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Arkeologisk museum i Stavanger  
*Museum of Archaeology, Stavanger*  
*National research centre for paleostudies and conservation*

# The Westland cauldrons in Norway

Åsa Dahlin Hauken

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Tove Solheim Andersen  
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Einar Solheim Pedersen  
Lotte Selsing

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PO Box 478  
N-4002 STAVANGER  
NORWAY  
Tel.: (+47) 51 84 60 00  
Fax: (+47) 51 84 61 99  
E-mail: ams@ark.museum.no

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Cover photo:  
Westland cauldrons in the collection at the Museum of Archaeology, Stavanger:  
Svebestad, Sandnes k. (cat. no. 36), Hinna, Stavanger k. (cat. no. 40), Midtre Salte, Klepp k. (cat. no. 49) and  
Urstein kloster, Rennesøy k. (cat. no. 57).  
The cauldron from Svebestad is the second largest in the country, with a base diameter of 80 cm.  
Photo: Terje Tveit, AmS.

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# ABSTRACT



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The Westland cauldrons constitute the largest group of so called Roman imports in Norway. 112 cauldrons are recorded, of these 110 are found in graves. This work gives an exhaustive presentation of all the known finds with Westland cauldrons in Norway. A new classification of the cauldrons is made, based on an analysis of the cauldron's profile. The cauldrons are divided into two classes, 1 and 2, each subdivided into types. The chronology of the cauldrons is investigated within an already existing framework, showing that the new classification also is chronologically relevant. Type 2C cauldrons cover the Late Roman Iron Age (C3) and the Migration Period, whereas class 1 cauldrons are found only in the C3, and type 2D cauldrons only in the late Migration Period. Different production techniques are discussed in detail. Class 1 cauldrons are hammered, class 2 cauldrons are both hammered and treated on a lathe. Based on the metalworking techniques a local, Norwegian production is rejected. The significance of Westland cauldrons in the West Norwegian society is discussed. A comparison between the graves containing cauldrons and a contemporary group of graves showed that there is a qualitative, but not a quantitative difference between the groups. There is also a fluctuation in wealth through time in both groups. The cauldrons served as status markers amongst the living. As gravegoods they could serve to further enhance the reputation of the deceased and the family. The fluctuation in the wealth of the graves is interpreted as an in- or decreasing need for social competition in an inherently unstable society. Finally the mode of exchange is discussed, pointing to the importance of gift exchange, both as a means of acquiring high status goods, creating a retinue and forming alliances, but also as a means to facilitate the exchange of more mundane necessity products.

Åsa Dahlin Hauken, Museum of Archaeology, Stavanger. PO Box 478, N-4002 STAVANGER, NORWAY.  
Telephone: (+47) 51 84 60 00. Telefax: (+47) 51 84 61 99. E-mail: aha@ark.museum.no

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## PREFACE

This book is a revised version of my 1984 thesis for the mag.art-degree at the University of Bergen. It has been on its way for a very long time, and might never had reached completion hadn't it been for a number of good friends and colleagues and the support of the Archaeological Museum in Stavanger. Firstly, I am greatly indebted to Dr. David Pelteret of King's College London, who undertook the task of transferring my English into proper, academic English. He has saved me from many a linguistic pitfall. Any remaining wrong-doings towards the English language are entirely my own. Secondly, I want to thank Prof. John Hines of Cardiff University for reading the proofs for the catalogue. My thanks also go to the editor, Dr. Siv Kristoffersen, who made very useful comments to the manuscript. Thanks also to Tove Sol-

heim Andersen for very patient work with figures, tables, maps and lay-out, Terje Tveit for new photographs, Astrid Hølland Berg for her object drawings and Åge Pedersen, photographer, who made my old black-and-white photographs from 1979 more fit for publication. Object drawings proved especially difficult to obtain, hence the somewhat mixed character of the plates, but I want to thank the photo departments of Universitetets Kulturhistoriske Museum in Oslo and Bergen Museum for their assistance, as well as Dr. Heid Gjøstein Resi, Oslo, Arthur Fasteland, Bergen and Anne Stalsberg, Trondheim for their help. I also want to thank Ingrid Landmark at Universitetets Kulturhistoriske Museum in Oslo for very helpful assistance.

## Geographical conventions

Norway is divided into nineteen large, administrative units, *fylker*, or counties. The capital, Oslo, is also a *fylke*.

Each county comprises a varying number of *kommuner*, 433 in all. Within a *fylke*, every *kommune* has a number, the urban ones first, followed by the rural *kommuner*.

When referring to archaeological finds, this civil administrative division has replaced the ecclesiastical division into *sgn* (parish) and *prestegjeld*.

A *prestegjeld* comprises two or more parishes under one vicar with a chaplain in each parish.

In addition, it is very common in everyday language to refer to geographical areas or districts, larger than a *kommune*, but smaller than a *fylke*.

Some of these areas, all mentioned in the text, are indicated on the map.

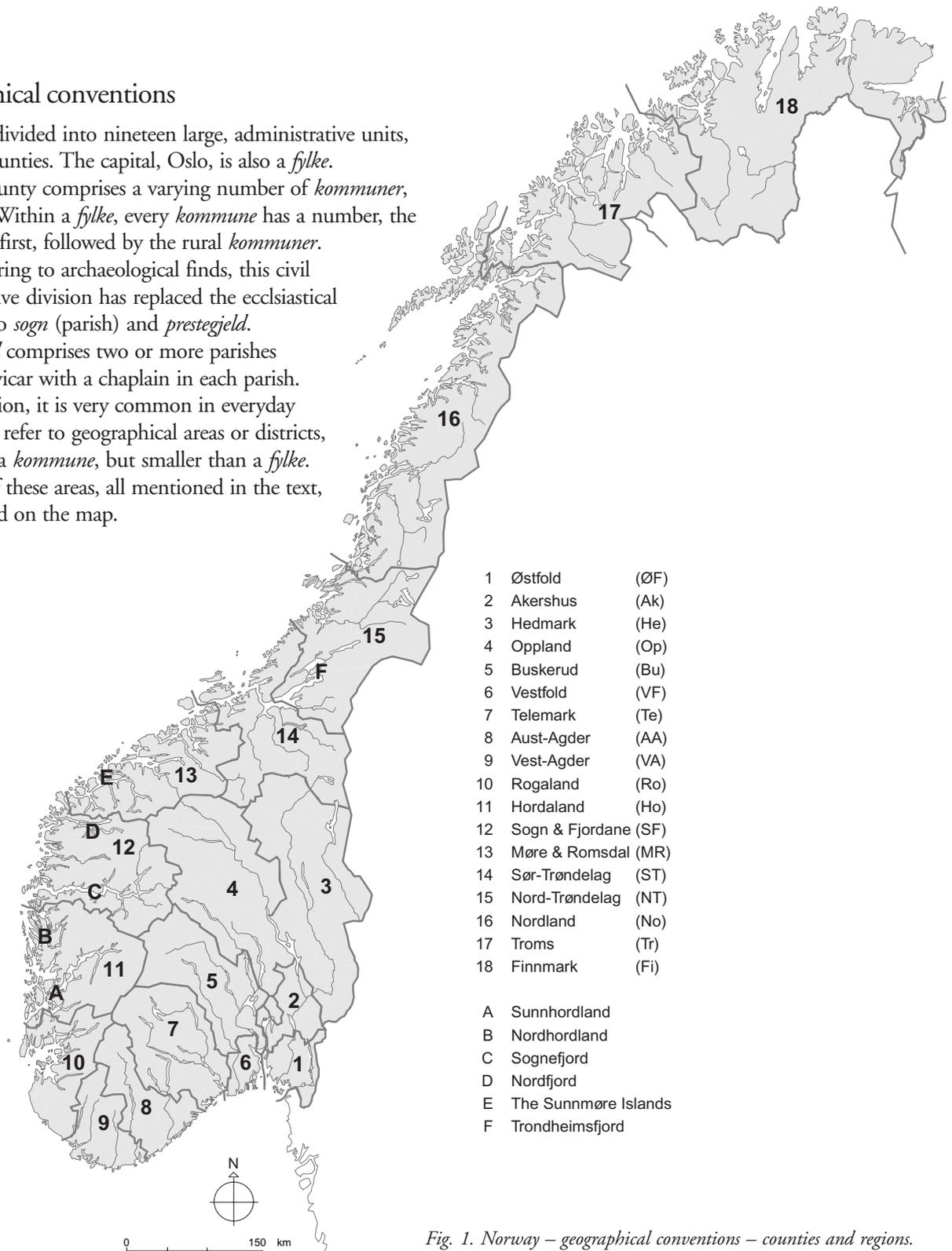


Fig. 1. Norway – geographical conventions – counties and regions.



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# CHAPTER 1.

## Introduction

The Westland cauldrons in Norway constitute the largest group of objects traditionally classified as Roman imports. Generally they are also considered as goods of Provincial Roman origin. Westland cauldrons can be described as a group of vessels, made from a copper alloy and with certain characteristic traits: Cauldrons with an outward-turned rim, a round base and a concave body above a carination. The base diameter is the largest diameter of the cauldron. The cauldrons either have riveted iron lugs or upright, triangular ears directly on the rim.

Despite their number, or perhaps because of their number, these cauldrons have never been subject to a larger study, and never from any other view than the typological-chronological. It might then be appropriate to renew the study of Westland cauldrons, and also to study the material from several different viewpoints. Since the largest number of Westland cauldrons are found in Norway, it is primarily the Norwegian material that will be discussed. Cauldrons found outside Norway will be only discussed to a lesser degree.

The first collation of the whole material known at that time was made by Anathon Bjørn in 1929 (Bjørn 1929). This collation was supplemented by Gunnar Ekholm in 1933 (Ekholm 1933). These catalogues are hardly more than lists of known finds, with very scanty information and they are also impaired by incorrect data. Since they today also are out of date, a necessary task was to compile an up to date and comprehensive catalogue of all known Westland cauldrons in Norway. The catalogue is presented in Appendix II. The old, and seemingly conflicting classifications pose another problem. One task will then be to clarify these classifications and what they mean and to see if they are suited for their purpose. If they are not practically useful the aim will be to make a classification that is.

Chronology poses the next problem. Westland cauldrons are traditionally dated to the Early Roman Iron Age and Migration Period. The Migration Period espe-

cially presents chronological problems that to a large extent still remain unsolved. The aim of this work is not to solve these problems, but to try to place the cauldrons in an already existing chronological framework. Since the majority of the cauldrons are grave finds, this can be done by using reliable find combinations.

The manufacture of Westland cauldrons is an aspect that has only been treated *en passant*. If the way in which these cauldrons were made can be established, we will get important information on both craftsmanship and the tools necessary for manufacture, and these findings will also have implications for where these cauldrons were produced. This leads further to questions on trade and exchange. Even if the cauldrons were produced in Norway, all the raw material would have had to be imported. Possible production areas will be discussed, as well as the nature of the trade and exchange products.

Finally, there is the question of what the Westland cauldrons in Norway signify. The main problems are: What social, economic and cultural significance did the cauldrons have in prehistoric Norwegian society? Are the cauldrons to be associated with high status or not? Are they a sign of economic surplus or not – and if they are, what was the basis for this surplus? Even more simply: If we leave out of account the Westland cauldrons as something special *per se*, is this group of graves similar to a contemporary, representative group of graves, or do they differ, and if so, how do they differ? No matter what the result of the analyses, it gives rise to the same questions: What is the cause of this? What does it signify?

To sum up: the aim of this work is to present all known Norwegian finds of Westland cauldrons in a comprehensive catalogue, to classify and date the material, to examine the manufacturing and function, to discuss the mode of exchange and finally to give an account of the Westland cauldrons as a cultural historical phenomenon in a prehistoric society.

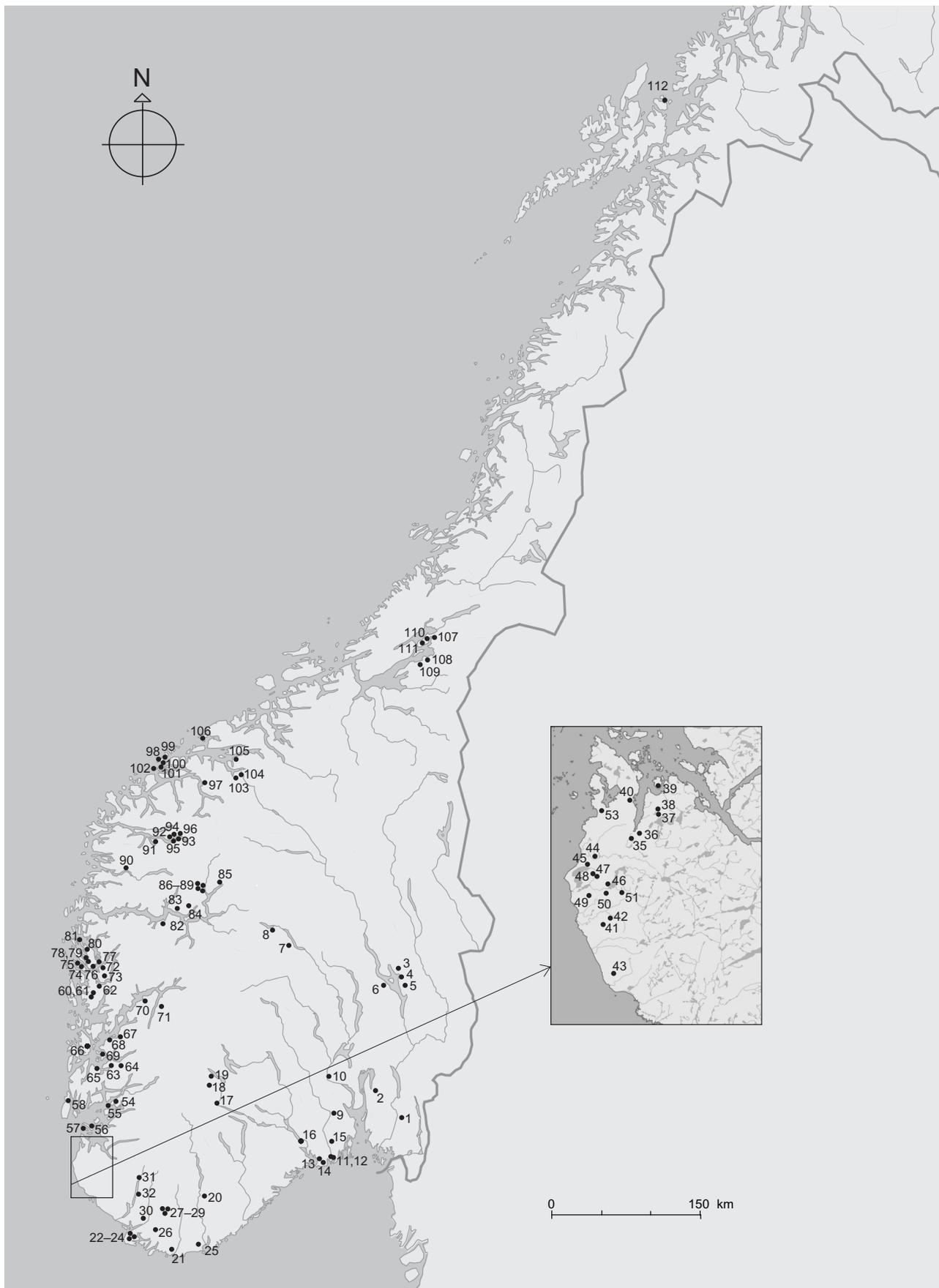


Fig. 2. The distribution of Westland cauldrons in Norway. The numbers refer to the catalogue, Appendix II.

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## CHAPTER 2.

### The material

#### Number and distribution

One hundred and twelve Westland cauldrons have to date been found in Norway. Two of them are bog finds (cat.nos. 36 and 112), the rest are grave finds. In two cases, two cauldrons were found in the same grave; thus we have 108 grave finds. The map fig. 2 shows the distribution of the Westland cauldrons. The majority of the cauldrons are found in the western part of Norway, the Westland, hence their name. The largest number of cauldrons has been found in places situated near the sea. Where this is not the case, they are still found in close association with water, except for finds like nos. 7, 8 and 17-19, that come from districts with trails that connect the east and west of Norway over the high mountains. The finds are not evenly distributed throughout the country but are clustered in smaller regions. Such regions are the area around the lake Mjøsa (nos. 3-6), the Larvik area (nos. 11-15), the regions of Lista (nos. 22-24) and Jæren (detail map), all of them rich archaeological areas in Norway. The cauldrons also cluster in southern and northern Hordaland (Norwegian: Sunnhordland and Nordhordland) along the inner areas of the Sognefjord, in the innermost Nordfjord, on the Sunnmøre islands and at the head of the Trondheimsfjord. If we compare this picture with distribution-maps of weapon graves from the Migration Period (fig. 3) and cruciform brooches (fig. 4), we can see that the distribution of cauldrons, weapon graves and brooches coincide to a large degree, but there are also areas with no cauldrons.

The difference in distribution patterns shows clearly that the distribution of Westland cauldrons does not reflect the settlement pattern in Norway in the Early Iron Age. Areas like the coast of Sogn and Fjordane are not represented, neither are cauldrons found north of Møre (except for the concentration in the Trondheimsfjord and the cauldron from Bjarkøy). The distribution of Westland cauldrons must reflect other circumstances, where communication is one key word.

Outside Norway, Westland cauldrons are found both in Sweden and in Denmark, though in smaller numbers. In Sweden there are 15 Westland cauldrons, in Denmark only four. There are also Westland cauldrons found on the Continent and in Britain (fig. 5 and Appendix III).

#### Corpse Treatment and Grave forms

In the Early Iron Age both cremation and inhumation graves occur, cremation being the most common way of treating the dead body prior to interment. A summary of corpse treatment and grave forms is given in table 1. Of the registered 108 graves, 73 graves are cremation graves, while only ten are inhumation graves. In 25 cases it is not possible to ascertain the treatment of the corpse, although sometimes it is possible to infer corpse treatment; in the catalogue these are given with a question mark, while in all tables they are recorded as undetermined. Grave form is a dual concept, referring both to the external form, and to the internal construction of the grave itself. The most common internal grave form is what I for this work have chosen to call a *chamber*. A chamber is a small space, its largest measure being smaller than 1 m. Typically the chamber is approx. 0.5 m sq. It is built of stones or slabs, the walls often made up of one slab each and with one or two slabs as a roof. There are of course variations in the construction, but the basic principle is the same. The cauldron is placed in the chamber, serving as a cinerary urn. It contains the cremated bones and the smaller items deposited as grave goods. Pottery (if any) and larger items are usually placed beside the cauldron. In three cases another cauldron or a bronze basin served as a lid on the urn (nos. 22, 98 and 100-101). The grave goods can be burnt, i.e. have been placed on the funeral pyre with the deceased, or unburnt. A mixture of burnt and unburnt grave goods in the same grave does sometimes occur. In twelve graves the cauldron and/or the cremated bones are carefully wrapped up. The wrapping varies: birch bark is fairly common, but cloth, felt, hide and bear's skin have been used. 22 graves also contain bear's claws. The inhumation graves are either cists, built of stones or slabs, or graves dug into the earth without any visible traces of a coffin or a more permanent construction. The term *cist* in this work thus refers to a space, large enough to hold an outstretched adult, or larger.

The external grave, the visible monument, is normally a barrow or a cairn. Since the majority of the finds are old ones, excavated in the 19th century, it is not possible to ascertain whether the external grave is a barrow (of earth) or a cairn (of stones and boulders). When unknown, the

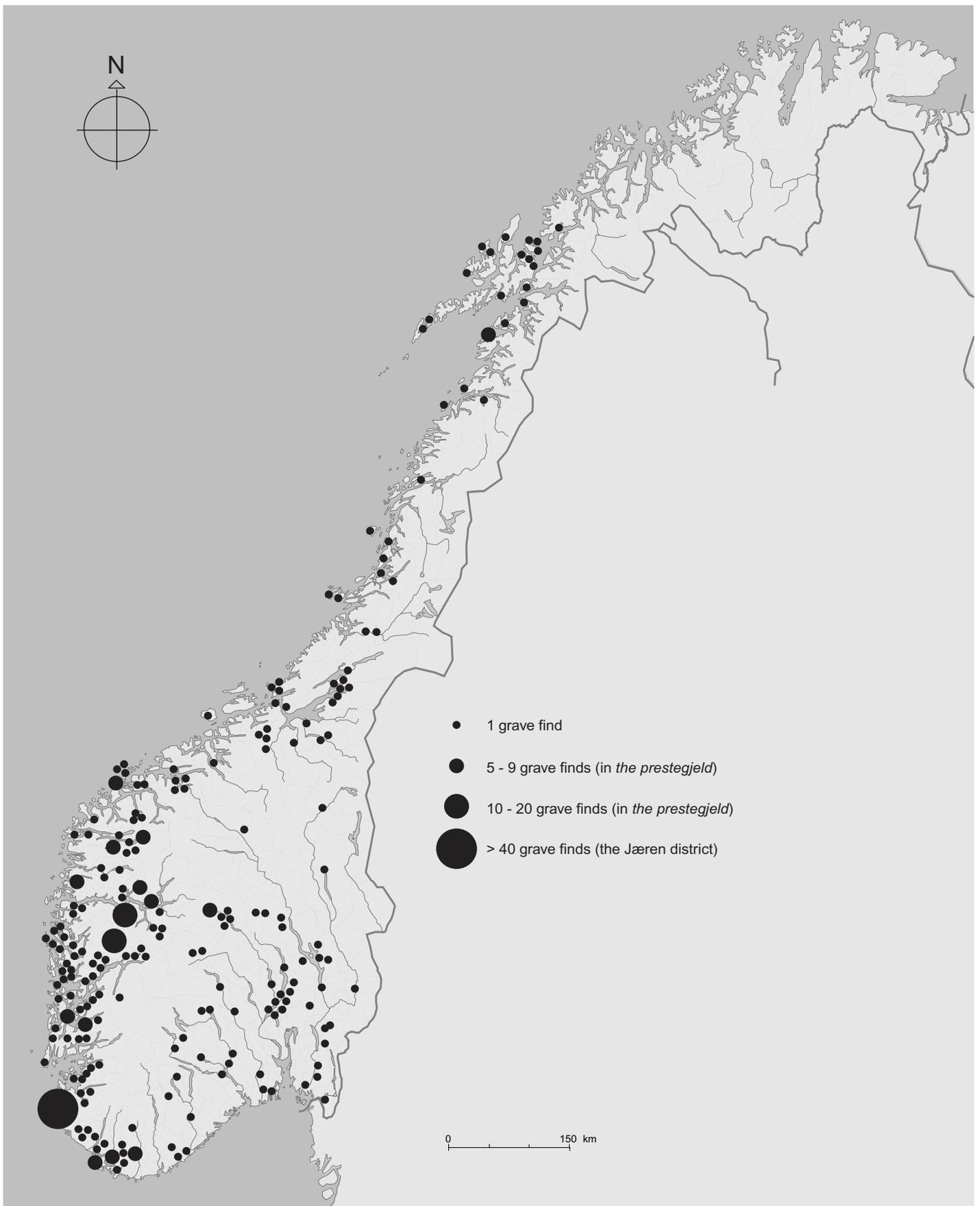


Fig. 3. The distribution of Migration Period weapon graves in Norway, mapped after Fett 1940b and Sjøvold 1962.

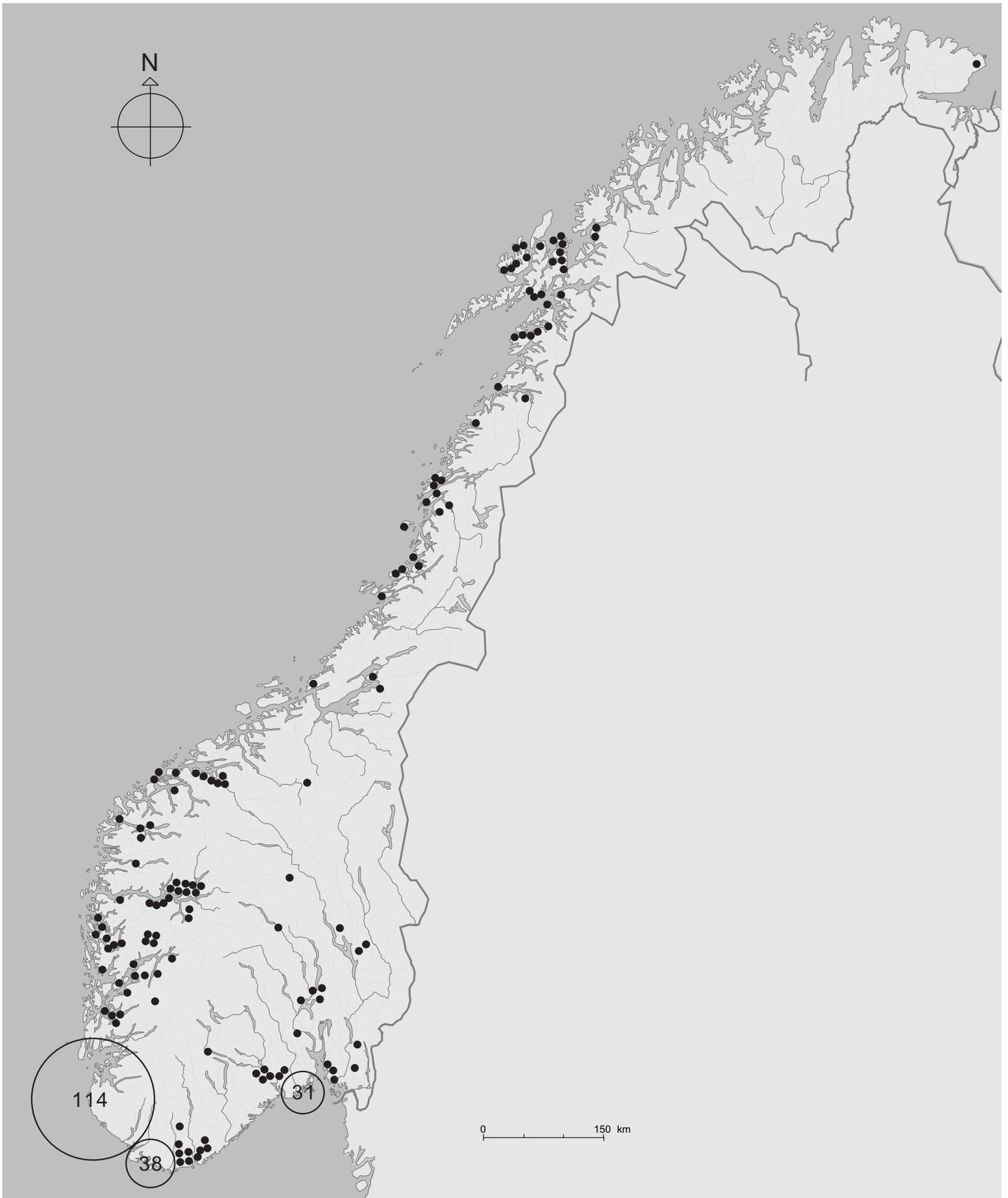


Fig. 4. The distribution of cruciform brooches, mapped after Reichstein 1975.

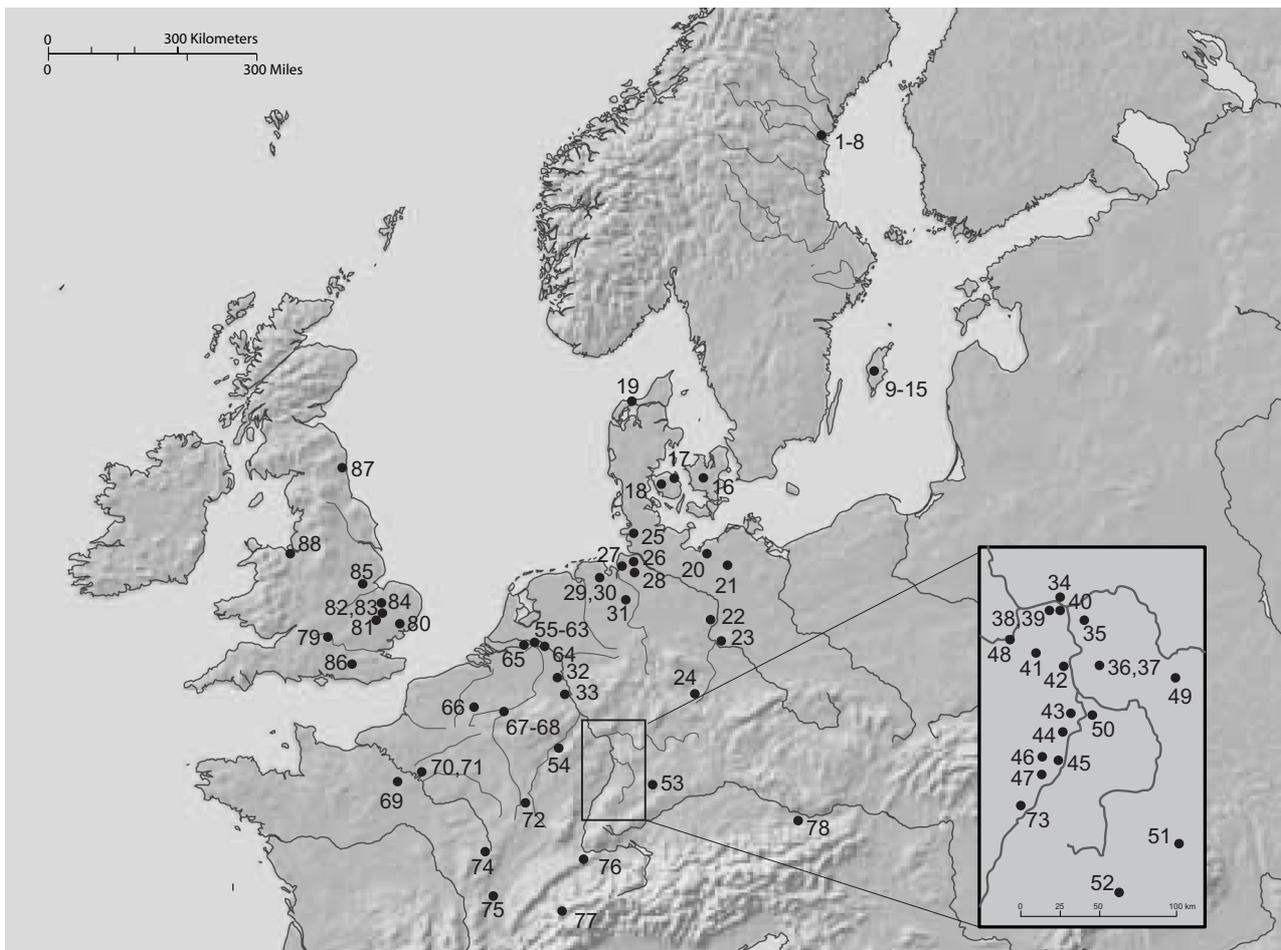


Fig. 5. The distribution of Westland cauldrons in Europe. The numbers refer to the find list Appendix III.

term mound will be used. There are only three recorded cases of flat graves. In cases of uncertain marking, the most likely marking is mentioned in the catalogue with a question mark, but in all tables recorded in the category «no information». Table 2 shows the size of the monuments, where information is available. In numerous cases the only information is «...found in a large mound...», and in some cases there is no information at all on the size of the monument. In the table two monuments are excluded: two long cairns, one recorded to have been 62 m x 9 m, the other 30 m x 15 m. The table demonstrates that most of the mounds are more than 15 m in diameter, i.e. they are larger than normal. (Normal size will range from 5-10 m.<sup>1</sup>) Some of them belong to the largest monuments in the Westland region, e.g. the cairn Ellefrøysa on the island of Godøy (37 m in diameter and 5 m high) where cat.no. 102 was found, and the cairn Kongshaugen on the island of Valderøy (40-42 m in diameter and 3 m high) where cat.nos. 100 and 101 were found.

### Grave goods

40 of the cauldrons, including the bog finds, were delivered to the museums without any other objects. This is not surprising, considering the fact that few of the graves were professionally excavated. This means that there are 72 more or less complete grave finds. The majority of the finds contain only a few objects; a few graves contain a large number of objects (fig. 48). A quantitative and qualitative analysis of the grave finds is carried out in chapter 6. Table 3 shows the most common categories of finds in the graves and their frequency.

### Gold objects

As is shown in table 3, gold objects are found in 29 graves, i.e. 20% of the graves contain gold. Payment rings are most frequent, but finger-rings, coins and medallions are also present, as well as the spiral button R 311 from the grave no. 98, Pl. 49b, and a «Kolben» neck ring found in the grave at Godøy, MR (no. 102), Pl. 51c. Generally the amount of gold is fairly small, with outstanding exceptions like nos. 100,101 from Jangarden, MR containing 156 g and no. 102 Godøy, MR with 311 g of gold. Five

graves contain a coin or medallion. A medallion is here defined as a coin or a coin-like object with a loop fixed to it, so it can be carried on a chain around the neck. These are:

No. 23 Vestre Hauge, *VÅ*. Medallion, a triple solidus struck in Trier 367-375 under Valentinianus I (364-375 AD), reproduced as R 285. Weight: 19.15 g. (Skaare 1995:26) (Pl. 11b).

No. 69 Sæbø, *Hø*. Medallion, solidus struck under Gratianus (375-383 AD). The loop is fixed in the «wrong» position; the image of the emperor is turned upside-down when the medallion is carried on a chain. The medallion is very worn. Weight: 4.32 g. (Pl. 39b).

No. 83 Hamre, *SF*. Medallion, solidus struck under Theodosius I (379-395 AD) The loop is fixed slightly askew in relation to the emperor's picture. The medallion is fairly worn. Weight: 5.32 g. (Pl. 45g).

No. 102 Godøy, *MR*. Medallion. Copy of a medal, struck under Constans (337-350 AD). (Axboe et al. 1986:72 no. 256) Weight: 10.57 g. (Pl. 51e).

No. 104 Åk, *MR*. Medallion, the original struck under Magnentius (350-353 AD (Axboe et al. 1985:22, no. 3) Weight: 11.243 g. (Pl. 53d).

There is only one bracteate in the material, a C-bracteate from the grave no. 85 Hauge, *SF*. Weight: 2.2 g. (Axboe et al. 1985:132, no. 72) (Pl. 46c-d).

The few finger rings in the material are simple and unadorned, like modern wedding rings, with one excep-

tion. The ring from the grave no. 42 Bø, *Rø* is a three-ridged ring of Beckmann/Andersson type 11 var. Ib (Beckmann 1969, Andersson 1993a:fig. 3, Pl. 18d) In a few graves there are thin, round gold sheets, like no. 49 Midtre Salte, *Rø* (Pl. 30d).

### Pottery

Pottery is found in 29 graves. Bucket-shaped pots are found in 14 graves, other pottery forms in 24 graves. Both bucket-shaped pots and other pottery forms occur in the same grave ten times. Most of the bucket-shaped pots are fragmentary and thus hard or impossible to classify more closely. Both early forms with straight sides and sparse decoration (e.g. Pl. 17f, Pl. 53b) as well as late forms with more convex sides filled with decoration (e.g. Pl. 27f) are represented in the graves. Other forms of pottery include the «handled pot» R 361 (8 graves, e.g. Pl.23a) and the «Buckelurne» (five graves, no. 30, 43, 44, 47 and 111). In one grave (nos. 11,12) a pot like R 364, Pl. 5a, was found, a pot belonging to Bøe's group «finer tableware» Pl. 6a, and a large, undecorated vessel. R 365, R 367 (Pl. 36g), and R 355 occur only in one grave each and the high-necked type R 368 in two graves (no. 19, Pl. 9b, no. 111). A pottery form like the very simple, almost baglike R 355 reportedly found in the grave no. 38 does not seem very likely in this material; unfortunately the sherds are now missing, making a verification of the classification impossible.

Table 1. Corpse treatment and grave forms in burials with Westland cauldrons.

Corpse treatment and grave form	Number
<b>Cremation graves</b>	
In mound, in chamber	58
In mound, in cist	1
In mound, under stone paving	1
In mound without construction	4
In mound, without further information	10
Flat grave chamber	1
No information	3
Total cremation graves	78
<b>Inhumation graves</b>	
In mound, in cist	7
In mound, dug into subsoil	2
In cist, without further information	1
Total inhumation graves	10
<b>Undeterminable corpse treatment</b>	
In mound, under slabs (no chamber)	1
In mound, in cist	1
In mound, without further information	4
No information	14
Total undeterminable corpse treatment	20
Total number of graves	108

Table 2. The distribution of size of grave monuments with Westland cauldrons.

Diameter in metres	Number of barrows/cairns
< 10 m	3
10 - 15 m	13
16 - 20 m	6
21 - 25 m	6
26 - 30 m	5
> 30 m	5

Table 3. The most common object categories found in the graves with Westland cauldrons.

Object category	Number of graves
Gold (ring, medallion etc.)	29
Pottery	29
Imports (glass, bronzes, glass beads)	27
Combs	26
Tools	15
Gaming pieces and/or dice	13
Other bone objects	13
Weapons	10
Clasps	7
Brooches	5

**Imports**

Imports include glass beads, glass and bronze vessels, i.e. items traditionally considered to be imported goods. Two silver bowls, found in the grave from Godøy, no. 102 (Pl. 51b), must also be interpreted as imports (Lavik 1969:49). Imported goods occur in 27 graves.

Glass beads are not very common in the material. They occur in only six graves (no. 3, 23, 53, 85, 97 and 104), either just singly or two or three together. The exception is grave no. 97, Vinje, *MR* where 25 glass beads were found. The beads are in no way exceptional, but belong to the common Early Iron Age forms – globular, cylindrical, double-conical or annular. They can be monochrome or polychrome; in two graves a mosaic bead was found (no. 85, no. 104). There is no information available on how these beads were worn. The 25 beads from grave no. 97 were presumably worn as a necklace. The beads themselves were molten together by the heat of the funeral pyre (Shetelig 1912a:35, 37.) The beads from grave no. 3, Vestre Hanum, *He*, hang on three small bronze rings, two beads on each ring (although one has lost one bead, Pl. 2b, d). They are interpreted by Rygh as ear rings. This is a less likely interpretation however, considering a find like grave OO from Sejlflod in Denmark (Ringtvedt 1991:57), where 5 rings of thin silver wire with beads were found. The rings were originally attached to a large string of amber and glass beads. This custom is not very common, but is geographically widely spread on the Continent (Tempelmann-Maçynska 1985:155, Liste 3).

Glass vessels are found in twelve graves. Two major groups are represented. One group is beakers of the Snartemo/Kempston types (R337/R338), with trailed molten glass threads. They are found in five graves: nos. 11,12 Skåra, *VF* (pl. 5c), no. 29 Snartemo II, *VA* (Pl. 14k), no. 46 Tu, *Ro* (Pl. 24a), no. 92 Indre Bø, *SF* (Pl. 47a) and no. 96 Kyrkjeide, *SF*. The other group is cut

glass beakers. Cut glass beakers have been exhaustively treated by Straume (1987) and her classification is used here. They are found in six graves, no. 28 Snartemo V, *VA* (type IX, Pl. 13p), no. 38 Sør-Hogstad, *Ro* (type IX), no. 44 Vasshus, *Ro* (type IV, Pl. 21a), no. 51 Vestly, *Ro* (type I B2, Pl. 34a), no. 83 Hamre, *SF* (type IX, Pl. 45f) and no. 98 Blindheim, *MR* (type X 1, Pl. 49a). The last mentioned differs from the rest of the cut glass beakers as the body of the beaker is without facets, only the rim is cut. Lastly there is a unique find in Norway, a «*Nuppenglas*», a small shallow bowl in green glass decorated with blobs and a zigzag border of molten glass thread (Pl. 16d). Its closest parallels are found on the Continent, in Germany and northern France (cf. A l'aube 1981:nos. 194, 199, 267 and 282; see also Lund Hansen 1987:116ff)

The group classified as «other bronze vessels» comprises one Eastland cauldron, four bronze pearl-edged bowls (*Perlrandbecken*) and fragments of an undeterminable bronze basin. The Eastland cauldron R347, Pl. 3a, was found together with no. 4 Farmen, *He*, the only known find in Scandinavia with both Eastland and Westland cauldrons. Two of the pearl-edged bowls were used as a lid on the Westland cauldron, in the finds no. 22 Lunde, *VA* (Pl. 10b) and no.98 Blindheim, *MR*. The latter is the R348, here Pl. 49c. The other two bowls are from inhumation graves, no. 29 Snartemo II, *VA* and no. 44 Vasshus, *Ro* (Pl. 20c,d). Both of them are very fragmentary. The undeterminable bronze bowl is from the grave Snartemo V (no. 28).

**Combs**

All the combs in the material are made from antler/horn, conventionally described as bone combs<sup>2</sup>. Combs are found in 26 graves. One comb per grave is most common, but up to four combs in one grave have been found. All combs are composite three-layer combs. The domi-

Table 4. The inhumation graves with weapons; forms and types. Classification after Bemmann & Hahne 1995 and Fett 1940 b (=Arms). x=present, but unclassified. xx= two. -=absent.

Cat.no.	11, 12	28	29	44	46	47	51	111
Sword	x	x	x	xx	x	x	x	x
Lance	x+x (wide)	Snartemo	x + Snartemo	x + wide	x	Snartemo?	Vestly	wide?
Spear	-	Snartemo	x	-	-	Arms F	Uteid	-
Shield (boss + handle)	VII + IIIc	VIII + IVb	VIII	-	VII	x	VII + IVa	VIII
Arrows	pinlike	pinlike	pinlike	double- edged, triple-edged	-	-	pinlike	triple-edged
Axe	-	Arms D	Arms A	Arms B	-	-	-	-
Weapon knife	-	-	-	x	-	-	x	-

nating type is R159, a comb with a semicircular upper part, like Pl. 17b, 19d and 37d. Long combs do occur, either with a rounded upper part, or straight ones, like Pl. 21e. Comb cases are rare: they are found in three graves (no. 20 Evje verk, *AA*, no. 44 Vasshus, *Ro*, Pl. 21e, and no. 83 Hamre, *SF*, Pl. 45b, e).

### Tools

The knife is, not unexpectedly, the most common tool in the material, but occurs in only ten graves. This seems a bit odd, as a knife may be regarded as an indispensable part of personal equipment. Scissors are found in six graves: they are of the common type R172 (shears) e.g. Pl. 27a. Finally there are tools that occur only once or twice in the material, such as weaving batten, socketed axe, awl, sewing needles and knife with a curved blade. (Pl. 2d, mid row, right). The knife was found in the grave no. 3, which also contained a weaving batten. The richest set of tools is found in the grave no. 51 Vestly, *Ro*, with tools for a goldsmith. The buried man had, apart from weapons, also been given an anvil, a pair of tongs, chisel, hammer, knives, bow drill, drawing iron and shears (Pl. 35, 36). This is the only grave in the material with such a number of tools, and the grave is in this respect unique for the period.

### Gaming-pieces and dice

The gaming-pieces found together with Westland cauldrons are always made of antler, never made of glass or any other material. They are invariably of the type R177, small round pieces with a convex top and two or three holes in the flat base (e.g. Pl. 31c). The gaming-piece R177 originates from the grave no. 72, Øvsthus, *Ho*, and the die R176 is from Jangarden, *MR* (nos. 100-101, Pl. 50e). Two or three dice were found in no. 25 Eik, *VA*, but in this grave there were no gaming-pieces as there were in the Jangarden grave. The number of gaming-pieces is fairly constant, one to three gaming-pieces being quite common where the number can be determined. The highest number, 30 gaming-pieces, is found in the grave no. 49 Midtre Salte, *Ro*. No. 70 Jondal, *Ho* has 15 gaming-pieces and no. 69 Sæbø, *Ho* has 13.

### Other bone objects

In this category are included pins, arrows, skin knives and spoons. None of these artefact types is very frequent: pins occur five times, bone arrows twice, skin knives thrice and a spoon only once. The bone pins are of two types, one with a round section like Pl. 40f, the other a flat pin like Pl. 48j. These pins are hairpins, and a complete set comprises two flat and one round pin and a comb (Petersen 1923:38, Marstrander 1983:fig. 6). In the grave no. 19 Heggstøl, *Tē*, such a complete set is found (Pl.

9c). The object classified as «bone arrow» from Østby, *ØF* (no.1) is described in the *Tilveksten* («accessions-list») as a bent, pointed bone tool. Unfortunately, this object is now lost, so it is impossible to ascertain what kind of object it was. Other bone arrows, though, have been described in the same way. The bone arrows from Godøy, *MR* (no. 102, Pl. 51f) are of the Vimose type, i.e. without barbs. The skin knives, or meat knives as they often are called in older literature, are found in three graves (no. 30, 38 and 71, Pl. 41e). They are all of the same type (R 450). Their function is somewhat obscure, probably they were used for removing flesh and fat from hides (Olsen & Shetelig 1910: 12-13). The spoon (no. 40, Hinna, *Ro*) is now missing, making a closer description impossible.

### Weapons

Ten of the graves are weapon graves, i.e. less than 10% of the total material. The information on one find is very scanty; the entry in Nicolaysen (1860-66:160) says that a fragment of an iron sword was found, but the sword was never delivered to the museum (no. 10, Haug, *Bu*). Only one of these weapon graves is a cremation grave, no. 79 Skardet, *Ho*, with one fragmentary lance and a fragmentary spearhead. The information about this find is not very good either, so the find combination is not very reliable. All the other graves are inhumation graves; nos. 11,12 Skåra, *VF* (Pl. 5, 6); no. 28 Snartemo grave V, *VA* (Pl. 13), no. 29 Snartemo grave II, *VA* (Pl. 14), no. 44 Vasshus, *Ro* (Pl. 22), no. 46 Tu, *Ro* (Pl. 24, 25), no. 47 Sør-Braut, *Ro* (Pl. 26), no. 51 Vestly, *Ro* (Pl. 33) and no. 111 Hol, *NT*. The different weapons and their types are shown in table 4. As can be seen from the table, the equipment in most cases is comprehensive. The sword, always two-edged, and the lance<sup>3</sup> are present in every grave. The shield is missing in just one grave and the spearhead in three. Arrowheads are found in all but two graves, while the axe is found in only three graves and the single-edged weapon knife in two graves. The find from Tu, *Ro*, no. 46, has been classified by Bemmann & Hahne (1995) as a find belonging to the Mollestad group. This, however, is not correct. The weapons in this grave have all suffered from «reconstruction» with gypsum, which makes a correct classification almost impossible. The shield boss, however, can be seen by a pencil sketch made by Helliesen in the Register, to have a pointed boss, i.e. it belongs to Bemmann & Hahne's type VII, and has been reconstructed as such. The lance does not contain any magnetic iron anymore, so what type it was originally is now impossible to ascertain. A very small sketch of the cross-section in the Register shows a blade with median ribs and a width/thickness ratio of approx. 2:1.

### Brooches

Brooches are found only in five graves (no. 11, 12, 18, 37, 42 and 104). This reduces the possibility for more accurate dating considerably, and permits only an approximate time span for the graves. Only two graves have two brooches, all the others only one. The brooches represented in the material are a simple bronze brooch (Pl. 18e), a large bow-knob bronze brooch (Pl. 8b), an early cruciform brooch (Pl. 53c), and two fully developed cruciform brooches (Pl. 6f and Pl. 16b). A fragment of a smaller bronze brooch, not classified was found together with the brooch Pl. 16b, and together with the early cruciform brooch Pl. 53c a five-armed swastika brooch of silver was found (Pl. 53f).

### Clasps

Clasps are found in seven graves. Clasps were used (mainly) for fastening cuffs on shirts or tunics. They all belong to Hines' Class B, most of them to form B1, i.e. plates with buttons (Hines 1993:12). They are found in the following graves:

- Cat. no. 1. Østby, *ØF* with stamped patterns (form B1 iv), Pl. 1b.
- Cat. no. 11, 12 Skåra, *VF* with both plain buttons and buttons with linear ornaments in relief (form B1 i and B1 ii) (Hines 1993:fig. 22b).
- Cat. no. 29 Snartemo grave II, *VA* with a variety of buttons; kidney shaped, buttons with relief ornaments, both linear patterns as well as profile masks and buttons with Style I ornaments (form B1 ii, B1 va, B1 vc), Pl. 14b, c, d.
- Cat. no. 44 Vasshus, *Ro* (Hines 1993:pl. VIII) and no. 51 Vestly, *Ro* (Pl. 34c), with Style I animal ornaments (form B1 vc).
- Cat. no. 71 Opedal, *Ho* with one plain button (form B1 i, Pl. 41g) and a fragment of a form B2 clasp (Hines 1993:36, fig. 70 f. Pl. 41f).
- Cat. no. 111 Hol, *NT* with plain buttons (form B1 i).

### Men or women?

A question that arises is whether Westland cauldrons are associated with male or with female burials, or whether they occur in the graves of both sexes. Traditionally, certain grave goods are sex specific; female grave goods being spindle whorls, weaving battens, hair pins and skin knives (Shetelig 1912a:110, Hagberg 1967:120), as well as graves with more than one brooch and graves where jewellery is prominent. Male grave goods include smiths' and carpenters' tools as well as weapons. Hunting equipment, such as arrows and objects like scales and weights have also been considered as belonging to male burials

(but see e.g. Stalsberg 1991 for another opinion). Choosing the traditional point of view, only a few of the graves can be ascribed to either sex, as follows:

#### FEMALE:

- Cat. no. 3 Vestre Hanum, *He*. Necklace and weaving batten.
- Cat. no. 19 Heggstøl, *Tē*. Hairpins.
- Cat. no. 30 Øvre Egeland, *VA*. Skin knife.
- Cat. no. 38 Hogstad, *Ro*. Skin knife.
- Cat. no. 48 Sør-Braut, *Ro*. Hairpins, spindle whorl.
- Cat. no. 53 Sola, *Ro*. Hairpins, spindle whorl.
- Cat. no. 70 Jondal, *Ho*. Hairpins.
- Cat. no. 71 Opedal, *Ho*. Skin knife, combs.
- Cat. no. 72 Øvsthus, *Ho*. Hairpin.
- Cat. no. 97 Vinje, *MR*. Hairpins, spindle whorl, 25 glass beads.
- Cat. no. 104 Åk, *MR*. Spindle whorl, weaving batten, two brooches.

#### MALE:

- Cat. no. 10 Haug, *Bu*. Sword (missing).
- Cat. nos. 11,12. Skåra, *VF*. Weapons.
- Cat. no. 26 Ø. Vemmestad, *VA*. Leather pouch with bronze weights.
- Cat. no. 28 Snartemo V, *VA*. Weapons, scales and weights.
- Cat. no. 29 Snartemo II, *VA*. Weapons.
- Cat. no. 44 Vasshus, *Ro*. Weapons.
- Cat. no. 46 Tu, *Ro*. Weapons.
- Cat. no. 47 Sør-Braut, *Ro*. Weapons.
- Cat. no. 51 Vestly, *Ro*. Weapons and goldsmith's tools.
- Cat. no. 79 Skardet, *Ho*. Weapons (unreliable context).
- Cat. no. 102 Godøy, *MR*. Bone arrows.
- Cat. no. 111 Hol, *NT*. Weapons.

Thus we appear to have 11 female graves and 11 or 12 male graves, which shows quite clearly that Westland cauldrons are not to be associated with only one sex.

### Osteological evidence

Only one larger study on cremated bones in Norway has been published (Holck 1987) and the subject material studied was confined to the *Oldsaksamling* in Oslo. Thus, only a very small number of the graves with Westland cauldrons has been examined. Nevertheless, the study revealed some interesting aspects that could only have been brought to light by an osteological examination. Seven graves with Westland cauldrons were a part of the study:

The age groups that will be referred to below are defined thus: Juvenis, age 10-24, Adultus age 18-44, and Maturus, age 35-64 (Holck 1987:267).

- Cat. no. 16. Hanes, *Tē*. The cauldron contained 805 g. bones from two individuals, one female, the other

probably a male. The female belonged to the age group Juvenis, the male to the group Maturus (Holck 1987:248).

- Cat. no. 20. Evje verk, AA. The find contained more than 3 kgs. of cremated bones, but only from one individual, a male age group Adultus. There were also animal bones, and both the human and animal bones showed cut marks from dismemberment (Holck 1987:251).
- Cat. no. 21. Vestre Skogsfjord, VA. 400 g, mostly cremated animal bones. The human bones were determined as male of the age group Adultus (Holck 1987:247).
- Cat. no. 25. Eik, VA. 195 g cremated bones from two individuals, one from the age group Maturus, and one from the age group Juvenis. No sex determination was possible. Several bones had cut marks from dismemberment (Holck 1987:277).
- Cat. no. 26. Øvre Vemmestad, VA. 390 g large pieces of bones, probably male, age group Adultus (Holck 1987:250).
- Cat. no. 27. Snartemo, grave IV, VA. 90 g animal and human bones, of a grown-up individual, possibly a woman. The animal bones show cut marks from dismemberment (Holck 1987:268).
- Cat. no. 30. Øvre Egeland, VA. 80 g human and animal bones. Neither the human's age nor sex could be determined. Among the bones were 7 bear's claws, one of which had cut marks indicating it was cut loose from the paw (Holck 1987:267).

The osteological examination confirmed the tendency established by the archaeological finds – Westland cauldrons were not sex-specific. In addition it revealed some other interesting points. Among this little group there were two double graves, whereas for the group as a whole (i.e. the cremation graves in the *Oldsaksamling*, n=1082)

double graves only account for 4.4%. There is nothing in these two graves (nos. 16 and 25) that gives an archaeological clue to the fact that there was more than one person buried, on the contrary, both these graves were poor (no. 16 perhaps due to the fact it is a very old find). The other fact is that two or three of the dead persons had been dismembered, either before or during the cremation. Human bones with signs of dismemberment occurred in 54 of the analysed graves. The reason for this practice is quite obscure, but Holck definitely ruled out battle wounds as an explanation (Holck 1987:180-182), since the marks were found on both female and male bones, as well as on one child. To this one might remark that people can get killed by the sword, or the axe, outside the regular battlefield. Violent deaths as a result of hostile attacks or assaults would not have been unknown, albeit perhaps uncommon. Another possible explanation is that the body was dismembered to facilitate the cremation, as it is quite difficult to burn a human body on a pyre and reduce it to bare bones. It is also possible that the dismemberment in some cases was a part of the burial ritual, where the corpse was prepared as a sacrifice, a symbolic meal for a god (Østigård 2000).

#### Footnotes

- <sup>1</sup> Out of 283 mounds whose sizes were recorded in Etne parish (Fett 1963), 59% were smaller than 10 m and 33% ranged in size from 10-15 m. Only two mounds were larger than 21 m in diameter, and none were larger than 30 m.
- <sup>2</sup> Bone is conventionally used to describe the material used for a variety of objects, whether they are made of antler, horn, or indeed bone.
- <sup>3</sup> In Scandinavia a distinction is commonly made between lance and javelin, following the German usage (*Lanzel/Speer*). A lance is thus a thrusting spear, the head without barbs, and a javelin is a throwing spear with a barbed head.

# CHAPTER 3.

## Classification

### Earlier classifications

In Scandinavia there were primarily two scholars working with the classification of Westland cauldrons, namely Gunnar Ekholm and Hans Norling-Christensen. Their primary concern was typology and chronology. By establishing a typological development of the cauldrons, a more accurate dating would be possible.

Ekholm presented a classification and chronology of the Westland cauldrons in 1933 (Ekholm 1933). He divided the cauldrons into eight types; three types named early Westland cauldrons, with riveted iron lugs, and four types named true Westland cauldrons, with triangular bronze ears. In addition he had one type, which he considered to be a degenerate form. The three early types are:

- 1) the Stadheim type. Cauldrons with a straight neck and a step on the side of the vessel. The type is dated to the 4<sup>th</sup> century (Ekholm 1933:14, fig. 7). (The type is named after cat.no. 82, Pl. 44a.)
- 2) the Midgården type. «Vessels with slightly protruding base and a height and base diameter of an approximate ratio of 1:2» (Ekholm 1933:16, fig. 9). (The type is named after cat.no. 76, Pl. 43a.)
- 3) the Timrå type. «Vessels, as a rule of a significant size, strongly protruding base and height smaller than the diameter.» (Ekholm 1933:16, fig. 10).

The Midgården and Timrå types are dated by Ekholm to the 4<sup>th</sup> century and he also supposes that they represent a later stage in development than the Stadheim type.

The true Westland cauldrons are:

- 1) high vessels with straight sides, like cat.no. 20 Evje verk, AA., Pl. 8c. These are dated to the middle or later part of the 4<sup>th</sup> century (Ekholm 1933:17-18, fig. 11).
- 2) the Kvissleby type. Vessels with an angular break at the side some distance from the base. This type, too, is dated to the 4<sup>th</sup> century (Ekholm 1933:18, fig. 12).
- 3) the Børte type. Vessels «that in form are closely related to the Kvissleby type . . . characterized by the soft, unbroken lines of the sides, thicker metal and more careful execution.» (Ekholm 1933:18). (The type is named after cat. no. 18, Pl. 8a.)

- 4) the Sola type is characterized by the same soft side-lines and a very protruding base. This type is dated by Ekholm to the 6<sup>th</sup> century (Ekholm 1933:18-19, fig. 14). (The type is named after cat.no. 52, Pl. 37a.)

The cauldron cat.no. 79, Skardet, Lindås, Ho, Pl. 43d, is seen by Ekholm as a pure degenerative product, with its high, slightly outwardly turned sides. This is dated to ca. 550 (Ekholm 1933:19, fig. 14).

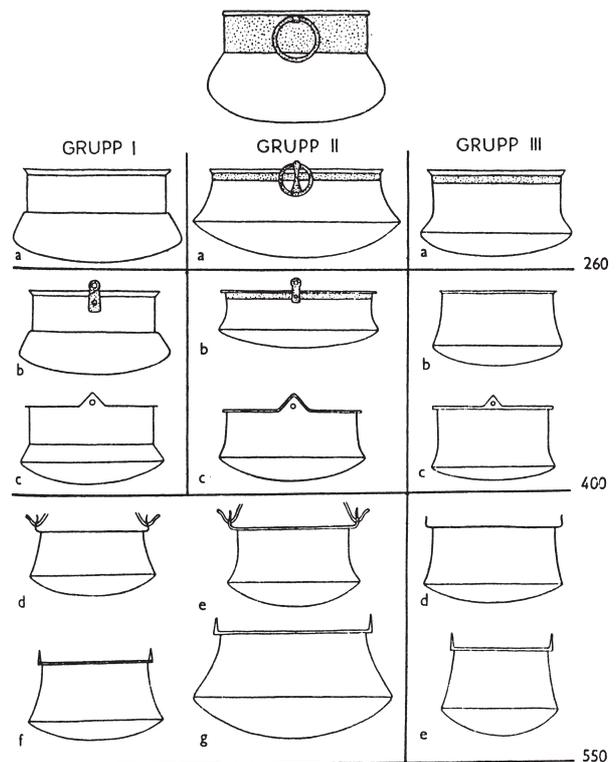


Fig. 6. The family tree of Westland cauldrons according to Ekholm (1956a). Group I: a) Krayenhoff, the Netherlands (Appendix III: no. 63). b) Stadheim, SF (cat.no. 82). c) Kvissleby I, Sweden (Appendix III: no. 4). Group II: a) Limeskastell Köngen, Germany (Ekholm 1933, footnote 52). b) Timrå church, Sweden (Appendix III: no. 1). c) Stenlille, Denmark (Appendix III: no. 16) Group III: a) Seltz, France (Appendix III: no. 73). b) Midgården, Ho (cat.no. 76). c) Evje verk, AA, (cat.no. 20). d) Attmar church (Appendix III: no. 7). e) Opedal, Ho (cat.no. 71).

In 1954-55 and 1956 Ekholm published two new papers where he elaborated on his typological studies and constructed a family tree for the different types of Westland cauldrons. I will here refer only to the main lines (Ekholm 1954-55:299; 1956 a:77). The typological development proposed by Ekholm is shown in fig. 6.

Ekholm's point of departure is a supposed original form, the cauldron from Körchow A, Mecklenburg. He then divides the cauldrons into three groups. Group I comprises bipartite vessels, while groups II and III are distinguished from each other only by their proportions. Group II is low and wide, while group III is high and narrow. Ekholm claims that group I and II merges around the year 400, though group II always retains its predilection for large dimensions.

Norling-Christensen divides the Westland cauldrons with triangular ears into two main groups (Norling-Christensen 1953):

- A) cauldrons where neck and shoulder is separated by a small step, and
- B) cauldrons where neck and shoulder form a more or less obtuse angle, or forms an unbroken (concave) line.

He does not give a new classification of the early Westland cauldrons, but uses Ekholm's classification. Norling-Christensen's main groups are shown in fig. 7.

He states that group A is represented by one find only, from Filzen in Germany, and dates this find to ca. 300 AD (Norling-Christensen 1953:48).

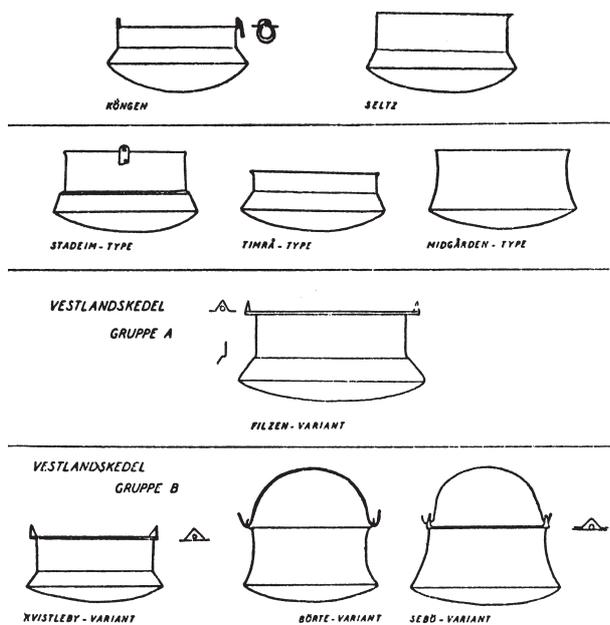


Fig. 7. Norling-Christensen's main groups of Westland cauldrons. (After Norling-Christensen 1953.)

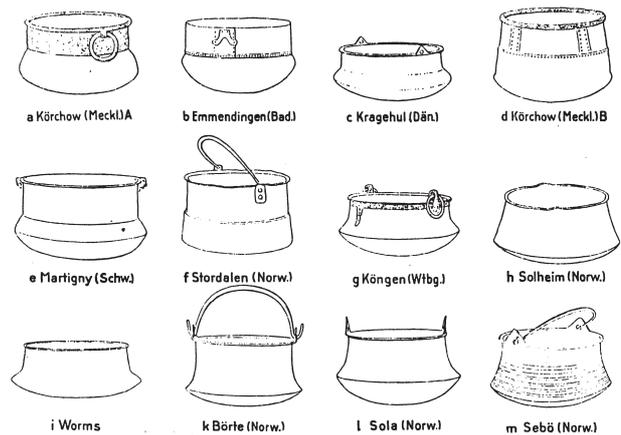


Fig. 8. The prototypes, early and fully developed Westland cauldrons as proposed by Behn (After Behn 1936)

Group B is further subdivided into following types:

- 1) the Kvissleby type: cauldrons with a vertical neck and a pronounced shoulder; neck and shoulder form a clear obtuse angle. This type is dated to the first half of the 4<sup>th</sup> cent.,
- 2) the Børte type: cauldrons with a vertical neck forming an unbroken line with a short, but clearly outward curved shoulder. The type is dated to the mid-5<sup>th</sup> cent. and
- 3) the Sæbø type: cauldrons with an outward turned profile, neck and shoulder forming an unbroken line. This type is dated to the late 5<sup>th</sup> and early 6<sup>th</sup> cent.

