scythe fragments are from the same artefacts (see Pl. 12:518:7,8).

Interpretation and dating: Beads and the bronze pendant point to a female burial. The pendant (Kivikoski 1973 fig. 786) dates it to the first half of the 11th century (Cleve 1978 118; LUISTARI II 117). The coin (:664) is German, struck in Regensburg during the reign of Henry II (Talvio 2000:10), and so it indicates the same period.

Grave 519

Location 111/116	Grave plans pp. 40, 41
Orientation SSW-NNE	Pl. 13:519:1–3
Size about 150x50 cm	KM 22346:680–691
Depth 115 cm	

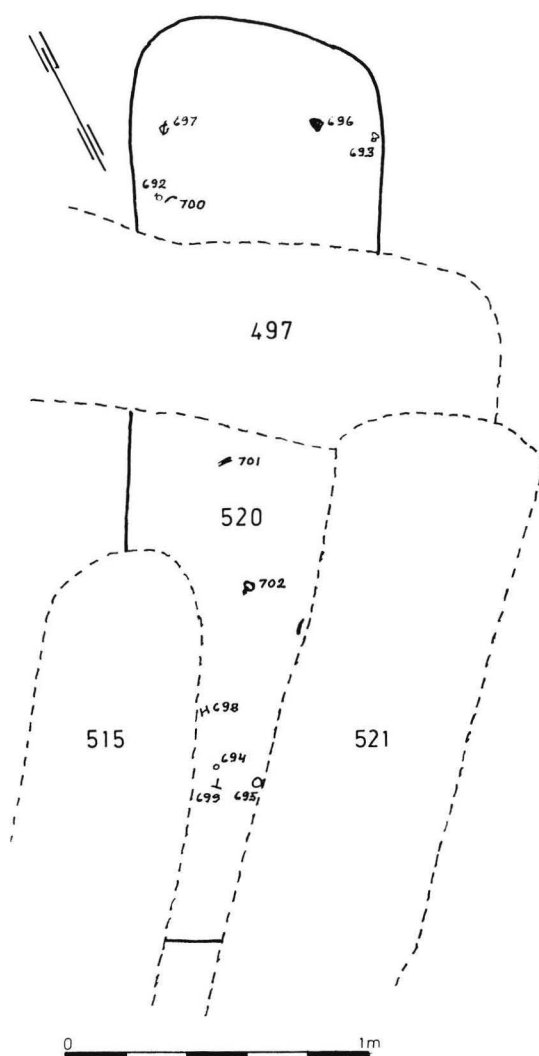
The grave had been dug mostly on top of the S part of grave 516. The grave-pit was of even width, the NE end was straight, and the SW end rounded, the bottom was quite even. Artefacts and artefact fragments were found at different levels, e.g. a fragment of a round silver pendant (22346:682), a silver ring (:683), a silver coin (:684), a bronze finger-ring fragment (:690), spiral ornament fragments (:681,685,689,691) and parts of bronze and iron artefacts (:680,686–688). The burial was unfurnished.

Interpretation and dating: Possibly the grave of a child. The coin is German without the name of the ruler (Talvio 2000:11). The grave was on top of all the burials in grave 516, from where the finds in its fill probably are, and therefore it must be later than the middle of the 11th century.

Grave 520

Location 120/110	
Orientation SSW-NNE	Pl. 13:520:1–6
Size 300x80 cm,	
bottom 280x60 cm	KM 22346:692–705
Depth about 110 cm	

The grave was situated in the northern part of the cemetery, where there was about 30 cm of topsoil and 20 cm of mixed earth. It was dug on top of graves 454, 466 and 528, and on top of it there were graves 497, 515 and 521. The grave-pit was long and narrow, tapering and shortening to the bottom. The bottom was uneven because of the stones, and at the NE end there was a charcoal patch extending about 20 cm lower down from the bottom level; its depth was about 30 cm. In the fill were several artefacts and artefact fragments: at the NE end an iron nail (22346:699), a rivet (:698), a bead (:694) and a silver coin



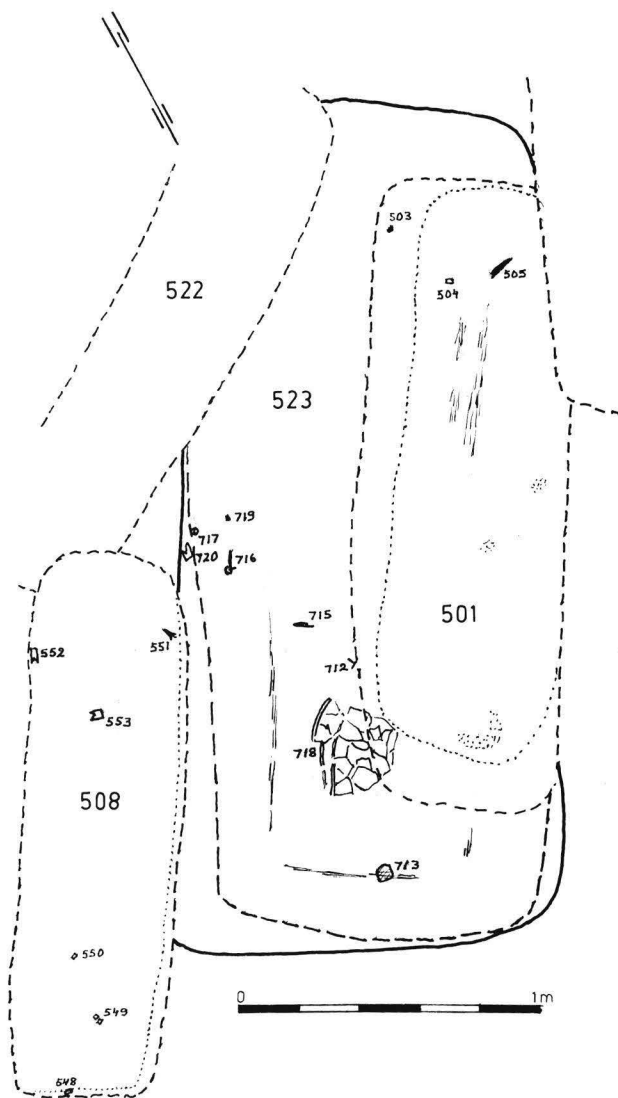
(:695) were found, at the SW end a round bronze mount (:692), a fragmentary sleigh bell (:693) and iron fragments (:696,700). In the middle part of the grave were a tip fragment of a sickle (:703), an iron belt-buckle (:702) and an iron fragment (:701), at the SW end of the grave a small penannular brooch (:697) was found.

Interpretation and dating: The belt-buckle points to a male burial. The coin is German from the time of Henry III, 1046–1056 (Talvio 2000:12), which means that the grave must be later. The brooch points to the final period of Luistari. It has flat ring and flat end knobs and is only 32 mm in diameter. In Salmo's classification (1956 71–72) it belongs to group 16, which is dated to the 12th and 13th centuries.

Grave 523

Location 116/112	See p. 36
Orientation SSW-NNE	Pl. 13:523:1–5
Size 280x120–130 cm	KM 22346:712–722
Depth 95–105 cm	

The grave was situated in the northern part of the cemetery, where there was about 35 cm of topsoil and 10–15 cm of mixed earth; a field ditch was running above its



SE side. The grave had been dug on top of graves 476 and 500, and it had been damaged in digging graves 501 and 522. The grave-pit was rounded in the corners, tapering and shortening to the bottom, and at the SW end the bottom was dug about 10 cm deeper down than at the NE end. At the SE side and at the NE end traces of wood were observed. There were some relative large stones above the NE end of the grave. Perhaps the stone setting had been scattered with the digging of later graves, but possibly the stones belonged originally in the setting on top of grave 500. On the bottom of the grave there were sherds of a clay vessel (22346:718) broken in situ, an iron knife (:715), a spiral ornament (:717) and fragments of iron artefacts (:716,719). About 15–20 cm higher up there were an iron nail fragment (:712), a half of a cube-stone (:713), an iron piece (:714) and a tooth of a sheep or a goat (:720). Also one small piece of slag was found. There were no bones, probably because grave 501 had been dug in the location of the deceased.

Interpretation and dating: In this grave there are no definitely male or female artefacts, but the teeth of a sheep or a goat points more to a female. Because the grave was on top of grave 500, it must be later than the beginning

of the 11th century. The clay vessel is of group II:2d (LUISTARI II 78, 83–84), but without ornaments, which may point to a late period.

Grave 527

Location 114/114

Orientation almost W-E

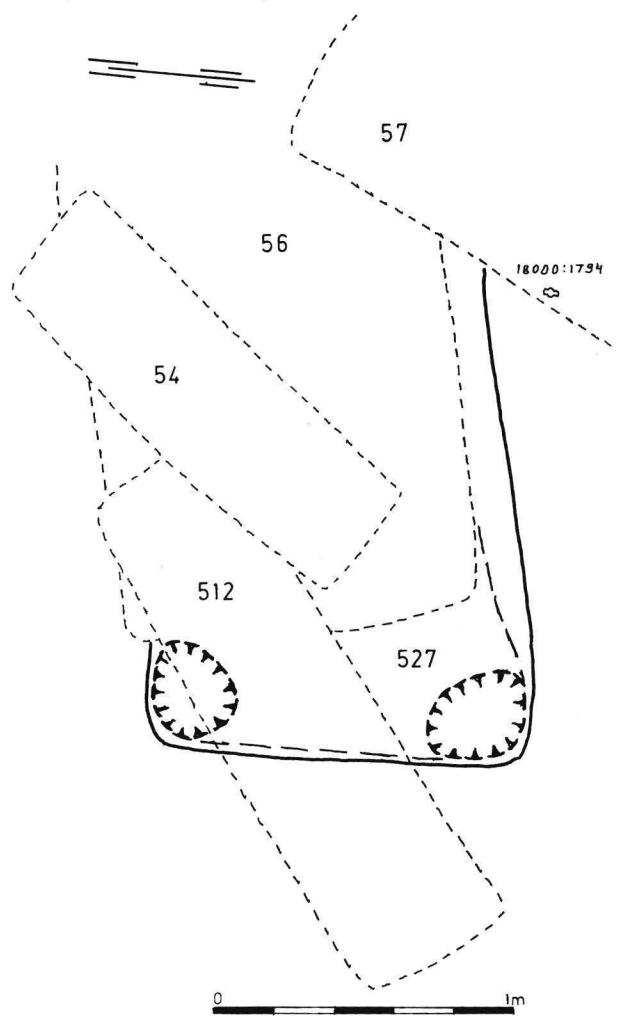
Size ? x120 cm

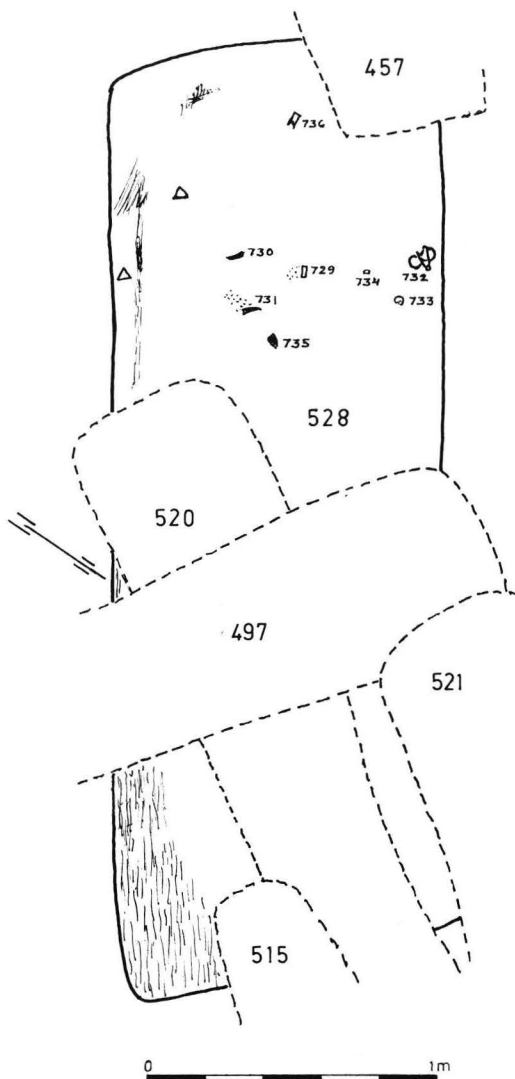
KM 18000:1794 ?

Depth about 90 cm

The grave was situated at the border of the area excavated in 1969, and most of it was overlain by graves 54, 56 and 57. In 1984 the eastern end of the grave appeared under graves 460 and 512. It was observed in the first place because of the traces of posts about 30 cm in diameter. These extended 10–15 cm deeper down in the ground than the grave bottom. This grave was also deeper than grave 460 so that the NE-corner had been preserved under the last-mentioned grave. No finds were observed in this small area, but it is possible that the small equal-armed brooch (18000:1794), found in the fill of grave 57 in 1969, was originally from this grave.

Interpretation and dating: Corner posts indicate in the first place a grave from the Merovingian Period. If the above-mentioned brooch is originally from this grave, the deceased was a woman and the grave had possibly been made at the beginning of the 7th century (LUISTARI I 32–33, LUISTARI II 86).

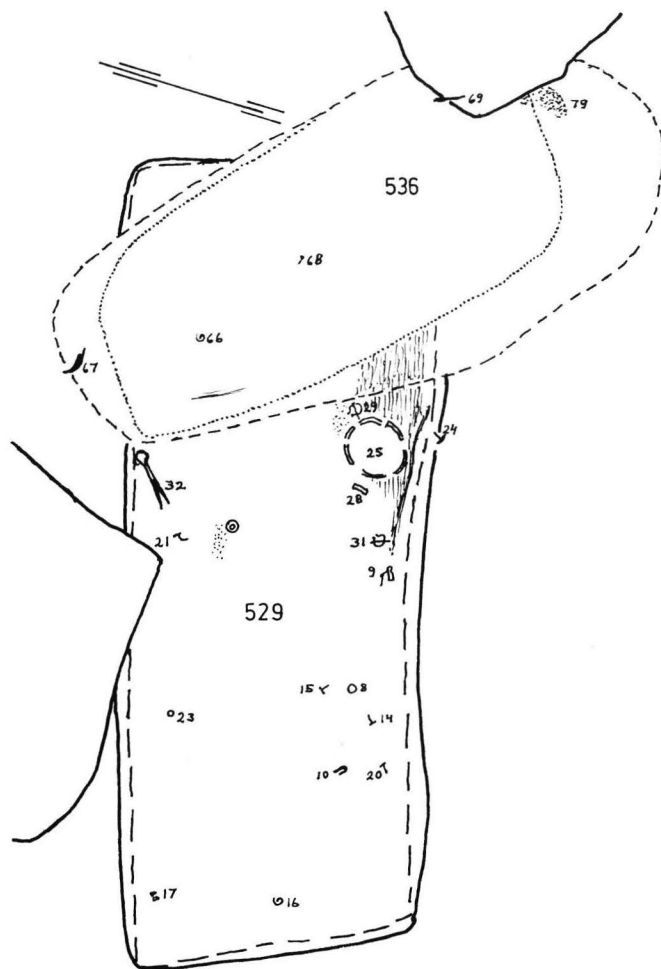




Grave 528

Location 119/109 See p. 28
 Orientation SW-NE Pl. 13:528:1-4
 Size about 320x95-110 cm KM 22346:728-737
 Depth 95-100 cm

The grave was situated in the northern part of the cemetery, where there was about 30 cm of topsoil and 20-25 cm of mixed earth. Its SW end was covered by graves 457 and 466, and graves 497, 515, 520 and 521 had been dug on top of its NE end. But since grave 466 was slightly shallower, the limits of this grave appeared distinctly at a depth of 90 cm from the soil surface. The grave-pit had probably had straight sides and rounded corners. The bottom had been dug about 5 cm deeper down at the SW than NE, but otherwise it was even. Especially in the preserved eastern corner there were ample traces of wood, and these were also observed in the southern corner, preserved outside the area of grave 466. There were some large stones on top of the eastern corner of the grave; if there had been a stone setting, it had been destroyed completely in digging later graves. There were only faint traces of bone from the deceased in the SW end of the grave, and sheep or goat tooth fragments (22346:736) were also found there. At the NW side of the grave a bit



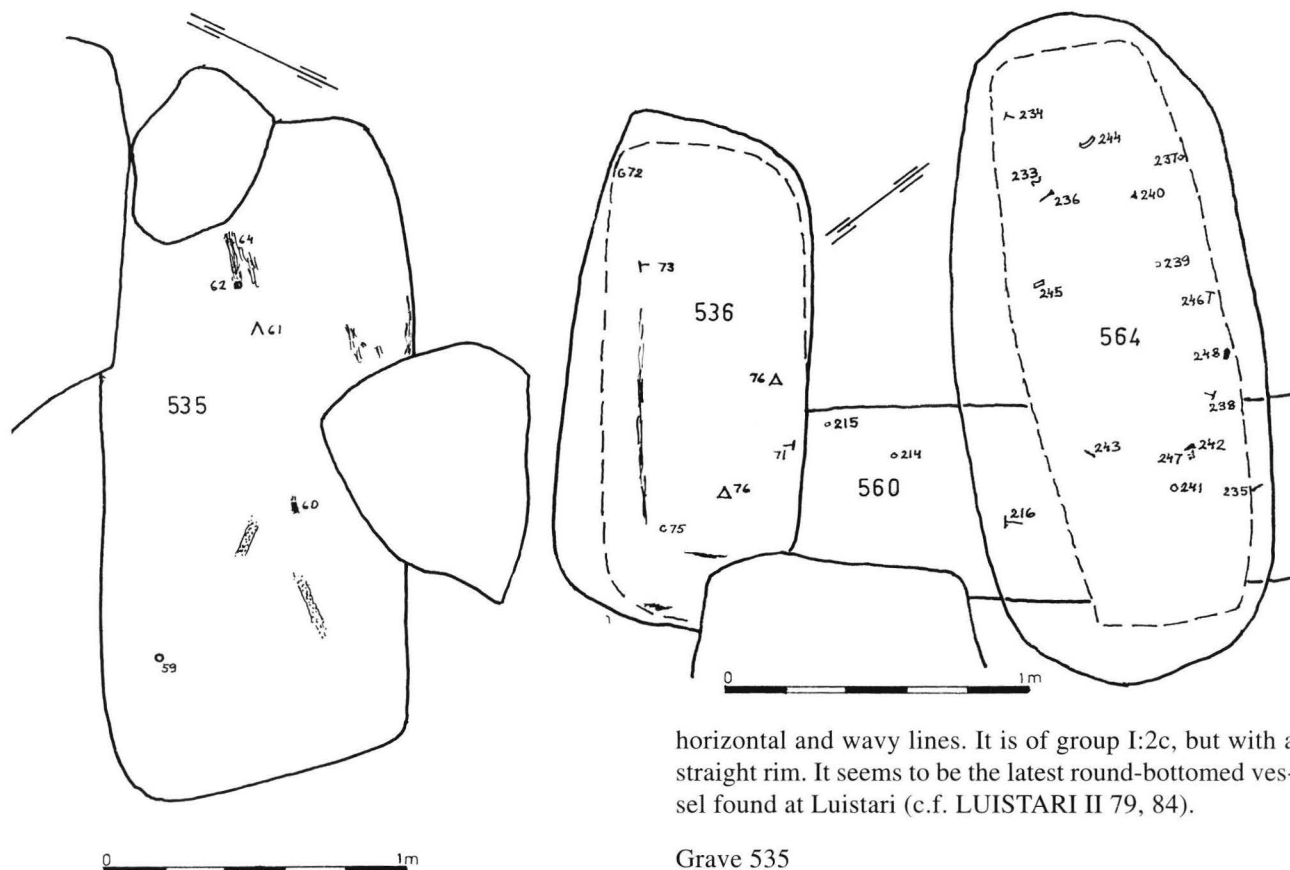
(:732) was found, and near it there was a bronze ring (:733). Other finds were a bronze spiral (:734), a bronze plate fragment (:729), an iron nail (:731) and a couple of iron artefact fragments (:730,735). At the NE end only a piece of quartz (:737) was found, and on top of the grave there was a horseshoe nail (:728). It is possible that a penannular brooch (:252), found rather high up on the border of grave 520, was originally from this grave.

Interpretation and dating: The bit indicates a male burial. If the brooch with poppy-ends is originally from this grave, it dates the burial to the first half of the 11th century (LUISTARI II 105). The grave is probably earlier than the second half of the 11th century, because it was beneath grave 520, coin-dated 1046-1056 AD.

Grave 529

Location 115/118
 Orientation ENE-WSW Pl. 14:529:1-10
 Size about 270x100 cm KM 23183:8-38
 Depth 60-65 cm

The grave was situated in the northern part of the cemetery, where there was about 45 cm of topsoil and 5 cm of mixed earth. The NE end of the grave had been damaged in digging grave 536. According to the preserved SW end the grave had had straight sides and a rounded bottom. There were many finds in this grave, but they were partly mixed. Judging by the iron nails (23183:14,15,20,24) and the partial dark bottom layer



there had been a coffin or a wooden lining in the grave. In the SE corner of the preserved part of the grave there were a clay vessel (:25) broken in situ and two penannular brooches (:29,31), one of which was of silver. On the N side of the grave shears (:32) were found. It is possible that the billhook (:67) discovered on top of grave 536 and the knife fragment (:1060), the find place of which is uncertain, are originally from this grave. From the grave area at varied levels a spiral finger-ring (:16), a bead (:23), a small bird pendant (:9), a silver coin (:8), a half of a firesteel (:10) and several fragments of silver, bronze and iron artefacts, potsherds, pieces of burnt clay, slag, flints and charcoal were found. The bottom of the grave was very stony, and the grave-pit had been left unusually shallow. There were no bones preserved, assuming the remains of a skull found in the fill at the SE end of grave 536 were not from this grave.

Interpretation and dating: Apart from the firesteel there are no definitely male artefacts in this grave. The brooches, the coin with a suspension link and the bird pendant indicate rather a woman, but the finger-ring is of a child's size (12 mm in diameter). Perhaps there were both a woman and a male child in this grave. The coin (Ethelred II, Long Cross, 997–1003, Thetford, Osulf, 1,47 g, Talvio 2000:13) gives a dating to the beginning of the 11th century. The silver penannular brooch has rolled ends and a ring of triangular section, the bronze brooch also has rolled ends, but the ring is of round section. Their date (LUISTARI II 100–101) is not in contradiction with the coin dating. The form of the bird pendant is unusual, but bird pendants in general belong to the late Viking Age (Cleve 1978 119–120). The clay vessel is decorated with

horizontal and wavy lines. It is of group I:2c, but with a straight rim. It seems to be the latest round-bottomed vessel found at Luistari (c.f. LUISTARI II 79, 84).

Grave 535

Location 129/116
Orientation WSW-ENE Pl. 14:535:1–2
Size 220x100 cm KM 23183:59–64
Depth 80–100 cm

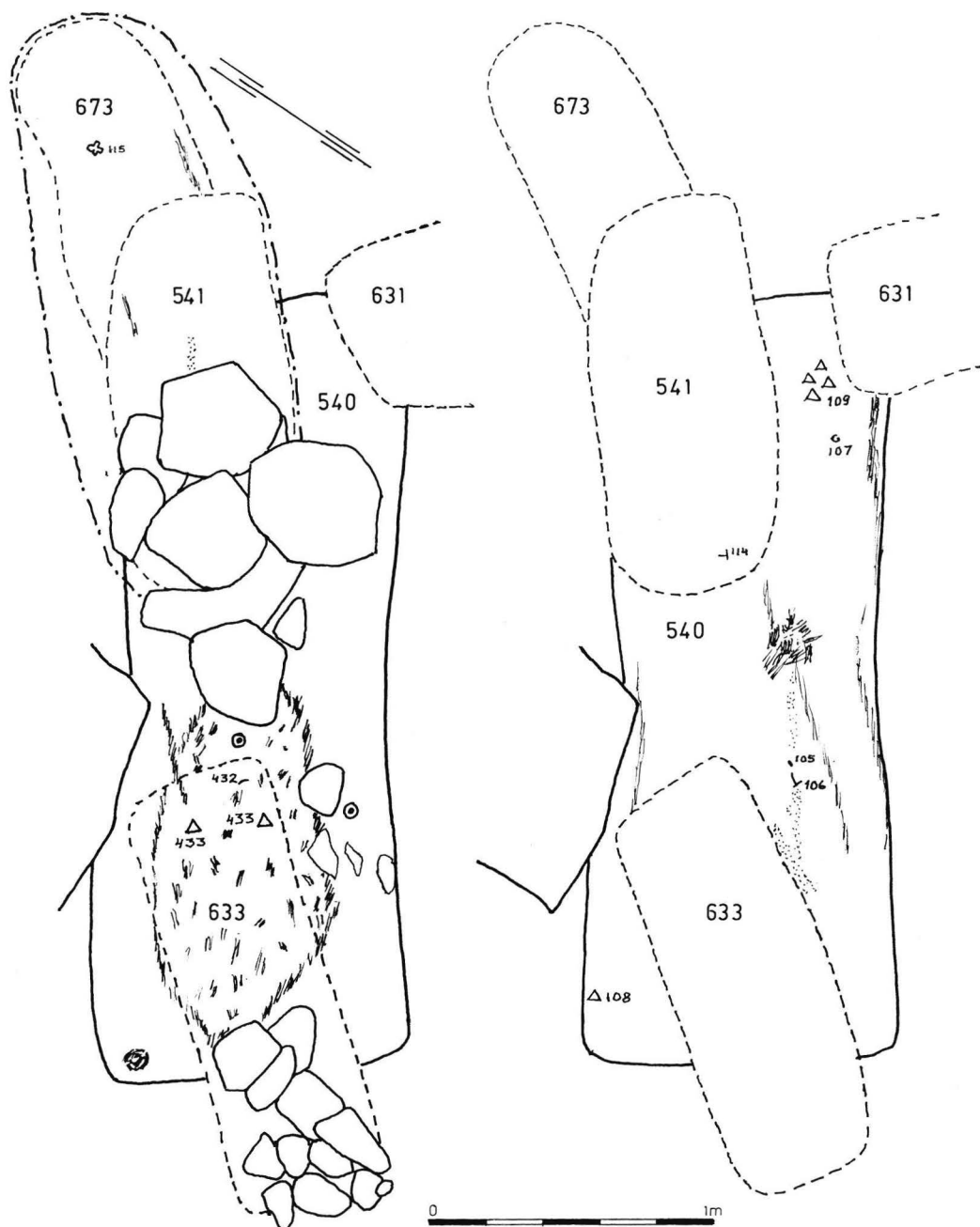
The grave was situated in the N part of the cemetery, under the old road bottom, with about 60–70 cm of top layers. The grave-pit had been dug between two fixed stones, and although it was regular in form when first discovered, it became irregular lower down, and the bottom was very uneven because of the stones. On top of the SW end of the grave there was an end stone 50–60 cm in diameter. In the fill some rather large charcoal pieces and potsherds were found. There were remains of the shin-bones of the deceased, but otherwise the bones were not preserved. A bronze weight (23183:59) was in the E corner of the grave, an uncertain iron fragment (:60) near the shin-bones, a tinder-flint (:61) and an iron weight (:62) were found at the SW end of the grave, the weight more than 15 cm lower down than the other finds. Close by it a wood sample (:64) was collected.

Interpretation and dating: The weights of spherical shape point to a male burial and date the grave to the 11th century (LUISTARI II 71).

Grave 536

Location 117/119
Orientation NW-SE Pl. 14:536:1–5
Size 215x100 cm, bottom 150x65 cm KM 23183:65–81
Depth about 1000 cm

The grave was situated in the N part of the cemetery, to



the S of the old field road, where there was about 50 cm of topsoil. It was dug on top of graves 529 and 560. The grave-pit was oval in form and even-bottomed. At the bottom there were remains of a coffin or a wood-lining measuring 125x55 cm, but the nails (23183:70,71,73) found in the pit were not typical coffin nails. A small bronze finger-ring (:72) belonged perhaps to this burial, but other artefacts and fragments, which were found at varied levels, were probably from the graves damaged in digging this grave. Of these a clay bead (:65), a small spiral ring (:66) and a billhook (:67) may be mentioned. The fill also contained charcoal, slag, burnt and decomposed bones, potsherds and a burnt clay piece. Near the top at the SE-end of the grave there were remains of a skull (see grave 529).

Interpretation and dating: Judging by the size of the coffin and the finger-ring (11 mm), this was a child's grave. The spiral finger-ring of round section points to

the later Viking Age (LUISTARI II 127). The grave overlay grave 529 dated to the first half of the 11th century, whereby this grave dates from that period at the earliest.

Grave 540

Location 128/117

Orientation SW-NE

Size 270x90–110 cm

Depth 70–110 cm

Pl. 14:540

KM 23183:105–113

The grave was situated in the northern part of the cemetery, under the old road and a field ditch, with the top layers varying from 45 to 70 cm. It had been damaged in the digging of graves 541, 631, 633 and 673, and it overlay the NE end of grave 600. The grave-pit broadened to the ends and it was even-bottomed; on the bottom and at the sides wooden remains were observed, and also a nail (23183:106) was found. At the NE end of the grave there

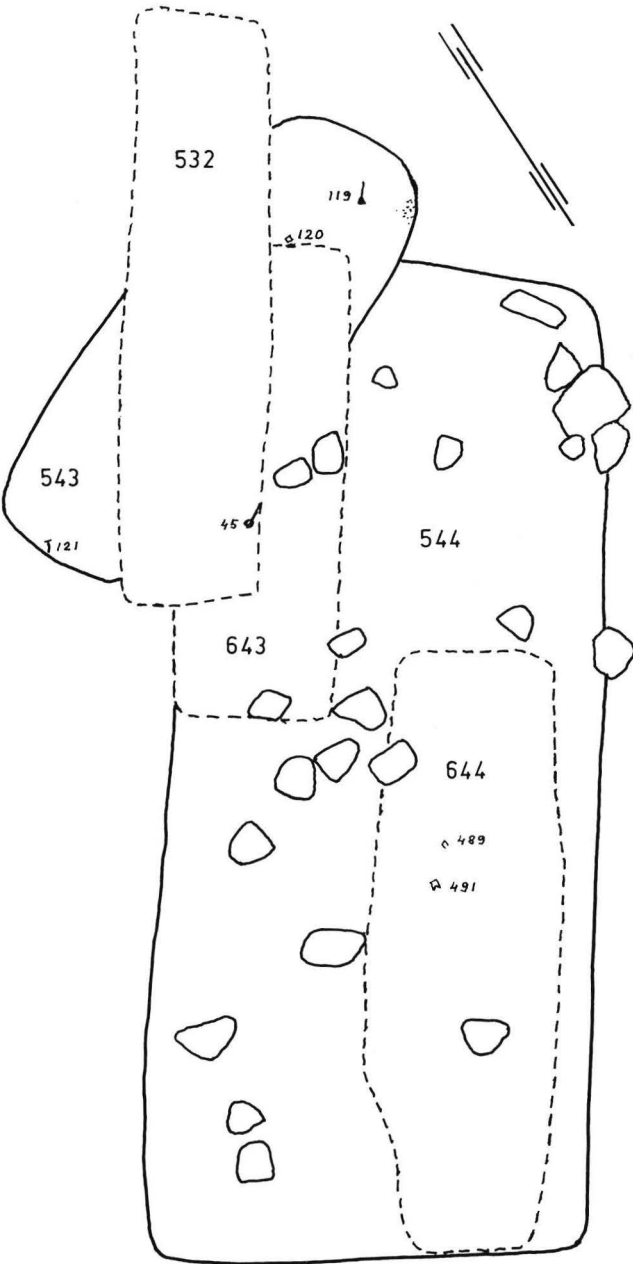
was a bone, probably from the lower limbs of the deceased. At the SW end of the grave, about 10 cm above the bottom level, there was a silver finger-ring (:107), and close by it a heap of very fragile potsherds (:109) were found. There were slag, burnt bone and potsherds in the fill.

Interpretation and dating: The size of the finger-ring (16 mm in diameter) indicates a woman. The silver ring (:107) with broad centre part and slightly overlapping ends, decorated with braid-like designs, dates the grave to the 11th century (LUISTARI II 127, group III).

Grave 541

Location 127/116
Orientation SW-NE Pl. 14:541
Size 220x85,
bottom 140x60 cm KM 23183:114–116
Depth about 120 cm

The grave was situated at the N end of the cemetery on



top of graves 540, 600 and 673. Overlaying its NE end there was a heap of rather large stones. The grave-pit was oval in form and even-bottomed. Charcoal, potsherds, a nail (23183:114) and a cruciform fitting (:115) were found in its fill. Some wood and decomposed bone were also found, but the burial was unfurnished.

Interpretation and dating: This was certainly a late grave and possibly that of a child. The underlying graves 540 and 600 date from the 11th century and grave 673 was the unfurnished grave of a child. Probably grave 541 is from the 12th century at the earliest.

Grave 543

Location 124/122
Orientation WSW-ENE Pl. (21:532)
Size 175x60–70 cm KM 23183:119–122
Depth about 60 cm

The grave was situated in the N part of the cemetery, under a field ditch slope, with approximately 40–50 cm of topsoil layers above it. It had been dug on top of the S corner of grave 544, and its middle part had completely disappeared in digging graves 532 and 643. The grave-pit was oval in form and at the NE end a little deeper than at the SW end. In the preserved parts of the grave a chisel-like artefact (23183:119), a bronze mounting (:120), a nail (:121) and a decomposed bone piece (:122) were found. Possibly the fragmentary iron key (:45), found in the fill of grave 532, was originally in this grave.

Interpretation and dating: No gender-determinant artefacts were found, and this may have been a child's grave. The dating is the first half of the 11th century at the earliest, because this grave overlay grave 544, dated to that period.

Grave 544

Location 124/122
Orientation SSW-NNE Pl. 15:544:1–14
Size 340x140–145 cm KM 23183:123–165
Depth 85–100 cm, at the NE end about 50 cm

The grave was situated in the N part of the cemetery, beneath the field-ditch slope, ditch and field. Closest by the old road the topsoil layer was about 40 cm thick, in other parts there was 10–25 cm of mixed earth or soil. The grave had been damaged in digging graves 532, 543, 643 and 644. The grave-pit had rounded bottom and corners. There were distinct remains of a wooden construction partly charred in it, and also seven nails (23183:123, 125, 128, 129, 132, 144, 146) were found. At the SW end of the grave there was a human tooth (:160), and the head of the corpse had apparently been there, but otherwise there were only small traces of bone. The artefacts were partly damaged and scattered, for example the parts of the rod-chain (:131, 149) were found more than two meters from each other. A silver penannular brooch (:142) was on the W side of the grave, silver belt mounts (:130, 147) were found on the E side, but they were more than 1 m from each other. Close by the ones found in the middle of the grave was a fragmentary knife with a knife-

sheath tip mount (:124) and an iron sleigh bell pendant (:145). A bronze-plated weight (:135) and spiral ornaments (:140,141,143) were found in the SW half of the grave, likewise large potsherds (:155–157, perhaps also :46 from the fill of grave 532). There were broken iron artefacts throughout the grave area, and only two arrow-heads (:153) were found in situ. A fragment of a hone (:150), a flint piece, a lump of slag and a couple of burnt clay pieces were other finds in this grave.

Interpretation and dating: The weight and the arrow-heads indicate a male. The silver penannular brooch with rolled ends and a ring of triangular section dates the grave to the first half of the 11th century (LUISTARI II 101). The other finds, like the bronze-plated spherical weight, are well in accordance with this dating. Flat-bottomed clay vessels of group II:2c, like the one in this grave, have previously been found in graves 17, 349 and 413 at Luistari, and are dated to the first half of the 11th century (LUISTARI II 82–83).

Grave 545

Location 130/115	Grave plan p. 49
Orientation SW-NE	Pl. 16:545:1–5
Size 295x85 cm, bottom 280x80 cm	KM 23183:116–171
Depth 70–80 cm	

The grave was situated in the northern part of the cemetery, beneath the old road at the site. There was about 40–60 cm of topsoil, and the grave appeared directly after the removal of the surface layers. It had been dug on top of the SW end of grave 547, and its E side had been damaged in digging graves 546 and 548. The grave-pit had rounded corners and a stony bottom. In the fill there was charcoal, and at the NW side remains of some wooden construction were observed. In the SW part of the grave an iron knife (23183: 169) and a small spiral ornament (:170) were found, and in the middle in almost a transverse row were an iron rod, a piece of flint and an open iron ring (:166–168).

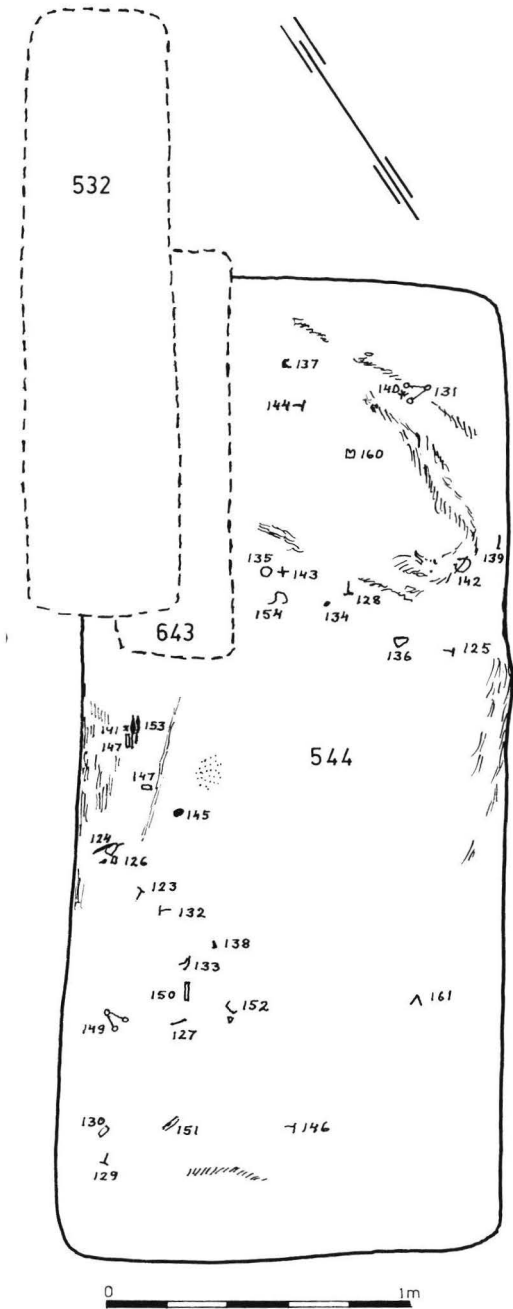
Interpretation and dating: The artefacts in this grave are neither sex-determinative or datable. The size of the grave points to a man. The very small spirals in the round ornament (:170) indicate the late Viking Age at the earliest. A rather similar ornament (18000:1789) was found in grave 56, coin-dated 1018–1024 AD (LUISTARI II 161, 187; LUISTARI I Plate 28:23). The scarce furnishing points to the Final period at Luistari.

Grave 547

Location 131/116	Size ?x50 cm
Orientation SSW-NNE	Depth 70 cm

Only the northeasternmost end of the grave had been preserved when graves 545, 546 and 548 had been dug. Judging from it the grave-pit had been quite rectangular in form, deepening slightly to the NE. There were no finds in the preserved part of the grave.

Interpretation and dating: This was possibly a child's grave from the late Viking Age.

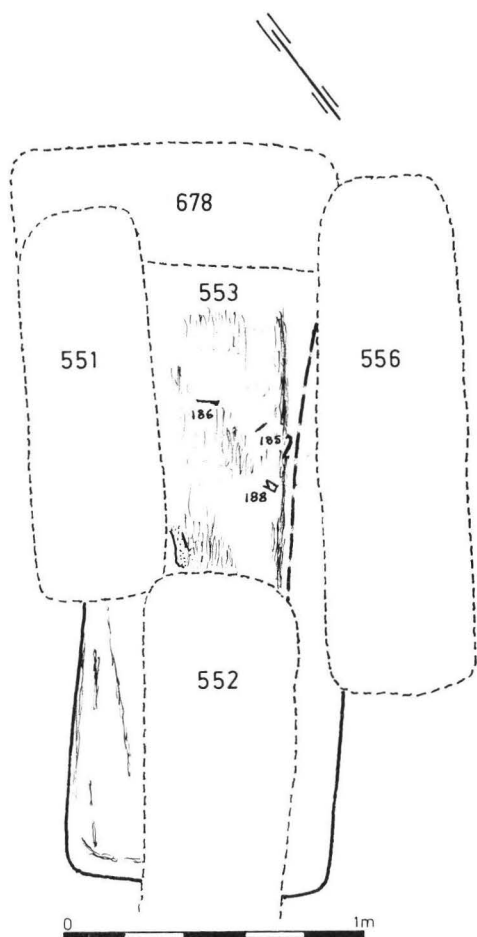


Grave 551

Location 123/118	Grave plan p. 49
Orientation SSW-NNE	Pl. 16:551
Size 150x55, bottom 130x35–45 cm	KM 23183:177–179
Depth 110–130 cm	

The grave was beneath the old road foundation, with about 60 cm of road layers and 15–20 cm of mixed earth. In digging it graves 553 and 677 had been damaged and grave 552 was on top of its N corner. The grave-pit had rounded corners. At the NE end there was a large stone on the bottom, but otherwise the bottom was even. A fragmentary sleigh bell button (23183:177), slag and burnt bone splinters were found in the fill, but the burial was unfurnished.

Interpretation and dating: A late grave. The sleigh bell button is possibly from grave 553.



Grave 553

Location 123/118

Orientation SW-NE

Size 200x90 cm,

bottom 190x70 cm

Depth 90–100 cm

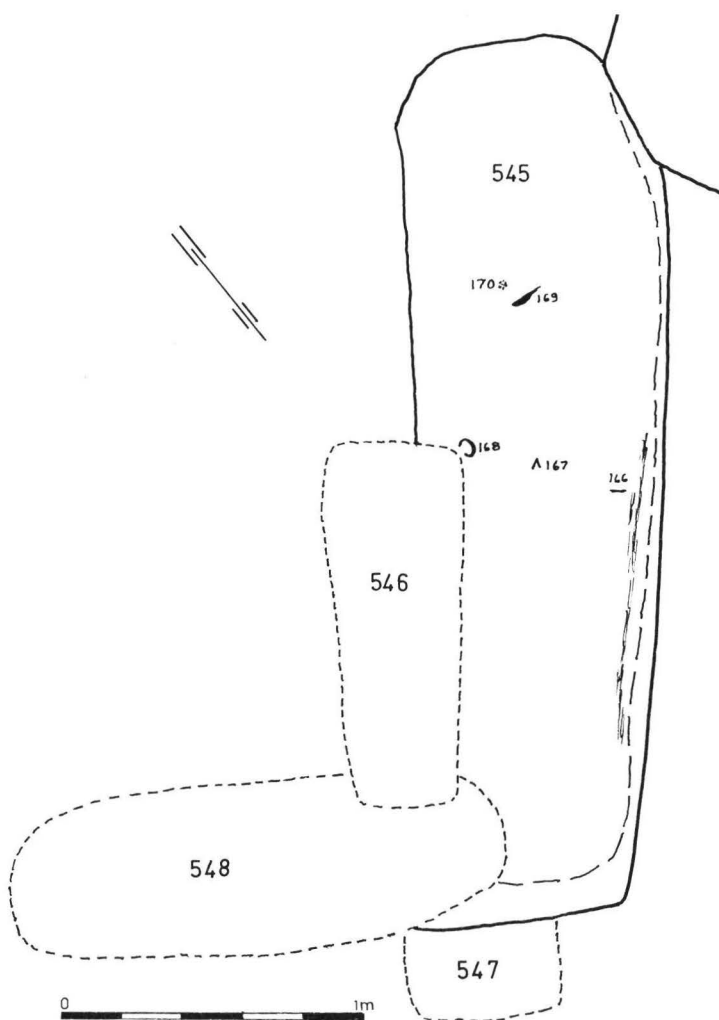
Pl. 16:553 (16:551)

KM 23183:185–188

23183:177 (grave 551)

The grave was situated in the northern part of the cemetery, under the old road foundation, with about 60 cm of road layers and about 15–20 cm of mixed earth. The grave had been damaged in digging graves 551, 552, 556 and perhaps also grave 678. The grave-pit was almost rectangular in form, the bottom was slanted to NE. It was covered by a layer of wood remains, and also at the sides remains of some wooden construction were observed. In the middle of the grave there were decomposed bone remains, a fragment of an animal tooth (:188, *mammalia*) and pieces of a firesteel (23183:185). An iron nail or a tang fragment of some iron artefact (:186) was found at the SW end of the grave, but otherwise only a couple of burnt clay pieces were observed. Possibly the fragmentary sleigh bell button (23183:177) found in the fill of grave 551 was originally in this grave.

Interpretation and dating: The firesteel indicates a male burial. Most of the oval firesteels previously found at Luistari were from the graves in the northern part of the cemetery, which were dated to the very end of the Viking Age or later (LUISTARI II 73). If the sleigh bell button was from this grave, it gives the dating to the Crusade Period (LUISTARI II 171).



Grave 554

Location 125/120

Orientation SW-NE

Size about 120x50 cm

Depth about 110 cm

Grave plan p. 64

Pl. 16:554

KM 23183:189–190

The grave was situated in the N part of the cemetery under the old road bottom, where there were about 50 cm of road layers and 10–15 cm of mixed earth. The grave-pit had been dug on top of graves 555 and 676, it was almost rectangular in form and had a stony bottom. In the fill were a couple of potsherds, and an iron rivet (23183:189) was found at the bottom.

Interpretation and dating: Judging by the size of the grave-pit, this was a child's grave, and because it was on top of other graves, it probably belongs to the late graves.

Grave 555

Location 126/120

Orientation SW-NE

Size 165x70 cm,

bottom 110x55 cm

Depth about 105 cm

Grave plan p. 64

Pl. 16:555

KM 23183:191–195

This grave was situated in the N part of the cemetery under the old road bottom, where there were about 50 cm

of road layers and 10–15 cm of mixed earth. The SW end of grave 676 had probably been damaged in the digging of this grave, and the NW-side of this grave had been slightly disturbed in digging grave 554. At the NE end of the grave there was a two-three storied pile of stones, which began about 45 cm and ended about 15–20 cm above the bottom level, so it appeared very soon after the removal of the surface layers. At the beginning the grave-pit was rounded at the SW end, but lower down it was almost rectangular in form. Its bottom was stony. In the fill there were a slag lump, a large potsherd and decomposed bone, at the SW end of the grave an iron knife and a nail (23183:191,192) were found 10–15 cm above the bottom level. It should be noted that at both ends of the grave-pit there were about 30 cm higher benches, as if there had been two graves on top of another, of which the smaller one had been deeper. If this was really so, the knife and the nail belonged to the longer, c. 75 cm-deep, grave-pit.

Interpretation and dating: Judging by the very small knife (55 mm), this was a child's grave. Otherwise, the poor furnishing indicates a rather late period.

Grave 558

Location 123/115	Grave plan p. 66
Orientation SSW-NNE	
Size 175x55 cm,	
bottom 135x40–45 cm	KM 22346:1060–1061
Depth 100–120 cm	23183:205–212

The grave was situated to the S of the road bottom, where there was 55–60 cm top-soil and about 15 cm of mixed earth. In the digging of this grave, graves 481, 559 and 677 had been damaged. In its upper parts the grave-pit broadened to the SW, but lower down it was almost rectangular in form. At the bottom in SW there was a large stone, because of which the bottom strongly sloped to NE. Already during the excavations in 1984 a bovine jawbone (22346:1060) had been found on top of this grave, and in 1986 a second one and also other bones (23183:211,212) were found. In the fill there were potsherds, slag, a burnt clay piece and fragments of iron artefacts (23183:205–207), but the burial was unfurnished.

Interpretation and dating: A child's grave. Judging by all features, this was one of the latest graves in the cemetery. It is possible that the bovine bones do not belong to the grave.

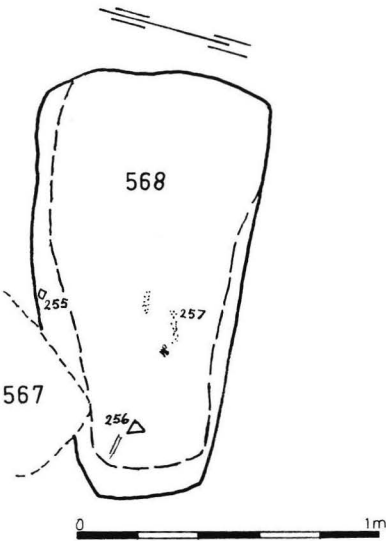
Grave 560

Location 117/119	Grave plan p. 45
Orientation SW-NE	
Size at least 190x50–60 cm	KM 23183:114–116
Depth 120–130 cm	

The grave was situated beneath the road foundation, where there was about 50 cm of topsoil and 20 cm of mixed earth. In digging it grave 655 had been damaged and graves 534, 563 and 564 overlaid it. The grave-pit had rounded corners and an even bottom. Charcoal, potsherds and a couple of beads (23183:214,215) were found

in the fill. An iron nail (:216) was only 10–15 cm above the bottom. The burial was unfurnished.

Interpretation and dating: No sex determination. This grave overlay grave 655, dated to the 11th–12th centuries, but it was under three other graves, which means that it can hardly be later than the 12th century.



Grave 568

Location 118/123	
Orientation almost W-E	Pl. 16:568:1–2
Size 150x40–80 cm,	
bottom 140x35–65 cm	KM 23183:255–257
Depth about 100 cm	

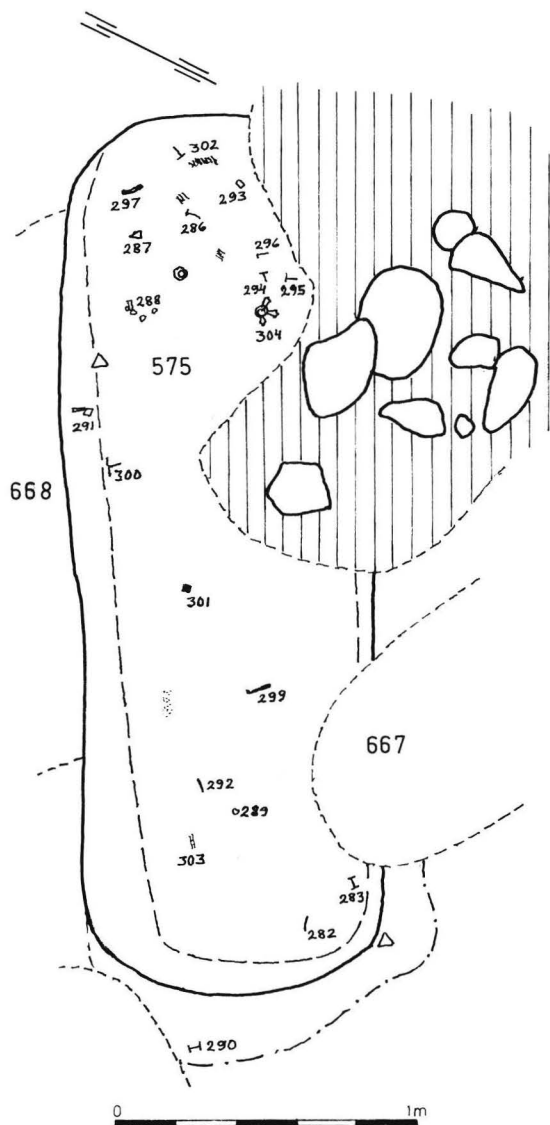
The grave was situated in the northern part of the cemetery, under the road foundation and partly also under an old filled field ditch. Its E end did not appear until c. 90 cm beneath the road surface. The grave-pit broadened markedly to the east, and the bottom was even. There was charcoal at the bottom, and decomposed bones and ornamented potsherds (23183:256) were found in the W end of the grave. A bronze mount (:255) was in the middle part of the N side.

Interpretation and dating: Judging by the size of the grave-pit, this was a child's grave. The fragments of the small clay vessel ornamented with a hatched band and probably belonging to group II:2b, date the grave to the 11th century (LUISTARI II 80–82).

Grave 569

Location 121/126	Grave plan p. 66
Orientation SSW-NNE	
Size 140x35 cm	KM 23183:258
Depth 75 cm	

The grave was situated in the N end of the cemetery under the slanting ditch slope and the filled-up field ditch overlaid its NW side. It was covered by about 35 cm topsoil and 20 cm mixed earth. The grave-pit was dug on top of grave 675. It was even-sided with rounded cor-



ners and even bottom. An iron nail (23183:258) was found at its NE end, but the burial was unfurnished.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. Because it was on top of grave 675, dated to the 11th century, it is from the late 11th century at the earliest.

Grave 575

Location 132/113
Orientation SW-NE Pl. 16:575:1–10
Size about 300x85 cm KM 23183:282–306
Depth about 90 cm

This grave was in the northern part of the cemetery under the road bottom, where there was about 65 cm of topsoil and about 20 cm of mixed earth. It was partly on top of the NW end of grave 668, and it had been badly destroyed in the digging of a large rubbish-pit. Also grave 667 partly overlaid it. The grave-pit had straight sides and rounded corners, and a large part of its bottom was of rock and stone. The fill contained slag, burnt bone, potsherds and a great number of artefact fragments, e.g. pieces of a knife-sheath (23183:287,288,303), a bronze sleigh bell pendant (:291), a bronze mount (:293) and an

iron mount with a bronze rivet (:301). Only the strap-divider with animal head mounts (:304), which was found at the SW end of the grave, was probably in its original place. There were also many rivets and nails (:283, 286,290,294–296,302). At the NE end a blue glass bead (:289) was found. Possibly the unusual rectangular strap mounts with animal designs (:268, 508), which were found overlaying grave 573 and in the fill of grave 650 were originally from this grave. No traces of the deceased were observed.

Interpretation and dating: This was probably a man's grave, and the strap-divider with three animal head mounts dates it to the 11th or the 12th century. The strap-divider found earlier in grave 302 had a ring with transverse lines like this one. Grave 302 was dated to the period 1000–1070 AD (LUISTARI II 152, 187–188, LUISTARI I Plate 80:302:4).

Grave 576

Location 135/113
Orientation SW-NE Pl. 17:576
Size 170x60,
bottom 155x40 cm KM 23183:307–308
Depth 140 cm

The grave was situated under the old road foundation, where there were about 70 cm of road layers and 5 cm of mixed earth. It had been damaged in digging grave 641. The grave-pit was rectangular in form, but the bottom was uneven because of stones. A belt buckle of bronze (23183:307), charcoal and slag were found in the fill, but the burial was unfurnished.

Interpretation and dating: Both the form and the depth of the grave-pit indicate a late date. The two-part belt buckle is of a type, which is dated to the 11th and 12th centuries (Kivikoski 1973 figs. 888 and 1196). It was found in the fill and must originate from some earlier grave.

Grave 577

Location 138/110 Grave plan p. 52
Orientation SW-NE Pl. 17:577:1–5
Size 230x60–70 cm,
bottom 145x60 cm KM 23183:309–319
Depth 45–115 cm

This grave was in the N part of the cemetery under the road and under the ditch edge, because of which its NE end was very shallow. It was beneath 20–80 cm of topsoil and 0–10 cm of mixed earth. In digging it the SW end of grave 578 had been destroyed. The grave-pit was irregularly long and oval in form, tapering to the NE, but rather even at the bottom. The fill contained slag, a potsherd, a piece of flint and fragments of iron artefacts (23183:316–318,309,310). On the bottom, at the SW end of the grave, there were a couple of small bronze spiral ornaments (:313,314), a small bronze rivet (:312) and two bronze mounts (:311,315). The small spiral ornament (:319) listed among the finds of grave 578, was probably from this grave.

Interpretation and dating: The small number of artefacts, all possibly from clothing, indicate the Final period. The small end roundels with only one spiral in the middle like the ones in this grave are not common.

Grave 580

Location 115/121
Orientation SW-NE Pl. 17:580:1-5
Size 180x80 cm KM 23183:324-335
Depth 80-85 cm

The grave was situated in the N part of the cemetery beneath the road bottom and about 50 cm road layers and about 10 cm of mixed earth. The grave-pit had straight sides and rounded corners. The bottom was rounded at the sides, and otherwise, except for one stone, quite even. On the NW side and in the S corner of the pit there were traces of some wooden construction, and at the bottom was a dark layer, which was darkest to the NW from the middle of the grave. There was charcoal, slag, a couple of potsherds and burnt bone in the fill. A fragment of a human tooth was found in the N corner of the grave, but otherwise there were only small traces of the deceased in the middle, where a firesteel (23183:328) and a knife (:329) were found. There was an axe-head (:327) at the SW end near the NW side. A red bead (:325), a tip fragment of a knife (:324) and a piece of iron (:326), found near the top of the grave, were probably filling earth finds.

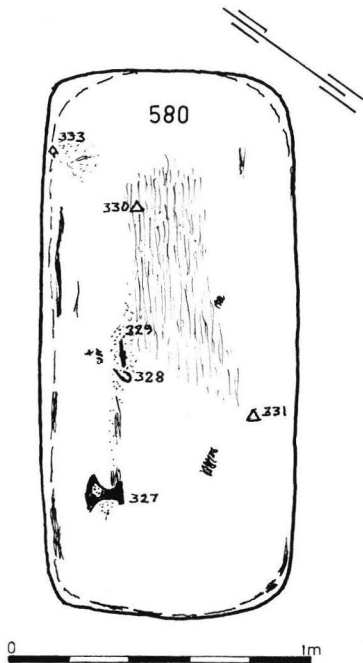
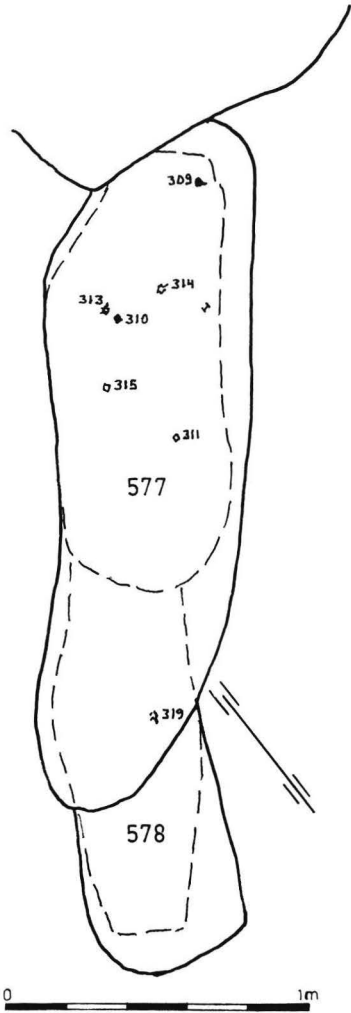
Interpretation and dating: This was probably a child's grave. The small battle-axe with strongly curved sides and long tongue-like flaps is only 120 mm high and its blade is 107 mm wide. This axe is rather similar in form to the silver-inlaid axes from Köyliö and Masku (Leppäaho 1964 Plates 61 and 62:1), but it has no offset between the blade and the cutting edge and no silver decoration. The Köyliö and Masku axes have been dated to the end of the 11th century or to the 12th century. Tomanterä (1978 91-92, 120) dated the Köyliö grave with the silver-inlay battle-axe to the end of the 11th century, which could also be the date for the Luistari grave 580.

Grave 583

Location 109/123
Orientation NW-SE Pl. 21:583
Size 200x55-70, bottom 190x45-60 mm KM 23183:336
Depth 100-105 cm

The grave had been dug transversely on top of graves 581 and 582. A stone setting of rather small stones, 10-25 cm of diameter, covered its S corner. The grave-pit had rounded ends and it widened to the NW; the bottom was somewhat uneven. Charcoal was observed in the fill and a fragmentary iron knife (23183:336) was found about 20 cm above the bottom. The burial was probably unfurnished.

Interpretation and dating: A late grave. The knife fragment is probably a fill-earth find.



Grave 590

Location 130/119

Orientation SW-NE

Pl. 17:590:1-2

Size 170x65-75 cm,

bottom 170x45-60 cm

KM 23183:348-351

Depth 15-60 cm

(The grave was beneath the field ditch and the ditch slope)

The grave was in the N part of the cemetery, mostly under the field ditch running to NE from the old road, with no more than 10-40 cm of mixed earth on top of it. It had been badly damaged in digging the ditch. The grave-pit was almost rectangular in form, somewhat rounded at the bottom and sloping to NE. By the NW side remains of some wooden construction were observed, and by the SE side in a couple of places decomposed bone was found. At the SW end there was a bead (23183:349), and at the NE end a fragmentary knife-sheath tip (:348). The other parts of the sheath and other possible artefacts could have been scattered widely apart with the earth dug up from the ditch.

Interpretation and dating: Judging by the size of the grave-pit this could hardly be a man's grave. The bead can indicate a woman. It is turquoise in colour. Turquoise beads are rare at Luistari, and they have been found only

in the graves of the 11th and 12th centuries (LUISTARI II 138). Accordingly, this grave is from the 11th century at the earliest.

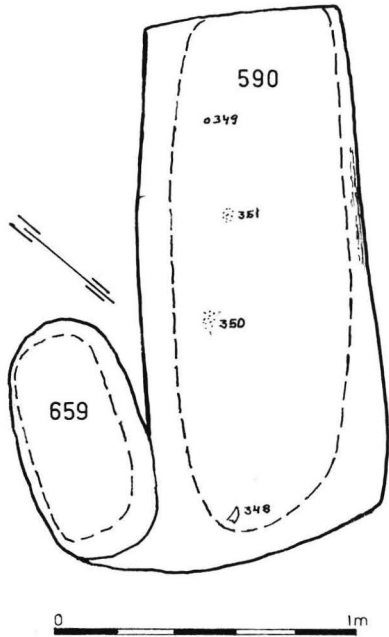
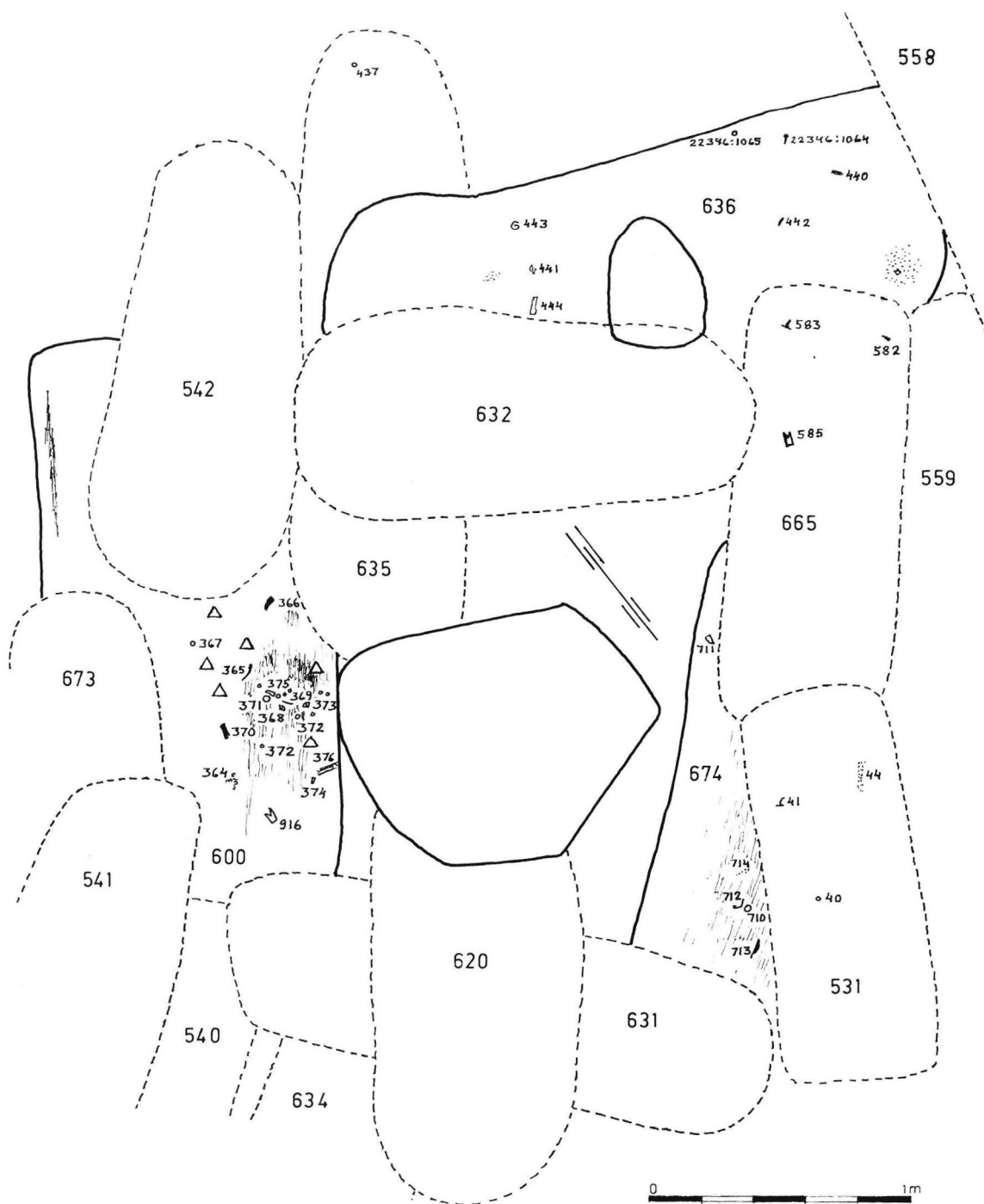


Fig. 3. Animal bones in grave 620, NE view.



Grave 600

Location 126/116

Orientation SW-NE

Pl. 17:600:1-6

Size ? x at least 65 cm

KM 23183:364-377, 916

Depth 80-85 cm

The grave was situated in the N part of the cemetery under the old road bottom, where the thickness of the top layers was about 55 cm. It was almost completely damaged in digging graves 540-542, 631, 635 and 673. On top of the grave there had been at least one stone, and the finds were discovered NE from this stone. In the S corner of the grave and at the bottom there were traces of some wooden construction. Bone remains were not observed and the artefacts were broken and scattered. Judging by the fragments there had been a sickle

(23183:366,370) and a clay vessel (:377) in the grave. Remaining from the dress of the deceased there were apron corner ornaments (:368,373), 8-9 beads (:372) and a coin with a suspension link (:371). Fragments of a bronze chain (:364), tang-like iron pieces (:365,369), two bronze mounts riveted together (:375), a bronze plate fragment (:367) and a spiral (:374) were also found. All these were collected from a section between later graves, measuring 100 by 50 cm. Farthest in SW were the potsherds, beads and the tip fragment of the sickle, which was near the side of the stone mentioned above; some of the potsherds were under the stone. There was an animal tooth on top of the grave (:916).

Interpretation and dating: Judging by the artefacts this was a woman's grave. The fragmentary silver coin is Ger-

man from the 11th century, but is not otherwise identified (Talvio 2000:16). The fragmentary turquoise bead, the biconical opaque blue bead and the brick-red beads with yellow lines point also to the 11th century and to the beginning of the 12th (LUISTARI II 138, 141), but the small multi-coloured beads are of an uncommon type. One of them is pale green and decorated with striped rectangles, two others are black. The first one is decorated with a white chain pattern, the second with a pale orange spiral line. They are not to be found in Johan Callmer's (1977) material, which extends to 1000 AD, and are apparently later.

Grave 619

Location 114/122
Orientation SW-NE
Size 165x40, bottom 155x40 cm KM 23183:392–395
Depth 100 cm

The grave was under the old road bottom, with 35–40 cm of topsoil and 30 cm of mixed earth. It had been made at least on top of graves 627 and 628 and it bordered graves 550 and 616. The grave-pit was even-sided, the NE end was rounded, the SW end straight, the bottom was even. Iron slag (:395), decomposed bone, an unidentified animal tooth fragment (:394), potsherds (:393) and an iron artefact fragment (:392) were found in the fill, but the burial was unfurnished.

Interpretation and dating: Probably a late grave.

Grave 620

Location 126/117	Grave plan p. 54
Orientation SW-NE	Fig. 3, p. 53
Size 150x80 cm, bottom 120x80 cm	KM 23183:396–401
Depth 120 cm	

The grave was situated in the N part of the cemetery under the road bottom, with 55–60 cm of top layers and about 20 cm of mixed earth. It had been dug on top of graves 631 and 634. The grave-pit was bordered at the SW by a large stone, and on top of it there was also a large stone measuring almost 50 cm in diameter. The pit was almost oval in form and rounded at the bottom. It was full of remains of two bovines (23183:400), in addition to charcoal, decomposed wood, slag, a potsherd, an iron nail (:396) and a couple of artefact fragments (:397,398). The animal bones ended about 10–15 cm above the bottom level, but no traces of a human corpse were observed.

Interpretation and dating: It is quite possible that this was a late pit dug only for animal remains.

Grave 622

Location 112/123	
Orientation SSW-NNE	Pl. 21:622:1–3
Size 170x60–85, bottom 170x35–70 cm	KM 23183:408–413
Depth about 90 cm	

The grave was situated in the N part of the cemetery under the old road bottom, with about 50 cm road layers and about 25 cm of mixed earth. In digging it graves 585, 624, 625 and 630 had been damaged. The grave-pit broadened to the NE and was even-bottomed. In the fill were slag, a potsherd, burnt clay and an iron artefact fragment (23183:408). An iron nail (:409) and an awl-like iron artefact (:410) were found close to the bottom. There were no traces of a corpse.

Interpretation and dating: No sex determination. This was certainly one of the very latest graves in the cemetery.

Grave 628

Location 113/120	Grave plan p. 56
Orientation NNE-SSW ?	Pl. 18:628
Size 355x100 cm ?	KM 23183:418–419
Depth about 80 cm	

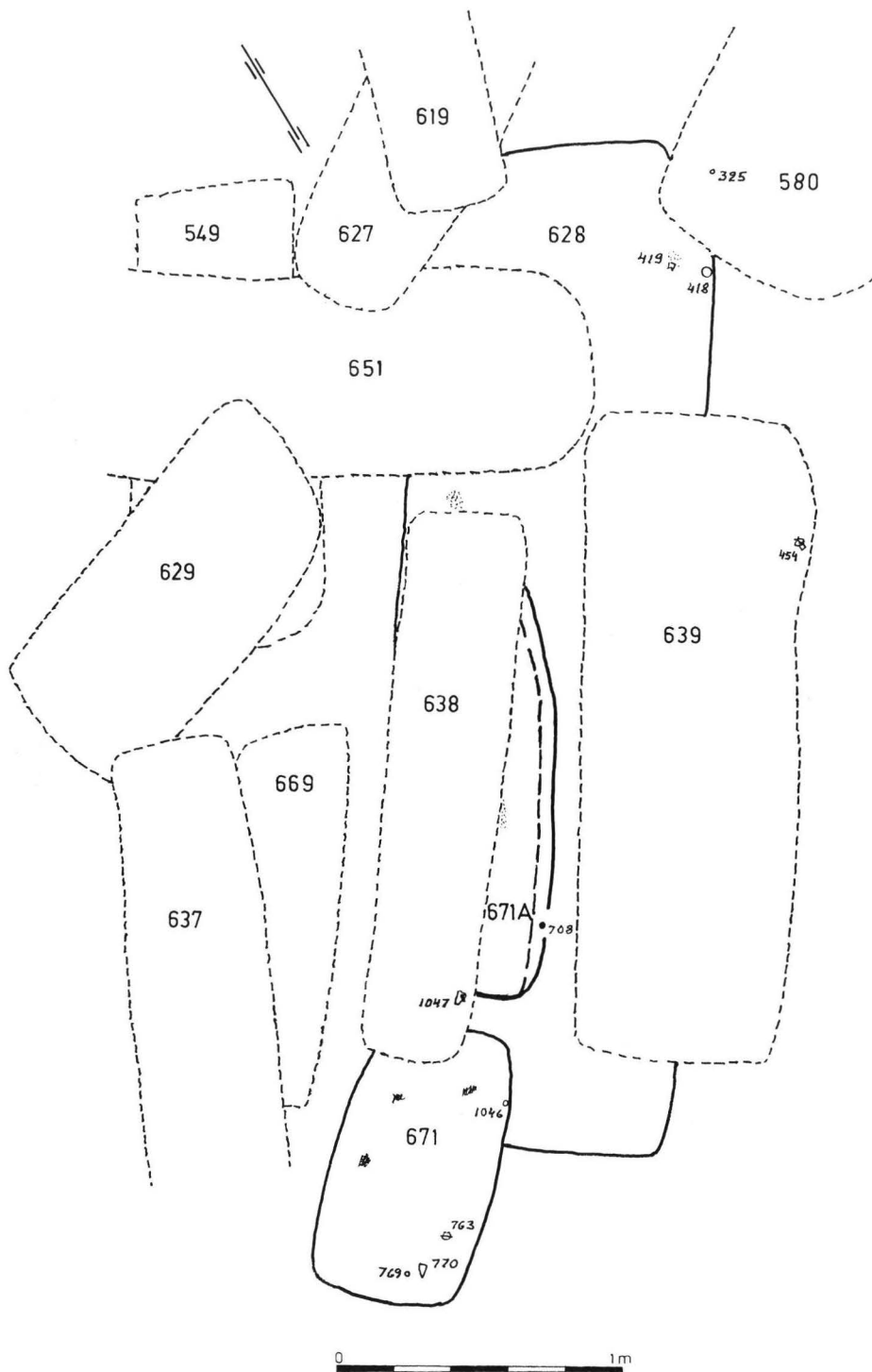
The grave was in the area of the old road bottom, where there were about 50 cm of top layers and about 20 cm of mixed earth. It had been badly damaged in the digging of graves 580, 619, 627 and 651, and also the filled up field ditch ran over it. The earth was completely mixed, and it is not impossible that the grave had continued to the SW under graves 638, 639, 671 and 671A, so that the corner found in 1984 (square 112/117) belonged to it. On the basis of the preserved NE corner the grave had been almost rectangular in form and even-bottomed. In this corner, quite close to the SE side of the pit, there was a human tooth (23183:419) and a round brooch (:418) was almost 40 cm above the bottom level; it had perhaps come up in connection with the digging of the later graves. Some decomposed bone was observed on the bottom in the section between graves 638 and 651.

Interpretation and dating: This was possibly a woman's grave but badly damaged. The round brooch is of bronze and measures 32 mm in diameter. In its centre is a hollow surrounded by a ridge, and around the ridge and the rim are rows of small triangular stamps. The edge is bent downwards, and the brooch is in shape rather similar to the brooch 20189:4 previously found at Luistari (LUISTARI I Plate 128:1). It is, however, better preserved and more richly decorated; only the pin is missing. This brooch is possibly of a Gotland type, and it is dated to the early Merovingian Period (LUISTARI II 91). Accordingly, grave 628 could be from about 600 AD or from the beginning of the 7th century.

Grave 630

Location 112/122	
Orientation WSW-ENE	Pl. 18:630
Size 310x60–65 cm	KM 23183:421
Depth 75–100 cm	

The grave was situated in the area of the old road bottom, where there were 45–55 cm of top layers and about 20 cm of mixed earth. It had been damaged in digging graves 583, 589, 614, 616 and 622–624, and also the filled up field ditch ran over it. The grave-pit was even-bot-



tomed and broadened either only to the NE end or to both ends. There was charcoal in the fill, and in the middle of the grave, almost on the bottom level, a chisel-like iron artefact (23183:421) was found. No other remains were observed.

Interpretation and dating: No sex determination. The size of the pit indicates a male. The only artefact is not datable, but the grave was lowest of all, and together with graves 587 and 625 it was of different size and orientation than the overlaying graves. It probably belongs to the graves made just after the abandonment of furnished burial.

Grave 631

Location 126/118
Orientation NW-SE
Size 215x65,
bottom 200x60 cm
Depth 130 cm

Grave plan p. 54
Pl. 21:631:1-3

KM 23183:422-426

The grave was situated under the old road foundation, where there were 55-60 cm of topsoil layers and 20 cm of mixed earth. In digging it graves 600, 634 and 674 had been damaged, and grave 620 had been dug transversely

on top of it. The grave-pit was even-sided with rounded ends and its bottom was even. In the fill, there were some stones, charcoal, slag, potsherds and decomposed bones. A nail (23183:423), a bronze rod (:424) and a fragment of an iron artefact (:422) were also found in the upper parts of the grave-pit. The burial was unfurnished.

Interpretation and dating: A late grave.

Grave 632

Location 125/115	Grave plan p. 54
Orientation NW-SE	
Size 175x80 cm,	
bottom 165x60 cm	KM 23183:427–431
Depth 140–150 cm	

The grave was situated close to the southern edge of the old road bottom, where there were 55–60 cm of topsoil layers. It had been dug on top of graves 635, 636 and 665. The grave-pit was oval with rounded bottom. There was a large stone on the bottom and stones also appeared in the fill. Otherwise remains of two bovine (23183:429,430) were packed into the pit. An iron artefact fragment (:427), a potsherd and a piece of burnt clay were also found in the fill.

Interpretation and dating: This was probably a late pit dug for animal remains.

Grave 633

Location 129/117	Grave plan p. 46
Orientation SSW-NNE	
Size 150x50–55 cm	KM 23183:432–433
Depth 80–115 cm	

The grave was dug on top of the NE end of grave 540, where there was 45–65 cm of topsoil. At its NE end there was a stone setting about 80x50 cm in size. The grave-pit had even sides, rounded corners and an even bottom. A fragmentary nail (23183:432), a potsherd (:433) and plenty of charcoal were found in the fill, but the burial was unfurnished.

Interpretation and dating: Possibly a child's grave. Because it was on top of grave 540, dated to the 11th century, it is from the late 11th century at the earliest.

Grave 635

Location 125/115	Grave plan p. 54
Orientation SSW-NNE	
Size 240x50–80,	
bottom 240x65 cm	KM 23183:437–439
Depth 115–135 cm	

The grave was situated close to the southern edge of the old road foundation, where there were 55–60 cm of top layers. In the digging of it grave 600 and possibly also grave 542 had been damaged, and graves 632 and 636 had been dug on top of it. The grave-pit was even-sided with rounded ends and its bottom was stony. A multicoloured bead (23183:437) was found at the SW end on the bottom, and there were charcoal, potsherds and burnt clay in the fill.

Interpretation and dating: The bead was found quite on the bottom, and so it possibly belongs to the burial. It has a basic yellow hue and is decorated with flower-like eye designs in red, white and green colours. Similar beads appear at Luistari in the graves of the late Viking Age (LUISTARI II 139), making this the earliest possible date for this grave, which was also on top of grave 600, dated to the 11th century.

Grave 636

Location 124/115	Grave plan p. 54
Orientation SE-NW	Pl. 18:636:1–2
Size about 230 x	
at least 80 cm	KM 22346:1064–1067
Depth about 75 cm	23183:440–445

The grave was situated in the area to the south of the old road bottom, where there were about 55 cm of topsoil layers. It had been dug on top of grave 635 and also on top of grave 600, and it had been damaged in digging graves 558, 632 and 665. There was a large central stone on top of the grave-pit, which was rounded in the corners and even-bottomed. Slag, decomposed bones, fragments of an iron rod chain (22346:1064, 23183:440), a bead (22346:1065), two small bronze rivets (23183:441) and an iron rod fragment were found in the fill. In the SE part of the pit close to the bottom there was a bronze finger-ring with a finger-bone (23183: 443) and fragments of a groove-like bronze list (23183:444), probably from a broad knife-sheath

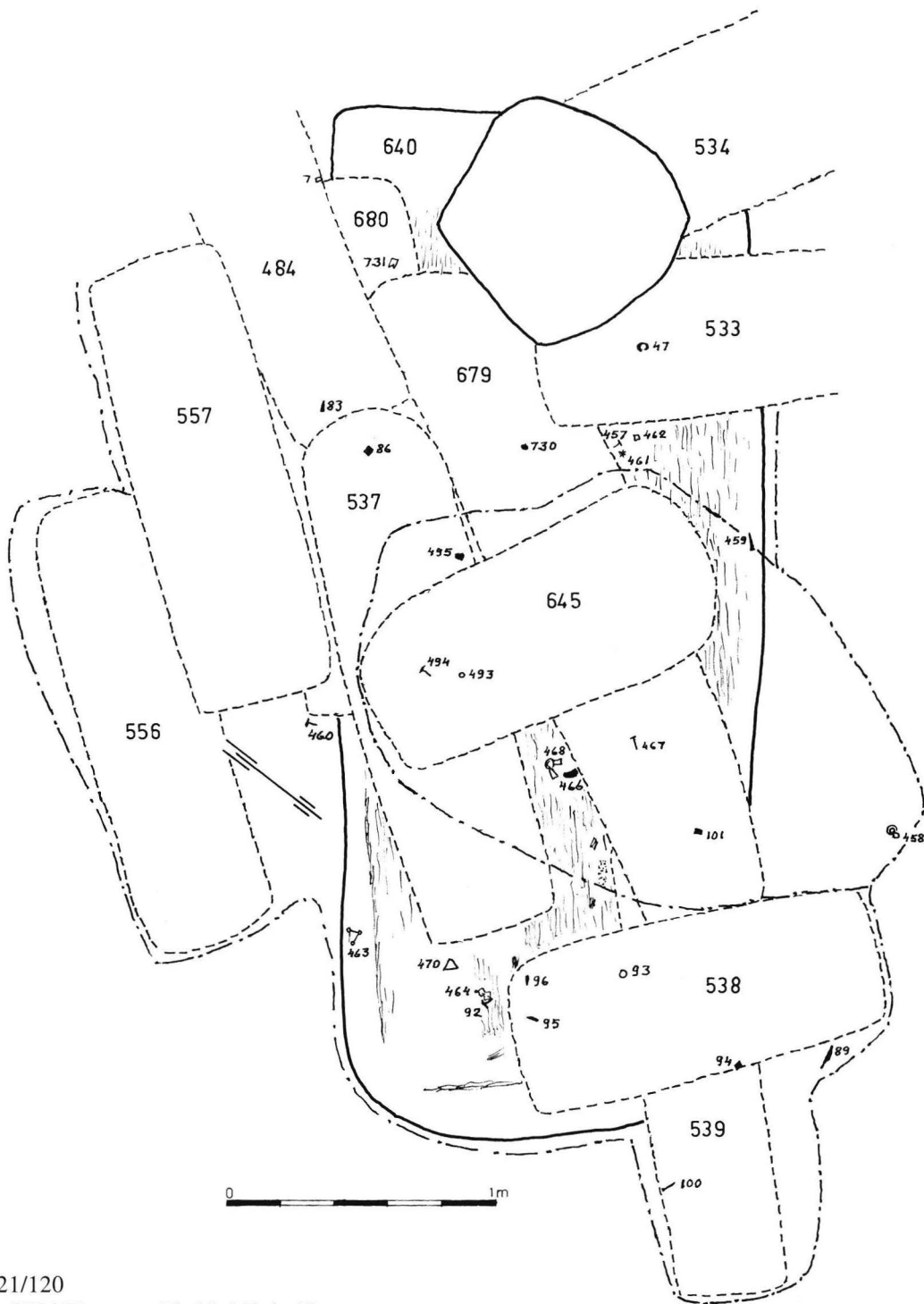
Interpretation and dating: Judging by the size of the spiral finger-ring (14–15 mm) this was a grave of a child or a very fragile woman. The ring of round section (group I:1) points to the late Viking Age or even later (LUISTARI II 122, 127). This grave overlay grave 600, and it is therefore certainly later than the beginning of the 11th century.

Grave 639

Location 113/118	Grave plan p. 56
Orientation SSW-NNE	
Size 225x80,	
bottom 190x40–65 cm	KM 23183:452–456
Depth 100–105 cm	

The grave was situated to the S of the old road bottom on top of grave 628, where there was about 50 cm of topsoil and about 30 cm of mixed earth. The grave-pit had in its upper parts even sides and rounded corners, but the bottom was broader at the SW end and uneven because of stones. In the fill, there were a couple of bronze artefact fragments (23183:453,455), charcoal and bovine tooth fragments (:456). In the E corner a belt buckle and bronze mount fragments (:454) were found.

Interpretation and dating: Probably a late grave. The belt buckle is small (28x20 mm), with double openings and with three small extensions in the oval front part. A rather similar but larger buckle has been found in Visby (Thunmark-Nylén 1995 fig. 416:1). Cleve (1929 252–259) termed similar buckles “Berezantypus” and dated them to the end of the Viking Age.



Grave 640

Location 121/120

Orientation SW-NE

Size 380x160 cm,

bottom 380x150 cm

Depth about 110 cm

Pl. 18:640:1-13

KM 23183:457-474

The grave was situated in the area of the old road bottom, where there was about 60 cm of topsoil and 20-25 cm of mixed earth. It had been damaged in the digging of graves 484, 533, 534, 537-539, 645, 679 and 680. The grave-pit was rounded in the corners, and the bottom slanted to the NE. On top of its SW end there was a large stone, about 90 cm in diameter. Only the easternmost corner of the grave and small strips between the later graves had been preserved, but from these it could be seen that there had been a large wooden construction in the pit and

also a bottom lined with wood. A few nails (23183: 457,460,467, 92 ?) were also found near and around the grave. There were charcoal, slag, burnt bones, potsherds and artefact fragments (:458,459,461,462,469) in the fill. In the bottom layer at the NE end of the grave two bronze sleigh-bell pendants (:464), an iron artefact fragment (:466) and a bronze strap-divider with some leather (:468) were found. Quite close to the SE side of the grave there was a three-jointed end of a rod-chain (:463). It is probable that the finds from the later graves were originally

in this grave, and accordingly the furnishing may contain in addition a bronze list (:7), an iron and a bronze ring (:47,51), sickle or scythe fragments (:83,86,94,101), a knife (:89), an oriental coin from the 10th century (:93) and bovine tooth fragments (:731).

Interpretation and dating: The extremely large grave-pit points to a male burial. The coin is badly worn and cannot be accurately dated (Talvio 2000:14). Similar sleigh bell pendants were previously found in graves 25 and 209, which both are from the beginning of the 11th century (LUISTARI I Plates 12:25:25–27 and 60:209:1–2, LUISTARI II 64). These pendants and the rod-chain (see Kivikoski 1973 104 fig. 762) date the grave to the 11th century.

Grave 645

Location 122/120 Grave plan p. 58
Orientation N-S,
bottom WNW-ESE
Size 220x140,
bottom 135x60–70 cm KM 23183:492–498
Depth about 130 cm

The grave was situated under the old road bottom, where there was about 60 cm of topsoil and 25 cm of mixed earth. It had been made on top of graves 537, 539, 640, 678 and 680. The grave-pit was in its upper parts irregular in form, lower down it was oval with a rather even bottom. Iron slag (23183:498), decomposed bovine bones (:496,497), a silver folio bead (:493), a nail (:494) and a couple of iron artefact fragments (:492, 495) were found in its fill.

Interpretation and dating: The fill of the pit was

unusually loose, which means that this was possibly a late pit dug for animal bones and other refuse.

Grave 646

Location 119/119
Orientation WNW-ESE
(almost W-E) Pl. 19:646
Size about 140x45 cm KM 23183:499–500
Depth about 80 cm

The grave was situated to the south of the road bottom, where there were 50–55 cm of top layers and about 10 cm of mixed earth. On top of it were graves 534 and 652, so that only a part of the S side and the NW end had been preserved. A large end stone, about 50 cm in diameter, had covered the last-mentioned part of the grave. At the foot of the stone there were remains of a small skull, and at the SE end of the preserved part of the grave a rod-like iron artefact (:499) was found. The grave bottom was even.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The only find, the 104 mm-long iron pin, which possibly had fastened the clothing of the deceased, is not datable. The grave was however lowest, and it is probably from the same period as graves 529 and 580 close to it, i.e. from the 11th century.

Grave 647

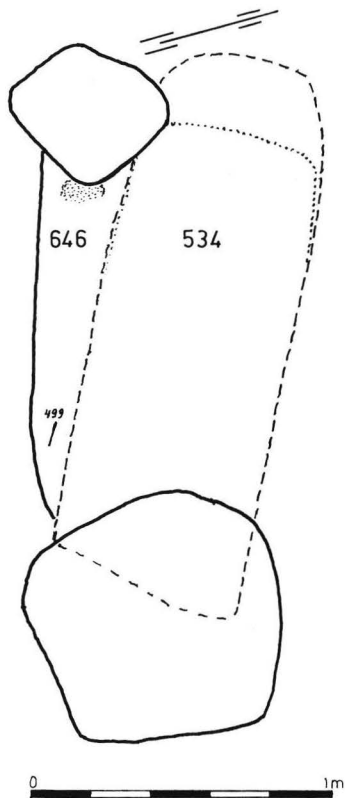
Location 129/114 Grave plan p. 60
Orientation WSW-ENE
Size 160x60–70 cm,
bottom 125x30–40 cm KM 23183:501–502
Depth about 95 cm

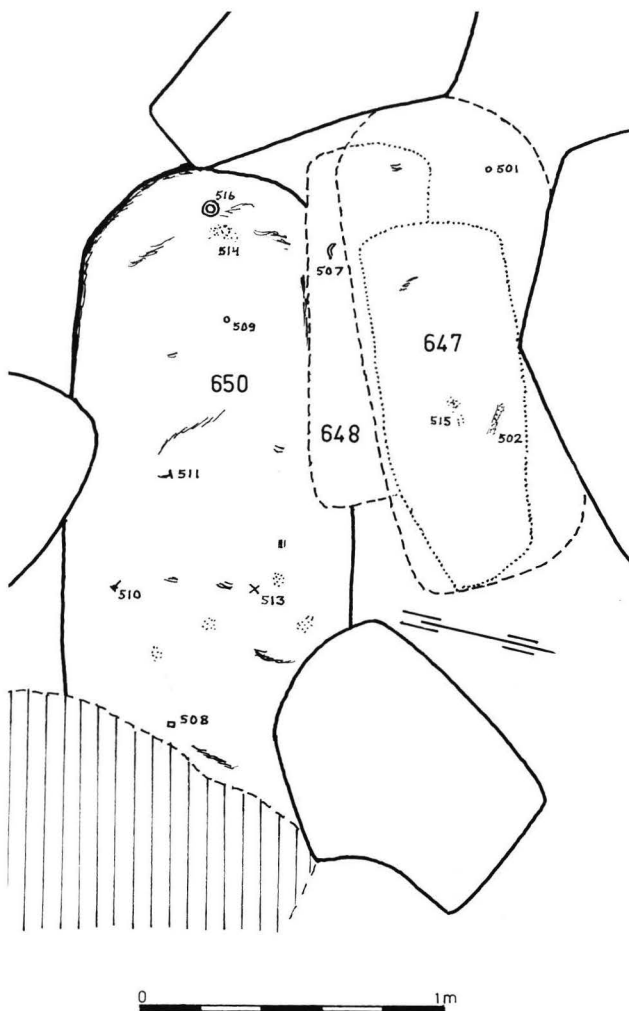
The grave was situated between large stones close to the S edge of the old road bottom. The thickness of the top layers was about 50 cm, and there was about 20 cm of mixed earth under them. The grave was partly on top of grave 648. In its upper parts the grave had rounded ends, but farther down it became more angular and broader at the SW end. The bottom was rather uneven because of stones. The fill contained charcoal and a decomposed horse metacarpus with a mark of cutting at the proximal end (:502). At the SW end, about 20 cm above the bottom level, a fragmentary blue bead with lighter spots (:501) was found.

Interpretation and dating: Judging by the size of the grave bottom this was a child's grave. Together with graves 648 and 650 it was situated between several large stones, and it seems possible that these three graves belonged together. Perhaps there was a mother in grave 650 and children in graves 647 and 648.

Grave 648

Location 129/113 Grave plan p. 60
Orientation WSW-ENE
(almost W-E)
Size 120x40 cm KM 23183:503–504,507
Depth 80–85 cm





The grave was situated partly under grave 647, and in digging it the NW side of grave 650 had been slightly damaged. The grave-pit was rounded in corners and even-bottomed. On top of it a bear's tooth pendant (23183:507) was found, and in the fill was charcoal, a lump of slag and a piece of flint (:503,504), but no other finds were observed.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. It was later than the burial in grave 650, but earlier than the one in grave 647.

Grave 650

Location 129/113
Orientation WSW-ENE
(almost W-E) Pl. 19:650:1-4
Size 205x95 cm,
bottom 160x90 cm KM 23183:507-516
Depth 100-115 cm

The grave was situated on the southern roadside, where there was about 45-60 cm of topsoil and 20-25 cm of mixed earth. On top of its N-side was grave 648, and its SE corner joined to the NE corner of grave 649. A large rubbish pit overlay all these features. Almost the whole of the grave surface was covered by a setting of large stones, but there were pieces of brick between the stones, and therefore it is not quite sure that the stone setting was original and belonged to this grave. The grave-pit was

rounded at the corners and rather uneven at the bottom because of some stones. There were traces of wood and a couple of iron nails (:510,511) in it, suggesting that there had been a coffin or some other wooden construction in the grave. Charcoal, slag, burnt bones and potsherds were found in the fill. On top of the grave there were decomposed bones. About 40 cm farther down there was a strap-mount (:508) at the E end of the grave, and still about 25 cm lower down in the SW half of the grave a yellow glass bead (:509). The bottom was about 10-20 cm from this level. Most of the wooden remains were about 30 cm above the bottom, and at the same level there were decomposed bones in many places at the NE end. These, however, did not form any distinct shape.

Interpretation and dating: The bead and the bear's tooth pendant, which was possibly originally in this grave, point to a female burial. The strap mount can be a filling earth find; a similar one (23183:268) was found in the fill of grave 573 about four meters to SE from this. The opaque yellow bead is the only certain find from this grave. Together with the pendant and the strap-mount it points to the late Viking Age (LUISTARI II 137; Kivikoski 1973 109 fig. 801; Cleve 1978 121, 153-154). The middle of the cast strap-mount is decorated with an unusual animal design, but with an indented edge list it resembles other rectangular cast bronze mounts previously found in Finland (cf. Kivikoski 1973 figs. 918, 919).

Grave 655

Location 118/121
Orientation SW-NE Pl. 19:655:1-20
Size 290x145,
bottom 270x135-140 cm KM 23183:536-545
Depth 100-125 cm

The grave was situated under the old road bottom, where there were 50-60 cm of top layers and 20-30 cm of mixed earth. It had been damaged in digging graves 560, 563, 564, 652-654, 656 and 657. On top of the SW end of the grave-pit there was a stone about 30-35 cm in diameter. The pit had rounded corners, the bottom slanted to NE. There was charcoal and slag in the fill, and traces of a wooden lining were observed on the preserved NW side of the grave-pit. At the SW end of the grave there were fragments of human teeth (:544, 545). In the W corner an iron rivet (:537), a weight (:538) and a fragmentary bronze plate (:539) were found. In the preserved parts of the NE end a couple of bronze mounts (:540,541) were discovered. In different parts of the grave there were fragments of iron artefacts (:536,542,543). Most of the artefacts found in the later pits in this area are probably originally from this grave.

Interpretation and dating: Possibly this was a man's grave. Most of the finds in this grave and around it are parts of a belt and artefacts hanging from a belt: six round mounts with small embossed bulges (23183:227,241,531 and 554 in the fills of graves 563, 564, 653, 657 and 23183:540,541 in grave 655), a cast strap-tag with a rhombic openwork lower part (:520 in the fill of grave 652), a sleigh bell pendant and a mount (:222,224 from

grave 563), two spherical bronze-plated weights (:225 from the fill of grave 563 and :538 from grave 655), a fragment of a badly damaged oriental coin (:534 from grave 654) and a fragment of a knife (:522 from grave 652). The coin is not datable (Talvio 2000:17), but similar mounts, cast strap-tags, sleigh bell pendants and bronze-plated weights have previously been found at Luistari in graves of the 11th and 12th centuries. One of these, grave 358, has a coin dating to the first quarter of the 12th century (LUISTARI II 152–154, 64, 70–71).

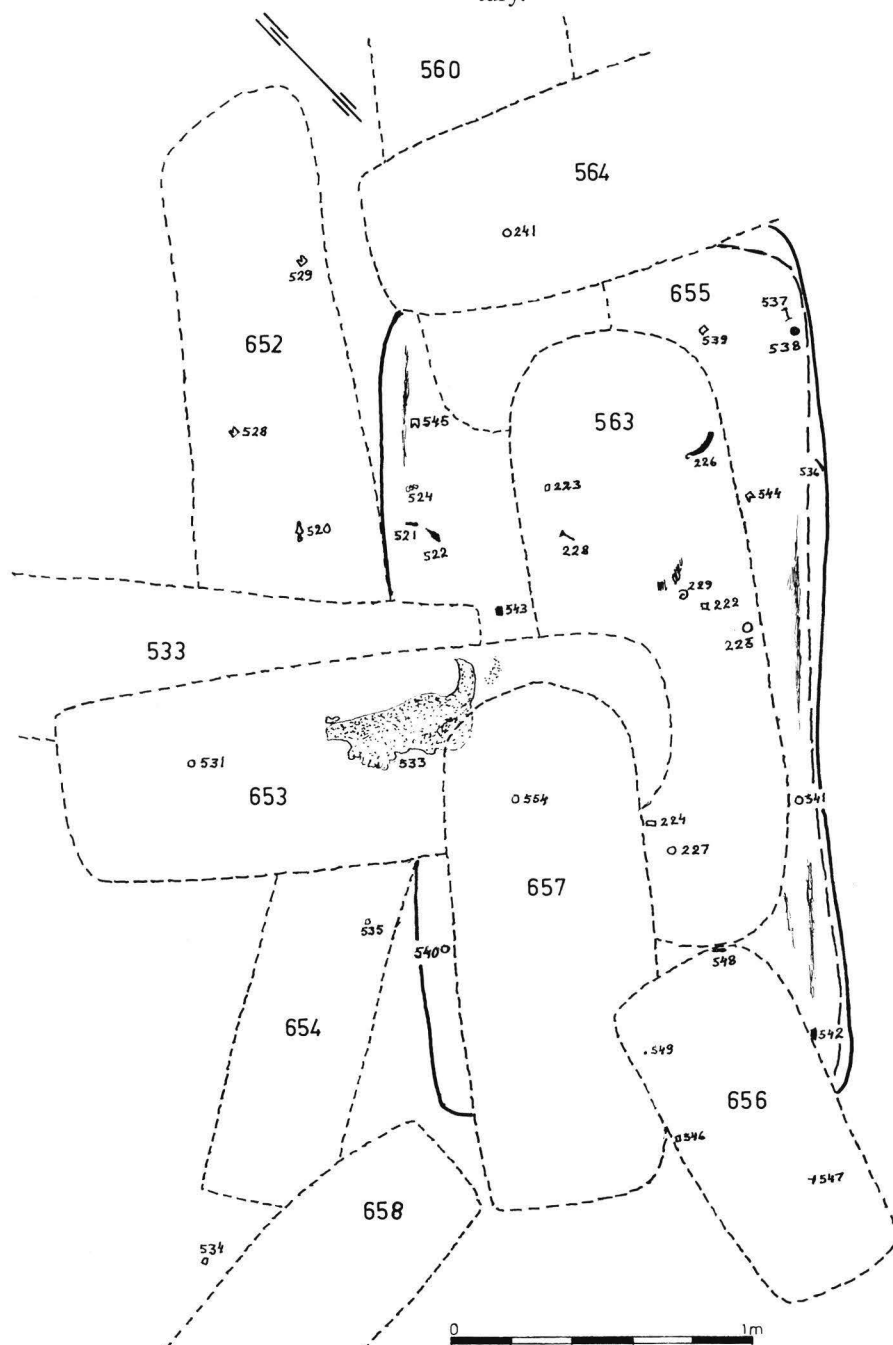
Grave 664

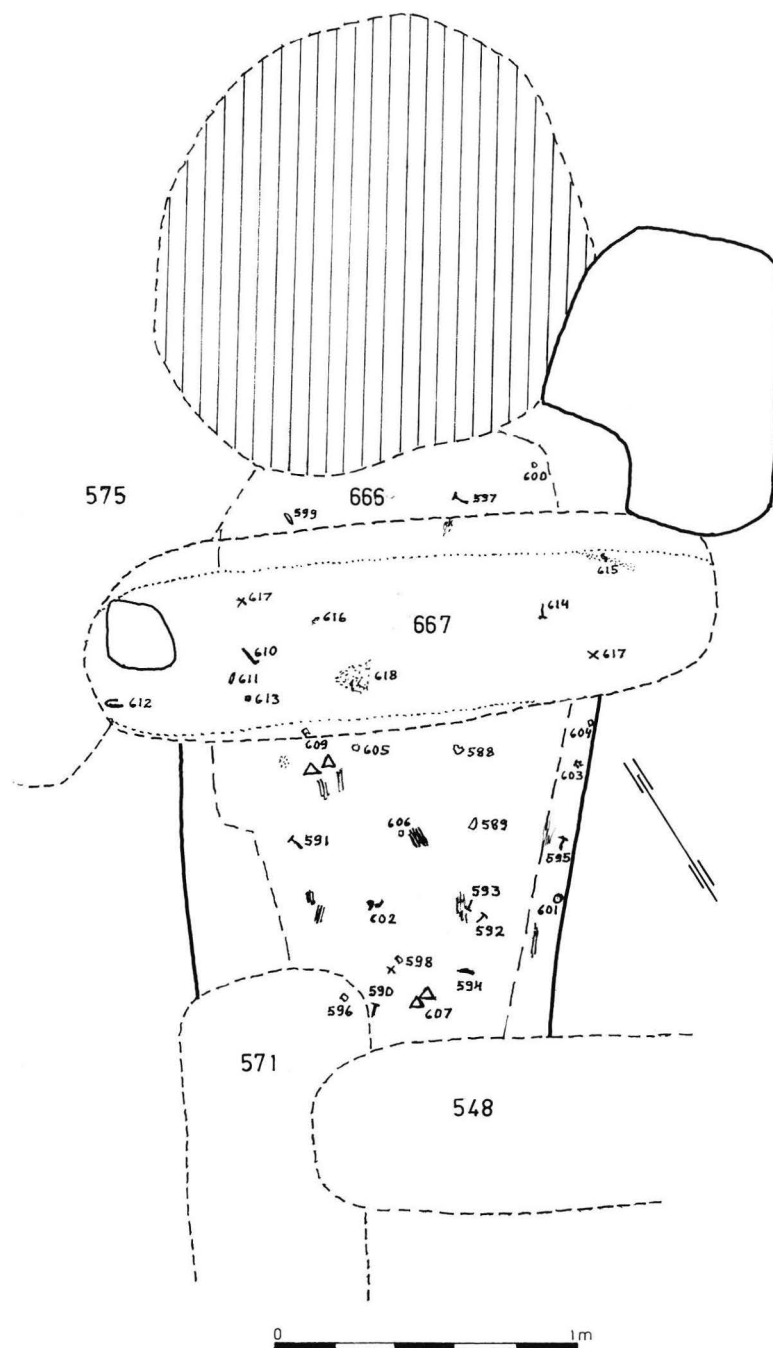
Location 134/110
Orientation NW-SE
Size 125x35 cm
Depth 100–110 cm

Grave plan p. 63
Pl. 21:664
KM 23183:580,581

The grave was situated on the S side of the road foundation, where there were about 65 cm of top-soil layers and 20 cm of mixed earth. It had been damaged in digging grave 621 and a field ditch, and it overlay the east corner of grave 668. The grave-pit was narrow with rounded ends and there was a large stone on the bottom. Only some slag and a trapezoid bronze sheet (23183:580) were found in the preserved SE end of the grave.

Interpretation and dating: Judging by the size of the pit this was a child's burial. Because it was on top of grave 668, it must be later than the beginning of the 11th century.





Grave 666

Location 132/115

Orientation SW-NE

Size at least 210x125 cm

Depth 95–105 cm

Pl. 20:666:1–13

KM 23183:587–609

23183 :610–619 (G. 667)

The grave was situated under the old road bottom, where there were 60–65 cm of top layers and 10–20 cm of mixed earth. It had been damaged in digging graves 548, 571, 667 and a large rubbish-pit. There were some scattered stones on top of the grave. The grave-pit had a tapering NE end. It was somewhat irregular in form and uneven at the bottom because of several stones. Burnt bone splinters (:992,996), charcoal, decomposed bone, slag (:991,995), potsherds (:607–608) and some bronze artefact fragments (:587–589) were found in the fill. On the edges of the grave-pit there were small traces of some

wooden construction, and all in all six nails (:590–593, 595,597) were found. These were all at almost the same level less than 20 cm above the bottom. One of them was at the SW end of the grave, the others in the NE half of the pit. A human tooth (:609) and some decomposed bone were found almost in the middle of the SE side of the grave. The furnishing was badly scattered and fragmentary. A bronze weight (:601), which was found at the NW side of the pit, a narrow pendant (:599) from the SW end, a palmette-ornamented mount (:605) from near the tooth, and a spiral ornament (:603) from the middle of the NW side are worth mentioning. Other finds were fragments of bronze plate and pieces of iron artefacts. The finds from the fill of grave 667, an iron tang fragment (:610), a bronze pin (:611) and a fragmentary oval firesteel (:612), were probably originally in this grave.

Interpretation and dating: Possibly this was a man's

grave. The twisted iron tang fragment, found in the fill of grave 667, is probably from a tanged spearhead with a knife-like blade. It dates from the 11th century at the earliest, and the spherical bronze weight points to the same time (LUISTARI I Plate 115:385:4, 1982b 36, 71). The mount with palmette decoration appears Oriental, but it has a hole in the middle for a rivet, which means it is possibly a copy made somewhere in the Nordic countries (see Jansson 1978 398–399). Slightly similar mounts have previously been found at Osmanmäki (4633:130) and Pappilanmäki in Eura and at Taskula in Turku, at Köyliönsaari in Köyliö and at Leikkimäki in Kokemäki (Kivikoski 1973 121 fig. 913). In these the pattern is however less distinct.

The grave was situated in the NE part of the cemetery on top of graves 575 and 666, where there was about 70 cm of topsoil and 10 cm of mixed earth. On top of its SE end there was a stone, 20–30 cm in diameter. The grave-pit had rounded ends and uneven bottom because of stones. Charcoal, slag, burnt bone, a decomposed pelvis of a horse or a bovine (23183:618) and several artefact fragments were found in its fill: a fragmentary firesteel (:612), a spearhead fragment (:610), a bronze pin (: 611) and bronze plate and bronze chain fragments (:615,616). An iron nail (:614) was found at the NW end about 20 cm above the bottom, and still 15 cm higher up in the fill was a nail top fragment (:613). The burial was unfurnished.

Interpretation and dating: This was a late grave and the fragments in the fill were probably from grave 666.

Grave 668

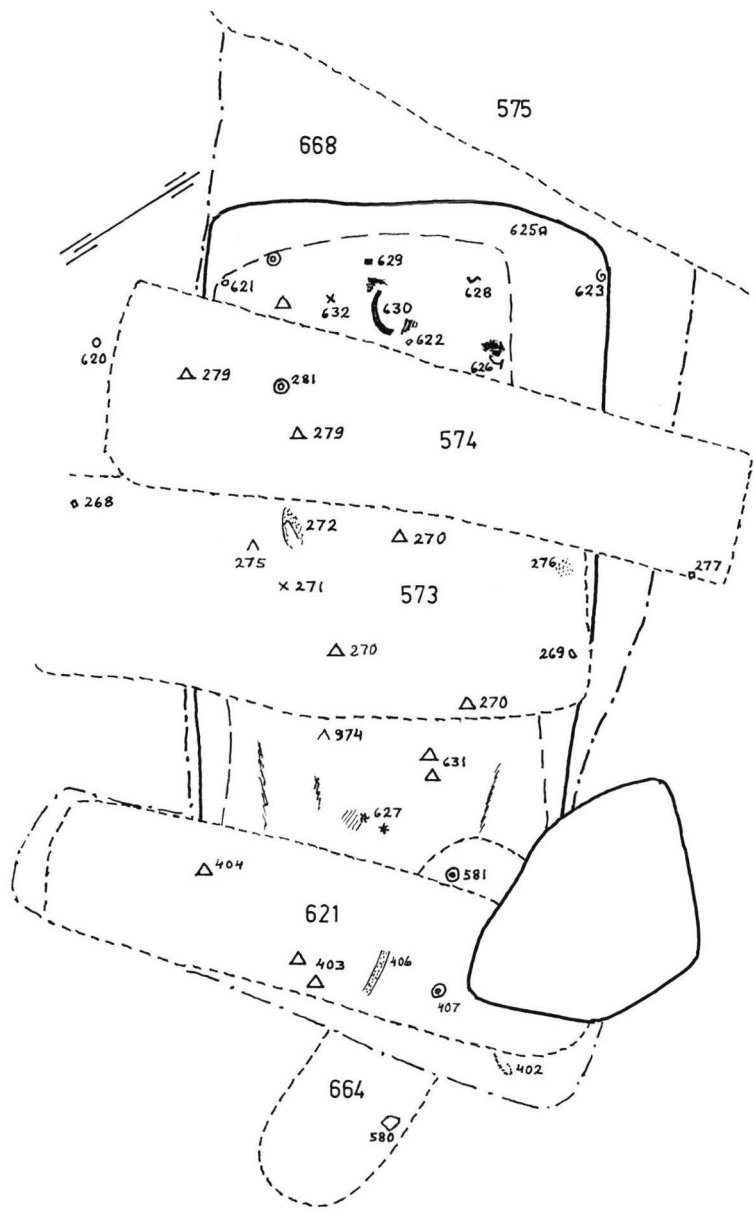
Location 132/112
 Orientation WNW-ESE Pl. 20:668:1–12
 Size 230x160 cm KM 23183:620–634
 Depth about 100 cm

The grave was situated by the southern roadside, where there was about 60 cm of topsoil and about 20 cm of mixed earth. It had been damaged in digging graves 573–575, 621 and 664, and there was also on top of it an oblong NW-SE-oriented rubbish-pit, in which there were also some stones. The grave pit had rounded corners and even bottom. Only small strips of the grave area had been preserved between the later graves, but it was clear that there had been wooden constructions in the grave. Also a couple of nails (:624, 626) were found. In the mixed layer above the grave was a silver coin (:620), in the fill was charcoal, slag, a burnt bone piece, a piece of bronze plate (:622), a bronze finger-ring (:623) a bronze rivet with leather (:621) and iron fragments (:625,629). At the NW end of the grave human teeth fragments (:625) and an iron vessel handle fragment (:630) were found. At the SE end were remains of an ornamented clay vessel and perhaps also of another one (631), spiral ornaments (:627) and a piece of flint (:974). In the fills of the overlaying graves were more fragments of clay vessels (:263,270, 279,284,403–404) and a piece of the iron vessel handle (:297). Perhaps also some other finds, a piece of a silver coin (:269), a blue bead (:289) and ring-border fragments (:402), and possibly also the skull remains of a pork (:272,273), were originally in this grave.

Interpretation and dating: It is possible that this badly disturbed grave had belonged to a woman. The perforated coin is German from the last decade of the 10th century (Strasbourg, Bishop Widerold, 991–999 AD), and the coin fragment is also Western (Talvio 2000:18, 15). The decorated potsherds are from a vessel with horizontal and crossing lines on the shoulder and of form group II:2b. A very similar vessel was found in grave 25 at Luistari, which was coin-dated to the beginning of the 11th century (LUISTARI I Plate 12:25:28, LUISTARI II 80–82). The iron vessel handle fragments are possibly from a wooden bucket (cf. Arbman 1940 Pls. 211–212).

Grave 667

Location 132/114 Grave plan p. 62
 Orientation WNW-ESE Pl. 20:6b,10–12
 Size 220x70, bottom 220x50 cm KM 23183:610–619
 Depth 100–120 cm



Grave 670

Location 127/121

Orientation SW-NE

Pl. 22:670:1–26, 23:670:1–20

Size 320x140–170 cm

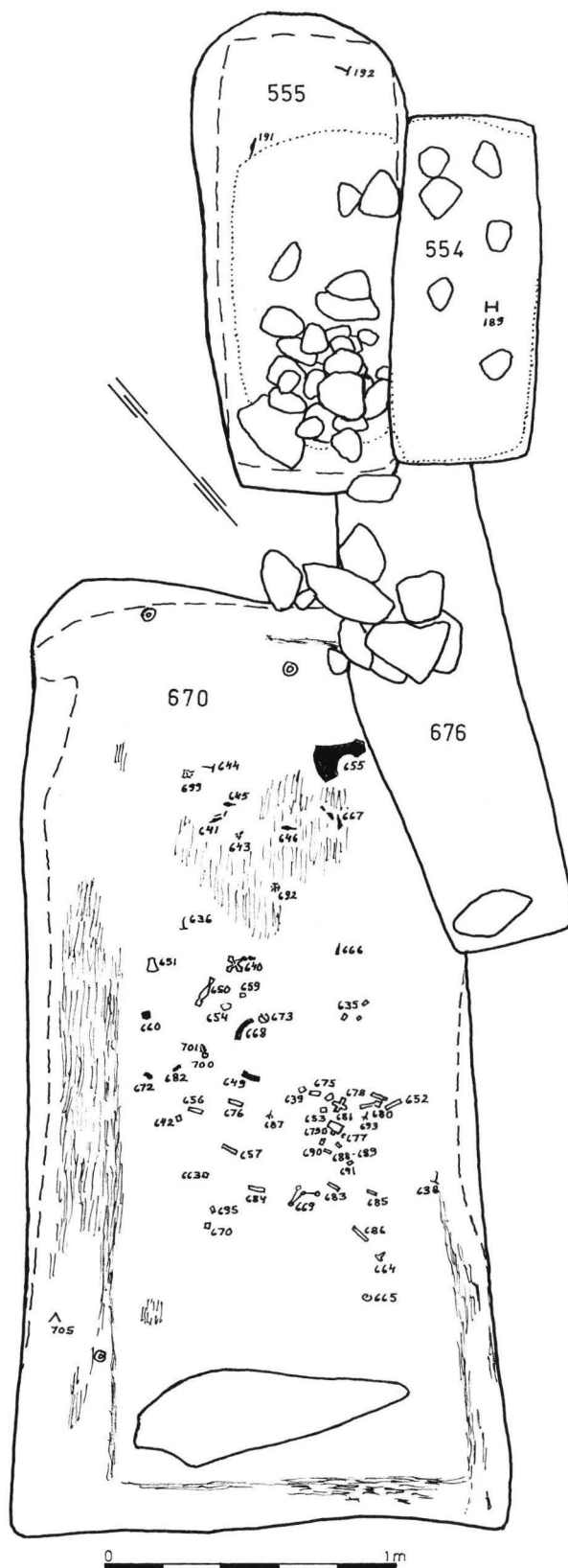
KM 23183:635–707

Depth (30–)110 cm

The grave was situated under the field ditch and the ditch slope, and its NE end extended under the field situated to the north of the old road. Accordingly, the thickness of the covering layers varied from 5 to 80 cm. In the upper parts of the ditch slope there was about 50 cm of topsoil and 30 cm of mixed earth, in the field 30 cm soil and 10 cm of mixed earth, but in the area of the ditch the thickness of the fill was only 5–10 cm. Although the grave borders came into view, it seems that with the digging of the ditch the grave bottom layer had also been damaged. The W corner of the grave had been disturbed in digging grave 676. The grave-pit was broader at the NE end, and its bottom was uneven because of stones. There were shallow depressions in the corners. On the walls of the grave-pit there were traces of wood, and especially at the SW end a dark layer covered the bottom. As soon as the grave borders appeared a great number of iron fragments were found; seemingly they had disintegrated from the axe-head (23183:655) found at the W corner close to grave 676. To the E of it fragments of several arrowheads (:641,645,646, 666,667) and three spiral ornaments (:643,692,699) were found; two more ornaments (:687, 693) were in the middle of the grave. The field ditch mentioned above passed over this location, and therefore the furnishing was broken and badly mixed.

A silver penannular brooch (:673) was found almost in the middle of the grave. From the belt there were a bronze strap-tag (:650) and fragments of a narrow silver band (:635,652,656, 657,675,676,683–686,688,689,695). All in all there was almost 40 cm of a band 8 mm in width. A large trapezoid bronze mount (:681) may also belong to the belt. Two cruciform mounts (:640,678), quadrangular mounts (639,642,653,663,670), bronze plate fragments (:653,654,679,690,691) and a bronze sleigh bell pendant (:680), which were all found mixed with the belt fittings, can possibly be from some other artefact than the belt. At the southern side of the richest find concentration, close to the SE border of the grave, an axe-formed pendant of bronze (:651) was found. In the middle of the grave, near the strap-tag mentioned above, was a silver coin fragment (:659), and about 20 cm NE from it a weight (:700) and a piece of leather (:701) were found.

At the NE end of the grave a spiral finger-ring (:665) was discovered, and about 50 cm to the S of it there were parts of a rod-chain (:669). Possibly the chain had also belonged to the belt. In the middle of the grave, at the NW side, there was a nutshell piece (:677), and quite in the middle fragments of an iron vessel handle (:640,649,668,672,682), possibly from a wooden bucket, were found. Two iron nails (:636,644) were at the SW end of the grave, one (:638) was close to the NW side. A bronze nail with wooden remains (:664) was found about 30 cm to the E from the latter. Other finds (:637,647,648,658,660–662, 671,674,694,696–698) were



different iron artefact fragments (:660 from a sword?). Charcoal, slag, burnt bones, a flint piece and two small potsherds were found in the fill.

This grave, badly disturbed when the field ditch was dug, had apparently been one of the richest at Luistari. In spite of the great number of bronze artefacts there were

no traces of the corpse, but some textile and leather remains had been preserved in connection with the mounts.

Interpretation and dating: The weapons and the belt indicate a male burial. The coin fragment is German, but is not identified or dated with any further precision (Talvio 2000:19). The small silver penannular brooch with rolled ends and a ring with a middle ridge points to the first half of the 11th century (LUISTARI II 101). The belt parts and the bearded axe of Scandinavian type (see Vuolijoki 1972 11) are not in contradiction with this dating. The C14-dating (HEL-3938) of the coffin wood is 1100+/-80 BP (843–1006 cal AD).

Grave 671

Location 111/117	Grave plan p. 56
Orientation SW-NE	Pl. 19:671:1–2
Size 95x60, bottom 70x40 cm	KM 22346:763,769,770
Depth 80 cm	23183:1046

The grave was situated in the N part of the cemetery, where there was about 55 cm of topsoil. It was partly on top of grave 628. The grave-pit grew smaller towards the bottom, which slanted to the SW. A carnelian bead (22346:769), a penannular brooch (:763) and fragments of a bronze bracelet (770) were found at the SW end. The brooch was about 20 cm above the bottom, the other finds lower down. Charcoal and a blue glass bead (23183:1046) were observed in the fill.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The bracelet fragments are from a Merovingian Period concave-convex bracelet (Kivikoski 1973 fig. 453; Cleve 1943 92–94 fig. 30b), and they must be from one of the destroyed Merovingian Period graves 516c, 527 or 628. The carnelian bead is flat and faceted, size 13x11,5x7 mm, and two similar ones have previously been found at Luistari, both in the graves of the late Viking Age (58 and 377, LUISTARI II 130, 187–188). The brooch is of bronze and resembles a combination of Salmo's types 7 and 15 (Salmo 1956 30–36, 65–71). The faceted end knobs lying directly on top of the ring and the almost six-sided section of the ring are from the former type, the three-part thickening at the middle and the trapezoid base of the pin are from the latter. According to Salmo (1956 71) the brooch with a thickening at the ring middle is one of the latest types of penannular brooches. The Luistari brooch with its features of the earlier Viking Age brooches must be one of the oldest specimens of its type in Finland. A date to the first half of the 11th century seems probable (cf. Kivikoski 1973 97 fig. 704).

Grave 671A

Location 112/118	Grave plan p. 56
Orientation SW-NE	Pl. 19:671A:1–2
Size 145x ?	KM 23183:708
Depth 100 cm	

The grave was situated to the NE of grave 671 and it had been destroyed almost completely in the digging of grave

638; only a strip of 20–30 cm of its SE side had been preserved, and a spherical weight (23183: 708) was found at its SW end about 20 cm above the bottom.

Interpretation and dating: Judging by the length of the grave-pit this was a child's grave. The weight dates the grave to the 11th century or later (LUISTARI II 71).

Grave 674

Location 126/118	Grave plan p. 54
Orientation SW-NE	Pl. 21:674:1–4
Size at least 160x55 cm	KM 23183:710–714
Depth about 90 cm	

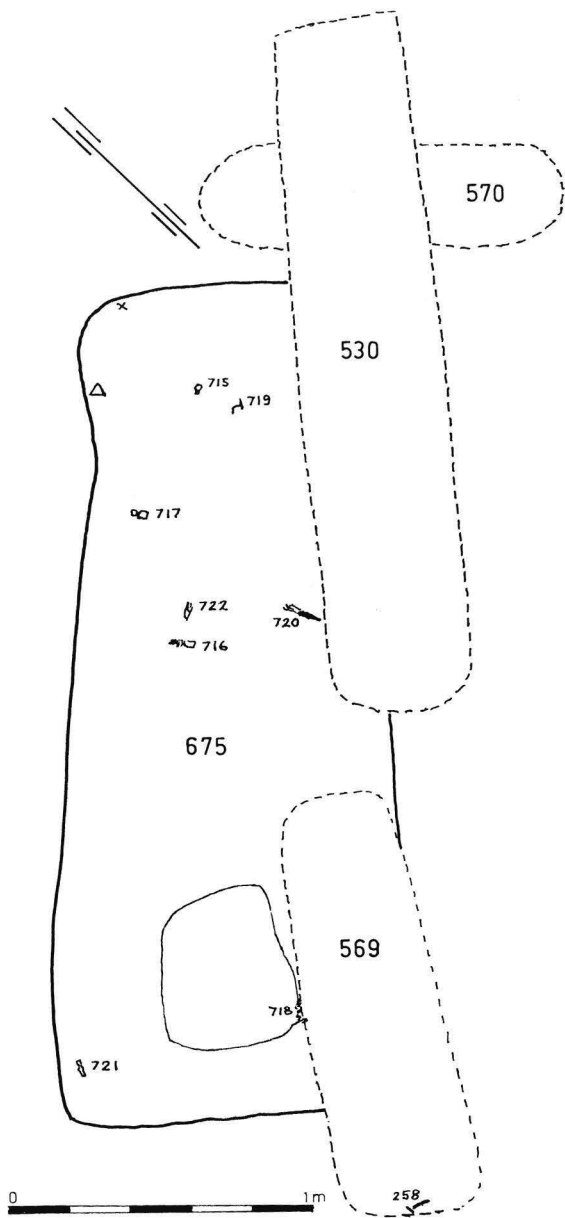
The grave was situated beneath the bottom of the field road, where there was about 55 cm of topsoil and about 25 cm of mixed earth. It was one of the graves that had been almost completely destroyed with the digging of the later graves. At least graves 531, 559, 631 and 665 had been dug on top of it. To the SE from grave 531 decomposed wood and an iron nail (23183:712), a silver coin (:710, on the surface), an iron knife fragment (:713) and a spiral ornament (:714) were found. To the SW of these, close to grave 655, was a small bronze strap-tag (:711). The grave was observed only when the dark bottom layer appeared, and as it was shallower than the later graves, its measurements remained obscure.

Interpretation and dating: The short-bladed knife and the coin with a rivet point to a woman or a child. The coin (Ethelred II, Long Cross type, about 997–1003, AElfnth in Chester, Talvio 2000:20) dates the grave to about 1000 AD or to the first half of the 11th century.

Grave 675

Location 121/126	
Orientation SW-NE	Pl. 21:675:1–7
Size about 280x100 cm	KM 23183:715–724
Depth (25–)95 cm	

The grave was under the field ditch and the ditch slope in the N part of the cemetery. On top of its SW end there was 35–65 cm of topsoil and about 20 cm of mixed earth, but at the NE end, under the ditch, there was hardly anything. The grave had been damaged also in digging graves 530 and 569 and an old field ditch. This filled ditch ran along the NW side of the grave; the ditch between the road bottom and the field was almost at right angles to it and ran over the NE end of the grave. The grave-pit had rounded corners and it broadened slightly to the NE. At the NE end, on the bottom, was a large stone that was not removed. An iron nail (23183:719) was found at the SW end, but no wood had been preserved. In the middle of the grave were remains of a knife and a knife sheath (:716,717,720,722), at the SW end a bronze button (:715) was found. At the NE end, to the NW from the bottom stone, was a stump of a bronze chain and an iron piece (:718), and quite in the E corner was a strap-tag (:721). In the fill a lump of hardened clay was found. No remains of the corpse were observed.



Interpretation and dating: The bronze button and the strap-tag indicate a male burial. The strap-tag is decorated with an animal design in the Gotland rune-stone style, which dates the grave to the 11th century (Nylén 1973 164 fig. 5 lowest; Thunmark-Nylén 1995 figs. 21, 55, 59, 269, 294a).

Grave 676

Location 126/121 Grave plan p. 64
Orientation SSW-NNE
Size 180x45–55, KM 23183:725–726
bottom 160x50 cm
Depth 110 cm, near the ditch 50–60 cm

The grave was situated in the area of the road bottom and the ditch slope, where there was about 50 cm of road layers and 30 cm of mixed earth. At the NE end of the grave there was a stone and at the SW end a scattered stone setting. The grave-pit had been dug on top of the W corner of grave 670 and its SW end had been damaged in digging graves 554 and 555. The pit narrowed to the ends

and grew smaller towards the bottom, which slanted to the NE. In the fill there was charcoal and slag, and in the middle of the pit, 15–20 cm above the bottom a chisel-like iron artefact (23183:725) was found.

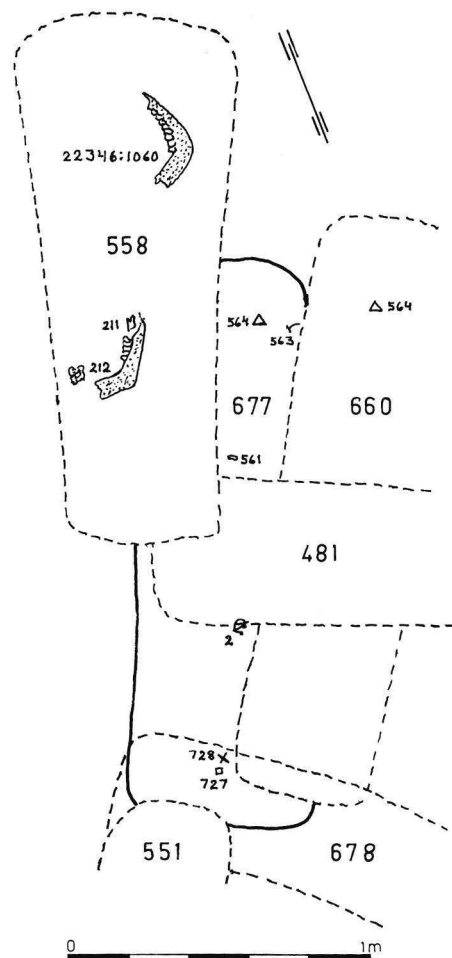
Interpretation and dating: This was possibly a child's grave. It overlay grave 670 and is accordingly later than the beginning of the 11th century.

Grave 677

Location 123/117
Orientation SSW-NNE
Size about 185x60 cm KM 23183:2(?), 727, 728
Depth 120–130 cm

The grave was situated in the NE part of the cemetery, on the S side of the road bottom, where there was about 60 cm of topsoil and 20 cm of mixed earth. It had been damaged in digging graves 481, 551, 558, 660 and 678. The grave-pit had rounded corners and its bottom slanted to the NE. In the fill there were a burnt lump of clay and a burnt bone splinter. Possibly the silver penannular brooch (23183:2), which was found on top of the intersection of graves 481, 660 and 677, was originally in this last-mentioned and oldest grave.

Interpretation and dating: If the silver penannular brooch with rolled ends and mid-ribbed ring was originally in this grave, it dates the grave to the first half of the 11th century (LUISTARI II 101).





Grave 680

Location 121/118 Grave plan p. 58
 Orientation SW-NE
 Size about 200x50 cm KM 23183:731
 Depth 120–125 cm

The grave was situated under the road bottom, where there was about 60 cm of topsoil and 20 cm of mixed earth. It was dug overlaying grave 640, but only small corners of it had been preserved between the later graves 484, 537, 557 and 678. The grave-pit was almost rectangular in form, but the shape of the bottom remained obscure. Only the bovine tooth fragments (23183:731) in the W corner of the pit could with any certainty be connected with this grave.

Interpretation and dating: The shape of this grave indicates a late period, but it was not one of the latest. It

was on top of grave 640, dated to the 11th century, which is also the earliest possible date for this grave.

Grave 698, a cairn

Location 141/79
 Size about 6x6 m Pl. 66:1–14, 67:698:1–3
 Height 30–85 cm KM 23607:1–120

The stone setting here identified as cairn 698 was situated at the eastern end of the cemetery area and on the highest spot of a small hillock known as Luistarimäki. It had been built by packing smaller stones around and between some ten large fixed stones. The setting was probably originally round, but inhumation graves 721 and 722 had been dug through its W side and a pit on its S side, making its form somewhat irregular.

The thickness of the stone setting was 40 cm in places; the earth was mixed with charcoal, and especially in the

E part of the setting there was a great deal of slag. The total quantity of slag from this cairn is 24 kg, and about half of it was found to the east of the largest stone in the middle. On the NW side of the cairn the setting was mostly of red sandstone slabs. Under these most of the burnt bones were found, but no more than about 100 g from the whole cairn could be collected. These were very small splinters, but among them is a fragment of a human tooth (23606:32).

About 1100 g of clay vessel fragments were found between the stones, and 400 g of these were in a charcoal patch about 50–60 cm in diameter on the eastern side of the cairn. Amidst the potsherds were fragments of horse and possibly bovine teeth (:80,81).

Nine metal artefacts or fragments, some of them on top of the stone packing, were discovered: a bronze list fragment (:1), a blue glass bead (:3) and an iron knife (:5) were on the NE side of the cairn, an iron plate fragment (:2) and pieces of a bronze sleigh-bell button (:4) were on the SW side. On the western side, outside the stone-packing, there was a bronze list fragment (:6) at a depth of about 30 cm, and an ornamented bronze plate fragment, originally a part of a Viking Age bracelet (Kivikoski 1973 fig. 734), with a hole in one end (:7) was found S of the cairn at a depth of 25 cm. It was in the mixed earth collected between the stones.

An iron artefact fragment with a pointed oval bulge on a curving base-plate (:8) was found SE of the central stone at a depth of about 40 cm. Near it there were some burnt bones and a great quantity of slag. There were also potsherds about 35–40 cm from this place. Between the large stones in the middle of the cairn, almost 60 cm from the top, an iron strip, curved and pointed at both ends (:9, a clamp ?), was found. In the same pit there was much slag, and a meter to the N of this location a bovine tooth (:44) was found.

Interpretation and dating: In spite of the small amount of burnt bones this was probably a cremation cairn. The bones were in very small splinters, which meant that not all of them could be collected. Moreover, the cremation itself had been executed in some other place. Of the metal artefacts, only the two last-mentioned ones (:8,9) could with certainty be counted among the finds of the cairn. The others are topsoil finds or found so much outside the stone-packing that they must be ascribed to other connections. The potsherds are mostly undecorated and not similar to those in the inhumation graves. Fragments of a small bowl with three-branched handle (Meinander 1954 Pl. 20:k) were also found from the northern border of the cairn. Similar bowls have been dated to the late Bronze Age (Meinander 1954 150–151; Salo 1981 316–317), but there was so much iron slag in this cairn that the dating to the earliest stage of the Iron Age seems more possible.

Grave 699, a cairn

Location 144/74
Size about 4x3.5 m Pl. 67:699:1–8
Height 25–80 cm KM 23607:126–189

Cairn 699 adjoined the SE side of cairn 698. It was elliptic in form, somewhat irregular and without a laid perimeter of stones. Its stone material had been gathered around a fixed stone more than one meter in diameter. The central stone extended 20–40 cm higher up than the other stones, and between it and a large boulder to the S of it over 5 kg of iron slag were recovered.

The cairn was mostly made of cobblestones of different sizes, but to the W of the central stone there were also some large sandstone slabs. Near and around them the earth contained charcoal, and under the largest slab there was a charred piece of wood almost 40 cm long. The soot area around these stone slabs was slightly apart from the dark earth around the central stone, and potsherds, some burnt bone splinters and over 1 kg of iron slag (:133–141) were found in it.

Especially to the S of the central stone there was very much iron slag, all in all more than 12 kg (:182–187). Most of the burnt bones were found to the north of the central stone, some of these in a dark patch extending under the central stone. In this same patch, to the NE from the stone, the most important metal artefact, a large bronze belt buckle (:131), was found about 40 cm below the ground. The other metal artefacts, a fish-hook (:126), two crampons (:127,128), an iron rod fragment (:129) and bronze artefact fragments (:130) were discovered only about 20 cm below the ground, which means that they may be surface finds. Potsherds were found scattered to the S, W and N of the central stone.

Interpretation and dating: Also in this cairn the amount of burnt bones was small, about 30 g, and they were in tiny splinters. The pit under the central stone with its belt buckle indicates however a burial. The belt buckle is of bronze, plated with white metal, and with an iron pin. It is four-sided, short and broad, slightly trapezoid, and the hold of the belt is clearly thinner than the other sides of the buckle. The rim is ornamented only with some transverse notches. So far I have not found any exact parallels to this buckle, but it may have some connection with the early Roman Period rectangular buckles, of which only iron specimens have been found in Finland (Salo 1968 113–115 Pl. 20:3). The C14 analysis of wood from under the sandstone slabs gave the result 2800+/-80 BP, 1062–867 cal BC (Hel-3953), but the carbonized nut from the SW border of the cairn was C14-dated to 2125+/-55 BP, 233–67 cal BC (Hela-212). The former result probably gives one more dating for the dwelling site, and only the latter one has some connection with the cairn.

Grave 700, a cairn

Location 141/71
Size about 5x4 m Pl. 68:700:1–7
Height 20–150 cm KM 23607:190–248,354,362;
25480:578–581

This cairn was situated to the SW of cairn 699 on a southward slope. It was oval in form and had been piled on the northern side of a large sharp-peaked boulder, apparently “the core stone”, more than a meter in height from the earth surface. To the E and W of this boulder there



Fig. 4. Cairn 699, S view.



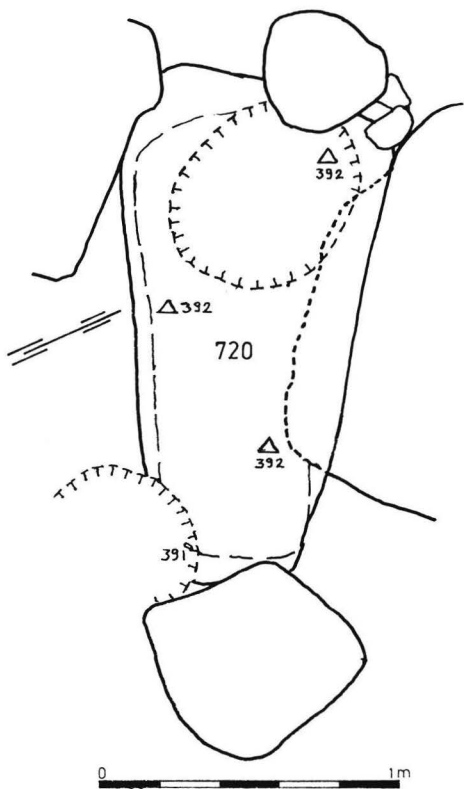
were large stones, 50–100 cm in diameter, partly in two layers and lifted on top of smaller stones, but to the N there was no edge-chain, only a setting made of small stones and of pieces of iron slag. The earth between the stones was dark and contained charcoal.