In Germany, Friedrich Behn worked with the same material. In 1936 (Behn 1936) he presented a classification and a chronology as seen in fig. 8. He identifies two original forms, both from Körchow in Mecklenburg. These are regarded as Celtic manufacture and are partly made of iron. One of these original forms, Körchow A, is the same Ekholm used as the original form for his typology (fig. 8 a). Behn has two descendants of this form, made all in bronze – the cauldron from Emmendingen, Baden (fig. 8 b) and the cauldron from the Kragehul bog find (fig. 8 c). The other original form is the cauldron Körchow B, fig. 8 d. Three groups derive from Körchow B. One group is represented by cauldrons like the ones from Martigny, Switzerland (fig. 8 e) and from Stordalen, i.e. Vinje, MR, cat. no. 97, fig. 8 f, (Pl. 48k). Cauldrons like the ones from Köngen, Württemberg; Seltz, Alsace and Solheim, Ho, cat.no. 74 (fig. 8 g and h) represent the second group. The third group comprises the true Westland cauldrons. This last group Behn divides into several subgroups:

- 1) the Børte type, fig. 8 k, where the upper part is al-

- most cylindrical and turns strongly outwards above the angle of the base,
- 2) the Sola type, fig. 8 l, is seen by Behn as a further development, where the sides are more evenly turned outwards; and
  - 3) the Sæbø type, fig. 8 m, interpreted by Behn as the last stage in development, where the sides no longer are parallel but are strongly turned outwards.

Behn dates his two base-types of cauldron from Körchow to the 1<sup>st</sup> century AD. Of the three groups derived from Körchow B, the type represented by Martigny and Vinje is dated to the late 3<sup>rd</sup> century, based on the other artefacts found in the Martigny hoard. Cauldrons of the second group similar to the Solheim one have been found, among other places, in the Casa dei Capitelli in Pompeii, but Behn remarks that this type seems to be long-lived (Behn 1936:126).

Of the true Westland group Behn dates the Børte type to the 4<sup>th</sup> cent. The Sola type is dated by a find from Long Wittenham in England (Behn 1936:126) to the 5<sup>th</sup> cent. and the Sæbø type is dated to the same century.

In his work on Roman imports into *Germania Libera*, Hans Jürgen Eggers also made a classification of the Westland cauldrons, but only of the early ones. Eggers distinguishes four types (Eggers 1951:160) see fig. 9.

- E 11. Cauldrons with a slightly S-shaped profile, e.g. Grieben (Eggers no. 1502, Appendix III: no. 22).
- E 12. Cauldrons with a break on the vessel wall and attached iron lugs, e.g. Hemmoor (Eggers no. 1028, Appendix III: no. 26).
- E 13. Cauldrons with a double break on the vessel wall and attached iron lugs, e.g. Stadheim, Vik, SF; cat.no. 82.
- E 14. Cauldrons with a double break on the vessel wall and triangular bronze ears, e.g. Häven 7 (Eggers no. 880, Appendix III: no. 20).

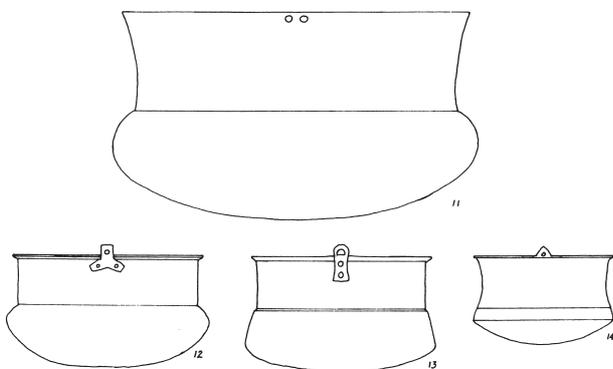


Fig. 9. The early Westland cauldrons according to H.J. Eggers. (After Eggers 1951)

## Criticism and a new classification.

As can be deduced from the above there are as many ways to classify an archaeological material as there are scholars. By comparing the different classifications we can see that Norling-Christensen, Behn and Eggers have worked along the same lines; in their classifications the vessel profile plays a decisive rôle. Ekholm, on the other hand, has used both vessel profile and vessel proportions in his classification.

For their time the classifications no doubt were satisfactory. Today, they are problematic to work with, however, since there are no fixed, measurable criteria defining the different types. Ekholm's method of using the proportions of the vessels is not very successful. The cauldrons he uses as type-defining examples all prove to be the extremes in their class. For example, for the Sola type, the cauldron from Sola (cat. no. 52) is the only one in the group where the base constitutes such a large part of the cauldron's total height.

I have chosen to use Norling-Christensen's classification as a basis for my classification, with two main types of true Westland cauldrons:

- A) cauldrons where neck and shoulder is separated by a small step, and
- B) cauldrons where neck and shoulder form a more or less obtuse angle, or form an unbroken (concave) line. Type B is further divided into three sub-groups, based on the vessel's profile.

His classification is clearly defined and the system practical. My aim has been to reach unambiguous definitions and easily measurable criteria. The classification is based on purely morphological criteria and is first and foremost a tool for structuring the material in clear groups.

## Terminology

I will now define the terminology used for the classification of Westland cauldrons. The classification method is an analysis of the cauldron's profile. The method has been used by Nordström in his work on Nubian pottery (Nordström 1972:68) and is based on analytical methods developed by, among others, Anna O. Shepard and J.C. Gardin (Shepard 1976:225; Gardin 1967). Nordström's method is the basis for my work.

The following terms are used in this analysis (see fig. 10):

*Base plane* is the horizontal plane on which an upright vessel stands. The base plane is tangential to a rounded base and parallel to a regular, flat base.

*Orifice plane* is the horizontal plane, which is tangential to the uppermost part of the orifice. The orifice plane is always parallel to the base plane.

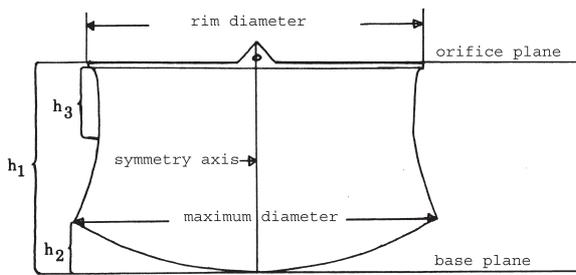


Fig. 10. Terms used for the classification of Westland cauldrons.

*Symmetry axis* is the imaginary axis through the centre around which a vessel may rotate without changing profile. In cases where the orifice and the base are not parallel, the symmetry axis is perpendicular to the orifice plane.

The *height* of the vessel is the distance between the base plane and the orifice plane. It is designated  $h_1$  (NB. The ears of a cauldron are never included in the height!).  $H_2$  designates the base height and  $h_3$  designates the neck height. There are two diameter measures natural to record on a Westland cauldron: the *rim diameter* and the *base diameter*, the latter also being the maximum diameter on the cauldron.

Important in the analysis is the recording of what can be termed *characteristic points* on a vessel's profile, i.e., clearly defined points at which principal measurements can be made (see fig. 11):

*Major point (M)*: The point where the maximum diameter is measured.

*Base point (B)*: The point where the vessel contour touches the base plane. In the case of the Westland cauldrons (having rounded bases) this point is considered identical with the point where the symmetry axis meets the base plane.

*Rim point (R)*: The point where the vessel's external profile touches the orifice plane. Simple rim shapes have only one rim point, more complex rim shapes may have several rim points. The Westland cauldrons have three

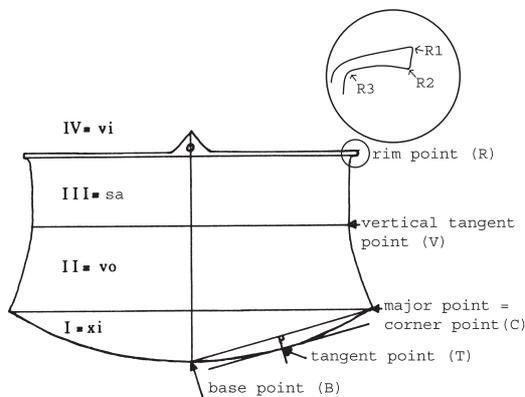


Fig. 11. The characteristic points of a Westland cauldron proper, with zonal division and analytical designations.

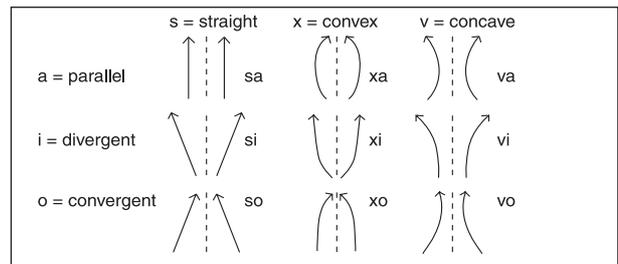


Fig. 12. The linear combinations in a shape analysis. Adapted after Gardin 1967.

rim points, designated  $R_1$ ,  $R_2$  and  $R_3$ , counting from the highest point at the orifice plane (i.e. from the top downwards).

*Vertical tangent point (V)*: A point where a vertical tangent, parallel to the symmetry axis, touches a concave or a convex part of the vessel profile.

*Corner point (C)*: A point on the profile where there is a clearly angular break, i.e. generally an abrupt change in the direction of the profile. This angular transition should be possible to trace horizontally around the vessel. In most cases this change may be rather smooth. A cauldron may have several corner points.

*Tangent point (T)*: This point is an auxiliary point, primarily to define the degree of convexity of the lower part of a vessel. It is calculated from a drawing of a vessel as follows: a line is drawn between the major point and the base point, and a tangent line, parallel to the first line, is drawn at the vessel profile.

The characteristic points are used to divide the cauldron into *horizontal zones*, which are designated with roman numerals, starting from the base. The number of zones may vary, depending on the number of characteristic points identified. Each zone may be analysed separately in the lateral aspect, again from the base upwards, see fig. 11. The contour line may be straight (*s*), convex (*x*) or concave (*v*). In relation to the symmetry axis it may be parallel (*a*), divergent (*i*) or convergent (*o*) (fig. 12). These two sets of analytical designations may be combined to describe the contour properties of a zone (Gardin 1967:19). For example, zone I of a Westland cauldron will always have the contour *xi*, i.e. convex and divergent in relation to the symmetry axis. Note that the designation *xa* and *va* are not used, since by definition a concave or convex contour line cannot be parallel to the symmetry axes.

**Morphology**

The different parts of a cauldron are illustrated in fig. 13.

*The base* is always zone I and runs from *B* to *C*. The profile is always convex and divergent, *xi*.

*The shoulder* is zone II and normally runs from *C* to *V*. The exceptions are types 1A, 1D, 2A and 2B (figs. 18,

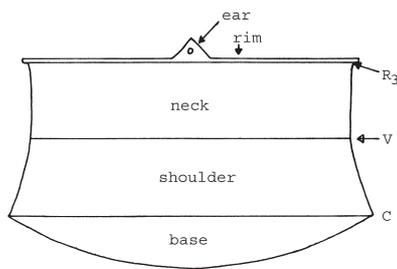


Fig. 13. The parts of a Westland cauldron and their relation to the characteristic points.

21 and 22) where the shoulder is delimited by  $C_1$  and  $C_2$ . The profile is normally concave and convergent, *vo*, except for the above mentioned types, where the profiles are either convex convergent, *xo*, or straight convergent, *so*.

The neck is usually zone III and has always a straight and parallel profile, *sa*. The neck is delimited by  $V$  and  $R_3$  or alternatively  $C_2/C_3$  and  $R_3$ .

The rim is usually zone IV. The true Westland cauldrons have a rim with a concave, divergent profile (*vi*) while the early Westland cauldrons have a straight, divergent rim (*si*). Consistent with the definition of the characteristic points, the rim has been defined as having three rim points (cf. above and fig. 11). For classification and typological purposes though, this does not have any significance, as the distance between  $R_1$  and  $R_2$  only gives the thickness of the rim. In the analyses therefore, only the points  $R_1$  and  $R_3$  are used.

### Calculation of proportions

The proportions of a vessel may be calculated with the formula  $\frac{\text{maximum diameter}}{\text{height}} \times 100 = \text{vessel index}$ . A vessel with the index 100 is as high as it is wide, a vessel with the index 50 is higher than it is wide and a vessel with the index 300 is wider than it is high (cf. Malmer 1962:8).

Though convenient, this is not a convincing method for distinguishing types of Westland cauldrons, even though Ekholm has attempted to do so. (Ekholm

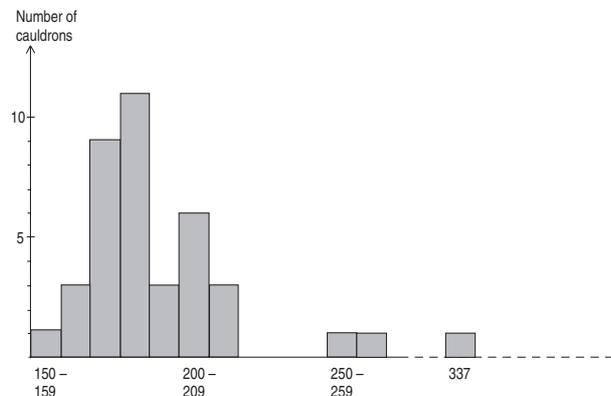


Fig. 14. The distribution of Westland cauldrons, criterion: vessel index.

1933:16; Ekholm 1956a:75) Firstly, you need to have a complete cauldron, which is seldom the case. Second, if one uses the index for all the complete Westland cauldrons, the material does not fall into groups, but rather is homogeneous, as fig. 14 shows.

Likewise the height of the base is not a reliable type-distinguishing criterion even though Ekholm tried to establish it as such a criterion (Ekholm 1933:18; Ekholm 1956a:75). I have the same objections to this method as to the use of vessel index. One cannot have a type-distinguishing criterion that is inapplicable to a majority of the material – and the base is the part of a cauldron most often missing. In the case of the cauldrons classified by Ekholm as belonging to the Sola type, i.e. with a high base, the height of the base makes up between 22% and 45% of the cauldron's total height (cat.nos. 52, 58, 71 and 98). As can be seen by the diagram fig. 15, the material is fairly homogenous in this aspect also; the majority of the intact cauldrons have base heights between 20% and 30% of the total height.

Neck heights, on the other hand, provide a reliable criterion as fig. 16 shows. Two main groups emerge. One group of Westland cauldrons has a short neck, or no neck at all. In the second group the neck takes up more than 10% of the total height of the cauldron. The average size ratio for the first group is 2%-3%; the average for the second group is ca 25% of the total height.

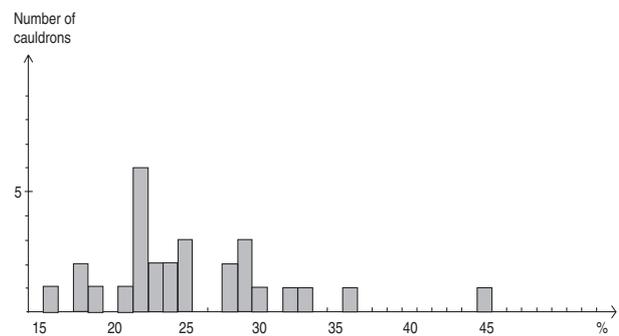


Fig. 15. The distribution of Westland cauldrons, criterion: base height,  $h_2$ .

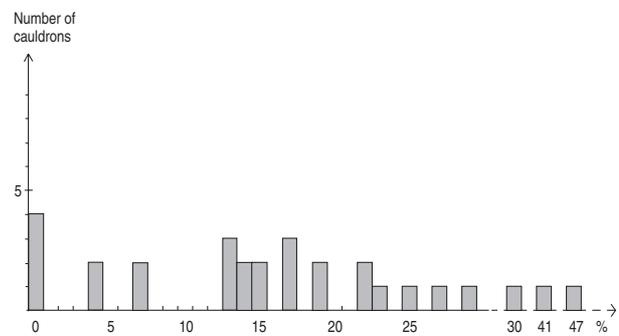


Fig. 16. The distribution of Westland cauldrons, criterion: neck height,  $h_3$ .

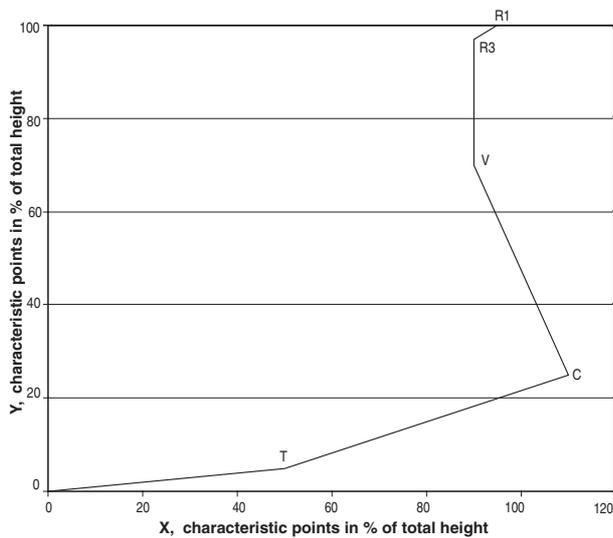


Fig. 17. The characteristic points, expressed as percentages of the total height, plotted in a coordinate system.  $T_x=50$ ,  $T_y=5$ ;  $C_x=111$ ,  $C_y=25$ ;  $V_x=90$ ,  $V_y=70$ ;  $R_3x=90$ ,  $R_3y=97$ ,  $R1x=95$ ,  $R1y=100$ , total height.

In order to facilitate both classification into types and comparison between the cauldrons, the profiles can be treated as diagrams in a coordinate system, where the characteristic points are plotted along the x- and y-axis. We can choose the corner point, C, as an example, cfr. fig. 17. The numerical value for the point is expressed as a percentage of the total height,  $h_t$ . The positioning of the C-point is expressed with two variables, one for the distance of the point to the symmetry axis, the other for the distance to the base plane. The distance to the symmetry axis, which in this case is half the maximum diameter is called  $C_x$ , and is plotted along the horizontal axis x. The distance to the base plane is called  $C_y$ , and is plotted along the vertical axis y. All the characteristic points are calculated and plotted in the same way and a line is drawn to connect them. In this way you get a schematic picture of the vessel profile that can be compared with other vessel profiles, regardless of their original size.

**New types. Definitions and classification**

As stated earlier I have used Norling-Christensen's classification as a basis for the new classification. To avoid total confusion regarding type names, I've chosen not to use names but to use letters and numbers.

The early Westland cauldrons are defined generally thus: Cauldrons with an outward turned rim, a marked corner point and a rounded base. They have riveted iron lugs, rather than the triangular ears found on the true Westland cauldrons. They may have an iron band on or under the rim. They may also have an iron band with rings for suspension. This class is designated 1, divided into the types 1A-1D.

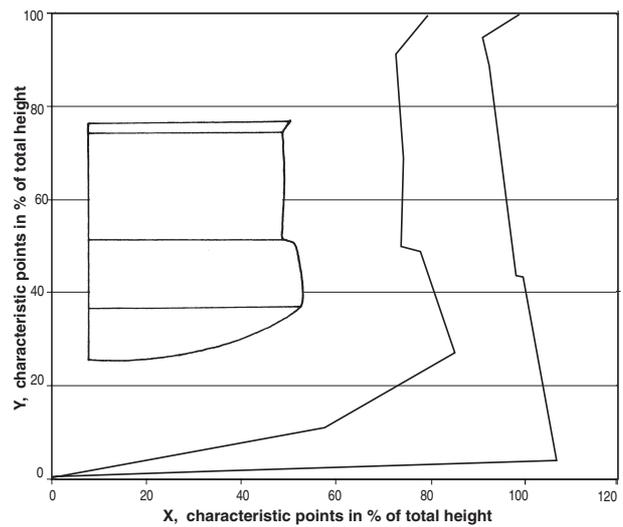


Fig. 18. Type 1A.

1A. (Former Stadheim type) Fig. 18. Cauldrons that are characterized by a step between neck and shoulder, i.e. the cauldron has three corner points. The lowest corner point,  $C_t$ , is also the maximum point. The neck constitutes approx. 50% of the total height. Some cauldrons may also lack a neck, in the sense that zone IV is not always parallel to the symmetry axis. The classification criterion however, is the step; classification is thus always unambiguous. The cauldron may be divided into five zones with the profiles: I (base) convex divergent ( $xi$ ), II (shoulder) convex convergent ( $xo$ ), III (ledge) straight convergent ( $so$ ), IV (neck) straight parallel ( $sa$ ), V (rim) straight divergent ( $si$ ). The neck may be divergent as well as convergent. The type is represented by seven cauldrons in Norway (Cat.nos. 4, 6, 13, 14, 42, 82 and 97; Fig. 58-59).

1B. Fig. 19. Cauldrons that are characterized by two cor-

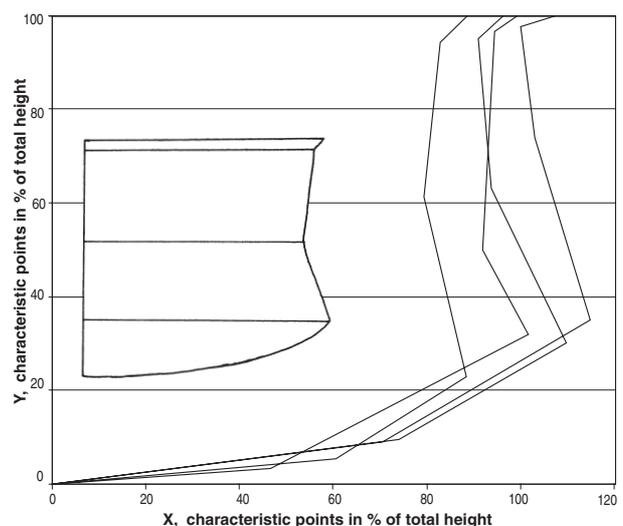


Fig. 19. Type 1B. Only complete cauldrons are included in the diagram.

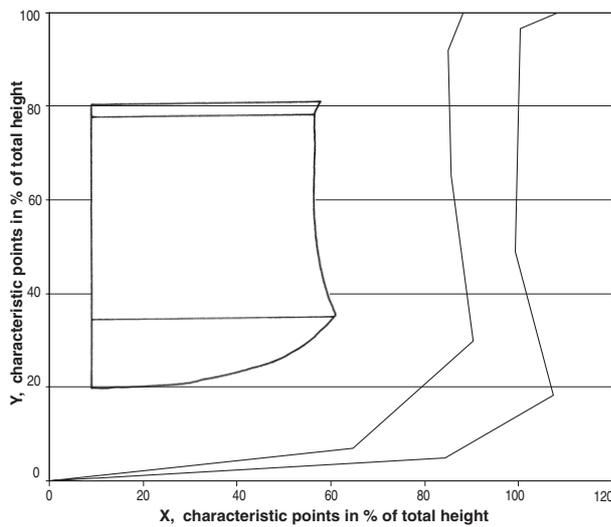


Fig. 20. Type 1C. Only complete cauldrons are included in the diagram.

ner points,  $C_1$ , which is the maximum point, and  $C_2$ , which is the classification criterion.  $C_2$  divides the cauldron into two parts of approximately the same size. This type does not have a neck, in the sense that no part of the cauldrons is parallel to the symmetry axis. The profile of the neck is straight, either convergent or divergent. The cauldron is divided into four zones, I (base) convex divergent (*xi*), II (shoulder) straight convergent (*so*), III (neck) straight divergent (*si*) or convergent (*so*), IV (rim) straight divergent (*si*). The type is represented by eight cauldrons in Norway (Cat.nos. 3, 16, 25, 40, 64, 76, 105 and 108. Fig. 60-61).

1C. Fig. 20. The type is characterized by an evenly convergent profile without breaks above the corner point. The shoulder is defined as running between  $C$  and  $V$ , the neck runs between  $V$  and  $R_3$ . The cauldron may

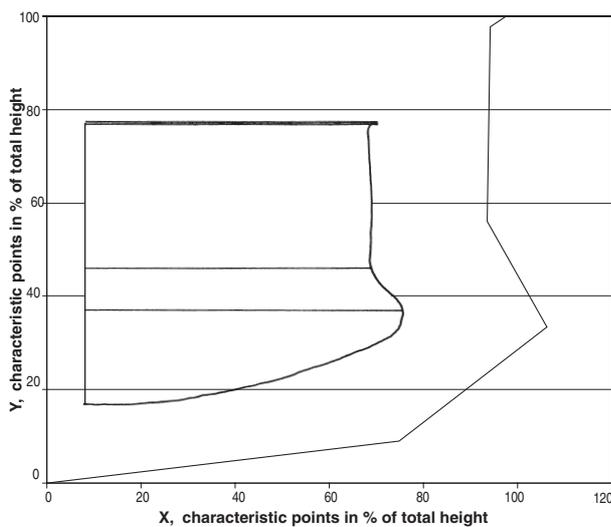


Fig. 21. Type 1D (cat. no. 36)

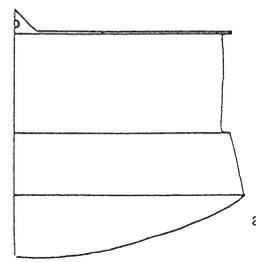


Fig. 22 a. Type 2A.

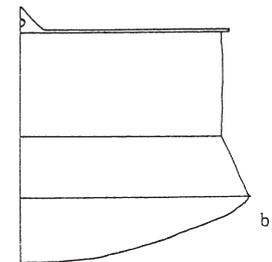


Fig. 22 b. Type 2B.

be divided into four zones, I (base) convex divergent (*xi*), II (shoulder) concave convergent (*vo*), III (neck) straight parallel (*sa*), IV (rim) straight divergent (*si*). The type is represented by four cauldrons in Norway (Cat. nos. 19, 63, 74 and 77. Fig. 62).

1D. Fig. 21. The type is characterized by two corner points, where  $C_1$  is the maximum point. It has a neck approx. half the total height of the cauldron, and a short, very marked concave shoulder, delimited by  $C_1$  and  $C_2$ . (On the full-scale drawing of cat.no. 36, the  $C_2$  is more resemblant to a vertical tangent point. The  $C_2$ , however, is on both Norwegian cauldrons clearly marked with a hammered line.) The cauldron may be divided into four zones, I (base) convex divergent (*xi*), II (shoulder) concave convergent (*vo*), III (neck) straight parallel (*sa*), IV (rim) straight divergent (*si*). The type is represented by two cauldrons in Norway (Cat.nos. 36 and 112. Fig. 63).

The true Westland cauldrons, class 2, are characterized by their triangular ears integrated into the outward turned rim. I will include Norling-Christensen's Filzen- and Kvissleby types, even if these are not found in Norway.

2A. Fig. 22 a. (Norling-Christensen's Filzen type). The type is characterized by the small step between neck

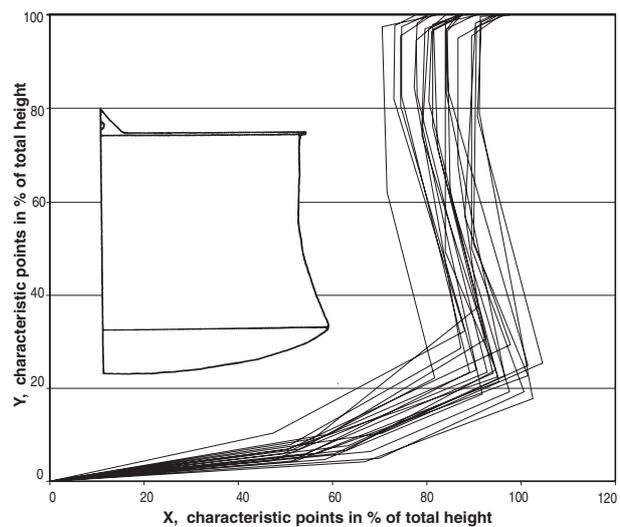


Fig. 23. Type 2C. Only complete cauldrons are included in the diagram.

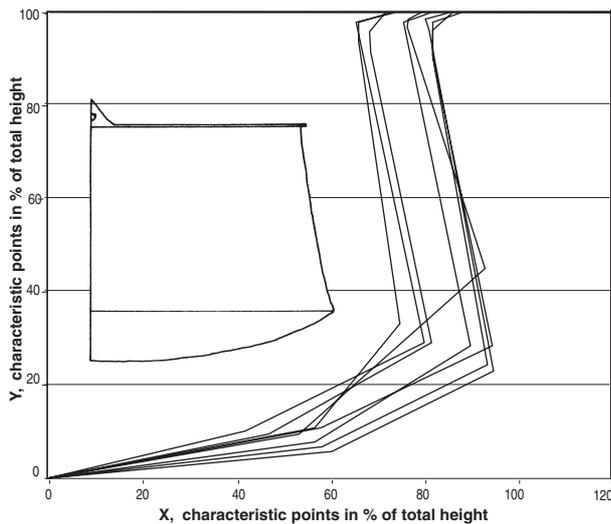


Fig. 24. Type 2D. Only complete cauldrons are included in the diagram.

and shoulder, i.e. the cauldron has three corner points. The neck is parallel to the symmetry axis.

2B. Fig. 22 b. (Ekholms and Norling-Christensen's Kvissleby type). The type is characterized by an obtuse angle between the neck and shoulder, i.e. the cauldron has two corner points. The neck is parallel to the symmetry axis, the shoulder is straight convergent.

2C. Fig. 23. This type is the most common in the material. It is characterized by one corner point = maximum point, concave converging shoulder and a neck more than 10% of the total height ( $V_y < 90\%$ ). The type is represented by 36 cauldrons in Norway. (Fig. 64-69).

2D. Fig. 24. This type has the same characteristics as type 2C, but the neck height never exceeds 10% of the total height ( $V_y \Rightarrow 90\%$ ). The neck may also be totally absent, in the sense that the upper part of the cauldron is not parallel to the symmetry axis. Type 2D is represented by 24 cauldrons in Norway (Fig. 70-74).

In addition to these types, there are two more types found in Continental Europe outside Scandinavia. One is the type E12, belonging to class 1, with riveted iron lugs, and one belonging to class 2 (Hässler 1978:abb. 4,5). The only difference between these two (judging by the illustrations) is the ears, the profile seems to be exactly the same, characterized by a straight neck, a marked corner point and a shoulder that is convex convergent. These types could be labelled 1E and 2E respectively.

By using the vessel's profile for classification it is possible to classify incomplete cauldrons, provided that a reasonable proportion of the cauldron is preserved. In most cases, only the base is missing, and the major part of the

body is intact. The advantage of such a classification especially applies to the types 2C and 2D, where the point *V* is the type-distinguishing point. The average height of the neck of a type 2C cauldron is 35 mm, whereas a type 2D cauldron has a neck only 5 mm high. Cf. fig. 16, where the type 2C is to the right of the 10% mark, type 2D to the left.

### Practicalities

The classification of the cauldrons is made on the basis of drawings of all the Norwegian cauldrons that were possible to draw. The device used is very common, primarily used for measuring the height of pots. Basically it is a platform with a ruler fitted to it at  $90^\circ$ . The cauldron is placed upside down on the platform and the distance between the vessel wall and the upright ruler is measured with another, pointed ruler, and plotted on a mm paper. A simpler, and faster device was later constructed, with a platform and the drawing board fitted to it by means of slots. The drawing board has a fixed mm paper and the plotting of the profile is done by means of a pointed ruler with a small notch on one of the long sides, on transparent paper, fastened with adhesive tape. In this way one can plot the profile directly onto paper without measuring; the tip of the pencil is placed in the notch, thus making sure that the distance is always correct. It is also much easier to keep the loose ruler straight (i.e. at right angles to a line parallel to the symmetry axis), using the mm paper as a guideline. Naturally, all angles have to be kept at  $90^\circ$ , and the drawn section has to pass through the centre of the cauldron.

### Typology

In the earlier publications on the Westland cauldrons, typology was strongly emphasized. Despite criticism, typology can be a very useful method for arranging a material into a relative, chronological sequence. The question is whether a typological method is meaningful when applied to Westland cauldrons. Is typology applied to forms as simple as these really relevant? The new classification, based on the Scandinavian material, has made it possible to discern four types of early Westland cauldrons, and four types of Westland cauldrons proper. The changes in form that this type of cauldrons undergo, is first and foremost technical. The early Westland cauldrons are entirely made by hand, while the Westland cauldrons proper represent a technical improvement and a higher degree of mechanical production, which is less time-consuming. The manufacturing process will be discussed in detail in chapter 5.

A possible typological development of the Westland cauldrons is shown in fig. 25. Types 1A, 1B and 1C are

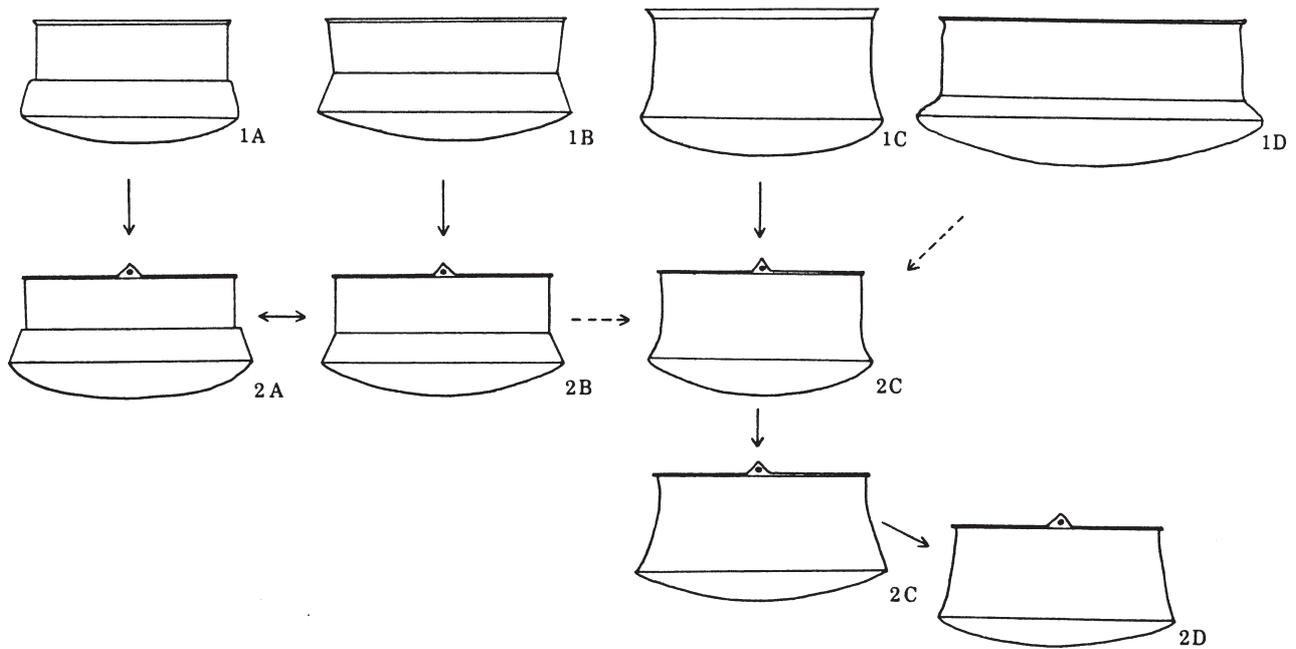


Fig. 25. Possible typological development of the Westland cauldrons.

all subject to the same changes. The suspension is changed, from riveted iron lugs to triangular ears integrated into the rim, which gives us the types 2A, 2B and 2C. The profile of types 2A and 2B are virtually unchanged, although the neck of type 2B seems to be more parallel to the symmetry axis than the necks of type 1B, possibly as a result of an influence from 2A, as indicated by the double arrow. Type 1C is considered as the inspiration for type 2C, with possible influence from type 1D, with its high, straight neck. Type 2D, finally, can be seen as a development of the type 2C, with a very short neck. Whether this typology also has a chronological relevance will be discussed in chapter 4.

Needless to say, forms do not change by themselves. Changes in form are always a result of the intentions and work of the craftsman. The idea «cauldron» had several forms, one of which was the Westland cauldron. The design is the result of craftsmen picking up ideas on what a cauldron could look like and still be a Westland cauldron (i.e. not violating the basic idea) and, more importantly, picking up ideas on how it could be made. These ideas might have come from contact with other craftsmen, by working in different workshops or by simply seeing other vessels.

## CHAPTER 4. Chronology

The aim of the chronological study in this work is to examine the dating of Westland cauldrons in the Norwegian finds and to see whether there are any chronological differences between the types. This work is not breaking new grounds in the chronology of the Roman Iron Age and Migration Period in Norway. A re-evaluation of the Migration Period chronology in Norway is, no doubt, overdue, but would far exceed the scope of this work.

For this purpose I have chosen the chronological framework as proposed by Straume (Straume 1987:13-14), which covers the latest phase of the Late Roman Iron Age and the Migration Period. The framework is based on earlier research by Slomann, Stjernquist and Lund-Hansen (Straume 1987:13 with further references) on the Roman Iron Age and Voss, Bakka, Lund-Hansen and Magnus (Straume 1987:14 with further references) on the Migration Period. Ilkjær (1990, 1993) has been used for the earliest weapon graves. Bemmann & Hahne (1995) have been followed for the classification of the Migration Period weapon graves.

The last phase of the Roman Iron Age is denoted C3, and has the following lead forms (*Leitformen*):

- equal-armed brooches with triangular plates that have drawn-out ends (fig. 26 a)
- Nydam brooches (fig. 26 d)
- bow-knob brooches (fig. 26 c)
- silver-sheet brooches without animal heads in profile (fig. 26 b)
- X-shaped belt mounts
- mounted quartzite strike-a-lights (fig. 27, 29)
- swords with hour-glass shaped grips (fig. 27, 29)
- sword scabbard mounts with drawn-out ends (fig. 27-29)
- semicircular chapes (fig. 27, 28)

In addition Slomann considers four-edged lances as clear C3-finds, as well as drinking-horn mountings, needle boxes and a bead-fashion favouring a large number of beads (Slomann 1977:63). Straume also mentions brooches like Mackeprang type IX, but acknowledges their occurrence in very late phase C2. Straume emphasizes the difficulty to grasp the transition C2/C3, since many artefacts and style elements are found in both periods,

but the abovementioned lead forms are considered to be useful for a C3- dating.

Norwegian key finds for C3<sup>1</sup> are, as listed by Straume:

- Foss, *ST* (T16364, Straume 1961:60-77, figs. 6-16; Ilkjær 1990:no. 173, ill. p. 305, Bemmann & Hahne 1995:no. 375, Abb. 13, 42:4) fig. 27
- Mollestad, *AA* (C1591-1594, Grieg 1926:78, fig. 58, Ilkjær 1990:no. 494, Bemmann & Hahne 1995:no. 191, Abb. 15:3) fig. 28
- Sætrang, *Bu* (C617-644, Slomann 1959, Straume 1987:no. 41, Ilkjær 1990:no. 735, ill. p. 306, Bemmann & Hahne 1995:no. 156) fig. 29
- Vøien, *Op* (C4870-4486, Grieg 1926:fig. 49, Ilkjær 1990:no. 802, Bemmann & Hahne 1995:no. 132, Abb. 9)
- Åk (cat. no. 104), Pl. 53

The weapon graves Foss, Mollestad and Sætrang all belong to Ilkjær's group 11, dated to C3 (probably continuing into early D1). The find from Vøien would probably better be omitted, as there is some serious disagreement concerning the date and as it contains both C2 and C3 elements (Ilkjær 1990:296, Ilkjær 1993:366-368; Bemmann & Hahne 1995:307-312, 371, 484-488).

The transition C3/D1 is not very easily fixed. Straume mentions one find, from Håland, Hå k. *Ro* (S4069, Straume 1987:14, no. 25, Ilkjær 1990:no. 324, Bemmann

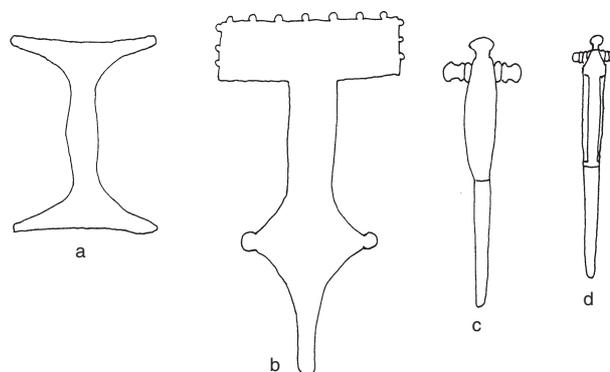


Fig. 26. Chronological lead forms, phase C3, brooches. a) Equal-armed brooch, triangular plates with drawn-out ends, b) Silver sheet brooch without animal heads in profile c) Bow-knob brooch, d) Nydam brooch.

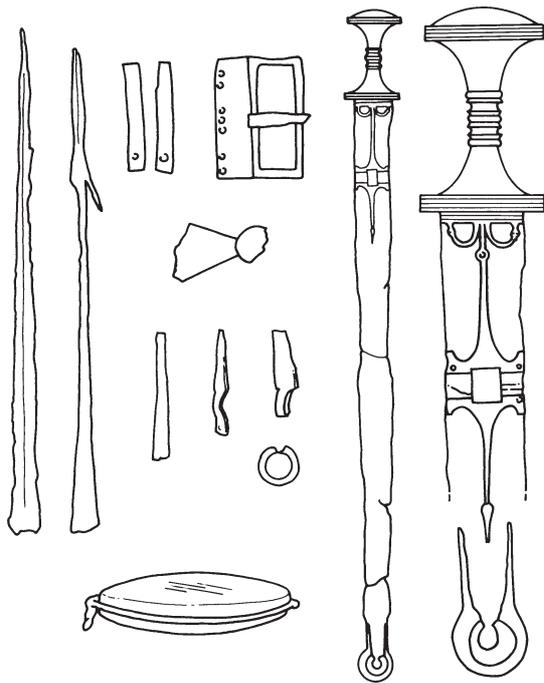


Fig. 27. Key find, phase C3, Foss, Sør-Trøndelag (T16364). After Ilkjær 1990.

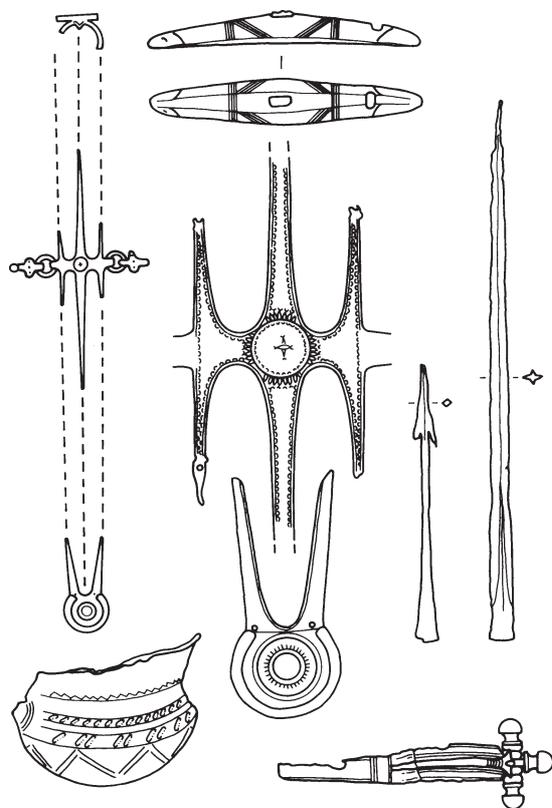


Fig. 28. Key find, phase C3, Mollestad, Aust-Agder (C1591-1594). After Ilkjær 1990.

& Hahne 1995:no. 218) as one example, where the shield boss (Ilkjær type 8ad) mainly belongs to C2 and C3 (with a hinted very early dating in D1 by Ilkjær 1990:fig. 199). The U-shaped chape, on the other hand, would be a «safe» Migration Period type (see below). Bemmann & Hahne have placed this find in their Mollestad or Kvamme group, which means it could be either C3 or D1. That the transition C3/D1 is not an abrupt one, is further demonstrated by the Danish grave finds with both Nydam and cruciform brooches (Brinch Madsen 1975, Ethelberg 1986:70).

Slomann points out four artefacts she considers as lead artefacts when dating a transitional find to the Migration Period (fig. 30):

- the fully developed cruciform brooch (i.e. where the headplate is wider than the bow)
- spiral clasps (Hine's A-class<sup>2</sup>)
- U- shaped chapes
- bossed urns (*Buckelurnen*)

Slomann further points out that silver sheet brooches (i.e. Nissen Meyer Stadium 1) and glass beakers with trailed, molten glass threads are not useful in this context, as these are found only in undisputed Migration Period contexts (Slomann 1977:63). To these artefacts Straume adds axes and arrowheads as parts of the weaponry and also wooden buckets with bronze covering.

Straume divides the Migration Period into two phases: D1 and D2, where D1 is represented by the Nydam- and Sösdala styles and D2 is represented by Style I.

Key finds for D1 are:

- Lunde, *VA* (B3543, Straume 1987:no. 28), fig. 31
- Evebø, *SF* (B4590, Straume 1987:no. 8, Ilkjær 1990:no. 157, 310 ill., Bemmann & Hahne 1995:no. 308) fig. 32
- Nordgården, *Te* (C19269-19280, 19615-19616, Straume 1987:no. 30, Ilkjær 1990:no. 508, 307 ill., Bemmann & Hahne 1995:no. 179, Abb. 42:7, 47:3) fig. 33
- Øvsthus, *Ho* (B3731, Straume 1987:no. 53, Bemmann & Hahne 1995:no. 294, Abb. 20:5, 21), fig. 34
- Krosshaug, *Ro* (B2269-2299, Magnus 1975), fig. 35
- Ommundrød, *VF* (C29300, Inv. Arch. Norway 1, no. 2, 1966), fig. 36
- Øvre Veien, *Bu* (C325-339, 343-348. Bemmann & Hahne 1995:no. 160, Abb.17:3, R155, R200 a-d, R305), fig. 37

Key finds for D2 are:

- Snartemo grave V, *VA*. Cat. no. 28 (Straume 1987:no. 39, Bemmann & Hahne 1995:no.199, Abb. 23), Pl. 13
- Søvtedt, *Te* (C9440-49, 9811, Straume 1987:no. 42), fig. 38



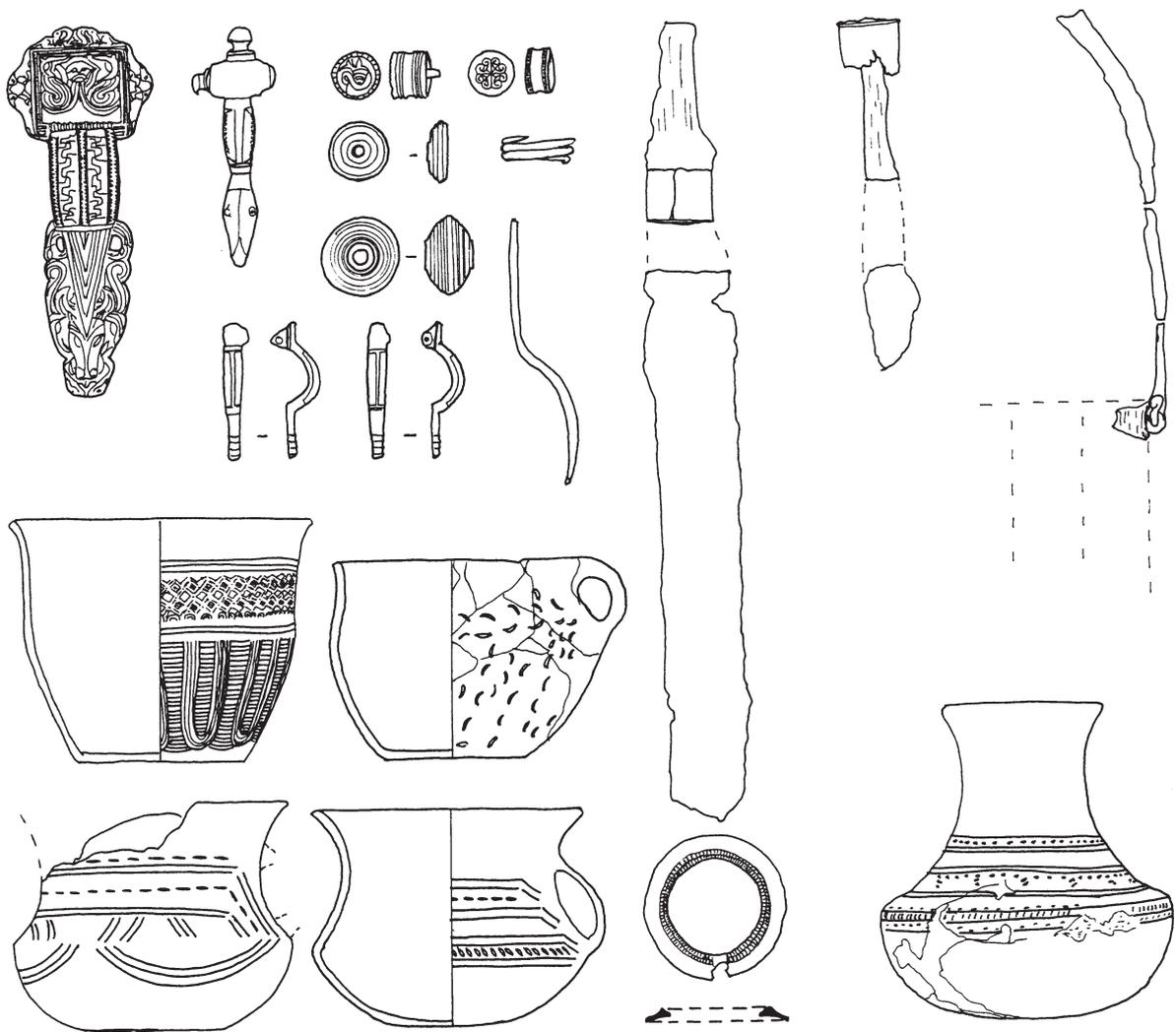


Fig. 31. Key find, phase D1, Lunde, Vest-Agder (B3543). Redrawn after Straume 1987.

emphasized the chronological relevance of early and late Style I. Straume has refrained from a division based on finely tuned stylistic criteria (and certainly employing such criteria is not an unproblematic approach); she has divided the Migration Period into two phases instead of the four proposed by Bakka (1973 and 1977).

Bakka's four-phase division can be questioned, both with regard to the first and the last. The first phase (VWZ I) is defined as beginning with the older (*ältere*) cruciform brooches. Bakka used Reichstein's definition; namely, brooches where the headplate is narrower than the bow or equal in width to it, but his dating is contrary to Reichstein's interpretation, as well as Slomann's, Lund Hansen's and others, who place the older cruciform brooches in C3. The true cruciform brooches (and the Migration Period itself) only begin with Reichstein's younger cruciform brooches, i.e. those where the headplate is wider than the bow. That would mean that the Migra-

tion period begins with Bakka's phase II<sup>3</sup>. The correlation between Bakka's phases and the brooch stages proposed by Nissen Meyer (Nissen Meyer 1935:99-104) does not work either. Bakka's latest phase, VWZ IV, is equally problematic. It is defined as beginning with D-bracteates in grave finds, of which there are only three, and a late development of Style I, «die aber dem frühen Stil I gegenüber noch nicht genau abgegrenzt ist» (sic!) (Bakka 1977:58).

However, it does seem possible to correlate Straume's D1 and D2 with Nissen Meyer's brooch stages, where D1 would cover stage 1 and 2; D2 would cover stage 3-6.

Straume is extremely cautious about the absolute dating of these phases. She dates the C2/C3 transition to 300/320. C3 she considers last until 375/400 and D1 until 450/475. D2, and with it the Migration Period, ends 550/575.



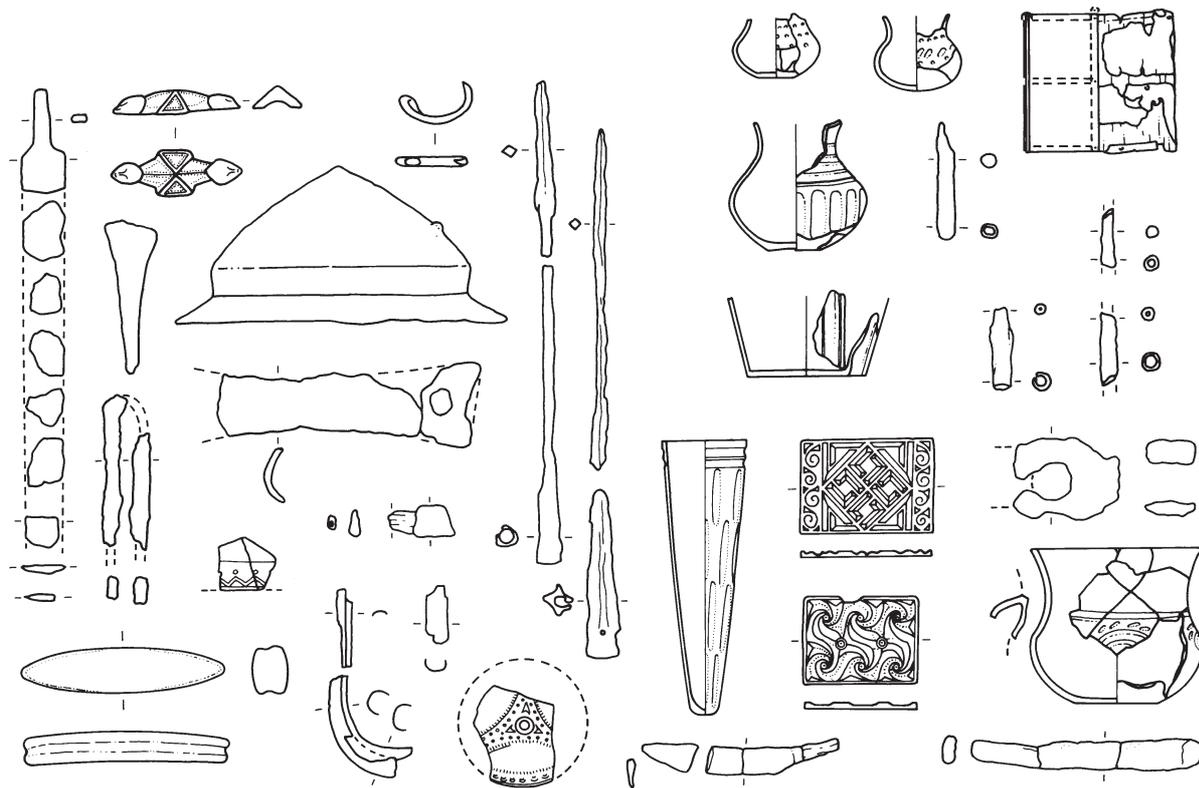


Fig. 33. Key find, phase D1, Nordgården, Telemark (C19269-19280, 19615-19616). After Ilkjær 1990.

find being closed than the opposite. Näsman considers many older, professional excavations as well as more recent amateur ones to be unreliable, since the records often are imperfect. Unreliable finds can only be used in chronological studies as support for a framework of reliable finds.

- (III) Doubtful combinations are finds where there is no possibility from the available information of deciding whether the find is closed or not. These finds can only be used in wider chronological contexts.
- (IV) Useless combinations are finds where it is more likely than not that the find is mixed, or where information on the find is non-existent. These only have a value as stray finds.

The criteria are very strict, and when applied to the Westland cauldrons, we end up with only one reliable find combination, cat.no. 51. The majority would be considered useless. As often the case, standard solutions turn into straightjackets instead of being helpful. Unless one is really trying to build a new chronological framework, there are several objections to the way in which Näsman applies the criteria. Professional excavations are of course to be preferred, but does that really mean that excavations done in the 19<sup>th</sup> century by «the founding fathers of archaeology» are of no use? Does the fact that 67% of the material are cremation graves mean that they

cannot be used for anything, least of all chronology? I propose a slightly different application of the criteria.

- Reliable. Professionally excavated finds and more recent finds with good records, excavated by amateurs are considered to be reliable, closed finds.
- Unreliable. Unreliable, but still closed finds are older amateur excavations and finds made by laymen, where the information about the circumstances is precise.
- Doubtful combinations are finds where there is no possibility from the available information to decide whether the find is closed or not.
- Useless combinations are finds where it is more likely than not that the find is mixed, or where information on the find is non-existent.

Näsman has an absolute priority of inhumation graves. With regard to the Westland cauldrons, however, I am more inclined to reverse this priority, especially concerning non-professional excavations. Näsman argues that cremation graves cannot be considered reliable, since we cannot know if anything was left behind at the pyre site. This is not a valid objection to burials in Westland cauldrons. After the cremation, great care was taken to clean and collect the cremated bones. During this process it is not very likely that grave goods would be forgotten or overlooked, as witnessed by the many minute fragments

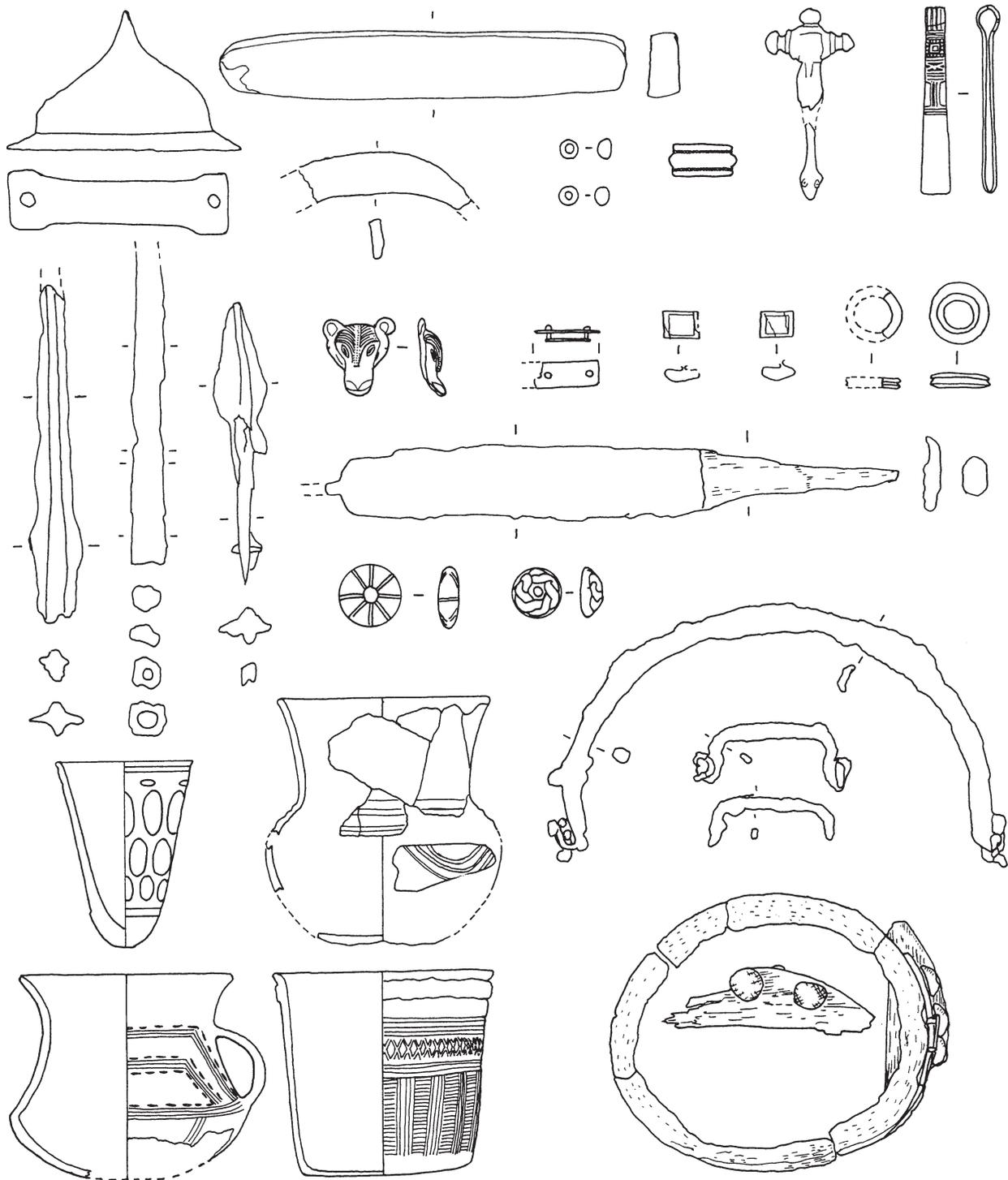


Fig. 34. Key find, phase D1, Øvsthus, Hordaland (B3731). Redrawn after Straume 1987.

of combs found among the bones. The bones and remains of grave goods are also quite often neatly wrapped up in hides, felt, textiles or birch bark. When the cauldron served as a cinerary urn, all the grave goods would be found within it. If the cauldron and its contents arrived intact in the museum, the find must be regarded as closed. Exceptions might be larger objects, like pottery,

but pottery on the other hand is not easily overlooked. It is much more difficult to assess the reliability of an inhumation grave excavated long ago (as can readily be confirmed by the number of objects and fragments of objects from a grave excavated in the 1960's compared to one excavated in the 1880's). The vital point here is whether we are discussing unmixed finds or complete



Fig. 35. Key find, phase D1, selected objects from Krosshaug, Rogaland (B2269-2299). The shield-shaped plate= R310, the rest of the find is drawn after Magnus 1975. (Original drawing of the large square-headed brooch by Lars Tangedal, Bergen Museum.)

finds. It is evident that a find has to be unmixed in order to be closed, but does it necessarily have to be complete? Näsman claims that you have to be positive nothing in a grave is missing. In my view this is absurd – a find is of no higher *chronological* value if you retrieve 102 boat-nails from the sieve instead of 98. An incomplete find is not useless in a chronological context. The grave goods in itself constitute a selection, and with good reasons it can be claimed that a grave find never is complete. One only has to bear in mind all the organic material that has disappeared through the centuries. Even in the cases where we with certainty can say that the find is not complete, the find can be used for chronological purposes, in the worst case as a post quem.

Using these modified criteria a viable classification of the finds with Westland cauldrons then becomes possible, as set out in table 5, p. 39. (43 finds where only the cauldron is preserved are excluded.) The list gives the catalogue number, the museum inventory number, farm name, *kommune*, county and type. (For geographical conventions, see p. 7)

### The chronology of Westland cauldrons

The result of the evaluation of the find combinations above gives this picture:

- Type 1A is not represented by any reliable find combination. Seven cauldrons are classified as belonging to type 1A.
- Type 1B is represented by one reliable find combination, no. 63 Hovland, *Hø*. Five cauldrons are classified as belonging to type 1B.
- Type 1C is represented by useless find combinations only.
- Type 1D only occurs as bog finds.
- Type 2C is represented by five reliable find combinations: no. 48 Sør- Braut, *Rø*; no. 68 Sæbø, *Hø*; no. 70 Jondal, *Hø*; no. 83 Hamre, *SF* and no. 102 Godøy, *MR*. 36 cauldrons are classified as belonging to type 2C.
- Type 2D is represented by three reliable find combinations, no. 29 Snartemo V, *VÅ*, no. 46. Tu, *Rø* and no. 49 Midt-Salte, *Rø*. 24 cauldrons are classified as belonging to type 2D.

As the type 1A does not have any reliable find combinations we have to turn to the unreliable ones for a dating. There are three unreliable find combinations with type 1A.

The find no. 4, Farmen, *He* is an old find; the grave was discovered in 1865 by the landowner while removing a mound, and published in 1873 by A. Lorange. It is not clear whether Lorange actually saw the grave himself, but the description of the circumstances gives an authentic impression. The grave contained two bronze cauldrons, an Eastland cauldron (Pl. 3a) filled with cremated bones, and a Westland cauldron. Lorange states that a stone had been placed on top of the Westland cauldron as a lid, and eventually the weight of the stone had caused the cauldron to collapse. As a consequence the stone slid from its original position on to the Eastland cauldron, where it made a hole in the side. The stone also pressed the Eastland cauldron against the wall of the small chamber, causing another hole in the side of the cauldron. Both these dam-

aged areas are clearly visible today. The Eastland cauldron is not easily dated; Lund Hansen has dated the find to C3, but the type covers the period C1-C3 (Lund Hansen 1987:69).

The grave no. 42 Bø, *Ro* was excavated in 1923 by a local amateur, A. Skjærpe and the site checked a few days later by the archaeologist J. Petersen. The find contained a gold finger ring like Beckmann type 11 with three ridges, as well as a simple bow brooch (Pl. 42e) The spiral is missing, but it probably was a crossbow construction. The head has a narrow, triangular termination where the spiral was fixed. The brooch has never had a head-knob, and cannot therefore be classified as a Nydam brooch. The nearest parallel in available literature is Shetelig 1906:fig. 16. The brooch dates the grave, and the cauldron, to C3.

The find no. 82 Stadheim, *SF* with belt buckle, -mountings and a quartzite strike-a-light (Pl. 44b) has been discussed at length by Fett (1937) and Sломann

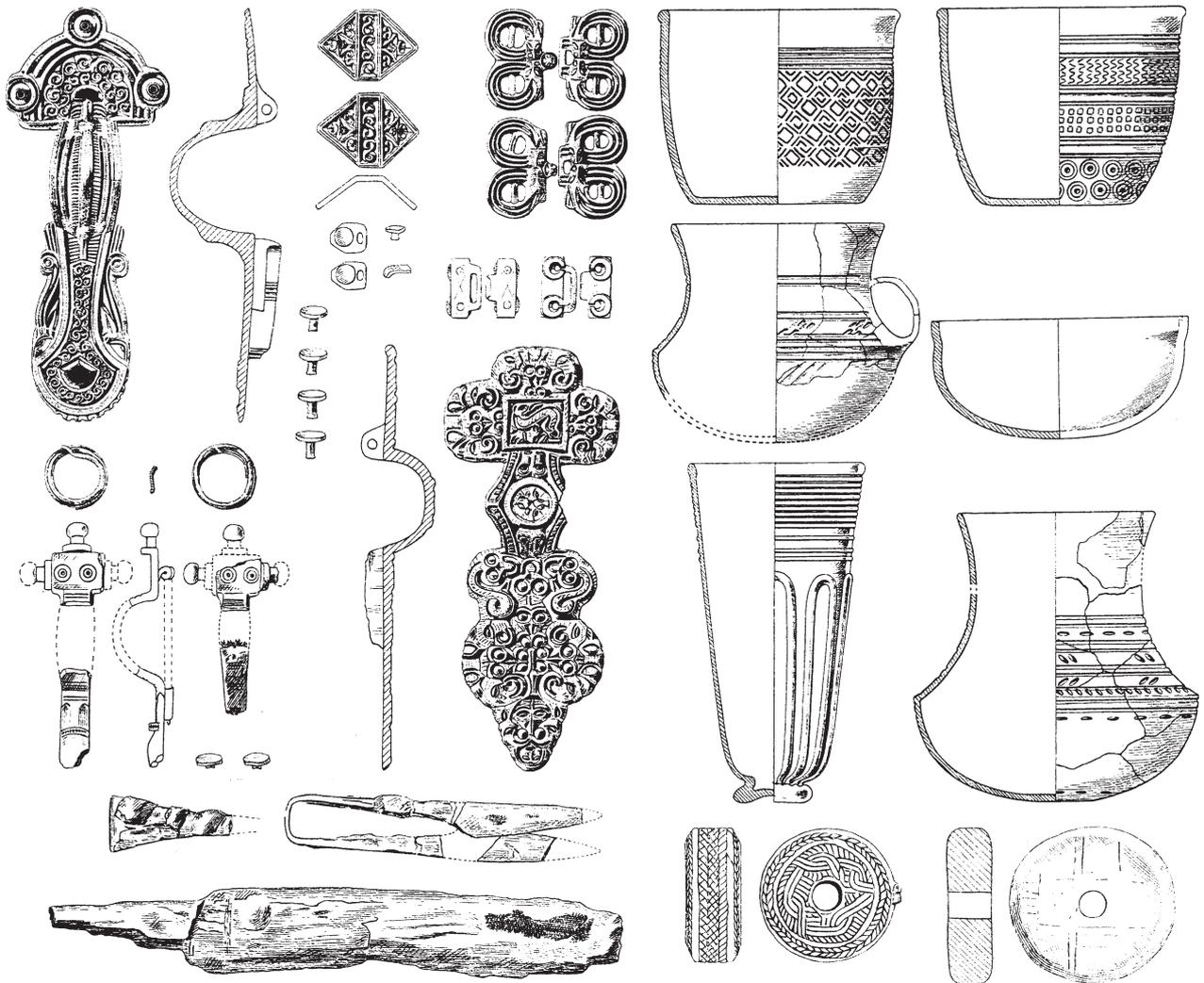


Fig. 36. Key find, phase D1, Ommundrød, Vestfold (C29300). After *Inventaria Archeologica*.

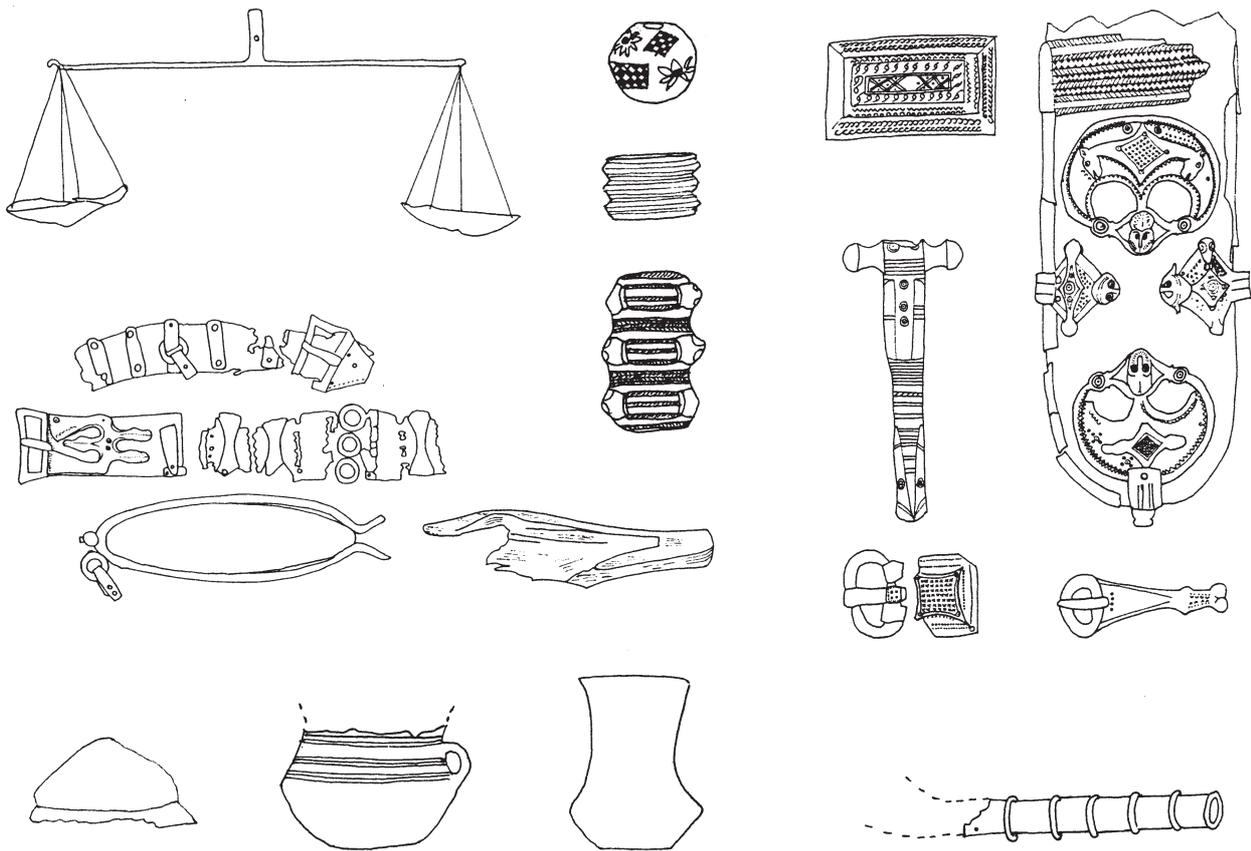


Fig. 37. Key find, phase D1, Øvre Veien, Buskerud (C325-339, 343-348). Drawings after Keyser 1837 (the drinking horn mount) and Reichstein 1975.

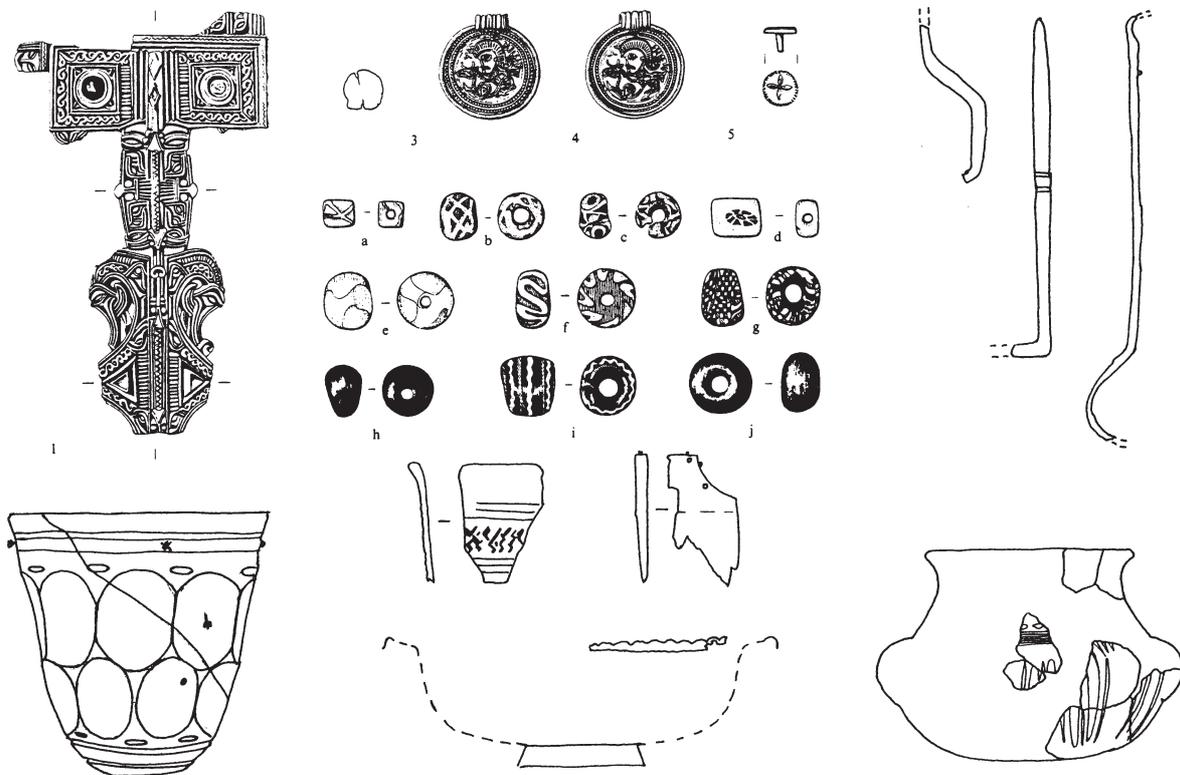


Fig. 38. Key find, phase D2, Sotvedt, Telemark (C9440-49, 9811). After Straume 1987.

Table 5. The graves with Westland cauldrons classified according to their chronological reliability. Criteria (modified) after Näsman 1972. Cauldrons without associated finds are not listed.

Reliable find combinations	Unreliable find combinations	Doubtful find combinations	Useless find combinations:
15. C10142 Ringdal, Hedrum, VF. 2	1. C15596 Østby, Rakkestad, ØF. 2	2. C9228 Dyster, Ås, ØF. 2	11, 12 C18898 Skåra, Tjølling, VF. 2
29. C 26001 Snartemo V, Hægebostad, VA. 2D	4. C15734 Farmen, Vang, He. 1A	5. C15963 Vestre Hanum, Vang, He. 1B	18. C8433 Børte, Tokke, Te. 2C
46. S1480 Tu, Klepp, Ro. 2D	26. C23256 Eik, Søgne, VA. 1B	30. C28026 Snartemo II, Hægebostad, VA. 2D	19. C20933 Heggestøl, Vinje, Te. 1C
48. S4058 Sør-Braut, Klepp, Ro. 2C	27. C9004 Ø. Vemmestad, Lyngdal, VA. 2	31. C21945 Ø. Egeland, Kvinesdal, VA. 2	22. B4302 Lunde, Farsund, VA. 2D
49. S7990 Midt-Salte, Klepp, Ro. 2D	38. S3552 Sør- Hogstad, Sandnes, Ro. 2D	35. B3159 Lunde, Sandnes, Ro. 2C	24. C4326 Vestre Hauge, Farsund, VA. 2
51. S8635 Vestly, Time, Ro. 2	42. S4355 Bø, Hå, Ro. 1A	39. S3572 Usken, Sandnes, Ro. 2C	37. S1522 Hogstad, Sandnes, Ro. 2C
64. B7956 Hovland, Etne, Ho. 1B	82. C6320 Stadheim, Vik, SF. 1A	71. B6597 Opedal, Ullensvang, Ho. 2D	40. S2246 Hinna, Stavanger, Ro. 1B
65. B7665 Kjellasvik, Ølen, Ho. 2	92. B3359 Indre Bø, Stryn, SF. 2	85. B317 Hauge, Luster, SF. 2D	44. C3302 Vasshus, Klepp, Ro. 2
69. B3358 Sæbø, Kvinnherad, Ho. 2C	98. B2892 Blindheim, Giske, MR. 2C	90. B4259 Sele, Naustdal, SF. 2C	47. S2452 Sør- Braut, Klepp, Ro. 2
70. B4207 Prestegården (the Vicarage), Jondal, Ho. 2	99. B5669 Blindheim, Giske, MR. 2C		53. C22814 Kirke- Sola, Sola, Ro. 2
83. B8983 Hamre, Leikanger, SF. 2C	100, 101 B10790 Jangarden, Giske, MR. 2C		55. S8200 Foldøy, Suldal, Ro. 2C
96. B6539 Kyrkjeeide, Stryn, SF. 2	104. C5870 Åk, Rauma, MR. 2C		58. B605 Avaldsnes, Karmøy, Ro. 2C
102. B11546 Godøy, Giske, MR. 2C	111. T10176 Hol, Inderøy, NT. 2C		67. B308 Seglheim, Kvinnherad, Ho. 2C
			72. B316, Øvsthus, Osterøy, Ho. 2D
			73. B4626 Revheim, Osterøy, Ho. 2D
			74. B5869 Solheim, Radøy, Ho. 2D
			75. B6086 Olsvoll, Radøy, Ho. 2D
			78. B4003 Skardet, Lindås, Ho. 2D
			79. B4256 Skardet, Lindås, Ho. 2C
			93. B3516 Stauri, Stryn, SF. 2D
			95. B6197 Ytre Bø, Stryn, SF. 1
			97. B5856 Vinje, Stordalen, MR. 1A
			103. C3168 Åk, Rauma, MR. 2C
			105. T12314 Sandnes, Rauma, MR. 1B

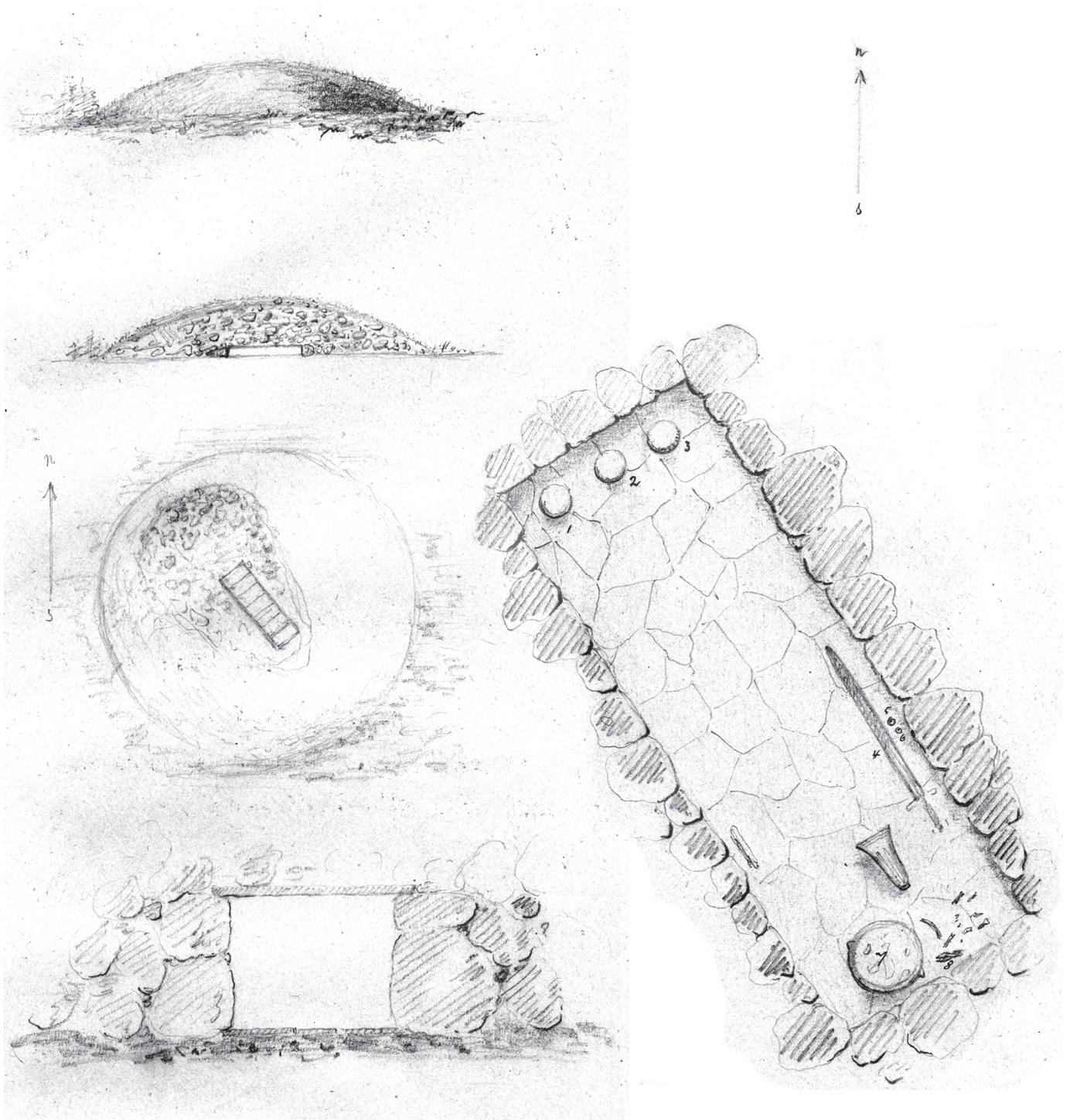


Fig. 39. The pencil drawings by T. Helliesen in the Register of the Archaeological Museum in Stavanger, recording the excavation of find no. 46 in 1882.

(1959). There is no disagreement on the dating to C3; Ilkjær has placed the Stadheim belt in his group no. 11, which he dates to C3 (with a possible continuation into D1), and the type 1A seems to belong to the C3 in Norway.

A grave with a type 1A cauldron, no. 97 Vinje, *MR* (Pl. 48) has been placed in the category of useless finds,

despite the seemingly accurate description of the find circumstances (Shetelig 1912a:35). There are no records in the archives at the Bergen Museum that give any clues to how this information was retrieved. The grave is a comparatively richly furnished female grave, with several finger rings, a bronze needle box and 25 beads among other things. The grave has been dated to C2 by Lund Hansen,



able to attribute the type 1D to C3 as well. There is one Danish find with a cauldron that (judging by the photographs) belongs to the type 1D, the grave no. 1 from Sanderumgård (Albrectsen 1968:69, pl. 21a-c, Lund Hansen 1987:420, Appendix III: no. 17). This is a double grave, richly furnished and it is dated to C1b, which must be correct. It is then possible that the type 1D is older than the other class 1 cauldrons, but as long as there are no datable Norwegian finds, this cannot be decided.

Type 2C is represented by five reliable find combinations. One of them, no. 48, Sør- Braut, *Ro* (Pl. 29) contains a bone hairpin and a spindle whorl; neither of these can be more closely dated. The grave from Godøy, no. 102, is the find with a Westland cauldron that is richest in gold in Norway (Pl. 51). It was excavated in 1962 by the archaeologist P.J. Lavik. The grave contained a gold medallion, an imitation of a medallion struck under the emperor Constans (337-350), which thus gives 337 as a t.p.q. On top of the cremated bones in the cauldron lay a neck ring with splayed ends, wound up in a spiral 2 ½ times. These neck rings are difficult to date as they are few and far between. They seem to have a counterpart in the *Kolben* armllets, which have a wide time range, from C2 to the end of the Migration Period (Kyhlerberg 1986:68-70). The other finds in the grave do not throw more light on the dating either; the pottery is too fragmented, the bone arrows cannot be closely dated and the silver vessels are unique. The best item for dating, thus, is the medallion. Given time for the original medallions to be issued and to circulate, plus time for the imitation(s) to circulate and be used, a date to the transition period C3/D1 (i.e. AD 375-400) is reasonable.

The grave from Hamre, *SF* (no. 83, Pl. 45) was discovered by the landowner and subsequently examined by the archaeologist P. Fett in 1938. The grave contained a cut glass beaker (Straume type IX), a solidus with a loop attached, struck for Theodosius I (379-395) and two bone combs with comb cases. T.p.q. is 379, and as the solidus is quite worn, the burial date should be well within D1.

The graves no. 69 Sæbø, *Ho* (Pl. 39) excavated by the amateur archaeologist I. Ross and no.70 Jondal, *Ho* (Pl. 40) excavated by the amateur archaeologist B.E. Bendixen both contain comb fragments, that only can be dated to D in general. The grave from Sæbø also contains a very worn solidus, with a loop, struck under Gratian (373-383), which could thus be dated to D1. (The fragmentary silver mount, decorated in Style I (Shetelig 1912a: fig. 197) was found in the same mound, but does probably not belong to the cauldron grave. The information in the «Tilveksten» is contradicting the information in the printed report (Ross 1880), which states that there were two separate cremation layers. One covered the chamber, the other contained the silver mount, a bronze strap

mount and a small bronze ring.

Among the unreliable finds, the grave from Hol, *NT* no. 111, was excavated by the archaeologist K. Rygh in 1912. Rygh states very clearly that the grave contained a double burial, but he was not able to detect any difference in time between the two, which were both male burials. The grave was a large stone cist that was placed directly on the solid rock, and all the items in the grave were found on the rock face, under approximately a foot of dark soil. There were no double sets of any item in the grave, so perhaps it has been misinterpreted as a double burial. However, one of the men (if there indeed were two) had been given weapons as grave goods, classified by Bemmann & Hahne as belonging to their Øvsthus or Snartemo group, i.e. D2 (Bemmann & Hahne 1995:326, 553, no. 394).

Another unreliable find is no. 98 Blindheim, *MR* (Pl. 49) with a cut glass beaker and a pearl-edged bowl of the late type, dated to D2 (Werner 1962:61).

Two graves, that have been classified as doubtful and useless, respectively, have had a prominent place in the chronological discussion on the relationship between the Late Roman Iron Age and the Migration Period. Both graves contain Westland cauldrons of type 2C, with high, straight necks, no. 104 Åk and no. 18 Børte. The find from Åk (Pl. 53) has an early cruciform brooch (Reichstein's type Åk), a five-armed swastika brooch, a handled pot and a medallion which is a copy of an original struck under Magnentius (350-353). The find combination can be dated to C3. As Danish parallels, the finds from Nyrup and Bøttekildegård may be mentioned (cf. Norling Christensen 1957, cat.nos. 2 and 116). The other find, no. 18, from Børte (Pl. 8a, b) contained bronze mounts for a belt, probably belonging to the Vøien type and a large bow-knob brooch that according to Bemmann & Hahne antedates the Nydam brooches and thus would belong to C3. (Bemmann & Hahne 1995:312).

The grave Snartemo V, no. 28, (Pl. 13), is one of the three reliable find combinations that can provide a dating of the type 2D. Hougen exhaustively treated the find in his monograph on the Snartemo Finds (Hougen 1935). In order to date the find, Hougen concentrated on the weapons, particularly the sword with its hilt covered with gilt foil decorated in Style I. According to Evison (1967:68, fig. 15 f, pl. X) and Steuer (1987:fig. 9, 233 no. 24), the sword is one of the earliest ring-pommel swords, and should be dated to the early 6<sup>th</sup> century. But the find also contained a bucket-shaped pot with a complex interlace decoration that completely covered the surface of the pot, which is a trait Bøe considered to be late and should be dated to the mid 6<sup>th</sup> century (Bøe 1931:195). Magnus has reached the same conclusion as Bøe (Magnus 1984:153).

The find no. 46 from Tu, *Ro* (Pl. 23-25) was excavated in 1882 under the supervision of the curator Helliesen, who recorded the excavation with neat pencil drawings in the Register (fig. 39). The find contained a glass beaker with trailed glass threads, pottery, sword, lance and shield boss. As mentioned elsewhere p. 17 the lance is now «reconstructed» with gypsum, making a classification impossible. The shield boss, however, is of the pointed type, belonging to Bemmann & Hahne's group VII (not group VI b). Bemmann & Hahne have dated the find to the Mollestad group, i.e. C3, which is incorrect, and would not tally with the glass beaker.

The last reliable find-combination, no. 49 Midt-Salte, *Ro* (Pl. 30) contains sherds from a bucket-shaped pot, not datable, and fragments of four three-layer combs, one with a convex upper part, the others being straight. There are straight combs in the grave no. 44 Vasshus, *Ro* as well, but a closer dating than the Migration Period is not possible. To get an impression of the time span of type 2D, we will have to resort to the doubtful find-combinations, as the find no. 38 Sør-Hogstad, *Ro* cannot be more closely dated than to D.

The doubtful find-combinations with cauldrons of type 2D are no. 29 Snartemo II, *VÅ* (Pl. 14), no. 71 Opedal, *Ho* (Pl. 41) and no. 85 Hauge, *SF*. No. 29 Snartemo was treated by Hougen in the same publication as Snartemo V. He reached the conclusion that the graves were almost contemporary, i.e. D2.

The find no. 71 from Opedal contains, among other things, four long combs and a bone skin knife. One of these combs is almost identical to a comb, found in grave II in the mound at Byrkje, Voss, *Ho* (fig. 40). The Byrkje II grave is dated to late D2 by a bucket-shaped pot with stamped bead decoration (cf. Solberg 1981:163) and the same date for the Opedal grave is not unreasonable.

The grave no. 85, Hauge is a very old find that came to light in the 1820's. The find comprises the cauldron, a mosaic glass bead (now lost) and a C-bracteate (Pl. 46c, d). With all reservations, the C-bracteate could date the find to D2 (cf. Bakka 1973:64ff).

There are also a few finds where the cauldrons only can be classified as belonging to the class 2, the true Westland cauldrons. Among the reliable find-combinations is the grave no. 51 Vestly, *Ro*, a goldsmith's grave with a large number of tools, as well as weapons, a cut glass beaker, a gold foil decorated in Style I, pottery, etc. The find is dated by the bucket-shaped pot with interlace and stamped bead decoration to late D2 (Pl. 36h). Bemmann & Hahne have classified the weapons as belonging to their Vestly group, which also marks the beginning of Style I in Norway.

Finally, there are three weapon graves, which from a source critical point of view are deemed useless but that

still might deserve mentioning. The grave no. 44, Vasshus, *Ro* (Pl. 20-22) contains a cut glass beaker and a fragmentary pearl-edged bowl. The weapon set includes a single-edged weapon knife, which points to a very late date, i.e. the end of D2. Bemmann & Hahne have placed the grave in their Vestly or Øvsthus group, which would rather point to the beginning of D2, despite the fact that the grave also contains a wide-bladed lance, which they claim is a weapon that first occurs in the Øvsthus group. A late date would also apply to no. 47 Sør- Braut, *Ro* (Pl. 25-28) (Bemmann & Hahne 1995:no. 233, Snartemo group). Finally we have the grave from Skåra, *VF* (no. 11-12, Pl. 5-6) which contained a glass beaker with trailed molten glass threads (like R338), two bronze bound wooden buckets, two Westland cauldrons and a cruciform brooch. The weapons and the cruciform brooch date the grave to D2.

There are 29 cauldrons possible to date from find-combinations. Out of these, only 11 graves were deemed as reliable closed finds. Based on all the 29 datable find-combinations, I have used type-similarity to date the other cauldrons. Thus all cauldrons belonging to class 1 are dated to C3 and all cauldrons of type 2D are dated to the period D2, as none of the dated cauldrons fall outside these periods.

The problem, then, lies with all the undated cauldrons of type 2C and the cauldrons that can only be classified as belonging to class 2, since they could belong to any of the periods. The unclassifiable cauldrons cannot be dated. The well-preserved cauldrons of type 2C, on the other hand, might tentatively be dated based on similarity, as there seems to be a tendency towards shorter necks through time. The following cauldrons could then be placed in C3: nos. 58, 67, 94, 100, 101, 103, 107 and 109. The cauldrons nos. 24, 33, 50, 55, 62, 68, 72, 79, 86, 90 and 99 could be placed in D1. The result of this attempt to date the cauldrons is shown in fig. 40. In the figure the poorly preserved cauldrons type 2C and the unclassifiable cauldrons class 2 with no accompanying artefacts are omitted. All other finds have been dated, regardless of their reliability, with the reliable finds given in bold.

### The distribution of the Westland cauldrons through time

Now that the time span of the different types has been established, the question then arises whether this has implications for the geographic and temporal distribution of the Westland cauldrons. All finds have been mapped according to the result in fig. 41. Fig. 42 maps the distribution of the Westland cauldrons during C3. Fig. 43 shows the distribution of the Westland cauldrons

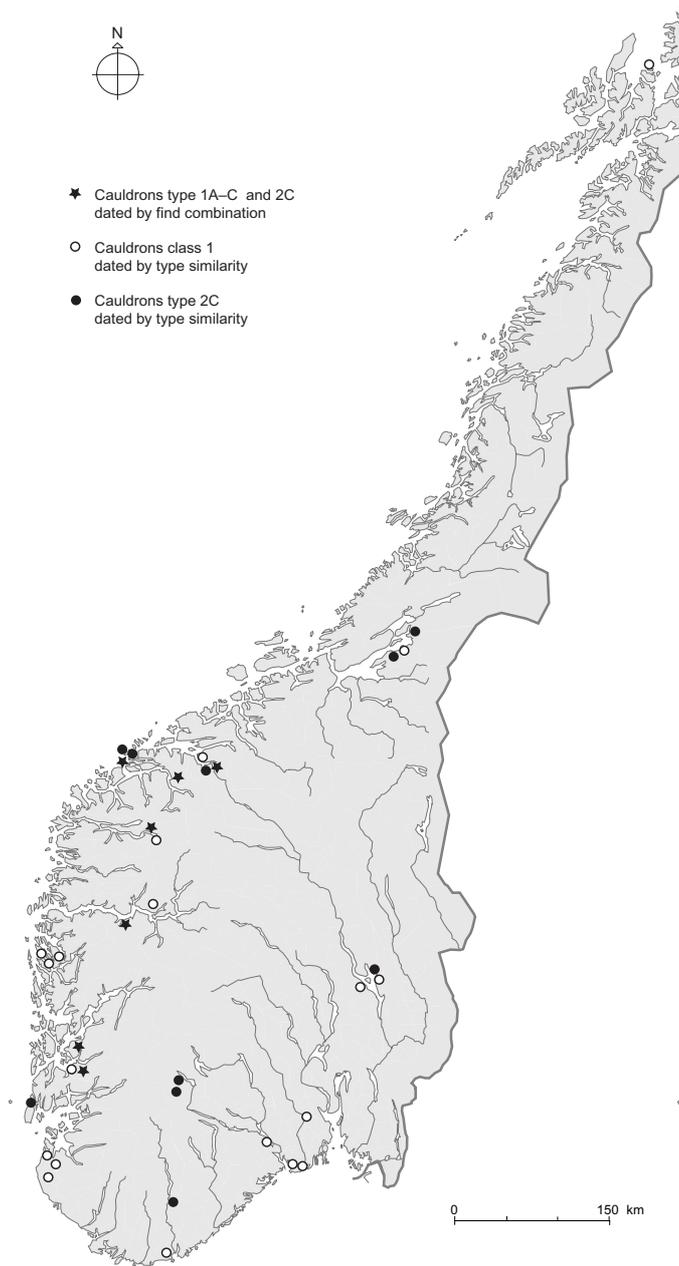


Fig. 42. The distribution of Westland cauldrons, phase C3.

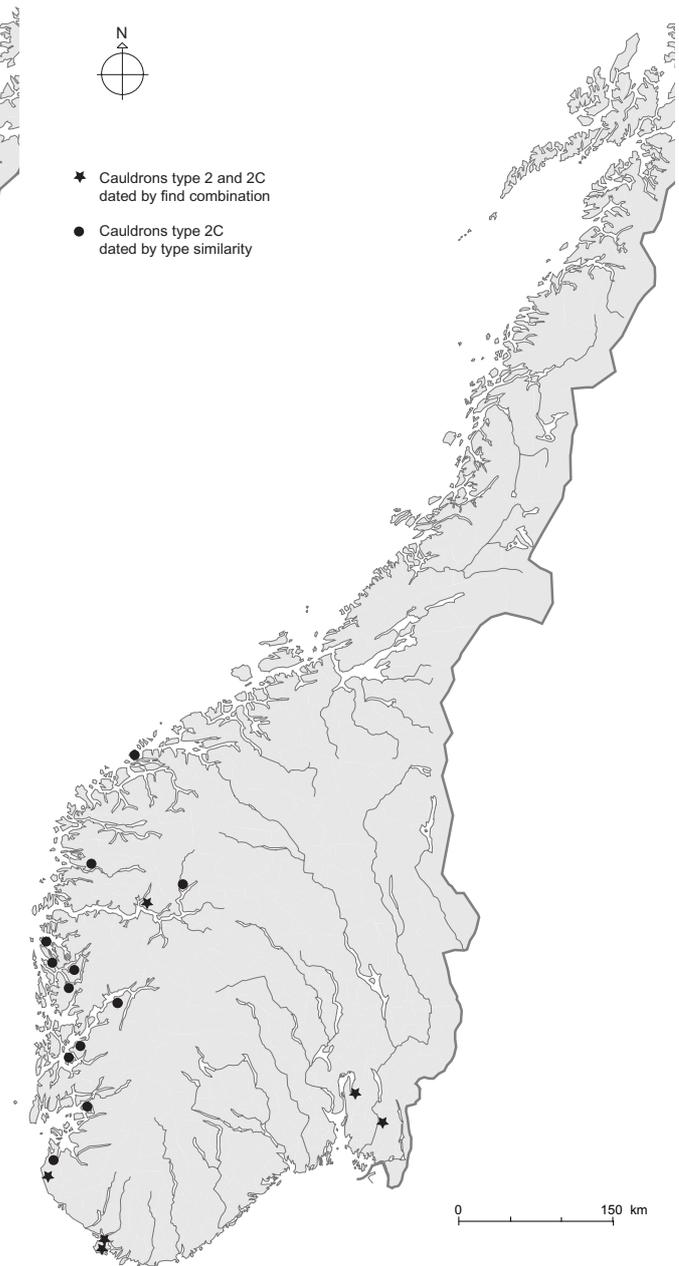


Fig. 43. The distribution of Westland cauldrons, phase D1.

during D1. Fig. 44 shows the distribution of Westland cauldrons in period D2.

In C3 there is a fairly even distribution of Westland cauldrons. Eastern and Western Norway, as well as the Trøndelag and Northern Norway have cauldrons from this period. In D1 Eastern Norway and the Trøndelag are less well represented, and there are no finds from Northern Norway. The cauldrons are restricted in distribution to the West coast. In D2 this is further accentuated.

There can be no doubt that this reflects the general shift from east to west in the frequency of grave finds from the Late Roman Iron Age through the Migration Period (Vinsrygg 1974: 46, Magnus & Myhre 1976: 254, pp. 333). Whether this also reflects a shift in «trade routes» or just an intensified contact between Western Norway and the Continent (here defined as Germany, the Netherlands, Belgium and France) must remain an open question, but it is obvious that the gateway to Norway in the Migration Period was South-western Norway.

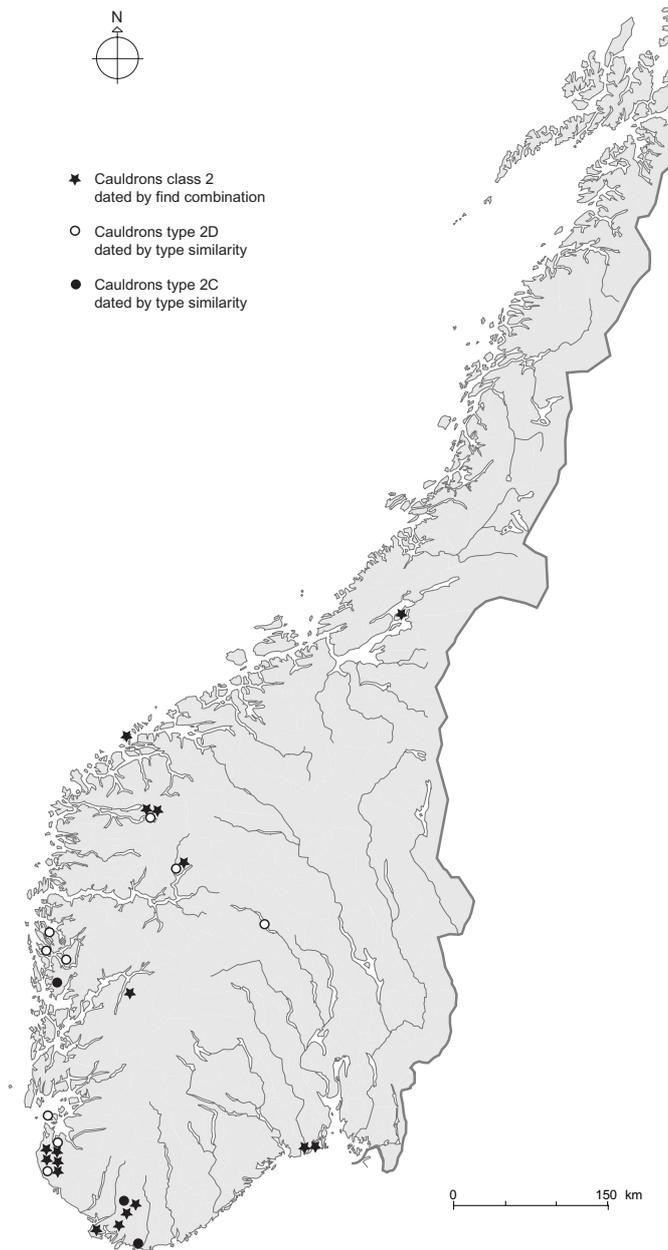


Fig. 44. The distribution of Westland cauldrons, phase D2.

### Conclusion

By using the reliable find-combinations it can be demonstrated that the Westland cauldrons occur in Norway over a period of about 250 years.

The types 1A-C can only be found in Late Roman Iron Age contexts, and only in the phase C3 in Norway. Type 1D, represented by only two cauldrons in Norway (nos. 36 and 112) are bog finds and impossible to date. Based on the similarity of the types, however, it is prob-

able that type 1D is contemporary with the type 1A-C, but this cannot be proved until we have reliable find-combinations.

Type 2C is dated by reliable find-combinations to C3 and D1, but it is highly probable that the type still existed in D2, as indicated by nos. 26, 37, 98 and 111.

Finally, type 2D can only be dated to D2.

The chronological investigation has thus shown that the cauldrons belonging to class 1 indeed are early Westland cauldrons. Type 2C was in use for the longest time, while it should be emphasized that there is no evidence for the occurrence of the type 2D before phase D2, not even in the useless find-combinations.

The result of the chronological investigation is represented graphically in fig. 45.

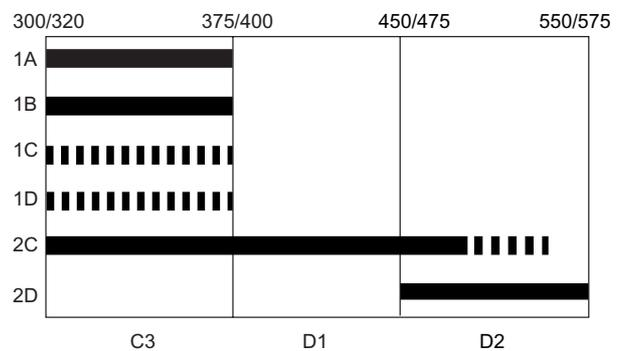


Fig. 45. The time span of the Westland cauldrons found in Norway.

### Footnotes

<sup>1</sup> Danish key finds for C3 as listed by Straume: Nyrup (Straume 1987, no. 87), Lundby (Norling-Christensen 1957, fig. 25) and Maagård (Norling-Christensen 1957, fig. 23). Swedish key finds C3: Hallbjens- Bjärges (Straume 1987, no. 62) and Lilla Jored (Sällström 1943).

<sup>2</sup> Hines 1993, where class A clasps are not exclusively dated to the Migration Period; the smallest ones are dated to C3, but do not seem to occur in Norway.

<sup>3</sup> I should point out that I discussed this question with Bakka at the beginning of the 80's. He informed me that he had finished his phase division before Reichstein published his work. The dating of the older cruciform brooches to the early Migration Period was given to him as a personal communication from Reichstein himself. He expressed his frustration over the latter's printed classification, but never had the time to revise his phases before his death.

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## CHAPTER 5.

# Production

The question of where the Westland cauldrons were produced has been raised several times. The first to do so was Lorange in 1873 (Lorange 1873:221). In his opinion, Westland cauldrons were produced in Norway under influence from the Roman Empire and with the handled pot as a local inspiration. The idea of a Norwegian production was forcefully rejected by Undset (Undset 1880:141). He claimed that the Westland cauldrons originated in Western Europe, and listed a number of cauldrons from north-west Germany, Belgium, northern France and England (Undset 1880:141, footnote 2). This opinion has never been met with serious opposition. Bjørn made an attempt to pinpoint the production centre (Bjørn 1929:29), but admitted that the scattered distribution was not very helpful. Despite this, he argued that «the Westland cauldrons on the Continent are associated with Frankish graves, and hence are a product of Frankish industry». Decisive in his view was their close association with the pearl-edged bowls, which he claimed were universally accepted as Frankish. He saw both the Westland cauldrons and the pearl-edged bowl as products of a flourishing brass industry in the Maas – Aachen area (Bjørn 1929:31). Since then, no one has ventured a proposition as to the production area for the Westland cauldrons.

The question of production area is still an open one, and will be treated later. But equally interesting is how they were produced, a question that earlier research has treated *en passant*, mostly based on assumptions.

### Metal analyses

Metal analyses undertaken in the last decade have cast a new and interesting light on the metals used for a variety of Roman imports, including the Westland cauldrons (e.g. Bollingberg & Lund Hansen 1993a, 1993b, Bollingberg 1995a, 1995b, Straume & Bollingberg 1995). The analyses of the major components of the metal showed that several different copper alloys were used. Both binary alloys (i.e. principally consisting of two metals) and ternary ones (i.e. principally three metals) were used for Westland cauldrons. Thirty-five cauldrons were analysed and the alloys were classified according to the copper al-

loy groups proposed by Riederer (Riederer 1984:221). One alloy group consists of tin-bronzes with a very low tin content of 1-5%. This alloy is found in eight cauldrons belonging to class 1. The next group comprise tin-bronzes belonging to Riederer's group 3 and 4, with medium or high tin content (group 3: 5-10% tin, group 4: >10% tin). This alloy is found in seven cauldrons. There is also one alloy group of lead-tin bronzes, Riederer's group 12 and 13 which is found in sixteen cauldrons. Group 12 has low tin and lead content of 1-10%, group 13 has a low lead content (1-10%) and a high tin content (10-20%). There is also a small group of brass cauldrons, one with 3.5% tin and 18% zinc, and a second with 7% tin, 5% zinc and 2% lead (Bollingberg & Lund Hansen 1993b:31). The analyses of the major components of copper alloys used for Westland cauldrons show that the alloy types used were both varied and of the same composition as those normally used in Roman and Provincial Roman metalworking. It is worth noting that some of the cauldrons belonging to class 1 are made of a copper alloy with a very low tin percentage, thereby being close in resemblance to the Eastland cauldrons. The available analysis of the Eastland cauldrons show that with one exception they all belong to Riederer's alloy group 2, i.e. 1-5% tin (Bollingberg 1995a:301, table 11:6). The typical alloy of 12 Westland cauldrons of class 2 shows a tin-bronze alloy, an alloy that also had been used for Westland cauldrons in the Neupotz hoard (Bollingberg & Lund Hansen 1993a:460, tab.3, 458, tab.1).

The minor trace elements (i.e. less than 1%), on the other hand, gave another picture. The alloys used for the Scandinavian Westland cauldrons contain silver and, most notable, gold in concentrations not found in the cauldrons from Neupotz. The mean value gold content in Scandinavian cauldrons is .0089%. In Neupotz it is .0005%. The silver content is .125% and .066% respectively. This would mean that the ore used for Scandinavian and Continental cauldrons was not the same, and/or that the manufacturers of the metals used in Scandinavian Westland cauldrons did not know the process of cupellation (i.e. the extraction of noble metals from baser metals such as copper or lead). The gold is probably present as a trace element in the copper ore, while the silver source

might be galena (PbS), which also contains bismuth (Bi) and antimony (Sb) as trace elements. Galena was the principle source of lead in antiquity.

The various alloys have different properties, which obviously were well known by the craftsmen, as is demonstrated by the use of several alloys for different parts of the same object (Bollingberg & Lund Hansen 1993b:32). By adding lead to the bronze, one gets a slightly softer metal. But lead increases the fluidity of the molten metal, which makes it suitable for complex cast work. The relative softness of the cold alloy is caused by the fact that lead does not enter into the crystalline structure of the alloy but is present as minute globules. Inclusion of arsenic or antimony, on the other hand, results in a harder alloy, provided the concentration does not exceed ca. 3%. In higher concentrations the alloy will be brittle. The tin-bronze alloy used for Westland cauldrons<sup>1</sup> (Bollingberg 1993:460, table 3) has a melting point at ca. 1000°C. The tin in the alloy would both have lowered the melting point and made the cold alloy considerably harder than pure copper. The lead would have made the molten alloy slightly more fluid, and the cold alloy softer. This would not be desirable for alloys intended for tools with cutting edges, but for cauldrons the slightly softer metal would be no disadvantage, even if the tensile strength is reduced by lead (Tylecote 1962:56, table 19). Zinc is present in such a small concentration that it hardly could have had any effect on the properties of the alloy.

Bronze is an alloy essentially for cold working after it has been cast. It can be drawn and hammered with relative ease. By hammering the bronze becomes harder and also more brittle. If one hammers long enough, the bronze will become so brittle it will crack. To avoid this, the metal has to be annealed, i.e. heated to a dull red and allowed to cool. In this process a new crystalline structure is formed, quite different from the cast structure, and the metal will again be soft, malleable and ductile. If the intended object requires a lot of hammering or other cold working, this process may have to be repeated several times. It does not matter at what rate the metal is cooled after annealing; quenching gives a slightly softer metal than slow cooling, but the difference has no practical significance.

## Metalworking

The basic methods for working metals can be divided into hot working, such as casting and forging, and cold working. In cold working the methods whereby metal is removed (such as engraving or turning) are differentiated from those where the metal is moved (such as by hammering, drawing, tracing or spinning).

## Casting

There are several different ways of casting, but for casting vessels the method of hollow casting would be used. This can be done in two ways, depending on the material used. One method is the false core casting, where the object to be cast is modelled in clay and a piece-mould is built up around it. The model is removed and shaved down to provide space for the molten metal. The mould pieces are then assembled. If there were many mould pieces it might be necessary to have a mother mould to keep the piece mould in register. When casting closed forms the model would have to be broken after the casting was done. It is also possible to use stone moulds for casting. The outer form of the object to be cast is cut in soft stone. The forms may also be turned. Turned stone forms for casting wine ladles have been found in France, dating to the 1<sup>st</sup> cent. A.D. These forms are made of limestone in two pieces that can be accurately joined together (Mutz 1972:38). Unfortunately there are no cores preserved so we do not know anything about the material used for the cores or the thickness of the cast items.

## Non-cutting techniques – moving metal

By hammering or spinning the metal can be shaped without any of it being removed by cutting. Using sheet metal a vessel can be made either by sinking or by raising (fig. 46). In the case of sinking the metal is hammered from the inside, usually into a shallow depression cut into the surface of the anvil, a wooden block or the like. Sinking causes the metal to be thinned in the most worked surface. By raising, the metal is hammered from the outside on an anvil or a dome-shaped stake. By raising, the metal gets thicker in the most worked part, due to the compression.

Sinking has limited utility since the metal is thinned very quickly. Forms with depths greater than the radius can hardly be made. Raising, on the other hand, allows much more hammering and is a more versatile technique.

Spinning is virtually a mechanical form of raising where the metal is pressed to the desired form while rotating. This requires a lathe and a forme (although Cave

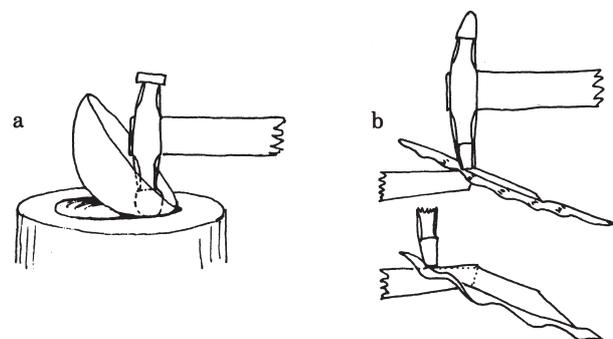


Fig. 46. Sinking (a) and raising (b). After Hodges 1968.

claims that in some instances the metal can be pushed into shape without this support (Cave 1977:85)). In order to make a closed vessel, i.e. a vessel where the orifice diameter is lesser than the maximum diameter, the forme must also be in sections that can be dismantled. A metal disc is mounted on a lathe (fig. 47) and is forced down on to the forme or chuck with round-ended burnishers. The headstock A is fixed, carrying the mandrel C, which is free to rotate. The forme is mounted on the drive mandrel. The tailstock F is adjustable and can be moved back and forth. When mounting a metal sheet in the lathe the tailstock is moved so close to the headstock that the sheet is clamped between the forme and the cup centre. The cup centre does not rotate. The tailstock is securely fixed in this position. The lathe is rotated and the burnisher is braced against the tool rest, pressing the metal against the forme by moving the burnisher back and forth. To avoid pleating one would normally use a back-stick, supporting the metal on the inside. The back-stick would be a piece of wood, approx. 5 cm wide and 20 cm long. It is also important to grease the metal to reduce friction. Wax can be used. Spinning demands attentiveness (one might easily lose a finger), dexterity and great force in the pressing, hence the long handles of the burnishers (up to 0.5 m).

#### Cutting techniques: removing metal

Working where metal is removed includes engraving and turning. In these processes metal is cut from the object, demanding tools that are considerably harder than the metal to be worked. It is quite possible to give an object its finish by turning (i.e. cutting away metal shavings) until the object has the desired form and thickness.

For spinning and turning it is necessary to employ fairly advanced equipment. Softer materials like wood or bone can be turned on a very simple cord- or pole lathe. On the other hand, for heavy work in metal, be it turning or spinning, a lathe with gears for power-transmission would be necessary.

#### The production of Westland cauldrons

There are no detailed technical studies on the production of Westland cauldrons, or any other types of larger bronze vessels. Willers claimed that the Hemmoor buckets were cast and then turned, a proposition that is quite reasonable but has been in no way verified (Willers 1901:141f). Eastland cauldrons were hammered: the traces of the hammer are clearly visible on several cauldrons. C.F.C. Hawkes discussed English bronze cauldrons, quite similar to the Westland cauldrons. Hawkes was also interested in the production of the cauldrons and mentions several times the possibility of the cauldrons being spun on the lathe (Hawkes 1951:180,184,187).

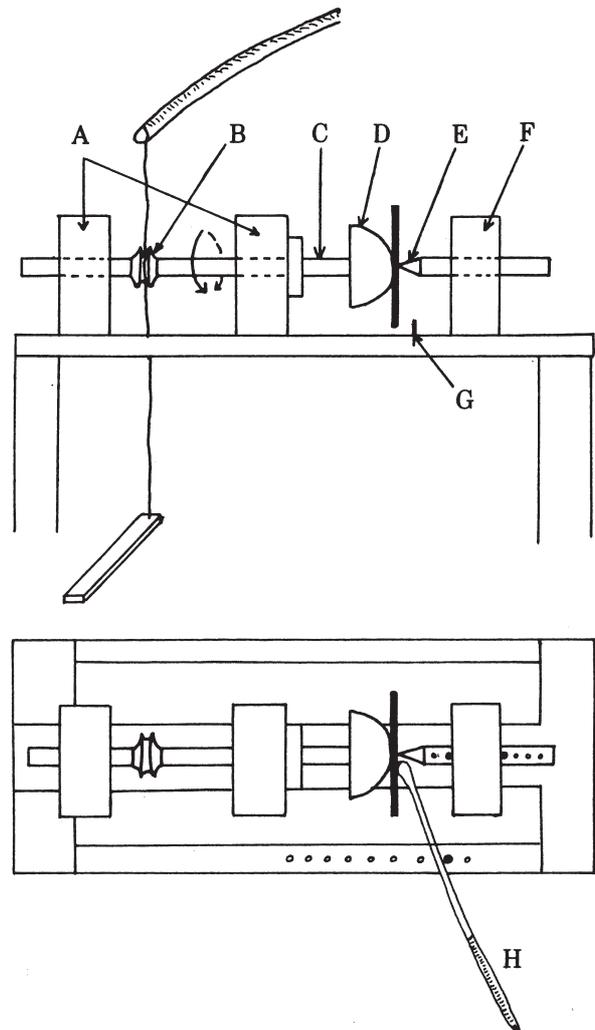


Fig. 47. Sketch of a simple pole lathe. A- headstock. B- drive mandrel. C- mandrel. D- forme. E- cup centre. F- tailstock. G- tool rest. H- burnisher. After Hodges 1968.

Central to this discussion is a study by the Swiss engineer Mutz (1972). It is primarily concerned with so called saucepans and strainers, but other vessel groups such as bowls, plates and jugs are discussed, as well as items like screws and nuts. The investigations carried out demonstrated that a large proportion of the objects assumed to be cast, indeed were cast but were also treated on the lathe, which had not been observed before. All the saucepans examined by Mutz had been turned. The investigation also showed that other materials had been turned, including stone and glass as well as wood and bone.

The various techniques leave different traces. Casting is very difficult to identify with the naked eye. If the object has been subject to subsequent working or polishing, casting might not be detectable at all, unless a metallographical sample is examined under a microscope.

Microscopic studies can also provide information on the production techniques. A study by Bollingberg and Buchvald revealed that the lead inclusions in the alloy

had been flattened out, demonstrating that the cauldrons in question were cold-worked (Bollingberg 1995b:627).

Hammering is quite easy to see; in many cases the traces of the hammer are still visible. If the hammer traces have been removed by planishing, it would still be possible to see them on an X-ray.

Spinning and turning are very difficult to distinguish. According to Hodges (1968:75) a turned work is thicker and of a more rigid metal, while the thickness of spun work usually shows an even graduation from base to rim. Also, complex profiles such as where the metal has been folded 180° to form flanges would be proof of spinning (Cave 1977:86). Whether spun or turned, the object will have a centre mark on the exterior of the base. If the object is spun, there will be no centre mark on the interior of the base, which would be the case if it had been turned. It should be noted that the absence of centre marks, be it on the interior or the exterior, does not exclude the possibility of turning/spinning, since these marks may have been removed by planishing. *The only positive correlation between centre marks and working is that the presence of an interior centre mark provides evidence of a turned work.*

Traces of the working process are visible on several Westland cauldrons. Sixteen cauldrons show clear signs of hammering. Fourteen of these belong to the class 1 cauldrons, one is undeterminable and one belongs to type 2D. Six cauldrons show only weak traces of hammering, all of them belonging to class 2.

Eight cauldrons have centre marks. Two cauldrons carry the centre mark on the exterior of the base (nos. 8 and 75), one has a centre mark on both the interior and the exterior (no. 48) and five carry the centre mark on the interior of the base (nos. 1, 55, 103, 107 and 110).

Twenty-seven cauldrons are decorated with groups of horizontal parallel lines and/or concentric circles. Three cauldrons are decorated on the interior and seven carry decoration on both the interior and the exterior<sup>2</sup>. The centre marks in the interior of the base of some of the cauldrons show that these cauldrons had been treated on a lathe. Whether this treatment was indeed turning or just the final polishing and decoration is not possible to decide. It does seem unlikely though, that the cauldrons (or some cauldrons) would have been truly turned all over on the lathe, since the metal is very thin and it would have been quite easy accidentally to tear or cut holes in the vessel wall. The transition base/body would be an especially critical spot, since the carination is the section of the vessel where the metal is stretched the most, i.e. has a very high stress tension. Had the cauldrons been cast to roughly the final shape, the metal would have been much thicker, and also of a more even thickness throughout the vessel. In fact, the thickest part of all the

cauldrons in the cases where this could be determined is the rim (class 2 cauldrons: thinnest 1.2–2.7 mm, thickest: 3.7–4.4, mean 2.2 mm) the thickness of the wall decreasing the nearer one gets to the base. The thinnest part of the cauldron is the carination, in some instances being not more than 0.1 mm. The thickness of the base is also varied, measurements ranging from 0.1 mm to as much as 1.5 mm with a mean of 0.5 mm.

The most probable manufacturing process would start with the casting of a plate, or possibly a wide, shallow bowl, which would then be hammered into shape by raising. This sounds quite easy, but demands a high degree of skill. Two major problems would arise. Since the cauldrons have a closed form, i.e. the orifice diameter is the smallest diameter of the vessel, this would have required the metal to be stretched towards the orifice, and not be allowed to expand sideways, for otherwise the neck would not have a smaller diameter than the maximum diameter at the base. Also, to bend the metal to form the carination without it cracking is proof of highly skilled craftsmen. This is the weakest spot of the cauldron, frequently dented and with corrosion holes, or even eaten away by corrosion altogether. The cauldrons of class 1 would only have needed a final planishing after they had been hammered to their final shape. Most cauldrons of class 2, however, would have been treated on the lathe as well, in which case a forme would have been necessary. The technical difficulties are the same as with raising, but producing a cauldron by spinning is a much faster process. Spinning without a forme is not possible, but one can burnish an object on the lathe without using any kind of forme or back-support.

The survey so far has showed that the class 1 cauldrons are hammered. Class 2 cauldrons give a more complicated picture, and would demand a very thorough study to reveal all the technical details. They show traces of both hammering and traces of having been treated on a lathe, which would point to the development of a production technique – not necessarily a more complicated one, but one that was faster and thus more efficient.

### Production area

The Roman origin of Westland cauldrons is a supposition that has grown into an archaeological truth. As mentioned above (p. 46) this opinion has been contested, but most of the scholars working with bronze vessels have settled for a production area within the Roman Empire, preferably *Germania Inferior*.

The wide variety of types within both class 1 and class 2 cauldrons that have been found outside Scandinavia makes a Scandinavian production location highly unlikely. There are no proofs whatsoever to show that Scandinavians had access to the technology necessary to pro-

duce bronze cauldrons. That the cauldrons were produced within the Roman Empire is therefore the only alternative.

It is possible that there were several areas of production, as indicated by the metal analysis. Unfortunately, none of the cauldrons found in very late contexts in Germany have been analysed. It would have been very interesting to know whether these late cauldrons have the same trace elements as the Scandinavian cauldrons, or if they instead resemble the Neupotz group. If the late cauldrons in Germany have a similar metal composition as the Scandinavian ones it would point to a common production area, and that there was a change in the production of copper alloy vessels some time between the late 3<sup>rd</sup> century and the early 6<sup>th</sup> century. A change in production could mean exploitation of new sources of metal ores, changes in smelting techniques or the relocation of production area(s), or a combination of any of these factors. If, on the other hand, the late German cauldrons are similar to the ones from the Neupotz hoard, that would point to the existence of different production areas, sources of metal ores or smelting techniques for Scandinavian and Continental cauldrons.

There seems to be a general consensus among archaeologists working with the west European material that the most likely production area for Westland cauldrons was in *Germania Inferior*, along the river Meuse in the area around Namur and Dinant (A l'aube 1981:127) where the production of copper alloy vessels survived migrations, the collapse of Roman power in the area and times of unrest, displaying a continuity from the late Roman Empire to the establishment of the Frankish kingdom (Gomolka 1978:228-229). The results of the metal analyses however, make this view problematic. Until further analyses have been undertaken, which also include post-Roman metalwork, the question of production area cannot be satisfactorily answered.

### Function

The function of the Westland cauldrons have not raised any particular interest among scholars, possibly because their function as cooking vessels has been seen as obvious. Eight Norwegian cauldrons have traces of soot, which shows that they have been exposed to fire. Many of them are also heavily worn, patched several times and with worn ear-holes. Looking at the cauldrons from a practical point of view we have vessels designed to be heat economical. They have a rounded base providing maximum surface exposed to the heat, and a restricted orifice to minimize heat loss without making it impractical to stir in. A cauldron with a rounded base is also stable when placed directly on an open fire. Apart from the traces of soot, mentioned above, there is no conclusive evidence in the Norwegian material for their function. There is however one find from Gotland, where the cauldron was found with a chain for suspension (Nerman 1935:89, fig. 611, Appendix III: no. 9). The Westland cauldron in the grave from Krefeld-Gellep (Appendix III: no. 32) is interpreted as a hanging cauldron, and a part of the kitchen utensils.

### Footnotes

<sup>1</sup> Average values in %: Cu 87.0, Sn 11.0, Pb 2.0, Zn .61, Fe .14, Ni .02, As .05, Sb .05, Bi .009, Ag .125, Au .0089.

<sup>2</sup> Cauldrons with interior decoration: nos. 36, 55 and 110. Cauldrons with decoration on both interior and exterior: 8, 39, 69, 72, 78 and 107. Cauldrons with decoration on the exterior: 1, 10, 11, 12, 17, 18, 20, 26, 58, 60, 75, 81, 83, 85, 87, 99 and 104.

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## CHAPTER 6.