Farther down the stone setting in the area to the N of the boulder consisted of stones about 20–40 cm in diameter, and the area of the cairn was smaller, about 4 x 3.5 m in size. The thickness of the setting on the N side of the largest stone was 35–40 cm, and most of the finds were discovered in it or between and under the large stones to the E of the large “eye boulder”.

Only a very small amount of burnt bone was found. Less than 10 g (:204,213) was directly to the N of the largest stone, and on the NW corner of the cairn there was a little more than 10 g (:354,362). In sifting the earth a further 7 g of bones (:226) were collected. The largest amount of burnt bone (66 g) was found at the SE side of the cairn. There, in a 15–20 cm deep soot-pit, which was about 80 cm in diameter and covered by small stone slabs, were apart from the bones (25480:580) some potsherds (25480:578), a burnt clay piece and a large lump of slag (25480:581).

Slag was found in all places in this cairn. From the area smaller than 3 m² bordered by the large stones, almost 14 kg were collected, and under and around the large stones over 16.5 kg were recovered. In places only slag had been packed between the stones. Potsherds were found weighing less than 0.5 kg, most of them to the W and NE from the largest stone. The only metal artefact from near and around this cairn was an iron fitting (:190), which was probably not at all from prehistoric times.

Interpretation and dating: Possibly this was a cremation cairn although the amount of bones was small. Most of the potsherds are rough and undecorated, but there are a couple of sherds (23607: 224) with an even surface and round and rather deep pits. They resemble late Bronze Age and early Iron Age ceramics found in the Baltic area (e.g. Balodis 1940 50 fig. 3–4; Latvijas PSRA 1974 fig. 24:4,8,10; Eesti esiajalugu 1982 fig. 94). Carbon 14 analyses of the charcoal gave the result 2420 \pm 100 BP, 719–420 cal BC (Hel-3954), and therefore also this cairn may date from the oldest Iron Age.



Grave 720

Location 132/82
Orientation WNW-ESE
Size 200x95 cm,
bottom 140x50–70 cm KM 23607:391–394
Depth about 60 cm

The grave was situated in the middle of the cemetery area, where there was 15–20 cm of topsoil and about 10 cm of mixed earth. Two later round pits had been dug through it. On top of the NW end of the grave there was a stone 40 cm in diameter, the stone at the SE end was about 60 cm in diameter. The grave-pit had been dug between two large stones. In its upper parts it was wide with rounded corners, but lower down it was trapezoid, broadening to the NW. The bottom was even. A bronze spiral (23607:391) was found at the SE end of the grave; potsherds, burnt bones and slag were recovered from the fill.

Interpretation and dating: Judging by the size of the grave bottom this was a child's grave. Possibly there had originally been more artefacts, but they had been scattered to the upper layers in connection with the digging of those later pits. Accordingly, the dating depends on the chronology established for the cemetery.

Grave 725

Location 135/76 Grave plans pp. 78,79
Orientation NNW-SSE,
almost N-S
Size 180x80 cm,
bottom 160x60 cm KM 23607:409–410, 24388:1
Depth about 85 cm

The grave was situated in the middle part of the cemetery

near cairns 698–700, where there was about 20 cm of topsoil and 10–15 cm of mixed earth. It had been dug on top of graves 724, 746 and 751. The grave-pit was almost oval in form in its upper parts, straight-sided and round-ended lower down and even-bottomed. At the SE end traces of a wooden coffin end, less than 40 cm in width, were observed. In the fill, slag and a piece of quartz were found.

Interpretation and dating: Judging by the location on top of the other graves, this must be a late grave. The coffin is rather narrow, which would indicate a child's burial in the Viking Age connections, but later the coffins of the adults were also quite small (LUISTARI I 27).

Grave 726

Location 136/79 Grave plan p. 72
Orientation NNW-SSE,
almost N-S Pl. 24:726
Size 205x75 cm,
bottom 180x50 cm KM 20607:411–417
Depth 70–90 cm

The grave was situated in the central part of the cemetery between the cairns, and with the digging of it graves 727, 730, 744 and 745 had been disturbed. It was beneath c. 25 cm of topsoil and almost as much mixed earth. The grave-pit had rounded ends, and there were some scattered stones at its S end. The bottom was uneven because of stones. Iron pieces, potsherds, burnt bones, slag and a stone disc (:417) were found in the fill.

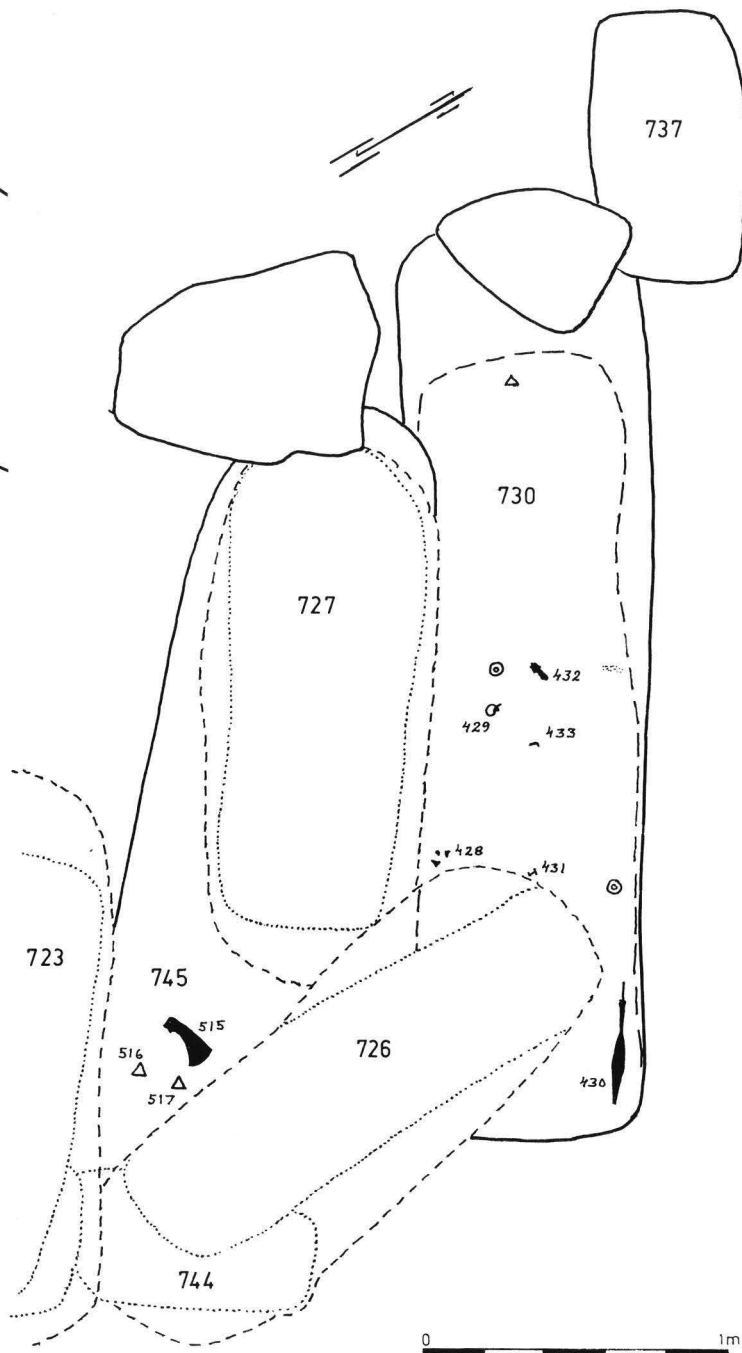
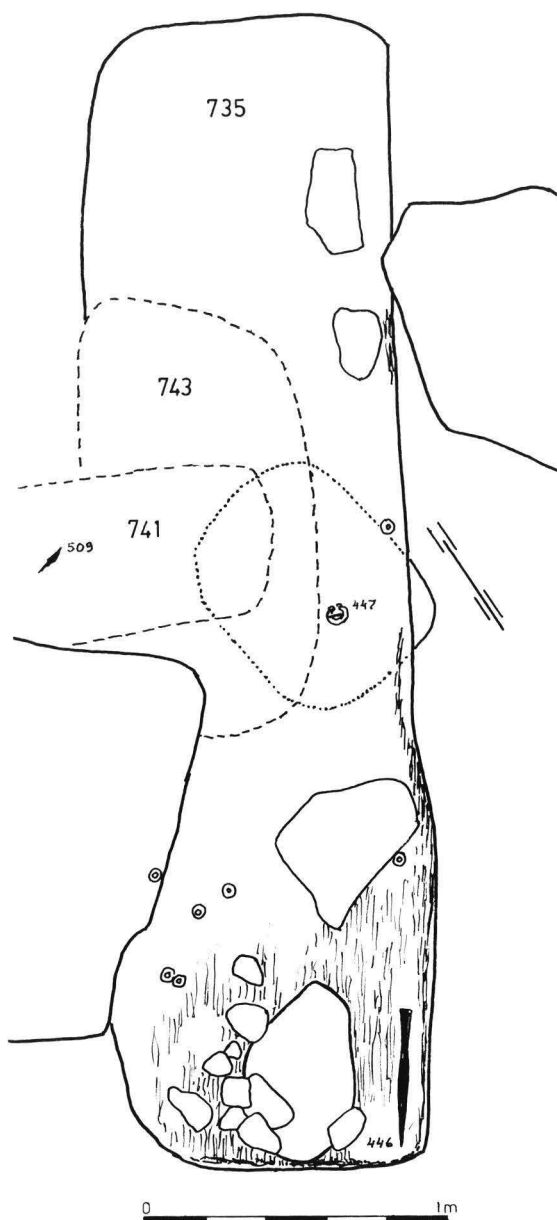
Interpretation and dating: This was one of the late graves with stone discs, definitely later than the Viking Age.

Grave 730

Location 135/81 Grave plan p. 72
Orientation NW-SE Pl. 24:730:1–3
Size 270x70 cm KM 23607:428–438
Depth 70–80 cm

The grave was situated to the NW of grave 726, and it had been slightly disturbed in digging graves 726 and 727. On top of it there was 20–25 cm of topsoil and about 15 cm of mixed earth. The grave-pit had almost straight sides and rounded corners in its upper parts, and on top of its NW end was a stone about 60 cm in diameter. On the bottom the earth was stony, so the pit there was irregular in form. At the E corner of the grave was a spearhead (23607:430), the point of which appeared about 20 cm higher up from the bottom. In the middle of the grave a fragmentary shepherd's crook pin (:429), an iron strap-tag (:432) and iron artefact fragments (:428,431,433) were found. In the fill were potsherds, burnt bones, slag and a stone flake. Of the corpse there was only a small amount of decomposed bone in the middle of the grave on the NE side. No traces of wood were observed.

Interpretation and dating: Judging by the spearhead this was a male burial. The spearhead is tanged with a tapering blade. Measuring 440 cm, it is the longest of its type found in Finland. The spearheads of the same type pre-



viously found at Luistari are all from the close of the Merovingian Period (LUISTARI II 22–23). This type of spearhead together with a shepherd's crook pin was also in graves 33 and 462. The strap-tag is of the same type, only more markedly shaped, as the one in grave 53 (LUISTARI I Plate 20:53:1).

Grave 734

Location 132/79 Grave plan p. 74
Orientation SSW-NNE
Size 250x85 cm, bottom 245x40–65 cm
Depth about 85 cm

The grave was situated in the middle of the cemetery, and it was almost completely under graves 728 and 729; it itself intersected grave 738 and a later pit on top of that grave. Above these there was 20–25 cm of topsoil and 15–20 cm of mixed earth. At the preserved SW end of

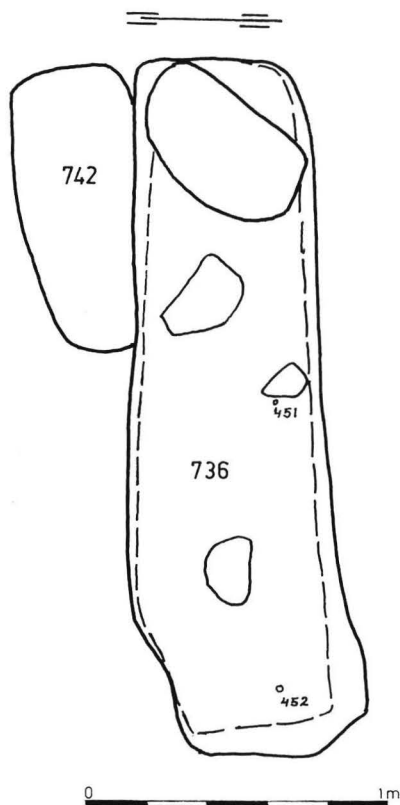
the grave stood an end stone about 40 cm in diameter and some smaller stones. The grave-pit narrowed to the bottom and it had rather sharp corners. No finds could be connected with this badly disturbed grave.

Interpretation and dating: No sex determination. This grave was later than grave 738 from the Viking Age, but it was not one of the latest graves in the cemetery.

Grave 735

Location 132/74
Orientation WNW-ESE Pl. 24:735:1–2
Size about 380x100 cm KM 23607:446–450
Depth 60–65 cm

The grave was situated in the central part of the cemetery



between the cairns, where there was 15–20 cm of topsoil and 20–30 cm of mixed earth. It had been damaged in digging graves 741 and 743. On top of the SE end of the grave there was a large stone and some smaller ones, and on its NE side some stones stood in upright position; possibly there had originally been a lengthwise row of them. The grave-pit was rather straight-sided with rounded corners, and the bottom was stony. On the bottom, especially at the SE end and on the NE side, there were distinct traces of wood, indicating a wooden lining in the grave despite the unevenness of the bottom.

In the E corner of the grave lay an iron spearhead (23607:446), and on top of a large stone in the middle of the grave bottom was a penannular brooch of bronze (:447). The latter lay upside down, and seemingly it was not in its original place, e.g. not all parts of its iron pin were found. There were no remains of the corpse, and the wooden lining had not been preserved at the NW end, which was probably due to the unusual shallowness of the grave-pit, caused by the stones on the bottom. Charcoal, slag and potsherds were found in the fill.

Interpretation and dating: The spearhead and the large penannular brooch indicate a male burial. The spearhead is a broad-tipped variant of Petersen's type E, the like of which were previously found in graves 80, 90 and 325. All these graves were dated to the middle Viking Age, 880–950 AD. The brooch is a richly decorated massive penannular brooch with faceted end knobs, 77x65 mm in size. A brooch of the same type, but still larger, was in grave 90, coin-dated to the second quarter of the 10th century (LUISTARI I 306:32, LUISTARI II 102, 185).

Grave 736

Location 128/77

Orientation almost W-E Pl. 24:736

Size 265x100 cm,

bottom 220x40–60 cm KM 23607:451–454

Depth 100–105 cm

The grave was situated in the central part of the cemetery, where there was about 20 cm of topsoil and about 30 cm of mixed earth. With the digging of it grave 742 had been damaged. On top of its W end stood a stone more than 60 cm high. The grave-pit widened to the E and narrowed towards the bottom, where it was rounded and slightly irregular in form. A bead (23607:451), a fragmentary bronze fitting (:452), potsherds and slag were found in the fill.

Interpretation and dating: No sex determination. The grave was apparently late, but it had an end stone, which means that Viking Age traditions had been continued in its construction.

Grave 737

Location 134/84

Grave plan p. 72

Orientation WNW-ESE

Size 90x50–55 cm

KM 23607:455

Depth about 55 cm

The grave was situated in the central part of the cemetery between the cairns, where there was about 15 cm of topsoil and about 30 cm of mixed earth. With the digging of it grave 730 had been slightly disturbed. On top of the middle part of the grave there was a stone 40–45 cm in diameter, and a charcoal patch under it. The grave-pit was rounded in the corners and even-bottomed. Only one potsherd was found in the fill.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. It overlay grave 730 from the last phase of the Merovingian Period, placing it to the Viking Age or later.

Grave 738

Location 133/79

Orientation WNW-ESE Pl. 24:738:1–2

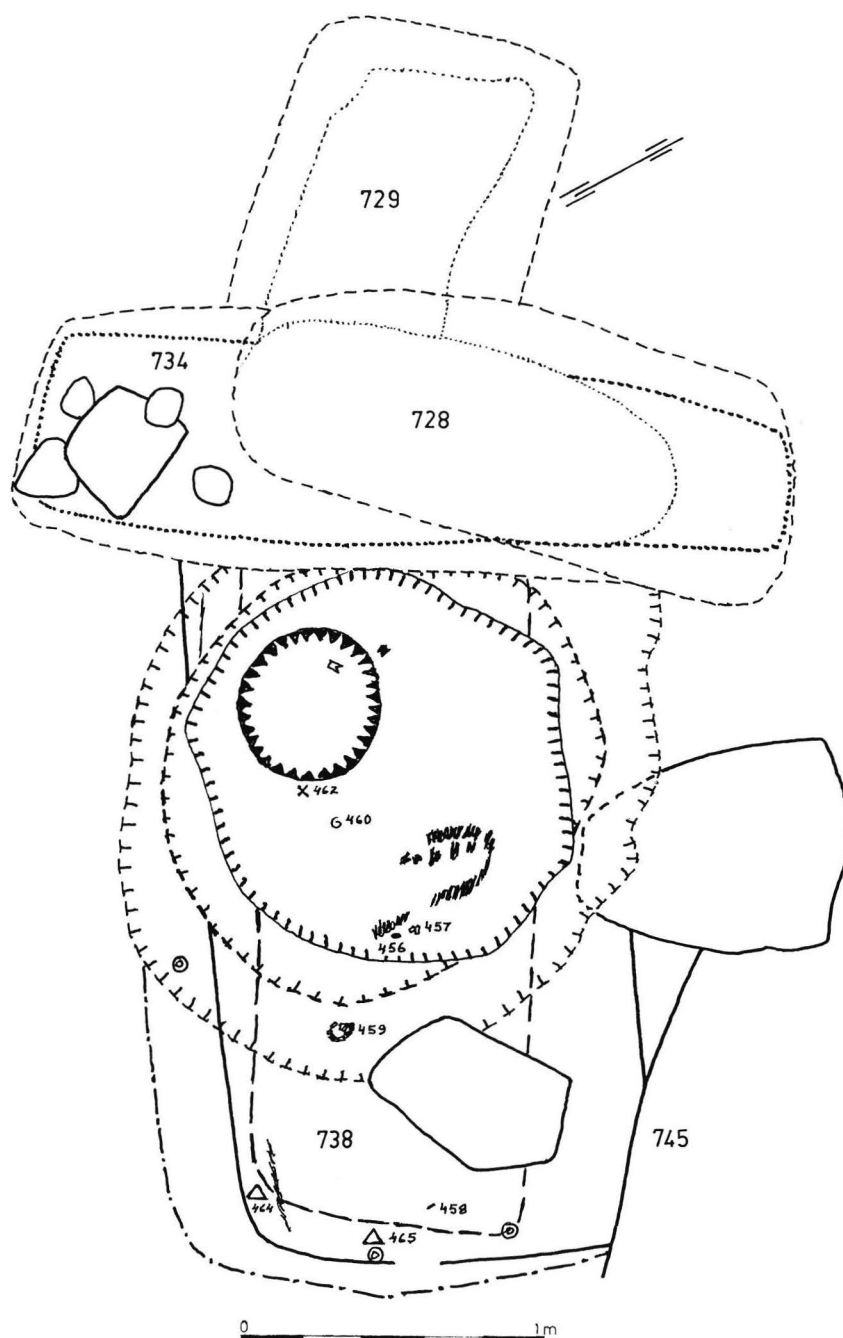
Size 240x160 cm,

bottom 225x85–90 cm

KM 23607:456–467

Depth 90–100 cm

The grave was situated in the central part of the cemetery, where there was 20–25 cm of topsoil and 15–20 cm of mixed earth. Its NW end had been destroyed in the digging of graves 725, 729 and 734, and an even-bottomed pit for some post, which reached almost 50 cm beneath the bottom level of the grave, had been dug through it. On top of the preserved NE end of the grave there was a stone, 30x60 cm in size, and at the sides of the grave-pit remains of a wooden construction 80 cm in width were observed. On the bottom, which slanted slightly to the NW, were an apron ornament fragment (23607:459) and a finger-ring of bronze (:460). Bronze spirals (:457), iron artefact fragments (:456,458), potsherds, burnt bones and



slag were found in the post-pit and in the fill of the grave. The post-pit was rather wide in its upper parts, but its bottom was only 50 cm in diameter, and it also contained charcoal, stones and an animal tooth which was completely decomposed.

Interpretation and dating: Judging by the apron ornament fragments this had been a woman's grave from the Viking Age. The spiral finger-ring has almost five turns and it is triangular in section, which indicates the earlier Viking Age (LUISTARI II 127, group I:3). Because the grave was so badly damaged, its more precise dating depends on its location.

Grave 739

Location 133/78

Orientation SSW-NNE

Grave plan p. 75

Size 135x80 cm,

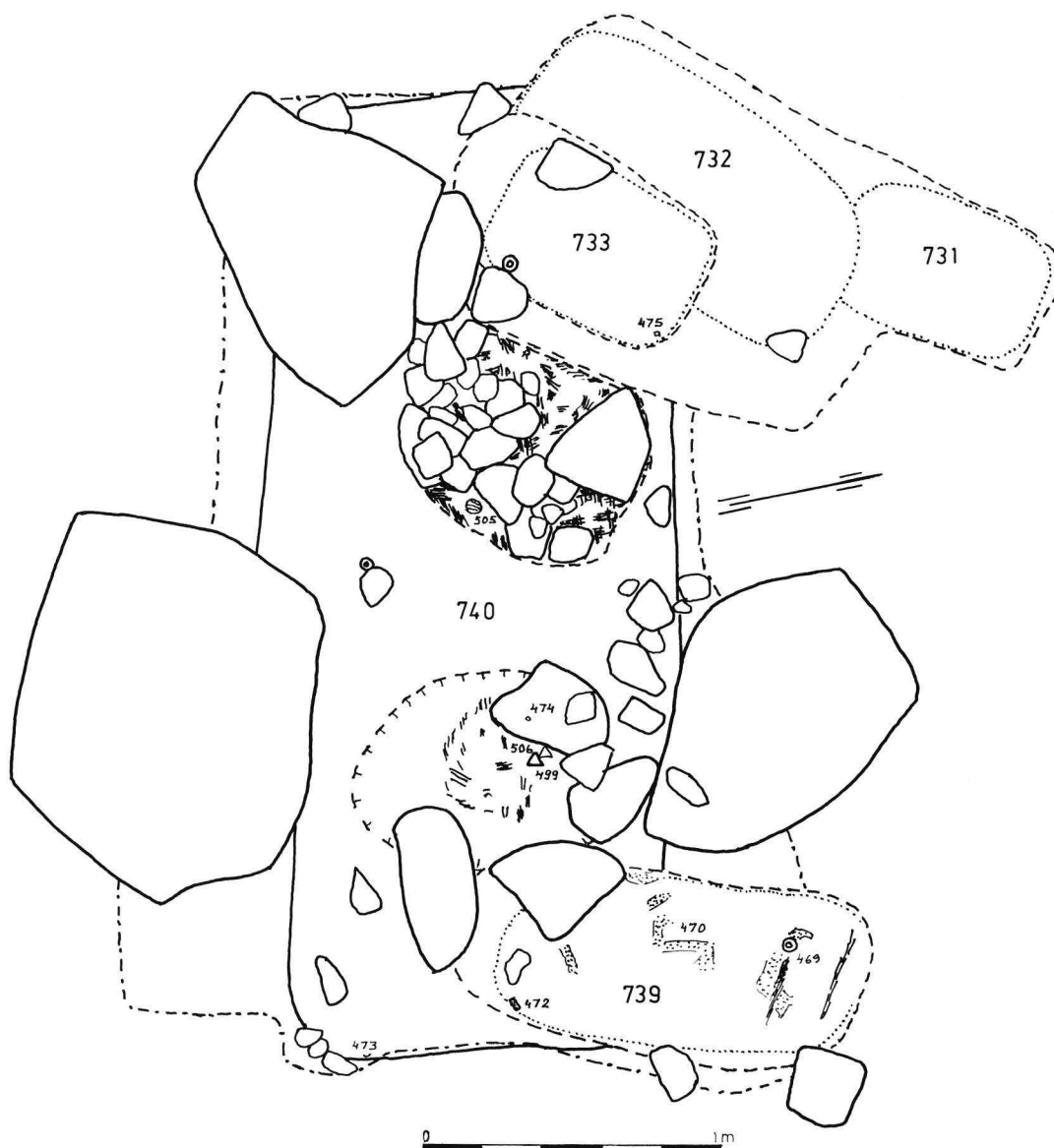
bottom 135x55 cm

Depth about 90 cm

KM 23607:468–472

The grave was situated in the central part of the cemetery on top of the NE corner of grave 740. The thickness of the topsoil layer was about 15 cm, and there was 25–30 cm of mixed earth under it. A couple of stones, 30–50 cm in diameter, were on top of the SW end of the grave. The grave-pit was oval in form, rather even-bottomed, and there were traces of wood at its NE end. Remains of a sheep (:23607:469,470), a fragmentary whetstone (:472), a potsherd and slag were found in it.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial, possibly from the Viking Age.



Grave 740

Location 131/77

Orientation almost W-E Pl. 24:740, 25:740:1-13

Size 320x160 cm,

bottom 300x110-115 cm KM 23607:473-507

Depth 80-90 cm

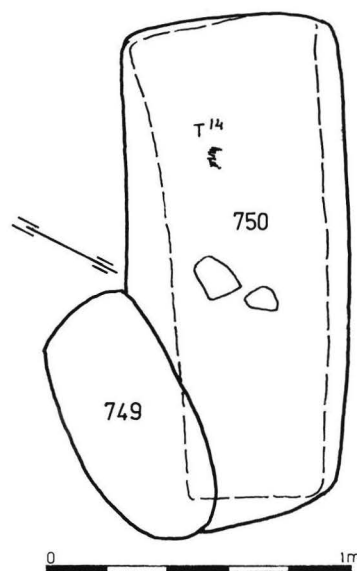
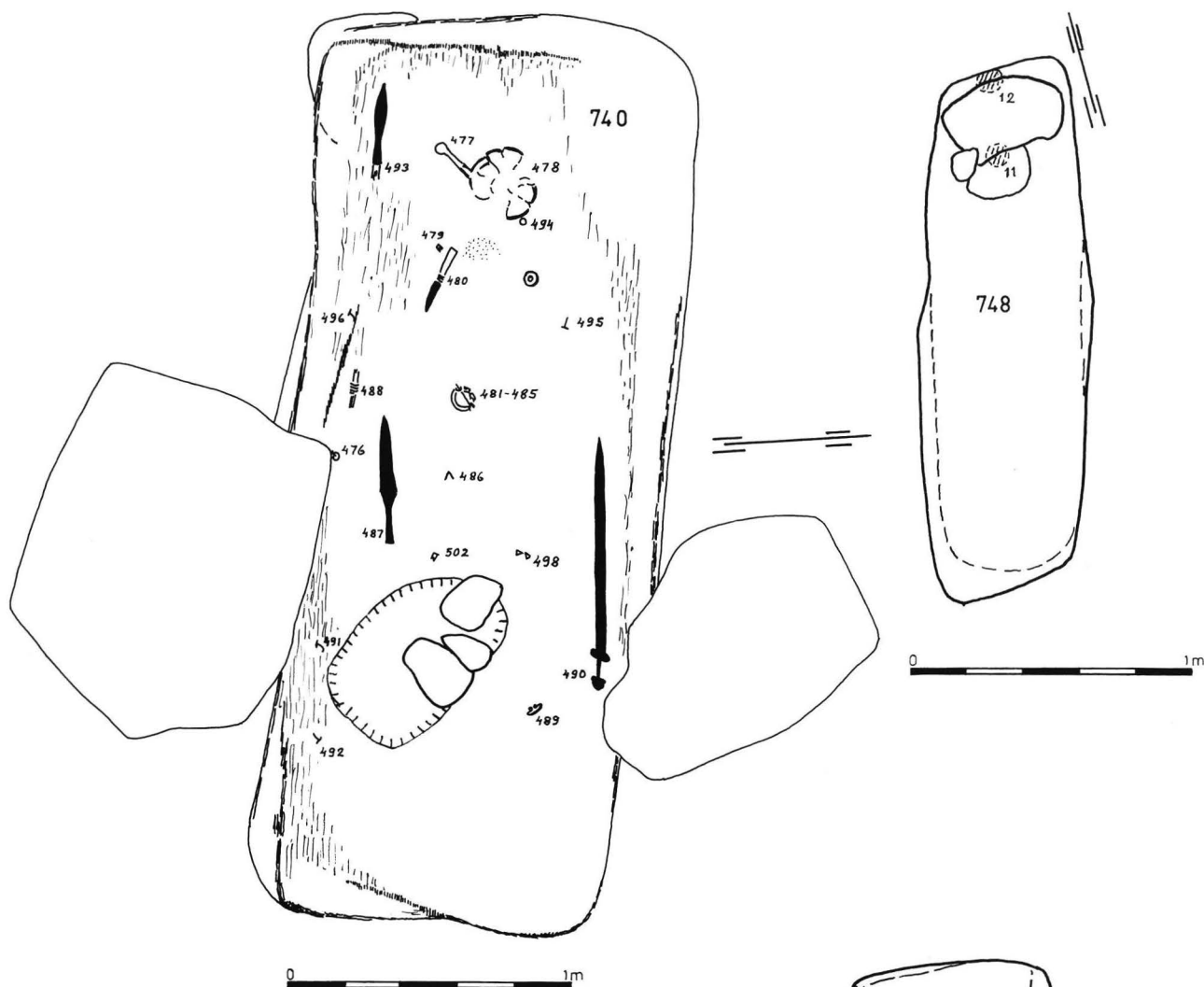
The grave was situated in the central part of the cemetery, where there was about 15 cm of topsoil and 25-30 cm of mixed earth. It had been damaged in the digging of graves 731-733 and 739, but none of these was as deep as it, not even the pit full of clay, stones and charcoal at the W end of the grave in which a stone disc (23607: 505) was found. On the other hand, at the E end of the grave there was another pit with soot and stones, extending about 20 cm lower than the bottom of the grave.

On top of the W end of the grave there was a large stone more than 1 m in diameter and reaching to the soil surface. On both sides of the grave-pit there were large fixed stones, but otherwise it had even sides and rounded corners. It was deepest in the middle and lined throughout with wood. The length of the chamber had been about

320 cm and the width 140 cm. In places, the wooden remains extended about 35 cm above the bottom level. This construction narrowed to the bottom, which was about 110 cm in width.

The corpse was almost completely decomposed, only a human tooth (:502) was found in the middle of the grave near the pit at the E end, and at the W end there were small traces of bone. On the S side, almost in the middle, was a large spearhead (:487), and another one (:493) was under the large end stone. A piece of the spear shaft, belonging to the latter, with a bronze ring (:488) was found near the large spearhead. Partly under the end stone were also shears (:477) and a clay vessel (:478). About 20 cm SE from these an iron knife with a preserved handle (:480) was discovered, and from this about 30 cm to the middle of the grave was a penannular brooch of bronze (:481) lying with the knobs downward.

On the N side of the grave, with the point to the W, was a sword (:490), and near its hilt a firesteel (:489) was found. About 50 cm to the middle from the latter there were flint pieces (:498). A spiral finger-ring (:476) was in the middle of the S side, another ring (:494) was found



near the clay vessel. On the S side of the grave there were three iron nails (:491,492,496), on the N side there was only one (:495), and near it small pieces of iron (:497) were observed.

In the top layers of the grave an iron plate fragment (:473), a bead (:474) and a silver coin piece (:475) were found, and in the fill there were potsherds, burnt clay and bones and slag. On the bottom of the later pit dug through the grave were a potsherd and a piece of slag (:506,507).

Interpretation and dating: The weapons indicate a male burial. The sword is of Petersen (1919) type H, dated mainly to the period 800–950 AD (Kivikoski 1973 112 fig. 831). One of the spearheads is a short and broad variant of Petersen type E (LUISTARI II 25–26), while the other one is of Petersen type F (Lehtosalo-Hilander 1985 14), which together with the sword gives a date to the end of the 9th or the beginning of the 10th century (cf. Kivikoski 1963 110). The large penannular brooch with pegs and a decorated silver plate on top of the ring fits well in this connection (Lehtosalo-Hilander 1990 63–66, fig. 7). The most probable date for the grave is the first half of the 10th century.

Grave 741

Location 131/74	Grave plans pp. 72, 89
Orientation SSW-NNE	Pl. 26:741
Size about 280x50–70 cm	KM 23607:508–512
Depth 85–105 cm	24388:2–6

The grave was situated in the middle of the cemetery

partly on top of graves 735, 743 and 789, where there was 15–20 cm of topsoil and 20–30 cm of mixed earth. Graves 788 and 792 were on top of the S-end of this grave. The grave-pit was rather regular at its N end, but at the S end there were some stones on the bottom. It was deepest in the middle. Bronze spirals (23607:508, 24388:3,4), an iron knife (23607:509), a knife fragment (24388:2), a potsherd, slag and skull bones and teeth of a calf (23607:510,511) were found in it.

Interpretation and dating: No actual sex determination. The great length of the grave-pit could indicate a man. The finds were probably from the older graves damaged when this one was dug.

Grave 745

Location 136/78	Grave plan p. 72
Orientation NW-SE	Pl. 26:745
Size 275x85 cm ?	KM 23607:515–518
Depth about 65 cm	

The grave was situated near cairn 698, where there was about 25 cm of topsoil and 20 cm of mixed earth. It had been badly disturbed in the digging of later graves. At least graves 726, 727 and 744 were on top of it, possibly also grave 723. In digging this grave the SW side of grave 730 had been slightly damaged. The grave-pit had been long and narrow with rounded corners and its bottom slanted a little to the SE. As grave 727 had been dug almost completely on top of this, only the southernmost corner had been preserved. An iron axe (23607:515) and some potsherds (:516,517) were found in it. On the SW side of the grave near the surface there was a piece of slag (:518).

Interpretation and dating: Probably a man’s grave. The axe is straight-backed and of a type, which is very common in Finland. According to Kivikoski (1973 117 fig. 877), about 110 specimens have been found. Vuolijoki (1972 22–23) includes in her group “the straight-backed Finnish axes” only 52 similar artefacts, and she is of the opinion that the type was in use throughout Viking Age. The axe in grave 745 has only small flanges on the shaft-side, which can possibly indicate the earlier Viking Age.

Grave 746

Location 137/77	
Orientation SSW-NNE	Pl. 26:746
Size at least 150x70 cm	KM 23607:519
Depth about 70 cm	

This grave was situated to the S of grave 745 in the area near cairns 698–700, where there was 20–25 cm of topsoil and about 20 cm of mixed earth. It had been disturbed in digging graves 723, 724 and 725. In the middle of the grave, about 25 cm above the bottom level, there was a stone setting, about 40 cm in diameter and made of six stones. The grave-pit had rounded corners and an even bottom. A stone disc (23607:519) was found in its fill.

Interpretation and dating: No actual sex determination, but the small size of the grave-pit indicates a child’s or a woman’s burial. Apparently this was not one of the lat-

est graves, although it was furnished only with a stone disc (23607:519).

Grave 748

Location 129/75	Grave plan p. 76
Orientation SSW-NNE	Pl. 26:748:1–2
Size 180x60–65 cm,	
bottom 180x55 cm	KM 24388:11–13
Depth 50–60 cm	

The grave was situated in the middle part of the cemetery, where there was about 35 cm of topsoil. In its upper parts the grave-pit had outward-curving sides, but on the bottom the sides were straight, and the ends were rounded. An immense fixed stone was under the S end of the grave, and therefore the pit was deeper at the north end. At this end on the bottom, a thin stone slab lay horizontally, and under it two stone discs (24388:11,12) were found. There was slag in the fill.

Interpretation and dating: No sex determination. This is one of the graves testifying that the stone discs were actually associated with funerary rites.

Grave 750

Location 126/80	Grave plan p. 76
Orientation WSW-ENE	
Size 170x70 cm,	
bottom 160x50–65 cm	KM 24388:14
Depth 115–125 cm	

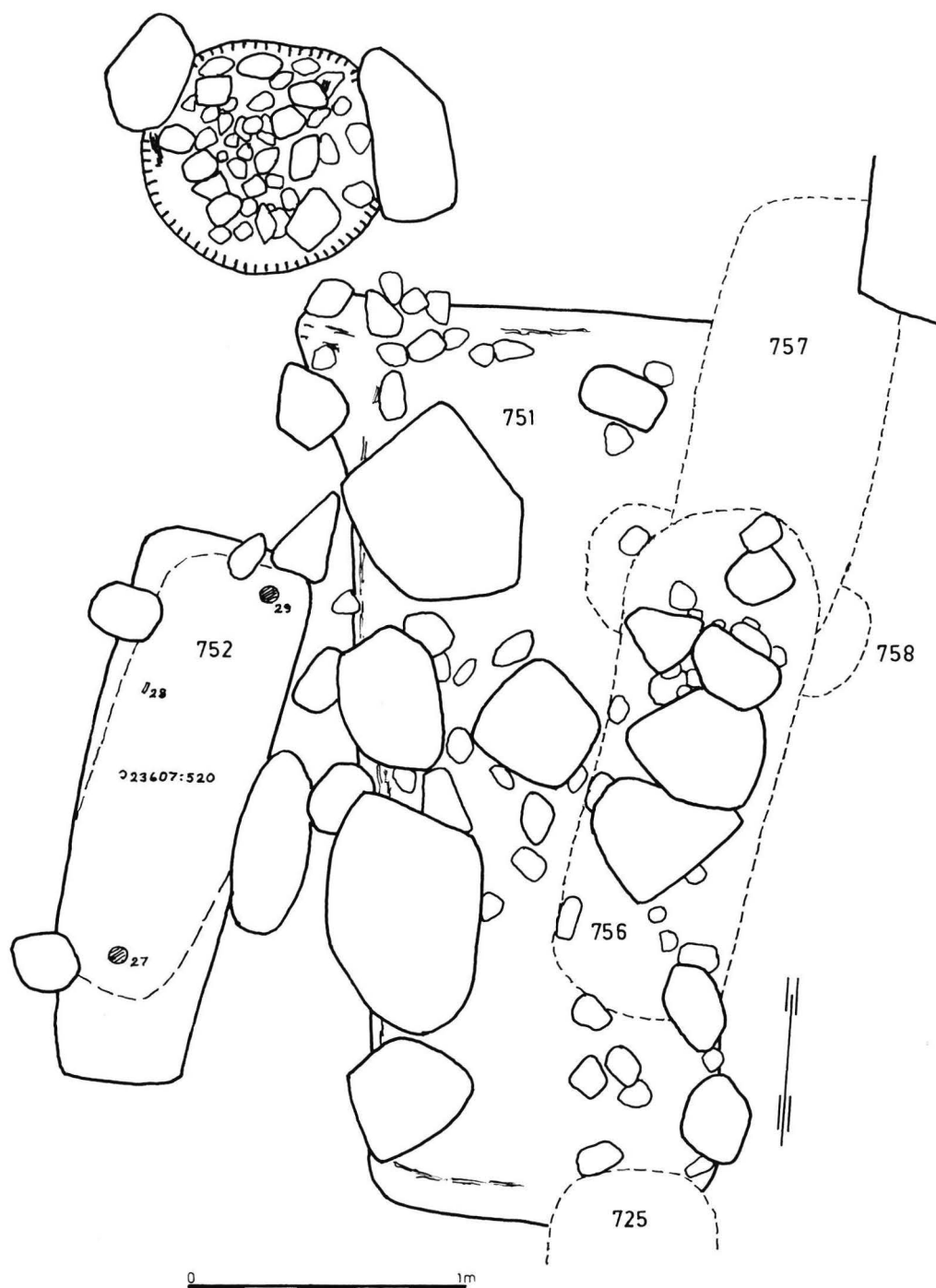
The grave was situated in the middle of the cemetery, where there was about 50 cm of topsoil and 10–15 cm of mixed earth. Grave 749 had been dug on top of its SE corner. The grave-pit had straight sides and slightly rounded corners in its upper parts, but on the bottom it was sharp-angled and broadened to the SW end. It was deepest in the middle. Only one nail (:14) was found in the southern part of the grave about 35 cm above the bottom. Near it about 5–10 cm deeper down in the ground there was charcoal.

Interpretation and dating: Judging by the size of the grave-pit this could hardly have been a man’s grave. It was apparently of late date.

Grave 751

Location 136/75	
Orientation S-N	Pl. 27:751:1–6
Size 335x125 cm,	
bottom 310x120 cm	KM 24388:15–26
Depth 60–70 cm	

The grave was situated in the middle of the cemetery near cairns 698–700, where there was 20–30 cm of topsoil and 20–25 cm of mixed earth. Graves 725, 756, 757 and 758 had been dug on top of it, but its finds had remained in situ. There had probably been two rows of large stones on its surface, but only the eastern one of them was intact, the western one had been destroyed in digging later graves. The grave-pit had almost straight sides and rounded corners. The bottom was even in the middle, but it slanted at the sides.

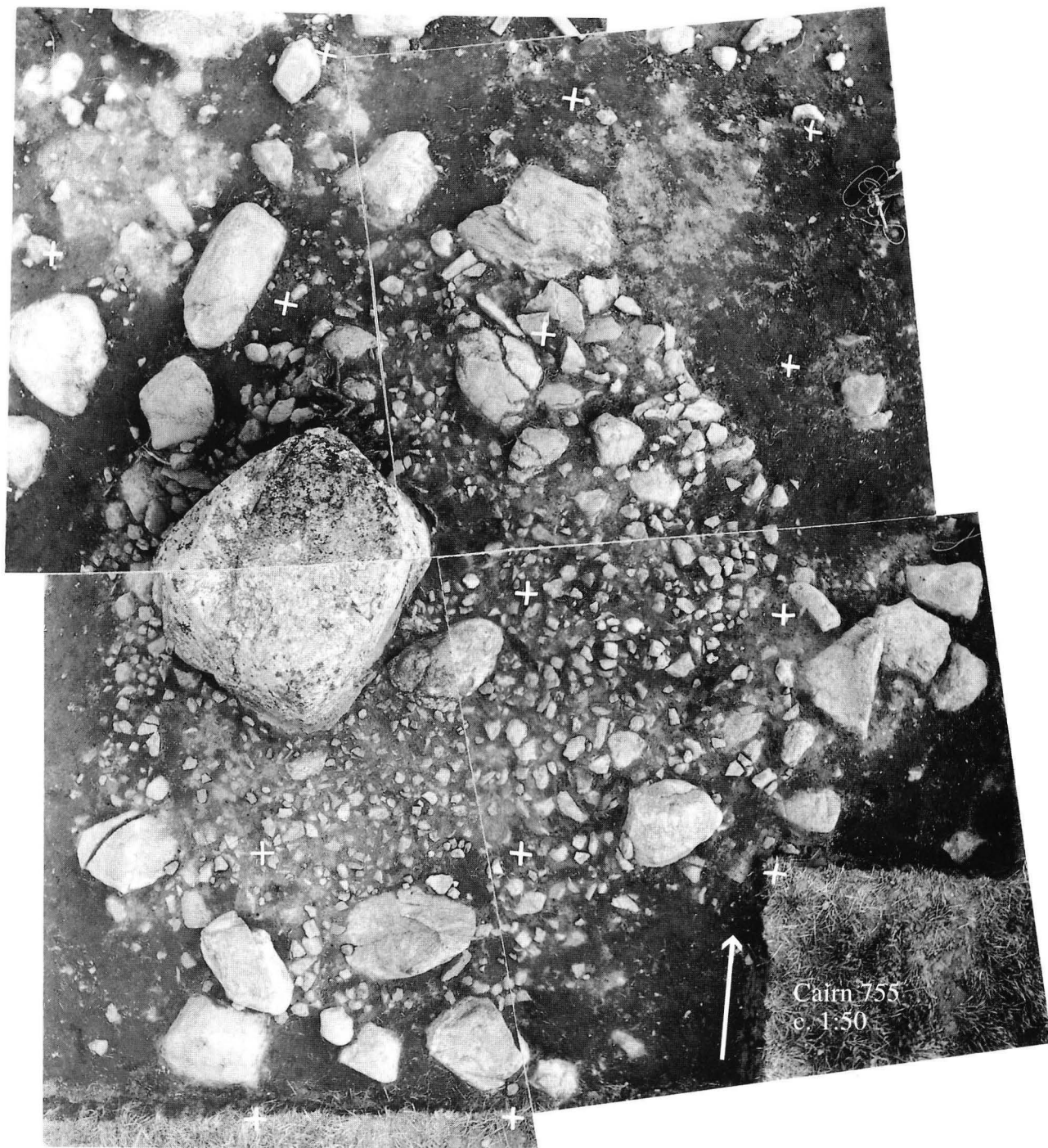


As soon as the top layers had been removed, a charcoal patch, 65x35 cm in size, was observed at the N end of the grave, and lower down it was discovered that almost all the preserved walls of the grave chamber were charred. In the middle of the N end the layer of charcoal was more than 25 cm thick, and it is possible that these traces were from some wooden artefact, and not only from the cover of the grave chamber, about 300x110 cm in size. The charcoal traces of the chamber walls reached to the height of 15–20 cm above the bottom level, but the large stones, one of which was 80x50x40 cm in size and extended to the soil surface, were on top of it and had crushed it especially at the N end.

The deceased was lying in the middle of the grave head in S. The E end of the grave 758 had been dug on top of the head part of the corpse so that only small scattered

pieces of the skull and a couple of teeth had been preserved. To the NE of these a bronze penannular brooch (23607:18) was found, and still 10–15 cm further to the same direction was a scythe (:17). At the S end of the grave in the middle were two iron rings (:20), and in the SE corner was a spearhead (:16). Another spearhead (:15) was found in the NW corner of the grave-pit. About 50 cm to the SE from it, in the charcoal patch mentioned above, were small shears (:19). Several lumps of slag were found at the same level as the finds, but only three potsherds and a burnt bone splinter were found in the fill. All the actual finds were discovered in a layer 10 cm thick.

Interpretation and dating: The weapons and the penannular brooch indicate a male burial. The brooch has peg-ornamented knobs and an iron pin joined to the ring



The grave was situated in the middle of the cemetery, where there was about 40 cm of topsoil. In digging this grave the W corner of grave 747 had been damaged. On top of the middle part of the grave there was a small stone group, and to the NE of this and between the stones there were decomposed horse bones (24388:39). The grave-pit broadened slightly to the SW and shortened to the bottom, which was uneven because of stones. A fragmentary iron knife (:35), potsherds, burnt bone splinters, slag and flint were found in the fill.

Interpretation and dating: No sex determination. The finds were in the fill except the horse bones, which were in connection with the stone setting. Apparently this was a late grave.

Grave 755, a cairn

Location 126/62

Size 7x6 m

Height 40–60 cm,

central stone 170 cm

Pl. 68:755:1–3, 69:1–21

KM 24388:42–127

Cairn 755 was situated in the S part of the cemetery area, to the SW of the highest part with cairns 698–700. It was slightly angular in form, rounded on the surface, and it

had an imposing central stone in the middle. It was over a meter in diameter, almost cubical in form with a rather even upper surface. There was no actual laid perimeter of stones. A few of the large stones along the edges were brought to their places; others were fixed.

Only a thin turf layer covered the stone setting, the surface of which had been made of rather small stones and earth. Below this layer the stones were bigger, and especially on the NE side of the cairn there was a great number of red sandstone slabs. On the E side of the central stone the setting contained the largest amount of charcoal and was also the thickest, and most of the finds were discovered there in an area of about 4 m². More than 1,650 g of burnt bones were collected, part of them from two concentrations beneath the stones, in which also an ornamented bone artefact fragment (24388: 47) and a bronze fragment (:46) were found. About a meter to the S of the southernmost bone concentration, at the bottom of the cairn, was a piece of a bronze rod (:48), and about 40 cm from it a point fragment of a bronze spearhead (? :49) was found.

On the NW side of the central stone there was an iron artefact fragment (:42), and on the NE side another one (:44) was found. To the SW of the central stone a rather large potsherd with a pointed shoulder (:45) was discovered, and to the NE of the same was a large sherd with two rows of ornamental pits (:118). Otherwise the greatest amount of potsherds (:83–88) was found in the E part of the cairn. Also the bovine bones (:77) and the most of the slag, totalling 4,213 g, were collected from this side of the central stone. The earth under the cairn was burnt red in places, but there was not so much charcoal that a cremation pyre could have been burnt at that place.

Interpretation and dating: This cairn contained a cremation burial. The potsherd with a pointed shoulder is from a clay vessel resembling the vessels of the Lausitz culture. Unto Salo (1981 315–317) has called these “the vessels of the bowl type”, and he enumerates nine vessels of the type from Satakunta and three find locations elsewhere in Finland. According to him, similar vessels are known from Sweden ever since period IV of the Bronze Age and they were common during periods V and VI. He is of the opinion that the Finns obtained the type from Uppland in Sweden. Also pointing to the late Bronze Age is the small bronze rod fragment, with serial twists. Similarly decorated neck rings are dated from the late Bronze Age to the early Iron Age (Stenberger 1971 273–274). A Carbon 14 analysis of charcoal in cairn 755 gave the result 2985+/-75 BP (1308–1078 cal BC, Hela-133). The iron fragments and the iron slag found in the cairn indicate that this result can hardly give the date of the burial.

Grave 756

Location 135/75 Grave plans pp. 78, 79
Orientation SSW-NNE
Size about 185x65–70 cm KM 24388:128–131
Depth about 75–85 cm

The grave was situated on top of grave 751 and in dig-

ging it also graves 757 and 758 had been disturbed. Some large stones were on top of its middle part, but these had probably been originally on the W side of grave 751, through which this grave had been dug. The grave-pit was oval in form, and the bottom slanted slightly to the S. Remains of a skull, a radius and an ulna of a horse (24388:129) and pieces of a bovine skull (:128) were found at the S end of the grave, and slag and a piece of flint were collected in the fill. There was also charcoal in the grave.

Interpretation and dating: No sex determination. This grave overlay the others, and it is possible that it had been dug for animal bones only.

Grave 757

Location 135/73 Grave plans pp. 78, 79
Orientation almost S-N
Size 160x65–75,
bottom 150x70 cm KM 24388:132–135
Depth 85–105 cm

The grave was on top of grave 758 and of the SW corner of grave 751, and its N end had been damaged in the digging of grave 756. The grave-pit was almost oval in form and its bottom slanted to the S. On the bottom, about 50–60 cm from the S end, there were slight traces of a human skull. The corpse had been no more than about 100 cm long. A tooth of a dog (:132) and a tooth of a horse (:133) were much higher up in the fill, in which also charcoal, slag and some burnt bone splinters were found.

Interpretation and dating: This must have been a grave of a child, possibly from the Viking Age.

Grave 758

Location 135/73 Grave plans pp. 78, 79
Orientation WNW-ESE
Size about 105x45 cm KM 24388:136
Depth 65–70 cm

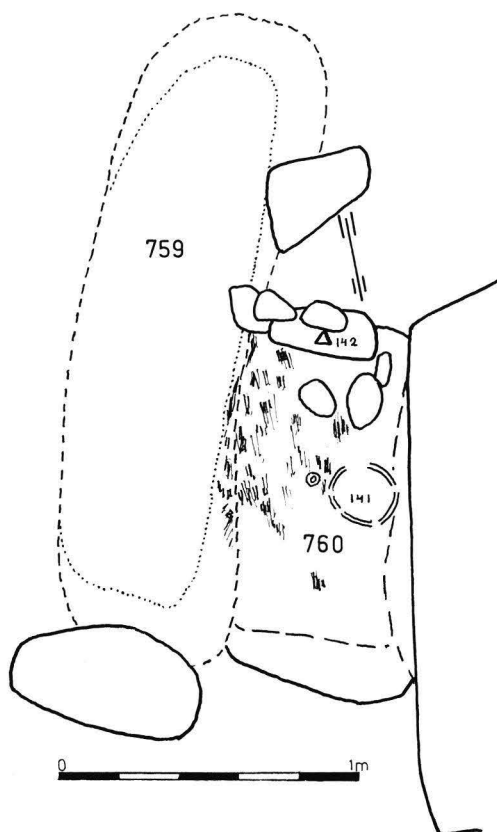
The grave was on top of the SW part of grave 751 and it had been destroyed almost completely in digging graves 756 and 757; only both ends had been preserved. The grave-pit had been oval in form and probably even-bottomed. At the E end, in the digging of which the skull in grave 751 had been smashed, a lump of iron slag was found, but no other finds were observed.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. It was later than grave 751 from the beginning of the Viking Age but earlier than graves 756 and 757.

Grave 760

Location 135/71
Orientation SSW-NNE Pl. 27:760
Size 130x65 cm,
bottom 100x50 cm KM 24388:141–147
Depth about 75 cm

The grave was situated only 3–4 m to the W of cairn 700, close to a large fixed stone. Grave 759 had been dug on



Grave 765

Location 136/67

Orientation SSW-NNE Pl. 28:765:1–8, 29:765:1–4

Size 270x110–130 cm,

bottom 265x120 cm KM 24388:158–194

Depth 80–90 cm

The grave was situated in the central part of the cemetery, slightly on top of the E corner of grave 764. In digging it an older hearth had been damaged so that only a strip of 20–40 cm had been preserved between graves 765 and 766. On top of the grave there was a distinct stone setting with the uppermost stones about 20 cm below the actual ground surface. At the SW end of the grave there was a group of several large stones, at the NE end only one stone of about 60 cm in diameter. The grave-pit had rather straight sides and rounded corners, the bottom was uneven because of stones. Birch bark was observed on top of the ornaments, but there were no remains of a coffin or a burial chamber. The fill contained a large amount of charcoal, probably because the grave had been dug on top of the above-mentioned hearth. Also potsherds, pieces of burnt clay and slag were observed in it.

The deceased was lying in a supine position, head to the SW. According to the bone remains, the right arm of the deceased was bent on the chest, the left arm from the elbow upwards next to the upper arm, and the legs were somewhat spread apart. On the basis of these traces the deceased had been about 160 cm tall. There was a bronze neck ring (24388:178) around the neck of the deceased, and also a necklace made of 8 bronze spirals and 7 pendants (:185). In connection with these there was some birch bark, textile remains and probably some hairs of

top of its SE side. At the SW end of the grave there were some stones in a row, and a charcoal patch, about 60x50 cm in size and about 25 cm deep on the SE side, covered its surface. These charred traces were possibly remains of a small coffin. To the W of them a clay vessel (24388:141) was found. Between the stones at the SW end there were sherds of another clay vessel (:142), and in the fill slag, burnt clay, a burnt bone splinter and a couple of pieces of quartz were found.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The clay vessel is of group II:1d, which points to the earlier Viking Age (LUISTARI II 80).

Grave 764

Location 136/68

Orientation SSW-NNE Pl. 27:764

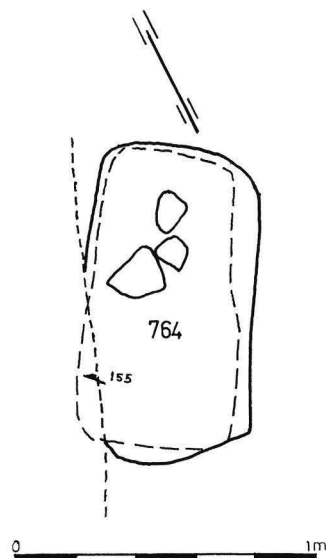
Size 110x60 cm,

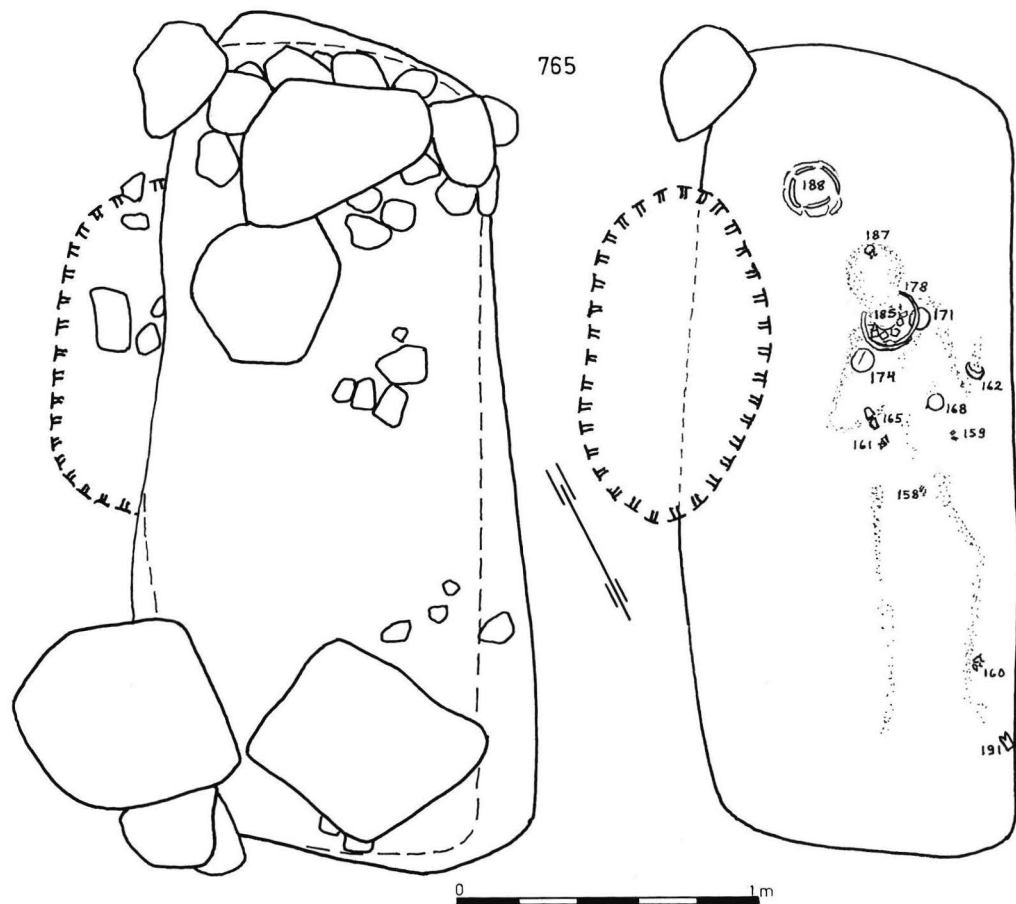
bottom 100x40–50 cm KM 24388:155–157

Depth 75 cm

The grave was situated about 4 m to the SW of cairn 700, and was beneath c. 50 cm of topsoil. The grave-pit broadened slightly to the NE, and there were three stones at the SW end in the fill. The bottom was even. The only finds were a worn iron knife (24388:155) near the E corner of the grave, a potsherd (:156) and some slag in the fill.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The finds are not datable.



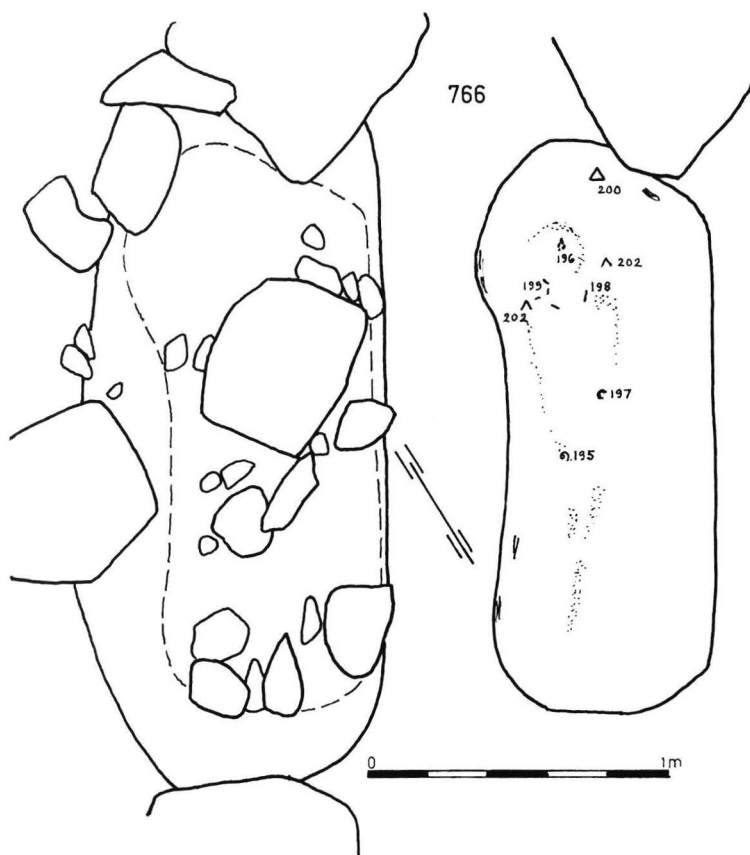


the deceased. On the left shoulder under the neck ring there was a round brooch (:171), and another one (:174) was found on the right a bit lower on the chest; this was upside down. Yet a third brooch (:168), smaller than these, lay on the lower part of the chest close to the left elbow. There was a bracelet (:162,165) around both wrists, but the finger-ring (:187) found under the skull could not have been on a finger; its distance from the elbows was about 60 cm. Two apron corner ornaments (:159, 161) were found on the waist, but only one ornament of the apron hem (:160) was found on top of the left shin-bone. Hairs of some animal were entangled with this object. At the foot end of the grave, in its N corner, fragments of animal teeth were observed, and to the S of the head of the deceased a clay vessel (:188) was found.

Interpretation and dating: Judging by the ornaments this was a female burial. The brooches are variants of the Finnish round brooches of types A and B. The shoulder brooches are of the same size as the B-type brooches (70–73 mm), the third one is like the brooches of type A (57–59 mm). None of them is of good craftsmanship. Brooches of these types were previously found in the Luistari graves 55, 73, 95, 180 and 294, which were all dated to the earliest Viking Age (800–880 AD, LUISTARI II 93–94, 184–185). A similar necklace with spirals and

knot-cross pendants was also in grave 55, knot-cross pendants with glass and bronze beads in grave 95. In the last-mentioned grave there were bracelets of the same massive type widening to the ends as the ones in this grave, only ornamented differently; while in this grave the bracelets are decorated with crescent stamps, the arm rings in grave 95 have lozenge figures. There is no essential chronological difference between these two ornamental motifs, at least both appear during the 9th century. That century is also indicated by the clay vessel with its form group I:1b and wavy line decoration. The finger-ring has double spiral ends, and thus it is of the only artefact type, which in earlier connections at Luistari was dated not earlier than the 10th century (LUISTARI II 142, 119–121, 84, 127).

The most curious artefact in this grave was the bronze neck ring. It is otherwise like the common loop-ended neck rings of three plaited rods (Kivikoski 1973 99–100 fig. 727), but one of the ends do not end in a loop. The ending is like a clumsy animal head with peg-formed eyes and long snout, which turns back to form another stylized open-mouthed animal head. There is no counterpart to this artefact in Finland, and I have not found any parallels in the archaeological literature of the neighbouring countries.



Grave 766

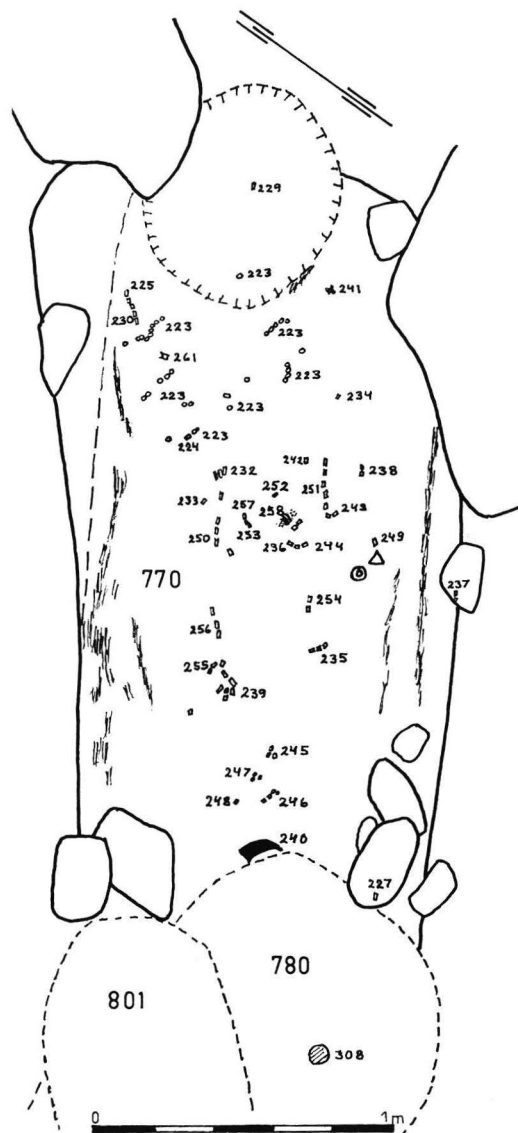
Location 137/67

Orientation SSW-NNE Pl. 27:766:1-3

Size 220x100 cm,
bottom 190x70-80 cm KM 24388:195-204
Depth 70-80 cm

The grave was situated directly to the E of grave 765, and on the top they were hardly distinguishable. A stone setting of about 10 stones and a diameter of 40-65 cm covered the middle part of the grave. The highest stones in it were observed no more than 15 cm below the ground, although the topsoil was about 50 cm thick above the grave surface. The grave-pit had rounded corners, but it was slightly irregular in form because of many stones in the ground. What was left of the deceased was a piece of the skull in the S corner of the grave, some bones of the lower limbs and a finger bone preserved within a spiral ring (24388:195) in the middle part of the grave. In addition to these only pieces of an iron object, potsherds, some burnt bone splinters, slag, pieces of flint and quartz were observed in the grave-pit. The fill contained a large amount of charcoal because the grave had been dug on top of the same hearth as grave 765.

Interpretation and dating: Judging by the size of the finger-ring this was a woman's grave. The bronze spiral finger-ring has seven turns and its diameter is 16 mm. It is of round section (group I:1), which points to a period later than the earlier Viking Age (LUISTARI II 127).



Grave 768

Location 132/68

Orientation SSW-NNE

Size 220x35-45 cm KM 24388:210-214
Depth 50-65 cm

This grave was situated in the central part of the cemetery, 4-5 m to the W of graves 764-766, where there was about 40 cm of topsoil. In digging it the SE side of grave 804 had been slightly damaged. The grave-pit was very narrow, slightly broadening to the N, and there was a lot of large stones on the bottom. It did not seem suited to burial, but two nails were found in the pit, one of them (24388:210) at the N end, the other one (:211) in the middle of the E side of the grave. There were also bovine tooth fragments (:213) at the N end in upper part of the pit. A potsherd, slag and small charcoal pieces were also found in the fill.

Interpretation and dating: The grave bottom was so uneven that there hardly was a burial in the pit. The nails and other finds must have come into it with the filling earth.

Grave 769

Location 132/71
Orientation SSW-NNE
Size about 200x70 cm KM 24388:215–222
Depth 70–100 cm

The grave was situated only 2–3 m to the N of grave 768, on the W side of a large fixed stone, where there was 35–40 cm of topsoil. On top of it there were charcoal and fragments of a bovine skull and teeth and also a couple of teeth of some other animal, possibly sheep or goat (24388:217–220). Some large stones were observed in the fill. In digging the oval grave-pit the N ends of graves 802 and 818 had been destroyed. A couple of potsherds, slag and two pieces of a whetstone (:222) were found in the fill, but no traces of the corpse were observed. The grave bottom was uneven because of a large stone.

Interpretation and dating: No sex determination. Judging by all features, this was a late grave.

Grave 770

Location 127/66 Grave plan p. 84
Orientation SW-NE Pl. 30:770:1–3
Size about 250x120 cm KM 24388:223–263
Depth 55–60 cm

The grave was situated close to the N side of cairn 755, where there was about 35 cm of topsoil. Its NE end had been damaged in digging grave 780, and its S corner was intersected by an almost round pit, about 60 cm in diameter. Because of these operations, the furnishings were partly scattered. The long sides of the grave-pit were slightly curved outside, and there were charred traces along them. The bottom was quite even. Of the corpse there were only one tooth preserved in the S corner of the pit, finger bones in connection with a spiral finger-ring (24388:258) in the middle of the grave, and slight bone remains at the foot end near the spiral ornaments (:239). The parts of the neck band (:223) at the SW end of the grave were in pieces which showed that the neck band had been made partly of beads and partly of bronze spirals, and there had been also beads fixed in bronze rings. Most of the spirals (:224–227, 229–239, 241–247) originated, however, from clothing, most probably from an apron. In the NE-most part of the grave there was a sickle fragment (:240), and a couple of potsherds, burnt clay, burnt bone splinters and slag were found in the fill.

Interpretation and dating: Judging by the neck band and the apron this was a female burial. All the previously found graves at Luistari with bronze spirals as parts of the neck band and spiral finger-rings of triangular section seem to have been from the earlier phase of the Viking Age (LUISTARI II 129, 127). That is probably also the dating of this grave.

Grave 772

Location 123/65 Grave plan p. 88
Orientation SSW-NNE
Size 105x45–55 cm KM 24388:267–268
Depth 65–70 cm

The grave was situated in the middle part of the cemetery, where there was 40–45 cm of topsoil. Grave 785 overlay a part of its SW end. On top of its NE end there were two stones, 25–45 cm in diameter, and a smaller one. The grave-pit was somewhat broader at the NE end and even-bottomed. Potsherds and slag were found in the fill, but the burial was unfurnished.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. Because it was beneath grave 785, dated to the earlier Viking Age, it must be from that time or earlier. Early Viking Age date is probable, because there were no Merovingian Period graves near it.

Grave 773

Location 130/63
Orientation S-N
Size 210x60–100 cm,
bottom 165x45–55 cm KM 24388:269–273
Depth 95–110 cm

This grave was situated to the E of cairn 755, where there was about 40 cm of topsoil. On top of it was a central group formed by a couple of stones. The grave-pit was elliptical in form, broadening slightly to the S, where it was also slightly deeper. There were no traces of a coffin or a corpse, but at the S end, about 50 cm above the bottom, there were cattle teeth (:272), and potsherds, burnt clay, a burnt bone splinter and slag were collected from the fill.

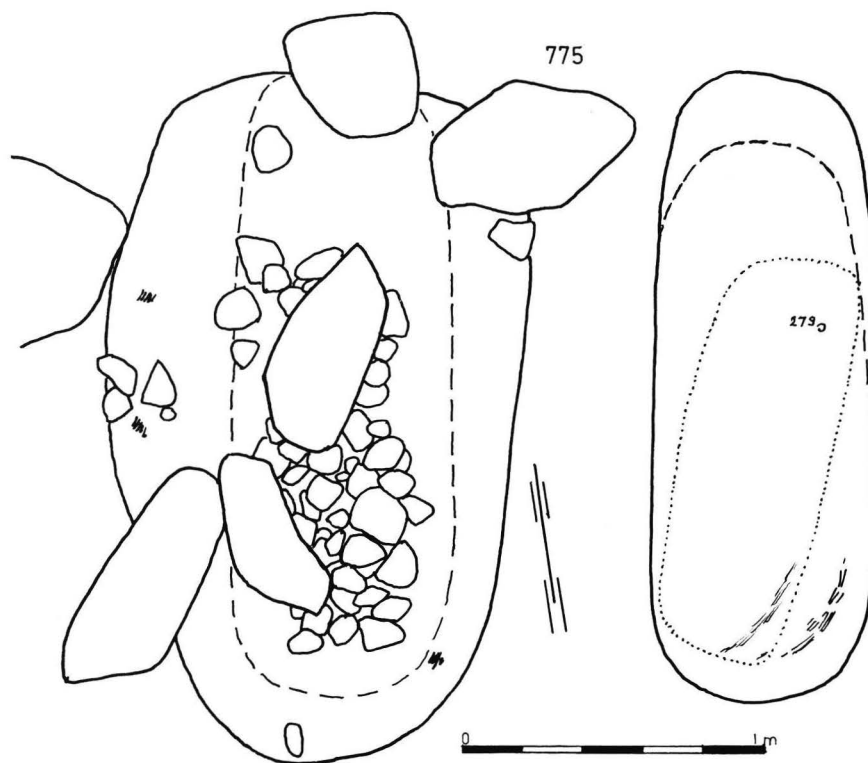
Interpretation and dating: No sex determination. Possibly a late grave.

Grave 774

Location 139/66
Orientation SSW-NNE
Size about 200x80–85 cm KM 24388:274–278
Depth about 100 cm

The grave was situated to the N of grave 773, where there was about 40 cm of topsoil. Grave 809 had been dug on top of its SW end. The grave-pit had almost straight walls, rounded corners and an even bottom. In the central part of it there was a group of a few scattered stones. In the middle of the grave, almost 40 cm above the bottom, an iron nail (24388:274) was found, and slightly lower at the W corner there were bronze spiral fragments (:275). Potsherds, burnt bone splinters and slag were found in the fill, but there were no traces of the deceased.

Interpretation and dating: No sex determination. Probably a late grave.



Grave 775

Location 123/67 See also p. 90
 Orientation almost N-S Pl. 30:775
 Size 230x135 cm,
 bottom 135x50 cm KM 24388:279–283
 Depth 100–125 cm

The grave was situated to the NW of cairn 755, where there was about 50 cm of topsoil. It had been made partly on top of the SW end of grave 790. Because of that it is uncertain whether the two large stones at the N end of this grave belong to this one or to grave 790. In any case on top of the middle of this grave there was a handsome stone setting made of stones about 15–20 cm in diameter, and on top of it there were yet three fairly large blocks – the biggest was 80x35x30 cm in size. The grave-pit was elliptical, very broad in the upper parts, but much narrower lower down, which was perhaps due to many stones at the N end. Closer to the bottom the pit had even sides and rounded corners, and at the S end there were traces of a charred wood frame; and even higher up in the fill some charcoal was found. There was nothing left of the deceased, but in the N half of the grave, quite close to the bottom, a bronze finger-ring (24388:279) was found. The fill contained potsherds, burnt clay, slag and a piece of flint.

Interpretation and dating: Judging by the size of the grave bottom this was a child's grave. The finger-ring is of flat-convex section, and therefore it could be dated to the Merovingian Period as well as to the 12th century (LUISTARI II 122–123, 128). Grave 775 was however on top of grave 790, dated to the earlier Viking Age, and it could thus have been made during that same period at the earliest.

Grave 776

Location 131/68
 Orientation SSW-NNE Pl. 30:776
 Size 180x50–60 cm KM 24388:284–288
 Depth 80–85 cm

The grave was situated to the NE of cairn 755, where there was about 45 cm of topsoil. It had been slightly damaged in digging graves 802 and 804. The grave-pit was in its upper parts round-ended, but lower down it was almost rectangular in form. The bottom was uneven because of stones. At the NE end and in the middle of the pit there were bones and remains of a skull of a pig (24388:287), but no traces of a human corpse were observed. Close to the surface a bronze spiral (:284) was found, and 20 cm lower, almost at the level of the pig bones, a piece of iron (:285) was collected. Otherwise there was only a chip of burnt clay and slag in the fill.

Interpretation and dating: No sex determination. Judging by the form of the grave-pit this was a real grave and no late pit for animal bones. The burial was unfurnished.

Grave 778

Location 129/69 Grave plan p. 91
 Orientation SW-NE Pl. 30:778:1–2
 Size 290x65–80 cm,
 bottom 290x50–65 cm KM 24388:292–302
 Depth 90–100 cm

The grave was situated to the N of cairn 755, where there was about 35–40 cm of topsoil. It had been dug on top of the SE side of grave 795, and it intersected also grave 793. On top of the SW end of the grave there was a group of a few stones, and between the stones a thigh bone and

a shin bone of a horse (24388:298) were found. At the N corner soon below the topsoil a stone disc (:292) was found. The grave-pit was angular, slightly broadening to the SW and uneven at the bottom because of stones. In the middle of it, about 40 cm above the bottom, a rivet (:294) was found, and at the SW end even higher a yellow bead (:293). There was some decomposed bone (:299) at the NE end of the pit about 30 cm of the bottom, and in the middle, about 10 cm lower down, a horse tooth (:300) was collected. Potsherds, burnt clay, a burnt bone splinter and slag were found in the fill, but there were no traces of a coffin or of a corpse.

Interpretation and dating: No sex determination. Judging by the form of the grave-pit this was a real grave, probably for a large person. Because of the unfurnished burial it is difficult to date. It overlay two others, and therefore it must be rather late.

Grave 779

Location 126/68	Grave plan p. 91
Orientation SW-NE	Pl. 30:779
Size 330x80 cm,	
bottom 300x45–60 cm	KM 24388:303–307
Depth 95–100 cm	

The grave was situated to the W of grave 778, where there was about 40–45 cm of topsoil. Grave 781 was partly on top of it, and in digging it graves 794, 795 and 798 had been damaged. The grave-pit had almost straight sides, the SW end was rounded, the NE end straight. The bottom was even, but it slanted slightly to SW. At the NE end, almost 50 cm above the bottom, an oval iron ring (24388:303) was found, and in addition a potsherd, burnt clay, a burnt bone splinter and slag were collected in the fill. There were no traces of a coffin or a corpse.

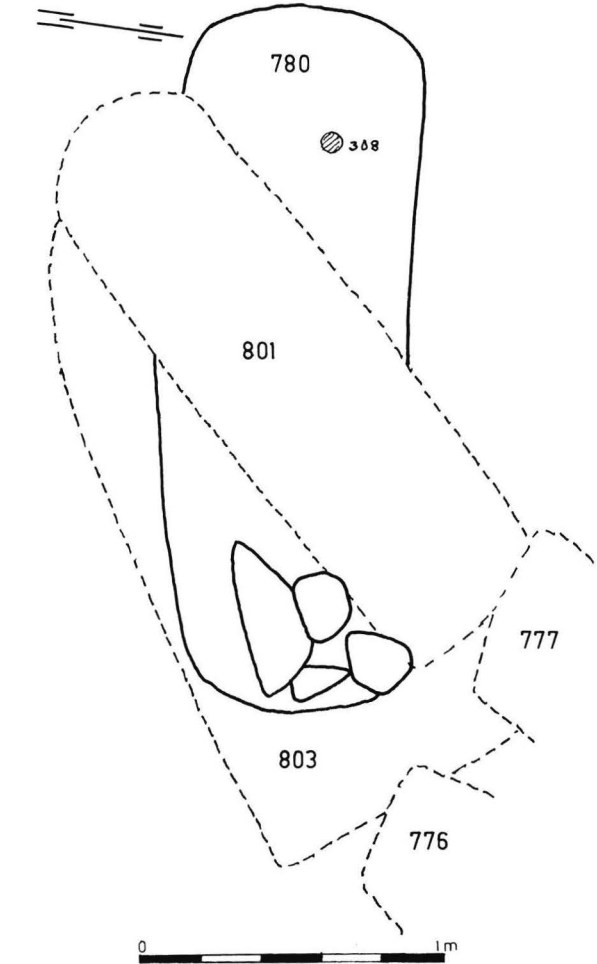
Interpretation and dating: No real sex determination, but this was a rather large grave, and so it possibly belonged to a male. It was on top of grave 795 from the earlier Viking Age, and so it is from that time at the earliest, but it also intersected the unfurnished graves 794 and 798, and is thus probably much later.

Grave 780

Location 129/67	
Orientation almost W-E	Pl. 30:780
Size about 250x80 cm	KM 24388:303–312
Depth 65–70 cm	

The grave was situated to the NE of cairn 755, where there was about 40 cm of topsoil. It had been dug on top of graves 770 and 803 and it had been damaged in the digging of grave 801. The grave-pit had rounded corners, and at its E end, near the bottom, was a group of large stones. At the W end, close to the bottom, a stone disc (24388:308) was found, and potsherds, a burnt lump of clay, slag and a stone splinter were in the fill. There were no traces of a coffin or a corpse.

Interpretation and dating: No sex determination. The grave was on top of graves 770 and 803 (?) from the ear-



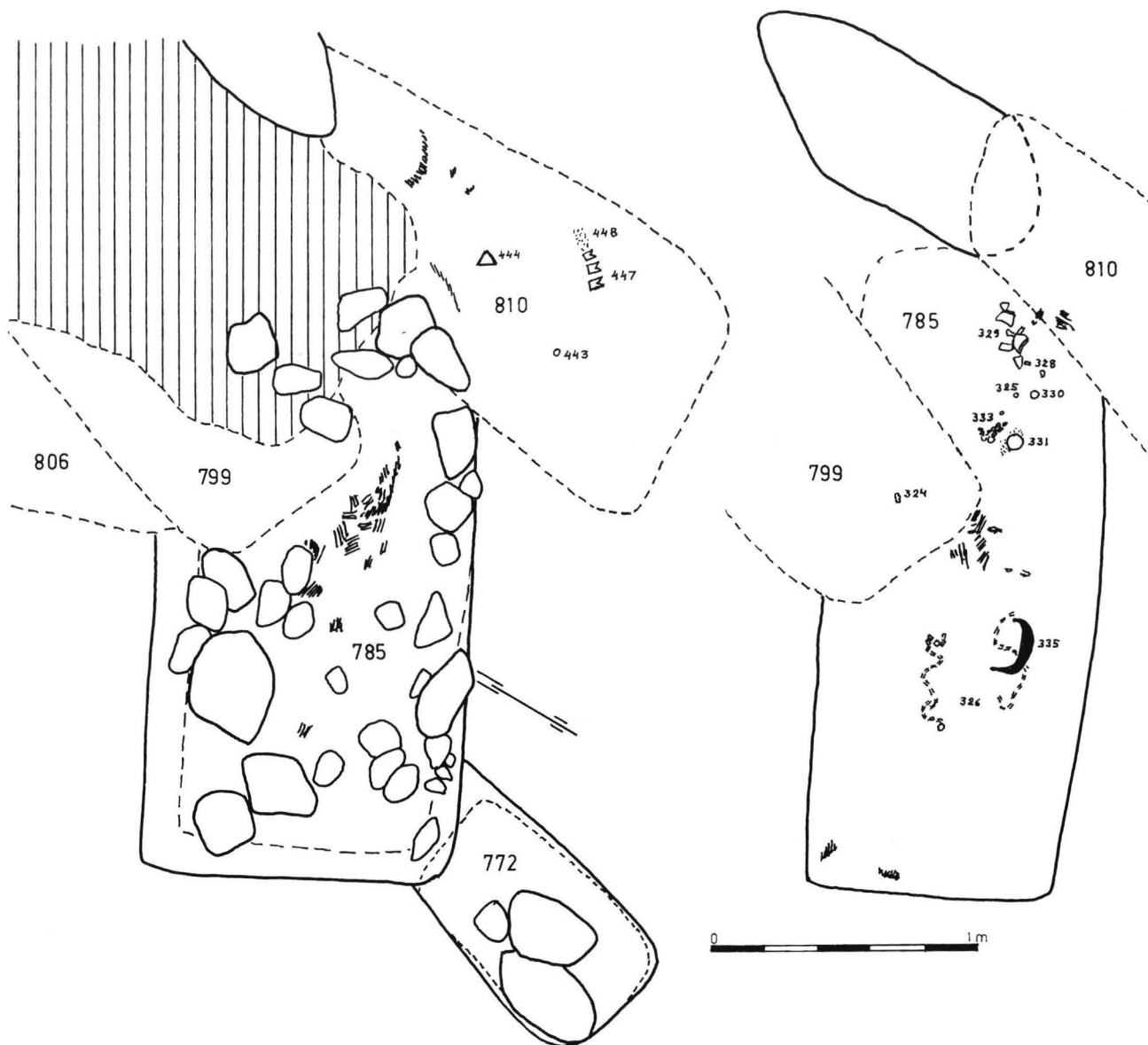
lier Viking Age, and so it is from that time at the earliest. Probably it is much later and one of the late graves with stone discs.

Grave 781

Location 126/69	
Orientation SSW-NNE	
Size 230x60–65 cm,	
bottom 160x60 cm	KM 24388:313–315
Depth 100–105 cm	

The grave was situated to the N of cairn 755, where there was about 40 cm of topsoil. It had been made partly on top of graves 779, 782, 794 and 798, and it was also touching grave 790. The grave-pit was equally broad everywhere, had rounded ends and shortened to the even bottom. Only scattered stones were in the fill, where also a potsherd, slag and cattle teeth (24388:314) were found. The teeth were in the middle of the grave about 50 cm above the bottom.

Interpretation and dating: No sex determination. This must be one of the latest graves in the cemetery, because it overlay four unfurnished graves.



Grave 784

Location 127/71

Orientation S-N

Size 200x60 cm,
bottom 200x55 cm

Depth 90–100 cm

Grave plan p. 93

KM 24388:320–322

The grave was situated to the N of cairn 755, where there was about 40 cm of topsoil. It had been dug on top of graves 783, 786, 787 and 805. The grave-pit was equally broad in all parts, the ends were slanting and the bottom sloped to the N. Rather high up in the NE corner of the pit cattle teeth fragments (24388:321) were found, and on the E side, 25 cm above the bottom, there was a whetstone (:320). In addition only slag was found in the fill.

Interpretation and dating: No sex determination. This grave was on top of three unfurnished graves and so it must be one of the latest ones.

Grave 785

Location 123/64

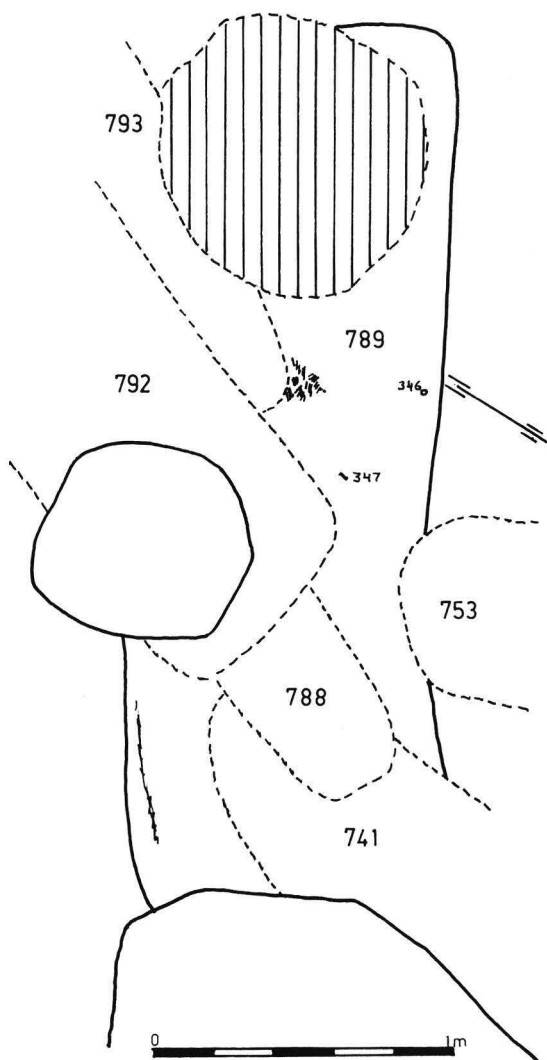
Orientation WSW-ENE Pl. 31:785:1–5

Size 250x120 cm,
bottom 240x100 cm

Depth 75–80 cm

KM 24388:323–338

The grave was situated to the NW of cairn 755, where there was 40–45 cm of topsoil. It had been damaged in digging graves 799 and 810, and there was yet a large rubbish-pit on top of these all. Judging by the preserved NE and N part of the grave there had been at least partly a boundary of erected stones along the sides of the grave. A lot of charcoal and soot was in the middle of this. The grave-pit was almost rectangular in form and even-bottomed. The bottom slanted slightly to the SW. The deceased was lying with its head to SW, where parts of the neck band (24388:324,325,330, 333), a round brooch



(:331) and a badly fragmentary clay vessel (:329) were found. The spiral ornaments of the apron sides (:326) were found at the E end of the grave. The border at the right side ended in a small bronze ring. On top of the border at the left side was an iron sickle blade (:335). In connection with the artefacts there were some birch bark and textile remains, but no traces of a coffin were observed. In the fill potsherds, a burnt piece of clay and slag were found.

Interpretation and dating: Judging by the ornaments this was a female burial. The brooch is a Finnish two-animal round brooch and it dates the grave to the earlier Viking Age. There are in the neck band both bronze beads, bronze spirals and an openwork bronze pendant with knot-cross design, which all appear at Luistari in the graves of the earlier Viking Age. Also the clay vessel, which is of group I:1b, indicate the same period (LUISTARI II 98–100, 128–129, 142, 79).

Grave 788

Location 131/72 Grave plan p. 91
Orientation SSW-NNE
Size about 310x40–50 cm KM 24388:345,349
Depth about 130 cm

The grave was situated to the N of cairn 755, where there

was about 40 cm of topsoil. It had been made on top of graves 741, 789 and 793, and the middle part of it was covered by grave 792, which was, however, a lot shallower. The grave-pit was very narrow, rounded at the NE end, straight at the SW end. The bottom was even and slightly slanting towards SW. On the bottom at the SW end tubular bones (24388:345) were found. In the filling of the NE end about 50–60 cm higher there were remains of the anklebone of a horse (:349).

Interpretation and dating: No sex determination. An unusually long, narrow and deep and apparently late grave.

Grave 789

Location 130/72
Orientation WSW-ENE Pl. 30:789:1–2
Size about 290x100 cm KM 24388:346–350
Depth 80–85 cm

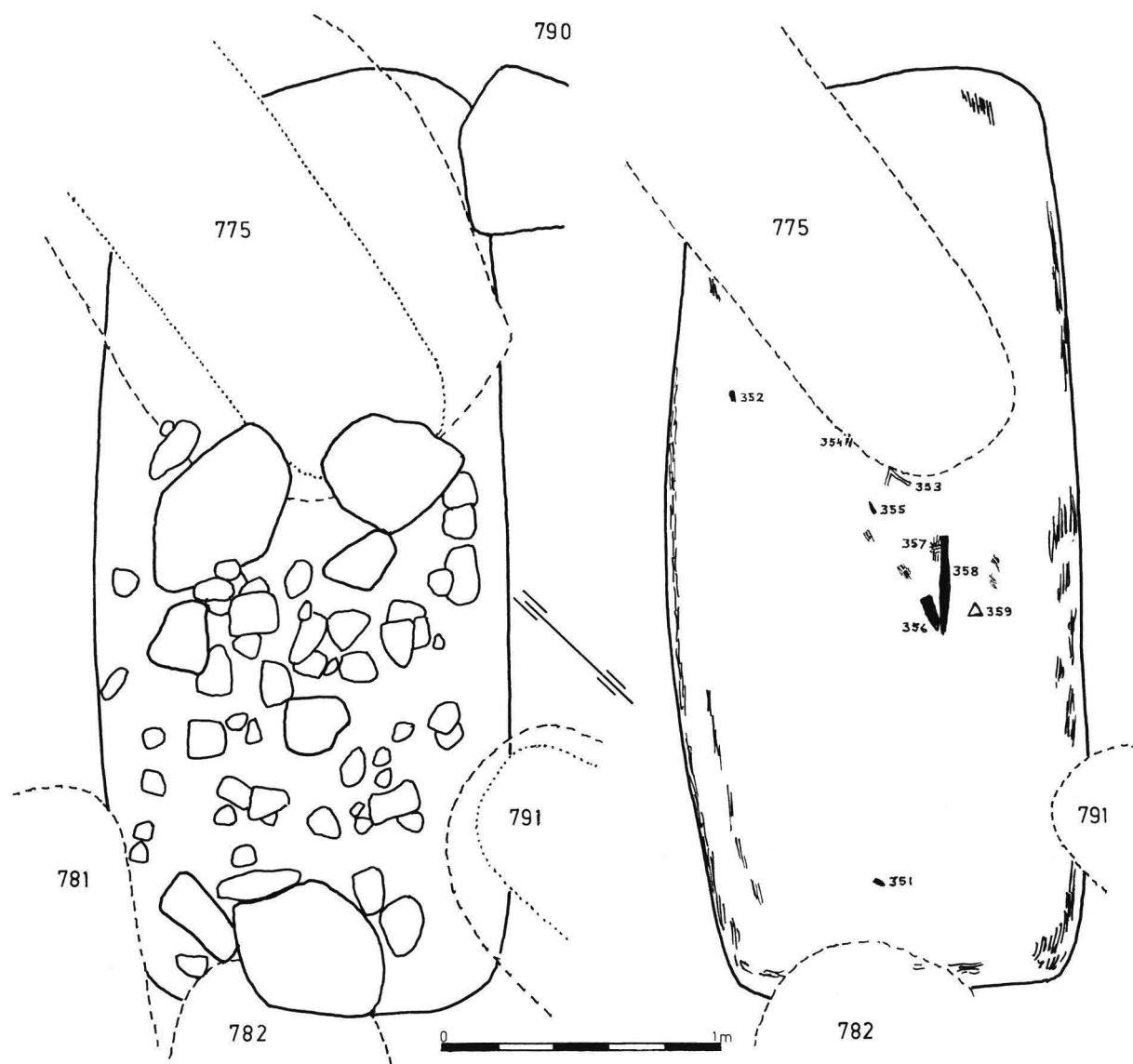
The grave was situated to the N of grave 788 and partly under it. It had also been damaged in digging graves 741, 792 and 793. In addition, there was an almost round pit at its W end. On top of the grave there were 40–45 cm of topsoil and some scattered stones. The grave-pit was quite wide, straight-sided and even-bottomed. At its preserved E corner there were traces of a wooden framework or of a side of a coffin. In the middle part of the grave, on the preserved NW side, a bronze spiral (24388:347) and a blue bead (:346) were found, and in the fill there were potsherds and slag.

Interpretation and dating: This badly destroyed grave was possibly a woman's burial from the Viking Age.

Grave 790

Location 124/68
Orientation SW-NE Pl. 32:790:1–5
Size 340x145 cm,
bottom 325x130–145 cm KM 24388:351–362
Depth 70–75 cm

The grave was situated to the NE of cairn 755 where there was 40–45 cm of topsoil. Its SW end had been damaged in digging grave 775, and graves 782 and 791 touched its NE end. On top of the NE end of the grave there was a stone about 40 cm in diameter, and in the fill there were quite a lot of smaller stones. The grave-pit was of even width, had rounded corners, and the bottom was uneven because of large stones. On all the preserved sides there were traces of charred wood, on the NW edge the height of these was about 25 cm. No remains of the deceased were observed, and almost all the finds were in the middle part of the grave. On top of a large stone there were a bronze mounting of a pouch (24388:353), a tip fragment of a sword (:356), a spear-ring (:357) and a spearhead (:358). Near these were some scattered pieces of iron (:354,355). Higher up in the fill two fragments of an iron knife (:351,352) were found, one of them at the NE end of the grave, the other next to the SW end. Thus, there was a distance of almost two metres between them and



the difference of depth was about 15 cm. Potsherds, burnt clay and slag were found in the fill.

Interpretation and dating: The weapons indicate a male burial. The spearhead is of Petersen type E, smooth-socketed variant with a length of 390 mm. Together with the spear-shaft ring it dates the grave to the earlier Viking Age. The bronze-mounted pouches previously found at Luistari were in the graves of the 10th century (LUISTARI II 26–30, 37, 67, 185–187). Thus, the first half of the 10th century is the most probable date.

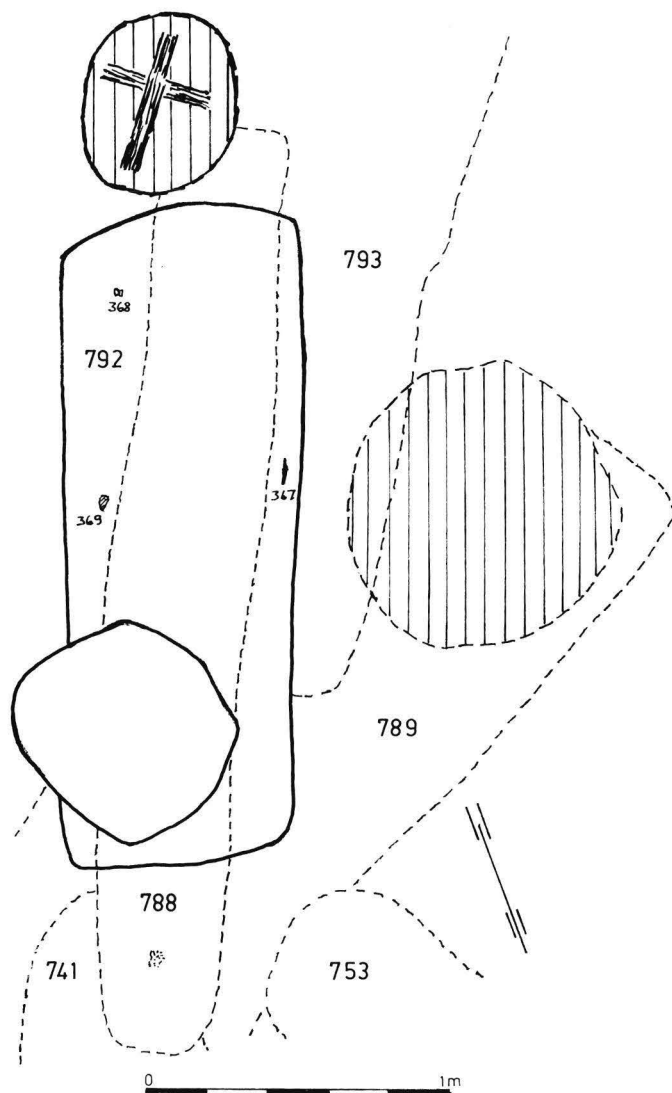
Grave 792

Location 130/71	Grave plan p. 91
Orientation SSW-NNE	Pl. 32:792
Size about 215x80 cm	KM 24388:367–374
Depth 100–110 cm	

The grave was situated to the N of cairn 755, where there was 40–45 cm of topsoil. It had been dug on top of graves 788, 789 and 793, and at its NE end was a large headstone. Looking from above it seemed to be almost round

and its height was about 70 cm. The grave-pit was of even width, had rounded corners and its bottom slanted to the N. On the NW side of the grave, rather high up in the fill, an iron knife (24388:367) was found, and on the SE side of the grave 15–20 cm lower there were fragments of a bronze spiral (:368) and a stone object of an indefinite shape (:369). In addition potsherds, burnt clay, burnt bone, iron slag and a chip of flint were found in the fill. No traces of a coffin or a corpse were observed. Near the SW end of the grave a peculiar pit had been dug, in which only partly decomposed wooden sticks formed a cross. It is possible that the pit had been dug after the cemetery had been found in 1969.

Interpretation and dating: No sex determination. This was a late grave because it overlay three others. It however had an imposing end stone, and so Viking Age traditions had been carried on when it was constructed.



Grave 795

Location 128/69

Orientation SW-NE

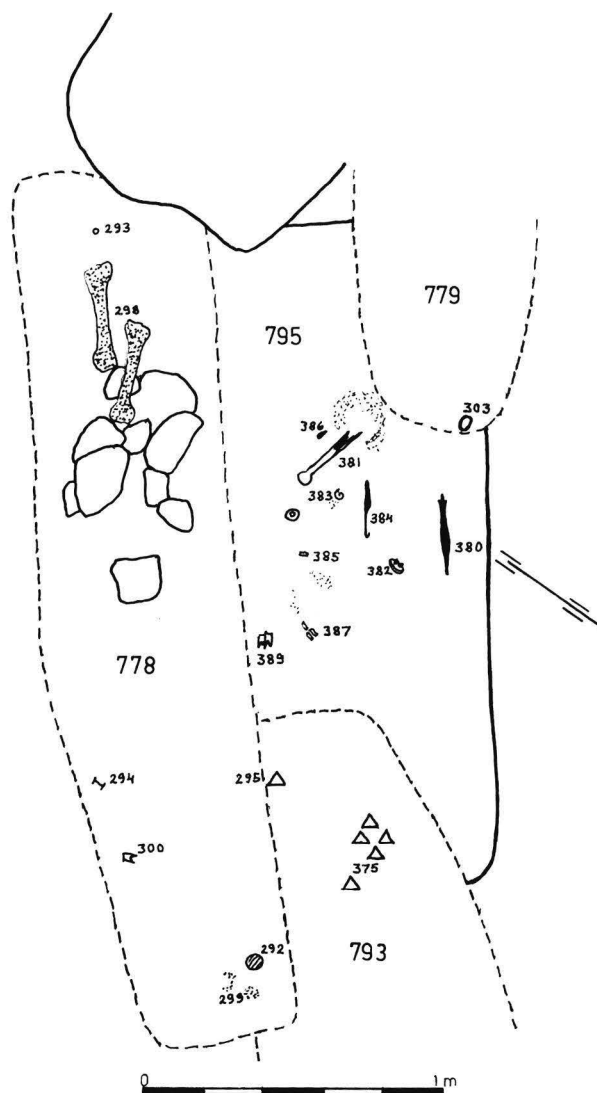
Pl. 32:795:1-6

Size at least 220x90 cm

KM 24388:380-390

Depth 75-85 cm

The grave was situated to the N of cairn 755, where there was 35-40 cm of topsoil. Graves 778, 779 and 793 had been dug on top of it so that only the central part of the grave was left. A few scattered stones, possibly the remains of a stone setting, covered the grave surface. Only the NW side and possibly the N corner were preserved, and on the basis of these the grave had had straight sides and rounded corners. The bottom slanted to the NE. The deceased had been lying with its head in the SW. Close to the skull and partly on top of it there were long shears (24388:381), and on the chest of the deceased there was an iron knife (:384), the point of which was oriented towards the head. About 10 cm to the N of the knife haft there was a bronze penannular brooch (:382) in an upright position. To the NW of these objects, on the left side of the deceased, there was a tanged spearhead (:380) the tip pointing to the foot end of the grave, and on the right side close to the waist there was a spiral ornament (:387), in which there was first one spiral and then two spirals



side by side. A loose spiral (:385) was found about 20 cm to the SW of this. To the SE of these ornaments there were bovine tooth fragments (:389). A bronze finger-ring (:383) was found close to the right shoulder. There were potsherds and slag in the fill. One rather large lump of slag was found on the same level as the objects.

Interpretation and dating: The spearhead indicates a male burial. It is tanged and long-bladed, and the penannular brooch is with faceted end knobs. This same combination was previously observed in graves 273 and 288, which were dated to the period 800-880 AD (LUISTARI II 30-31, 102, 184-185). Most probably also grave 795 is from that time.

Grave 798

Location 126/70

Orientation WNW-ESE

Size about 220x70 cm

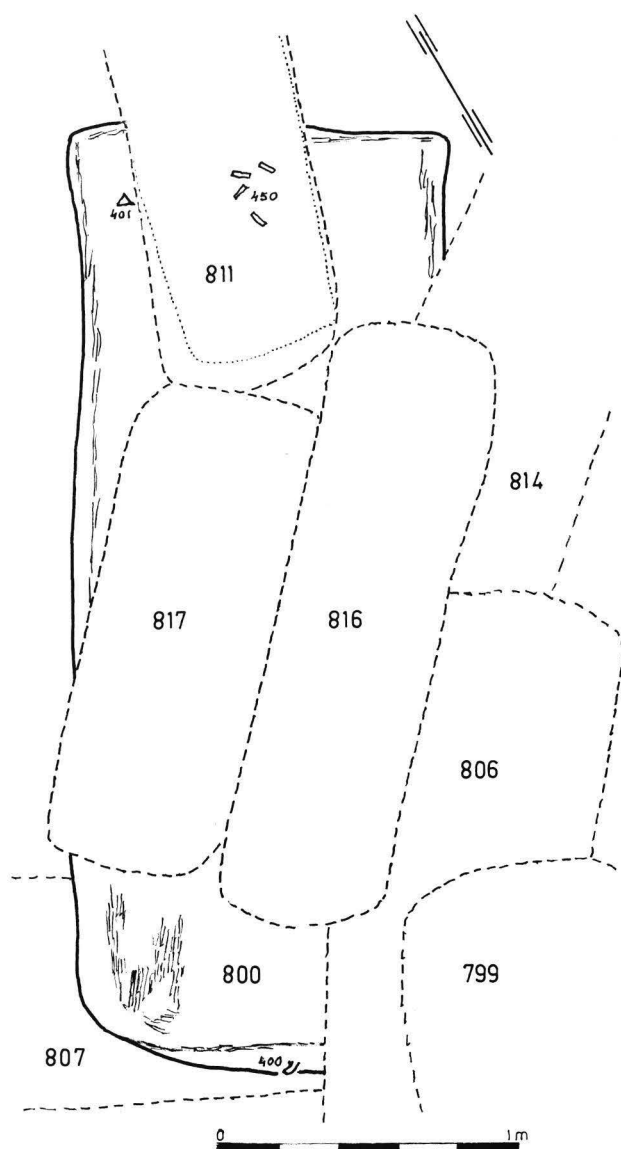
Depth 110-115 cm

Grave plan p. 93

Pl. 30:798:1-2

KM 24388:394-397

The grave was situated about 5 m to the N of cairn 755 where there was about 40 cm of topsoil. In digging it grave 805 had been slightly damaged, and graves 781-783 and 794 overlay it. The grave-pit was of even width, the NW end was straight, the SE end was rounded, and



the SW end. A finger-ring of bronze (24388:399) was found on the W side in the middle of the grave, and a bronze spiral (:398) was about 40 cm to the NE of it. Both of these were less than 20 cm above the bottom. Otherwise only a little charcoal at the NE end of the grave was observed. There were no traces of a coffin or a corpse.

Interpretation and dating: This was probably a late grave and the finds are from the earlier graves damaged when it was dug.

Grave 800

Location 122/60

Orientation SSW-NNE Pl. 30:800

Size 300x130 cm,
bottom 300x120 cm

KM 24388:400–405

Depth 95–100 cm

The grave was situated to the W of cairn 755 where there was 45–60 cm of topsoil. Graves 806, 811, 816 and 817 had been dug on top of it, so that only the NE end and the corners at the SW end had been preserved. On top of the NE end there was a scattered stone setting. The grave-pit had straight sides and slightly rounded corners, and there were distinct traces of wood lining on the walls. These were about 20 cm high on the SE side. A fragmentary firesteel (24388:400) was found at the NE end of the grave. Finds in the fill, i.e. potsherds, burnt clay, burnt bone splinters, slag and a flint piece may partly originate from the fills of the overlaying graves, because it was possible to distinguish the graves from each other only little by little.

Interpretation and dating: No real sex determination, but the large size of the grave-pit and the firesteel suggest a male burial. The firesteel is lyre-shaped, and all the previously discovered Luistari graves that contained firesteels of this type were from the Viking Age (LUISTARI II 72–73).

Grave 802

Location 131/70

Orientation SSW-NNE

Size 230x80 cm,
bottom 220x65 cm

KM 24388:406–411

Depth 85–110 cm

This grave was situated to the N of cairn 755, where there was about 40 cm of topsoil. It had been damaged in digging grave 769 and it overlay graves 776, 777 and 818. Some rather large stones were on top of its middle part. The grave-pit was of even width, had rounded corners and uneven bottom because of stones. On the NW side under the stones some decomposed bone (:408) was found, and in the middle of the pit close to the surface there was an iron rod (:406). Potsherds, burnt bone, slag, a piece of flint and charcoal were found in the fill.

Interpretation and dating: No real sex determination, but the large size of the grave-pit could indicate a male burial. This was apparently a late grave.

the bottom was remarkably even. At the NW end, about 50 cm above the bottom, a stone disc (24388:394) was found, and in the fill were potsherds, bovine teeth (:397a), slag and a flint piece, but no traces of a coffin or a corpse were observed.

Interpretation and dating: No sex determination. This was possibly one of the late graves with stone discs, although there were several graves overlaying it.

Grave 799

Location 122/62

Grave plan p. 88

Orientation SSW-NNE

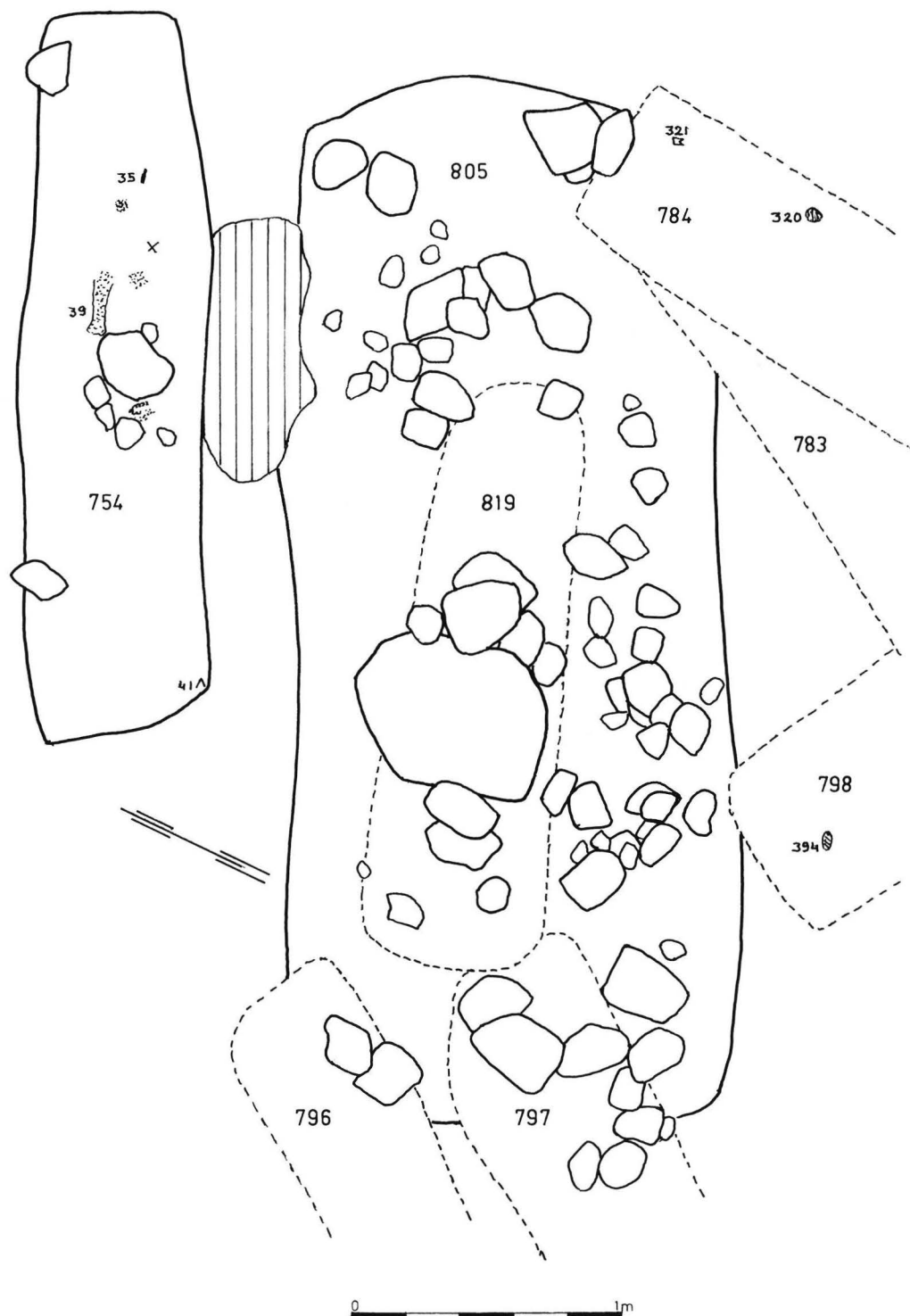
Pl. 30:799

Size 200x80–85 cm

KM 24388:398–399

Depth 85–115 cm

This grave was situated to the W of cairn 755. It was totally covered by a large rubbish-pit and only emerged when the latter had been removed. In digging it at least graves 785 and 806 had been damaged. The grave-pit was of even width and had rounded corners. The bottom slanted strongly to NE because there was a large stone at



Grave 805

Location 126/72

Orientation ENE-WSW Pl. 33:805:1-6

Size 380x160 cm,

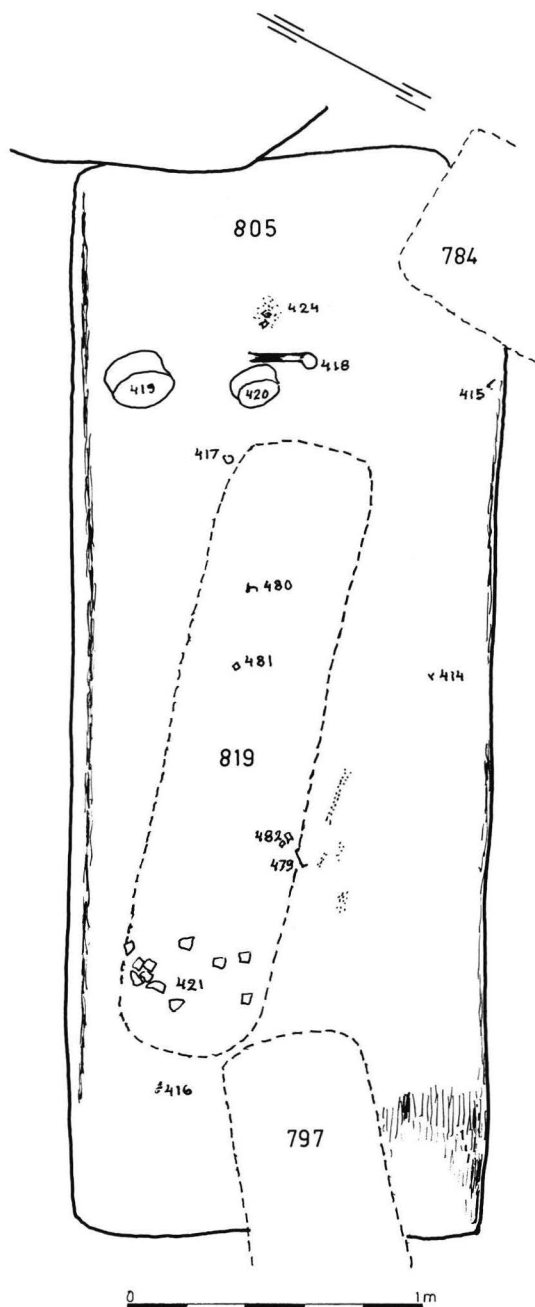
bottom 360x140 cm

Depth about 100 cm

KM 24388:414-427

The grave was situated to the N of cairn 755, where there was about 40 cm of topsoil. On top of its borders graves 783, 784, 796 and 797 had been made, and grave 819 had been dug in the middle of it. If there had been a stone setting in the grave, it had been scattered in digging the

later graves. The grave-pit had straight sides and rounded corners, but the bottom was almost rectangular and slanting to SW. At the NE end of the pit there were teeth fragments (24388:424), and at the SW end some bones of the lower extremities of the deceased. Two clay vessels (:419, 420), shears (:418) and a bronze finger-ring were found at the NE end of the grave, at the other end there were remains of a third vessel (:421), the pieces of which were also found in the fill of grave 819. On top of the grave and in the fill a couple of horseshoe nails (:414,415), fragments of a bronze chain (:416), potsherds, burnt clay, burnt bone, slag and a stone splinter were found.



Interpretation and dating: The large size of the grave-pit could indicate a male or a multiple burial. Because there are no especially male artefacts and the finger-ring is only 14 mm in diameter, it is probable that there had been more than one corpse in this large pit. Two of the clay vessels are of group I:2b with cord-impressed decoration, the third is probably of group I:1b (only a small number of rim pieces were preserved), but it is ornamented very much like the small beaker from grave 170 and of group II:1b. It also has a figure executed with double cord impressions in which a wavy line undulates between straight lines. This figure is however not at the thickest part but clearly above it. All the above-mentioned groups of clay vessels occur during the earlier Viking Age at Luistari, grave 170 was dated to the 9th century (LUISTARI II 79–80). The small spiral finger-ring has three turns and is of flat-convex section. The shears are of the common Viking Age ring-ended type, length 215 mm (Kivikoski 1973 fig. 976).

Grave 806

Location 123/63 Grave plan p. 92
Orientation SSW-NNE Pl. 30:806:1–3
Size about 250x60 cm KM 24388:428–431
Depth 105–115 cm

The grave was situated to the W of cairn 755 in a location with 45–55 cm of topsoil. It was partly on top of grave 800 and it had been damaged in the digging of graves 799, 814, 816 and a large rubbish-pit. The grave-pit had rounded corners and an uneven bottom because of stones. A bronze spiral tube (24388:428), two beads (:429,430) and iron slag were found in the fill.

Interpretation and dating: No sex determination. This was a grave without furnishing (the artefacts are fill-earth finds), but not one of the latest graves in the cemetery because there were three later graves overlaying it.

Grave 808

Location 123/59
Orientation SW-NE
Size 285x95–105 cm,
bottom 220x90 cm KM 24388:435–440
Depth 100–125 cm

The grave was situated to the SW of cairn 755, where there was 50–55 cm of topsoil. Grave 812 had been dug totally on top of it, and its SW end had been intersected in digging graves 811 and 813. The grave-pit broadened slightly to the SW in its upper parts, but lower down it had even sides and rounded corners. At its NE end there were some stones, the largest one of which was at the NE end of grave 812. The bottom of the grave slanted to the NE, because there was a large stone on the bottom at the SW end. At the SW end in the upper part of the pit a bronze spiral (24388: 435) was found, but otherwise the fill contained only a rusted wood piece, potsherds, a burnt bone splinter, slag and a tiny flake of flint.

Interpretation and dating: No sex determination, but the large size of the grave-pit may indicate a male. In size and in form this grave was similar to the Viking Age ones, but it was so disturbed that any exact dating is impossible.

Grave 810

Location 122/64 Grave plan p. 88
Orientation SSW-NNE
Size 215x95 cm,
bottom 135x50–70 cm KM 24388:443–449
Depth 65–90 cm

The grave was situated to the W of cairn 755, where there was 45–50 cm of topsoil, and it was partly under a large rubbish-pit. In the digging of this grave the SW end of grave 785 had been disturbed. The grave-pit broadened to the N end, where a blue bead (24388:443), decomposed bones and cattle teeth (:447,448) were discovered. Potsherds, burnt clay, a burnt bone splinter and slag were found in the fill, and at the S end some charcoal was observed.

Interpretation and dating: Judging by the size of the grave bottom this was a child's grave. It was on top of grave 785, dated to the 9th century, and it is thus from the same century at the earliest.

Grave 811

Location 121/59	Grave plan p. 92
Orientation SSW-NNE	Pl. 33:811
Size 190x60 cm, bottom 160x50–55 cm	KM 24388:450–455
Depth 110–120 cm	

The grave was situated to the SW of cairn 755, where there was about 50 cm of topsoil. It had been dug on top of graves 800, 808, 812 and 813. At its S end there was a stone setting formed of about ten stones. The grave-pit was almost rectangular in form. Its bottom slanted to the N, because there was a large stone at the S end. In the fill there were fragments of a whetstone (24388: 450), potsherds, a burnt clay piece and slag.

Interpretation and dating: No sex determination. This grave overlay four others, and it therefore must be late. The finds are from the earlier disturbed graves.

Grave 812

Location 122/58	
Orientation SW-NE	Pl. 33:812:1–2
Size 170x85 cm, bottom 170x55–60 cm	KM 24388:456–458
Depth about 100 cm	

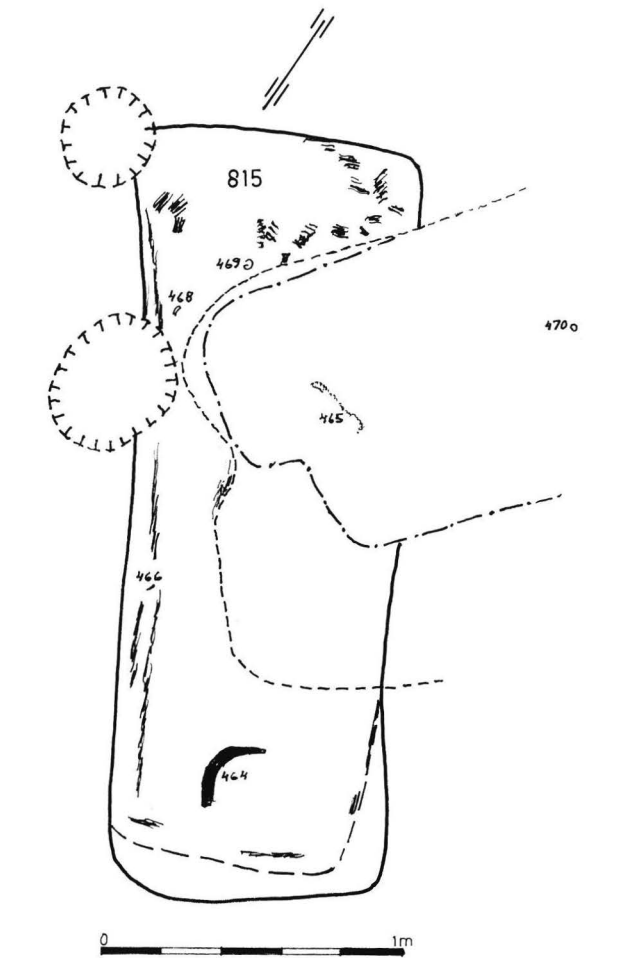
The grave was situated to the SW of cairn 755, quite on top of grave 808. Its NE end was covered by a stone, 60 cm in diameter. The grave-pit had rounded corners, it broadened slightly to the NE, and it was impossible to discern its bottom and the bottom of grave 808. A tip fragment of a sickle (24388:456) was found in the upper part of the grave-pit, but a chisel-like stone artefact (:457) was quite on the bottom. In addition there was slag in the fill.

Interpretation and dating: No sex determination. Judging by all this was a late grave. The stone artefact was possibly a talisman.

Grave 815

Location 119/61	
Orientation SE-NW	Pl. 33:815:1–4
Size 250x80 cm, bottom 240x85–90 cm	KM 24388:464–473
Depth about 100 cm	

The grave was situated to the W of cairn 755, on the border of the area excavated in 1969, where there was about 50 cm of topsoil. In digging the large drainage ditch its middle part had been damaged, and on top of its NE side there were also two later round pits, 30–45 cm in diameter. The grave-pit had even sides and rounded corners. Its bottom slanted to SE, and there were on the sides traces of a coffin or a wooden frame, at least 200x70 cm in size. On the bottom there was also a dark layer. At the NW end of the grave a fragmentary sickle (24388:464)



was found, at the SE end there were two fragments of a finger-ring (:468,469) about 30 cm from each other. On the NE side a small iron rod (:466) was discovered. Close to the trace caused by the excavator there was a brass chain (:465), possibly recent, and a bronze bead (:470). The fill contained potsherds, slag and a chip of flint, and especially at the S end large amounts of charcoal. No traces of the deceased remained.

Interpretation and dating: This was probably a woman's grave. The diameter of the finger-ring is 15–16 mm. It is of flat-convex section and not datable. The bronze bead is round with tapering ends and different from all other bronze beads found at Luistari. Neither has Kivikoski (1973) described any similar specimens, but a rather identical bead (6127:44) was found in grave VII/1912 at Osmanmäki in Eura. This grave with its penannular brooch with funnel-shaped knobs dates from the middle Viking Age (see LUISTARI II 104–105 Table 7). The location of grave 815 points to the same period.

Grave 816

Location 122/61	Grave plan p. 92
Orientation SW-NE	
Size 200x60–65 cm	KM 24388:474–475
Depth 105–130 cm	

The grave was situated to the W of cairn 755, where there was about 50 cm of topsoil. It had been dug on top of

graves 800, 806 and 814. The grave-pit had even sides and rounded corners, the bottom was uneven because of a large stone. In the E corner about 20 cm above the bottom there was a fragment of a bronze rod (24388:474), and in the fill a large lump of slag was found. There were no traces of a corpse or a coffin.

Interpretation and dating: No sex determination. This grave overlay three other graves, whereby it was certainly late.

Grave 817

Location 123/61 Grave plan p. 92
 Orientation SW-NE
 Size 160x60 cm,
 bottom 140x60 cm KM 24388:476–478
 Depth 105–110 cm

The grave was situated to the W of cairn 755, where there was about 50 cm of topsoil, and it had been dug directly on top of grave 800. The grave-pit had straight sides and rounded corners and its bottom was even. In the middle of it, about 30 cm above the bottom, a blue bead (24388:476) was found, and in addition there were potsherds and slag in the fill. No traces of a corpse or a coffin were observed.

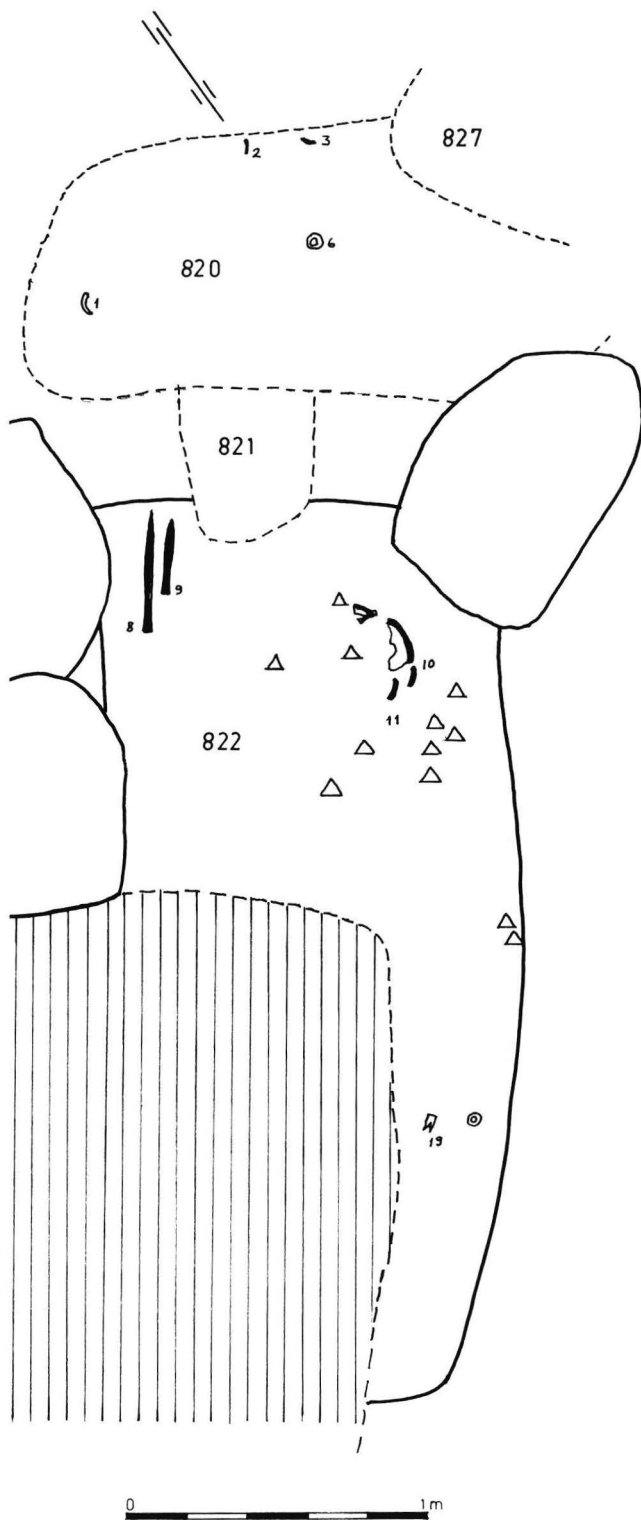
Interpretation and dating: Judging by the size of the grave bottom, this was a child's grave. It overlay grave 800, probably from the Viking Age, dating thus from that time at the earliest. The depth of the grave suggests a late period.

Grave 819

Location 126/72 Grave plans pp. 93, 94
 Orientation WSW-ENE
 Size 220x60 cm KM 24388:479–484
 Depth 120 cm

The grave was situated to the N of cairn 755, where there was about 40 cm of topsoil, and it had been dug directly on top of grave 805. Its middle part was covered by a group of stones, which had been gathered around a stone almost 80 cm in diameter. In its upper part the grave-pit broadened to the SW, but lower down it had straight sides and rounded corners. The bottom was quite even. On the S side of the pit an iron clamp (24388:479) was found, and at the E end there was a bent nail (:480). About 30 cm to the middle from it was a bronze mount (:481), and at the place of the clamp but about 30 cm lower down and thus on the bottom was a fragment of a bronze finger-ring and a tooth fragment (:482). In the fill there was a potsherd and a burnt piece of clay, and at the W end some potsherds belonging to the third clay vessel in grave 805 were found.

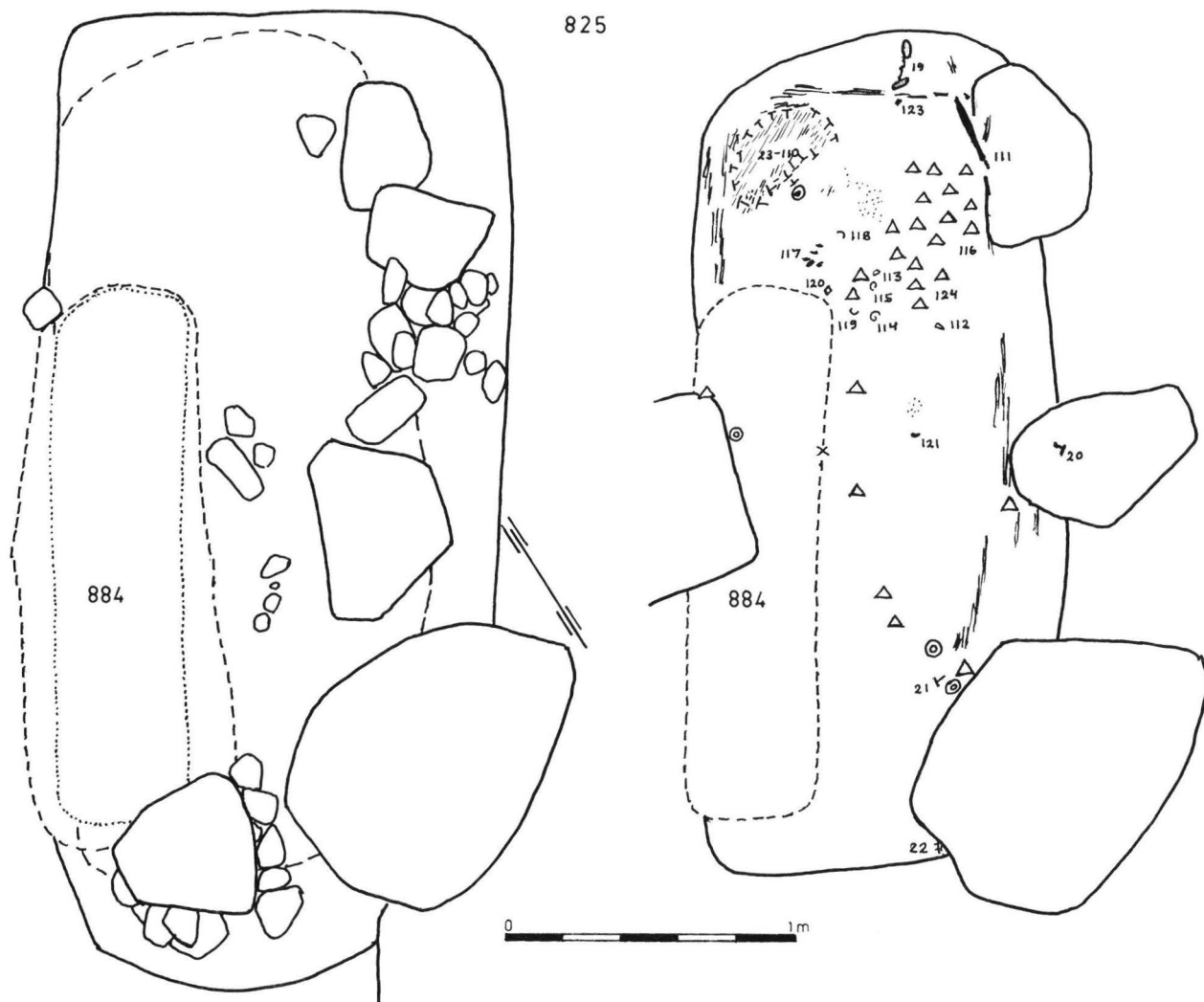
Interpretation and dating: No sex determination. This grave overlay grave 805 from the earlier Viking Age, and so it can be from that time at the earliest. The ring fragment is of triangular section, which indicates a rather early dating (LUISTARI II 123, 127), but when it may be from the older grave, it cannot date this one.



Grave 820

Location 126/55
 Orientation WNW-ESE
 Size 250x60–70 cm KM 24740:1–6
 Depth 105–130 cm

The grave was situated in the stony SW part of the cemetery, to the S of cairn 755. It had been dug on top of the small grave 821, and on top of it there were grave 827 and a rubbish-pit, 60 cm in depth. The grave-pit was oval



in form and its bottom was very stony. At the SE end in the fill a fragmentary bronze ring (24740:1), a couple of iron rods (:2,3), a potsherd, a burnt bone splinter and a lump of slag were found. No traces of a coffin or a corpse were observed.

Interpretation and dating: No sex determination. This was probably a late grave.

Grave 822

Location 127/57

Orientation SSW-NNE Pl. 34:822:1–3

Size at least 290x130 cm KM 24740:8–15

Depth 85–100 cm

The grave was situated to the S of cairn 755, and its E corner had been destroyed in digging a pit for the stay-slab of a power line pylon. Grave 821 was partly on top of its SW side. The area was stony, and it was necessary to remove 60–70 cm of topsoil before the borders of the grave were visible. The grave-pit had probably been with even sides and rounded corners. Its bottom was stony and it slanted to the SW, so that what was left of the NE end was 10–15 cm above the deepest spot of the grave. There had been at least two clay vessels in the grave. Their pieces (24740:10–12) were found mostly in the W corner of the pit. Two spearheads (:8,9) were discovered in the S corner of the grave, and at the NE end there were

cattle teeth fragments (:13). Potsherds, slag and a piece of flint were found in the fill. There were no traces of the deceased.

Interpretation and dating: The spearheads indicate a male burial. They are both of Petersen type E (Petersen 1919 26–28). The longer one (408 mm) has ornamental grooves, the other one is quite short (216 mm) and lacks decoration. A similar combination of one ornamented and one smooth-socketed variant of type E spearheads was previously found in graves 135, 145, 348 and 400 at Luistari. Of these graves number 145 was dated to the period 800–880 AD, the other ones to the period 880–950 AD. The clay vessels are of group I:1b. One of them is ornamented with wavy lines, the other one with cord ornaments. Quite similar vessels were found in grave 145, and thus grave 822 most probably also dates from the period 800–880 AD (LUISTARI II 26, 184–186, 77–79).

Grave 825

Location 128/52

Orientation SSW-NNE Pl. 34:825:1–8, 35:825

Size 340x160 cm,
bottom 225x100 cm

KM 24740:19–129

Depth 120–125 cm

The grave was situated to the S of grave 822 in the same stony area where there was about 55 cm of topsoil and

10 cm of mixed earth. Grave 884 had been dug on top of its SE side. At the NE end of the grave there was a stone 40–50 cm in diameter and a pile of smaller stones, and the NW side was covered by a pile of large stones set in a row. If there had been a similar row on the SE side, it would have been completely broken when grave 884 was dug. There was a large ground-stone in the N corner of the grave, and because of that the grave-pit grew markedly smaller towards the bottom. Its shape was largely determined by the large stones in the ground. A coffin or a wooden frame found in this almost 3,5 m long pit was only 220x100 cm in size. On the NW side there were traces of it already about 50 cm above the bottom level, at the SW end about 40 cm from the bottom. A nail was found both on the NW side (:20) and in the N corner (:21) of this construction. In the S corner of the grave about 90 nails (:23–110) were discovered. They formed an oval and in connection with them there was a great deal of wood. Apparently there had been a wooden box strengthened with iron nails. In the W corner there was a spearhead (:111) and to the NE from it plenty of potsherds (:116,124), partly in very small fragments. The bronze finger-ring (:113–115,118,119) was also found in pieces in the SW half of the grave, and near it there were a lot of iron fragments (:117). These were possibly from a broken knife or a scythe, because among the slag collected from the grave there was also a tip fragment (:122). The bit (:15) found about 50 cm above the bottom at the SW end of the grave seems to have been outside the wooden walls. Of the deceased there were only some remains on the bottom, the most marked feature was the trace of the skull at the SW end of the grave. In the fill there were more potsherds, burnt clay, burnt bone, slag and quartz.