# The significance of the Westland cauldrons in West Norwegian Early Iron Age society

### Introduction

More than two-thirds of the landmass in Norway has an elevation exceeding 300 meters above sea level, and only approximately 3% is used for agriculture. Despite this – Norway has always been considered to be a basically agricultural society by Norwegian scholars. In the study of Early Iron Age society in Norway this outlook has been a determinant factor, and from the 1920's to the 1970's the study of the Early Iron Age society was equal to the study of the growth of an agricultural society and implicitly, settlement history.

The main aim of the study of settlement history was to answer the question: When did sedentary farmers populate district xx? The studies were based on the available archaeological material – grave finds and stray finds, and the oldest grave find in an area was often interpreted as the first sign of a permanent settlement. The increasing number of grave finds, and their dispersion showed the establishment of new farms and their expansion. It is of course a methodological weakness that the settlement history is inferred from grave finds and stray finds, not from the settlements themselves, but settlements were in most cases unknown, with the exception of the visible house remains in the Jæren region in Rogaland and the Lista region in Vest-Agder. Settlements are no longer unknown, and excavations through the last twenty to thirty years have led to the discovery of a number of previously unknown sites, ranging in date from the late Neolithic to the Late Iron Age (e.g. Løken et al. 1996: 100-101, Diinhoff & Kvamme 1997, Helliksen 1997). Using Rogaland as a model for other agricultural areas, a continuous, sedentary settlement can be dated back to the Late Neolithic Period and Early Bronze Age (oldest <sup>14</sup>C-dating: 3625±85 BP, Løken et al. 1996:80), antedating most of the oldest grave finds with two millennia.

A Norwegian Early Iron Age farm had one or several multifunctional longhouses with a byre under the same roof, grouped around a courtyard, occasionally with smaller buildings as well. The houses were built of wood, in Rogaland often with outer stone walls for insulation and protection from wind and rain. The farm had an infield, separated from the outfields by a stone-built circular fence or wall. The ends of this circular enclosure ran

parallel to each other, making up the cattle-track leading from the outfields to the byre (cf. Myhre 1978, 1980). The infield was an area that was cleared for cultivation and dotted with clearance cairns. It was thus not one large field but instead consisted of smaller, irregular fields. The fields were intensively cultivated and fertilized. The main crop was barley, with wheat and oats as additional crops. The outfields, which in the coastal area of Rogaland were heathland, were used for pasture and for collecting fodder. The farms lay scattered in the landscape, often on hillocks where the soil was sandy, self-draining and easy to work with simple tools.

The excavations of 1980-1990, 1992 and 1994 at Forsandmoen in Rogaland have yielded a lot of new information (Løken et al. 1996:69, 99-98 with further refs.) both on the organisation of settlements and the building themselves. The excavations, which totally uncovered an area of 78 500 m<sup>2</sup>, revealed the remains of 240 houses, visible as wall ditches, fireplaces and postholes in the subsoil. On the basis of an analysis of 220 of these houses, it was possible to discern sixteen settlement phases and eighteen house types. The analyses of the house types showed the existence of a house type in the Roman Iron Age and Migration period, standardized in its basic construction details and general layout. This house type is also found elsewhere in Norway (e.g. Helliksen 1997:157).

The total length of occupation on the site was two thousand years, the first houses being built around 1500 BC. The site of Forsandmoen is in many ways exceptional and it is the (hitherto) only site that must, even by Norwegian standards, be called a village.

The concept of «village» is otherwise not used in Norway at all, although many 18<sup>th</sup> century Norwegian farms bore a clear resemblance to a European village or hamlet with its cluster of buildings surrounded by the infield (cf. Lillehammer 1999). The land belonging to the farm was divided among several owners, each being an independent unit (Norwegian: *bruk*). Each *bruk* had its part of the infield divided into narrow strips of fields, and adjacency would be an exception, not a rule. In 1857, the *Utskifningslov* (the closest English equivalent of the word is the Law of Severance) gave the impetus to a long process of profound change in the agricultural districts of

Norway. If one landowner on a farm demanded it, all the arable land was gathered into larger units on an equitable basis. In some areas, however, this redistribution never took place, and a medieval cultural landscape has survived into modern times.

That village-like settlements existed in SW Norway in the 4<sup>th</sup>-6<sup>th</sup> centuries is indubitable, and they were probably much more common than the archaeological record shows, but the single farm, comprising not more than one or two units, still has to be considered to be the most common settlement type.

The two thousand years of settlement on Forsandmoen, which at its height had a population of 160-200 people, left no visible traces of their everyday lives above ground, apart from clearance cairns. The total number of burial cairns is not known; it could have been as many as 50. Today there are 20 left, and there are only eight preserved burial finds, the oldest from the Late Roman Iron Age. That means that the preceding 1700 years of continuous settlement could not be traced in the archaeological record (cfr. p. 51)

A larger populated area, comprising several farms is in Norwegian called *bygd* (derived from Old Norse *byggja* 'to live at a place, populate'). For want of a better English word I will use the term 'district'. In western Norway a district is usually a fairly well defined topographical unit, like the arm of a fjord, a valley or an island. Communication routes by sea and land interconnect the districts, along the coast and at the fjords, and by paths through the valleys and over the mountains.

The archaeological evidence indicates that by the Late Roman Iron Age Norway was a society with centres able to exert political and economical control over larger territories (Myhre 1987). The model applied is that of a stratified society with a redistributive economy; the term 'petty kingdom' is often used. There seem to be a consensus among archaeologists today that the chiefdom model as defined by Service<sup>1</sup> is not adequate to describe the Late Roman Iron Age/Migration Period society. Especially they stress the importance of armed forces as a power base for a chieftain or petty king. Service's evolutionary model, where the chiefdom is the stage between the egalitarian tribal society and the state, does not cover the development in Iron Age Northern Europe. Jensen (1981) has used the term 'petty kingdom' to cover the gap between a society that could be described as a chiefdom and one that might be defined as a state.

Näsman initiated the study of historical ethnography in Scandinavia. He proposed a model for Scandinavian society based on an analogy with Visigothic society in the 4<sup>th</sup> century, when the Visigoths were settled in southern Romania (Näsman 1988:138-140). By that time, Visigothic society possessed several strata of leadership.

The basic level was the village council. The next was the tribal council consisting of the best men of the tribe (the 'aristocracy'). They elected the chieftain (*reiks*) who held the executive power, backed by a retinue. In times of unrest the tribes could unite into a tribal confederation that elected a temporary leader – a *kindins*. Näsman points out that the *kindins* had a very weak position, and that the Visigoths by the fifth century A.D. had a war kingship that was based on the *reiks*, not the *kindins*.

As a point of departure I will use a model of the Norwegian Iron Age Society from the 4<sup>th</sup> to the 6<sup>th</sup> centuries characterized by the following traits:

- Dispersed settlements based on intensive farming and extensive husbandry. Nucleated settlements existed, but are still too few in the archaeological record to show a pattern.
- A stratified society, as can be seen from the grave finds. The grave finds show a stratum of the society that could amass an economic surplus, enabling them to acquire foreign goods. This points to a redistributive economy.
- A society with a level of organization able to muster the work force necessary to construct and maintain hill-forts, possibly also with semi-permanent military camps ('court sites') and boat-houses (an indirect proof of the existence of large boats) (Løken 2001:11). This again bespeaks an economic surplus whereby those controlling it were able to exert force.

In a society such as this, which was a «developed» chiefdom or a petty kingdom, the chieftain would have certain obligations. He would have been a central actor in the official cult, performing the appropriate rites at the right time and bearing the cost for the religious feasts, mediating in conflicts, (probably) functioning as a judge and organizing larger enterprises, such as trade and/or war expeditions and intensive periods of fishing or hunting. In order to legitimize his power and actions he would probably have been dependent on both a council (which had elected him) and a retinue. To keep his position, generosity would have been paramount. He would have to support his retinue, be generous with gifts and be able to hold large feasts: no one would have liked a miser for chieftain. From this it follows that a redistributive system was vital; only through this would it have been possible for the chieftain to accumulate the surplus necessary to maintain his position. But a redistributive system does not exclude other forms of distribution, such as reciprocity. Reciprocity will be discussed in chapter 7.

Although agriculture always has been considered the corner-stone of the Iron Age economy, the importance of other resources should not be underestimated. Studies on Forsandmoen indicate that the area available for corn

crops would not have been sufficient to keep the estimated number of people alive (Løken et al. 1996:72). To be solely dependent on farming would have been barely enough to ensure survival, even less to gather a surplus. It would be of vital importance for the viability of a district to have an additional resource, or preferably several resources, to exploit. Animal husbandry played an important role in the economy in prehistoric as well as in historic times (when taxes were paid with butter). Summer pastures in the high mountains must have been an important resource, as witnessed both by archaeological finds, including houses and graves, and by pollen analysis (e.g. Bjørge et al. 1992, Kvamme et al. 1992). The high mountains also offered hunting grounds, especially for reindeer, a source of meat, hides and raw material for objects made from antlers such as combs, pins and spoons. In addition the mountain and woodland areas provided raw materials for the most important metal, iron, in the form of bog iron, and wood for the production of charcoal. There are iron smelting sites where the estimated production of iron is calculated in tons, far exceeding the needs of the nearest populated districts (Stenvik 1990:34, 1991:101). There is also evidence of iron production on a smaller scale, but still with an output sufficient to supply the needs of an area larger than a single farm (Haavaldsen 1987:76).

Fishing would also have played an important part – not surprising in a country with more than 50 000 km of coastline – but in SW Norway this has not been subject to any larger investigations. Petersen excavated house remains on the island of Utsira in the North Sea, 18 km west of the island Karmøy (Petersen 1936), where 7 of the 11 house remains yielded finds from the Migration Period. That the main resource on this island was fish is obvious; even today out of the island's total 6.2 km<sup>2</sup>, only 0.9 km<sup>2</sup> is cultivated (probably the maximum cultivable) and that mainly for grass for fodder.

The hunting of sea mammals and sea birds and the collecting of eggs, feathers and down are all seasonal activities well known from the historic records. It would be remarkable if these resources would not have been exploited in a landscape where the sea is ever present.

These additional resources could mean survival in hard times and a surplus in better times – a surplus that could be exchanged for other goods or be converted into political power.

## Question and Hypothesis

The main question to be answered is what significance the Westland cauldrons had in the Early Iron Age society in SW Norway. In earlier works where the cauldrons are mentioned, they are seen as an expression of wealth and

high status. This supposition is primarily based on the opinion that the cauldrons were foreign goods and therefore could not be owned by everybody. In order to acquire a Westland cauldron one needed a surplus – and hence the cauldrons have been associated with the upper stratum of the society.

The unspoken assumption behind this belief rests on the following hypothesis: Westland cauldrons were expressions of wealth and high status. If this hypothesis be correct, graves with Westland cauldrons should differ from other contemporary graves, not only by the presence of the cauldrons, but also by containing richer and more numerous grave goods. That is to say: in graves with Westland cauldrons there should be a difference in grave goods, not only in quantity but in quality as well.

## Method

The analysis that follows will compare the graves containing Westland cauldrons as a group with contemporary graves without cauldrons from districts where Westland cauldrons have been found. A more detailed study, where the cauldron graves were compared with contemporary graves at the local (district) level, was published in Hauken 1997. The districts used for the comparative analysis were Giske *kommune* in Sunnmøre, Møre og Romsdal; Gloppen and Stryn *kommuner* in Nordfjord, Sogn og Fjordane; Vik *kommune* in Sogn, Sogn og Fjordane; Etne *kommune* in Sunnhordland, Hordaland; Sola *kommune* in Rogaland and Tokke *kommune* in Telemark. Included in the analysis will be all grave finds that with reasonable certainty can be dated to the Late Roman Iron Age C3 and the Migration Period. Finds that can only be dated to the Early Iron Age in general are excluded. Thus, 159 grave finds out of a total of 301 are included in the analysis.

In the quantitative analysis the number of artefact types (NAT) in the finds is counted. 14 glass beads, 1 gold ring and 3 pottery sherds each represent one artefact type (Hedeager 1978b). No valuation of the objects is made, but one must assume that one pot did not have the same «value» as one gold ring. By using what could be labelled quality indicators, namely gold and imports (glass beads and vessels of metal or glass), it is possible to make a qualitative analysis as well, noting the presence or absence of quality indicators.

## Analysis

The group of Westland cauldrons comprises 108 graves (bog finds are omitted from this analysis). The median NAT (*vide supra*) value for the group is 3; the mean value is 4.3. If the finds with 1 NAT (i.e. 37 finds where only

the cauldron is preserved) are omitted, the median value of NAT for the group is 4 and the mean value is 6. If the find with the highest NAT, 28, in the cauldron group is also omitted, the median value is unchanged but the mean value decreases to 5.7.

The control group comprises 159 grave finds. The median value of NAT for the control group is 3 NAT; the mean value is 4.16 NAT. If the finds with 1 NAT (31 finds) are omitted, the median value is 4 NAT and the mean is 4.93 NAT. If the find with the highest NAT, 30, is also omitted, the median value is unchanged, but the mean value decreases to 4.73.

Looking at the median value only, there is no quantitative difference between the cauldron group and the control group. The mean NAT value is slightly higher for the cauldron group, 0.9 NAT. But the major difference between the two groups lies in the presence of quality indicators (see figs. 48 and 49). 30 cauldron graves, or 27.7% contain gold; in the control group there are 11 graves with gold, or 6.9%. In the cauldron group there are eight graves with imports, or 7.4%. In the control group 15 graves contain imports, or 9.4%, mostly glass beads. The number of graves with both imports and gold in the cauldron group is 17, or 15.7%. In the control group there is only one grave with both imports and gold, corresponding to 0.6%<sup>2</sup>.

The analysis showed no quantitative difference between the two groups. There is, however, a significant qualitative difference between the cauldron group and the control group. But are there differences within the cauldron group? Are older graves richer than younger graves, or is the contrary the case?

By examining all the cauldron graves that are dated on the basis of find combinations, and not on type similarity, it can be seen that the graves with the highest NAT either belong to phase C3 or D2 (figs. 48, 50, 52, 54). Also, there are more graves datable to D2 than to C3, and the graves from D2 have a higher NAT than those from C3. With one exception (cat.no. 26), the graves from D2 are weapon graves containing both imports and gold, thus being above the average for the cauldron group, quantitatively as well as qualitatively.

Of the 34 graves with cauldrons that can be dated to phase C3, there are only eight that can be dated through the find combinations; four of these have more than 10 NAT. Of the 19 graves that are datable to phase D1, only five can be dated through the find combinations; none of these has a NAT value exceeding 8. The total number of cauldron graves in this phase is low, but one should bear in mind the 21 undatable graves. Some of these, if not all, might belong to this phase.

An attempt to periodize the control group gave another result. (The dating of the graves in the control group

give only an approximate date. It is primarily based on the information given in the description of the finds, which of course can cause many errors, and on datings found in older works, if such existed.)

The chronological dispersion of the graves in the control group shows that there are 29 graves from phase C3 and phase D1, whereas there are 48 graves from phase D2 (figs. 51, 53, 55). The increase of graves in D2 is very marked. 12 of the C3 graves contain quality indicators, but only four graves in phase D1 and six graves in D2. By comparison, the graves in phase D2 are not as qualitatively outstanding as the D2 graves in the cauldron group.

In order to see whether the tendency towards an increasing number of graves from C3 to D2 also applies to other group of finds, I examined the finds of cruciform brooches as published by Reichstein (1975) and the weapon graves as published by Bemmann & Hahne (1995).

In order to date the finds with cruciform brooches I used Reichstein's own datings, as well as find combinations where possible. There are 28 graves with cruciform brooches that can be dated to phase C3 in Norway, 59 graves with brooches belonging to phase D1 and 195 graves with brooches that can be dated to phase D2. In addition, there are 105 brooches, described by Reichstein as *Einzelformen*, that are undated.

Looking at the weapon graves, using Bemmann & Hahne's datings (Bemmann & Hahne 1995:294, abb.1) 34 graves and 8 possible graves belong to the Vøien and Mollestad groups, i.e. the C3 phase. 24 graves and 11 possible graves belong to the Tveito and Kvamme groups, i.e. the D1 phase. 51 graves and 21 possible graves belong to the Vestly, Øvsthus, Snartemo and Nerhus groups, i.e. the D2 phase.

Both the finds of cruciform brooches and the weapon graves confirmed a marked increase in number of datable finds from phase D1 to D2. It could also be noted that the cauldron group and the weapon grave group are similar also in the decrease of finds from C3 to D1, but this tendency was contradicted by the control group and the cruciform brooches. A possible source of error is of course the 21 undatable cauldron finds, as well as the 118 undated weapon graves in Bemmann & Hahne's work. How many of these in reality belong to phase D1 is impossible to say. There were also 38 grave finds in the control group that could not be dated to a specific phase.

The decrease in grave finds from C3 to D1 in the cauldron group and the weapon graves is probably not a reflection of the real prehistoric situation, but is rather a chronological problem. As there are no thorough and modern chronological studies of the abundant pottery material, it is extremely difficult to date finds that con-

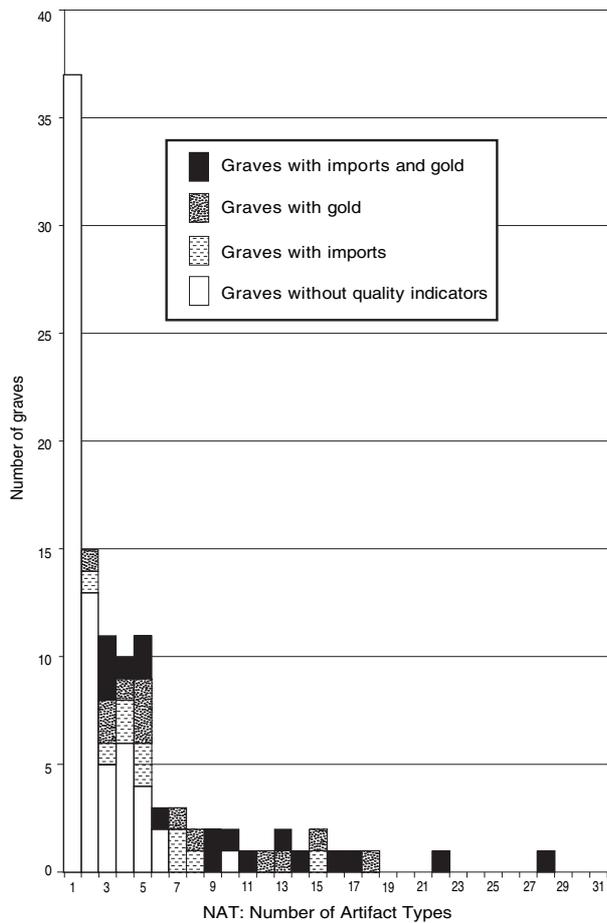


Fig. 48. The distribution of quality indicators in the graves with Westland cauldrons.

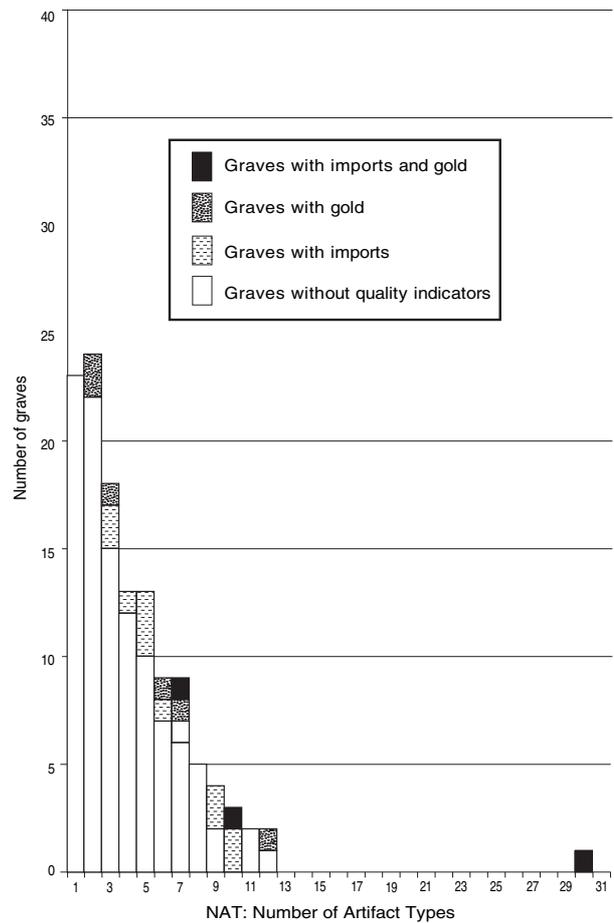


Fig. 49. The distribution of quality indicators in the control group.

tain only pottery or lack defined characteristic chronological features, such as clear weapon types or ornaments in defined styles.

However, the increase in grave finds from D1 to D2 is a common trait in all the groups studied. The cauldron graves and weapon graves also show a tendency towards higher NAT and a high number of quality indicators in phase D2.

The difference between the cauldron group and the control group is a qualitative, not a quantitative one. The number of quality indicators in the cauldron group is so high there can be no doubt that the difference is a significant one. Thus, Westland cauldrons are associated with a group of people who were able to accumulate an economic surplus – the top stratum in early Iron Age society.

### Interpretation

What do the fluctuations in the grave material from C3 through D1 to D2 signify? To see the increase in number of burials as a direct reflection of population growth and growth of wealth is far too simplistic. The question is intimately linked to the question of what a burial is. The

obvious function is to dispose of a dead body. This could be done in many ways, most of them leaving no retrievable trace behind – only a small fraction of the prehistoric population at any given time was buried in such a way they could be found several centuries later. Of course, burials also have deep religious meanings, but these will not be discussed here.

Death brings about change and instability, apart from personal grief and a sense of loss. Burial can be a means to restore harmony again. But it can also be used for other purposes. High status burials, such as the cauldron graves, can be seen as a way of re-asserting a family's status, which may have been potentially threatened through the death by one of its members, by the burial of lavish, even extravagant possessions. To withdraw precious and prestigious objects from circulation, combined with the huge expenditure of labour necessary to erect a large burial monument, is a notable demonstration of power.

But there is also the possibility that burials were used for a yet another purpose, one that perhaps could be labelled «family pretences», where a burial is more an expression of a family's aspirations than the reflection of a «real» situation. In a society as outlined above, power was

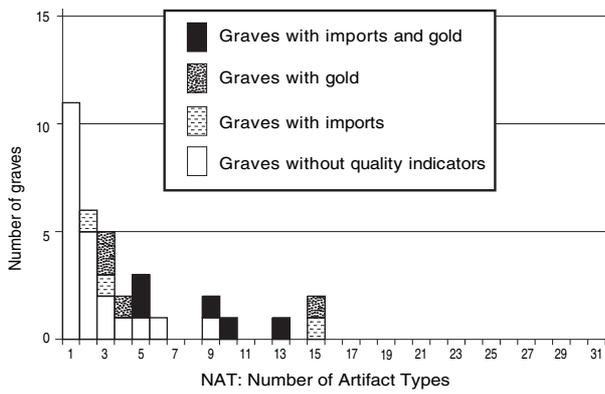


Fig. 50. The distribution of quality indicators in the cauldron group, phase C3. N=34.

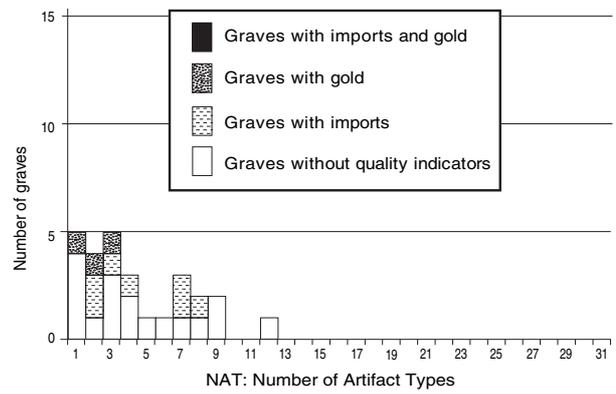


Fig. 51. The distribution of quality indicators in the control group, phase C3. N=29.

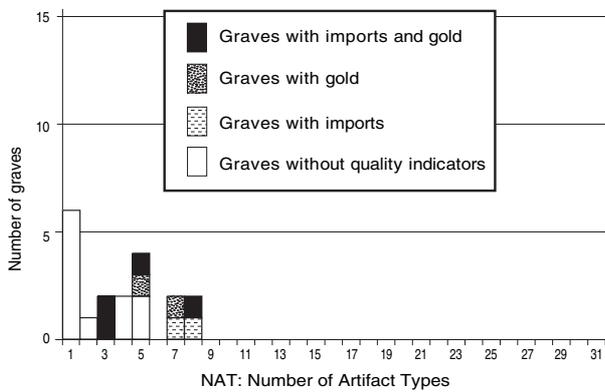


Fig. 52. The distribution of quality indicators in the cauldrons group, phase D1. N=19.

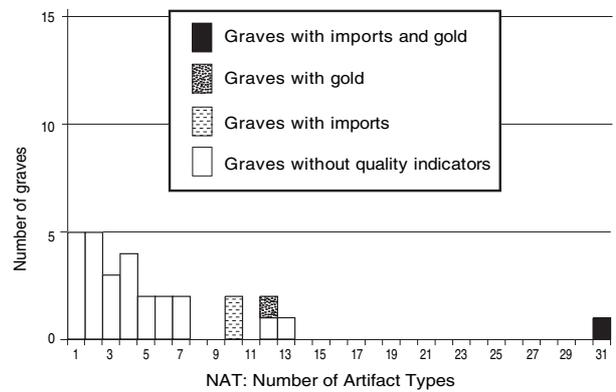


Fig. 53. The distribution of quality indicators in the control group, phase D1. N=29.

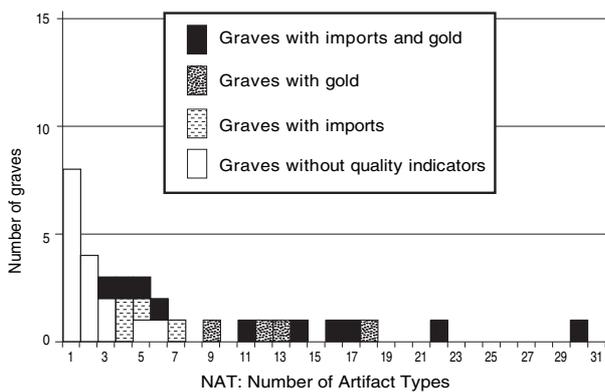


Fig. 54. The distribution of quality indicators in the cauldron group, phase D2. N=34.

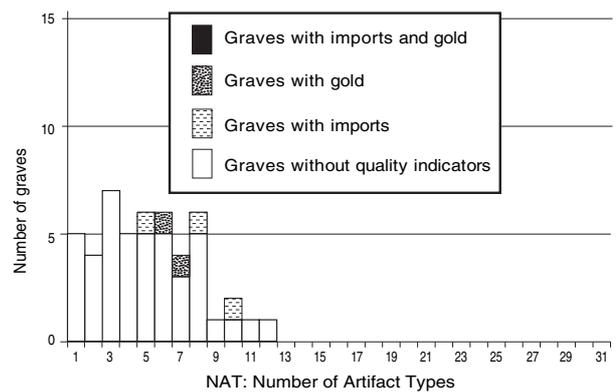


Fig. 55. The distribution of quality indicators in the control group, phase D2. N=48.

certainly based on economic strength, but probably also on personal qualities, such as charisma, generosity and good fortune. Although there is a widespread tendency to view prehistoric societies as both static and stable, they were probably neither very static, nor stable. The basic

(super)structure of society might be very stable (such as monarchy was for centuries in Scandinavia), but within this structure we must allow room for individuals acting, planning, making alliances, even scheming, in the competition for power. This would lead to changing loyalties

and shifting patterns of influence. In this intricate game of power, conspicuous consumption, to use Veblen's term, must have been of the utmost importance. Richly furnished burials may be interpreted as a strategy to maintain (or achieve) a coveted position in an unstable society. The high number of burials in phase D2 can be seen as an expression of an increased tension in the SW Norwegian society in the late 5<sup>th</sup> and early 6<sup>th</sup> century, both on a district level and a larger supra-regional level. There are several possible explanations for this. It is possible that SW Norway in phase D2 was reaching the limit of its carrying capacity. It has been estimated that the Jæren region by the 6<sup>th</sup> century had as many inhabitants as in ca. 1350, before the Black Death struck. This was also the population ca. 1750, before the introduction of the potato (Myhre 1983).

If the decrease in number of finds from phase C3 to phase D1 is a real one, it might indicate that phase D1 was a relatively stable period, where the need for marked expressions of power and high status was not as acute as in the preceding or succeeding phases.

## Summary

The analysis has shown that there is a difference in grave goods between cauldron graves and other contemporary graves, not so much in quantity as in quality. If it be granted that wealth and high status in life also reappears as wealth and high status in grave goods, the hypothesis that Westland cauldrons are expressions of wealth and high status is verified.

Prestige objects such as bronze cauldrons, glass beakers and gold objects were very important in life as status markers. Equally important was their role as part of the grave goods. As grave goods they could serve multiple functions; they were not only prestige objects in themselves, but the fact that they were deposited in the grave, i.e. withdrawn from circulation, could further enhance the reputation of the deceased and the surviving family. This could be a strategy to either restore or strengthen a family's leading position in the community, which might be temporarily weakened by the death. But it might also be a strategy by a family to achieve a position they had held previously.

The analysis showed an increase in the number of graves from phase C3 through to phase D2, with a significant increase in the number of graves from phase D1 to D2. The high number of graves in phase D2 can be interpreted as the consequence of an inherently unstable society, which combined with an increased population pressure resulted in social competition and a striving for power.

## Footnotes

<sup>1</sup> «Chieftoms have centralized direction, hereditary hierarchical status arrangements with an aristocratic ethos, but no formal, legal apparatus of forceful repression. The organization seems universally to be theocratic, and the form of submission to authority that of a religious congregation to a priest-chief» (Service 1975:16).

<sup>2</sup> This is the famous grave from Enebø, see fig. 32 (Straume 1987:79 no. 8)

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# CHAPTER 7.

## Trade and exchange

The relation between the Romans and the Germanic peoples has fascinated Scandinavian scholars from the earliest days of archaeology to the present. Hedeager (1978a) gives an excellent survey of the main contributions concerning the trade in Roman imports and will thus not be reiterated here. Further information appears in Lund Hansen's major work on the exchange between the Roman Empire and *Germania Libera* (1987:216-217).

There can be no doubt that there were contacts between the Roman Empire (and its successors) and Norway. The presence of Westland cauldrons in Norway was indubitably one consequence of this contact.

The questions that arise are: How did the Westland cauldrons come to Norway? Who brought them to the country? And why?

### Trade and exchange: some definitions<sup>1</sup>

Trade is a peaceful activity, which has as its aim the acquisition of products that are not found or made locally. Where this attractive product is acquired dictates whether the trade is short-distant (local trade) or long-distance (inter-regional trade). Short-distance trade takes place within a single cultural and geographical unit; long-distance trade takes place between cultural and geographical units. The size of these units might vary from case to case. Long distance trade can be

- direct, i.e. products are transported directly from their production area to the recipient area
- successive, i.e. some of the products are deposited in the areas between the production area and the recipient area, or
- indirect, where the products pass from area to area as a short-distant trade until they reach the final recipient area (Stjernquist 1967:28f, Stjernquist 1985:71-72).

The products can be paid for through barter, with preferred measures of value or with a standard value (e.g. money in our modern sense).

The motives for trade may vary. It might be a commodity/necessity trade such as food produce or salt; it might be status trade desirable for the maintenance of a

social position or of political relations. Last, but not least (in modern days, anyway) it can be motivated by profit.

Hedeager (1978a: 213) divides both long- and short-distance trade into two categories. Long distance trade can take the forms of either primary or secondary exchange. Primary exchange in long-distance trade applies to valuable goods that are considered prestige items. These are transported over great distances via chieftains and kings. In urban communities, primary exchange can also include everyday commodities that are not found locally in sufficient quantities. Goods included in the primary exchange may increase in quantity as the distance to the production areas increases. Hedeager's primary exchange corresponds to Stjernquist's successive long-distance trade. Secondary exchange includes goods that are bought and consumed at the sites where the primary goods are acquired or exchanged. These products are consumed by the people transporting the primary goods, and show another distribution pattern – their distribution is concentrated in the transport areas.

Short distance trade is divided into high-ranking exchange and low-ranking exchange. High-ranking exchange is the local equivalent of primary exchange, i.e. the distribution of prestige goods on a local level. The distribution is restricted to the area controlled by the chieftain, king or other high-status individuals (e.g. priests, royal officials etc.). Low-ranking exchange includes daily necessities, e.g. pottery, that is exchanged within a smaller geographical and cultural area, and can show a wide distribution within this local area.

### Economic systems

The exchange between the Roman Empire and *Germania Libera* involved three economic systems (Hedeager 1978a).

- The Roman Empire constituted the first system, characterized by a money and market economy.
- The second system comprised the so-called «buffer zone» between the Roman Empire and the rest of the *Germania Libera*, also called «the Glacis» (Lund Hansen 1987:185). Hedeager estimates this zone to

be a ca. 200 km wide zone along the Limes, characterized by a limited money economy. It perhaps included markets and a merchant class. The size of the buffer zone has been contested by Lund Hansen (1987:187) and how wide this zone really was is still an open question.

- The third system embraced the rest of *Germania Libera*, using money without a monetary economy and perhaps moneyless markets.

The significant difference between the three spheres is clearly demonstrated, but there are some problems regarding the definition of systems 1 and 2.

The Roman economy certainly was both a monetary and market economy. The nature of the Roman economy has been much discussed, and has been subject to major shifts of focus. The 'modern capitalistic' interpretations of Rostovzeff and Frank, yielded in popularity to the Jones/Finley camp, who claimed that

- a) trade and manufacture played a very minor part in the economy of the Roman Empire and
- b) high status depended on landed wealth.

Since I am not an economic historian I will refrain from entering the debate, but merely comment on it as an outsider. That the 'capitalistic' interpretation of Rostovzeff and Frank is too modern a model seems clear. The Finley/Jones model on the other hand does not seem to be fully appropriate either. It is not difficult to agree with clause b), but I find it very hard to agree with clause a); it is almost as if Finley and Jones, along with many others, view the economy with very much the same eyes as the landed gentry of England's 19<sup>th</sup> century, with its contempt for wealth acquired through industry and trade. More recent works have shown that the alleged unimportance of trade and weak monetization outside urban areas cannot reflect reality (Greene 1986 with further refs, Pucci 1983, Pleket 1983, Howgego 1994). The Roman Empire had a transport system, a monetary system and a monetary policy that encouraged trade.

The definition of the buffer zone is not very satisfactory. Characterizing the zone as one with a limited money economy is not possible, since this concept means that money in the modern sense, i.e. standard values, was not used, but instead implies the use of preferred measures of value and/or special purpose money. In Hedeager's discussion the term seem to denote a state of limited access to money, i.e. coins, as the peoples in the buffer zone did not have mints. This does not necessarily mean that they did not have a monetary economy. Another question is what Hedeager means by markets – a market economy (an economy where the price on goods and services are dependent on supply and demand) or a market (a site where goods are exchanged at a regular basis). That the

buffer zone would be a market economy seems highly unlikely, but it may have had market places.

## Models of exchange – The Roman Empire and *Germania Libera*

The trade with Westland cauldrons took place within and between different economic systems, and with different motives, depending on what system we are discussing. It is important to determine what primary function the cauldrons had. Within the Roman Empire the cauldron had a purely utilitarian function: they were kitchen utensils, albeit valuable ones. Profit was the dominating motive for the producer and the seller, while need was the dominant one for the purchaser. Once the cauldrons were transported over the border into the buffer zone, their primary function becomes rather unclear to us. They could still have been used as kitchen utensils but probably their primary function was altered. (Chronology needs to be considered here, as there would be a difference between the buffer zone and its occupants in the 2<sup>nd</sup> and 3<sup>rd</sup> centuries AD, and the 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> century AD. By the 6<sup>th</sup> century AD there would be no buffer zone, as there was no Roman Empire.)

Supposing that the buffer zone was populated with more or less romanized Germanic peoples through the whole period, we would get a neat bridge between the Roman Empire and *Germania Libera*. Having one foot in each camp, so to say, the inhabitants of the buffer zone would have appreciated Westland cauldrons as practical, Roman cooking pots. At the same time, they would also be able to appreciate the symbolic value the cauldrons might hold amongst their less romanized Germanic neighbours, without the restraints associated with the procuring of such items – the fact that they, as status goods, could not be bought. It seems quite obvious that the Germanic people, both those living within the borders of the Empire, as well as those living in the buffer zone, were important as intermediaries in this exchange.

Within both the buffer zone and *Germania Libera* as well as between the two, profit-motivated trade was not the primary motive, as the models imply. Status trade and commodity trade instead were the primary motives in these zones, and Westland cauldrons, other bronze vessels and glass should be classified as parts of a primary exchange – a long-distance status trade.

## Westland cauldrons – their route to Norway

The first Westland cauldrons coming to Norway were deposited in the 4<sup>th</sup> century, the last ones in the 6<sup>th</sup> century. The latest Westland cauldrons on the Continent, found to date are the cauldrons from Donzdorf (Appen-

dix III: no. 51) and Krefeld-Gellep grave 1782 (appendix III: no. 32), which were buried in the first half of the 6<sup>th</sup> century. These continental finds are important when trying to estimate when the cauldrons ceased to be produced. The grave from Krefeld-Gellep and the famous boy's grave from the Kölner Dom are considered to be contemporary. The oak lid that covered the boy's grave under the cathedral is dendrochronologically dated to ca. 537 (Pirling 1979:176). That means there is no difference in circulation time between Norway and the Continent. Assuming a normal circulation time for a cauldron to be 25-30 years, the production of Westland cauldrons ceased in the first quarter of the 6<sup>th</sup> century. This means that we have approximately 200 years of a seemingly steady influx of Westland cauldrons into Norway.

How did the cauldrons come to Norway? That it was a long distance trade is indubitable, but was it a direct, successive or indirect trade?

Had it been a direct long distance trade, we would expect to find a wider range of provincial Roman goods in Norway, not only prestige goods but simpler items as well. This is not the case; the archaeological evidence does not allow such an interpretation.

In the case of indirect trade, i.e. short distance trade between the intermediate areas, we would expect a diminishing quantity of goods with an increasing distance from the production area. This is not the case either, which leaves us with the successive long distance trade as the applicable model.

In a successive trade, some of the products are marketed on their way to their final destination. This would mean that there should be Westland cauldrons in areas between the production area and Norway. The archaeological evidence confirms such an interpretation.

The buffer zone was a likely starting-point for this trade. It has several archaeological characteristics which make this a reasonable assumption. Hedeager claims that the onward transportation was organized in the area she labels zone 2 in *Germania Libera*, an area that in the west roughly corresponds to Germany north of the river Ems and Denmark (Hedeager 1978a:208, fig. 1). Furthermore, she claims that the primary goal of the Roman-Germanic trade was the acquisition of luxury goods by local (Germanic) chiefs (Hedeager 1978a:209).

Let us consider this last statement. The total number of imported pieces (glass, bronzes, silverware) in Scandinavia is 1164, (Lund Hansen 1987:126) from a period of 400 years, equalling 2.91 pieces per annum. Now, as the influx quite obviously was not constant during all these years, I calculated the number of datable pieces per annum for the periods and all phases, using the tables in Lund Hansen 1987:140-143. The number of pieces from the Early Roman Iron Age found in Scandinavia is 280

from a period of 160 years = 1.75/annum (Denmark 1.16, Norway 0.175, Sweden 0.40). The corresponding figures for the Late Roman Iron Age are 820 pieces from a period of 240 years = 3.41/annum (Denmark 2.12, Norway 0.72, Sweden 0.55). In Denmark, the country with the largest proportion of imports, there are only two phases where pieces per annum exceeds 1, namely phase B2 (90 years) 1.08/annum and phase C1b (40 years) 4.1/annum. Phase B2/C1a (40 years) averaged 1.0 piece per annum.

Looking at these numbers from a Roman point of view makes it quite clear that this is not a very interesting market, if these were the primary or only objects for sale in a profit-motivated trade. One would have to multiply these numbers hundredfold to make trade worth the effort. To a certain degree it would of course be dependent on what one could get in return. Here we touch upon one of the main questions – what did the Germanic people provide in return?

There are few written sources on this matter, in contrast with the amount of information given on the trade with Africa, India and China (Meier & van Nijf 1992:123-129). Tacitus and Pliny the elder, both first-century sources, mention the only commodity that has left any trace – amber, but whether this is relevant information for the situation in the 4<sup>th</sup> and 5<sup>th</sup> century is questionable. Ammianus Marcellinus, a fourth-century source, mentions a treacherous slave merchant who divulged secrets to the Germans. In addition to slaves, diplomatic gifts (Strabo, writing in the first century) and tribute (such as grain, hides, horses, cattle, slaves and weapons) are mentioned, both by Strabo and Cassius Dio, an early third-century source. In Eggers' work on Roman Imports this was discussed and his conclusion was

- a) we do not know what the Germans exchanged, since most of what is mentioned in the written sources is organic material that disappears,
- b) it might be possible to discover Germanic exports that are not mentioned in the sources, and
- c) these two combined will, however, not give a true picture of the living culture (Eggers 1951: 73-75).

Fifty years later this is still the case. We still do not know what the Germans provided in return.

Seen from the perspective of the Roman provinces, trade with the Germanic peoples was probably not very important. One should also consider the fact that, with the possible exception of some types of glass, none of the objects known as Roman imports were intended for export. They were manufactured in provincial Roman workshops for Romans to use in their everyday life.

Another fact to consider is that burials are not very well suited for the purpose of mapping or calculating the

extent of imports, as the burial material represents a very conscious selection of objects. Settlement sites, on the other hand, give a fuller picture of the prehistoric situation (Näsman 1990:91).

What we must assume is that the peoples of both Germania and Scandinavia needed a large amount of goods not found within their own territory, but that these are normally not considered as imports, being mainly raw materials such as bronze, gold, silver and mercury.

#### Another possibility?

In the 3<sup>rd</sup> century, the Roman provinces suffered several attacks by the Germanic peoples living east of the Rhine, e.g. the invasion by the Franks and the Alamannians in 275-278. The river finds from the Rhine – Otterstadt-Angelhof, Römersberg-Mechtersheim, Neupotz and Hagenbach (Appendix III: nos. 43, 44, 45 and 47) – are interpreted as results of this invasion, namely, invaders capsizing during the crossing of the Rhine (Künzl 1993,1:497-500). Quite obviously the Franks and the Alamannians were plundering on a large scale. Most of the bronze objects stolen were of types that are also found in Germanic burial contexts. If the river finds are representative of what was taken on these raids into the Roman provinces, some (if not all) of the items found in Germanic graves undoubtedly represent stolen property. A large proportion of the stolen goods, especially the silver objects, were probably seen as raw material, to be reworked or melted down. In the Hagenbach river find there are 41 bronze vessels. In the Neupotz river find the copper alloy objects weigh almost 200 kgs, and include 43 bronze cauldrons (34 of them being Westland cauldrons). That means that what was plundered in one incursion could theoretically be enough to supply all of Scandinavia with Westland cauldrons for a century. I am not claiming that all Roman imports in *Germania Libera* were plundered goods, but in view of the relative insignificant rôle this kind of trade had for the Romans, plunder is a possibility that cannot be ruled out. There is one example in Norway where this is the only reasonable interpretation: The Eastland cauldron found together with cat.no 3. The Eastland cauldron must have been robbed from a sanctuary, because the inscription declares it a votive offering «APRVS.ET.LIBERTINUS.CVRATOR [pos] VERUNT» i.e. «Aprus and Libertinus, the warden, dedicated (this).»

How significant plunder could have been is of course impossible to say. The river finds have shown that it had been possible to steal a considerable number of goods on one expedition. Stolen goods might also increase a person's prestige. Plunder could be a great opportunity to procure prestigious objects to use in an exchange and would probably have been considered far more honour-

able than any other means.

To sum up: The Westland cauldrons came to Norway through one or several intermediaries as a part of a successive long distance trade, being a primary exchange of status goods. My proposition is that this exchange took the form of gift-exchange, both in *Germania Libera* and in Norway.

#### Gift-exchange

The significance of gift-exchange in so-called primitive or stateless societies has been discussed by a number of scholars (e.g. Mauss 1990, Odner 1973, Dalton 1977, Qviller 1981, Samson 1991, Vestergaard 1991, Hauken 1991). Mauss' work has had a profound impact on anthropological, sociological and archaeological research. He showed that the function of a gift is manifold, and its significance is decisive in economics, politics and religion. I would claim that the gift-exchange was ingrained in the very structure of the pre-state societies, even to the extent that a breakdown of the institution could lead to a society's total disintegration.

In contrast to the profit-motivated trade, gift-exchange is an unfinished relationship. It can involve the donor and the recipient in a personal bond, whether exchanging gifts for personal use or on behalf of a group. A gift can be defined as an object which ostensibly is given by one person of his or her own accord to another. The receiver has, however, the tacit duty of making a delayed 'repayment', which, in the eyes of the donor, the receiver is obliged to fulfil. Gift-exchange is thus a process where objects are exchanged with delayed reciprocity. The repayment can be material or non-material.

A gift could serve many purposes. An evident and well-documented one is 'showing-off' or 'boasting'. By giving handsome presents the donors showed their own wealth and status. But giving away valuable objects had an important purpose. Gifts were used to establish and to maintain relations that were advantageous in one way or another. Leaders, who might have been chieftains or kings, exchanged gifts to establish and maintain peaceful relations between their groups. This may be the most important aspect of gift-exchange, since it facilitated other activities between the groups, such as trade or exchange of other and non-prestigious goods that might have been far more important economically.

Gift-giving generated allies for war or raids by which one's own wealth and reputation could be further increased. Allies also had the mutual obligation to help each other.

These forms of gift-exchange were highly institutionalised and were maintained by delayed reciprocity. Gifts and return gifts were not exchanged at the same

occasion, but if the gift in return was not offered within an acceptable interval it meant that the alliance no longer existed; this may have amounted to a declaration of war.

To demonstrate power in the local community the gift was indispensable. It could be used in horizontal relationships, between people who were equals or near equals, to ensure good relations and avoid dangerous frictions. The gift could also be used in a vertical relationship, where it could take on the character of masked blackmail. In the vertical relationship recipients were inferiors. As it was impossible for them to requite with a gift of equal material value, they must substitute with loyalty. In this way the chieftain could tie more dependants to himself and expand his area of influence.

### Westland cauldrons – exchange in Norway

The distribution of Westland cauldrons shows an uneven geographic pattern, they cluster in smaller districts such as the Jæren region, the Nordfjord area and the Sunnmøre islands (fig. 2). I interpret these districts as the most important recipient areas, and as such also centres of the inter-regional exchange. The districts are strategically well placed along natural communication routes, where the traffic could be controlled and travel would be easy. They are, by Norwegian standards, also good farming land. Their geographical setting made it possible to draw on marine resources, fish in lakes and rivers, as well as what the woodlands and high mountains had to offer, such as summer pastures, wild game and iron smelting. This combination of resources from land, sea, river, lake and mountain was decisive for the accumulation of the surplus so necessary for entering into the sphere where things like Westland cauldrons were exchanged.

Looking at the distribution of cauldrons in Norway, it is possible to discern two distribution patterns, inter-regional and intra-regional exchange. In both cases the status motivation was fundamental, but the inter-regional exchange also included other goods (*vide infra*). These distribution patterns are most readily explained, by using gift-exchange as a model (Fig. 56). I interpret the districts with many cauldrons as the primary recipient and distribution areas. Between these districts cauldrons and other status goods, such as glass, gold, weapons and expensive clothing, have been exchanged in horizontal social relationships. This exchange took the form of institutionalised gift-exchange, a relationship that was maintained and renewed on certain occasions, such as religious feasts, winter banquets, funerals, weddings and *thing* assemblies. The invited party had to answer with a return invitation and the presents received had later to be reciprocated. On such occasions Westland cauldrons were passed from district to district, between primary reci-

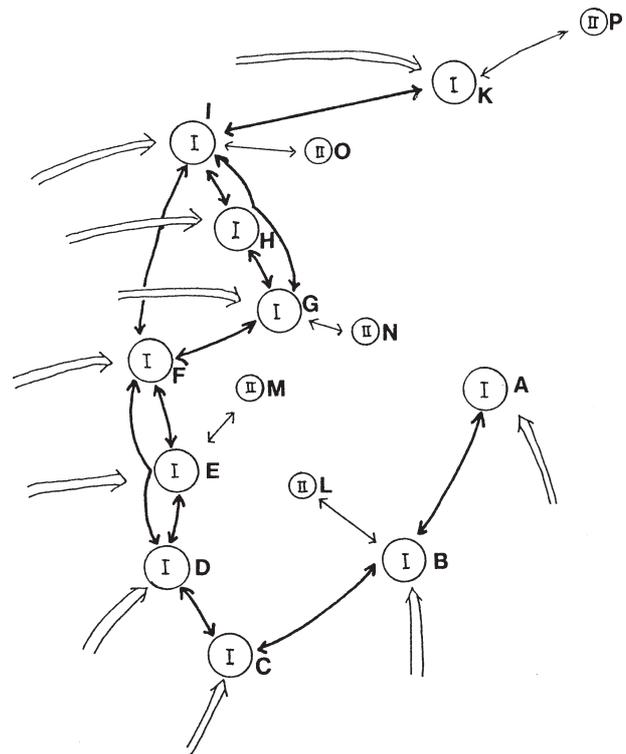


Fig. 56. Proposed model of the gift-exchange of Westland cauldrons in Norway. I: The primary recipient areas. II: The secondary recipient areas. The schematic areas correspond to the following regions of Norway: A=Lake Mjøsa district. B=Larvik area. C=Lista. D=Jæren. E=southern Hordaland. F=northern Hordaland. G=inner Sogn. H=inner Nordfjord. I=the Sunnmøre islands. K=inner Trøndelag. L=upper Telemark. M=Hardanger. N=Valdres valley. O=Romsdal. P=Medelpad, Sweden.

ent areas and between primary and secondary recipient areas.

Within a chieftain's area of influence a cauldron might have been distributed in several ways. It might have been given as payment for services rendered or given to someone who was not considered as an equal as a demonstration of power, with a double, unspoken message: 'I want to be on good terms with you, but know your place.' In vertical relationships the demand for loyalty was even more absolute. The fact that Westland cauldrons are found not only at the major farms in a district, but on smaller farms as well (Hauken 1997), and not only in very rich graves can most readily be explained as a result of gift-giving in a vertical relationship.

### The necessary gift exchange – *Donare necesse est*

Gift exchange could form strong, personal relationships necessary for the creation of alliances, both horizontal and vertical. These alliances were crucial in order to obtain other, non-status goods that might be very impor-

tant economically. Considering all aspects of the material of every-day life one can enumerate a large number of articles that could be parts of necessity trade, both within Norway and between Norway and the outside world.

- Foodstuff (grain, dairy produce, fish, eggs, meat, honey, salt, fruit, berries, seeds etc.)
- Clothing (wool, linen, nettle-cloth, down, furs, dyes)
- Shoes (hides and leather)
- House-hold items (pottery: soapstone/asbestos and clay, iron, soapstone and wood)
- Tools (wood, iron, raw material for hones and quern-stones)
- Weapons ( iron, wood, leather)
- Jewellery (bronze, silver, gold, glass beads, amber, wax, mercury)
- Other personal items (combs, pins, gaming-pieces and dice: bone and antler, belt fittings: bronze, iron)
- Boats and land vehicles (wood, iron, tar, ropes)
- Houses (wood, birch bark, turf or shingles)
- Slaves

Most of these items could be found within Norway, but not everywhere. Salt would have to be exchanged between inland regions and the coast. Grain might have been exchanged between more fertile regions and for example northern Norway. Building a house in the deforested region of Jæren would have required access to supplies of building material somewhere else, for example in the north-east region of Rogaland. To make a turf-roof weatherproof you need seven layers of high quality birch bark – which for an average long-house means a quantity enough to cover a football pitch meeting World Cup standards. Iron would undoubtedly have played a major role in the necessity trade, both inter-regional and intra-regional. The raw materials necessary for making jewellery, with the possible exception of wax, were not found in Norway. Although there are both copper and silver mines in Norway, there is no proof whatsoever they were exploited in prehistoric times. Bronze, silver, gold and mercury, necessary for gilding, must have been obtained from the Continent.

How this necessity trade was conducted is an open question. It does seem evident, however, that it was based on reciprocity, but whether it was performed as barter or with the use of preferred measures of value is unclear. A mixture of the two would seem reasonable.

Gift exchange and necessity trade are intimately connected, especially in long distance trade, where gift exchange is a necessary vehicle for the trade in other commodities. The exchange of goods over long distances demands an organisation that can guarantee the safety of the parties involved. This implies protection during travel, a safe site where the exchange can take place and a rela-

tionship between the parties involved, either through personal knowledge or by recommendation. Gift exchange is vital in forming the necessary relations; one might even consider it to be a form of refined toll. In order to exchange over long distances more mundane goods, but ones highly necessary for their recipients, it would be necessary to travel as an armed party to a known destination where one either had formed a personal contact on a previous occasion, or was sent by someone with this personal connection. When arriving at the destination, which would be protected by the chieftain or petty king of the territory, high status goods would be presented as gifts to the local leader – tokens of good will and peace. Only then, when all the social niceties had been well performed, could the exchange of necessity goods begin.

#### Footnotes

- <sup>1</sup> All trade is exchange, although all exchange is not necessarily trade – but with the definition of trade in this study, the two concepts can be used interchangeably.

# References

- Akerman, J.Y. 1860: Report on researches in an Anglo-Saxon cemetery at Long Wittenham, Berkshire, in 1859. *Archaeologia XXXVIII*, 327-352.
- A l'aube 1981: *A l'aube de la France. La Gaule de Constantin à Childéric*. Musée du Luxembourg, 26 février – 3 mai 1981. Ministère de la culture et de la communication. Paris.
- Albrectsen, E. 1986. *Fynske jernaldergrave III. Yngre romersk jernalder*. Fynske Studier VII. Odense.
- Andersson, K. 1993a: *Romartida guldsmede i Norden I. Katalog*. Aun 17. Societas Archaeologica Upsaliensis. Uppsala.
- Andersson, K. 1993b: *Romartida guldsmede i Norden II. Fingerringar*. Occasional Papers in Archaeology 6. Societas Archaeologica Upsaliensis. Uppsala.
- Axboe, M. 1982: The Scandinavian Gold Bracteates. *Acta Archaeologica* 52: 1-100.
- Axboe, M., Clavadetscher, U., Düwel, K., Hauck, K. & Padberg, L. von 1985: *Die Goldbrakteaten der Völkerwanderungszeit. Ikonographischer Katalog 1, 2-3*. Münstersche Mittelalter-Schriften 24/1, 2-3. Vilhelm Fink, München.
- Axboe, M., Düwel, K., Hauck, K., Padberg, L. von & Wypior, C. 1986: *Die Goldbrakteaten der Völkerwanderungszeit. Ikonographischer Katalog 2, 1-2*. Münstersche Mittelalter-Schriften 24/2, 1-2. Vilhelm Fink, München.
- Bakka, E. 1963a: Forntida i Odda, Ullensvang og Kinsarvik. In: Kolltveit, O. (ed.): *Odda, Ullensvang og Kinsarvik i gamal og ny tid 1*, 47-205. Bygdeboknemnda, Odda.
- Bakka, E. 1963b: Gullpressblekket fra Vestly. *Frå haug ok heidni 1963:1*, 210-213.
- Bakka, E. 1972: Forntida i Stord. In: Høyland, O. (ed.): *Stord bygdebok 1*, 70-159. Stord herad, Stord.
- Bakka, E. 1973: Goldbrakteaten in norwegischen Grabfunden: Datierungsfragen. *Frühmittelalterlichen Studien VIII*, 53-87.
- Bakka, E. 1977: Stufengliederung der nordischen Völkerwanderungszeit und Anknüpfungen an die kontinentale Chronologie. In: Kossak, G. & Reichstein, J. (eds.): *Archäologische Beiträge zur Chronologie der Völkerwanderungszeit*, 57-60. Antiquitas, Reihe 3, 20. Rudolf Habelt, Bonn.
- Baratte, Fr., Bonnamour, L., Guillet J.-P. & Tassinari, S. 1984: Vases antiques de métal au musée de Chalon-sur-Saône. *Revue archéologique de l'est et du centre-est*. 5<sup>th</sup> supplement. Dijon.
- Beckmann, C. 1969: Metallfingerringe der römischen Kaiserzeit im freien Germanien. *Saalburg Jahrbuch. Bericht des Saalburg Museums* 26, 5-106.
- Behn, F. 1936: Drei Bronzegefäße der frühen Völkerwanderungszeit von Bensheim, Starkenburg. *Germania* 20, 120-127.
- Beltz, R. 1909: Ein Grabfund der Völkerwanderungszeit von Teterow in Mecklenburg. *Prähistorisches Zeitschrift* 1, 379-386.
- Beltz, R. 1910: *Die Vorgeschichtlichen Altertümer des Großherzogtums Mecklenburg-Schwerin*. 2 vols. Dietrich Reimer, Schwerin.
- Bemmann, J. & Hahne, G. 1995: Waffenführende Grabinventare der jüngeren römischen Kaiserzeit und Völkerwanderungszeit in Skandinavien. Studien zur zeitlichen Ordnung anhand der norwegischen Funde. *Bericht der Römisch- Germanischen Kommission* 75, 1994, 283-640. Römisch- Germanische Kommission des Deutschen Archäologischen Instituts. Philipp von Zabern, Mainz.
- Bendixen, B. E. 1884: Undersøgelser i Jondal i Hardanger sommeren 1883. *Foreningen til Norske Fortidsmindebevaring, Aarsberetning 1883*, 25-35.
- Bendixen, B. E. 1895: Fornlevninger i Søndhordland. *Foreningen til Norske Fortidsmindebevaring, Aarsberetning 1894*, 9-90. Kristiania.
- Bernhard, H. & Petrovsky, R. 1990: Die Bronzegefäße. In: Bernhard, H., Engels, H.-J., Engels, R. & Petrovsky, R.: *Der Römische Schatzfund von Hagenbach*, 34-40. Verlag des Römisch- Germanischen Zentralmuseums, Mainz.
- Björge, T., Kristoffersen, S. & Prescott, C. 1992: Arkeologiske undersøkelser i Nysset-Steggjevassdragene 1981-1987. *Arkeologiske rapporter* 16, Historisk Museum, Universitetet i Bergen.
- Björn, A. 1920: Fra den romerske jernalder i Trøndelagen. *Det Kgl. Norske Videnskabers Selskabs Skifter 1919*, 6, 3-28. Trondheim.
- Björn, A. 1929: Bronsekar og glasbegre fra folkevandringstiden i Norge. *Det Kgl. Norske Videnskabers Selskabs Skifter 1929*, 6, 3-50. Trondheim.
- Boe G. de & Hubert, F. 1977: *Une installation portuaire d'époque romaine à Pommerœul*. *Archaeologia Belgica* 192. Bruxelles.
- Boesterd, M. den 1956: *The Bronze Vessels in the Rijksmuseum G.M. Kam at Nijmegen*. Description of the collections in the Rijksmuseum G.M. Kam 5. Nijmegen.
- Bollingberg, H.J. 1995a: Haupt- und Spurenelemente in römischen Importfunden aus Skandinavien. In: Lund Hansen, U.: *Himlingøje - Seeland - Europa*. Nordiske Fortidsminder. Serie B, 13, 283-315. Kongelige Nordiske Oldskriftselskab, København.
- Bollingberg, H.J. 1995b: Copper-alloyed artefacts from Roman imports in Scandinavia: Elemental Analysis. In: Vandiver, P.B., Druzik, J.R., Madrid, J.L.G., Freestone, I.C. & Wheeler, G.S (eds.): *Materials Issues in Art and Archaeology IV; symposium held May 16-21, 1994, Canun, Mexico*, 621-629. Materials Research Society Symposium Proceedings, 352. Pittsburg.
- Bollingberg, H.J. & Lund Hansen, U. 1993a: Spurenelementvergleich zwischen einigen Westland- und Ostlandkesseln aus Neopotz, Deutschland und Skandinavien. In: Künzl, E.: *Die Alamannenbeute aus dem Rhein bei Neupotz*, 1, 457-469. Römisch- Germanisches Zentralmuseum. Monographien. 34, 1. Mainz.
- Bollingberg, H.J. & Lund Hansen, U. 1993b: Trace Element Studies by DC ARC/Laser - Optical Emission Spectrography of Some Bronze Artefacts from the Roman Import to Scandinavia. In: Fischer, P. (ed.): *Proceedings in Archaeology and Natural Science* V, 1, 26-40. Jonsered.
- Brøgger, A.W. 1921: *Ertog og øre. Den gamle norske vegt*. Videnskapsselskaps Skrifter. II, Hist.-filos. Klasse 3. Dybwad, Kristiania.