Interpretation and dating: The spearhead indicates a male grave. It is 285 mm long, tanged and narrow-bladed, but not quite like the typical tanged long-bladed spearheads dated to the beginning of the 9th century (LUISTARI II 30–31). It has a shorter blade and longer shaft, and it may be considered a parallel form to the small less typical spearheads of type E (see LUISTARI II fig. 6:9–11). The dating to the 9th century, even to its first half, may however be correct. At least one bronze plate fragment (:113) is from a finger-ring of group II:1a, which occurs only in the Merovingian Period and the earlier Viking Age graves at Luistari (LUISTARI II 127). The bit has rings of round section and a three-jointed mouth-piece, in which the middle joint is longest. According to Taavitsainen (1976 25) three-jointed bits were more common in Finland during the Merovingian Period than in the Viking Age. The clay vessel (or vessels?) and the fragmentary iron artefact (:117,122) were so damaged that it is difficult to say anything of their shape, possibly the vessel was of group I:1a or I:2b. I know of no parallels to the oval box with 90 nails. All the boxes at Birka (Arwidsson-Thorberg 1989 113–121) are angular in form. Only among the small cases are there round shapes. In the Oseberg find there is a bucket made of 10 staves, in which the hoops were originally fastened with three vertical rows of flat-headed iron tacks (VIKING OG HVIDE KRIST 1992:160). Although the Luistari box was not

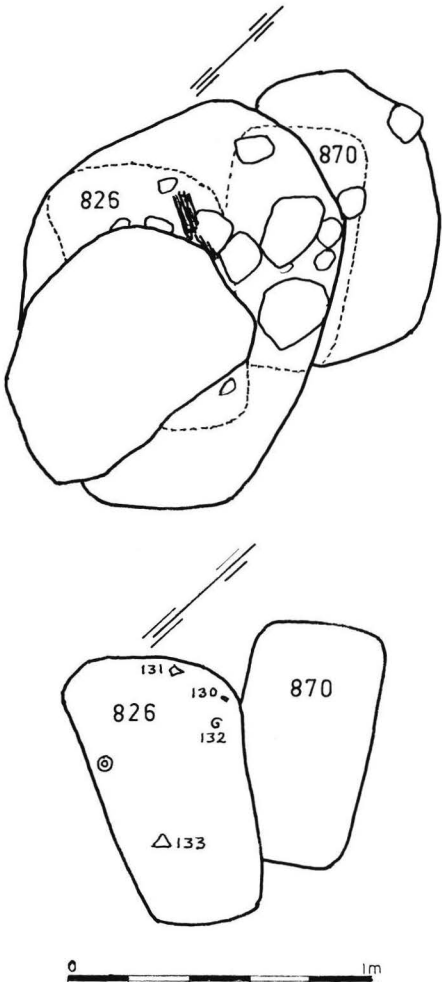
similar to this, the Oseberg bucket perhaps indicates the technique used in making it. On the basis of the above it seems that grave 825 may be dated to the 9th century.

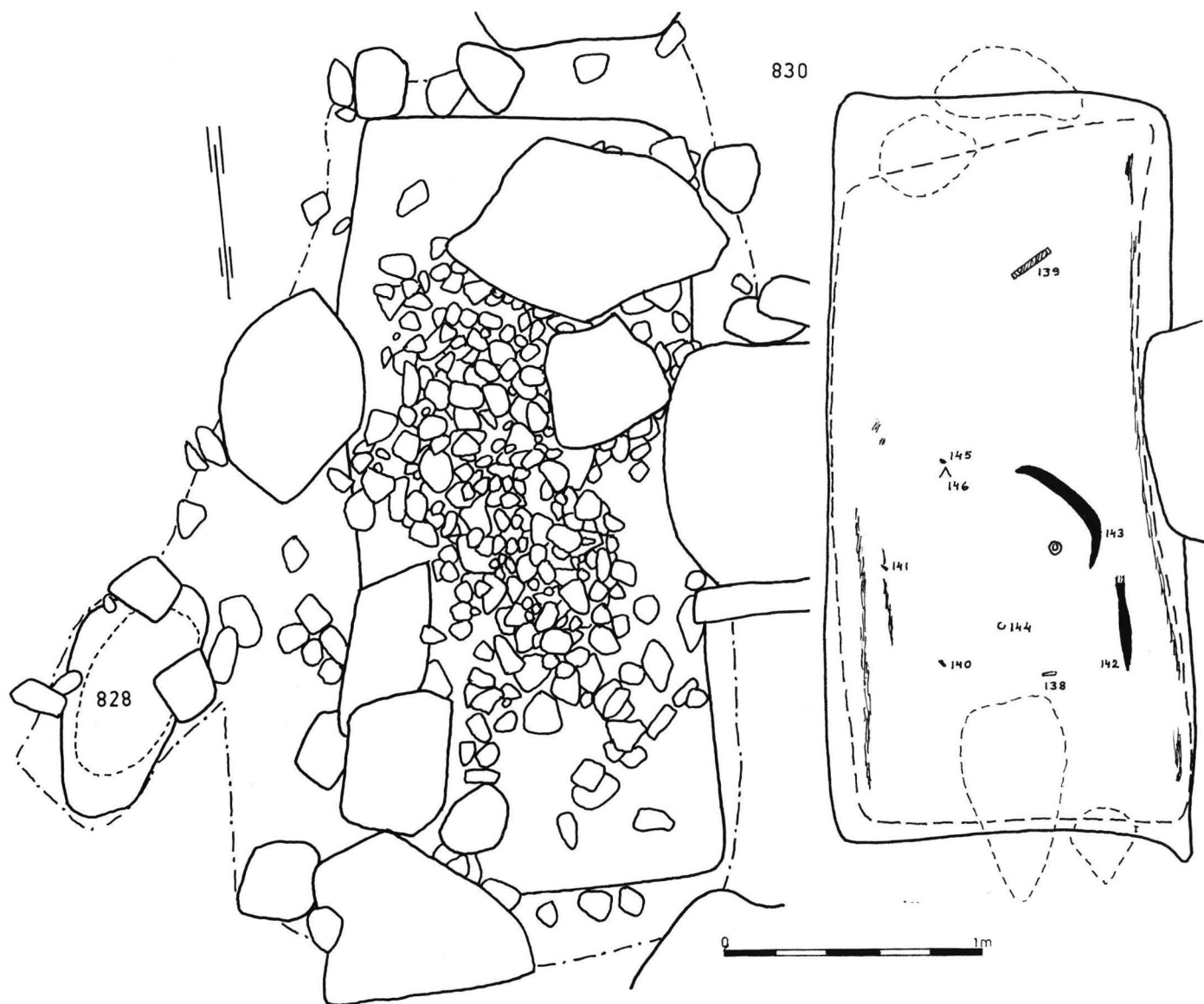
Grave 826

Location 126/52	
Orientation NW-SE	Pl. 34:826:1–3
Size 140x100 cm, bottom 100x50 cm	KM 24740:130–137
Depth 100 cm	

The grave was situated to the W of grave 825, and it was partly on top of grave 870. A large stone, 60–90 cm in diameter, and half a dozen of smaller stones overlay it, and there was a small c. 5 cm thick charcoal patch in connection with them. The grave-pit was oval in form in its upper parts, but it broadened towards the NW at the bottom. It had rounded corners and the bottom was deepest in the middle. At the NW end of the grave a bronze spiral (24740:130), a bronze sleigh bell pendant (:131) and a small finger-ring (:132) were found, but the only trace of the deceased was the finger bone inside the ring. At the SE end some potsherds with wavy line ornaments were found. The fill contained burnt bone, slag and a piece of quartz.

Interpretation and dating: Judging by the size of the grave-pit and the finger-ring, 12 mm in diameter, this was a child's grave. The sleigh bell pendant is of the same





type as the larger pendant in grave 118 (LUISTARI I Plate 47:118:5), but it is smaller, 38x31x31 mm in size, the ridge on the thickest part is more distinct and the upper part is decorated with double-ringed dots. Sleigh bell pendants occur in Birka, in the East Baltic regions and in Russia, and they are usually dated to the 10th and 11th centuries; grave 118 was dated to the period 880–950 AD. The bronze finger-ring in grave 826 has a middle shield and belongs to group II:1b, dated to the earlier Viking Age (LUISTARI II 116, 185, 125–126). Therefore it seems probable that this grave is from the 10th century.

Grave 828

Location 126/50
Orientation SSW-NNE
Size 95x50, bottom 70x35 cm
Depth 75–80 cm

The grave was situated in the S part of the cemetery on the E side of grave 830, where there was 55–60 cm of topsoil. The grave-pit was ovaloid in form, even-bottomed, and there were scattered stones on top of it. The burial was unfurnished.

Interpretation and dating: Judging by the size of the grave-pit, this was the burial of a very small child. The graves around it (825, 826, 830) are dated to the 9th and 10th centuries.

Grave 830

Location 125/49
Orientation S-N
Size 350x150–200,
bottom 280x125–140 cm
Depth 90–115 cm

The grave was situated to the SW of grave 825, where there was about 60–70 cm of topsoil, and it was bordered by several large stones. On top of its S end there were two stones, 70–110 cm and 50 cm in diameter, and in the NE corner there was a row formed by stones almost as large as these. A stone setting, in places almost 40 cm in thickness and made of smaller stones, covered the middle part of the grave. The grave-pit broadened to the N, and because of some large ground stones it was uneven on the bottom. Distinct traces of wood were found only on the sides of the grave-pit, so it is possible that only these were covered by

boards. In the middle of the pit, about 30 cm above the bottom there were also remains of wood, and it is thus possible that there was some kind of roof supported by the above-mentioned side boards. At the S end of the grave a whetstone (24740:139) was found, in the NW corner there was a spearhead (:142) and SE of it a scythe (:143). In the middle of the N end a small bronze ring (:144) was discovered, and almost in the middle of the grave there were a piece of flint (:145) and a small iron fragment (:146). More iron fragments (:140,141) were found to the N of these, and almost 40 cm higher up in the fill there were a fragment of a bronze pin (:138), some potsherds, burnt clay, burnt chips of bone, slag and a stone flake. No traces of the corpse were observed.

Interpretation and dating: The spearhead indicates a male burial. It is 340 mm long and about 35 mm wide and in form it is something between the Petersen (1919 23, 26–28) types A and E; in sturdiness it corresponds type A. Possibly this characteristic gives a dating to the 9th century (LUISTARI II 25–26). The scythe is 530 mm long and it is thus the longest found at Luistari. In form it is most like the one found earlier in grave 68 (LUISTARI I Plate 34:68:1). Both of these have an almost straight blade tip, but in the scythe in this grave the angle between the shaft and the blade is more obtuse than in the one in grave 68. The bronze spiral ring is of flat-convex section, 14 mm in diameter, and very fragmentary. The whetstone is long and narrow, 180x22x16 in size, and of grey stone.

Grave 831

Location 124/44	Grave plan p. 101
Orientation NW-SE	
Size 100x40–50 cm	KM 24740:152
Depth 80–85 cm	

The grave was situated in the SW part of the cemetery, and it was dug on top of the W side of grave 835. The grave-pit was even-sided with rounded corners, and the bottom was quite even. Only a lump of slag was found in the fill and the burial was unfurnished.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. It overlay grave 835, which means that it could be from the middle of the 10th century at the earliest.

Grave 833

Location 127/42	
Orientation NW-SE	Pl. 34:833
Size 255(240)x60 cm	KM 24740:153–155
Depth 80–85 cm	

The grave was situated in the southern part of the wasteland at the site, where stones were fewer and there was 50–60 cm of topsoil. It had been damaged in the digging of grave 834. The grave-pit broadened to the NW, its bottom slanted to the SW, and only scattered stones were found in its fill. A stone disc (24740:153) was found at the NW end of the pit, and only some potsherds and lumps of slag were in its fill. No traces of the deceased were observed.

Interpretation and dating: No sex determination. This is one of the mysterious stone disc graves which are difficult to date.

Grave 834

Location 126/40	
Orientation NNW-SSE	
Size 200x70 cm	KM 24740:156–159
Depth 80–100 cm	

The grave was situated to the SW of grave 833, on top of which it had been partly dug. Because a later refuse pit covered the surface almost completely, there was 50–65 cm of topsoil and only scattered stones above these graves. The grave-pit had even sides and rounded corners and its bottom slanted to the SE. At the SE end on the bottom an indefinite bundle of metal wire (24740:156) was found, and the fill contained three potsherds, a couple of burnt bone splinters and slag. No traces of the deceased were observed.

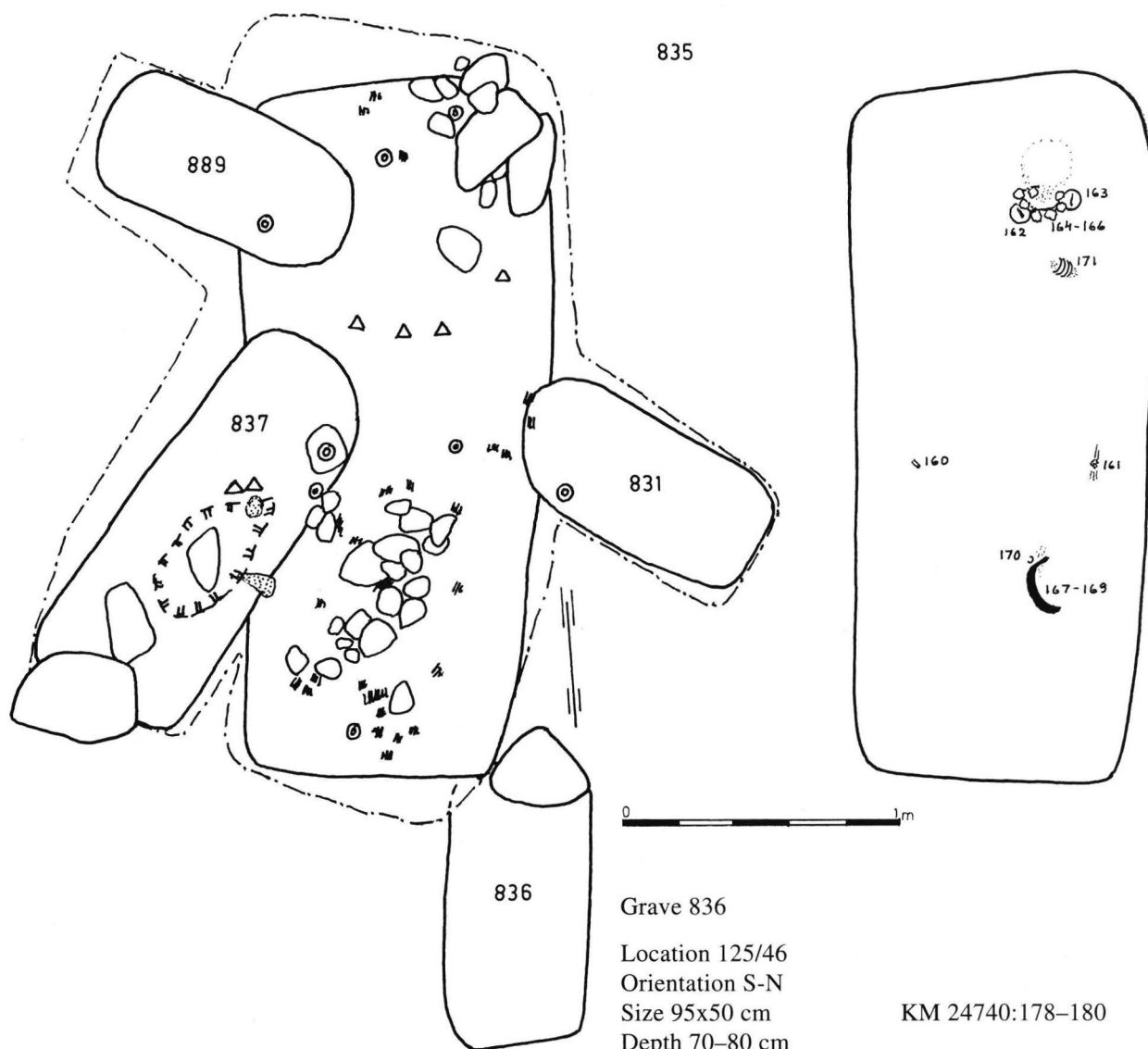
Interpretation and dating: No sex determination. This was a late grave.

Grave 835

Location 125/43	
Orientation S-N	Pl. 37:835:1–6
Size 250x110 cm	KM 24740:160–177
Depth 100–105 cm	

The grave was situated to the N of graves 833 and 834, where there was about 50 cm of topsoil. Around the N end of the grave there were several large stones, and round about and partly on top of it four small graves (831, 836, 837 and 889) had been dug. Grave 836 in the NW corner was only touching this one, but the others were slightly on top of it. There were scattered stones, slag and charcoal on top of the grave-pit, and in the fill potsherds, burnt clay, a burnt bone splinter and quartz were found. The grave-pit had even sides and rounded corners and its bottom slanted to the S. The head of the deceased had been at the S end, where the neckband made of bronze beads and pendants (24740:164) and two round brooches (:162,163) were found. About 20 cm to the N of these was a bracelet (:171), but the finger-ring (:170) was about 120 cm more to the N close to a sickle (:167). A bronze piece (:160) and a fragmentary spiral ornament (:161) were in the middle of the grave, the spiral ornament on the W-, the bronze piece on the E-side. The bronze artefacts were covered by a wood and birch bark layer, but no traces of the coffin borders were observed, and there were very slight remains of the corpse.

Interpretation and dating: Judging by the ornaments this was a woman's grave. The round brooches are so-called "two-animal brooches", dated to the period (800)825–950 AD. They are 61–62 mm in diameter and probably not among the earliest of their type (c.f. LUISTARI II 98–100 fig. 30:2). The neckband consists of 9 multi-part angular bronze beads and of 8 openwork pendants with a knot-cross design. One of the beads is of 2 parts, the others of 3 parts, and they are ornamented



Grave 836

Location 125/46
Orientation S-N
Size 95x50 cm
Depth 70–80 cm

KM 24740:178–180

with four small circular stamps on the facets instead of ringed dots as usual. Similar stamps decorate the solid suspension links of the pendants, and apparently all the parts had been made at the same time. Angular bronze beads and knot-cross pendants previously found at Luistari were in the graves of the periods 800–880 AD (graves 55,95) and 880–950 AD (graves 64,318,319,390), so probably also this neckband was made during the first half of the 10th century at the latest (LUISTARI II 128–129, 142, 146–148). The spiral bracelet of four and a half turns is of triangular section. It tapers to the ends, which have a groove on top of the middle ridge. The spiral bracelets previously found at Luistari were in the graves of the 10th and 11th centuries; the ones of triangular section were dated to the latter (LUISTARI II 121). The spiral ring found at the foot end of the grave is rather small, only 14 mm in diameter. It is of flat-convex section and not datable. The sickle is 200 mm long and 29 mm wide and of the same form as the sickle in grave 386, dated to the period 880–950 AD (LUISTARI II 185–186). Considering all these dates it seems possible that grave 835 is from about the year 950 AD. Most of the artefacts point to the earlier Viking Age, but the bracelet indicates a later period.

The grave was situated in the SW part of the cemetery, and grave 835 had been dug on top of its SE corner. A stone-slab was on top of its S end. The grave-pit was of equal width with rounded corners, and the bottom was slightly uneven. Potsherds, a burnt bone splinter and slag were found in the fill, but the burial was unfurnished.

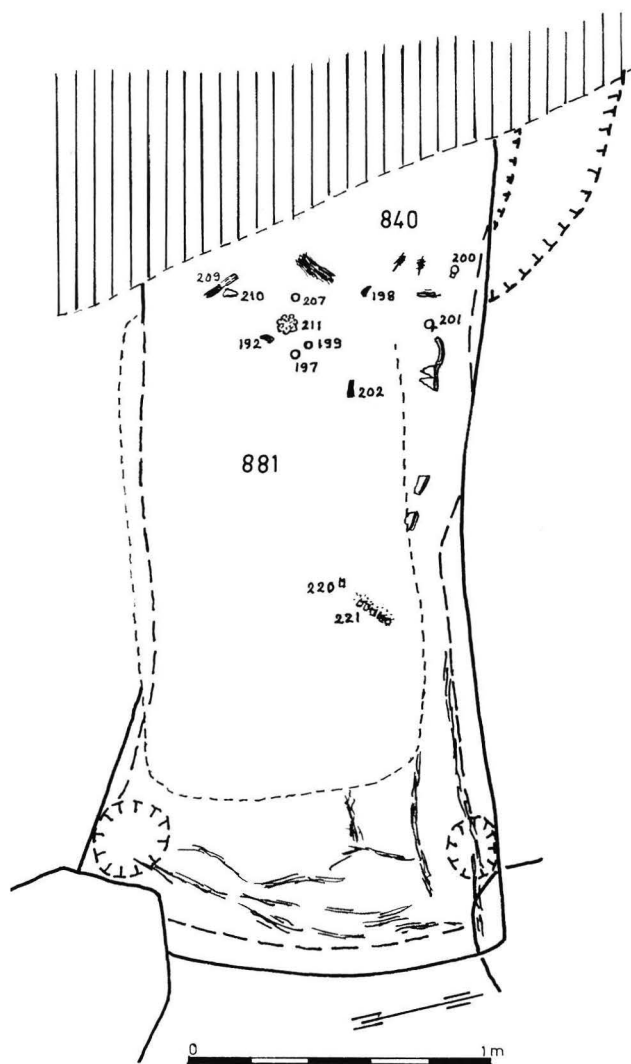
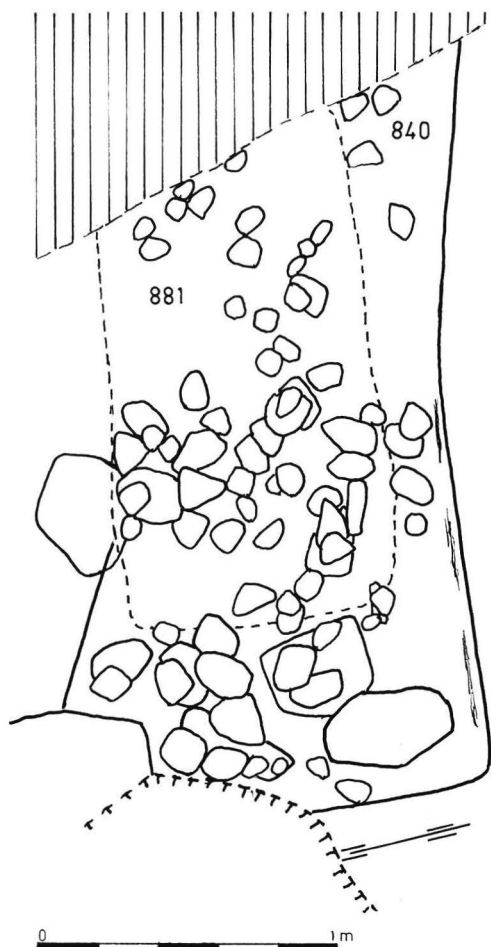
Interpretation and dating: Judging by the size of the grave-pit, this was a child's burial. Because grave 835 overlay it, it must be earlier than the middle of the 10th century.

Grave 837

Location 126/44
Orientation SSW-NNE
Size 140x60 cm
Depth 100 cm

KM 24740:181–182

The grave was situated in the SW part of the cemetery, where there was about 50 cm of topsoil. It was dug partly on top of the E side of grave 835. At its NE end was a stone about 30 cm in diameter, and smaller stones were in the fill. In the middle of the grave, partly on top of the fill stones, was a charcoal patch, about 80x25 cm in size, and fragments of a horse's thighbone (:182). Potsherds



and slag were found in the fill, but the burial was unfurnished.

Interpretation and dating: Judging by the size of the grave-pit, this was a child's burial. It was on top of grave 835, so it is from the middle of the 10th century at the earliest.

Grave 840

Location 123/41

Orientation WNW-ESE Pl. 36:840:1–11

Size at least 245x

110–140 cm

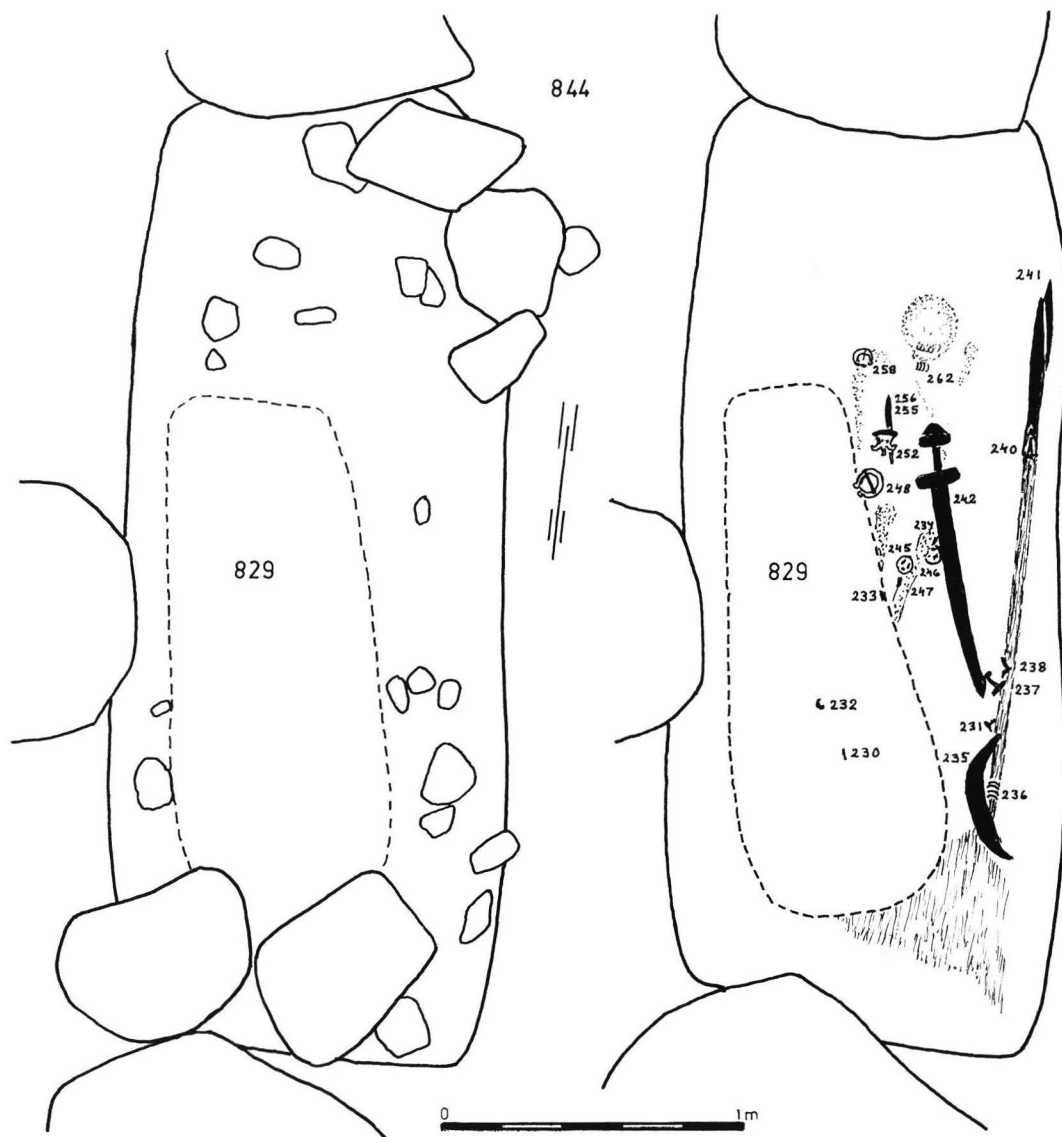
KM 24740:185–222

Depth 120–125 cm

The grave was situated to the SW of graves 835–837, close to the drainage ditch area excavated in 1969, and its W end had been damaged in digging the ditch. There was about 50–60 cm of topsoil. The grave-pit was partly on top of an earlier fireplace, and grave 881 had been dug directly on top of the W part of this grave. At the preserved E end an erected stone was supported by another stone, but otherwise the stone setting was damaged. The grave-pit broadened to the E. The bottom was rather even, but at the E end there were three shallow pits, two close to the corners, the third nearer the middle. At the same end and on the N side there were traces of wood, which extended as far as 35 cm above the bottom. At the damaged W end of the grave there were an iron knife (24740: 209), a flint piece (:210), six weights (:197,199, 200,201,207), a large spiral ornament (:211), iron nails and iron artefact fragments (:189–192,194,198,202–205). The middle of the pit was full of

potsherds of two, possibly of three different clay vessels (:193,214–216), and at the E part of the grave on the N side there were the remains of a dog (:220,221). In addition some fragments of bronze artefacts and spirals (:185,187, 195,213), iron plate fragments, burnt clay, burnt bone and slag were found in the fill.

Interpretation and dating: This was most probably a man's grave. The spherical weights point to a date around 1000 AD (LUISTARI II 71). The large spiral ornament is star-like with eight horns and made of 60 spirals. Similar ornaments were characteristic of the richly furnished men's graves of the period 880–950 AD (LUISTARI II 165, 169–170), and so this find indicates the 10th century. One of the fragmentary clay vessels (:215) has curved bottom and almost straight contour and it is decorated with two cord impressions. It is rather small (height 80–90 mm, diameter 140–150 mm) and probably belongs to group I:1b. The other vessel (:214) is a flat-bottomed "flower-pot" of group II:2d and similarly cord-decorated, height 145–150 mm, bottom diameter c. 115 mm and mouth diameter about 180 mm. The vessels of the last-mentioned group have been dated to the 10th and 11th centuries, the vessels with curved bottom rarely occur later than the 10th century (LUISTARI II 79, 83). Therefore, the latter half of the 10th century or about 1000 AD seems to be the most probable dating for this grave.



Grave 843

Location 120/48

Orientation SSW-NNE

Size 140x60 cm

KM 24740:225–229

Depth 100–120 cm

The grave was situated quite near the area excavated in 1969, and its W corner had been destroyed in digging the drainage ditch. There was about 50–55 cm of topsoil, but a very large rubbish pit extended on top of this grave and reached in places to the depth of 90 cm. The grave-pit had even sides and rounded corners, and on its even bottom there were distinct traces of a round-ended spade. At the SW end on the bottom fragments of animal teeth (24740:227) were found, the fill contained potsherds, a burnt lump of clay, slag and a chip of flint.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. It was rather deep and unfurnished apart from the animal remains, and probably it was later than the Viking Age. The spade marks make it interesting.

Grave 844

Location 122/49

Orientation S-N

Pl. 38:844:1–7, 39:844:1–7

Size 330x145 cm,

bottom 310x120–130 cm

KM 24740:230–269

Depth 120–130 cm

The grave was situated to the E of grave 843, and it was bordered by large stones in the N, E and S. It was overlain by 50–60 cm of topsoil and traces of a large refuse pit extended even deeper. Grave 829 had been dug directly on top of this grave, but the S end and the W side of the grave were preserved. At the SW corner of the grave there was an arched row of stones, at the N end there were two stones over 60 cm in diameter. The westernmost of these was of weathered granite and badly disintegrated. The grave-pit was of even width, had rounded corners and its bottom slanted to the S. At the NW corner there were traces of wood, but elsewhere wood was found only in connection with spear shafts. A small patch of charcoal was observed at the S end. The deceased was lying in a

supine position head in the S, and most of the lower body had been destroyed in digging grave 829. Fortunately, the most important finds had been in the preserved W part of the grave. In the SW corner there were two spearheads (24740:240,241) on top of each other, and 110 cm to the N of them a spear-ring (:236) was found and next to it a scythe blade (:235). About 20 cm to the S of the scythe tang there was an iron rivet and a nail (:237,238), and next to these was the swordpoint, from which the sword (:242) continued diagonally to the chest of the deceased, where the hilt lay about 15 cm lower than the point. To the E of the sword, close to the hips of the deceased, were two bronze strap-dividers (:245,246). Near the waist on the right side there was a large penannular brooch of bronze (:248) facing upside down, and another brooch (:258) was found on the right shoulder. On top of the chest was a large iron knife (:255) pointing to the S and a piece of flint (:256) together with a firesteel (:252). A finger-ring (:262) was found below the chin and what were obviously remains of a tin pendant (:257) about 10 cm further on the chest. A few teeth of the deceased were collected and the preserved bones could be observed as a yellowish, sticky mass. In the fill there were some iron fragments (:231,233,234,247,264), potsherds, burnt clay, burnt bones and slag. In the fill of grave 829 a couple of iron artefact fragments (:230,232) were found.

Interpretation and dating: The weapons indicate a male burial. The sword is of Petersen (1919) type H with a silver-decorated handle. It is 946 mm long and weighs more than 2700 g. Type H is dated to the period 800–950 AD (Kivikoski 1973 112 fig. 831). The spearheads are of Petersen type E. One of them is 512 mm long and with ornamental grooves, the other is smooth-socketed and about 14 cm shorter. Both are very similar in shape. Only one of the spears had a ring. Because the spearheads were one on top of another, it is not clear to which one the ring belonged. It is of triangular section, has three twists and a diameter of 29 mm.

The scythe blade is curved, 440 mm long and 41 mm wide. Near its tang end a nail (:238) and a large rivet (:237) were found, but it is not certain whether they are from the scythe shaft. The knife is 215 mm long, with a narrow blade. The back of the blade is slightly curved near the point. There had been an iron hook at the end of the shaft. Similar knives were found e.g. in graves 90 and 100, coin-dated to the first half of the 10th century, and in grave 323, coin-dated to the end of the 9th century (LUISTARI II 46).

Both penannular brooches are of the variant with pegs. The smaller one (:258) found at the right shoulder, is 60x48 mm in size, and it has a pin joined to the ring in the normal way. The larger brooch (:248) found near the waist has the attachment beneath it. Measuring 77x72 mm, it has an ornamented silver plate on the ring; in fact it is quite similar to the brooch found in grave 740 (see Lehtosalo-Hilander 1990 64 fig. 7). These brooches together with others with similar affixing apparatus seem to date from the first half of the 10th century, although the penannular brooches with pegs already came into use during the first half of the 9th century (LUISTARI II 102–

103; Lehtosalo-Hilander 1990 67–70).

An artefact that also confirms the dating to the first half of the 10th century is the bronze-handled firesteel with horsemen designs. Similar firesteels were found earlier in graves 90 and 348 at Luistari, both coin-dated to the second quarter of the 10th century (LUISTARI II 73–75; Lehtosalo-Hilander 1990 61–65). The finger-ring with a flat middle-shield, belonging to group II:1b, suits this date well (LUISTARI II 125–126).

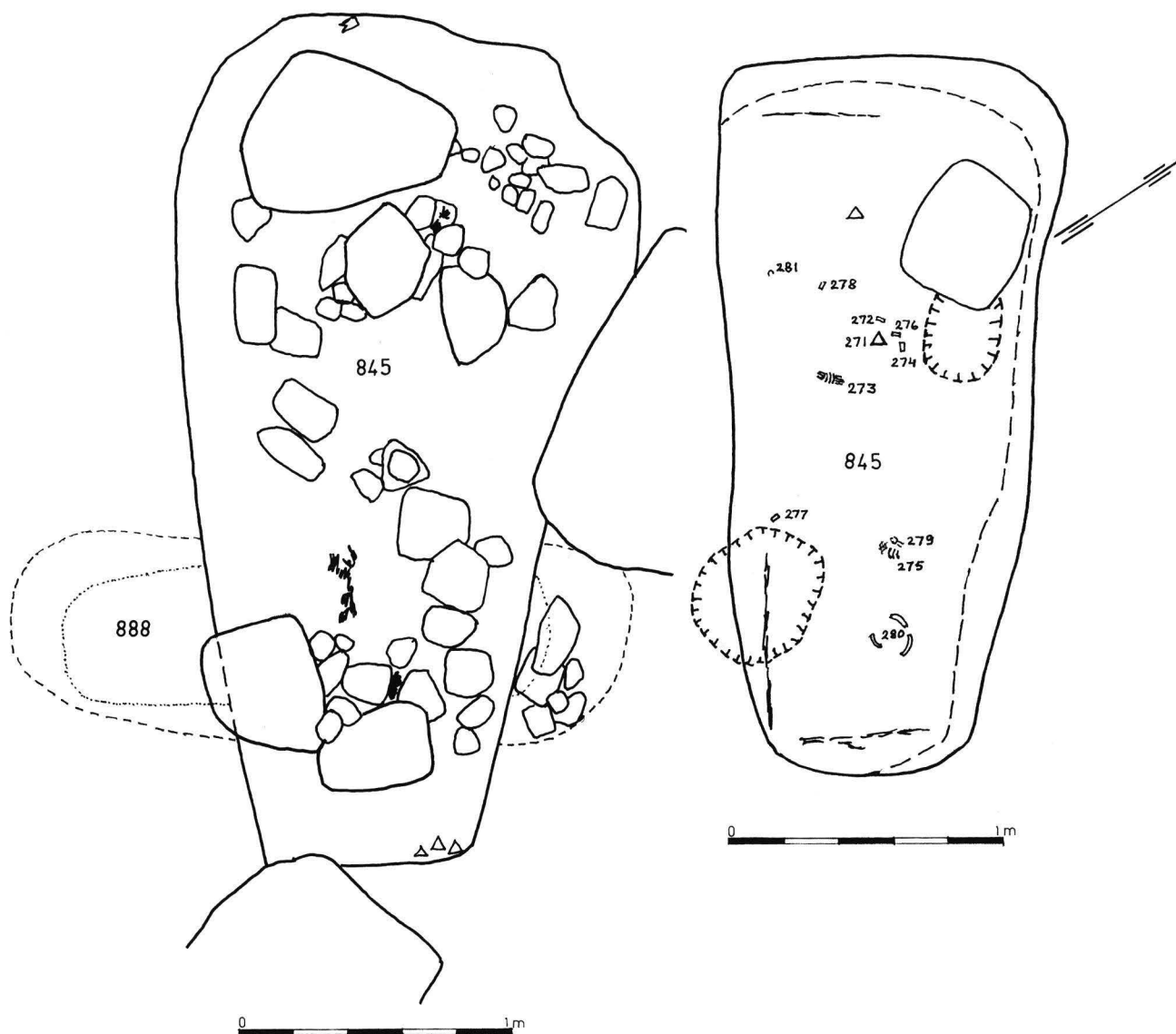
From the belt of the deceased two strap-dividers, some leather and a mount were preserved. Both dividers are round with a smooth outer ring and three spokes. Their middle part is divided into small cells by lists forming a triangle with concave sides superimposed on a circular frame. In one of them (:245) there is a circle in the middle of the triangle, in the other one (:246) a curved list separates a pear-shaped cell of every corner of the triangle. Each spoke contains a twisted figure. These carefully made artefacts must be prototypes of the strap-dividers such as the one found in grave CK at Köyliö (Cleve 1978 Pl. 21:317), but so far I have not found any exact parallels.

The bronze mount fastened with three iron rivets to a leather strap fixed in one of the strap-dividers (:246) is fragmentary and partly melted. It is decorated with cast ornamentation, resembling the late Vendel style (cf. Kivikoski 1973 fig. 604). It seems that an ancient mount, maybe collected from a cremation burial-ground, was joined to this belt with finely made strap-dividers. It is the only mount found in this grave, but grave 829 overlay it, and so some parts of the belt may have disappeared; there was, for example, no belt buckle.

Grave 845

Location 123/43	
Orientation NW-SE	Pl. 40:845:1–5
Size 320x100–170,	
bottom 260x70–130 cm	KM 24740:270–287
Depth 90–100 cm	

The grave was situated to the N of grave 840 close to the drainage ditch, and it overlay the NE end of grave 888. There was 50–70 cm of topsoil, and overlaying both ends of the grave was a group of large stones, but the stone settings were partly scattered and the middle part of the grave had been plundered. A part of a spear shaft with its ring (24740:273) was transversely in the middle of the grave and about 20 cm above the bottom. The grave-pit broadened to the NW, where there was a large stone on the bottom. To the SE of it and also close to the S corner of the grave there were pits reaching about 10 cm below the bottom level. It is possible that these had been formed when it was attempted to remove the bottom stones. At the S corner and at the NW end of the pit there were traces of wooden frames. Remains of a fragmentary clay vessel (:280), a bronze finger-ring (:275) and a fragment of a spiral ornament (:279) were found at the SE end. Some bronze spirals (:272,274,276–278) and a small bronze ring (:281) were 80–90 cm to the NW of the finger-ring. In the fill there were potsherds, an iron fragment (:270),



Grave 850, a cairn

Location 130/45

Orientation SW-NE

Size 7x4 m

Thickness of the stone setting 30–50 cm

Pl. 70:1–16, 71:1–10

KM 24740:291–399

charcoal, burnt clay and bone, slag and a stone flake. In the NW corner of the pit there were small fragments of an animal tooth (:285).

Interpretation and dating: The spear-ring indicates a male burial. It is 26 mm in diameter, has a middle shield and is of group II:1a. The finger-ring is of group II:1c, and both these groups date from the earlier Viking Age (LUISTARI II 124–126 fig. 35:5,7). The clay vessel is very fragmentary, but probably of group I:1b, which indicates the same time (LUISTARI II 78–79 fig. 22:2). The loose spirals are 6–8 mm in thickness and made of flat-convex or triangular rod. They may be from a belt. The spiral ornament is very fragmentary but clearly from an end-roundel (see LUISTARI II 166–168 figs. 48, 43:10), and therefore also these small preserved details of the dress point to a man.

Cairn 850 was situated in the S part of the cemetery at the border of the field. It had been built between and around three stones more than two metres in diameter, and also other large stones in the neighbourhood had been used. The area between these natural boulders had been filled with smaller stones, forming an almost regular cairn. It was 7x4 m in size and oriented SW-NE. On its SE side was a very even border of larger stones, the smooth surfaces of which were turned outwards. In the centre of the cairn, between the large fixed stones, was a circle of large split stones and in the middle of it an upright standing stone. At the edges there were some fairly large stones, but they didn't form a completely united chain. The border of the stone setting was however quite distinct. The fill of the cairn was unusual; apart from natural and split stones there was more than 273 kg iron slag. Particularly in the S corner and in most of the sides the fill consisted of almost nothing but slag.



On the surface of the cairn the soil was sooty and very black, but only very little burnt bone was found, and lower down there were only slight traces of charcoal. Potsherds were found already on the surface and the lowest of them were beneath the stone setting more than one metre below the original ground level. There were altogether more than 13 kg potsherds, two thirds of them in the central part of the cairn. At the W corner about 3 kg were found. Of the other finds the following could be mentioned: a blade of a knife (24740:293) at the SE edge, a fragment of a bronze rod (:316), cube-stones (:291,317,318,320), stone discs (:319,383,394) and perhaps pieces of pig iron (:315). There were cattle teeth (:307,337,365–369) especially in the middle of the cairn, in the lower part of the stone setting.

On the edges of the cairn clean sand appeared almost immediately under the stone setting, but in the middle the soil was mixed and discoloured 10–20 cm lower down. To a certain extent this was caused by moles, but on the SE edge a feature extended even further was revealed. It was 170x60 cm in size and continued almost half a metre beneath the bottom of the cairn. The shape of the pit was precisely similar to an inhumation grave, but apart from a few sticky spots nothing else was found on the bottom, and the fill contained only a few potsherds (:391).

The direction of the pit was SW-NE, and at its NE end there was that round stone setting of large split stones. It seems possible that it had been first built to mark the grave, after which the rest of the cairn material had been

gathered. The large stones on the SE side of the cairn were on top of the pit.

Interpretation and dating: It is just possible that this curious cairn was a grave monument. Its shape was so regular that it hardly was a refuse heap. On the other hand, the only whole metal artefact, a knife with rivet holes for fastening the shaft (24740: 293), appears to be late (Zachrisson 1976 66–67). There are large numbers of potsherds, but they are from many different vessels. Most of them are from undecorated pots, but there are also pieces of a vessel with horizontal and winding grooves (:298,300,303,324,329,330,339, 341,342, 348,351) and of another one with only a winding groove (:326). In one rim sherd (:328) there is a curving cord impression; in some sherds (:355,356,373,385) the surface is scratched or there are pits in the wall (:327,355, 374). Two sherds (:333,347) seem to be from vessels with angled walls, and some other ones (:359,362,376) are bottom pieces from flat-bottomed vessels. The sherds with angled wall contour and the ones with scratched surface resemble known Bronze Age ceramics (see e.g. Meinander 1954 *Tafel* 24; Salo 1981 figs. 5 and 134), and curving lines imitating cord impressions seem to occur in the late Bronze Age ceramics found at the Asva hillfort in Estonia (EE 1982 fig. 96:9,10). But for those other ornamental motifs I have found counterparts neither in the published material, nor in the potsherds from other cairns or from the dwelling site at Luistari. In addition, the amount of slag shows that the cairn must be from the Iron Age. It probably dates from the Pre-Roman period, which is still poorly known.

Grave 851

Location 129/36
Orientation SSW-NNE Pl. 40:851
Size 170x50 cm KM 24740:400–401
Depth 70–75 cm

The grave was situated in the southern field area, where there was about 30 cm of surface soil. The grave-pit had even sides and rounded corners, and its bottom was uneven because of a couple of stones. At the NE end about 30 cm above the bottom a bronze finger-ring (:400) was found, and in the fill there was iron slag, but nothing else was observed.

Interpretation and dating: No sex determination. The finger-ring has a mid-ribbed middle shield and so it is of group II:1a. It dates possibly from the earlier Viking Age (LUISTARI II 127) and is probably a fill-earth find in this narrow and late (?) pit surrounded by unfurnished graves.

Grave 853

Location 129/34
Orientation SSW-NNE
Size 160x65 cm KM 24740:404–409
Depth 90–95 cm

The grave was situated in the southern field area, where there was about 30 cm of surface soil. The grave-pit had even sides and rounded corners, and the bottom slanted slightly to the SW. At the SW end of the pit there was a small iron fragment (:404) and at the NE end a cattle tooth (:407); burnt clay, burnt bone, slag and a piece of flint were found in the fill.

Interpretation and dating: No sex determination. This was probably a late grave.

Grave 854

Location 131/33
Orientation SSW-NNE Pl. 40:854
Size 170x55 cm KM 24740:410–414
Depth 75 cm

The grave was situated in the southern field area, where there was about 30 cm of surface soil. The grave-pit had even sides and rounded corners, and the bottom was even. In the middle of the pit a fragment of a stone axe (:410) was found, at the SW end there was a large potsherd (:412) and at the NE end a tooth of a goat or a sheep (:413). Higher up in the fill a rim fragment of a clay vessel and several lumps of slag were found.

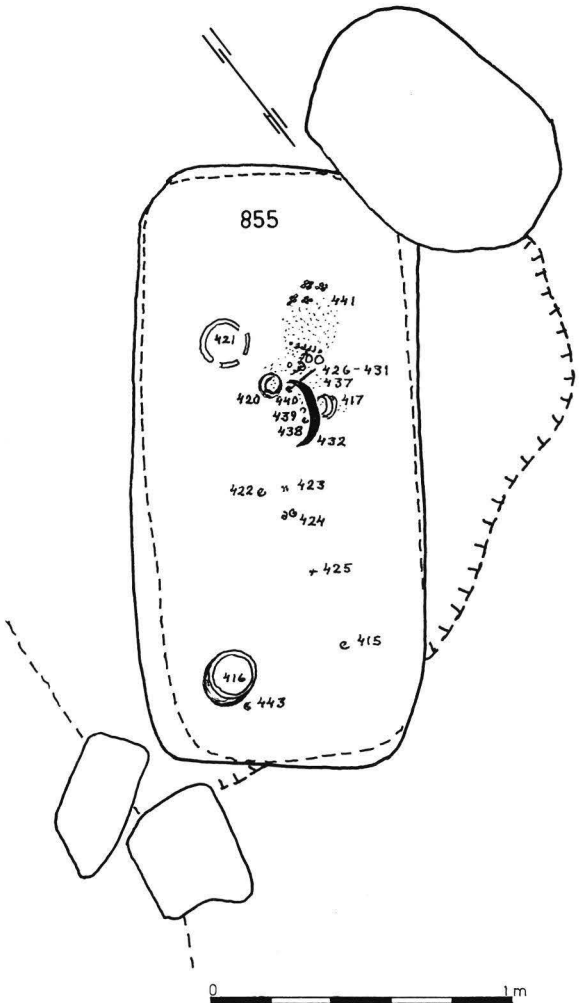
Interpretation and dating: No sex determination. This was probably a late grave, but the stone axe fragment could have been an amulet intentionally buried with the deceased.

Grave 855

Location 125/40
Orientation SW-NE Pl. 41:855:1–20
Size 195x90 cm KM 24740:415–448
Depth 90–95 cm

The grave was situated in the S part of the cemetery overlying a large hearth, in a location with 60–75 cm of top layers. The grave-pit was of regular form with rounded corners. Its bottom was on top of the fireplace stones, and was thus rather uneven. The grave could be distinguished from the area of the fireplace only when the rim of the clay vessel at the NE end (:416) appeared. The other vessel at the SW end (:421) was found over 15 cm lower down; both were on the SE side of the grave-pit. The deceased was in a supine position with the head to the SW. The hands were folded over the chest, where two bracelets (:417,420), a sickle (:432), three finger-rings (:438–440), a small spiral ornament (:436), an iron pin (:437) and the remains of a neckband (:427–431) were found. Mixed with the last-mentioned objects were the teeth of the deceased (:427g,444). On the forehead there were spiral ornaments (:441) as also near the lower limbs (:423,425), where also three bronze rings (:422,424) were found. Two more rings (:415,443) were discovered at the NE end of the grave, one of them quite near the clay vessel (:416). The bronze artefacts were covered by a birch-bark layer. In the fill there were potsherds, burnt clay, a burnt bone splinter and slag.

Interpretation and dating: The small spiral bracelets and small finger- and toe-rings show that this was a child's grave. The bracelets have 5–6 turns and they are made of only 4–5 mm wide rod of flat-convex section. Their



diameter is 46 mm. The finger- and toe-rings have 3,5–8 turns, they are of round section and their diameter is 10–15 mm. The clay vessels are quite simple and undecorated. One of them (:421) is of group II:2d, the other one of group II:2c (LUISTARI II 78 fig. 22:16,15). In form, the sickle resembles most closely the sickle found in grave 404 (LUISTARI I Plate 123:404:46), but there is no rivet. The iron pin is 135 mm long and badly rusted, but it is possible that it originally had an iron ring fastened in a hole at its head end. The short chain (110 mm) of double rings (:426) may have been fastened to it. The neckband consists of four beads, six bronze spirals and four silver coins. The order in the band was following: a blue bead, two bronze spirals, a coin (:429), a bronze spiral, a blue bead, a coin (:428), two spirals, a coin (:430), a spiral and a blue bead. The fourth coin lay under the former ones, and a yellow bead with flower-like eyes in turquoise, blue, white and brownish grey colours (:427a) was found slightly farther away. One of the coins (:428) is Oriental possibly from 754/5 AD, the second (:429) is Anglo-Saxon of Ethelred II, Helmet type from 1003–1009 AD, the third (:430) is German of Henry II from 1014–1024 AD, and the fourth (:431) is also German of Otto-Adelheid type from 983/991–1040 AD (see Talvio 2000:22–25). These date the grave to the first quarter of the 11th century or later.

Grave 860

Location 119/51
Orientation SSW-NNE
Size 200x70 cm,
bottom 165x55 cm
Depth 110–115 cm
KM 24740:457–460

The grave was situated close by the drainage ditch, where there was about 40–50 cm of topsoil. The upper parts of the grave-pit had been destroyed in the digging of the drainage ditch, but the bottom was undamaged. In the middle of the grave about 30 cm above the bottom a blue bead (:457) was found, and there were also potsherds, slag and a stone splinter in the fill.

Interpretation and dating: No sex determination. This was probably a late grave and the bead was also a filling earth find.

Grave 870

Location 126/54
Orientation NW-SE
Size 100x70, bottom 80x40 cm
Depth 95 cm
Grave plan p. 98

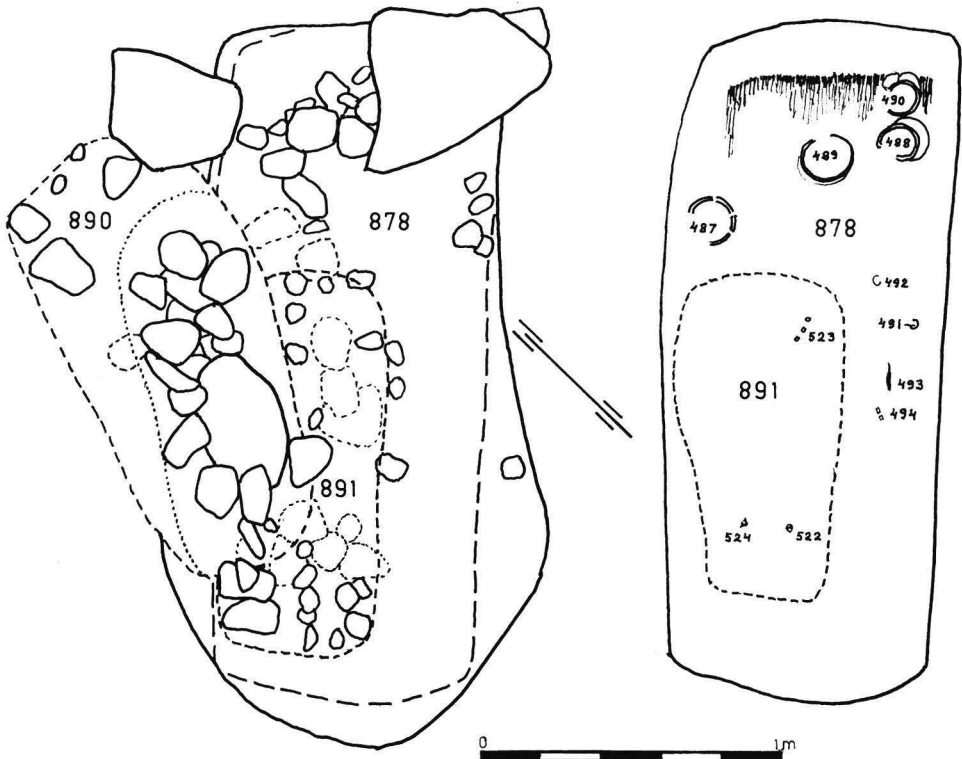
The grave was situated in the S part of the cemetery, where there was 60–70 cm of topsoil, and its SW side had been destroyed in digging grave 826. The grave-pit was oval in its upper parts, but lower down it was even-sided with rounded corners. The burial was unfurnished.

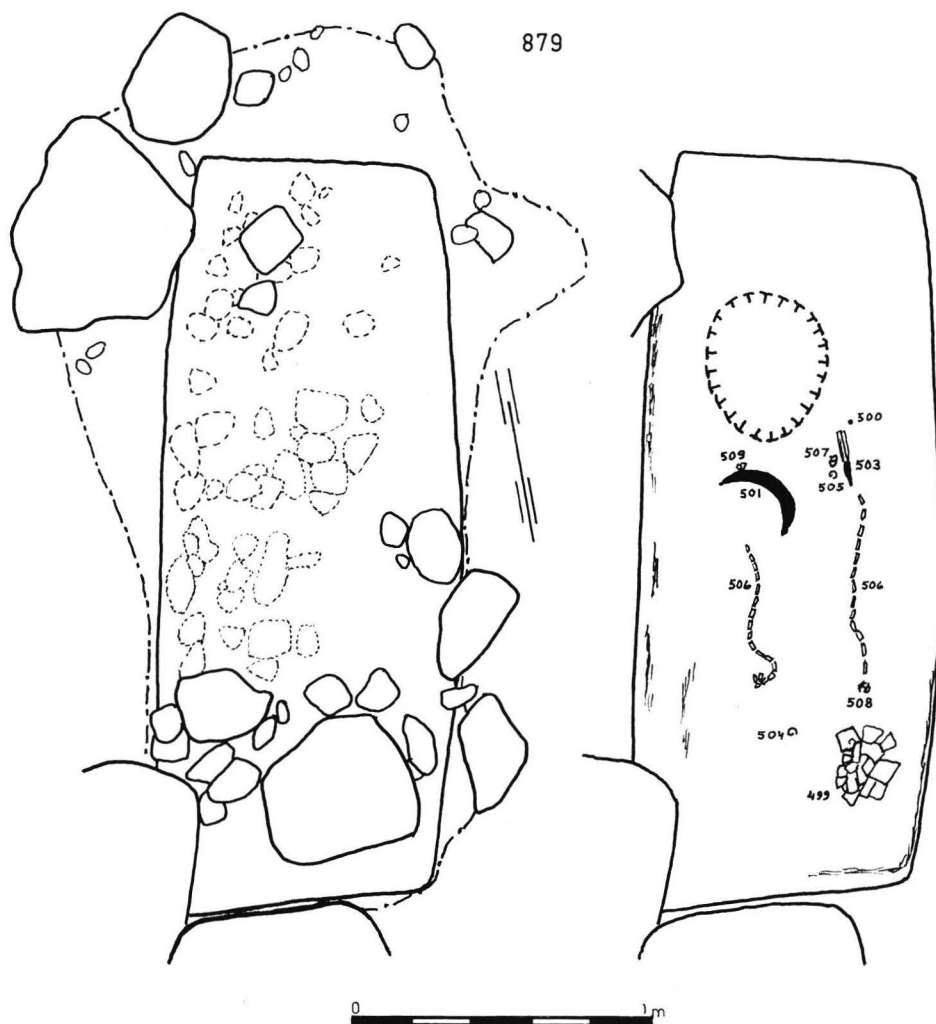
Interpretation and dating: Judging by the size of the grave-pit, this was a child's grave, and because it was beneath grave 826, it cannot be later than the middle Viking Age.

Grave 878

Location 129/48
Orientation SW-NE
Size 220x90–95 cm
Depth 85 cm
Pl. 40:878:1–6
KM 24740:487–498

The grave was situated to the N of cairn 850, where there





was 35–40 cm of topsoil. At the SW end of the grave there was a large stone, 45–50 cm in diameter, and a large number of smaller stones, but apparently the stone setting had partly been destroyed in the digging of graves 890 and 891. The grave-pit was somewhat irregular in its upper parts, but lower down it was almost equally wide with slightly rounded corners. The bottom was even and there were wood remains at its SW end. At the same end there were four clay vessels (:487–490). About half a metre to the middle of the grave, on the NW side, there were two halves of the same penannular brooch (:491, 492) about 20 cm from each other, and a small iron knife (:493) and a spiral ornament fragment (:494) to the NE from these. In the fill potsherds, a burnt bone splinter, slag and a stone piece were found.

Interpretation and dating: Probably this was a woman's grave. The penannular brooch has rolled ends and a ring of round section. Similar brooches previously found at Luistari were dated from the 10th century to the Crusade Period (LUISTARI II 100–101). Probably all the clay vessels have curved bottoms and belong to group I:1b. Two of them have a bottom pit. Three of the vessels were decorated with cord impressions. In one of them (:488) there are two cord lines just under the rim and three about 20 mm lower down, in the other two there are four (:487) and three (:489) cord lines just above the widest part of

the vessel. The fourth vessel (:490) is ornamented with a horizontal band, in which three wavy lines undulate between two straight double lines. These vessels suggest a dating to the earlier part of the Viking Age (LUISTARI II 79).

Grave 879

Location 131/49

Orientation S-N

Pl. 42:879:1–10

Size 280x100 cm,

bottom 250x90–100 cm

KM 24740:499–514

Depth 90–130 cm

The grave was situated to the NE of grave 878, near the power line pylon, where there was about 80 cm of topsoil. At its N end there was a stone, about 50 cm in diameter, and the filling earth contained a large amount of smaller stones. The grave-pit was almost rectangular, and there were wooden remains on both long sides and at the N end. The bottom was even. An irregular patch covered the S end of the grave, indicating a pit, about 10 cm deeper than the grave. In digging this the head part of the grave had been destroyed. To the N of this pit a blue bead (24740:500), a knife (:503), a finger-ring (:505) and close to it an apron corner ornament (:507) were found. To the E of these, on the right side of the deceased was a

sickle (:501) and beneath it the ornament of the other upper corner of the apron (:509). The bronze spiral rows of the apron sides (:506) continued about 70 cm to the N and ended to the ornaments of the lower corners. To the N of these was a bronze finger-ring (:504), and in the NW corner of the grave a broken clay vessel (:499) was found. Birch bark was observed above the bronze artefacts, but there were only very slight traces of bones. Potsherds, slag, a flint piece and a stone splinter were found in the fill.

Interpretation and dating: On the basis of the apron remains this was a female grave. There was possibly also a child, because the spiral finger-ring (:505) in the middle of the grave was only 10 mm in diameter. It is of triangular section, the other one (:504) at the foot end of the grave is of flat-convex section and about 15 mm in diameter. The sickle is very fragmentary. The clay vessel is undecorated and belongs to group I:1a. The only vessel of this group previously found at Luistari was in grave 95, dated to the period 800–880 AD (LUISTARI II 77–79, 184). Possibly the same dating applied to this grave as well.

Grave 881

Location 122/41	See also p. 102
Orientation NW-SE	Pl. 42:881:1–2
Size 170x100(–80) cm	KM 24740:206,208
Depth 100–110 cm	(See grave 840)

This grave overlay grave 840, and therefore it could be observed only near the bottom layer. The grave-pit had even sides and rounded corners and its bottom was even. Its fill was full of artefacts and artefact fragments from grave 840, but probably the slight traces of a skeleton on the N side of the grave-pit and two finger-rings (:206,208) are from this grave.

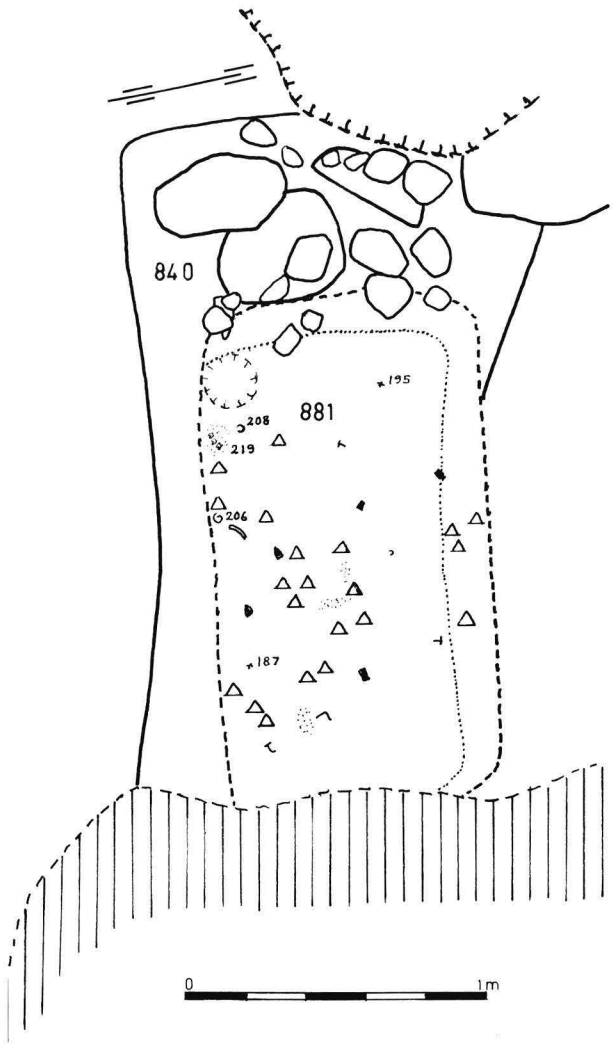
Interpretation and dating: Judging by the size (diameter 13 mm) of the spiral finger-ring (:208) with a finger bone within it this was a child's grave. This ring is of flat-convex section, the other fragmentary ring is of round section. Because this grave was on top of grave 840, dated to the latter half of the 10th century or to about 1000 AD, it is from the beginning of the 11th century at the earliest.

Grave 888

Location 123/42	Grave plan p. 105
Orientation SW-NE	
Size 180x60, bottom 140x40 cm	
Depth 105 cm	

The grave was situated in the S part of the cemetery, where there was about 70 cm of topsoil. Grave 845 overlay its NE part. The grave-pit had rounded ends and an even bottom. Only a small strip of the grave's NE end was preserved, and there was a small pile of stones on top of it. No finds.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. Because it was beneath



grave 845 from the earlier Viking Age, it could not be later than that.

Grave 889

Location 126/43	Grave plan p. 101
Orientation NW-SE	
Size about 100x55 cm	KM 24740:176 (Grave 835)
Depth 90–95 cm	

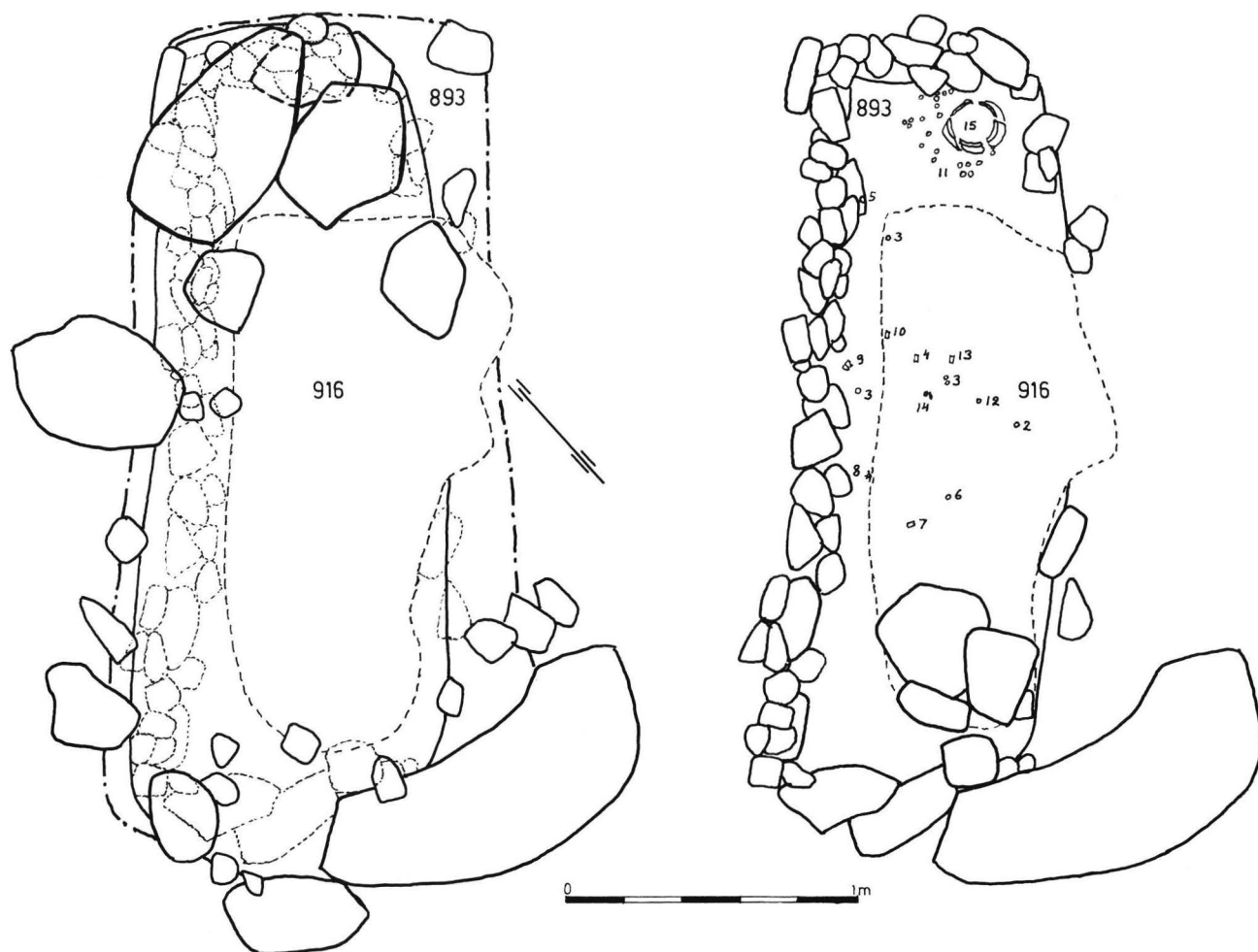
The grave was situated in the SW part of the cemetery, and it was dug on top of the SE corner of grave 835. The grave-pit was almost rectangular in its upper parts but oval at the bottom. Only one lump of slag was found in the fill, and the burial was unfurnished.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. Because it was on top of grave 835, it is from the middle of the 10th century at the earliest.

Grave 890

Location 129/48	Grave plan p. 108
Orientation SSW-NNE	
Size 125x45 cm	KM 24740:520–521
Depth 85 cm	

The grave was situated in the S part of the cemetery overlaying graves 878 and 891. It was covered almost totally



by a pile of stones. The grave-pit had rounded ends and its bottom slanted to the NW. Four potsherds and a piece of slag were found in the fill, but the burial was unfurnished.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. The graves beneath it were from the earlier part of the Viking Age, which implies that it is from that period at the earliest.

Grave 891

Location 128/48 Grave plan p. 108
Orientation SW-NE Pl. 42:891:1–3
Size 105x40–55 cm KM 24740:522–524
Depth 90 cm

The grave had been dug completely on top of the E corner of grave 878, and overlaying the SE side of this grave was grave 890, which however was shallower, and so the bottom of this grave was undamaged. There was a large amount of stones on top of the graves, but they were possibly from the scattered stone setting of grave 878. The grave-pit broadened to the SW and it had an even bottom. At its SW end three small blue beads (:523) were found, and at the NE end there were two apron corner ornaments (:522,524). No remains of the deceased were preserved.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. Because it was on top of grave 878, dated to the earlier part of the Viking Age, it could be from that time at the earliest. The corner or-

naments made of four spirals indicate the period 800–880 AD, because the two graves (130, 294) previously excavated at Luistari which contained similar ornaments were from that time (LUISTARI II 155–157, 184–185).

Grave 893

Location 133/61
Orientation SW-NE Pl. 42:893:1–6
Size 285x120–140,
bottom 260x90–100 cm KM 25480:2–17
Depth 95–100 cm

The grave was situated in the SE part of the cemetery, where the earth was stony and the topsoil was about 45 cm in thickness. Grave 916 had been dug on top of its NW side, so that some beads of grave 893 were in its fill. At both ends of the grave there was a group of stones and a row of stones bordered the SE-side and the SW end of the grave-pit, which broadened to the NE and was even-bottomed. A clay vessel (25480:15) and remains of a neckband (25480:5,11) were found in the SW end of the pit. Some beads (25480:2,3,6,12) were also collected in the middle of the grave, as well as spiral ornaments (25480:7–10,13). An iron fragment, potsherds, slag and some pieces of burnt bone (25480:14,16,17) were found in the fill. There were no traces of the deceased.

Interpretation and dating: Judging by the beads and the apron ornaments this was a female burial. Most of the beads are dark blue and cylindrical, which indicates the

earlier phase of the Viking Age. Also the multi-part bronze bead (25480:3) can be from that time. Two apron corner ornaments were preserved. One of them (:9) is very small and made of four spirals, in the other one (:8) the spirals are rather thick (5–6 mm). The clay vessel is undecorated and belongs to group I:1b. All these details point to the early part of the Viking Age (LUISTARI II 128–129, 131, 155–157 fig. 43:1, 77–79). The yellow green-striped bead (:5) and the transparent turquoise beads (:6,11) are not as easily dated. The last-mentioned ones, however, seem to have a counterpart among the beads in grave 62, dated to the period 880–950 AD (LUISTARI II 185, Colour Plate I:6).

Grave 894

Location 130/58

Orientation SSW-NNE Pl. 43:894:1–12

Size 210x100 cm,

bottom 165x65 cm KM 25480:18–33

Depth 85 cm

The grave was situated in the stony SE-part of the cemetery area, where the topsoil was about 45 cm in thickness. Grave 912, which was shallower, was on top of its western corner, and there was also a trace of some other round pit. The grave-pit was rectangular and it had a wooden lining. Distinct traces of wood appeared on the sides to a height of about 15 cm, and the bottom was quite even. Remains of the skull were found at the SW end of the grave; the arms were folded over the chest and the stomach and also traces of thighbones were observed. Beads (25480:21) were found at the neck, the right arm with a spiral bracelet (25480:25) was bent up near the neckband, where two finger-rings (25480:23,24) were found. Also on the left arm, lying on the abdomen, were a bracelet (25480:26) and two finger-rings (25480:27,29). A small iron knife (25480:28) was found on the right-hand side of the deceased, and at the NE end of the grave, about 80 cm from the chin of the deceased was a small bronze ring (25480:22), probably a toe-ring. At the SE-side of the grave-pit, about 20 cm above the bottom level, was a cube-stone (25480:20) and charcoal, potsherds, burnt clay and bones (25480:30–32) were found in the fill. A couple of beads (25480:18–19) were quite near the surface of the grave.

Interpretation and dating: The size of the deceased (height about 100 cm) and her ornaments point to the fact that this was a grave of a little girl. Most of the beads are cylindrical and dark blue, which points to the earlier Viking Age. Spiral bracelets, on the other hand, could give a dating to the 10th century. (LUISTARI II 121, 131).

Grave 895

Location 141/66

Grave plan p. 113

Orientation almost S-N

Pl. 43:895:1–5

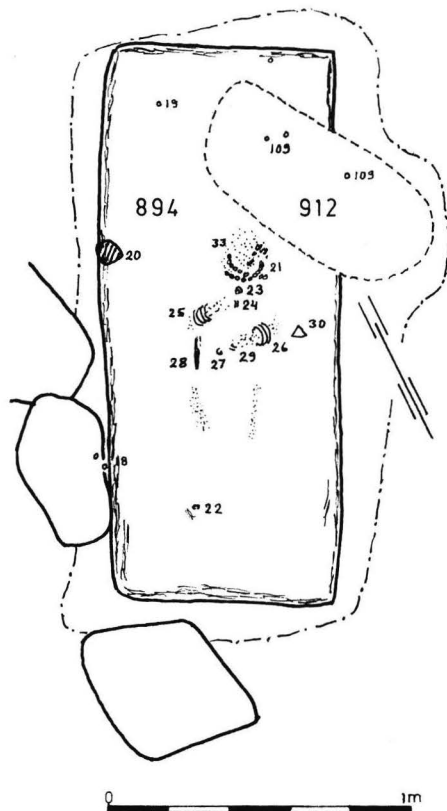
Size 290x110 cm,

bottom 260x80–90

KM 25480:34–46

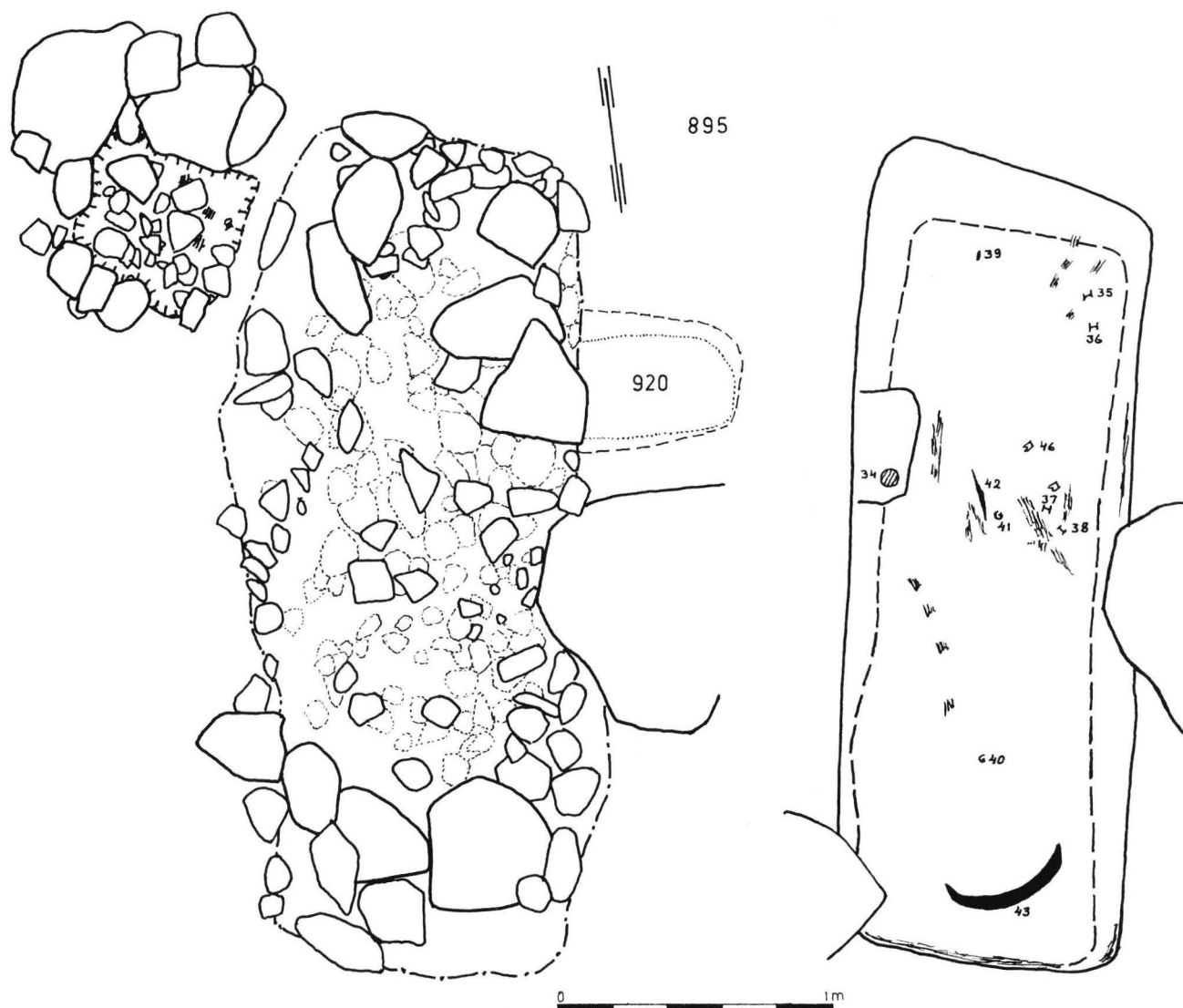
Depth 80–90 cm

The grave was situated in the stony SE part of the cem-



etry, where there was 35–45 cm of topsoil. It was dug on top of the E end of grave 920. The whole area was very stony, but apparently the northern end of the grave was marked with a row of large stones. The grave-pit broadened slightly to the north; it had rounded corners and was filled with very dark soil. Its bottom was rounded and uneven because of stones. In the NW corner of the pit was a scythe (25480:43). A finger-ring with a bone inside (25480:41) and a knife (25480:42), the tip pointing north, were found in the middle of the grave. A small bronze ring (25480:40), only 11 cm in diameter, was about 85 cm to the NNE of them, and an iron rivet in two pieces (25480:37,38) was 20 cm to the W. Two more rivets (25480:35,36) were found in the SW corner, about 90 cm to the SW of the first-mentioned rivet, and in the area between them were teeth of sheep or goat (25480:46). A small iron artefact fragment (25480:39) was quite near the S end of the grave-pit. On the W and N sides and on the bottom were traces of wood. Large amounts of charcoal, some slag, potsherds and burnt bone (25480:44,45) were found in the fill, as well as a stone disc (25480:34), which was about 30 cm above the bottom.

Interpretation and dating: The scythe indicates a Viking Age male burial and its wide blade (40 mm) points to the 9th and 10th centuries (LUISTARI III 19, LUISTARI II 54–55). On the other hand, the finger-ring was rather small, only 16–17 mm in diameter, which means that the deceased was possibly a young person. That would also explain the remains of a sheep or a goat (cf. LUISTARI I 39).



Grave 897

Location 130/57

Orientation SSW-NNE

Size 135x75 cm,

bottom 110x50 cm

Depth 85 cm

KM 25480:47-49

The grave was situated in the stony S part of the cemetery, where there was about 45 cm of topsoil. It was directly to the SW of grave 894 so that at the beginning no border between these two was observed. The grave-pit was of almost even width with rounded corners, and it tapered to the even bottom. At the NE end in the fill there was one stone. In the middle and in the NE part of the pit there were decomposed bone and cattle teeth (25480:48,49), and a couple of potsherds (:47) were found in the fill.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The cattle remains point to a male. The location indicates a dating to the middle Viking Age.

Grave 898

Location 130/56

Orientation SSW-NNE

Size 210x60 cm,

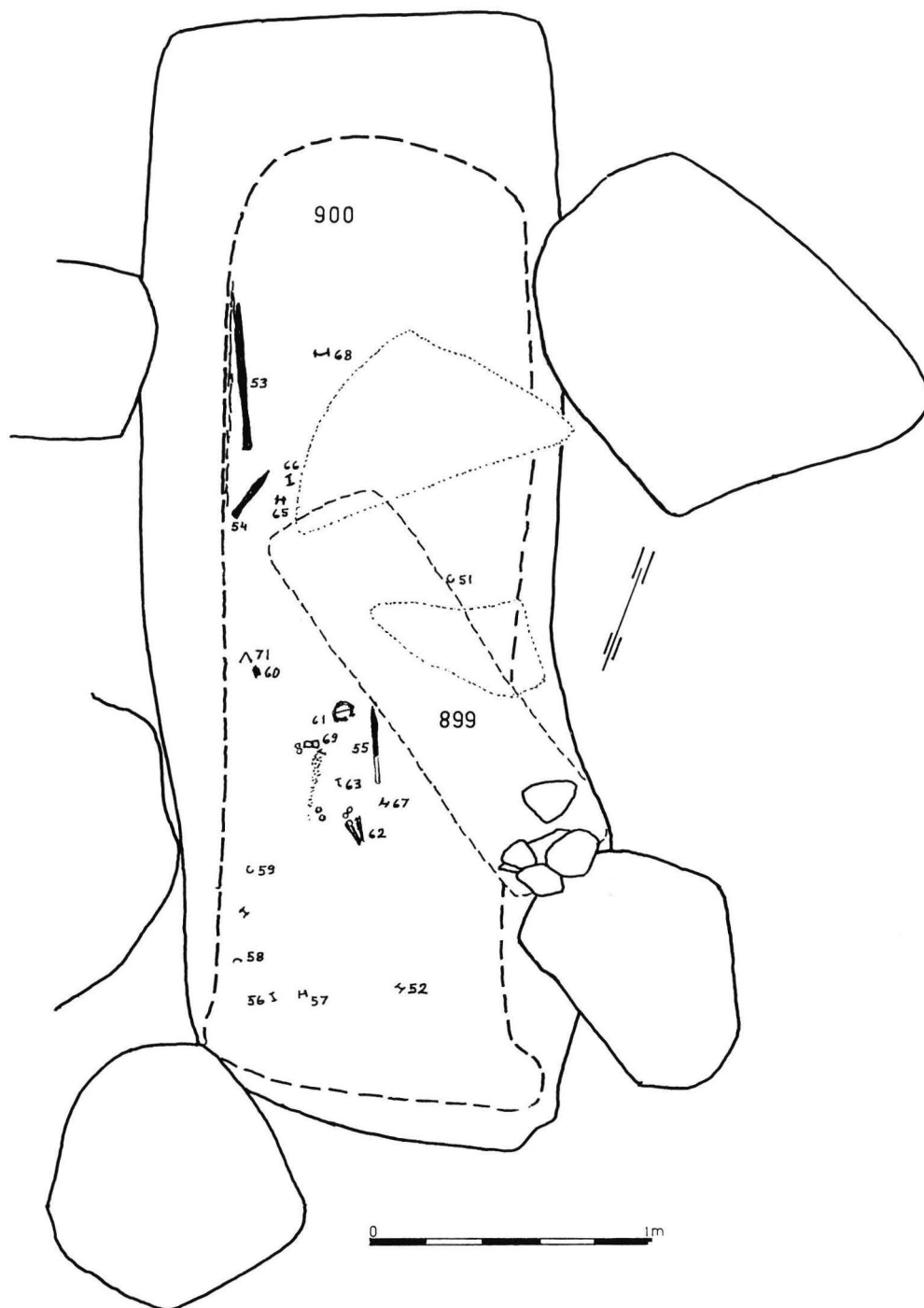
bottom 180x55 cm

Depth 60-85 cm

KM 25480:50

The grave was beside grave 897, to the SE of it. The grave-pit clearly shortened towards the bottom and also narrowed slightly. At the bottom was a large stone, the upper corner of which rose 25 cm higher up than the other parts of the bottom. An iron knife (25480:50) was found at the very SW end of the pit. It was about 30 cm higher up in the fill than the bottom at this end, but at the same level as the top of the stone. Perhaps the grave diggers had first tried to remove the stone, but when this appeared to be difficult, they had chosen to dig a shallower grave.

Interpretation and dating: The deceased cannot be defined. The narrow shape of the grave and the poor furnishing point to a late period.



Grave 900

Location 132/54

Orientation NNW-SSE Pl. 44:900:1-12

Size 400x145 cm,
bottom 340x105 cm

KM 25480:51-71

Depth 65-85 cm

The grave was situated in the stony S part of the cemetery, where there was 45-50 cm of topsoil. It was dug between several large fixed stones and the shape of the grave-pit was not quite regular. The bottom, which was much shorter and narrower than the upper parts, was uneven because of the stones. In the digging of grave 899 the middle part of this grave had been damaged, but the bulk of the artefacts seemed to be in situ. The upper part

of the corpse, however, was destroyed. Of the skeleton there were only parts of the right thighbone and bones of the arms bent over the waist left. On top of the penannular brooch (25480: 61), found upside down in the middle of the grave, were remains of the wrist bones, and also under the brooch arm bones were found, so that the brooch seems to have remained between the arms. To the W of the brooch was a long knife (:55), the tip pointing to the SSE. Twenty centimetres to the E of it was a belt-buckle (:69) and near it several small round greyish spots were observed as if the belt had been decorated with small round tin (?) studs. Two similar roundels together with a long strap-tag (:62) were found about 30 cm to the NW of these. At the SE end of the grave, in the E corner, two spearheads (:53,54) were discovered, and near them were

a long iron rivet (:68) and two smaller ones (:65,66). Three rivets (:63, 64,67) were found near the brooch and the knife, and at the NW end of the grave there were four rivets (:52,56,57), one of which, found near the NE side of the grave, has later disappeared. Near these were a couple of bronze ring fragments (:58,59), the third (:51) was found at the SW side near the border of grave 899. In the middle of the E side was an iron fragment (:60), and potsherds and two pieces of flint (:70,71) were found in the fill.

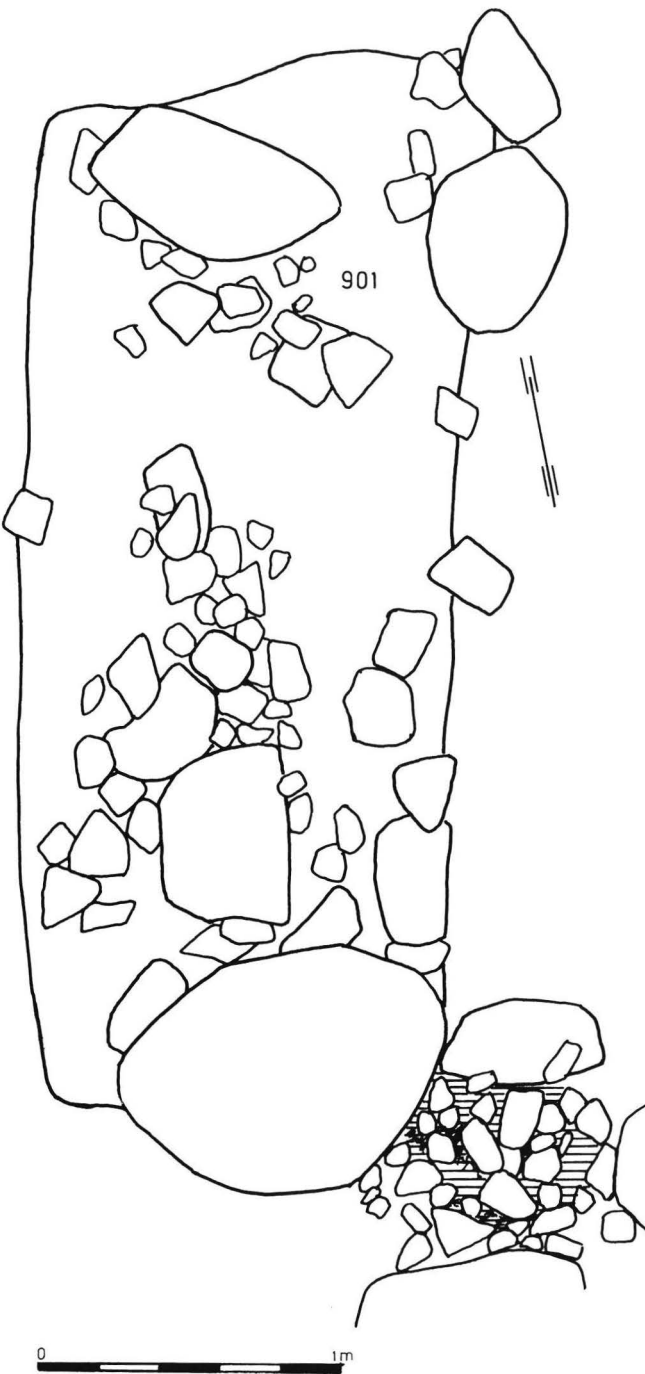
Interpretation and dating: Judging by the artefacts this was a man's grave. The brooch is a massive penannular brooch with faceted end knobs and with three more knobs on the ring. Its diameters are 64 and 58 mm. It is the first of this variant from Luistari, and according to Salmo, knobs on the ring are not common in this type of penannular brooch; they appear more often in the brooches with pegs (Salmo 1956 30, 38–39, fig. 16; a similar brooch has been found at Kyrksundet in Hiittinen, Edgren 1999 fig. p. 12). The variant without pegs is uncommon also in Sweden, where four specimens have been found in Gotland, all differing in section and apparently only with two knobs on the ring (Carlsson 1988 22, 44). At least one of the variant with three knobs on the ring and rather equal in size with the Luistari brooch is from the Swedish mainland (StHM 21052:80 VI from Solberga in Askeby, Östergötland). Carlsson (1988 70) dates the Gotland brooches to his period C (900–1000 AD). In Finland the brooches with faceted end knobs begin to occur around 800 AD, and also at Luistari some brooches of this type of ordinary form seem to be from the 9th century (LUISTARI II 102; cf. also grave 901).

The spearheads are both of type Petersen E, but one of them is the shortest found at Luistari (219 mm) and undecorated, and the other one is 467 mm long and it has ornamental grooves on the socket and a pattern-welded blade. Similar combination was previously found at Luistari in grave 135, and a grooved spearhead and a smooth-socketed one were together also in graves 145, 348 and 400. In these the grooved spearhead was not pattern-welded, but the smooth-socketed one in grave 145 was. Of these grave 145 was dated to the earliest Viking Age (800–880 AD), and the others were from the middle Viking Age (880–950 AD). With its pattern-welded spearhead, grave 900 probably belongs to the close of the 9th century (LUISTARI II 26–30, 184–186).

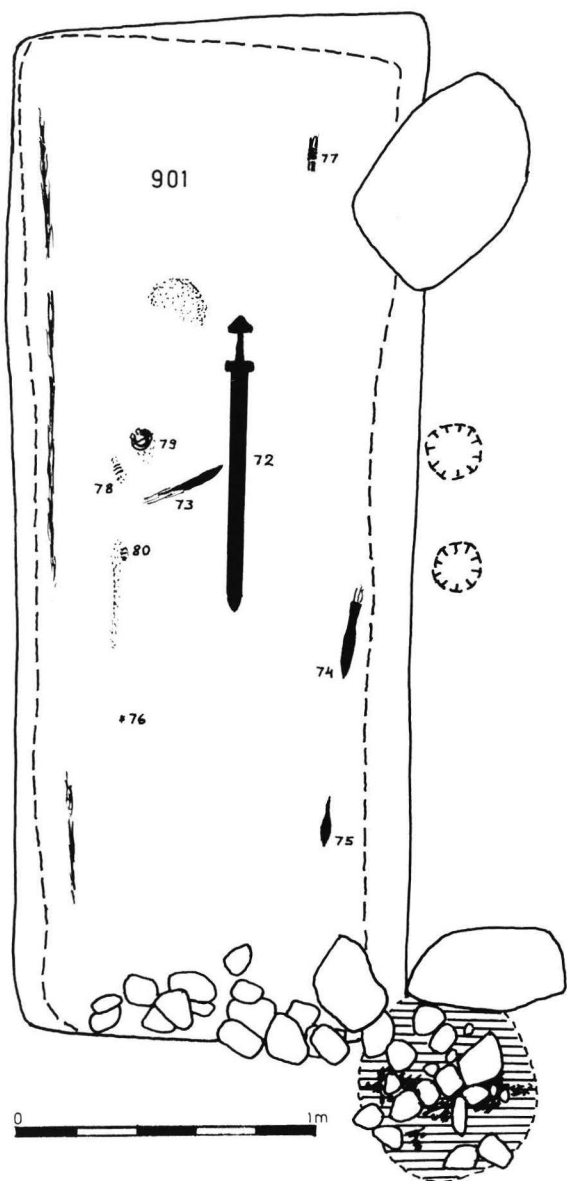
Grave 901

Location 136/63
 Orientation S-N Pl. 45:901:1–9
 Size 340x160 cm,
 bottom 340x135 cm KM 25480:72–81
 Depth 70 cm

The grave was situated in the stony SE part of the cemetery, where there was about 40 cm of topsoil. On top of its N end was an unusually large stone block, measuring 110x80x75 cm, and also other rather large stones. A larger block also covered the S end. It measured 80x40x50 cm and was almost regularly prismatic. At the NW corner of



the grave there was a charcoal pit full of stones, 60 cm in diameter and about 35 cm in depth, and near the W side, almost in the middle, two round patches, 15 and 20 cm in diameter and almost 30 cm in depth from under the topsoil, were observed. At the beginning the grave-pit was rounded in corners, but later it was almost rectangular in form. The bottom was uneven because of stones. Especially at the E side of the pit decomposed wood was observed. At the S end of the grave there was the skull of the deceased, and to the N of the middle the right thighbone was observed. The distance from the top of the skull to the upper end of the thighbone was 86 cm. Hand and finger bones were found together with a finger-ring (25480:78) near the waist at the right side of the deceased, and about 10 cm to the SW was a bronze penannular brooch (:79) upside down in the earth. Trans-



versally on top of the stomach of the deceased was a long knife (:73). The sword (:72) was laid on the left side so that the handle was near the skull, and two spearheads (:74,75) were found on the W side the tips to the N. A bronze ring (:77), which was found at the SW corner of the grave, was probably from one or the other of the spears. Near the upper end of the right thighbone there was a spiral ornament (:80) and another one (:76) was found about 55 cm to the N of it. Potsherds (:81) were found in the fill.

Interpretation and dating: Judging by the weapons this was a man's grave. The sword is of Petersen type H (Petersen 1919 89–100), and together with the spearheads, one of which (:75) is a very small variant of the tanged spearhead with a tapering blade and the other (:74) probably a variant of type A-E (LUISTARI II 22–23, 25–26; c.f. Salmo 1938 248, Plate X:5), it points to a very early stage of the Viking Age. A long (248 mm) and narrow-bladed (163x15 mm) knife complete the combination. One of the spears had had a very thin shaft, because the shaft-ring is only 19 mm in diameter. It is of flat-convex wire and has four turns. Even the finger-ring is wider; it

is 21 mm in diameter and of group II:1c. Its middle shield is decorated with engravings.

The brooch is a penannular brooch with pegs. The dating of this brooch type is not really in contradiction with the dating of the weapons (see Kivikoski 1963 80; LUISTARI II 102–103), but it seems that this is so far the earliest known grave with this type of brooch. Never before has a penannular brooch with pegs been found together with a tanged spearhead with a tapering blade, which is a type of the late Merovingian Period in Finland (Cleve 1943 130). The other spearhead is an intermediate form between the spearheads from graves 68 and 288, both of which were found together with tanged long-bladed spearheads. A penannular brooch with faceted ends was found in grave 288 (see LUISTARI I Plate 72:288, LUISTARI II 29–31). Apparently these three graves and grave 140 represent the earliest Viking Age weaponry.

Grave 903

Location 134/64

Orientation SSW-NNE

Size 160x70 cm,

bottom 120x45–50 cm KM 25480:84–85

Depth 60–80 cm

The grave was situated in the stony SE part of the cemetery, where there was 40–45 cm of topsoil. A rubbish-pit with brick fragments was on top of the grave, so that it was badly damaged. The grave-pit was rather broad with rounded corners and it grew smaller towards the bottom. At the NE end of the bottom there was a stone, so that it was about 15 cm higher up than the SW end. At the SE side near the bottom a large iron plate fragment (25480:84) was found, and there were a couple of potsherds (:85) in the fill, but no traces of the deceased were observed.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The finds are not datable, but the location points to the early Viking Age.

Grave 905

Location 139/60

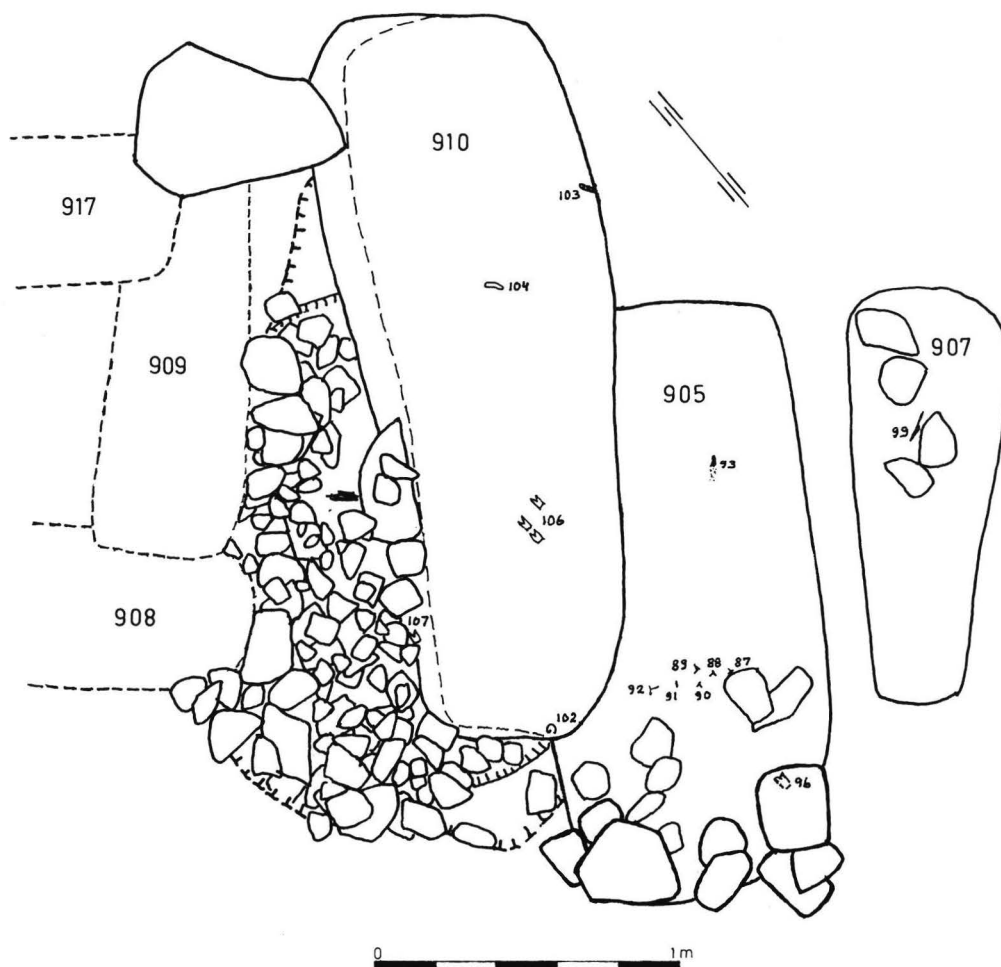
Orientation SSW-NNE

Size 180x90 cm

KM 25480:87–96

Depth 90 cm

The grave was situated in the stony SE part of the cemetery, where there was 40–50 cm of topsoil. On top of the grave there was so deep a rubbish-pit that only 10–15 cm of the bottom layers of the grave-pit were preserved. Besides the SE-most part of the grave had been damaged in digging grave 910. On the other hand this grave had been dug on top of a large fireplace. The grave-pit was straight-sided, only slightly rounded at corners, and its bottom slanted to the SW. In the NE part of the pit, about 10 cm above the bottom, there was a transverse row of six nails (25480:87–92), and about 40 cm to the N of these, at the N corner of the grave, there were remains of sheep or goat teeth (:96). At the SW end of the pit an iron fragment with some bone clinging to it (:93)



was found. The fill contained charcoal, slag, a potsherd and burnt clay (:94,95).

Interpretation and dating: In this grave there were no sex-determined artefacts, but sheep or goat teeth could indicate a woman (LUISTARI I 39, 41). The artefacts are not datable., but the location may indicate a dating to the middle Viking Age.

Grave 907

Location 138/61
Orientation SW-NE Pl. 45:907
Size 140x30–50 cm KM 25480:99
Depth 90 cm

The grave was situated in the stony SE part of the cemetery, with 40–50 cm of topsoil. Besides on top of it there was a large rubbish-pit so that only about 20 cm of the lowest part of the pit was preserved. The grave-pit was trapezoid in form broadening to the SW, and its bottom was even. At the SW end in the fill there were four stones of about 20 cm in diameter. The only find was an iron knife (25480:99) found in the SW half of the grave-pit.

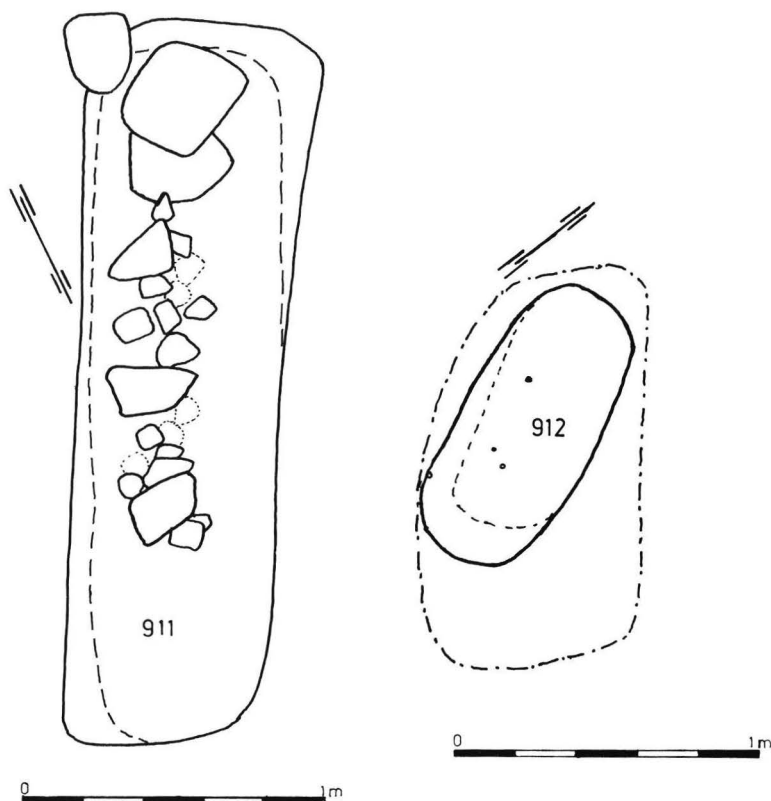
Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The knife is not datable, but the location of the grave points to the middle Viking Age.

Grave 910

Location 119/60
Orientation SSW-NNE Pl. 45:910:1–2
Size 250x90 cm KM 25480:102–107
Depth 120 cm

The grave was situated in the stony SE part of the cemetery in a place where beside the ordinary top-layers was a large rubbish-pit, the bottom of which extended 90 cm below the surface. In digging this grave a large hearth and grave 905 had been damaged. The grave-pit was rounded at the ends, the SE side was straight, the other side curved, and the bottom was even. At the NE end, about 40 cm above the bottom, a bronze finger-ring (25480:102) was found, and near the W corner was a fragmentary pendant whetstone (:103). The fill contained charcoal, slag, a burnt bone splinter, a potsherd and fragments of sheep or goat teeth (:104–107).

Interpretation and dating: The diameter of the finger-ring (15 mm) and the teeth of a sheep or a goat could point to a woman, but the pendant whetstone is usually a male artefact. It is possible that the grave, in spite of its size, belonged to a young boy. Both the pendant whetstone and the ring, which is of round section, point to the later Viking Age (LUISTARI II 62, 122, 127).



Grave 911

Location 135/55

Orientation SSW-NNE

Size 230x65 cm

KM 25480:108

Depth 95 cm

The grave was situated in the stony SE part of the cemetery, where there was 60–65 cm of topsoil. Its SW end was covered by a row of stones 10–40 cm in diameter. The grave-pit was even-sided with rounded corners and its bottom slanted to the NE. Some potsherds were found in the fill, but the burial was unfurnished.

Interpretation and dating: A late grave.

Grave 912

Location 130/58

Orientation NNW-SSE

Pl. 45:912

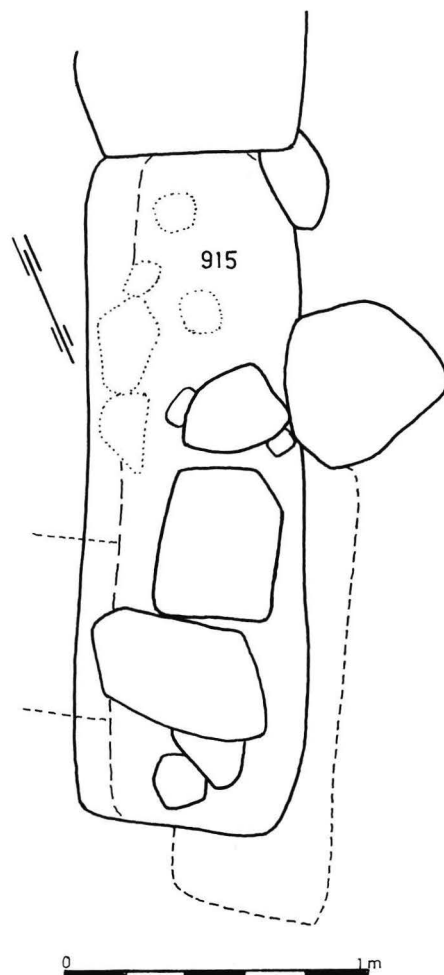
Size 80x40 cm

KM 25480:109–110

Depth 75 cm

The grave was situated in the stony SE part of the cemetery, where there was about 45 cm of topsoil. The grave-pit, which was oval in form and even-bottomed, was dug directly on top of the SW part of grave 894. From the SE part of it four beads (25480:109) were found. In the fill there were potsherds (:110) and charcoal.

Interpretation and dating: This was a grave of a small child. Because it overlay grave 894, it must be later than the beginning of the 10th century, but the small yellow cylindrical beads indicate a dating before 950 AD; they occur only in zones III and IV at Luistari (LUISTARI II 131).



Grave 915

Location 136/52

Orientation SSW-NNE

Size 230x45–65 cm

KM 25480:113

Depth 95 cm

The grave was situated in the stony SE part of the cemetery, where there was about 45 cm of topsoil. In digging it graves 914 and 986 had been damaged. The surface of the grave was covered by a row of stones 35–60 cm in diameter. The grave-pit narrowed to the SW end and its bottom was even. A couple of potsherds were found in the fill, but the burial was unfurnished.

Interpretation and dating: Apparently a late grave.

Grave 918

Location 141/58

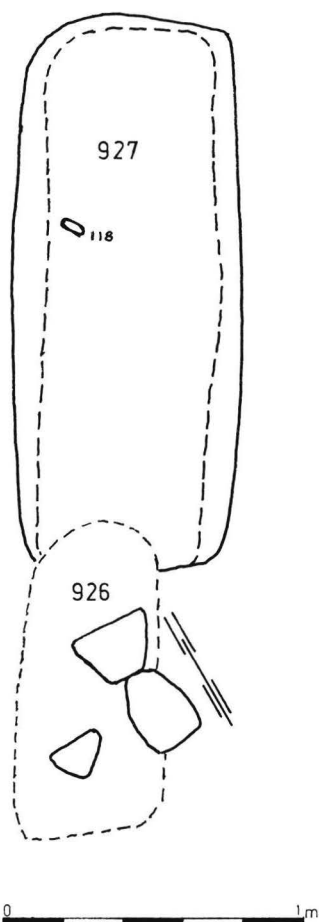
Orientation SSW-NNE

Size 210x70–75 cm

KM 25480:114–115

Depth 115 cm

The grave was situated in the SE part of the cemetery, where there was about 50 cm of topsoil. In digging it grave 988 had been damaged. The grave-pit was almost rectangular in form, slightly rounded at the SW end and rather even-bottomed. On top of the SW end there was a stone about 65x55x40 cm in size. In the middle of the SE side about 60 cm above the bottom a blue bead



(25480:114) was found, but otherwise there were only a couple of burnt bone splinters (:115) in the fill.

Interpretation and dating: A bead may indicate a woman, but it was found so high up in the fill that it cannot be used for sex determination or dating. This was probably a late grave.

Grave 921

Location 149/67
Orientation SSW-NNE
Size 185x55 cm KM 25480:117
Depth 100–110 cm

The grave was situated under the field in the SE part of the cemetery, where there was about 30 cm of topsoil. The grave-pit was almost rectangular in form and its bottom slanted to the SW. A tooth of a sheep or a goat (25480:117) was found in the SW part of the pit about 50 cm above the bottom, but otherwise there was only some decomposed bone on the bottom.

Interpretation and dating: No sex determination. Probably a late grave.

Grave 927

Location 138/56
Orientation SSW-NNE Pl. 45:927
Size 185x75 cm KM 25480:118
Depth 90 cm

The grave was situated in the SE part of the cemetery,

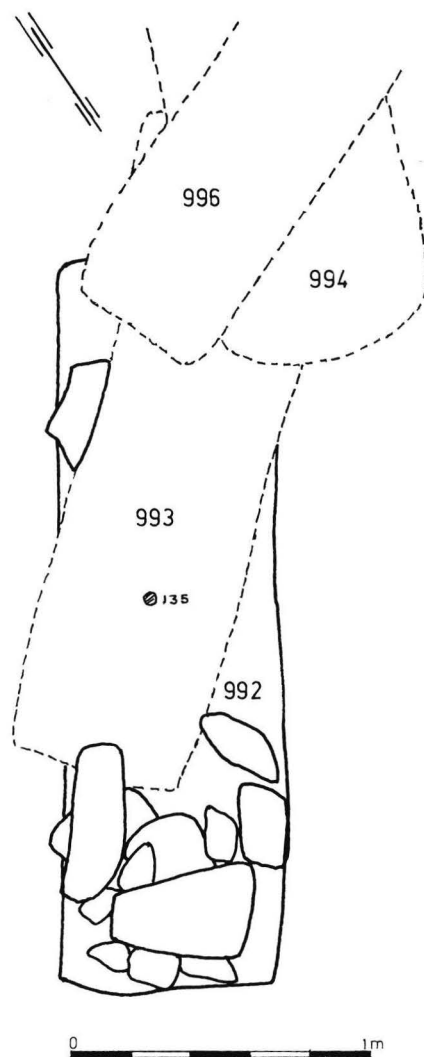
where there was about 45 cm of topsoil. Its NE part had slightly been damaged in digging grave 926. The grave-pit was almost rectangular in form, the bottom slanted slightly to the N, so that it was at the NE end 25 cm deeper down than at the SW end. On the SE side, about 50 cm from the SW end, an oval firesteel (25480:118) was found, but there were no other finds.

Interpretation and dating: The firesteel indicates a male burial. Most of the oval firesteels previously found at Luistari were dated to the very end of the Viking Age or later (LUISTARI II 72–73).

Grave 992

Location 126/87
Orientation SSW-NNE
Size 240x75 cm KM 25480:134
Depth 75 cm

The grave was situated in the N part of the cemetery, to the W of cairn 422, where there was 40–45 cm of topsoil. Its SW end had been destroyed in digging graves 993, 994 and 996. The preserved NE end was covered by stones. The end stone and the stones on both sides of



it stood on their narrow faces. The grave-pit was almost rectangular in form, and slightly deeper at the SW end than at the NE end. Only some potsherds (25480:134) were found in the fill.

Interpretation and dating: No sex determination. Although this grave contained no preserved finds beside the potsherds, which could be from the dwelling site, it seems possible that this was a Merovingian Period grave. It was under all the others and it is oriented in the same direction as the earlier Merovingian Period graves near it.

Grave 993

Location 126/86	Grave plan p. 119
Orientation SW-NE	Pl. 47:993
Size 220x70 cm	KM 25480:135–136
Depth 80 cm	

The grave was situated in the N part of the cemetery to the W of cairn 422, where there was about 45 cm of topsoil. In digging it the SW end of grave 992 had been damaged, and graves 994 and 996 were on top of the SW end of this grave. The grave-pit was almost rectangular in form and even-bottomed. In the fill there were some stones which may originally have been on top of grave 992. In the NE part of the grave, about 15 cm higher up from the bottom, a stone disc (25480:135) was found, and in the fill there was a rim fragment of a pit-decorated clay vessel (:136).

Interpretation and dating: No sex determination. The grave cannot belong to the very latest ones, because there were still two later graves overlaying it. It is one of the graves containing stone discs.

Grave 994

Location 124/85	Grave plan p. 119
Orientation SSW-NNE	Pl.
Size 190x80 cm	KM 25480:623
Depth 90 cm	

The grave was partly on top of the SW end of grave 993, and grave 996 was dug through its middle part. There was about 45 cm of topsoil and under it the grave-pit was straight-sided with rounded corners and bottom. At its NE end on the E side, about 20 cm from the bottom, there was a charcoal patch, which had been intersected in digging grave 996, and at the SW end decomposed cattle bones (25480:623) were found. Otherwise, the pit lacked finds.

Interpretation and dating: Cattle bones may indicate a male burial. There is no better dating than this grave being later than graves 992 and 993 and earlier than grave 996.

Grave 995

Location 120/99	
Orientation SW-NE	Pl. 46:995
Size 220x95 cm, bottom 185x75 cm	KM 25480:137–141
Depth 80–90 cm	

The grave was situated in the N part of the cemetery beneath the old drying barn, in a place, where there was about 30 cm of topsoil. In digging it the W-most corner of grave 1025 had been destroyed. On top of the NE end of the grave there was a group of stones, 60–70 cm in diameter, and also in the fill there was a lot of stones. The grave-pit was almost equilateral with rounded corners, growing smaller towards the rounded bottom. At its NE end, about 10 cm above the bottom, a rivet (25480:137) was found. In the middle of the pit, about 30 cm from the bottom, there were remains of a cattle skull (:140), and at both ends of the pit decomposed bones were observed. In the fill there were also potsherds, a burnt bone splinter and a flint piece (:138,139, 141).

Interpretation and dating: No sex determination, although the cattle remains may indicate a male burial. This grave certainly is later than grave 1025, but otherwise there is no date for it.

Grave 997

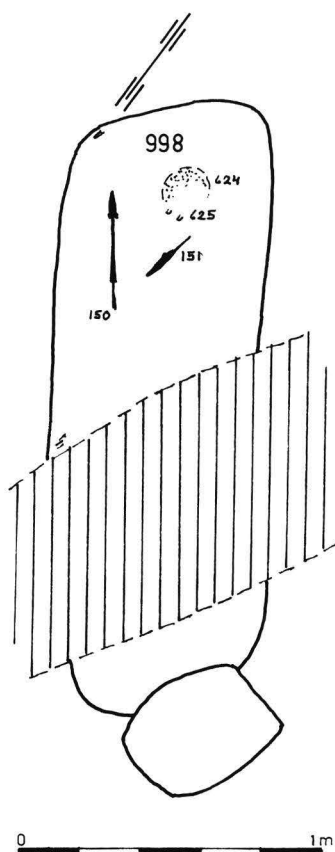
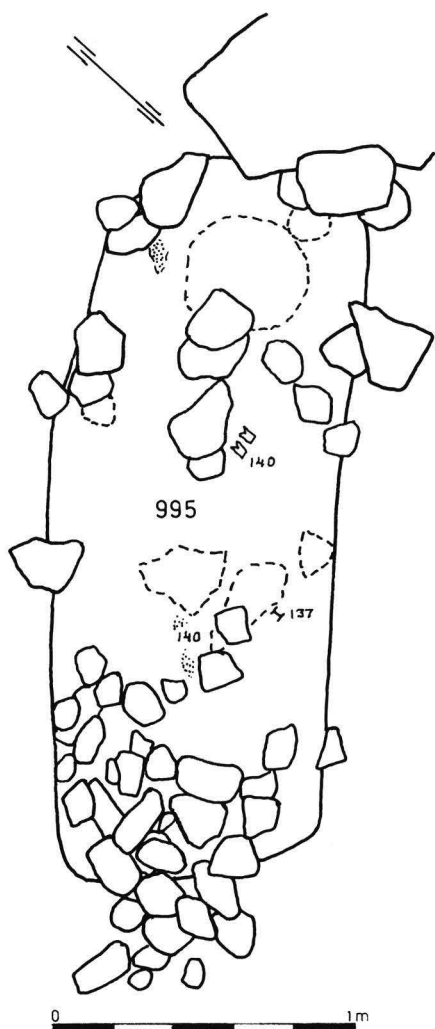
Location 130/104	
Orientation NNW-SSE	
Size 240x90–100 cm	KM 25480:142–149
Depth 110–120 (150) cm	

The grave was situated in the N part of the cemetery under the SE wall of the old drying barn. The foundation stones of the drying barn were located transversally on top of it, and a ditch full of stones was under the foundation, and 80–90 cm thick layer of stones had to be removed before the grave's shape could be observed. The grave's own stone setting had been over 150 cm long, 60 cm wide and about 40 cm deep, and it covered the middle part of the grave. The grave-pit was even-sided with rounded corners and a rounded bottom. There was decomposed wood on the sides and the pit was full of bovine bones. The animal had been in the pit on its side, the head to the NW and the forelegs clearly higher up than the spine. There were no traces of the hind legs. In the upper parts of the pit bronze plate fragments (25480:142) and an iron rod fragment (:143) were found. In the middle of the SW side of the pit near the bottom was an iron nail (:145) and near the spine of the bovine a sickle fragment (:144) was found. In the fill there were also some potsherds (:146,147), but no traces of a human skeleton were observed.

Interpretation and dating: In spite of the regular grave-pit, the stone setting and the fact that the Merovingian Period grave 998 was beside it and in the same direction, this grave must have been dug rather late for a bovine animal. The C14 analysis of a bone piece gave the result 190+/-30 BP, 1679–1810 cal AD (Hel-3952), and the animal had thus been buried in the 17th century at the earliest.

Grave 998

Location 130/105	
Orientation NNW-SSE	Pl. 46:998:1–3
Size 205x70 cm	KM 25480:150–153,624,625
Depth 75 cm	



The grave was situated to the NE of grave 997 and it was almost in the same direction. Because there was no stone setting on top of it and it was much shallower than grave 997, its SE end had totally been destroyed in digging the ditch for the drying barn foundation. The grave had also been damaged by the moles and by the tree-roots. The NW part and the SE-most end of the grave-pit had been preserved, and on the basis of these the pit had been even-sided with rounded ends and a rather even bottom. A part of the skull of the deceased had been preserved in the NW end. To the SW of it was an angon (25480:150) the tip to the NW, and on top of the chest of the deceased was a knife (:151). In the fill there were potsherds and some charcoal (:152–153).

Interpretation and dating: On the basis of the spear-head this was a man's grave. That is an angon of the Finnish type b, which is generally dated to the period 650–750 AD (Cleve 1943 132). At Luistari all the other spear-heads of this type have been found in graves directed from SW to NE.

Grave 999

Location 131/106
Orientation WNW-ESE
Size 205x85 cm KM 25480:154–155,626
Depth 70–105 cm

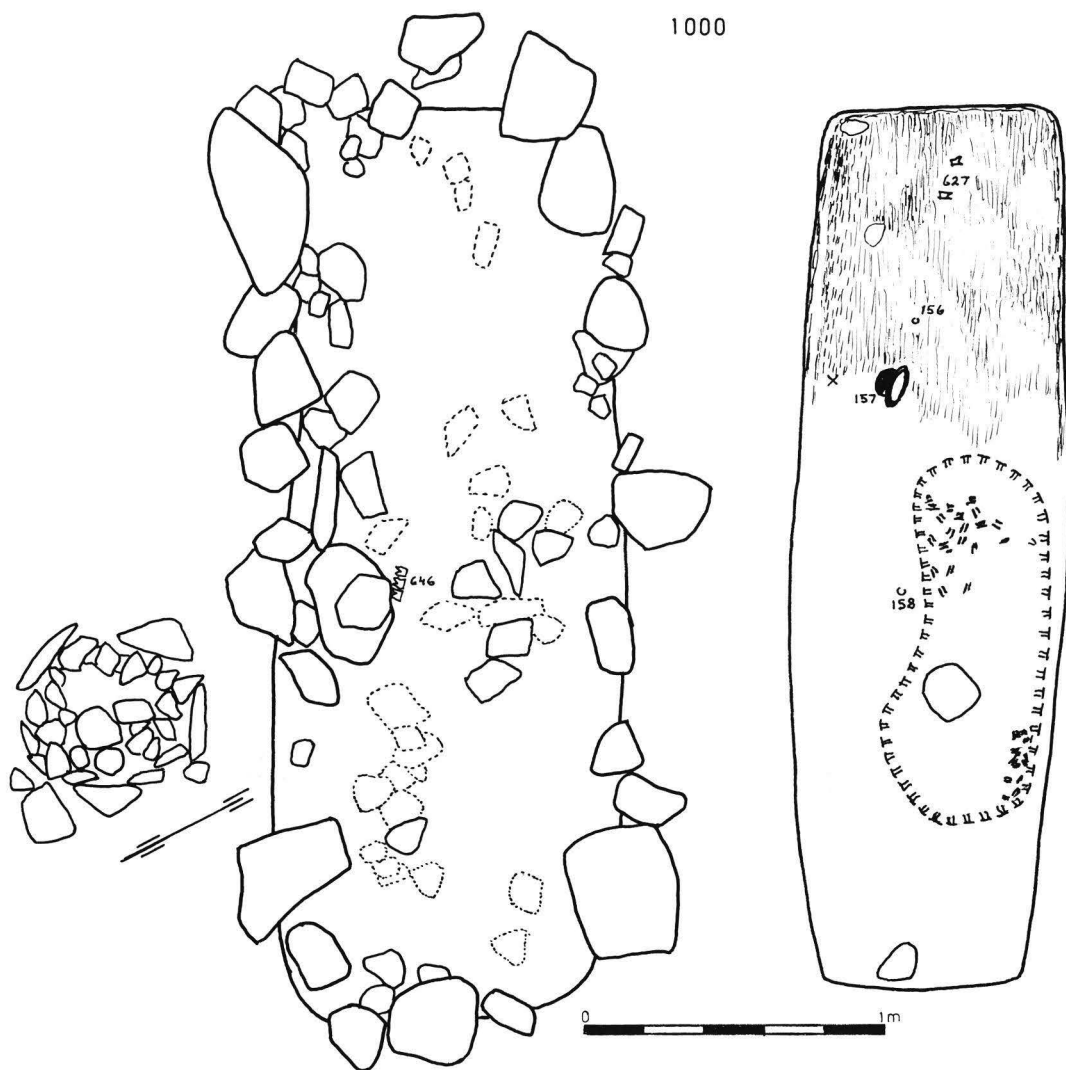
The grave was situated to the NE of the two former ones in the same row, but it was slightly more in the direction W-E. At the NW end of it there was a stone setting of rather small stones, and over the SE end ran the ditch dug for the stone foundation of the drying barn. The tree roots had also damaged the grave. At the beginning the grave-pit seemed very regular, even-sided and round-ended, but there were a couple of large stones on the bottom, and so it was very uneven. At the NW end of the pit a lower jawbone of a horse and cattle teeth fragments were found, and there were some potsherds in the fill.

Interpretation and dating: It is fairly difficult to know when this pit had been dug; beside it was the Merovingian Period grave 998, only a couple of metres farther was the pit dug for animal remains about a thousand years later, and both of these were in the same direction. To be on the safe side this grave has been excluded from further analyses.

Grave 1000

Location 124/90
Orientation NW-SE Pl. 46:1000:1–2
Size 300x85–110 cm KM 25480:156–161,627,646
Depth 70–75 cm

The grave was situated in the northern part of the cemetery, to the W of cairn 422 and to the E of the S corner of the drying barn foundation. On top of the stones on its edges there was only about 10 cm of turf, but the sides of the grave-pit could not be discerned until 20 cm deeper. At this level, cattle teeth (25480:646) were found at the E corner of the grave. The grave-pit was straight-ended but the sides curved outwards, so that the width at the



bottom was 90 cm in the middle, at the NW end 65 cm and at the SE end 75 cm. The bottom was even but it slanted slightly to the NW. In the middle of the grave a trace of a later pit with some charcoal, amounting to 120x50 cm on the bottom, could be discerned. At the SE part of the grave there were traces of wood on the sides over a distance of 100–120 cm from the end of the grave. There was also a thick layer of birch bark all over this end. These traces ended abruptly, and it is possible that the rest of the grave had been destroyed by grave robbers. Under the birch bark cover a small bronze ring (:156) and bovine teeth fragments (:627) were found. About 90 cm from the SE end and near the place where the birch bark ended an iron shield-boss (:157) lay on its side. In the middle of the grave-pit, a bronze finger-ring, finger bones and leather (:158) were found. In the fill there were potsherds, burnt bone splinters and a piece of quartz (:159–161).

Interpretation and dating: On the basis of the shield-boss this possibly robbed grave had belonged to a man. The shield-boss has a rounded top and straight waist part, and it has four holes in the flange. It is quite similar to the shield-bosses found in the Luistari graves 52 and 269. Shield-bosses like these were fairly common in Finland and elsewhere. In Finland they are dated mainly to the

period 650–750 AD (LUISTARI I Plate 20:52:6, 67:269:5; LUISTARI II 41). The C14-dating of the birch bark (Hel-4101) is 1290 \pm 90 BP (680–859 cal AD).

Grave 1001

Location 142/93

Orientation NNE-SSW

Size 180x60 cm,

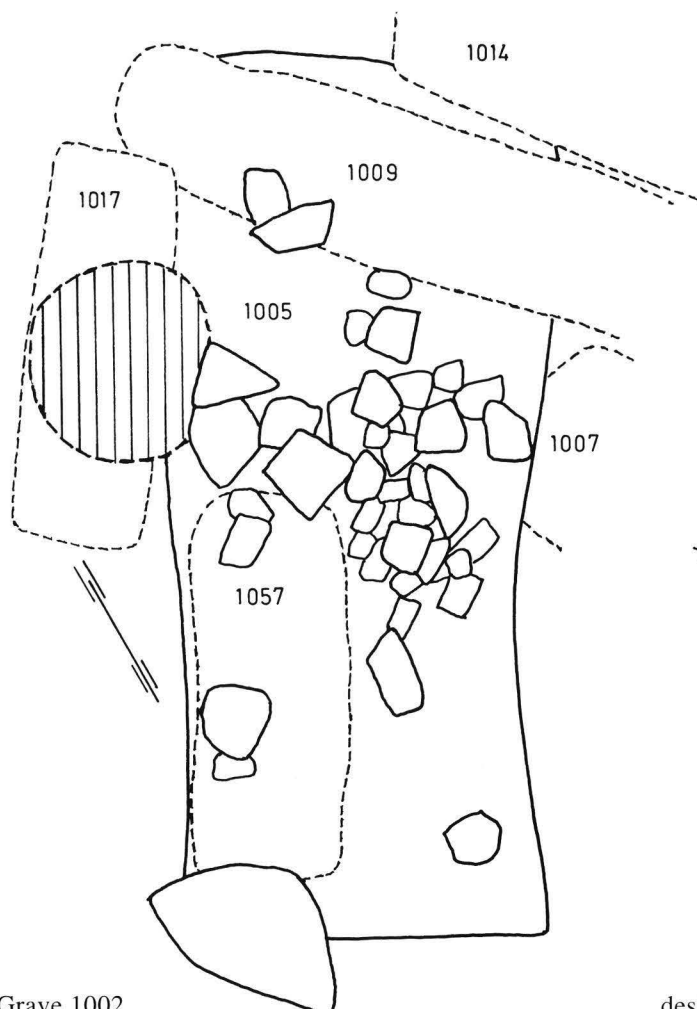
bottom 165x50 cm

Depth 90 cm

KM 25480:162–163,628

The grave was situated in the NE part of the cemetery, to the E of cairn 422, where there was about 50 cm of topsoil. On top of its NE side were some stones which perhaps had rolled there from the cairn. The SE side of the grave had been damaged in digging grave 1002, and its NW end was on top of the N end of grave 1003. The grave-pit was straight-ended with curving sides and it grew smaller towards an even bottom. At the NE end of it remains of a human skull and teeth (25480:628) were found. Potsherds and burnt bone splinters (:162,163) were found in the fill.

Interpretation and dating: The skull seemed to be rather small, suggesting that this was perhaps a child's grave. It was not furnished and was probably late.



Grave 1002

Location 141/92
Orientation SSW-NNE Pl. 47:1002
Size 155x50 cm,
bottom 145x40 cm KM 25480:164–167,629,630
Depth 100–110 cm

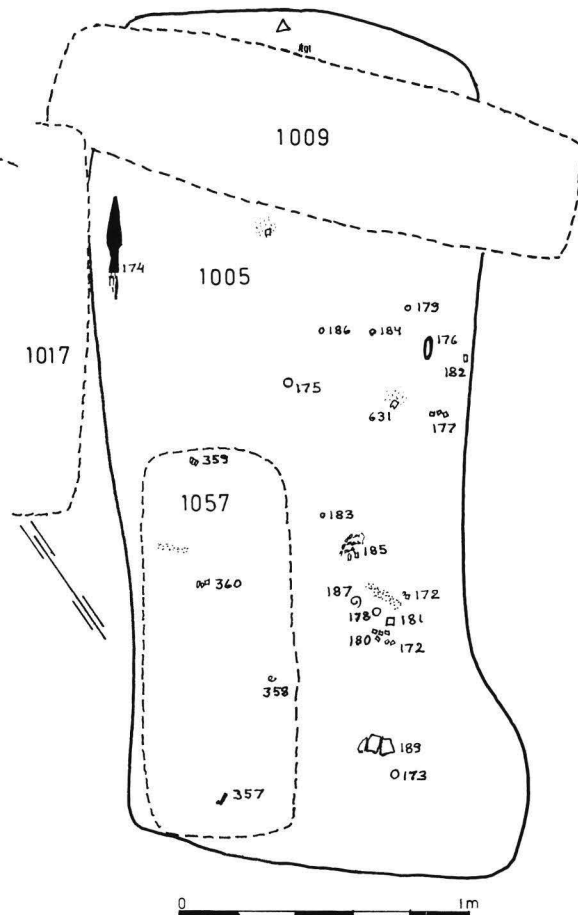
The grave was situated in the NE part of the cemetery, to the E of cairn 422, where there was about 50 cm of top-soil. It was on top of graves 1001 and 1003. The grave-pit was almost rectangular in its upper parts, but the form was more irregular deeper in the grave. In the fill there were some large stones, over 40 cm in diameter. At both ends of the grave, remains of bovine teeth were found, and in the middle of the W side there was a stone disc (25480:164). The fill contained potsherds, burnt clay and burnt bone splinters (:165–167).

Interpretation and dating: No sex determination, possibly a child's grave. This was one of the late graves with a stone disc.

Grave 1003

Location 142/92
Orientation S-N
Size 180x55 cm KM 25480:168–169
Depth 115–120 cm

The grave was situated in the NE part of the cemetery beneath the two former ones, and its NE corner had been



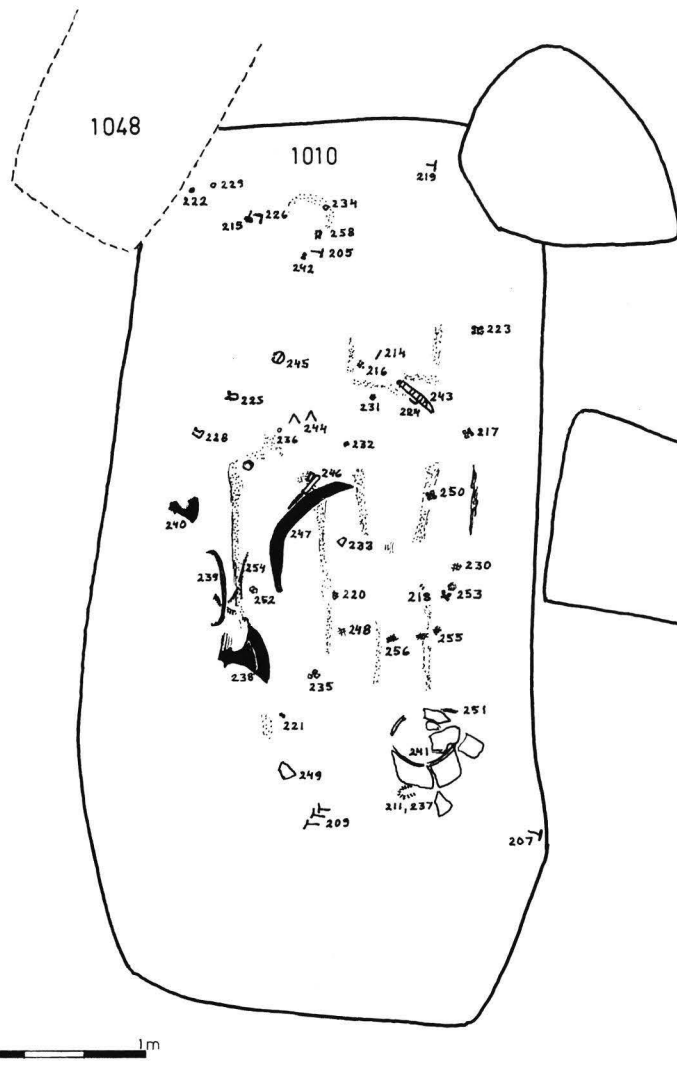
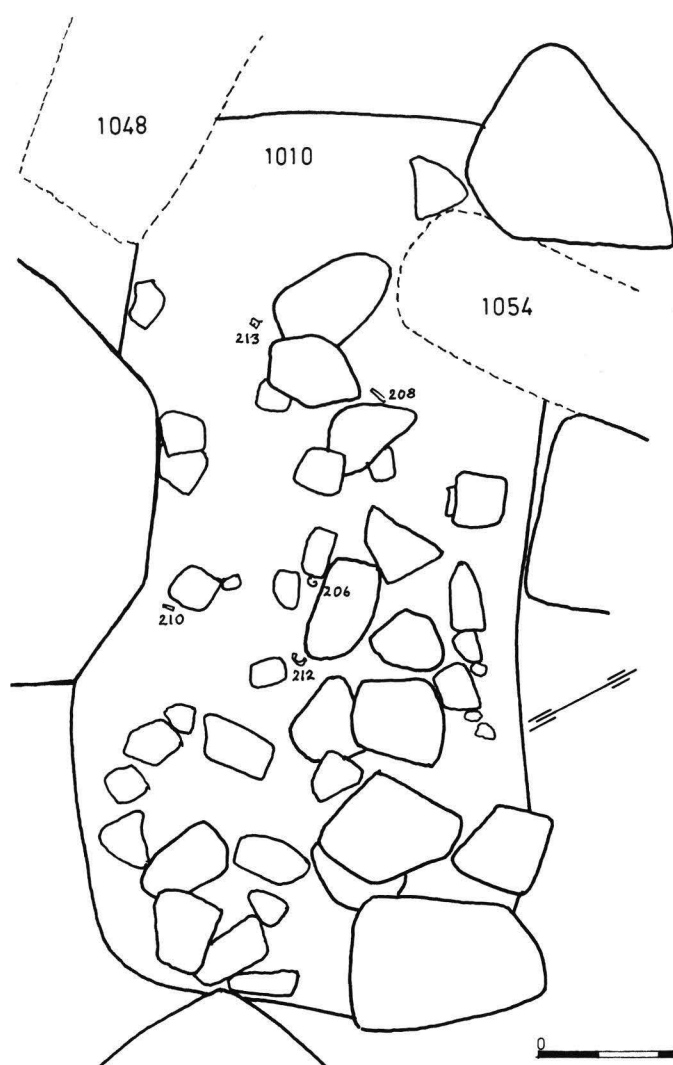
destroyed in building the road slope in 1969. It seems to have been even-sided, round-ended and even-bottomed. At the S end of it a piece of diabase (25480:168) was found, and in the fill there were potsherds (:169).

Interpretation and dating: No sex determination. Although this grave was the lowest one, I do not believe that it had been made during the period of furnished burials. Its grave-pit was too deep and too narrow.

Grave 1005

Location 140/102
Orientation SSW-NNE Pl. 47:1005:1–9
Size 230x120 cm KM 25480:172–191,631
Depth 120 cm

The grave was situated in the NE part of the cemetery to the NE of cairn 422, where there was 80–90 cm of top-soil. On top of its middle part was an irregular stone heap, about 150x120 cm in width and 30–40 cm in thickness, perhaps the rest of the grave's stone setting. The grave had been damaged at least in the digging of graves 1009, 1014, 1017 and 1057, and on top of all these there was a rubbish-pit. The preserved NE corner of the grave-pit was almost angular, and the bottom slanted to the NE. At the SW end of the grave there were human teeth, and about 50 cm from these, on the SE side of the pit, was a spear-head (:25480:174). A firesteel (:176) was found on the NE side of the grave, and a spiral finger-ring (:187) was



in the NE half of the pit, where also a bone piece, fragments of a knife-sheath (:172,181), a silver coin (:178) and spiral ornaments (:180,185) were found. More silver coins (:173,175), spirals (:182) and glass beads (:179,183,184, 186) were found scattered in different parts of the pit. In the fill there were potsherds, a piece of flint and a fragment of a stone artefact (:188–191).

Interpretation and dating: Possibly this was a double grave; the beads and the perforated coins point to a female burial, the spearhead and the firesteel indicate a male. One of the coins (:175) is English from the beginning of the 11th century (Ethelred II, Last Small Cross, about 1009–1016, Lincoln), the two others are German from the same period (Mainz, Henry II, 1002–1024 ?, and a copy of a coin from Cologne, early 11th century; Talvio 2000:26–28). The spearhead is of the round-based variant of Petersen type G. One spearhead of the same variant was previously found at Luistari in grave 349, which was dated to the first half of the 11th century (LUISTARI II 34–36). That date also seems to be adequate for grave 1005.

Grave 1007

Location 138/103
Orientation NNW-SSE
Size 180x80 cm,

bottom 140x50 cm
Depth 145–150 cm

KM 25480:194

The grave was situated in the NE part of the cemetery, where there was about 75 cm of topsoil. Its W corner had been destroyed in digging grave 1006, and on top of its SE end were at least graves 1005 and 1008. Because the pit of the last-mentioned one was both wide and deep, it is not possible to know, if grave 1038 was also on top of this. Of these diverging graves only the ends survived. The grave-pit seems to have been almost rectangular in form and even-bottomed. At the SE end of it almost 40 cm above the bottom a yellow bead (25480:194) was found, but no other finds could be connected to this grave.

Interpretation and dating: Judging by the size of the grave bottom this was a burial of a child or a small adult. The grave was earlier than grave 1005, and therefore it is hardly later than the beginning of the 11th century.

Grave 1008

Location 139/103
Orientation SW-NE
Size 200x120 cm
Depth 140–150 cm
KM 25480:195–199

The grave was on top of the former one and in digging it

grave 1038 had been destroyed almost completely. The grave-pit was oval in form with a rounded bottom, which was uneven because of stones. In the fill there were several stones, 20–30 cm in diameter. Between and under these skulls of bovine and pork and other bones of bovine and horse (25480:196–198) were found. Otherwise there were only some potsherds (:195) in the fill.

Interpretation and dating: This grave was on top of all others and can thus be one of the late pits dug for animal bones.

Grave 1009

Location 139/101	Grave plans pp. 123, 127
Orientation NW-SE	
Size 205x55 cm	KM 25480:200–204
Depth 130 cm	

The grave was situated in the NE part of the cemetery, where there was 80–90 cm of topsoil. It had been made on top of graves 1005 and 1015 and it had been damaged in digging graves 1017 and 1038. The grave-pit was narrow, at first rounded at the ends, lower down almost rectangular in form. Especially at its SE end there was a large number of stones. Charcoal, an iron nail (25480:200), a bronze spiral (:201), a rim fragment of a clay vessel (:202), a flint piece (:203) and a decomposed bovine bone (:204) were found in the fill. The nail and the flint piece were about 50 cm above the bottom in the mixed earth, the other finds were found 20–35 cm lower down.

Interpretation and dating: This grave was later than grave 1005, dated to the first half of the 11th century, but not one of the latest graves, because it was overlain by graves 1017 and 1038.

Grave 1010

Location 140/105	Grave plans p. 124
Orientation NW-SE	Pl. 48:1010:1–15, 49:1010:1–21
Size 300x150 cm	KM 25480:205–259
Depth 120 cm	

The grave was situated in the NE part of the cemetery to the NE of cairn 422, where there was 50–60 cm of topsoil. It had been dug between four large stones, and its W corner and NE side had been damaged in digging graves 1048 and 1054. Especially on top of the SE side of the grave there was a great deal of stones; possibly the stone setting had originally been more regular. The grave-pit was wider than usual and had rounded corners. Although the bottom was even, it slanted to the NE side, so that the difference in the NW end was 13 cm. At the SE end the S corner went 16 cm deeper down than the E corner, because there was a bottom stone in the latter one. Although there were very little wood remains in the pit, 8 iron nails were found. Three of these (25480:209) were quite side by side in the middle of the SE side, the fourth (:207) was on the NE side. The rest of the nails (:205,214,215,219) were near the NW end of the grave. All these were found 25–40 cm above the grave bottom. Remains of two deceased were found on the bottom. Of the SW one there were remains of a skull, thigh-bones

and shin-bones. Clear traces of the lower limbs of the deceased on the NE side were found, and it could be seen that the arms had been folded crosswise across the waist, but only the lower parts of the upper arm bones were preserved, and there were no traces of the shoulders and the skull. It is possible that these had been destroyed in digging grave 1054.

On the chest of the corpse on the SW side there was a small penannular brooch (:245) and a bronze sleigh bell pendant (:213). On its right side a fragmentary firesteel (:225), a U-shaped bronze mount (:228) and a silver finger-ring (:227) were found, on the abdomen were a couple of flint pieces (:244) and a blue bead (:236). Between the SW side of the grave-pit and the right leg bones of the deceased there were , beginning from the NW, a bearded axe (:240), a sickle (:239) and a battle-axe (:238). Transversally on top of the left thigh-bone was a scythe (:247) and partly under it were a knife and a bronze mount (:246). Under the right-side thigh-bone fragments of a bronze-decorated veil (:252, 254) were found, and more veil fragments (:211,237) were beside the large clay vessel near the feet of the other corpse. On the waist of this deceased, on top of its arm bones, was a knife in a bronze-mounted sheath (:243), and along the left side of the corpse and also beside the right-side shin-bones there were spiral ornaments (:223,217,250,230, 253,218,255, 256,216,220,248). Some beads (:221,222,229,234,236, 242) and iron and bronze artefact fragments (:224,226, 231,251,210,232,233,235,249) were found scattered. Among the artefacts, which were no longer in their original places, were also a finger-ring (:206), a bronze sleigh bell pendant (:213), a tip fragment of a bronze pin (:208) and half of a penannular brooch (:212). All these were found about 30 cm above the find layer. In the fill there were also charcoal, a burnt bone splinter, a stone fragment and a piece of flint (:257,259).

Interpretation and dating: This was a definite double burial with a man on the SW side of the grave and a woman in the NE half. There are however some problems. The fact that the sickle was found together with the axes on the SW side of the man indicates simultaneous burial, but how is it then possible that the veil of the woman was found in pieces at the foot end of the grave and the largest piece was under the man's leg bones? At least three different explanations can be suggested: 1) the veil was older than both these burials and from quite another connection, 2) the woman's burial was older than the man's, 3) the veil had been destroyed in connection with the burial. The damage at the NW end of the grave can be explained by the digging of graves 1048 and 1054, but that cannot explain the fragments, e.g. the brooch (:212), the finger-ring (:206) and the sleigh bell (:213), in the fill of grave 1010. Therefore, it seems probable that there was material from earlier burials.

The ornament found on the man's chest is a small penannular brooch with flat end knobs and a thick part in the middle of the ring. Salmo (1956 70–71) dates this type to the Crusade Period, mostly to the 12th century. The man's ring is of silver and has a twisted middle part. According to Kivikoski (1973 136 fig. 1094), similar

rings are common in the Middle Age connections and in Scandinavia often of gold. In Finland bronze and silver specimens are found in late Viking Age and Crusade Period graves. This was the first of its kind found in the Luistari graves, but a closed finger-ring of silver (22346:1013) with an imitated twisting in the front part was found in the top soil about 20 m to the NW of this grave.

One of the axes is a broad-bladed battle-axe. It is 160 mm in height and the width of the blade is 184 mm. The shafting flanges are almost of the same size on each side of the socket, and the blade is nearly symmetrical. There is a distinct offset between the blade and cutting edge and the cutting edge is unusually high, about 40 mm. In this the Luistari axe resembles the silver-inlaid axes from Köyliö (Cleve 1978 Pl. 6:94) and Masku (Kivikoski 1973 145 fig. 1192). Tomanterä (1978 115) has dated the Köyliö axe to the end of the 11th century, the axe from Masku is possibly later (Tomanterä 1978 80–81, 88–92; see also VIKING OG HVIDE KRIST 1992: 556b). The measurements of the Luistari axe point to the Crusade Period (c.f. Vuolijoki 1972 28).

The other axe is a Scandinavian bearded axe of small size. It is only 119 mm in height, and the blade is 95 mm wide. It is quite similar in shape and size to an axe found at Kouvala in Luopioinen (Kivikoski 1973 118 fig. 881), but it has no ornamental extensions. Vuolijoki (1972 12) has dated the Luopioinen axe to the late Viking Age. The axe from grave 1010 also resembles the axe found in grave 290 at Luistari (LUISTARI II fig. 16:2). The flat head is a common feature in them, but the axe from grave 1010 has small flanges also on the back like the Scandinavian bearded axes. Grave 290 was dated to the period 1000–1070 AD (LUISTARI II 51–53). A good counterpart is also an axe (17208:168) from grave 30 at Vilusharju, which probably dates from the Crusade Period (Nallinmaa-Luoto 1978 140 Pl. XI:5. See the dating of the knife from the same grave p. 186!).

The man's knife is straight-backed with a distinct offset at the junction of the blade and the tang. Similar knives already occurred during the Merovingian Period, and the youngest ones are from the middle of the 11th century or even later (LUISTARI II 45). The fragmentary firesteel (:225) is lyre-shaped. Four firesteels of the same form were previously found at Luistari, and they were all in Viking Age graves (LUISTARI II 73). The bronze mounts with round holes and/or small bulges may be from a belt or a knife sheath. The U-formed end-mount (:228) from the man's right side and the trapezoid mount (:233) from close by the left thigh-bone are however of thinner material than the rectangular mount with a fold (:246). The last-mentioned one was found quite near the knife, and so it possibly belongs to it.

The sickle blade differs from all previously found sickles at Luistari. It is 218 mm long, strongly and evenly curved, and its blade is 30 mm wide. The shaft had been fixed with a rivet, which is a late detail (LUISTARI II 56, dating of graves 359 and 404 p. 188). On the other hand, the scythe blade with its length of 450 mm and width of 40 mm corresponds to the measurements of the Viking Age scythes (LUISTARI II 55).

On the woman's side of the grave there were a lot of spiral ornaments. Among these were clearly remains of an apron and a mantle with end borders and appliquéd ornaments. It is however quite clear that a large part of the mantle had disappeared and only one whole corner ornament of the apron was found. These facts indicate that the woman's burial was earlier than the man's. It was already mentioned above that the parts of the southwest Finnish veil with bows were found scattered. The veils of this shape have been dated to the 11th century and the beginning of the 12th, the richly decorated western Finnish mantle came perhaps not into use earlier than during the second half of the 11th century (LUISTARI II 160–164).

The woman's knife was badly disintegrated, but it was c.170 mm long, of which the handle accounts for 90 mm. Above the junction of the blade and the handle there are 11 turns of bronze wire and at the handle end there are two crosswise riveted rectangular bronze mounts. Beside the edge and point mount the sheath has at least four transverse mounts. At the upper end there is a hole and a ring in it. Somewhat similar knives and knife sheaths have been found in the graves of the 11th and 12th centuries in western Finland (Keskitalo 1950 45–46; Kivikoski 1973 125–126 figs. 963–965; LUISTARI II 49–50).

The clay vessel near the woman's feet was in fragments, but it had been fairly large, about 15 cm in height and over 20 cm in diameter. It is flat-bottomed, without decoration and belongs to group II:2c, which occurs throughout the Viking Age (LUISTARI II 83).

The most important finds from the fill are beads, a finger-ring, a sleigh bell and a half of a penannular brooch. Two of the beads are round and flat blue beads, two of the opaque blue variant of the segmented beads, one badly disintegrated bead is greenish and only one is multicoloured. It has yellow, green and white lengthwise stripes. A somewhat similar bead was found in grave 404, coin-dated to the beginning of the 12th century (LUISTARI II 132–137, 141, Colour Plate IV:9,14).

The finger-ring is badly damaged. It has a middle shield and belongs to group II:1c, which indicates a Viking Age dating (LUISTARI II 125–126). The fragmentary sleigh bell is similar to the ones found in graves 25 and 209 and dated to the beginning of the 11th century (LUISTARI II 64). The penannular brooch fragment is from a brooch with rolled ends and hexagonal section. According to Salmo (1956 23) multi-angular sections are quite uncommon in Finland in brooches with rolled ends. In Gotland they occur more frequently, and Carlsson (1988 69) dates them to his period B/C (800–1000 AD).

This analysis has shown that there is in the fill material which could be dated to the Viking Age, but the artefacts in the close contact with the deceased persons point partly to a later dating. There are also facts indicating that the female burial may be earlier than the male one. The C14 dating (Hel-3937) of the chamber wood from the woman's side is 920+/-80 BP (1045–1202 cal AD).

Grave 1012

Location 125/109

Orientation SSW-NNE

P1. 46:1012

Size 160x60 cm

KM 25480:262,633

Depth 130–135 cm 26695:3

The grave was situated in the N part of the cemetery under the drying barn, where there was 30 cm of topsoil but still more mixed earth. About 50 cm from the earth surface there were badly decomposed bones (25480:633) at the SW end of the grave-pit, and at the NE end there was a rather large bottom stone. Otherwise the bottom was even and the grave-pit was almost rectangular in form. A fragment of a cube-stone (:262) and potsherds (26695:3) were found in the fill, but the burial was unfurnished.

Interpretation and dating: No sex determination. This was one of the late graves without furnishing. The cube-stone and the potsherds derive from the dwelling place.

Grave 1015

Location 140/99

Orientation NW-SE

Pl. 46:1015:1-3

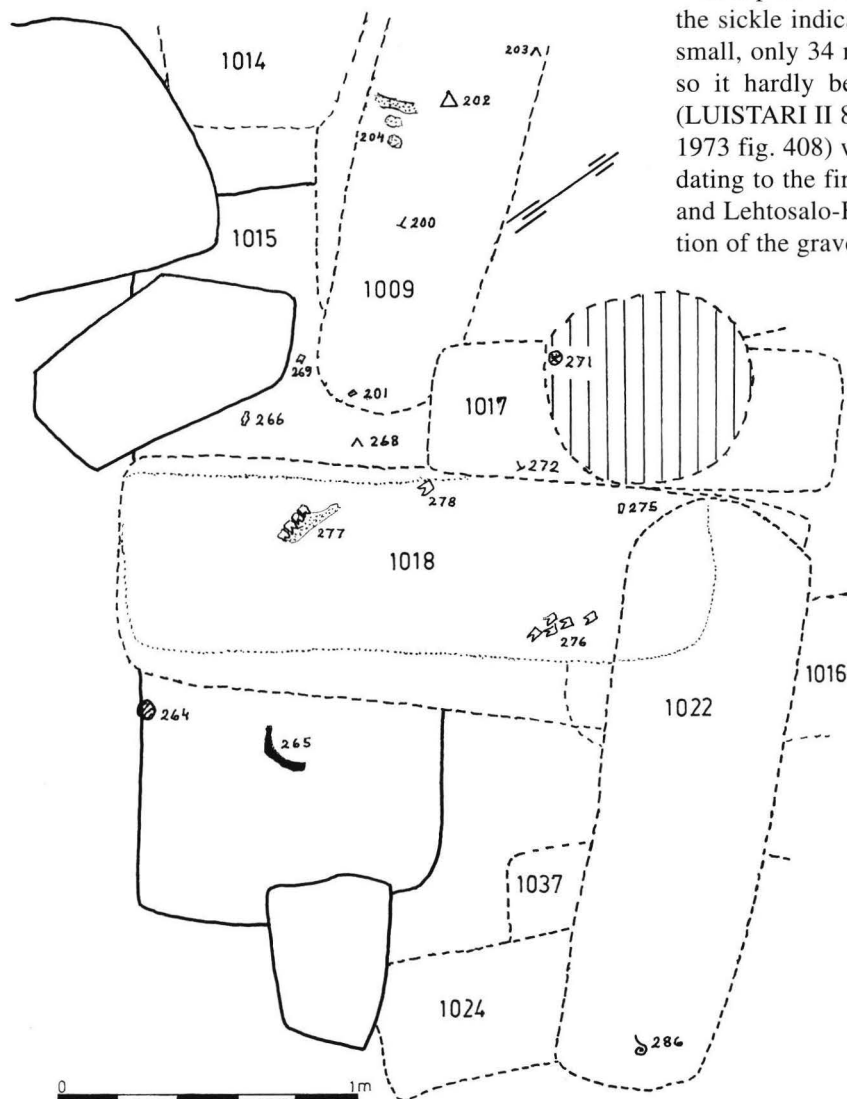
Size 245x100 cm

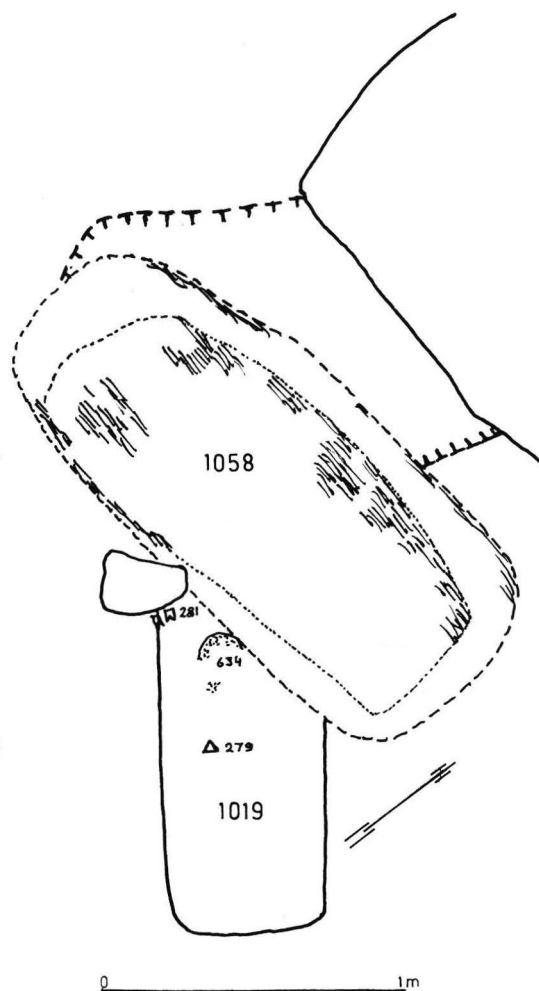
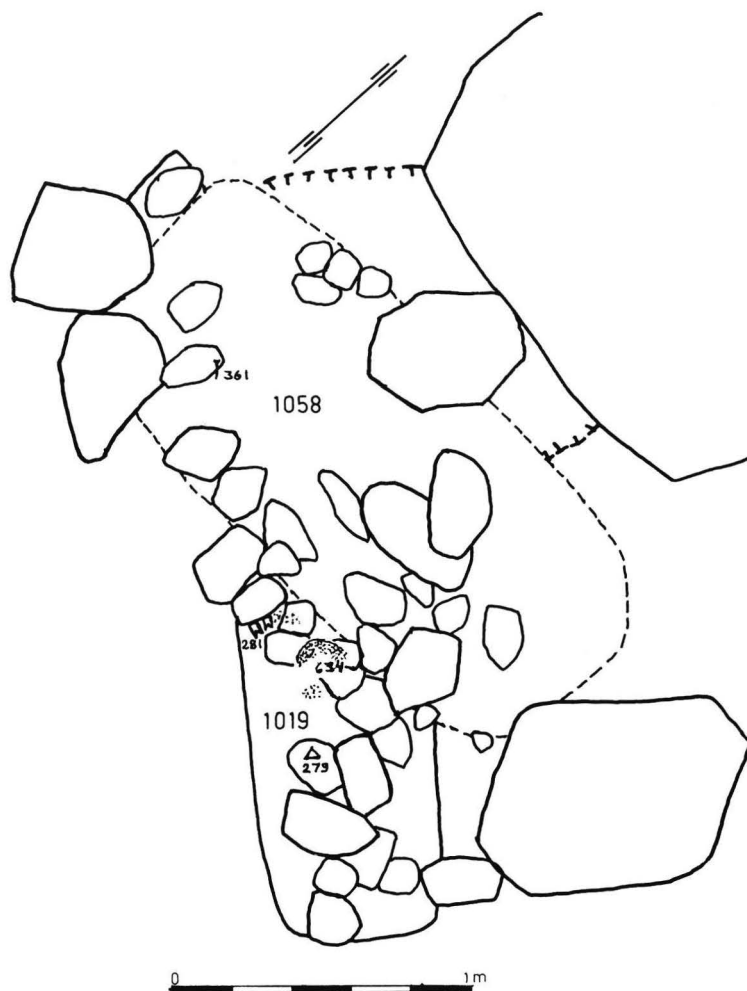
KM 25480:264–269

Depth 115–120 cm

The grave was situated in the N part of the cemetery to the NE of cairn 422, where there was about 90 cm of topsoil. It had been badly disturbed in digging graves 1005, 1009, 1017 and 1018; only the SE end and the W corner had been preserved. The grave-pit was rather wide with rounded corners, and its bottom slanted to the NW. On top of the W corner was a large stone, measuring 90x50x50 cm. It could have been an end-stone, but the top-layers had been disturbed many times, and it is not certain that it had belonged to this grave. At the NW end of the grave there were slight traces of a skull and a human tooth (25480:269). About 30 cm to the SW of these a small equal-armed brooch (:266) was found, and at the preserved SE end a fragmentary sickle (:265) was discovered. In the top-layers above the grave there were a cube-stone (:264), potsherds and a splinter of flint (:267, 268). It is possible that the small round brooch (:271) found in the fill of grave 1017 was originally in this grave.

Interpretation and dating: The equal-armed brooch and the sickle indicate a female burial. The brooch is rather small, only 34 mm in length, but it has broad arms, and so it hardly belongs to the earliest ones of its type (LUISTARI II 86). If the small round brooch (Kivikoski 1973 fig. 408) was originally in this grave, it indicates a dating to the first half of the 7th century (see grave 505 and Lehtosalo-Hilander 1988 201–203), but the orientation of the grave points to the Luistari Mer II stage.





Grave 1018

Location 140/100

Orientation SW-NE

Size at least 200x80 cm

Depth 140 cm

Grave plan p. 127

KM 25480:275–278,648

The grave was situated to the SE of grave 1017 and was partly under it. On top of it there was about 75 cm of topsoil, and in digging it graves 1015 and 1016 had been disturbed. Grave 1022 covered the NE end of this. After the removal of the topsoil bovine teeth and jawbones (25480:276–278) were found on top of the grave. The grave-pit narrowed to the bottom, where it was almost rectangular in form. The bottom was otherwise even, but at the NE end there were rather large stones on the sides. In the fill, about 30 cm above the bottom, a very fragmentary spiral ornament (:275) was found, but the burial was unfurnished.

Interpretation and dating: No sex determination. Like the former this was a late grave, and possibly the bovine remains had nothing to do with the burial.

Grave 1019

Location 136/102

Orientation NW-SE

Size at least 250x65 (55) cm

Depth 115 cm

The grave was situated in the N part of the cemetery to

Grave 1017

Location 140/101

Orientation SW-NE

Size 135x45 cm

Depth 130–140 cm

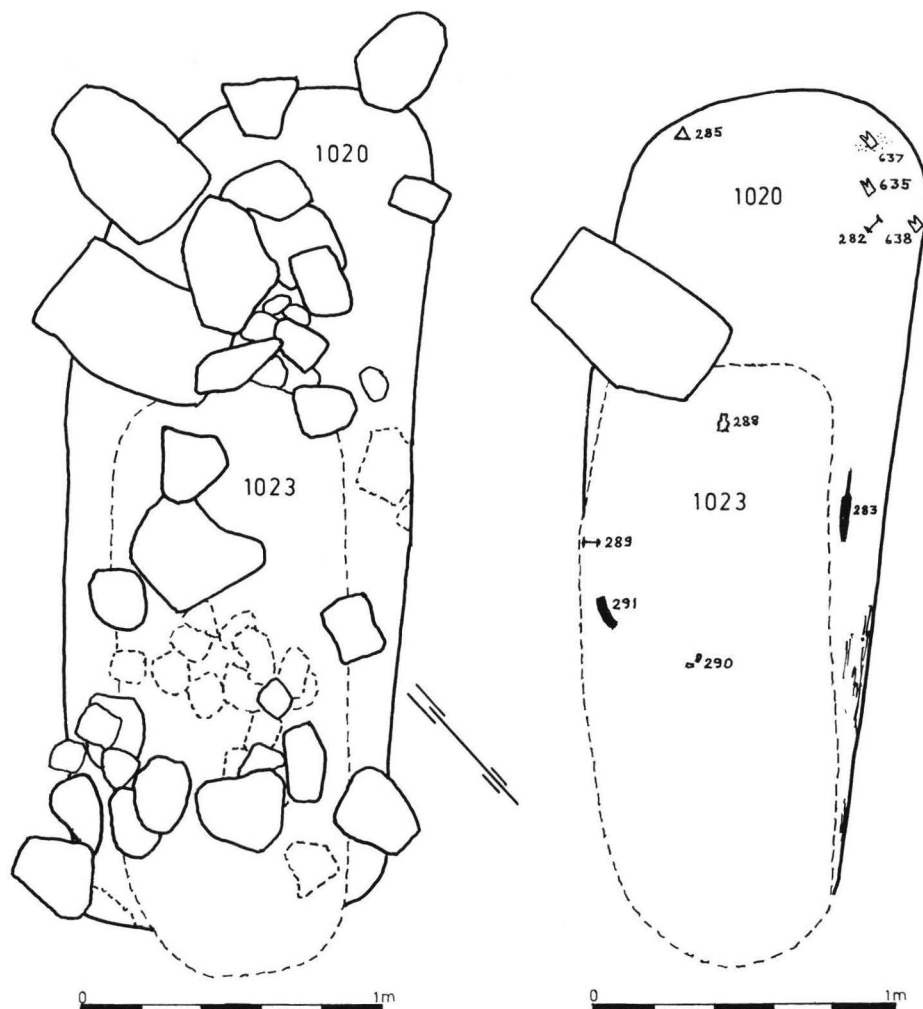
Grave plans pp. 123,127

Pl. 46:1017

KM 25480:271–274

The grave was situated in the NE part of the cemetery, where there was about 75–85 cm of topsoil. On top of its middle part was a late pit, about 65 cm in diameter and with a depth of 110–115 cm from the earth surface. The grave-pit was almost rectangular in form and in digging it graves 1005, 1009, 1015 and 1018 had been somewhat disturbed. The bottom was uneven because of a large stone. On the SE side of the SW end an iron nail (25480:272) was found, and on the NW side, about 10 cm above the bottom, there was a small round brooch (:271). In addition a fragmentary bronze spiral (:273) and three potsherds (:274) were found in the fill.

Interpretation and dating: Judging by the size of the grave-pit, this was a child's burial, and it overlay all other graves at the site. Because of that it must be one of the latest ones. The small round brooch, which is of an early Merovingian Period type (see above grave 1015), must originally have been in some other connection, possibly in grave 1015 or in some other earlier grave, which had totally been destroyed.



the NE of cairn 422 and the large rubbish-pit beside it, at a place, where there was about 70 cm of topsoil. Its NW end had been destroyed in digging grave 1058. On top of the preserved SE end there was a lot of stones, and it is possible that there had been originally a stone setting all over the grave. Human teeth and remains of a skull (:634) were found near the border of grave 1058, and 10–20 cm to the SW of these there were decomposed bones and animal teeth fragments (:281). The grave-pit was straight-sided with rounded corners. It narrowed to the bottom, which was even. Charcoal, potsherds and burnt clay (:279,280) were found in the fill.

Interpretation and dating: No sex determination. The skull remains were not in their original place but were found about 40 cm above the bottom at the same level as the animal bones and teeth. The grave was earlier than grave 1058, but otherwise there is no date. If the small triangular-headed pin (25480:361), found in the mixed layers on top of this and grave 1058, was originally in this grave, it gives a dating to the early Merovingian Period (Kivikoski 1973 46, 66–67 figs. 244, 440).

Grave 1020

Location 120/101

Orientation SW-NE

Size 280x100 cm,

Pl. 46:1020:1–6

bottom 245x75 cm

Depth 85–90 cm

KM 25480:282–285,635–638

The grave was situated in the N part of the cemetery, to the NW of cairn 422. It was under the drying barn foundation, where there was about 50 cm of topsoil. Its northeasternmost part had been destroyed in digging grave 1023. On top of the SW end of the grave there were several large stones, 40–50 cm in diameter, but also otherwise the grave surface and the surrounding area was full of stones. The grave-pit was wide with rounded corners, and the bottom was rather even. On the NW side there were remains of decomposed wood. Bovine teeth and remains of jawbones (25480:635,637–638) were found in the W corner of the grave, and near these was an iron rivet (:282), about 80 cm to the NE of it was a knife (:283). Potsherds (:284,285) were found in the fill. Possibly the metal artefacts, a crayfish brooch (:288), a rivet (:289), bronze list fragments (:290, from a damaged finger-ring?) and a sickle fragment (:291) found in the fill of grave 1023, were originally in this grave.

Interpretation and dating: If the crayfish brooch and the sickle were originally in this grave, they indicate a female burial. The brooch is rather similar to the brooches found in the Köyliö graves B 7 and B 9 and dated by Cleve (1943 73–74) to the 7th century.

Grave 1022

Location 141/100	Grave plan p. 127
Orientation NW-SE	Pl. 47:1022
Size 210x85 cm, bottom 210x60 cm	KM 25480:286–287,639
Depth 120–130 cm	

The grave was situated at the N end of the cemetery, to the NE of cairn 422, where there was 75–85 cm of topsoil. It had been dug on top of graves 1016, 1018, 1024 and 1037. The grave-pit looked pear-formed at first, but lower down it was straight-sided with rounded ends. The bottom was uneven because of stones. Quite at the SE end of the pit, almost 20 cm above the bottom, a spiral-end of an iron pin (:286) was found. In the fill there were some potsherds (:287) and animal teeth fragments (:639; bovine, sheep or goat).

Interpretation and dating: Judging by the location of the grave on top of the other graves, it must be one of the latest ones. The iron pin fragment must have come to its fill from the dwelling-site layers, because it is from a pin with spiral-head, dating from the Pre-Roman Iron Age to the early Roman Period (Kivikoski 1973 20 fig. 12; Salo 1968 98).

Grave 1023

Location 120/102	Grave plan p. 129
Orientation SW-NE	Pl. 46:1020 (1023)
Size 190x80 cm	KM 25480:288–293
Depth 115–120 cm	(See grave 1020)

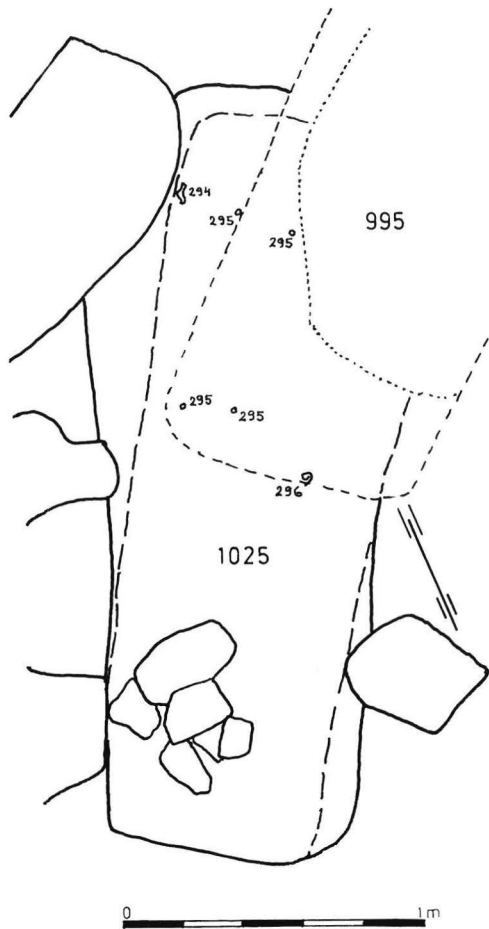
The grave was situated in the N part of the cemetery to the NW of cairn 422, and it had been dug directly on top of grave 1020. The grave-pit was oval in form and with rounded bottom. It was full of different bovine bones (25480:293), and also decomposed wood, charcoal, a potsherd (:292), a crayfish brooch (:288), an iron rivet (289), bronze finger-ring (?) fragments (:290) and a sickle fragment (:291) were found in its fill.

Interpretation and dating: This was possibly a very late pit dug for animal bones only. All the artefacts were found 30–60 cm above the bottom, and they were probably originally in grave 1020, which was destroyed when this grave was dug.

Grave 1025

Location 122/100	
Orientation SSW-NNE	Pl. 47:1025:1–3
Size 250x90 cm, bottom 240x80 cm	KM 25480:294–299
Depth 75 cm	

The grave was situated in the N part of the cemetery under the old drying barn foundation, where there was about 30 cm of topsoil. Its W corner had been destroyed in digging grave 995. The grave-pit was even-sided with rounded corners and an even bottom. An equal-armed brooch (25480:294) was found at the SW end of the pit about 30 cm above the bottom. At this same end, quite near the bottom, there were three orange beads, and two



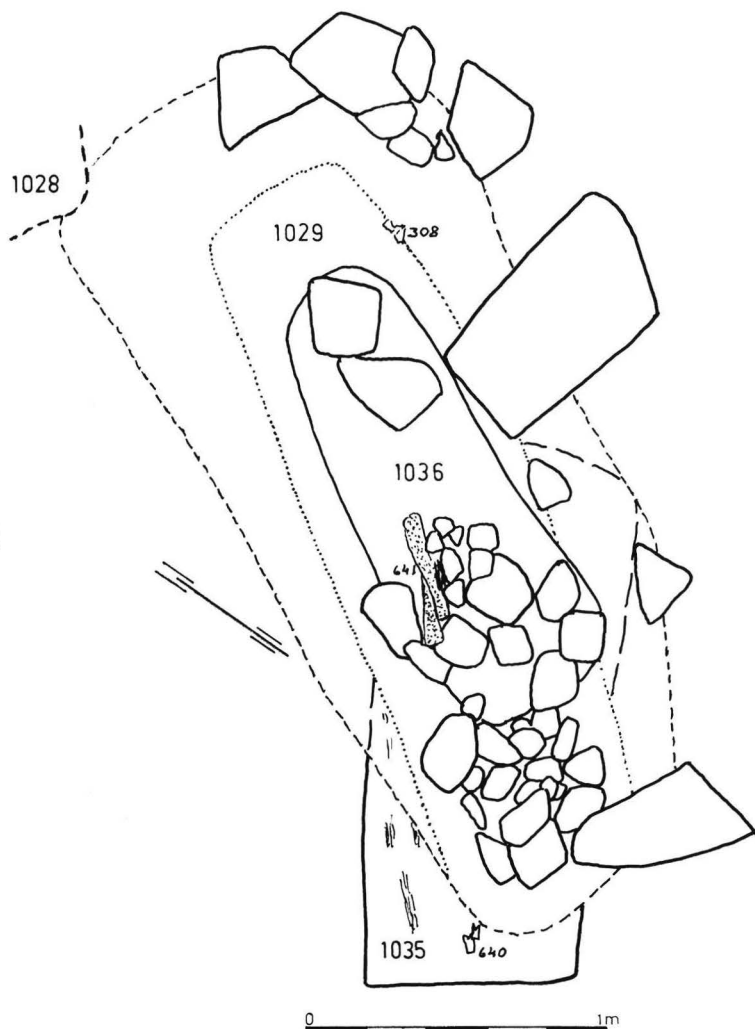
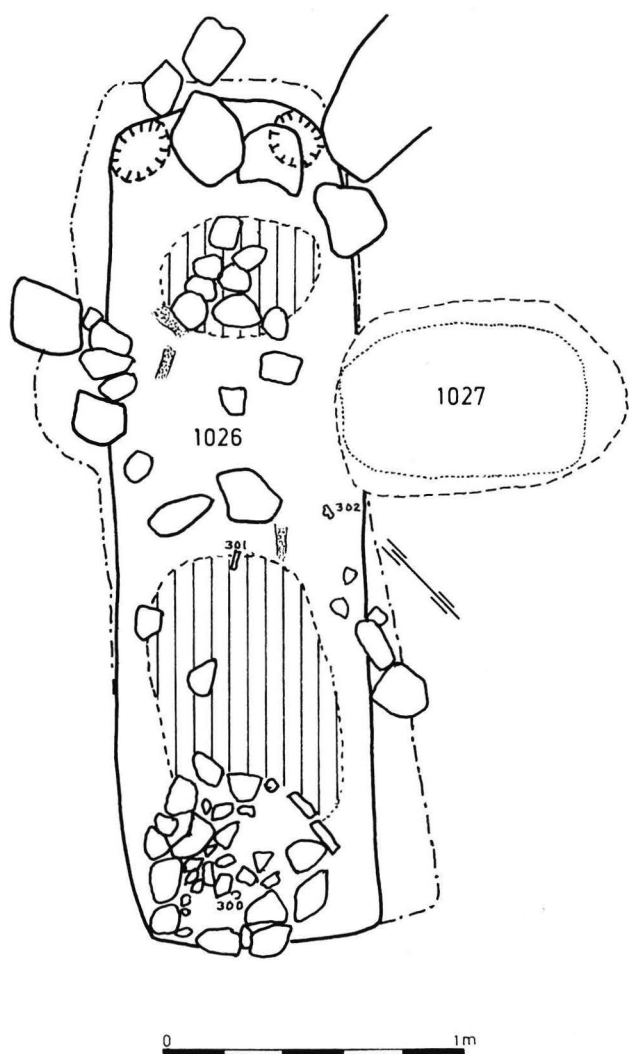
more (:295) were found almost in the middle of the grave, where also a bronze finger-ring with a bone inside (:296) was discovered. Potsherds, a burnt bone splinter and a stone flake (:297–299) were found in the fill. The finger-bone was the only remains of the deceased.

Interpretation and dating: Judging by the brooch and the beads this was a female burial. The brooch is rather small, only 34 mm in length. It dates the grave to the earlier phase of the Merovingian Period (LUISTARI II 86). Orange beads were the most common beads of the period (Cleve 1943 87).

Grave 1026

Location 124/100	
Orientation SSW-NNE	Pl. 47:1026:1–2
Size 285x85 cm	KM 25480:300–305
Depth 75 cm	

The grave was situated in the N part of the cemetery, to the NW of cairn 422 and under the foundation of the old drying barn, where there was 40–50 cm of topsoil. On top of the NE end of the grave there was a curious round heap of small stones, 60 cm in diameter, but it could not belong to the burial, because it was partly on top of the soil-pit, which intersected the grave. This soil-pit was 95x60 cm in size, and another smaller pit, 50x40 cm in size, was observed at the SW end of the grave. The NW side of the grave had been damaged in digging the small grave 1027. The grave-pit was very regular in form with rounded ends and an even bottom. In its E, S and W corners there were round patches, which extended 10 cm



Grave 1029

Location 127/102

Orientation SSW-NNE

Size 290x100 cm,

bottom 260x70–80 cm KM 25480:308–309

Depth 100–105 cm

deeper down from the bottom level. In the middle of the grave slight traces of bone were observed, and a fragment of a bronze arm ring (? 25480:301) and a three-branched handle of a clay vessel (:302) were found. At the NE end of the grave there was a half of a small iron ring (:300). In the fill, fragments of several clay vessels (:303), a burnt bone splinter and two stone flakes were found.

Interpretation and dating: This grave was badly destroyed in digging later pits. The arm-ring fragment may indicate a woman. The shape of the pit with patches in the corners points to the Merovingian Period, and the location of the grave supports this dating. The three-branched vessel handle must originate from the Luistari dwelling site. It dates from the late Bronze Age (Meinander 1954 140, 150–151, Pl. 20:k), and five similar handles have been found at Luistari. Two of them (20552:176, 23607:88–89) are from cairns 422 and 698, one is from the fill of this grave (25480:302) and two (25480:490,512) were found from the stony area W and SW from cairn 422, and thus not very far from this grave.

The grave was situated in the N part of the cemetery, to the NE of cairn 422 and under the old drying barn foundation, where there were about 40 cm of topsoil layers and about 20 cm of mixed earth. Grave 1036 overlay the middle part of this grave, and in digging this pit, grave 1035 had been destroyed almost completely. On top of the NE end of the grave there was a partly scattered heap of stones. The grave-pit had rounded corners, it broadened to the SW and became smaller towards the bottom, which slanted slightly to the NE. At the SW end, 30 cm above the bottom, a fragment of a bronze vessel (25480:308) was found, and there were potsherds in the fill (:309).

Interpretation and dating: No sex determination, although the large size of the grave-pit may indicate a male burial. The shape of the grave points to pagan times, but the burial was unfurnished and therefore it may be of later date.

Grave 1030

Location 123/102

Orientation SSW-NNE

Size 180x85 cm,

bottom 170x65 cm KM 25480:310–312

Depth 85–90 cm

The grave was situated in the N part of the cemetery, to the NW of cairn 422 and under the drying barn foundation, where there was 40–50 cm of topsoil. There were some stones overlaying the SW end of the grave, and to the E of these there were remains of a bovine skull (25480:312). The grave-pit was rounded at the SW end, somewhat irregular deeper down because of stones, but the NE end ended abruptly to a curious pit, full of crushed bricks and about 200x160 in size. On the SW, SE and partly on the NE side of this pit there were darker lines, and also charcoal on the SW side. The bottom of the grave was even, but at the NE end there were stones. In the fill on different levels decomposed bovine bones, a horse-shoe nail (:310) and some potsherds (:311) were found.

Interpretation and dating: For its regular shape and correct orientation this pit could be from the earlier Merovingian Period, but being without furnishing it can also be late.

Grave 1031

Location 126/92

Orientation WNW-ESE

Size 170x65 cm

KM 25480:313–314

Depth 50–65 cm

The grave was situated in the N part of the cemetery, close by cairn 422, to the W of it, where there was 15–20 cm of topsoil. On top of its middle part was a large stone, measuring 40x25x30 cm, and some smaller ones. To the SW of the grave and partly on top of it was a charcoal pit, about 50 cm in diameter, from which charcoal had scattered all over the top of the grave. The grave-pit was oval in form with a rounded bottom. In its middle part, about 30 cm above the bottom an iron nail (25480:313) was found, but otherwise there were only potsherds (:314) in the fill.

Interpretation and dating: No sex determination. The shallow depth points to a child's burial, the location and the orientation to the late Merovingian period.

Grave 1032

Location 129/88

Orientation SW-NE

Size 140x65,

bottom 110x55 cm KM 25480:315

Depth 65 cm

The grave was situated in the N part of the cemetery, to the SW of cairn 422, where there was about 30 cm of turf and topsoil. The grave-pit was almost rectangular in form diminishing to the bottom, which slanted to the SW. The earth was stony and therefore the stones in the fill

need not be intentionally placed. Only some burnt bone splinters were found in the pit.

Interpretation and dating: The size of the grave-pit indicates a child's burial. The location and orientation points to the early Merovingian period.

Grave 1033

Location 126/105

Orientation SSW-NNE

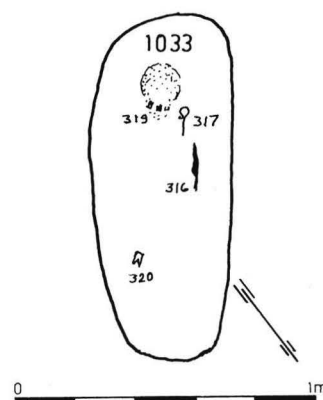
Pl. 50:1033:1–2

Size 115x45 cm

KM 25480:316–320

Depth 60 cm

The grave was situated in the N part of the cemetery, to the NW of cairn 422 and under the drying barn foundation, where there was about 50 cm of topsoil. The grave-pit was round-ended, broader at the SW end, and even-bottomed. At the SW end there were remains of a skull and teeth (25480:319). To the NW of them a shepherd's crook pin of iron (:317) was found. An iron knife (:316) was to the NE of it, the tip pointing to the SW. At the NE end on the SE side sheep or goat teeth (:320) were found. There was a potsherd (:318) in the fill.



Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. Shepherd's crook pins of iron were common in men's weapon graves especially in the period 650–750 AD, and so the pin indicates a boy's burial and a dating to the middle of the Merovingian Period (LUISTARI II 108). The knife is straight-backed and rather long, 210 mm. It may represent weaponry in this grave.

Grave 1034

Location 127/90

Orientation NW-SE

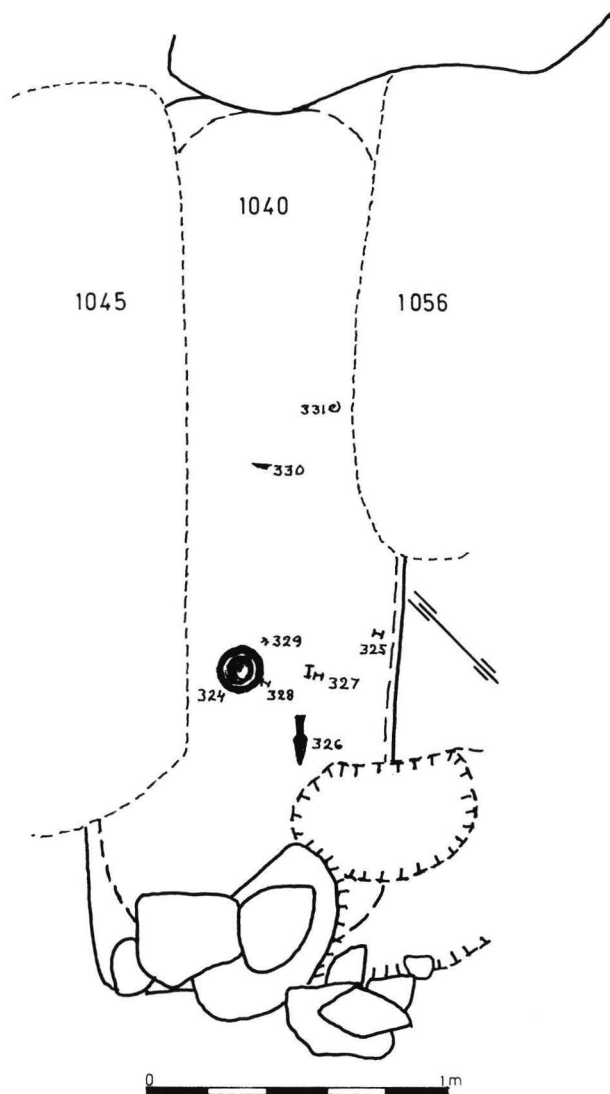
Size 120x80,

bottom 90x40 cm

KM 25480:321

Depth 65 cm

The grave was situated in the N part of the cemetery to the SW of cairn 422. It was covered by about 35 cm of turf and topsoil. The grave-pit was ovaloid in form at its upper parts, but straight-sided with rounded ends lower



down. The bottom was even. Only some potsherds were found in the fill.

Interpretation and dating: Judging by the size of the grave-pit this was a child's burial. The location and orientation points to the late Merovingian Period.

Grave 1035

Location 128/103 Grave plan p. 131
Orientation SW-NE
Size 180x75 cm KM 25480:640
Depth 95 cm

The grave was situated in the N part of the cemetery under the drying barn foundation, where there was about 40 cm of topsoil and 20 cm of mixed earth. It had been almost totally destroyed in digging graves 1029 and 1036. Only the NE end was preserved, and on the basis of it the grave-pit had been rather rectangular in form and even-bottomed. In the preserved E corner there was decomposed wood, and bovine teeth fragments (25480:640) were found in the middle of the NE end.

Interpretation and dating: No sex determination. Most probably this grave was from the Merovingian Period. It was, however, so badly damaged that any further definitions are impossible.

Grave 1036

Location 127/103 Grave plan p. 131
Orientation SSW-NNE
Size 150x45-55 cm KM 25480:309,641
Depth 110 cm

The grave had been dug directly on top of graves 1029 and 1035. At its SW end there were two stones, 30-35 cm in diameter. At the NE end a stone setting of about 20 scattered stones contained a piece of wood and two foreleg bones of a horse (25480:641). The grave-pit broadened to the NE, the NE end was straight, the SW end rounded, the bottom slanted to the NE. The burial was unfurnished. All the potsherds found here (:309) were listed in connection with the finds from grave 1029.

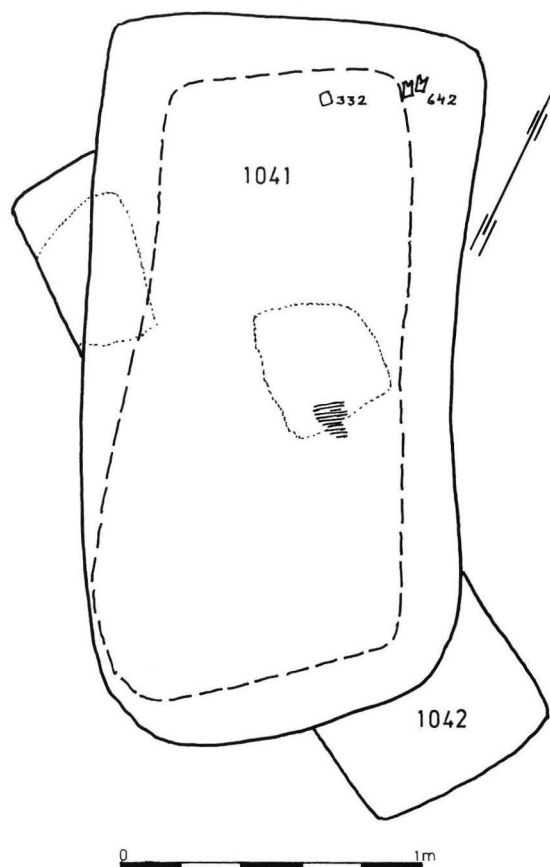
Interpretation and dating: No sex determination. The size of the pit points to a child. The grave was apparently late, because it overlay two others, and also the later one of these, grave 1029, was unfurnished.

Grave 1040

Location 135/109
Orientation SW-NE Pl. 50:1040:1-9
Size at least 300x
100-110 cm KM 25480:324-331
Depth 90-105 cm

The grave was situated in the N part of the cemetery, to the N of cairn 422, where there was 70-80 cm of topsoil. Its sides had been damaged in digging graves 1045 and 1056. On top of the NE end of the grave there was a group of stones. The SW end of the grave-pit was rounded and the bottom was 10 cm deeper than in the NE end. A shield-boss (25480:324), a spearhead (:326), iron rivets (:325, 327, 328) and bronze spirals (:329) were found at the NE end of the pit. To the SE from the middle of the grave there were a fragmentary iron artefact (:330) and a bronze finger-ring fragment (:331).

Interpretation and dating: The shield-boss and the spearhead indicate a male burial. The shield-boss has a conical top and lacks a waist part. It is 83 mm in height and 154 mm in diameter, and the width of the flange is only 22 mm; there are four rivets affixed to the flange. The only totally preserved one of these is 43 mm in length. The four loosely found rivets are 32-40 mm in length and probably also from the shield. The shield-boss is somewhat similar to the Viking Age conical shield-bosses (Salmo 1952 399-402 fig. 358), but it is higher, and it also looks like some shield-bosses of the Migration Period (cf. Arwidsson 1948 Pl. 21f, Fullerö, G. Uppsala). The spearhead is socketed with rounded basal angles and the widest part of the blade located some distance above the junction of the blade and the socket. It is 166 mm in length, of which the socket accounts for 75 mm, and the blade is 35 mm wide. Like the shield-boss it has no exact parallel among the weapons found in Finland. In general it is more like the spearheads of the older Iron Age than the younger Iron Age ones (cf. Kivikoski 1973 53 fig. 308). The location of grave 1040 points to the oldest Merovingian Period.



Grave 1042

Location 134/103

Orientation NW-SE

Size 240x70 cm

KM 25480:334

Depth 80–100 cm

The grave was under grave 1041, and only its SE end and the westernmost corner were preserved. On the basis of them the grave-pit had been almost rectangular in form. At the NW end the bottom had been uneven because of stones. Only one potsherd (25480:334) was found in the fill.

Interpretation and dating: See above grave 1041.

Grave 1043

Location 136/107

Orientation SSW-NNE

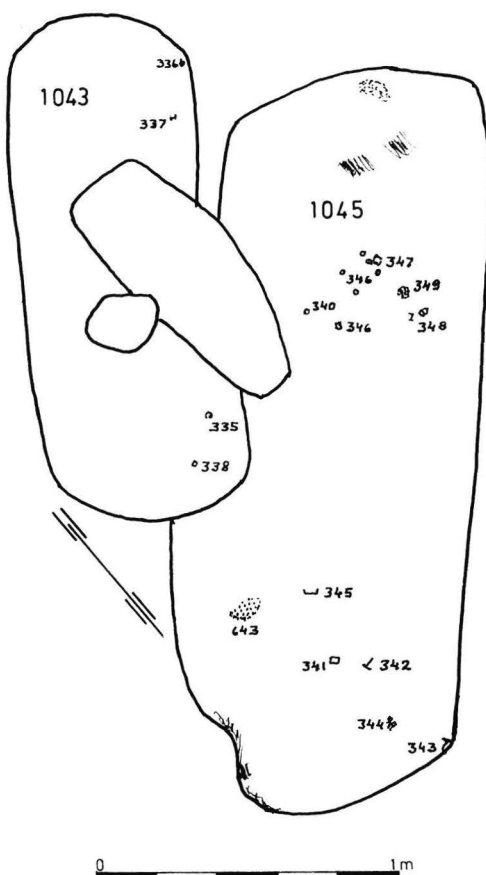
Pl. 50:1043:1–3

Size 170x65 cm

KM 25480:335–338

Depth 80–115 cm

The grave was situated in the N part of the cemetery, to the N of cairn 422, where there was 75–80 cm of topsoil. It had been made on top of graves 1044 and 1045. The grave-pit had even sides and rounded ends, but in the middle of its bottom there was so large a stone that one must ask if there had been any burial at all; the pit was at each end 30 cm deeper than in the middle. At the NE end, 20–30 cm above the bottom, a bronze finger-ring (25480:335) and a bead (:338) were found, and in the W corner a knob of a bronze penannular brooch (:336) and a small bronze rivet (:337) were discovered. These were also 25–30 cm above the bottom.



Grave 1041

Location 134/104

Orientation NNW-SSE

Pl. 50:1041

Size 240x120 cm,

bottom 200x80–100 cm

KM 25480:332–333,642

Depth 110–120 cm

The grave was situated in the N part of the cemetery, to the N of cairn 422, where there was about 70 cm of topsoil. On top of it grew a large birch tree, the roots of which had badly mixed the earth layers. The grave-pit was uncommonly wide in proportion to its length, and in the digging of it grave 1042 had been damaged almost completely. It had rounded corners and it grew smaller towards the bottom, which slanted slightly to the NW end. In the middle of the bottom there was a large stone. In the N corner of the pit, about 35 cm above the bottom a bronze mount (25480:332) and horse teeth fragments (:642) were found. Charcoal and potsherds (:333) were in the fill.

Interpretation and dating: No sex determination. The grave resembled the large graves with multiple burials excavated in 1971 (LUISTARI I 36–37), but because there were so few finds, it is impossible to date. Possibly it is a poorly furnished grave from the Viking Age, and grave 1042 damaged in digging it was from the Merovingian Period.

Interpretation and dating: Possibly a woman's or a child's burial. In the making of this grave the first idea may have been to dig up the stone in the middle of the grave, but because it was so large, the ends of the pit had been filled in again, and the corpse had been buried on a higher level. The brooch knob is from a penannular brooch with poppy-shaped ends, dated generally to the first half of the 11th century (LUISTARI II 105). The finger-ring has spiral-ends, but with rather small spirals and narrow ring. Therefore it is somewhat different to the bigger rings found earlier in the men's graves at Luistari and dated to the middle of the Viking Age (LUISTARI II 127). The only bead is 9x7 mm in size and has green-white-yellow flower-like eyes on a yellow base. Somewhat similar beads were found earlier in grave 58, dated to the first half of the 11th century (LUISTARI II 139, 187).

Grave 1045

Location 136/108	Grave plan p. 134
Orientation SW-NE	Pl. 51:1045:1-10
Size 245x100 cm	KM 25480:340-350,643
Depth 100-110 cm	

The grave was situated in the N part of the cemetery, to the N of cairn 422, where there was 80-90 cm of topsoil. It had been dug on top of the SE side of grave 1040, and the SE side of it had been damaged in digging grave 1043. The grave-pit was narrower in the SW end, its corners were rounded and the bottom was rather even. In its E corner and at the SW end there were slight traces of wood, and at the NE end two nails and a clamp (25480:342,343,345) were found. Traces of a human skull (:643) were observed in the NE half of the pit, near the outside bulging part of the SE wall. It is just possible that there had been at that place a smaller grave, in which this skull belonged. At the NE end of the grave there were further a bronze mount (:341) and a spiral ornament (:344). Quite at the SW end there was some bone, and 60-80 cm to the NE from it beads (:340,346), a small sleigh bell (:347), a couple of spiral ornaments (:348,349) and a small bronze rivet (:348a) were found. Judging by the location of the beads the head of the deceased should have been at this end, but clear traces of the skull were not observed. The fill contained a burnt bone splinter.

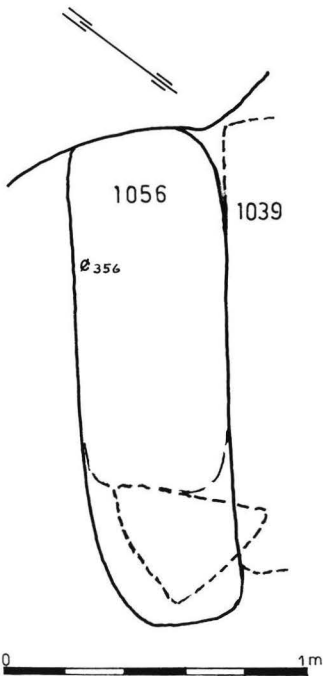
Interpretation and dating: Beads and an apron ornament indicate a female burial. Two of the beads are opaque blue segmented beads (:340,346c), one is an uncommon multicoloured variant of segmented beads with dark stripes and yellow ovals surrounded by violet rings (:346d), one is blue (:346a) and one is yellow (:346b) with flower-like eyes. Apart from the multicoloured segmented bead, similar beads have been found earlier at Luistari, and they have been dated to the 11th and 12th centuries (LUISTARI II 132, 139). One of the spiral ornaments (:348) is certainly from an apron corner, possibly also another one (:344); the fragments (:349) are probably from a three-branched braid such as the ones found earlier in graves 10, 23 and 56 at Luistari (LUISTARI II 163 fig. 43:7).

Grave 1055

Location 137/107	
Orientation SW-NE	Pl. 51:1055
Size 155x40 cm	KM 25480:355
Depth 125-135 cm	

The grave was situated in the N part of the cemetery, to the N of cairn 422, where there was about 75 cm of topsoil. It had been dug on top of the SE part of grave 1046 and of the NW end of grave 1048. The grave-pit was almost rectangular in form and it had even bottom. At its SW end, about 20 cm above the bottom, a chisel-like artefact (25480:355) was found, but nothing more was observed.

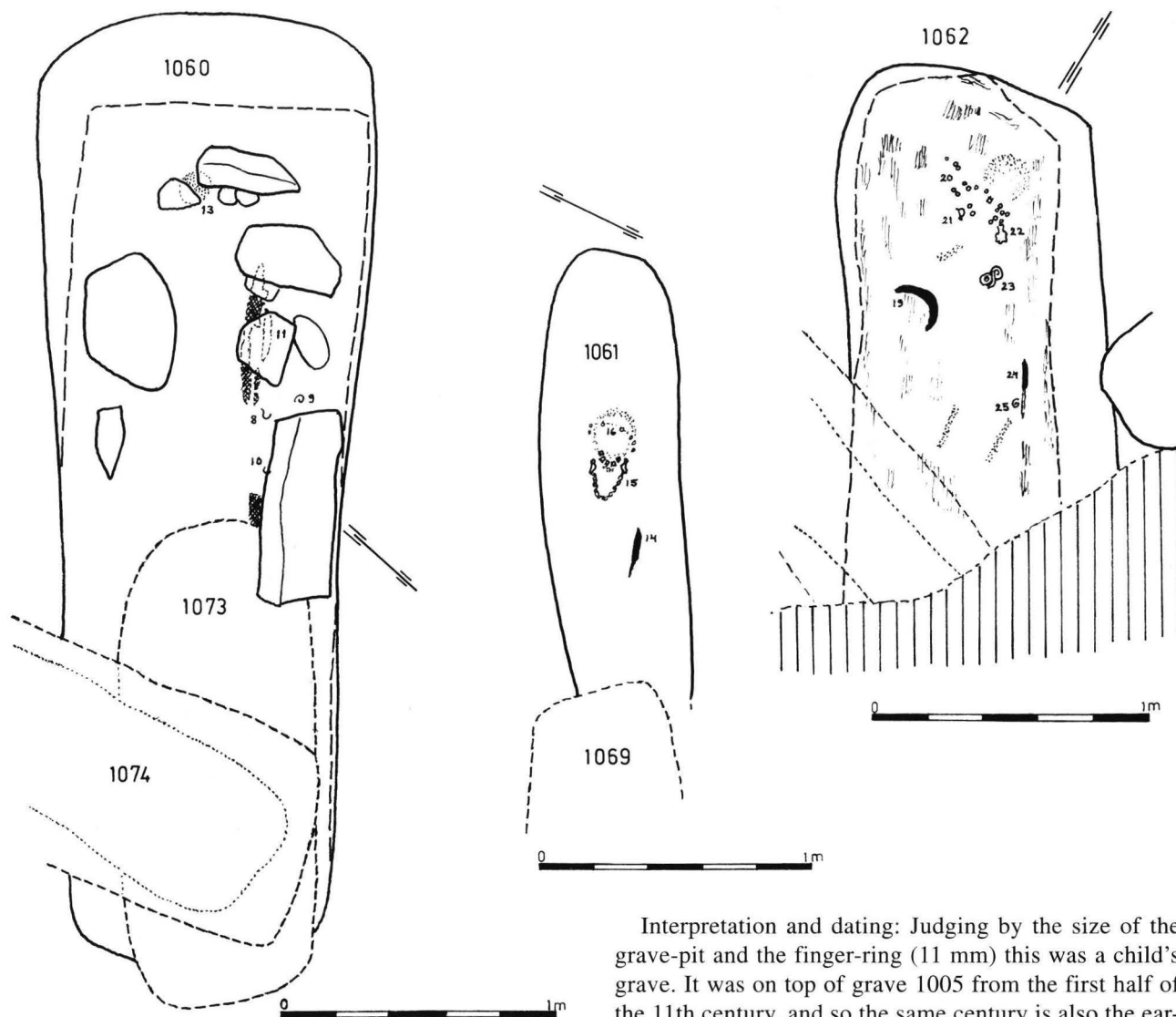
Interpretation and dating: Judging by the size and the form of the grave-pit, this was a late grave, perhaps of a child. The artefact is probably a fill find.



Grave 1056

Location 135/109	
Orientation SW-NE	Pl. 51:1056
Size 160x50 cm,	
bottom 115x45 cm	KM 25480:356
Depth 90-100 cm	

The grave was situated in the N part of the cemetery, to the N of cairn 422, where there was about 75 cm of topsoil. It had been dug partly on top of the NW side of grave 1040, and on top of its NW side was grave 1039. In SW the grave-pit bordered to a large stone or bedrock. The preserved E corner was rounded. At the NE end on the bottom there was a large stone, so that the bottom was even only at the SW end. On the SE side, about 40 cm from the SW end and only 5-10 cm above the bottom, a small penannular brooch (25480:356) was found, but no other finds were observed.



Interpretation and dating: This was probably a child's grave, and the small penannular brooch with flower-shaped ends dates it to the latter half of the 11th century at the earliest (LUISTARI II 106).

Grave 1057

Location 140/102	Grave plan p. 123
Orientation SSW-NNE	Pl. 51:1057:1-3
Size 130x50 cm	KM 25480:357-360
Depth 125 cm	

The grave was situated in the N part of the cemetery, to the NE of cairn 422, where there was about 60 cm of top-soil and 20-30 cm of mixed earth. It had been dug completely on top of grave 1005. The grave-pit had straight walls and rounded corners, and the bottom was quite even. Its middle part was overlain by a stone, 30 cm in diameter, and a couple of smaller stones. On the NW side of the pit, slightly to the NE from the middle, a small bronze finger-ring (25480:358) was found, in the middle of the NE end there was an iron artefact fragment (:357), and at the SW end spiral ornament fragments (:359,360) and a piece of decomposed bone were discovered. All these were found 10-15 cm above the bottom.

Interpretation and dating: Judging by the size of the grave-pit and the finger-ring (11 mm) this was a child's grave. It was on top of grave 1005 from the first half of the 11th century, and so the same century is also the earliest possible dating for this grave. The finger-ring is a spiral-ring of round section, which indicates the later Viking Age (LUISTARI II 122, 127).

Grave 1058

Location 136/102	Grave plan p. 128
Orientation W-E	Pl. 51:1058:1-2
Size 190x85 cm, bottom 165x65 cm	KM 25480:361-363
Depth 130 cm	

The grave was situated in the N part of the cemetery, to the NNE of cairn 422. It had been dug on top of grave 1019 and a fireplace from still older times. The stones and the charcoal in the fill may originate from these older constructions. The grave-pit was oval in form with a rounded bottom. On top of it but in the mixed layer a small pin with a triangular head (25480:361) and a bronze rod (:362) were found, and the fill contained some potsherds (:363).

Interpretation and dating: This grave overlay grave 1019, and therefore it cannot be very early. The small triangular-headed pins are however artefacts of the Migration Period or the early Merovingian Period (Kivikoski 1973 46-47 fig. 244). Accordingly, somewhere near this

place there must have been a grave, in which the pin had originally been. It was possibly grave 1019 or perhaps grave 1042.

Grave 1060

Location 113/96	Grave plan p. 136
Orientation SW-NE	Pl. 51:1060:1–3
Size 310x100–105 cm	KM 26695:8–13
Depth 65–95 cm	

The grave was situated in the NW field area but near the drying barn foundation, and thus there was about 75 cm of topsoil overlaying its NE end, but only 40 cm on the SW part. The stone setting consisted of an upright standing stone at the SW end and of rows of stone flakes along the sides. Some of these flakes also stood on their sides. The stone rows were preserved as far as the middle of the grave, but in digging graves 1073 and 1074 the NE part of grave 1060 had been totally destroyed. The grave-pit was straight-sided with rounded corners and its bottom slanted slightly to the NE. The only remains of the deceased was the skull under the end stone at the SW end, and apparently also this end had been disturbed at some stage. Only a part of the upper end of a shepherd's crook pin (26695:8) had been preserved, and it was found about 20 cm above the bottom. Pieces of a bronze finger-ring (:9,10) were found over 20 cm apart from each other, and on the bottom of the grave there were rusted traces of an artefact about 95 cm long, of which only small iron pieces (:11) were preserved. This object (a sword?) may have interested the looters of the grave. Iron fragments (:53,54) found in graves 1073 and 1074 were possibly from the artefacts in this grave. Only some potsherds (:12) were found in the fill.

Interpretation and dating: The large size of the grave-pit and the shepherd's crook pin indicate a male burial. Large shepherd's crook pins of iron are very common in the weapon graves of the Merovingian Period, especially at the end of the 7th and at the beginning of the 8th century. The finger-ring is of flat-convex section, and is thus not datable (LUISTARI II 108, 122–123).

Grave 1061

Location 112/97	Grave plan p. 136
Orientation SW-NE	Pl. 51:1061:1–2
Size at least 165x50 cm	KM 26695:14–18
Depth 50 cm	

The grave was situated in the NW field area to the NW of grave 1060 and beside it. On top of the grave there was about 40 cm of topsoil, and quite soon after removing it the finds appeared. The bottom was even. Because grave 1069 was on top of the NE end of the grave, its length remained obscure. The skull was about 60 cm from the SW end of the grave, and the deceased seemed to have been of small size. Over its forehead ran a row of grey spots, perhaps traces of a headband. On both sides of the neck there was a small equal-armed brooch and the brooches were joined by a bronze chain (26695:15). About 20–40 cm to the NW of the brooches an iron knife

(:14) was found, the tip pointing to the head of the deceased. Nothing else was observed, and there was only one potsherd (:51) in the fill of grave 1069.

Interpretation and dating: The equal-armed brooches indicate a female burial. They are of Merovingian Period type and rather small, length 35 mm. They are most like the brooch found earlier in grave 421, but they have some kind of furrow in the middle part. Accordingly, they probably date the grave to the 7th century (LUISTARI II 86–88 fig 24:7). The knife is 187 mm in length, of which the blade is more than 110 mm. The blade tip is tapering as in saexes with pointed tips, mainly dated to the 7th century (Kivikoski 1973 77 fig. 524).

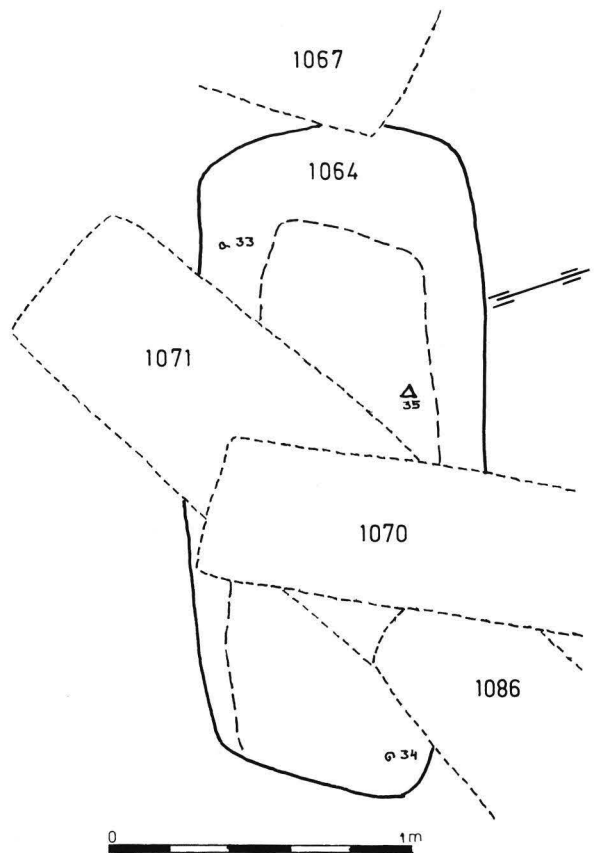
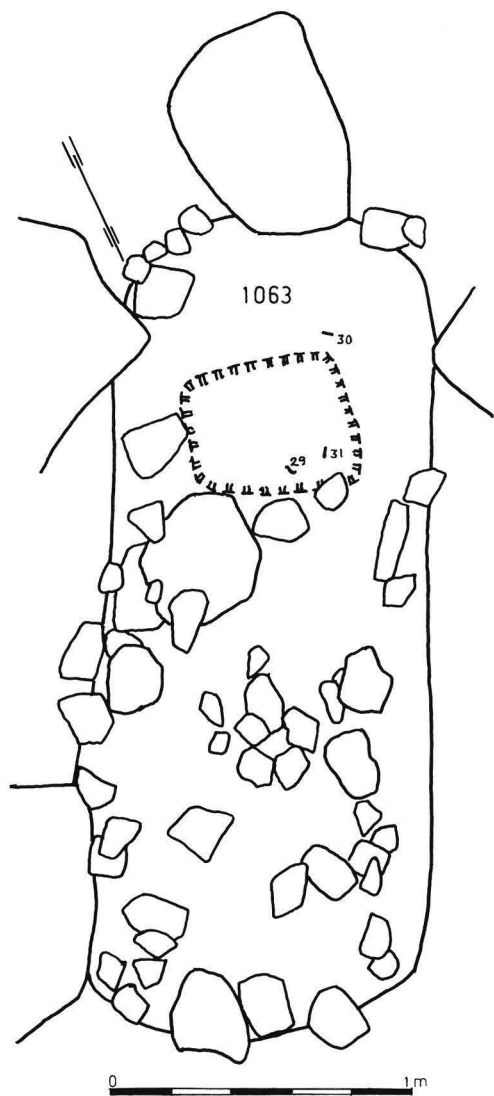
Grave 1062

Location 112/63	Grave plan p. 136
Orientation NNW-SSE	Pl. 52:1062:1–7
Size 200x90 cm	KM 26695:19–28
Depth 75 cm	

The grave was situated to the S of graves 1060 and 1061, and its NW end was less than a metre from the SW end of grave 1060. About 50–70 cm of topsoil and mixed earth was on top of it. The SE part of the grave had remained under the drying barn foundation and been destroyed. The head of the deceased was at the NW end, and so the most important part of the grave had been preserved. The grave-pit was of even width with slightly rounded corners and bottom. It contained a wooden coffin, 60–65 cm wide, which had been at least 180 cm long. Traces of wood were observed until 15–20 cm above the bottom. In this coffin lay a female half on its side, the head bent towards the left shoulder. Apart the skull there were traces of shin-bones, of the right arm bent from the elbow upwards, and of the left arm, which was quite straight. Although the finger-ring (26695:25) was found close to the left side near the knees, there were finger bones in connection with it. Near the finger-ring there was a knife (:24) the tip pointing to the head end, and by the right side near the pelvis was a sickle (:19). Close to the neck and on the chest of the deceased there were 20 glass beads (:20), near the right shoulder was an iron fibula with a band-shaped arch and a hinge (:21), on the left shoulder a crayfish brooch (:22) was found upside down, and about 10 cm from it to the foot end a dragon brooch (:23) was discovered. The fill contained only one potsherd (:26).

Interpretation and dating: The combination of three brooches and beads indicates a female burial. Three brooches of these special types together are however quite unusual. The fibulae with band-shaped arches and hinges have occurred earlier as shoulder brooches in grave 346 at Luistari and possibly in grave XVII at Pappilanmäki in Eura (11063:674a,b), but the crayfish brooches have mostly been regarded as third brooches holding the mantle. Here, however, it was found on the left shoulder, and the dragon brooch seemed to be the mantle brooch. The last-mentioned one is curious, because it is formed of two serpent bodies but there is only one head. Its design is rather simple and the brooch is not the best specimen of its type. It was probably made in the 8th century

(Kivikoski 1973 62 fig. 405; Cleve 1943 79). The cray-fish brooch is of the variant with roundels at the lower end, and it seemingly dates from the latter part of the Merovingian Period (Kivikoski 1973 61 fig. 397). The fibulae with band-shaped arches and hinges previously found at Luistari were dated to the last phase of the Merovingian Period (LUISTARI II 91). Five of the beads in this grave were large multicoloured ones. There were in two of them yellow, in two red and white and in one red, white and yellow stripes on a dark blue ground. Rather similar beads belong to Callmer's (1977 84–85, 77) bead group Bf, which according to him is numerous at the beginning of the Viking Age (Bead period I, 790–820 AD). Two of the other beads are roundish-flat dark blue beads, but 13 are orange- coloured and similar to the ones found earlier in grave 352 at Luistari (LUISTARI II 137). One of these is more than twice as long as its diameter, but most of them are cylindrical and thicker than their length. These are the most typical beads of the Merovingian Period in Finland (Cleve 1943 87). The fragmentary finger-ring is of flat-convex section and its diameter is about 18 mm. The knife is straight-backed and 136 mm long. The sickle is most like the sickle from grave 246 (LUISTARI I Plate 66:246:2), but it is only 207 mm long and its blade is 26 mm wide, thus being shorter and



slightly broader. The ornaments date the grave to the Merovingian Period, preferably to its latter half.

Grave 1063

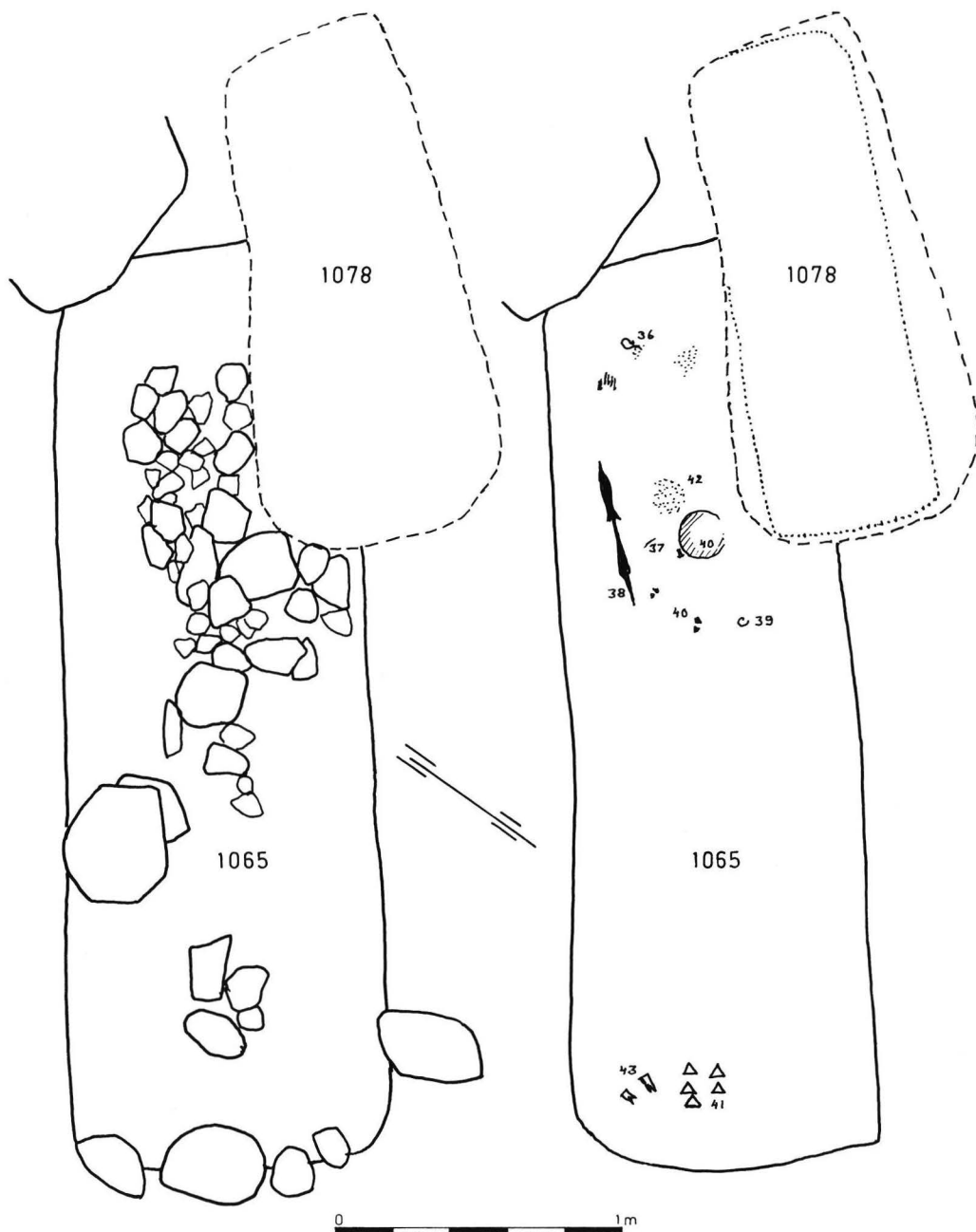
Location 122/97
 Orientation SSW-NNE Pl. 52:1063
 Size 275x110 cm KM 26695:29–32
 Depth 75–80 cm

The grave was situated under the drying barn foundation, where there was about 50 cm of topsoil. The grave-pit was not quite regular in form, because there were four large stones around it. Its ends were rounded and the bottom slanted to the SW. Close to the SW end there was a charcoal patch, 50x30–45 cm in area and 5 cm deep, widening to the W. Near it three small iron rod fragments (26695:29–31) were found, but otherwise there were only some potsherds (:32) in the fill.

Interpretation and dating: The large size of the grave-pit points to a male burial, and the iron rod fragments seem to be from a shepherd's crook pin. Similar pins were very popular as fasteners for men's cloaks during the middle part of the Merovingian Period (LUISTARI II 108), but at Luistari their use continued until the latter half of the 8th century.

Grave 1064

Location 115/99
 Orientation WNW-ESE Pl. 52:1064:1–2
 Size at least 180x50–70 cm KM 26695:33–35
 Depth 75–95 cm



The grave was situated in the old field area to the N of grave 1060, but it was so near the drying barn foundation that its E end was overlain by about 70 cm of topsoil, while W end had hardly 30 cm of topsoil covering it. The easternmost part had probably been destroyed in making the foundation, and graves 1070, 1071 and 1086 had been dug on top of its middle part. The grave-pit broadened to the E end, had rounded corners and a bottom slanting to the W. At the E end, about 5 cm above the bottom, a bronze finger-ring with some bone and textile remains (26695:34) was found. At the W end in the fill there were a small bronze ring with a mount (:33) and a potsherd (:35).

Interpretation and dating: The grave-pit was rather small and the diameter of the finger-ring was 18 mm. It is thus more probable that this was a woman's rather than a man's grave. The finger-ring is of flat-convex section, whereby it may be from the Merovingian Period but also later (see LUISTARI II 122–123).

Grave 1065

Location 118/96

Orientation SW-NE

Size 320x100–105 cm,
bottom 280x100 cm

Depth 90–115 cm

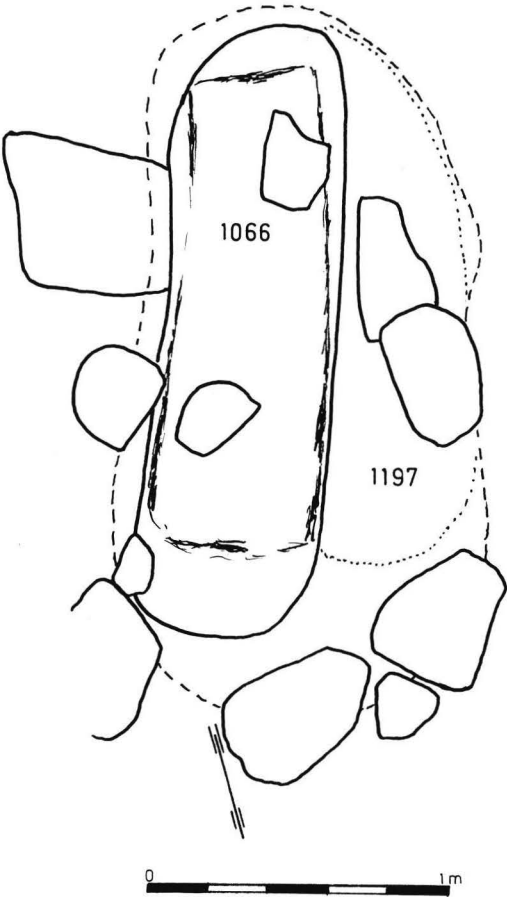
Pl. 53:1065:1–3

KM 26695:36–45

The grave was situated under the drying barn foundation, where there was about 70 cm of topsoil. Its W corner had been destroyed in digging grave 1078. At the NE end of the grave there seemed to have been a stone row, and at the SW end there had been a dense stone setting, which had been damaged in making the later grave and perhaps also the stone foundation of the barn. The grave-pit was quite regular in form with even sides and rounded corners. The bottom was about 10 cm deeper down at the SW than at the NE end. Remains of the skull of the deceased were discovered in two places, the first of which was in the middle of the stone setting at the SW end. Be-

side these remains there was an angon (26695:38), and quite close towards the foot end a curious round rust patch was observed, as if there had been a shield-boss, but there were only some iron fragments (:40) in this location. About 25 cm to the NE from this place a bronze finger-ring (:39) was found. The upper part of a shepherd's crook pin (:36) and smaller parts of the skull were discovered quite close to the SW end of the grave, but the tip fragment of the pin (:37) was found about 70 cm to the NE, near the largest skull fragment and the angon. At the NE end of the pit there were remains of a clay vessel (:41) and teeth of a goat or a sheep (:43). A burnt bone splinter (:44) and a piece of flint (:45) were found in the fill.

Interpretation and dating: The angon indicates a male burial. It is of the later b variant of the so-called Finnish angon (Kivikoski 1973 fig. 550), although its blade is rather long compared with the total length (190 mm to 530 mm). The blade is however only 20 mm broad, and so this angon could not be classified into the group of the large-bladed angons. Together with the angon in grave 378 this artefact forms an intermediary group between the Finnish angons of variant b and the large-bladed angons. The angon dates the grave to phase II of the Merovingian Period (650–750 AD, Cleve 1943 133 and Table 2), and the shepherd's crook pin and the spiral finger-ring of triangular section are in agreement with this dating (LUISTARI II 19–21, 108, 122–123, 127).



Grave 1066

Location 120/92
 Orientation SSW-NNE Pl. 52:1066
 Size 210x65 cm,
 bottom 160x45–55 cm KM 26695:46–50
 Depth 115 cm

The grave was situated under the drying barn foundation, where there was about 50 cm of topsoil. In digging it grave 1197 had been damaged. In the fill of the grave there were a couple of stones, 25–30 cm in diameter. The grave-pit was at the SW end almost rectangular in form, but the NE end was rounded. The bottom was almost even and it slanted slightly to the SW. The coffin, 155x40–55 cm in size, had straight ends and it broadened somewhat to the NE. On the SE wall of the grave-pit its wooden side was observed 55 cm above the bottom. On the other walls the traces, which were most profuse at the NE end, reached to a height of 20–30 cm. The burial was unfurnished, but in the fill potsherds, burnt bone splinters and pieces of flint (26695:46–49) were found.

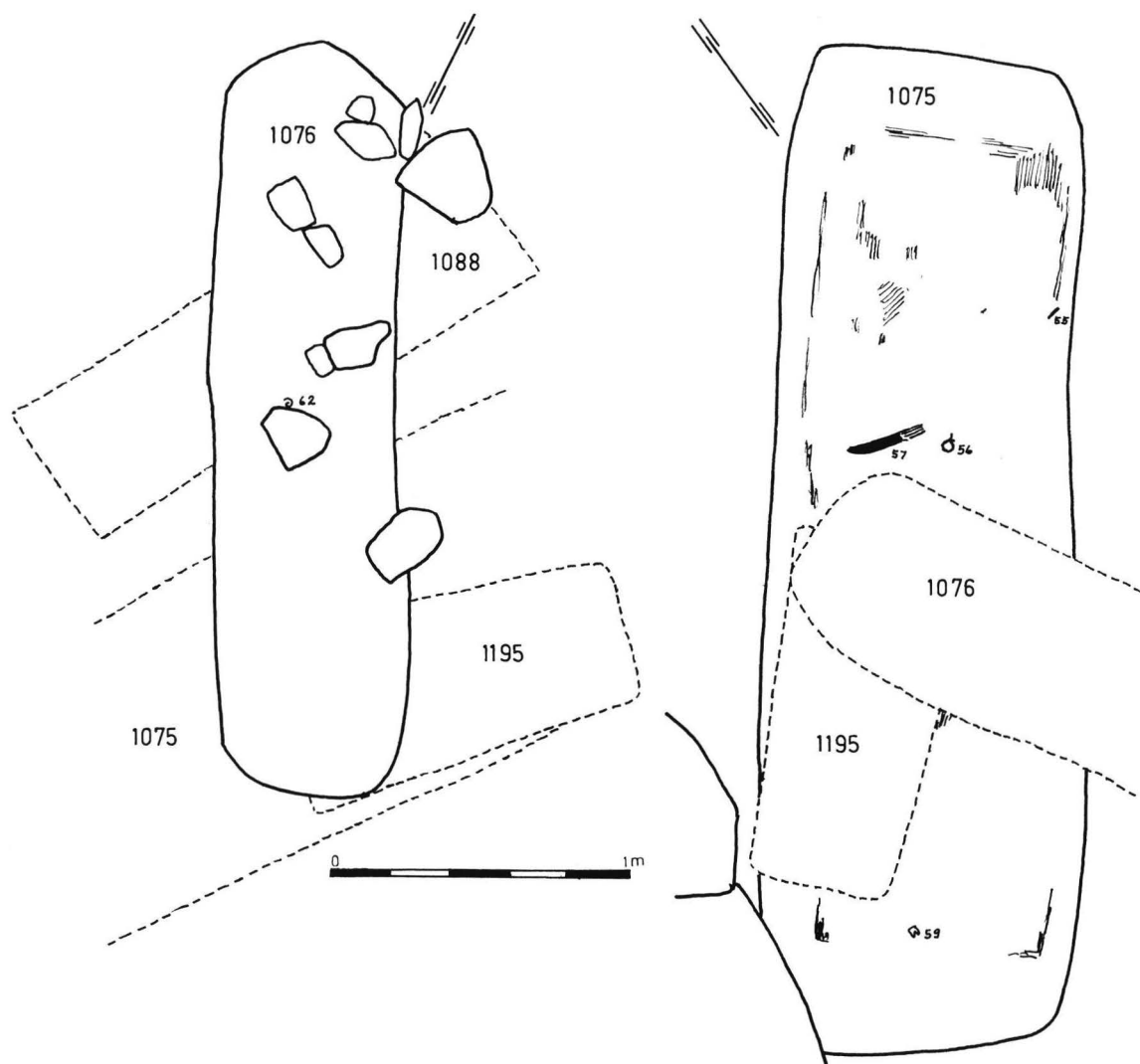
Interpretation and dating: The small size of the coffin indicates a child's or a small woman's burial. The form of the coffin may point to a late date, e.g. at Ristinpelto in Lieto, dated to the Crusade Period, coffins tapering to the foot end were observed (Cleve 1952 167).

Grave 1075

Location 116/92 Grave plan p. 141
 Orientation SW-NE Pl. 54:1075:1–2
 Size 330x100–110 cm KM 26695:55–60
 Depth 110–125 cm

The grave was situated under the drying barn foundation at a place where there had been a stove and a large birch tree. Because of these there was 80 cm of topsoil on top of the grave, and also after the removing of the top layers the grave borders were indistinct because of the birch roots. Graves 1076 and 1195 had also been dug on top of the middle part and the NE end of the grave. The grave-pit broadened slightly to NE, had rounded corners and to the SW slanting bottom. Traces of some wooden construction, 270x80 cm in size, were observed in the pit. These remains reached about 15 cm above the bottom. In the middle of the grave fragments of an iron shepherd's crook pin (26695:55,56) were found about 50 cm from each other. The badly damaged seax (:57) was transversely on the waist of the deceased, of which only slight traces were preserved. At the NE end of the pit there were teeth remains of a goat or a sheep (:59), and a potsherd and a burnt bone splinter were found in the fill.

Interpretation and dating: The seax and the iron shepherd's crook pin suggest a male burial. The seax is so damaged that it is impossible to determine its type, possibly it had been straight-backed. The shepherd's crook pin points to the middle and last part of the Merovingian Period (see LUISTARI II 108).



Grave 1076

Location 116/94
 Orientation NNW-SSE Pl. 52:1076
 Size 250x60 cm KM 26695:61–63
 Depth 130–140 cm

The grave was situated under the drying barn foundation and under the stove remains and the birch roots, so that there was about 80 cm of topsoil. It had been dug to overlay graves 1075, 1088 and 1195. The grave-pit had rounded ends and an even bottom except for one bottom stone. A bronze spiral finger-ring (26695:62) was in the middle of the grave about 15 cm above the bottom. A nail fragment (:61) and a couple of potsherds (:63) were found in the fill.

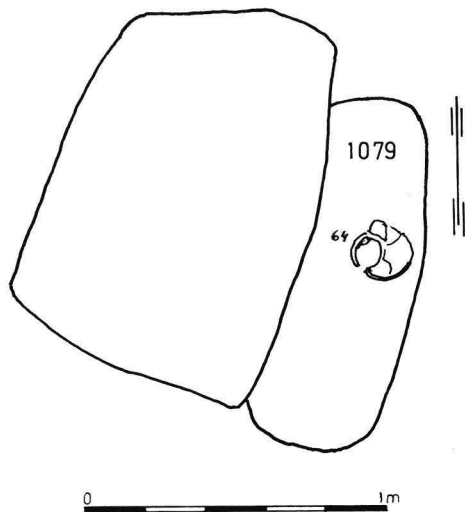
Interpretation and dating: No sex determination. This grave overlay three other graves, of which grave 1075 was from the Merovingian Period; the others were small and unfurnished. It is just possible that they also were from the Merovingian Period, but they may be much later. The finger-ring is 16 mm in diameter and of flat-convex section and is thus not datable. A rod of flat-convex section was used in making finger-rings during the Merovingian Period, but it still occurred in rings of the Final period at Luistari (e.g. graves 36, 354, 404, LUISTARI II 122–123). This grave is probably one of the late ones.

Grave 1079

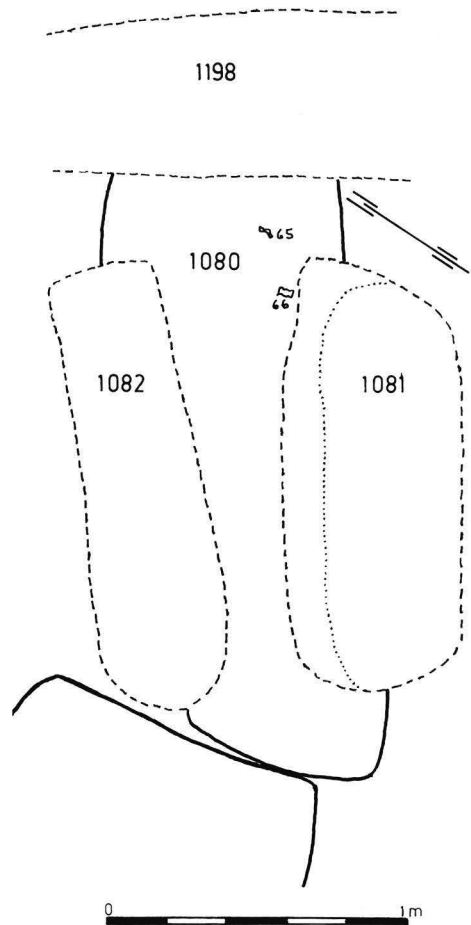
Location 117/94 Grave plan p. 142
 Orientation N-S Pl. 52:1079
 Size about 120x40 cm KM 26695:64
 Depth about 70 cm

The grave was situated under the drying barn foundation, where there was about 50 cm of topsoil. To the W of it was a fixed stone, 130 cm in diameter, and the grave-pit with rounded ends had been dug quite along the E side of the stone. The earth here was hard and full of small stones, and accordingly the bottom of the grave-pit was uneven. In the middle of the pit, on its E side, a clay vessel (26695:64) was standing almost upright, but no other finds or traces of the corpse were observed.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The clay vessel is of group II:2a, which consisted earlier of only two vessels from Köyliö (LUISTARI II 77–78, 80). These were found from graves B7 and B8 at Köyliösaari, dated to the latter half of the 7th century (Cleve 1943 176). The vessel from Luistari is almost similar to the one from grave B7 (c.f. Cleve 1943 Plate 28:151). As grave 1079 was surrounded by Merovingian Period graves, it could well be from the 7th century.



the wall of the drying barn there was an older feature, which disappeared about 10 cm before the bottom of this grave was reached. The burial was unfurnished.



Grave 1080

Location 117/89

Orientation SW-NE

Pl. 53:1080:1-2

Size at least 200x65 cm

KM 26695:65-67

Depth 120-135 cm

The grave was situated under the drying barn foundation and under the birch tree; so there were about 100 cm of mixed layers on top of it. The grave-pit had rounded corners and uneven bottom because of stones. At the SW end of the grave, 20 cm from one another, two small equal-armed brooches (26695:65,66) were found, but nothing of the deceased was preserved. Only a potsherd was found in the fill.

Interpretation and dating: The pair of equal-armed brooches indicates a Merovingian Period female burial. The brooches are of the long and slender variant (42x14 mm in size), which is common in Finland. Cleve (1943 76) has dated similar ones to the 7th century. At Luistari the brooches from graves 28 and 57 are most like these in form (LUISTARI II fig. 24:3,6).

Grave 1095

Location 121/103

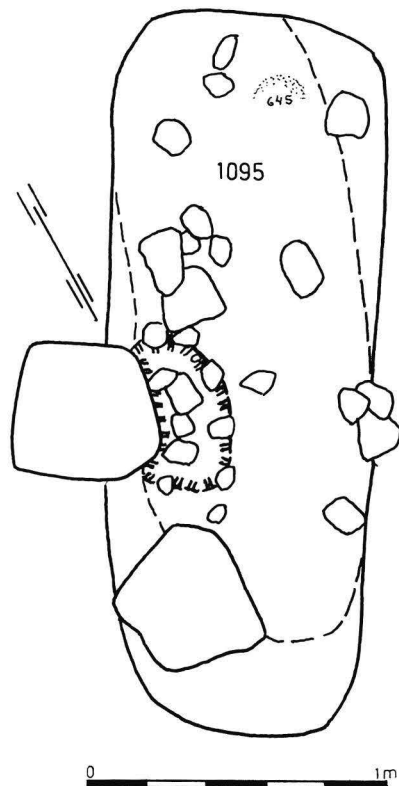
Orientation SSW-NNE

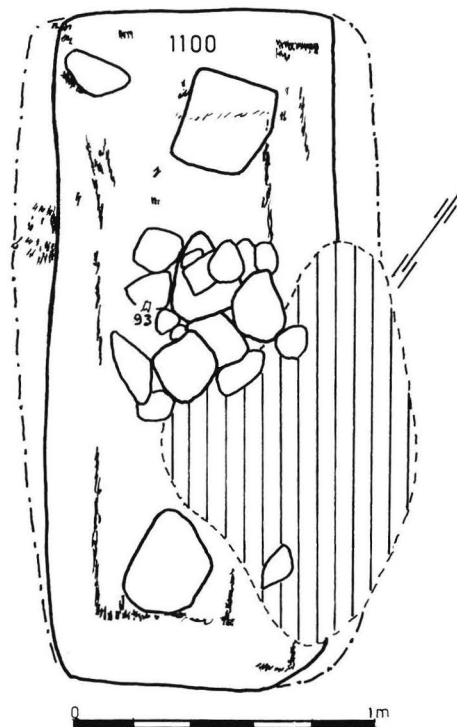
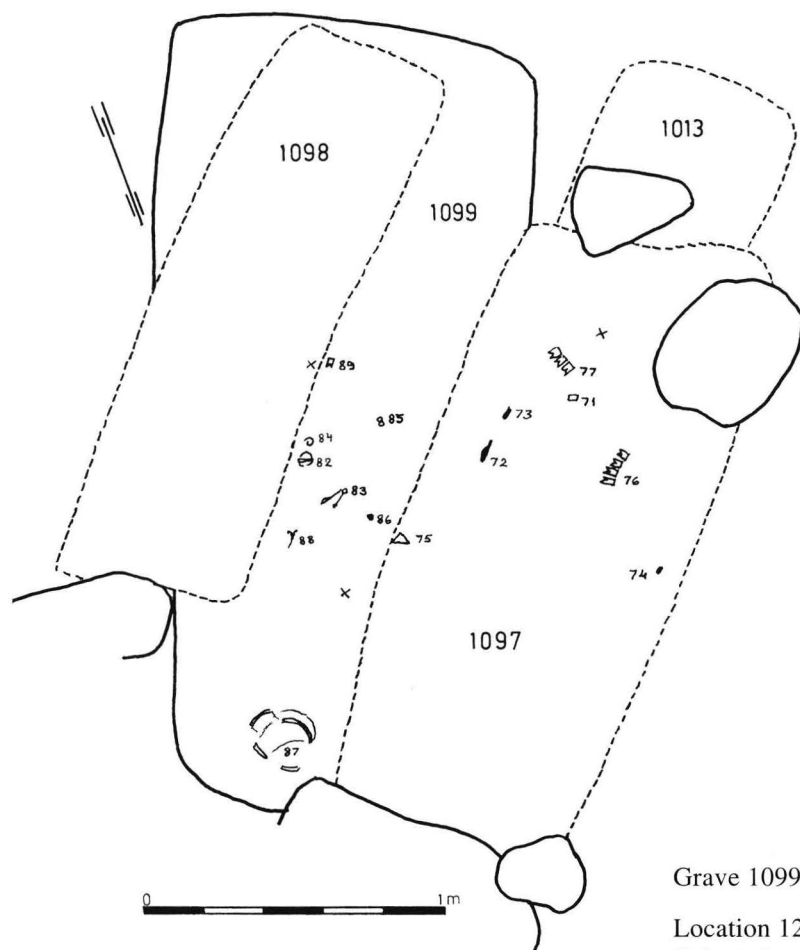
Size 240x85 cm

KM 25480:645

Depth 105 cm

The grave was situated under the drying barn foundation, close by its NW wall, where there was about 20-25 cm of topsoil. Under this the earth was mixed and burnt red, so that the borders of the grave-pit appeared first at a depth of 60 cm. In the middle of the grave-pit there were some stones, and at the SW end traces of a skull (25480:645) were observed. About 30 cm lower down, in the middle of the SE side of the pit, there was a charcoal patch, 50x30 cm in size and 10 cm in depth. The grave-pit was in its upper parts rather even-sided and rounded at the ends, but lower down the NE part was bordered by two large stones, making the size of the bottom 210x30-75 cm (narrowest at the NE end). Between it and





Grave 1099

Location 127/110

Orientation SSW-NNE Pl. 54:1099:1-6

Size at least 260x125 cm KM 26695:82-90

Depth 95-100 cm

Interpretation and dating: No sex determination. Although the burial was unfurnished, the form of the grave-pit is such that the dating to the Merovingian Period seems possible.

Grave 1097

Location 127/111

Orientation SW-NE

Pl. 54:1097:1-2

Size 190x80-90 cm

KM 26695:71-79

Depth 125-135 cm

The grave was situated under the brick floor in the N corner of the drying barn foundation, where the earth had originally been very stony. It was necessary to remove an approximately 85-cm layer of earth and stones before the borders of the grave appeared. Graves 1013 and 1099 had been damaged in the digging of this grave. Large stones bordered its ends, and the sides and the bottom were uneven. In the fill an iron knife (26695:72), fragments of bronze and iron artefacts (:71,73,74), a potsherd (:75), horse teeth (:76,77), burnt bone splinters (:78) and a stone flake (:79) were found, but the burial itself was unfurnished.

Interpretation and dating: No sex determination. This was a late grave, and the finds in the fill are probably from grave 1099.

The grave was under the brick floor of the drying barn, and there were about 85 cm of mixed layers on top of it. Grave 1097 had been dug on top of its NW part and grave 1098 on top of its SE side, so that only a strip of 40 cm of the middle part of the grave and W, S and E corners had been preserved. The grave-pit had rounded corners, and the bottom slanted slightly to the NE. In the middle of the grave on the bottom there was a dark layer and some wood, and on top of it most of the finds were discovered. Quite near the border of grave 1098 human teeth (26695:89) were found. About 25-30 cm to the NE of them a bronze finger-ring (:84) and an iron brooch (:82) were found, and 15 cm to the N of these fragments of some iron artefact (:83) were discovered. A small bronze pin with a triangular head (:88) was found about 25 cm to the NE of the brooch, and quite at the NE end of the grave there was a fragmentary clay vessel (:87). In addition an iron artefact fragment (:86), a couple of beads smelt together (:85) and a burnt vertebra were found. In the middle of the grave there was also some charcoal. Possibly the finds in the fill of grave 1097 were originally in this grave.

Interpretation and dating: This was possibly a woman's grave. The very poorly preserved iron brooch probably had been annular and about 45 mm in diameter. It has a bronze fastening pin, which is quite unusual. The annular brooch has been regarded as a Medieval type

(Kivikoski 1973 figs. 1047–1051), but at least one iron annular brooch (16312:214), ornamented with a bronze band wound around the ring, has been found in the Merovingian Period cemetery at Kylämäki in Laitila (about this cemetery: Kivikoski 1969 45; Schauman-Lönnqvist 1994 32, 1996 132–133). Thus the unusual Luistari brooch could be from that time too. The small ornamental pin with a triangular head is better known from earlier finds, and a similar pin was also found at Luistari overlaying grave 1058. According to Kivikoski (1973 46–47 fig. 244), these small pins with triangular heads came into fashion during the Migration Period but were still in use in the Merovingian Period. At Luistari they seemingly belong to the earliest artefacts in the inhumation graves. The clay vessel is flat-bottomed and belongs to group II:1c, i.e. it represents pottery of an ageless type (LUISTARI II 80). The iron fragments (Pl. 54:1099: 6) could be from a key and a knife, but also from a knife suspended from a rather stout iron rod with rings in each ends. These artefacts are totally corroded.

Grave 1100

Location 97/79	Grave plan p. 143
Orientation NNW-SSE	
Size 220x115 cm	KM 26695:91–93, 179d
Depth 65 cm	

The grave was situated in the W field area of the cemetery, where there was about 30 cm of topsoil. At its both ends there were stone slabs, 30x30x10–15 cm in size. The slab at the SE end was still standing, but the stone at the NW end had fallen down. On top of the middle part of the grave there was a round stone setting, 55–60 cm in diameter and 20–25 cm thick. It had partly been destroyed, when a later pit had been dug in the E corner of the grave. The grave-pit was almost rectangular in form, only the E corner was rounded, and the bottom was rather even. A partly charred wooden construction was found in it, the edges of which appeared about 25–30 cm above the bottom. It was broader at the NW end and it measured ca. 205x65–75 cm. Charcoal was also observed outside the grave-pit in the W. Human teeth fragments (26695:93) were found under the stone setting in the middle of the pit, but otherwise there were only a couple of potsherds and a burnt bone splinter (:91,92) in the fill.

Interpretation and dating: No sex determination. Although there were no metal artefacts in this grave, its construction and location point to the Viking Age. The fact that the teeth fragments were found in the middle of the grave may indicate that the deceased was small, perhaps a child, furnished with only artefacts of perishable material.

Grave 1120

Location 103/61	
Orientation SSW-NNE	Pl. 55:1120
Size 210x75 cm	KM 26695:110,110a
Depth 100 cm	(Grain of rye)

The grave was situated in the W field area of the cemetery, where there was about 35 cm of topsoil. The grave-pit was very regular in form, rounded at the corners and with an even bottom. There were some stones in the fill. The only find in the grave was a piece of iron mail (? 26695:110), which was found in the SW half of the grave quite on the bottom. From the middle of the grave bottom a sample of earth was taken, and in it a grain of rye was found.

Interpretation and dating: No sex determination. The grain of rye was C14-analysed and it gave the date 225+/-30 BP (1661–1793 cal AD, Hela-209) for this late grave.

Grave 1154

Location 110/138	
Orientation NNW-SSE	
Size 155x75 cm	KM 26695:112
Depth 90 cm	

The grave was situated in the N-most part of the cemetery under the old field road bottom, where there was about 60 cm of topsoil. It had been dug at least on top of grave 1159. The grave-pit had rounded corners and even bottom. Only a bovine tooth (26695:112) was found at its SE end.

Interpretation and dating: No sex determination. This was apparently a late grave.

Grave 1165

Location 114/130	
Orientation SW-NE	
Size 220x70 cm	KM 26695:115
Depth 105 cm	

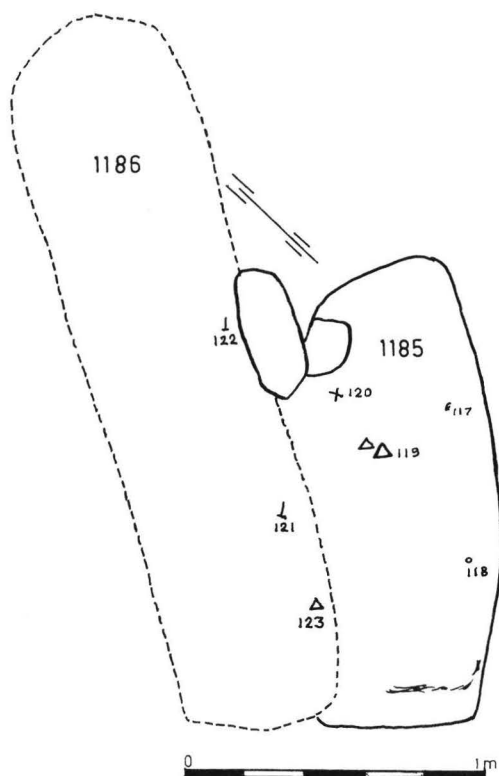
The grave was situated in the N part of the cemetery under the old field road bottom, where there was about 60 cm of topsoil. The grave-pit was regular in form with rounded corners and an even bottom. Only a bovine tooth (26695:115) was found in the NW corner of the grave.

Interpretation and dating: No sex determination. Apparently this was a late grave.

Grave 1185

Location 123/125	
Orientation SSW-NNE	Pl. 55:1185:1–2
Size 150x65 cm	KM 26695:117–120
Depth 35–40 cm	

The grave was situated in the N part of the cemetery under the ditch between the field and the wasteland. Because of that its bottom appeared soon after the removing of the topsoil, 25–30 cm in thickness. It had been damaged also in digging grave 1186. The sides of the grave-pit, rounded at the corners, were curved outwards, and the bottom was even. There were remains of a coffin, at most 130 cm long, at the NE end of the grave. At this same end a blue bead (26695:118) was found. A bronze spiral (:117), potsherds (:119) and a burnt bone splinter (:120) were discovered closer to the SW end. No traces of the deceased were observed.



Interpretation and dating: Judging by the size of the coffin this was a child's grave. The scarce furnishing fits this explanation well. A couple of beads and bronze spirals were usual in children's graves.

Grave 1186

Location 124/125

Orientation SSW-NNE Pl. 55:1186:1-2

Size 240x60 cm

KM 26695:121-123

Depth 35-55 cm

The grave was situated in the N part of the cemetery next to grave 1185, and in digging it the SE side of grave 1185 had been damaged. The grave-pit was of even width, rounded at the ends, and a large stone was on the bottom at the NE end. In the middle of the NW side there were two iron nails (26695:121,122) 60 cm from each other, and at the NE end 20 potsherds (:123) were found. There were no remains of the deceased.

Interpretation and dating: No sex determination. The small depth of the grave-pit indicates that this was not one of the latest graves. The potsherds may be from the older grave 1185, but the nails belonged to this one. It seems that this was one of the graves from the intermediary period between the time of the furnished burial and the purely unfurnished one.

Grave 1197

Location 120/92

Grave plan p. 140

Orientation N-S / S-N

Size 180x80

Depth 95 cm

The grave was situated in the middle part of the cemetery under the drying barn foundation, where there was about 50 cm of topsoil. Its E side had been damaged in the digging of grave 1066. In the middle, on top of the W side, there were two stones, 50x30x36 cm and 50x30x13 cm in size. The grave-pit was ovaloid in form and the bottom was rounded. No finds.

Interpretation and dating: No sex determination. The location of the grave points to the Merovingian Period, but the burial could also be much later, because grave 1066 overlaying it seems to be of late date.

Grave 1200

Location 125/94

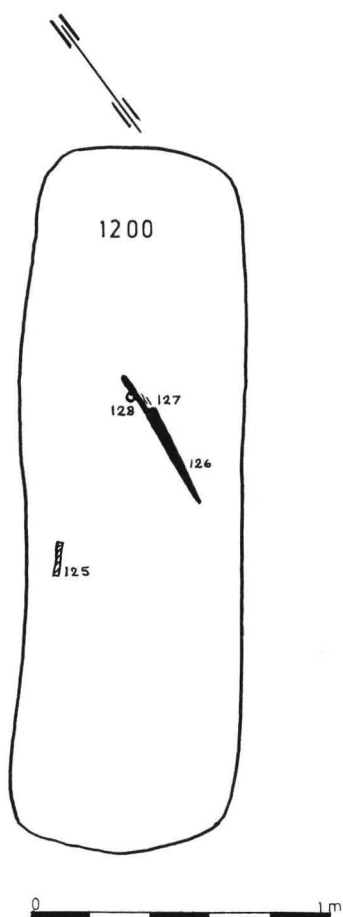
Orientation SSW-NNE Pl. 53:1200:1-3

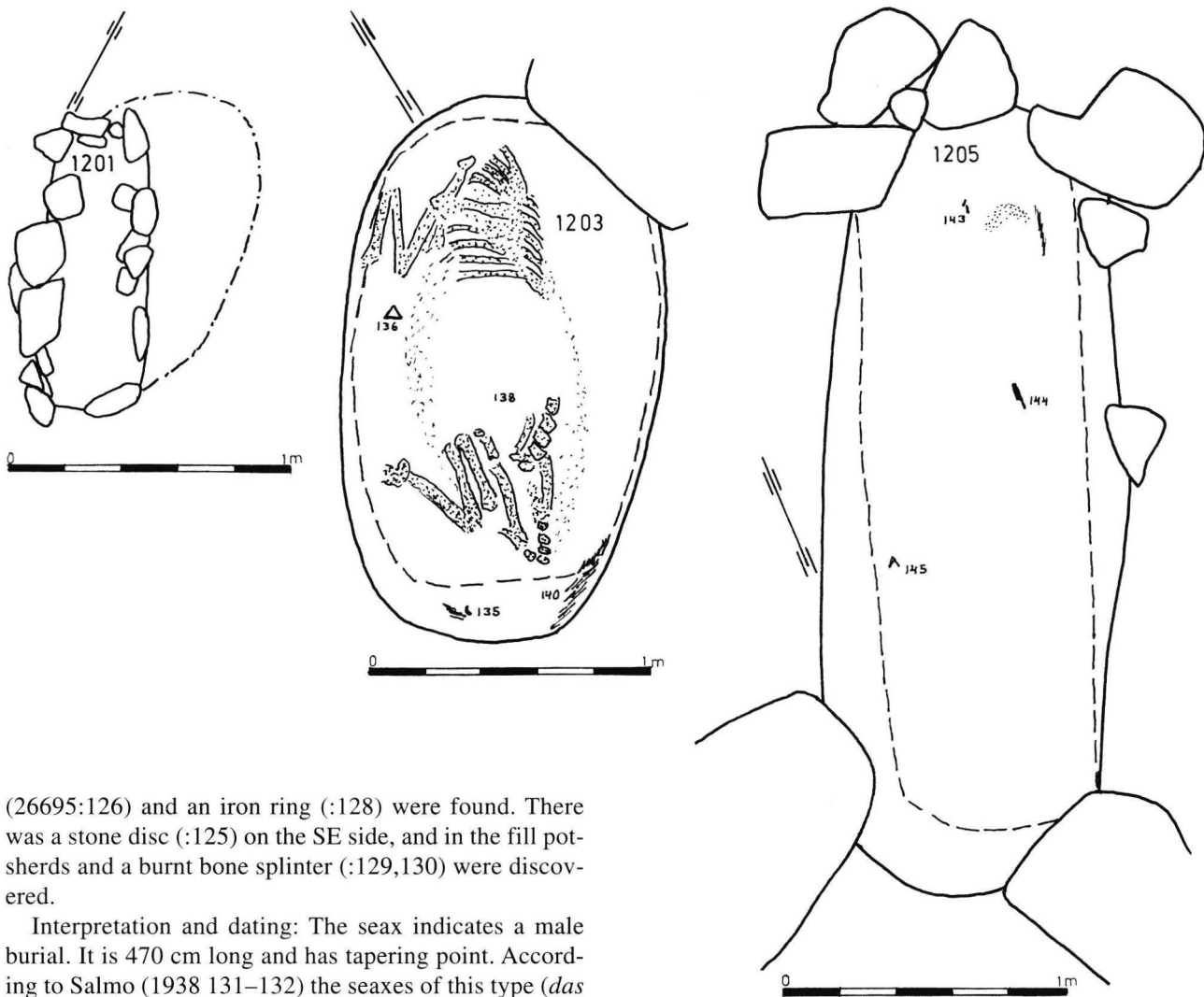
Size 230x70-75 cm

KM 26695:125-130

Depth 60 cm

The grave was situated in the wasteland to the SE of the drying barn foundation, where there was a turf layer of 5-10 cm and 20-25 cm of mixed earth under it. The NW side of the grave was under the ditch filled up with stones. On top of the grave there were some stone slabs, a couple of them standing, so that there could have originally been a stone setting. The grave-pit broadened slightly to the NE, it had rounded corners, and its bottom was uneven because of stones. In the middle of the grave a seax





(26695:126) and an iron ring (:128) were found. There was a stone disc (:125) on the SE side, and in the fill potsherds and a burnt bone splinter (:129,130) were discovered.

Interpretation and dating: The seax indicates a male burial. It is 470 cm long and has tapering point. According to Salmo (1938 131–132) the seaxes of this type (*das schmalspitzige Kampfmesser*) appeared in Finland as early as during the Roman period, but most of them are from the 7th century. The longest mentioned by Salmo (1938 129) was 360 mm in length, whereby the Luistari specimen must be one of the longest ones, if not the longest.

Grave 1201

Location 126/93
Orientation NNW-SSE
Size 120x80 cm
Depth 70 cm
KM 26695:131–132

The grave was situated in the wasteland to the SE of the drying barn foundation, where there was 10–15 cm turf and about 20 cm of mixed earth under it. The grave-pit was oval in form and in the direction N-S, but inside it a frame had been built of small sandstone slabs and other flat stones in the direction NW-SE. This small stone coffin was about 105x40 cm in size and its sides were 20–30 cm high. On top of the grave-pit there was charcoal, and in the fill potsherds and some bone splinters were found.

Interpretation and dating: Judging by the size of the stone frame this was a grave of a child. The grave was unfurnished, the finds were from the fill, but the location of the grave points to the Merovingian Period.

Grave 1203

Location 128/109
Orientation SSW-NNE
Size 195x115 cm
Depth 135–140 cm
Pl. 55:1203
KM 26695:135–140

The grave was situated on the N corner of the drying barn foundation under the brick floor, where there was 95 cm soil to remove. The grave-pit was oval in form with rounded bottom, and it contained remains of a bovine (26695:138). Charcoal, an iron rod fragment (:135), potsherds (:136), burnt bone splinters (:137) and a couple of flint pieces (:139) were found in the fill. Curiously, on the SE side and at the SW end there were wooden remains (:140) as if from a coffin.

Interpretation and dating: This was probably a late pit dug for animal remains. It is, however, possible that there had been an earlier grave, from which the coffin traces originated.

Grave 1205

Location 123/94
Orientation NNE-SSW Pl. 55:1205:1–3
Size 280x90–110 cm,
bottom 250x80 cm KM 26695:142–147
Depth 80 cm

The grave was situated under the drying barn foundation, to the NW of its SE wall, where there was 10–15 cm turf and about 35 cm of mixed earth. On top of its middle part there were two large stones, 100x70x45 cm and 85x40x30 cm in size, but these and other stones in this location hardly had anything to do with a stone setting. The grave-pit was straight-sided with rounded corners, and it grew smaller towards the bottom. At the NE end there were slight traces of wood and decomposed remains of a skull. Close to it two small iron fragments (26695:143) were found. An iron knife (:144) was about 50 cm to the S from these the tip pointing to the NE, and about 70 cm to the SW of it two small flint pieces (:145) were found. In the fill there were potsherds (:146), burnt bone splinters (:147) and a piece of light metal (:142).

Interpretation and dating: The large size of the grave-pit indicates a male burial, but the scarce furnishing gives no support to this hypothesis. The knife is fragmentary and the potsherds are filling earth finds. The dating of the grave on the basis of the artefacts is thus impossible. The location points to the Merovingian Period.

Grave 1233

Location 102/129
Orientation SSW-NNE
Size 185x65 cm KM 27177:12–13
Depth 120 cm

The grave was situated in the field area in the N part of the cemetery. It had been dug partly on top of the large fireplace 7. The grave-pit had rounded corners and an even bottom and its walls curved slightly outwards. At the SW end of the pit, 30 cm above the bottom, the pelvis of a horse (27177:13) was found, but there were no traces of a human corpse.

Interpretation and dating: No sex determination. Both the location, the form of the grave-pit and the unfurnished burial show that this was a late grave.

Grave 1242

Location 95/132
Orientation SSW-NNE Pl. 55:1242
Size 190x45 cm KM 27177:14
Depth 90–95

The grave was situated in the field area in the N part of the cemetery, where there was about 45 cm of topsoil. In digging it a grave, which continued to the unexcavated area, had been damaged. The grave-pit was almost rectangular in form and even-bottomed. In the middle of its NE end about 30 cm above the bottom there were traces of wood, and a penannular brooch (27177:14) was found 20 cm higher up, but there were no finds on the bottom.

Interpretation and dating: Probably a late grave. The penannular brooch is with small faceted end knobs and a ring of almost rectangular section, thus of Salmo's type 13, which is dated to the late Viking Age and the Crusade period (Salmo 1956 63; Kivikoski 1951 53, 1973 fig. 1032). This brooch is only 30 mm in diameter and so it probably is rather late. When it is from the fill, this grave must be still later than its original grave.

Grave 1255

Location 97/123
Orientation SW-NE Pl. 55:1255
Size at least 120x60 cm KM 27177:15
Depth 85 cm

The grave was situated in the old field area in the N end of the cemetery, where there was about 40 cm of soil. Only its NE end was excavated, because the SW end extended beyond the excavation area. The grave-pit seemed ovaloid in form and its bottom was even. At the NE end of the pit about 15 cm above the bottom there was a piece of flint (27177:15), but no other finds were observed.

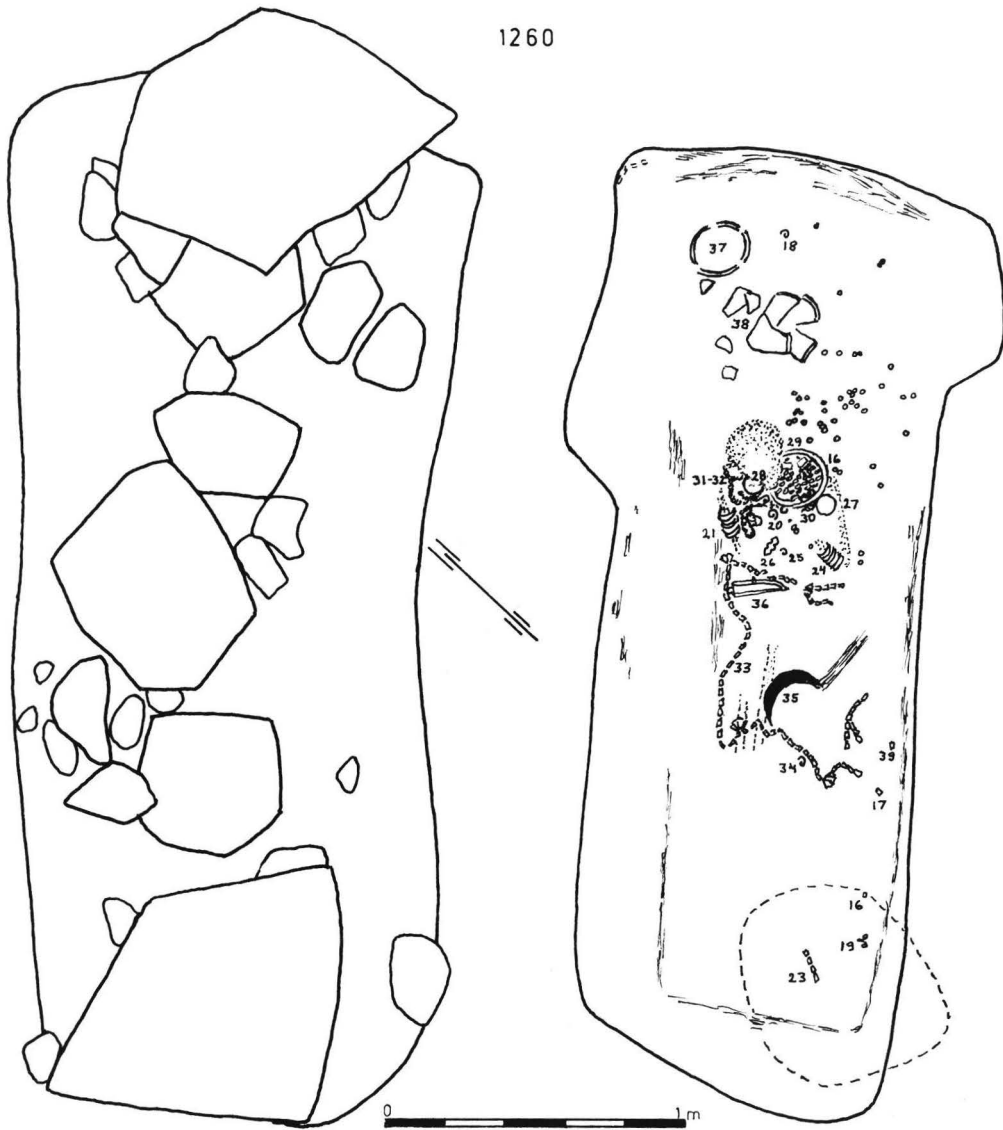
Interpretation and dating: Probably a late grave.

Grave 1260

Location 116/31 Grave plans p. 148
Orientation SW-NE Pl.56:1260:1–9, 57:1260: 1–7, 58:1260:1–2,
Size 340x135–145 cm 59:1260:1–3, 60:1290
Depth 100–115 cm KM 27177:16–41

The grave was situated in the S part of the cemetery close to grave 118 excavated in 1970. There was 60–70 cm of topsoil, but a part of it had been piled at the place after the year 1970. On top of the grave were four large stones and some smaller ones laid in a lengthwise row. The largest stones, 120 cm in diameter, were at the ends. The grave-pit had rounded corners and it grew slightly smaller towards the bottom, which was still over 3 m long and 1 m wide. At the SW end there had been an older patch, on top of which this grave had been dug. In the fill there was charcoal, and the SW end of the wooden grave-chamber was charred. Because of that it was best preserved; otherwise there were only slight traces of the 280 cm long and 75–80 cm wide wooden construction. At best these traces extended only 25 cm above the bottom. Although the grave had been preserved under the thick stone setting, moles had played havoc at the SW end; one passage went through the neck ring, the other close by a clay vessel. At the N corner of the grave there may have been at some stage the nest of a mole, in which a bead (27177:16a), a finger-ring(:19) and a piece of an apron border (:23) had been transported by the moles. The bottom of this nest reached about 35 cm lower down than the grave-pit, and it had been dug under the wooden constructions or at least under their upper parts, because the wooden edges were observed above the nest-pit.

The deceased lay half on its right side the head bent towards the right shoulder. The right arm was bent up from the elbow, so that the hand was against the right



cheek, and the finger-ring (:20) was under the chin. Because of the spiral arm ring (:21) and the other ornaments a lot of bones had been preserved. The left arm was bent so that the hand with its finger-ring (:25) rested on the chest. Bones of the left lower arm had also been preserved because of a spiral arm ring (:24). Of the skull only the lower chin bone on top of the neck ring (:29) was undamaged. Of the lower limbs there were traces only about 60 cm from the waist to the foot end, because the apron (:33) was not straight but in folds, and the bones had been preserved only in connection with its borders. The bronze dividers and most of the beads (:16) were found to the left of the skull inside the neck ring, but a part of the beads had been scattered around by the moles. There were however so much of the neck ornament in position that the construction of the arrangement with six bead bands became clear, i.e. the five blue rows and the sixth yellow bead row under one of the dividers were *in situ*, likewise the large beads in the middle of the uppermost band.

The three bronze chains (:32), which the spiral-ended chain holders (:30,31) joined to the round brooches (:27,28), were found in the right armpit and along the right side. The chains were partly broken and there was large amount of decomposed textiles under them. On the right

side of the chest there was an equal-armed brooch (:26) lying upside down. Transversely at the waist, above the spiral borders of the apron there was a knife in a bronze-plated sheath (:36). Close to the knees above the apron hem a sickle (:35) was found with some of its wooden handle preserved. At the head end there were two clay vessels (:37,38), and near these a finger-ring (:18) and some beads, possibly also transported by the moles. One more finger-ring (:34) was found near the left lower corner of the apron. In the fill there were potsherds and some burnt bone splinters (:40,41). The grave bottom was quite even except from the pit in the N corner.

Interpretation and dating: The set of ornaments shows this to be a woman's grave. The two shoulder brooches are so-called Finnish two-animal round brooches, which have been dated to the period (800)825–950 AD (LUISTARI II 98–100). They are of good craftsmanship with a diameter of about 55 mm. The 70 mm long equal-armed brooch is decorated with deep grooves and 13 pegs. It belongs to Ella Kivikoski's type 6 of the Viking Age equal-armed brooches, which she has dated to the 9th and 10th centuries (Kivikoski 1938 18–20, 1973 93 fig. 678). A brooch of the same type was previously found in grave 291 at Luistari (LUISTARI II 88). The chain holders are

of massive bronze, spiral-ended and ornamented with transverse notches on all upper edges. I have not seen any exactly similar specimens, but they mostly resemble a chain-holder found at Kalmumäki in Kalanti (KM 8242:81), in which there are also only two loops in the lower part. According to Marianne Schauman (1971 29–32) the cast chain-holders with spiral ends came into use at the beginning of the 10th century, first in western Finland. The chains are made of spiral rings of three turns and they have been joined to the chain-holders crosswise. Similar chains have been found earlier in four graves at Luistari, and at least in seven other graves in Eura. The type seems to have been most commonly in use in Finland in the 10th century and at the beginning of the 11th century (Schauman 1971 25–26; LUISTARI II 114).

The bead band consists of 259 glass beads, of which 178 are dark blue single segmented beads, 37 doubled segmented dark blue beads, six three-part blue beads, 17 round yellow beads, seven doubled yellow beads, four silver-foil beads and ten large multicoloured beads. Of the last-mentioned ones six have blue base colour, the others are white, green, red, and yellow, one of each. Some of the figures on the beads are quite shapeless, the others have round spots with a ring of other colour around or radiating eye-figures in black-red or in black-white with a green, black or blue spot in the middle. This type of multicoloured beads was earlier lacking at Luistari (see LUISTARI II 148), but also in this grave the beads are partly different from the ones in Köyliö. According to Cleve (1978 131–132) there were no blue or white beads of this type (Cleve's group 5) at Köyliö.

The beads were threaded into six strings with the largest beads in the middle, and they were joined to the necklace spacers of cast bronze, size about 40x15 mm. Behind the spacers there are lists with six holes, through which the strings were drawn. After that they were threaded through four parallel spirals, then through two and finally through one spiral. Probably the string ends were then twisted together and the neck ornament was tied round the neck with these bands. The necklace spacers are formed of two rows of seven roundels with a ringed dot in the middle of each roundel. The previously found necklace spacers had only one row of roundels, but the idea is just the same (Kivikoski 1973 106 fig. 773; LUISTARI II 148 fig. 37:4).

The neck ring is of a common type with loop ends. It is only the second one at Luistari, but over a hundred similar rings have been found in Finland. They have been dated mostly to the Viking Age (Kivikoski 1973 99–100 fig. 727). Spiral bracelets are also quite common in Finland, and also at Luistari they have been found in about ten graves (LUISTARI II 121). The bracelets in this grave are, however, original, because one end of each is richly ornamented. They have seven turns and are slightly triangular in section. The decoration consists of triangular and circular stamps and of crossing lines. I have not seen any specimens like these before in Finland, but in the Baltic countries also spiral bracelets were richly decorated (see e.g. Latvijas PSRA Pl. 62:9, 66:31).

Five finger-rings were found in this grave. Two of them

(:18,34) were simple spiral rings with 2,5 turns and they are 15 and 10 mm in diameter. Both are of triangular section, group I:3, thus pointing to the earlier part of the Viking Age. Two other ones are with middle shield, one of them (:20) is ornamented with double lines, the other (:25) with triangular and circular stamps. These belong to group II:1c, which was also dated to the earlier part of the Viking Age. The fifth finger-ring (:19) has double spiral ends, group VI, and it is the eighth from the Luistari graves. This is a type which dates mainly from the middle of the Viking Age or the 10th century (LUISTARI II 125–127).

The knife found at the waist of the deceased was in a large bronze-plated sheath. This resembles the broad knife-sheaths of the late Viking Age (Kivikoski 1973 126 fig. 968), but it is more slender and more tapering towards the point, and the bronze plate of the front side is ornamented only with groups of lines imitating basketry. Possibly we have here the prototype of the Finnish sheaths of this type, because this object must be dated to the 10th century (c.f. LUISTARI II 48–49). The knife is 170 mm in length, of which the handle is about 100 mm, and the blade is 17 mm wide.

The sickle blade is 294 mm long and 30 mm wide and it forms a strong angle. With its wide tang part it resembles most the sickle found in grave 155 and dated to the beginning of the Viking Age (LUISTARI II 55–56, 184).

One of the clay vessels has a curved bottom and it is of group I:1c. It is 85 mm in height and its diameter is about 160 mm; the largest part is ornamented with four cord impressions. Inside it were a corn grain and a small (55 mm long) iron awl with wooden handle. The other clay vessel was flat-bottomed. Its height was probably about 130 mm, the bottom diameter may have been 130 mm, and the diameter of the mouth was 150–160 mm. The ornamentation is uncommon, five slender wavy lines about 2 cm under the mouth and seven horizontal grooves under these. The grooves are narrower than the finger-grooves mentioned in connection with some vessels at Luistari (LUISTARI II 76), and they were probably drawn with a wooden stick.

The dating of the ornaments in grave 1260 points to the 9th and 10th centuries. The bracelets, the chain holders and the finger-ring with double spiral ends seem to be preferably from the 10th century. According to Callmer (1977 89), the yellow segmented beads belong to the latter half of the 10th century. Multicoloured beads similar to the ones in grave 1260 occur in the Kuusela find at Pertunmaa dated to the late 10th century or c. 1000 AD (Lehtosalo-Hilander 1988a 169 and fig. p. 166).