- Bøe, Johs. 1927: Norsk gravguld fra eldre jernalder. *Bergens Museums Årbok 1926, Hist.-ant. rekke 2*, 3-104. Bergen.
- Bøe, Johs. 1931: *Jernalderens keramikk*. Bergens museums skrifter 14. Grieg, Bergen.
- Bøe, Johs. 1942: Fra ledens fortid. Et forsøk. *Viking VI*, 175-199.
- Böhme, H.W. 1974: *Germanische Grabfunde des 4. bis. 5. Jahrhunderts zwischen unterer Elbe und Loire*. 2 vols. Münchener Beiträge zur Vor- und Frühgeschichte 19. C.H. Beck'sche, München.
- Cagnat, R. & Chapot, V, 1920: *Manuel d'Archéologie Romaine. II, Décoration des monuments, peinture et mosaïque, instruments de la vie publique et privée*. Auguste Picard, Paris.
- Cave, J.F. 1977: A Note on Roman Metal turning. *History of Technology 2*, 77-94.
- Christie, J.K. 1842: Antiquarisk-historiske Skitse af Augvaldsnæs. *Urda II*, 322-347.
- Clarke, E.D. 1817: Observations upon some Celtic remains, lately discovered... *Archaeologia XVIII*, 340-343.
- Dalton, G. 1977: Aboriginal economies in stateless societies. In: Earle, T. K and Ericson, J.E (eds): *Exchange Systems in Prehistory*, 191-212. Academic Press, London.
- Dasnoy, A. 1968: La nécropole de Samson. *Annales de la Société archéologique de Namur 54*, 277-343.
- Dedekam, H. 1926: To tekstilfund fra folkevandringstiden. *Bergens Museums Årbok 1924-25, Hist.- ant. rekke 3*, 1-57. Bergen.
- Diinhoff, S. & Kvamme, M. 1997: Vereide-prosjektet boplass: arkeologiske undersøkelser på Vereide 1990-1996. *Arkeologiske rapporter 22*. Arkeologisk institutt, Museumsenheten, Universitetet i Bergen. Bergen museum.
- Doppelfeld, O. & Pirling, R. 1966: *Fränkische Fürsten im Rheinland: Die Gräber aus dem Kölner Dom, von Krefeld- Gellep und Morken*. Schriften des Rheinischen Landesmuseums Bonn, 2. Rheinland-Verlag, Düsseldorf.
- Eggers, H.J. 1951: *Der römische Import im Freien Germanien*. Atlas der Urgeschichte I. 2 vols. Hamburgisches Museum für Völkerkunde und Vorgeschichte. Hamburg.
- Eggers, H.J. 1955: Zur absoluten Chronologie der römischen Kaiserzeit im Freien Germanien. *Jahrbuch des Römisch-Germanischen Zentralmuseum Mainz 2*, 196-238. Mainz.
- Eggers, H.J. 1968: Römische Bronzegefäße in Britannien. *Jahrbuch des Römisch-Germanischen Zentralmuseum Mainz 13* (1966), 67-164. Mainz.
- Ekholm, G. 1933: Bronskärilen av Østlands- och Vestlandstyp. En förberedande sammanställning. *Det Kgl. Norske Videnskabs Selskabs Skifter 1933*, 5, 3-35. Trondheim.
- Ekholm, G. 1954-55: Neues über die Westland- Kessel. *Trierer Zeitschrift für Geschichte und Kunst des Treierer Landes und seine Nachbargebiete 23*, 224-230.
- Ekholm, G. 1956a: En västlig och en östlig importgren i Nordens järnålder. English summary. *Viking XX*, 71-80.
- Ekholm, G. 1956b: De orientalska glasens vägar mot Norden. *Fornvännen 51*, 246-266.
- Ekholm, G. 1958: Westeuropäische Gläser in Skandinavien während der späten Kaiser- und der frühen Merowingerzeit. *Acta Archaeologica 29*, 21-50.
- Ekholm, G. 1965: Als orientalisches angenommene Gläser Skandinaviens aus dem ersten bis aus dem sechsten Jahrhundert n. Chr. *Antikvariskt Arkiv 26*, 1-27. Kungl. Vitterhets Historie och Antikvitets Akademien. Lund.
- Ellmers, D. 1965: Zum Trinkgeschirr der Wikingerzeit. *Offa 21*, 21-43.
- Engelmann, R. 1898: Pompeji. *Berühmte Kunststätten 4*. E.A. Seemann, Leipzig.
- Enqvist, A. 1919: Några norrländska gravfynd från äldre folkvandringstid. *Arkiv för norrländsk hembygdsforskning, 1-2*. Härnösand 1919, 1-27.
- Ethelberg, P. 1986: *Hjemsted - en gravplads fra 4. & 5. Årh. e. Kr*. Skrifter fra Museumsrådet for Sønderjyllands Amt, 2. Haderslev Museum, Haderslev.
- Evison, V. 1967: The Dover Ring-sword and other Ring-swords and Beads. *Archaeologia CI*, 63-118.
- Farbregd, O. 1980: Perspektiv på Namdalens jernalder. *Viking XLIII*, 20-80.
- Fett, E. Nissen 1968: Forhistorien i Etne. In: Dyrvik, S. (ed.): *Etne- saga 1*, 124-156. Etne bygdeboknemnd, Etne.
- Fett, E. Nissen 1972: Forhistorisk tid. In: Vaage, E. (ed.): *Kvinnherad I*. Bygdesoga, 11-156. Kvinnherad bygdeboknemnd, Rosendal.
- Fett, E. & Fett, P. 1951: Det førhistoriske Vik. In: Hoprekstad, O. (ed.): *Bygdabok for Vik i Sogn I*, 52-138. Nemndi for bygdeboki.
- Fett, P. 1938: Sætrangbeltet og andre belter fra eldre jernalder. *Bergens Museums Årbok 1937, Hist.- ant. rekke 7*, 3-21. Bergen.
- Fett, P. 1940a: Arms in Norway between 400 and 600 A.D. Part 1. *Bergens Museums Årbok 1938, Hist.-ant. rekke 2*, 5-89. Bergen.
- Fett, P. 1940b: Arms in Norway between 400 and 600 A.D. Part 2. *Bergens Museums Årbok 1939, Hist.- ant. rekke 1*, 3-45. Bergen. (Both parts reprinted in one volume without printing year)
- Fett, P. 1950a: Stranda prestegjeld. *Førhistoriske Minne på Sunnmøre*. Bergen.
- Fett, P. 1950b: Haram prestegjeld. *Førhistoriske Minne på Sunnmøre*. Bergen.
- Fett, P. 1950c: Borgund prestegjeld. *Førhistoriske Minne på Sunnmøre*. Bergen.
- Fett, P. 1951b: Norddal prestegjeld. *Førhistoriske Minne på Sunnmøre*. Bergen.
- Fett, P. 1954a: Strandebarm prestegjeld. *Førhistoriske Minne i Hardanger*. Bergen.
- Fett, P. 1954b: Ullensvang prestegjeld. *Førhistoriske Minne i Hardanger*. Bergen.
- Fett, P. 1954c: Leikanger prestegjeld. *Førhistoriske Minne i Sogn*. Bergen.
- Fett, P. 1954d: Luster prestegjeld. *Førhistoriske Minne i Sogn*. Bergen.
- Fett, P. 1954e: Vik prestegjeld. *Førhistoriske Minne i Sogn*. Bergen.
- Fett, P. 1955: Sogndal prestegjeld. *Førhistoriske Minne i Sogn*. Bergen.
- Fett, P. 1956a: Kvinnherad prestegjeld. *Førhistoriske Minne i Sunnhordland*. Bergen.
- Fett, P. 1956b: Ulvik prestegjeld. *Førhistoriske Minne i Hardanger*. Bergen.
- Fett, P. 1957: Landnåmet i Giske og Borgund. *Borgund og Giske II*, 65-144. Borgund og Giske bygdeboknemnd, Bergen.
- Fett, P. 1960: Gloppen prestegjeld. *Førhistoriske Minne i Fjordane*. Bergen.
- Fett, P. 1961: Stryn prestegjeld. *Førhistoriske Minne i Fjordane*. Bergen.
- Fett, P. 1963: Etne prestegjeld. *Førhistoriske Minne i Sunnhordland*. Bergen.
- Fett, P. 1965a: Haus prestegjeld. *Førhistoriske Minne i Nordhordland*. Bergen.
- Fett, P. 1965b: Fjelberg prestegjeld. *Førhistoriske Minne i Sunnhordland*. Bergen.
- Fett, P. 1965c: Lindås prestegjeld. *Førhistoriske Minne i Nordhordland*. Bergen.
- Fett, P. 1967a: Stord prestegjeld. *Førhistoriske Minne i Sunnhordland*. Bergen.

- Fett, P. 1967b: Hosanger prestegjeld. *Forhistoriske Minne i Nordhordland*. Bergen.
- Fett, P. 1969: Alversund prestegjeld. *Forhistoriske Minne i Nordhordland*. Bergen.
- Fett, P. 1970a: Manger prestegjeld. *Forhistoriske Minne i Nordhordland*. Bergen.
- Fett, P. 1970b: Hamre prestegjeld og Åsane prestegjeld. *Forhistoriske Minne i Nordhordland*. Bergen.
- Fett, P. 1971a: Fana prestegjeld. *Forhistoriske Minne i Midhordland*. Bergen.
- Fett, P. 1971b: Ølen prestegjeld. *Forhistoriske Minne i Sunnhordland*. Bergen.
- Fett, P. 1973: Bergen by. Tillegg. *Forhistoriske Minne i Midhordland*. Bergen.
- Fried, M.H. 1967: *The evolution of Political Science: an essay in political anthropology*. Random House, New York.
- Frölich, S. 2000 (ed.): *Gold für die Ewigkeit – Das Germanische Fürstengrab von Gommern*. Landesamt für Archäologie Sachsen-Anhalt, Halle (Saale).
- Gaitzsch, W., Geissen, A., Meier-Arendt W., Päßgen, B., Quarg G., Schauerte G. & Steiner, A. 1984: Ein Verwahrfund des 4. Jahrhunderts aus dem Königsforst bei Köln. *Bonner Jahrbücher* 184, 335-477.
- Gardin, J.C. 1967: Methods for the descriptive Analysis of Archaeological Material. *American Antiquity* 32: 1, 13-30.
- Gjessing, H. 1925: Vestagder i forhistorisk tid. In: Aall, H. et al. (eds.): *Norske bygder II*. Vest-Agder I, 33-76. Grieg, Bergen 1925.
- Gomolka, G. 1978: Die Metallproduktion. In: Günther, R. & Köpsten, H. (eds.): *Die Römer an Rhein und Donau*, 189-229. 2<sup>nd</sup> ed. Hermann Böhlau, Wien - Köln - Graz.
- Greene, K. 1986: *The Archaeology of the Roman Economy*. Batsford, London.
- Gregory, T. 1976: A hoard of Roman bronze bowls from Burwell, Cambridgeshire. *Proceedings of the Cambridge Antiquarian Society LXVI*, 1976, 63-79.
- Grieg, S. 1926: *Hadelands eldste bosetningshistorie*. Skrifter utgitt av Det Norske Videnskaps-Akademi i Oslo. II, Hist.-filos. Klasse. 1925, 2. Dybwad, Oslo.
- Grieg, S. 1938: *Listas jernalder*. Universitetets Oldsaksamlings Skrifter I. Oslo.
- Hagberg, U.-E. 1967: *The archaeology of Skedemosse II. The Votive Deposits in the Skedemosse Fen and their Relation to the Iron-Age Settlement on Öland, Sweden*. (Kungl. Vitterhets Historie och Antikvitets Akademien.) Stockholm.
- Hagen, A. 1977: *Norges Oldtid*. Cappelen, Oslo.
- Hansen, U. Lund 1987: *Römischer Import im Norden. Warenaustausch zwischen dem Römischen Reich und dem freien Germanien während der Kaiserzeit unter besonderer Berücksichtigung Nordeuropas*. Nordiske Fortidsminder. Serie B, 10. Det Kongelige Nordiske Oldskriftselskab, København.
- Hansen, U. Lund 1990: Langdistancehandel i romersk jernalder – fra gaveudveksling til aftalehandel. *hikuin* 16, 63-88.
- Hauken, Å. Dahlin 1984: *Vestlandskittlar. En studie av en provinsialromersk importgruppe i Norge*. Unpublished thesis, Universitetet i Bergen.
- Hauken, Å. Dahlin 1991: Gift-exchange in Early Iron Age Norse Society. In: Samson, R. (ed.): *Social Approaches to Viking Studies*, 105-112. Cruithne Press, Glasgow.
- Hauken, Å. Dahlin 1997: Vestlandskjeler, velstand og makt. Tre studier av Vestlandskjelenes plass og betydning i lokalsamfunnet i eldre jernalder i Vest-Norge. (English abstract). In Selsing, L. (ed.): *Fire fragmenter fra en forhistorisk virkelighet. AmS-Varia* 31, 37-52. Stavanger.
- Hawkes, C.F.C. 1951: Bronze-workers, Cauldrons and Bucket-Animals in Iron Age and Roman Britain. In: Grimes, W. (ed.): *Aspects of Archaeology in Britain and Beyond. Essays presented to O.G.S. Crawford*, 172-199. London.
- Hedeager, L. 1978a: A quantitative analysis of Roman Imports in Europe north of the Limes (0-400 A.D.), and the Question of Roman-Germanic Exchange. In: Kristiansen, K. & Paludan-Müller, C. (eds.): *Studies in Scandinavian Prehistory and Early History I*, 191-216. New Directions in Scandinavian Archaeology. The National Museum of Denmark, Copenhagen.
- Hedeager, L. 1978b: Processes towards a State Formation in early Iron Age Denmark. In: Kristiansen, K. & Paludan-Müller, C. (eds.): *Studies in Scandinavian Prehistory and Early History I*, 217-223. New Directions in Scandinavian Archaeology. The National Museum of Denmark, Copenhagen.
- Helliesen, T. 1900: Oldtidslevninger i Stavanger Amt. *Stavanger Museums Årshefte* 1899, 36-57. Stavanger.
- Helliesen, T. 1901: Oldtidslevninger i Stavanger Amt. *Stavanger Museums Årshefte* 1900, 31-63. Stavanger.
- Helliesen, T. 1903: Oldtidslevninger i Stavanger Amt. *Stavanger Museums Årshefte* 1902, 43-84. Stavanger.
- Helliesen, T. 1904: Oldtidslevninger i Stavanger Amt. *Stavanger Museums Årshefte* 1903, 31-74. Stavanger.
- Helliesen, T. 1907: Oldtidslevninger i Stavanger Amt. *Stavanger Museums Årshefte* 1906, 37-96. Stavanger.
- Helliksen, W. 1997: *Gård og utmark på Romerike 1100 f. Kr. – 1400 e. Kr.* Universitetets Oldsaksamling Varia 45. Oslo.
- Herteig, A. E. 1955: *Bidrag til jernalderens busetningshistorie på Toten*. Skrifter utgitt av Det Norske Videnskaps-Akademi i Oslo. II, Hist.-filos. Klasse 1. Dybwad, Oslo.
- Heyerdahl-Larsen, B. 1971: Bjarkøykjelen. *Ottar* 67, 24-26.
- Hines, J. 1984: *The Scandinavian Character of Anglian England in the pre-Viking Period*. BAR British Series 124.
- Hines, J. 1993: *Clasps, Hektespenner, Agraffen. Anglo-Scandinavian Clasps of Class A-C of the 3<sup>rd</sup> to 6<sup>th</sup> centuries A.D.: Typology, Diffusion and Function*. Kungl. Vitterhets Historie och Antikvitets Akademien. Stockholm.
- Hjellestad, H. 1933: *Fana, I*. Dreyer, Bergen.
- Hodges, H. 1968: *Artifacts*. 3<sup>rd</sup> ed. John Baker, London.
- Holand, I. 2001: *Sustaining life. Vessel import to Norway in the first millennium AD*. AmS-Skrifter 17. Stavanger.
- Holck, P. 1987: «Cremated bones: a medical-anthropological study of an archaeological material on cremation burials.» Ph.D. dissertation. University of Oslo. Printed in: Antropologiske skrifter 1b. Anatomical Institute, University of Oslo 1996.
- Hougen, B. 1924: *Grav og gravplass. Eldre jernalders gravskikk i Østfold og Vestfold*. Videnskapsselskapets skrifter. II, Hist.-filos. Klasse 6. Dybwad, Oslo.
- Hougen, B. 1935: *Snartemofunnene: studier i folkevandringstidens ornamentikk og tekstilhistorie*. Norske Oldfunn VII. Universitetets Oldsaksamling, Oslo.
- Hougen, B. 1967: *The Migration Style of Ornament in Norway*. 2<sup>nd</sup> ed. Universitetets Oldsaksamling, Oslo.
- Howgego, C. 1994: Coin circulation and the integration of the Roman economy. *Journal of Roman Archeology* 7, 5-21.
- Hässler, H.J. 1978: Über drei Metallgefäße der jüngeren Kaiserzeit aus Elm, Kr. Bremervörde, Niedersachsen. *Hammaburg NF* 3/4 (1976/77), 79-86. Neumünster.
- Haavaldsen, P. 1997: Lavteknologisk jernframstilling i Rogaland i jernalder og middelalder. In Selsing, L. (ed.): *Fire fragmenter fra en forhistorisk virkelighet. AmS-Varia* 31, 69-92. Stavanger.
- Ilkjær, J. 1990: *Illerup Ådal. Die Lanzen und Speere*. Jutland Archaeological Society Publications XXV: 1, 2. Århus.

- Ilkjær, J. 1993: *Illerup Ådal. Die Gürtel. Bestandteile und Zubehör.* Jutland Archaeological Society Publications XXV: 3, 4. Århus.
- Inventaria Archaeologica.* Corpus des ensembles archaologiques. Norway (ed. Per Fett): 1. set. Migration period graves. Rudolf Habelt, Bonn 1966.
- Jensen, J. 1981: Oldtidens samfund. Tiden indtil 800. *Dansk socialhistorie* 1. Viborg.
- Jones, A.H.M. 1964: *The later Roman Empire 284-602. A social economic and administrative survey. I-II.* Oxford 1964. Reprint: Baltimore 1986.
- Jørgensen, L. Bender 1986: *Forhistoriske tekstiler i Skandinavien.* Nordiske Foridsminder. Serie B, 9. Det Kongelige Nordiske Oldskriftselskab, København.
- Kennett, D.H. 1971a: Late Roman bronze vessel hoards in Britain. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 16, 1969, 123-148. Mainz.
- Kennett, D.H. 1971b: Graves with swords at Little Wilbraham and Linton Heath. *Proceedings of the Cambridge Antiquarian Society LXIII*, 1971, 9-26.
- Keyser, R. 1837: Beskrivelse over tvende Fund paa Ringerige i Norge af Oldsager fra Hedenskabets sidste Periode. *Annaler for Nordisk Oldkyndighed* 1836-37, 142-159.
- Klüwer, L.D. 1823: *Norske mindesmerker, aftegnede paa en reise gjennem en Deel af det Nordenfjeldske, og beskrevne.* Udgivne af det Kongelige Norske Videnskabers Selskab. Wulfsbergske Bogtrykkerie, Christiania.
- Koster, A. 1997: The Bronze Vessels 2. Acquisitions 1954-1996 (including vessel of pewter and tin). *Description of the Collections in the Provinciaal Museum G.M. Kam at Nijmegen XIII.* Provincie Gelderland 1997.
- Kutsch, F. 1921: Ein frühfränkische Grab aus Biebrich. *Germania V*, 27-35.
- Künzl, E. 1993: *Die Alamannenbeute aus dem Rhein bei Neupotz.* Römisch-Germanisches Zentralmuseum. Monographien 34, 4 vols. Mainz.
- Kvamme, M., Berge, J. & Kaland, P.E. 1992: Vegetasjonshistoriske undersøkelser i Nyset-Steggjevassdragene. *Arkeologiske rapporter* 17. Historisk Museum, Universitetet i Bergen.
- Kvamme, M. & Randers, K. 1982: Breheimenundersøkelsene 1981. *Arkeologiske Rapporter* 3. Historisk Museum, Universitetet i Bergen.
- Kyhlberg, O. 1986: Late Roman and Byzantine Solidi. In: Lundström, A. & Clarke, H. (eds.) *Excavations at Helgö X. Coins, Iron and Gold*, 13-126. Kungliga Vitterhets Historie och Antikvitets Akademien. Stockholm.
- Lange, E. de 1911: En gravplass fra ældre jernalder. *Oldtiden* 1910, I: 2, 21-50.
- Lavik, P.J. 1969: *Godøyfunnet og bakgrunnen for det.* Unpublished thesis, University of Bergen.
- Leineweber, R. 1997: *Die Altmark in spätrömischer Zeit.* Veröffentlichungen des Landesamtes für Archäologie, Landesmuseum für Vorgeschichte, Sachsen-Anhalt 50. Halle (Saale).
- Lillehammer, A. 1999: Farm and village, the problem of nucleation and dispersal of settlement – seen from a Norwegian perspective. In: Fabech & Ringtved (eds.): *Settlement and landscape. Proceedings of a conference in Århus, Denmark May 4-7, 1998*, 131-137. Jutland Archaeological Society, Moesgård.
- Lillehammer, G. 1996: *Død og grav. Gravskikk på Kvassheimfeltet, Hå i Rogaland, SV Norge.* AmS-Skrifter 13. Stavanger.
- Lindenschmit, L. 1911: *Altertümer unser heidnischer Vorzeit V.* Victor von Zabern, Mainz.
- Lorange, A. 1873: Om spor af romersk kultur i Norges ældre jernalder. *Christiania Videnskabs- Selsk. Forhandlinger for 1873*, 185-236. Kristiania.
- Lorange, A. 1875a: *Samlingen af Norske Oldsager i Bergens Museum.* Beyer, Bergen.
- Lorange, A. 1875b: Indberetning til Filialafdelingens Direktion i Anledning en reise til Søndmøre, Juni 1874. *Foreningen til Norske Fortidsmindesmerkers Bevaring, Aarsberetning 1874.* Kristiania.
- Løken, T., Pilø, L. & Hemdorff, O. 1996: *Maskinell flateavdekking og utgravning av forhistoriske jordbruksboplasser – en metodisk innføring.* AmS-Varia 26. Stavanger.
- Løken, T. 2001: Jæren eller Karmøy – hvor var makta i Rogaland i eldre jernalder? *Frå haug ok heidni* 2001:1-2, 3-14.
- Mackeprang, M. 1952: *De nordiske guldbraketeater.* Jutland Archaeological Society Publications II. Universitetsforlaget, Århus.
- Madsen, H. Brinch 1975: En nordjysk kvinnegrav fra omkring 400 e. Kr. *bikuin* 2, 123-130.
- Magnus, B. 1975: *Krosshaugfunnet.* Stavanger Museums Skrifter 9. Stavanger.
- Magnus, B. & Myhre, B. 1976: *Forhistorien.* Norges historie I. Cappelen, Oslo.
- Magnus, B. 1984: The interlace motif on the bucket-shaped pottery of the Migration Period. *Universitetets Oldsaksamlings Skrifter. Ny rekke* 5, 139-157. (Festskrift til Thorleif Sjøvold). Oslo.
- Malmer, M. 1962: *Jungneolitische Studien.* Acta Archaeologica Lundensia. Series in 8°, no. 2. Lund.
- Marstrand, L. 1983: *Inntrøndelag i romertid. Gravfunn og bosetning.* Gunneria 43. Trondheim.
- Marstrand, S. 1938: En gravplass fra folkevandringstid ved Evje nikkerverk i Setesdalen. In: Norling-Christensen, H. & Glob, P. (eds): *Winther-Festskift*, 162-196. Munksgaard, København.
- Maryon, H. 1957: Fine Metalwork. In: Singer, C et al. (eds.): *A History of Technology II. The Mediterranean Civilizations and the Middle Ages.* Clarendon Press, Oxford.
- Mauss, M. 1990: Essai sur le don. *L'Année Sociologique* 1 (2ème ser.) 1923-24. Translated by W.D. Halls: *The gift. The form and reason for exchange in archaic societies.* Routledge, London.
- Meier, F. & Nijf, O. van 1992: *Trade, Transport and Society in the Ancient World. A sourcebook.* Routledge, London.
- Meyer, E. Nissen 1935: Relieffspanner i Norden. *Bergens Museums Årbok 1934. Historisk.-antikvarisk rekke nr. 4*, 1-125. Bergen.
- Miglbauer, R. 1994: Ein römerzeitlicher Verwahrfund aus Wels, Oberösterreich. In: Ronke, J. (ed): Akten der 10. Internationalen Tagung über antike Bronzen. *Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 45, 285-291. Konrad Theiss, Stuttgart.
- Moberg, C.-A. & Olsson, U. 1973: *Ekonomisk historisk början. Försörjning och samhälle.* Wahlström & Widstrand, Stockholm.
- Montelius, O. 1882-84: Den förhistoriska fornforskningen i Sverige under åren 1880 och 1881. *Svenska Fornminnesföreningens Tidskrift V*, 1-52.
- Montelius, O. 1898: Den nordiska jernaldernas kronologi. III. Jernaldernas sjette period. *Svenska Fornminnesföreningens Tidskrift* 10, 55-130.
- Munch, J. Storm 1965: Borg og bygd. Studier i Telemarks eldre jernalder. *Universitetets Oldsaksamling Årbok* 1962, 7-175. Oslo.
- Mutz, A. 1972: *Die Kunst des Metalleden bei den Römern.* Birkhäuser, Basel.
- Myhre, B. 1978: Agrarian Development, Settlement History and Social Organization in Southwest Norway in the Iron Age. In: Kristiansen, K. & Paludan-Müller, C. (eds.): *Studies in Scandinavian Prehistory and Early History I.* New Directions in Scandinavian Archaeology, 224-271. The National Museum of Denmark, Copenhagen.

- Myhre, B. 1980: *Gårdsanlegget på Ullandhaug*. AmS-Skrifter 4. Stavanger.
- Myhre, B. 1981: *Sola og Madla i førhistorisk tid*. AmS-Småtrykk 10. Stavanger.
- Myhre, B. 1983: Beregning av folketall på Jæren i yngre romertid og folkevandrings-tid. In: Ólafsson, G. (ed.): *Föredrag från det XVI nordiska arkeologmötet, Island 1982*. Þjóðminjasafn Íslands, Reykjavik.
- Myhre, B. 1987: Chieftains' graves and chieftom territories in South Norway in the Migration Period. In: Hässler, H (ed.): *Studien zur Sachsenforschung* 6, 169-187. (Veröffentlichungen der urgeschichtlichen Sammlungen des Landesmuseums zu Hannover 34.) August Lax, Hildesheim.
- Möller, J. 1987: *Katalog der Grabfunde aus Völkerwanderungs- und Merowingerzeit im Südmainischen Hessen (Starkenburg)*. Germanische Denkmäler der Völkerwanderungszeit. Serie B, Die Fränkischen Altertümer des Rheinlandes 11. Franz Steiner, Stuttgart.
- Møllerop, O. 1961: En foreløpig meddelelse om et smedgravfunn fra Vestly i Time. *Stavanger Museum Årbok 1960*, 5-14. Stavanger.
- Nerman, B. 1935: *Die Völkerwanderungszeit Gotlands*. Kungl. Vitterhets Historie och Antikvitets Akademien. Stockholm.
- Neuffer, H. 1972: *Der Rheingraberfriedhof von Donzdorf (Kreis Göppingen)* Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 2. Müller & Gräff, Stuttgart.
- Neumann, J. 1837: Kong Valders grav. *Urda I*. Bergen.
- Neville, R.C. 1852: *Saxon Obsequies illustrated by ornaments and weapons..* London.
- Nicolaysen, N. 1860-66: *Norske Fornlevninger. En oplysende Fortegnelse over Norges Fortidslevninger, ældre end Reformationen og henførte til hver sit Sted*. Foreningen til Norske Fortidsmindesmerkers Bevaring, Kristiania.
- Nicolaysen, N. 1868: Tillæg til «Norske Fornlevninger» *Foreningen til Norske Fortidsmindesmerkers Bevaring, Aarsberetning 1867*, 72-115.
- Nicolaysen, N. 1871: Tillæg til «Norske Fornlevninger» m. m. *Foreningen til Norske Fortidsmindesmerkers Bevaring, Aarsberetning 1870*, 134-161.
- Nicolaysen, N. 1876: Antikvariske notiser. *Foreningen til Norske Fortidsmindesmerkers Bevaring, Aarsberetning 1875*, 216-248. Kristiania.
- Nicolaysen, N. 1883: Udgravninger I Evje 1882. *Foreningen til Norske Fortidsmindesmerkers Bevaring, Aarsberetning 1883*, 14-29. Kristiania.
- Nordström, H.-Å. 1972: *Cultural Ecology and Ceramic Technology. Early Nubian Cultures from the Fifth and Fourth Millennia B.C.* Acta Universitatis Stockholmsensis. Studies in North-European Archaeology 4. Almqvist & Wiksell, Stockholm.
- Norling-Christensen, H. 1949: Germansk Jernalders Begyndelse i Norden. *Viking XIII*, 1-16.
- Norling-Christensen, H. 1953: Vestlandskedler og malede glas. *Kuml 1953*, 47-60.
- Norling-Christensen, H. 1957: Haraldstedgravpladsen og Ældre Germansk Jernalder i Danmark. *Aarbøger for Nordisk Oldkyndighed og Historie 1956*, 14-143.
- Näsman, U. 1972: Grunden för en tudelning av äldre germansk järnålder. *TOR XIV* (1970-71), 89-110.
- Näsman, U. 1988: Analogislutning i nordisk jernalderarkæologi. In: Mortensen, P. & Rasmussen, B.M. (eds.): *Fra stamme til stat i Danmark. 1 Jernalderens stammesamfund*, 123-140. Jysk Arkæologisk Selskabs Skrifter XXII. Moesgård.
- Näsman, U. 1990: Om fjärrhandel i Sydskandinaviens yngre järnålder. Handel med glas under germansk järnålder och vikingatid. *bikuin 16*, 89-118.
- Odner, K. 1972: Ethno-historic and ecological settings for economic and social models of an Iron Age Society: Valdalen, Norway. In: Clarke, D.L. (ed.): *Models in Archaeology*, 623-651. Methuen, London.
- Odner, K. 1973: *Økonomiske strukturer på Vestlandet i eldre jernalder*. English summary. Historisk Museum, Universitetet i Bergen.
- Olsen, M. & Shetelig, H. 1910: En indskrift med ældre runer fra Fløksand i Nordhordland. *Bergens Museums Årbok 1909*:7, 1-44. Bergen.
- Petersen, J. 1936: *Gamle gårdsanlegg i Rogaland. Fortsettelse*. (German summary.) Institutt for sammenlignende kulturforskning. Serie B: Skrifter XXXI. Aschehoug, Oslo.
- Petersen, Th. 1923: *Meldalsfundene. En gravplads under flat mark fra ældre jernalder paa Vahaugen i Meldalen*. Norske Oldfund IV. Universitetets Oldsaksamling, Kristiania.
- Pirling, R. 1964: Ein fränkisches Fürstengrab aus Krefeld-Gellep. *Germania 42*, 179-216.
- Pirling, R. 1974: *Das Römisch-Fränkische Gräberfeld von Krefeld-Gellep 1960-1963*. Germanische Denkmäler der Völkerwanderungszeit. Serie B, Die Fränkischen Altertümer des Rheinlandes 8. Mann, Berlin.
- Pirling, R. 1979. *Das Römisch-Fränkische Gräberfeld von Krefeld-Gellep 1964-65*. Germanische Denkmäler der Völkerwanderungszeit. Serie B, Die Fränkischen Altertümer des Rheinlandes 10. Mann, Berlin.
- Planck, D. 1979: Brunnenfunde aus dem römischen Kastellort bei Buch, Geimeinde Rainau, Ostalbkreis. *Denkmalpflege in Baden-Württemberg. Nachrichtenblatt des Landesdenkmalamtes 8:1*, 115-120.
- Pleket, H. W. 1983: Urban elites and business. In: Garnsey, P., Hopkins, K. & Whittaker, C.R (eds.): *Trade in the ancient economy*, 131-144. Chatto & Windus, London.
- Pucci, G. 1983: Pottery and trade. In: Garnsey, P., Hopkins, K. & Whittaker, C.R (eds.): *Trade in the ancient economy*, 103-117. Chatto & Windus, London.
- Qviller, B. 1981. The Dynamics of the Homeric Society. *Symbolae Osloensis LVI*, 109-155.
- Raddatz, K. 1976: *Grabfunde der römischen Kaiserzeit und Völkerwanderungszeit von Kirchweyhe und Osterholz, Kreis Grafschaft Hoya*. Materialhefte zur Ur- und Frühgeschichte Niedersachsens 10. August Lax, Hildesheim.
- Ramqvist, P.H. 1992: *Högom. The excavations 1949-1984*. Högom Part I. Archaeology and Environment 13. Karl Wachholtz, Neumünster.
- Reichstein, J. 1975: *Die Kreuzförmige Fibel*. Offabücher 34. Karl Wachholtz, Neumünster.
- Reichstein, J. 1977: Stufengliederung der späten Kaiserzeit und der Völkerwanderungszeit anhand von Grabfunde mit Kreuzförmigen Fibeln. In: Kossack, G. & Reichstein, J. (eds.): *Archäologische Beiträge zur Chronologie der Völkerwanderungszeit*, 53-56. Antiquitas, Reihe 3, 20. Rudolf Habelt, Bonn.
- Reim, H. 1982: *Der römische Gutshof bei Hechingen – Stein, Zollernalbkreis*. Förderverein zur Erforschung und Erhaltung der Kulturdenkmale in Stein E.V. Tübingen.
- Riederer, J. 1984: Metallanalysen römischer Bronzen. In: Gehrig, U. (ed.): *Toreutik und figürliche Bronzen römischer Zeit. Akten der 6. Tagung über antike Bronzen 13.-17. Mai 1980 in Berlin*, 220-225. Staatliche Museen Preußischer Kulturbesitz Berlin, Antikenmuseum, Berlin.

- Ringtved, J. 1991: Fremmede genstande på Sejlflodgravpladsen, Nordjylland. In: Fabeck, C. & Ringtved, J (eds.): *Samfundsorganisation og Regional Variation. Norden i romersk jernalder og folkevandringstid*, 47-73. Jysk Arkæologisk Selskabs Skrifter XXVII. Moesgård.
- Ross, I. 1880: Indberetning om archeologiske Undersøgelser i Fjellberg, fortagne Sommeren 1879. *Foreningen til Norske Fortidsmindemerkernes Bevaring, Aarsberetning 1879*, 160-168. Kristiania.
- Rygh, K. 1871: Katalog over Det Kgl. norske Videnskabers Selskabs Oldsamling. *Det Kgl. Norske Videnskabers Selskabs Skrifter 1871*:7, 21-96. Trondheim.
- Rygh, K. 1879: Faste fornlevninger og oldsagsfund i Nordre Trondhjems Amt. *Det Kgl. Norske Videnskabers Selskabs Skrifter 1878*. Trondheim.
- Rygh, K. 1913: Über einige Feuerzeuggeräte in norwegischen Gräberfunden aus der älteren Eisenzeit. *Opuscula Archaeologica Oscari Monteli Septugenario dicata*, 327-334. Hæggström, Stockholm.
- Rygh, O. 1872: To norske oldsagsfund. *Christiania Videnskabs-Selsk. Forhandling 1872*, 344-360. Kristiania.
- Rygh, O. 1885: *Norske Oldsager*. Alb. Cammermeyer, Kristiania. (Facsimile edition 1999, Tapir, Trondheim)
- Samson, R. 1991: Economic Anthropology and Vikings. In: Samson, R (ed.): *Social Approaches to Viking Studies*, 87-96. Cruithne Press, Glasgow.
- Schaeffer, F.A. 1927: *Un Dépôt d'Outils et un Trésor de Bronzes de l'Époque Gallo-Romaine découverts à Seltz (Bas-Rhin)*. Publications du Musée de Haguenau (Alsace). Haguenau.
- Schallmayer, E. 1982: Ausgrabungen im Lagerdorff des Numeruskastells Walldürn, Neckar-Odenwald-Kreis. *Archäologische Ausgrabungen in Baden-Württemberg 1982*, 146-150. Landesdenkmalamt Baden-Württemberg. Theiss, Stuttgart.
- Schetelig, H. see Shetelig, H.
- Schmidt, B. 1961: *Die späte Völkerwanderungszeit in Mitteldeutschland*. Veröffentlichungen des Landesmuseums für Vorgeschichte in Halle 18. Max Niemeyer, Berlin.
- Service, E.R. 1975: *Origins of the State and Civilization. The Process of Cultural Evolution*. W.W. Norton, New York.
- Shepard, A.O. 1976: *Ceramics for the Archaeologist*. Publication 609. Carnegie Institution of Washington. Washington D.C.
- Shetelig, H. 1905: Spandformede lerkar fra folkevandringstiden. *Foreningen til Norske Fortidsmindemerkernes Bevaring, Aarsberetning 1904*, 42-91. Kristiania.
- Shetelig, H. 1907: The cruciform brooches in Norway. *Bergens Museums Årbok 1906*:8, 1-162. Bergen.
- Shetelig, H. 1912a: *Vestlandske graver fra jernalderen*. Bergens Museums Skrifter. Ny række, II: 1. Bergen.
- Shetelig, H. 1912b: Die norwegische Skelettgräber der Völkerwanderungszeit. *Præhistorische Zeitschrift IV*, 351-367.
- Shetelig, H. 1917: Nye jernaldersfund paa Vestlandet. *Bergens Museums Årbok 1916-17. Hist.- ant. række 1*, 7-86. Bergen.
- Sjøvold, Th. 1962: *The Iron Age Settlement of Arctic Norway I*. Tromsø Museums Skrifter X, 1. Universitetsforlaget, Tromsø.
- Skaare, K. 1976: *Coins and Coinage in Viking-Age Norway*. Universitetsforlaget, Oslo.
- Skaare, K. 1995: *Norsk mynthistorie 1*. Universitetsforlaget, Oslo.
- Slomann, W. 1950: Medelpad og Jämtland i eldre jernalder. *Universitetet i Bergen, Årbok 1948. Hist.- ant. rekke 2*, 1-88. Bergen.
- Slomann, W. 1959: *Satrangfunnet. Hjemlig tradisjon og fremmede innslag*. Norske Oldfunn IX. Universitetets Oldsaksamling, Oslo.
- Slomann, W. 1964: En antikvarisk-historisk skisse omkring Avaldsnesfunnet. *Viking XXVIII*, 5-38.
- Slomann, W. 1970: The Early Westland Cauldrons. In: Filip, J. (ed.): *Actes du VII:e Congrès International des Sciences Préhistorique et Protohistoriques. Prague 21-27 août 1966, II*, 920-924. Academia, Praha.
- Slomann, W. 1972: Bosetning og bosetningsproblemer i Sydvest-norge i eldre jernalder. *Stavanger Museum Årbok 1971*, 5-38. Stavanger.
- Slomann, W. 1977: Der Übergang zwischen der späten Kaiserzeit under der frühen Völkerwanderungszeit in Norwegen. In: Kosack, G. & Reichstein, J. (eds.): *Archäologische Beiträge zur Chronologie der Völkerwanderungszeit*, 51-64. Antiquitas, Reihe 3, 20. Rudolf Habelt, Bonn.
- Solberg, B. 1981: Spearheads of the Iron Age in Norway. *Acta Archaeologica 51* (1980), 153-172. København.
- Sorterup, J.B. 1845: Udsigt over Urner, Gravkar og jordfundne Kar fra Nordens Hedenold. *Annaler for Nordisk Oldkyndighed og Historie 1844-45*, 317-370. København.
- Stalsberg, A. 1991: Women as Actors in North European Viking Age Trade. In: Samson, R. (ed.): *Social Approaches to Viking Studies*, 75-83. Cruithne Press, Glasgow.
- Stenvik, L. F. 1990: Lavteknisk jernframstilling i Trøndelag. Foredrag från höstmötet i Röros 1998. *Jernkontorets bergshistoriska utskott H 47*, 30-38. Stockholm.
- Stenvik, L. F. 1991: Iron production and economic «booms» during 2000 years. In: Espelund, A. (ed.): *Bloomery Ironmaking during 2000 years: seminar in Budalen, Sør-Trøndelag, Norway: August 26<sup>th</sup>-30<sup>th</sup> 1991, 1*: Ancient ironmaking in a local and general Norwegian context, 100-115. Budalsseminaret 1991-1993, Trondheim.
- Steuer, H. 1987: Helm und Ringschwert. Prunkbewaffnung und Rangabzeichen germanischer Krieger. Eine Übersicht. In: Hässler, H (ed.): *Studien zur Sachsenforschung 6*, 189-236. (Veröffentlichungen der urgeschichtlichen Sammlungen des Landesmuseums zu Hannover 34.) August Lax, Hildesheim.
- Stjernquist, B. 1967: *Models of Commercial Diffusion in Prehistoric Times*. Scripta Minora. Regiae Humaniorum Litterarum Lundensis 1965-66: 2. Gleerups, Lund.
- Stjernquist, B. 1985: Methodische Überlegungen zum Nachweis von Handel aufgrund archäologischen Quellen. In: Düwel, K. (ed.): *Untersuchungen zu Handel und Verkehr der vor- und frühgeschichtlichen Zeit in Mittel- und Nordeuropa I*, 56- 83. Abhandlungen der Akademie der Wissenschaften in Göttingen. Vandenhoeck & Ruprecht, Göttingen.
- Straume, E. 1961: To romertids gravfunn fra Trøndelag. (With English summary.) *Viking XXV*, 51-88.
- Straume, E. 1963: Nordfjord i eldre jernalder. *Årbok for Universitetet i Bergen 1961, Hum. serie 4*, 1-84. Bergen.
- Straume, E. 1987: *Gläser mit Facettenschliff aus skandinavischen Gräbern des 4. und 5. Jahrhunderts n. Chr.* Instituttet for sammenlignende kulturforskning Serie B: Skrifter LXXIII. Universitetsforlaget, Oslo.
- Straume, E. & Bollingberg, H. 1995: Ein Westlandskessel der jüngeren Kaiserzeit aus Bjarkøy in Nordnorwegen. Neue Analyse eines alten Fundes. *Archäologisches Korrespondenzblatt 25*:1, 127-142. Mainz.
- Sällström, F. 1943: Lilla Jored-fyndets gravanläggning. *Antikvariska Studier 1*. Kungl. Vitterhets Historie och Antikvitets Akademien Handlingar 55, 5-60. Stockholm.
- Tempelmann-Mačynska, M. 1985: *Die Perlen der römischen Kaiserzeit und der frühen Phase der Völkerwanderungszeit im mitteleuropäischen Barbaricum*. Römisch-Germanische Forschungen 43. Philipp von Zabern, Mainz.

- Tholander, E. 1971: En teknikers funderinger om Norrlandsjärn och Trøndelagssalt i förhistoriskt handelsutbyte. English summary. *Fornvännen* 1971, 1-17.
- Thompson, F.H. 1956: Anglo-Saxon Sites in Lincolnshire. *The Antiquaries Journal* 36, 181-199.
- Tomasevic-Buck, T. 1984: Ein Bronzedepotfund aus Augusta Raurica. (Dorfstraße 1, Kaiseraugst, Kt. Aargau). *Bayerische Vorgeschichtsblätter* 49, 143-196.
- Tylecote, R.F. 1962: *Metallurgy in Archaeology*. Edward Arnold, London.
- Undset, I. 1878: *Norske oldsager i fremmede Museer: en oplysende fortegnelse*. Kristiania Videnskabselskap. Dybwad, Kristiania.
- Undset, I. 1880: Fra Norges ældre jernalder. *Aarbøger for Nordisk Oldkyndighed og Historie* 1880, 89-184.
- Universitetet i Trondheim 1980: *Funn og fornminner Møre og Romsdal 4*. Molde kommune: topografisk-arkeologisk registrering 1978. Universitetet i Trondheim, Det Kgl. Norske Videnskabs Selskab, Museet. Trondheim.
- Vestergaard, E. 1991: Gift-giving, Hoarding, and Out-doings. In: Samson, R. (ed.): *Social Approaches to Viking Studies*, 97-104. Cruithne Press, Glasgow.
- Vestrum, A. 1926: *Skogns historie I*. Nemnda for Skogns historie, Levanger.
- Vinsrygg, S. 1974: Grav og gravfelt, gard og bygd i Noreg. *Stavanger Museums Årbok* 1973, 37-50. Stavanger.
- Waller, K. 1959: *Die Gräberfelder von Hemmoor, Quelkborn, Guldendorf und Dubnen-Wehrberg in Niedersachsen*. 8. Beiheft zum Atlas der Urgeschichte. Hamburgisches Museum für Völkerkunde und Vorgeschichte. Hamburg.
- Waller, K. 1961: *Der Urnenfriedhof in Wehden*. Die Urnenfriedhöfe in Niedersachsen 4. August Lax, Hildesheim.
- Werner, J. 1938: Die römischen Bronzebeschirdepots des 3. Jahrhunderts und die Mitteldeutsche Skelettgräbergruppe. In: Sprockhoff, E. (ed.): *Marburger Studien*, 259-267. Darmstadt.
- Werner, J. 1958: Kriegergräber aus der ersten Hälfte des 5. Jahrhunderts zwischen Schelde und Weser. *Bonner Jahrbücher* 158, 372-413.
- Werner, J. 1962: *Die Langobarden in Pannonien*. Bayerische Akademie der Wissenschaften. Philosophisch-Historische Klasse. Abhandlungen. Neue Folge 55A. C.H. Beck'sche, München.
- Whittaker, C.R. 1983: Late roman trade and traders. In: Garnsey, P., Hopkins, K. & Whittaker, C.R. (eds.): *Trade in the ancient economy*, 163-180. Chatto & Windus, London.
- Willers, H. 1901: *Die römische Bronzezeit von Hemmoor*. Hahn-sche Buchhandlung, Hannover.
- Willers, H. 1907: *Neue Untersuchungen über die Römische Bronzeindustrie*. Hansche Buchhandlung, Hannover.
- Østigård, T. 2000: Sacrifices of Raw, Cooked and Burnt Humans. *Norwegian Archaeological Review* 33, 1, 41-58.

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## APPENDIX I.

# The Westland cauldrons in the Neupotz hoard

In 1993 the monograph on the Neupotz hoard was published (Künzl 1993, Appendix III: no. 45). The hoard is associated with the Alamannian and Frankish invasion of Gaul in AD 275. In this enormous hoard, where the copper alloy objects alone weighed 197.33 kg, there was also a large number of Westland cauldrons. The cauldrons in the hoard were classified by Künzl, and divided into eight groups, NE 1-8 (Künzl 1993,1:232, fig. 57). The groups NE 1 and 2 are cauldrons made of metal sheets riveted together and as such cannot be regarded as Westland cauldrons, neither early nor the true type, but rather as «proto» Westland cauldrons, a fact that Künzl acknowledges. NE 3 belongs to the class 1 cauldrons. It has a complex rim form, and the upper part is divided into two by a hammered line. The «neck» is convex and the shoulder concave. The shoulder is set off from the base in a clear angle, but the base is almost flat. There is only one cauldron in the Neupotz hoard of this type, E7, but there are cauldrons belonging to this type in the hoards of Otterstadt-Angelhof and Hagenbach (Appendix III, nos. 43 and 47). Unfortunately, the other groups in the material are poorly defined. The type NE 4 is described as the classical form of the Westland cauldron without the triangular ears, with a steep upper part and a pronounced, keel-shaped break in the lower section. NE 5 has the same form, but is smaller and has the triangular ears. The types NE 6-8 are considered as variations of NE 5 (Künzl 1993,1:231). NE 6 is defined by Künzl thus: «Typ NE 6 hat eine weniger ausladende Unterpartie; die akzentuierte Trennungslinie liegt nun zwischen der steilen Wandung des Oberteils und der unteren Hälfte.» (Künzl 1993,1:231). NE 7 is characterized by its distinct base, shaped as a mushroom turned upside-down. NE 8 has a slightly inwards-curved upper part and a spherical base.

In 1996<sup>1</sup> I had the opportunity to study the cauldrons from the Neupotz hoard myself. All the cauldrons were examined and profiles of 30 of them were drawn. The overall impression was that these cauldrons were much better preserved than the majority of the Norwegian ones, and also in many cases better made. The result of the study can be summed up thus:

- There are no cauldrons of the type 1A, 2A and 2D in the Neupotz hoard.
- There are five cauldrons of the type 1B (E12, E13, E15, E16, E17, all classified as type NE 4 by Künzl). The Neupotz ones are more refined and better executed than the Norwegian ones (with the exception of E17, which is badly damaged). In accordance with the definition, they have no neck in the strict sense, but are less converging/diverging than the Scandinavian ones. As opposed to the Scandinavian ones they have clearly outward-turned rims to contain the iron band with the lugs. The cauldrons of the type 1B differ from 1D in size and their shoulder is straight, not convex.
- Type 1C is represented by one cauldron in the hoard, E14 (classified as belonging to NE 4 by Künzl).
- The nearest equivalent to type 1D in Neupotz is type NE 4. The difference lies in the profile of the shoulder: type NE 4 has a convex (xo) shoulder, type 1D has a concave (vo) one. There are six cauldrons of the type NE 4 in the hoard, E8, E9, E10, E11, E12 and E12 (in agreement with Künzl).
- Type 2B, with a straight neck parallel to the symmetry axis and a sharp break in the profile setting off the shoulder, is represented by four cauldrons in Neupotz, E20, E21, E22 and E24 (E20-22 are classified as type NE 5 and E24 as NE 6 by Künzl).
- Type 2C, with a neck more than 10% of the cauldron's height, is represented by ten cauldrons, E29, E30, E31, E33, E34, E35, E36, E37, E38 and E39 (all classified as NE 8 by Künzl).

The Neupotz hoard also contains types that are not found in Scandinavia, type NE 3 (cauldron E7) and type NE 7 (cauldrons E25, E26 and E27), as well as type NE 6 (cauldrons E23 and E28). The type NE 6 is not very well defined; a more precise definition of NE 6 would be that it has no neck (i.e. no part of the profile parallel to the symmetry axis), the upper part of the vessel's profile is concave divergent and the shoulder is concave convergent, separated by a vertical tangent point, V. (Cauldron E28 was classified as a type NE 8 by Künzl.)

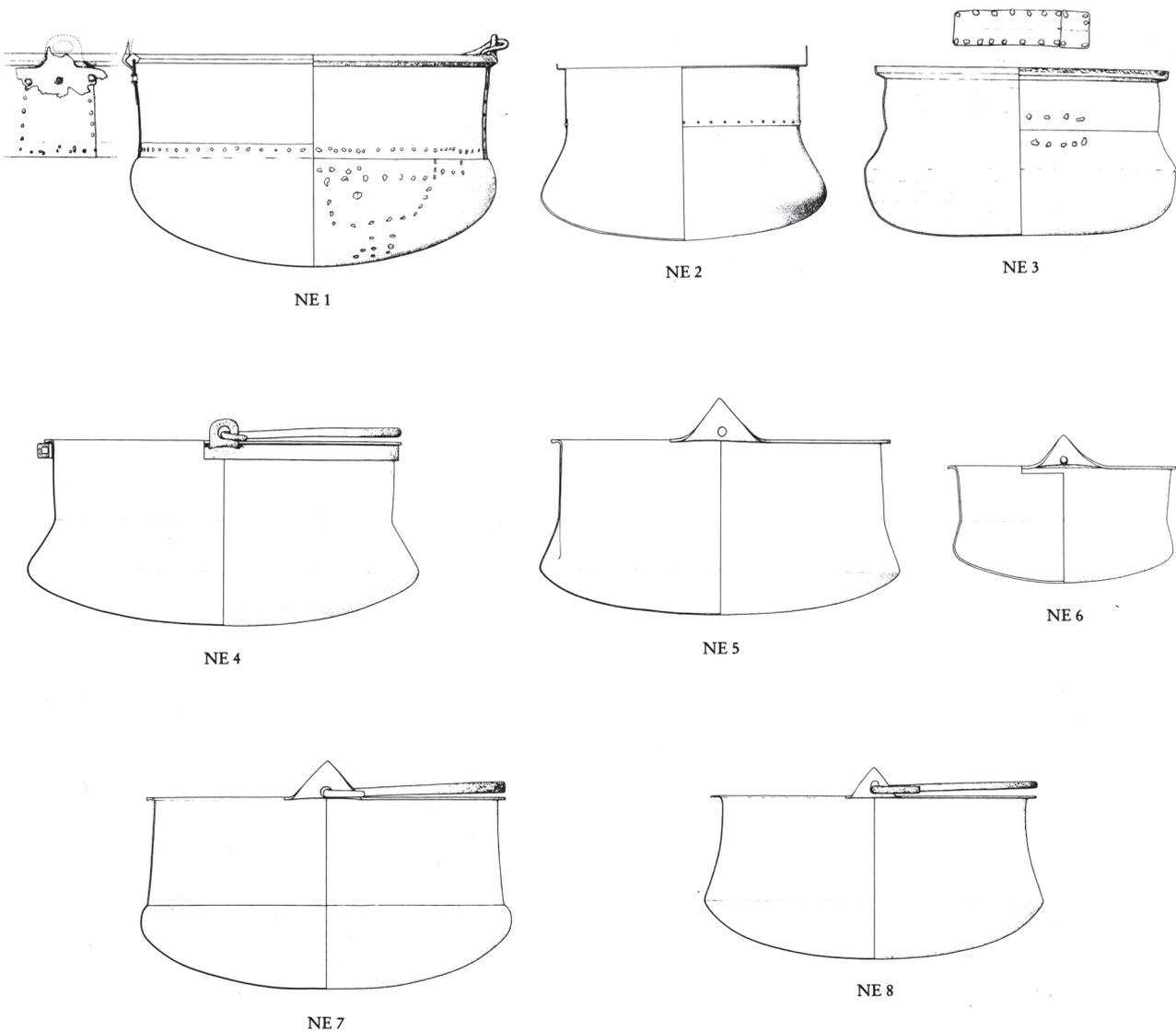


Fig. 57. The Westland cauldrons in the Neupotz hoard as classified by Künzl. (After Künzl 1993)

- The cauldron E41 is also a type of its own, very similar to the type NE 6. The base is now missing, but the vessel's profile can be divided into four zones, with a concave convergent shoulder and a straight divergent neck, separated by a straight and parallel section. The rim is concave divergent.
- Five cauldrons can only be grouped in classes, E18 and E19 belonging to class 1, and E32, E40 and E42 belonging to class 2.

The hoard gives an interesting picture of the tableware and kitchen utensils that were in use in the countryside of the Roman province of *Gallia Belgica* in the last quarter of the 3<sup>rd</sup> century. The hoard proves that many different types of Westland cauldrons were in use at the same time. This is hardly surprising, since this is a hoard of a quite special character. It is not what in common archaeological

usage would be described as an intentional deposit; it is the result of an accident. The hoard is also randomly collected, in the sense that the plunderers seemingly had one main objective – to lay their hands on anything that was made of metal. They obviously did not care if the objects were old or new, or even fit for use. Whether this is a good enough reason to reject the proposed typological development, as Künzl has done (Künzl 1994, 1:234), is debatable. The invention or design of a new type does not mean that the old one immediately is obsolete. It is also wrong when Künzl claims that the whole typological development is represented in the Neupotz hoard, since it contains no type 2D cauldrons. Furthermore, the cauldrons in the Neupotz hoard and the Scandinavian ones are made of metal with a different composition (see p. 46), which indicates different production areas.

The objections against the typology do not change

the fact that the classification is both valid and practical, and also is chronologically relevant when applied to the Scandinavian material. Also, as far as I am aware, there are no finds in the area east of the Rhine that contain both class 1 and class 2 cauldrons. Outside Scandinavia, there are no finds of class 1 cauldrons that can be dated to the 4<sup>th</sup> century. As for class 2 cauldrons, there are no finds in the area east of the Rhine that with certainty can be dated to the 3<sup>rd</sup> and 4<sup>th</sup> centuries (there is no good dating

for the hoard from Bensheim, App. III:36,37). Class 2 cauldrons are found in graves from late 5<sup>th</sup> or even early 6<sup>th</sup> century, i.e. belonging to the post-Roman era.

#### Footnotes

- <sup>1</sup> I want to thank Dr. H.-J. Engels and Dr. R. Schultz, Landesamt für Denkmalpflege, Archäologische Denkmalpflege Amt Speyer, Dr. Engels for permission to study the collection and Dr. Schultz for very kind assistance during my stay in Rheinzabern.

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# APPENDIX II.

## Catalogue of the Westland cauldrons in Norway

### Preface

The main purpose of the catalogue is to give a complete presentation of the Westland cauldrons in Norway, with their provenance, find circumstances and grave goods as well as principal measures and characteristics of each cauldron.

The finds are presented with *fylke* and *kommune* in topographical/administrative order (cfr. p. 7). Finds from the same *kommune* are sorted after their museum number and museums, thus: B-numbers (Bergen Museum), C-numbers (Kulturhistorisk Museum, University of Oslo, formerly Universitetets Oldsaksamling), S-number (Archaeological Museum in Stavanger) and T-number (Norwegian University of Science and Technology NTNU, Vitenskapsmuseet, Trondheim).

Under the main heading «fylke» the entries have the same layout:

- Catalogue number
- Provenance (Farm name and *kommune*)
- Museum number
- In italics: outdated provenance found in old literature; *sogn* (*s.*) and *prestegjeld* (*pgd.*) substituted by *kommune* as administrative unit, and/or changes in spelling
- Find circumstances
- Rim diameter. Base diameter
- Height
- Condition, repairs, decoration etc.
- NAT, grave goods
- Type
- Dating
- Reference to old findlists
- References

Find circumstances: Information on corpse treatment, size and form of the grave (internal and external, cfr. p. 11). No information about excavator means the find was excavated by non-professionals.

Rim diameter and base diameter are given in millimetres and refers to largest measure. Approximate measures mean that the cauldron is either so badly preserved or deformed that exact measures cannot be given.

Height is given in millimetres and refers to the cauldron's height, ears excluded. H<sub>2</sub> refers to the base height, H<sub>3</sub> to the neck height (cfr. p. 24).

NAT, Number of Artefact Types (cfr p. 53) in the grave. Artefact types are for example combs, brooches, pottery, bucket-shaped pottery, swords. Different types of belt fittings are counted as one type= belt.

Grave goods: a short find list, where the description of the items mainly are references to literature such as R (see below). Items that are not included in the NAT, such as burnt bones, textile fragments, birch bark etc. are listed after the sign &.

Datings refer to the chronological framework in chapter 4. Datings based on find combinations are indicated, all other datings are based on type similarity.

References: All references to year books with their titles abbreviated refer to the volume year, not the printing year. The first reference is referring to the printed accession list (*Tilveksten*), unless the first reference is Nicolaysen 1860-66, 1876 or 1883.

### Abbreviations in the Catalogue:

Ab.	Foreningen til Norske Fortidsminnesmerkers Bevaring, Aarsberetning
Arms	Fett 1940b
BMÅ	Bergens Museums Årbok
HMT	Tilvekstfortegnelse for Historisk Museum, Forhistorisk samling. Universitetet i Bergen.
R	Rygh 1885
SMÅ	Stavanger Museum Aarberetninger (1877-1889), Årshefte (1890-1944) Årbok (1945- )
TVS	Det Kongelige Norske Videnskabers Selskabs Skrifter (Trondheim)
UOT	Universitetets Oldsaksamlings Tilvekst
UOÅ	Universitetets Oldsaksamlings Årbok
Waffen	Bemmann & Hahne 1995
VJG	Shetelig 1912a.

Note 1: The letter «Å» replaced «Aa» in the orthographic reform of 1917, although names can still be spelled with Aa instead of Å.

Note 2: A catalogue of published Tilvekster from Norwegian museums is found in Hines 1993:103-106.

## ØSTFOLD

## 1. Østby, Rakkestad k. (Pl. 1a)

C15596

Cremation grave. Found in the middle of a cairn in a chamber built of rounded boulders. The chamber was 3 ft. square. The cauldron was surrounded by birch bark and was half filled with cremated bones. Rim diam.: approx. 310 mm Base diam.: approx. 340 mm

Height: approx. 170 mm

Heavily corroded, full of small holes. Twisted iron handle, corroded to the rim. Exterior decorated with horizontal, parallel lines. Internal centre mark.

Type: 2

NAT: 4, two worked pieces of bone, a pair of wrist-clasps (Hines type B1 iv, Pl. 1b), «a bent sharpened bone implement» (bone arrow?) now lost & cremated bones. (C15597, C15598)

Dating: D1

Bjørn 1929:no. 1

Ab. 1886:56; UOÅ 1945-48:31-32; Hines 1984:310, Hines 1993:pl.VI, 113.

## AKERSHUS

## 2. Dyster, Ås k. (Pl. 1c)

C9228

Inhumation grave? No information available.

Rim diam.: approx. 300 mm.

Height: (preserved) 75 mm.

Handle missing. Base loose and dented.

Type: 2

NAT: 5, the wooden box R180 (Pl. 1d), gold payment ring (1.84 g), needle like R142, two fragmentary silver mounts & ribs from cow and dog. (C9240-43)

Dating: D1

Bjørn 1929:no. 6

Ab. 1879:173-175; Montelius 1898:124; Bøe 1927:11; Lund Hansen 1987:432.

## HEDMARK

## 3. Vestre Hanum, Hamar k. (Fig. 60a, pl. 2a)

C15693

*(Vestre Hanum, Vang s. & pgd.)*

Cremation grave. Found in a cairn 0.6 m high, 30 m in diam. in a chamber.

Rim diam.: 298 mm Base diam.: 305 mm

Height: 150 mm H<sub>2</sub>: 45 mm H<sub>3</sub>: —

Twisted handle. Iron lugs, not preserved. Clearly hammered.

Type: 1B

NAT: 15, cylinder of bronze sheet (needle box? Pl. 2b), fragments of four bronze strap ends (Pl. 2b), one bronze belt ring (Pl. 2d), one small bronze ring (Pl. 2d), one bronze strap mount (Pl. 2d), bronze sheet mounts of at least five different types (Pl. 2c), two different types of bronze wire (Pl. 2a), two rings of bronze wire with glass beads (Pl. 2a, one is R284), glass beads (melted), melted silver, frag. of curved iron knife corroded together with ring like R284 (Pl. 2d), iron weaving batten like R150, iron nails, iron mounts & cremated bones. (C15693-15700)

Dating: C3 (find combination)

Bjørn 1929:no. 3; Eggers 1951:no. 432

UOÅ 1945-48:52-54; Slomann 1970:921 fig.1, 923; Lund Hansen 1987:432.

## 4. Farmen, Hamar k.

C15734

*(Farmen, Vang s. & pgd.)*

Cremation grave. Found in 1865 in a mound, in a small chamber, together with an Eastland cauldron. The Eastland cauldron was filled with cremated bones. The Westland cauldron stood beside it, with a stone on top of it, which had almost completely destroyed it, and also made a hole in the side of the Eastland cauldron. (From A. Lorange's private collection)

Height: (preserved) 100 mm

Cauldron in one rim fragment. Has had riveted iron lugs. Handle missing.

Type: 1A ?

NAT: 2, the Eastland cauldron R347 (C15733, Pl. 3a) & cremated bones.

Dating: C3.

Ekholm 1933, no. 94; Eggers 1951:no. 333

Ab. 1873:131-132; Lorange 1873:204-211; UOÅ 1945-48:62; Slomann 1970:922; Lund Hansen 1987:432.

## 5. Lille Re, Stange k. (Pl. 3b)

C4968

Cremation grave. Found in a large mound, surrounded by stones and covered by a slab. No further information available.

Cauldron in fragments: 5 rim fragments, one body fragment, base and iron handle. Rim with small protrusion.

Type: 2

NAT: 2, a plain gold ring (7.76 g, stolen in 1910) & cremated bones. (C4969)

Dating: C3 – D.

Bjørn 1929:no. 2

Ab. 1869:88; Bøe 1927:12.

## OPPLAND

## 6. Nedre Stabu, Østre Toten k. (Fig. 58a, pl. 3c)

C5552

Cremation grave. Found in a chamber, covered by a slab. No further information available.

Rim diam.: 275 mm Base diam.: 300 mm

Height: 160 mm H<sub>2</sub>: 60 mm

Has had riveted iron lugs. Handle missing. Damaged base. Cauldron clearly hammered.

Type: 1A

NAT: 1

Dating: C3

Bjørn 1929:no. 4; Eggers 1951:no. 374.

Ab. 1871:85; Herteig 1955:39-40, fig. 13; Lund Hansen 1987:433.

## 7. Reien, Vestre Slidre k. (Fig. 70a, pl. 4a)

C30223

Found during bulldozing. No further information available.

Rim diam.: 270-300 mm Base diam.: approx. 300 mm

Height: (preserved) 119 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 6 mm

Deformed, base missing. Piece of handle corroded in one ear.

Type: 2D

NAT: 1

Dating: D2  
 UOÅ 1962:182.

**8. Kvie, Vang k.** (Fig. 64a)  
**C3910**

(*Kvien, Hurum s., Vang pgd. i Valdres*)

Cremation grave. Found in a mound before 1824. No further information available.

Rim diam.: 290 mm Base diam.: 325 mm

Height: 166 mm H<sub>2</sub>: 32 mm H<sub>3</sub>: 59 mm

Half the body lost. Only a quarter of the base preserved. External centre mark. Handle missing.

Type: 2C

NAT: 2, ...«rusty Iron Objects...» now lost.

Dating: C3 - D2

Ekholm 1933:no. 93.

Nicolaysen 1860-66:119, 755; Ab. 1866:94.

**BUSKERUD**

**9. Fosnes, Kongsberg k.** (Pl. 4b)  
**C961**

(*Tuft s., Sandsvær pgd.*)

Cremation grave. Found in a very large mound surrounded by 4 stone slabs. No further information available.

Rim diam.: 260 mm Base diam.: approx. 280 mm

Height: 155 mm

Riveted iron lugs. Straight profile. New base. Patched and mended in several places. Handle missing.

Type: 1

NAT: 1

Dating: C3

Bjørn 1929:no 5; Eggers 1951:no. 336.

Nicolaysen 1860-66:171; Lund Hansen 1987:433-434.

**10. Haug, Øvre Eiker k.** (Pl. 4c)  
**C9**

Inhumation grave? Found in a mound of sand by the Rev. Strøm (1778-1797). The information is unclear.

Rim diam.: 180 mm Base diam.: 195 mm

Height: (preserved) 105 mm

Very small cauldron, but typical. Exterior decorated with horizontal, parallel lines. Missing: base, handle and parts of rim.

Type: 2

NAT: 4, frag. of iron sword, pot and staves to a small bronze bound bucket. Only the cauldron was delivered to the museum.

Dating: D2?

Ekholm 1933:no. 95.

Nicolaysen 1860-66:160.

**VESTFOLD**

**11, 12. Skåra, Larvik k.** (Pl. 5e)  
**C18898 I, C18898 II**

(*Skåra, Tjølling pgd.*)

Inhumation grave in a stone cist, in a large cairn, Kongshaugen (the King's mound) approx. 20 m in diam. The information is unclear and not complete. Possibly a double burial. The cist was 12 feet long N-S and 9 feet wide E-W, and the floor was covered with birch

bark. The body was lying with the head to the south.

The cauldrons now in approx. 25 undeterminable fragments, one fragment of one base and five rim fragments, two with triangular ears. One ear riveted to the rim (repair). Handles missing. Exterior decorated with parallel, horizontal lines in pairs.

Type: 2

NAT: 14, sword (Pl. 6c), two lances with wide blade (Arms type J, Pl. 5b), shield boss (Waffen type VII, and fragments of shield grip (Waffen type IIIc)(Pl. 6e), pinlike arrow heads, pair of scissors, two knives, one with silver-mounted handle (Pl. 5d), frags. of a cruciform brooch (Pl. 6f), frag. of a smaller brooch, clasp buttons (Hines type B1i and B1ii), glass beaker like R338 (Snartemo type, Pl. 5c), frags. of at least four pots, one large undecorated, one like R364 (Pl. 5a) and one finer vessel (Pl. 6a), gold ring (11.7 g), staves of two bronze bound wooden buckets (Pl. 6b,d), resin caulking for two wooden vessels & two bear claws (C18892-18904).

Dating: D2 (the cruciform brooch)

Bjørn 1929:no. 7.

Ab. 1897:66-69, fig. 4; Hougen 1924:46; Bøe 1927:19; Arms:7 no. 60; Norling-Christensen 1953:53; Hines 1984:52; Hines 1993:16 (with misinterpreted farm name Skreia)110, 112; Waffen:519 no. 166.

**13. Berg, Larvik k.** (Fig. 58b, pl. 7a)  
**C12360 I**

(*Berg, Brunlanes pgd.*)

Cremation grave. Found in a very large mound, 120-130 paces in circumference and 3 m high, in a small chamber of six slabs. No further information available.

Rim diam.: approx. 300 mm Base diam.: approx. 300 mm

Height: (preserved) 105 mm

Has had riveted iron lugs. Rim, base and handle missing.

Type: 1A

NAT: 1

Dating: C3

Bjørn 1929:no. 8; Eggers 1951:no. 318.

Ab. 1885:113; Hougen 1924:51; Lund Hansen 1987:435.

**14. Berg, Larvik k.** (Fig. 58c, pl. 7b)  
**C12360 II**

(*Berg, Brunlanes pgd.*)

Cremation grave. Found at the same time and in the same mound as no. 13, also in a small chamber of slabs.

Rim diam.: 310 mm Base diam.: approx. 320 mm

Height: (preserved) approx. 130 mm

Type: 1A

NAT: 1

Dating: C3

Bjørn 1929:no. 8; Eggers 1951:no. 318.

Ab. 1885:113; Hougen 1924:51; Lund Hansen 1987:435.

**15. Ringdal, Larvik k.** (Pl. 7e)  
**C10142**

(*Ringdal, Hedrum pgd.*)

Cremation grave? Found in a mound, beneath three stone slabs. Excavated by the headmaster M. Larsen.

Cauldron in numerous larger and smaller fragments.

Type: 2

NAT: 4, bucket shaped pot, pot like R361, resin caulking for a birch bark or bentwood vessel (C10140-10143).

Dating: C3 - D

Bjørn 1929:no. 9

Ab. 1880:230

## TELEMARK

**16. Hanes, Skien k.** (Fig. 60b, pl. 7c)**C4941***(Hannes, Solum pgd.)*

Cremation grave. Found in a mound, in a chamber with a roof slab. The cauldron was wrapped up in calf hide.

Rim diam.: 320 mm Base diam.: 365 mm

Height: 166 mm H<sub>2</sub>: 49 mm

Handle missing. Has had riveted iron lugs.

Type: 1B

NAT: 2, one bear's claw &amp; cremated human and animal bones, charcoal.

Dating: C3

Bjørn 1929:no. 10; Eggers 1951:no. 352.

Nicolaysen 1860-66:210; Ab. 1869:85; Storm Munch 1965:52-53, 55 fig. 15; Holck 1987:248; Lund Hansen 1987:435 (with incorrect attribution to type 1A, Stadheim).

**17. Vistad, Tokke k.** (Fig. 70b, pl. 7d)**C1673***(Vistad, Mo pgd.)*

No information available.

Rim diam.: 270 mm Base diam.: approx. 280 mm

Height: (preserved) 100 mm H<sub>2</sub>: — H<sub>3</sub>: 3 mm

Cauldron dented. Base and parts of rim and shoulder missing. Bronze handle. Exterior decorated with horizontal, parallel lines in pairs. The interior with traces of hammering.

Type: 2D

NAT: 1

Dating: D2

Bjørn 1929:no. 11

Nicolaysen 1860-66:234; Storm Munch 1965:52.

**18. Tveiten, Børte, Tokke k.** (Fig. 64b, pl. 8a)**C8433**

Cremation grave. Found under a large stone paving in a mound. The cauldron was wrapped up in birch bark. The gold ring might possibly not belong to the find; it was found in 1876; the other objects were found by renewed digging in 1877.

Rim diam.: 280 mm Base diam.: 307 mm

Height: 162 mm H<sub>2</sub>: 40 mm H<sub>3</sub>: 40.5 mm

Bronze handle. Exterior decorated with horizontal, parallel lines in pairs, concentric circles on the exterior of base.

Type: 2C

NAT: 5, bow-knob brooch (Pl. 8b), plain gold ring (5.05 g), bronze mounts (belt fittings), iron clinker nails &amp; cremated bones.

Dating: C3 (the brooch)

Bjørn 1929:no. 12.

Ab. 1877:30-31, fig. 16; Montelius 1898:95; Shetelig 1907:10-11 fig. 6; Bøe 1927:24; Bjørn 1929:6 fig. 1; Behn 1936:126; Fett 1938:12; Norling-Christensen 1953:52; Storm Munch 1965:51-52, 53 fig. 14; Slomann 1970:922 fig. 2, 923; Lund Hansen 1987:435; Waffen:311 fig. 2, 312.

**19. Heggestøl, Vinje k.** (Fig. 62a, pl. 9a)**C20933**

Cremation grave. Found in a mound, in a chamber lined with birch bark. The objects were placed in the cauldron.

Rim diam.: 330 mm Base diam.: 338 mm

Height: 187 mm H<sub>2</sub>: 60 mm

Has had riveted iron lugs. Handle missing. Damaged by a large tear in the side.

Type: 1C

NAT: 10, pot like R368 (Pl. 9b), frags. of undeterminable pot, frags. of a bucket-shaped pot, two bone combs like R159 (Pl. 9d) (one unburnt, one burnt), frags. of bone pins (Pl. 9c), frags. of bone spoon (Pl. 9c), undeterminable piece of bone, worked bone fragments, bronze fragments, a piece of iron & birch bark., cremated bones and charcoal.

Dating: C3 (find combination)

Bjørn 1929:no. 13; Eggers 1951:no. 354.

Oldtiden VI:84-86 with figs; Bjørn 1929:7 fig. 2; Bøe 1931:107 fig. 147, 114; Storm Munch 1965:50-51; Slomann 1970:922 fig. 2, 923; Lund Hansen 1987:435.

## AUST-AGDER

**20. Evje verk, Evje og Hornnes k.** (Fig. 64c, pl. 8c)**C11092**

Cremation grave. Secondary grave in Kongshaugen (the Kings' mound), a barrow of sand, 28-30 m in diam. and 3.6 m high; in a chamber of slabs with the interior measures 0.36 m x 0.36 m. The cauldron was surrounded by birch bark. Excavated by the archaeologist N. Nicolaysen in 1882.

Rim diam.: 295 mm Base diam.: 312 mm

Height: 180 mm H<sub>2</sub>: 35 mm H<sub>3</sub>: 50 mm

Well preserved. Parts of handle corroded to rim and in ears. Exterior decorated with horizontal, parallel lines. Patched four times.

Type: 2C

NAT: 6, x-shaped belt mount (Pl. 8d), small iron nail, fragments of a three-layer comb with bronze rivets (Pl. 8e), frag. of a comb case, sixteen bear's claws & cremated human and animal bones (C11093-11094).

Dating: C3.

Bjørn 1929:no. 14.

Nicolaysen 1883:19; Ekholm 1933:17 fig. 11, 17-18; Marstrander 1938:169 fig. 5k, 176-177, 178 fig. 11; Norling-Christensen 1953:52; Slomann 1970:922 fig. 2, 923; Holck 1987:251; Lund Hansen 1987:436.

## VEST-AGDER

**21. Vestre Skogsfjord, Mandal k.** (Pl. 10a)**C2701***(Vestre Skogsfjord, Halså s.)*

Cremation grave. Found in a mound, no further information available.

Rim diam.: 255 mm

Height: (preserved) 85 mm

Cauldron in one rim fragment in good condition.

Type: 2(D)

NAT: 3, iron fragments, three bear's claws & cremated human and animal bones, furs and textiles (C 2701-2707).

Dating: D2

Bjørn 1929:no. 16.

Nicolaysen 1860-66:270; Gjessing 1925:44; Holck 1987:247.

**22. Lunde, Farsund k.** (Fig. 70c, pl. 10b)**B4302***(Lunde, Vanse s. & pgd, Lista)*

Cremation grave. Found in a mound, approx. 20 m in diam. in a

chamber of slabs. The cauldron sat on several layers of birch bark, with a bronze bowl as a lid.

Rim diam.: 282 mm Base diam.: 310 mm

Height: 165 mm H<sub>2</sub>: 47 mm H<sub>3</sub>: 9 mm

Handle and small section of rim and wall missing.

Type: 2D

NAT: 4, pearl-edged bronze bowl (type R 348, *Perbrandbecken*, Pl. 10c), three frags. of thin gold foil (1.35 g), bone comb & cremated bones.

Dating: D2

Bjørn 1929:no. 17

Ab. 1885:72; Montelius 1898:124; de Lange 1911:36-39, figs. 5, 6; Gjessing 1925:53; Bøe 1927:30; Bjørn 1929:8 fig. 3; Ekholm 1933:18; Grieg 1938:65-66, figs. 42, 43.

### 23. Vestre Hauge, Farsund k. (Pl. 11a)

C4326

(*Vestre Hauge, Lista*)

No information available.

Cauldron in two frags. with ears, one frag. of base with traces of repair and one undeterminable frag.

Type: 2

NAT: 3, the triple solidus R285 (Valentianus I, 364-375, 19.15 g, Pl. 11b), one stone bead (Pl. 11a), two glass beads (C 4327).

Dating: D1 (the solidus)

Ekholm 1933, no. 96.

Ab. 1867:96; Ab. 1868:98; Montelius 1898:70 (ill.), 94; Brøgger 1921:47; Bøe 1927:30-31; Grieg 1938:101-103, 106 fig. 82, 107 fig. 83; Norling-Christensen 1953:53; Skaare 1995:26 (ill.), Lund Hansen 1987:436.

### 24. Torp, Farsund k. (Fig. 64d, pl. 11c)

C8020

(*Torp, Lista*)

Cremation grave. Found in 1876 in a mound, the cauldron only contained «ashes». No further information available.

Rim diam.: 270 mm Base diam.: 293 mm

Height: 168 mm H<sub>2</sub>: 48 mm H<sub>3</sub>: 24 mm

Very well preserved, no decoration. Handle missing. One ear repaired.

Type: 2C

NAT: 1

Dating: D1

Bjørn 1929:no. 18.

Nicolaysen 1876:233-234; Ab. 1877:4; Grieg 1938:62 fig. 40, 63-64.

### 25. Eik, Søgne k. (Fig. 60c, pl. 11d)

C23256

Cremation grave. Found in a mound, reduced by ploughing, in a chamber built of slabs, approx. 0.6 m x 0.5 m. The cremated bones were wrapped up in felt with bearskin around, and placed in the cauldron.

The find was sent to the museum by the teacher P. Lunde, who supervised the excavation.

Rim diam.: approx. 430 mm Base diam.: approx. 460 mm

Height: approx. 180 mm H<sub>2</sub>: 45 mm

Cauldron deformed and dented. Has had iron lugs. Iron band around the rim, iron handle. Clear traces of hammering.

Type: 1B

NAT: 5, two small frags. of composite bone comb, two or three bone dice, iron nail, quartzite strike-a-light, nine cremated bear's claws & remains of bearskin, yellow-greenish felt, birch bark and cremated bones.

Dating: C3

Bjørn 1929:no. 15; Eggers 1951:no. 329.

UOÅ 1943-44:128-129; Gjessing 1925:44; Holck 1987:277.

### 26. Øvre Vemmestad, Lyngdal k. (Pl. 12a)

C9004

Cremation grave. Central grave in a mound of sand, approx. 25 m in diam. and approx. 3.5 m high. A chamber was built of four slabs, approx. 1 m x 0.5 m x 0.5 m, with two slabs as roof. The cremated bones were wrapped up in horse skin. The find spot was subsequently examined by the archaeologist O. Rygh in 1878.

Rim diam.: 298 mm Base diam.: approx. 320 mm

Height: (preserved)140 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 55 mm

Cauldron corroded, the base loose and in several pieces. Exterior decorated with horizontal, parallel lines. Bronze handle.

Type: 2C

NAT: 12, handled pot like R 361, two bucket-shaped pots (Pl. 12 b,c), bronze bound wooden bucket, resin caulking for a wooden vessel, gold payment ring (6.58 g, stolen in 1910) iron socketed axe, iron knife, leather pouch with bronze weights, quartzite whetstone, bear's claw & five hazel nuts, birch bark, bast, horse skin and cremated bones (C 8999-9011).

Dating: D2

Bjørn 1929:no. 19.

Ab. 1878:264, figs. 18, 21-22; Gjessing 1925:52, fig. 47; Bøe 1927:32, Bøe 1931:190 (ill.), 193; Holck 1987:250.

### 27. Snartemo, Hægebostad k. Grave IV. (Fig. 70d, pl. 12d)

C22116

Cremation grave. Found in a mound in a chamber built of rounded stones with a slab as roof. No further information available.

Rim diam.: approx. 250 mm Base diam.: approx. 270 mm

Height: without base 181 mm H<sub>2</sub>: 38 mm H<sub>3</sub>: 6 mm

One ear, part of rim and base is loose. Handle missing.

Type: 2D

NAT: 2, quartzite whetstone & cremated human and animal bones.

Dating: D2

Bjørn 1929:no. 20.

Oldtiden VIII:214, Hougen 1935:5; Holck 1987:268.

### 28. Snartemo, Hægebostad k. Grave V. (Fig. 71a, pl. 12e)

C26001

Inhumation grave. Grave dug in the subsoil, 4.6 m x 1.2 m, without cist, with two slabs serving as roof, under obliterated mound. Excavated by the conservator L. Smestad in 1933.

Rim diam.: 270 mm

Height: (preserved)115 mm H<sub>2</sub>: — H<sub>3</sub>: 5 mm

Type: 2D

NAT: 22, double-edged sword: hilt and scabbard with gold- and silver inlays in Style I (Pl. 13n), frags. of a baldric: buckle of gilt silver (Pl. 13a) button of gilt silver (Pl. 13d), strap end of gilt silver (Pl. 13c); lance (Waffen type Snartemo, Pl. 13 j), javelin (Waffen type Snartemo, Pl. 13j), at least 10 iron arrow heads, shield of aspen (*populus tremula*) with shield boss (Waffen group VIII, Pl. 13k) and shield grip (Waffen type Ivb, Pl. 13l), axe like Arms D (pl. 13m), two iron knives, one with leather sheath (pl. 13h), the other with wooden sheath; two pairs of iron shears, each with frags. of wooden case (Pl. 13f, g); iron awl (fire steel, Pl. 13e), red quartzite strike-a-light (Pl. 13i), quartzite whetstone, frags. of bronze balance scale with case, 3 lead weights, gold payment ring (19 g, Pl. 13b), silver mount, faceted glass beaker (Straume type IX, Pl. 13p, q), frags. of a bronze bowl, bucket-shaped pot (Pl. 13o) & woven textiles, bearskin and birch bark.

Dating: D2 (find comb.)

Hougen 1935; Hougen 1967:12, 14, 25-28, 39; Arms:11 no. 110, fig. 91; Norling-Christensen 1949:10; Norling-Christensen 1953:52; Ekholm 1956:81, 90; Straume 1987:98 no. 39; Ilkjær 1993:252, Waffen:524 no. 199.

**29. Snartemo, Hægebostad k. Grave II. (Fig. 71b)**

**C28026** (originally S287)

Inhumation grave. Grave dug in the subsoil, approx. 5 m x 1.20 m with slabs as roof, under a damaged large, round mound. The find was bought by O. Rygh in 1878. Transferred to the Oldsaksamling in 1953.

Rim diam.: approx. 150 mm

Height: (preserved) 140 mm H<sub>2</sub>: — H<sub>3</sub>: 10 mm

Cauldron in three pieces. Handle and base now missing. No decoration.

Type: 2D

NAT: 17, double-edged sword with richly decorated gilt silver hilt (Pl. 14a) and decorated wooden scabbard, one javelin (Pl. 14q), three lances (one broad-bladed, Pl. 14p, one Waffen, type Snartemo, Pl. 14o), shield boss (Waffen, group VIII, Pl. 14r), axe Arms type A (Pl. 14n), socketed axe with remains of wooden shaft (Pl. 14i), one pin-like arrow head, shears like R172, red quartzite strike-a-light (Pl. 14l), glass beaker like R338 (Pl. 14k), pearl-edged bronze bowl (*Perlrandbecken*), bronze bound wooden bucket (*yew, Taxus baccata*), iron bound wooden bucket, sherds of a bucket-shaped pot (Pl. 14j), three gold payment rings (17.08 g, Pl. 14e, f, h), iron buckle with silver inlays (Pl. 14 g), 11 silver clasp buttons (nine gilt, Hines types B1ii e and f, and B1v a, Pl. 15b, c, d; one button is now missing), frags. of «different iron tools» (now missing) & textiles.

Dating: D2 (find comb.)

Bjørn 1929:no. 21.

Ab. 1878:299; Montelius 1898:89 fig. 191, 123; Dedekam 1926:36-48, Pl. VI-VII; Gjessing 1925:52; Bøe 1927:32; Hougen 1935; Hougen 1967:28, 40; Arms:12 no. 112, fig. 90; Norling-Christensen 1949:13; Norling-Christensen 1953:53; Ekholm 1958:32; Hines 1993:19 fig. 30 e, fig. 32 a, 24 fig. 44 m, 112, 114; Waffen:525 no. 200.

**30. Øvre Egeland, Kvinesdal k. (Pl. 15a)**

**C21945**

Cremation grave. Found in a mound named «Ospehaugen» (the Aspen mound) in a chamber built of rounded stones 0.35 m x 0.4 m x 0.32 m. The mound was 24 m in diam., approx. 2 m high, built of stones with an earth cap. The discovery of the find was reported and the site excavated by the archaeologist H. Gjessing in 1916.

Rim diam.: approx. 270 mm

Height: (preserved) approx. 100 mm H<sub>3</sub>: 0 mm

Only half the cauldron reasonably well preserved, the rest in a large number of smaller fragments. Iron handle in fragments. Base missing.

Type: 2D

NAT: 5, pot like R 369 (*Buckelurne*), frag. of three-layer bone comb, frag. of composite skin knife, seven bear's claws & cremated human and animal bones, birch bark and charcoal.

Dating: D2

Bjørn 1929:no. 22.

Oldtiden VIII:178; Bøe 1931:146 fig. 226, 148-149; Holck 1987:267.

**31. Tonstad, Sirdal k. (Pl. 15b)**

**B4391**

Cremation grave. Found in the middle of a mound in a chamber. The cauldron was filled with cremated bones wrapped up in felt, and surrounded by birch bark. No further information available.

Rim diam.: 285 mm Base diam.: 299 mm

Height: (preserved) approx. 100 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 30 mm

Lower part of cauldron damaged. Base loose. Handle missing.

Type: 2C

NAT: 1

Dating: C3-D

Bjørn 1929:no. 23.

Ab. 1886:62; Gjessing 1925:55.

**32. Haughom, Sirdal k.**

**B5716**

(*Haugholm, Bakke*)

Cremation grave. Found in a mound, the cauldron was filled with charcoal and ashes. No further information available.

Rim diam.: approx. 260 mm Base diam.: approx. 300 mm

Height: (preserved) approx. 140 mm.

Cauldron heavily corroded and cracked. Base loose. Pieces of iron handle preserved

Type: 2

NAT: 1

Dating: D

Bjørn 1929:no. 24.

BMÅ 1901, no. 12:24.

**ROGALAND**

**33. Unknown locality. (Pl. 15c)**

**S without number.**

No information available.

Rim diam.: approx. 310 mm

Fairly well preserved. Base and a quarter of cauldron's side missing.

Type : 2C

NAT: 1

Dating: D1

Ekholm 1933:no. 110.

**34. Unknown locality.**

**B6318.**

Cremation grave? No information available.

Cauldron in fragments: two large fragments of body with triangular ears, each with two holes, one large and four small fragments of iron handle, one rim fragment and seventeen undeterminable fragments.

Type: 2

NAT: 1. There are a few cremated bones in the cauldron.

Dating: C3 - D

Bjørn 1929:no. 39.

BMÅ 1909, no. 14:50.

**35. Lunde, Sandnes k. (Fig. 71c)**

**B3159**

(*Lunde, Hoiland*)

Cremation grave. Found 1875 during railroad work, in a cairn approx. 12.5 m in diam., in a small chamber built of four large stones with a large slab as a roof.

Rim diam.: 266 mm Base diam.: 310 mm

Height: 183 mm H<sub>2</sub>: 54 mm H<sub>3</sub>: 0 mm

Heavily corroded, a quarter of the cauldron now in fragments. Handle missing.

Type: 2D

NAT: 2, bone comb & cremated bones (now missing)

Dating: D2

Ekkholm 1933:no. 99.

Nicolaysen 1876:235; Ab. 1877:67-68; Helliessen 1904:67; VJG:81 (footnote).

**36. Svebestad under Høyland prestegård (the Vicarage), Sandnes k.** (Fig. 63, pl. 15d)

S2988

(Høiland s. & pgd.)

Bog find. Found at 40 cm's depth, probably when cutting peat for fuel.

Rim diam.: 700 mm      Base diam.: 800 mm

Height: 360 mm      H<sub>2</sub>: 120 mm

Has had riveted iron lugs, now missing. Cauldron cracked where the lugs have been. Rim repaired twice. Base decorated with concentric circles on the interior; patched nine times.

Type: 1D

NAT: 1

Dating: C3

Bjørn 1929:no. 31.

SMÅ 1907, no. 3:23; Straume & Bollingberg 1995:130, abb.7.

**37. Hogstad, Sandnes k.** (Fig. 65a, pl. 16a)

S1522

(Haugstad, Riskekverven s, Hetland pgd.)

Found in a cairn called Trehaug (the Tree mound), 16 m in diam. No further information available.

Rim diam.: 296 mm      Base diam.: 323 mm

Height: 171 mm      H<sub>2</sub>: 32 mm      H<sub>3</sub>: 38 mm

Base almost completely loose. Heavily corroded in the transition body/base. One ear missing.

Type: 2C

NAT: 6, cruciform brooch (Pl. 16b), small pot (Pl. 16c), plain gold finger ring (5,2 g), bronze ring, glass bowl («Nuppenglas», Pl. 16d) repaired with gold sheet in Style I (S 1520-1526).

Dating: D2 (the style)

Bjørn 1929:no. 37.

Ab. 1883:57, fig. 1 a; Montelius 1898:98 fig. 204; Helliessen 1900:50; Bøe 1927:45; Bjørn 1929: 22 fig. 13; Norling-Christensen 1949:13; Ekkholm 1958:25, 28, fig. 1 f. Lund Hansen 1987:437.

**38. Hogstad, Sandnes k.** (Pl. 17a)

S3552

(Sør-Hogstad, Riskekverven s, Hetland pgd.)

Cremation grave. Found in 1912 in a cairn, 26 m in diam. and 3 m high. The cauldron was placed in the NW side of the cairn, between stones and contained all objects. The cauldron was covered with ferns. The find was reported to the museum and the site subsequently excavated by the archaeologist A.W. Brøgger.

Rim diam.: approx. 310 mm      Base diam.: 300 mm

Height: (preserved)100 mm      H<sub>2</sub>: approx. 36 mm

Cauldron in fragments: four pieces of body, one with rim preserved, base and 44 smaller fragments. Handle missing. No ears preserved.

Type: 2D?

NAT: 7, frags. of pots like R 355 (now lost), small handled pot like Pl. 16c and pot like R 361 (Pl. 17c), foot- and rim sherds of a glass beaker with cut facets (Straume Type IX), frags. of bone gaming-pieces (Pl. 17d), three-layer bone comb (Pl. 17b), frag. of bone skin knife (now missing), animal's claw & cremated bones.

Dating: D2.

Bjørn 1929:no. 36.

SMÅ 1912, no. 4:13; Ekkholm 1956:90; Straume 1987:87 no. 22, taf. 37.

**39. Uskjå, Sandnes k.** (Pl. 17e)

S3572

(Usken, Riskekverven s, Hetland pgd.)

Cremation grave. Found in a chamber, 60 cm x 66 cm, covered by a large slab. The cauldron was covered with birch bark, the pot stood beside it.

Rim diam.: approx. 320 mm

Heavily corroded cauldron, now in fragments: four large rim fragments and one large fragment of base, 65 undeterminable small fragments. Bronze handle. Exterior and interior decorated with horizontal, parallel lines.

Type: 2C

NAT: 2, bucket-shaped pot (Pl. 17f).

Dating: C3/D1

Bjørn 1929:no. 35.

SMÅ 1912, no. 4:20. Bøe 1931:183, footnote 53.

**40. Hinna, Stavanger k.** (Fig. 61a, pl. 18a)

S2246

(Hinna, Hetland s. & pgd.)

Cremation grave. Found in a mound, approx. 25 m in diam. and 1.8 m high, before 1870. No further information available. (From B. Hanson's private collection.)

Rim diam.: 430 mm      Base diam.: 449 mm

Height: 210 mm

Cauldron corroded, with several holes and cracks, base dented. No ears preserved. On top of the outward turned rim an iron band, heavily corroded, where the iron lugs probably have been. Patched 12 times, especially at the side. Cauldron clearly hammered.

Type: 1B

NAT: 3, frag. of a bone spoon, two bone gaming-pieces & cremated bones (all missing).

Dating: C3

Bjørn 1929:no. 34.

SMÅ 1900:47, 64. Lund Hansen 1987:437.

**41. Motland, Hå k.** (Pl. 18b)

C16268

Cremation grave. Found in a small mound in a chamber. No further information is available.

Rim diam.: 300 mm      Base diam.: 325-360 mm

Height: preserved 120 mm      H<sub>2</sub>: approx. 60 mm      H<sub>3</sub>: 6 mm

Cauldron dented and deformed, base loose, one piece of iron handle, smaller bronze fragments from body. Cauldron clearly hammered.

Type: 2D

NAT: 1

Dating: D

Bjørn 1929:no. 25.

Ab. 1891:94.

**42. Bø, Hå k.** (Fig. 59a, pl. 18c)

S4355

Cremation grave. Found in a chamber in a previously «excavated» and damaged mound, «Steinhaugen» (the Stone mound). The chamber was 45 cm x 25 cm x 48 cm, with slabs as roof and floor. Excavated by the local amateur archaeologist A. Skjærpe and subsequently examined by the archaeologist J. Petersen in 1923.

Rim diam.: —      Base diam.: approx. 260 mm

Cauldron in fragments: one body fragment, one rim fragment, one base fragment and 32 smaller fragments. Has had riveted iron lugs. Cauldron hammered with sharp tool.

Type: 1A

NAT: 3, gold finger ring, 24.7 g (Andersson Type 11 var. 1b, Pl. 18d), bronze bow brooch (Pl. 18e) & cremated bones and birch bark.

Dating: C3

Ekholm 1933, no. 97.

SMÅ 1924-25, Tilveksten for 1923:18-19; Bøe 1927:37; Beckmann 1969:73; Andersson 1993a:154, no. 825; Andersson 1993b:57.

#### 43. Voll, Hå k. (Pl. 19a)

S4730

(Voll, Varhaug s.)

Found in 1925, no information about the find available.

Rim diam.: approx. 260 mm Base diam.: -

Cauldron in fragments: 3 rim fragments, two of which have triangular ears, and 14 smaller fragments of body. On each side of ears two bronze nails, on one ear a small piece of bronze sheet, probably serving as a strengthening of the hole, which is very worn.

Type: 2

NAT: 4, sherds of a «Buckelurne» (Pl. 19b), sherds of another pot (finer tableware, Pl. 19c) quartzite whetstone (Pl. 19d), flint flake (Pl. 19e).

Dating: D

SMÅ 1925-28:37.

#### 44. Vasshus, Klepp k. (Pl. 20a, b)

C3302

(Vasshus/Varbus, Bore s., Klepp pgd.)

Inhumation grave. Found in 1863 in a large mound, in a cist (approx. 4.7 m x 1.4 m x 1.1 m) of large, rounded stones with large slabs as a roof and smaller stones lining the bottom which was covered with birch bark. The cist was oriented WNW-ESE. The bronze vessels sat in the middle of the cist, covered by a small slab.

Rim diam.: approx. 280 mm

Cauldron in three rim fragments, two with triangular ears. Bronze handle. Cauldron patched several times.

Type: 2

NAT: 16, frags. of two double-edged swords, one with scabbard (Pl. 22a, d), two lances, one with wide blade (Arms type F, Pl. 22b), axe Arms type B (Pl. 22e), shield boss, weapon knife (Pl. 22c), 10 frags. of arrowheads (one is the R213, Pl. 22f-l), the whetstone R157 (Pl. 21d), three-layer comb and comb case (Pl. 21e), frag. of bronze ring (Pl. 21c), six gilt clasp buttons (Hines type B1vc), pearl-edged bronze bowl (Perbrandbecken Pl. 20c, d), frag. of cut glass beaker (Straume type IV, Pl. 21a), frag. of a «Buckelurne» (Pl. 21b), gold finger ring (6.04 g) (C 3300-3313).

Dating: D2 (find comb.)

Bjørn 1929:no. 26.

Nicolaysen 1860-66:791-792; Montelius 1898:123-124; Bøe 1927:40; Arms:13 no. 138-139; Straume 1987:102-103 no. 48, pl. 70-72; Hines 1993:pl.VIII, 28, 114; Waffen:530 no. 236.

#### 45. Bore, Klepp k.

C6832

No information about the find is available.

Only the base is preserved, but the cauldron is said to have had triangular ears, but no outward turned rim.

Type: 2

NAT: 1

Bjørn 1929:no. 27.

Ab. 1874:67.

#### 46. Tu, Klepp k. (Fig. 71d, pl. 24e)

S1480

Inhumation grave. Found in a cairn called «Ådnehaugen» (Ådne's mound), 18.5 m in diam. and 1.5 m high, in a cist, 4.37 m long. Excavated by the curator T. Helliesen in 1882.

Rim diam.: 311 mm Base diam.: approx. 320 mm

Height: (preserved) 150 mm H<sub>2</sub>: — H<sub>3</sub>: 10 mm

Base loose and fragmented. Body with several corrosion-holes. Piece of iron handle corroded to one ear.

Type: 2D

NAT: 11, glass beaker like R338 (Pl. 24a), two bucket-shaped pots (Pl. 23b,c) handled pot like R361 (Pl. 23a), shears like R172 (Pl. 23d), knife (Pl. 24b), double-edged sword (Pl. 25b), lance («cross-section cruciform», now destroyed by reconstruction, Pl. 25a), shield boss (Waffen, type VII, [not type VIb], Pl. 24c, d), two gold payment rings (3.1 g, 2.8 g), whetstone (Pl. 25c) & human and animal bones (S1476-93).

Dating: D2 (find comb.)

Bjørn 1929:no. 28.

Ab. 1882:143; Montelius 1898:124; Helliesen 1907:70; Bøe 1927:38; Bjørn 1929:20 fig. 10; Arms:15 no. 153; Waffen:530 no. 234.

#### 47. Sør- Braut, Klepp k. (Pl. 28a)

S2452

Inhumation grave. Found in a cairn called «Imrå», 25.5 m in diam. and 2 m high, in a cist, oriented N-S. The cist measured 4 m x 1 m x 1 m. Excavated by the curator T. Helliesen in 1902.

Cauldron in 45 undeterminable fragments < 4 cm. (largest dim.), two rim fragments and two body fragments.

Type: 2

NAT: 12, double-edged sword (Pl. 26a), lance (Waffen type Snar-temo, Pl. 26b), javelin Arms type F (Pl. 26c), frag. of a shield boss (Pl. 26e), two knives (Pl. 26d, f), shears (Pl. 27a), two iron handles (Pl. 27b, c. b belongs to the cauldron), one bronze handle belonging to a wooden bucket (Pl. 28b), two bucket-shaped pots (Pl. 27e, 28d), one «Buckelurne», gold payment ring (4.6 g), a piece of rock crystal (Pl. 28c)

Dating: D2 (find comb.)

Bjørn 1929:no. 20.

SMÅ 1902:99-100; Helliesen 1907:83; Bøe 1927:38; Arms:16 no. 166; Waffen:530 no. 233.

#### 48. Sør- Braut, Klepp k. (Pl. 29a)

S4058

Cremation grave. Found in a long cairn (62 m x 9 m) in a pyramid-shaped chamber of three slabs, leaning against a large stone that made up the fourth wall. The chamber measured 0.6 m x 0.7 m x 0.4 m. Excavated in 1918 by the local amateur A. Skjærpe and subsequently examined by the archaeologist J. Petersen. The potsherd and the piece of baked clay was found outside the grave.

Rim diam.: 306 mm Base diam.: approx. 320 mm

Height: (preserved) 100 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 45 mm

Lower part of body and transition body/base in small fragments. Base loose, handle missing. Cauldron hammered with a sharp tool. External and internal centre mark.

Type: 2C

NAT: 7, melted pieces of green glass, plain soapstone spindle whorl like R170 (Pl. 29b), bone pin in three pieces (Pl. 29d), undeterminable potsherd (Pl. 29c), baked clay?, two bear's claws & cremated bones and charcoal.

Dating: D1  
Ekholm 1933, no. 98.  
Oldtiden IX:81; Grieg 1926:34.

**49. Midtre Salte, Klepp k.** (Fig. 72a, pl. 31a)  
**S7990**

Cremation grave. Found by the landowner while ploughing, in a chamber. The chamber measured 36 cm x 32 cm x 30 cm, with a large slab as a roof. Excavated by the teacher P. Heskestad in 1953. Rim diam.: 286 mm Base diam.: 305 mm  
Height: 165 mm H<sub>2</sub>: 40 mm H<sub>3</sub>: 13 mm  
Tips on both ears broken off. Base dented and full of holes, patched eight times.  
Type: 2D  
NAT: 9, sherds of a bucket-shaped pot (Pl. 30b), sherds of a round-bellied pot (Pl. 30a), round gold sheet (Pl. 30d), 30 bone gaming-pieces like R177 (Pl. 31c), frags. of four bone combs (one convex, three straight, Pl. 30c), frags. of comb cases (Pl. 31b), frags. of a bone pin, ten bear's claws & sheep's wool, birch bark, cremated bones and charcoal.  
Dating: D2  
SMÅ 1953:35-37, 36 fig. 10.

**50. Re, Time k.** (Fig. 65b, pl. 32a)  
**B1862**

Found in 1866 in a mound. No further information available. Rim diam.: 250 mm Base diam.: 271 mm  
Height: 139 mm H<sub>2</sub>: 32 mm H<sub>3</sub>: 33 mm  
Cauldron patched several times. Bronze handle missing. Irregular striation on the exterior.  
Type: 2C  
NAT: 1 (two axes and a socketed axe reported to have been found at the same time do not belong to this find.)  
Dating: D1  
Bjørn 1929:no. 29  
Lorange 1875 a:55 (ill.); Arms:12 no. 113.

**51. Vestly, Time** (Pl. 32b)  
**S8635**

Inhumation grave. Found in a cairn, 21 m in diam., 3 m high, called «Olshaugen» (Ola's mound) in a cist of large stones, 4 m x 1 m x 1 m. The body lay on birch bark. Excavated in 1960 by the archaeologist O. Møllerop.  
Cauldron in large number of smaller fragments. Has had iron handle.  
Type: 2D?  
NAT: 28, double-edged sword (Pl. 33a), javelin (Waffen type Uteid, Pl. 33f), lance (Waffen type Vestly, Pl. 33g), shield boss (Waffen type VII) and shield grip (Waffen type IVa, Pl. 33d), fragments of pin-like arrow heads (Pl. 33e), gold finger ring (6.83 g, Pl. 34b), round gold sheet (Pl. 34c), gold sheet decorated in Style I (repair on the glass beaker, Pl. 34e) remnants of a belt with clasp buttons (Hines type B1vc, Pl. 34f), bronze tweezers like R165 (Pl. 34e), cut glass beaker (Straume type I B 2, Pl. 34a), bucket-shaped pot (Pl. 36h), pot like R367 (Pl. 36g), frags. of a turned wooden vessel, anvil (Pl. 35a), pair of tongs (Pl. 35c), hammer (Pl. 35f) bow drill (Pl. 35d), two drawplates (Pl. 35b with remains of wooden handle, Pl. 36e), two knives (Pl. 33b, c), iron shears like R172 (Pl. 36a), chisel (Pl. 35e), iron socket (Pl. 36b), quartzite strike-a-light (Pl. 36c), quartzite whetstone (Pl. 36d), sandstone whetstone (Pl. 36f), nails, iron fragments & birch bark, textiles and wood.  
Dating: D2  
SMÅ 1901:14 no. 14; Møllerop 1961:5-14; Inventaria Archaeologica, Norway 1:3; Bakka 1963b; Straume 1987:103-104 no. 50;

Hines 1993:114; Waffen:323 abb. 19, 530-531 no. 237.

**52. Unknown locality, Sola k.** (Fig. 72b, pl. 37a)  
**C14974**

No information available.  
Rim diam.: 385 mm Base diam.: approx. 450 mm  
Height: 244 mm H<sub>2</sub>: 110 mm H<sub>3</sub>: 0 mm  
Well preserved, but with holes made by cutting or slashing with a sharp instrument.  
Type: 2D  
NAT: 1  
Dating: D2  
Bjørn 1929:no. 32.  
Ab. 1889:142; Ekholm 1933:18-19 fig. 14; Behn 1936:126; Ekholm 1954-55:Taf 2,2; Myhre 1981:115, fig. 87.

**53. Sola, Sola k.**  
**C22814**

(*Kirkesola, Håland pgd.*)  
Cremation grave. Delivered to the museum in 1904 without any information.  
Base of cauldron almost complete, with approx. diam. 320 mm, traces of hammering on the inside. The rest in fragments. No traces of ears.  
Type: —  
NAT: 5, frags. of a bone needle, frag. of a bone comb, molten glass beads, spindle whorl.  
Dating: C3 – D.  
UOT 1922:44; Myhre 1981:115.

**54. Sandane, Suldal k.** (Pl. 37b)  
**S6399**

(*Asheim av Prestegården (Berge), Jelsa s & pgd.*)  
Cremation grave. Found in a cairn, 10 m in diam., and 1.35 m high, in a chamber 0.5 m x 0.6 m x 0.5 m. The chamber was built of both stones and slabs, with one slab as a floor and one as a roof. The cauldron was found in the soil that filled the chamber. Excavated by the archaeologist H. Egenæs Lund in 1936.  
Rim diam.: approx. 310 mm  
Height: (preserved)173 mm H<sub>2</sub>: — H<sub>3</sub>: 43 mm  
Cauldron in fragment: three rim fragments, two with triangular ears, one base fragment approx. 250 x 100 mm and 27 smaller fragments, all heavily corroded. Exterior of base fragment decorated with concentric circles.  
Type: 2C  
NAT: 2, two cremated bear's claws & a few cremated bones, carbonized hazel nutshells and charcoal.  
Dating: C3 - D  
SMÅ 1936:15.

**55. Foldøy, Suldal k.** (Pl. 37c)  
**S8200**

Cremation grave. Found in the remains of a cairn, after blasting a large boulder, in a chamber 0.3 – 0.4 m in diam., with a large slab as a roof.  
Rim diam.: approx. 300 mm  
Height: approx. 170 mm  
Cauldron compressed and so heavily damaged that no original measures can be given. Interior of base decorated with concentric circles in three groups with two circles each. Internal centre mark. Has had an iron handle.  
Type: 2C?  
NAT: 5, molten glass, frags. of a bone comb (Pl. 37d), gold finger

ring (8 g), bear's claws.  
 Dating: D1  
 SMÅ 1955:130.

**56. Hauskje, Rennesøy k.**  
**C2151**

(*Hausken/Hauskeid*)

Found in a mound. No further information available.  
 Cauldron in two larger pieces, one is approx. half the base, with a rectangle cut out. Traces of hammering.  
 Type: 1  
 NAT: 1  
 Dating: C3  
 Ekholm 1933:no. 100.  
 Nicolaysen 1860-66:328.

**57. Utstein kloster, Rennesøy k. (Fig. 73a, pl. 37e)**  
**S2763**

No information about the find available.  
 Rim diam.: 226 mm Base diam.: 244 mm  
 Height: 140 mm H<sub>2</sub>: 40 mm H<sub>3</sub>: 0 mm  
 Well preserved, some cracks in transition base/body.  
 Type: 2D  
 NAT: 1  
 Dating: D2  
 Bjørn 1929:no. 38.  
 SMÅ 1905:111.

**58. Avaldsnes, Karmøy k. (Fig. 65c, pl. 38a)**  
**B605**

Cremation grave. Secondary grave in «Flagghaugen» (the Flag mound), 43 m in diam., 4-5 m high. (The Westland cauldron does not belong to the famous Avaldsnes find, Late Roman Iron Age C2) The cremated bones were probably wrapped up in the woollen cloth.  
 Rim diam.: 304 mm Base diam.: 305 mm  
 Height: 165 mm H<sub>2</sub>: 62 mm H<sub>3</sub>: 48 mm  
 Bronze handle. Exterior decorated with horizontal, parallel lines.  
 Type: 2C  
 NAT: 2, bone gaming-pieces & coarse, woven woollen cloth and cremated bones.  
 Dating: C3  
 Christie 1842:327-328; Lorange 1875:71; VJG:73-74, 81 (footnote); Slomann 1964:13, 16 fig. 40; Lund Hansen 1987:438.

**59. Unknown locality in the Westland region (Ylmheim, Sogn or Veka, Voss?)**  
**B315**

No information available.  
 Rim diam.: 290 mm Base diam.: 332 mm  
 Height: 175 mm H<sub>2</sub>: 45 mm H<sub>3</sub>: 5 mm  
 Well preserved, one ear missing.  
 Type: 2D  
 NAT: 1  
 Dating: D2  
 VJG:82 footnote 2; Fett 1973:6.

**HORDALAND**

**60. Hatlestad, Bergen k. (Fig. 65d, pl. 38b)**  
**B3701**  
 (*Hatlestad, Fana, Sunnhordland*)

Cremation grave. Found in «Apaldhaugen» (the Apple tree mound), an oblong cairn 0.5 m high; in a chamber with a roof slab. No further information available.

Rim diam.: 234 mm Base diam.: 255 mm  
 Height: 132 mm H<sub>2</sub>: 30 mm H<sub>3</sub>: 18 mm  
 Cauldron well preserved. Bronze handle. Exterior decorated with horizontal, parallel lines and simple star on base.  
 Type: 2C  
 NAT: 1  
 Dating: D2  
 Bjørn 1929:no. 56.  
 Ab. 1881:84; Hjellestad 1933:166 (ill); Fett 1971a:9.

**61. Hatlestad, Bergen k.**  
**B5752**

(*Hatlestad, Fana, Sunnhordland*)

Cremation grave? Found in «Leigneshaugen» (Leignes' mound), a natural mound, 24 m in diam. and 4 m high. No further information available.  
 Rim diam.: approx. 390 mm  
 Height: (preserved) 110 mm  
 Cauldron in rim frag. with one ear.  
 Type: 2  
 NAT: 1  
 Dating: C3 -D  
 Bjørn 1929:no.55.  
 BMÅ 1903, no. 3:18; Fett 1971a:9.

**62. Tunes, Bergen k. (Pl. 38c)**  
**B311**

(*Tunes, Haus s. & pgd.*)

Cremation grave. Found in a cairn, in a chamber with a roof slab of white marble, approx. 2.6 m sq. and 0.3 m thick.  
 Rim diam.: 300 mm Base diam.: 310 mm  
 Height: (preserved) 160 mm H<sub>2</sub>: 38 mm H<sub>3</sub>: 30 mm  
 Cauldron with bronze handle decorated with dots-and-circles: two groups with three circles in each and terminations formed as birds' heads. Base loose.  
 Type: 2C  
 NAT: 1  
 Dating: D1  
 Bjørn 1929:no. 61.  
 Lorange 1875:86; BMÅ 1886:86; Fett 1965a:14.

**63. Auastad, Etne k. (Fig. 62b, pl. 38d)**  
**B4858**

Cremation grave. Found in a cairn, in a chamber. No further information available.  
 Rim diam.: 282 mm Base diam.: approx. 290 mm  
 Height: (preserved) 145 mm  
 Cauldron heavily corroded. Has had iron lugs, the rivets corroded to cauldron under rim. Hammered. Base loose.  
 Type: 1C  
 NAT: 1  
 Dating: C3  
 Ekholm 1933, no. 102.  
 Ab. 1892:112; Grieg 1926:39; Fett 1963:29-30; Nissen Fett 1968:196 (ill).

**64. Hovland, Etne k.**  
**B7956**

Cremation grave. Found in a cist (interior measure approx. 1 m x 2 m) in a cairn, 8 m in diam. The site was subsequently excavated by

the archaeologist G. Gjessing in 1928.

Cauldron in four rim fragments and base. Has had an iron band around rim.

Type: 1B

NAT: 4, six small sherds of two different pots, a small piece of iron slag, 2 ½ bear's claws & cremated bones and nut shells.

Dating: C3

Bjørn 1929:no. 64.

BMÅ 1928:27; Fett 1963:24; Nissen Fett 1968:200.

#### 65. Kjellavik, Ølen k.

**B7665**

Cremation grave. Found in the remains of a mound, approx. 10 m in diam. and 1 m high, 2.5 m from the western edge; in a chamber built of four large stones and with one stone as roof and one stone as floor. The chamber measured 0.45 m x 0.35 m x 0.25 m.

Rim diam.: approx. 240 mm

Cauldron in two large body fragments, base, iron handle and eighteen small bronze fragments.

Type: 2

NAT: 3, frags. of a composite bone comb, five bear's claws & cremated bones and birch bark.

Dating: C3 - D

Bjørn 1929:no. 52 (NB. Wrong museum number in Bjørn's list!).

BMÅ 1926, no. 1:3; Fett 1971b:14-15.

#### 66. Høyland, Stord k.

**B4300**

Cremation grave. Found in a cairn in a small chamber, surrounded by a cremation layer. No further information available.

Rim diam.: approx. 295 mm

Height: preserved 90 mm

Base and handle missing.

Type: 2

NAT: 1

Dating: C3 - D.

Bjørn 1929:no. 54.

Ab. 1885:71; Fett 1967a:13-14; Bakka 1972:120.

#### 67. Seglheim, Kvinnherad k.

**B308**

(*Seglem, Kvinherad*)

Cremation grave. Found in a chamber in a mound. The cremated bones were wrapped up in felt.

Rim diam.: 304 mm Base diam.: approx. 310 mm

Height: approx. 150 mm H<sub>2</sub>: approx. 20 mm H<sub>3</sub>: 70 mm

Cauldron patched, base loose. Has had iron handle.

Type: 2C

NAT: 3, frag. of a comb, gold payment ring (1.6 g) (B309-310).

Dating: C3

Nicolaysen 1860-66:366; BMÅ 1886:77; Bøe 1927:50; Fett 1956a:15; Nissen Fett 1972:69.

#### 68. Døsland, Kvinnherad k. (Fig. 66a, pl. 38e)

**B319**

(*Dysseland, Kvinnherreds pgd.*)

Cremation grave. Found in a chamber in a natural gravel ridge. No further information is available.

Rim diam.: 266 mm Base diam.: 296 mm

Height: 166 mm H<sub>2</sub>: 39 mm H<sub>3</sub>: 30 mm

Handle missing. Cauldron dented, otherwise well preserved.

Type: 2C

NAT: 2, iron tool with a long tang.

Dating: D1

Bjørn 1929:no. 40.

Nicolaysen 1860-66:366; Lorange 1875:78; BMÅ 1886:78; Fett 1956a:20-21; Nissen Fett 1972:64 fig. 20.

#### 69. Sæbø, Kvinnherad k. (Fig. 66b, pl. 39a)

**B3358**

(*Sebø, Borgund s., Fjellberg pgd.*)

Cremation grave. Found in a cairn, approx. 12 m in diam. and 2 m high, in a chamber in the SW section of the cairn, covered by a cremation layer, approx. 4.6 m in diam., which also filled the chamber. The chamber was 0.6 m x 0.45 m, the lower part cut into the soft rock, the upper part built of four large stones lying flat and covered by a large slab. The pottery and the gaming-pieces were found in the cremation layer. Excavated by the amateur archaeologist I. Ross in 1879.

Rim diam.: 248 mm Base diam.: 278 mm

Height: 134 mm H<sub>2</sub>: 34 mm H<sub>3</sub>: 19 mm

Cauldron well preserved, with some holes caused by corrosion. Approx. a quarter of the base is missing. Exterior decorated with horizontal, parallel lines, concentric circles and a six-pointed star on the interior of base. Bronze handle. Cauldron has sprung a leak while in use, the leak stopped with resin.

Type: 2C

NAT: 7, solidus (Gratianus 375-383; 4.32 g) fitted with a loop (Pl. 39b), frags. of a long bone comb (Pl. 39c), thirteen bone gaming-pieces (Pl. 39d), frags. of a bucket-shaped pot (Pl. 39e), frags. of pots like R361 and R365, sixteen bear's claws & birch bark and cremated bone.

Dating: D1 (the pottery)

Bjørn 1929:no. 53.

Ab. 1879:253-254; Ross 1880:160-163; Montelius 1989:94; VJG:83, 86 figs. 193-196; Bøe 1927:52; Bjørn 1929:11 figs. 4-5; Behn 1936:126; Norling-Christensen 1953:53; Fett 1965b:19-20.

#### 70. Prestegården (the Vicarage), Jondal k. (Fig. 66c, pl. 40a)

**B4207**

Cremation grave. Found in a cairn 15.5 m in diam. and 2 m high: in a chamber 0.52 m x 0.47 m, built of large stones and with two slabs on top of each other as roof. The cauldron was wrapped in birch bark. Excavated in 1883 by the amateur archaeologist B.E. Bendixen.

Rim diam.: 282 mm Base diam.: 322 mm

Height: 183 mm H<sub>2</sub>: 59 mm H<sub>3</sub>: 28 mm

Well preserved, no decorations. Parts of iron handle corroded to rim.

Type: 2C

NAT: 8, two bone combs, one a long comb (Pl. 40c, e), a bone pin (Pl. 40f), a small bone disc (Pl. 40b) fifteen bone gaming-pieces (Pl. 40d), a greenish-yellow glass sherd, three small pottery sherds (now missing), six bear's claws.

Dating: D1 (find combination)

Bjørn 1929:no. 68.

Ab. 1883:26-28, 62; VJG:82, 84 figs. 186-191; Fett 1954a:10.

#### 71. Opedal, Ullensvang k. (Fig. 73b, pl. 41i)

**B6597**

Cremation grave. Found in a cairn, 10-12 m in diam. and 2-2.5 m high. The cauldron sat between the stones, approx. 1 m down in the cairn, surrounded by the remains of the pyre and with a slab as a roof, but there was no chamber construction.

Rim diam.: 264 mm Base diam.: 281 mm

Height: 184 mm H<sub>2</sub>: 61 mm H<sub>3</sub>: 8 mm

Well preserved. Has had iron handle, now missing.

Type: 2D

NAT: 6, bronze clasp button (Hines type B1i, Pl. 41g) and frag. of bronze clasp (Hines form B2, Pl. 41f), frag. of a belt ring (Pl. 41h), frags. of three or four composite bone comb (Pl. 41 a-d), frags. of a skin knife like R450 (Pl. 41 e), seven bear's claws & cremated bones, birch bark and two pieces of rock crystal (burnt).

Dating: D2 (find combination)

Bjørn 1929:no. 67.

BMÅ 1913, no. 13:5; Fett 1954b:13-14; Bakka 1963a:127-130, fig. 55, 56. Hines 1993:36,111, fig. 70f.

## 72. Øvsthus, Osterøy k. (Fig. 66d)

**B316**

(Øvsthus, Hosanger *pgd.*)

Cremation grave. Found in a cairn in a chamber of four stones in a square and with a slab as a roof.

Rim diam.: 258 mm Base diam.: 272 mm

Height: 147 mm H<sub>2</sub>: 45 mm H<sub>3</sub>: 26 mm

Almost half the body missing, as well as large parts of base. Exterior decorated with horizontal, parallel lines and concentric circles on base. Parts of iron handle corroded to rim.

Type: 2C

NAT: 4, the bone gaming-piece R177, frags. of a bone comb, frag. of a bone pin.

Dating: D1

Ekkholm 1933, no. 104.

Nicolaysen 1860-66:396; Lorange 1875:83-84; Fett 1967b:4.

## 73. Revheim, Osterøy k. (Pl. 42a)

**B4626**

(Revheim, Gjerstad *s.*, Haus *pgd.*)

Cremation grave. Found in a cairn 10-12 m in diam., in a chamber approx. 2.6 m from the edge. The chamber was built of round stones and had a roof slab.

Rim diam.: 276 mm Base diam.: 311 mm

Height: 115 mm H<sub>2</sub>: 45 mm H<sub>3</sub>: 9 mm

Cauldron very low, no outward turned rim. Hammered. The triangular ears raise straight from vessel side with equal thickness. Cauldron probably modified by cutting away original rim and part of neck.

Type: 2D?

NAT: 2, iron frags. (of the handle?) & cremated bones.

Dating: D2

Bjørn 1929:no. 60.

Ab. 1890:106; Fett 1965a:3.

## 74. Solheim, Radøy k. (Fig. 62c, pl. 42b)

**B5869**

(Solem, Sebø *s.*, Manger *pgd.*)

Cremation grave. Secondary burial in the «Røysahaugen» (The Cairn mound), 15 m in diam., on a slab at a depth of 3 *alen* (1,85 m). Two more graves were found in the same cairn.

Rim diam.: 260-266 mm Base diam.: 316 mm

Height: 178 mm H<sub>2</sub>: 58 mm H<sub>3</sub>: 12 mm

Cauldron said to have had riveted iron lugs, none visible today, cauldron cracked where the lugs could have been. Outward turned rim.

Type: 1C

NAT: 3, frag. of a bone comb (Pl. 42c), bone gaming-pieces.

Dating: C3

Bjørn 1929:no. 63

BMÅ 1904, no. 12:10; VJG:80, 82 figs. 183-184; Behn 1936:124,

126, Abb. 1:h; Fett 1970a:9.

## 75. Olsvoll, Radøy k.

**B6086**

(Olsvoll, Sebø *s.*, Manger *pgd.*)

Cremation grave. Found in a cairn, approx. 20 m in diam., in a chamber built of four evenly shaped stones, with several layers of stones both in the floor and the roof.

Rim diam.: 232 mm Base diam.: approx. 262 mm

Height: (preserved)110 mm H<sub>2</sub>: — H<sub>3</sub>: 10 mm

Cauldron fairly well preserved, exterior decoration with horizontal, parallel lines. Bronze handle still in place. Base loose and in three pieces, external centre mark.

Type: 2D

NAT: 3, frags. of a composite bone comb, bear's claws & cremated bones.

Dating: D2

Bjørn 1929:no. 62.

BMÅ 1908, no. 3:11; Fett 1970a:8.

## 76. Midgården, Lindås k. (Fig. 61b, pl. 43a)

**B312**

(Midgården, Hammer/Hamre *pgd.*)

Cremation grave. Found in the «Runnhøgjen», 6 m in diam. and 1,5 m high, in a chamber in the SE edge. The chamber measured 0.95 m x 0.4m x 0.4 m and was built of large stones with a large slab as a roof. There was a cremation layer under and around the chamber at the bottom of the cairn. The cauldron was wrapped up in birch bark.

Rim diam.: 283 mm Base diam.: 293 mm

Height: 165 mm H<sub>2</sub>: 38 mm

Has had iron lugs, now missing. Cauldron clearly hammered.

Type: 1B

NAT: 1 (2?, allegedly found with the remains of an axe).

Dating: C3

Ekkholm 1933, no. 103.

Nicolaysen 1860-66:405; Lorange 1875:84; VJG:32; Grieg 1926:34;

Ekkholm 1933:16 fig. 9; Fett 1970b:5.

## 77. Eiknes, Lindås k. (Fig. 62d, pl. 43b)

**B3990**

(Eiknes, Hosanger *pgd.*)

Cremation grave. Found in the «Storrøysi» (the Large cairn), in a chamber. No further information available.

Rim diam.: 315 mm Base diam.: 320 mm

Height: 146 mm H<sub>2</sub>: 27 mm H<sub>3</sub>: 28 mm

Well preserved. Handle missing. Iron rivets for fastening the iron lugs preserved under the outward turned rim.

Type: 1C

NAT: 3, .. «cremated bones and many sherds of glass bottles and bowls»... now missing.

Dating: C3

Bjørn 1929:no. 57.

Ab. 1882:99; Fett 1967b:5-6

## 78. Skardet, Lindås k. (Fig. 73c, pl. 43c)

**B4003**

(Skardet, Seim *s.*, Alversund *pgd.*)

Cremation grave. Found in a cairn, almost 2 m high and at least 12 m in diam., in a chamber, 0.6 m x 0.6 m, built of slabs and with three slabs on top of each other as a roof.

Rim diam.: 236 mm Base diam.: 271 mm

Height: 167 mm H<sub>2</sub>: 49 mm H<sub>3</sub>: 7 mm

Well preserved, decorated on base with six-pointed star within a double circle. Iron handle.

Type: 2D

NAT: 4, frags. of composite bone comb, drop of green glass (from a beaker?), three bear's claws.

Dating: D2.

Bjørn 1929:no. 59.

Ab. 1882:101; Fett 1969:10.

**79. Skardet, Lindås k. (Pl. 43d)**

**B4256**

(*Skaret, Seim s., Alversund pgd.*)

Cremation grave. Probably found in the same cairn as no.78.

Rim diam.: approx. 275 mm Base diam.: approx. 310 mm

Height: (preserved)105 mm

Base loose. Iron handle missing.

Type: 2C

NAT: 5, sherds of six different pots (one bucket-shaped, one handled pot, 2 coarse ware, 2 finer ware), frags. of lance Arms type G, frags. of javelin Arms type H.

Dating: D1

Bjørn 1929:no. 58. (NB. Wrong inventory number in Bjørn's list! In the collection the cauldron has number 4276 and the base number 4256.)

Ab. 1884:86; Ekholm 1933:19; Fett 1969:10.

**80. Lindås, Lindås k.**

**B7959**

Cremation grave. Found in a cairn, 16-18 m in diam. and at least 2 m high, in a chamber, slightly larger than the cauldron. No further information is available. The site was subsequently examined by the archaeologist G. Gjessing in 1928.

Rim diam.: 273 mm

Height: (preserved)100 mm

Large part of cauldron missing.

Type: 2

NAT: 1

Bjørn 1929:no. 65.

BMÅ 1928:28; Fett 1965c:13

**81. Fonnes, Austrheim k. (Fig. 67a)**

**B4386**

Cremation grave. Found in a cairn, 23 m in diam. and 2 m high, in a chamber slightly to the NW of the centre of the cairn. No further information available.

Rim diam.: 275 mm Base diam.: 287 mm

Height: 156 mm H<sub>2</sub>: 36 mm H<sub>3</sub>: 35 mm

Well preserved. Two smaller pieces of base are missing. Base decorated with concentric circles. Has had iron handle.

Type: 2C

NAT: 1

Dating: D1

Bjørn 1929:no. 66.

Ab. 1886:61; Fett 1965c:15-16

**SOGN OG FJORDANE**

**82. Stadheim, Vik k. (Fig. 59, pl. 44a)**

**C6320**

Cremation grave. Found in a cairn, 18 m in diam. and 25 m high, in a chamber on the northern side of the cairn. The chamber was

0.9 m x 0.6 m, built of slabs.

Rim diam.: 295 mm Base diam.: 316 mm

Height: 182 mm H<sub>2</sub>: 50 mm

Well preserved. Has iron lugs. Hammered.

Type: 1A

NAT: 4, gold finger ring (11.05 g, stolen in 1910), belt buckle and fittings of bronze (Pl. 44 b), quartzite strike-a-light (Pl. 44b).

Dating: C3

Bjørn 1929:no. 73.

Ab. 1873:64; VJG:33; Bøe 1927:56; Ekholm 1933:14 fig. 7; Fett 1938:8, fig. 11; Fett & Fett 1951:75; Fett 1954:5; Slomann 1970:921 fig. 1, 923.

**83. Hamre, Leikanger k. (Fig. 67b, pl. 44c)**

**B8983**

Cremation grave. Found in «Smiehaugen» (the Smithy mound), 18-19 m in diam., in a chamber 0.6 m x 0.7 m, built of round stones and with two slabs as a roof. The site was subsequently examined by the archaeologist P. Fett in 1938.

Rim diam.: 302 mm Base diam.: 334 mm

Height: 180 mm H<sub>2</sub>: 45 mm H<sub>3</sub>: 31 mm

Well preserved. Exterior decorated with horizontal, parallel lines and concentric circles on base. Iron handle corroded to rim.

Type: 2C

NAT: 8, glass beaker with cut facets (Straume Type IX, Pl. 45f), solidus (Theodosius I, 379-395; 5.52 g, Pl. 45g), two fragmentary bone combs with comb cases (Pl. 45a-e), bronze frags., two frags. of a pot (finer tableware) 12 bear's claws & birch bark, cremated and uncremated bones.

Dating: D1 (find comb.)

BMÅ 1938, no. 3:6-10, fig. 1-4; Norling-Christensen 1953:52; Ekholm 1956a:83 fig. 4,2; Ekholm 1965:17; Fett 1954:5-6; Straume 1987:86 no. 18.