A C14 analysis was made of two samples from this grave. The first had been taken from the end part of the wooden grave chamber, the other was the corn grain from inside the better preserved clay vessel. The results are as follows:

Hel – 3936 wood from the chamber
1200+/-80 BP 738–933 cal AD
Hela- 210 corn grain
1270+/-55 BP 666–882 cal AD

According to these analyses the grave would more probably date from the 9th than the 10th century.

Grave 1264

Location 116/26
Orientation SSW-NNE
Size 170x45 cm KM 27177:42
Depth 50–55 cm

The grave was situated in the SW part of the cemetery, where there was about 30 cm of topsoil. In digging it graves 1270, 1284, 1285 and 1286 had been damaged. The grave-pit had rounded corners and an even bottom. At its NE end a blue bead (27177:42) was found, but the burial was unfurnished.

Interpretation and dating: No sex determination. This grave overlay four other graves, and therefore it must be late. The bead was originally in one of the older graves.

Grave 1265

Location 116/28
Orientation WSW-ENE Pl. 55:1265:1–3
Size 270x95 cm KM 27177:43–44
Depth 60 cm

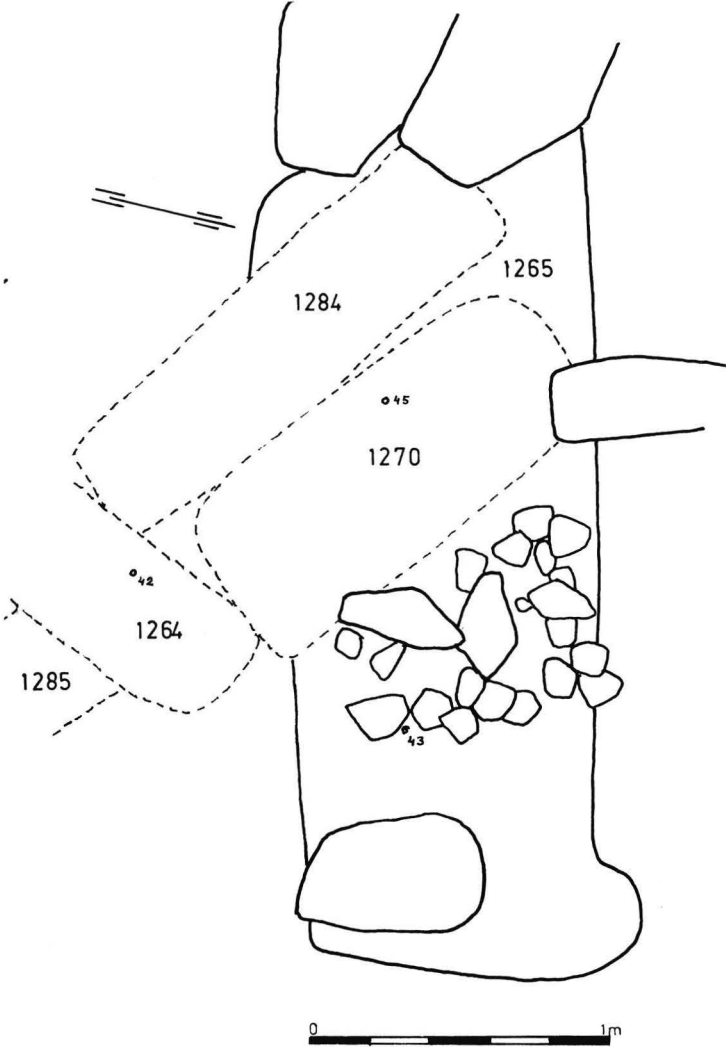
The grave was situated on the waste land in the S part of the cemetery where there was about 30 cm of topsoil. Its SW end had been destroyed in digging graves 1270 and 1284. At its both ends was a large stone, but the one at the SW end was fixed. In the middle of the grave there also seems to have been a stone setting, but it was badly damaged. The grave-pit was even-sided, but in its N corner there was a rounded protrusion. The bottom was even, but at the E end there was a fixed stone. Only a fragment of an apron corner ornament (27177:43) and a potsherd(:44) were found on the bottom of the grave, but possibly the beads (:42,45) found in the fills of the later graves were originally from this grave.

Interpretation and dating: This was probably a female burial from the late Viking Age. The grave was badly disturbed and the finds were scattered, but the size and the form of the grave-pit point to the Viking Age. The bead from grave 1264 is blue and ribbed, size 11x7 mm, and the bead from grave 1270 has blue-white-red-yellow flower-like eyes on a basic hue of blue, size 11x12 mm. Both these types of beads are from a rather late period of the Viking Age (LUISTARI II 137, 139).

Grave 1273

Location 113/24 Grave plan p. 151
Orientation S-N (N-S)
Size 230x60 cm KM 27177:47–49
Depth 90–95 cm

The grave was situated on the wasteland area in the S part of the cemetery, where there was about 40 cm of topsoil. In digging it the W corner of grave 1275 had been damaged, and grave 1271 slightly overlay its W side. At the beginning the grave-pit appeared to be curved, but lower down it was almost rectangular in form. The bottom slanted to the S. On top of the middle part of the grave there was a stone setting, 130x50 cm in size and about 45 in depth. It had been made of stones of differ-



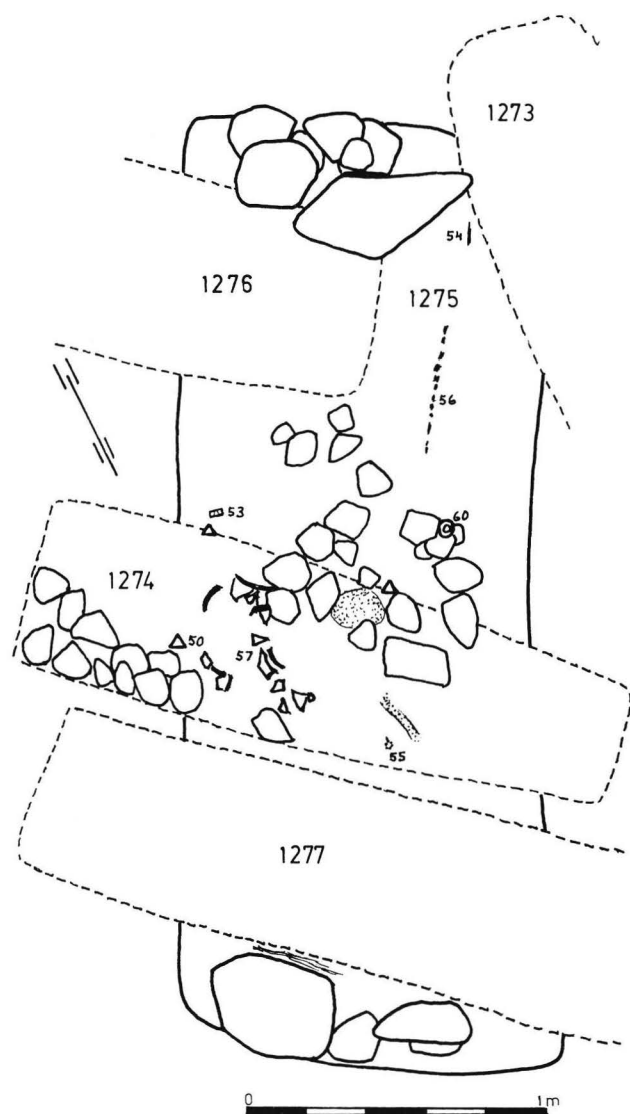
ing sizes, the biggest of which were about 30 cm in diameter. At the N end on the bottom there were a couple of decomposed upper arm bones of a goat or a sheep (27177:48), but otherwise only a burnt clay piece and a burnt bone splinter (:47,49) were found in the fill.

Interpretation and dating: No sex determination, although the goat or sheep bones may indicate a woman (see LUISTARI III 30). The grave was on top of grave 1275 from the Viking Age, so it is from that period at the earliest. It was unfurnished, but it had a stone setting and one later grave overlaying it, so probably it is one of the unfurnished graves made just after the abandoning of the custom of furnished burial.

Grave 1274

Location 114/24 Grave plan p. 151
Orientation NW-SE
Size 205x45–55 cm KM 27177:50–52
Depth 50–60 cm

The grave was situated on the wasteland in the S part of the cemetery, where there was about 40 cm of topsoil. The grave-pit was almost rectangular in form, and at its SE end there was along the NE side a row of stones, 10–15 cm in diameter. In the middle of the grave there were also some scattered stones. The pit had been dug transversally on top of grave 1275, and it is probable that the



skull and the fragments of a clay vessel (27177:57) were from the earlier grave, which was about 15 cm deeper than this one. A couple of potsherds (:50,51) and a burnt clay piece were found on top of the grave-pit. At the ends, which were outside the area of grave 1275, the bottom of the grave was quite even.

Interpretation and dating: No sex determination. This grave was later than grave 1275 from the Viking Age, but it was so shallow that it hardly belongs to the latest graves of the cemetery (see LUISTARI I 25).

Grave 1275

Location 114/24

Orientation SSW-NNE

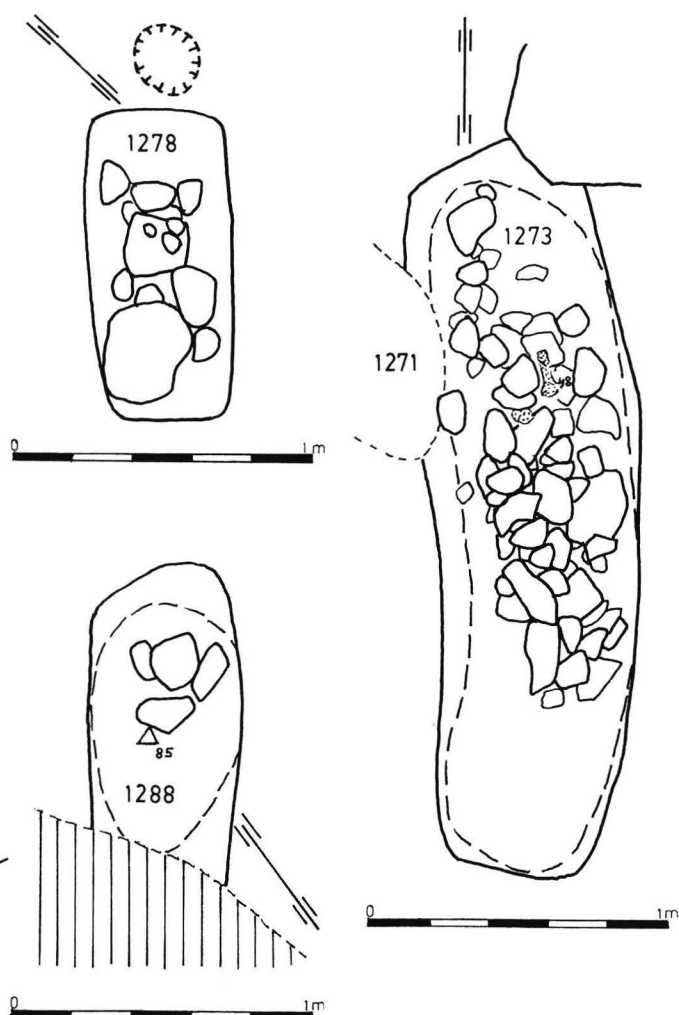
Size 310x120 cm

Depth 65–75 cm

Pl. 55:1275:1–4

KM 27177:53–60

The grave was situated on the waste land at the S end of the cemetery, where there was about 40 cm of topsoil. The grave-pit had rounded corners and even bottom, and only at the NE end a slight line of decomposed wood was observed. At both ends of the grave-pit there were large stones, and possibly also in the middle of the pit there had been a group of stones, scattered in the digging of graves 1273, 1274, 1276 and 1277. The three last-men-



tioned ones had been dug transversely on top of grave 1275, and although they were shallower, grave 1275 had badly been damaged in digging them. Probably the skull found in the middle of the grave-pit, on the border of this and grave 1274, was not at its original place. Apart from the skull there were only slight traces of a long tube-like bone at the NE end of the pit. The remains of a clay vessel (27177:57) were found partly on the bottom of this grave, partly in the fill of grave 1274. Near the potsherds there was a fragmentary pendant whetstone (:53). Quite at the SW end an iron rod (:54) was found, and to the NE of it there was on the bottom a rusted trace from some long iron artefact, of which only small iron pieces (:56) could be collected. Probably there had been some large iron artefact, which had been taken away long ago. In addition of these finds only a spiral ornament fragment (:55) was discovered on the bottom near the above-mentioned long bone. Burnt clay and four chips of burnt bone (:58–60) were collected in the fill.

Interpretation and dating: The size of the grave-pit is typical of a Viking Age male burial, but otherwise there is only the fragmentary spiral ornament (:55), probably the end of a garter, and the pendant whetstone fragment (:53, LUISTARI II 166–167 Table 13:2, 62), which point to a man. The iron rod, possibly a pin fragment, is quite rusted, and there were only tiny fragments of a large iron artefact. The clay vessel is undecorated, but it is of group

I:2b. Most of the Luistari graves with vessels of this group have been dated to the period 880–950 AD, but there are a couple of graves (51, 297) from the earlier period and one (15) from about the year 1000 AD (LUISTARI II 184–187). The location of the grave points more readily to a late than an early date.

Grave 1278

Location 108/22 Grave plan p. 151
 Orientation SW-NE
 Size 105x45, bottom 70x40 cm
 Depth 95 cm

The grave was situated in the S part of the cemetery, to the SW of grave 1283, where there was about 60 cm topsoil. The grave-pit was almost rectangular in form, even-bottomed and full of stones. No finds.

Interpretation and dating: Judging by the size of the grave-pit this was the grave of a small child. Probably it dates from the 10th century like the woman's grave 1283 near it.

Grave 1280

Location 114/21
 Orientation SSW-NNE Pl.55:1280
 Size 260x100 cm,
 bottom 160x95 cm KM 27177:64–65
 Depth 65 cm

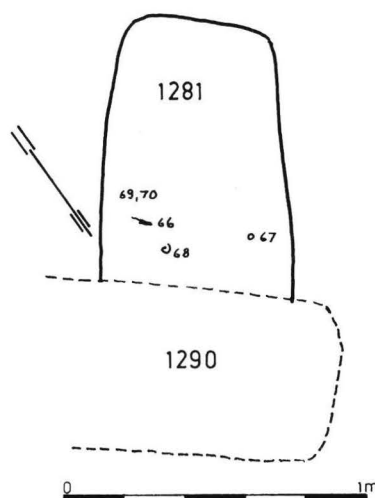
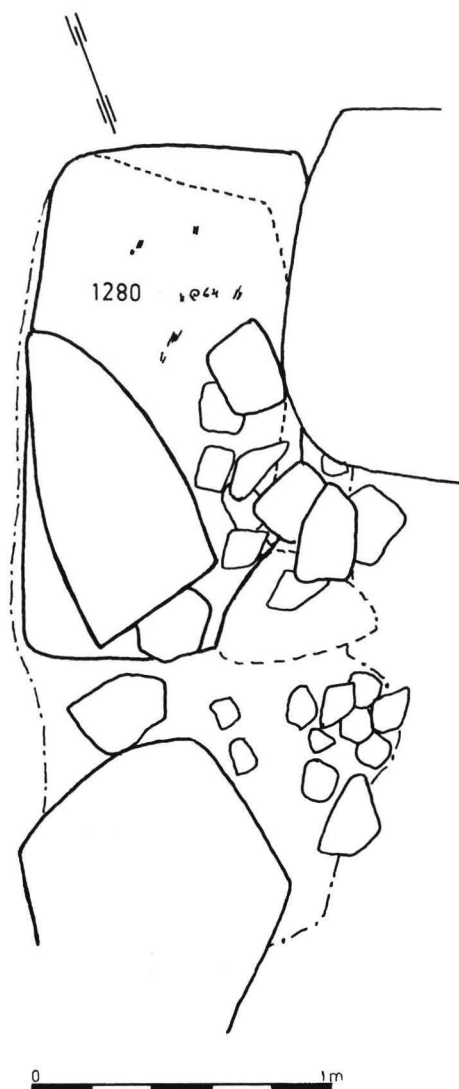
The grave was situated on the wasteland area in the S part of the cemetery, where there was about 40 cm of topsoil. At the beginning the grave-pit seemed to be rather large, but it grew smaller before long. Its NE end was covered by a large stone over a metre long and several smaller stones. The bottom was even. At the SW end a spiral finger-ring (27177:64) was found, and there were some potsherds (:65) and a great deal of charcoal in the fill. No bones were preserved.

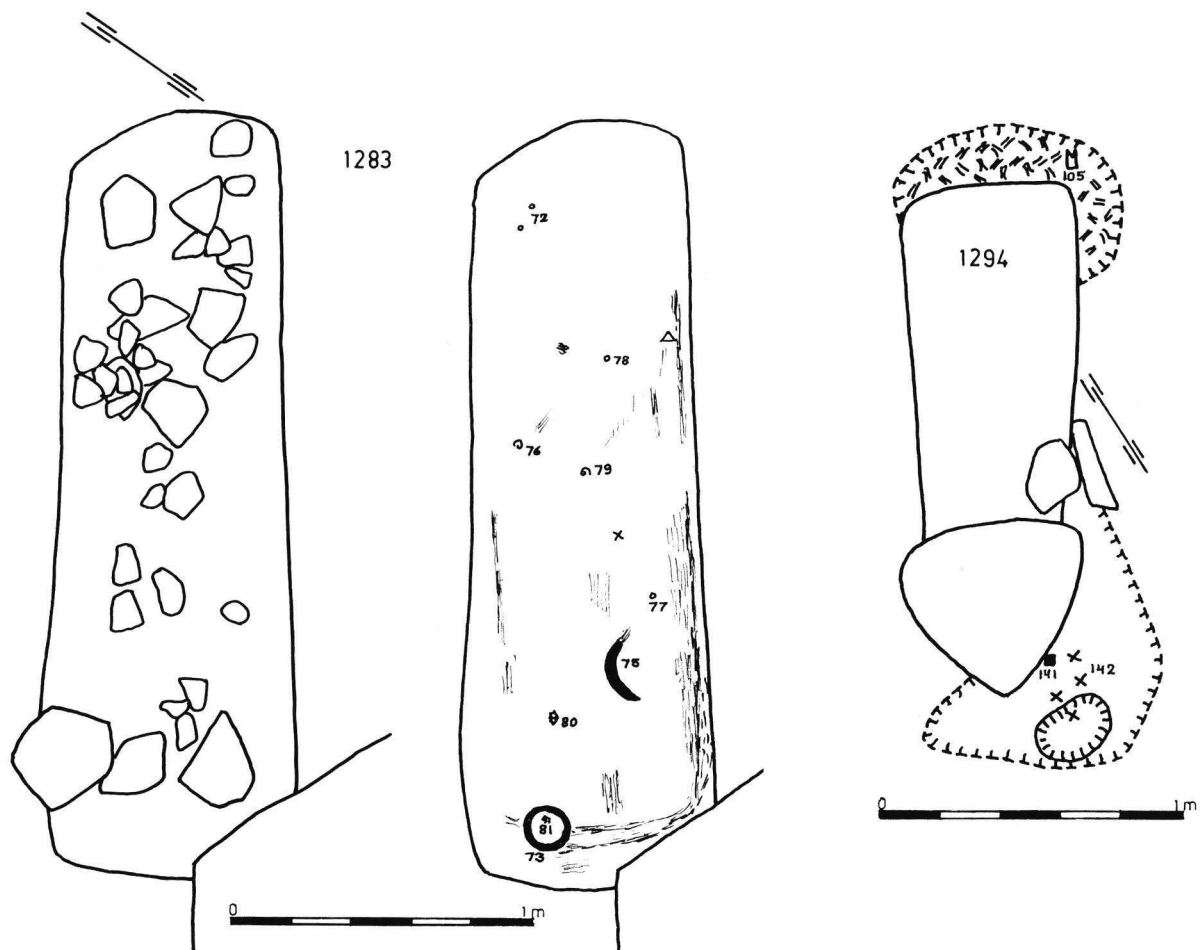
Interpretation and dating: The finger-ring is only 15 mm in diameter, which means that the deceased must have been a child or a very fragile woman. The ring is of flat-convex section and accordingly the dating depends on the location of the grave.

Grave 1281

Location 113/18
 Orientation SW-NE Pl. 55:1281:1–5
 Size at least 90x50–60 cm KM 27177:66–71
 Depth about 60 cm

The grave was situated in the S part of the cemetery, where there was about 35–40 cm of topsoil. Its NE end had been destroyed in digging grave 1290. The grave-pit had rounded corners and even bottom. All the finds were discovered near the border of grave 1290, so they probably had been in the middle of the grave. The knife (27177:66) was found on the SE side of the grave-pit, the finger-ring (:68) was closer to the middle, the white bead (:67) was close to the NW side. In sifting the earth from the area to the NE of the knife a blue bead (:70), a





bronze ring and a piece of a chain (:69) were discovered. Only one potsherd (:71) was found in the fill.

Interpretation and dating: This was probably a child's grave. The finger-ring is 15 mm in diameter and of even width and flat section. It thus belongs to group IV, which may indicate the late Viking Age (LUISTARI II 127). The beads are singly made twisted beads and not datable. The fragment of the bronze chain is made of rod-like joints. Similar joints, only a little longer, were found in grave 529 dated to the beginning of the 11th century (see above). Therefore, it seems that this grave may be from the late 10th or the early 11th century.

Grave 1283

Location 110/23
Orientation SW-NE Pl. 56:1283:1-10
Size 250x75-80 cm,
bottom 195x80 cm KM 27177:72-84
Depth 75-80 cm

The grave was situated on the waste land area in the S part of the cemetery, where there was 40-60 cm of topsoil. All over the top of the grave-pit there was a scattered stone setting. The corners of the grave were rounded and the bottom was even except for the SW end, where there were a couple of fixed stones; so the burial was at the NE end. At this end there were traces of a wooden construction, about 180-185 cm in length and 65 cm in width. The traces were distinct only on the NW side of the NE end, and here also they reached only to the height

of 15 cm from the bottom. All the bones of the deceased had disappeared, but on the basis of the location of the artefacts this had lain the head in the SW. At this end of the grave three blue beads (27177:72,73) were found, and 40-50 cm from these to the NE there were two bronze finger-rings (:76,79). There was a finger bone inside one of these, discovered about 25 cm more to the N than the other one. At the NE end of the grave a sickle (:75), a clay vessel (:73) and fragments of the corner ornaments of an apron (:80,81) were discovered. Some spirals (:74) were also found in sifting sand, and near the sickle there was a bead (:77). Potsherds, burnt bone splinters, charcoal and a stone flake (:82-84) were found in the fill.

Interpretation and dating: On the basis of the apron ornaments and the beads this was a woman's grave. The beads are singly made twisted beads, the finger-rings are spiral rings of group I:2; these artefacts are not datable. The cord-ornamented clay vessel with rounded bottom, belonging to group I:1c may date the grave to the 10th century (LUISTARI II 79).

Grave 1288

Location 119/32 Grave plan p. 151
Orientation SW-NE
Size at least 80x50 cm KM 27177:85
Depth about 60 cm

This grave was situated in the S part of the cemetery, where there was about 35 cm of topsoil. Some part of its NE end had been destroyed in digging the drainage ditch in 1969. The grave-

pit had rounded corners and it was almost oval on the bottom. On top of it there was a small pile of stones. The bottom was even. Only potsherds (:85) were found, but two of them were from the bottom part, and it is possible that the vessel had been damaged when the drainage ditch was dug.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. The dating depends on the location of the grave.

Grave 1294

Location 114/16 Grave plan p. 153
Orientation SSW-NNE
Size 110x55 KM 27177:93
Depth 70 cm

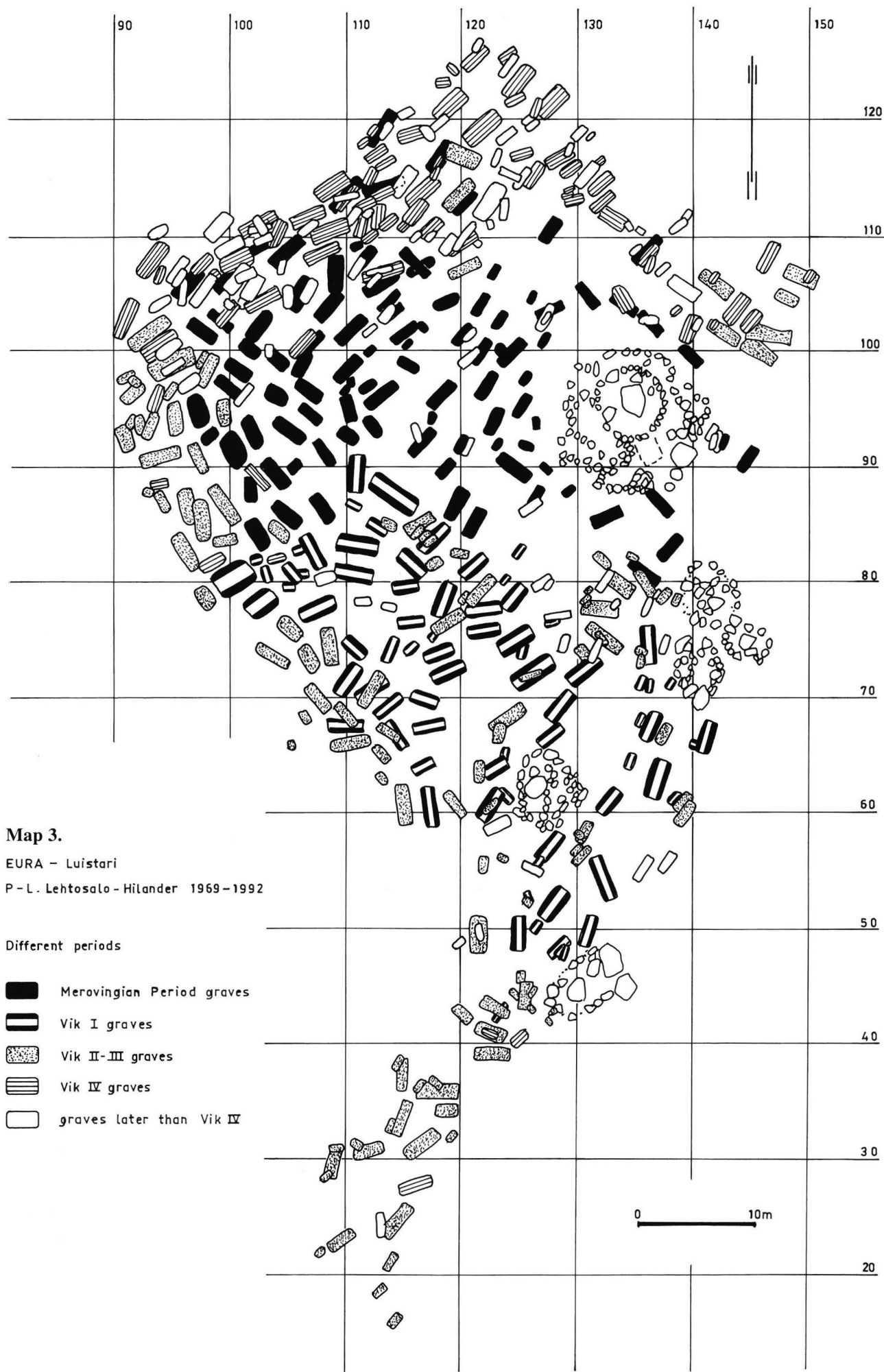
The grave was situated in the southernmost corner of the

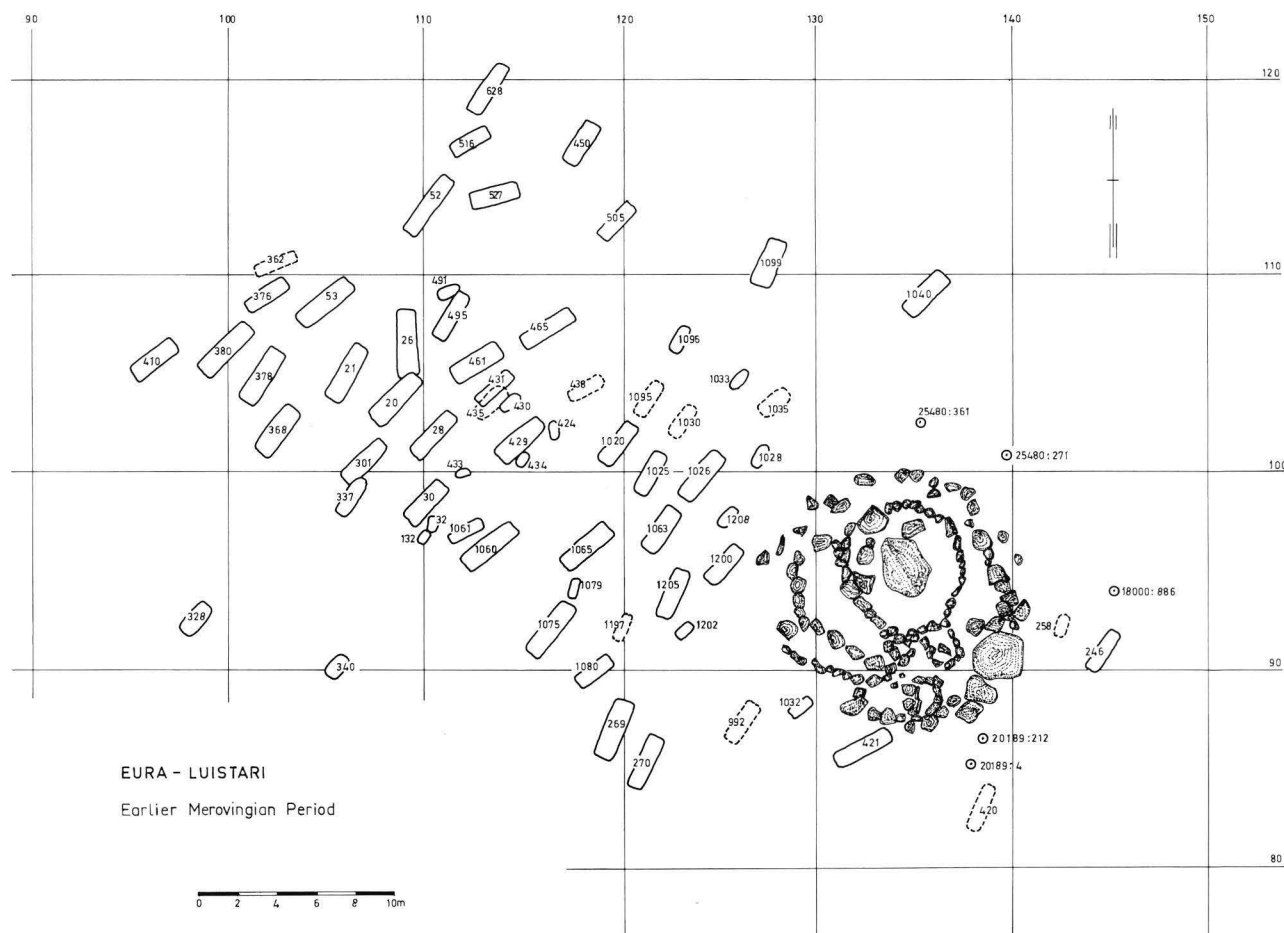
cemetery, where there was about 30 cm of topsoil. Its SW end had been dug on top of an older hearth, about 80x60 cm in size and 20 cm deep, and at its NE end there was a fixed stone about 55 cm in diameter. The grave-pit was almost rectangular in form and its bottom was even. Only a couple of potsherds were observed in its fill, but a bovine tooth (27177:105) was found in the hearth and burnt bone splinters, a potsherd and a piece of burnt clay (:140–142) were found in a patch of red earth to the NE of the grave.

Interpretation and dating: Judging by the size of the grave-pit this was a child's grave. Without furnishing it is difficult to date, because both Viking Age and late graves were found near it. The nearest Viking Age child's grave (1281) was found only some 2–3 m from this, and it was laid in the same direction.

Unfurnished children's graves without constructional details but possibly from the Luistari periods in terms of location and grave-pit form:

Period	Grave	Location	Orientation	Size	Depth	Form	Finds
Mer I	424	110/102	S-N	105x60	85–90	ovaloid	22346:12–13
	434	115/100	SSW-NNE	60x30	50–55	ovaloid	
	491	111/109	SW-NE	120x50	70	ovaloid	22346:452
	1028	127/101	SSW-NNE	135x55	70–75	four-sided	25480:307
	1096	123/106	SSW-NNE	120x70	100–110	four-sided	
	1202	125/97	SSW-NNE	125x70	55	four-sided	26695:133–134
	1208	123/92	SW-NE	115x60	80	ovaloid	26695:148–150
Mer II	1027	123/100	NW-SE	95x60	75	ovaloid	25480:306
Vik I	742	127/76	WSW-ENE	95x40	60	four-sided	23607:513
	761	136/70	S-N	140x50	95–100	four-sided	24388:148
	763	138/71	SW-NE	90x50	70	ovaloid	24388:153–154
	807	124/61	WNW-ESE	140x60	80–85	four-sided	24388:432–434
	821	126/55	SSW-NNE	>60x40	100	four-sided	24740:7
	920	140/66	W-E	>60x45	80	four-sided	25480:116
Vik II–III	496	121/110	NW-SE	? x 65	100	ovaloid ?	
	721	138/78	SSW-NNE	125x60	60	four-sided	23607:395–397
	722	137/78	SSW-NNE	155x75	90–100	four-sided	23607:398–403
	731	131/79	SSW-NNE	70x45	80–85	four-sided	23607:439–442
	732	130/78	SW-NE	125x65	90	four-sided	23607:443–445
	733	130/78	SW-NE	70x50	75	four-sided	
	743	131/75	WNW-ESE	145x75	75	ovaloid	23607:514
	744	136/78	SW-NE	80x35	70–75	four-sided	23607:413
	758	135/73	WNW-ESE	105x45	65–70	ovaloid	24388:136
	823	123/56	NW-SE	90x60	60–65	four-sided	24740:16
	824	122/55	S-N	150x70	95	rectangular	24740:17–18
	832	127/42	NW-SE	75x40	75	four-sided	
	874	128/42	SW-NE	70x40	80	four-sided	
	1110	105/65	NW-SE	>60x60	60	ovaloid	26695:103
	1111	106/68	NW-SE	90x45	50	rectangular	26695:104
Vik IV	570	119/124	NW-SE	120x35	85–90	ovaloid	
	1021	138/119	SW-NE	70x40	90–95	four-sided	
FP	659	131/119	SSW-NNE	75x30	40	ovaloid	
	663	135/110	WNW-ESE	80x50	105	four-sided	
	749	127/79	SW-NE	90x20	90–95	four-sided	
	926	138/57	SSW-NNE	100x50	115	four-sided	





Map 4.

	Men	Women	Children	Possible children	Undefined
1.	20	21	1033	32	362
2.	52	26	1079	132	420
3.	53	28		258	435
4.	269	30		328	438
5.	270	246		340	992
6.	301	368		424	1030
7.	337	376		430	1035
8.	378	410		433	1095
9.	380	421		434	1197
10.	429	431		491	
11.	450	461		1028	
12.	495	465		1032	
13.	1040	505		1096	
14.	1060	516C		1202	
15.	1063	527		1208	
16.	1065	628			
17.	1075	1020			
18.	1200	1025			
19.	1205	1026			
20.		1061			
21.		1080			
22.		1099			

In addition there are five stray-find brooches and pins which may indicate burials:

18000:886	A fragment of a shepherd's crook pin (LUISTARI I Pl. 128:18)
20189:4	Small round brooch (LUISTARI I Pl. 128:1)
20189:212	Equal-armed brooch (LUISTARI I Pl. 127:419:4)
25480:217	Small round brooch (Pl. 46:1017, see grave 1017)
25480:361	Triangular-headed pin (Pl. 51:1058/1019, see grave 1058)

Later Merovingian Period

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Map 6. Viking I burials

	Men	Women	Children	Possible children	Undefined
1.	40	55	41	50	808
2.	45	64	61	171	
3.	51	73	63	194	
4.	68	95	77	199	
5.	120	130	183	296	
6.	140	155	273	322	
7.	145	157	294c	742	
8.	165	160	294d	761	
9.	195	170	294e	763	
10.	288	172	295c	772	
11.	292	175	297	807	
12.	295a	180	313	821	
13.	299	190	316	828	
14.	751	191	760	870	
15.	795	293	764	888	
16.	800	294a	805b	890	
17.	822	294b	879b	920	
18.	825	295b	891		
19.	830	309	903		
20.	895	342	907		
21.	900	765			
22.	901	770			
23.		785			
24.		789			
25.		805a			
26.		878			
27.		879a			
28.		893			

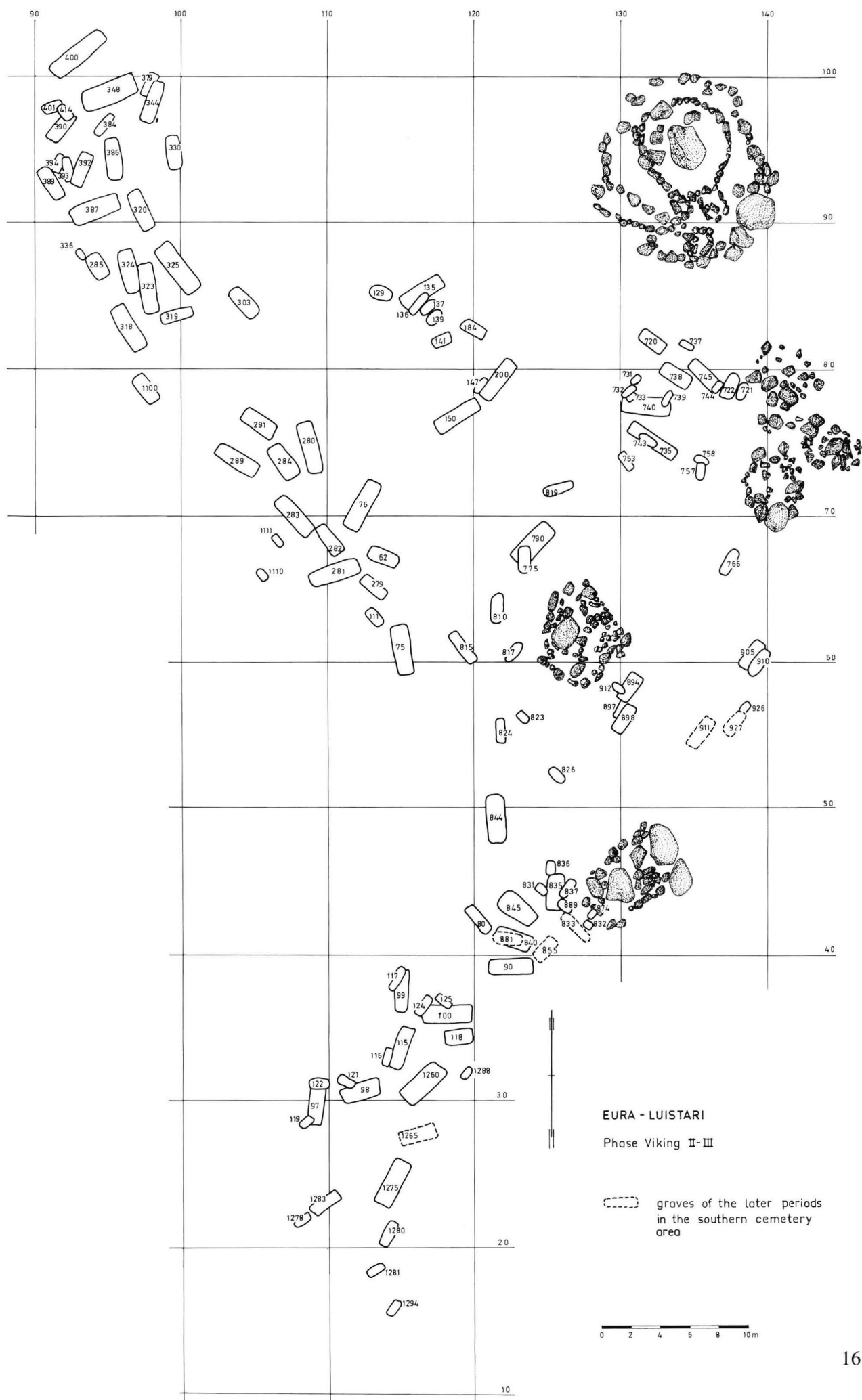


Map 7. Viking II–III burials

Vik II–III men	Women	Children	Possible children	Undefined	Vik IV–FP
1. 75	62	118	111	819	855
2. 76	97	136	116	824	881
3. 80	98	137	117		911
4. 90	99	139	119		926
5. 100	115	141	121		927
6. 135	184	147	122		1265
7. 150	200	280b	124		
8. 280a	279?	303b	125		
9. 281a	284?	330	129		
10. 281b	285	379	336		
11. 282	291a	384	414		
12. 283	291b	393	496		
13. 289	319	394	721		
14. 303a	324	401	722		
15. 318	344	720	731		
16. 320	386	739	732		
17. 323	389	757	733		
18. 325	390	775	737		
19. 348	392	810	743		
20. 387	738	817	744		
21. 400	753	826	758		
22. 735	766	837	823		
23. 740	815	894	831		
24. 745	835	897	832		
25. 790	905?	898	836		
26. 840	1260	910	874		
27. 844	1283	912	889		
28. 845		1280	1100		
29. 1275		1281	1110		
30.		1288	1111		
31.			1278		
32.			1294		

Graves of the Vik II–III in the northern part of the cemetery (Map 8)

207	217
215	226
225	229
471	
480	
510	



Map 8. Viking IV burials

Vik IV men	Women	Children	Possible children	Undefined	Vik II–III
1. 9	23	222	547	1007	207
2. 15	25	231	570	1041	215
3. 17	35	265	1021		217
4. 208	56	290			225
5. 212	58	306			226
6. 302	209	321			229
7. 349	359	363			471
8. 385	366	408			480
9. 402	370	444			496 ?
10. 403	377	450A			510
11. 407	383	460A			
12. 423	413	467			
13. 490	455	473			
14. 500	460	475			
15. 516A	472	476			
16. 528	516B	513			
17. 535	518	529b			
18. 544	523	543			
19. 575	529a	568			
20. 640	540	646			
21. 655	600	647			
22. 666	650	648			
23. 670	668	671			
24. 675	674	671A			
25. 1005a	1005b	676			
26.	1045	1043			
27.	1265*	1057			
28.		1185			
29.		855*			
30.		881*			

* In the southern part of the cemetery area (Map 7).

Map 9. Final Period burials and some other late grave groups

	Men	Women	Children	Children ?	FP ?	Stone settings	Coffin graves	Stone disc graves	Late animal graves
1.	13	22	10	360	364	432	508	478	620
2.	345	36	49	415	369	449	509	492	632
3.	347	39	365	569	405	463	511	726	645
4.	358a	334	367	633	630	541	560	746 □	756 □
5.	375	354	371	659	677	583	725	748 □	997 □
6.	381	356	411	663	734	667	1242	752 □	999 □
7.	391	358b	466	749	736	773		778 □	1008 □
8.	404b	374	470	926	747	774		780 □	1023
9.	406	404a	474		750	777		798	1203
10.	412	485	536		754	792		833*	
11.	445	590	554		779	802		993	
12.	488	635	555		994	811		1002 □	
13.	520	636	577		1066	812			
14.	545	1010b	580		1076	911			
15.	553		664		1186	915			
16.	639		1055			918			
17.	927		1056			1009			
18.	995					1029			
19.	1010a					1036			
20.						1058			
21.						1273*			
22.						1274*			

* In the southern part of the cemetery area.
□ Stone-setting

Graves and burials

	Graves		Burials			
		Men	Women	Children	Undefined	Burials total
Mer I	67	19	22	17	9	67
Mer II	35	14	9	7	7	37
Vik I	81	22	28	37	1	88
Vik II–III	125	35	30	62	2	129
Vik IV	85	25	27	33	2	87
FP	70	19	14	25	15	73
Total	463	134	130	181	36	481



Fig. 5. The Luistari site from above. Photo by Antti Kylänpää 1977.

THE DWELLING SITE AND CAIRNS AT LUISTARI

Since inhumation burials were carried out for hundreds of years in the Luistari area, it is only natural that the older dwelling site in this location was badly damaged. However, the distribution of Bronze Age ceramics and the remains of hearths permit an evaluation of the extent of the dwelling site. The southernmost of the large pit hearths was found at the extreme southern boundary of the excavated area and the only hearth discovered in the north end of the excavated area was near the northernmost boundary, which suggests the possibility that the dwelling site covered a larger area than the excavations. In the northern area the distribution of pottery with scratched surfaces extends more or less to the vicinity of the hearth, and in the southern part slightly to the south

of the large hearths, six of which were found in this part of the site. Scratched and pit-ornamented as well as smooth, pit-ornamented potsheerds were in a clearly smaller area, solely above the 38-m a.s.l. contour line. The largest amounts of pit-ornamented pottery were found in a sooty layer situated north-northeast of highest part of the area. As a whole, the pottery from the dwelling site, which clearly differed from the ceramics found in the inhumation graves, was in a 20–30 metre-wide and 110 metre-long zone to the west of the 38-metre elevation contour facing the river.

The hearths exhibited a special distribution pattern. In the south part of the area there were six large pit hearths in an area 30 metres long and over 10 metres wide. The










Fig. 6. The sooty area to the NNE of the highest point, excavated in 1969, N view.

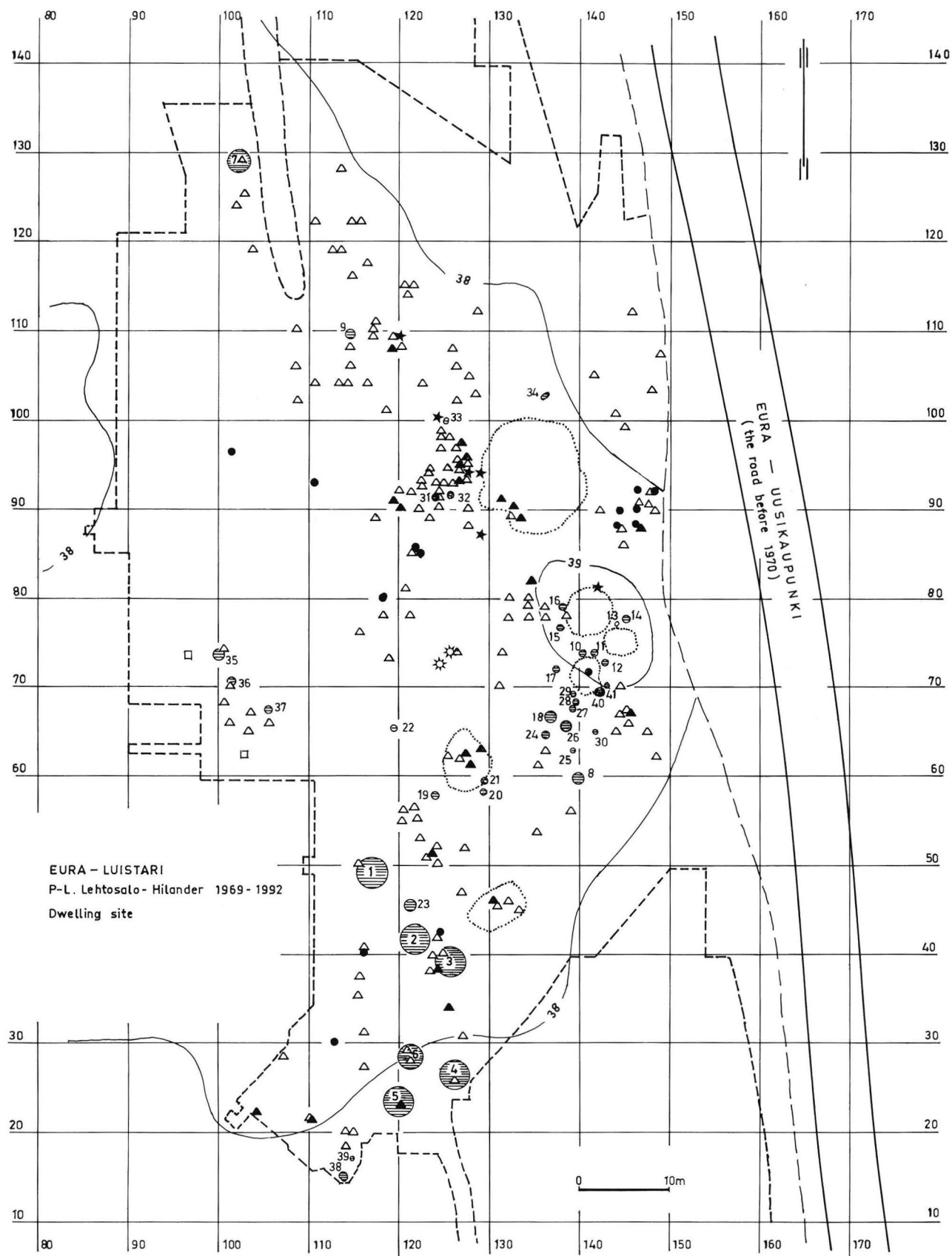
Map 10. Hearths and soot-pits at Luistari (soot-pits overlaying the graves are not mentioned)

No.	Location	Size, depth, soot layer (cm)	Finds	
1.	117/49	300x300, 135 (95)	18000:4657–4658	Slag, burnt clay
2.	121/41	280x240, 130–140 (80–90)	18000:4659	Finger-ring of bronze
3.	125/30	310x280, 150–155 (100)	24740:630–633, 656c-d	Potsherds, charcoal
4.	126/26	330x310, 140 (100)	24740:627–629, 656f,h	Potsherds, burnt bone, charcoal
5.	120/23	245x235, 115 (70–80)	27177:100–102, 151g-h	Potsherds, slag, charcoal
6.	121/28	> 200, 95 (55)	27177:103, 151i	Potsherds, charcoal
7.	101/129	220x200, 100 (60)	27177:104, 151f	Potsherds, charcoal
8.	140/60	180x170, 100 (50–55)	25480:107,568,621p,622a	Animal teeth, quartz, charcoal
9.	114/109	170x120 (50x50), 130	22346:742–749	Bronze mount, nails, cranium piece (Late?)
10.	140/74	70x60, 70 (25–30)	23607:361–363	Potsherds, burnt bone, slag
11.	141/74	130x80, 95 (45)	23607:36	Potsherds
12.	143/73	80x75, 95–100 (65–70)	23607:143–144	2 potsherds, burnt bone fragment
13.	144/77	60x50, 50 (20–25)	23607:77–84	Potsherds, animal teeth, burnt bone
14.	145/78	160x130(60x55),50(20)	23607:121–125	Potsherds, slag, burnt bones
15.	137/76	40x35, 50 (20)		
16.	137/79	80x80, 75 (30)		
17.	137/72	90x85, 70 (20)	24388:525s,t,u	Charcoal
18.	137/67	150x60, 95 (40)	24388:525e,f,g	Charcoal
19.	124/58	140x70, 100 (20)	24388:496	Potsherd
20.	129/58	55x35, 50 (10)	24388:525q	Charcoal
21.	129/59	50x45, 70 (25)	24388:500–501	Potsherd, slag
22.	119/65	85x90 (50x50), 140	24388:525p	Charcoal (Late ?)
23.	121/45	115x115, 85 (35)	24740:625–626	Potsherd, slag
24.	136/65	70x60, 80 (30)	25480:621n	Charcoal
25.	139/63	60x50, 80–85 (45–50)	25480:561 (beside)	Stone artefact fragment
26.	139/66	140x100, 60 (20)	25480:560,563–566,621o	Potsherds, burnt clay, slag, charcoal
27.	139/67	50x30,60 (15)		
28.	139/68	160x100 (60x45), 80 (30)	25480:570	Burnt bone splinter
29.	139/69	70x70, 75 (20–25)		
30.	142/65	60x60, 50 (20)	25480:622b	Charcoal
31.	124/91	85x75, 65 (35)	25480:423–424,621m	Pot sherds, charcoal
32.	125/91	55x50, 60 (25)		
33.	125/100	35x35, 75 (25)		
34.	136/103	90x40, 100 (20)		
35.	100/73	100x100, 90–95 (60–65)	26695:179o	Charcoal
36.	101/70	65x65, 65 (32–33)	26695:179p	Charcoal
37.	105/67	70x70, 50 (15–20)		
38.	114/15	80x50–60, 50 (20)	27177:105	Animal tooth
39.	115/17	90x50, 50(15–20)	27177:140–142	Potsherds, burnt bone, burnt clay
40.	142/69	80x80, 60 (15–20)	25480:578–581	Potsherds, slag, burnt bones and clay
41.	143/70	60x40, 50 (5–10)	25480:582,584	Potsherds

The two last-mentioned ones belong to cairn 700

Map symbols

-  hearth
-  potsherds with scratched surface
-  potsherds with scratched surface and pits
-  potsherds with pits
-  potsherds decorated with stamps
-  potsherds with raised bands
-  clay vessel lugs



hearths were 2–3 metres in diameter and approximately 1 metre deep, and there was only one smaller hearth in this area. In the central area, near the highest point and the central cairns were one large and several smaller hearths, mostly round, 60–80 cm in diameter and 20–30 cm deep, and soot pits. North of them was the above-mentioned continuous area of soot. The three westernmost hearths, similar to the latter and clearly smaller than the pit hearths in the south part, were separated from the others by an area over 10 metres wide that did not contain any finds of dwelling-site ceramics. In the vicinity of these hearths were some potsherds with scratched surfaces (26695:166–169,171–172) and sherds with raised bands (26695:158,170) that were not found elsewhere.

The only hearth in the north end, over 50 metres from the above, was somewhat smaller than the hearths in the south part, but of similar shape and depth. Potsherds with scratched surfaces were found throughout the curving area that followed the 38-metre elevation contour, linking the northernmost hearth with the ones in the south part.

The pottery from the dwelling site at Luistari requires a separate study. Suffice it here to present a map giving the main details of its distribution. Plates 62–64 give an idea of the nature of the pottery. The most important find in this connection was from hearth no 5, which revealed

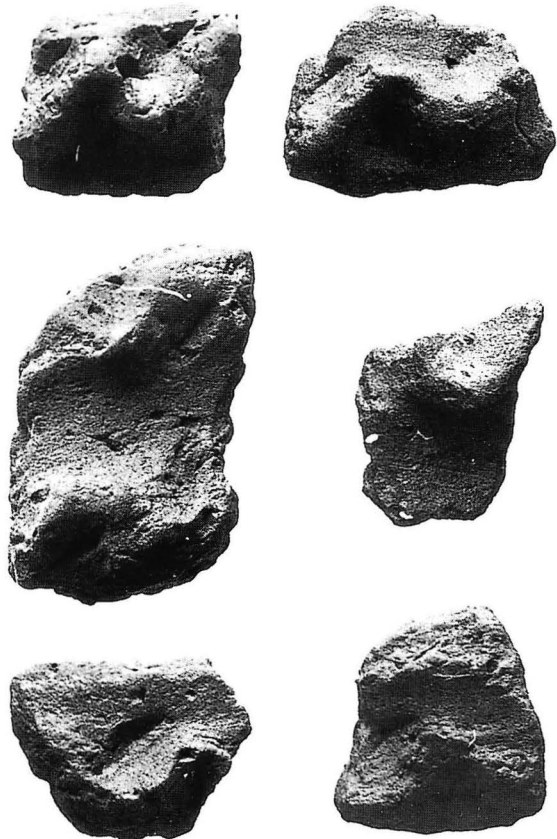


Fig. 7. Potsherds with raised bands (26695:170) from the westernmost area.



8a

Fig. 8, 8a. Hearth no 3, SSE view, and a potsherd with textile impressions (24740:630) from it. The stoneless area overlaying hearth no 3 is grave 855.



Fig. 9. Hearth no 4 from above.

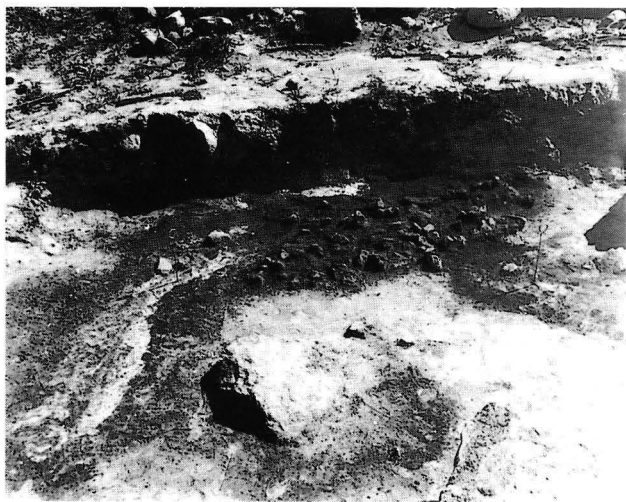


Fig. 10. Hearth no 1, W view.



Fig. 11. Hearth no 2, E view. The stoneless patch with a skull is grave 80.



Fig. 12. Grave 910 and hearth no 8, SW view.



Fig. 13. Hearth no 8 in profile, NW view.



Fig. 14. Hearth no 5, NE view.



Fig. 15. Sootpits 31 and 32, SW view. In the background is grave 1031.



Fig. 16. Hearth no 17, NE view.

large sherds of a pit-ornamented even-based vessel with a scratched surface (27177:100). This find linked the large hearths with the period represented by this type of pottery. The radiocarbon dates obtained for the hearths show that the dwelling site was mainly in use during the Late Bronze Age, although one of the small hearths may be from as late as the 6th century AD (Lehtosalo- Hilander 1999). It remains to be established whether the site was in long-term use or whether this hearth, and perhaps some others, is connected with the inhumation burials.

The area in which the six cairns of the Luistari site are located is 60 metres long and 25 metres wide. The north-

ernmost cairn 422 is the largest, 12–13 metres in diameter, while the remainder are considerable smaller. Cairn 699 measures 4 x 3.5 metres, cairn 700 is 5 x 4 metres, and the largest diameter of the others is 6–7 metres. All the cairns were of stones mixed with earth, and the thickness of stone setting varied between 20 and 60 cm. It was thickest in cairn 755, measuring 40–60 cm.

Four of the cairns (422, 699, 700 and 755) were constructed around a single stone clearly larger than the others. In two cairns (698, 850) the spaces between several large stones were filled to form a more or less regular stone setting. Cairn 850 is oval, while the others are mainly round. Cairns 422 and 755 contained large amounts of burnt bone, suggesting that they were cremation graves, which can be dated to the chronological boundary of the Bronze Age and the Iron Age. Burnt bone was also found in cairns 698, 699 and 700, albeit in considerably smaller amounts, and there was hardly any burnt bone in cairn 850. It is possible that the latter was erected on top of an inhumation grave dug in the ground.

Considerable amounts of iron slag were found in all the cairns. The smallest amount was in cairn 755, only slightly more than four kilograms; the others contained 17–30 kg, except cairn 850 with as much as 273 kg. This cairn was partly made of slag. Cairn 850 also contained the largest amount of potsherds, a total of some 13 kg. Cairns 422, 698 and 755 all contained clearly over a kilo-



Fig. 17. Cairn 698, NNW view.



Fig. 18. Cairn 700, N view.



Fig. 19. Cairn 422, SEview.

gram of potsherds; cairn 700 contained hardly half a kilogram and cairn 699 contained only 250 grams of potsherds.

In addition to pottery with scratched surfaces, the cairns also contained smooth-surfaced sherds with pits or grooves and sharply profiled Lausitz-influenced pottery (in cairns 422, 698 and 755). One of the bowl fragments had a three-pointed ear (Cairn 698, 20607:88,89), and four similar ears or lugs were found in the area west of the largest cairn 422 (20552:176; Lehtosalo-Hilander 1986, fig. 7:3; 25480:302, 490, 512). Two of these were only a metre from each other, and there were not more than 12 metres between even the outermost ones. The finding of so many three-pointed lugs was quite surpris-



ing, since previously only two were known from the Finnish mainland (Salo 1981 318). The Luistari finds also include at least one vessel ear of different shape (NM 22346:254), which was found in the northern part of the area.

There were few metal objects in the cairns, and their connection with the original grave goods was not always quite clear. The bronze button (20552:12) and a fragment of a bronze knife (20552:8) from cairn 422 clearly pointed to the Bronze Age, as also a fragment of a bronze ring from cairn 755 (24388:48) and the tip of a bronze spearhead (24388:49). The Iron Age is suggested by finds of slag and the fragment of an iron spearhead (20552:13) and a miniature sickle (20189:6) from cairn 422, a belt buckle from cairn 699 (23607:131) and minor fragments of iron objects, found in all cairns except number 700.

With the exception of cairns 422 and 755 the Luistari cairns can be linked to the Early iron Age only with certain reservations. The use of pottery for dating and charcoal for radiocarbon analysis is restricted by the fact that earth-mixed cairns of this type will always include material from their surroundings. Because the cairns were erected on a dwelling site, they may contain both charcoal and ceramics from it. This would explain the very early date obtained for cairn 755 (see further and Lehtosalo-Hilander 1999).

Fig. 20. Cairn 755 and the excavation area in 1988, NE view.



Fig. 21. Cairn 755, ENE view.

RADIOCARBON DATES

Radiocarbon analyses were carried out of 22 samples from Luistari and the results are as follows (calibrated results in terms of 16 and 84 % probability):

C = cairn, G = Grave, H = hearth

1. Hela-133	C 755	24388:525c	2985+/-75	BP 1308–1078 cal BC
2. Hel-3953	C 699	23607:522n	2800+/-80	BP 1062–867 cal BC
3. Hel-3957	H 5	27177:151g	2740+/-90	BP 997–830 cal BC
4. Hel-3955	H 7	27177:151f	2630+/-90	BP 868–581 cal BC
5. Hela 208	G 855	25740:421a	2560+/-55	BP 780–562 cal BC
6. Hel-1383	C 422	20552:242	2510+/-120	BP 763–465 cal BC
7. Hel-3954	C 700	23607:522j	2420+/-100	BP 719–420 cal BC
8. Hela-212	C 699	23607:142	2125+/-50	BP 233–67 cal BC
9. Hel-3956	H 17	24388:525s	1490+/-80	BP 473–630 cal AD
10. Hel-3935	G 281	18000:3199	1360+/-80	BP 627–771 cal AD
11. Hel-3933	G 343	18000:3811	1330+/-80	BP 659–810 cal AD
12. Hel-3934	G 130	18000:2373	1330+/-80	BP 659–810 cal AD
13. Hel-4101	G 1000	25480:621g	1290+/-90	BP 680–859 cal AD
14. Hela-210	G 1260	27177:37a	1270+/-55	BP 699–841 cal AD
15. Hel-4100	G 281	18000:3196	1260+/-80	BP 700–871 cal AD
16. Hel-3936	G 1260	27177:151b	1200+/-80	BP 738–933 cal AD
17. Hel-3938	G 670	23183:707	1100+/-80	BP 843–1006 cal AD
18. Hel-3939	G 406	18000:4616	1020+/-80	BP 943–1135 cal AD
19. Hel-3937	G 1010	25480:621h	920+/-80	BP 1045–1202 cal AD
20. Hel-131	G 20	18000:1233	640+/-120	BP 1259–1406 cal AD
21. Hela-209	G 1120	26695:110a	225+/-30	BP 1661–1793 cal AD
22. Hel-3952	G 997	25480:148	190+/-30	BP 1679–1810 cal AD

Samples 10 – 12 and 15 –19 are from grave chambers, sample 13 is from the birch bark which covered the burial in grave 1000, and sample 20 is from a soot-pit overlaying the Merovingian Period grave 20. Samples 5, 14 and 21 are from charred seed-corn and sample 8 is from a nutshell. Sample 22 was taken from the leg-bone of a buried bovine animal, and the other ones are wood samples from three hearths (Nos. 3, 4, 9) and four cairns (Nos. 1, 2, 6, 7).

The obtained dates, when calibrated, cover as a whole the period from ca. 1300 BC to the beginning of the 19th century AD. They fall into two larger groups. The seven earliest dates form a continuous series from 2985 BP to 2420 BP (1308 – 420 cal BC), and another group of continuous dates is formed by results from samples Nos. 9 – 19, which cover the period 1360–920 BP (627 – 1202 cal AD). Apparently the dates of the first group reflect the period when the dwelling site was occupied and the cairns were constructed, the dates of the second group are from the period of inhumation cemetery.

One of the earliest dates (No. 5) is however from grave 855, an inhumation burial of a child. Moreover, it is from a barley grain found inside a clay vessel and thus seemingly from a closed find. When this grave is coin-dated by four silver coins to the beginning of the 11th century (Talvio 2000:22–25), the only explanation is that the grain originated from the dwelling site and had been deposited in the pot along with fill. Grave 855 overlay pit hearth No. 3, and thus the seed possibly dated the hearth.

Two radiocarbon dates fall between the above-mentioned groups. The date obtained for the nutshell (No. 8) points to the two last centuries BC, the sample from the small hearth next to grave 751 (No. 9) falls mainly in the 6th century. The nutshell was found in the area of cairn 699, where the date of the other sample (No. 2) was several hundred years older. The dwelling- site soil in the cairn possibly provides an explanation.

The radiocarbon date of the small hearth is more than a thousand years later than the dates obtained for the large pit hearths, and seemingly somewhat older than the old-

est inhumation graves. It is, however, possible that it is from the same time as the inhumation graves. Even the samples from the grave-chambers have given results a couple of hundred years older than the artefacts in the same graves; e. g. the artefacts date grave 281 to the first half of the 10th century, but the two samples from the grave-chamber (Nos. 10 and 15) gave the results 1360+/-80 BP and 1260+/-80 BP, i. e. dates even three hundred years older.

The oldest (No. 20) of the remaining three dates may still be associated with the use of the cemetery. A considerable number of unfurnished graves overlay the older ones, and it is quite possible that fires also were burnt in connection with the late burials. Grave 20 itself was not overlain by later graves, but there were several unfurnished and apparently late graves quite near it. So it could well be believed that the burial continued until the 14th century.

The last two dates are from the 17th century at the earliest. One of them (No. 21) is from a rye grain found on the bottom of the unfurnished grave 1120, the other (No. 22) is from the bone of the animal in grave 997.



Fig. 22. Stone-setting on top of grave 997, SSE view.

Fig. 23. Grave 997, SSE view. In the background is the skull of a bovine animal.

Grave 1120 was found under the field in the westernmost part of the cemetery. It is highly improbable that burials had continued there in the 17th or 18th centuries. According to a map drawn in 1696 (LUISTARI I fig. 95), the area all around the most stony part of the cemetery was cultivated field, and it seems quite impossible that graves would have been dug at the place only a few decades before. The rye grain was perhaps deposited in grave 1120 by a mole.

The bovine animal in grave 997 may have died of natural causes and was buried at a time when the cemetery had gone out of use. It is to be observed that there were several graves in the N part of the cemetery with only animal bones, and they are situated in the stony waste land area to the north of cairn 422. These pits could well have been dug at the same time as the fields were cultivated.

As a whole, the radiocarbon results from Luistari tell the same story as the artefacts. The oldest dates are more than three thousand years old and they obviously witness the earliest use of the dwelling site. Cremated corpses were buried in cairns some centuries BC and perhaps some time after the beginning of the Christian era. The inhumation burials are clearly later. A couple of truly late dating results point to the fact that fairly recent pits for animal bones could have been dug in the old cemetery, and on the other hand that it is also possible to find irrelevant material on the bottom of a grave. At Luistari it was often observed that the moles had dug their passages through graves. A few mysteries could be attributed to these "grave-robbers".



THE ORIENTATION OF THE GRAVES

The excavations carried out in 1984–1992 did not greatly change the picture that had been obtained of the orientation of the graves at Luistari. Previously, there had been only one N-S oriented grave among the Mer I graves, and the remainder were oriented SW-NE, a direction, which with its variants, SSW-NNE and WSW-ENE, was the most popular orientation throughout the centuries at Luistari. Now there was more variation. Of the 67 graves that I include in this group, five are oriented S-N or N-S and three NE-SW, while 88% are laid SW-NE, keeping the overall picture unchanged.

The graves of the Mer II stage were originally distinguished on the basis of the NW-SE and SE-NW orientations, and it was discovered that they contained weapons dated to the close of the Merovingian Period by Cleve. Ultimately, these weapons were not found in graves of any other orientation (except in the Viking Age grave 901, orientation almost S-N). However, one Finnish angon (G 998) and one dagger-bladed spearhead (G 419), which are weapon types of the previous stage, were found in the graves of this group, totalling 35. In only four of these (nos. 317, 329, 335, 338) was the head of the deceased at the SE end.



Fig. 24. Three different orientations. Graves 462, 455, 445, 464, 436 and 448, W view.

The greatest degree of variation occurred during the Early and Middle Viking Age, from which there are a total of 205 graves. Some 60% of the graves that can be dated to the 9th century are laid SW-NE, but over 10% are oriented NW-SE, S-N and E-W. Only two graves laid SE-NW and E-W and one N-S and NE-SW, which means that the heads of the bodies were predominantly at the south and west ends of the graves. Even in the 10th century the most popular orientation was SW-NE (42%), but the number of graves laid NW-SE was almost as large (35%), and approximately 10% of the graves were oriented S-N or N-S. Over 5% were oriented W-E.

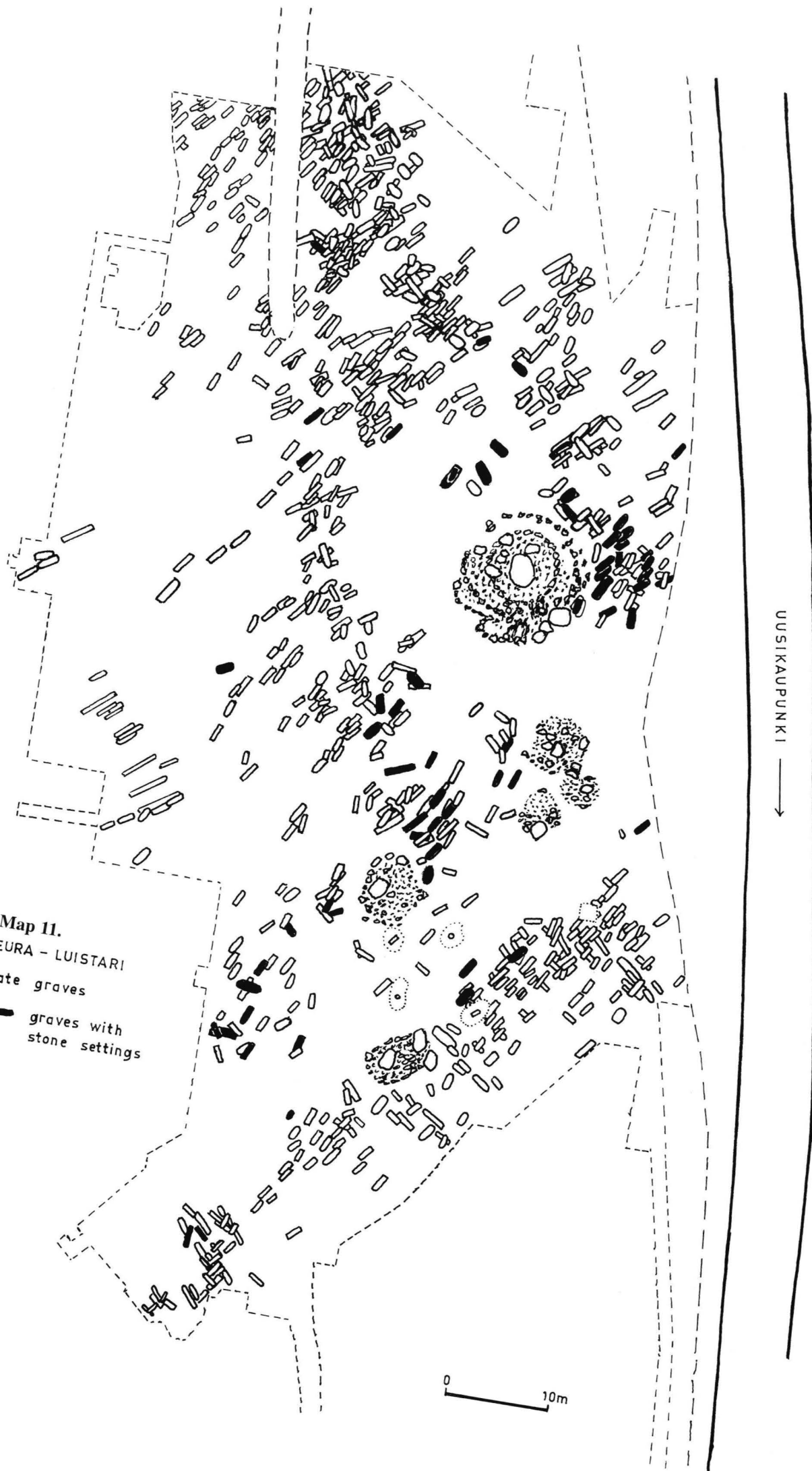
A decisive turn towards the SW-NE orientation took place during the last stage of the Viking Age, in which I class 86 graves. The proportion of SW-NE oriented graves rises to almost 85% of all the graves. Less than 10% of the graves were laid NW-SE and 5% were oriented NE-SW.

Other orientations occur only individually. There is again some more variation during the FP stage, but $\frac{3}{4}$ of a total of 56 graves are oriented SW-NE. A notable feature is the over 10% proportion of graves oriented NW-SE and the fact that the exceptional twin burial 404 is also exceptionally oriented, NE-SW, as also two other late graves (347, 391).

Among the late unfurnished graves the NW-SE oriented ones amount to almost 20%, but over $\frac{3}{4}$ are laid SW-NE, and predominantly SSW-NNE. There are very few other orientations; only 2% are laid S-N and W-E. Particularly noteworthy is the almost complete lack of graves laid W-E, as the graves are unfurnished and clearly younger than the early decades of the 12th century. Luistari does not exhibit the transition to the W-E orientation, which Cleve (1948 78) assumed to have taken place in Eura and Köyliö during the Late Viking Age. SSW-NNE is closer to S-N than W-E, and this almost south-north orientation seems to have become the most popular one during the final stage of the cemetery.

Variation in grave orientation was to some degree influenced by the stony soil in the central parts of the cemetery. Graves of the Merovingian Period and the Viking Age were placed among large stones where space was available. On the other hand, the late graves were dug in places of light silty soil and they accordingly appear in very dense groups outside the stony area (Map 11). There was nothing in this area that would have prevented digging all the graves with the same orientation, and it is thus remarkable that the same old orientations are still used. This variation is not due to difference in date, for there are also NW-SE graves among those that were dug on top of all the others.

Map 11.
 EURA - LUISTARI
 Late graves
 — graves with
 stone settings



THE CONSTRUCTIONS OF THE INHUMATION GRAVES

The constructions and structures of the inhumation graves at Luistari are discussed in detail in *LUISTARI I* (19–35, see also Lehtosalo-Hilander 1989), but some points have to be added after subsequent excavation. The number of investigated Merovingian Period graves increased considerably, from less than fifty to at least one hundred, and a hitherto unknown type of stone setting was discovered in addition to previously known forms. Graves 1000 and 1201 had a perimeter or border of upright sandstone slabs along all the sides. There may have been a similar perimeter in the Viking Age women's graves 785 and 893. Another previously unknown type of stone setting was discovered on top of grave 1100. There were red slabs of sandstone at both ends; one of the slabs was still standing upright and there was a round setting of smaller stones in the middle of the grave pit. There were remains of wooden structures but no objects in the grave-pit. The location of the grave points to the Viking Age and it may have been made for a child.

Among the graves of Luistari as a whole the most common type of stone setting was a group of stones at one end of the grave. These were found in graves of all periods. It was also customary to erect only one large stone at one end. Combining these two groups we observe that almost half of all surviving stone settings (52/110) encountered in the excavations of 1984–1992 were at one end of the grave. Moreover the end setting is always part of a combination. Six graves had settings at both ends and in nine the end setting was linked to a central stone setting, row of stones or a setting around the grave pit. In grave 1100 there was a central stone setting in addition to the stones at the ends. Accordingly, stones or stone settings at the ends were found in a total of 68 graves.

More rarely was a stone or stone setting placed in the middle of the grave or the whole grave was covered with stones. Two of the central stone settings were on top of graves 756 and 997, late burials of animals, four were on top of unfurnished children's graves (636, 737, 926, 1278)



Fig. 25. Grave 1060 with rows of sandstone slabs, W view. The drying barn foundation is in the background.

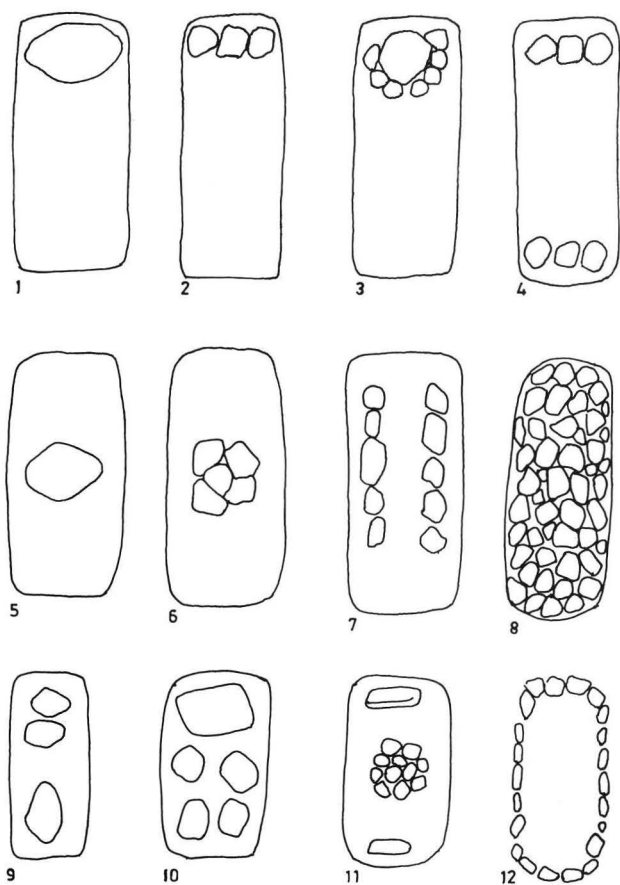


Fig. 26. Types of stone-settings at Luistari.

and one was in a grave of assumedly late date (754). Only 13 of the graves with a central stone setting were assigned to different periods at Luistari: two or three (1031, 1095, 1197?) to the Merovingian Period and nine (450B, 475, 766, 775, 805, 819, 1005, 1057, 1288) to the Viking Age. There is one possibly later case (1273). Of these five, possibly six, are children's graves (450B?, 475, 775, 1031, 1057, 1288). It appears that a central stone or small stone setting was placed more often on the children's graves than suggested by previous research at Luistari (LUISTARI I 25).

Stone settings covering the whole grave area are rare at Luistari. The ones termed full stone settings here cover usually only about 2/3 of the grave surface, but these graves are clearly more covered than the ones with end or central groups. Full settings were found on top of two graves (435, 1019) that may be from the Merovingian Period, while five are of the Viking Age, and four of these are children's graves (470, 826, 890, 891). One of the full stone settings was laid on top of grave 650, which may be a woman's grave, but it is uncertain whether or not the setting is an original feature (see description of grave 650). It was easier to cover small graves completely than large ones and it is thus only natural that the complete stone settings are found among the children's graves.

Lengthwise rows of stones are also rare grave structures, although they occur in Luistari from the Early Merovingian Period (graves 1060, 1200) until the stage of unfurnished burial (graves 911, 915). Among the graves

excavated in 1984–1992 a single row of stones was found in graves 735, 825, 911, 915, 1200, 1260 and two rows in graves 751, 1010 and 1060, while in grave 45, excavated in 1969, there were probably three (LUISTARI I 24 and fig. 18). The most impressive of these row settings was on top of grave 1260, in which a row of large stones joined the stones at the ends. The largest of the stones measured over one metre across. This impressive burial monument covered a woman's grave of the mid-10th century. The other row settings were on male graves, except for twin grave 1010 and unfurnished graves 911 and 915.

The stone settings were mostly constructed clearly on top of the graves, and only in the late graves were there stone setting structures deeper down in the fill. Some of the damaged stone settings could be reconstructed as groups, but the original shape of some remained unclear (graves 500, 835, 1274). Because the stone settings of the graves were usually of large stones, dense or of specially selected stones, i.e. red sandstone, stones situated randomly on the graves or in the fill may distort the available picture only slightly.

Comparing the stone settings discovered in the excavations of 1984–1992 with those mapped in 1969–1972, attention is first drawn to the small number of stone settings. Of the 420 graves discovered in the earlier excavations 140 (33%) were marked with a stone setting, while only 122 (14%) of the 873 excavated in 1984–1992 were thus marked. There is, however, a simple explanation: the initial excavations were carried out in the central areas of the cemetery, where Merovingian Period and Viking Age graves were common, while the later excavations were in margins, with many unfurnished and Late Iron Age burials (Viking IV, FP).

The small number of observed stone settings on graves in the northern parts of the cemetery is also due to the fact that there were many superimposed burials and the surface layers were destroyed in many places at the location of the drying barn foundation. There may have been originally more stone settings. The number of graves, however, is so great, that a few unobserved stone settings will hardly alter the overall picture, according to which more than one grave out of two had a stone setting during the Merovingian Period and Viking Age until around the year 1000. After this every third or fourth grave had a stone setting, and only approximately one out of fifteen of the late unfurnished graves.

As the stone settings grew rarer the number of wooden structures in the graves became more common. During the Merovingian Period these were observed in one grave out of three, although ten graves of the earlier stage at Luistari (Mer I) only had posts at the corners. One out of two Viking Age and FP graves contained a coffin or was lined with wood. Only ca. 1.5% of all unfurnished graves revealed wooden structures, but nails were found in a slightly larger number of these graves. It is not, however, certain that individual finds of nails that are not associated with the remains of wooden structures, are from coffins or burial chambers. They could have been deposited in the grave pits along with the fill.



Fig. 27. Stone-setting of grave 895, S view.



Fig. 28. Stone-setting of grave 785, WSW view from above.



Fig. 29. Graves 510 and 505, SW view. The upright sandstone slabs overlay the NE end of grave 510.

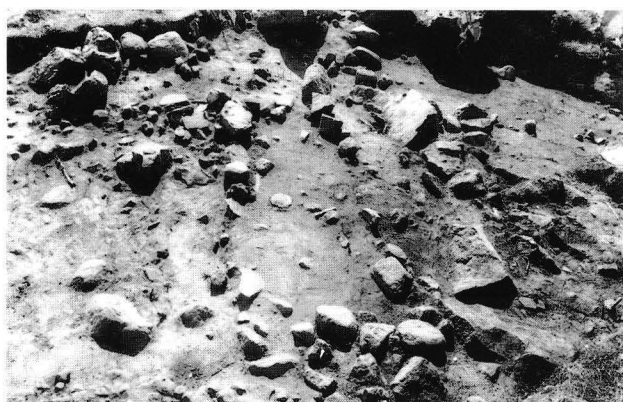


Fig. 30. Grave 1000 in the middle, NW view.



Fig. 31. Stone-setting of grave 901, W view from above.



Fig. 32. Stone-setting of grave 1260, W view.

THE LATE UNFURNISHED GRAVES

The problems concerning the late and mostly unfurnished graves at Luistari has been treated earlier (Lehtosalo-Hilander 1997), but it is necessary to add some facts. At first, there are many different kind of late graves at Luistari. Some of them are rather recent graves with only animal corpses, mostly bovine. They must have been dug only a couple of hundred years ago for cattle killed by some disease. Most of these graves (620, 632, 645, 756, 1008, 1023, 1203) were easily identified, because they were on top of all others and their fill was much darker than the fill in other graves. The form of the pit also was different, almost elliptic. The bones were often quite well preserved.

The only exceptions to this rule were graves 997 and 999, which were on both sides of grave 998 from the Merovingian period. They were not on top of the other graves; they were almost in the same direction as grave 998, and their form was similar to it. In addition, grave 997 had a stone setting similar to the ones on top of many furnished graves at Luistari. The C14-analysis of the

bones in grave 997 (Hel-3952, see above) proved however that the animal had died perhaps a thousand years later than grave 998 had been made. A possible explanation for the pit form is that an older grave had been at the same place, and there had been an depression in the ground. The new pit had been dug here, and as the soil was much easier to dig in the grave-pit, the animal's grave had the same form as the older grave. Perhaps the stones were from the original stone setting.

If depressions similar to the ones in Käräjämäki (Salmo 1952 26–28; LUISTARI III 59, fig. 9) had existed at Luistari, it would explain, why there were bigger animal graves and rubbish pits just on top of some large graves (e.g. 844, 910, 1020). Naturally one would dig a pit at a spot where one had part of it ready.

Another category of late graves which are worth mentioning are graves with stone settings, 31–32 in number. Most of the stones were on top of the graves. Large end stones covered the top of three of these late graves. In grave 918 the stone was at the SW end, in grave 792 an

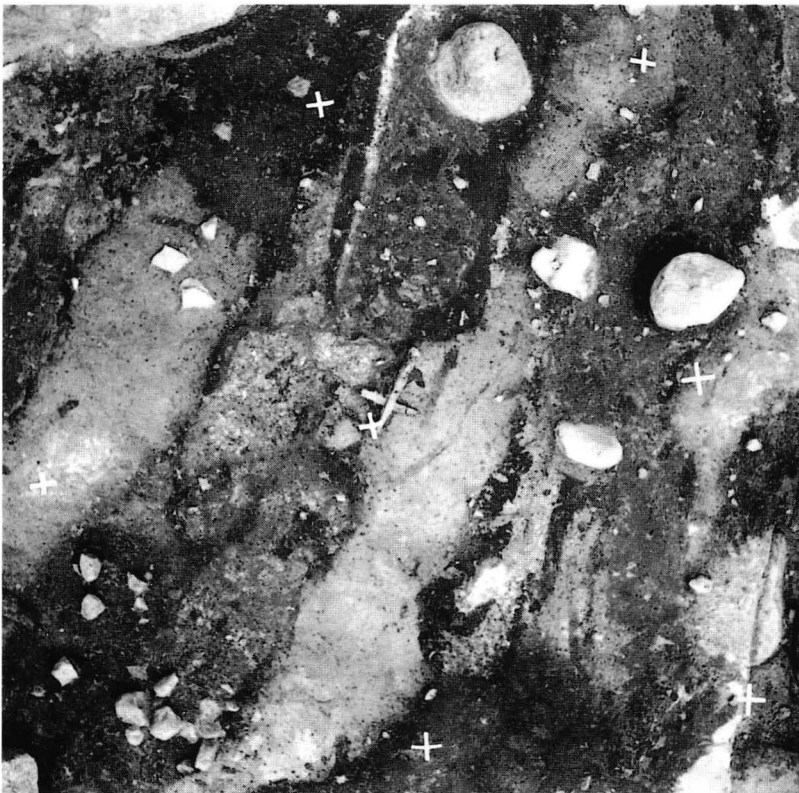


Fig. 34. Grave 792 with an almost round stone overlaying its SW end, from above. Observe the wooden cross at the SW end of the grave in the middle of the photo.



Fig. 33. Grave 736, E view.



Fig. 35. Grave 748. The sandstone slab and the first stone disc (24388:11) from above.



Fig. 36. Grave 748 and the second stone disc (24388:12), S view.

almost round and 70 cm high boulder was at the NE end, and almost as big a stone was at the same end of grave 812. A group of stones covered the NE end of graves 432, 541 and 1029, in grave 999 the group was at the NW end, in grave 811 at the S end and in grave 778 at the SW end. The stones in graves 583,667 and 1009 were at the SE end. Only one stone was in the middle of grave 777, but a heap of stones covered the top of the middle part of graves 756, 773, 774, 802, 997, 1002, 1008 and 1273. A group of stones at both ends were in grave 1036 and a lengthwise row of stones was observed in graves 911, 915 and 1274. Accordingly, most of the stone settings known from the furnished graves occurred also in late unfurnished graves.

If all the unfurnished graves with stone settings had been underlying the other graves without furnishing, it would have been easy to connect them with the furnished graves. Some of them, e.g. grave 792, were on top of all other graves, and so the practice to mark the graves with natural boulders must have continued a long while. Possibly all graves were originally marked in some way, but for example wooden poles would have decayed in less than a hundred years.

In six graves (449, 463, 746, 748, 752, 780) the stones were in the fill near the bottom. Only one large stone, about 60x40x30 cm in size, was at the NE end of grave 449. In grave 748 a thin sandstone slab covered the north end of the bottom, and under it two stone-discs were found. In graves 463, 746 and 752 there was a small stone setting in the middle and in grave 780 at the E end of the grave. In four of these six graves stone-discs were found; in graves 748 and 752 there were two (24388:11,12,27,29) and in graves 746 and 780 one (23607:519, 24388:308).

The stone discs are surprisingly well represented in the graves without traditional furnishing. Of the total of 27

discs only five (22346:501, 23607:505, 25480:34,574, 26695:125) were in the fill of furnished graves (500, 740, 895 [2], 1200), three (24740:319,383,394) were in cairn 850 and one (23607:87) in cairn 698, four (24740:639a,b, 25480:558, 27177:132) were found in top layers outside the graves and 14 in unfurnished or very poorly furnished graves; in addition to the ones mentioned above they were in graves 478, 492, 726, 778, 798, 833, 993 and 1002 (22346:346,453; 23607:417; 24388:292,394; 24740: 153; 25480:135, 164). The smallest of these (22346:453) is only 43 mm in diameter, the largest (26695:125) 110 mm. The weight is not in proportion to the size, the smallest is the lightest (about 49 g), but the heaviest one (24740: 319) is 87 mm in diameter and weighs 310 g, the largest one only 214 g.

At least 41 sandstone discs in the collections of the Kauttua factory museum (KM 20775:3–36 and seven pieces without numbers) have been found at the old village site of Kauttua (see LUISTARI I 7, 9 and 362 fig. 95), now a cultivated field. Only a small trial excavation has been made on this site, but almost every spring some old artefacts have been gathered from the topsoil of the field after ploughing. Most of these are from the historical times, but the village is known from medieval sources and it is quite possible that it originates from the Luistari periods. The stone discs are an artefact group which connects these two sites.

When the stone discs found at Luistari and on the village site are compared, a certain difference is observed. Two thirds of the discs from Luistari weigh 75–140 g, but less than one third of the ones from the village. One very big disc weighing 740 g (20775:35) has been found there, and a couple of them (20775: 12,13) weigh less than 25 g, fifteen less than 70 g. Many of the artefacts are however so equal in size and weight, six weighing

65–70 g and five about 80–90 g, that a moment I thought, they could have been weights for weighing fish.

Several sandstone discs have also been found at the Vainionmäki cremation cemetery in Laitila, some 40 km SW from Luistari. These vary in diameter from 60 to 108 mm and in weight from 155 to 193 g. Here the variation seems smaller than at Luistari, but only six discs were found at Vainionmäki (Söyrinki-Harmo 1996 71). They are, however, important, because Vainionmäki as a whole could be dated to the Merovingian Period (Schauman-Lönnqvist 1996 62).

Stone discs seem however to occur during a long time, from the Stone Age to the Medieval period. The site where the greatest number (c. 200) of stone discs were found is Nästinristi in Laitila, dated to the late Comb Ware phase. According to Mirja Miettinen (1980 76–78) these discs vary in diameter from 20 to 80 mm, the most being 40–70 mm in diameter; the weights are not mentioned. Miettinen is of the opinion that most of the discs are sling stones used in the hunting of aquatic birds. This opinion is shared by Anne Vikkula (1986 18) and partly by Jukka Luoto (1991 15–16, 18).

In connection with discs found on Iron Age sites Luoto (1991 16–18) has mentioned also possibilities that the discs had been platters for baking bread, sports or gaming equipment or lids for burial urns. Ella Kivikoski (1963 122, 1980 42) has also supposed them to be lids of cups or other vessels. In my opinion most of the discs are too small to be baking platters, and where are the urns, if these are urn lids? The possibility that the disc-shaped artefacts had been gaming pieces has been mentioned in connection with the finds from the site of PKbanken in Lund (Persson 1976 379, fig. 333), and it is plausible, but most probably not the only explanation.

After the finds from Vainionmäki and Luistari it seems

certain that the discs have something to do with the funeral rites. At Luistari they naturally could be originally from the dwelling site, but their location in grave 748 proves that the placing is intentional (see above). The fact that they occur only in furnished men's graves at Luistari can be a mere coincidence, but maybe not. At Mahittula in Raisio two discs were found in man's grave 4 (19000:55,66), but two others were with a woman in grave 20 (19000:3210,3211).

In Sweden and in Åland small breads of similar form and size have been found in graves (Gräslund 1967; Kivikoski 1980 34; Lehtosalo-Hilander 1984 307–308). Therefore it seems possible that the discs in graves could be surrogates of bread, which have been buried with the deceased in the hope of good harvest (cf. Christiansson 1948 125–127; Gräslund 1967 259). There is reason to recollect that until these days children have thrown stone flakes along the surface of the water known in Finnish as "casting bread". Is it unthinkable that in this game the memory of ancient bird hunting is united with the general endeavour to secure the everyday bread? (Lehtosalo-Hilander 1989 36).

Two more stone artefacts have been found in the unfurnished graves at Luistari. In grave 812 there was a small stone chisel (24388:457), in grave 854 a fragmentary stone axe (24740:410). They are not the first ones from the Finnish or Nordic Iron Age graves (Kivikoski 1965 34–35; Huurre 1991 90, footnote 14; Ringstad 1988 328–330), and in Eura also there is from Yli-Nuoranne a Merovingian period grave with a stone chisel (18317:8, grave 26) and from Käräjämäki a chisel (6127:50) from a slightly dubious grave 1/1912. Until quite recently it has been believed that the stone adzes have magical properties (Huurre 1991 87–90), and so the artefacts in Luistari graves may also have been used as talismans.



Fig. 37. The river Eura, the old village site of Kauttua and Luistari to the left in the background, NE view.

THE DEVELOPMENT OF WEAPONRY AND ORNAMENTATION ACCORDING TO THE WHOLE MATERIAL FROM LUISTARI

THE WEAPON GRAVES

Weapon combinations

Of the probably 134 male graves in the Luistari cemetery 93 contained burials including weapons. Twenty-eight of them are from the Merovingian Period and 65 from the Viking Age or of later date. Some of the graves contained only one weapon, a spear in most (Mer I: G 337; Mer II: G 33, 338, 353, 419, 730; Vik I: G 45, 165, 830; Vik II: G 75, 80, 318, 320, 735, 845; Vik III: G 471; Vik IV: G 407, 666, 1005; FP: G 445). In five of the Merovingian Period graves (270, 300, 495, 1075, 1200) the only weapon was a seax or a large knife and in one (G 1000) a shield. A sword (G 510), an axe (G 745) and an arrowhead (G 375) were also found singly in the later graves. There were twelve such single-weapon graves from Merovingian Period contexts and 17 from the Viking Age, totalling slightly less than a third of all. It should be noted, however, that had the shields been made completely of organic materials they would have decomposed. Accordingly, some of these graves may have contained two weapons, a protective shield in addition to an offensive weapon.

The most common of these are graves in which two weapons were found. In most of them a knife was found alongside the spearhead (Mer I: G 301; Mer II: G 315, 331; Vik I: G 40, 292, 295b, 795, 825; Vik II: G 100, 281b, 282, 289, 323), but it was almost as common to place two spears with the deceased (Mer II: G 329, Vik I: G 51, 145, 751, 822; Vik II: G 325, 400; Vik III: G 76, 215, 225; Vik IV: G 423). The combination of spear and shield (Mer I: G 20, 429, 1040, 1065) and spear and seax or one-edged sword (Mer II: G 304, 998) also occurred in the Merovingian Period. The Viking Age graves at Luistari contained also swords (Vik I: G 299 ?; Vik IV: G 15; FP: G 445 ?), axes (Vik III: G 480; Vik IV: G 385) and arrowheads (Vik I: G 120) together with spearheads, as well as the combinations of axe and knife (Vik IV: G 302), axe and arrowheads (Vik IV: G 670), and knife and arrowhead (Vik IV: G 544).

During the last stage of the Viking Age the traditional combinations of weapons disappeared completely. In addition to three spearheads found singly, the graves of this stage have revealed ten different combinations. Alongside the above-mentioned, there was the sword and the shield (G 17), perhaps the sword and the knife (G 516b), the spear, sword and knife (G 208), and two spears and three knives (G 349). Two graves of the Final Period (404,

1010) also contained a hitherto new combination, two axes of different size.

Two combinations of three weapons date from the Merovingian Period, two spears and a seax from grave 317 and a spear, a shield and a seax from grave 378. There are three Viking Period cases of two spears and knife or knives (G 135, 140, 349) and the combination of a spear, a sword and a knife (G 283, 790, 208), but only one case of two spears and a seax (G 900), two



Fig. 38. Grave 751 with two spearheads, N view.

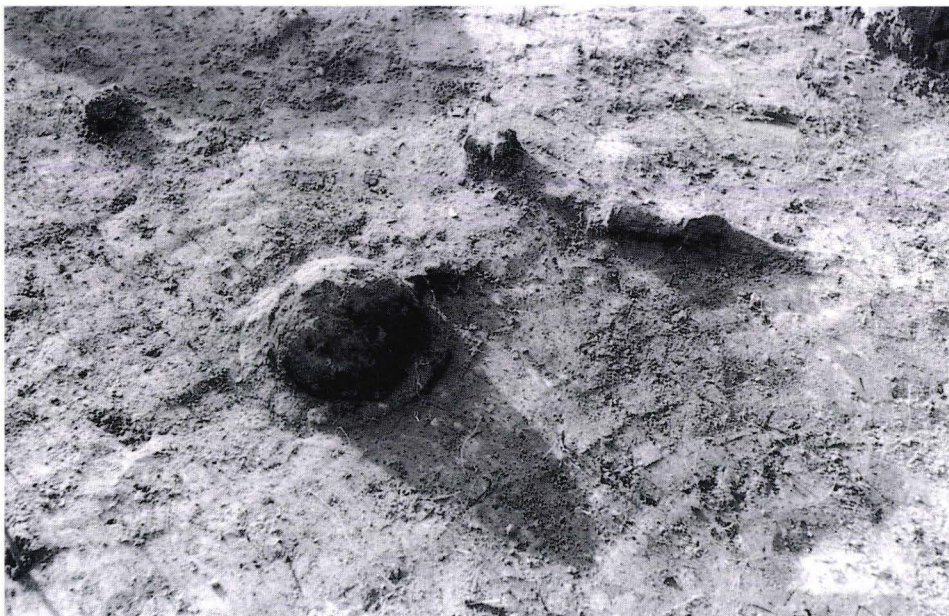


Fig. 39. Shield buckle, spearhead and rivets in grave 1040, E view.

spears and an arrow (G 288), and two knives and arrows (G 544).

Three combinations of four weapons date from the Merovingian Period, all of them different. Grave 380 contained two spears, a shield and a sceax, grave 269 contained two spears, a shield and a knife, and grave 462 revealed a spear, a shield, a sword and a seax. There are four Viking Period combinations of four weapons. Two graves (844, 901) contained two spears, a sword and a seax, one (G 740) had two spears, a sword and a knife, and one (G 68) revealed three spears and a knife.

Only one Merovingian Period grave (52) contained five weapons, viz. two spears, a shield, a sword and a seax, but there were three Viking Age graves with five weapons, viz. nos. 90, 281a and 348. Instead of a shield, these graves contained a knife; grave 348 had two knives in addition to a seax. The predominance of the spears is reflected by the fact that they are found in almost all combinations and in 83% of all graves containing weapons. Twenty-six males were buried with two spears and one with three (in the calculations a shaft ring is regarded as representing a spear and an identifiable fragment of a sword is taken as a sword).

Spearhead types

Of the Merovingian Period spearhead types, the variants of the Finnish angon are mostly found in graves of the first group at Luistari (Mer I, cf. LUISTARI I 42–43, LUISTARI II 173). Variant b occurred three times as the only spearhead (G 20, 301, 429) and once in connection with a socketed spearhead (G 52). Two other pairs of spearheads contained a large-bladed angon as one of the spears. In grave 269 it was paired with a dagger-bladed point and in grave 380 with a socketed spearhead resembling the Vendel type. Two spearheads, which are intermediate forms between variant b and the large-bladed angon (LUISTARI II 21), were the only spearheads found in graves 378 and 1065. The only find from grave 337 was a short-bladed javelin point (LUISTARI II 21–22),

and the spear in grave 1040 had a short, socketed and wide-bladed point. All in all, the male graves of this stage contained only three socketed spearheads, but nine tanged ones. All the socketed specimens are of different types, while the tanged spearheads are variants of the angon.

The most common spearhead type of the second Luistari group of the Merovingian period (Mer II) was a tapering-bladed tanged point (LUISTARI II 22–23). In



Fig. 40. Grave 462 from above.

six cases (G 33, 304, 331, 353, 462, 730) it was the only spearhead in the grave and there was a pair of them in grave 329. The other spearhead pair of this stage included a tapering-bladed socketed spearhead together with a short-bladed javelin point (G 317), which was also found once by itself in a grave of this stage (G 338). Other singly occurring points were a Finnish angon (G 998), a dagger-bladed point (G 419) and a socketed spearhead with a fullered blade (G 315, LUISTARI II 24–25).

If we include the pair of spearheads (a short-bladed javelin point and a socketed spearhead with tapering blade) in grave 333, the burial of a child, there are three socketed and 13 tanged spearheads in this group at Luistari. Accordingly, throughout the Merovingian Period spears were generally fitted with tanged points and only exceptionally with socketed points. The most common spearheads in Finland at the time, the angons and the tapering-bladed tanged points were also the most common ones at Luistari.

During the earliest stage of the Viking Age (Vik I) tanged spearheads were still in use, and the long-bladed tanged point was introduced (LUISTARI II 30–31). This type was found singly in graves 795 and 825, in a pair in grave 140, together with a variant of type E in grave 288 and together with a short A-E variant and a small spearhead with accentuated junction (LUISTARI II 31–32) in grave 68. Moreover, a tanged tapering-bladed point was also found together with small E-type variant in grave 901, which contained a sword. Of the 19 graves with weapons of the Viking I stage, six contained tanged spearheads.

The new custom, however, had come to Luistari, and it was expressed in the considerable popularity of the twin spearheads and the use of the E-type point, common to the Nordic countries (Petersen 1919 26–28). As many as nine Viking I graves at Luistari contained two spearheads, and in five of them the pair consists of socketed narrow-bladed points, i.e. type E and/or its variants (G 51, 145, 751, 822, 900). In three graves (40, 165, 292) the only spear had an E-type point. There were also four graves (45, 120, 295b, 299) in which only a section of the spear haft was found with a bronze ring around it. Also in these the missing spearhead was most probably of type E, for in most cases in which the spearhead and ring were in place the former was of type E (G 68 ?, 90, 145, 348, 740, 790, 844, 901; LUISTARI II 36–37). The socketed spearhead of grave 830 (24740:142) was considerably more solid than the others, mainly resembling Petersen's type A (1919 23), although it was no pure example of the type.

There was clearly a change in favour of the socketed spearheads during the oldest stage of the Viking Age. The seven tanged spearheads are now matched by at least 18, possibly 22, socketed spearheads. Regardless of the hafting technique, all these spears have long, narrow blades, giving the weaponry a highly uniform appearance.

This uniformity grew during the next stage (Vik II). Of the 11 spearheads occurring singly (G 75, 80, 100, 281b, 282, 283, 289, 318, 323, 735, 790), only one (18000:3215, G 283) was of some other type than type

E, and also its blade lacked basal angles. Of the eight pairs of spears (G 90, 135, 281a, 325, 348, 400, 740, 844), seven were fitted with variants of the type E spearhead with the pair always consisting of two spearheads of different length. In only one pair was one of the spearheads a specimen with basal angles resembling type F (G 740). Only the shaft ring was recovered from two graves (320, 845). Although the spearheads vary in size, the material as a whole is strikingly uniform.

The situation changed in the late 10th century. The E-type spearheads fall out of use, although individual specimens may occur as late as the Viking III stage (G 471). These usually have a ridged blade, a narrow tip and an accentuated part at the junction of the socket and the blade. This variant developed into the long-socketed spearhead with accentuated junction (LUISTARI II 31–32, fig. 9:8,9). The most impressive example of this type was discovered in grave 480 (22346:378).

There was a pair of accentuated spearheads in grave 76 and an accentuated spearhead was found together with a K-type point in grave 225. The third pair of this stage is formed by G and M -type spearheads. The five accentuated spearheads of stage V III are a narrow-bladed continuation of the Early Viking Age tradition, while types G, K and M with basal angles and wide blades point to later developments (LUISTARI II 31–35).

Until now the pairs of spearheads had been almost as common in Viking Age graves as spears occurring individually (20 pairs – 19 individual specimens and 6 rings), but there are only two pairs from the 11th century graves at Luistari, both of which consist of two silver-ornamented G-type points (G 349, 423; Lehtosalo-Hilander 1985 22–24, 31–32). A silver-ornamented G-type spearhead was found as a single specimen in grave 407 (18000:4629) and an undecorated specimen with a rounded base was found in grave 1005 (25480:174). A M-type point was the only spearhead in two graves (15, 208), as was a knife-shaped point in two burials (385, 666 [fragments 23183:594, 610], cf. LUISTARI II 32–36).

There are only two spear-bearing graves from stage FP. Grave 381 contained an H-type spearhead (LUISTARI II 35) and grave 445 revealed a rhomboid-bladed point (22346:131). The dramatic decrease in the number of spearheads is reflected by the fact that the E-type spearheads and their variants outnumber all Late Viking Age spearhead types four to one.

Axes and arrowheads

Axes and arrowheads in graves are also a phenomenon of the Late Viking Age. The oldest graves containing axes (G 480, 22346:376; G 745, 23607:515) date from the close of the 10th century, but wide-bladed battle-axes do not appear until after the year 1000 (G 385, 18000:4358; G 580, 23183:327). Alongside them there are also bearded axes and in one case a straight-sided Scandinavian axe. The list of all axes from Luistari is completed by a small bearded axe from grave 35, a female burial, and a miniature axe (22346:464) discussed in connection with chil-

dren's graves containing weapons. There are no more than a dozen axes, nevertheless amounting to over half of all axes found at Eura (LUISTARI II 51–54). Axes were rarely deposited in graves there.

The same concerns the arrowheads (LUISTARI II 40–41), although they were discovered by surprise in two impressive chamber-construction graves from the close of the Viking Age. Grave 544 contained two arrows (23183:153a,b), and no. 670 possibly had as many as four (23183:641,645–647,661,666,667), but they were so fragmentary that their precise number is uncertain. The fact that they were found in grave 670, one of the most impressive in the whole cemetery, suggests that attitudes regarding hunting changed around this time. Could the hunting of fur animals have reached such proportions that it engendered its own upper class that was independent of the soil? These graves lack objects pointing to cultivation or animal husbandry.

Graves containing swords

Only two of the graves with swords at Luistari (nos. 17 and 510) did not contain a spear, and even one of those, grave 17, was in such disturbed condition that it could well have contained a spear (at least two stray finds of point fragments of Viking Age spearheads have been found at Luistari, LUISTARI II 36). Five sword-bearing graves contained a pair of spears, and they were among the best-furnished graves in the whole cemetery. They are presented above in connection with the descriptions of the graves, and it will suffice here to give only a brief list of their main finds. The graves are listed here in chronological order.

1. Grave 52. Date: Older phase of the Merovingian Period.

Weapons: hiltless sword, Finnish angon, socketed spearhead with a narrow rhomboid blade, seax with a curving point, round-topped shield boss

Ornaments: spiral ring with a central plate

Other objects: bit ring

The grave was destroyed when graves 13, 17 and 23 were dug (LUISTARI I 84–85, Pl. 20:52:1–6; LUISTARI II 13, 17–21, 24, 41, 122, 125–126, 63–64).

2. Grave 304. Date: Later phase of the Merovingian Period

Weapons: large one-edged sword (see Jørgensen 1992 30 fig. 4), tapering-bladed tanged spearhead

Ornaments: two spiral finger-rings of bronze, one of them with a ridged middle shield (variant of group II:1a; there is an error in lists in LUISTARI II 122)

Other objects: iron belt-buckle, tang fragment of a knife

Grave preserved intact (LUISTARI I 208–209, Pl. 81:304:1–6; LUISTARI II 18, 22–23, 122–125, 149).



Fig. 41. Grave 480, ESE view.

3. Grave 462. Date: Later phase of the Merovingian Period

Weapons: iron parts of a sword hilt, tapering-bladed tanged spearhead, straight-backed seax, round-topped shield boss.

Ornaments: iron shepherd's crook pin, bronze spiral ring.

The foot end of the grave was destroyed when graves 436, 448, 457 and 483 were laid, in which connection the sword blade was apparently torn out of the grave (see p. 26, Pl. 5).

4. Grave 901. Date: early 9th c.

Weapons: Petersen H-type sword, tapering-bladed tanged spearhead, small variant of an E-type spearhead, shaft ring, narrow-bladed seax.

Ornaments: penannular brooch with pegs, spiral finger-ring with a middle shield

Other objects: two spiral ornaments.

Grave preserved intact (p. 115–116, Pl. 45)



Fig. 42. Purse mount, sword fragment and spear-head in grave 790, NE view.



Fig. 43. Finds in grave 901, from above.

5. Grave 299. Date: 9th c.

Weapons: Sword blade fragments, shaft ring containing a piece of a spear shaft of ash.

Ornaments: two finger-rings, one spiral ring with a middle shield, the other a spiral ring of flat-convex section

Other objects: an oval fire-steel, a rod-like fire-steel (?), spiral ornaments.

The grave had probably been looted and its SE end was destroyed in drainage works in the field at the site (LUISTARI I 15, 204–205, Pl. 80; LUISTARI II 17, 36–37, 122–123, 72–73, 165–167).

6. Grave 283. Date: close of 9th c. – ca. AD 900

Weapons: Petersen X sword, long-socketed spearhead with a wide tapering oval blade, shaft ring, and knife.

Ornaments: facet-knobbed penannular brooch, bronze ring with a middle shield.

Tools and implements: sickle, shears

Other objects: curving fire-steel, spiral ornaments.

On top of the grave were two later pits and a field ditch crosses its southeasternmost part, but the bottom layers were only slightly disturbed (LUISTARI I 189–191, Pl. 74–75; LUISTARI II 13–14, 32, 36–37, 46, 102, 122–125, 54, 57–58, 72–73, 166–169).

7. Grave 348. Date: Second quarter of 10th c. (coin date LUISTARI I 45, 307).

Weapons: Petersen X-type sword, decorated spearhead Petersen E, spearhead A-E, shaft ring, narrow-bladed seax, knife.

Ornaments: Gilt and silvered ornamental pin decorated in the Borre style, spiral finger-ring with a middle shield

Tools and implements: sickle, shears, knife

Other objects: pouch with bronze mounts containing pieces of flint, leather pouch containing 8 weights and three intact and three fragmentary Arabian silver coins,

a fire-steel with a bronze handle, a pendant whetstone, an iron lock, braided silver bands, spiral ornaments, bronze rings, two clay vessels, remains of a dog (?).

Grave 347 was laid directly above this grave, but since the former was considerably shallower, this grave survived intact (LUISTARI I 237–240, Pl. 95–99; LUISTARI II 13–14, 25–26, 36–37, 18–19, 46–47, 109–111, 122–125, 54–58, 65–74, 62, 166–171, 77–80).

8. Grave 790. Date: First half of 10th c.

Weapons: Sword blade tip, Petersen E spearhead, spear shaft ring

Tools and implements: Small knife

Other objects: Pouch mount

This grave was destroyed when grave 775 was originally laid, but it had probably been looted previously (p. 89–90, Pl. 32).

9. Grave 281a. Date: First half of 10th c. ? (Two radiocarbon dates from the grave-chamber: Hel-3935 1360±80 BP, 627–771 cal AD, and Hel-4100 1260±80 BP, 700–871 cal AD).

Weapons: Petersen X sword, 2 (3) Petersen E spearheads, seax, knife

Ornaments: funnel-ended penannular brooch, finger-ring with a middle shield

Tools and implements: scythe-blade, shears

Other objects: spiral ornaments, spiral rings, remains of a dog

Grave 281 was a burial of two males. Most of the grave goods probably belonged to the same person as the sword (LUISTARI I 186–188, Pl. 69–71; LUISTARI II 13–14, 26–30, 18–19, 45, 103–105, 123–125, 54–58, 165–169).

10. Grave 740. Date: first half of 10th c. (the grave contained two fragments of an Oriental coin, but it cannot be dated).

Weapons: Petersen H sword, variant of a Petersen E spearhead, Petersen F spearhead, knife

Ornaments: silver-plated penannular brooch with pegs, bronze ring with a middle shield

Tools and implements: Shears

Other objects: Lyre-shaped fire-steel, flint pieces, spiral ornament, bronze ring, fragments of a silver coin, clay vessel, stone disc from the fill

Graves 731–733 and 739, as well as a couple of refuse pits, were dug above this grave, but its bottom layer was almost completely intact (p. 75–76, Pl. 25).

11. Grave 844. Date: First half of 10th c.

Weapons: Petersen H sword, decorated Petersen E spearhead, smooth-socketed Petersen E spearhead, knife

Ornaments: silver-plated penannular brooch with pegs, bronze ring with a middle shield, pewter pendant?

Tools and implements: scythe-blade, shear fragments?

Other objects: fire-steel with a bronze handle, belt parts



Fig. 44. Finds in grave 740, W view.

A large refuse pit and grave 829 had been dug above this grave, and it was to some degree disturbed (p. 103–104, Pl. 38–39).

12. Grave 90. Date: Mid-10th c. (coin date, LUISTARI I 45, 306)

Weapons: Petersen Y sword. Petersen E spearhead, variant of a Petersen E spearhead, shaft ring, seax, knife

Ornaments: facet-knobbed penannular brooch, two finger-rings with a middle shield

Tools and implements: scythe, shears

Other objects: pouch containing two weights and a fragment of an Arabian coin, fire-steel with a bronze handle, pieces of flint, spiral ornaments, potsherds

Although the ends of this grave were destroyed when graves 86 and 88 were dug, it was almost completely intact (LUISTARI I 109–111, Pl. 37–39; LUISTARI II 13–15, 25–29, 36–37, 18–19, 46, 102, 122–126, 54–58, 67–75, 165–170, 78, 83).

13. Grave 510. Date: Second half of 10th c.

Weapons: Petersen S sword with silver decoration on the hilt

Ornaments: finger ring with double-spiral ends

Other objects: belt parts, fragments of spiral ornaments, spiral rings, remains of a bronze vessel, potsherds

Graves 503, 506 and 525 were laid on top of this grave, and the foot end was particularly disturbed (p. 38–39, Pl. 10).



Fig. 45. Spearheads and bit in grave 423, NW view.

14. Grave 17. Date: ca. AD 1000

Weapons: Petersen S-T sword with silver decoration on the hilt, shield mounts

Ornaments: finger-ring with a middle shield

Tools and implements: shears

Other objects: knife-sheath fragments

This grave was badly destroyed in the digging of sewage ditch and its fill contained a great number of finds (LUISTARI I 60–61, Pl. 5; LUISTARI II 15–16, 41–42, 123, 126, 57–58, 49–50).

15. Grave 15. Date: ca. AD 1000 (coin date, LUISTARI I 45, 305).

Weapons: Petersen Y sword, variant of a Petersen M spearhead

Ornaments: funnel-ended penannular brooch, spiral finger-ring

Tools and implements: scythe-blade, shears

Other objects: two clay vessels, an English silver coin, a spiral ring

This grave was partly destroyed when the later graves 10, 16, 19 and 36 were dug (LUISTARI I 58–59, Pl. 4; LUISTARI II 13–15, 34–35, 103–105, 122, 54–58, 77–79, 68).

16. Grave 208. Date: mid.11th c. (coin date, LUISTARI I 45, 306–307)

Weapons: Petersen Y sword, variant of a Petersen M spearhead, knife

Ornaments: penannular brooch with poppy-shaped knobs, spiral ring

Tools and implements: shears

Other objects: pouch containing a weight, beads and fragments of silver coins, a lyre-shaped fire-steel, spiral ornaments and two spiral rings from near the foot of the body, clay vessel, remains of a dog

One side of the grave was destroyed when grave 210 was dug, and the fragments of the sword were discovered in the fill of grave 210 (LUISTARI I 163–166, Pl.



Fig. 46. Sword from grave 510 (22346:579).

62–63; LUISTARI II 13–15, 34–35, 45–48, 105, 122, 57–58, 67–73, 166–168, 78, 81–83).

17. Grave 516A. Sword hilt knob (NM 22346:655) at the bottom of the grave (p. 40, Pl. 12:516:1). The original grave with sword totally damaged.
18. Grave 445. Sword tip fragment (NM 22346:123) in the fill (p. 22–23, Pl. 3:445:3).
19. Grave 670. Sword blade fragments (NM 23183:697) at the bottom of the grave (p. 64–65, Pl. 23:670:13–16).
20. Surface layer at the north end of the cemetery. Tip fragment of a sword blade, length 490 mm, width 42 mm. (NM 22436:1050).

Luistari thus had originally at least seventeen graves containing swords and possibly several others. They appear to fall into four groups. Graves 52, 304 and 462 contained Merovingian Period spearheads, graves 15 and 208 contained M-type spearheads, graves 17, 510 and 516 contained no spearheads whatsoever, and the remainder had spearheads resembling type E. Grave 299, from which only a shaft ring and a section of the shaft were found belongs to the latter group (see above p. 187). Grave 283, also containing a ring, belongs to this group, although the spearhead found in it is of an exceptional form with no Finnish parallels (LUISTARI II 32).

Comparing this classification with the location of the graves in the cemetery, it can be noted that the Merovingian Period graves, graves containing only swords, and graves with type M spearheads were all in the northern part of the cemetery, while the graves with type E spearheads were in the south part, except for grave 348, which was at the very west end. The above three groups are in zone I of the cemetery as defined in the study LUISTARI I (pp. 42–47), and the latest group is in zones III and IV. This means that at least the graves with swords confirm the cemetery chronology that I arrived at after the first excavations. As a whole, the oldest and youngest graves of the cemetery are in the north end of the area, with the Early Viking Age graves situated southwest of them. The use of the north end, however, was not resumed at once. Before and after AD 1000, there were burials at both ends of the cemetery, although this fact is not reflected by the graves containing weapons.

After the first four excavation seasons it appeared that most of the later Merovingian Period and Viking II stage graves had been investigated (LUISTARI III 53–55). This, however, was not the case. Possibly 11–13 more graves from the Luistari Mer II period were found (Nos. 462, 730, 998, 1000, 1015, 1019 ?, 1027, 1031, 1034, 1042 ?, 1062, 1064, 1201), and Viking II stage increased by five new weapon-bearing graves (Nos. 735, 740, 790, 844, 845), among others. These include three graves with swords, further underlining the impressive array of male

weaponry during the first half of the 10th century. As many as seven graves with swords (90, 281, 283, 438, 740, 790, 844) could be dated to this stage at Luistari, and four or five more could be found in other cemeteries in Eura (Osmanmäki 7/1912, Pappilanmäki 1/1934, 4/1939, Yli-Nuoranne 1/1934, perhaps Yli-Nuoranne 1/1979). This means that in Eura a man with a sword was buried approximately once every four or five years during the first half of the 10th century. At least as many swords, found as stray finds or discovered occasionally and dated to the same period, have been found in Eura (KM 1120:1, 1822:1,2, 9164: 1, 2, 3 from Pappilanmäki; 1907:15, 4448:3, 4633:165 from Osmanmäki; 2706:1, 3036:14 from Lauhianmäki; 2361 from Vhä-Vahe; TM 327 and 8203 from Eura). Thus, sword-bearing men were not uncommon in Eura around the year 900.

The 10th century clearly appears to have been a time of active contacts for the people of Luistari. In both weaponry and dress the men of the locality followed the contemporary fashions of the Baltic regions. This can only be interpreted through the assumption that these fashions, held in common with the Scandinavians, were adopted on joint expeditions of trade and plunder (Lehtosalo-Hilander 1990 66–70, 1999 10–11). However, men of Eura were also buried with shears and scythes, which means that by the time their funeral feasts were held they had become respected members of their farming community.

From the close of the same century are the silver-decorated swords (graves 17 and 510), and the graves from c. AD 1000 containing weights (Nos. 9, 207, 500, 840) show that trade was still important to the community. Although the weaponry of the traders was no longer so pronounced, there are greater numbers of pouches and weights. There was at least one man with a sword buried with a pouch in the mid-11th century (H 208), but during the late stages of the pagan burial rite axes appear to take the place of swords as status weapons.



Fig. 47. Axe from grave 670 (23183:655).

MATERIAL ON DRESS FROM THE MALE GRAVES

Merovingian Period

There are 33 Merovingian Period graves at Luistari that are identified as male burials. Twenty-eight of these contained items associated with dress. The early Merovingian Period phase at Luistari, reflected by the SW-NE oriented graves of the northeast part (LUISTARI I 42–43), is represented by 15 graves; the later phase is represented by 13 graves. Most of the graves of the latter stage were intact upon being found.

The most common object of dress of both phases was the cloak clasp. Ten were found from both periods; there is also a fragment from the older stage that may be from an iron pin (18000:4295, grave 380). The material displays a clear difference in the sense that where there appear to be eight iron shepherd's crook pins (18000:1221, 3095, 4284, 26695:8, 29–31, 36, 56 from graves 20, 269, 378, 1060, 1063, 1065 and 1075, and a stray find 18000:886), one simple hook-ended pin (18000:148, grave 301) and two large ring-head pins (18000:1586, grave 53 and 22346:166, grave 450) from the earlier stage, the later stage includes brooches alongside the pins. Although the shepherd's crook pins remained in use – being found in graves 33, 338, 419, 462 and 730 (18000:1407, 3787, 20189:214, 22346:228, 23607:249) – there were two graves (300, 353) in which the cloak was affixed with an iron brooch with band-shaped arch and hinges (18000:3478, 4015), another two (317, 331) in which an iron penannular brooch (18000:3577, 3750) was used for this purpose, and one (329) with a cart-wheel-shaped brooch of bronze (18000:3737).

Here, too, the later stage differs from the older one. In all the preserved graves of the older stage, the pin was at the right shoulder, but the cloak appears to have been affixed under the right armpit in the later graves with brooches, nos. 317 and 329. A change appears to have taken place in the manner of wearing the cloak towards the close of the Merovingian Period. Being previously affixed at the right shoulder, it covered the whole body with only the right arm protruding from the opening. Now affixed beneath the right arm, it may also have been folded double to prevent it from hanging too low. The right arm would have more room to move and the cloak, folded shorter, may have prevented movement less.

Belt parts are found in graves of both stages. Five of the graves of the older stage contained these objects: one contained a buckle and an end-mount (G 495, 18000:1467, 1469), three contained only a buckle (G 20, 18000:1223; G 378, 18000:4286; G 380, 18000:4297, 4298), and one revealed only an end-mount (G 53, 18000:1587). Graves 315 and 329 of the later stage both contained a buckle and end-mounts (18000:3567, 3563, 3736, 3735),

while only a buckle was found in nos. 304, 317 and 419 (18000:3511, 3579; 20189:215), and an end-mount in no. 730 (23607:432). All the belt-buckles of the older stage have an oval rim, while in the graves of the later stage only no. 419 had an oval iron buckle with a long mount. The other buckles of this stage are trapezoid or semi-oval, and two (in graves 304, H 317) lack a mount for affixing them (LUISTARI II 148–149).

Although the buckles vary, the end-mounts appear to have been similar during both stages. The tongue-like



Fig. 48. Grave 317, NW view. The large iron penannular brooch (18000:3577) is situated low on the right side.

end-mounts in grave 53 of the older stage and in nos. 315 and 730 of the later stage are of the same form. The two tapering end-mounts from grave 329 are iron versions of the design realized in bronze in the older Viking Age end-mounts for belts (see LUISTARI II 149, 152).

Finger-rings are the only actual ornaments found in the Merovingian Period male graves. There were seven from both stages; two from grave 304 (18000:3508,3512) and one from each of the others. Most of the rings are simple spiral rings. In graves 378, 380, 1040 and 1060 they are of flat-convex rod (18000:4285,4299; 25480:331; 26695:9–10), while in graves 270 and 1065 they are of slightly triangular rod (18000:3100; 26695:39). The only male ring of this stage with a middle shield was found in grave 52 (18000:1573).

One of the rings from grave 304 (18000:3508), of the later stage, was probably of middle-plate design and made of a centrally ridged plate. It was, however, in such poor condition that its original design cannot be definitely ascertained. The other ring (18000:3512) from this grave is a spiral ring of flat-convex rod. It is the only ring of this type, for the rings from graves 315, 317, 331, 338 and 462 (18000:3568,3578,3748,3788; 22346:227) are of triangular rod, while the ring from grave 1000 (25480:158) was made of flat rod 9 mm wide. It thus seems that although ring section alone does not indicate a date, these details as a whole will reflect a difference between the older and later stages of the Merovingian Period: flat-convex sections dominate during the older stage, the triangular ones at the end of the Merovingian Period.

Viking I Phase

Seven cloak or mantle brooches were found in the 21 male graves that can be dated to the oldest stage of the Viking Age, i.e. a brooch in every third grave. Grave 140 contained an iron brooch with rolled ends (18000:2447), but the other brooches are of bronze. Graves 288, 795 and 900 contained each a brooch with faceted knobs (18000:3287; 24388:382; 25480:61), and there were brooches with peg-ornamented knobs in graves 40, 751 and 901 (18000:1484; 24388:18; 25480:79). The brooches are quite large, only the brooches with faceted knobs from graves 288 and 795 are under 50 mm in diameter, the others vary between 64 and 75 mm in diameter. The largest specimen is the peg-ornamented brooch from grave 40 (LUISTARI II 100–103).

In this grave the deceased male was laid on his right side, and the brooch was found near the waist. In grave 140, the brooch was almost in the middle of the chest area, while in no. 288 it was on the right side of the chest. In grave 751 it was found near the right shoulder, and in grave 795 it was on the left side of the waist. Grave 900 contained a brooch with faceted knobs also on the ring. It was laid on the stomach of the body. In grave 901 a knob-ornamented brooch was placed on the right side slightly above the waist. With regard to their locations the brooches in graves 288 and 751 could have clasped the cloak at the right shoulder, but in graves 40, 900 and 901 the cloak was probably affixed at the waist on the



Fig. 49. Penannular brooch and knife in grave 901 from N. The brooch is upside-down.

right side, and in grave 795 it was fastened beneath the left armpit near the waist (a left-handed man?). The man buried in grave 140 was possibly dressed with the cloak covering both shoulders, or the brooch was affixed to the neck of a smock.

Metal belt parts were found in four graves (68, 145, 195, 900) of which no. 900 was the only one also to contain a cloak brooch. This would suggest that since the cloak covered most of the body, a belt with mounts was not needed. On the other hand, the belts from graves 68 and 195 only had a simple buckle and a long end-mount (only the fragment of the end-mount survived of the belt in grave 145), which means that they were not luxury items (see LUISTARI II 149, 152, 154–155). Perhaps the males were divided among those who wore cloaks and those wearing smock, with correspondingly different status. Grave 145 contained the tools of a carpenter, and no. 195 contained no weapons whatsoever.

The belt from grave 900 differs from the others in that its buckle (25480:69) included a long mount and its one end was apparently bifurcated. In addition to the end-mounts (25480:62), the forks included round struck pieces of thin metal plate, of which only two fragmentary specimens survive. There were these round mounts at least as continuations of the buckle and the end-mounts, but it is not clear whether or not the whole 18mm-wide leather belt was decorated with them. In any case, this belt, discovered in a grave containing a brooch, was more impressive than others from the same period.

Spiral ornaments were not used much in male costume during this period. In some cases the cloak had round plaited ornaments at the corners (G 40, 18000:1478,1479, 1481; G 120, 18000:2312,2314,2315; G 292, 18000:3365, 3369; G 901, 25480:76,80), and in some possibly a cross-shaped design on the shoulders (G 120, 18000:2310; G 299, 18000:3467; LUISTARI II 165–166). Grave 795 contained a bronze spiral threaded on a leather thong

(24388:385), and an ornamental design consisting of a long spiral followed by two parallel spirals (24388:387). They may be from the straps of tools or implements, for they were found near the waist of the body (cf. LUISTARI I Pl. 38:90:10 and LUISTARI II 170). An end-ornament possibly from leggings was found only in grave 40 (18000:1482), but many of the graves of this stage (nos. 40, 165, 195, 288, 292, 299, 830, 895 and 900) appear to have included bronze rings resembling finger-rings, which were found near the feet. Except for the ring from grave 288, these rings are 11–16 mm in diameter, and could thus have hardly been worn by men on their fingers. These objects may have been the decorations of leggings or footwear (LUISTARI II 166–168).

The men's graves also contained larger rings, whose locations and the finger bones often accompanying them show them to have been actual finger-rings. Most of these rings have a wide middle plate; the ridged type (II:1a, LUISTARI II 122–123) was found in graves 45, 195, 288 and 822, and smooth-plated specimens mostly bearing engravings were found in graves 140, 145, 292, 299, 795 and 901. Six graves contained a simple spiral ring. In graves 51, 292, 825 and 895 there were digital bones within the ring, while the rings from graves 165 and 900 were fragmentary. The latter objects and the ring from grave 292 were of triangular section, while the remained were of flat-convex rod. The preserved rings had between three and five turns.

In addition to fragments of a ring with a middle shield, the finds from grave 45 included a twisted piece of rod from a finger-ring with double-spiral ends (LUISTARI II 127). This grave may have originally contained two rings. There may also have been two rings in graves 292 (18000:3359,3360) and 825 (24740:114–115 and 24740:113,119–120), one an ordinary spiral ring and the other a ring with a middle shield. Grave 120 may have contained a rather exceptional type of ring. The fill of an

unfurnished grave overlaying grave 120 contained an open ring made of wide flat-convex rod of bronze (group IV, LUISTARI II 123, 127).

The smallest finger-rings worn by men appear to have been ca. 17 mm in diameter, and the largest 23 mm. The smallest were all ordinary spiral rings, while the smallest ring with a middle shield (24388:383, G 795) measured 18 mm in diameter, and the diameter of the others varied from 19 to 23 mm.

Viking II Phase

There are 24 male graves of the second stage (V II) of the Viking Age that are clearly associated with each other on the basis of their rich and uniform assemblages. Because grave 281 contained two male bodies, the number of buried males is 25. Eleven were fitted with a brooch or brooches, and three wore an ornamental pin, which means that more than one man out of two had a metal clasp for his cloak or mantle. Three of the graves (nos. 90, 283, 735) contained a brooch with faceted knobs (18000:2047,3227, 23607:447); four (150, 400, 740, 844) contained a peg-ornamented brooch, or brooches (18000:2530,2531,4481, 23607:481, 24740:248,258); and four other graves (100,289, 281a, 303) contained funnel-knobbed brooches (18000:2167, 3176,3302,3496). The peg-ornamented brooches were the largest group among these; there were two apiece in graves 150 and 844. One of the brooches was apparently worn at the shoulder, while the other was beneath the armpit near the waist. At least in grave 844, the brooches were affixed to similar fabric. This could have been a large cloak affixed with a smaller brooch at the shoulder and larger, silver-decorated, brooch beneath the right armpit. If the brooches in grave 150, which was partly destroyed, were in their original locations, the larger one would have been to the left of the neck, and the smaller one on the left side of the



Fig. 50. Strap tags and a mount in grave 900.



Fig. 51. Finds in grave 844, N view.

Fig. 52. Brooches, firesteel and knife in grave 844, N view. The smaller brooch is still covered by organic material.

body (LUISTARI I 138–140). The cloak would thus have been affixed on the opposite side than in grave 844.

In the graves containing only one brooch this object was discovered in four cases on the right side (graves 90, 100, 289, 735; LUISTARI I 109, 117–118, 195), once near the right shoulder (grave 400, LUISTARI I 276–277), twice on the left side (283 on the chest, 303 at the hip; LUISTARI I 189–190, 208), and twice at the waist in such a location that it was unclear on which side it had originally been. In grave 281a the deceased was laid on the right side, while in no. 740 a very small amount of bones was preserved. In graves 135, 282 and 348 the cloak was affixed with a pin instead of a brooch. In nos. 135 and 282, the pin was on the right side at the waist; in grave 348 the pin was at this height on the left side (LUISTARI I 130, 188–189, 238).

A notable feature of the brooches of this stage is their large size. The smallest brooch, measuring 58 x 54 mm, was found in grave 283. All the others are over 60 mm in diameter, the largest measuring 90 mm (G 90) and 94 mm (G 281a). The latter had silver plates at the knobs, and in

the large brooches (diameter > 75 mm) from graves 740 and 784 there was a stamped silver plate on ring's top facet (Lehtosalo-Hilander 1990 67–70, fig. 7). The punching was done after the plate was attached because the stamps are visible on the upper facet of the ring. Many of these brooches have rich stamped decoration. The cloak brooches of this stage were both large and impressive.

The ornamental pin of iron from grave 282 is unassuming in appearance, but the Borre-style pins from graves 135 and 348 were over 20 cm long and richly decorated. The most impressive specimen was from grave 348. In this object, the bronze ring-end was both gilt and silver-plated (LUISTARI II 109–111; Lehtosalo-Hilander 1990 57–60, fig. 2). Attached to the blue cloak it must have made a striking impression.

Partly because of these large cloak clasps, more fabric remains have survived in the graves of this stage than in others. On the other hand, there were also spiral ornaments in male attire of this period, in connection with which traces of textiles have survived. There was decoration at least in the cloaks, belts, leggings and perhaps



Fig. 53. Ornamental pin (18000:2394) in grave 135 is beside the knife near the waist, NE view.

smocks and mittens (LUISTARI II 165–170). Owing to these details it is possible to distinguish the graves of this period from those of the early Viking Age. The same types of weapons and brooches appear, but the rich decoration of clothing is a feature specific to the first half of the 10th century. Also from this period are belts with tassels decorated with bronze spirals and most of the star-like ornaments of the cloaks.

There may have been spiral-decorated textile belts in eight graves of this period (no. 90, 100, 280, 281a, 325, 348, 400, 845; LUISTARI II 168–169; KM 24740:272,274,276–278 from grave 845), but only one (grave 75) contained the bronze end-mount of a leather belt (18000:1946). Moreover, there was only one (no. 844) that contained two strap-dividers and a mount attached to one of them (24740:245,246). This belt was also of leather, but apparently the tasselled spiral-ornamented belts and the textile belts in general were popular during this period. This fashion was short-lived, for spiral-ended tassels are no longer found in graves of the following stage.

Also in this Viking II period, finger-rings were the only ring-type ornaments worn by men. They appeared in 19 graves; only graves 80, 289, 303, 400 and 735 contained no finger-rings. Just as in the graves of the previous stage, some of the ring-like objects were found near the feet of the body (see graves 75, 90, 150, 281a, 282, 283, 303, 320, 323, 325, 348, 387, 740), suggesting that at least some of them were used to decorate the bands of footwear or leggings (LUISTARI II 167 Table 12). These ob-

jects were mostly simple spiral rings, and only in graves 90 and 348 was there a ring with a middle shield (18000:2056, 3909) and in grave 75 a ring with double-spiral ends (18000:1951) at the foot end. The rings in connection with which finger bones were found or which were near the hands generally had middle plates (LUISTARI II 125 Table 9). It was only in graves 318 and 325 that the only ring was an ordinary spiral ring (18000:3594,3708), and in graves 150 and 323 this type of ring was found along with the middle-shield type (18000:2528, 2504 and 18000:3635,3636).