**84. Kvam, Sogndal k. (Pl. 46a)**

**B4877**

(*Mellom (between) Årøya og Sogndal*)

Cremation grave. Found in «Torshaug» (Tor's mound), a long cairn 28-30 m x 12-15 m and 1-2 m high. «in the middle an almost round slab, 5 feet in diam. laid over a carefully constructed room where the cauldron stood, filled with fine earth, cremated bones and birch bark.» Excavated by the Englishman E. Kennard in 1892.

Rim diam.: approx. 330 mm

Height: (preserved) 85 mm

Cauldron in two pieces: upper part of body and base. Base hammered.

Handle missing.

Type: 1

NAT: 2, bear's claw & cremated bones and birch bark.

Dating: C3.

Bjørn 1929:no. 74, Eggers 1951:no. 313.

Ab. 1892:118; BMÅ 1892:16; Fett 1955:4; Lund Hansen 1987:440.

**85. Hauge, Luster k. (Fig. 73d, pl. 46b)**

**B317**

Cremation grave. Found in the 1820's in the «Kongshaugen» (the King's mound), a mound with a cairn core, in a chamber of slabs. The chamber was found at the edge of the mound.

Rim diam.: 286 mm Base diam.: 316 mm

Height: 168 mm H<sub>2</sub>: 38 mm H<sub>3</sub>: 0 mm

Very well preserved, bronze handle. Exterior decorated with horizontal, parallel lines, six-pointed star on the base. (This is the type model R 353.)

Type: 2D

NAT: 3, gold bracteate (C-Type, 2.2 g, Pl. 46c-d) and a glass mosaic bead (now missing).

Dating: D2 (the bracteate)

Bjørn 1929:no. 72.

Nicolaysen 1860-66:455; Lorange 1875:93; BMÅ 1886:93; Bøe 1927:55; Mackeprang 1952:151 no. 172; Norling-Christensen 1953:53; Fett 1954d:5; Bakka 1973:64, Abb. 15. Axboe et al. 1985:132 no. 72, taf. 89-90.

#### 86 - 89. Saude, Luster k.

##### B321

(*Søvde, Dale s., Luster pgd.*)

Cremation graves. Four Westland cauldrons found in the «Sæmingsrøysi» (Sæming's cairn), 8 m in diam. The information about the find circumstances is not very clear. «Here one of the bronze cauldrons B 321 was found together with B 1576 and cremated bones in a chamber built of slabs, right under the surface in the eastern side. The other three bronze cauldrons B 321 were probably found in the same cairn, and one or two pots are also said to have been found here.» (Fett 1954d:8)

##### 86. B321 a (Fig. 67c)

Rim diam.: 312 mm

Height: (preserved) 112 mm H<sub>2</sub>: — H<sub>3</sub>: 20 mm

Has had iron handle.

Type: 2C?

Dating: D1

##### 87. B321 b (Fig. 74a)

Rim diam.: 307 mm

Height: (preserved) 126 mm H<sub>2</sub>: — H<sub>3</sub>: 0 mm

Exterior decorated with horizontal, parallel lines. Handle missing.

Type: 2D

Dating: D2

##### 88. B321 c

Rim diam.: approx. 230 mm

Height: (preserved) 55 mm

Cauldron in two rim fragments and a number of small fragments. Diameter measured on loose bronze handle, so small it can only belong to this cauldron.

Type: 2

Dating: C3 – D

##### 89. B321 d

Rim diam.: approx. 290 mm

Height: (preserved) 130 mm

Ears missing. Small triangular protrusion on rim. Cauldron patched.

Type: ?

Dating: C3 - D

There are three bases to this find, but it is not possible to decide which base belongs to which cauldron.

Other objects: B 1756, one bone gaming-piece; cannot with certainty be ascribed to any of the graves.

Bjørn 1929:no. 69-71.

Lorange 1875:93; Nicolaysen 1860-66:454; Fett 1954d:8.

#### 90. Sele, Naustdal k. (Fig. 67d)

##### B4259

Cremation grave. Found in a cairn, approx. 10 m in diam. The cairn was covered with slabs under the turf.

Rim diam.: 277 mm

Base diam.: 283 mm

Height: (preserved) 112 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 35 mm  
Cauldron full of corrosion holes, otherwise fairly well preserved. Base loose. Handle missing.

Type: 2C

NAT: 5, bone gaming-pieces, one potsherd, bear's claw, a nodule of iron pyrites (now missing).

Dating: D1.

Bjørn 1929:no. 75.

Ab. 1884:88.

#### 91. Vereide, Gloppen k.

##### B318

Cremation grave. Found with cremated bones in a mound. No further information available.

Rim diam.: 270 mm

Height: (preserved) 97 mm

Base loose, one ear missing. Iron handle.

Type: 2

NAT: 1

Dating: C3 – D

Bjørn 1929:no. 76.

Lorange 1875:104; BMÅ 1886:104; Fett 1960:17; Straume 1963:32; Lund Hansen 1987:440.

#### 92. Indre Bø, Stryn k.

##### B3359

Inhumation grave. Found in a cist, 4.25 m x 0.95 m, oriented E-W. The cauldron sat 1 m from the W end and the pot 1 m from the E end.

Rim diam.: 274 mm Base diam.: approx. 290 mm

Height: (preserved) 150 mm

Cauldron full of corrosion holes. Base missing. Parts of handle corroded to rim and ears.

Type: 2

NAT: 4, bucket-shaped pot with iron band and -handle (Pl. 47b), frags. of a pot like R 361, frag. of a glass beaker like R 337 (Pl. 47a).

Dating: D2

Bjørn 1929:no. 77

Ab. 1879:236; Fett 1961:18; Straume 1963:29.

#### 93. Stauri, Stryn k. (Fig. 74b)

##### B3516

Cremation grave. Found in a mound in a chamber at a depth of about 2 *alen* (ca 1 m). No further information about the find is available.

Rim diam.: 280 mm Base diam.: 313 mm

Height: (preserved) 130 mm H<sub>2</sub>: approx. 40 mm H<sub>3</sub>: 1 mm

Base loose. Iron handle missing. Poor work.

Type: 2D

NAT: 2, frags. of a pot like R 361.

Dating: D2

Bjørn 1929:no. 80.

Ab. 1880:250; Fett 1961:14; Straume 1963:31-32.

#### 94. Kyrkjeide, Stryn k. (Fig. 68a, pl. 47c)

##### B6188

Cremation grave. Found in a cairn, 15 m in diam. and 2 m high, in a small, round chamber of stones with a slab as a roof. The cauldron was wrapped up in birch bark.

Rim diam.: 310 mm Base diam.: 327 mm

Height: 162 mm H<sub>2</sub>: 37 mm H<sub>3</sub>: 77 mm

Cauldron well preserved, base cracked.

Type: 2C

NAT: 1

Dating: C3

Bjørn 1929:no. 78.

BMÅ 1909:9; Fett 1961:18-19; Straume 1963:31

**95. Ytre Bø, Stryn k.**

**B6197**

Cremation grave. Found in a chamber built with four slabs as walls, one slab as floor. The chamber was found on approx. 1 m's depth under level ground surface, next to a boulder. The cauldron was wrapped up in birch bark.

Cauldron in heavily corroded fragments: two rim fragments, one with iron band, three larger and seven smaller undeterminable fragments and a large number of small fragments. Cauldron repaired several times.

Type: 1

NAT: 2, bear's claws & cremated bones and birch bark.

Dating: C3

Ekholm 1933:no. 105; Eggers 1955:no. 434.

BMÅ 1909:11; Grieg 1926:40; Fett 1961:17-18; Straume 1963:31.

**96. Kyrkjeeide, Stryn k. (Pl. 47d)**

**B6539**

Cremation grave. Found in a cairn, 25 m in diam. and 3 m high, in the E side of the cairn. The cauldron was covered with a slab, but there was no chamber. Excavated by the archaeologist H. Shetelig in 1911. The cremated bones were wrapped up in birch bark fastened with bast bands. The cauldron was also lined with felt.

Cauldron in fragments: one rim fragment, four body fragments, one piece of the base 21 cm x 33 cm and both ears, one with a piece of the vessel's body, two fragments of iron handle

Type: 2

NAT: 5, 2 frags. of glass beaker like R 337-38, frags. of bone comb, bone gaming-pieces, bear's claws & cremated bones, birch bark, felt and bast bands.

Dating: D2

Bjørn 1929:no. 79.

BMÅ 1912, no. 8:22; Shetelig 1917:11-13, figs. 5-6; Straume 1963:31.

**MØRE OG ROMSDAL**

**97. Vinje, Stordal k. (Pl. 48k)**

**B5856**

(*Vinje, Stordal s, Stranda pgd.*)

Cremation grave. Found in a barrow, built of earth and gravel, sitting on the top of the roof slab of a chamber, built of four large, round stones. The cauldron was covered with a large piece of birch bark and a slab. The chamber was empty.

Rim diam.: approx. 280 mm Base diam.: approx. 320 mm

Height: (preserved) 130 mm H<sub>2</sub>: approx. 50 mm

Cauldron with iron handle and riveted iron lugs; one replaced during the time of use. Base loose, patched eight times. One patch at rim. Clearly hammered.

Type: 1A

NAT: 9, gold finger ring (4.2 g; Andersson Type 10 var. 1b, Pl. 48a) two silver rings (Beckmann Type F5 and F8, Pl. 48b) two bronze spiral rings (Beckmann Type F31, Pl. 48c), bronze belt ring with four strap holders like R 322 (Pl. 48d), two bronze strap ends like R 326 (Pl. 48e), bronze needle box (Pl. 48h), frags. of iron knife with silver end plate (Pl. 48f), frags. of bone comb (Pl. 48i), three bone

hairpins (Pl. 48g, j) (one round and two flat), 25 glass beads, spindle whorl & cremated bones and birch bark.

Dating: C3 (find comb.)

Bjørn 1929:no. 81.

BMÅ 1904, no. 12:1-6; VJG:35-37 figs. 71-80; Bøe 1927:58; Fett 1938:19, 21 fig. 10; Fett 1950a:9-10; Beckmann 1969:76 no. 297; Lund Hansen 1987:440; Andersson 1993a:167 no. 900.

**98. Blindheim, Giske k. (Fig. 68b, pl. 49d)**

**B2891**

(*Blindheim, Roald s., Haram pgd.*)

Cremation grave. Found in a cairn called «Stølshaugen» (the Shieling mound), 30 m in diam. and 3.5 m high, in a chamber built of slabs, approx. 0.6 m x 0.6 m with two slabs on top of each other as a roof. A bronze bowl was turned upside down as a lid on the cauldron.

Rim diam.: 293 mm Base diam.: 326 mm

Height: 180 mm H<sub>2</sub>: 40 mm H<sub>3</sub>: 27 mm

Cauldron well preserved, a few corrosion holes. Base cracked. Piece of iron handle corroded to one ear.

Type: 2C

NAT: 5, the gold spiral button R 311 (18.877 g, Pl. 49b), plain glass beaker (Straume var. X1, Pl. 49a), the pearl-edged bowl R 348 (*Perhrandbecken*, Pl. 49c), scallop shell (*Pecten maximus*). (B 2891-94).

Dating: D2 (find comb.)

Bjørn 1929:no. 83.

Ab. 1874:80-81; Lorange 1875:109; Lorange 1875 b:38; Montelius 1898:92, 123, fig. 199; Bøe 1927:59; Bjørn 1929:23 fig. 14; Bøe 1942:185-186; Fett 1950b:28; Straume 1987:77 no. 1.

**99. Blindheim, Giske k. (Fig. 68c)**

**B5669**

(*Blindheim, Roald s., Haram pgd.*)

Cremation grave. Secondary grave in the Blimshaugen, 36 m in diam. and 5 m high, in a chamber built of slabs. The cauldron sat on a large piece of birch bark.

Rim diam.: 300 mm Base diam.: 327 mm

Height: 170 mm H<sub>2</sub>: 37 mm H<sub>3</sub>: 44 mm

Cauldron heavily corroded. Base fragmented. Pieces of iron handle corroded to rim. Exterior decorated with horizontal, parallel lines.

Type: 2C

NAT: 3, gold payment ring (1.75 g), drops of molten glass & cremated bones and birch bark.

Dating: D1.

Bjørn 1929:no. 84.

BMÅ 1901, no. 12:6; Bøe 1927:59; Fett 1950b:29; Lund Hansen 1987:440; Andersson 1993a:167-168, no. 905.

**100, 101. Jangarden, Giske (Pl. 50a, b)**

**B10790 II c, B10790 II d**

(*Valderøy/Vallero, Borgund pgd.*)

Cremation grave. Secondary grave in the «Kongshaugen» (the King's mound), a cairn 40-42 m in diam. and 3 m high. Excavated 1824-27 under the supervision of Bishop Neumann. The cauldrons were found under two slabs in a «Hollow of Stones, like a Bird's Nest, carefully lined with Birch Bark and Moss.» (Neumann 1834:29) One cauldron was turned upside down as a lid over the other.

**B10790 II c**

Rim diam.: 292-295 mm Base diam.: 316 mm

Height: 175 mm

Fairly well preserved, cracked in transition body/base. Bronze handle. One ear loose.

Type: 2C

**B10790 II d** (Fig. 68d)

Rim diam.: 333 mm Base diam.: 345 mm  
 Height: 176 mm H<sub>2</sub>: 52 mm H<sub>3</sub>: approx. 73 mm  
 Fairly well preserved, cracked in transition body/base. Has had iron handle, now missing.  
 Type: 2C

NAT: 15, gold payment ring (156.46 g, Pl. 50c), nine drops of molten gold, one piece of molten silver (3.25 g), ten drops of molten bronze, five small bronze mountings, four small bronze rivets, two bronze sheets, two burnt rectangular dice (one is the R 176, Pl. 50e), one complete and three frags. of at least two more bone gaming-pieces like R 177 (Pl. 50d), frags. of composite bone comb, worked burnt bone, 8 pottery sherds, large frag. of sewn birch bark container, 18 bear's claws, limpet shell (*Patella vulgata*) coloured green by bronze corrosion & cremated bones, bird's bones and birch bark. (Previously B895, 896, 900, re-catalogued in 1954.)

Dating: C3

Bjørn 1929:no. 82

Neumann 1837:27; Nicolaysen 1860-66:527-528; Lorange 1875:106; Bøe 1942:108-109, pl. XIX, XXII; Fett 1950c:46; UBÅ 1953, no. 4:56-63; Fett 1957:120, 122 (ill.); Andersson 1993a:167, no. 904.

**102. Godøy, Giske k.** (Fig. 69a, pl. 51a)**B11546 f**

Cremation grave. Found in a cairn, the «Ellefryøysa» (Ellef's cairn), 37 m in diam. and 5 m high, in a hexagonal chamber 0.5 m x 0.6 m x 0.4 m, built of slabs. Excavated in 1962 by the archaeologist P.J. Lavik and in 1973 by P.J. Lavik and B. Magnus.

Rim diam.: 325 mm Base diam.: 342 mm  
 Height: 168 mm H<sub>2</sub>: 38 mm H<sub>3</sub>: 80 mm

Very well preserved, no decorations. The handle missing.

Type: 2C

NAT: 10, gold medallion (imitation of a medallion struck under Constans 337-350, 10.57 g, Pl. 51e), a «Kolben» neck ring (311,16 g, Pl. 51c), gold nail, two silver vessels (Pl. 51b), composite bone comb (Pl. 51d), five bone arrow heads (Pl. 51f), pottery sherds, clinker nail, eight bear's claws & cremated bones.

Dating: C3-D1

HMT 1962-66: 4-10, fig. 1-2; Lavik 1969; Hagen 1977:261-262; Skaare 1976:161 no. 130; Andersson 1993 a:167, no. 903; Axboe 1982:61-62; Axboe et al. 1986:72-73 no. 256, taf. 45-46; Kyhlberg 1986:69-70, 121.

**103. Åk, Rauma k.** (Fig. 69b, pl. 52a)**C3168**

(Åk, Grytten s. & pgd.)

Cremation grave. Found in the middle of a mound, in a chamber. No further information available.

Rim diam.: 305 mm Base diam.: 322 mm  
 Height: 157 mm H<sub>2</sub>: 29 mm H<sub>3</sub>: 30 mm

Fairly well preserved. Base almost completely loose. Internal centre mark. Iron handle missing.

Type: 2C

NAT: 5, gold finger ring (Beckmann type 2-4, 10.92 g), the silver mountings R 147 for a knife handle (Pl. 52b,c), a silver cylinder and two silver mounts; everything stolen in 1910.

Dating: C3

Bjørn 1929:no. 85.

Nicolaysen 1860-66:538; Rygh 1872:344; Bøe 1927:59; Andersson 1993 a:168 no. 908.

**104. Åk, Rauma, Grave II** (Fig. 69c, pl. 52d)**C5870**

(Åk, Grytten s. & pgd.)

Inhumation grave. Found in a slab cist, 7 m long, oriented NW-SE, brought to light by shifting sands. There has probably been a barrow at the site.

Rim diam.: 305 mm Base diam.: 322 mm  
 Height: 153 mm H<sub>2</sub>: 39 mm H<sub>3</sub>: 30 mm

Well preserved. Exterior decorated with horizontal, parallel lines.

Iron handle

Type: 2C

NAT: 13, gold medallion (imitation, the original struck under Magnentius 350-353, 11.243 g, Pl. 53d), the five-armed swastika brooch R 238 of gilt silver sheet (Pl. 53f), early cruciform brooch (Pl. 53c), bronze belt ring (Pl. 53e), pot like R 361 (Pl. 53a), bucket-shaped pot (Pl. 53b), frags. of turned wooden bowl, amber bead, glass mosaic bead, spindle whorl of baked clay, wooden knife handle with bronze fittings, frags. of weaving batten, two iron cylinders, three worked pieces of wood with bronze fittings (Pl. 53g) & woollen cloth.

Dating: C3 (find comb.)

Bjørn 1929:no. 86

Ab. 1872:76, pl. III; Rygh 1872:344-354, figs. 1-8; Montelius 1898:94, Shetelig 1905:52 fig. 9; Shetelig 1907:42 fig. 51; Brøgger 1921:Pl. I fig. IV; Bøe 1927:59; Bøe 1931: 57 fig. 63, 58-59; Mackeprang 1952:110 no. 12; Norling-Christensen 1953:52; Slo-mann 1970:922 fig. 2, 923; Reichstein 1975:98-99, 110, 128 no. 279, Taf. 1; Axboe et al. 1985:22, no. 3, taf. 3-4; Bender Jørgensen 1986:245, no. 29; Andersson 1993a:168, no. 909;

**105. Sandnes, Rauma k.****T12314**

(Sandnes, Holm s., Veøy pgd.)

Cremation grave. Found in a cairn. Under the cairn a pit had been dug, and in the pit a round chamber of slabs was built, approx. 0.4 m in diam. Excavated by the archaeologist A. Bjørn in 1921.

Rim diam.: 360 mm Base diam.: approx. 420 mm

Height: approx. 160 mm

A quarter of the shoulder missing, cauldron cracked in the transition neck/shoulder and shoulder/base. Base loose, in several pieces. Iron lugs corroded to rim

Type: 1B

NAT: 2, small iron rivet (for a comb?).

Dating: C3

Bjørn 1929:no. 87; Eggers 1951:no. 398.

TVS 1921, no. 1:12-13, fig. 3; Bjørn 1929:15 fig. 6; Lund Hansen 1987:441.

**106. Eidskrem, Aukra k.****T12136**

(Eikrem/ Eiskrem)

Found in a cairn, approx. 25 m in diam., in a cist of slabs, 1.6 m long, oriented N-S. No further information is available.

Cauldron in four fragments, the largest 5.5 cm (largest dim.).

Type: 1

NAT: 1

Dating: C3

Bjørn 1929:no. 89; Eggers 1951:no. 331.

TVS 1920, no. 2:31; Lund Hansen 1987:441.

## NORD-TRØNDELAG

## 107. Lønnem, Steinkjer k.

T28

*(Lønnem, Sparbu pgd.)*

Found c. 1817 in a mound. No further information available.

Rim diam.: 312 mm Base diam.: approx. 340 mm

Height: 153 mm H<sub>2</sub>: 32 mm H<sub>3</sub>: approx. 75 mm

Cauldron cracked at transition body/base, parts of neck and shoulder missing. Exterior decorated with horizontal, parallel lines, concentric circles. Internal centre mark. Piece of iron handle corroded to one ear.

Type: 2C

NAT: 1

Dating: C3

Bjørn 1929:no. 93; Ekholm 1933:no.108.

Klüwer 1823:79; Nicolaysen 1860-66:651; Rygh 1871:22; Rygh 1879:67.

## 108. Gjeite, Levanger k. (Pl. 54a)

T483

Cremation grave. Found in a barrow, 3.5 m high, in a chamber built of four large stones and with slabs as roof and floor. The chamber measured 0.8 m x 0.8 m.

Rim diam.: approx. 320 mm Base diam.: approx. 380 mm

Height: 143 mm

Cauldron dented, rim partially missing. Patched six times. Remains of iron lug corroded to neck. Clear traces of hammering with sharp tool.

Type: 1B

NAT: 1

Dating: C3

Bjørn 1929:no. 91; Eggers 1951:no. 341.

Ab. 1868:14-15, footnote 1; Rygh 1879:98; TVS 1919:12; Mars-trander 1983:50, 180; Lund Hansen 1987:442.

## 109. Svedjan av Salthammer, Levanger k. (Pl. 54b)

T560

There is no information about this find.

Rim diam.: 315 mm Base diam.: approx. 340 mm

Height: approx. 175 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 75 mm

Lower half of body eaten away by corrosion. Base loose. Piece of iron handle corroded to one ear.

Type: 2C

NAT: 1

Dating: C3

Ekholm 1933, no. 106.

Ab. 1870:86; Rygh 1879:96; Vestrum 1926:25.

## 110. Ferstad, Inderøy k.

T2415

Cremation grave. Found in a large cairn in a chamber built of slabs. No further information is available.

Rim diam.: 304 mm Base diam.: —

Height: (preserved) 125 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 35 mm

Cauldron heavily corroded, in six larger fragments and both ears, glued together. Most of iron handle and cauldron's shoulder missing. Base in two fragments with concentric circles. Internal centre mark.

Type: 2C

NAT: 1

Dating: C3 – D

Ekholm 1933:no. 107.

Ab. 1880:229.

## 111. Hol, Inderøy k.

T10176

Inhumation grave, double burial. Found in a cairn approx. 10 m in diam. and 2 m high, in a cist built of stones. The cist measured 5.25 m x 1 m x 0.7 m, and was covered with two slate slabs. According to the excavator, it is most probable that the two individuals were buried at the same time. Excavated by the archaeologist K. Rygh in 1912.

Rim diam.: 299 mm Base diam.: approx. 320 mm

Height: (preserved) 125 mm H<sub>2</sub>: — H<sub>3</sub>: approx. 50 mm

Cauldron with several, large corrosion holes. Handle missing. Base loose and fragmented. Ears with extra, small holes drilled over the large ones, which are very worn.

Type: 2C

NAT: 18 (man #1: NAT 7), three bronze belt fittings, two bronze clasps (Hines type B1i), bronze handle for chest, two different bronze cylinders (mountings for shafts), iron handle (of a wooden bucket), pot like R368, pot like R369 (*Buckelurne*) & human and animal bones, including horse.

(man #2: NAT 9), double-edged sword, lance like Arms type F, ten three-edged arrow heads like R213, shield boss (Waffen group VIII), clinker nail, payment gold (1.6 g), quartzite strike-a-light with bronze mounts and a bronze box for cinder (both mounted on the belt), silver tweezers, iron mounts. (T 10159-10180). The cauldron ascribed to man #1.

Dating: D2

Bjørn 1929:no. 90.

TVS 1912, no. 8:16-23, figs. 7-14 (also printed in *Oldtiden III*); Rygh 1913; Bøe 1927:64; Bøe 1931:150; Arms:32, no. 379; Hines 1993:111; Waffen:553, no. 394.

## TROMS

## 112. Øvergård, Bjarkøy k.

C18174

Bog find. Found in a bog at 1.3 m depth. No further information is available.

Rim diam.: 855 mm

Height: 420 mm

Volume: 200-250 l.

Cauldron patched in several places.

Type: 1D

NAT: 1

Dating: C3

Bjørn 1929:no. 92.

Ab. 1885:87; Sjøvold 1962:111, 124, Pl. 50; Heyerdahl-Larsen 1971; Straume &amp; Bollingberg 1995.

## SUPPLEMENT

*Unregistered cauldrons at AmS (the Archaeological Museum in Stavanger)*

Two cauldrons, class 2, from unknown localities, probably in Rogaland.

*Privately owned:*

Hamre, Leikanger k., Sogn og Fjordane

Westland cauldron, class 2. (Pers. comm. Sigrid Kaland, Bergens Museum)

*Cauldrons erroneously attributed to the Westland class:***Manvik, Brunlanes pgd., Larvik k., Vestfold****C35042 a**

Fragments of a globular cauldron with triangular ears, like Baratte et al. 1984: Pl. II, III and Ekholm 1954-55: Taf. 3: 1, 2.

Holand 2001:186.

**Lunde, Farsund k., Vest-Agder****B4967**

Cauldron with straight sides and triangular ears without holes. Medieval.

Hauken 1984: no. 23, Holand 2001:195.

**Hatteberg, Kvinnherad k., Hordaland.****B7838**

Cauldron with thick base riveted to straight sides, triangular ears, no outward-turned rim. Medieval.

Hauken 1984: no. 69, Holand 2001:210.

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## APPENDIX III.

# Westland cauldrons found outside Norway

The find list gives the following information: Find place, class of cauldron (1 or 2), type of find (finds are grave finds unless otherwise specified) and literature references. The numbers in the find list have been used on the map fig. 5). The find list does not presume to be complete.

### SWEDEN

1. The church, Timrå sn, Medelpad. Class 1.  
Kungliga Vitterhets Historie och Antikvitets Akademiens Månadsblad 1898-99: 113f, 193, fig. 151.
2. Västland, Skön sn, Medelpad. Class 1.  
Kungliga Vitterhets Historie och Antikvitets Akademiens Månadsblad 1900: 34f.
3. Västland, Skön sn, Medelpad. Type 2C.  
Fornvännen 1923, Tillväxten: 26, fig. 7. Straume 1987: 116 no. 77, taf. 97.
4. Kvissleby I, Njurunda sn, Medelpad. Type 2B.  
Fornvännen 1917, Tillväxten: 29. Enqvist 1919: 5-10, fig. 2. Ekholm 1933: fig. 12. Straume 1987: 111 no. 67, taf. 92.
5. Kvissleby II, Njurunda sn, Medelpad. Type 2C.  
Fornvännen 1908, Tillväxten: 253f, fig. 122. Enqvist 1919: 10-12, fig. 5.
6. Kvissleby III, Njurunda sn, Medelpad. Type 1A.  
Montelius 1882-84: 46. Enqvist 1919: 12-16, fig. 14. Straume 1987: 111, no. 66, taf. 91:1-6.
7. The church, Attmar sn, Medelpad. Class 2.  
Slomann 1950: 30, fig. 10.
8. Högom, Selånger sn, Medelpad. Class 2.  
Ramqvist 1992: 131, pl. 92
9. Kyrkebys, Hejnum sn, Gotland. Class 1. Hoard.  
Nerman 1935: 89, 99-100, fig. 611.
10. Kyrkebys, Hejnum sn, Gotland. Class 1. Hoard.  
Nerman 1935: 89, 99-100, fig. 612.
11. Galtung, Lau myr, Burs sn, Gotland. Class 2. Hoard.  
Nerman 1935: 89, 100.
12. Sojdungs, Fole sn, Gotland. Class 2. Hoard.  
Nerman 1935: 89, 100.
13. Sojvide, Sjonhem sn, Gotland. Class 1.  
Nerman 1935: 89, no. 119.
14. Barshaldershed, Fide och Grötlingbo sn, Gotland.  
Nerman 1935: 89, no. 159
15. Lilla Bjärges, Lau sn, Gotland.  
Nerman 1935: 89, no. 185.

Note: The cauldron from Båling, Jättendal sn, Hälsingland, published by Ekholm in Fornvännen 1955, can hardly be classified as a Westland cauldron, judging by the photograph.

### DENMARK

16. Stenlille, Holbæk. Class 2.  
Norling-Christensen 1953: 49, fig. 7.
17. Sanderumgaard grave I, Davinge sn, Åsum. Type 1D.  
(early 3<sup>rd</sup> cent. C1b)  
Sorterup1845: 365, Tab. X:94. Lund Hansen 1987:420.
18. Kragehul mose, Flemløse sn, Odense. Class 2. Hoard.  
Norling-Christensen 1953: 48, fig. 3.
19. Baunehøj, Hjortdal sn, Thisted. Class 2.  
Norling-Christensen 1953: 49, fig. 4.

### GERMANY

20. Häven grave 7, Mecklenburg. Class 1.  
Beltz 1910: 352, 354.
21. Teterow, Mecklenburg. Class 2.  
Beltz 1909: 379-381. Inventaria Archaeologica D 50.
22. Grieben, Ldkr. Stendal, Sachsen. Class 1. Hoard/river find?  
Eggers 1951: no. 1502, Leineweber 1997:370, taf. 52.
23. Gommern, Ldrk. Burg, Sachsen-Anhalt. Class 1.  
Frölich 2000.
24. Stotternheim, Kr. Sömmerda, Thüringen. Class 2. Hoard.  
Schmidt 1961: 116.
25. Wolburgsau, Ditmarschen, Schleswig-Holstein. Class 2. Hoard.  
Undset 1880: 141. Behn 1936: 125, with further references.
26. Hemmoor-Warstade grave 22, Kr. Land Hadeln, Hannover. Class 1.  
Willers 1901: 27, taf. I:9. Eggers 1951: no. 1028. Waller 1959: 14, no. 22, taf. 15.
27. Wehden, Wesermünde, Niedersachsen. Class 2.  
Waller 1961: 23, taf. 1:301.
28. Elm, Kr. Bremervörde, Niedersachsen. Class 2.  
Hässler 1978:85, abb.4.
29. Helle grave 6, Westerstede, Niedersachsen. Class 2.  
Werner 1958: 387-388, Abb. 11:4.
30. Helle grave 7, Westerstede, Niedersachsen. Class 2.  
Werner 1958: 388.
31. Osterholz, Grafschaft Hoya, Niedersachsen. 2 cauldrons, class 1.  
Raddatz 1976: 15-17, abb. 8, 21-22, 48 no. 3a, b. Taf. 9, 10, 11:1, 33, 34, 36:1a.
32. Krefeld-Gellep grave 1782, Nordrhein. Class 2.  
Pirling 1964: 206, 214, taf. 59,1. Pirling 1974: 64, taf. 50:2, 138:2.

33. Königsforst bei Bergisch-Gladbach, Rhein.-Bergischer Kreis, Nordrhein-Westfalen. Class 2. Hoard.  
Gaitzsch et al. 1984: 354 no. 33, 355 abb. 11.
34. Biebrich, Wiesbaden, Hessen. Class 2.  
Kutsch 1921: 27-29, Abb. 2:12.
35. Trebur, Kr. Groß-Gerau, Starkenburg, Hessen. Class 2.  
Lindenschmit 1911: 19, taf. 6:106. Möller 1987: 131, Taf. 141:3.
36. Bensheim, Kr. Bergstraße, Starkenburg, Hessen. Class 2. Hoard.  
Behn 1936: 121, Abb. 2:12. Möller 1987: 15-16, Taf. 118.
37. Bensheim, Kr. Bergstraße, Starkenburg, Hessen. Class 2. Hoard.  
Behn 1936: 122. Möller 1987: 15-16. (Destroyed by fire in 1944.) Nos. 36 and 37 found together.
38. Rhein bei Mainz, Rheinland-Pfalz. Class 2. Stray find.  
Behn 1936: 122, with further references, abb. 28:1
39. Rhein bei Mainz, Rheinland-Pfalz. Class 2. Stray find.  
Behn 1936: 122, with further references, abb. 28:2
40. Mainz-Bretzenheim, Rheinland-Pfalz. Class 2.  
Mainzer Zeitschrift 3, 1908: taf. 5,14. Behn 1936: 122.
41. Sprendlingen, Alzey, Rheinhessen.  
Bjørn 1929: 28, with further references
42. Worms, Rheinland-Pfalz. Class 1. Hoard.  
Behn 1936: 124, with further references.
43. Otterstadt-Angelhof, Rheinland-Pfalz. Class 1 and 2. River find.  
Künzl 1993,1:243, abb.8
44. Römersberg-Mechtersheim, Rheinland-Pfalz. Class 2. River find.  
Künzl 1993,1:243.
45. Neupotz, Kr. Germersheim, Rheinland-Pfalz. 35 Cauldrons, class 1 and 2. River find.  
Künzl 1993,1: 231-238, 1993,2: 44-49, 1993,4: taf. 206-267.
46. Rheinzaubern, Kr. Germersheim, Rheinland-Pfalz. Class 1. Hoard.  
Willers 1901:65.
47. Hagenbach, Kr. Germersheim, Rheinland-Pfalz. 4 cauldrons, class 1 and 2. River find.  
Bernhard & Petrowsky 1990: 34-38, Abb. 21, Taf. IV.
48. Bretzenheim an der Nahe, Rheinland-Pfalz. Class 2.  
Westdeutsche Zeitschrift XVII, 1898: taf. 9,6. Behn 1936: 122.
49. Walldürn, Kr. Neckar-Odenwald, Baden-Württemberg. Hoard.  
Schallmayer 1982:149, abb. 129.
50. Brühl, Baden-Württemberg. Class 2. Stray find.  
Künzl 1993,1: 233, 245 abb. 11.
51. Donzdorf, Kr. Göppingen, Baden-Württemberg. Class 2.  
Neuffer 1972: 88, taf. 24:7, 63:1, 65:1.
52. Hechingen-Stein, Zollernalbkreis, Baden-Württemberg. Class 2. Hoard.  
Reim 1982: 54, 38 abb. 26.
52. Rainau-Buch, Ostalbkreis, Baden-Württemberg. Class 1. Hoard? (found in a well)  
Planck 1979: 118-119, abb. 2, 4
54. Filzen, Kr. Bernkastel-Wittlich, Saalburg. 4 cauldrons Class 1 and 2. Hoard.  
Werner 1938: Taf. 108, 109. Behn 1936: 122.
- den Boesterd 1956: 50, fig. 163.
58. Unknown find-place, Nijmegen?, Gelderland. Class 2.  
den Boesterd 1956: 50, fig. 164.
59. Waal, Nijmegen, Gelderland. Class 2. Hoard.  
den Boesterd 1956: 50, fig. 165.
60. Unknown find-place, Nijmegen?, Gelderland. Class 2.  
den Boesterd 1956: 50, fig. 166.
61. Unknown find-place, Nijmegen? Gelderland. Class 2.  
den Boesterd 1956: 50, fig. 167.
62. Unknown find-place, Nijmegen?, Gelderland. Class 2.  
den Boesterd 1956: 50-51, fig. 168.
63. Krayenhoff, Nijmegen, Gelderland. Class 1. Hoard.  
Norling-Christensen 1953: 48, footnote 2 with further references.
64. Herwen-Bijlandse Waard, Nijmegen, Gelderland. Class 1. Hoard?  
Koster 1997:70-71 with ill.
65. Near Tiel in the Waal, Nijmegen, Gelderland Class 2. River find.  
Koster 1997:71 with ill.

## BELGIUM

66. Pommeroeul, Hainant. 2 cauldrons, class 1. Stray finds.  
De Boe & Hubert 1977: 38, fig. 58, 59.
67. Samson grave 5, Namur. Class 2.  
Dasnoy 1968: 285, fig. 5:3.
68. Samson grave 7, Namur. Class 2.  
Dasnoy 1968: 290, fig. 7:5.

## FRANCE

69. Houdan grave 16, Yvelines, Seine-et-Oise. Class 2.  
Böhme 1974: 319, taf. 126:8.
70. Unknown find-place near Paris  
Bjørn 1929: 29.
71. Unknown find-place near Paris  
Bjørn 1929: 29.
72. Ramecourt grave 2, Vosges.  
Bulletin de Société Archeologique Champenoise 32, 1938: 109, fig. p. 110. (NB! Pirling 1964: foot-note 57, with findplace Dourvallier, might be misspelling for Domvallier. The cauldron belongs to the female grave. There was no cauldron in the male grave, although the illustration might give this impression)
73. Seltz, Bas-Rhin. 2 cauldrons class 1. Hoard.  
Schaeffer 1927: 33-34, Pl. VII: b,c. Behn 1936: 124.
74. Alise St.-Reine (Alesia), Côte d'Or. 2 cauldrons, class 1?. Hoard.  
Pro Alesia 1906, no. 3-4: 51, 53. Behn 1936: 125.
75. Chalon-sur Saône. 5 cauldrons. Class 1. River finds.  
Baratte et al. 1984: 20-21, 24 (nos. 7-11, 18), pl. IV, V, VI, IX.

## SWITZERLAND

55. Unknown find-place, Nijmegen? Gelderland. Class 1.  
den Boesterd 1956: 49, fig. 161.
56. Unknown find-place, Nijmegen? Gelderland. Class 2.  
den Boesterd 1956: 49, fig. 162.
57. de Winseling, Nijmegen, Gelderland. Class 2.
76. Kaiseraugst, Kt. Aargau, Basel-Land. Class 1. Hoard.  
Tomasevic-Buck 1984:147, abb. 3:6.
77. Martigny, Valais. Class 1. Hoard.  
Behn 1936: 125, with further references.

AUSTRIA

78. Wels, Oberösterreich. Class 1. Hoard.  
Miglbauer 1994: 286, abb. 1, 2, 3.

ENGLAND AND WALES

79. Long Wittenham grave 93, Oxfordshire (prev. Berkshire).  
Class 2.  
Akerman 1860: 345, 351, pl. XVIII:2.
80. Ixworth Thorpe, Suffolk. Class 2.  
Thompson 1956: 197.
81. Sawston, Cambridgeshire. Class 2.  
Clarke 1817: 340-343, pl. XXV:4.
82. Little Wilbraham grave 5, Cambridgeshire. Class 2.  
Neville 1852: 13, pl. 16.
83. Little Wilbraham grave 42, Cambridgeshire. Class 2.  
Neville 1852: 16.
84. Burwell, Cambridgeshire. 3 cauldrons, class 1. Hoard.  
Gregory 1976: 70-73, fig. 3, 4.
85. Loveden Hill, Hough-on-the-Hill, Lincolnshire. Class 1.  
Kennett 1971b: 25.
86. Wotton, Surrey. 4 cauldrons, class 1. Hoard.  
Kennett 1971a: 130-132, fig. 11:4.
87. Prestwick Carr, Northumberland. Class 1. Hoard.  
Eggers 1968: 86-87, 108 no. 65, abb. 24:f.
88. Long Rake, Halkyn Mountains, Flintshire. 3 cauldrons, class 2.  
Hoard.  
Archaeologia XIV: 275, pl. XLIX

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## APPENDIX IV.

# List of lost copper alloy cauldrons (possibly Westland cauldrons) in Norway

### BUSKERUD

1. Folum, Norderhov pgd., Ringerike k. «.. a pot with ashes and a copper cauldron.» Nicolaysen 1860-66:145.
2. Sandsvær, Efteløt pgd., Kongsberg k. «.. a small brass cauldron.» Nicolaysen 1860-66:168.

### OPPLAND

3. Rødenes, Fluberg s., Søndre Land k. «At Rødenes is kept a bronze cauldron that is said to have been found 100 years ago together with another one, that was overturned on top of this one. The first one has the usual form with two triangular ears cut in the rim.» Nicolaysen 1876:221.
4. Øvre Stabu, Østre Toten k. «.. a similar and in the same way deposited bronze cauldron», i.e. similar to cat. no. 6. Ab. 1871:85, no. 100.

### AUST-AGDER

5. Ribe, Fjære s. & pgd., Grimstad k. «.. a brass cauldron filled with cremated bones, .. had two triangular ears for the handle.» Nicolaysen 1876:229.

### VEST-AGDER

6. Bjærheim, Hægebostad pgd. & k. «[in a cist] a sword, two bridle rings, a copper cauldron sitting on a copper dish and a number of pots.» Nicolaysen 1860-66:277.
7. Leknes, Kvinesdal pgd. & k. «in a mound two small copper cauldrons with cremated bones and ashes.» Nicolaysen 1860-66:285.
8. Kongsgård, Oddernes s & pgd., Kristiansand k. «a copper cauldron with ashes and bones, and stones over and under. The cauldron crumbled when it was lifted.» Nicolaysen 1868:96.

### ROGALAND

9. Jåtten, Hetland pgd. (=Jåttå, Stavanger k.) «.. a bronze cauldron with ashes and cremated bones. Everything was thrown away. /.. / in the vicinity a pot and a bronze cauldron is said to have been found. Both are lost.» Helliessen 1901:52.
10. Lille Oma, Ly pgd., Time k. «.. in a small chamber of slabs a brass cauldron filled with cremated bones.» Nicolaysen 1860-66:296.
11. Sæbø, Hjelmeland pgd. & k. In a large mound, removed in the

1820's: «a copper cauldron, a sword and a pair of iron gloves(?)» Nicolaysen 1860-66:330.

12. Surhus, Skjold pgd (=Sørhus, Vindafjord k.) «.. a copper cauldron filled with ashes and charcoal.» Nicolaysen 1860-66:336-337.
13. Haugå, Torvastad (=Haugo øvre/nedre, Karmøy k.) «in a mound a pot, a skeleton and a copper cauldron full of ashes and cremated bones.» Nicolaysen 1860-66:348.
14. Norheim, Torvastad pgd., Karmøy k. «.. in the Jønes mound, a copper or brass cauldron with ashes and cremated bones.» Nicolaysen 1860-66:350.
15. Tjelta, Håland pgd., Sola k. «.. a copper cauldron with a gold ring in it.» Helliessen 1903:74.
16. Søndena, Vikedal pgd., Tysvær k. «.. a bronze cauldron of the Westland form, filled with cremated bones, among these a bone die..» Nicolaysen 1860-66:803, Nicolaysen 1876:238.
17. Klunghaug av Jelsa, Suldal k. «in a chamber a bronze cauldron with cremated bones. The cauldron was very brittle and was broken. One ear was retrieved and had been taken home, but was now lost.» Report by Jan Petersen 1931 in the topographical archive, Archaeological Museum in Stavanger.

### HORDALAND

18. Seglheim, Kvinnherad k. «..the remains of a brass cauldron with an iron handle, and with cremated bones.» Bendixen 1895:36, Fett 1956:15.
19. Prestegården (the Vicarage), Jondal k. «.. a small chamber.. in the chamber lay cremated bones and fragments of a bronze cauldron.» Bendixen 1884:28, Fett 1954a:11.
20. Hereid, Eidfjord k. «Lost – two 'brass cauldrons'.» Fett 1956b:12.
21. Solheim, Radøy k. «.. object of metal, that looked like a cauldron, rusty and consumed to such a degree it fell to pieces at the slightest touch.» Fett 1970a:9.
22. Hundvin, Hundvin s, Lindås pgd. & k. «.. a brass cauldron.» Nicolaysen 1860-66:400, Fett 1965c:7.
23. Askøy, Bergen k. «.. in a crevice in the rock an old brass cauldron, that came to the museum in Bergen.» Nicolaysen 1860-66:415. (Possibly mediaeval)

### SOGN OG FJORDANE

24. Halland, Leikanger pgd. & k. «.. a copper cauldron with some mouldered coins and a massive finger-ring of gold.» Fett 1954c:5.
25. Kyrkjeeide, Stryn k. «Lost – a cremation grave with a bronze cauldron.» Fett 1961:20.
26. Gutdalen, Stryn k. «.. a copper cauldron and two swords.» Nicolaysen 1871:157, Fett 1961:8.
27. Hove, Vik k. Lost cauldron? Not entered in the Register.

Belonging to the find B553, 555, 559-562, 1563. «.. remains of the copper urn, and by it lay the belt and the other bronze items.» Lorange 1875:96-99, Fett 1954d:7.

with ash and cremated bones and surrounded by a spiral-shaped arm ring of gold (K8507) and with ring embellishments at the ends.» Nicolaysen 1860-66:549. Undset 1878:21.

## MØRE OG ROMSDAL

28. Roald, Haram pgd., Giske k. «.. a copper cauldron with coins.» Lost cauldron (or hearsay only?) to C5034-37. Fett 1950b:22-23.
29. Roald, Haram pgd., Giske k. «a copper cauldron with ashes and bones.» Fett 1950b:23.
30. Tenfjord, Vatne s, Skodje pgd. & k. «a copper urn (brass?) filled with ashes and human bones, and a sword.» Nicolaysen 1860-66:523.
31. Årø ytre, Molde k. «.. the remains of a bronze cauldron, they were totally disintegrated and could not be preserved.» Universitetet i Trondheim 1980:78.
32. Bremsnes, Kvernes pgd., Averøy k. Lost vessel to the find Straume 1987: no. 2. «.. a brass vessel, turned upside down, under this a glass beaker (now in K [=Copenhagen]) with cut ovals and filled

## SØR-TRØNDELAG

33. Vestre Tunheim, Klæbu pgd. (= Vestre Tanem, Klebu k.) «.. a spearhead and a brass cauldron.» Nicolaysen 1860-66:589.

## NORD-TRØNDELAG

34. Ysse, Verdalen pgd., Verdal k. «.. a metal urn with ashes, a spear, a four-edged lance, some cremated bones and a golden arm ring.» Nicolaysen 1860-66:639.
35. Rannem, Sparbu pgd., Steinkjer k. «an almost consumed copper bowl, 3-4 litres, filled with ashes, and two finger rings of gold.» Nicolaysen 1860-66:651, Bøe 1927:nr 302.
36. Helgeid, Stod pgd. (=Helge, Steinkjer k.) «.. a metal urn..» Nicolaysen 1860-66:658.

# QUICK REFERENCE GUIDE:

## Finds in alphabetical order with catalogue number

### Abbreviations:

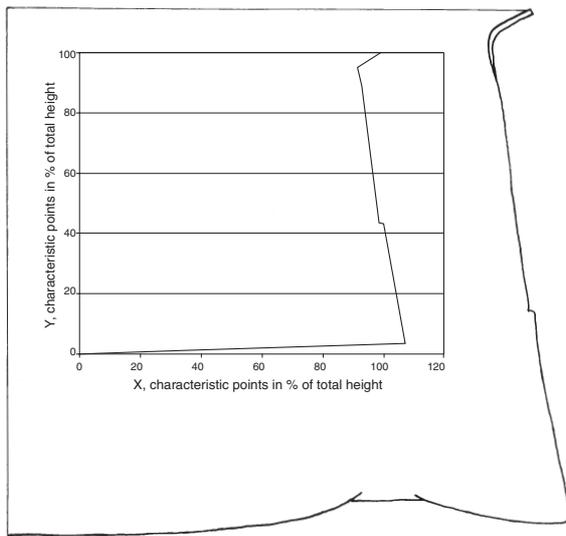
<i>AA</i>	Aust-Agder (8)
<i>Ak</i>	Akershus (2)
<i>Bu</i>	Buskerud (5)
<i>Fi</i>	Finnmark (18)
<i>He</i>	Hedmark (3)
<i>Ho</i>	Hordaland (11)
<i>MR</i>	Møre & Romsdal (13)
<i>No</i>	Nordland (16)
<i>NT</i>	Nord-Trøndelag (15)
<i>Op</i>	Oppland (4)
<i>Ro</i>	Rogaland (10)
<i>SF</i>	Sogn & Fjordane (12)
<i>ST</i>	Sør-Trøndelag (14)
<i>Tē</i>	Telemark (7)
<i>Tr</i>	Troms (17)
<i>VA</i>	Vest-Agder (9)
<i>VF</i>	Vestfold (6)
<i>ØF</i>	Østfold (1)



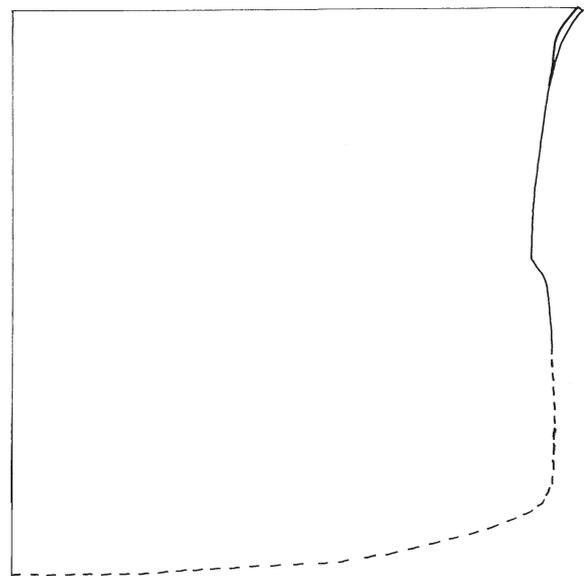
Asheim av Prestegården, Jelsa = Sandane, Suldal k., <i>Ro</i> .
Auastad, Etne k., <i>Ho</i> . B4858. Cat. no. 63
Avaldsnes, Karmøy k., <i>Ro</i> . B 605. Cat. no. 58
Berg, Larvik k., <i>VF</i> . C12360 I. Cat. no. 13
Berg, Larvik k., <i>VF</i> . C12360 II. Cat. no. 14
Blindheim, Giske k., <i>MR</i> . B2891. Cat. no. 98
Blindheim, Giske k., <i>MR</i> . B5669. Cat. no. 99
Bore, Klepp k., <i>Ro</i> . C6832. Cat. no. 45
Bø, Hå k., <i>Ro</i> . S4355. Cat. no. 42
Børte, Tokke k., <i>Tē</i> . C8433. Cat. no. 18
Dyster, Ås k., <i>Ak</i> . C9228. Cat. no. 2
Døsland, Kvinnherad k., <i>Ho</i> . B319. Cat. no. 68
Eidskrem, Aukra k., <i>MR</i> . T12136. Cat. no. 106
Eik, Søgne k., <i>VA</i> . C23256. Cat. no. 25
Eiknes, Lindås k., <i>Ho</i> . B3990. Cat. no. 77
Evje verk, Evje og Hornnes k., <i>AA</i> . C11092. Cat. no. 20
Farmen, Hamar k., <i>He</i> . C15734. Cat. no. 4
Ferstad, Inderøy k., <i>NT</i> . T2415. Cat. no. 110
Foldøy, Suldal k., <i>Ro</i> . S8200. Cat. no. 55
Fonnes, Austrheim k., <i>Ho</i> . B4386. Cat. no. 81
Fosnes, Kongsberg k., <i>Bu</i> . C961. Cat. no. 9
Gjeite, Levanger k., <i>NT</i> . T483. Cat. no. 108
Godøy, Giske k., <i>MR</i> . B11546 f. Cat. no. 102
Hamre, Leikanger k., <i>SF</i> . B8983. Cat. no. 83
Hanes, Skien k., <i>VF</i> . C4941. Cat. no. 16
Hatlestad, Bergen k., <i>Ho</i> . B3701. Cat. no. 60
Hatlestad, Bergen k., <i>Ho</i> . B5752. Cat. no. 61
Haug, Øvre Eiker k., <i>Bu</i> . C9. Cat. no. 10
Hauge, Luster k., <i>SF</i> . B317. Cat. no. 85
Haughom, Sirdal k., <i>VA</i> . B5716. Cat. no. 32
Hausken, Finnøy = Hauskje, Finnøy k., <i>Ro</i> . C2151. Cat. no. 56
Heggestøl, Vinje k., <i>Tē</i> . C20933. Cat. no. 19
Hinna, Stavanger k., <i>Ro</i> . S2246. Cat. no. 40
Hogstad, Sandnes k., <i>Ro</i> . S1522. Cat. no. 37
Hogstad, Sandnes k., <i>Ro</i> . S3552. Cat. no. 38
Hol, Inderøy k., <i>NT</i> . T10176. Cat. no. 111
Hovland, Etne k., <i>Ho</i> . B7956. Cat. no. 64
Høyland, Stord k., <i>Ho</i> . B4300. Cat. no. 66
Indre Bø, Stryn k., <i>SF</i> . B3359. Cat. no. 92
Jangarden, Giske k., <i>MR</i> . B10790 II c. Cat. no. 100

Jangarden, Giske k., <i>MR</i> . B10790 II d. Cat. no. 101	Vasshus, Klepp k., <i>Ro</i> . C3302. Cat. no. 44
Kirkjesola = Sola, Sola k., <i>Ro</i> . C22814. Cat. no. 53	Vereide, Gloppen k., <i>SF</i> . B318. Cat. no. 91
Kjellaskvik, Ølen k., <i>Ho</i> . B7665. Cat. no. 65	Vestly, Time k., <i>Ro</i> . S8635. Cat. no. 51
Kvam, Sogndal k., <i>SF</i> . B4877. Cat. no. 84	Vestre Hanum, Hamar k., <i>He</i> . C15693. Cat.no. 3
Kvie, Vang k., <i>Op</i> . C3910. Cat. no. 8	Vestre Hauge, Farsund k., <i>VA</i> . C4326. Cat. no. 23
Kyrkan, Avaldsnes, Karmøy k., <i>Ro</i> . B605. Cat. no. 58	Vestre Skogsfjord, Mandal k., <i>VA</i> . C2701. Cat. no. 21
Kyrkjeide, Stryn k., <i>SF</i> . B6188. Cat. no. 94	Vinje, Stordal k., <i>MR</i> . B5856. Cat. no. 97
Kyrkjeide, Stryn k., <i>SF</i> . B6539. Cat. no. 96	Vistad, Tokke k., <i>Tē</i> . C1673. Cat. no. 17
Lille Re, Stange k., <i>He</i> . C4968. Cat. no. 5	Voll, Hå k., <i>Ro</i> . S4730. Cat. no. 43
Lindås, Lindås k., <i>Ho</i> . B7959. Cat. no. 80	Ytre Bø, Stryn k., <i>SF</i> . B6197. Cat. no. 95
Lunde, Farsund k., <i>VA</i> . B4302. Cat. no. 22	Østby, Rakkestad k., <i>ØF</i> . C15596. Cat.no. 1
Lunde, Sandnes k., <i>Ro</i> . B3159. Cat. no. 35	Øvergård, Bjarkøy k., <i>Tr</i> . C18174. Cat. no. 112
Lønnem, Steinkjer k., <i>NT</i> . T28. Cat. no. 107	Øvre Egeland, Kvinesdal k., <i>VA</i> . C21945. Cat. no. 30
Midgården, Lindås k., <i>Ho</i> . B312. Cat. no. 76	Øvre Vemmestad, Lyngdal k., <i>VA</i> . C9004. Cat. no. 26
Midtre Salte, Klepp k., <i>Ro</i> . S7990. Cat. no. 49	Øvsthus, Osterøy k., <i>Ho</i> . B316. Cat. no. 72
Motland, Hå k., <i>Ro</i> . C16268. Cat. no. 41	Åk, Grytten = Åk, grave II, Rauma k., <i>MR</i> . C5870. Cat. no. 104
Nedre Stabu, Østre Toten k., <i>Op</i> . C5552. Cat. no. 6	Åk, Rauma k., <i>MR</i> . C3168. Cat. no. 103
Olsvoll, Radøy k., <i>Ho</i> . B6086. Cat. no. 75	
Opedal, Ullensvang k., <i>Ho</i> . B6597. Cat. no. 71	
Prestegården, Jondal k., <i>Ho</i> . B4207. Cat. no. 70	
Re, Time k., <i>Ro</i> . B1862. Cat. no. 50	
Reien, Vestre Slidre k., <i>Op</i> . C30223. Cat. no. 7	
Revheim, Osterøy k., <i>Ho</i> . B4626. Cat. no. 73	
Ringdal, Larvik k., <i>VF</i> . C10142. Cat. no. 15	
Sandane, Suldal k. <i>Ro</i> . S6399. Cat. no. 54	
Sandnes, Rauma k., <i>MR</i> . T12314. Cat. no. 105	
Saude, Luster k., <i>SF</i> . B321 a - d. Cat. no. 86 - 89	
Seglheim, Kvinnherad k., <i>Ho</i> . B308. Cat. no. 67	
Sele, Naustdal k., <i>SF</i> . B4259. Cat. no. 90	
Skardet, Lindås k., <i>Ho</i> . B4003. Cat. no. 78	
Skardet, Lindås k., <i>Ho</i> . B4256. Cat. no. 79	
Skåra, Larvik k., <i>VF</i> . C18898 I, C18898 II. Cat. no. 11, 12	
Snartemo, grave II, Hægebostad k., <i>VA</i> . C28026. Cat. no. 29.	
Snartemo, grave IV, Hægebostad k., <i>VA</i> . C22116. Cat. no. 27	
Snartemo, grave V, Hægebostad k., <i>VA</i> . C26001. Cat. no. 28	
Sola k., unknown locality, <i>Ro</i> . C14974. Cat. no. 52	
Sola, Sola k., <i>Ro</i> . C22814. Cat. no. 53	
Solheim, Radøy k., <i>Ho</i> . B5869. Cat. no. 74	
Stadheim, Vik k., <i>SF</i> . C6320. Cat. no. 82	
Stauri, Stryn k., <i>SF</i> . B3516. Cat. no. 93	
Svebestad under Høyland prestegård, Sandnes k, <i>Ro</i> . S2988. Cat. no. 36	
Svedjan av Salthammer, Levanger k., <i>NT</i> . T560. Cat. no. 109	
Sæbø, Kvinnherad k., <i>Ho</i> . B3358. Cat. no. 69	
Sør- Braut, Klepp k., <i>Ro</i> . S2452. Cat. no. 47	
Tveiten, Børte, Tokke k., <i>Tē</i> . C8433. Cat. no. 18	
Unknown locality, Sola k., <i>Ro</i> . C14974. Cat. no. 52	
Usken = Uskjå, Sandnes k. <i>Ro</i> . S3572. Cat. no. 39	
Utstein kloster, Rennesøy k., <i>Ro</i> . S2763. Cat. no. 57	
Valderøy, Borgund = Jangarden, Giske k., <i>MR</i> .	

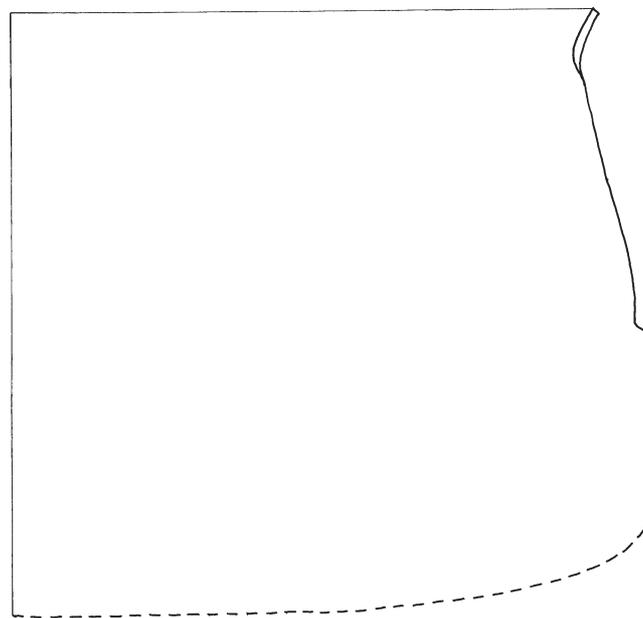




a) Cat. no. 6 C5552.

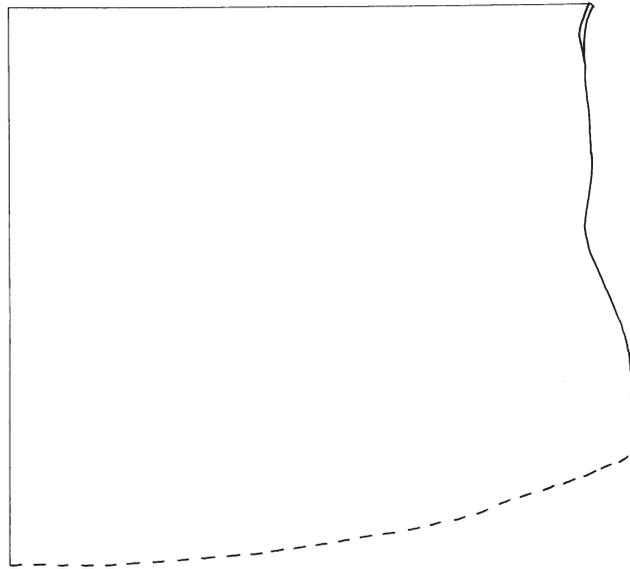


b) Cat. no. 13 C12360 I.

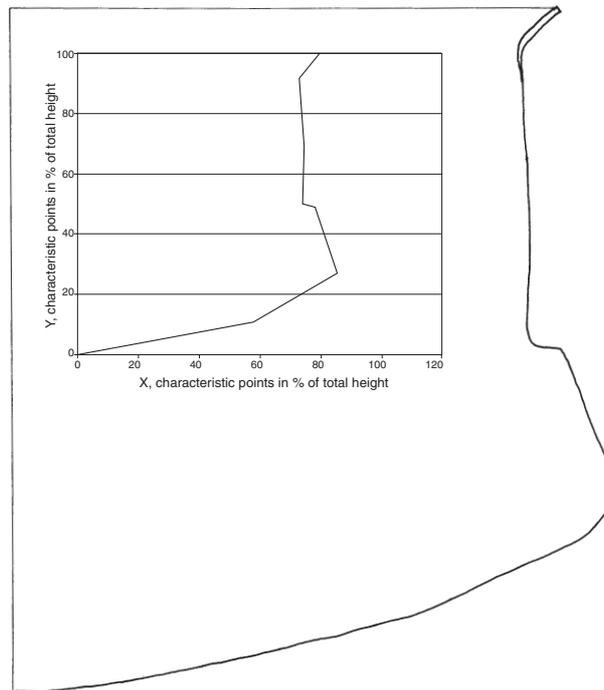


c) Cat. no. 14 C12360 II.

Fig. 58. Type 1A. Scale 1:2.

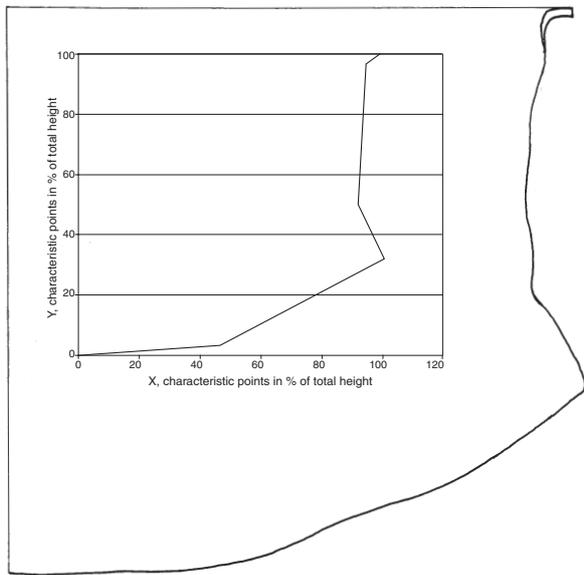


a) Cat. no. 42 S4355.