The rings with middle shields that were clearly found on fingers in 15 graves are among the most impressive of their kind. At least nine of them had a wide and flat central part decorated with engravings or stamped designs (graves 90, 135, 280, 281a and b, 282, 320, 323; LUISTARI II 122–123, group II:1c, and grave 845, KM 24740:275), while in the others this part was undecorated or so corroded that the decoration can no longer be distinguished (graves 100, 150, 283, LUISTARI II 122, group II:1b; grave 740, KM 23607:476, grave 844, KM 24740:262). Only one of the rings (18000:3931 in grave 348) has a central plate with a ridge (group II:1a), which suggests that this type went out of use during the period concerned.

The silk garment decorated with braided silver bands from grave 348 is notable, but nevertheless an exception (LUISTARI II 171). The most common item of clothing for men was probably a woollen smock extending down to the knees and worn over long trousers. No distinct remains of trousers have been found, because organic materials have survived only in connection with bronze. The only possible spiral-ornamented garter ending, in connection with which interesting textile remains were preserved, was unfortunately found in a location that was hardly original. Preserved beneath the ornament was a piece of a tablet-woven band, under which was a piece of blue chevron twill (LUISTARI II 167). If this fragment had been discovered near the legs, like most other similar ornaments, it would suggest that the man had worn blue trousers or some other covering of the legs tied with the colourful tablet-woven bands.

There were remains of leather or fur in connection with some of the ornaments. The most distinct remains of this kind were found in grave 90 (LUISTARI I 109–111), where fur was preserved around a ring on the right hand and the bones of the hand. Since there was also fur between the left arm bent on the chest and the spiral ornament remaining underneath it, it appears possible that the man had worn fur mittens. Leather and not fabric was found in connection with the spiral ornaments found near the wrists (18000:2042,2052), suggesting that these ornaments were for the mittens.

Grave 90 also contained the remains of a tablet-woven tasselled belt (LUISTARI II 168–169). The belt was woven round with ten tablets and was worn double on the waist. The yarns of the ends formed the tassels, onto which a few thick spirals were threaded. Probably the other tasselled belts (from graves 100, 280, 281a, 325, 348, 400 and 845?) that are typical of this period, were

tablet-woven, although no distinct remains were found in any other graves,

In grave 90 the upper torso of the male was dressed in garments made of at least two different types of fabric. Although both fabrics are woollen twill, they can be distinguished, because in one wefts spun in different directions were used, i.e. four adjacent yarns were alternatively Z and S-spun (see 18000:2030, 2035,2045,2051). The spiral ornaments were sewed to this fabric, while in the textile found beneath a large penannular brooch (18000:2047), all the wefts were Z-spun. This suggests that the spiral ornamented garment was not a cloak but possibly a smock (cf. LUISTARI II 165). This is also suggested by a seam discovered beneath a spiral ornament located on top of a fire-steel. The fragment was upside-down upon being discovered, which means that the seam was facing upwards (LUISTARI I Pl. 38:90:10). The same fabric was found beneath the fire-steel; it had 10–11 S-spun warps and approximately 9 wefts per centimetre.

The fabric beneath the penannular brooch had 8-10 plied warps and 8 Z-spun wefts per centimetre, suggesting a looser bind than in the other cloth. A small fragment of the same cloth was also recovered near the fire-steel (18000: 2030), and it appears to have been very dark (dark blue?). If the garment decorated with spiral ornaments was a smock, these remains are probably from a cloak.

Fabric with alternately spun wefts has also been found in graves 280 (18000: 3133), 348 (18000:3938; on top of the fire-steel) and 844 (24740:253 on top of the fire-steel; 24740:258 in connection with the smaller brooch; 24740:258 on top of the ring; 24740:249–251 in connection with the large brooch). At least in the latter grave, the remains appear to be from a cloak attached on the right side with two brooches.

Fig. 54. Penannular brooch with poppy heads from grave 490 still covered by birch bark and textiles, from above.



Viking III Phase

During the latter half of the 10th century, the western part of the cemetery, the last place where graves were dug, began to fill up. There was room for very few graves in the southwesternmost corner, because of the many large stones in this area, and for some reason the local population did not want to expand the cemetery further south. Therefore, they began to make new burials in the north end of the area. The graves that can be dated to the Viking III stage, with reference to coins or other features, have been found in the largest area: in the southwesternmost part of the cemetery and also in the northeast part, in addition to a few graves overlaying other burials in the central part. There are approximately forty graves of this stage, but only 13 male burials form a distinct group.

The only male grave with large numbers of spiral ornaments is no. 480. It contained several round end-ornaments (22346:364,368,370,372,381), two rhomboid or cruciform ornaments with one arm shorter than the others (22346: 369,374), and two ornaments resembling halves of the so-called star-like ornaments of the former stage (22346:373,380, cf. LUISTARI I Pl. 35:75:2,3). In addition the grave contained individual spirals (22346: 361,363,366,371) and groups of spirals whose original nature can no longer be established (22346: 379,382). With the exception of one stray spiral ornament (22346:361), all these objects were found in the upper torso area of the body, with the largest ornaments evenly grouped left and right. Assuming all the ornaments to be from the same garments, the item of clothing could have been a cloak worn loosely over the shoulders, with only one long side bearing decoration. Unfortunately, the later graves 477 and 478, overlay the pelvis and hips of the body, which precludes further knowledge of how far towards the legs the rows of ornaments extended. At present, the row on the right side extends to approximately 50 cm from the shoulder and the left row to roughly 35 cm from the shoulder. It is also possible that this could have been a garment with decorated sleeves.

A grave of this stage, containing a large star-like ornament, is no. 840 in the south area. The ornament (24740:211) includes eight round parts along the edges. They are of similar construction as the ornaments in the previous stage

(LUISTARI II 156 fig. 43:12), but the central part is different. It has four spirals in the middle, surrounded by an indistinct zone of braiding from which the 16 spirals extend to the round parts. In addition to this ornament the grave contained only two different round ornaments (24740:187,195). The grave was badly disturbed, as the later grave 881 had been dug to overlay it. The star-like ornament was discovered at the very bottom of the grave, while the round ornaments were in the fill of grave 881.

Grave 510 contained two round ornaments (22346:568) similar to the larger one from grave 840 and a rhomboid ornament (22346:576) similar to the one from grave 480. The grave may also have contained a couple of round end ornaments (22346:575,577). There was also a round ornament in grave 76 (18000:1989), and possibly two rhomboid or cruciform ornaments in grave 225 (18000:2963,2967) resembling those of the former period (LUISTARI II 156 fig. 43:11). Only round end ornaments were found in graves 490 and 1275 (22346:448, 27177:55), and they were the most common ornaments, being also found in graves 76, 225 and 480 (NM 18000: 1992, 2962 two specimens, 2964 two specimens; NM 22346: 364, 372 and possibly 368, 370 and 381, which may be parts of larger ornaments). In fact, the round end ornaments are the only type of spiral ornament from the male graves at Luistari that is found in graves of all stages of the Viking Age (LUISTARI II 170). The tasselled spiral-ended belts on the other hand appear to be limited to Viking II, as they were no longer in use during the period in question.

This period did not introduce any new forms as such among the spiral ornaments, but there was a new way of using spirals. During the second half of the 10th century ornaments employing long spirals with sections pulled straight and crossing spirals appear in the material. The first ornaments made in this manner were small round designs with two crossing spirals in the centre (LUISTARI II 156 fig. 43:8). This technique developed to its utmost towards the end of the Viking Age in the hem-plate ornaments of women's aprons (e.g. Appelgren-Kivalo 1907 Pl. XV).

As mentioned above, tasselled spiral-ended belts were no longer used during Viking III. However, two graves of the period contained metal parts belonging to leather belts. Graves 225 and 510 contained a tapering end-mount (18000: 2965, 22346:583). Grave 225 did not contain any other metal parts of belts, while grave 510 revealed a round strap-divider with attachment mounts (22346: 565) and the rectangular attachment mount of a belt buckle with an iron pin (22346:581). Quite probably the bronze rim fragments (22346:528,555) from the surface layers of graves 505 and 509 are from this buckle (see Pl. 10:510:3).

An unfortunate stray find is relatively large floral-knobbed penannular brooch (22346:351) from the fill of

grave 479, overlaying grave 480. The fill also contained sherds of a clay vessel belonging to the latter grave. The narrow-based pin of the brooch (22346:936) was found in the fill of grave 510 a couple of metres southwest of the location of the brooch. This brooch resembles most closely the brooch from grave 10 (18000:1063, LUISTARI I Pl. I:10:3), but is of different size (42 x 42.5 mm), and it also differs from other brooches of the same type and of late date from women's and children's graves (LUISTARI II 106). A different date and function for this brooch thus appears to be possible. Because it cannot be conclusively associated with grave 480 any more than with grave 510, we can only consider the possibility in future that the small floral-knobbed brooches were preceded by a number of larger brooches that could also be used by men.

Another brooch type which is generally dated to as late as the 11th century but may have come into use in the period discussed here, i.e. towards the close of the 10th century, is the brooch with poppy-shaped ends (cf. Salmo 1956 57; Carlsson 1988 66, 73–74). Although grave 208, from which a brooch of this type had been previously discovered, is coin-dated to the middle of the 11th century (LUISTARI I 306–307, LUISTARI II 105), graves 490 and 528 may be several decades older. The poppy-knob brooches (22346:447,252) in connection with them are over 50 mm in diameter and have narrow pin bases, thus still exhibiting features of the Early Viking Age. It should be noted that all the penannular brooch types that came into use in Finland after the year 1000 have a kidney-shaped or trapezoid base of the pin (Salmo 1956, types 13–22, 25–26; Kivikoski 1973 figs. 692, 704–706, 1032–1033, 1035–1038, 1040–1044).

An iron penannular brooch with rolled ends (18000:2828) was discovered in grave 207. It appears to be exceptionally late in comparison with the other finds of iron penannular brooches (cf. Salmo 1956 18; Kivikoski 1973 65, 95, figs. 431, 691; LUISTARI II 100). This means that no one of the brooches that could be from this period is clearly a product of that time. Viking III is a transitional period with which so far only few artefact types can be clearly associated.

It needs to be mentioned in this connection that although none of the Luistari graves attributed to this period contained a funnel-ended penannular brooch, it is a type that may be found in graves of the period. According to the available coin date, grave 15, which contained a penannular brooch with high funnel knobs (18000:1163) could also belong to this group, although it is placed in the following group with reference to a spearhead among its finds. A brooch of the same variant (20541:4) was discovered in the Yli-Nuoranne cemetery in Eura along with an E-spearhead with accentuated junction, typical of this stage. There are also cases of other funnel-ended brooches being found in connection with spearheads of this stage (LUISTARI II 103–105, 182, Tables 7 and 15).

Finger-rings were discovered in eight male graves of the Viking III stage (nos. 76, 207, 225, 471, 480, 490, 510 and 528). Only three of the total of 12 ring-like objects have a middle shield, and of these one (18000:2950



Fig. 55. Penannular brooches with funnel ends from Yli-Nuoranne (20541:4) and Luistari (18000:1163).

in grave 225) was clearly found at the foot of the grave; and only one (22346:360 in grave 480) was probably worn on the finger. The ring from grave 207 (18000:2834) was found at the end of the grave pit. During the previous period the rings with middle shields could be identified as male rings, but now the situation was different. Simple spiral rings were found in graves 225, 510 and 528 (18000:2966, 22346:570, 733). Grave 510 also contained an impressive ring with double-spiral ends (22346:580) in a location suggesting the left hand. The ring was found beneath a sword, and it is mystery how one of the spiral arms (NM 22346:726) had come into the fill of grave 525.

Most of the graves of this period contained only one ring; two rings were found in graves 471 (22346:286,288) and 510 (22346:570,580) and there were three objects resembling finger-rings in grave 225. Two of the rings (18000:2950, 2961) in the latter grave were at the foot, and in grave 471 a section of a textile band was preserved inside one of the rings (22346:288), which suggests that all these objects had some other function than to adorn fingers. Accordingly only grave 510 contained two finger-rings.

Viking IV Phase

All the male graves of the Viking IV stage were in the north end of the cemetery and were oriented SW-NE. There are 23 of these graves, in addition to the male corpse in grave 1005, which may also have contained a woman. Ten of these graves contained penannular brooches, i.e. in roughly two out of five. Seven of the brooches have rolled ends; three are of bronze (18000:1001, G 9; 18000:4503, G 402; 18000:4626, G 407) and four are of silver (18000:3984, 3994, G 349; 22346:515, G 423 ?; 23183:142, G 544; 23183:673, G 670). The brooch in grave 15 (18000:1163) has high funnel-shaped knobs; the brooch from grave 208 (18000:2856) has poppy-bud knobs and the ends of the brooch from grave 385 (18000:4364) are of animal's head shape. The smallest brooches, from graves 385 and 670,



Fig. 56. Grave 15 at Luistari with the mantle brooch (18000:1163) on the right side of the chest beside the sword, N view.

are 32 mm in diameter and the largest (grave 15) is 65 mm in diameter.

Only the brooch from grave 407 was discovered on the left side of the skull at such a location that it could have been worn on the shoulder. In graves 9 and 670 the brooches were on the left side at the waist, and the brooches were also near the waist in graves 385 and 402, in which the deceased laid on their sides, and in grave 470, where there were so small remains of the skeleton that its position remained unknown. In graves 15 and 208 the brooches were on the right side of the chest beneath the armpit. If these brooches were used for clasping a cloak, they would have been affixed at a low point, at least in the two last-mentioned cases beneath the armpit on the right side. In graves 349 and 423 the brooches, or brooch parts, were not in their original locations.

Fourteen of all rings of this period were discovered either at the foot of the grave or in the surface layers or fill. In only seven graves was the ring possibly worn on the finger, and this was certain only in grave 208 where a piece of the digital bone was inside the ring (18000:2849). The two rings from graves 9 and 17 were discovered in locations suggesting the fingers. In grave 9, both rings (18000:999,1014) were of flat-convex rod, but one of them (1014) was of such small diameter (13 mm) that it could hardly have been worn even on the little finger of a man. This period's only spiral finger-ring with a middle shield (18000:1206) was found in grave 17. In it the ends are still of rod of triangular section. This is a connection with earlier periods, but the other ring (18000: 1202) is of round rod, as are the rings from graves 208, 302 and 349 (18000: 2849,3484,3978). The rings with a broad centre part and slightly overlapping ends (18000:4513, 22346:5) in graves 403 and 423 could also have been on the fingers. The former is of bronze and decorated with stamped designs, while the latter is of silver, concave in the front part and decorated with rows of stamps and three-dot triangles.

The rings found at the foot of the graves, or in the surface layers or fill, were mostly spiral rings of round rod (18000:985,2850, 2851,3989,3990, 22346:481, 23183:229,665, 25480:187 from graves 9, 208, 349, 500, 655, 670, and 1005). Rod of triangular section was used only in the rings found in grave 15 (18000: 1153,1166) and in

the ditch traversing grave 302 (18000:3484). The foot end of grave 403 contained a ring of group III:2 (18000: 4520; LUISTARI II 123, 127) almost similar to the ring found at its head end (18000:4513), and the surface layers of grave 17 revealed a ring of almost evenly wide rod with slightly overlapping ends (18000:1186, group IV). As a whole the finger-ring of the male graves of this stage was a spiral ring of round rod. There were thirteen of these out of a total of 23 rings.

The spiral ornaments display a distinct change with regard to previous period. End ornaments for garters were found only in grave 208 (18000:2853), which contained no other spiral ornaments except one find from the fill (see LUISTARI II 157), and in grave 670 (23183:643).

It should be noted that the ornaments that were especially characteristic of the male burials of the middle stage of the Viking Age and which, with the exception of the spiral-tasselled belts, were still found in Viking III graves, are no longer to be found. Cruciform and other ornaments in which the central part of the spiral roundels consisted of plaited yarn, the large star-like ornaments and the spiral-tasselled belts clearly went out of use by the 11th century. Now the round appliquéd ornaments always had a spiral or spirals in the centre, and in the cross-shaped ornaments the spirals covered the threads almost completely.

Round ornaments were found in graves 432 (22346:8), 500 (22346:473), 545 (23183:170) and 670 (23183:652), and cruciform ornaments were recovered from graves 544 (23183:140) and 670 (23183:699). Grave 670 also contained the remains of two ornaments made of very small spirals (23183:687,693) resembling those previously found in grave 374 (LUISTARI I Pl. 108:374:2,3; LUISTARI II 158). Graves 500, 544 and 666 also contained fragments. A fragment discovered in grave 500 (22346:488) had one spiral followed by two and again by one. This fragment may be from a woman's veil with bows (e.g. LUISTARI I Pl. 10:25:1; LUISTARI II 163) or head-band (see Pl. 41, 24740:441). Grave 544 contained unidentified fragments (23183:141,143), and a small round ornament was discovered in grave 666 (23183:603). This means that spirals or spiral ornaments (some of them stray finds) were found in only seven graves, and they were not in large numbers in any of them. It seems that the custom of decorating men's dress with spirals went out of use or at least markedly declined while it became more widespread in women's costume.

At the same time, the metal parts of belts became more common than previously, being found in as many as fifteen graves of this period. The number of belt buckles is small in relation to this, for they were found only in graves 9, 423 and 500. Two of these buckles were of the same basic type, consisting of two parts and ending in an animal's head shaped protrusion (Salmo 1952 fig. 316). The buckle from grave 9 (18000:1005) has a long mount with grooved side lists. The mount of the buckle from the fill of grave 502 (22346:512), which was most probably originally from grave 423, is much more unassuming. The buckle from grave 500 (22346:495) was damaged with the mount end missing. It had possibly been

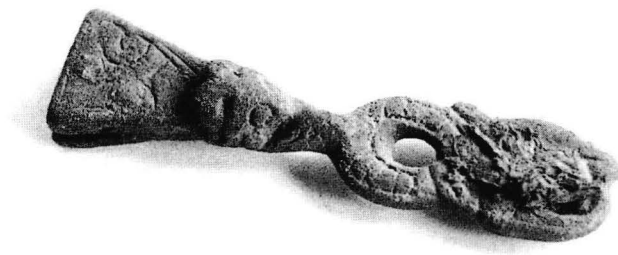


Fig. 57. Strap tag (23183:721) from grave 675.



Fig. 58. Mounts and sleigh bell in the middle part of grave 670, NE view.

with fixed mount like a buckle from Fröjel in Gotland (Thunmark-Nylén 1998 Pl. 129:1). In addition there were surface-layer or fill finds of three two-part buckles (18000:176, 4023, LUISTARI I Pl. 128:5 and 102:353:3; 23183:307, Pl. 17:1) and one single-part buckle (20552:239, LUISTARI I Pl. 128:4; LUISTARI II 149–151). Even if they were all from graves of this period, there would nevertheless not be a buckle for each belt with other metal parts.

End-mounts were found in six graves (nos. 15, 403, 407, 655, 670 and 675). Grave 407 appears to have contained two end-mounts (18000:4624, 4625), and there were also two mounts among the finds from the surface layer and the fill (NM 22346:398, 542), which may be from this stage. This raises the total of end-mounts to nine. Only the mount in grave 15 (18000:1217) and one of the mounts from grave 407 (18000:4624) are tapering forms made from a double list, which are also known from the older stages. The remainder are cast pieces with an opening in the upper end for the strap and they are joined with only one rivet.

Most of the Luistari mounts of this type have an opening in the middle part. In the mount from grave 407, the opening is oval and the end of the piece is rounded (LUISTARI II 152 fig. 40:5), while in the other perforated end-mounts (18000: 4517, G 403; 22346:398, G 482; 22346:542, G 507; 23183:520, G 655; 23183: 650, G 670) the opening is rhomboid or it tapers downwards. The most impressive piece, from grave 670, has a lower part widening into a tail-like shape and is with thickenings at both ends. It is decorated with crossing lines and ringed dots. Two others (22346:398, 542) appear to be simple variants of it. Another profusely decorated end-mount (23183:520) was found on the surface of grave 652; it may have originally been from grave 655. Its lower part

is rhomboid and it is decorated on both sides with stamped ring designs. Like the above-mentioned specimen, the end-mount from grave 403 tapers towards the end, but it is rounder and lacks decorations. The ninth specimen (23183:721), from grave 675, ends in an animal design of the rune-stone type (cf. Thunmark-Nylén 1995 figs. 21, 55, 59, 269, 294a).

There are also strap-dividers from six graves of this stage. There are three animal-head mounts linked to divider rings from graves 302 (18000:3489) and 575 (23183:304) in addition to one animal-head mount (18000:1140) recovered as a stray find. The divider from grave 349 (18000:3995) has mounts with side lists, but the mounts from grave 407 (18000:4623) were smooth and undecorated. Only one smooth ring was found in grave 15 (18000:1151), but as many as four rings that could have belonged to the belt were found in connection with grave 640. One of these (23183:458) is a bronze ring 30 mm in diameter linked to a smaller iron ring and the other (23183:468) is a bronze ring barely 20 mm in diameter attached to two 8-mm wide leather straps with mounts. The fill of grave 533, which covered this grave, contained an open iron ring (23183:47) 20 mm in diameter and a smaller bronze ring attached to a rhomboid-shaped stamp-ornamented mount (23183:51). It is not certain whether all these objects belonged to the same belt. A strap-divider with three bars (22346:397) was discovered on the surface of grave 482.

Ornamental mounts belonging to belts were also found in six graves. Round mounts decorated with embossed bulges were found in graves 349 (18000:3985) and 655 (23183:227, 241, 540, 541, 554). Grave 575 may have been the original location of rectangular mounts with animal designs (23183:268, 508), although they were found in the surface layer of grave 573 and the fill of grave 450. A

mount with a palmette design (23183:605) was found in grave 666 and a fragment of a rectangular mount with a perforated upper plate (22346:9) was found near grave 423. It is probably from the same belt as the fragments previously found in grave 13 (Luistari I Pl. 3:13:5,7).

A large number of silver lamellae (23183:635,652, 656,657,675,676,683-686,688, 689,695) and a large trapezoid mount of bronze (23183:681), possibly belonging to a belt, were recovered from grave 670. In connection with these were fragments of two different textiles, a coarse 2/2 twill and a much finer broken twill. The coarse twill was nearest the mount surface, then the broken twill (the mount was upside down). A fragment of the coarse fabric was also observed under the axe-formed pendant (23183:651), which was found about 85 cm to the south of these. Apparently the garment made of the coarser cloth had been on top of the other made of the broken twill. A third fabric was discovered under one of the spiral ornaments (23183:699) at the head end of the grave. According to Päivi Hakanpää, who has studied a part of the textiles from Luistari, it is of 2/1 twill. Unfortunately the grave was so disturbed that the reconstruction of the man's clothing would be a mere guess-work.

Furthermore, this grave also contained objects suggesting horse-gear, e.g. two cruciform mounts of bronze

(23183:640,678; type LUISTARI I Pl. 103:358:2, LUISTARI II 64; Kivikoski 1973 fig. 1000; cf. Forsåker 1986 116 fig.13:1). One of them, together with a bronze sleigh bell pendant with a mount (23183:680), was found quite near the trapeze-formed artefact, which means that the last-mentioned one could also have been a forehead ornament for a horse. A quite interesting fact is that in grave 44 at Vilusharju in Tampere a similar cruciform mount, two sleigh bell pendants and small silver lamellae fragments were found and also a ring of a bit (Nallinmaa-Luoto 1978 44-47, 168-171, 229, 197). The mount and pendants from Vilusharju are made of iron, but the combination is suggestive: had those delicate silver bands decorated a bridle? At Luistari the cruciform mounts were of bronze, there were the trapeze-formed mount and at least five rectangular bronze fittings (23183:639, 642,653,663,670), and the amount of the silver lamellae was greater, about 40 cm of a band 8 mm in width. These would have made a stately bridle, but maybe the mounts together with the strap-tag had decorated both the man and his horse.

Lengths of bronze chain appear to have been associated with five belts. In grave 500 the chain was made of double rings (22346:477); the one in grave 675 was of single links (23183:718); but all the others were of rod-like joints of bronze. In grave 544, the chain consisted of four links (23183:131,149), and in graves 640 and 670 of three links (23183:463,669). A further special feature is the fact that as many as five graves (nos. 544, 575, 640, 655, 670) contained sleigh bells often at the end of a long bronze mount. There were two of these in grave 640 (23183: 464); and one each in the others (23183:145 of iron; 23183:291 of bronze; 23183:222,224 of bronze; 23183:680 of bronze). The mounts were attached to a leather strap, suggesting that the sleigh bells belonged to belts or possibly to a bridle.

One more detail of dress deserves to be mentioned. A bronze button (23183:715) was found in grave 675. It was cast in one piece and is thus not similar to the sleigh-bell buttons of the following stage. According to Kivikoski (1973 123, fig. 938), only one similar button has been found on the Finnish mainland, in cemetery C at Köyliösaari in Köyliö (8602A:123). It is from grave C 3 of the cemetery, which contained, among other objects, an X-type sword, a small narrow-bladed spearhead and a ring with double-spiral ends. The grave was thus earlier than this. Cleve (1978, 22-23, 156) suggests that the button belonged to a pouch.

Final Period

The last stage of furnished burial at Luistari (FP) extended over a few decades before and after the year 1100. I have attributed to this stage 21 male burials differing from the graves of the preceding period. Some, such as grave 13, could have been assigned to the previous group, but since this grave overlay grave 23 it appears to be better suited to the present group. The boundary, however, is indistinct. All the graves of this group were at the north end of the cemetery.

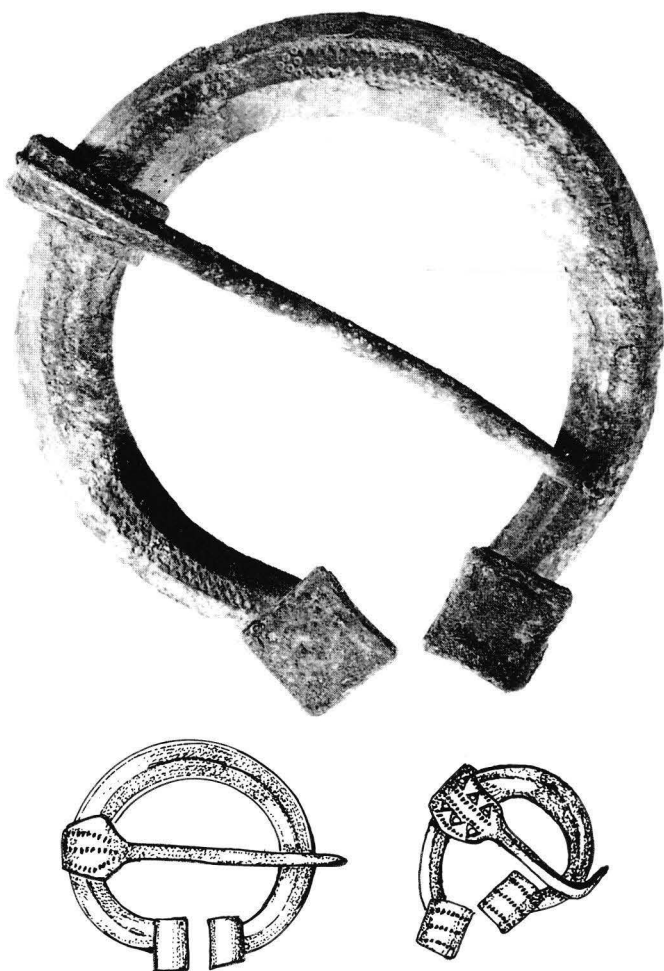


Fig. 59. The largest (18000:3176, grave 281) and the smallest brooch (23183:673, grave 670) from a man's grave and the smallest silver brooch among all the finds (23183:2, stray find). Scale 1:1.

These 21 graves contained five penannular brooches. Small-knobbed specimens of bronze (18000:1094,4224, 4445, 22346:697) were found in graves 13, 375, 391 and 520, and in grave 1010 there was a silver brooch with a thickening in the middle of the ring (25480:245) on the chest of a male body. All the brooches were small, 34–40 mm in diameter. In graves 375, 391 and 520 the brooch was near the right shoulder, and in grave 1010 in the middle of the chest area. The brooch from grave 13 was found near the feet, and it was not in its original location (LUISTARI I 15–17, 55–57). If these small brooches were also from cloaks, the cloak would have been affixed at the right shoulder. It is also possible that they were used as clasps for the neck-opening of a smock or with a coat-like garment apparently belonging to male dress at the time. Grave 345 at Luistari contained small sleigh-bell buttons (18000:3838) associated with the introduction of this type of garment (cf. Pälsi 1928 77). Like the brooches mentioned here, the buttons were found on the right side of the chest area (LUISTARI II 171). There were also button fragments from grave 520 (22346:693) and the fill of grave 551 (23183: 177; originally from grave 553?).

Possible belt parts were found in six or seven graves (nos. 13, 358, 445, 520, 639, 779?, 1010). As in the previous period, analysis suffers from the fact that similar mounts or fittings could have been used in horse-gear. Therefore it is not certain whether or not the round mounts with embossed bulges from grave 358 (LUISTARI I Pl. 103:3–13) were from the equipment of a man or a horse. The cruciform mount (18000:4204) found in the grave suggests the latter and the large iron strap buckle (18000:4197) could just as well be from a horse harness as from a belt (LUISTARI II 64, 152–154).

Also of iron is a buckle from grave 520 (22346:702), but it is considerably smaller than the above, oval and probably originally fitted with a rectangular mount. Moreover, only one round bronze rivet (22346:692) was found in the vicinity of this grave that could have belonged to a belt, but there were several other graves in the area, which means that the original number of mounts could have been greater.

The situation with regard to grave 13 was even more unclear and it is possible that the discovered parts (LUISTARI I Pl. 3:13:4–8) are from two different belts. The stamp-ornamented end-mount (18000:1574) and the mounts with perforated upper plates (18000:1262, 1301, 1575), to which additions are found in grave 423 (22346:9), probably come from the same context (cf. LUISTARI II fig. 41), while the narrower undecorated end mount (18000:1088) is from the same belt as the strap divider and its attachment mounts (18000:1081, 1082, 1102). It is possible that only the latter belt was originally placed in grave 13.

The belt buckle from grave 639 (23183:454) is of bronze and quite small. It consists of two parts and is rather similar to some larger buckles from Gotland (Thunmark-Nylén 1995 fig. 416:1, 1998 Pl. 128:9). Its mount is almost totally disintegrated and only a small fragment of the leather of the belt has survived.

Grave 779 contained only an oval iron ring (24388:

303) that can be imagined to be a strap divider, and grave 1010 contained special mounts decorated with round opening and/or embossed bulges (25480:228, 233, 246a). One of these (:228), with only bulges, was found next to the right hip. It is a U-shaped fitting with a straight lower edge that could be a suitable end mount for a belt or the tip mount of a knife-sheath of even width. A similar fitting from grave 1 of the Humikkala cemetery in Masku (NM 8656:1:9a) has been interpreted as the mount of a knife-sheath; grave 47 at Humikkala also contained insignificant remains of a sheath mount with round holes (NM 8656:47:6). These parallels would permit an identification of the mounts as sheath parts (see also grave 122 at Ristinpelto in Lieto, NM Section for History 50109:97), but the possible tip mount was found on the opposite side of the hip than the knife.

A rectangular mount from the same grave (25480:246a) forms an angle with three round holes on either side and rows of embossed bulges running along the edges. The mount was found on top of the left hip, next to a knife tang, whereby it could well belong to a sheath, but even then the angle remains a mystery. The third mount (25480:233) is of trapezoid shape. It too has embossed bulges along the edges and three round holes in the middle. It was discovered next to the left hip bone, which does not exclude the possibility of its belonging to a sheath or belt. The grave, or its immediate vicinity, did not contain a belt buckle, which means that we have to consider the possibility that the buckle was of bone, antler or some other subsequently lost organic substance.

An iron strap buckle (22346:113) was found in the location of grave 445. It has a straight bar for attaching the strap and a slightly wider rounded front part. The pin is missing. This grave also contained a round bronze strap divider (22346:120) with three bars and three round ornaments in the centre with knot designs (cf. Thunmark-Nylén 1995, Pl. 201b:17, 387a:4). It is doubtful, whether this ornament belongs to the belt of the deceased (see p. 23).

As discussed above, the latest furnished male burials do not express any uniform fashion with regard to belts. If a reconstruction of male belts were to be done on the basis of the Luistari material alone, the results would be quite unassuming; the buckle would be of bronze and quite small or of iron and of very simple form; there would be only one strap divider, either of bronze or iron, and the belt would end in a very narrow, tapering bronze mount. These finds do not suggest a belt with mounts and fittings along its whole length.

Not one of the graves of this stage contained spiral ornaments that could be associated with male costume; and finger-rings were found only in connection with five male bodies. A total of ten rings were found in the graves of the period, but four or five of them were found in fill. Grave 13 contained a bronze spiral ring of round rod (18000:1089), with a digital bone inside it; grave 381 revealed two similar round-rod spiral rings (18000:4329, 4330). A similar ring from grave 345 (18000:3837) was found in a location suggesting that it may have been worn on the finger, but it was very small (diam. 12 mm) for a man's ring.



Fig. 60. Finds from grave 1010.

A silver ring with groove ornament (18000:4078) from grave 358, containing several burials was large enough (19 mm) to have been worn by a man, and a silver ring (25480:227) from grave 1010, a double burial, has a twisted front part and was clearly worn by the man. The finds from the fill included two rings (18000:1069,1084) from grave 13, one of which was a spiral ring of round rod and the other a fragmentary ring with double-spiral ends, as well as the two round-rod rings (18000:4302, 4315) and silver-ring fragments (18000:4309) from grave 481. It is to be noted that all the spiral rings are of round rod, and there are no rings among them that have middle plates.

Male ornaments: Conclusions

The male graves at Luistari contained a total of 58 clasps for cloaks or other items of clothing, consisting of 18 pins and 40 brooches. The former were shepherd's crook pins and ringed pins of iron in the Merovingian period, and two Borre-style ringed pins and a simple iron pin of the Viking Period. Brooches were adopted as clasps for cloaks towards the close of the Merovingian Period, with the use of fibulae with band-shaped arches and hinges and penannular brooches. One of the graves (329) contained a cartwheel-shaped brooch of bronze. Brooches with faceted knobs and those with pegs came into use at

the beginning of the Viking Age, the funnel-knobbed brooches ca. AD 900, around the same time as the ringed pins, followed by the poppy-knobbed brooches in the late 10th century. During the first half of the 11th century silver brooches with rolled ends come into use in male attire and the brooches become smaller. Until then the brooches worn by men were rarely under 50 mm in diameter, but from the mid-11th century the diameter approached 30 mm. In addition to the silver brooches, the bronze brooches with small faceted knobs were also of this size.

Almost 50 graves provide data on the locations of the brooches and pins. In ten graves the location of the clasp was definitely not the original one. Moreover, there are three slightly uncertain cases and two graves in which the body was laid on its side. The only definite item of information here is that the cloak was affixed at the waist. The largest number of disturbed graves are from the earlier stage of the Merovingian Period (four out of ten) and from the last stage of the Viking Age (three out of eleven). There are no uncertain cases from the Mer II and Viking I phases, and only two out of twelve from the Vik II–III phases. The most reliable information on the wearing of cloaks is thus from a period extending from the latter half of the 8th century to around AD 1000, represented at Luistari by 24 graves containing brooches and eight graves in which the cloak was affixed with a pin.

In most cases the clasp was found on the right side of the body, a pin on eight occasions and a brooch in 25 cases. The middle chest area was the location of a pin in two graves and a brooch in three cases, and the left side of the body for four pins and six cases with a brooch. In surprisingly many cases the cloak appears to have been affixed on the left. Even in one of the two cases with two brooches, both were found on the left side of the chest. This suggests the possibility that a family or kin group with inherited left-handedness was buried at Luistari.

There are three distinct cases from the Mer I phase in which a shepherd's crook pin of iron was worn at the right shoulder, and two from the Mer II phase. Furthermore, one fibula with band-shaped arch and hinges of iron and a penannular brooch were also worn at the right shoulder. These finds point to the manner of wearing the cloak that is familiar from European pictorial material (e.g. Boucher 1970 figs. 265, 269, 270, 287, 289, 295). However, the location of the clasp moved downward during the Mer II phase. Accordingly, the brooches in graves 300 and 329 were found beneath the right armpit of the body, and the shepherd's crook pin in grave 730 and the iron penannular brooch in grave 317 were near the right thigh.

With the exception of the above-mentioned graves with two brooches (all with pegs), there were only two Viking Age graves in which the brooch was worn at the right shoulder (nos. 400 and 751; in both cases the brooch was with pegs). In thirteen cases it was found at the right side near the waist and in one grave (90) at a slightly lower location. The brooch was found near the left shoulder in one grave (407), on the left at waist height in two cases (graves 283, 795; in addition the pin in grave 348) and even lower in three or four graves (207, 303, 544). Only

in two graves was brooch in the middle of the chest area slightly above the waist (graves 140, 670). These results from a larger body of material offer a picture considerably different from that suggested by Michael Müller-Wille (1987 53 and fig. 10:4) with reference to previous finds from Luistari.

During the Vik IV phase, the size of the men's brooches decreased considerably and silver became the material used, but in all the preserved graves they were located near the waist or below it. However, of the five brooches from the FP stage three were near the right shoulder, one in the middle of the chest area, and one had moved from its original location. It is possible that these brooches were not used with a cloak but with a smock or coatlike garment, as buttons came into use in clothing around that time. The buttons were mostly made of thin bronze plate, and accordingly only small traces of them survive.

Around the time when small brooches and buttons came into use in male costume, the custom of decorating men's clothing with bronze spirals was rejected. The latest male graves with spiral designs are nos. 208 and 670 from the middle of the 11th century. The latter already contained a small penannular brooch of silver. The earliest spiral ornaments in men's garments were found in graves 40 and 901, which are probably from the first half of the 9th century. The ornaments in these graves are unassuming in character. The largest numbers of spiral ornamental in male costume were used during the first half of the 10th century, but contrary to my previous assumption (LUISTARI II 170), this fashion continued until the close of the century.

Except for the middle stage of the Viking Age, when spiral-tasselled belts were in fashion, the Luistari material contained few belt parts. Apparently the knotted textile belts were more common than leather straps with metal fittings. During the Merovingian Period belt buckles and end mounts were mostly made of iron, and of bronze during the Viking Age. In the early Viking Age the buckles and strap-tags were simple in design and decorated with stamps, and it was not until the late Viking Age that cast ornamental end mounts came into use. Silver lamellas, ornamental belt dividers and a few eastern ornamental mounts show that some men also owned impressive belts, but not a single specimen has been found intact.

Of the ring ornaments, the men of Luistari wore only finger-rings, among which the wide-plated spiral rings and rings with double-spiral ends were the most impressive objects. In their use, the year 1000 appears to have been some kind of watershed, after which simple spiral rings were matched by various silver rings, but the wide-plated spiral rings were no longer worn by men..

The only pendant ornament worn by a male was found in grave 670 (23183:651), from the close of the Viking Age. It is a flat axe pendant of bronze, with an embossed palmette (?) design in the centre and stamps along the edges. This object is somewhat larger than the silver axe pendant found in grave C38 at Köyliö (Cleve 1978 Pl. 11:179), yet clearly smaller than the axe pendants found in hoards in Northern Finland and Lappland (Kivikoski

1970, 1973 140 fig. 1140); both in size and ornamentation it resembles most the pendants from Lenvik, Botnhamn in northern Norway (Kivikoski 1970 fig. 4:3,4). Worn by a man, it may have been more of an amulet than a personal ornament, perhaps comparable to Thor's hammers and pendant crosses, which are lacking in the finds from the Eura region.

The dress of the sword-bearing men

The sword-bearing males of the 10th century have certain features of dress in common, but these details are also found in the attire of others. For example graves 90 and 281a both contained a cloak brooch over 90 mm in diameter, but the smallest penannular brooch (of a man) was also found in a sword grave (no. 283). One of the two Borre-style ring pins was found in a grave that did not contain a sword. The tasselled yarn-woven belts are features of interest in sword graves 90, 281a and 348, but these belts were probably also part of the assemblages of graves 100, 280, 325 and 400, all of which lacked swords. There were also large appliquéd spiral ornaments in

graves 75, 100, 280, 318, 400 and 840, which did not contain swords.

However, silver-plate brooches, as in graves 281a, 740 and 844, were not found in the swordless graves, and the belt-worn pouches with metal mounts and the fire-steels with horseman designs were found only in the graves with swords. A narrow-bladed seax was found only in one swordless male grave (no. 900). It is possible that the costumes of these males also had other distinguishing features, such as clothes of certain colour or of a certain fabric.

It is a notable feature that scythes and shears are considerably more common in the sword graves than in the others and that none of them contained horse-bits, although these objects were found in other men's graves of the Viking Age (nos. 145, 280, 400, 423, 528, 751?, 825; cf. LUISTARI II 63–64, LUISTARI III 45–50). Despite their weaponry, the men with the swords clearly belonged to the local community. Therefore, the international aspects of their weapons and other equipment reflect the community as a whole and not separate individuals.

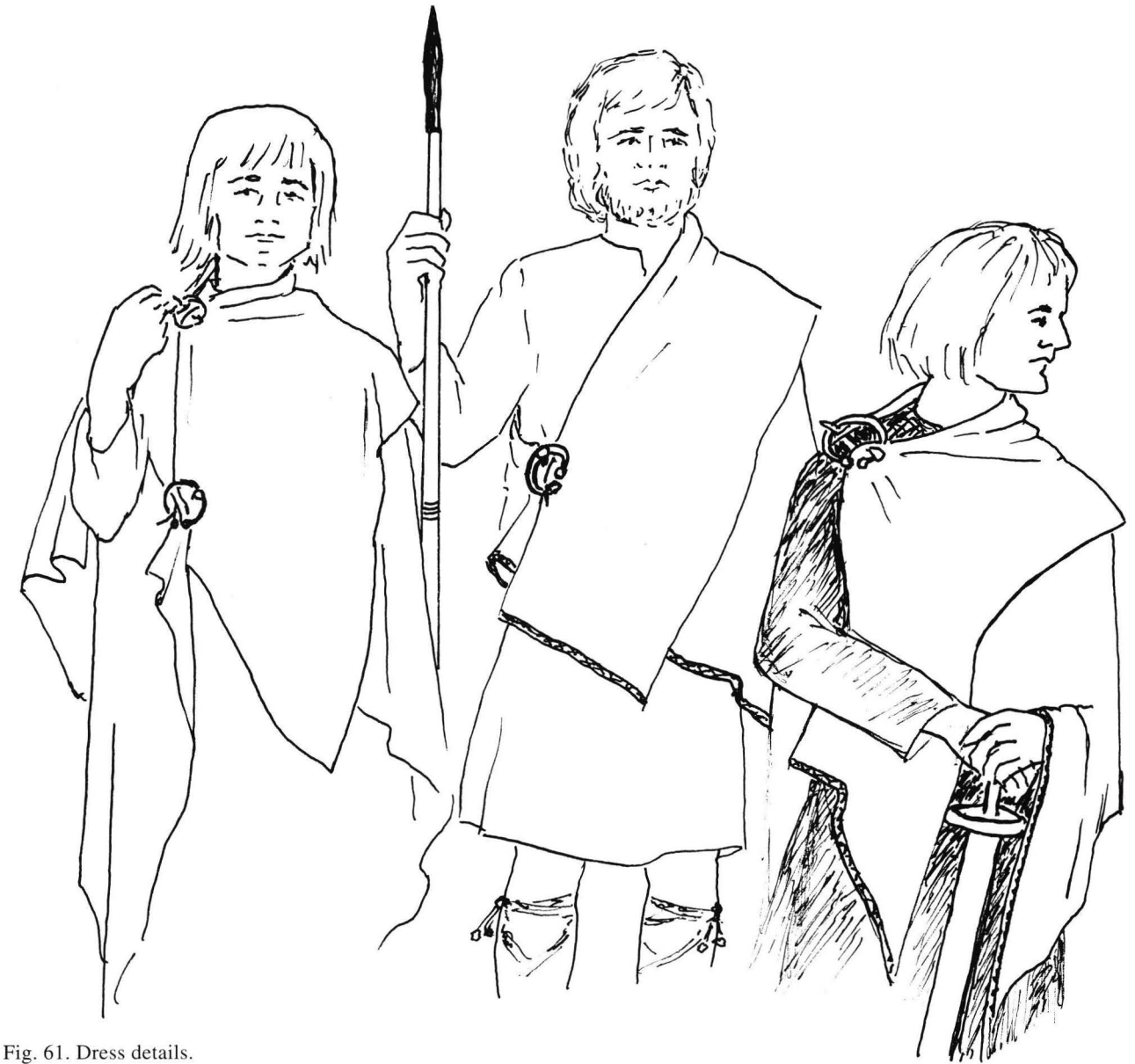


Fig. 61. Dress details.

WOMEN'S DRESS AND ORNAMENT

Merovingian Period

Excavations at Luistari have revealed a total of 31 Merovingian Period women's graves and in addition there are four stray-find brooches and pins which may indicate female burials. None of the graves contained a complete set of ornaments as, for example, graves A17, B4, B7, B8 and B9 at Köyliö, where the combination of brooches is complemented by ring ornaments (cf. Cleve 1943 33, 41–44, Pls. 17, 22, 24–26). Many of the Luistari graves were partly destroyed, but even the number of fragments of Merovingian Period armrings is so small that they would hardly amount to two pairs of bracelets. In and near grave 516 there were the fragments of at most two concave-convex bracelets (22346:627,641,645,770,775), while graves 1020 and 1026 contained only fragments possibly from the middle parts of bracelets (25480:290,301). If the incompleteness of the sets of ornament was a result of graves being damaged or destroyed there should be fragments of armrings among the stray finds.

Moreover, grave 246 contained a pair of bracelets, but no other ornaments, while grave 21 contained a bracelet along with a brooch and a ring (LUISTARI I 177, 63–64). In graves 30, 305 and 1064, a ring was the only personal ornament (LUISTARI I 72, 209–210; 26695:34). It should be noted that none of the graves belonging to phase III of the Merovingian Period as defined by Cleve (1943, 168–172) contained bracelets, and there are no Merovingian Period necklaces from the whole cemetery.

Presentations of Merovingian Period ornaments in general works on archaeology usually refer to one of the above-mentioned combinations of ornaments from Köyliö: a pair of equal-armed brooches joined by a chain with a crayfish brooch in the middle, the ensemble being complemented with one or two pairs of bracelets (see e.g. Huurre 1979, 179). With reference to the finds from Luistari, the ornaments present quite a different picture. With only two exceptions, the 31 Merovingian Period graves identified as female burials contained ornaments, but only five of them (graves 26, 352, 431, 1061 and 1080) had pairs of equal-armed brooches (18000:1383,1457; 18000:4008,4009; 22346:29,30; 26695:15a,b; 26695:65,66), and only in one (no. 1061) were the brooches linked with a chain. None of these graves contained a third brooch or bracelets.

Three more and differing brooch pairs were found at the shoulders of buried women. Grave 346 (LUISTARI I 236) contained two identical fibulae with band-shaped arches and hinges of iron, but no other ornaments, and the three-brooch combination was found in two graves. Grave 505, which can be dated to the very beginning of the Merovingian Period contained two small round

brooches and a crayfish brooch as the third brooch (22346:533,536,532); the only ring ornament was a finger-ring of multi-ridged form (22346:534). Grave 1062, from the close of the Merovingian Period contained a brooch pair at the shoulders of a buried female. The pair consisted of an iron fibula with band-shaped arches and hinges and a crayfish brooch, and a serpentine or snake brooch was the third ornament of the set (26695:21–23). Also in this exceptional combination of ornaments, the only ring ornament was a bronze spiral ring (26695:25), but among the 20 beads of the necklace (26695:20) were five large multi-coloured specimens in addition to two



Fig. 62. Brooches, chains and knife in grave 1061, NE view.



Fig. 63. The NW end of grave 1062, SW view.

blue and 13 orange beads. Beads were found in only two other connections; grave 352 contained four beads (18000: 4010) and there were five orange beads (25480: 294,295) in grave 1025. There may also have been beads of bone on the necklace in grave 352 (LUISTARI I 242).

Of the 35 possible women's burials of this period at Luistari, 27 contained brooches and possibly three contained a pin (nos. 335, 1019, 1099). Twelve of the equal-armed brooches were found on their own (18000:1237, G 21; 18000:1794, G 57 [527]; 18000:1864, G 28; 18000:3718, G 327; 18000:4101, G 359 [376]; 4168, G 368; 20189:212, G 419; 20552:3, G 421; 22346:218, G 461; 22346:275, G 468 [465]; 25480:266, G 1015; 25480:294, G 1025) but unfortunately only two of them are from graves that are so well preserved (nos. 368 and 421) that we can assume them to have been the only original brooches in the graves. The mixed layers, however, did not contain an identical pair to any of the brooches found singly. Grave 421 also contained a finger-ring (20552:4) and a small length of chain, while in no. 368 the brooch was the only ornament.

A single crayfish brooch (25480:288) was possibly the only ornament in grave 1020, and three of the small round brooches (20189:4, 23183:418, 25480:271) were found singly. They were all different and were found tens of metres from each other at the locations of graves 628 and 1017, and in grid square 137/85. Two of them could hardly have been a pair, like the identical brooches in grave 505 (22346:533, 536).

With regard to their form, the small triangular-headed pins (25480:361, 26695:88) from graves 1058 (1019?) and 1099 could be a pair, but they, too, were found over ten metres from each other. A bronze rod (25480:362) was

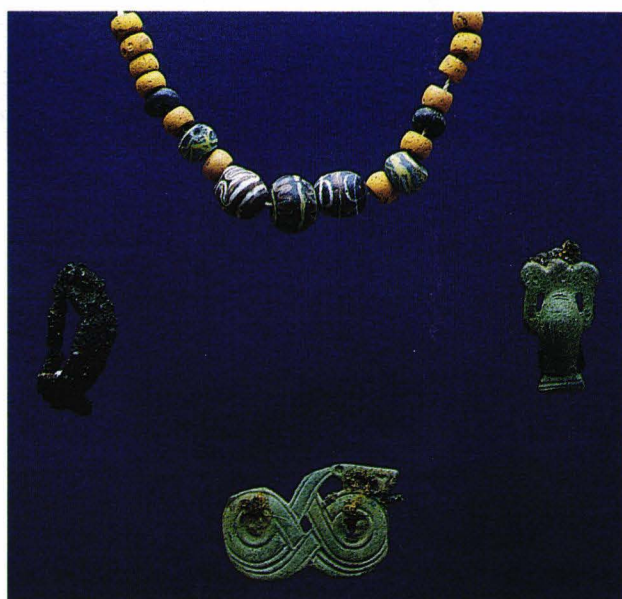


Fig. 64. Ornaments from grave 1062.

also found near graves 1019 and 1058; it may be a fragment of the other pin. It is, however, somewhat thicker than the rod of the pin found near it. Grave 1099 also contained an annular brooch of iron with a bronze clasp pin (26695:82), and a bronze finger-ring with middle shield (26695:84). Grave 335 contained a simple iron pin and fragments of a bronze finger-ring of flat-convex section (LUISTARI II 109, 122).

The women's brooches of this period from Luistari consisted of equal-armed brooches (22 specimens), crayfish brooches (3 specimens), round brooches (5), serpent brooches (1), annular brooches (1) and fibulae with band-

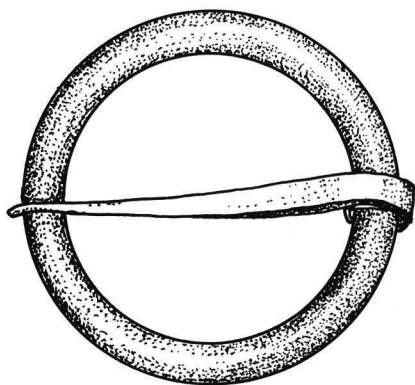


Fig. 65. Reconstruction of the annular brooch (26695: 82) from grave 1099.

shaped arches and hinges (3), which have been regarded as male ornaments (Salmo 1952 222); two specimens were found in the men's graves at Luistari (LUISTARI II 89). Triangular-headed pins of bronze were also used during the oldest stage of the Merovingian Period, and no doubt simple iron pins and pins carved from wood or bone were also worn.

A new and unusual phenomenon in the Finnish Merovingian Period milieu is the annular brooch. It is, however, worth notice that there are abundant material of annular brooches from Anglo-Saxon England from the fifth to seventh centuries. Among the oldest of them there are specimens of iron and of bronze and iron (Palm & Pind 1992 67–68, 74, 76–78, 56 fig. 3a). So the annular brooch in grave 1099 is perhaps one of the oldest ornaments at Luistari, and it may point to directions earlier neglected.

The equal-armed brooches were the most common brooches of the period at Luistari, but only three crayfish brooches were found, i.e. two less than the fibulae with band-shaped arches and hinges and two less than the round brooches. Thus, the proportions of crayfish brooches and equal-armed brooches is not at all the same as described by Kivikoski (1961, 168) for the Finnish material.

Cleve (1943, 169) came to the conclusion that the women's brooches do not form chronological groups as distinct as the male weapons. At Luistari, very small equal-armed brooches, small round brooches and triangular-headed pins form the oldest stage, to which two of the crayfish brooches also belong (graves 505 and 1020). Of latest date are the graves containing fibulae with band-shaped arches and hinges (nos. 346 and 1062). The others fall in between these two groups.

The Luistari excavations and research clearly show that at least at Eura a complete costume with a pair of brooches was not owned by all women, or not everyone was buried in such a costume. Perhaps not everyone could afford all the ornaments. On the other hand, it is possible that ornaments were used more by the living and that the brooches and other ornaments of only a few were ever buried with the dead. Others may have left them as heirlooms to daughters or other relatives. Maybe the real opulence of the richest Merovingian Period ladies is reflected

in the combinations that we know from some inner Finnish hoards of bronze ornaments (cf. Lehtosalo- Hilander 1993 18–22, 1994 112 fig. 1), and not even in the graves in Köyliö.

If this is the case, the period of circulation of brooch types may have been considerably longer than the average life-span of the individual. If, on the other hand, weapons were obtained for a boy when he reached the age of manhood and he took them with him into the grave, the weapons may have been only a couple of decades when they were taken out of use. This would explain why the Merovingian Period weapons form more distinct chronological groups than the ornaments.

The earliest phase of the Viking Age (Viking I)

At least 28 female burials belong to the oldest Viking Age phase at Luistari, termed Viking I. The graves of this period are in the central area of the cemetery. Eleven of these women were outfitted with brooches, mostly round specimens classified by Appelgren (1897 1–13) into types A–F, but only two women (graves 95 and 765) had a combination of three brooches and one (grave 294) had two brooches. All the other graves contained only one brooch each. Grave 55 contained an A-type round concave-convex brooch (18000:1612); graves 73 and 180 contained a B-type brooch (18000:1939,2688); and there was a penannular brooch in three graves (G 157, 18000:2574; G 295, 18000:3418; G 878, 24740:491–492). Grave 785 contained a two-animal concave-convex brooch (24388:331) and grave 175 revealed a rare brooch with four horse-head designs (18000:2653, LUISTARI II 89).

Each of the three-brooch combinations contained two round brooches of type B (G 95, 18000:2085,2091, LUISTARI II 93–94, fig. 26:1; G 765, 24388:171,174). The third brooch in grave 95 (18000: 2080) was an equal-armed brooch of Kivikoski's group 4 (1938 15–17); in grave 765 the third brooch (24388:168) was a round concave-convex brooch mainly resembling type A (cf. Kivikoski 1973 fig. 656). In grave 294 one of the brooches (18000:3391) was a concave-convex brooch of type B and the other (18000:3390) was a unique brooch with eight bird figures (LUISTARI II 92–94, fig. 59). There were no chains attached to the brooches in any of these graves; the only lengths of chain were found in grave 191 (LUISTARI II 114–115), which did not contain any brooches.

Twenty graves contained pieces of necklaces, mostly dark blue cylindrical glass beads (LUISTARI II 131). In two partly destroyed graves (789, 879) there was only one bead in each (24388:346, 24740:500), but in the other cases the smallest number of beads was seven. Grave 175 with seven beads (18000:2650,2651) was also damaged by later burial. The largest number of beads from a single burial was 129. They were found in grave 130 (18000:2341,2343), which in addition contained only two rings (18000:2342,2345) and the remains of an apron (18000:2344,2346–2350, 2354–2360). In the other, more or less preserved, graves, the number of beads and the bronze spirals used along with them varied between nine



Fig. 66. Grave 765, N view.



Fig. 67. Ornaments from grave 765.

Fig. 68. Grave 765, ornaments in situ, NE view.

(G 294b, 18000: 3396) and ninety (G 160, 18000:2549, 2588). The graves with less than 20 beads were mostly damaged (see graves 73, 172, 180, 190, 191, 785). It appears, however, that the necklaces often had beads only on the front side; the row of beads did not have to extend all around the neck.

In five graves, the necklace included bronze pendants with knot-cross designs (LUISTARI II 142). Grave 785 contained only one pendant (24388:333); there were seven in grave 765 (24388: 185), while in the other cases there were two (G 55, 18000:1597,1600), three (G 64, 18000:1899) and five (G 95, 18000:2088f). Eight such pendants (24740:164) were found in grave 835, which belongs to the next chronological stage. In this necklace, the intermediary parts were multi-part bronze beads whose decoration matched that of the suspension loops of the pendants (Pl. 37:835:2).

The bead necklaces of this first stage were assembled with less discipline; the beads accompanying the pendants varied. Grave 55 contained bronze spirals and rounded

multi-part bronze beads; grave 64 had spirals and mostly segmented glass beads, and grave 95 contained angular multi-part bronze beads and cylindrical glass beads (LUISTARI II 128–129, 142, 146–147 Table 10). Grave 785 contained spirals, angular multi-part bronze beads and cylindrical glass beads (Pl. 31:785:2); and there were only bronze spirals in grave 765 (Pl. 29:765:2). There was thus a different combination in each necklace.

Only two of the graves of this period contained a neck-ring, and there were bracelets in only two. Grave 765 contained both a neck-ring (24388:178) and two bracelets (24388:162,165); grave 73 had only fragments of a neck-ring (18000:1911, LUISTARI II 118), while grave 95 contained four bracelets (18000:2072,2073,2081, 2082, LUISTARI II 119–121). As a whole, there were few large ring ornaments; only in one grave out of nine. There were, however, finger-rings, in two graves out of three, though only one per grave in most cases. In only five graves (nos. 64,130, 155, 295, 879) were there two rings; one contained three (95) and one had four (55).



Fig. 69. Necklace in grave 835 in situ, from above.

Middle phase of the Viking Age (Viking II–III)

Phase two of the Viking Age women's graves corresponds to phases V II and V III of the men's graves. The graves of this stage were in the westernmost margin of the cemetery, at the very southernmost edge and scattered randomly in the middle area and in the northeastern part. This stage was characterized by segmented multi-part glass beads (LUISTARI II 131–132) and by the fact that there are surprisingly few brooches.

If we exclude from the probable women's graves corresponding to men's groups V II and V III, the three considerably damaged graves (nos. 279, 284 and 905), twenty-seven graves remain, but only five of them contained brooches. Grave 62 revealed two round concave-convex brooches of type C and a so-called Lion brooch as the third brooch (18000:1874–1876, LUISTARI II 92–95). Grave 390 contained a penannular brooch with rolled ends (18000:4398, LUISTARI II 100); and graves 835 and 1260 each contained two round concave-convex brooches with twin animal figures (24740:162,163, Pl. 37:835:3,4; 27177:27,28, Pl. 57:1260:1,2). The third brooch in grave 1260 (27177:26) was an equal-armed brooch of Kivikoski's group 6 (1938 18–20). A similar equal-armed brooch was found in grave 291 (18000:3326, LUISTARI II 88), in which two women were buried. In the graves of this group only one woman out of six was fitted with a brooch or brooches in her costume.

Chains were even rarer. Except for the sumptuously furnished grave 1260, which contained an impressive three-row set of chains (27177:32, Pl. 60), only graves 285 and 291a contained badly rusted pieces of rod-chain (18000:3253–3256,3259,3264; 18000:3340,3347,3348). Because these graves did not contain metal shoulder brooches or pins, the chains must have been borne by pins of bone or wood, which had subsequently decayed (LUISTARI II 115).

Beads were found in 14 graves, i.e. every second one of the group. These, too, included three (226, 815, 1265) from which only one or two beads were recovered



Fig. 70. Ornaments from grave 835.

(18000:2987, 24388:470, 27177:42,45). In the other graves the number of beads varied greatly, from four (G 1283, 27177:72,77,78) to as many as 259 (G 1260, 27177:16, Pl. 58). Bronze beads and spirals were still in use in the necklaces; the former were found in six graves (G 62, 18000:1877f [13]; G 200, 18000:2802; G 319, 18000:3609; G 390, 18000:4408,4020–4021,4428e,4432; G 815, 24388:470; G 835, 24740:164), and the latter were discovered in three graves (G 319, 18000:3606; G 390, 18000:4427,4428; G 1260, 27177:16; LUISTARI II 128–129 fig. 37)). In graves 319 and 390 the spirals were apparently threaded like beads, while in grave 1260 the spirals were used to join threads from two necklace spaces or dividers from which bead strings were suspended (Pl. 58). Behind these dividers was a list with six holes keeping the six strings of beads apart. Grave 319 revealed a similar divider with seven holes in the list (18000:3610, LUISTARI II 148), but only a total of 15 beads. This grave, however, was badly damaged, which means that it may originally have contained considerably more necklace parts.

Bronze pendants were found in only one necklace (from grave 835) that can be dated to this stage. There were, however, eight of them combined with multi-part bronze beads (see above). This necklace is the last reflection of the necklace fashion of the Early Viking Age, while the necklace in grave 344 prefigured later developments. It was decorated with four Arabian coins (LUISTARI II 143). These two necklaces were the only neck ornaments with pendants from this stage.



Fig. 71. Ornaments in grave 1260, N view.

During this phase large ring ornaments were even rarer than before, for only grave 1260 contained a neck-ring (27177:29, Pl. 58:1) and in addition to the spiral bracelets (27177:21,24, Pl. 57:1260:6-7) from this grave there was only one bracelet in each of graves 62 and 835. The ornament from grave 62 (18000:1873, LUISTARI II 119-121) was massive open ring widening towards the ends and decorated with rhomboid designs, while the bracelet from grave 835 (24740:171, Pl. 37:835:1) was a spiral with almost five turns. There were, however, many fin-

ger-rings; only one grave in six lacked them, and they were thus more common than during the previous phase.

Nine graves contained more than one finger-ring. Graves 62, 291 and 1260 each contained four to five bronze rings (G 62, 18000:1871,1872,1878,1879; G 291, 18000:3339,3342,3343,3346,3350; G 1260, 27177:18-20,25,34). Grave 291, however, was made for two bodies, and only two (3342,3346) of the five rings were found next to one of the bodies in places suggesting that they had been worn on the fingers. The third ring (3339) was

near the head of this female, and the other two, one of which was very small (3350), were found near the feet of the other body.

Most of the rings were simple spiral rings, and they were made of rod of varying section (LUISTARI II 122). Ten finger-rings (from six graves) were of triangular and ten (from seven graves) of round section, and twelve (from nine graves) were of flat-convex section. There was also a ring with slightly overlapping ends made of flat-convex rod 6 mm wide (27177:79, Pl. 56:1283:7). Only three graves, nos. 97 (18000:2101), 324 (18000:3653) and 1260 (27177:20,25), contained finger-rings with middle shields; the one from grave 324 was of silver. It was not, however, found on the finger of the body, but in a clay vessel at the foot of the grave. At the foot of grave 1260 was a finger-ring with double-spiral ends (27177:19) which probably had been moved by moles to their nest.

A spiral-decorated apron was found in almost every other grave of the Viking II–III stage. Large corner ornaments of bronze spirals are special features of these garments (LUISTARI II, fig. 43:2–3), which seem to appear

especially at the lower corners of the aprons. Only the apron in grave 291a appears to have had large ornaments with duplicated transverse parts in every corner (LUISTARI II 157–158). The aprons from graves 386 and 1260 may have been similar with regard to the fact that they had these multiple ornaments in lower corners and small three-part ones in upper corners (cf. Pl. 59:1260:1,3 and LUISTARI I Pl. 116:386:2,3). Grave 386, however, did not contain edge spirals, which were found in grave 1260, and only two of its corner designs have survived. Large multiple ornaments were found in graves 115 and 200 (18000:2261,2644, LUISTARI I Pl. 46:115:4 and 60:200:4), and large simple ones were discovered in graves 344 (18000:3827), 390 (18000:4415, 4429) and 738 (23607:459, Pl. 24:738:1). All these graves also contained ornamental spirals from the apron edges. Only small corner ornaments were found in graves 226 (18000:2985), 392 (18000:4453,4456), 1265 (27177:43, Pl. 55:1265:1) and 1283 (27177:74,80,81, Pl. 56:1283:8–10) and only edge spirals were obtained from grave 99 (LUISTARI II 158).



Fig. 72. Finds in grave 1260, NE view. Observe the form of the sickle.

Fig. 73. Ornaments from grave 1260.

Late Viking Age (Viking IV)

The third Viking Age group of women's graves mainly corresponds to group IV of the male graves of the period. The graves of this group were in a mostly uniform group at the north and northwestern ends of the cemetery. Almost all these graves were oriented SW-NE, only grave 668 was laid SE-NW, grave 58 NE-SW, and grave 472 almost S-N.

The graves of this group reflect the stage of Viking Age ornament that has traditionally been best known and dated (Cleve 1978 198–201). The stately women's graves of cemetery C at Köyliö tell of wasteful ostentation, and the prehistoric Eura costume reconstructed from the finds of grave 56 at Luistari (Lehtosalo-Hilander 1984 44–53) underlines this impression. The overall picture, however, is slightly different.

There are 27 women's graves that can be included in this group and roughly dated to the three first quarters of the 11th century. Only seven of these contained brooches, and a pair of brooches, i.e. two similar brooches, were found in only two graves (nos. 35, 56, LUISTARI I 74–76, 89–94, Pl. 14–16, 22–28). Moreover, graves 25 and 529 contained two different brooches (G 25: a round brooch and a silver penannular brooch, 18000:1144,1342; G 529: a silver penannular brooch and a bronze penannular brooch, Pl. 14:529:3,4) and only grave 56 contained three brooches. A single brooch was probably in graves 359 and 383 (18000:4095, 112), and there is one stray-find brooch of the period (23183:2, possibly from the badly disturbed grave 677).

A complete chain set, with chain-holders, chains and pendants, was found only in graves 35 and 56, which also contained pairs of brooches. Fragments of chain, bronze ring chains (G 25, 18000:1136; G 516c, 22346:657; G 600, 23183:364), and rod-chains of bronze (G 529, 23183:9) and iron (G 58, G 370, G 377, LUISTARI II 115) were recovered from seven graves, which means that there may originally have been more chain sets. Holders

and pendants usually belonging to chain ornaments were found in six graves (25, 35, 56, 58(59), 377, LUISTARI II 113, 116–118; G 518, 22346:676 cruciform pendant, Pl. 12:518:4; G 529, 23183:9 bird-shaped pendant, Pl. 14:529:1). Of these, no. 518 did not contain remains of chains. Accordingly, parts of chain ornaments were found in a total of ten graves.

In addition, bear's tooth pendants were found in graves 58(59), 516c and 650 (18000:1845; 22346:634,652,658, Pl. 11:516:11–13; 23183:507, Pl. 19:650:1). They also have been joined to chains, but on the other hand they were used as pendants on some kind of cloth or in a band hanging from the waist (Vahter 1932 183–186; Kivikoski 1965 26–27; Cleve 1978 121–122, 199; Riikonen 1999 *hauta* 27). There seems to have been several pendants in these ornaments, as many as twelve in grave 27 at Kirkkomäki in Turku (KM 27025:145) and at Lehtimäki in Kalanti (15131:3; Viking og Hvide Krist 1992 290:237). The three pendants from grave 516 and the one from the fill of grave 59 are quite similar and they could be from an ornament like the last-mentioned ones, but the bear's tooth pendant found near grave 650 is smaller and differently decorated, and possibly it was worn alone.

Only four of the graves of this phase (nos. 209, 366, 370, 523) did not contain any beads. As a whole, however, the beads were few; graves 529 (23183:23), 650 (23183:509) and 668 (23183:289) contained one bead each, and the number of beads in the others varied between 2 and 34, the largest number being found in grave 56. The beads, however, were multicoloured and larger than previously (LUISTARI II Colour Plate III:9–11, IV:1,2,8–10), and it should be noted that most of the graves were partly destroyed. Moreover, beads were no doubt made of materials that have completely decomposed in the soil. Excavation revealed beads and bead necklace pendants of which nothing, or only tiny fragments, could be recovered (LUISTARI II 128, 130, 145).

The glass beads were now fewer in number and more impressive than before, in addition to which the necklaces

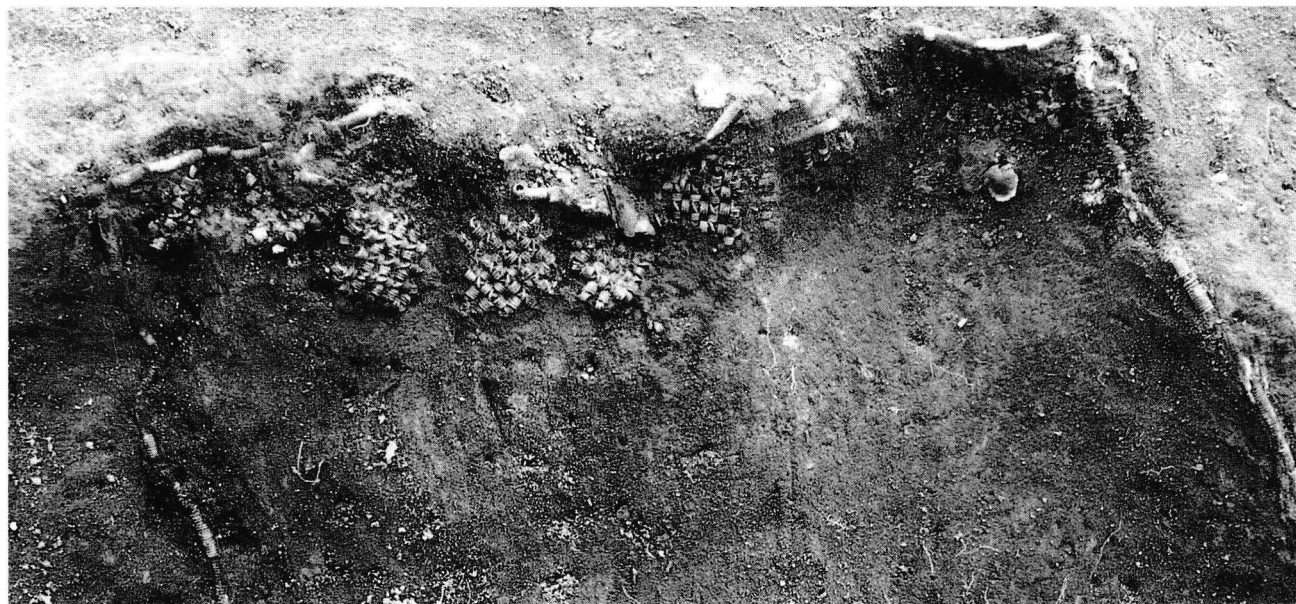


Fig. 74. Apron hem in grave 460, SW view.

were no longer strung with spirals or bronze beads and were not divided into parts with necklace spacers. Neither were bronze pendants added to the beads. However, twelve necklaces (in graves 25, 56, 58, 359, 377, 383, LUISTARI II 143; G 472, 22346:300; G 516B, 22346:636,644,647; G 518, 22346:664; G 529, 23183:8; G 600, 23183:371; G 668, 23183:620,269?) appear to have included a silver coin or several coins, and in addition two necklaces included flat silver pendants (G 56 and G 383, LUISTARI II 143–145, Luistari I Pl. 23:56d,g, Pl. 114:383:3). A fragment of a similar pendant (22346:682, Pl. 13:519:1) was found in the fill of grave 519; it as well as a silver ring and a coin (22346:683,684) belonged probably originally to the neckband in grave 516B.

Grey round patches, sometimes together with a bronze suspension link, were observed in some of these graves (35, 377). They were probably remains of round and flat pendants made of bronze and tin, which seem to have been the more unassuming substitutes of the coins and silver sheet pendants (LUISTARI II 145).

None of the graves of this period contained neck rings; bracelets were found in six graves (23, 25, 35, 56, 370 and 529). Except for the last-mentioned one, these were spiral bracelets of narrow band (LUISTARI II 121). There were two of them in graves 35 and 56, possibly only one in the others. Grave 529 contained a fragment of a silver band bracelet with stamped ornament (23183:28, Pl. 14:529:5). This bracelet had been very similar to the arming in the silver hoard from Lämsä in Kuusamo (Björkman 1957 26 fig. 9; Kivikoski 1973 fig. 1083), in which there are also parallels to the large silver brooch from the Luistari grave 25 (Lehtosalo 1973 105–109, figs. 2, 4, 5).

Finger-rings were found in 18 graves, twelve of them containing more than one. The custom of wearing several rings had thus spread. Graves 35, 58 and 359 each contained six finger-rings (LUISTARI I Pl. 14:35:1–6, Pl. 29:58/59:3–5, Pl. 30:58/59:22,25,26, Pl. 104:359:1–4,10,12), but they were not all near the hands. The four rings from grave 56, however, were definitely worn on the fingers (LUISTARI I 90, Pl. 25:56:6–9). In many cases the bones had decayed so completely that the function of the rings remained uncertain.

Bronze spiral decoration was clearly used more in costumes of the period than before. In addition to apron ornaments there were also round and oval figures (G 23, G 56, LUISTARI I Pl. 8:23:11,15, Pl. 28:56:20–23; LUISTARI II 161; G 455, Pl. 3:445/455:5–13), which were apparently used to decorate cloaks, and plaited pieces and bronze-ring borders belonging to headgear (graves 23, 25, 56, 58, 359, LUISTARI I Pl. 8:23:10,12,13, Pl. 10:25:1,3, Pl. 28:56:24,25, Pl. 29:58:1, Pl. 104:359:5,14; G 668, Pl. 20:668:9,10,12). Thirteen graves also contained a number of individual spirals and ornaments that so far cannot be associated with any definite items of dress.

The corner ornaments of the aprons were again small, but some of them had duplicated transverse parts (LUISTARI I Pl. 8:23:6 and 104:359:13; duplicated corner ornaments are also e.g. in the apron found at

Osmanmäki in Eura, Appelgren-Kivalo 1907 Pl. XV), and separately made bronze spiral figures were sewn onto the apron hems. Aprons decorated in this way had been at least in graves 25, 56, 58, 377, 460 and 1005 (LUISTARI II 159–160, Table 11; G 460, Pl. 4:460:11,12; G 1005, Pl. 47:1005:8). The number of appliquéd designs in the aprons varies. Grave 377 contained nine, and five were found in grave 56, although nine may have been the original number here, too (LUISTARI I Pl. 110:377:17 and 27:56:18a–e; Lehtosalo-Hilander 1984 49 fig. 34). There were ten such ornaments in grave 460, but they were considerably smaller than in the other graves (Pl. 4:460:11). Graves 25 and 58 revealed only the traces of these ornaments (LUISTARI I Pl. 10:25:2 and 29:58:10,11).

Women's graves 23, 25, 35, 56, 58 and 668 and twin burial 1010 (Pl. 49:1010:3–6), which was dated to the next stage, all contained traces of the so-called South-west Finnish veil with bows (cf. Vahter 1952 151–158 and Tomanterä 1985 38; Lehtosalo-Hilander 1984 77 fig. 46), but these remains were not in their original locations in any of these, and none contained all the parts of this item of headgear. In most cases only a piece, or a few pieces of the selvedge, which was threaded with bronze rings, were recovered (LUISTARI II 161–163). A piece of birch-bark reinforced with bronze rings (18000:4113, LUISTARI II 84), from grave 359, may be from some other kind of headgear.

Women's finger-rings in Viking Age graves

Comparing the finger-rings from the women's graves of the Viking I and Viking II–III stages with those from the Viking IV graves, the differences clearly emerge. Six of the Viking I graves (nos. 55, 64, 96, 170, 295 and 309) contained rings with middle shields. Except for the rings in graves 55 and 170 they are of form group II:1c. The finger-ring from grave 55 is of group II:1a and the one from grave 170 is of group II:1b (LUISTARI II 122–123). Thirteen of the spiral rings were made of triangular rod, five of flat-convex rod and only two small rings from the multiple burial 295 were of round rod (18000:3432,3436). There was also one ring with double-spiral ends (G 765, 24388:187).

Ten spiral finger-rings in the second group of women's graves are of triangular rod, 12 are of flat-convex rod and 10 are of round rod. There are four finger-rings with middle shields, two of these belonging to group II:1c (G 1260, 27177:20,25, Pl. 56:1260:3,4), like most of the finger-rings of the previous stage; one is of group II:2a (G 97, 18000:2101) and one belongs to group II:2b (G 324, 18000:3653). There is also one ring with double-spiral ends (group VI; G 1260, 25480:19, Pl. 56:1260:2) and one open ring of even width (group IV; G 1283, 27177:79; Pl. 56:1283:7). All the rings are of bronze except the one from grave 324, which is of silver (LUISTARI II 222–228).

The corpus of Viking IV rings is quite different, with only one spiral ring of triangular rod (G 35, 18000:1441), four of flat-convex rod (G 23, G 58 and 377, 18000:1292, 1829, 1862, 4237) and as many as 18 of round rod. There



Fig. 75. The costume reconstructed according to finds from grave 56 at Luistari.

are also two rings of almost rectangular section (G 58, 18000:1854, G 455, 22346:188). There is only one middle-shield ring of type II:1c (G 668, 23183:623), and no rings with double-spiral ends at all. On the other hand, there are six bronze middle-shield rings with an abruptly widening plate (II:2a; G 56, 18000:1678, 1695; G 58, 18000:1828, 1830; G 516c, 22346:653; G 518, 22346:671) and five of silver (II:2b; G 35, 18000:1024, 1046, 1052; G 359, 18000:4102; G 413, 18000:4309; LUISTARI II 123, 126–127). Of the middle-plate rings with slightly overlapping ends, five had convex plates (type III:1; G 23, 18000:1300; G 383, 18000:4348; G 460, 22346:203,

205, 208, Pl. 4:460:2–4) and four had flat plates (type III:2; G 25, 18000:1348; G 58, 18000:1859; G 518, 22346:668, Pl. 12:518:6; G 540, 23183:107, Pl. 14:540). There was also one open ring made of rod of even width (group IV; G 35, 18000:1427).

There are no specimens of the five last-mentioned groups in the Viking I women's graves, and there is only one finger-ring each of types II:2a, II:2b and IV from the Viking II–III women's graves. This means that spiral rings made of triangular or flat-convex rod, the middle-shield spiral rings of group II:1, and possibly the double-spiral-ended rings as well are all predominantly a phenomenon of the 9th and 10th centuries, while the round-rod spiral rings and the middle-plate rings of groups II:2 and III were a fashion of the 11th century.

The last phase of furnished burial (Final Period)

There are not very many, only 11, women's graves that can be attributed to the stage FP, when furnished burial came to an end at Luistari. In addition, there are the females of the double burials 358, 404 and 1010, which apparently included the most affluent women of this period. Nineteen males are matched by only fourteen women, which indicates that at Luistari, the late male graves are more easily identified than the female burials. In the cemeteries where the women of the period were buried in cloaks richly decorated with spirals, e.g. at Yliskylä in Perniö, at Humikkala in Masku and at Ihala in Raisio (Appelgren-Kivalo 1907 28–58; Pälsi 1928; Hirviluoto 1973 60–67) the situation is the opposite – the women's graves are more easily observed.

Four of the possible fourteen women's graves contained brooches. Grave 485 contained two brooches (22346:415, 417, Pl. 8:485:5–6), grave 404 had three (LUISTARI I Pl. 121:404:3–5), grave 36 contained one (LUISTARI I Pl. 17:36:2), and there was possibly one woman's brooch in the double burial in grave 1010 (Pl. 49:1010:2). All seven brooches are penannular brooches. Two of them have floral knobs (G 36, G 404), two have rolled ends (G 404, G 1010), and three brooches (G 404, two in grave 485) have small, rounded square-shaped knobs. All these brooches are under 40 mm in diameter. The penannular brooches are generally not linked to chains (an exception is grave 16 at Vilusenharju in Tampere; see Nallinmaa-Luoto 1978 18), and none of the women's graves of this stage at Luistari contain chains; the fragments of rod chain links from grave 636 (22346:1064, 23183: 440, 442) were found in the fill.

Beads were found in ten graves, but there were only 1–2 beads each in six of them, one from graves 334 (18000:3767), 590 (23183:349), 635 (23183:437) and 636 (22346:1065) and two from graves 36 (18000:994, 1007) and 354 (18000:4035, 4036). All these graves were situated in the north end of the cemetery, where there were several overlapping burials. It should be noted, however that, for example, grave 334 was intact and it, too, contained only one bead (LUISTARI I 228–229).

The largest number of beads, 25, were found in grave 404, and grave 356 contained 18 beads (LUISTARI II



Fig. 76. Bronze ring borders of a veil in grave 1010, from above.

Colour Plate III:7,8). Grave 485 had seven beads (Pl. 8:485: 7), and there were five in grave 1010 (Pl. 49:1010:1). It is possible that all these graves originally contained more beads. Silver coins and pendants were found in four graves of this stage. Grave 36, from which only two beads were recovered, contained five coin pendants, and grave 356 contained three round silver pendants. In grave 404 there was a Western coin fitted with a suspension loop and one longiform bronze pendant. It also appears to have contained round pewter pendants: four subsequently disintegrated grey, round discs were observed in excavation (LUISTARI II 143-148). A special case was grave 358 which did not contain a single bead but nevertheless four coin pendants (LUISTARI I Pl. 103:358:15-17,19). The beads were probably of some organic substance and had disappeared without leaving a trace.

One or several finger-rings were found in 10 graves, and only graves 334, 590, 635 and 1066 lacked rings. Graves 356, 404 and 485 contained two finger-rings each, and the rings from graves 22 and 358 are of silver. There are six spiral rings, of which three are of flat-convex section (18000:1454,4032,4582 from graves 36, 354 and 404) and three are of round rod (18000:4066, 22346:416, 23183:443 from graves 356, 485 and 636). One of the middle-plate rings is possibly of group II:1c (G 1010, 25480:206), one is of group II:2a (G 485, 22346:426), one is of group II:2b (G 356, 18000:4059) and two belong to group III:2 (18000:1247,1466 in graves 22 and 39). The narrow, tapering rings (group V), which are not found at all in the Viking Age graves, are among the finds of graves 358 and 404, which are coin-dated as the youngest of the cemetery (LUISTARI II 123,127, fig. 35:15).

Spiral ornaments from aprons were found in graves 354 (18000:4034), 404 (18000: 4556,4562,4566,4571), 485 (22346:420) and 1010 (25480:220). The remains of a cloak were also found in graves 404, 1010 and maybe in grave 356 (LUISTARI II 157, 160-161; Pl. 49:1010:7, 10-19), while only grave 1010 contained parts of a veil with bows (Pl. 49:1010:3-6). Spirals of uncertain association with certain items of dress were also found in graves 36, 39, 334 and 356 (18000:1310,1465,3766,3768, 4067-4068).

As in the preceding periods, here, too, we must note that only few women were buried in full festive attire. Only two women out of fourteen wore spiral-ornamented cloaks, and neither was the sole occupant of the burial chamber. In both cases, a man had been crammed in. In grave 404, the remains of the male were in a heap at the

foot end, while in grave 1010 the man was laid alongside the woman.

A dress attached at the shoulders with two brooches was probably worn by the deceased only in graves 404 and 485, and in neither grave had textiles survived to the extent that any new details could have come to light. Even spiral-ornamented aprons were rare in graves of this stage. In most cases the women appear to have been buried in smocks with a brooch at the neck opening. A necklace of beads was worn around the neck, with a few silver pendants for the most affluent women. The finger-ring was still the most common item of personal ornament. Even bracelets were no longer placed in graves of this stage. The material does not reveal whether this decreasing use of ornament reflected the influence of Christianity, greedier heirs or general impoverishment. Perhaps all these phenomena took place at the same time.



Fig. 77. Ornaments in grave 404, SWview.

OTHER MATERIAL FROM THE WOMEN'S GRAVES

Merovingian Period

Relatively few women's graves of the early stage of the Merovingian Period contained tools or implements. Perhaps only one grave in three contained a knife and only one in six had a sickle; there were no other implements at all. Only three graves (28, 410, 1099) contained a ceramic vessel (18000:1390, 4638, LUISTARI I Pls. 13: 28:1, 125:410:2 ; 26695: 87, Pl. 54:1099:5), but there were animal remains in six graves (21, 410, 421, 431, 1019, 1020; LUISTARI I 309–310, Tupala 2000). The situation was completely different at the end of the Merovingian Period, when eight of the nine women's graves contained either tools or food placed with the deceased. Both a knife and a sickle were found in three graves (343, 346, 1062, 18000:3803,3804, 3859,3860, 26695:19,24); there was a knife in two (335, 352, 18000:3772,4011) and a sickle in one (1015, 25480:265). Grave 305 contained both a clay vessel (18000:3516, 3518) and the remains of an animal skull, while grave 327 contained only the teeth of a goat or sheep (LUISTARI I 310).

The earliest phase of the Viking Age

During the early stage of the Viking Age the graves also contained knives and sickles alongside ornaments associated with dress. Knives were found in nine graves (55, 95 [2], 155, 175, 294, 295, 309, 878 and 879; 18000:1615,2078,2093, 2559, 2652, 3387, 3430,3437, 3533, 24740:493,503); a sickle occurred together with a knife in graves 55, 155 and 879 (18000:1602,2558, 24740:501), and as a sole implement in graves 64, 73, 180, 770 and 785 (18000:1902,1971,2684; 24388:240,335). It should be noted that most graves contained either a sickle or a knife; shears were found only in grave 805 (24388:418). A total of 15 graves contained some kind of tool or implement.

Clay vessels (total 26) were found in 18 graves of this stage. Six of the vessels were flat-bottomed, while the others had round or rounded bases. Eight of the vessels were undecorated, of which three had even bases (18000:2563,3393,3799 from graves 155, 294 and 342) and five (18000:2501,2654,2730,2751, 24740:499, 25480:15 from graves 175, 190, 191, 879 and 893) had rounded bases. A flat-bottomed vessel from grave 295 (18000:3429) was decorated with horizontal drawn finger impressions, but in other respects the decoration consisted of wavy lines and cord impressions (LUISTARI II 77–79). Wavy lines were the only decoration of six ves-

sels (18000:1619,1941,2629,3423, 24388:188,421 from graves 55, 73, 170, 295, 765, 785). The vessels of graves 294 and 878 (18000:3394, 24740:490) had wavy lines bordered with double horizontal lines, and there were similar zones in the vessels of graves 170 and 805 (18000:2628, 24388:421), in which all the designs were made with double cord impressions. Horizontal cord impressions were also found in the vessels in graves 64 (18000:1904,1913,1979), 95 (18000:2097), 805 (2 vessels, 24388:419,420) and 878 (3 vessels, 24740:487–489).

In most cases there was only one pot per grave, but graves 170, 294 and 295 contained two, grave 805 three and grave 878 as many as four vessels. Finger-rings, beads and clay vessels were the most common objects in the graves of this period. They are found in the same proportions, in two graves out of three.

Middle Viking Age

A marked feature of the women's graves of the following period is the small number of knives. Except for grave 1260, containing a knife in a handsome bronze overlay sheath (27177:36, Pl. 59:1260:2), only graves 98 and 99 revealed possible knife fragments (18000:2111,2141), and double burial 291 contained a small knife (18000: 2241). Sickles were found in graves 386, 815, 835, 1260 and 1283 (18000:4372, 24388:464, 24740:167, 27177:35,75), and there may have been sickles also in graves 200 and 324 (18000:2801,3670). There were now more finds of shears, for example in graves 97, 229 and 324 (18000:2102,2995,3672). In all these cases, the shears were placed at the foot of the grave next to the clay vessels.

Almost every second grave of this stage contained clay vessels. Graves 226, 324 and 1260 contained two pots each, while the others had only one pot each. The vessels from graves 98, 226, 389 and 392 and the second vessel of graves 324 and 1260 were flat-bottomed, while the others had round bases. Only three vessels were undecorated: the flat-bottomed vessels of graves 226 and 389 (18000:2981b,4392), and the round-based bowl from grave 99 (18000:2151).

Cord-impressed decoration occurs in five round-based vessels (graves 200, 324, 344, 1260 and 1280, 18000:2640,3654,3828, 27177:37,73) and in three flat-bottomed pots (graves 98, 226, 324, 18000:2124, 2981, 3667). The vessels from graves 97, 115 and 386 (18000:2103,2263,4373) were decorated with wavy lines. There are five delicately impressed wavy lines at the mouth of one of the vessels from grave 1260 (27177:38) and beneath them are seven horizontal grooves roughly 5 mm

wide. The vessel from grave 392 (18000:4452) was decorated solely with horizontal impressions. There are not as many pots as in the graves of the previous stage, but a larger proportion of them are now decorated, and cord impressions are more common than wavy lines.

Animal remains are considerably more common during this stage than before. Where only graves 130 and 157 of the previous stage contained remains of goat or sheep (18000:2365,2580,2581), now almost one woman's grave in three revealed remains of sheep or goat, most usually teeth, which suggests that the head of the animal was the deceased's share (LUISTARI I 39–41, LUISTARI III 30).

Nails and rivets also became more widespread. They were in some cases used for constructing coffins and wooden burial chambers (LUISTARI I 30–32), but for example grave 324 appears to have contained a small four-sided box held together with nails and rivets (LUISTARI II 85).

Late Viking Age

Reviewing the third group of Viking Age women's graves, we observe that in these graves of the 11th century, knives, sickles and shears are clearly more numerous than during the previous periods. Knives were found in almost every third grave, sickles in even more cases, and shears in every fourth grave. Spindle whorls were found only in grave 35, containing two (18000:1434, 1435, LUISTARI I Pl. 16:35:17, 18). There were hardly any more, for only one fragment (23607:257) was recovered even among the stray finds.

The tools are divided as follows. A combination of knife, sickle and shears was found in graves 56 (18000:1704,1728,1727), 377 (18000:4271,4275,4276) and probably 518 (22346:669,674,677,766), and grave 529 possibly contained a knife, shears and a billhook (23183:1060,32,67). A knife, shears and a small axe were recovered from grave 35 (18000:1432, 1437, 1431, 1447) and a knife and sickle were possibly among the finds from graves 58 (18000:1847,1840,1846, see Pl. 12:518:7,8) and 359 (18000:4119,4111). Grave 383 contained a sickle (18000:4356) and as many as three or four knives (18000:107,108,4338,4355), but some of them may have been from older graves. The others contained one tool or implement each, thus adding up to a total of 16 women's graves with tools from this stage. There were knives in graves 25, 366, 516c and 523 (18000:1353, 4160, 22346:651,622,716), sickles in graves 413, 455 and 600 (18000:4323, 22346:183,184, 23183:366,370) and shears in grave 23 (18000:1304).

Twelve of the graves of the period contained a clay vessel, or vessels. Graves 359 and 377 contained two each, and there were three pots in grave 23. There was thus a total of 16 pots, seven of which were undecorated (18000:1436,4127,4176,4277, 4305, 22346:718 and 23183:377 from graves 35, 359, 370, 377, 413, 523 and 600). This was proportionately a greater number than previously. The pots also differed from the older ones by virtue of being flat-bottomed; only two had round or rounded

bases. One of the latter was a clumsily executed cord-impressed vessel from grave 23 (18000:1576); the other, from grave 529 (23183:25), was decorated with a zone of wavy lines bound by horizontal grooves. Four vessels (18000:1281,1363,150 and 23183:631 from graves 23, 25, 359 and 668) were decorated with a zone of hatched designs, and four (18000:1299 and 1576 from grave 23, 18000:1770 and 4278 from graves 56 and 377) had cord impressions. The two last-mentioned ones were of flower-pot shape and decorated with only a few turns of a very thick cord (LUISTARI II 78, 83 group II:2d, fig. 22:16). Similar pots were found in the men's and children's graves of the corresponding period (see graves 207, 208, 444, 666? and 840).

Animal remains were found in every second woman's grave of this period. Seven of these (graves 35, 56, 359, 377, 523, 600 and 668) also contained a clay vessel. In graves 35 and 359 there apparently were the remains of a dog. Grave 668 possibly contained the head of a young pig; graves 366, 460, 518 and 523 included the head of a goat or lamb; and bovine remains were found in graves 56, 58, 455 and 600 (LUISTARI I 309–310; Tupala 1999). The teeth in grave 377 were so decayed that they could not be analysed.

The last phase of furnished burial

A notable feature of the material of the Final Period is that five women were still given a sickle (18000:1452,3765,4584, 22346:424 and 25480:239 from graves 36, 334, 485, 404, 1010), but perhaps only four were given a knife (18000:4207,4583,4588, 23183:348 and 25480:243 from graves 358?, 404 [2], 590 and 1010). Shears were placed only in grave 404 (18000:4585). A clay vessel (25480:241) was found in double burial 1010, near the feet of the woman. Sherds from two vessels were found in the area of grave 358 (18000:4087), but as this grave was overlain by two later burials and there were also earlier burials in the area, it is not certain whether the vessels can be associated with grave 358 and its female burial.

Grave 404 did not contain a pot, but its finds included pieces of birch bark suggesting an oval vessel sewn from sheets of bark (LUISTARI I Pl. 123:404:52; LUISTARI II 84). Animal remains were found in graves 485 and 1273 (22345:431, 27177:48). In the former grave they were skull remains of a bovine animal, in the latter upper arm bones of goat or sheep (Tupala 2000). The custom of placing food with the body thus continued to some degree even when the custom of furnished burial was rejected, for also unfurnished graves contained animal remains (the late animal burials are a separate issue, see p. 165, 176). It is difficult to ascertain when this custom was rejected or whether it was rejected at all, because it is almost impossible to date unfurnished graves.

THE CHILDREN'S GRAVES

Discernment of children's graves from adult burials

Bones have survived very poorly at Luistari and therefore osteological determinations could be made only in exceptional cases. The children's graves are distinguished from the adult burials by four features. Where bones have been preserved, the small size of the body was the primary basis for identification. Where no bones were found, the size of the ring ornaments was considered. Small finger-rings, bracelets and toe-rings could have been worn only by children. The most common size of modern-day engagement and wedding rings is 17–18 mm; the smallest rings sold are of size 14. Accordingly, I regard an interior diameter of 14 mm as the upper limit of children's rings when other details do not show that the deceased was smaller than normal.

Other small objects most probably belonged to children. I have attributed small objects in small, and also larger, grave pits to children. A small coffin or a small grave-pit of shallow depth is also an indication of a prehistoric child burial. Basing on these criteria, there is a total of 180 children's burials pre-dating the mid-12th century. Ninety-seven of them contained grave-goods and five children without personal furnishing were buried with furnished women (graves 294 and 335). All in all these burials include ten children probably placed in the same grave pit with one or several adults.

Only three Merovingian Period children's graves contained objects. There was only an undecorated ceramic vessel (26695:64) in grave 1079, and grave 1033 contained a large knife and a shepherd's crook pin (25480:316,317). The orientation and location of these graves suggest that they are from the older stage, while grave 333 belonged to the later stage. The latter was apparently for a young boy outfitted with two spearheads and a knife. His cloak was attached with a large triangular-headed pin; there was a bronze bracelet around the wrist and a bronze ring on the finger (18000:3755–3760, LUISTARI I Pl. 90:333:1–6). The boy could not have been very old, for the maximum diameter of the bracelet was only 37 mm. The grave, however, was one of the best-furnished ones in the whole Merovingian Period section of the cemetery.

In addition to these furnished graves, I have identified to the Merovingian Period 19 small graves (32, 132, 258, 328, 340, 424, 430, 433, 434, 491, 1027, 1028, 1031, 1032, 1034, 1096, 1201, 1202, 1208) mainly on the basis of their location in the area where graves were dug in the Merovingian Period. On the other hand, some of them have constructional details, such as sooty stone settings, that are hardly present in Viking Age graves. There were

also two children in grave 335, containing several bodies. It is quite possible that these 24 burials do not represent all the children buried during the Merovingian Period. There may have been more remains of children also in the 16 unfurnished graves located in the area of Merovingian Period burials and corresponding structurally to them (graves 362, 420, 435, 438, 992, 1030, 1035, 1095, 1197 of the older phase, and graves 34, 312, 332, 339, 350, 1019 and 1042 of the later phase). Almost all these graves included sooty stone settings, and some contained bovine bones, but there were no objects.

There are 132 probable Viking Age children's burials at Luistari. Eighty of them contained objects and artefacts of some kind. The remainder are dated on the basis



Fig. 78. Small ornaments in grave 139, NE view.

of their location and the shape of the grave pit. As I have explained previously, the late graves at Luistari are clearly narrower and deeper and have sharper angles than those from the period of furnished burial (LUISTARI I 25–26). Therefore, in the locations where the graves were intact, also the early unfurnished burials could be distinguished from later graves.

In the north parts of the cemetery, there were so many overlapping burials that many of the children's graves may have been completely destroyed. If there had been small unfurnished graves in this part, only a corner of such would have survived at best. This is possibly reflected by the fact that where 37 children's graves were found in the area of the oldest stage of the Viking Age and 20 of these were furnished, and where 62 graves (30 furnished) can be assigned to phases Viking II and III, thirty of the thirty-three graves of Viking IV are furnished, and 17 of the 25 of the FP phase. This hardly implies solely the fact that more children were given a furnished burial during the 11th and 12th centuries, but also that it was almost impossible to distinguish unfurnished children's graves in the north area of the cemetery, while in the other parts of the cemetery also the unfurnished children's graves are included in the calculations.

The adults' graves to which the children's graves of Viking I correspond are 51 in number, and the children's graves thus amount to 42% of the total. There are 67 adults' graves of the Viking II and III stages, making the percentage of children's graves 48. Fifty-four adults' graves have been attributed to the Viking IV phase, making the percentage of children's burials 38. There are 58 FP-stage graves, among which 43% are possibly children's graves. If only the furnished children's graves are taken into consideration, the percentage would vary from 28 (V I) to 36 (V IV) with an average of 31 %.

If we add to this the unfurnished children's graves probably from the Viking Age and the Final Period, the average will be 43%. This is not an improbable figure (see Gräslund 1973 161–164; LUISTARI III 53). The proportion of children's graves at Luistari is greater than in any of the early Christian cemeteries in Finland (cf. Purhonen 1998 154). This fact gives poor support to the theories according to which the heathens appreciated children less than the Christians (Gräslund 1997 325; Salo 1992 38–39, 1997 29–30; Purhonen 1998 152–155). Quite small children were buried among the adults at Luistari and the graves of many of them were furnished with the same care as the graves of the adult members of their families.

The periodization of the children's material

It was pointed out above that the women's graves do not display as distinct a difference between the first half and second half of the 10th century (V II and V III) as the men's graves do. The differences are even smaller in the children's graves. The children's graves of the oldest Viking Age period (V I) are distinguished from the middle and late stages by their location and sparser furnishings, but throughout the whole Late Iron Age a few beads and

spirals, small rings, iron knives and pots are among the most common objects of the children's graves. Bracelets and sleigh-bells occur in the graves of the 10th century and the early 11th century, but are lacking, as also the pots, from the graves of the FP phase. On the other hand small penannular brooches occur in the graves of the Viking IV and FP phases, and it appears as if the floral-knobbed penannular brooches were especially children's brooches at Luistari. Four of them were found in children's graves (2 from grave 10 [18000:1062,1063] and one from each of graves 466 [22346:253] and 1056 [25480:356]). Only one was found in a grave definitely attributed to an adult woman (grave 404). Grave 36, which contained the smallest floral-knobbed brooch (18000:1453), may also have belonged to a young person.

Other features that the latest periods have in common are the presence of belts and a growing array of objects. Where in the 9th and 10th century graves only one in five or six contained other objects than the most common ones mentioned here, every second grave of the 11th century and early 12th century included such objects. In addition to belt parts, the graves contained objects suspended from belts, such as pouches, fire-steels, keys and pendant whetstones, but also weapons and tools, such as chisels, a sickle (grave 855) and shears (grave 367). Nails and rivets appear in the material from the 10th century onwards, but in greater amounts during the FP stage. A stone disc was also found in three late children's graves (nos. 478, 746, 1002).

Children's weapon graves

Nine of the children's graves at Luistari contained weapons. The above-mentioned Merovingian Period grave 333 contained two spearheads and a knife (18000:3755, 3756,3760), which were large enough to have been placed in the grave of an adult male. The position of the spearheads suggests a spear length of only 160–170 cm (see LUISTARI I 227–228). Grave 1033, which was also from the Merovingian Period, contained a knife over 20 cm long (25480:316). On the other hand, the weapons found in the Viking Age children's graves correspond in size to their owners.

The smallest child to be outfitted with a weapon was buried in grave 273. Since it had a toe-ring (18000:3110) and remains of the skull had survived, it was more or less certain that the body was not longer than 65 cm. Next to the body was a small knife (18000:3109) and a narrow-bladed tanged spearhead 189 mm long (18000:3107). The point and a penannular brooch with faceted knobs (18000:3108) used to attach the child's clothing date the grave to the first half of the 9th century (LUISTARI II 31, 102).

Grave 41, also dated to the oldest phase of the Viking Age (LUISTARI II 184), contained the body of a child, and an object that appears to be an arrowhead (18000:1494). Because arrowheads are generally rare in the Finnish graves (LUISTARI II 40), we can assume that the point was from a small spear. It is also possible that a

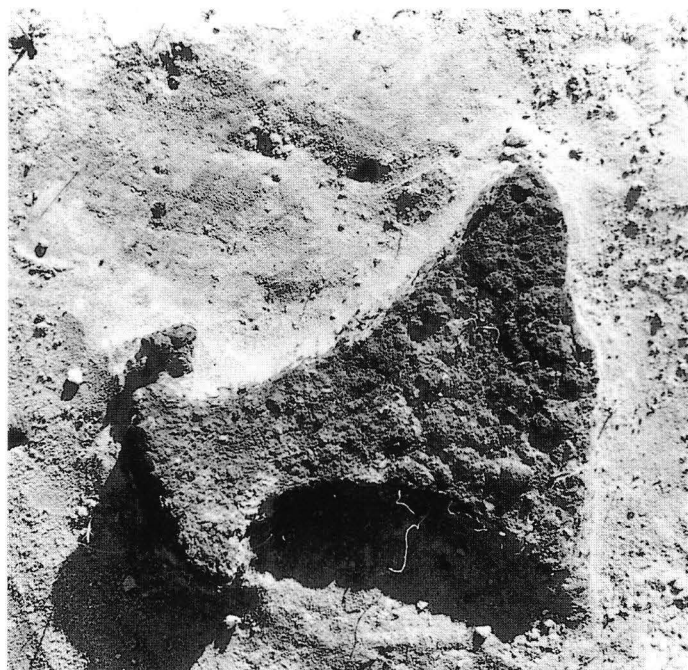


Fig. 79. Axe in grave 580, from above.

Fig. 80. Iron pin on the left shoulder of a boy and a knife beside it in grave 1033, NE view.

bow and arrows were the weapons of children up to a certain age. The body was definitely shorter than 130 cm, but since the foot end of the grave was damaged in the digging of grave 66 and a later field ditch, the precise length of the body cannot be ascertained.

Grave 330 was more impressive than children's graves usually were. It had a large stone at one end and was covered by a stone setting in the middle. The grave pit was over two metres long and almost a metre wide. A wooden chamber with sturdy posts at the corners was built in the pit. The body was 130 cm long and was accompanied by two pots (18000:3744,3745), remains of a cow skull (18000:3747) and a spearhead with accentuated junction measuring 195 mm (18000:3743). The grave also contained a corner ornament of an apron (18000:3746), which was quite a strange find. It could however have been deposited on the bottom of the pit along with fill, for the grave itself is dated to the middle of the Viking Age (LUISTARI II 185–186), when the surrounding part of the cemetery had been used for burial for at least two centuries.

Even longer grave pits were dug for children buried in the 11th century who were given iron points as grave goods. The small body in grave 306 was buried in a wooden coffin 240 cm long but only roughly 50 cm wide and was given a small knife (18000:3523) and barbed point with a knife-like blade (18000:3522, length 147 mm). Grave 363 was even longer (330 cm), but the body buried at its SW end was quite small, with a finger-ring only 13 mm in diameter (18000:4143). Buried with this child was a key and a purse, and there was also a fire-steel in the grave pit (18000:4144, 4142,4148,4140). Clothing is indicated by a small penannular brooch (18000:4151) and a belt buckle (18000:4146), the belt of

which was probably of a tablet-woven band. Possibly a button-like object (18000:4141) found in the fill at the foot of the grave was originally part of the costume of the deceased (there were later pits at this location). The deceased was armed with a knife (18000:4150) and a point 108 mm long (18000:4152) that could have been an arrowhead, but also the point of a child's spear.

A notable feature of all the Viking Age graves is that only the knife-like point in grave 306 was in such a position that it could be assumed to have had a long shaft. A spear shaft less than 40 cm long could have fitted into grave 273; grave 41 had room for a shaft only half this length; and grave 330 could accommodate a shaft only slightly longer. This means that the points in these graves would hardly have been hafted or that their shafts were broken. The shaft of the point in grave 363 could have had a maximum length of 125 cm, although the grave pit itself was over three metres long. It is a mystery why a pit this long was needed, since the length of the spear did not require it.

In the two remaining graves of this group the child was not armed with a spear or an arrow, but with an axe. There is also a stray find of an actual miniature axe. The graves are from the close of the Viking Age or of even later date. Grave 290 was discovered at the west end of the cemetery. It was marked by a large stone and a couple of smaller ones, but the grave pit was only 160 cm long and half a metre wide. It contained the remains of a charred coffin. The body was at most 120 cm in length. A bead and a bronze pendant (18000:3323,3320) were strung around the neck of the child, and at the waist was a bronze mount and three iron pendants, a small 90 mm-long knife, but a fire-steel of normal size with a piece of flint (18000:3321,3322,3319,3318,3316). The axe

(18000: 3317) was next to the left shoulder and, like the knife, it was a miniature object, only 115 mm in height. With regard to type it was a well-formed so-called Fenno-Russian bearded axe (LUISTARI II 51).

An actual battle-axe (23183:327, Pl. 17:580:3) was placed with the child in grave 580, but it, too, was of miniature size, 120 mm in height and with a blade 107 mm wide (cf. Vuolijoki 1972 36–37). The other equipment consisted of a knife and a fire-steel (23183:329,328), both of which were more or less normal-sized. Because the grave did not contain bronze objects, the bones of the body were poorly preserved. There were only a few remains of the deceased over an area slightly more than one metre long, but the child could have been taller, for the traces were very indistinct, especially in the foot area.

The miniature axe recovered as a stray find (NM 22346:464) has a blade 36.5 mm wide. It is almost symmetrical and only 58mm in height. The butt is flat, 16 mm long; the eye is triangular with one side broken off, as also the corners of the blade. In its form the axe resembles the straight-sided Scandinavian axes of the period (Vuolijoki 1972 18–19, 66, fig. 19), but it has hardly any flanges. The axe was found in a mixed layer on the surface of grave 497, and its original location is uncertain. Grave 497 partly overlay grave 466, but also another child's grave, no. 496, was damaged by the digging of

later graves at the site. In fact, grave 497 overlay three furnished graves, nos. 528, 520 and 466, beneath which the small grave 496 was situated. In terms of form, the axe could be from the oldest grave.

As demonstrated above, only grave 330 lacked a knife, and it appears to have been the most common object of the boys' graves, which is the most probable interpretation for these weapon graves. It is possible to imagine that all the graves that contained knives but no definitely feminine attributes were boys' burials (Vik I: graves 77, 764, 907; Vik II–III: graves 394, 401, 898; Vik IV: grave 321; FP: graves 49, 466, 555). It is nonetheless quite obvious that the children's graves are mostly non gender-specific and that only in exceptional cases were the deceased outfitted in a manner distinguishing boys from girls.

Children's dress

There is so far very little data on the costume and dress of Finnish children of the Merovingian Period, because so far very few children's graves of the period are known. The two boys' graves (333, 1033) at Luistari tell only that the boys' cloaks were affixed with pins similar to those used by men and that boys could be given bracelets even though men did not wear them.



Fig. 81. Ornaments in grave 894, NE view from above.



Fig. 82. Ornaments in grave 118, E view.

The triangular-headed bronze pin of the child in grave 333 (18000:3758) was worn at the right shoulder and the ring ornaments were on the right wrist (18000:3759) and on one of the fingers of the right hand. The spiral finger-ring of bronze (18000:3757) was 11–13 mm in diameter. The iron shepherd's crook pin (25480:317) of the boy in grave 1033 was at the left shoulder, as was the case in some of the male burials at Luistari (see above), but he was not given any ring ornaments.

There are considerably more furnished children's graves of the Viking Age, showing that even infants were given one or several glass beads or a round pendant threaded on a length of yarn worn around the neck. For example, grave 912, which contained four small yellow beads (25480:109), was only 85 cm long. Small spiral finger-rings and toe-rings decorated the hands and feet of small children, and slightly older girls would be given spiral bracelets, silver pendants and even chains worn on the chest. The most complete set of ornaments, however, is from grave 10 of the FP phase, which contained the body of a child, two floral-knobbed penannular brooches and a third brooch of miniature size (18000:1061–1063, LUISTARI I Pl. 1:10:1–3).

The Luistari cemetery had four Viking Age graves in which a bronze spiral bracelet of several turns was placed on both wrists of a child. Of these, graves 118, 139 and 894 are from the 10th century, the last-mentioned probably being the oldest. The fourth, grave 855, is coin-dated to as late as the first half of the 11th century (Talvio 2000

nos. 22–25). In graves 118, 139 and 855, tabby cloth of relatively fine quality (G 118, 18000:2294; G 139, 18000:2421, 2423; G 855, 24740:417, 418, 420) was preserved within and partly outside the spiral turns, although the garment around the child's body was of twill (G 118, 18000:2291; G 139, 18000:2421, 2423, 2424, 2427, 2432, 2434, 2440; G 855, 24740:417, 418, 420, 427, 432). This suggests that the children were dressed in the same manner as the adult women: the undergarment was a tabby smock with bracelets at the sleeves, over which a sleeveless garment or mantle was worn affixed with a brooch or iron pin (see Lehtosalo-Hilander 1984 fig. 3). All these children had bead necklaces; there was a necklace of as many as 65 glass beads in grave 118 (18000:2282–2284), and one with 55 beads in grave 894 (25480:19, 21). The necklaces of two other children had fewer parts, but they were more impressive. The one in grave 139 contained beads with patterns and two Arabian coins (18000:2430–2438); and grave 855 had a necklace with as many as four silver coins: one Arabian, one English and two German (24740: 427–231, Pl. 41:855:5).

One of the children (grave 118) had a round bronze brooch (18000:2291), but two children's graves (139, 855) appear to have contained iron pins (18000:2428, 24740: 437). It can be assumed that the children's clothes were usually attached with wooden or bone pins. Because grave 894 did not contain any traces of clasps, it may have contained a pin or pins of organic material. It is not, however, impossible that this child, like most of the others,

was buried dressed only in a smock, in this case made of twill (25480:26). In addition to a bead necklace (25480:19,21), two bracelets (25480:25,26), four finger-rings (25480:23,24,27,29) and a small toe-ring (25480:22), the child also had a knife (25480:22) and possibly a grinding-stone (25480:28; Pl. 43:894:1–12).

The ring ornaments and bracelets suggest that these were girls, but the question is not that simple. Grave 333, from the Merovingian Period, shows that a boy could also be given a bracelet and in grave 290, from the 11th century, the boy wore a bead and a round bronze pendant around his neck (LUISTARI II 145). The gender of these children is indicated by the weapons, but there were only ten or so children's graves containing weapons, which means that there must be a large number of boys among the other burials.

The chains bring to mind image of wealthy matrons with their chest ornaments, but lengths of chain have also been found in a few children's graves. A small length of double-ring chain (24740:426) was discovered in grave 855, and the two rod-chain links from grave 1281 (27177:69) are hardly chains worn on the chest. On the other hand a chain of varied rings (18000:2427) was found in grave 139 in a position corresponding the place of the chains worn on the chest. It had rust stains in two places, one of which matched the location where the chain was joined to an iron pin. There may have been an iron ring in the other location, where the chain was sewn to the garment, or attached to a pin of subsequently decayed organic material (see LUISTARI II 114–115). The length of chain, ca. 80 mm long, had hung freely on the right side of the girl, perhaps attached to a small bell pendant (18000:2424). A similar pendant was possibly included in grave 141 (18000:2672).

The bell pendants and sleigh-bells appear to have been typical artefacts of the children's graves (LUISTARI II 116–117). It is, however, uncertain whether the sleigh-bells were separate toys, parts of rattles or ornaments sewn onto clothing (cf. Gräslund 1973 164–171). The two sleigh-bells of grave 118 (18000:2290,2295) were found at the waist of the child, but in grave 408 the sleigh-bell (18000:4634) was on the temple suggesting that it belonged to an item of headgear. The sleigh-bell of grave 826 (24740:131) was at the northwestern end, also suggesting the possibility of an ornament for headgear. The sleigh-bell of grave 444 (22346:102) is of a different type with a longiform bronze mount (Pl. 2:444:6). It was situated near the waist and it may have belonged to a belt. The large iron sleigh-bell of grave 475 (22346:324, Pl. 6:475:2) had come loose from its support. It was found at the very edge of the grave, and cannot be assigned any of the above-mentioned connections.

In addition to the sleigh-bell found on the forehead, only one other find directly points to headgear or an ornament for the head. Sets of spirals (1-2-1 spirals) were found on the forehead of the child in grave 855. Four such sets (24740:441) were recovered, but there may have been more of them originally. The spirals may have belonged to a band worn on the forehead, or they could have been

sewn onto a cap or garment covering the forehead of the child.

Spirals were sometimes found near the neck of the child, which means that they were used in necklaces along with beads (Pl. 41:855:5). Small appliquéd roundels and spiral crosses are also found, but the children were not given any richly decorated textiles.

The purpose or meaning of the corner ornaments of women's aprons in children's graves is a mystery (see graves 141, 330, 371, 401; 18000:2670,2746,4184–4185, 4498). Were some children perhaps wrapped in their mothers' aprons for burial? This appeared to be quite a plausible explanation in view of the finds from grave 460, where three tiny silver rings (22346:203,205,208) were found along with a richly decorated apron hem (22346:202). There were, however, ankle bones beneath the hem of the apron, indicating that the woman herself was buried and the small rings remain a mystery. Placed at the foot of the grave they could have been votive offerings from children. In grave 891 the corner ornaments (24740:522,524) were so suitably near the ankles of the child that she must have had a small apron herself. A similar case is known from the Humikkala cemetery in Masku (Söyrinki-Harmo 1992 151–152).

Other material in children's graves

As mentioned above, belts with buckles and objects suspended from belts appeared in the graves during the 11th century. In addition to knives, especially fire-steels (Vik I: G 63, 18000:1891; Vik IV: G 290, 18000:3318, G 363, 18000:4140, G 513, 22346: 606, G 529b ?, 23183:10; FP: G 580, 23183:328) but sometimes also pouches (G 363, 18000:4142,4148,4149; G 367, 18000:4164), weights (G 363, 18000:4142; G 474, 22346:312; G 671A, 23183:708) and keys (G 363, 18000:4144; G 543 ?, 23183:121) were placed in the graves with the children (cf. Gräslund 1973 174). A pendant whetstone was discovered in three children's graves (G 444, 22346:103; G 466, 22346:260; G 910, 25480:103) and there was a stone disc in three graves (nos. 478, 746, 1002; 22346:346, 23607:519, 25480:164).

Tools deposited with children include small chisels (G 147, 18000:2492; G 543, 23183:119; G 676, 23183:725; G 1055, 25480:355), sickles (G141, 18000:2456; G 855, 24740:432), and shears on one occasion (G 367, 18000:4166). Where the graves contained tools, weapons or toys of bone, antler or wood, no traces remain of these objects.

During the Viking Age, food was placed quite often in the children's graves. A pot or two are found in approximately one furnished children's grave out of four (Vik I graves 41, 63, 183, 297, 316, 760; Vik II–III graves 118 [2], 139, 330 [2], 394, 401, 1288 ?; Vik IV graves 408 ?, 444 [2], 460A ?, 513, 568 ?, 855 [2], 1185 ?; FP grave 466 ?), and there are animal remains from at least ten graves (Vik II–III graves 139 ?, 393, 739, 757, 810, 837, 897, 910; Vik IV graves 444, 647). It should again be pointed out that traces of wooden porridge bowls and beakers, and birch-bark vessels have survived only exceptionally.

THE CHRONOLOGY OF THE LUISTARI CEMETERY AFTER TOTAL EXCAVATION

The chronology of the cemetery requires adjustment, but only to a minor degree. Naturally, the period when the area was used for habitation and burial now presents itself as considerably longer, as the oldest radiocarbon dates are three thousand years old and the latest only a couple of centuries old. There is, however, nothing surprising *per se* in this situation. The ceramics discovered in the first year of excavation already gave cause to expect more Bronze Age material, and old maps tell of land use during historically documented times. The large number of late unfurnished graves was, however, a surprise, as also the discovery of several cairns and preserved hearths, and the picture provided by the oldest inhumation graves.

Despite expectations, Luistari revealed no men's graves that could be compared to the graves of Cleve's phase I (1943 167–168, 188–189). Although the number of earlier Merovingian Period graves grew almost three-fold and several women's graves dated to ca. AD 600 were discovered, there were no finds of Finnish funnel-topped shield bosses or the oldest type of the Finnish angon. If however the dates of Cleve's phases, which are based on weapon finds, are changed for older ones according to the new Scandinavian chronology (see e.g. Jørgensen 1992 22 figs. 4–6), there may be no contradiction, and the oldest men's graves at Luistari, e.g. graves 52, 1040 and graves containing typical Finnish angons of variant b, could also be dated to the period around the year 600.

The Merovingian Period material from Luistari is still most distinctly divided, according to grave orientation, into two stages: an older one representing the 7th century and perhaps the beginning of the 8th, and a later one dated from that on to the second half of the 8th century. The focus is on the women's graves in the former, and on the men's graves in the latter. There are children's graves from both stages.

In the male graves of the Viking Age, the difference between the uniform Early Viking Age and the more diffuse Late Viking Age was further underlined. The former is characterized by E-type spearheads and large penannular brooches of bronze, while the latter is marked by a diversity of weapon combinations, silver coins and small silver brooches. The intermediary Viking III stage is more closely associated with the older stage, contrary to expectations. A reason for this is the material from the women's graves. The women's graves of the Viking Age did not display chronological groups as distinct as those of the men's graves. Because shoulder brooches were found in only a few graves, dating according to brooches or fibulae did not provide the expected chronological framework. The C-Da stage (LUISTARI II 97–100) of the four-animal Finnish concave-convex brooches was fi-

nally lacking, while there were more finds of A-B brooches and two-animal brooches. The women of the Luistari community appear to have worn two-animal brooches at the time when C-D and Da brooches were in use elsewhere. There were no essential additions to the women's material of the Late Viking Age, while the array of Early and Middle Viking Age material grew and expanded considerably.

It was also a surprise that most of the graves containing coins were investigated during the first four excavation seasons. Although the number of graves of the two last periods grew almost three-fold, only 23 Western coins or fragments thereof were added to the existing material of 72 coins. Fifteen of the new coin finds could be dated, and none were younger than the middle of the 11th century. There were seven English coins from between 997 and 1016, and all eight German coins are from the period 991–1056 (Talvio 2000). Thus, graves 358 and 404 are still the youngest coin-dated graves at Luistari (LUISTARI II 184).

Only two of the five Arabian coins and their fragments found in excavations in 1984–1992 could be dated. One of these was from the last quarter of the 10th century and it provided the second coin date for the weapon graves of the Viking III period. The other dated Arabian coin is possibly from 754/755 AD, but it was on the same necklace as three Western coins. Two of these are German, with 991 and 1002 as their earliest possible dates of minting, and the third is an English coin struck in 1009 at the earliest, which means that the Arabian coin was roughly two and a half hundred years old upon being interred as an ornament. The long circulation of Oriental coins as ornaments is also attested by a coin found in the fill of grave 538 which was so worn that only part of the rim inscription is visible (see Talvio 2000:14).

Grave 855 in which the above-mentioned old Arabian coin was found is most probably the youngest furnished grave in the south end of the cemetery. After it, burials shifted completely to the north end of the cemetery, where new graves apparently began to be dug already in the late 10th century. The oldest of these was probably grave 471, which contained a variant of an E-type spearhead and which was almost completely destroyed by later graves. This grave was followed by graves 528, 490, 510, 480 and possibly the easternmost group consisting of graves 207, 215, 217, 225, 226 and 229. These graves and those to the north of them are almost completely outside the Merovingian Period cemetery area. Subsequently, graves were repeatedly dug in the same locations, thus producing the grave clusters of the north end, at worst consisting of as many as eight intersecting graves.

When first sketching an overall picture from incomplete material and then reviewing the results with reference to a complete corpus of data, as is the case at Luistari, the possibly most interesting question is whether the picture changes and, if so, how much. Here, additional excavation partly reinforced the earlier picture and partly led to disappointment.

One such disappointment was the fact that the excavation of the oldest part of the inhumation cemetery did not solve the problem of the adoption of this custom in the Eura region. The Merovingian Period material is representative, for instead of the estimated 50 graves (LUISTARI II 173) the early stage of the period is now represented by 67 graves, and about ten new graves of the later phase were also discovered. However, the oldest stage of the weapon graves and the luxury items are still lacking. The material tells of a relatively affluent community with established burial traditions, but the origin of these traditions remains obscure. Almost all the material is already known from the archaeology record. It is important, however, that the body of material shows how varying the combinations of objects were and how exceptional complete sets of weapons and ornaments are. The weapon combinations and sets of women's ornaments known from the graves at Köyliö (Cleve 1943 178–181, 186–192) were seemingly not everyday reality in Merovingian Period Finland, but evidence of an exceptionally rich community.

With regard to the Viking Age, the number of graves did not grow proportionally as much as for the Merovingian Period, but it nevertheless almost doubled. The oldest stage of the Viking Age was now represented by 34 new discoveries of graves and the overall picture of women's ornament in particular gained more detail. It was also discovered that population growth and the growth of affluence of the community had already begun in the 9th century,

After the first excavations at Luistari I had regarded the material of the middle stage of the Viking Age, the close of the 9th century and the first half of the 10th century, as almost complete (LUISTARI III 53–54), but here, too, some 30–35 new graves were discovered. The imprecise figure is caused by the fact that although the weapon graves can be divided into the Viking II and III stages, this is difficult with regard to the women's and children's graves. Contrary to expectations, there were no further discoveries of women's graves with later variants of the Finnish four-animal concave-convex brooches. On the other hand, three graves (nos. 785, 835, 1260) with two-animal concave-convex brooches were discovered. The most distinct characteristic of the 10th-century

women was an apron with corners decorated with large spiral ornaments. Viking III was ultimately closer to the older stages than the Late Viking Age. Accordingly, Viking II and III, totalling 125 graves, form an almost distinct group.

It was quite a surprise that the 10th century, which appears to have been a flourishing period at Luistari with impressive weapons and large cloak brooches worn by men, revealed surprisingly few women's graves with brooches. Although one of the cemetery's most stately women's graves (no. 1260) belongs to this stage, it does not alter the fact that most of the graves are only moderately furnished. Only three pairs of shoulder brooches from a period of a century is not much.

It seems quite unbelievable that, with only one exception, all the graves of the first half of the 11th century containing round Finnish concave-convex brooches were within the ditch area excavated in 1969. The excavations of 1984–1992 did not reveal any more round D-type brooches, despite the fact that the number of Viking IV graves grew by about fifty. The richness of the women's graves of the early 11th century (LUISTARI III 46) is not diminished in any way, but these well appointed graves are now given their proper perspective in view of the fact that the other contemporary graves were considerably poorer.

It is quite probable that the location where the excavations commenced in 1969 was the grave site of the leading local family. In this small area of 10x10 m were the partly overlapping burials of over ten well-furnished persons – women, men and children. Alongside the stately women's graves there were five or six furnished children's graves and two or three graves with swords (15, 17 and 516). The lowermost burial, grave 52 from the Merovingian Period with weapons, hardly belongs to this cluster of graves from the end of the 10th century to ca. 1100.

The largest amount of new information was provided by the children's graves. Luistari is not the only cemetery containing children's graves in Finland (see Söyrinki-Harmo 1992, 1992a figs. 1, 2), but it was now possible for the first time to review children's burials as a corpus and as part of the cemetery as a whole. In most cases, a child was buried in its grave, but often near some amply furnished adult's grave (e.g. graves 35, 56, 100, 135, 670, 740, 835) and sometimes in the same pit as an adult (graves 280, 294, 295, 303, 335, 529, 805, 879). Owing to the poor preservation of bones, a small ring with digital bones is sometimes the only indication of another body.

A notable feature of the Merovingian Period cemetery

was that the small graves were not oriented as regularly as the graves of the adults. Especially in the Viking Age, small graves were grouped around certain adult graves (cf. LUISTARI III 20). These groups suggest the possibility of a continuity of family and kin extending beyond the grave. The fact that changes in children's graves over time were minor is one expression of these ties. The tradition continued from one century to another.

All in all, there were no more than 12–13 double or

mass burials. These include graves of the Early Viking Age possibly resulting from an epidemic of some kind, but there are also a few graves (358, 404, 1010) of this kind from the very end of the furnished burial period. The latter are among the most impressive in the whole cemetery. At a time when others had adopted the custom of unfurnished burial, some families still wanted to express their status with traditional opulence and underline their family ties with burials in jointly used grave-chambers.



Fig. 83. It all began in this ditch... Pentti Ruohomaa, Kimmo Toivola, the author and a skull in the drainage ditch at the site in 1969. Photo Tuula Lähteenmäki, Kunnallis-Sanomat 4. 9. 1969.

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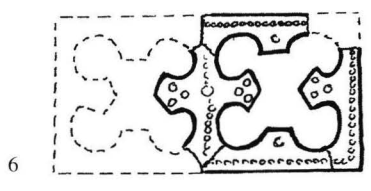
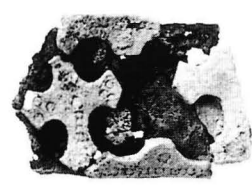
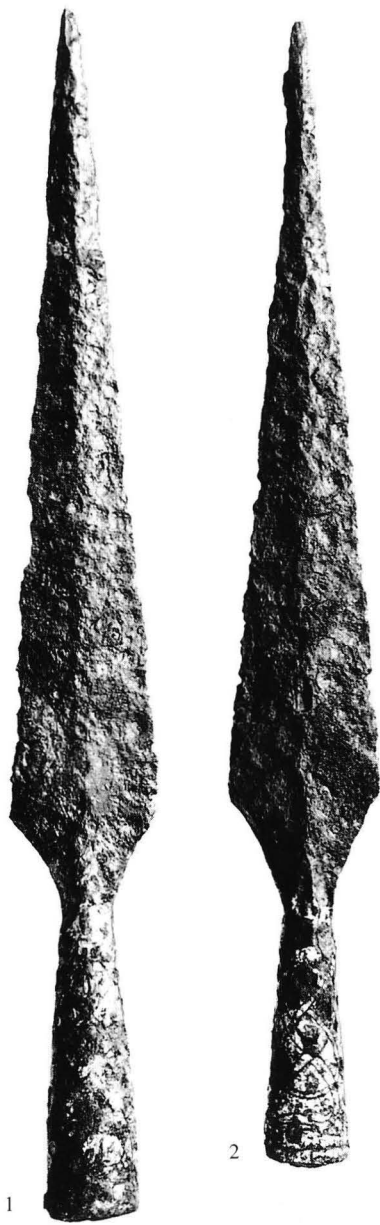
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ABBREVIATIONS:

- FM = Finskt Museum, Helsingfors
- ESA = Eurasia Septentrionalis Antiqua, Helsinki
- SM = Suomen Museo, Helsinki
- SMYA = Suomen Muinaismuistoyhdistyksen Aikakauskirja – Finska Fornminnesföreningens Tidskrift, Helsinki (Helsingfors)

G 423



G 502

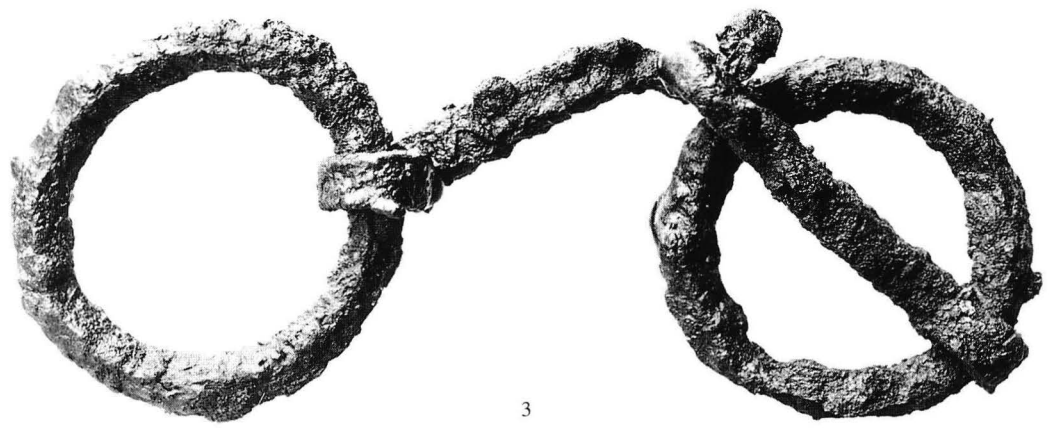
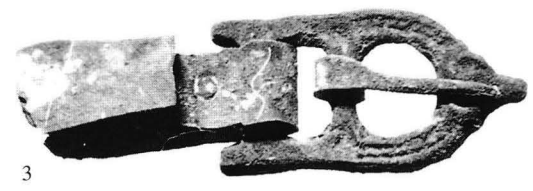


Plate 1. **G 423** (22346): 1–2 spearheads (1,2), 3 bit 1/1 (3), 4 a finger-ring of silver (5), 5 spiral ornament (8), 6 belt fitting (9).
 – **G 502** (22346): 1 a penannular brooch of silver (515), 2 web-foot pendant (514), 3 belt buckle (512).

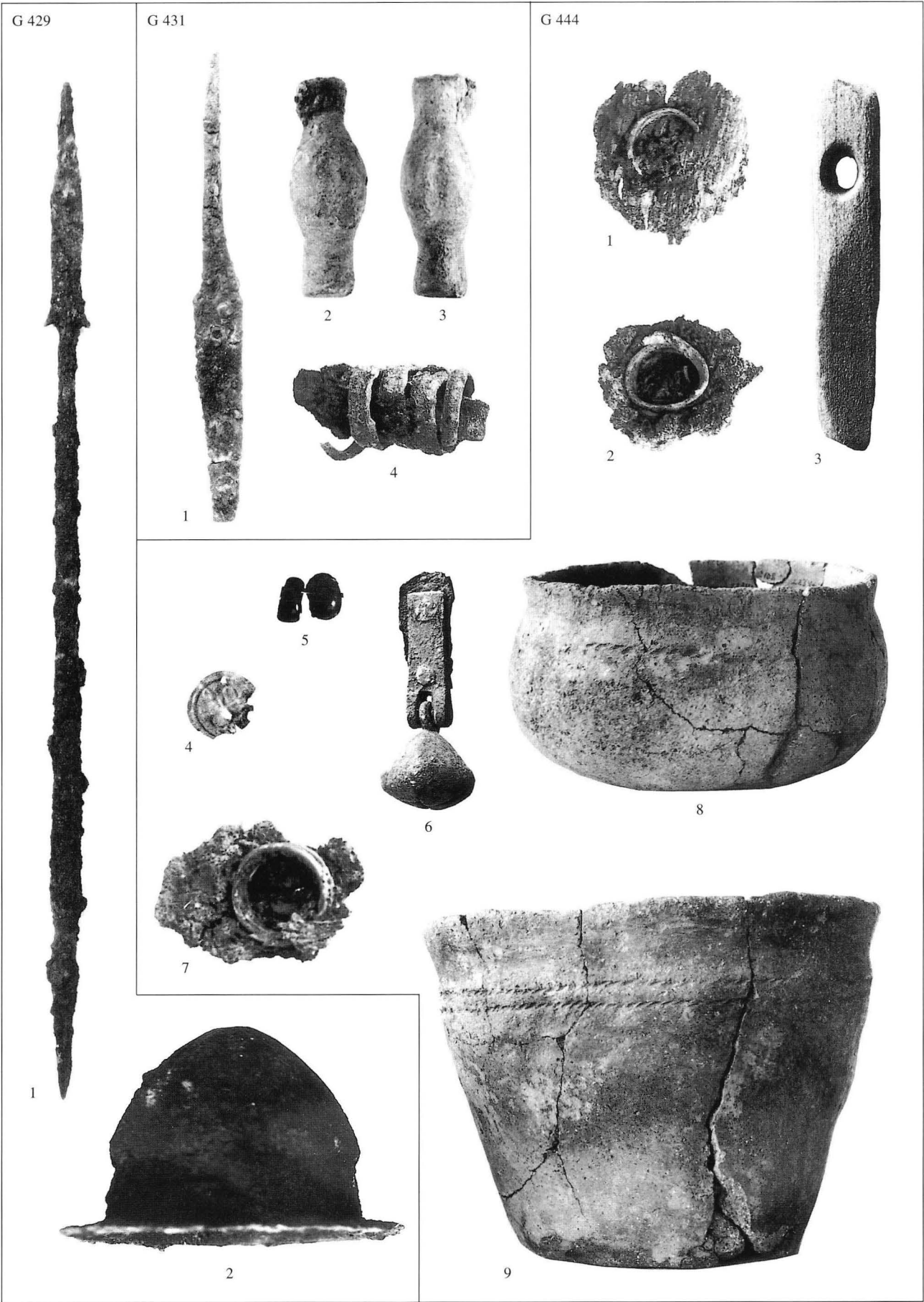
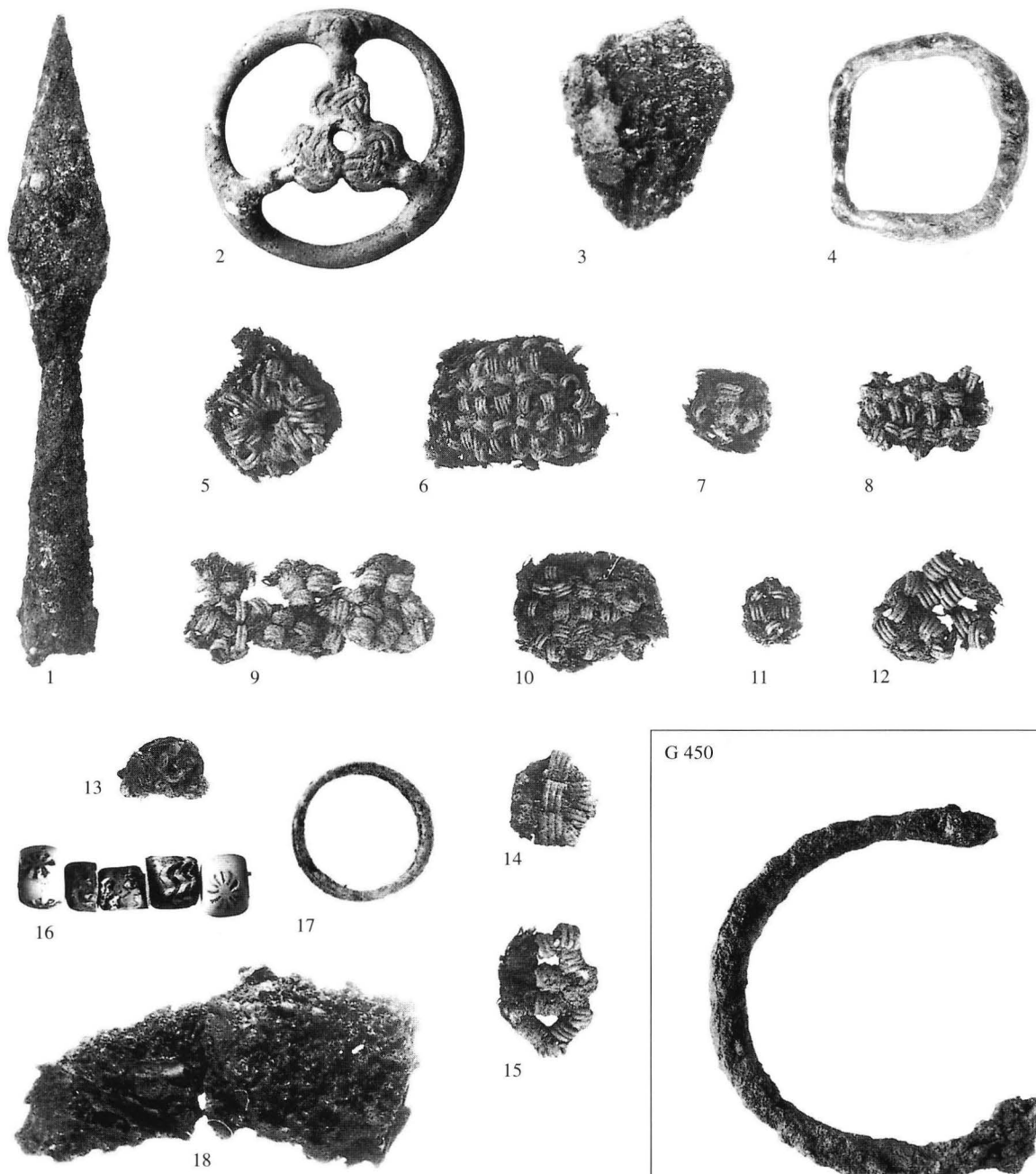


Plate 2. **G 429** (22346): 1 angon (27), 2 shield-boss (26). – **G 431** (22346): 1 knife 1/2 (31), 2–3 brooches (29,30), 4 finger-ring (32). – **G 444** (22346): 1–2 finger-ring fragments (105a,b), 3 pendant whetstone (103), 4 silver pendant (106b), 5 two beads (106a), 6 sleight bell pendant (102), 7 finger-ring (104), 8–9 clay vessels (108,109).

G 445/455



G 450



Plate 3. **G 445 & 455** (22346): 1 spearhead (131), 2 strap-divider (120), 3 sword-tip (123), 4 belt buckle (113), 5–15 spiral ornaments (121,122,125,126,129,130,134,140,186, 43 [fill of grave 436], 234 [fill of grave 463], 16 five beads (118,119,128,185,187), 17 finger-ring (188), 18 sickle fragments (183,184). – **G 450 & 450A** (22346): 1 bronze mount (161), 2 grinding stone (165), 3 two bronze rivets (164), 4 ring-head pin (166).

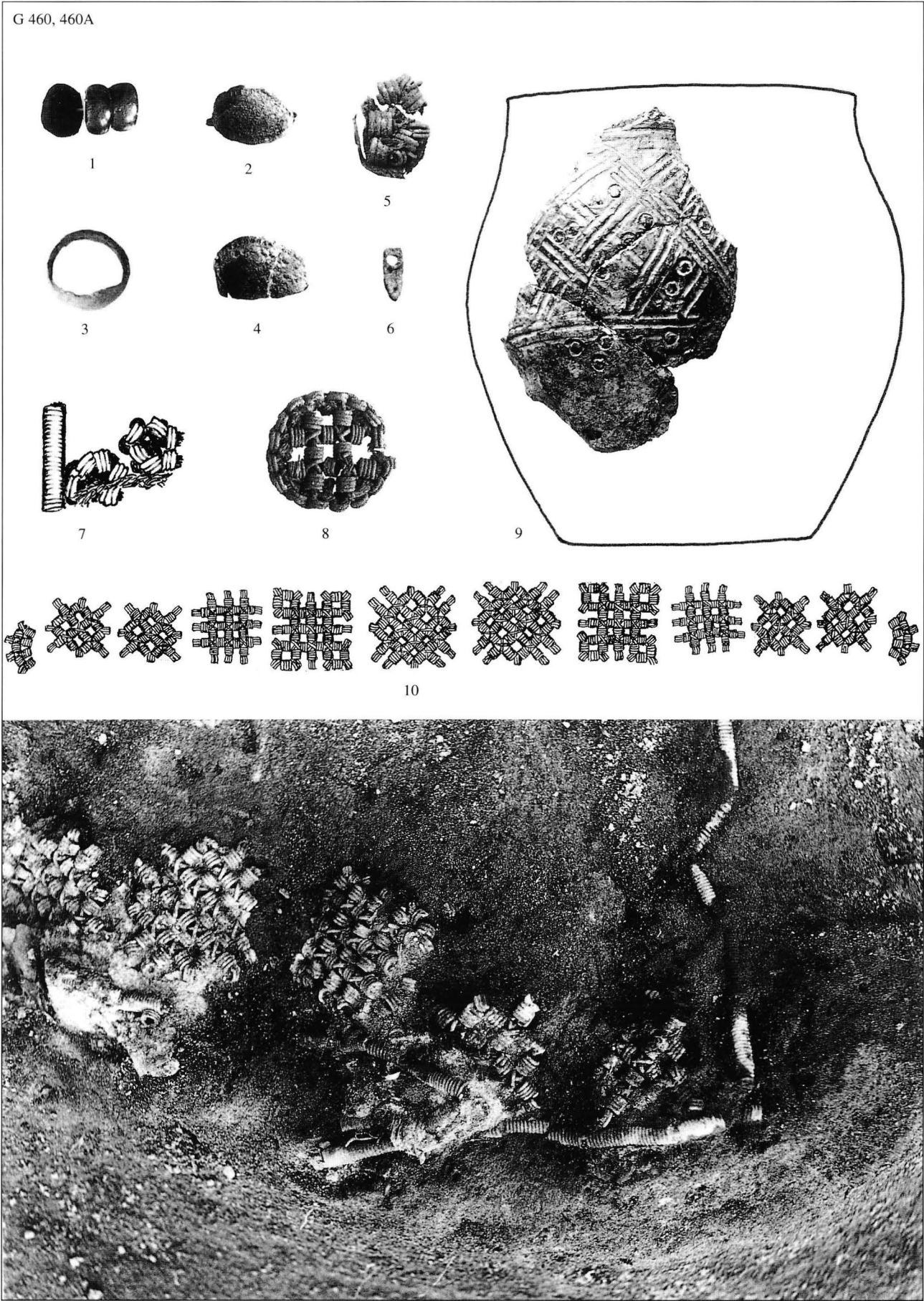


Plate 4. **G 460 & 460A** (22346): 1 two beads (200,207), 2-4 finger-rings of silver (203,205,208), 5 spiral ornament (202:2), 6 bronze fitting (204), 7-8 spiral ornaments (202:3, 206), 9 ceramic vessel 1/1 (201), 10 reconstructed apron hem ornaments (circa 1/3), 11 apron hem (202) in situ.

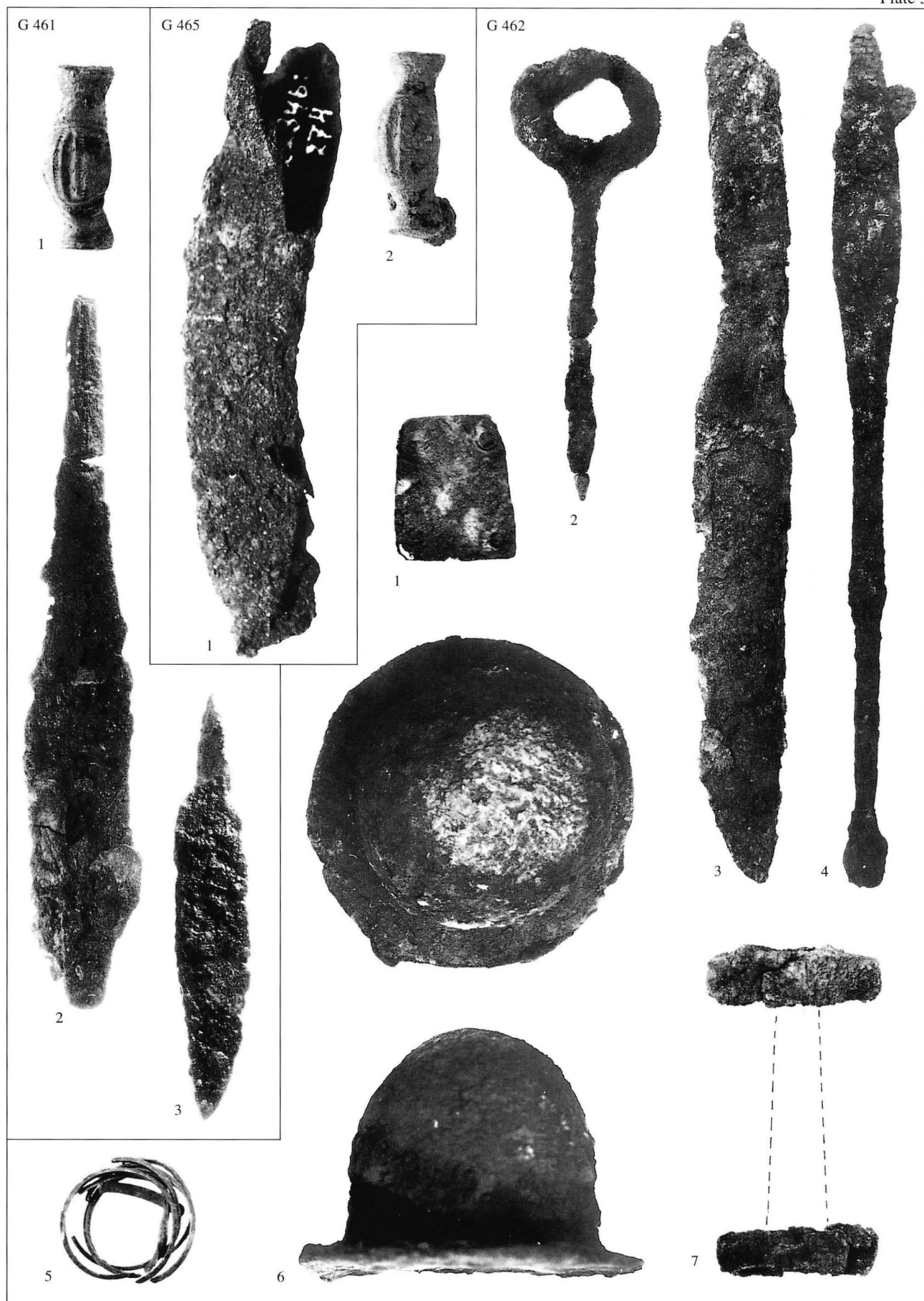


Plate 5. **G 461** (22346): 1 brooch (218), 2 knife (216), 3 knife (217). – **G 465** (22346): 1 sickle fragment (274), 2 brooch (275). – **G 462** (22346): 1 bronze mount (222), 2 iron pin 1/2 (228), 3 seax (224), 4 spearhead (223), 5 finger-ring (227), 6a,b shield-boss (226), 7 sword handle fragments (225).

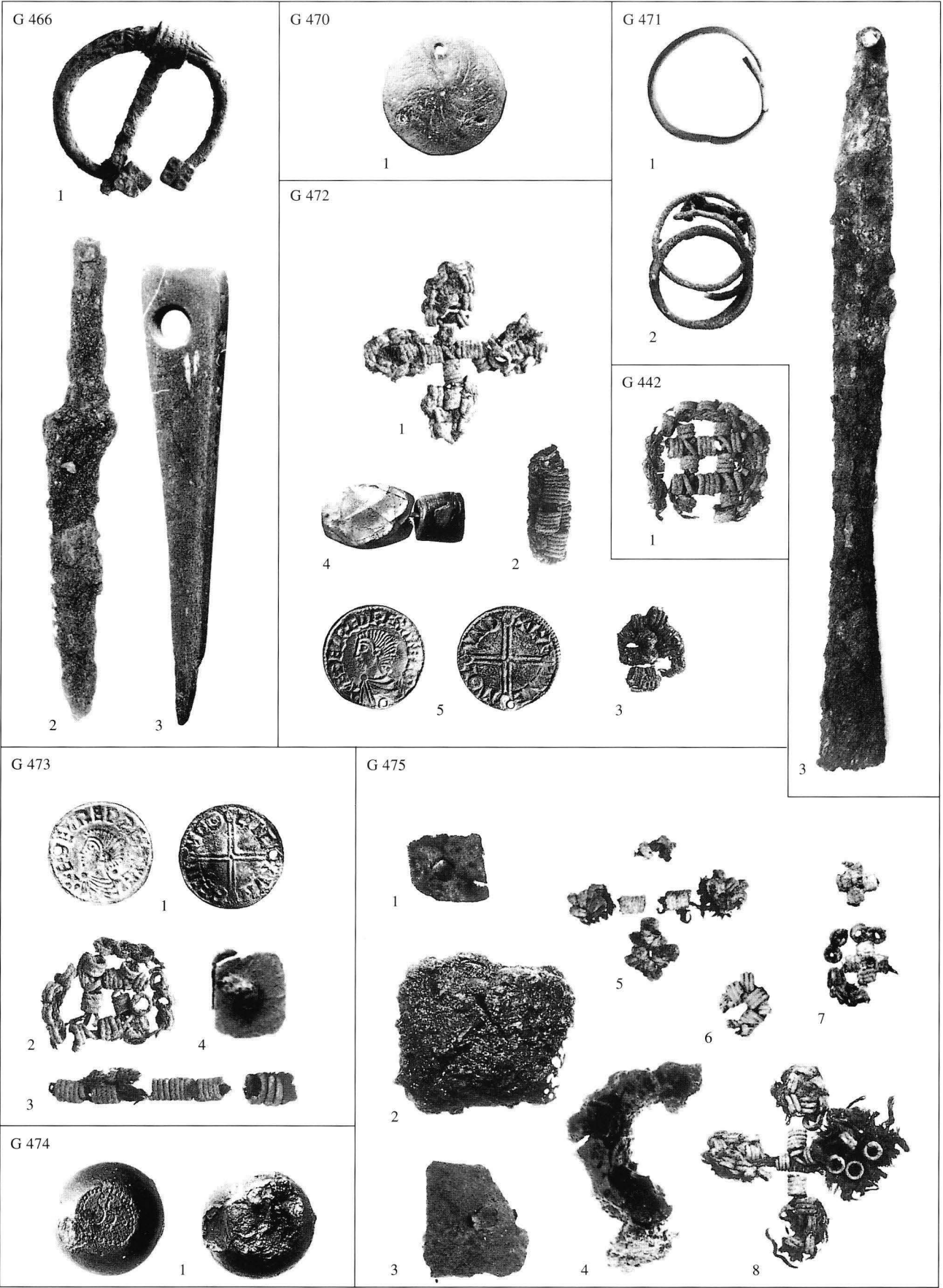


Plate 6. **G 442** (22346): spiral ornament (87). – **G 466** (22346): 1 brooch (253), 2 knife (255), 3 whetstone (260). – **G 470** (22346): fitting (284). – **G 471** (22346): 1–2 finger-rings (286, 288), 3 spearhead (287). – **G 472** (22346): 1–3 spiral ornaments (294, 297, 301), 4 beads (295, 296), 5 silver coin (300). – **G 473** (22346): 1 silver coin (307), 2–3 spiral ornaments (208, 209), 4 bronze mount (310). – **Grave 474** (22346): weight (312). – **G 475** (22346): 1, 3 mounts (315, 325), 2 sleigh bell (324), 4 iron fragment (327), 5–8 spiral ornaments (316, 318, 321, 329).

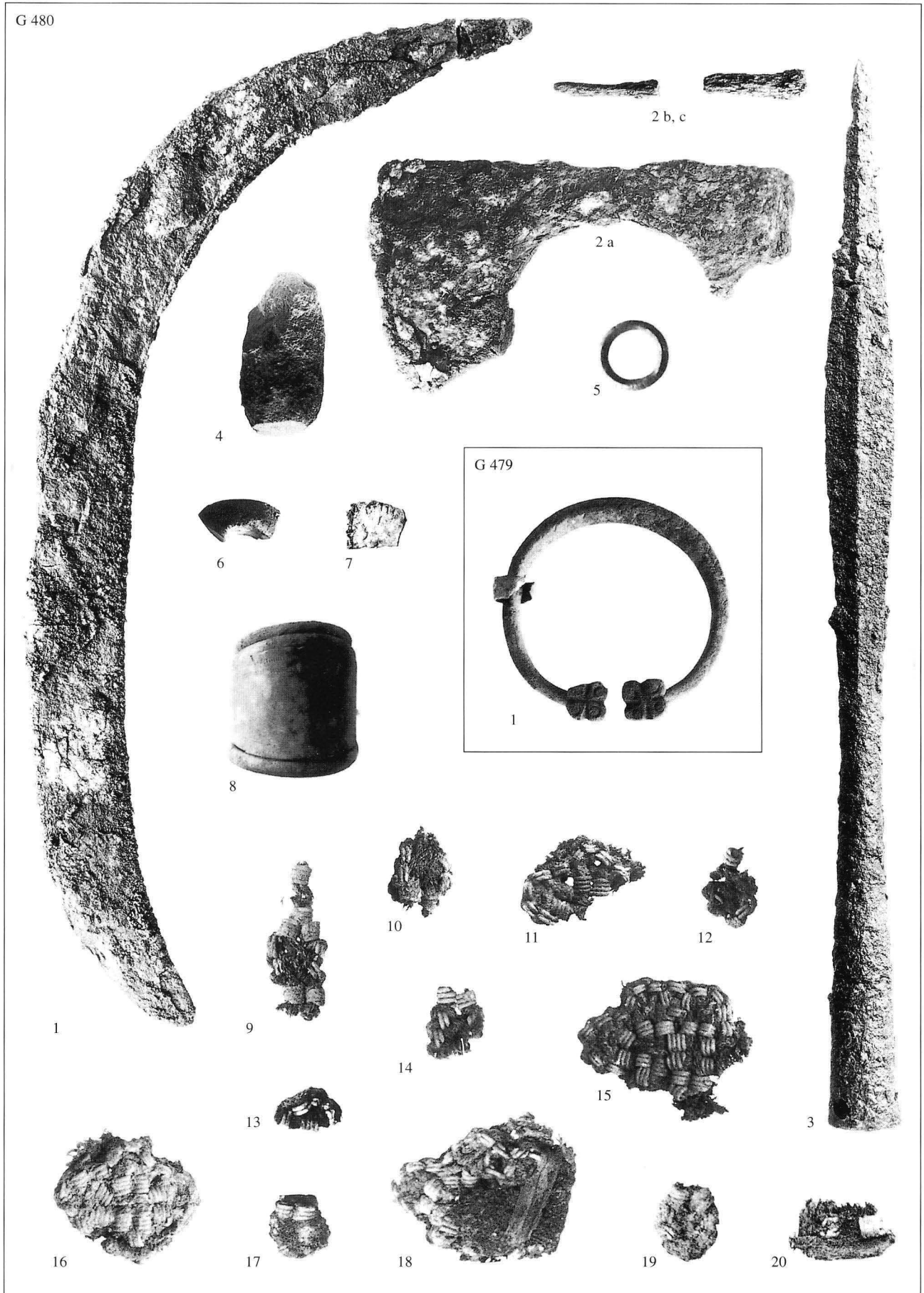


Plate 7. **G 479** (22346): penannular brooch (351). – **G 480** (22346): 1 scythe (377), 2a-c axe (376), 3 spearhead (378), 4 grinding-stone for paint (1025), 5 ring (356), 6 amber bead fragment (374b), 7 silver coin fragment (374e), 8 finger-ring (360), 9–20 spiral ornaments (362,368,369,370,375,372,373,373a,380a,380b,381,382).

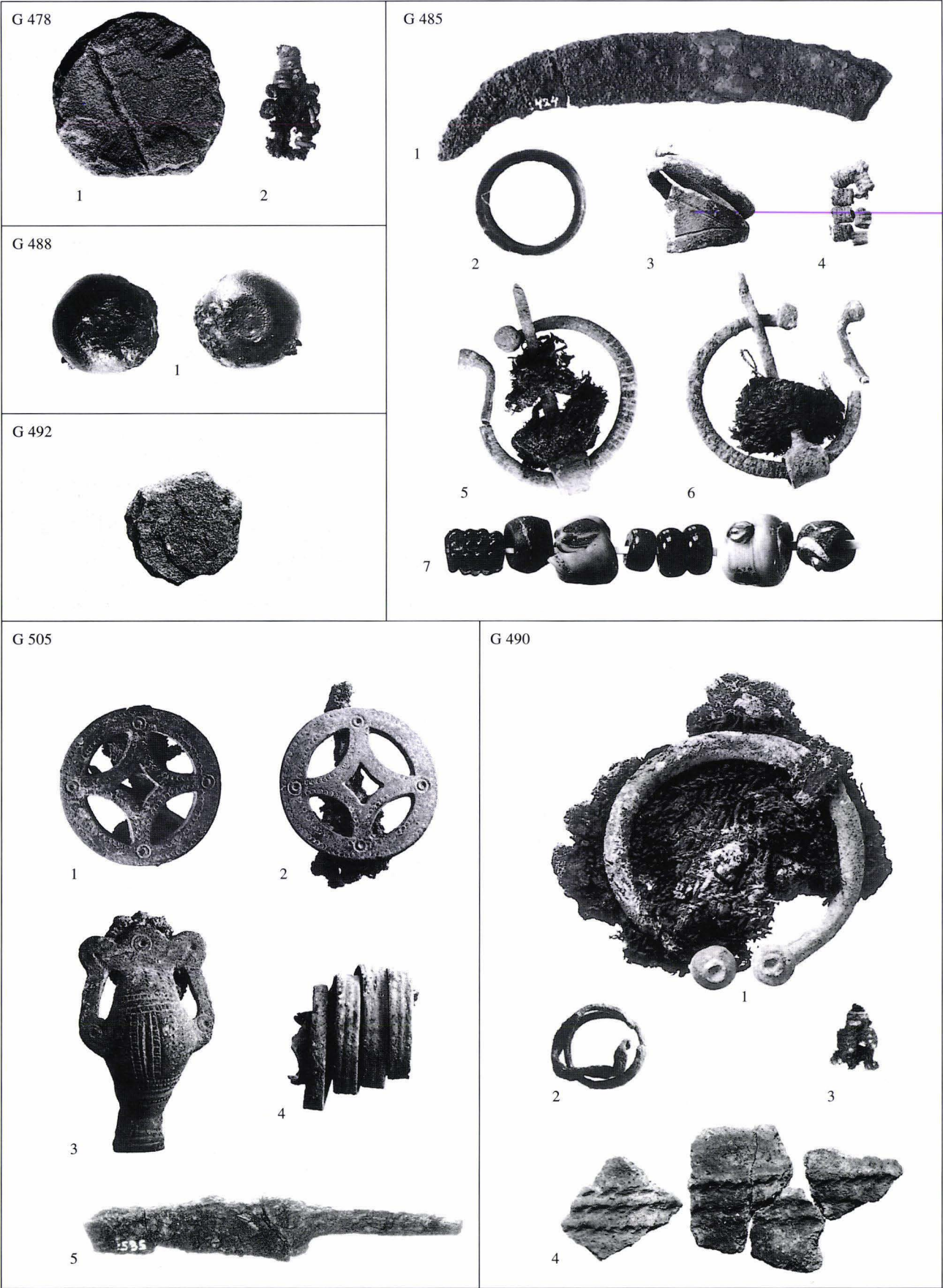


Plate 8. **G 478** (22346): 1 stone disc 1/2 (346), 2 spiral ornament (345). – **G 485** (22346): 1 sickle fragment (424), 2–3 finger-rings (416,426), 4 spiral ornament (420), 5–6 penannular brooches (415,417), 7 beads (405,406,414, 421,422, 423,425). – **G 488** (22346): weight (439). – **G 490** (22346): 1 brooch (447), 2 ring (446), 3 spiral ornament (448), 4 ceramic vessel fragments (450). – **G 492** (22346): stone disc 1/2 (453). – **G 505** (22346): 1–2 round brooches (533,536), 3 cray-fish brooch (532), 4 finger-ring (534), 5 knife 1/2 (530).

G 500



Plate 9. **G 500** (22346): 1–2 spiral ornaments (473,488), 3 knife fragment (476), 4 weight (491), 5 belt buckle (495), 6 knife sheath fragments (478), 7–9 coin fragments (478a,482,487), 10 bronze chain (477), 11 stone disc (501), 12 ceramic vessel (497), 13 finger-ring (481), 14 stone flake (502).

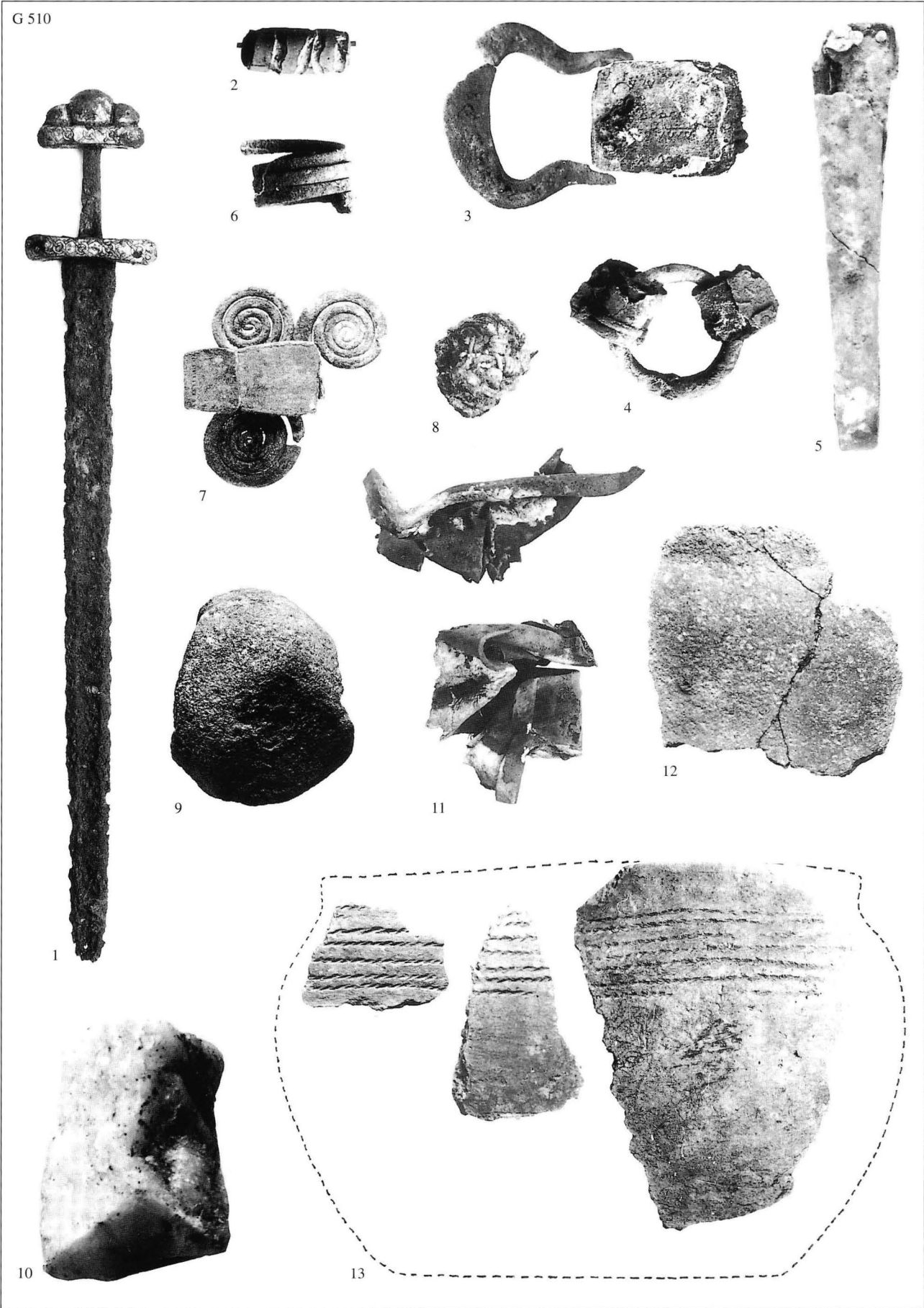


Plate 10. **G 510** (22346): 1 sword (579), 2 bead (562), 3 belt buckle (528,555,581), 4 strap-divider (565), 5 strap tag (583), 6–7 finger-rings (570,580), 8 spiral ornament (568), 9 grinding stone (569), 10 quartz flake (593), 11 bronze vessel fragments (566), 12–13 ceramic vessel fragments (531,585).

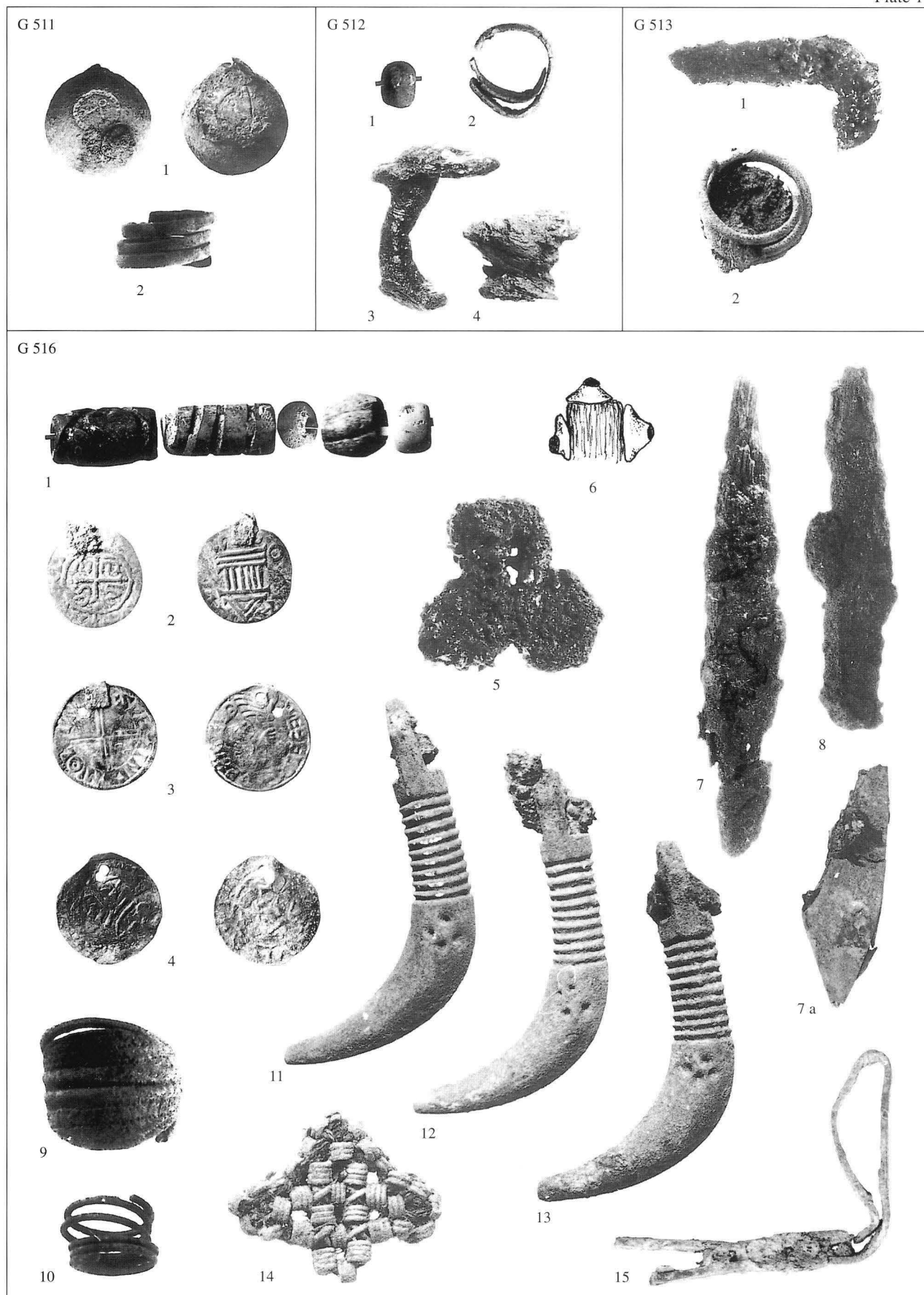


Plate 11. **G 511** (22346): 1 weight (596), 2 finger-ring (595). – **G 512** (22346): 1 bead (600), 2 finger-ring (603), 3–4 nails (601, 602). – **G 513** (22346): 1 firesteel (606), 2 finger-ring (607). – **G 516** (22346): 1 beads (614, 617, 620, 623, 629), 2–4 silver coins (626, 644, 647), 5 knife end mount (631), 6 knife handle end (649), 7, 7a knife and a sheath point mount (651), 8 knife fragment (622), 9–10 finger-rings (653, 643), 11–13 bear's tooth pendants (634, 652, 658), 14 spiral ornament (656), 15 bronze list (630).

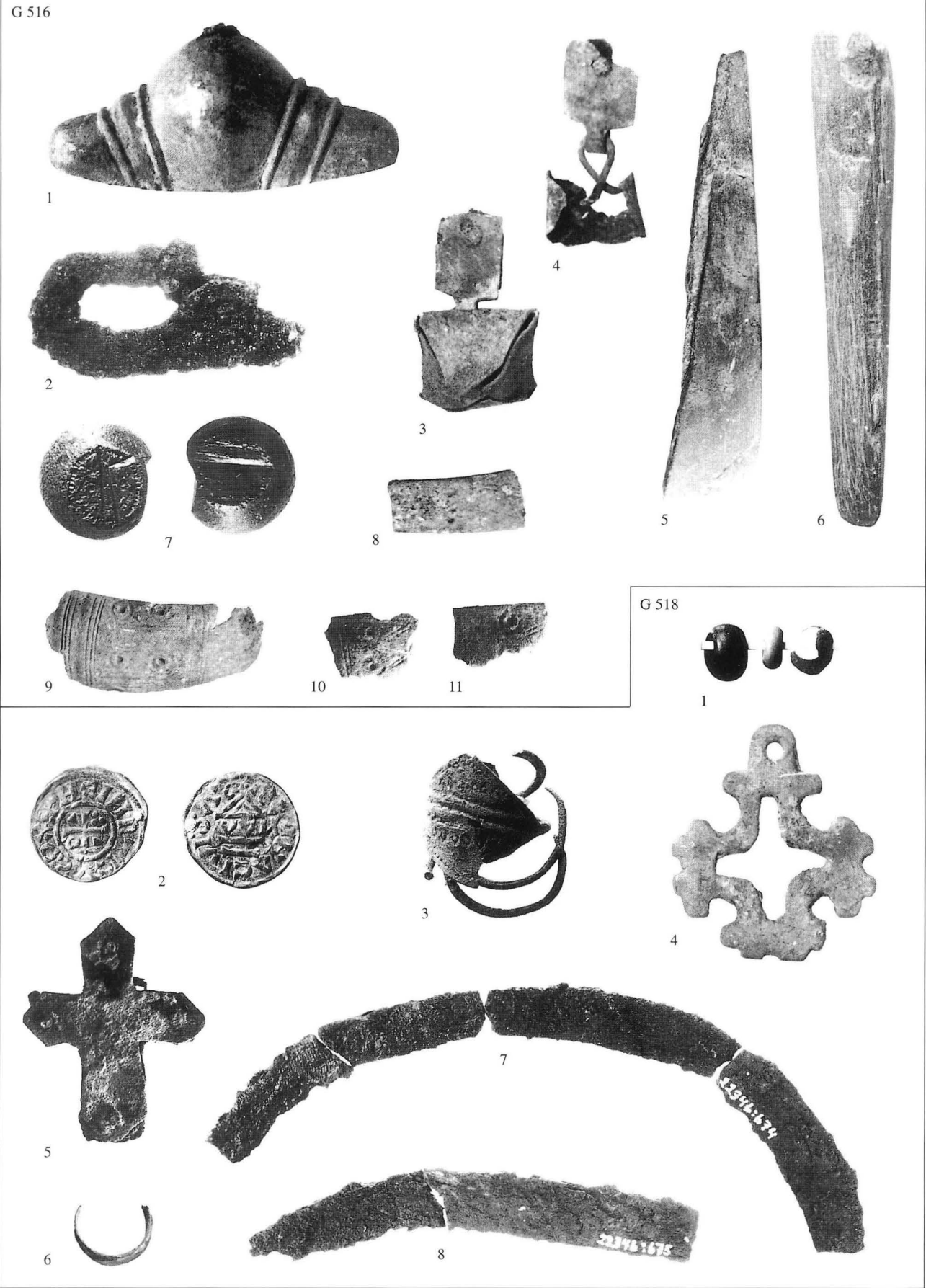


Plate 12. **G 516** (22346): 1 sword pommel (655), 2 firesteel fragment (615), 3–4 two sleigh bells (639,640), 5–6 whetstones (646,654), 7 weight (616), 8–11 bracelet fragments (641,645,627a,b). – **G 518** (22346): 1 beads (667,670,673), 2 silver coin (664), 3 finger-ring (671), 4 cruciform pendant (676), 5 cruciform mount (661), 6 finger-ring (668), 7 sickle fragments (18000:1840, 22346:669,677,674), 8 scythe fragments (18000:1846, 22346:675).

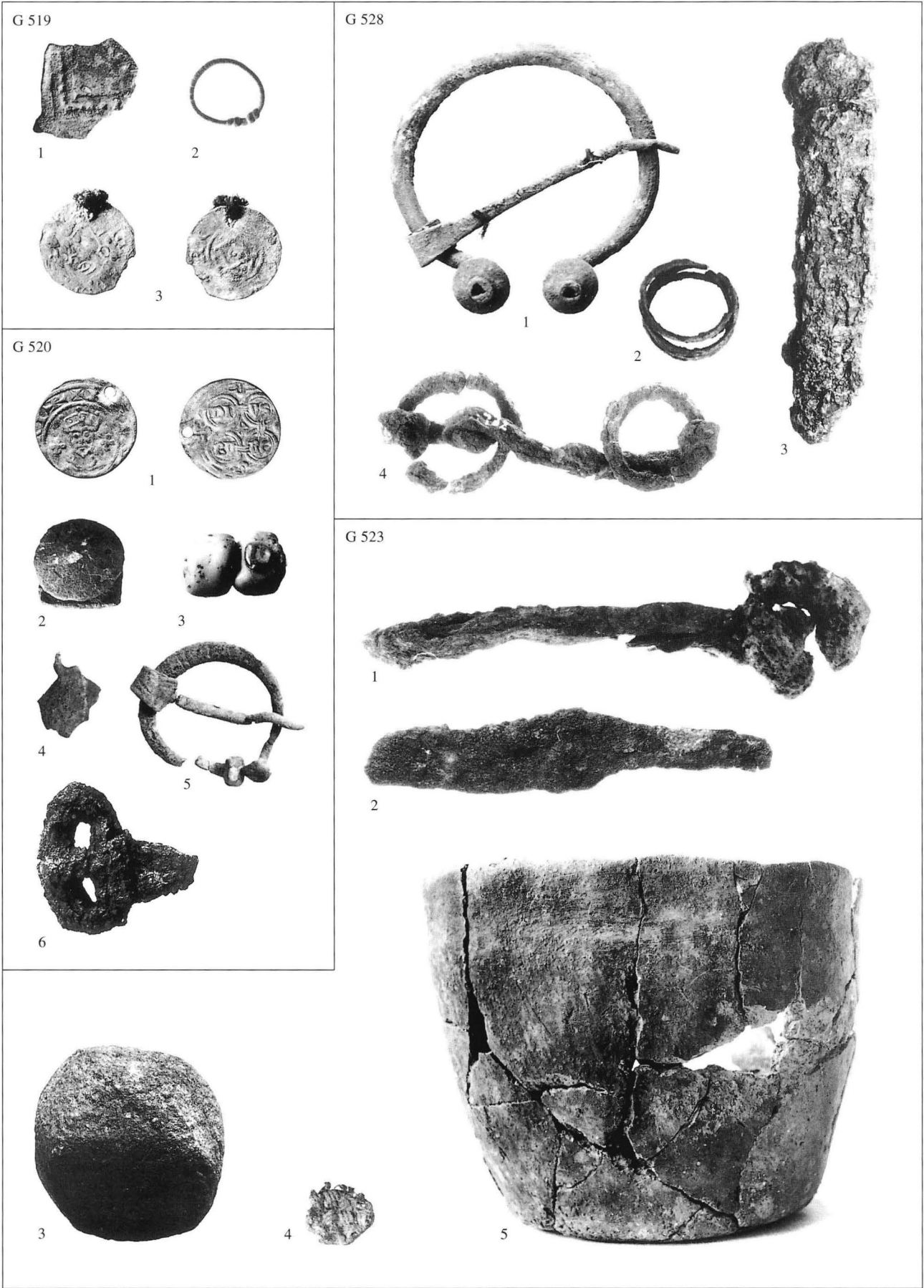


Plate 13. **G 519** (22346): 1 silver sheet fragment (682), 2 silver ring (683), 3 silver coin (684). – **G 520** (22346): 1 silver coin (695), 2 bronze mount (692), 3 beads (694), 4 sleigh bell button (693), 5 brooch (697), 6 belt buckle (702). – **G 523** (22346): 1 iron artefact fragment (716), 2 knife (715), 3 grinding stone (713), 4 spiral ornament (717), 5 ceramic vessel (718). – **G 528** (22346): 1 brooch (252), 2 finger-ring (733), 3 knife fragment (730), 4 bit 1/2 (732).

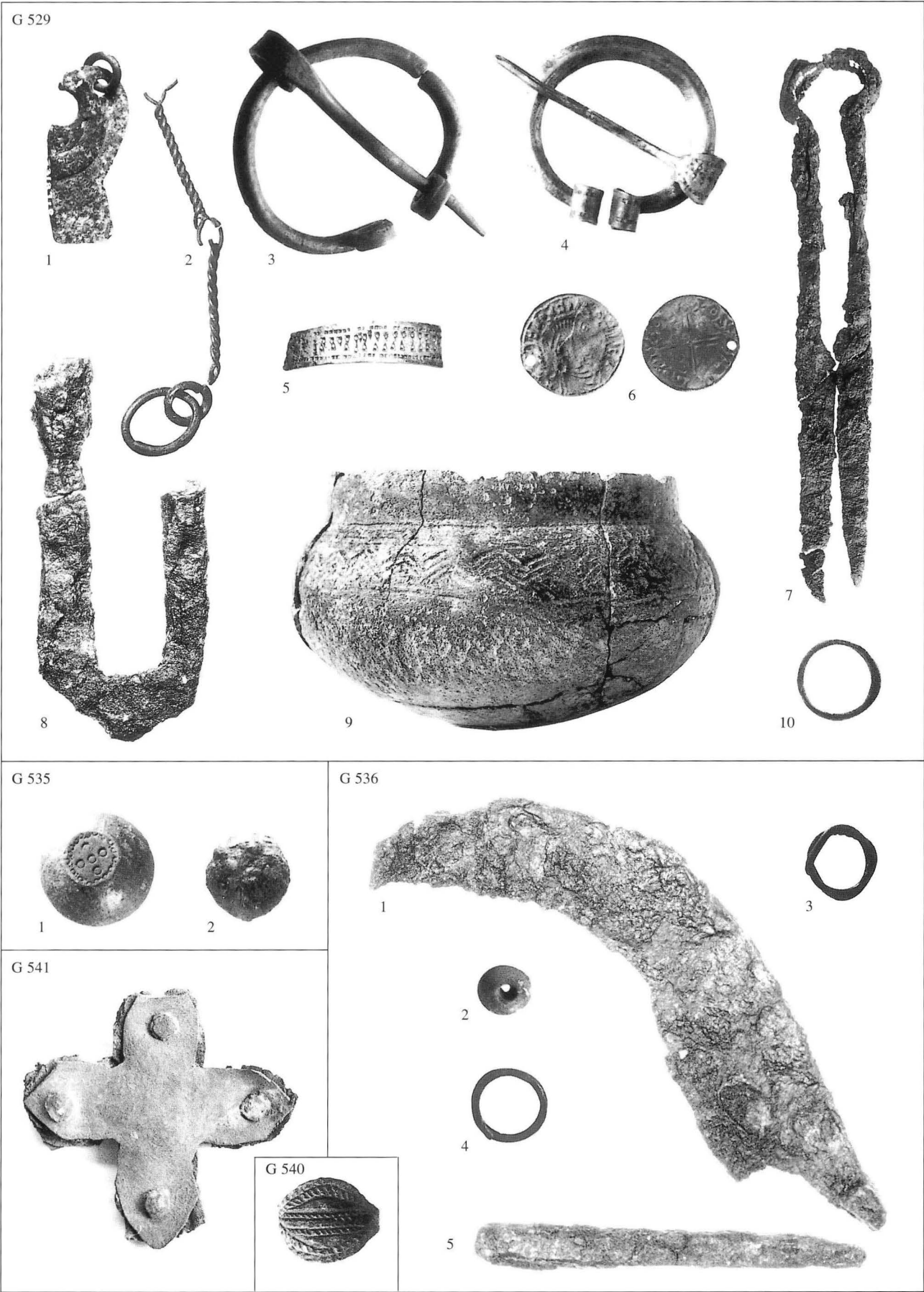


Plate 14. **G 529** (23183): 1–2 bird pendant and rod chain (9), 3 bronze brooch (31), 4 silver brooch (29), 5 bracelet fragment (28), 6 silver coin (8), 7 shears (32), 8 firesteel (10), 9 ceramic vessel (25), 10 finger-ring (16). – **G 535** (23183): 1 weight (59), 2 weight (62). – **G 536** (23183): 1 billhook (67), 2 bead (65), 3–4 finger-rings (66,72), 5 iron rod (74). – **G 540** (23183): silver finger-ring (107). – **G 541** (23183): cruciform mount (115).

G 544



Plate 15. **G 544** (23183): 1 silver brooch (142), 2 iron artefact fragment (139), 3–4 arrowheads (153a,b), 5 knife and a sheath tip mount (124,127), 6–7 rod chain links (149,131), 8 hook ? (154), 9 spiral ornament (140), 10 bronze mount fragment (136), 11 weight (135), 12 iron sleigh bell (145), 13 silver sheet on leather band (147), 14 whetstone (150).

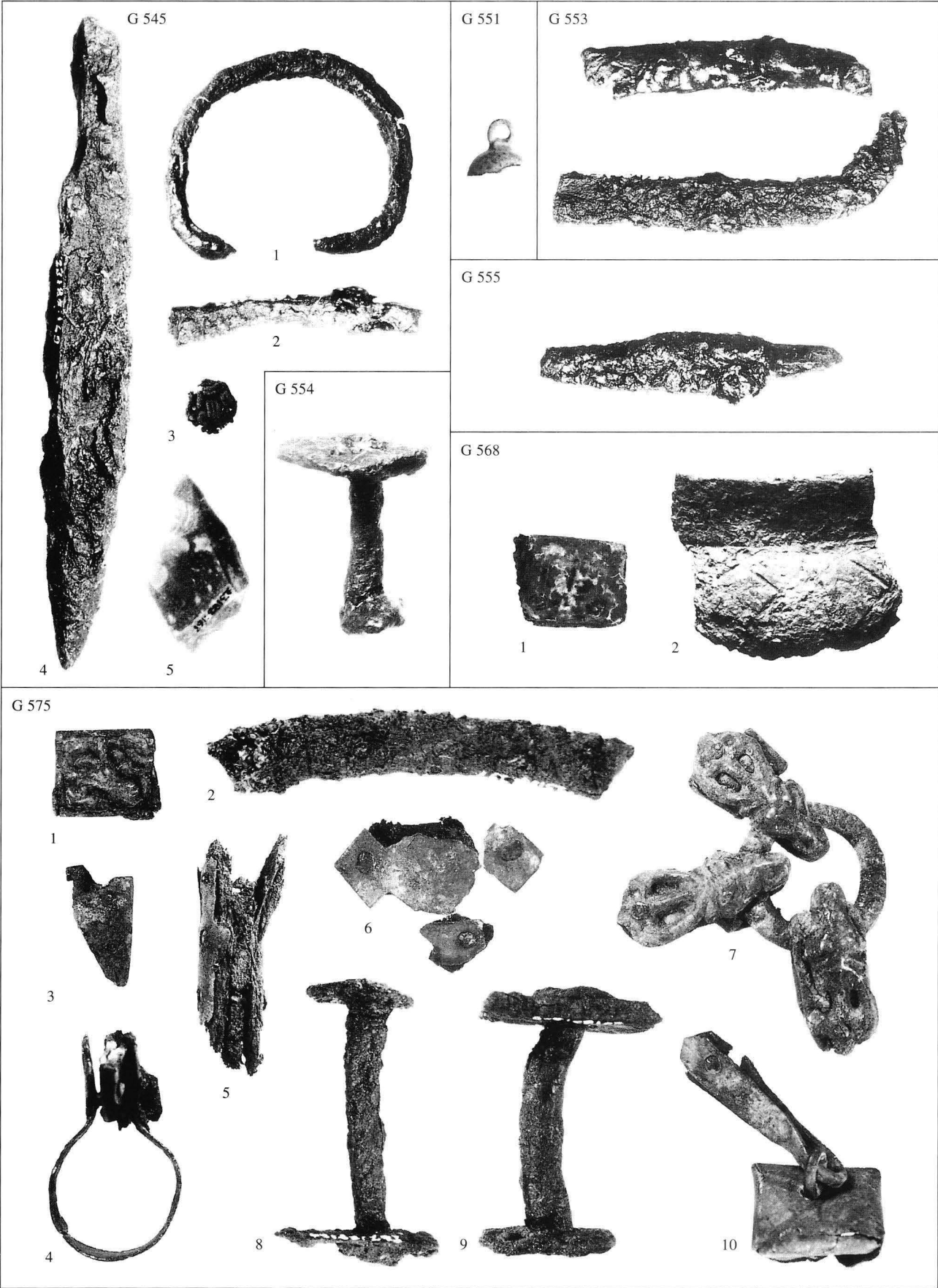


Plate 16. **G 545** (23183): 1 iron ring (168), 2 iron rod (166), 3 spiral ornament (170), 4 knife (169), 5 flint piece (167). – **G 551** (23183): sleigh bell button fragment (177). – **G 553** (23183): firesteel fragments (185). – **G 554** (23183): iron rivet (189). – **G 555** (23183): knife (191). – **G 568** (23183): 1 bronze mount (255), 2 ceramic vessel fragment (256). – **G 575** (23183): 1 mount (268), 2 vessel handle fragment (297), 3–4 sheath fragments (287,288), 5 comb fragment ? (303), 6 mount fragments (293), 7 strap-divider (304), 8–9 iron rivets (283,290), 10 sleigh bell (291).

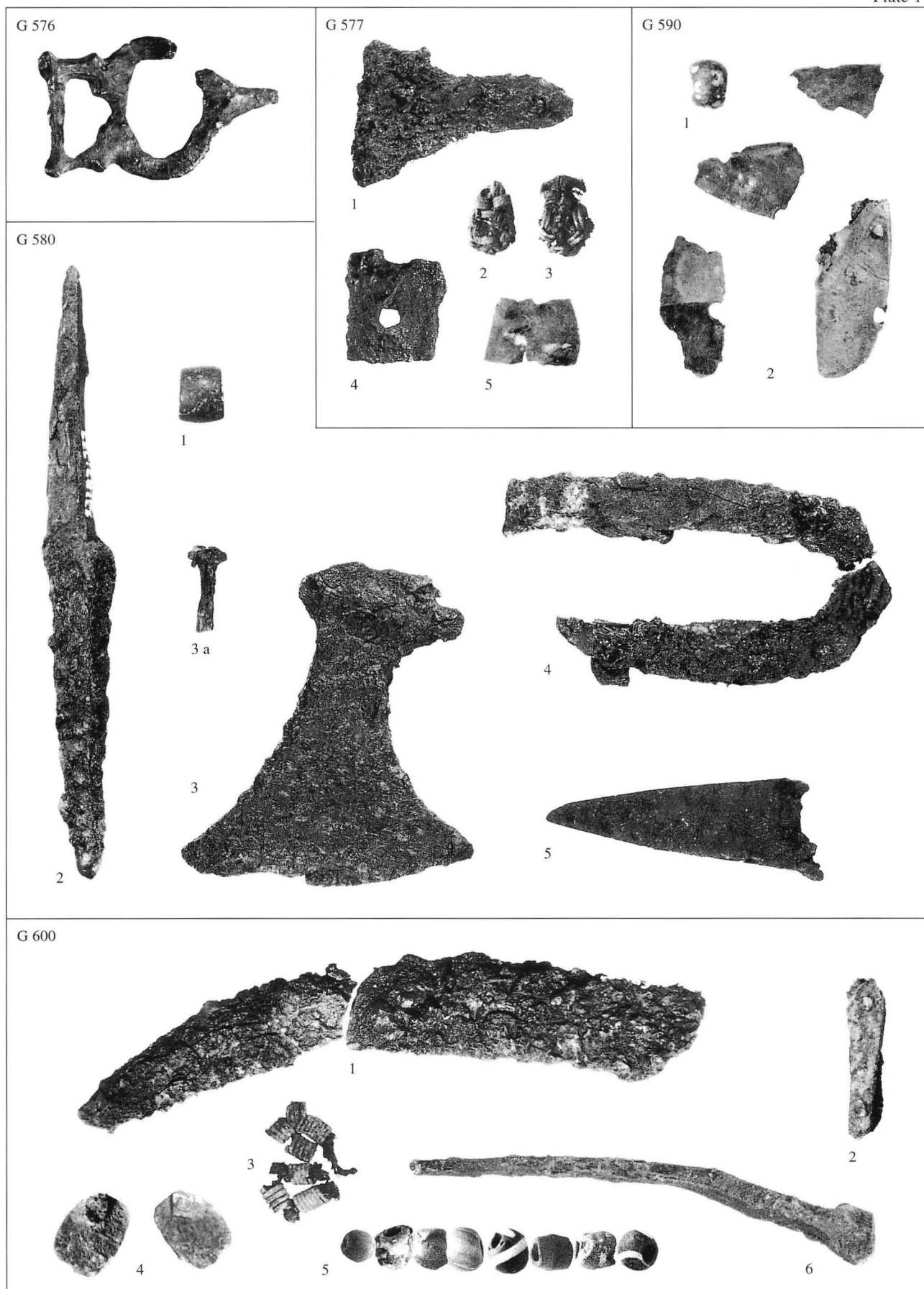


Plate 17. **G 576** (23183): belt buckle (307). – **G 577** (23183): 1 iron fragment (309), 2–3 spiral ornaments (319, 313), 4–5 bronze mounts (310, 315). – **G 580** (23183): 1 bead (325), 2 knife (329), 3–3a axe (327), 4 firesteel fragments (328), 5 knife tip fragment (324). – **G 590** (23183): 1 bead (349), 2 sheath mount fragments (348). – **G 600** (23183): 1 sickle fragments (366, 370), 2 bronze mount (375), 3 spiral ornament (368), 4 silver coin fragment (371), 5 beads (372), 6 iron tang (365).

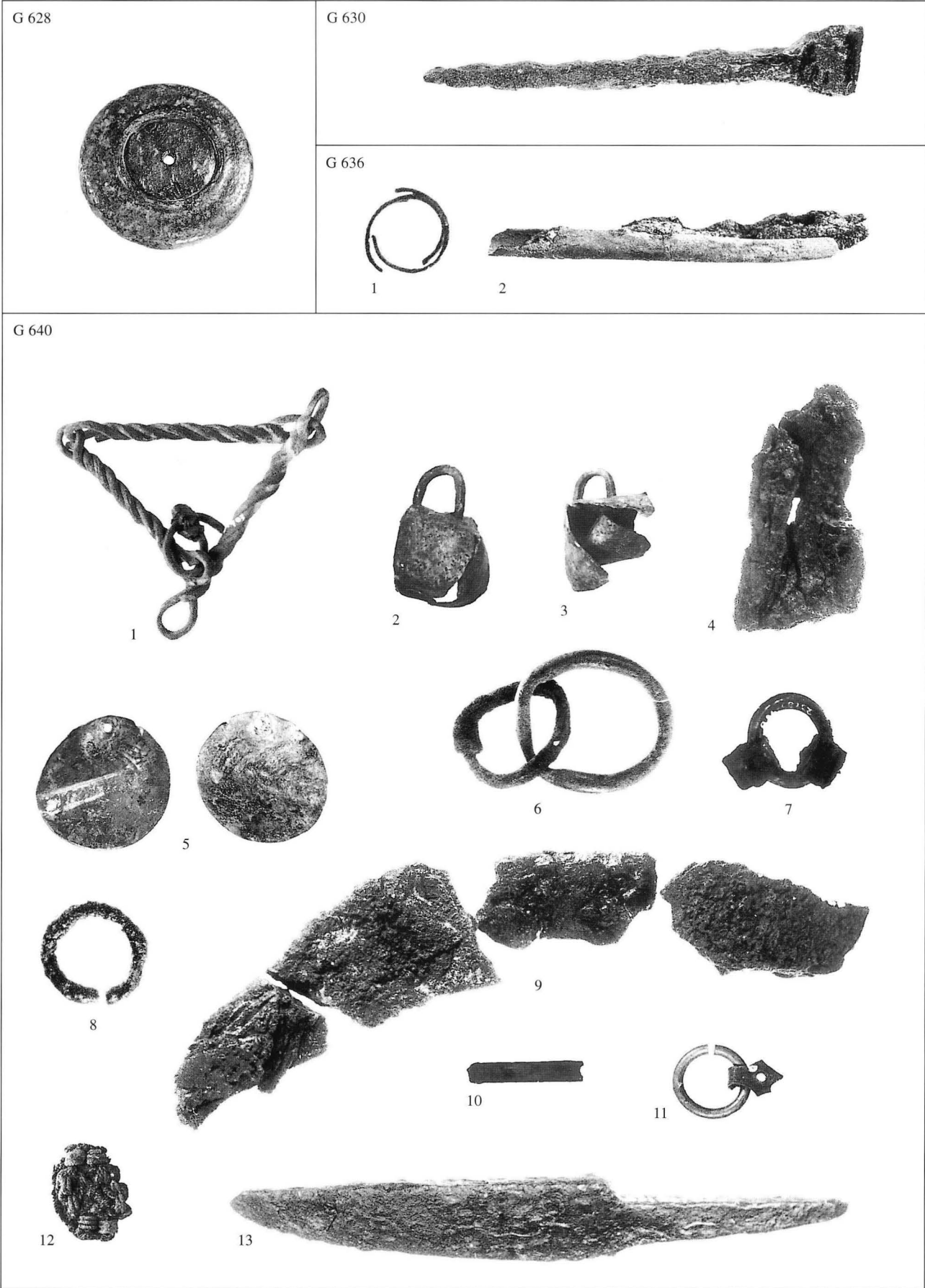


Plate 18. **G 628** (23183): brooch (418). – **G 630** (23183): chisel -like artefact (421). – **G 636** (23183): 1 finger-ring (443), 2 groove-like mount and leather (444). – **G 640** (23183): 1 rod chain links (463), 2–3 two sleigh bells (464a,b), 4 iron artefact fragment (466), 5 silver coin (93), 6 iron and bronze ring (458), 7 strap-divider (468), 8 iron ring (47), 9 sickle or scythe fragments (101,86,83,94), 10 bronze list (7), 11 strap-divider (51), 12 spiral ornament (461), 13 knife (89).

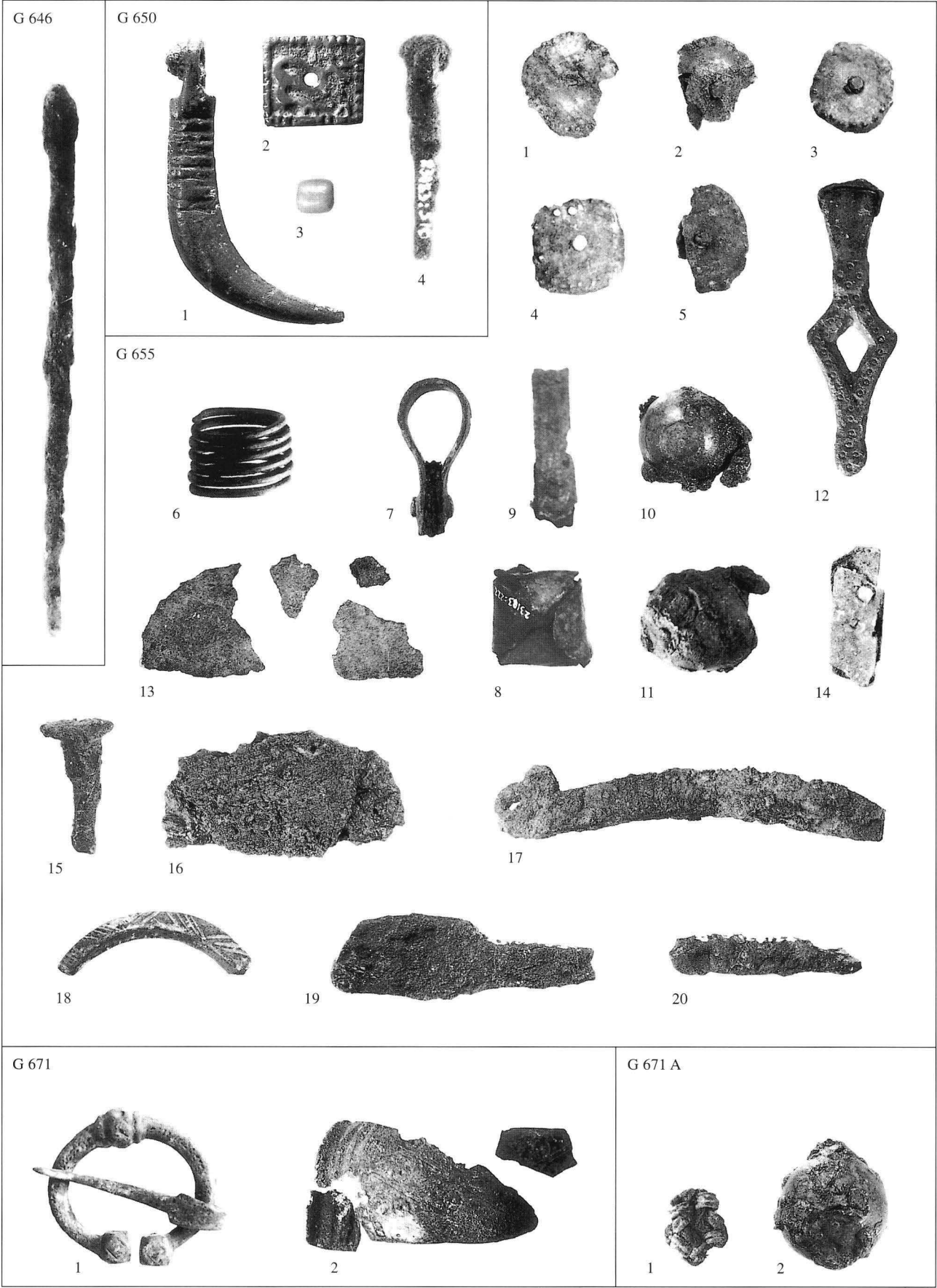


Plate 19. **G 646** (23183): iron pin (499). – **G 650** (23183): 1 bear's tooth pendant (507), bronze mount (508), 3 bead (509), 4 nail ? (510). – **G 655** (23183): 1–5 bronze mounts (540,541,227,241,554), 6 finger-ring (229), 7 sheath mount (553), 8–9 sleigh bell and mount (222,224), 10–11 weights (538,225), 12 strap tag (520), 13 bronze sheet fragments (539), 14 bronze mount (245), 15 nail (547), 16 iron fragment (542), 17 vessel handle fragment (226), 18 bronze bracelet fragment (244), 19–20 knife fragments (522,548). – **G 671** (22346): 1 brooch (763), 2 bracelet fragments (770). – **G 671A** (23183): 1 spiral ornament (448), 2 weight (708).

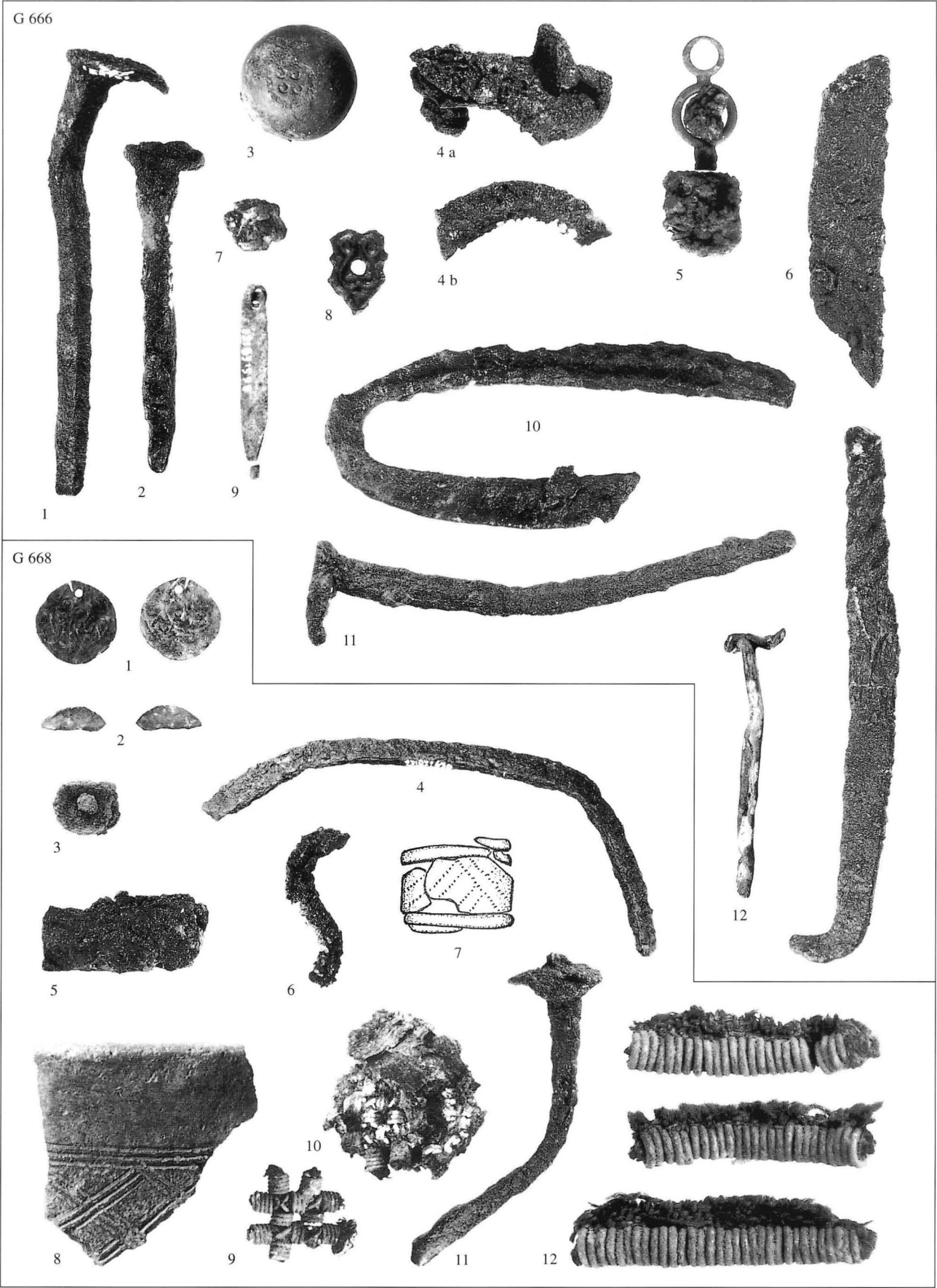


Plate 20. **G 666** (23183): 1–2 nails (592,595), 3 weight (601), 4 iron fragments (602a,b), 5 artefact fragment (587), 6a,b spearhead with a knife-like blade 1/1 (594,610), 7 spiral ornament (603), 8 bronze mount (605), 9 bronze pendant (599), 10 firesteel fragment (612), 11 nail (614), 12 bronze pin ? (611). – **G 668** (23183): 1–2 silver coins (620,269), 3 mount (621), 4 vessel handle fragment 1/2 (630), 5–6 iron fragments (629,628), 7 finger-ring (623), 8 pot sherd (631), 9–10 spiral ornaments (627), 11 nail (626), 12 bronze ring-border fragments (402).

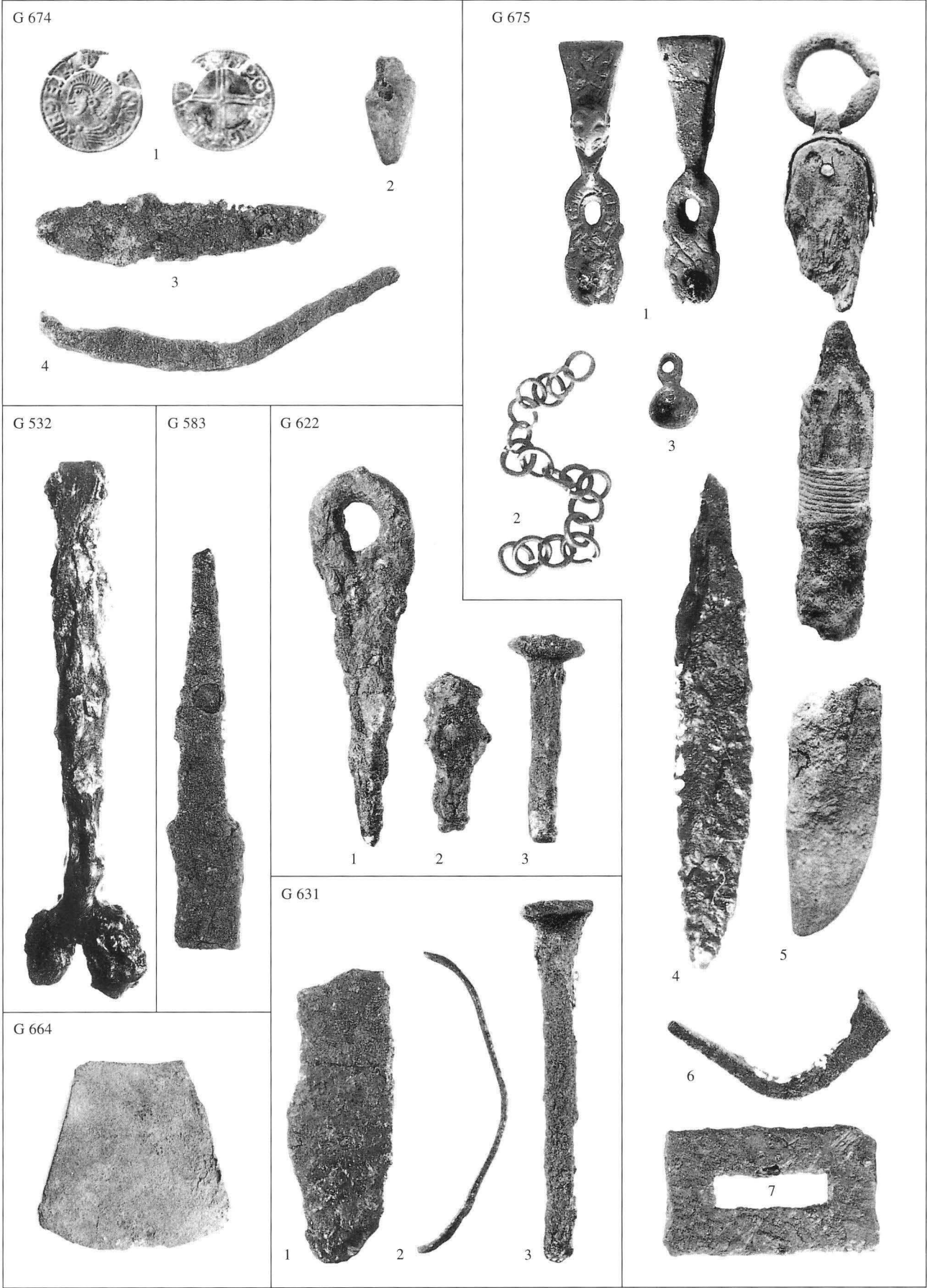


Plate 21. **G 532/543** (23183): iron key (45). – **G 583** (23183): knife (336). – **G 622** (23183): 1 awl ? (410), 2–3 nails (408, 409). – **G 631** (23183): 1 knife tip fragment ? (422), 2 bronze rod fragment (424), 3 nail (423). – **G 664** (23183): bronze sheet (580). – **G 674** (23183): 1 silver coin (710), 2 end mount (711), 3 knife (713), 4 iron rod (712). – **G 675** (23183): 1 end mount (721), 2 chain (718), 3 bronze button (715), 4 knife (720), 5 knife and sheath fragments (716, 717, 722), 6 nail (719), 7 iron sheet (723).

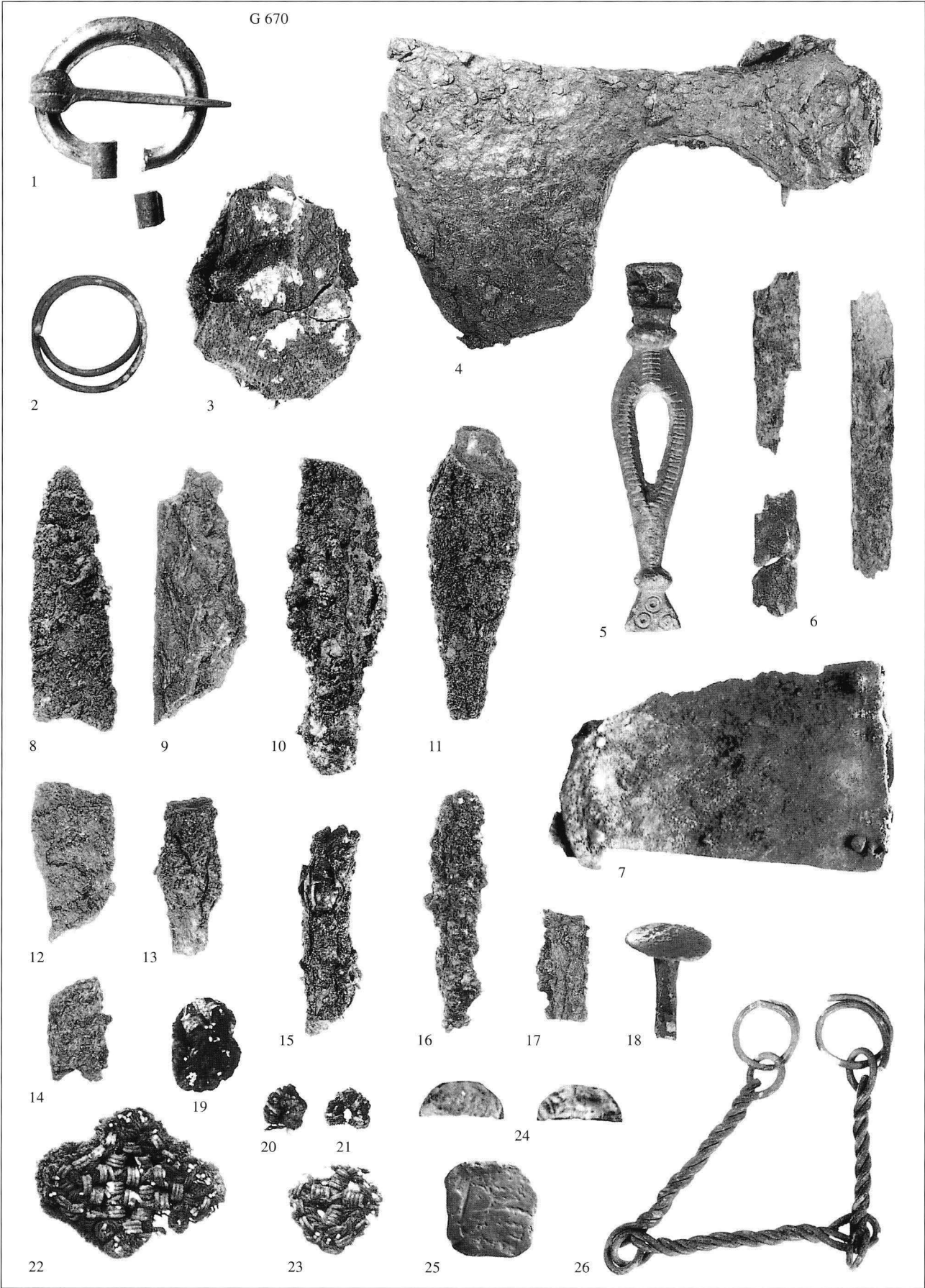


Plate 22. **G 670** (23183): 1 silver brooch (673), 2 finger-ring (665), 3 bronze pendant (651), 4 axe (655), 5 strap end mount (650), 6 silver sheet mounts (652), 7 bronze mount (681), 8–17 iron arrowhead fragments (641a,b, 645, 646, 667a,b,c, 647, 666, 661), 18 bronze nail (664), 19–23 spiral ornaments (643,687,693,695,692), 24 silver coin fragment (659), 25 bronze weight ? (700), 26 rod chain links (669).

G 670



Plate 23. **G 670** (23183): 1–2 cruciform mounts (640,678), 3 iron hook (640), 4–8 bronze mounts (639,642,653a,b,c, 663,670), 9a,b sleigh bell and mount (680), 10–12 vessel handle fragments 1/1 (649,668,672), 13–16 iron artefact fragments (660,637,648,697), 17–20 nails (636,638,658,644).

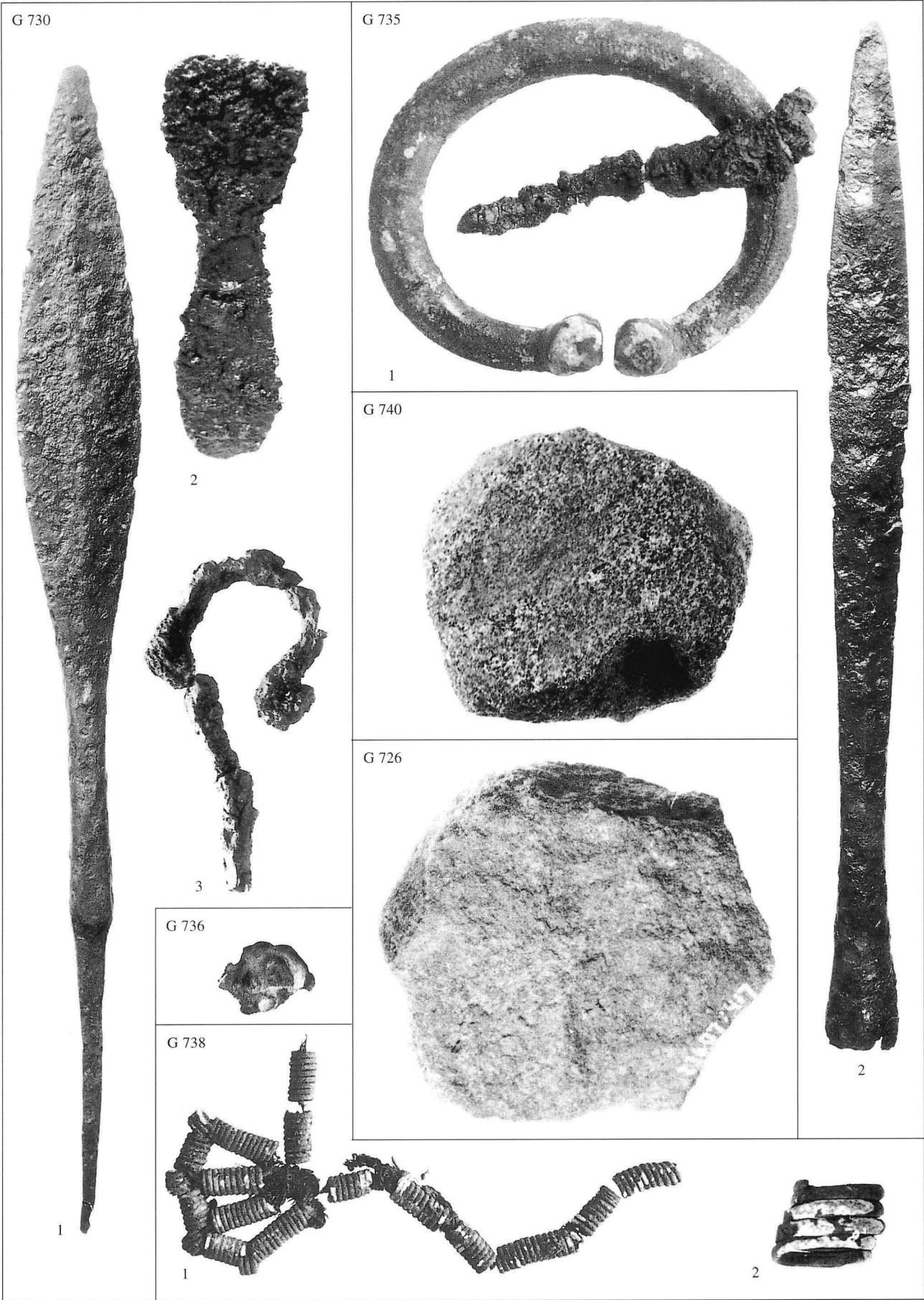


Plate 24. **G 726** (23607): stone disc (417). – **G 730** (23607): 1 spearhead (430), 2 strap tag (432), 3 shepherd's crook pin (429). – **G 735** (23607): 1 brooch (447), 2 spearhead (446). – **G 436** (23607): bronze mount (452). – **G 738** (23607): 1 spiral ornament (459), 2 finger-ring (460). – **G 740** (23607): stone disc (505).

G 740

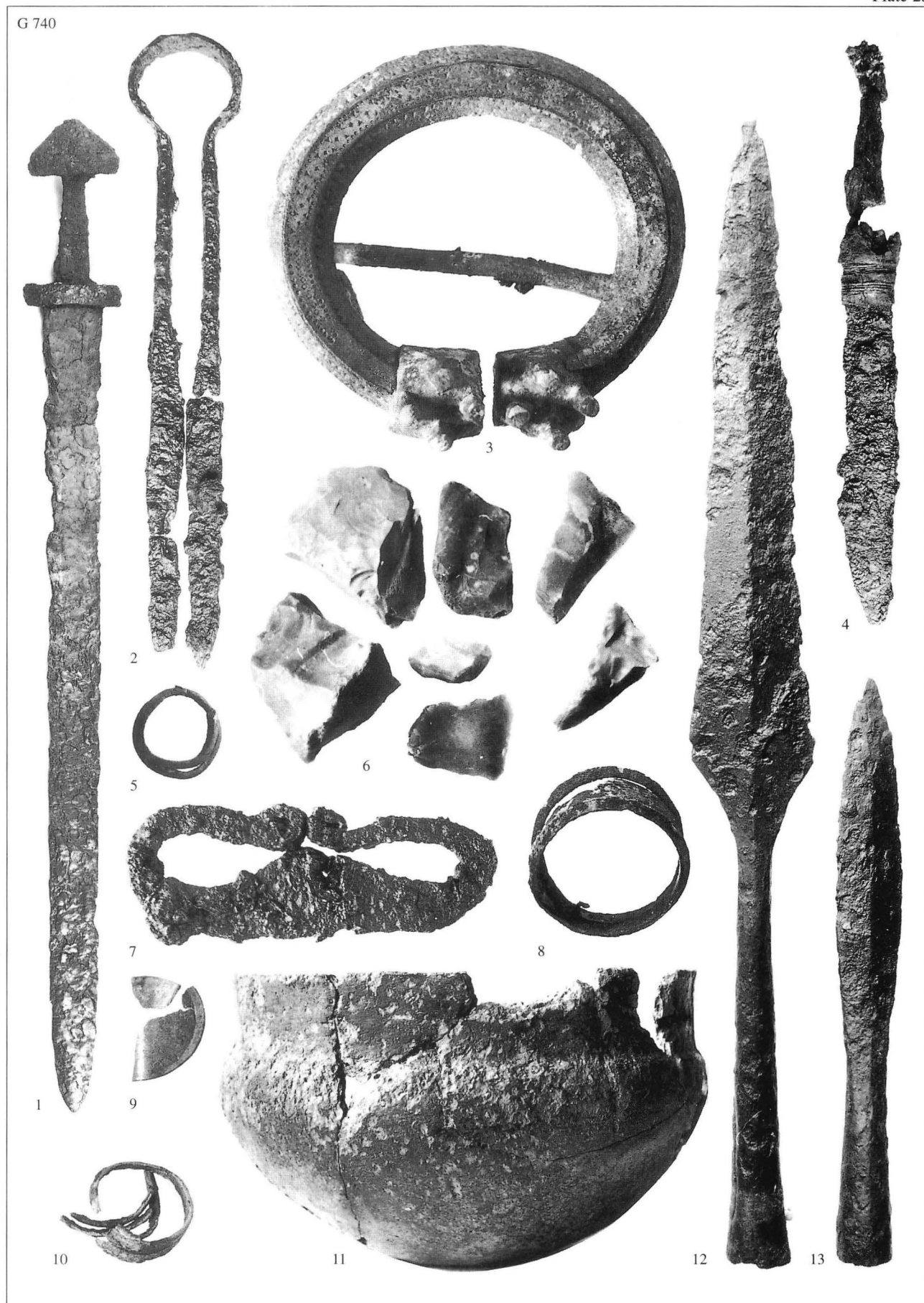


Plate 25. **G 740** (23607): 1 sword (490), 2 shears (477), 3 brooch (481), 4 knife 1/2 (480), 5 finger-ring (494), 6 flint pieces (486,498), 7 firesteel (489), 8 spear shaft ring (488), 9 silver coin fragments (475), 10 finger-ring (496), 11 ceramic vessel (478), 12–13 spearheads (487,493).

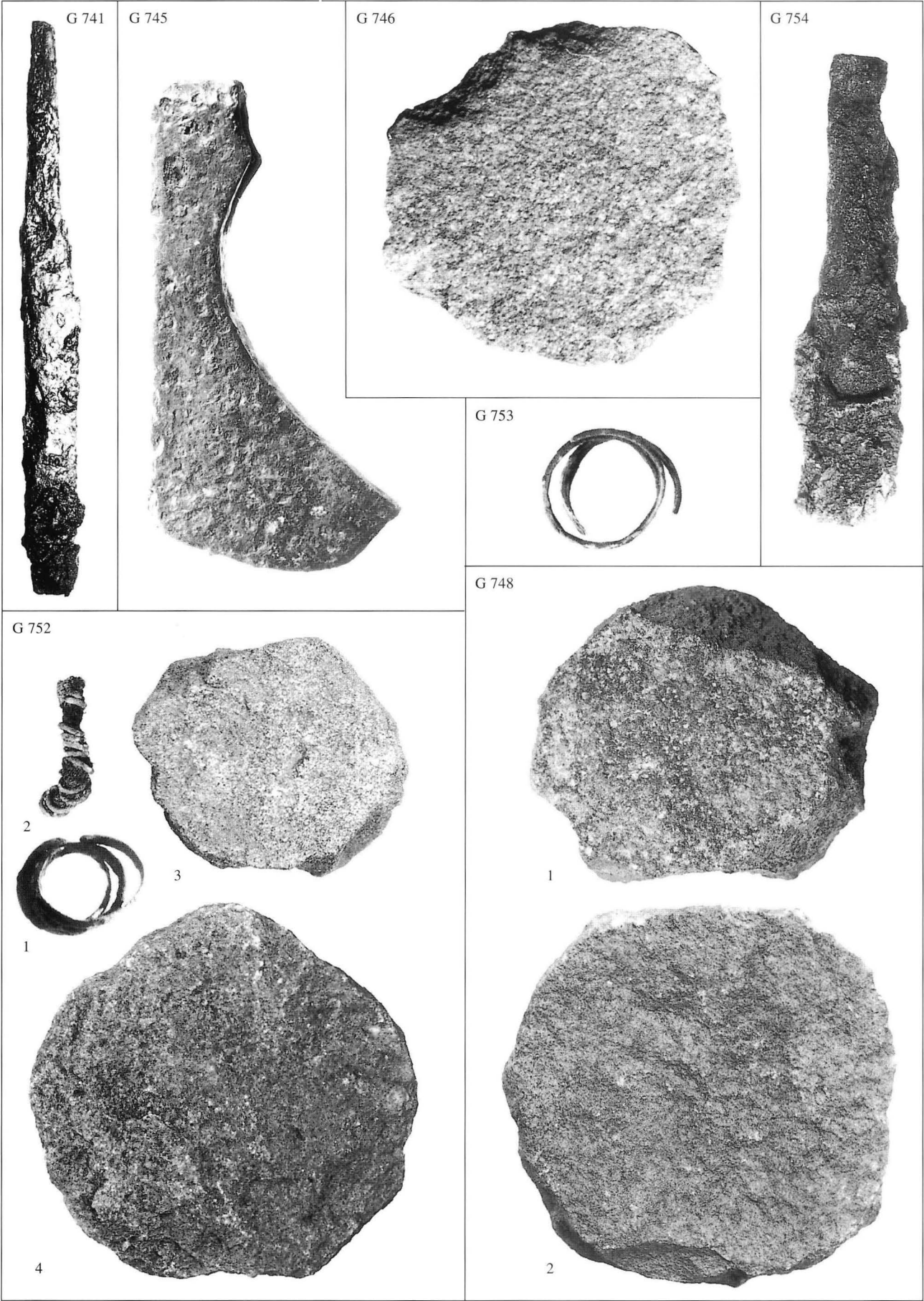


Plate 26. **G 741** (23607): knife (509). – **G 745** (23607): axe (515). – **G 746** (23607): stone disc (519). – **G 748** (24388): 1–2 stone discs (11,12). – **G 752** (23607): 1 finger-ring (520), (24388): 2 spiral border fragment (28), 3–4 stone discs (27,29). – **G 753** (24388): finger-ring (31). – **G 754** (24388): knife fragment (35).

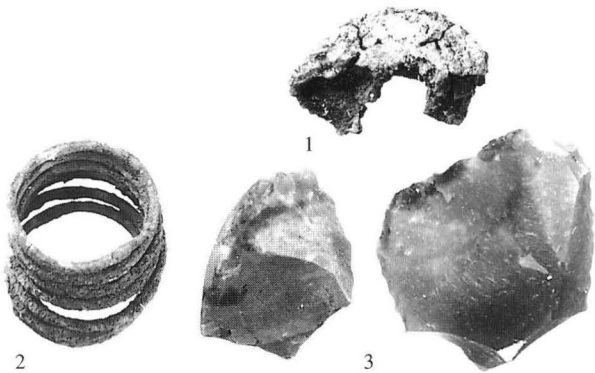
G 751



G 760



G 766



G 764



Plate 27. **G 741** (24388): 1 scythe (17), 2 brooch (18), 3 iron rings 1/2 (20), 4 shears (19), 5–6 spearheads (16,15). – **G 760** (24388): ceramic vessel (141). – **G 764** (24388): knife fragment (155). – **G 766** (24388): 1 iron fragment (197), 2 bronze finger-ring (195), 3 two flint pieces (202).

G 765

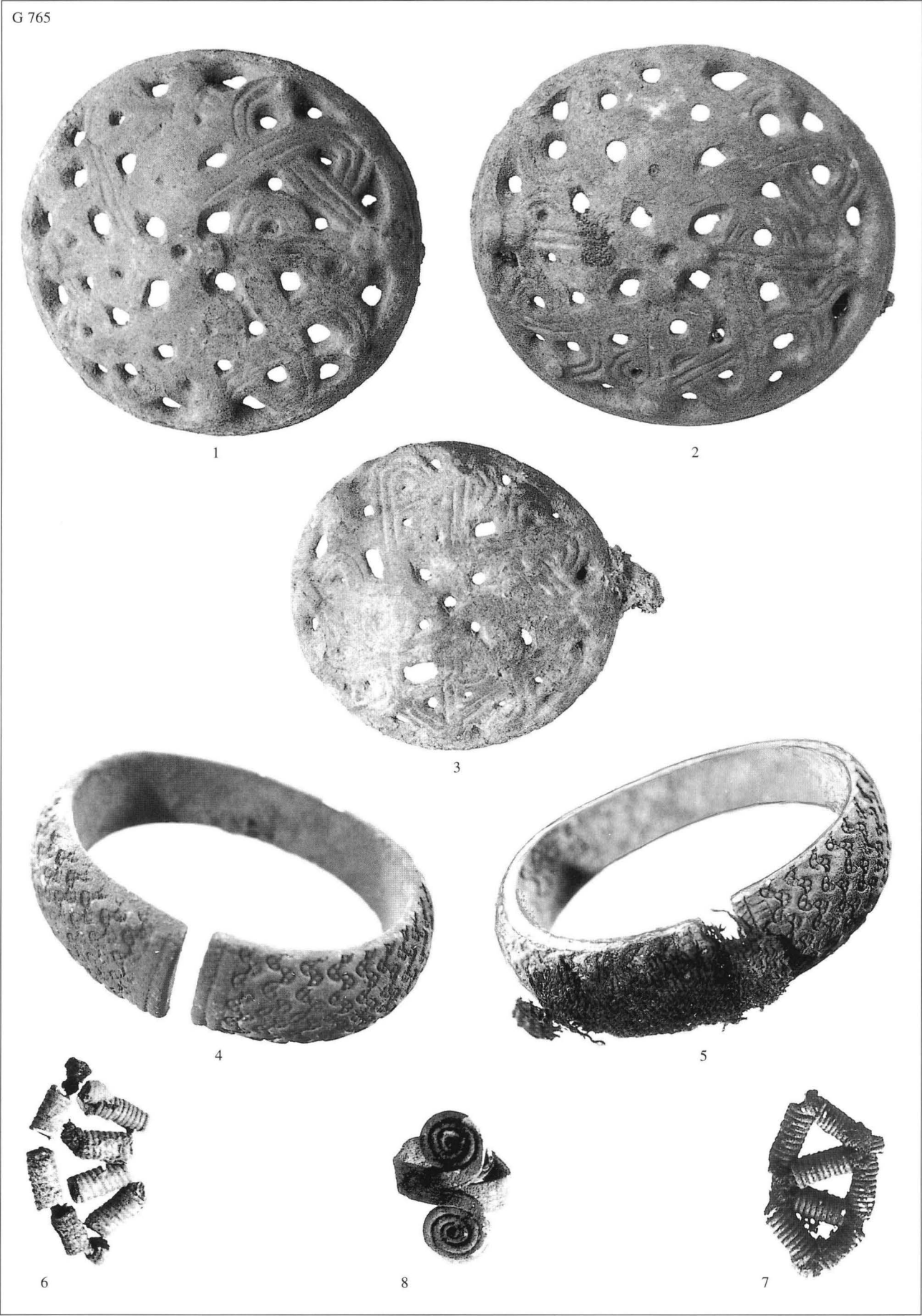


Plate 28. **G 765** (24388): 1–3 brooches (171,174,168), 4–5 two bracelets (162,165), 6–7 apron corner ornaments (160, 161), 8 finger-ring (187).

G 765



Plate 29. **G 765** (24388): 1 finger ring 6/10 (187), 2 necklace 6/10 (185), 3 neck-ring 6/10, 3a neck-ring 1/1 (178), 4 ceramic vessel (188).

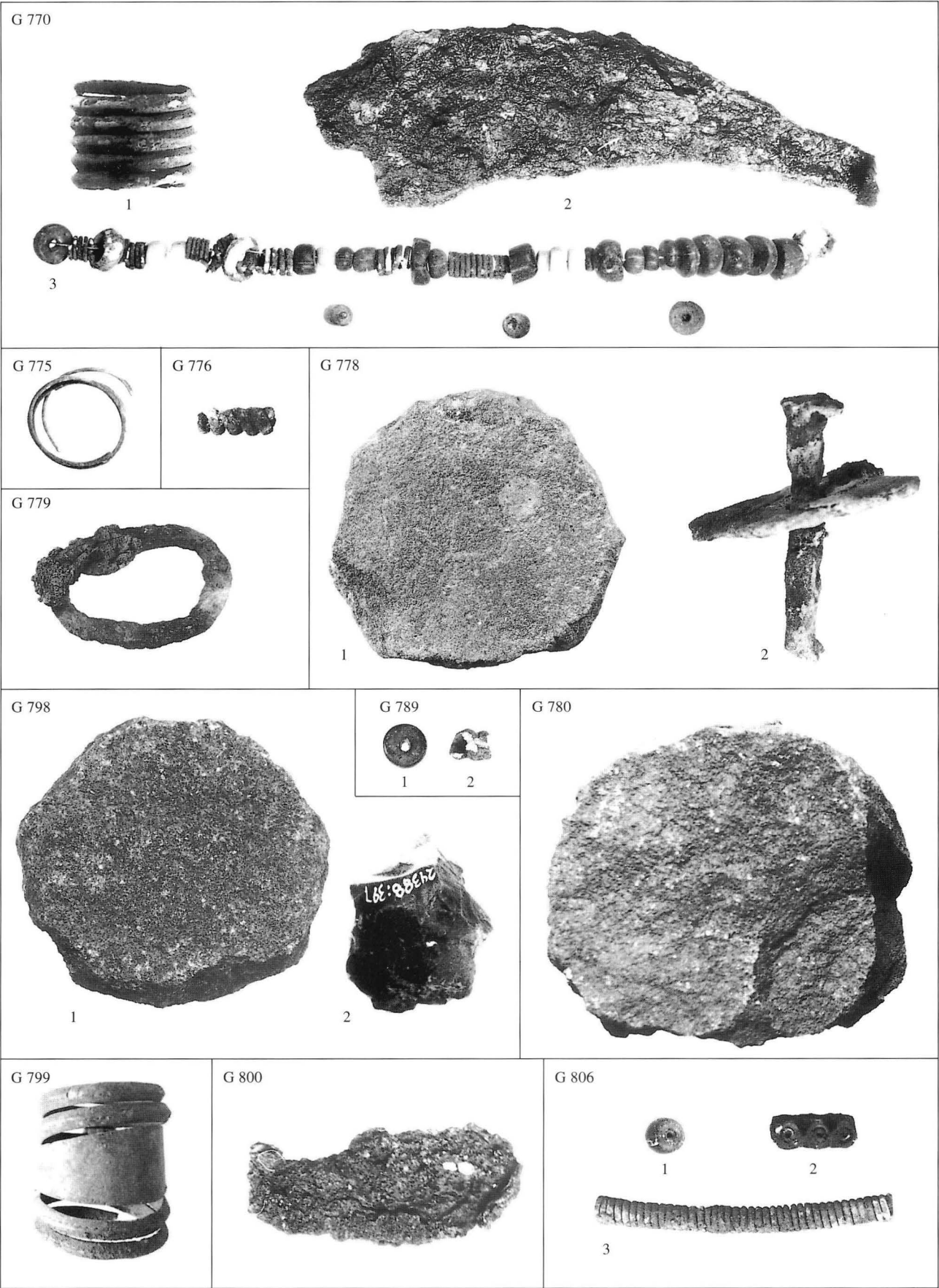


Plate 30. **G 770** (24388): 1 finger-ring (258), 2 sickle fragment 1/1 (240), 3 necklace (223). – **G 775** (24388): finger-ring (279). – **G 776** (24388): bronze spiral (284). – **G 778** (24388): 1 stone disc (294), 2 iron mount and nail (294). – **G 779** (24388): iron ring (303). – **G 780** (24388): stone disc (308). – **G 789** (24388): 1 bead (346), 2 bronze spiral (347). – **G 798** (24388): 1 stone disc (394), 2 flint piece (397). – **G 799** (24388): finger-ring (399). – **G 800** (24388): firesteel (400). – **G 806** (24388): 1 bead (429), 2 multipart bronze bead (430), 3 spiral border fragment (428).

G 785



Plate 31. **G 785** (24388): 1 sickle (335), 2 necklace (324,325,333), 3–3a round brooch (331), 4–4a ceramic vessel 1/2 and a sherd 1/1 (329). 5 apron border fragment 1/2 (326).



Plate 32. **G 790** (24388): 1 spearhead (358), 2 purse mount (353), 3 sword tip 1/2 (356), 4 spear shaft ring (357), 5 knife fragments (351,352,355). – **G 795** (24388): 1 spiral tube with leather thong (385), 2 knife 1/2 (384), 3 shears (381,386), 4 spearhead (380), 5 finger-ring (383), 6 brooch (382). – **G 792** (24388): knife (367).

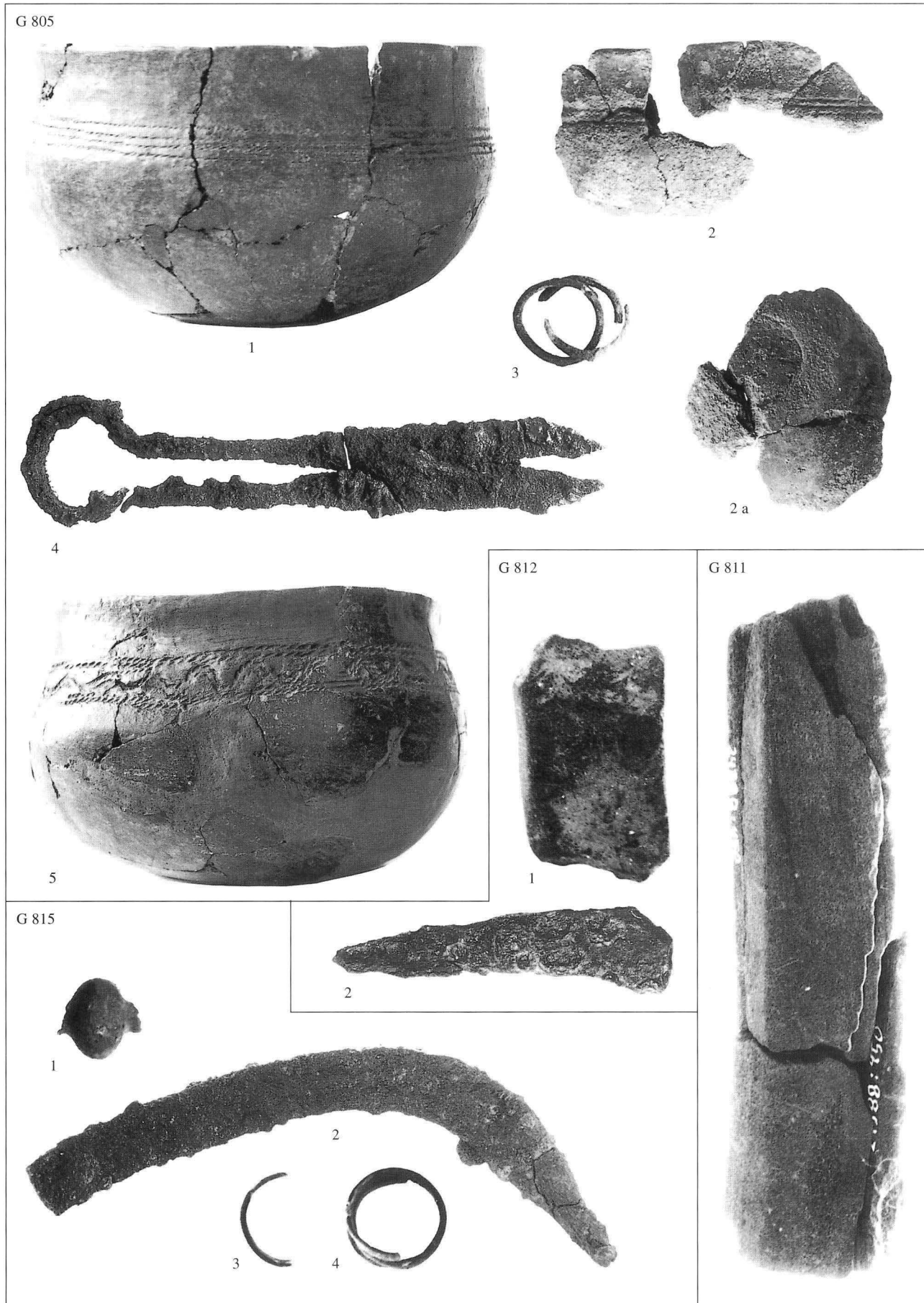


Plate 33. **G 805** (24388): 1 ceramic vessel (419), 2-2a ceramic vessel fragments (420), 3 finger-ring (417), 4 shears (418), 5 ceramic vessel (421). – **G 811** (224388): whetstone (450). – **G 812** (24388): stone chisel (457), 2 sickle point (456). – **G 815** (24388): 1 bronze bead (470), 2 sickle fragment 1/2 (464), 3-4 finger-ring fragments (468, 469).

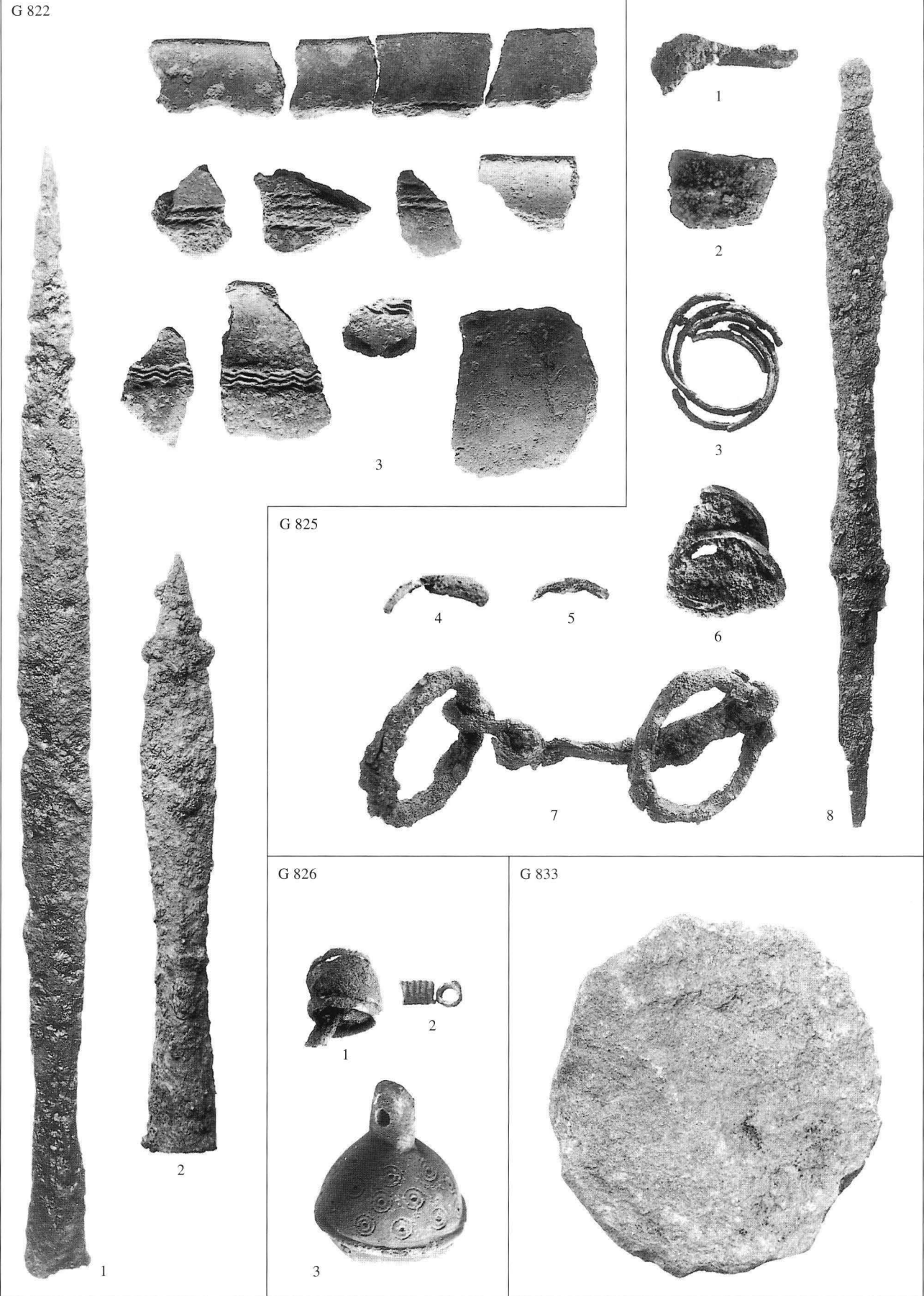


Plate 34. **G 822** (24740): 1–2 spearheads (8,9), 3 potsherds (11,12). – **G 825** (24740): 1 bronze artefact fragment (112), 2 finger-ring fragment (113), 3 finger-ring (114), 4–6 finger-ring fragments (118,119,115), 7 bit (19), spearhead (111). – **G 826** (24740): 1 finger-ring (132), 2 bronze spiral (130), 3 sleigh bell (131). – **G 833** (24740): stone disc (153).



Plate 35. A part of nails (24740:23–110) in the oval box in grave 825. 1/2.

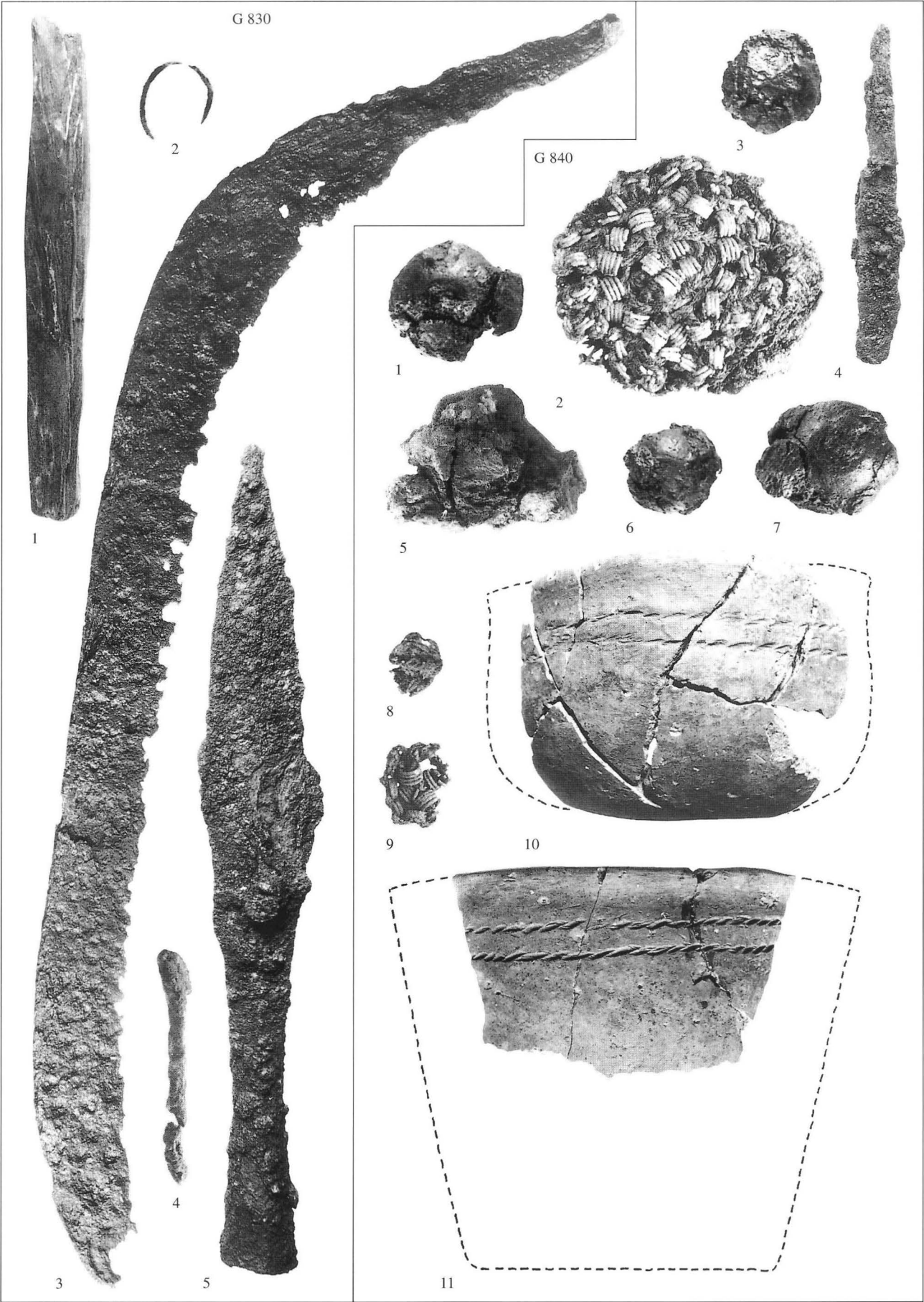


Plate 36. **G 830** (24740): 1 whetstone 1/2 (139), 2 finger-ring (144), 3 scythe (143), 4 bronze pin (138), 5 spearhead (142). – **G 840** (24740): 1 weight (201), 2 spiral ornament (211), 3 weight (197), 4 knife 1/2 (209), 5 two weights (200a,b), 6–7 weights (207,199), 8–9 spiral ornaments (187,195), 10–11 ceramic vessels (215,214).

G 835

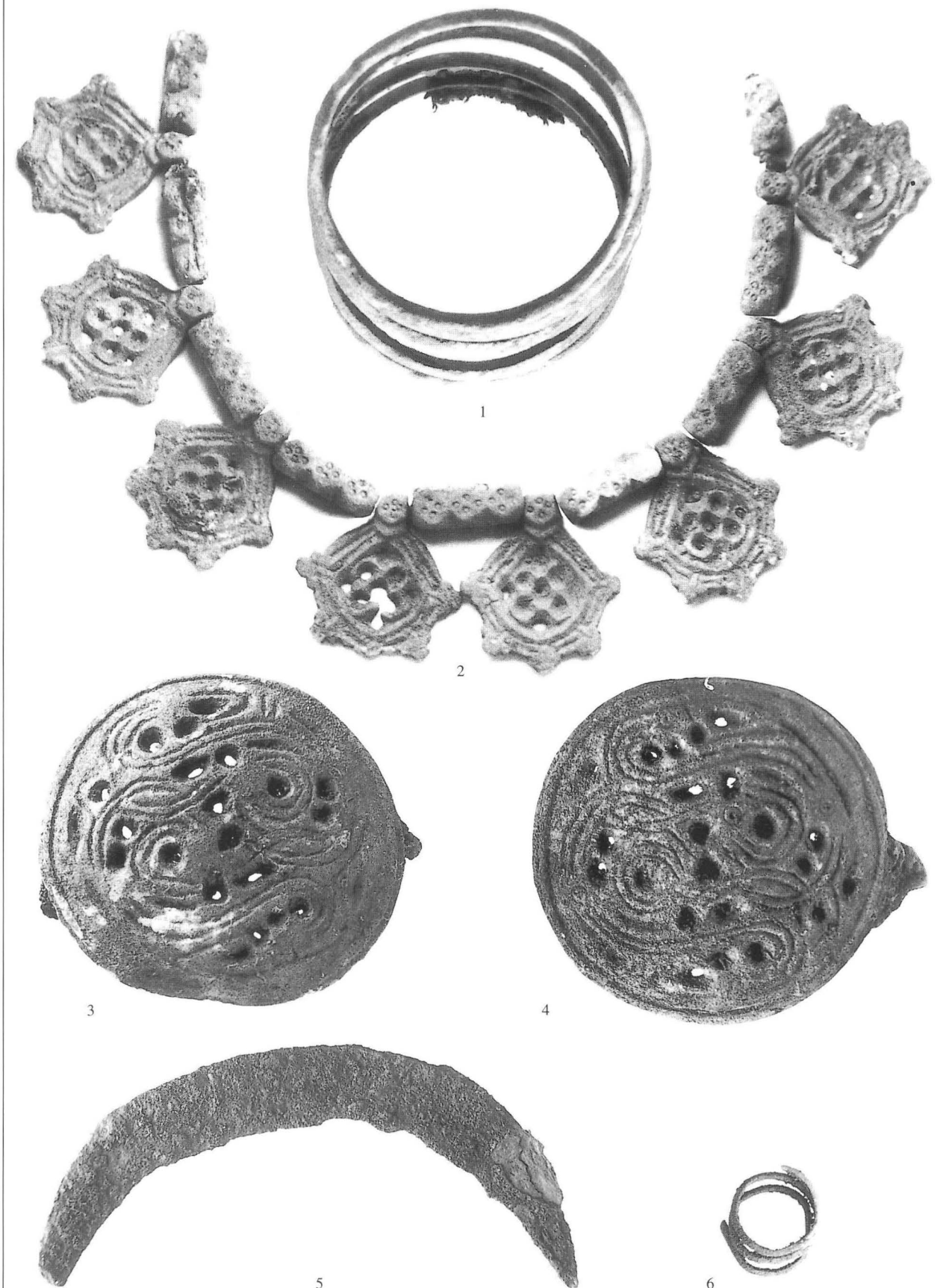


Plate 37. **G 835** (24740): 1 bracelet (171), 2 necklace (164), 3–4 brooches (162,163), 5 sickle (167), 6 finger-ring (170).

G 844

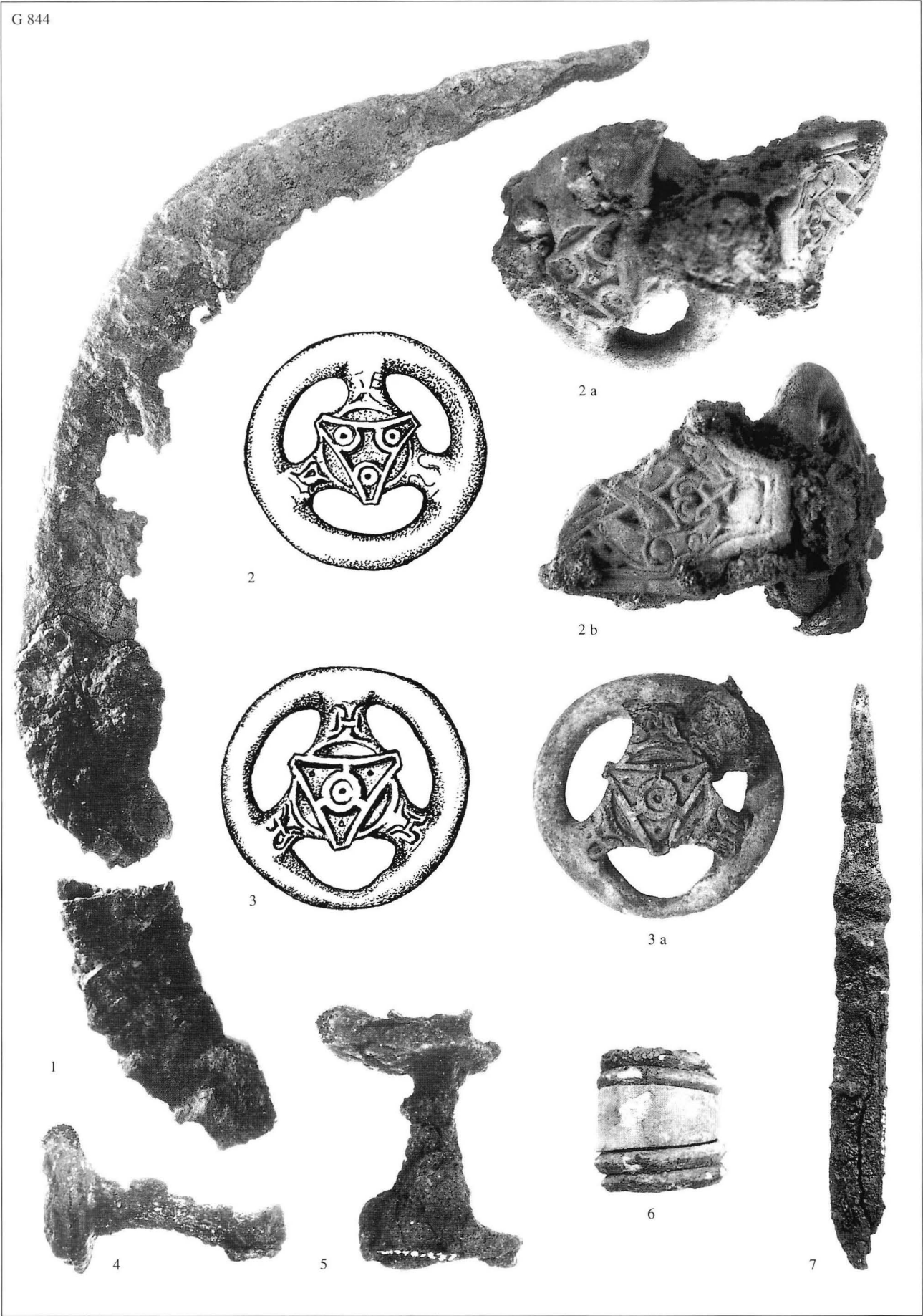


Plate 38. **G 844** (24740): 1 scythe (235), 2–2a,b strap-divider (246), 3–3a strap-divider (245), 4 nail (238), 5 rivet (237), 6 finger-ring (262), 7 knife 1/2 (255).

G 844

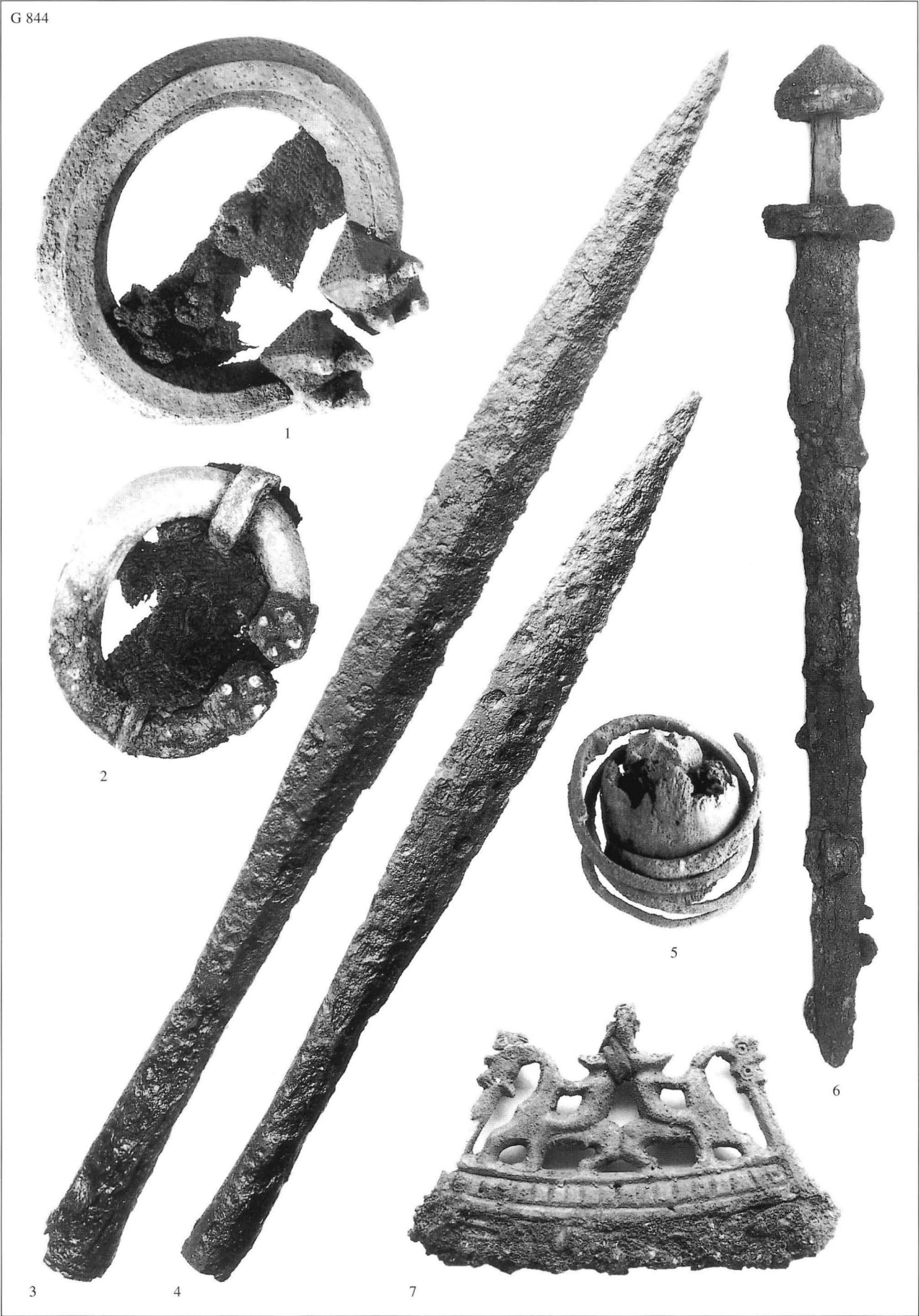


Plate 39. **G 844** (24740): 1–2 brooches (248, 258), 3–4 spearheads (240, 241), 5 spear shaft ring (236), 6 sword (242), 7 firesteel (252).

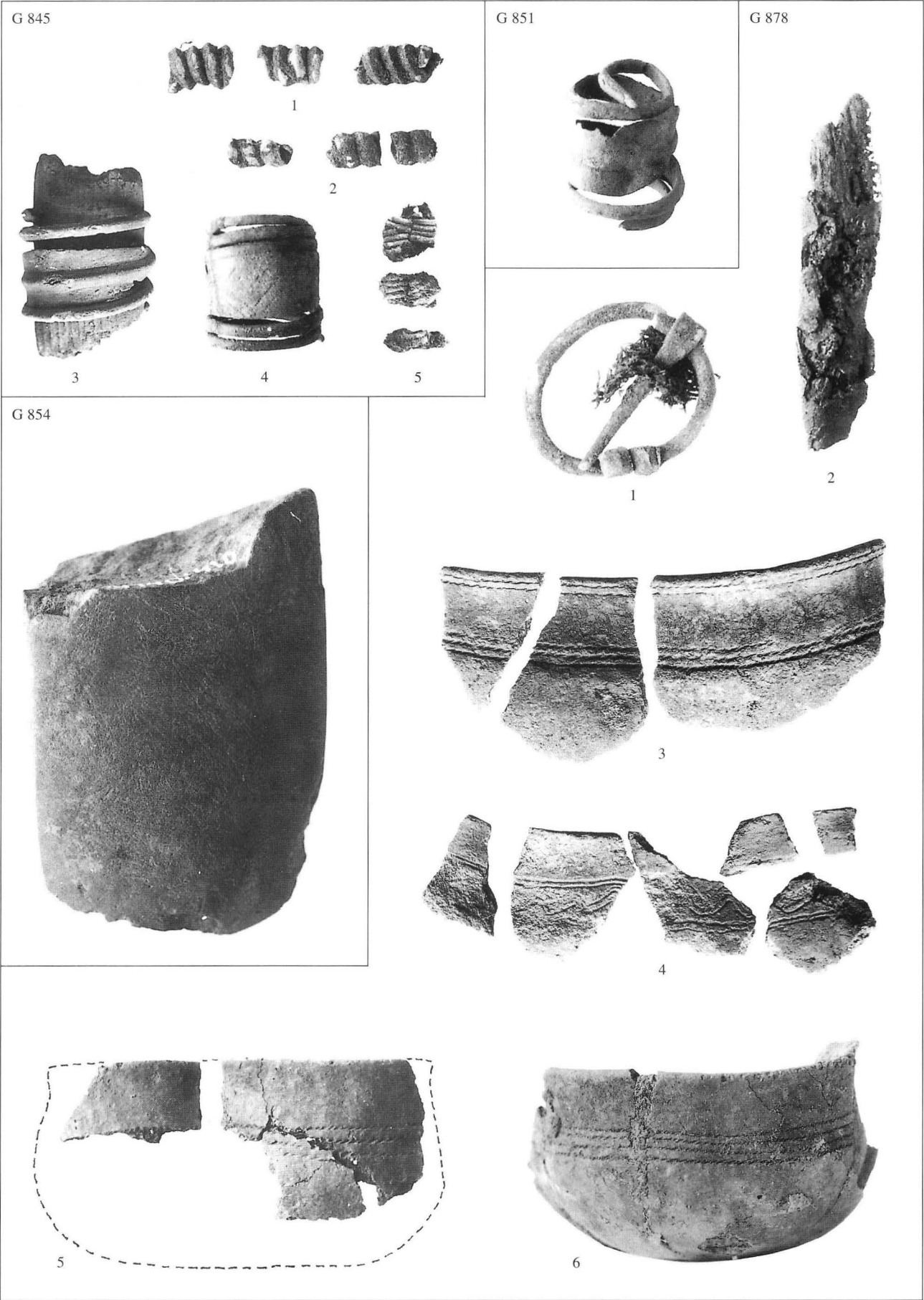


Plate 40. **G 845** (24740): 1 bronze spirals (272,274,276–278), 2 spear shaft ring (273), 3 finger-ring (275), 4 spiral ornament fragments (273). – **G 841** (24740): finger-ring (400). – **G 854** (24740): stone axe (410). – **G 878** (24740): 1 brooch (491,492), 2 knife (493), 3–6 ceramic vessels (488,490,489,4879).

G 855

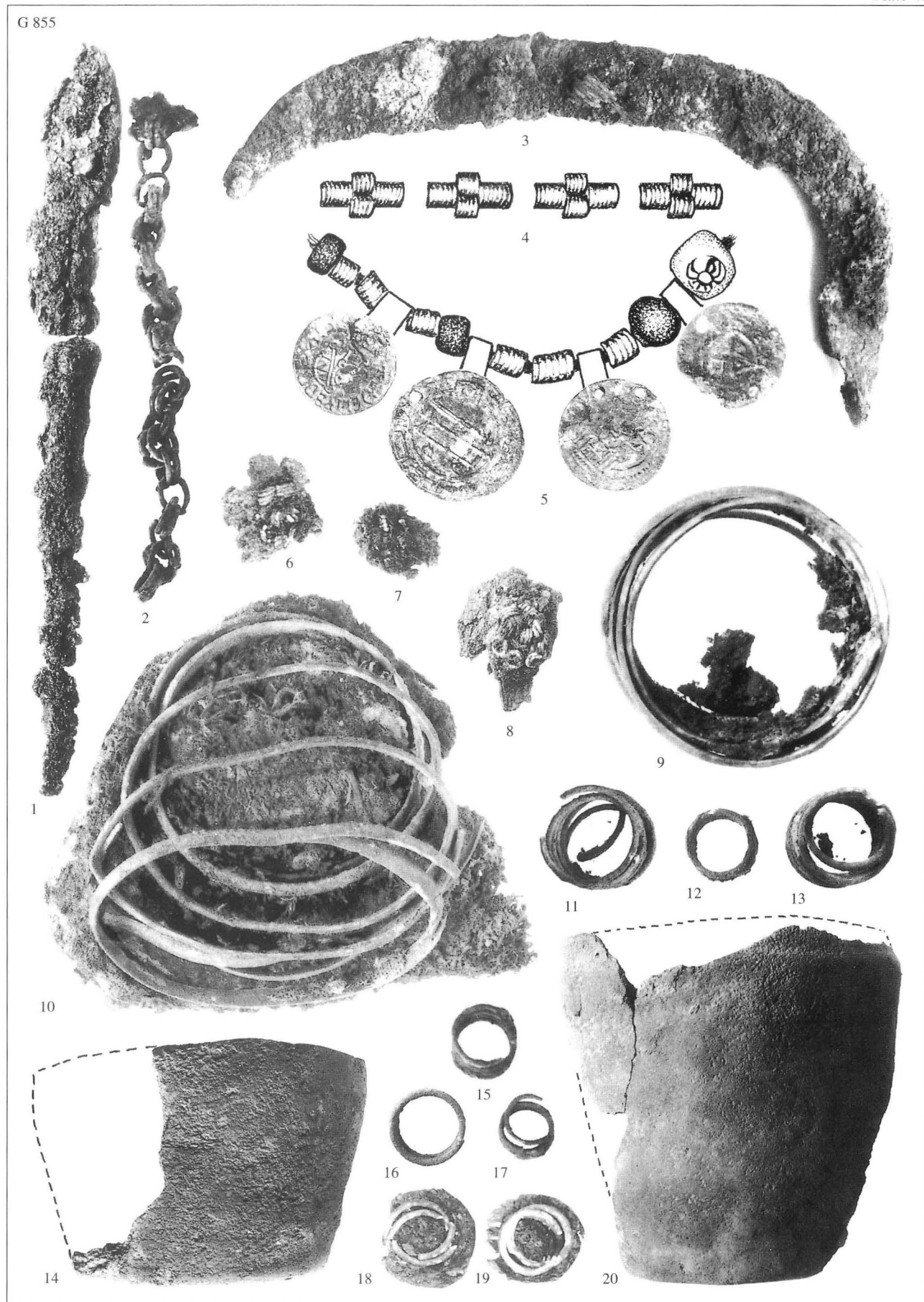


Plate 41. **G 855** (24740): 1 iron pin (437), 2 bronze chain (426), 3 sickle (432), 4 spiral ornaments (441), 5 necklace (427–431), 6–8 spiral ornaments (423,425,436), 9–10 bracelets (420,417), 11–13 finger-rings (422,439,440), 14 ceramic vessel (421), 15–19 bronze rings (438,415,443,424a,b), 20 ceramic vessel (416).

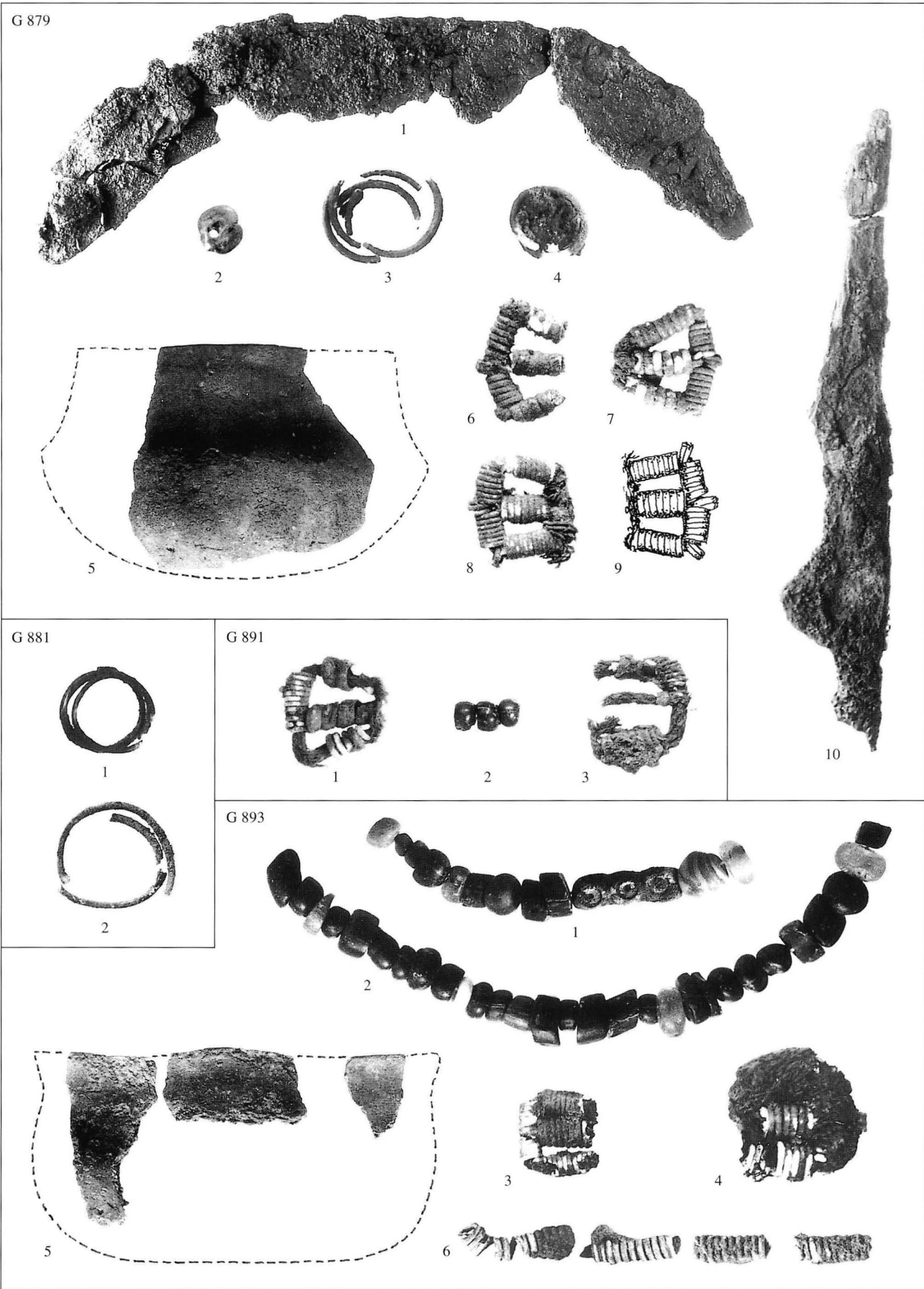


Plate 42. **G 879** (24740): 1 sickle (501), 2 bead (500), 3–4 finger-rings (504,505), 5 ceramic vessel (5), 6–9 apron corner ornaments (509,507,508,506), 10 knife (503). – **G 881** (24740): 1–2 finger-rings (206,208). – **G 891** (24740): 1 apron corner ornament (522), 2 beads (523), 3 apron corner ornament (524). – **G 893** (25480): 1 beads (2,3,5,6), 2 beads (11,12), 3–4 apron ornaments (9,8), 5 ceramic vessel (15), 6 bronze spirals (4,7,10,13).

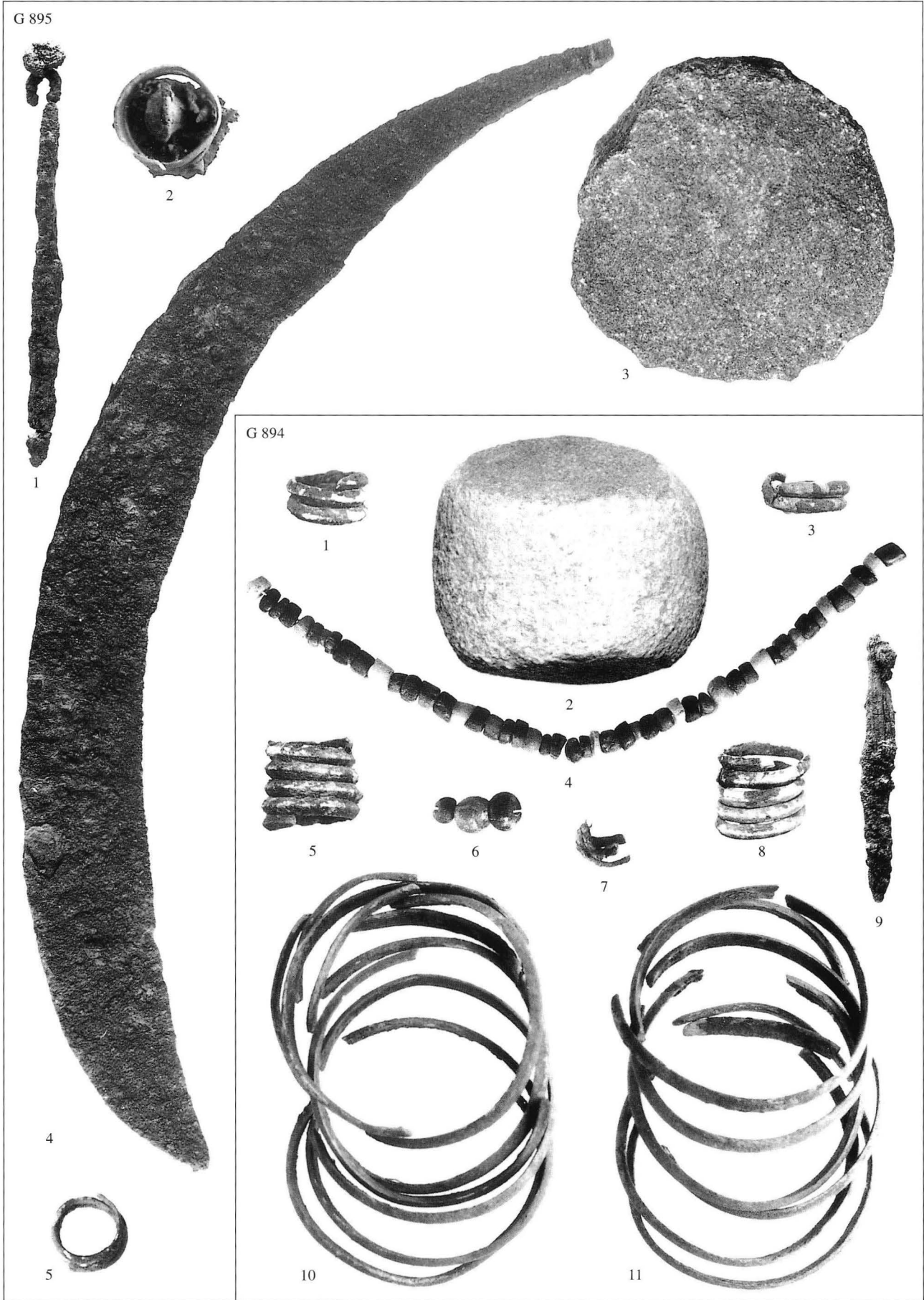


Plate 43. **G 894** (25480): 1 finger-ring (24), 2 grinding stone (20), 3 finger-ring (29), 4 neckband (21), 5 finger-ring (23), 6 beads (18,19), 7 toe-ring (22), 8 finger-ring (27), 9 knife 1/2 (28), 10–11 bracelets (25,26). – **G 895** (25480): 1 knife 1/2 (42), 2 finger-ring (41), 3 stone disc (34), 4 scythe (43), 5 finger-ring (40).

G 900

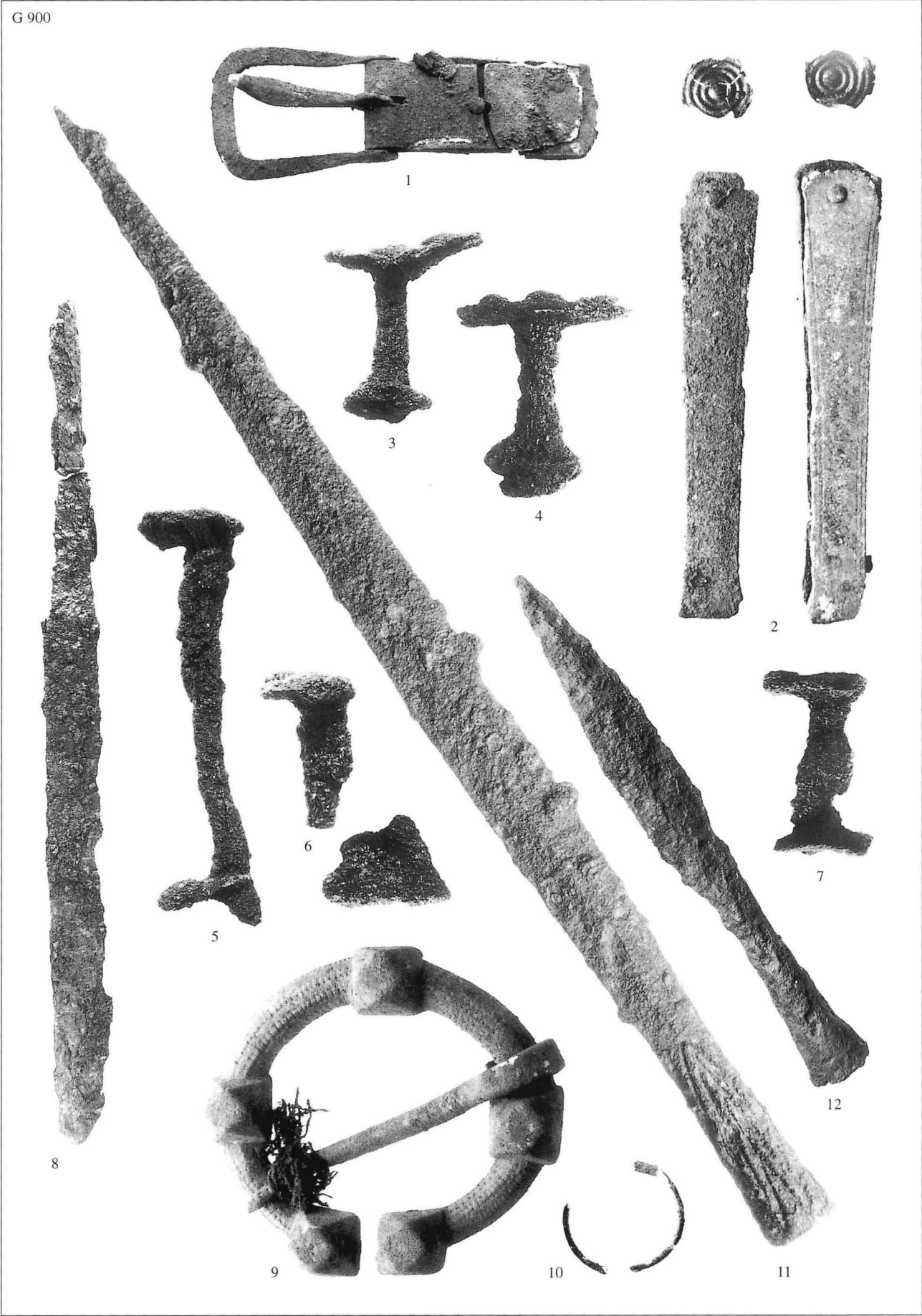


Plate 44. **G 900** (25480): 1 belt buckle (69), 2 strap tags and round fittings (62), 3–7 rivets (56,67,68,66,52), 8 seax (55), 9 brooch (61), 10 finger-ring fragments (58,59), 11–12 spearheads (53,54).

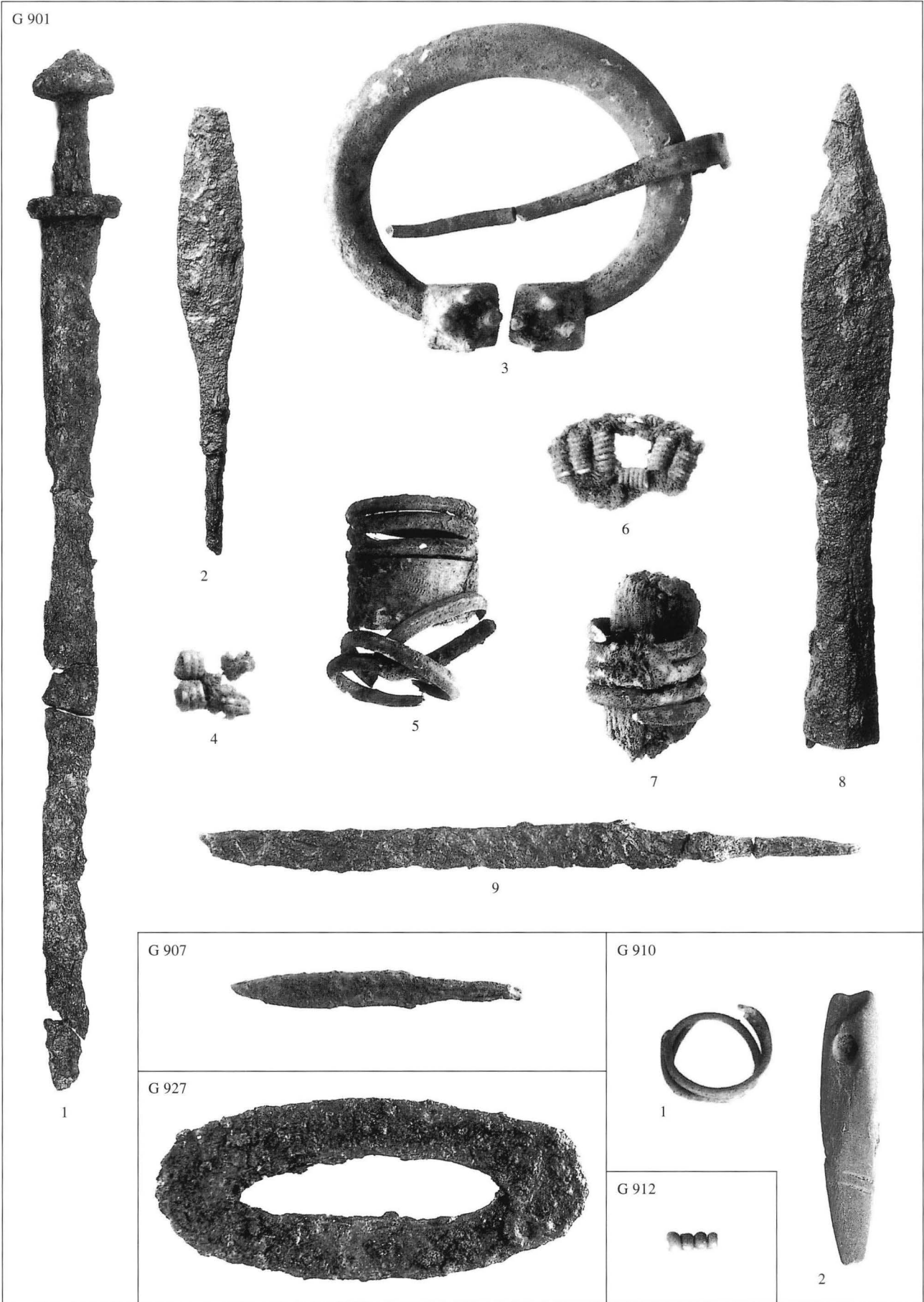


Plate 45. **G 901** (25480): 1 sword (72), 2 spearhead (75), 3 brooch (79), 4 spiral ornament (76), 5 finger-ring (78), 6 spiral ornament (80), 7 spear shaft ring (77), 8 spearhead (74), 9 long knife 1/2 (73). – **G 907** (25480): knife 1/2 (99). – **G 910** (25480): 1 finger-ring (102), 2 pendant whetstone (103). – **G 912** (25480): beads (109). – **G 927** (25480): firesteel (118).

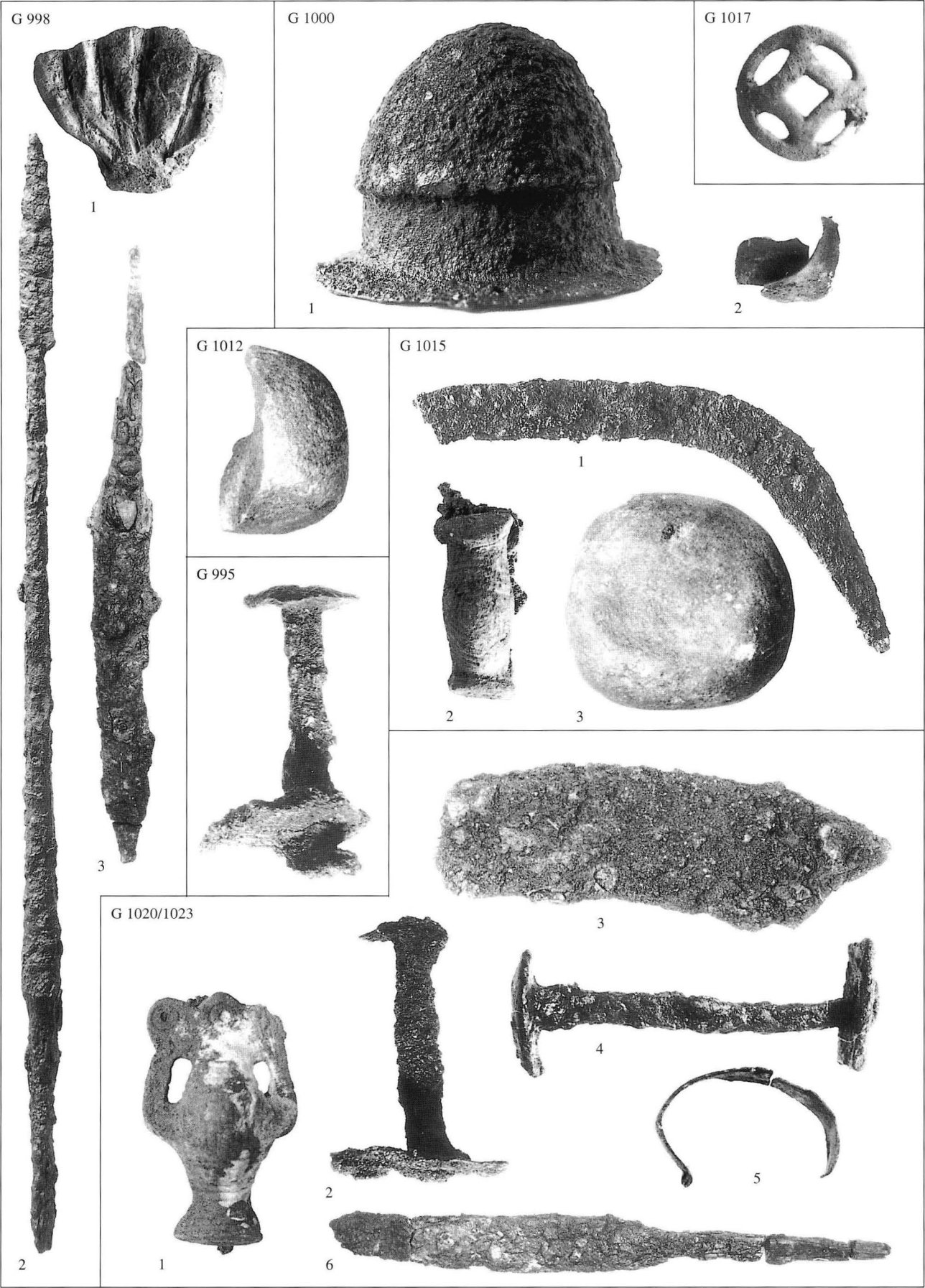


Plate 46. **G 995** (25480): rivet (137). – **G 998** (25480): 1 potsherd (152), 2 angon (150), 3 knife 1/2 (151). – **G 1000** (25480): 1 shield-boss (157), 2 finger-ring (158). – **G 1012** (25480): grinding-stone fragment (262). – **G 1015** (25480): 1 sickle fragment (265), 2 brooch (266), 3 grinding-stone (264). – **G 1017** (25480): brooch (271). – **G 1020 & 1023** (25480): 1 brooch (288), 2 rivet (289), 3 sickle fragment (291), 4 rivet (282), 5 finger-ring fragments ? (290), 6 knife 1/2 (283).

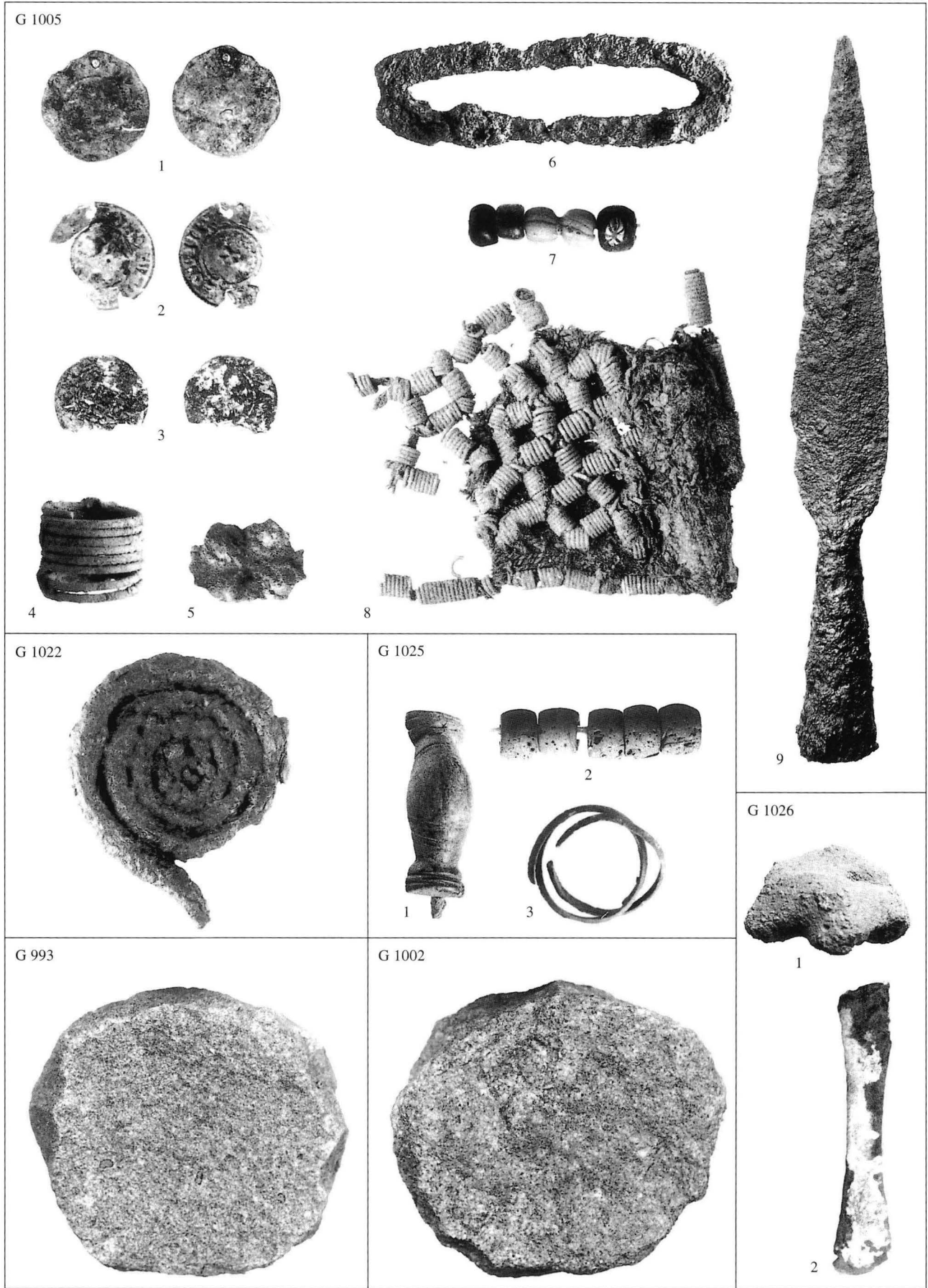


Plate 47. **G 993** (25480): stone disc (135). – **G 1002** (25480): stone disc (164). – **G 1005** (25480): 1–3 silver coins (173, 175, 178), 4 finger-ring (187), 5 sheath fragment (181), 6 firesteel (176), 7 beads (179, 183, 184, 186), 8 apron corner fragment (185), 9 spear-head (174). – **G 1022** (25480): spiral-head pin fragment (286). – **G 1025** (25480): 1 brooch (294), 2 beads (295), 3 finger-ring (296). – **G 1026** (25480): 1 ceramic vessel lug (302), 2 bracelet fragment ? (301).



Plate 48. **G 1010** (25480): 1 bronze list fragment (210), 2 scythe (247), 3 axe (240), sickle (239), 5 brooch (245), 6 bronze rod (208), 7 battle axe (238), 8 bronze mount (246a), knife (246), 10 finger-ring (227), 11 bronze mount (233), 12 end mount (228), 13 iron weight ? (231), 14 sleigh bell (213), 15 firesteel fragments (225).

G 1010

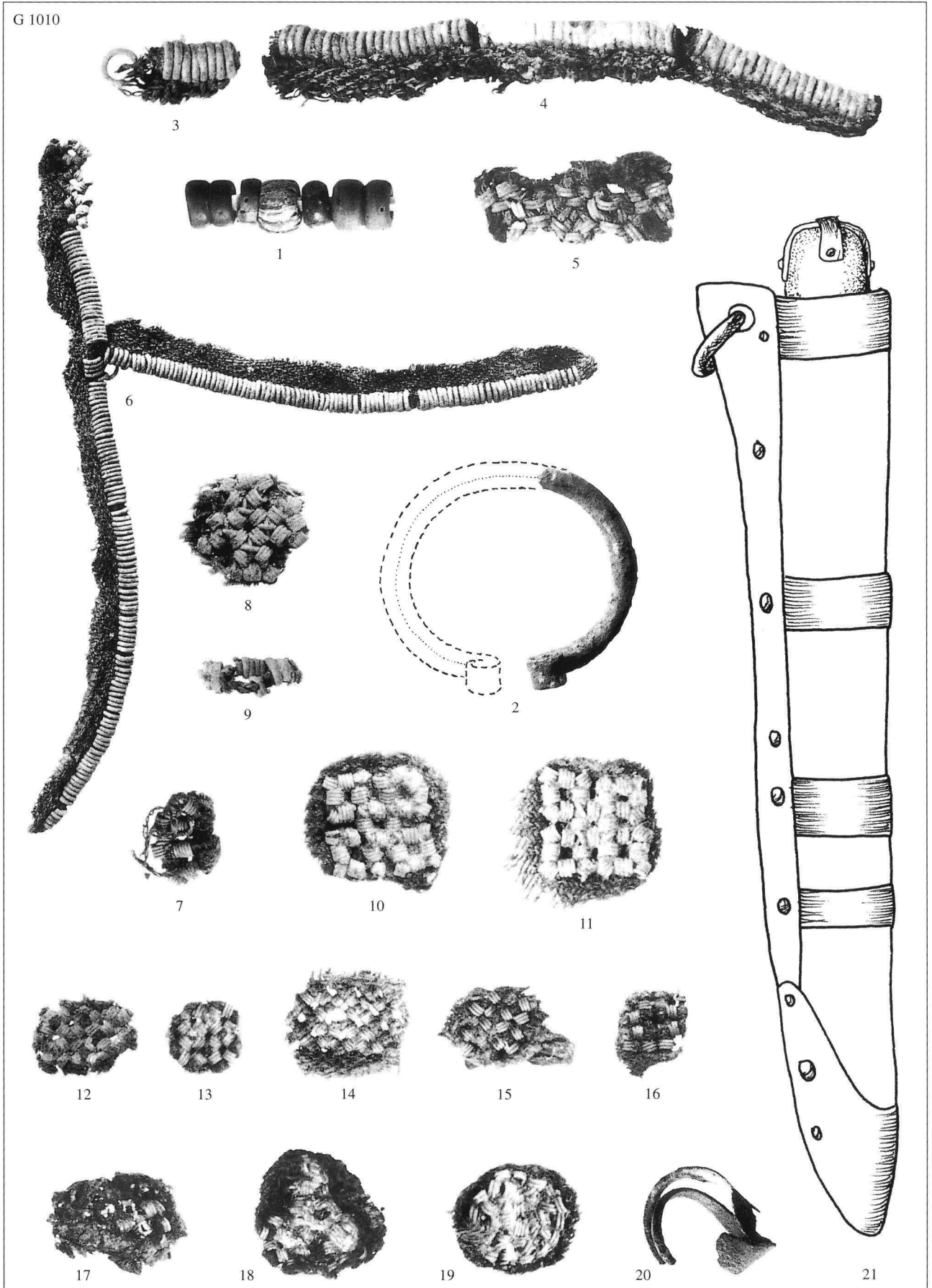


Plate 49. **G 1010** (25480): 1 beads (221,222,229,236,242), 2 brooch fragment (212), 3-4 ring border fragments (211, 237a), 5 spiral ornament (237b), 6 ring border fragment 1/2 (254), 7 apron corner ornament (220), 8-19 spiral ornaments (217,218,223,250,230,248,255a,255b,256,252, 253a,253b), 20 finger-ring fragment (206), 21 knife (243, drawing according to a X-ray).

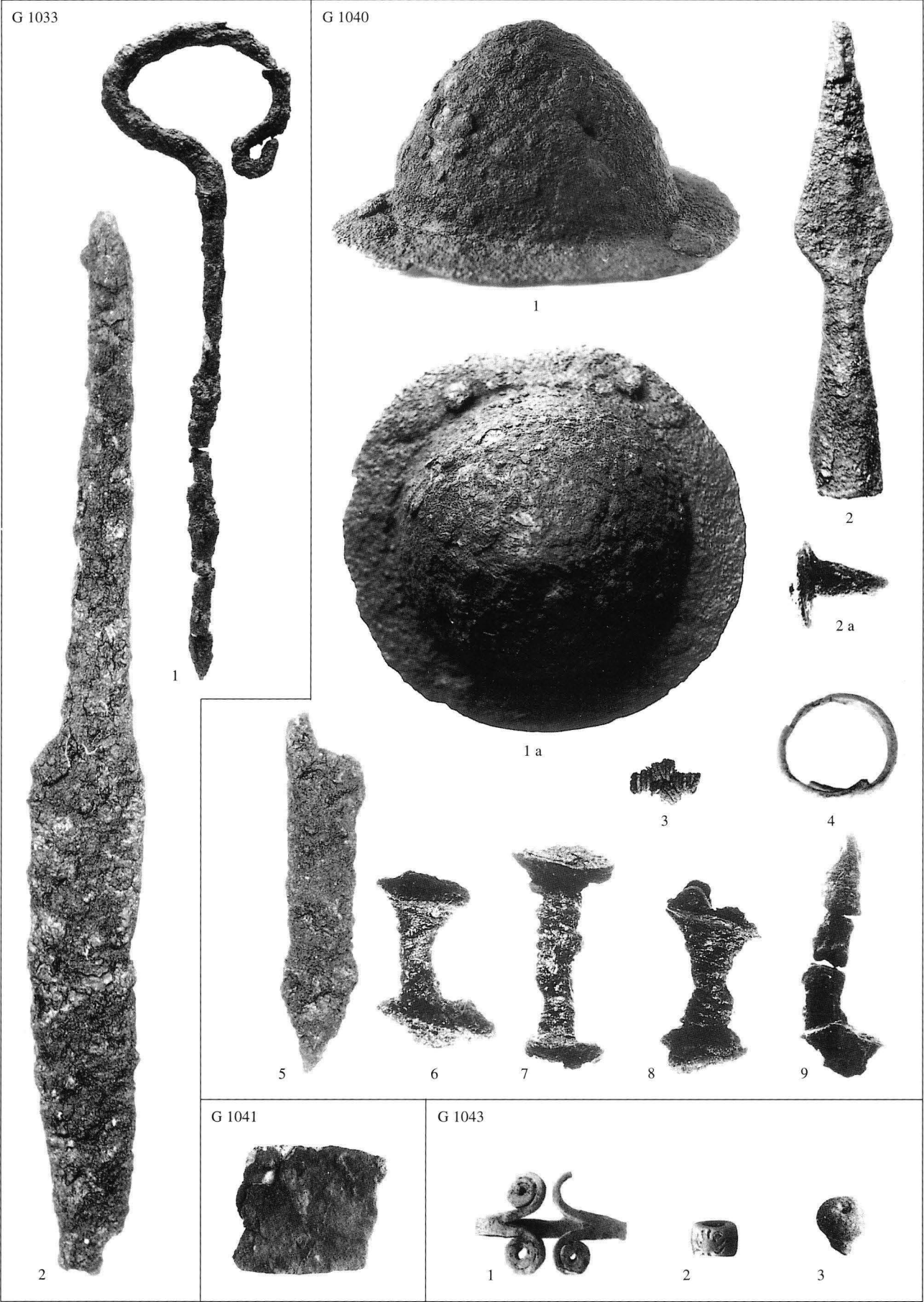


Plate 50. **G 1033** (25480): 1 iron pin (317), 2 knife (316). – **G 1040** (25480): 1 shield-boss (324), 2–2a spearhead (326), 3 spiral ornament (329), 4 finger-ring (331), 5 iron artefact fragment (330), 6–9 rivets (325,327a,b,328). – **G 1041** (25480): bronze sheet fragment (332). – **G 1043** (25480): 1 finger-ring (335), 2 bead (338), 3 brooch fragment (336).

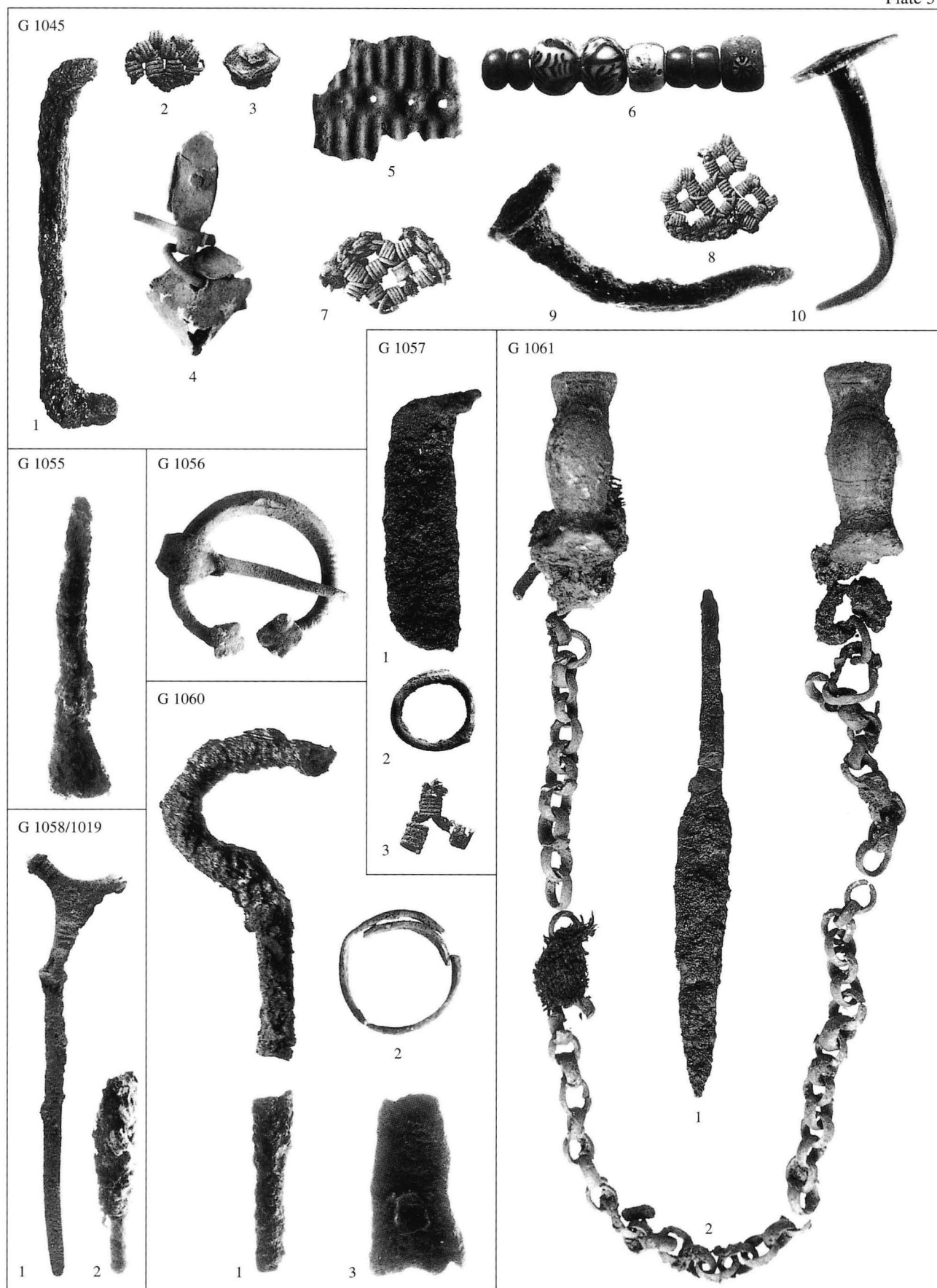


Plate 51. **G 1045** (25480): 1 clamp (345), 2 apron corner ornament (348), 3 bronze rivet (348a), 4 sleigh bell (347), 5 bronze mount (341), 6 beads (340,346), 7-8 spiral ornaments (349,344), 9-10 nails (343,342). – **G 1055** (25480): iron artefact (355). – **G 1056** (25480): brooch (356). – **G 1057** (25480): 1 iron list (357), 2 finger-ring (358). – **G 1058/1019** (25480): 1 bronze pin (361), 2 pin fragment (362). – **G 1060** (26695): 1 iron pin fragments (8,53), 2 finger-ring fragments (9,10), 3 iron fragment (54). – **G 1061** (26695): 1 knife 1/2 (14), 2 brooches and chain (15).

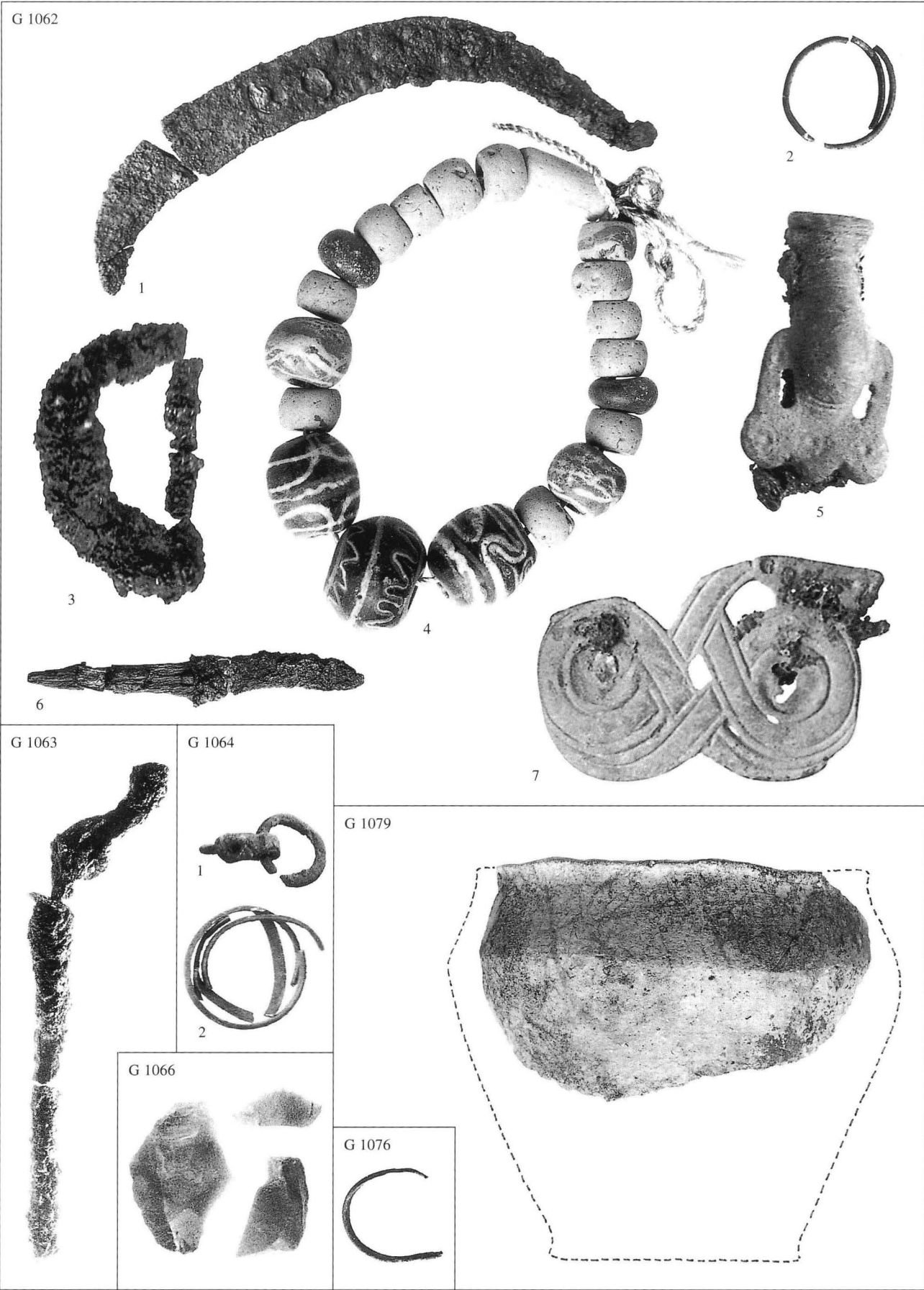


Plate 52. **G 1062** (26695): 1 sickle (19), 2 finger-ring (25), 3 iron brooch (21), 4 beads (20), 5 bronze brooch (22), 6 knife 1/2 (24), 7 bronze brooch (23). – **G 1063** (26695): iron pin fragments (29–31). – **G 1064** (26695): 1 bronze ring and mount (33), 2 finger-ring (34). – **G 1066** (26695): flint pieces (48,49). – **G 1076** (26695): finger-ring fragment (62). – **G1079** (26695): ceramic vessel (64).

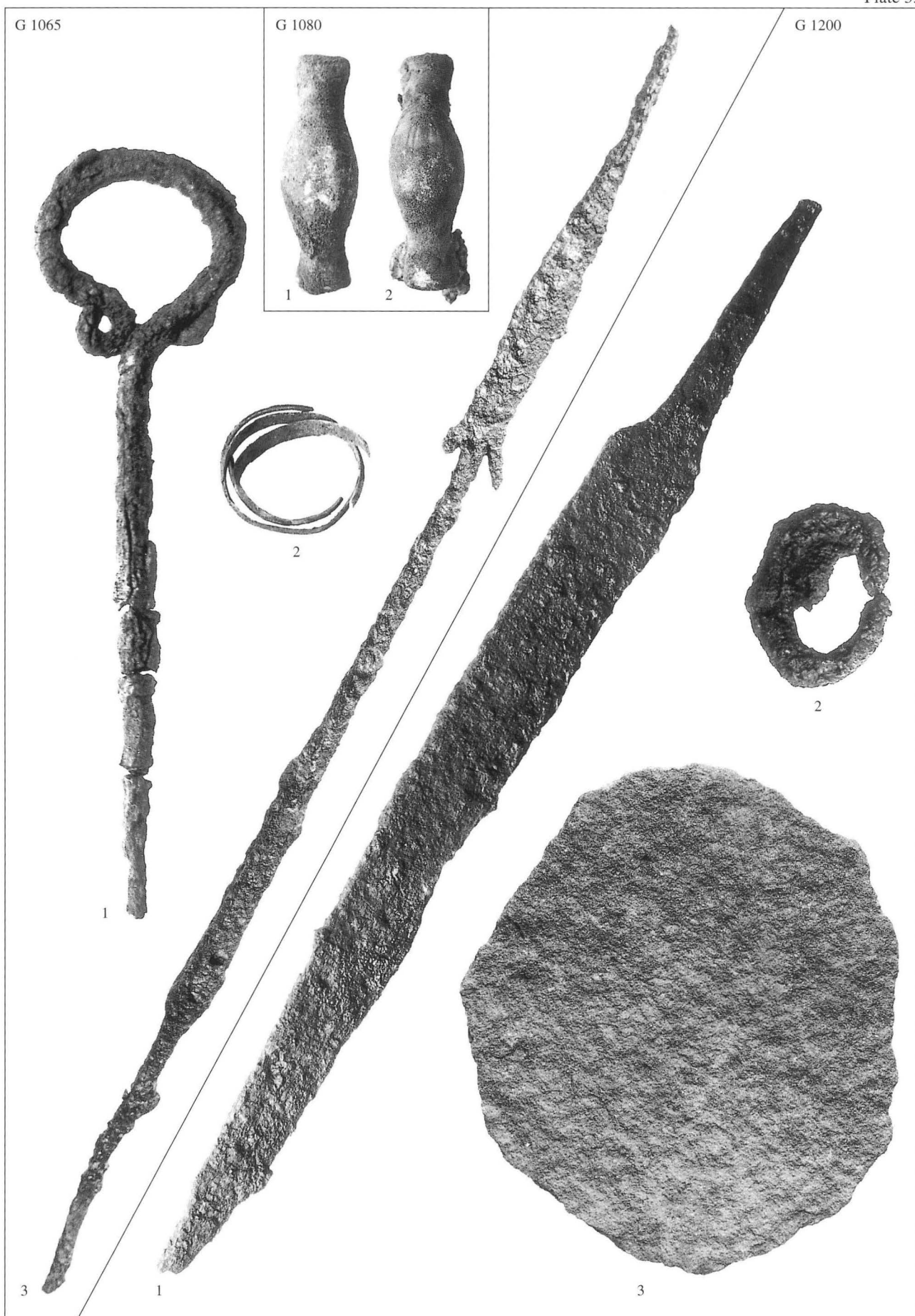


Plate 53. **G 1065** (26695): 1 iron pin (36,37), 2 finger-ring (39), 3 angon (38). – **G 1080** (26695): 1–2 brooches (65,66). – **G 1200** (26695): 1 seax (126), 2 iron ring (128), 3 stone disc (125).

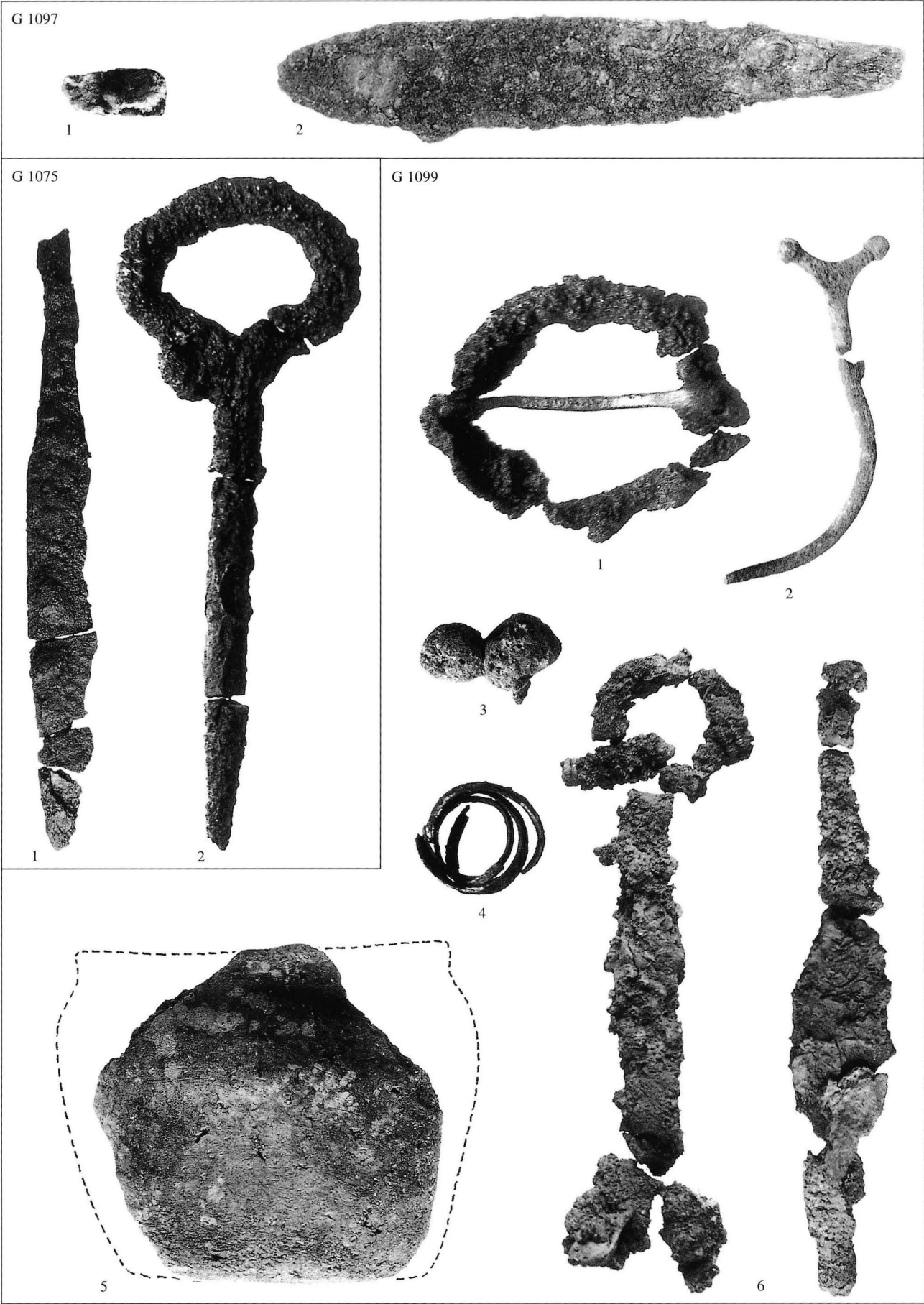


Plate 54. **G 1075** (26695): 1 knife 1/2 (57), 2 iron pin (55,56). – **G 1097** (26695): 1 bronze mount fragment (71), 2 knife (72). – **G 1099** (26695): 1 iron brooch (82), 2 bronze pin (88), 3 melt beads (85), 4 finger-ring (84), 5 ceramic vessel (87), 6 iron key ? and knife (83a,b).

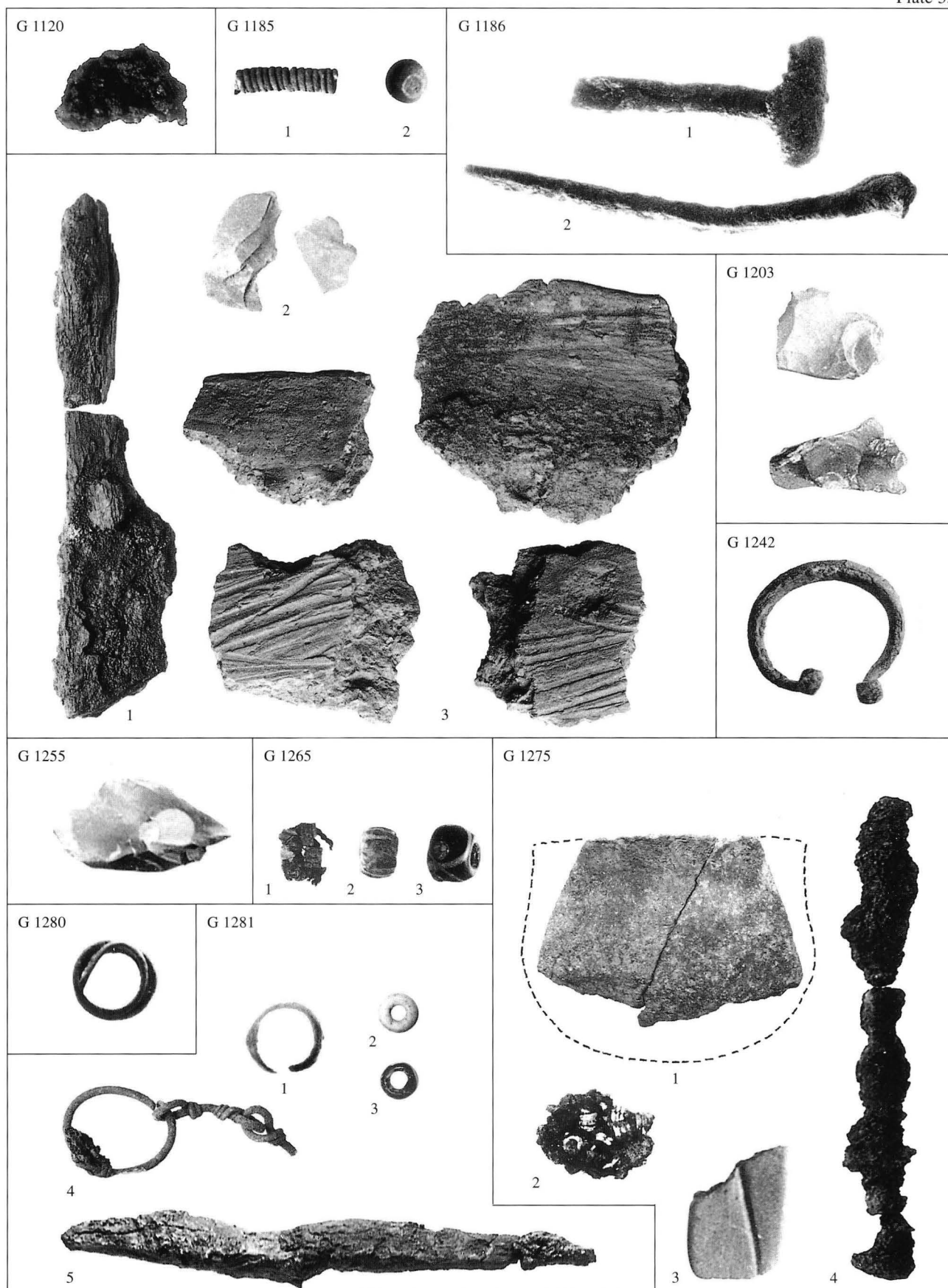


Plate 55. **G 1120** (26695): iron mail fragment ? (110). – **G 1185** (26695): 1 bronze spiral (117), 2 bead (118). – **G 1186** (26695): 1–2 nails (121, 122). – **G 1203** (26695): flint pieces (139). – **G 1205** (26695): 1 knife fragments (144), 2 flint pieces (145), 3 potsherds (146). – **G 1242** (27177): brooch (14). – **G 1255** (27177): flint piece (15). – **G 1265** (27177): 1 corner ornament fragment (43), 2–3 beads (42, 45). – **G 1275** (27177): 1 ceramic vessel (57), 2 spiral ornament (55), 3 whetstone fragment (53), 4 iron pin fragments ? (54). – **G 1280** (27177): finger-ring (64). – **G 1281** (27177): 1 finger-ring (68), 2–3 beads (67, 70), 3 bronze ring and rod chain links (69), 4 knife (66).



Plate 56. **G 1283** (27177): 1 finger-ring (76), 2 sickle (75), 3–5 beads (72,77,78), 6 ceramic vessel (73), 7 finger-ring (79), 8–10 spiral ornaments (74,80,81). – **G 1260** (27177): 1–5 finger-rings (18,19,20,25,34), 6 sickle (35), 7 ceramic vessel fragment (38), 8 awl ? (37a), 9 ceramic vessel (37).

G 1260

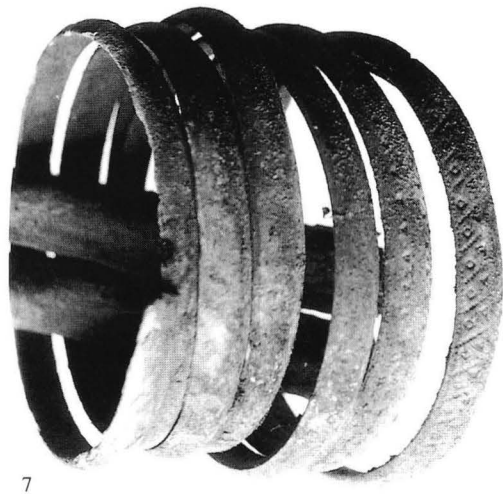
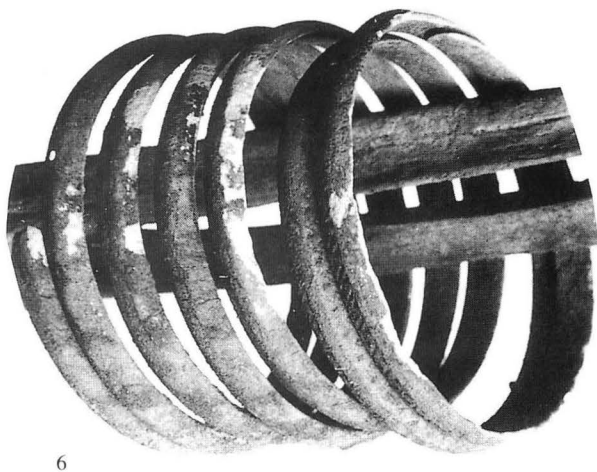
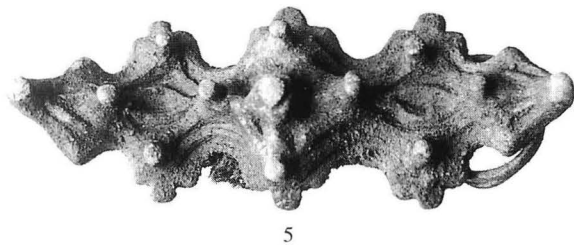


Plate 57. G 1260 (27177): 1 brooch (28), 2 chain holder (31), 3 brooch (27), 4 chain holder (30), 5 brooch (26), 6 bracelet (21), 7 bracelet (24).



Plate 58. **G 1260** (27177): 1 bead necklace 7/8 (16), 2 neck-ring (29).

G 1260

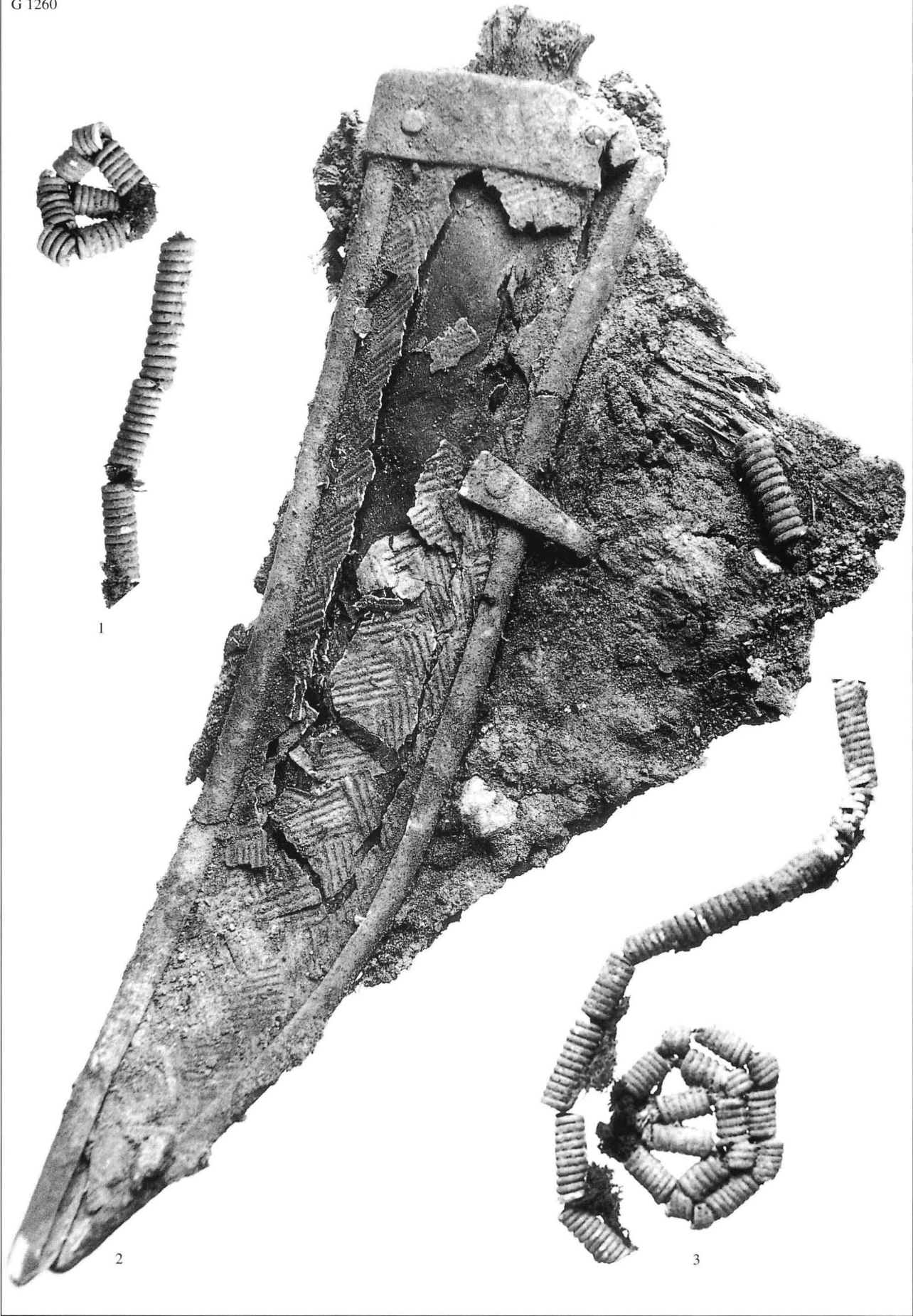


Plate 59. **G 1260** (27177): 1 apron upper corner ornament (33), 2 knife sheath 5/4 (36), 3 apron lower corner ornament (33).



Plate 60. **G 1260** (27177): 1 necklace (16), 2–3 brooches (28,27), 4–5 chain holders (31,30), 6 chains (32), 7 brooch (26), 8–9 bracelets (21,24). 11/20.

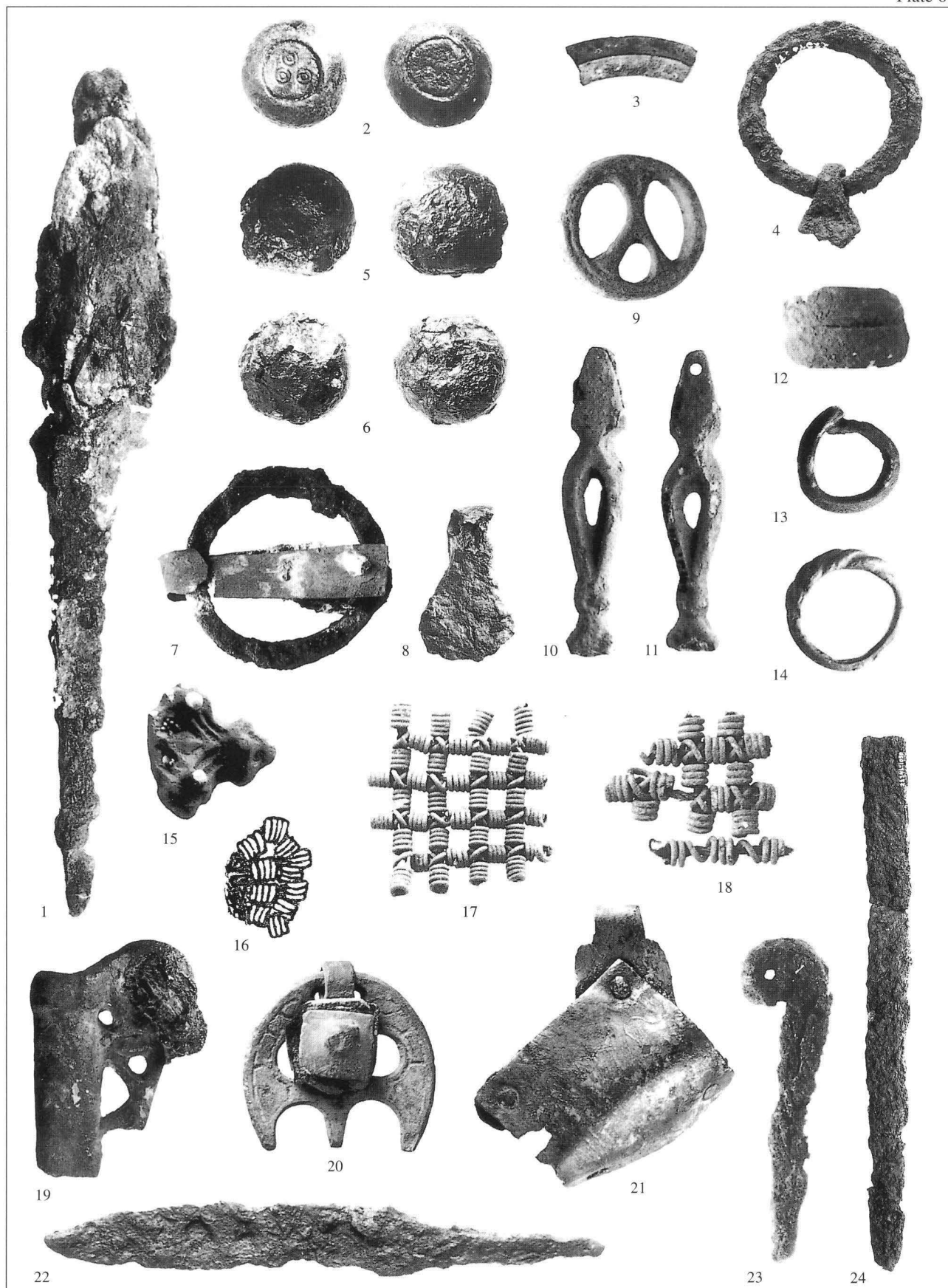


Plate 61. 1 **G 49** knife (22346:740), 2–3 **G 440** weight & silver brooch fragment (22346:52,53), 4 **G 441** bit ring (22346:74), 5 **G 469** weight (22346:279), 6 **G 489** weight (22346:442), 7 **G 467** iron ring & bronze mount (22346: 269), 8 **G 497** small axe (22346:464), 9–10 **G 482** strap divider & tag (22346:397,398), 11 **G 507** strap tag (22346: 542). – **Surface soil finds:** 12–14 finger-rings (24388:508, 25480:401, 22346:1013), 15 brooch fragment (25480: 520), 16–18 spiral ornaments (22346:234,759, 23183:1049), 19 bronze artefact (23183:1047), 20–21 mounts (22346:750, 23183:997), 22 knife (26695:178), 23 iron pin (22346:745), 24 sword fragment 1/5 (22346:1050).

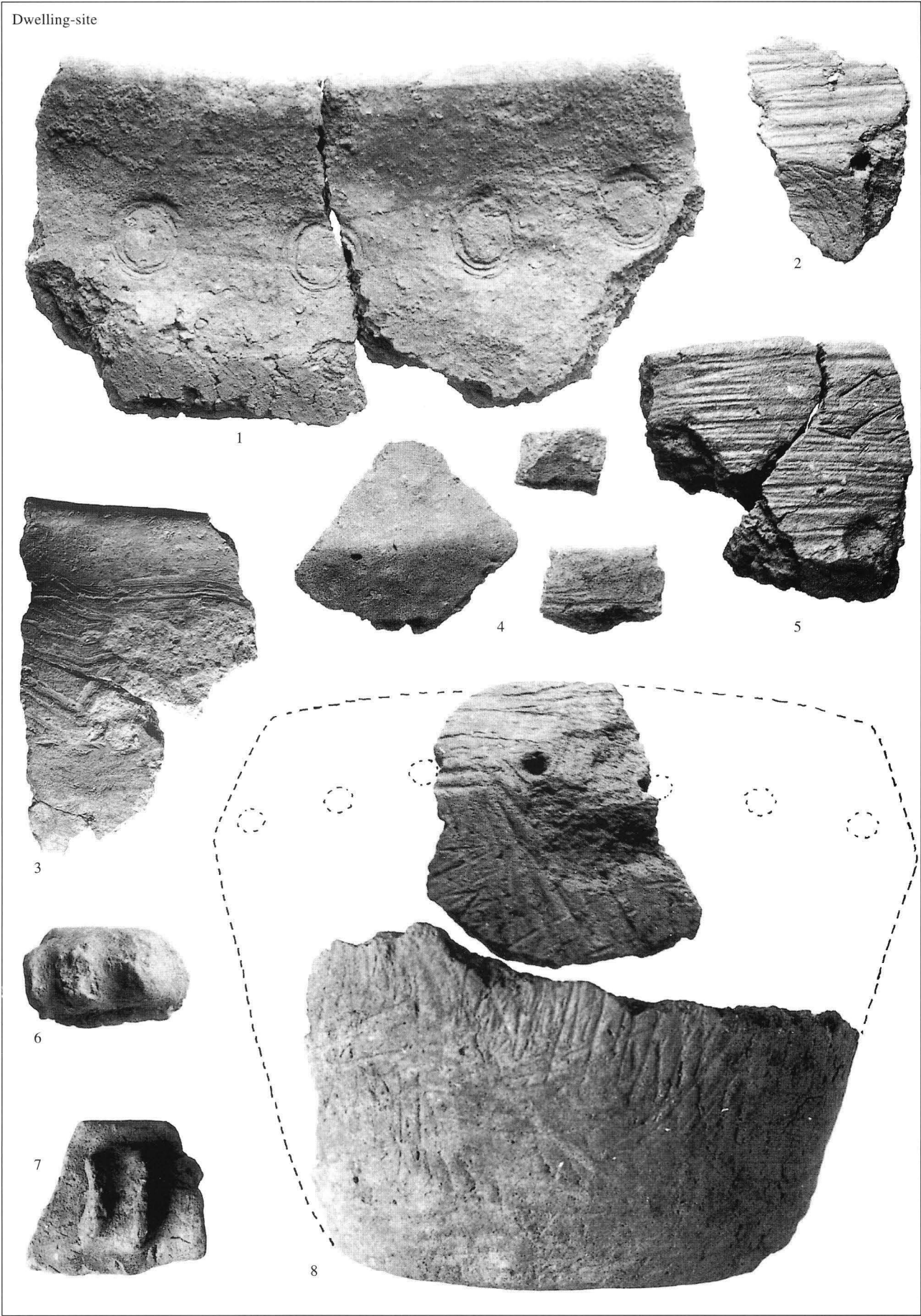


Plate 62. **Dwelling site:** 1 25480:423 (124/91), 2 25480:492 (127/95), 3 18000:63 (95/101), 4 24740:585 (126/43), 5 27177:108 (110/21), 6 25480:490 (127/94), 7 25480:512 (129/87), 8 27177:100 (119/23–24) 1/1.

Dwelling-site

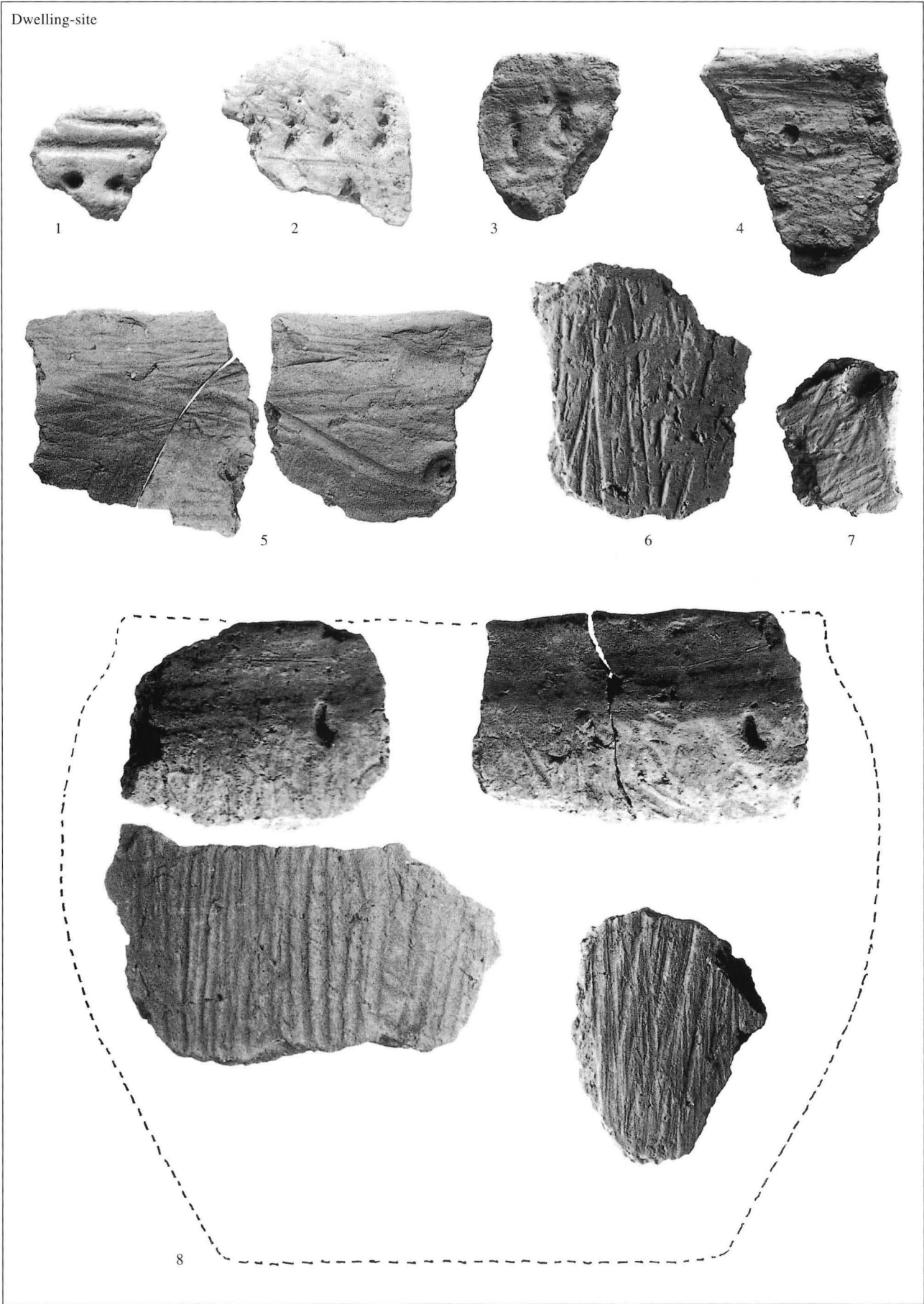


Plate 63. **Dwelling site:** 1 24740:450 (134/38, in the fill of grave 857), 2 24388:295 (129/69, in the fill of grave 778), 3 25480:601 (145/67), 4 25480:484 (127/88), 5 25480:600 (145/67), 6 24740:529 (120/55), 7 25480:379 (119/91), 8 24740:567,556,555,567 (124/50, 123/51) 1/1.

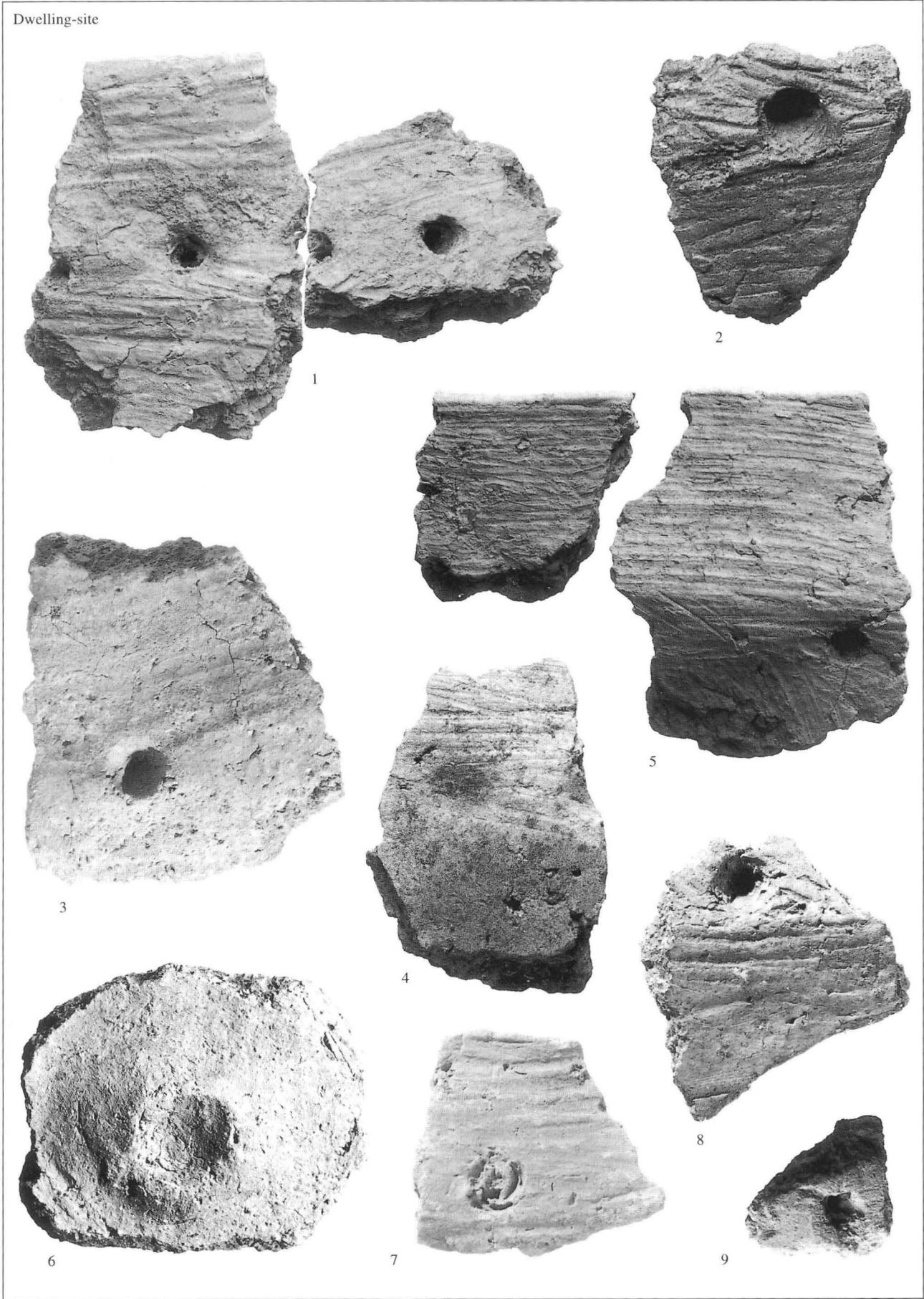


Plate 64. **Dwelling site:** 1 25480:472 (126/95), 2 24740:655 (surface soil find), 3 18000:863 (144/86), 4 24740:630 (124/38), 5 25480:477 (126/97), 6 18000:923 (146/90), 7 18000:3062 (from the fill of grave 246), 8 18000:815 (124/34), 9 25480:385 (120/90).

Cairn 422

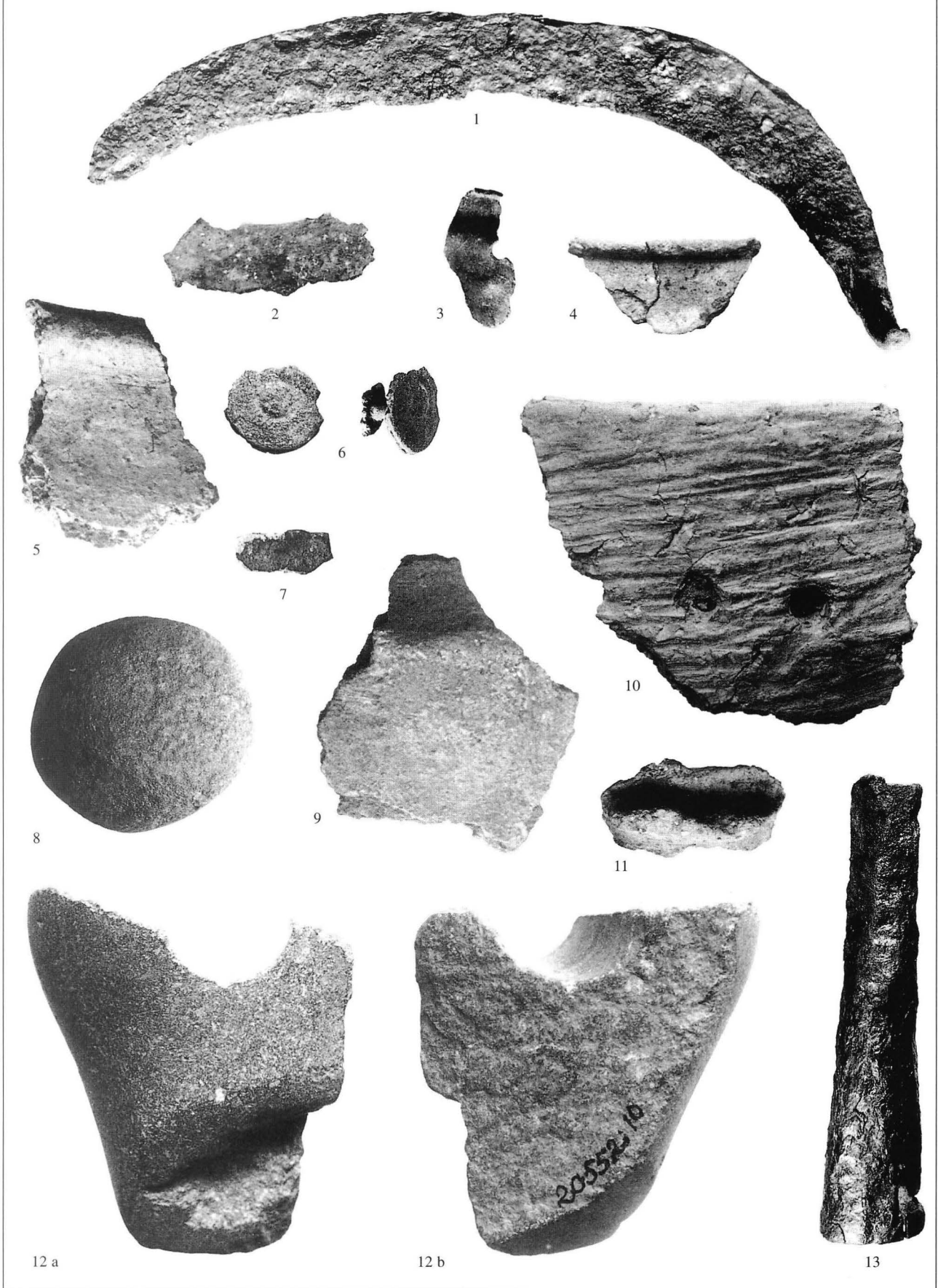


Plate 65. **Cairn 422:** 1 sickle (20189:6), 2 bronze knife fragment (20552:8), 3 bronze mount fragment (20552:7), 4–5 potsherds (20552:164,102), 6a,b bronze button (20552:12), 7 bronze mount fragment (20552:9), 8 grinding stone (20552:11), 9–11 potsherds (20552:32,104,176), 12a,b stone axe fragment (20552:10), 13 iron spearhead fragment (20552:13). All 1/1.

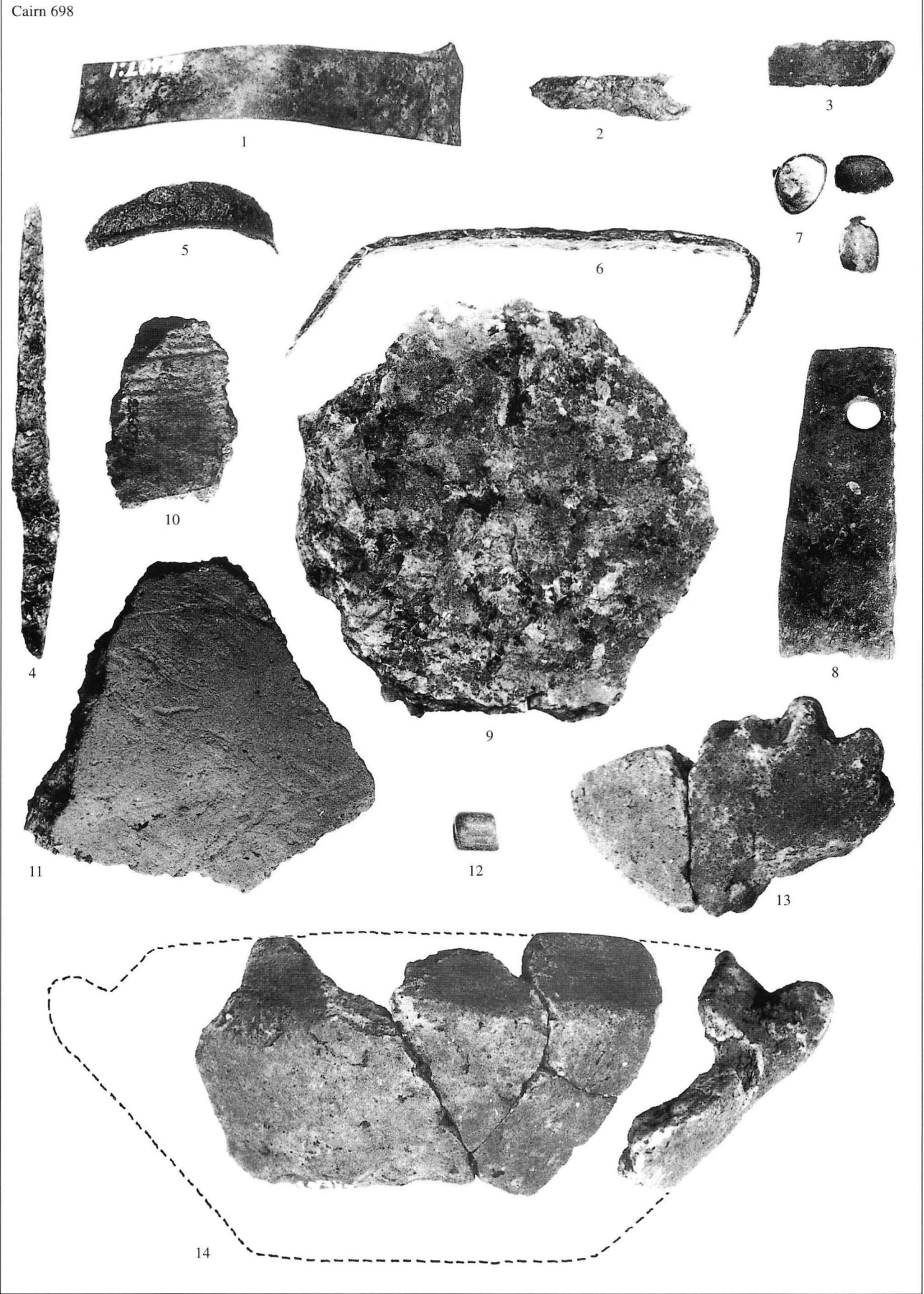
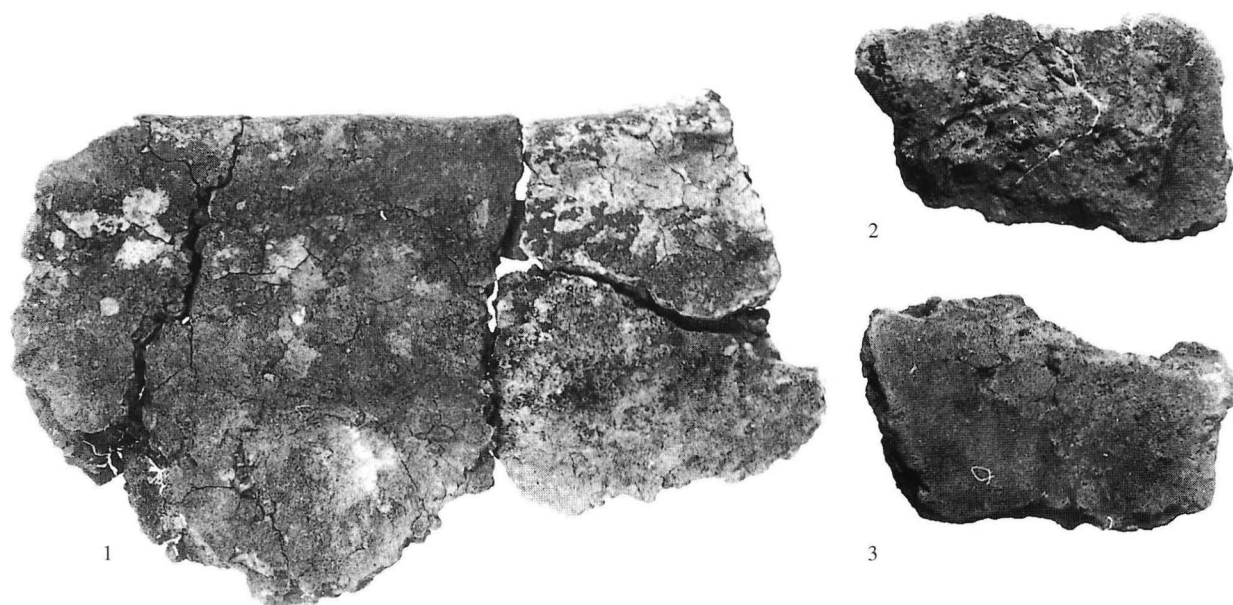


Plate 66. **Cairn 698** (23607): 1 bronze list (1), 2 iron fragment (2), 3 bronze list fragment (6), 4 knife (5), 5 iron artefact fragment (8), 6 clamp (9), 7 sleigh bell button fragments (4), 8 bronze bracelet fragment (7), 9 stone disc (87), 10–11 potsherds (14,12), 12 bead (3), 13 potsherd (88), 14 ceramic vessel fragments (89,88), reconstruction 1/1.

Cairn 698



Cairn 699



Plate 67. **Cairn 698** (23607): 1–3 ceramic vessel fragments (78,36,38). – **Cairn 699** (23607): 1 iron fish-hook (126), 2–3 three-point crampons (128,127), 4 belt-buckle (131), 5–8 potsherds (169, 161, 138a,b).

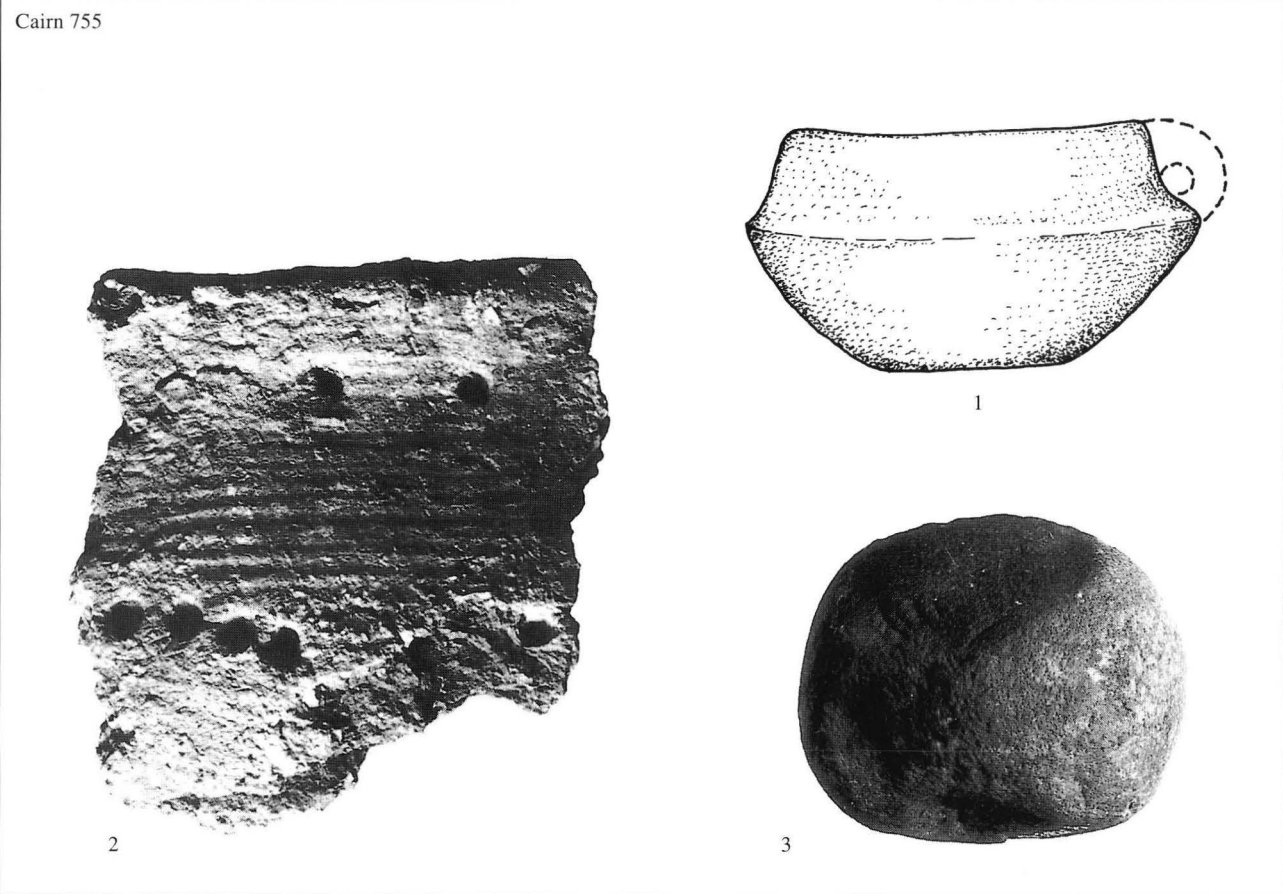


Plate 68. **Cairn 700** (23607): 1–2 potsherds (219), 3 potsherd (194), 4–5 bottom fragments of a ceramic vessel (200), 6 potsherd with pits (224), 7 bottom fragments of a ceramic vessel (25480:582). – **Cairn 755** (24388): 1 sketch according to potsherd 45, 6/10, 2 potsherd (118), 3 grinding stone (50).

Cairn 755

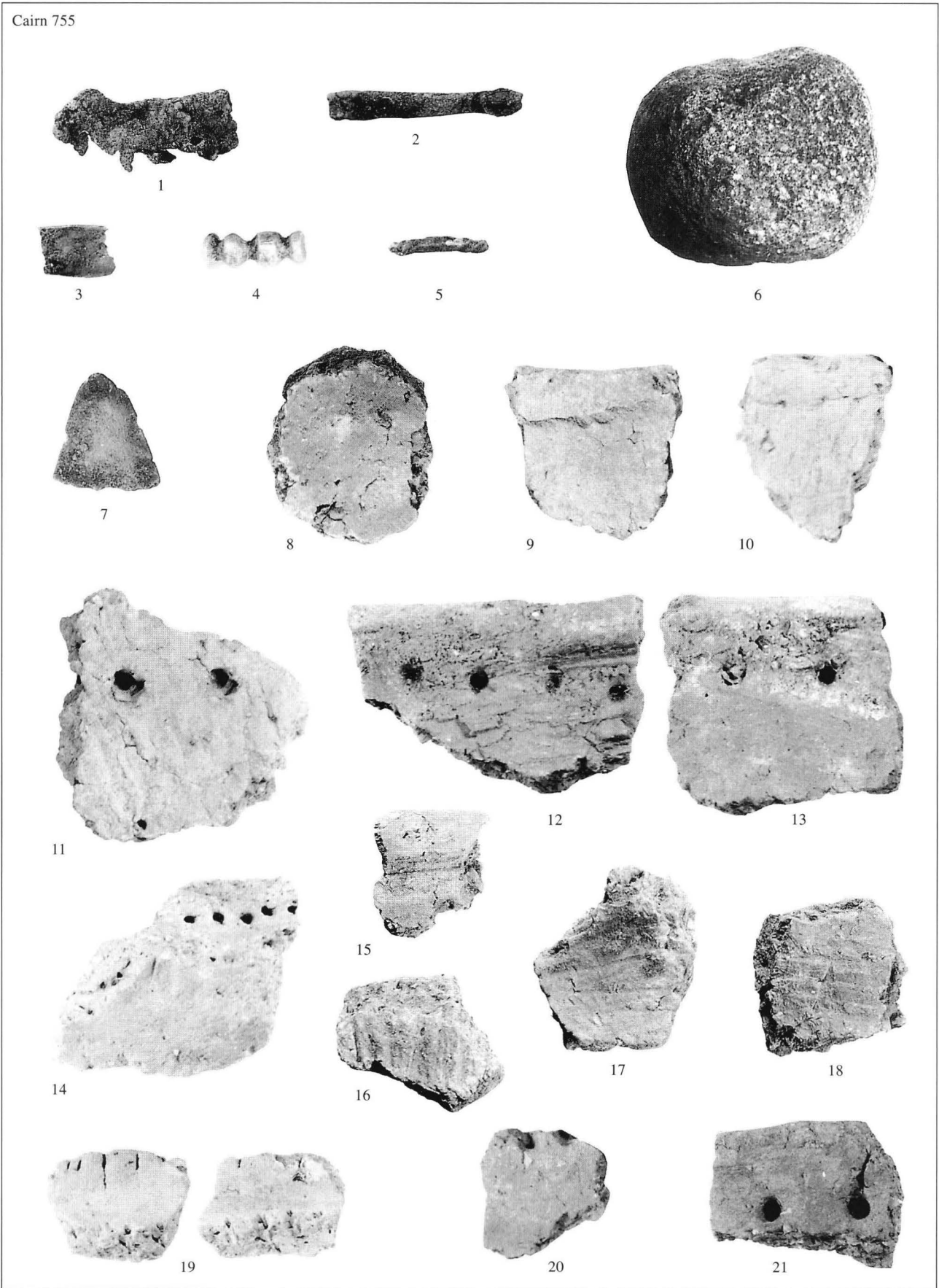


Plate 69. **Cairn 755** (24388): 1 iron fragment (42), 2 iron rod fragment (44), 3 bronze artefact fragment (46), 4 bone artefact (47), 5 bronze rod fragment (48), 6 grinding stone (43), 7 tip fragment of a bronze spearhead (49), 8 potsherd (51), 9–10 rim fragments of a ceramic vessel (100, 84), 11 potsherd with pits and scratched surface (84), 12–13 rim fragments with pits (85), 14 potsherd with small pits (87), 15–18 potsherds with scratched surface (88), 19 potsherds with hatching on the rim and on a projecting list (86), 20 potsherd with small pits (91), 21 rim fragment with round pits (100).

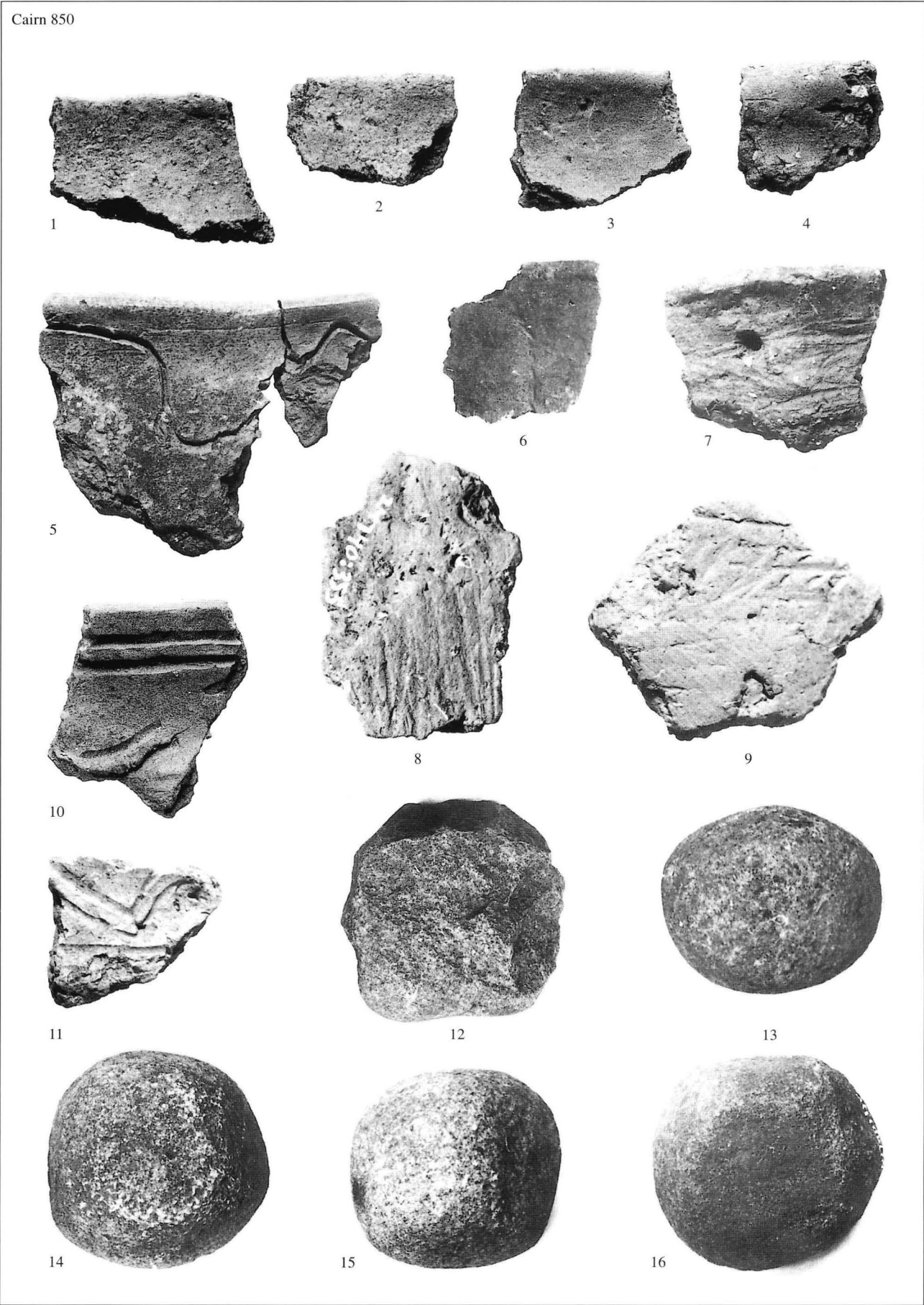


Plate 70. **Cairn 850** (24740): 1–4 rim fragments of ceramic vessels (325), 5 rim fragment with a winding groove (326), 6 rim fragment with a curving cord impression (328), 7–9 potsherds with scratched surfaces (374,355,373), 10–11 potsherds with double grooves (298,348), 12 stone disc 1/2 (319), 13–16 grinding stones (318,291,317,320).

Cairn 850

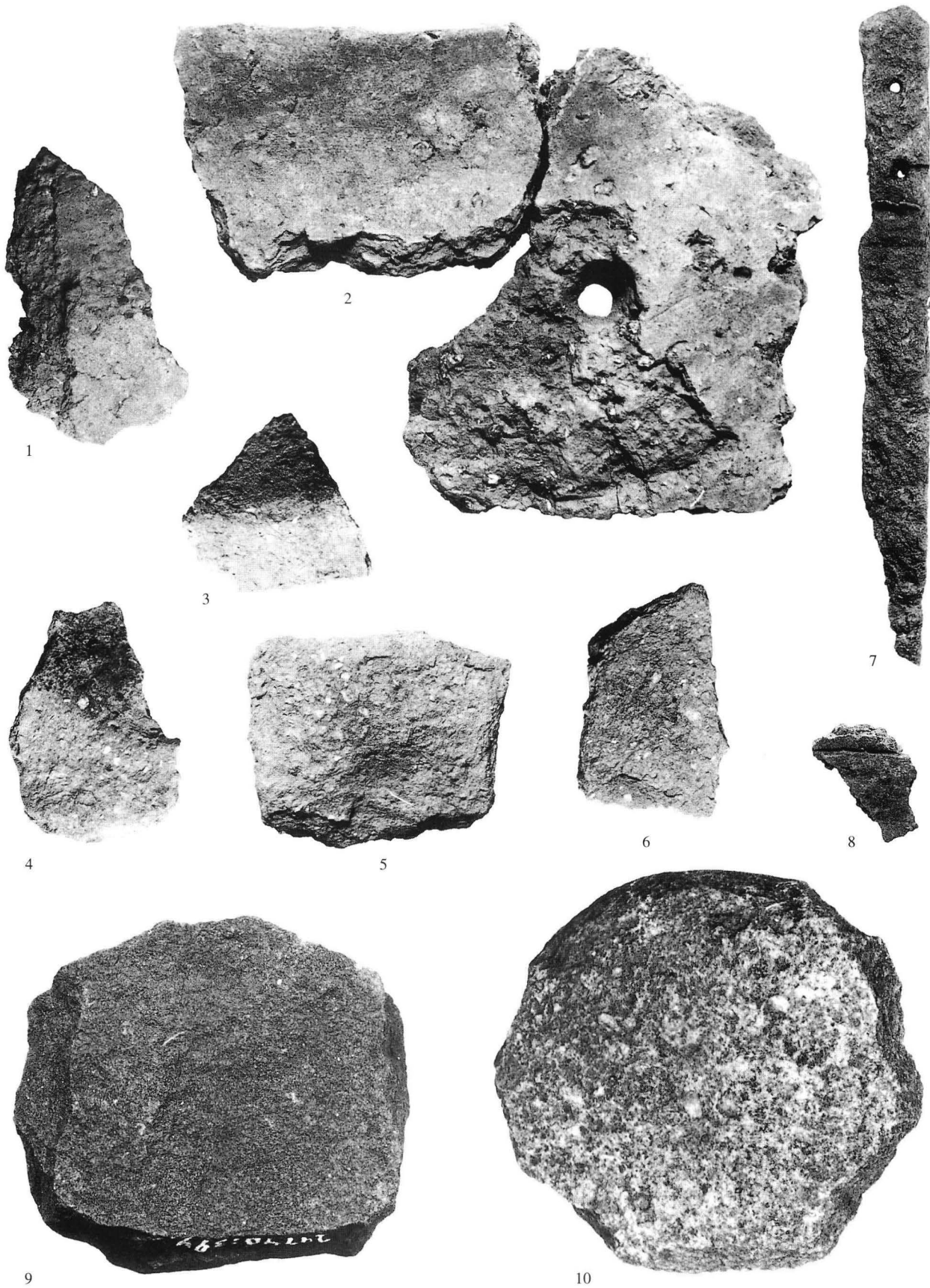


Plate 71. **Cairn 850** (24740): 1 potsherd (347), 2 rim fragment of a large vessel with pits (327), 3–6 sherds of a vessel with angled wall contour (333), 7 knife (393), 8 potsherd with grooves, 9–10 stone discs (394,383).



Plate 72. 1. **G 510**: bronze vessel fragments 22346:566 in situ. – 2. **Dwelling-site**: quern-stone fragment 22346:1038 in situ (122/111).

The coin finds, 1984–1992, with a numismatic comment by Tuukka Talvio

The Luistari cemetery is the richest in Finland in terms of coin finds. There are also two other cemeteries with many coins from the Pyhäjärvi region, Köyliö (Vanhakartano) and Yläne (Anivehmaanmäki). A common feature for these cemeteries is that there are women's graves with several – exceptionally more than ten – coins worn with the necklace. Coins – but usually only fragments – are often also found in pouches, mainly in men's graves. In most other cemeteries, even in Eura, graves seldom contain more than one or two coins

The new coin finds from Luistari are generally similar to those from the earlier excavations (see *Luistari* I, 305–9), but in this part of the cemetery most of the coins are West-European and date from the first half of the 11th century. There are only four or five Islamic dirhams. One of them (in grave 855) is an early Abbasid issue, probably from the 750s. It is the earliest coin from Luistari, but it was found together with two German and one English coin which give the burial the *terminus post quem* 1014. It is also very well preserved, which means that it cannot have circulated continuously for over two hundred years; presumably it had been hidden away (not necessarily in Finland) for a long time before being returned to circulation.

The Samanid fragment in grave 480 is notably late, 976–97. Samanid coins from this time are, however, also known from the graves excavated before 1984.

The four coins in grave 855, containing the burial of a young girl, have all been worn as ornaments, and the same is true of all the other whole coins in these finds. (Whole coins *not* worn as ornaments are relatively uncommon in Finnish grave finds.) As already noted, coin ornaments are mostly found in women's graves, while men's graves more often contain coin fragments which apparently have been used as money (see graves 480, 500, 670, 740).

Coin list

1. **Grave 472** (22346:300) England, Ethelred II, Long Cross type (c. 997–1003), London, moneyer Lyfinc, cf. SCBI Helsinki 297–299. 1.57 g, pierced, with trace of a loop. – Near the neck.

2. **Grave 473** (22346:307) As above, from Lincoln, moneyer Unbein. Die-identical with SCBI Helsinki 228. 1.20 g, pierced. – From the southwest end of the grave.

3. **Grave 480** (22346:374e) Caliphate, Samanid, Nuh II (976–97), fragment (0.31 g). – From the pouch in the middle of the grave.

4. **Grave 500** (22346:478). Small fragment (0.06 g) of an European coin, broken into two. – From a mouldered pouch (?) in the middle of the grave.

5. **Grave 500** (22346:482). Two embrittled fragments (0.22 g) of a European coin. – Location as above.

6. **Grave 500** (22346:487). Two thin shards of a coin (?). – Location as above.

7. **Grave 516** (22346:636). Germany, Regensburg, Conrad II as emperor (1027–39). Dbg 1094, Hahn 35. 1.03 g, with remains of a loop (bronze). – From the southwest end of the grave.

8. **Grave 516** (22346:644). England, Ethelred II, Long Cross type (c. 997–1003), London, moneyer Swetinc. Die-identical with SCBI Helsinki 311. 1.46 g, with remains of a loop (bronze) and additional hole. – From the middle of the grave.

9. **Grave 516** (22346:647). Germany, Strasbourg, Bishop Wicelin (1001–29)? Dbg 945. 0.75 g, pierced, with trace of a loop. – Location as above.

10. **Grave 518** (22346:664). Germany, Regensburg, Henry II (1st reign, 1002–09). Hahn 27 jl. 1.37 g, pierced, with a rivet of bronze. – From the filling.

11. **Grave 519** (22346:684). Germany, Würzburg. Dbg 859. 0.64 g. Pierced (with a loop of thread). – From the filling.

12. **Grave 520** (22346:695). Germany, Duisburg, Henry III as emperor (1046–56). Dbg 323. 1.38 g, pierced, with trace of a loop. – From the filling.

13. **Grave 529** (23183:8). England, Ethelred II, Long Cross type (c. 997–1003), Thetford, moneyer Osulf. Cf. SCBI Cop. 1239, Hild. 3804 (var.). 1.47 g, pierced. – From the west end.

14. **Grave 538** (23183:93). Caliphate, unidentified, worn almost smooth. 2.73 g, with trace of a loop (bronze). – From the filling, above grave 640.

15. **Grave 573** (23183:269). Fragment (0.31 g) of a European coin? – From the filling, above grave 668.

16. **Grave 600** (23183:371). Germany, unidentified, an embrittled fragment (0.27 g) and some smaller pieces. Remains of a loop (bronze). – From the middle of the grave.

17. **Grave 654** (23183:534). Fragment of a corroded silver coin, probably Islamic. 0.53 g. – From the filling, above grave 655.

18. **Grave 668** (23183:620). Germany, Strasbourg, Bishop Widerold (991–99). Dbg 940. 0.66 g, pierced. – From a mixed layer above the grave.

19. **Grave 670** (23183:659). Germany, unidentified, a fragment (0.38 g). – From the middle of the grave.

20. **Grave 674** (23183:475). England, Ethelred II, Long Cross type (c. 997–1003), Chester, moneyer Aelfnoth. Cf. Hild. 1486 (var.). Broken, a small piece is missing (1.50 g); pierced, with remains of a loop (rivet). – From the surface.

21. **Grave 740** (23607:475). Caliphate, two unidentified fragments of a single coin (1.09 g). – From the surface layer.

22. **Grave 855** (24740:428). Caliphate, Abbasid, al-Mansur, A.H. 137 (754/5)? With remains of a loop (bronze). – From the necklace.

23. **Grave 855** (24740:429). England, Ethelred II, Helmet type (c. 1003–09), York, moneyer Ire. Cf. Hild. 745. 1.44 g, with remains of a large loop (bronze). – Location as above.

24. **Grave 855** (24740:430). Germany, Strasbourg, Henry II as emperor (1014–24). Dbg 920. 1.28 g, pierced twice, with a rivet in one of the holes. – Location as above.

25. **Grave 855** (24740:431). Germany, Otto-Adelheid type (983/991-c. 1040). 1.12 g, pierced, with broken edge. – Location as above.
26. **Grave 1005** (25480:173). Germany, Cologne type, early 11th century. 1.07 g., pierced, with a rivet in the hole. – From the northwest end of the grave.
27. **Grave 1005** (25480:175). England, Ethelred II, Last Small Cross type (c. 1009–16), Lincoln. Large fragment (0.62 g) and three small shards. – From the middle of the grave.
28. **Grave 1005** (25480:178). Germany, Mainz, Henry II (1002–24)? Large fragment (0.53 g) and small shards. – From the northwest end of the grave.

Abbreviations:

- Dbg = H. Dannenberg, Die deutschen Münzen der sächsischen und fränkischen Kaiserzeit (Berlin, 1876–1905)
- Hahn = W. Hahn, Moneta radasponensis. Bayerns Münzprägung im 9., 10. und 11. Jahrhundert (Braunschweig 1976)
- Hild. = B. E. Hildebrand, Anglosachsiska mynt (Stockholm 1881)
- SCBI = Sylloge of the Coins of the British Isles (London)

APPENDIX 2.

Animal bones (1984–1992) by Ulla Tupala

Grave & KM No.

223:25480:644	Dentes molares (upper). Bos.	508:22346:553	D. praemolares and dentes fragments. Bos.
426:22346:18	Metacarpus. Bos, age over 2–2.5 years.	509:22346:559	Dentes fragments. Ovis/Capra/Bos.
431:22346:34	Dentes fragments. Capra/Ovis.	510:22346:590	Dentes fragments. Bos.
440:22346:58	Dentes molares -fragments. Bos.	518:22346:787	Dentes fragments. Caprinae.
444:22346:111	Dentes fragments. Caprinae.	518:22346:798	Dentes fragments. Caprinae.
449/493:22346:159	Dentes molares and dentes praemolares fragments and mandibula fragments. Sus.	523:22346:720	Dentes fragments. Capra/Ovis.
453:22346:179	Mandibula fr., 2 dentes praemolares. Sus.	528:22346:736	Dentes fragments. Ovis/Capra.
455:22346:189	Dentes fragments. Caprinae.	553:23183:188	Dentes fr. Mammalia.
457:22346:191	Dentes fragments. Caprinae?	558:22346:1060	Sin. mandibula (broken) + 3 d. praemolares and 3d. molares. Bos.
460:22346:210	Dentes fragments. Caprinae.	558:23183:211	Mandibula fr., 2 d. praemolares and 1d. praemolares fr. Bos.
469:22346:283	Dentes molares -fragments. Bos.	558:23183:212	Mandibula (dext.) + 1 d. molares, in loose, 2 d. molares and vertebra cervicalis. Bos.
471:22346:292	Mandibula fr. + 2 dentes molares, mandibula fr. + 1 d. praemolares and d. molares fr. Sus.	564:23183:250	Dentes fragments. Bos.
479:22346:352	Dentes fragments. Capra/Ovis.	572:23183:264	Mandibula fr.+2 d. molares and the third d. molares, which is not bursted. Bos (young).
480:22346:387	Mandibula (dext.) + 2 d. molares, mandibula (sin.) + 2 d. molares and 1 d. praemolares, maxillare fr. + 2d. praemolares, maxillare fr., cranium fr. and dentes fragments. Canis.	573:23183:272	Mandibula fr. sin. + 2 d. molares, mandibula fr. dext. + 2 d. molares, mandibula fragments and dentes fragments. Sus.
480:22346:388	Costa fr. Bos/Equus.	573:23183:273	3 d. incisivi, 2 d. praemolares and dentes fragments. Sus.
480:22346:389	Not analysed	597:23183:359	Dentes fragments. Bos?
481:23183:6	Humerus dist. fr. Ovis/Capra.	597:23183:360	Dentes molares -fr. Bos.
485:22346:431	Dentes praemolares fragments. Bos.	600:23183:916	Dentes molares (lower). Bos. A few fragments of burnt bone. Mammalia.
492:22346:455	3 dentes molares (deciduous teeth), atlas, vertebrae cervicalis, 2 vertebrae thoracalis and 4 costa(?) fragments. Equus (young).	619:23183:394	Dentes fr. Mammalia.
494:22346:461	Dentes molares (upper). Bos.	620:23183:400	(Bone fragments in all 2,568 kg.) Mandibula (sin.) + P ₃ P ₄ M ₁ M ₂ M ₃ , in loose P,
494:22346:462	Dentes molares and mandibula fr. Bos.		mandibula (dext.) + P ₂ P ₃ P ₄ M ₁ M ₂ M ₃ ,
503:22346:525	Dentes fragments. Capra/Ovis.		
508:22346:552	Dentes fragments. Bos.		

	mandibula (sin.) + P ₃ P ₄ M ₁ M ₂ M ₃ , maxillare (sin.) + P ⁴ M ¹ M ² , loose M ₁ , maxillare (dext.) + P ⁴ M ¹ M ² M ³ , and loose: 1 d. praemolares, 12 d. incisivi and 8 dentes fragments and cranium fragments; atlas, epistropheus (in two pieces), 8 vertebrae cervicalis, 20 v. thoracalis and 2 v. lumbales, some vertebrae and costa fragments; pelvis proksim. fr., which is clearly cut. Bos.	739:23607:469	Mandibula + P ₄ M ₁ M ₂ M ₃ , mandibula + P ₃ P ₄ M ₁ M ₂ M ₃ ; 6 d. molares (upper), 6 d. praemolare (upper) and 2 d. incisivi in loose; cranium fragments (also a small piece of horn). Ovis (age over 2 years).
In grave 620, there are remains of two bovines, but no bones of limbs.		739:23607:470	Humerus distalis-fragments, ulna sin. and radius (proximal end), ulna fr., scapula fr. and bone fragments. Capra/Ovis.
632:23183:429	Humerus (sin.) and bone fragments. Bos.	741:23607:511	2 dentes molares (lower), 2 d. molares (upper) and 5 dentes fragments, mandibula and cranium fragments. Bos (young).
632:23183:430	(Bone fragments in all 5,434 kg.) Mandibula (sin.) + P ₂ P ₃ P ₄ M ₁ M ₂ M ₃ , mandibula (dext.) P ₃ P ₄ M ₁ M ₂ M ₃ , mandibula (dext.) P ₃ P ₄ M ₁ M ₂ M ₃ , and in loose 4 d. incisivi, 1 upper d. praemolares and 2 lower d. praemolares. Bones of front legs: centrotarsale, 2 metacarpus, radius + ulna fr., ulna (proxim. end), radius+ulna, humerus and 2 scapulas. Bones of hind legs: femur, metatarsus, os sacrum, 2 pelvis astragalus and calcaneus. Furthermore 10 pieces of phalanges, 6 v. lumbales, 17 v. thoracales and in loose many epiphysis of vertebrae, 20 costa and costa fragments.	754:24388:39	(Bone fragments in all 0,180 kg.) Scapula and astragalus. Equus.
		755:24388:77	32 Dentes fragments. Bos.
		756:24388:128	2 bone fragments. Mammalia.
		756:24388:129	23 mandibula fragments and 3 d.praemolares (P ³ P ³ M ¹) and P ³ -fr. Bos.
		757:24388:132	(Bone fragments in all 0.400 kg.) Maxillare + M ¹ M ² M ³ , 4 d. molares in loose, cranium fragments, radius and ulna (distalis end). Equus.
		757:24388:133	Dentes fr. Canis/Lupus.
		768:24388:213	D. incisivi. Equus.
		769:24388:217	2 dentes molares fragments. Bos.
		769:24388:218	Not analysed.
		769:24388:219	Dentes molares. Bos.
		769:24388:220	Cranium fr., mandibula fr., 1 d. molares; 3 d. praemolares. Bos.
		773:24388:272	Mandibula + 3 dentes molares; 1 dentes praemolares, 2 deciduous teeth and cranium fragments. Bos.
In grave 632 there are remains of two bovines.		776:24388:287	4 dentes molares (upper). Bos.
634:23183:435	Diaphysis fr. of a long bone. Mammalia.	778:24388:298	(Bone fragments in all 0,85 kg.) Cranium fragments, mandibula and maxillare fragm. Sus.
639:23183:456	Dentes molares fr. and fragments. Bos.	778:24388:299	Femur and tibia. Equus.
645:23183:496	Distal end of femur. Bos.	778:24388:300	Atlas fr. Mammalia.
645:23183:497	Vertebra fr. Bos/Equus.	781:24388:314	Dentes molares fr. Equus.
647:23183:502	Metacarpus (cut mark in proximal end). Equus.	784:24388:321	Dentes fragments. Bos.
653:23183:533	(Bones in all 0,720 kg.) Fragments of cranium: cranium fr. + horn and 1 horn in loose, maxillare + P ⁴ M ¹ M ² and maxillare + M ¹ M ² M ³ . Bos.	788:24388:345	Dentes fragments. Bos?
661:23183:573	Dentes fragments. Bos.	788:24388:349	(Bone fragments in all 0,16 kg.) 7 diaphysis fragments of a long bone. Mammalia.
665:23183:585	Dentes fr. Bos.	795:24388:389	Astragalus. Equus.
667:23183:618	Femur (diaphysis-fr.). Bos/Equus.	798:24388:397a	Dentes fragments. Ovis/Capra/Bos.
680:23183:731	Dentes fragments. Bos?	810:24388:447	Dentes molares. Bos.
698:23607:44	Dentes fragments. Bos.	810:24388:448	3 dentes molares. Bos.
698:23607:80	Dentes fragments. Equus.	822:24740:13	Bone fr. Mammalia.
698:23607:81	Dentes fragments. Bos?	837:24740:182	76 small dentes fragments, 8 of them belong to cattle. Bos.
		840:24740:220	Femur diaphysis fr. and 1 ph I. Equus.
		840:27470:221	Dentes fr. Canis/Lupus.
			19 dentes fragments. Canis/Lupus.

850:24740:307	8 dentes fragments. Bos.	1002:25480:629	Dentes fragments. Bos.
850:24740:337	23 dentes fragments. Bos?	1002:25480:630	Mandibula (sin.) fr. + 2 d. molares. Bos.
850:24740:365	Dentes fragments. Bos.	1005:25480:632	Dentes fragments. Bos.
850:24740:366	4 d. molares pieces and dentes fragments. Bos.	1008:25480:198	Mandibula (sin.) + M ₁ M ₂ M ₃ , mandibula (dext.) P ₃ P ₄ M ₁ M ₂ M ₃ , and 2 d. praemolares and 1 d. incisivi in loose; cranium fragments, horn and vertebra fragments; 2 tibia, 2 astragalus, fibula fragments, and bone fr. Bos.
850:24740:367	Dentes fragments. Bos?		Maxillare + M ¹ M ² M ³ , maxillare + P ³ P ⁴ M ¹ . Sus.
850:24740:368	Dentes molares (lower) and dentes fragments. Bos.		Tibia (distalis fr.) and femur (proximal fr.). Equus.
850:24740:369	Dentes fragments. Bos?		4 metatarsus diaphysis fragments. Bos.
853:24740:407	Dentes incisivi and dentes fragments. Bos.	1012:25480:633	Bone fragments. Mammalia.
854:24740:413	A piece of dentes molares and dentes fr. Capra/Ovis.	1018:25480:276	2 m ^x and mandibula fragments. Bos.
895:25480: 46	25 dentes fragments. Ovis/Capra.	1018:25480:277	Mandibula fr. + m ₁ m ₂ , mandibula and dentes fragments. Bos.
897:25480: 48	13 mandibula/maxillare fragments, 8 dentes fragments and 2 P ^x , 1 M ^x , 1 P ₄ ja 1 M _x . Bos.	1018:25480:278	Dentes fragments, 2 d. molares, maxillare fragments. Bos.
897:25480: 49	23 metacarpus/metatarsus diaphysis fragm. Mammalia.	1018:25480:648	Maxillare fragments, 2 d. molares and d. praemolares fragments. Bos.
905:25480: 96	31 dentes fragm., 10 of them belong to Ovis/Capra.	1020:25480:635	D. praemolares (upper). Bos.
910:25480:106a	A piece of d. molares (upper) and 4 dentes fragments. Ovis/Capra.	1020:25480:636	D. molares and maxillare fragments. Bos.
910:25480:106b	D. molares (lower) and 4 dentes fragments. Ovis/Capra.	1020:25480:637	D. molares and maxillare fragments. Bos.
910:25480:106c	D. molares (upper), d. molares (lower) and 7 dentes fragments. Ovis/Capra.	1020:25480:638	Dentes molares (upper). Bos.
910:25480:107	Mandibula/maxillare fr. and 13 dentes fragments. Ovis/Capra.	1022:25480:639	Dentes fragments. Bos/Capra/Ovis.
921:25480:117	2 piece of lower d. molares. Ovis/Capra.	1023:25480:293a	Cranium fragments. Mammalia.
994:25480:623	Radius + ulna (proximal end). Bos?	1023:25480:293b	D. molares (upper). Bos.
995:25480:140a	P _x ja m _x . Bos.	1023:25480:293c	Dentes fragments. Bos.
995:25480:140b	Cranium fr. Mammalia.	1023:25480:293d	Dentes fr. Bos.
997:25480:148	Mandibula (sin.) + P ₂ P ₃ P ₄ M ₁ M ₂ M ₃ , mandibula (dext.) + P ₃ P ₄ M ₁ M ₂ M ₃ , maxillare (sin.) + P ⁴ M ¹ M ² M ³ , maxillare (dext.) + M ² M ³ and 5 d. incisivi, 1 d. molares and 5 d. praemolares in loose. Humerus (sin. and dext.), radius+ulna (sin. and dext.), femur (sin. and dext. fragm.), tibia (sin. and dext. fragm.), metatarsus (sin. and dext.), pelvis fr, 7 carpi/tarsi and phalanges fragments. 5 costa fragments, atlas, epistropheus and 9 vertebra fragments. Bos.	1023:25480:293e	D. molares. Bos.
In grave 997 there are remains of one bovine.		1023:25480:293f	Dentes fr. Bos.
		1023:25480:293g	Dentes fragments. Bos.
		1023:25480:293h	6 d. molares (upper), 6 d. praemolares (upper), 2 d. molares (lower), 4 d. praemolares and 8 d. incisivi. Bos.
		1023:25480:293i	Mandibula (sin.) + P ₄ M ₁ M ₂ M ₃ , sin. and dext. humerus (distalis fragments), pelvis fr., tibia sin. and dext., metatarsu sin. ja dext., femur, 2 vertbraes, astragalus, metacarpus and small bone fragments. Bos.
999:25480:626	Dentes molares – fragments. Bos.	1023:25480:293j	Cranium fragments and horn fragments. Bos.
999:25480:155	Mandibula (sin.) + P ₂ P ₃ P ₄ M ₁ M ₂ M ₃ , mandibula (dext.) + P ₂ P ₃ P ₄ M ₁ M ₂ M ₃ , and in loose 3 d. incisivi and mandibula/maxillare fragments. Equus.	1030:25480:312	Maxillare (sin.) + P ⁴ M ¹ M ² M ³ , maxillare (dext.) + P ³ P ⁴ M ¹ M ² M ³ , mandibula + P ₂ P ₃ P ₄ M ₁ , and in loose d. praemolares ja d. incisivi and cranium fragments. Bos.
1000:25480:627	Dentes fragments. Bos.		45 dentes fragments, 10 of them belong to Ovis/Capra.
1000:25480:646	Mandibula fr., 3 d. molares and 1 d.praemolares. Bos.	1033:25480:320	

1035:25480:640	Dentes fragments. Bos.	Hearth 26 (139/66)	
1036:25480:641	Radius + ulna. Equus?	25480:566	27 dentes fragments. Bos?
1041:25480:642	Dentes molares (lower). Equus.		1 burnt bone fragment. Mammalia.
1045:25480:643	Cranium fragments. Mammalia.		
1065:26695:43	77 dentes fragments, 10 of them belong to Ovis/Capra.	Stray finds:	
1075:26695:59	34 dentes fragments, 5 of them belong to Ovis/Capra.	22346:1009	D. molares (upper). Bos.
1095:25480:645	Cranium fragments. Mammalia.	22346:1037	Dentes fragments. Capra/Ovis/Bos.
1097:26695:76	26 d. molares fragments and dentes fragments. Equus. Small dentes fragments. Mammalia.	22346:1059	Burnt bone fragment. Mammalia.
1097:26695:77	2 d. molares (lower) and 1 d. molares in 4 pieces. Equus.	22346:1096	3 d. molares, 2 d. praemolares. Bos (young).
1154:26695:112	D. molares (upper) and 3 dentes fragments. Bos.	23183:818	Mandibula fragments, 2 dentes praemolares. Bos.
1165:26695:115	D. molares (upper). Bos.	23183:861	Femur sin. (epiphysis is lacking). Bos (young).
1203:26695:138	Southern part of the grave: Femur sin. and dext., tibia sin. and dext., metatarsus sin. and dext., 3 vertebra lumbales, os sacrum, calcaneus sin. and dext., astragalus sin. and dext., centrotarsale sin. and dext., 5 phalanges I and phalanges II. Bos.	23183:965	Dentes molares (upper) and 2 bone fragments. Bos.
	Northern part of the grave: Metacarpus sin. and dext., humerus sin. and dext., radius + ulna, radius and 2 phalanges I. Bos.	23607:274	Dentes fr. Equus.
1233:27177:12	3 pelvis fragments. Equus.	23607:276	Dentes and dentes fr. Equus.
1273:27177:48	Humerus distalis end (epiphysis is lacking). Ovis/Capra.	23607:277	Diaphysis fr. of long bone and cranium fr. Mammalia.
		23607:306	Metacarpus (diaphysis). Bos.
		23607:308	Dentes fragments. Bos.
		23607:328	Dentes fragments. Bos.
		23607:510	Not analysed.
		24740:619	A piece of d. molares. Bos.
		25480:371	Dentes molares (lower). Bos.
		25480:391	P2, P3, M1, M2 and 24 dentes fragments. Equus.
		25480:563	D. molares (upper), 16 dentes fragments and 22 small bone fragments. Bos.
		25480:596	2 d. molares (lower), 2 pieces of molares and 14 mandibula fragments. Ovis/Capra.
		25480:604	D. molares (upper). Bos.
		25480:607	D. molares (upper). Bos.
		25480:614	Bone fr. Mammalia.
		25480:647	Metatarsus (epiphysis loose). Bos (young).
Hearth 38 (114/15)			
27177:105	D. molares (upper). Bos.		

APPENDIX 3

Tiina Jäkärä: Analyses of wood samples from graves in the Luistari cemetery

Numerous wood samples were recovered from the graves at Luistari, in connection with grave structures and objects. The results presented below are a sample of a very large body of material. Not all the material recovered over the years has been analysed here. The samples that were in poorest condition could only be identified as either coniferous or deciduous timber.					
GRAVE CONSTRUCTIONS					
Grave	KM-number of the samples	Result			
62	18000:1883	Larch (<i>Larix decidua</i>)	98	18000:2133	Deciduous timber
			99	18000:2162	Pine (<i>Pinus sylvestris</i>)
			115	18000:2274	Pine (<i>Pinus sylvestris</i>)
			120	18000:2320	Pine (<i>Pinus sylvestris</i>)
			130	18000:2373	Pine (<i>Pinus sylvestris</i>)
			135	18000:2406	Pine (<i>Pinus sylvestris</i>)
			139	18000:2444	Pine (<i>Pinus sylvestris</i>)
			155	18000:2571	Pine (<i>Pinus sylvestris</i>)
			280	18000:3150	Pine (<i>Pinus sylvestris</i>)
			281	18000:3200	Pine (<i>Pinus sylvestris</i>)
			283	18000:3238	Coniferous timber
			284	18000:3251	Pine (<i>Pinus sylvestris</i>)
			289	18000:3312	Pine (<i>Pinus sylvestris</i>)

291	18000:3358	Pine (<i>Pinus sylvestris</i>)
293	18000:3386	Pine (<i>Pinus sylvestris</i>)
294	18000:3404	Pine (<i>Pinus sylvestris</i>)
324	18000:3688	Birch (<i>Betula pendula</i>)
324	18000:3689	Birch (<i>Betula pendula</i>)
328	18000:3727	Pine (<i>Pinus sylvestris</i>)
333	18000:3764	Pine (<i>Pinus sylvestris</i>)
343	18000:3808	Pine (<i>Pinus sylvestris</i>)
343	18000:3812	Pine (<i>Pinus sylvestris</i>)
345	18000:3856	Pine (<i>Pinus sylvestris</i>)
348	18000:3966	Pine (<i>Pinus sylvestris</i>)
377	18000:4283	Pine (<i>Pinus sylvestris</i>)
389	18000:4396	Pine (<i>Pinus sylvestris</i>)
390	18000:4444	Pine (<i>Pinus sylvestris</i>)
392	18000:4460	Pine (<i>Pinus sylvestris</i>)
403	18000:4532	Spruce (<i>Picea abies</i>)
404	18000:4602	Pine (<i>Pinus sylvestris</i>)
406	18000:4617	Pine (<i>Pinus sylvestris</i>)
466	22346:267	Coniferous timber
480	22346:394	Pine (<i>Pinus sylvestris</i>)
480	22346:380	Spruce (<i>Picea abies</i>)
510	22346:568	Spruce (<i>Picea abies</i>)
510	22346:578	Coniferous timber
510	22346:579c	Coniferous timber
535	23183:64	Pine (<i>Pinus sylvestris</i>)
544	23183:165	Pine (<i>Pinus sylvestris</i>)
545	23183:171	Pine (<i>Pinus sylvestris</i>)
575	23183:306	Pine (<i>Pinus sylvestris</i>)
575	23183:304	Deciduous timber
640	23183:468	Pine (<i>Pinus sylvestris</i>)
668	23183:634	Pine (<i>Pinus sylvestris</i>)
735	23607:522c	Pine (<i>Pinus sylvestris</i>)
738	23607:522f	Pine (<i>Pinus sylvestris</i>)
765	24388:525e	Deciduous timber
785	24388:525l	Pine (<i>Pinus sylvestris</i>)
790	24388:357c	Pine (<i>Pinus sylvestris</i>)
901	25480:79	Coniferous timber
901	25480:79b	Pine (<i>Pinus sylvestris</i>)
1066	26695:50a	Pine (<i>Pinus sylvestris</i>)
1260	27177:151b	Pine (<i>Pinus sylvestris</i>)

SPEAR SHAFTS

740	23607:488	Oak (<i>Quercus robur</i>)
790	24388:357a	Oak (<i>Quercus robur</i>)
844	24740:236	Oak (<i>Quercus robur</i>)
845	24740:273	Oak (<i>Quercus robur</i>)
901	25480: 77	Oak (<i>Quercus robur</i>)

KNIFE HANDLE

675	23183:717	Deciduous timber
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SWORD GRIP

510	22346:579b	Deciduous timber
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WOODEN ARTEFACTS

670	23183:664	Deciduous timber (<i>Birch?</i>)
670	23183:706	Deciduous timber (<i>Birch?</i>)

THE HEARTH BENEATH GRAVE 765

765	24388:525g	Spruce (<i>Picea abies</i>)
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Most of the wooden grave structures at Luistari were made of pine. This is in agreement with previous results concerning samples from the Kirkkomäki cemetery in Turku and the Vanha Kansakoulu cemetery at Ihala in Raisio, both of which are mainly from the Crusade Period (see Jäkärä 1997). Coniferous timber was thus the most natural choice for structures like this, as was also the case certainly for buildings as well. A rarer discovery was larch in grave 62. The remains of a sickle handle found at Kirkkomäki in Turku proved to be larch, which, however, was not used in the grave structures.

The results of analyses of samples from Luistari confirmed an interesting detail of the burial structures, in graves 98 and 324, which contained large numbers of rivets, the construction was of deciduous timber. This was also the case in graves 17 and 27 at Kirkkomäki. Because the timber of the grave structures generally appears to have been coniferous, these graves may represent different kinds of structures. For example, in Swedish grave finds rivets are quite rare and when found they are usually associated with trunks or chests used as coffins or with recycled planks from vessels (see Gräslund 1980, 24). There was also an iron ring in the centre of grave 27. This object could have been a handle for lifting the lid of a chest.

At Luistari, as elsewhere, rust posed a problem in connection with wood samples in connection with objects. In some cases, however, it was still possible to determine the timber as coniferous or deciduous. Exceptions were timber samples that had been in contact with bronze, for example from spear shafts from Luistari. All the hafts of the spearheads were identified as oak. A uniform result such as this points to the properties of oak as a hafting material. The handles of the swords and knives were also of deciduous wood.

In future, more emphasis should be placed on the study of wooden samples recovered in connection with artefacts. A great deal of information is available on the use of different species of timber in prehistoric times in various parts of the country. Comparisons with neighbouring areas will also provide interesting data on the use of wooden materials. The present results already point to a diverse use of timber species.