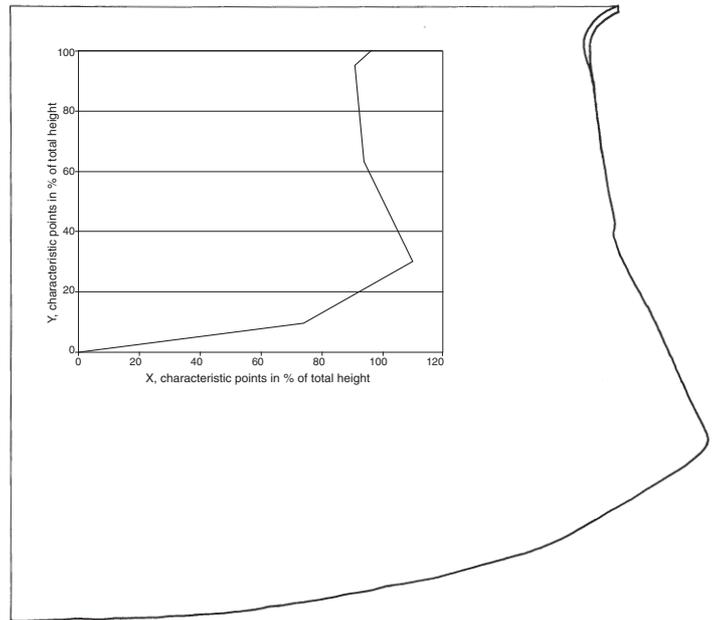


b) Cat. no. 82 C6320.

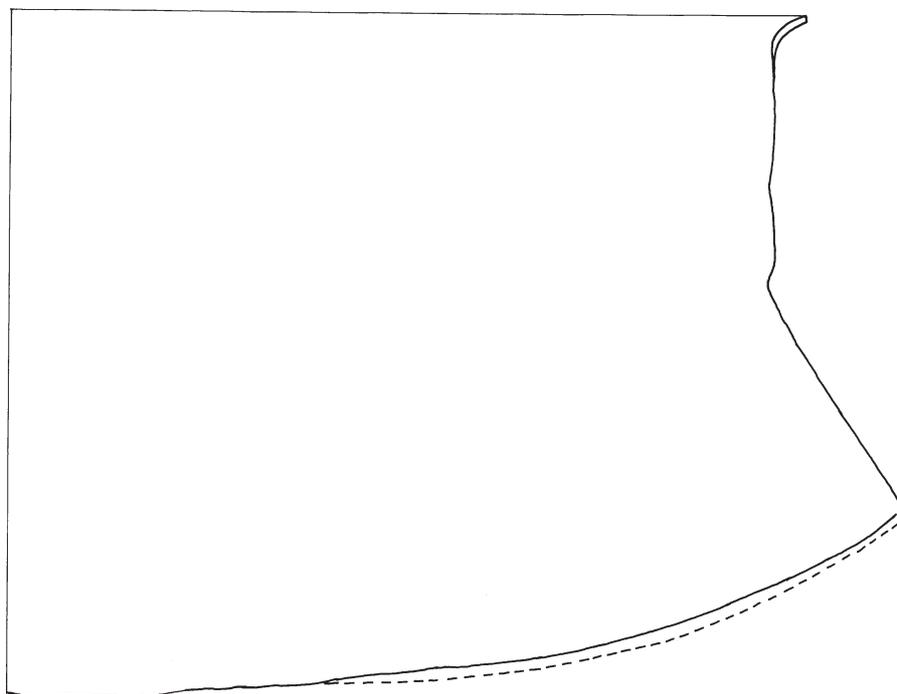
Fig. 59. Type 1A. Scale 1:2.



a) Cat. no. 3 C15693.

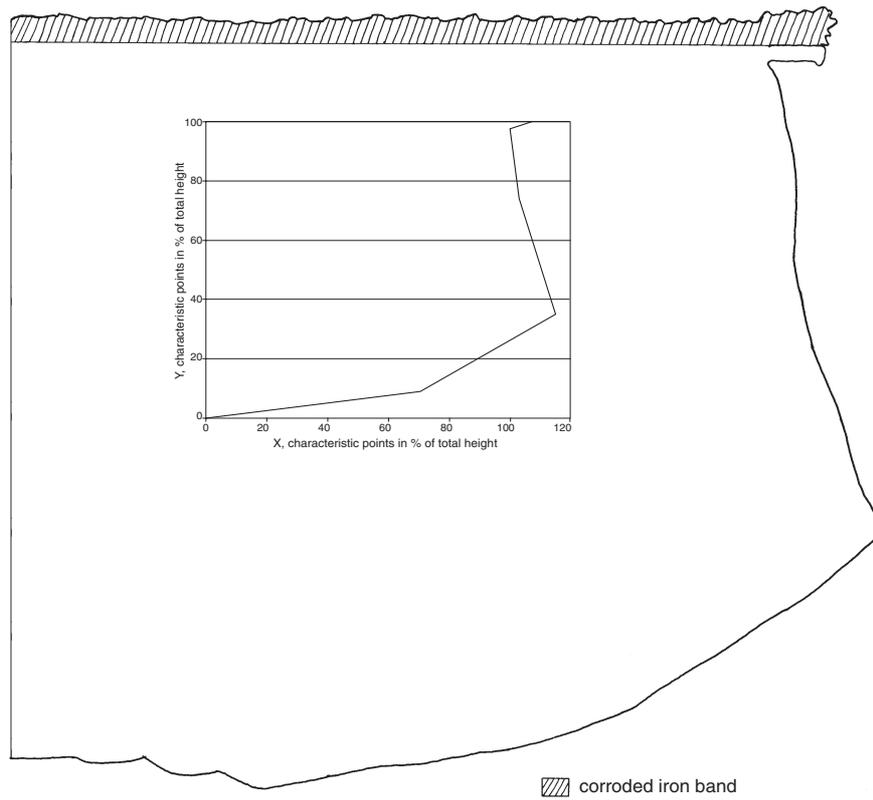


b) Cat. no. 16 C4941.

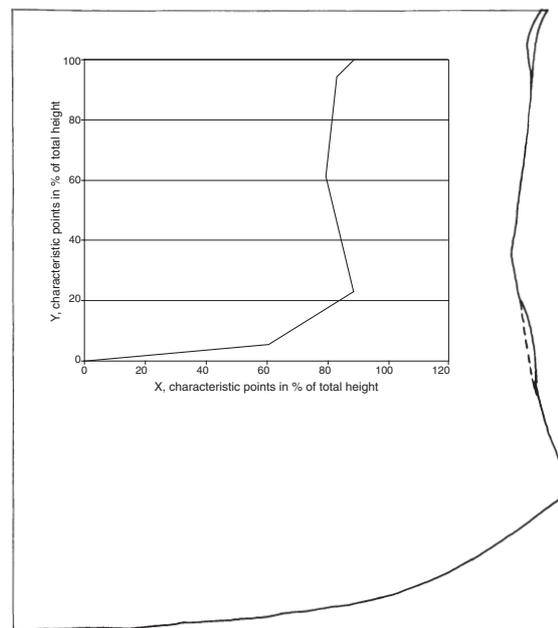


c) Cat. no. 25 C23256.

Fig. 60. Type 1B. Scale 1:2.

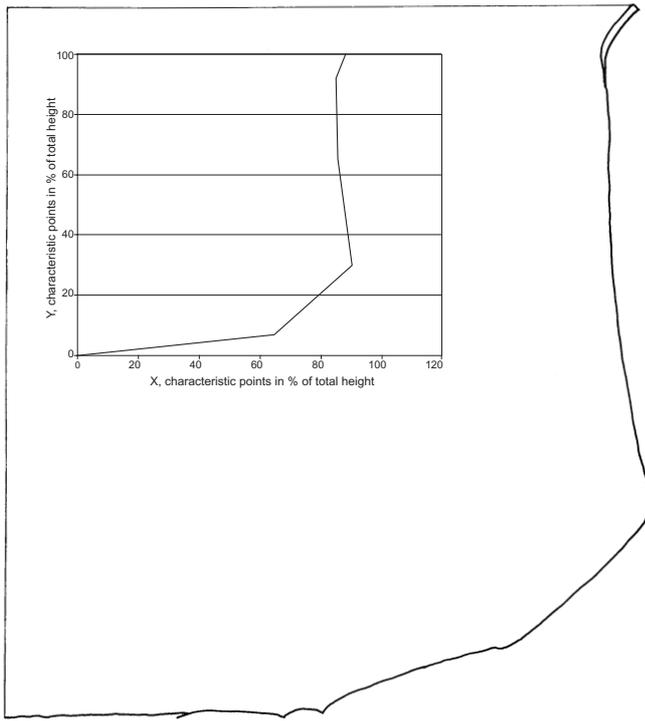


a) Cat. no. 40 S2246.

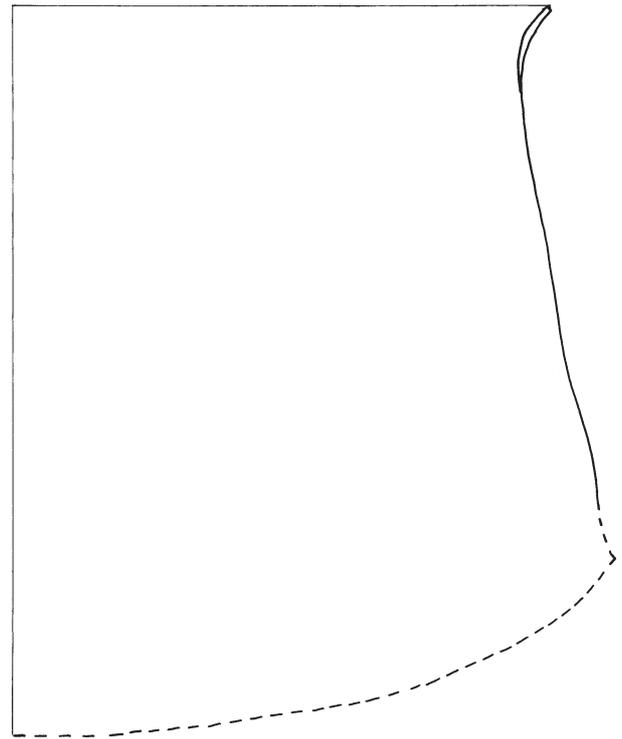


b) Cat. no. 76 B312.

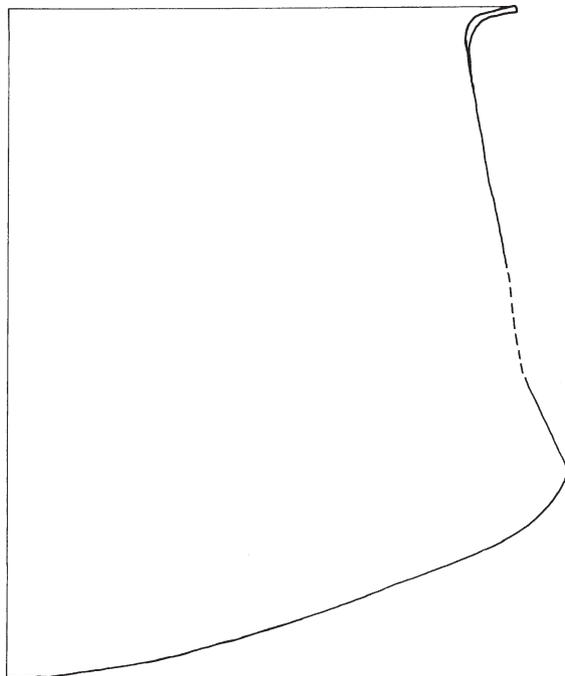
Fig. 61. Type 1B. Scale 1:2.



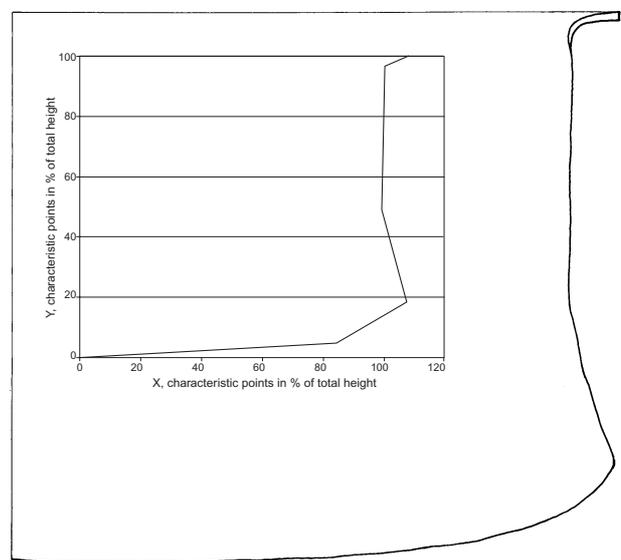
a) Cat. no. 19 C20933.



b) Cat. no. 63 B4858.

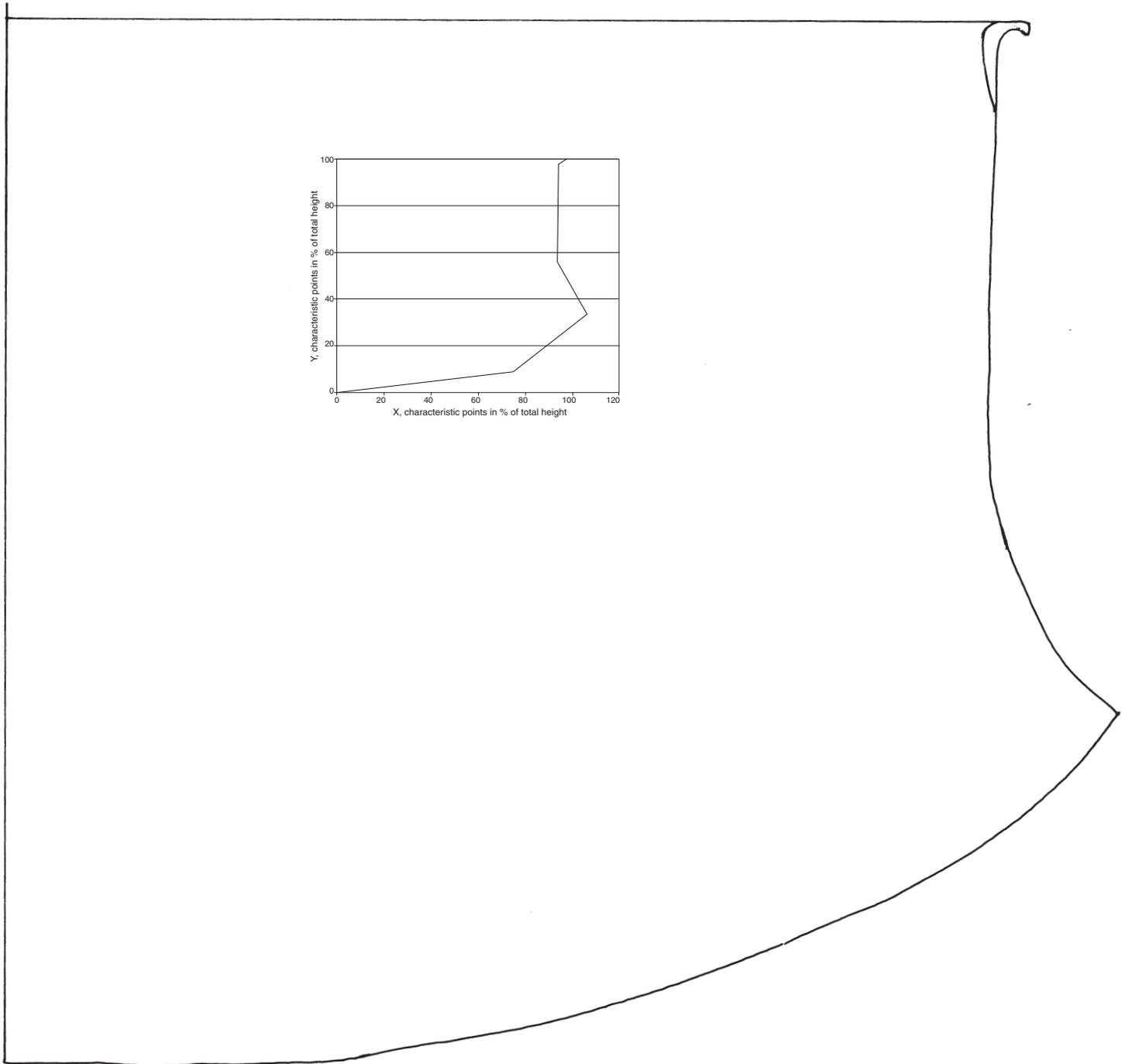


c) Cat. no. 74 B5869.



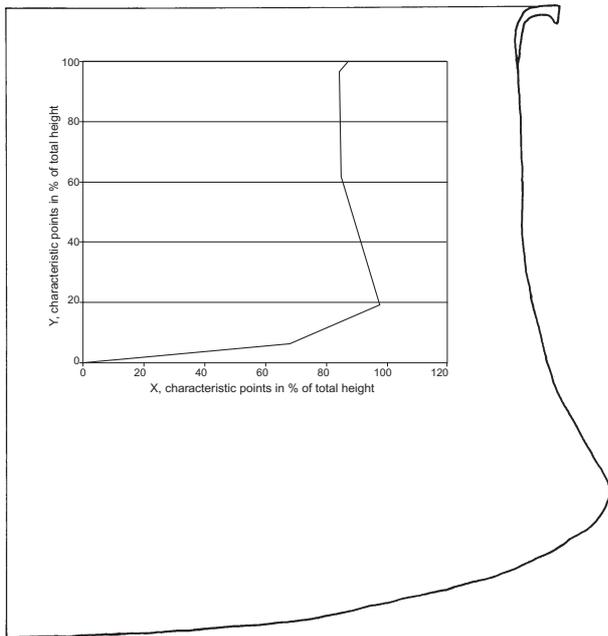
d) Cat. no. 77 B3990.

Fig. 62. Type 1C. Scale 1:2.

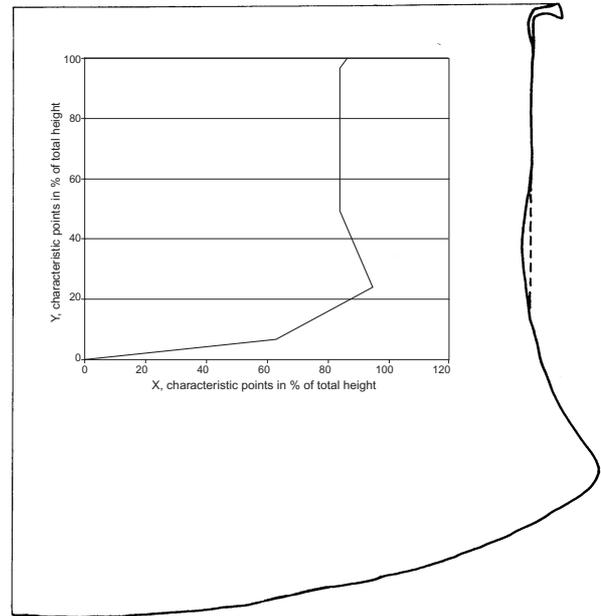


Cat. no. 36 S2988.

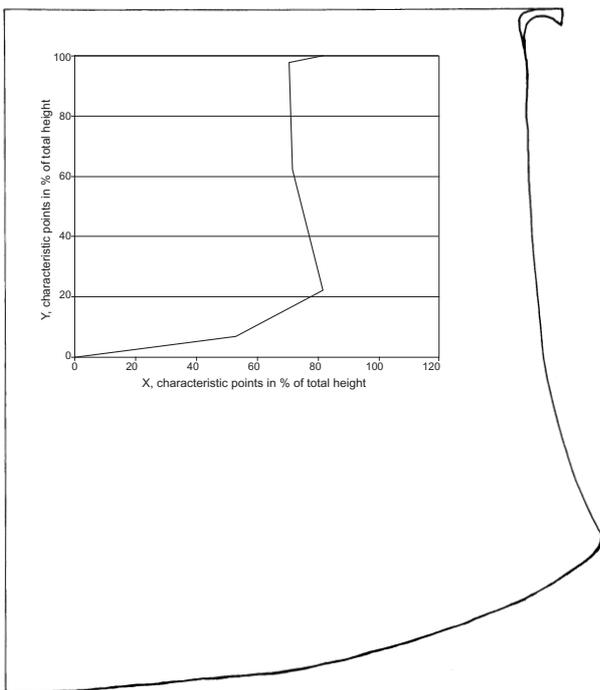
Fig. 63. Type 1D. Scale 1:2.



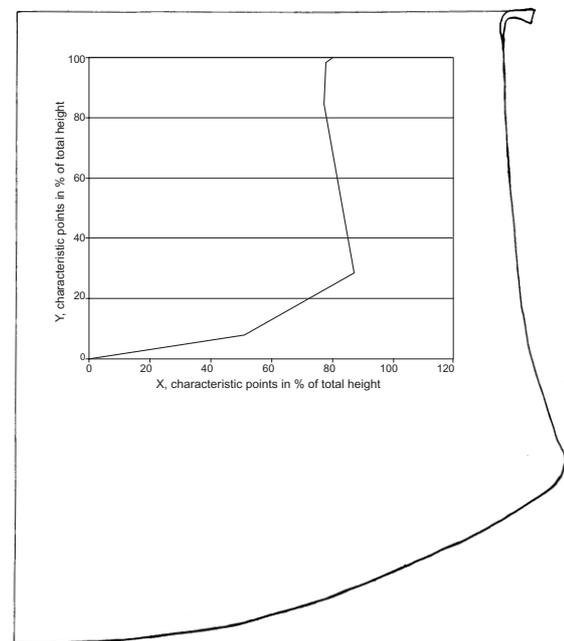
a) Cat. no. 08 C3910.



b) Cat. no. 18 C8433.

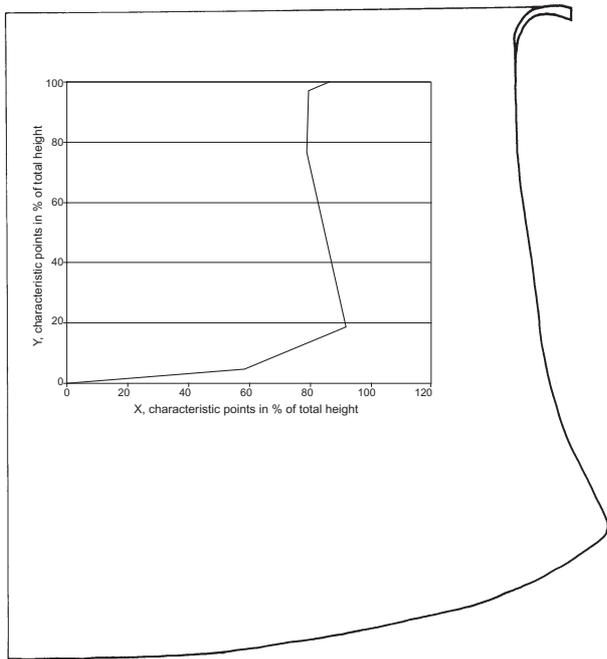


c) Cat. no. 20 C11092.

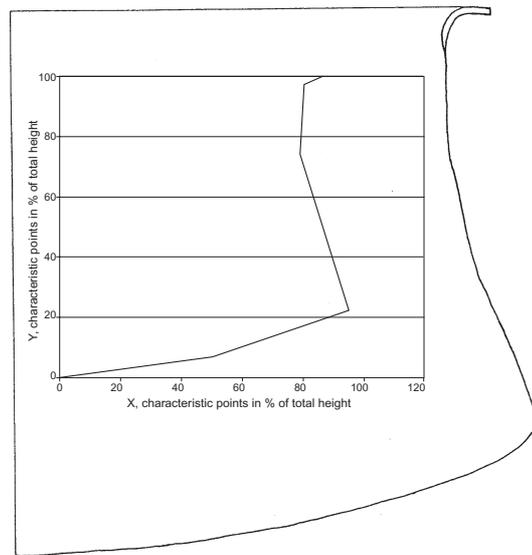


d) Cat. no. 24 C8020.

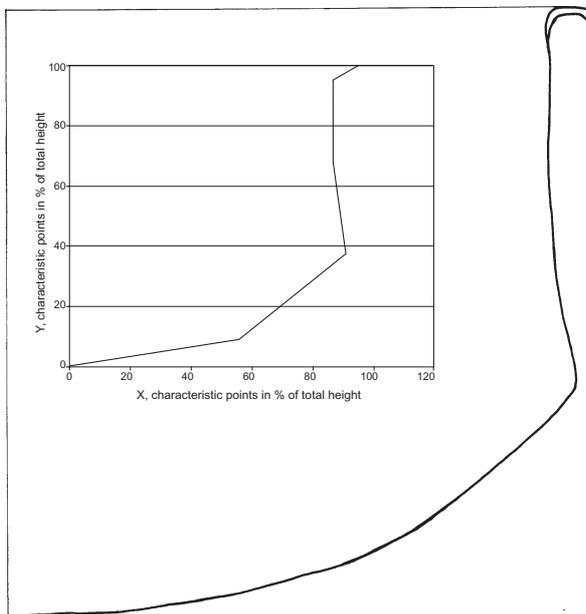
Fig. 64. Type 2C. Scale 1:2.



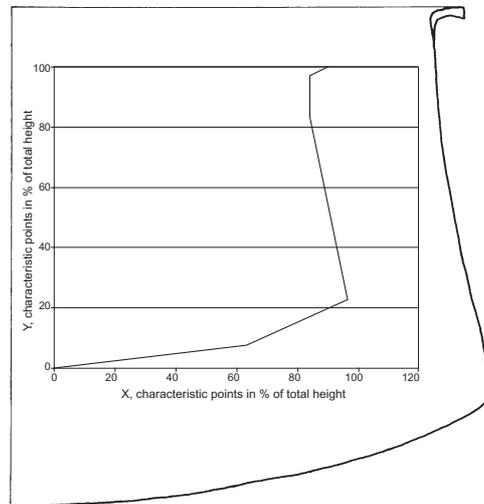
a) Cat. no. 37 S1522.



b) Cat. no. 50 B1862.

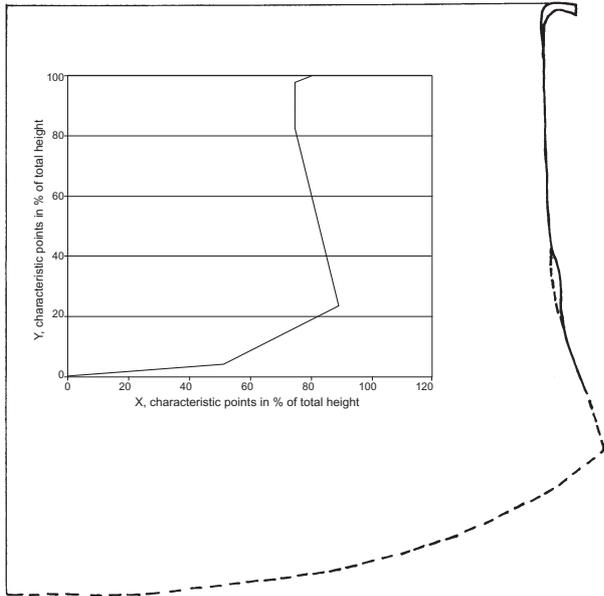


c) Cat. no. 58 B605.

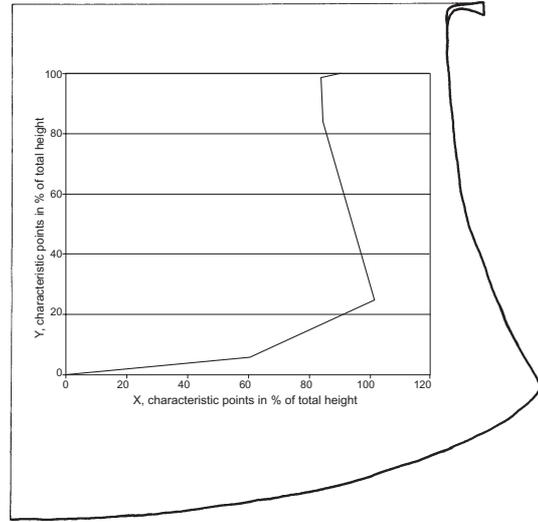


d) Cat. no. 60 B3701.

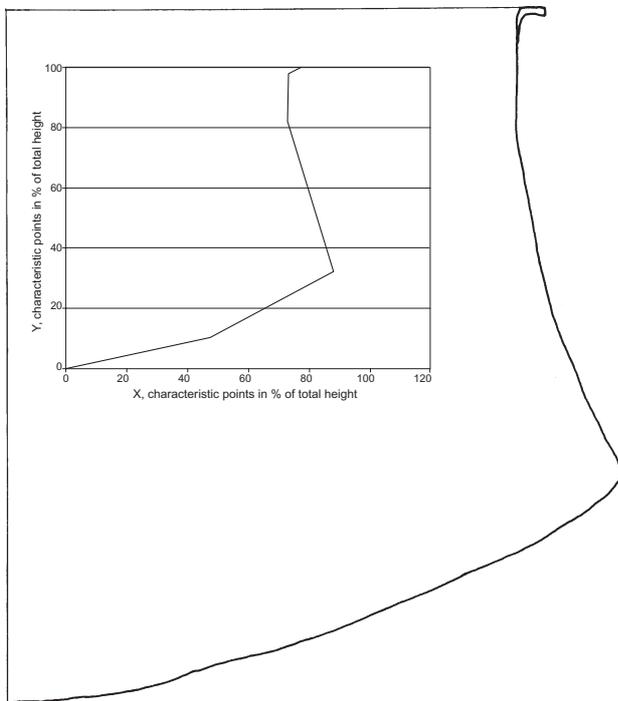
Fig. 65. Type 2C. Scale 1:2.



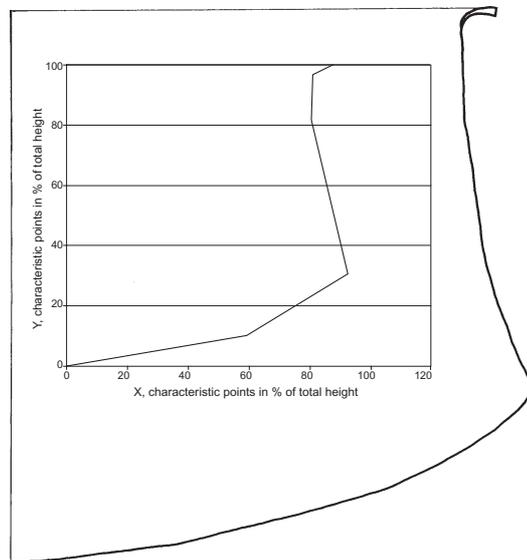
a) Cat. no. 68 B319.



b) Cat. no. 69 B3358.

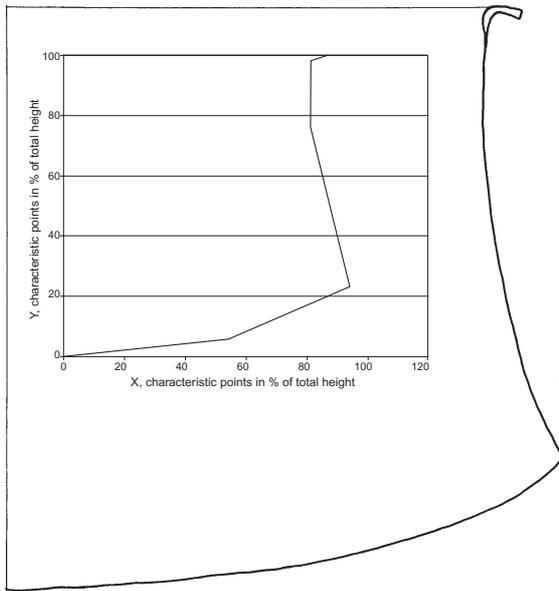


c) Cat. no. 70 B4207.

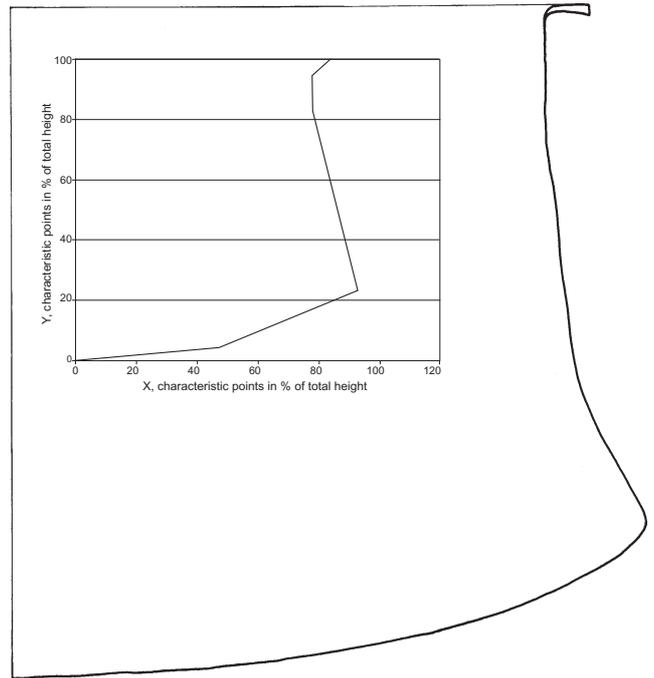


d) Cat. no. 72 B316.

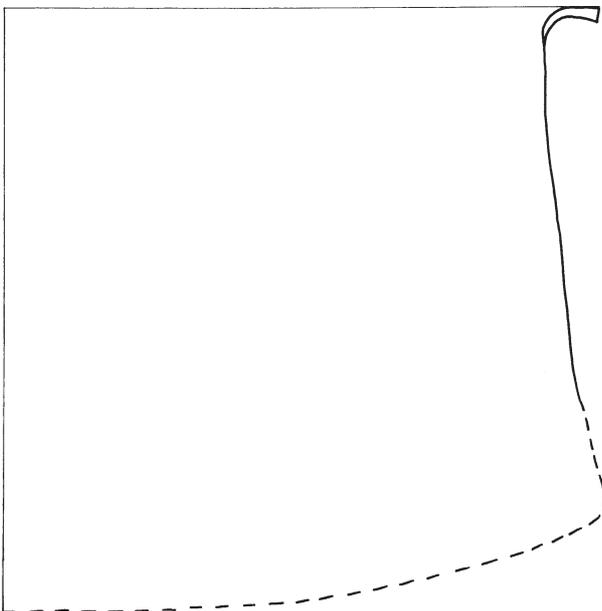
Fig. 66. Type 2C. Scale 1:2.



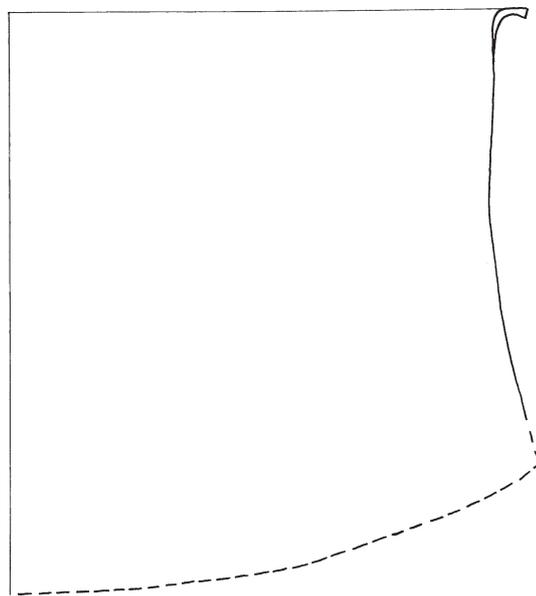
a) Cat. no. 81 B4386.



b) Cat. no. 83 B8983.

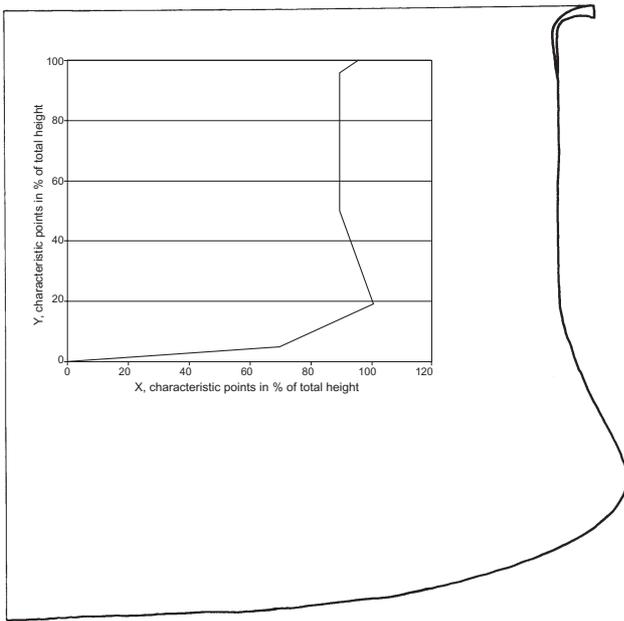


c) Cat. no. 86 B321a.

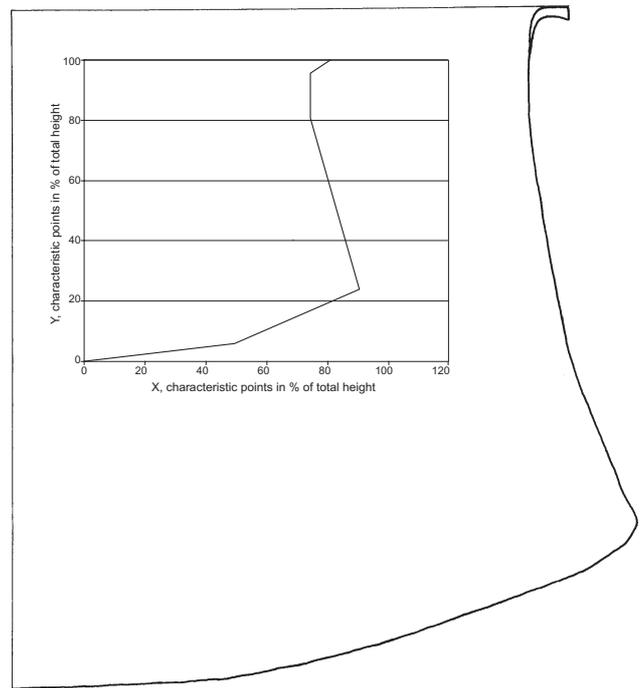


d) Cat. no. 90 B4259.

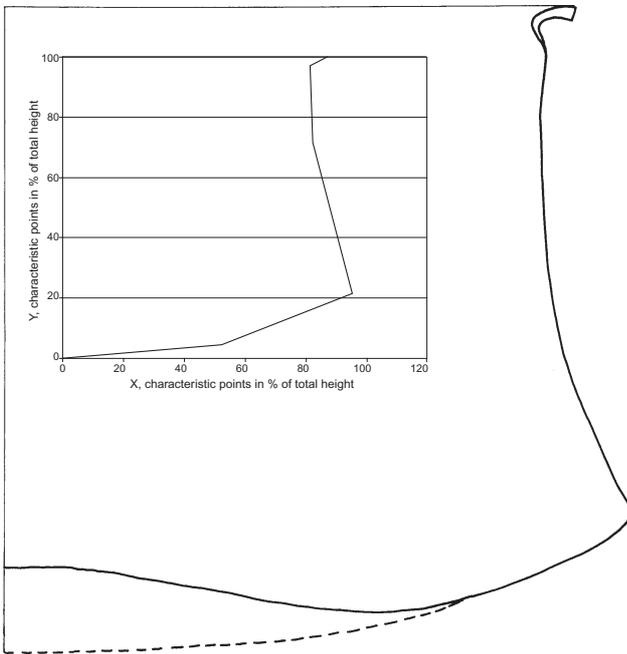
Fig. 67. Type 2C. Scale 1:2.



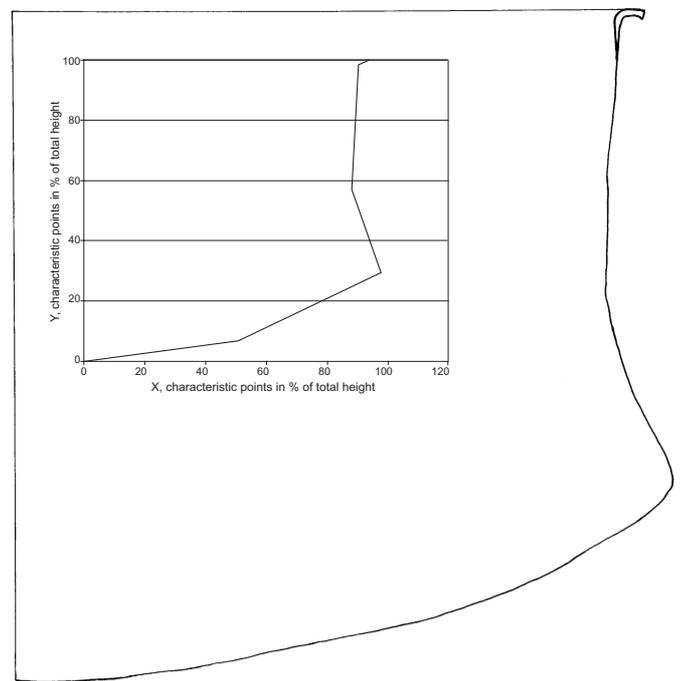
a) Cat. no. 94 B6188.



b) Cat. no. 98 B2891.

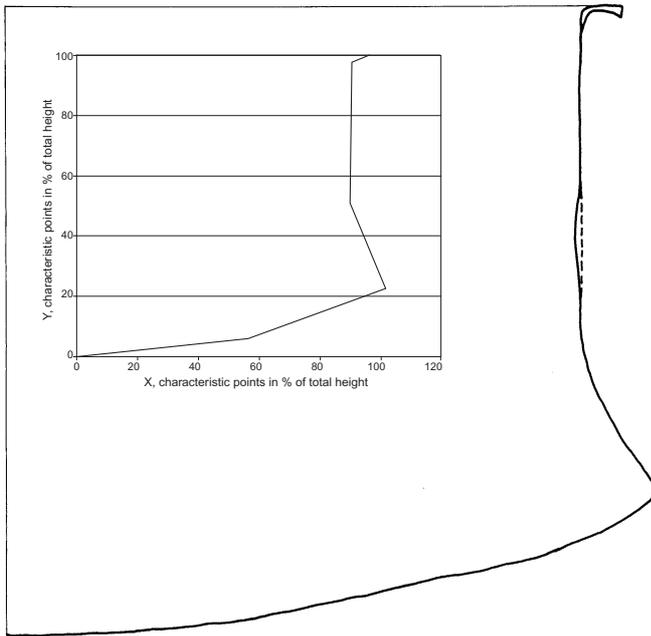


c) Cat. no. 99 B5669.

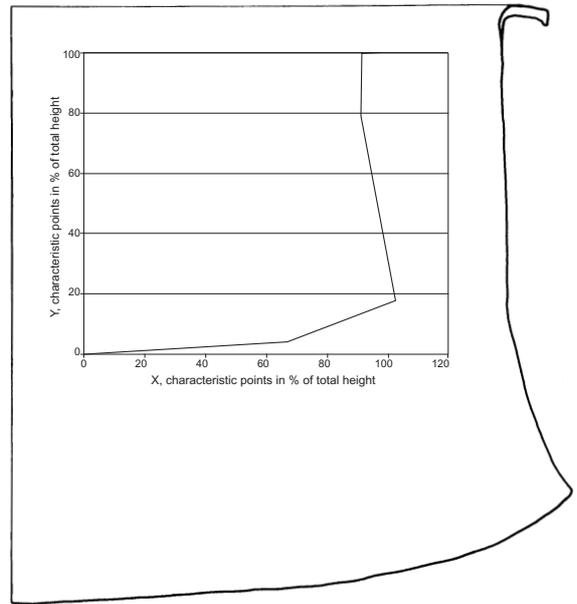


d) Cat. no. 101 B10790 II d.

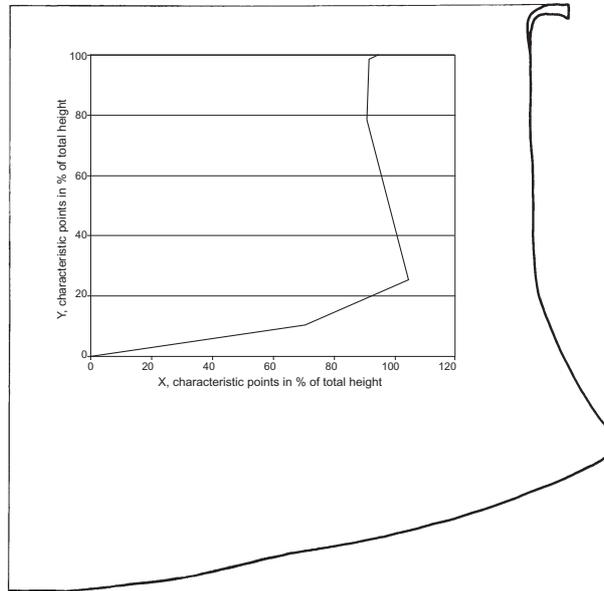
Fig. 68. Type 2C. Scale 1:2.



a) Cat. no. 102 B11546.

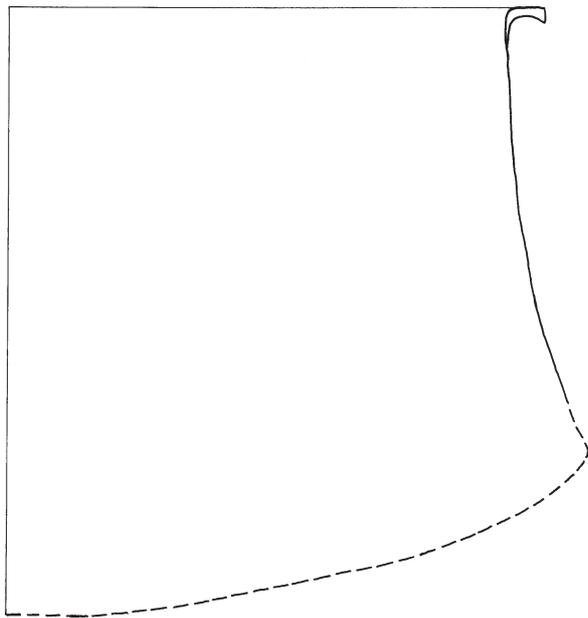


b) Cat. no. 103 C3168.

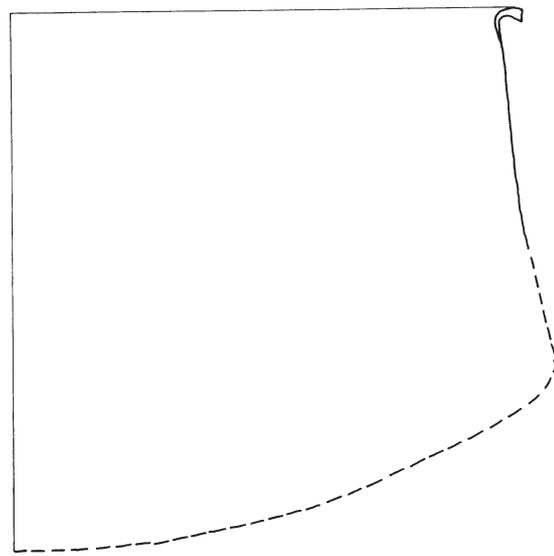


c) Cat. no. 104 C5870.

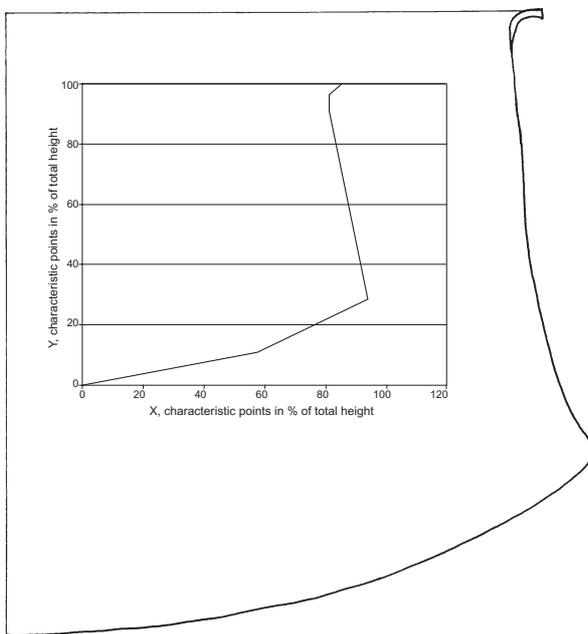
Fig. 69. Type 2C. Scale 1:2.



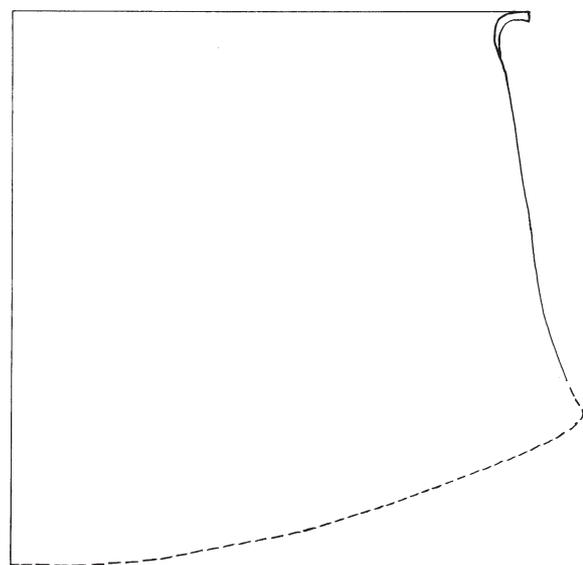
a) Cat. no. 7 C30223.



b) Cat. no. 17 C1673.

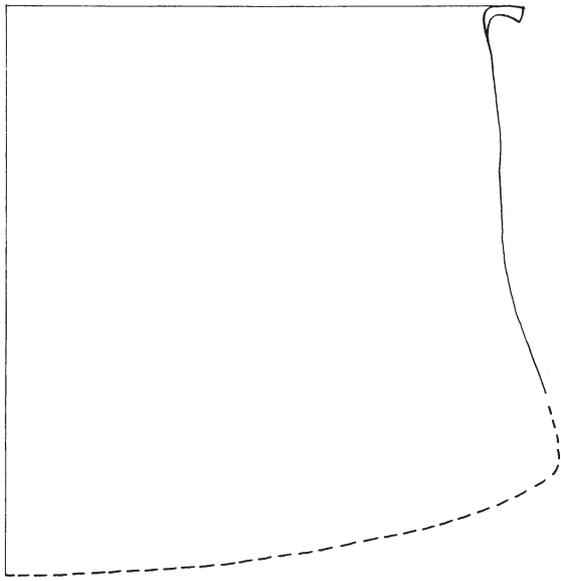


c) Cat. no. 22 B4302.

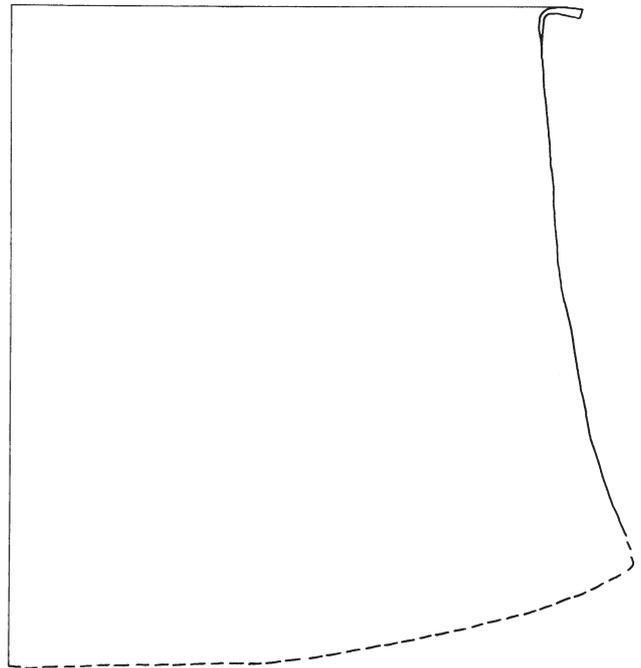


d) Cat. no. 27 C22116.

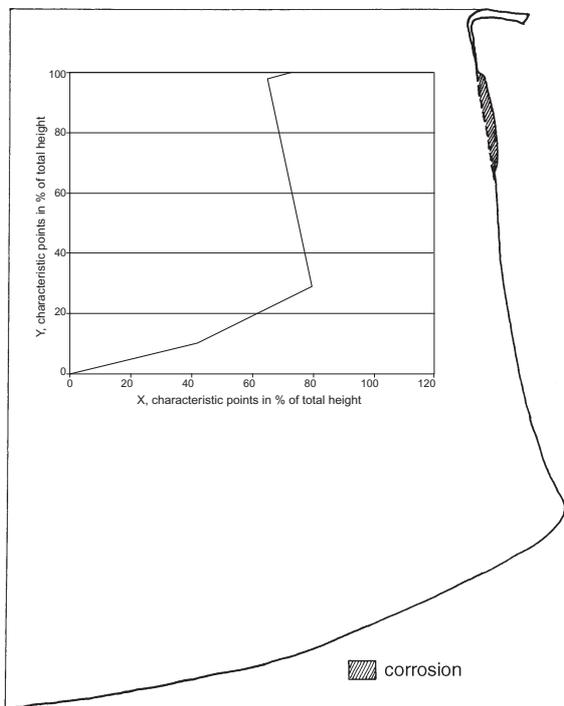
Fig. 70. Type 2D. Scale 1:2.



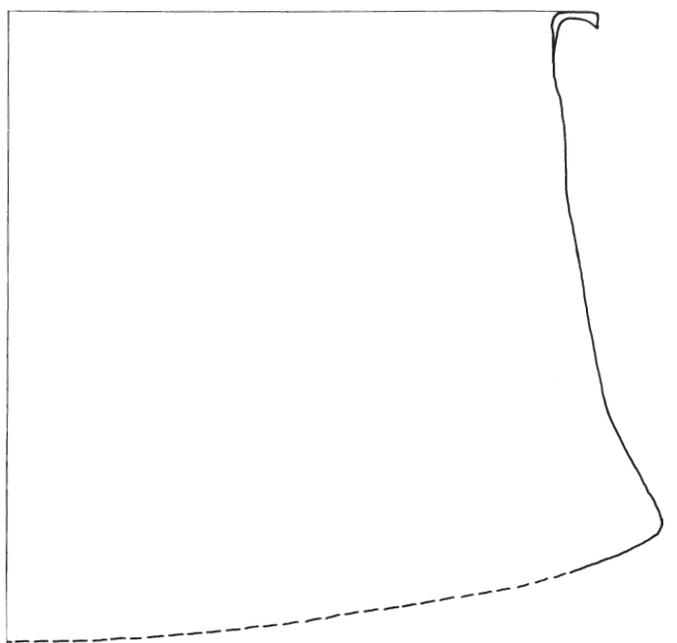
a) Cat. no. 28 C26001.



b) Cat. no. 29 C28026.

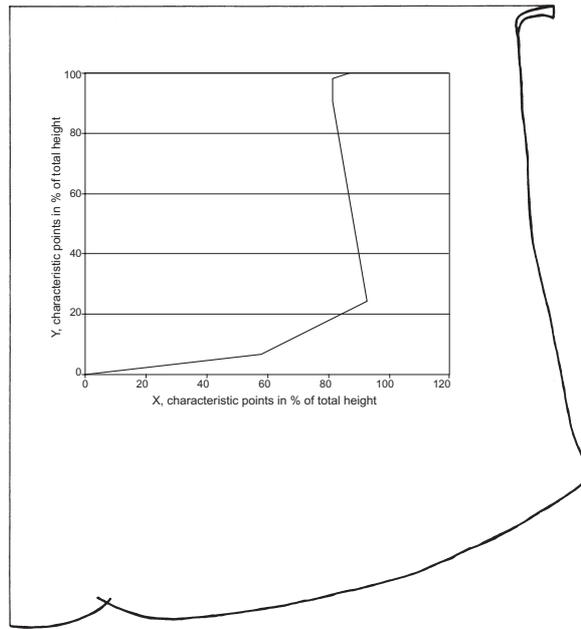


c) Cat. no. 35 B3159.

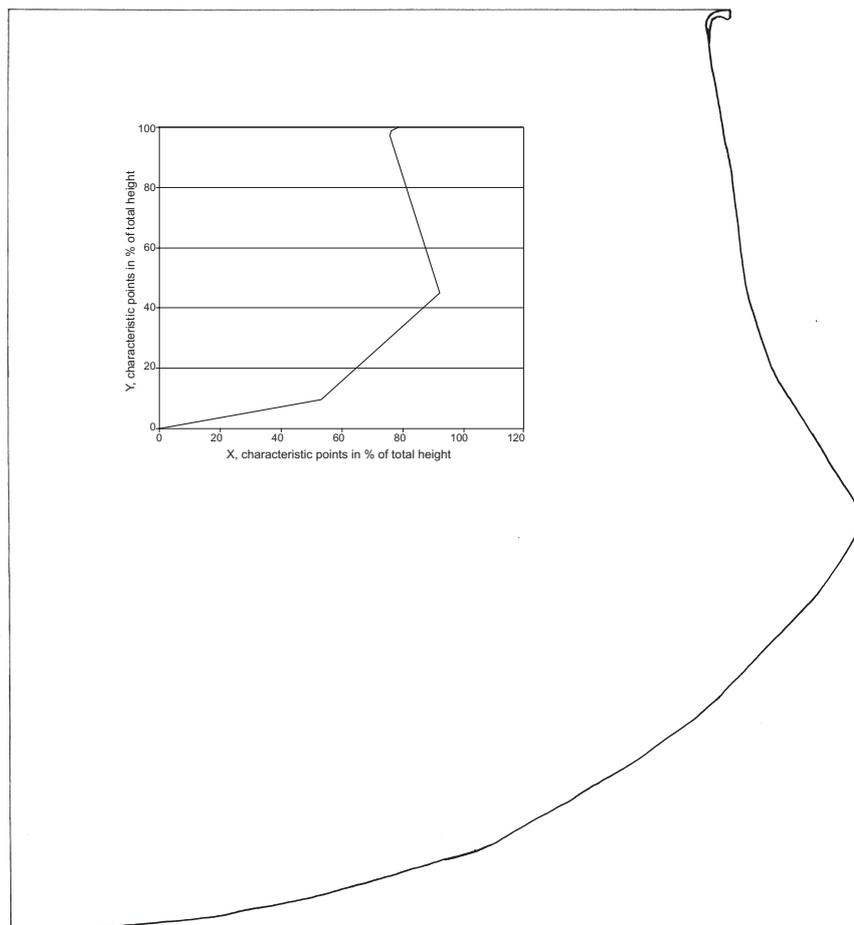


d) Cat. no. 46 S1480.

Fig. 71. Type 2D. Scale 1:2.

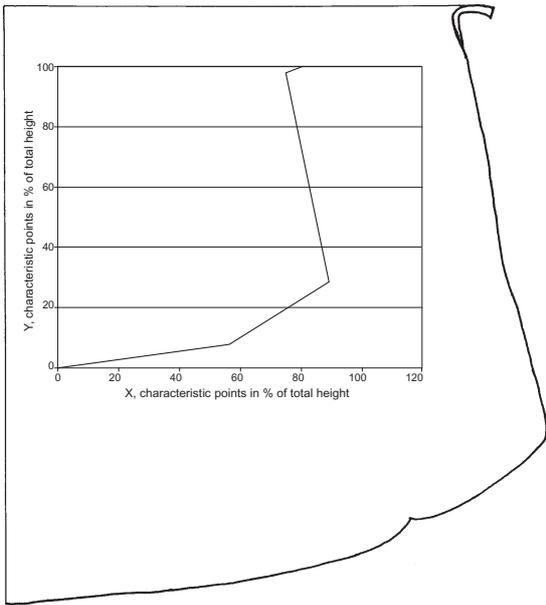


a) Cat. no. 49 S7990.

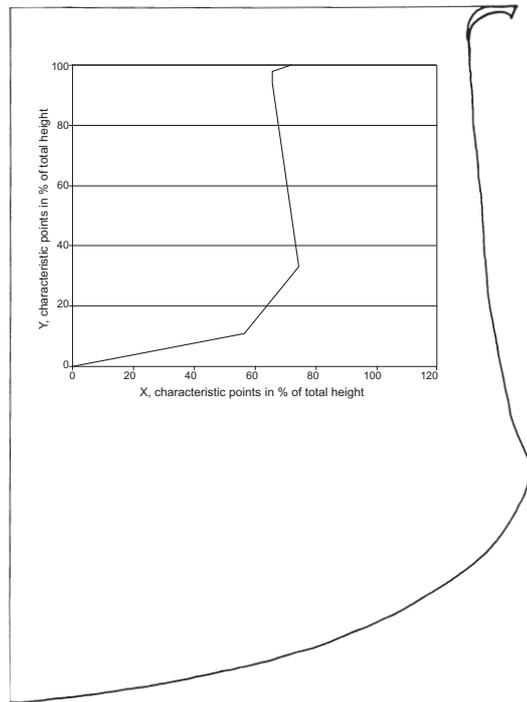


b) Cat. no. 52 C14974.

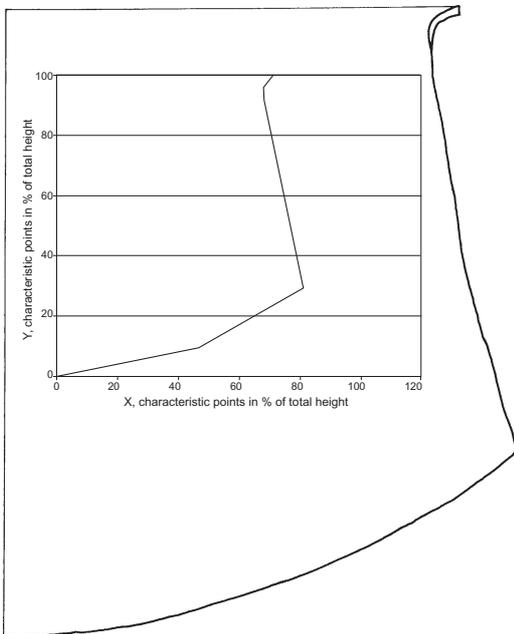
Fig. 72. Type 2D. Scale 1:2.



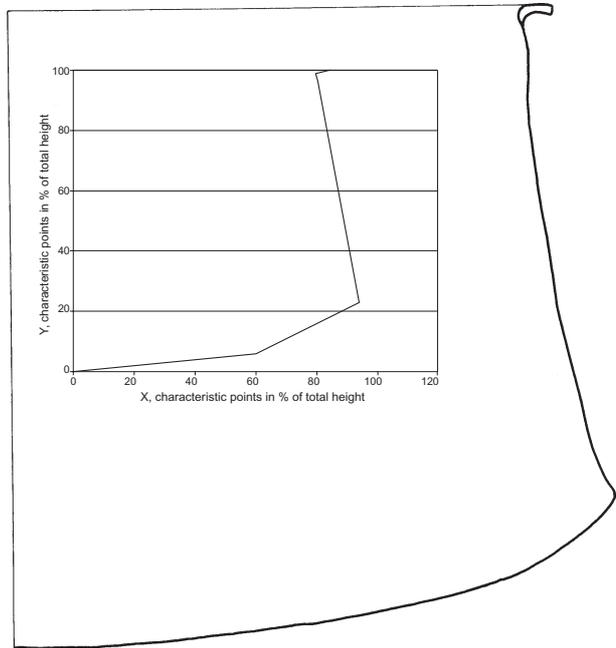
a) Cat. no. 57 S2763.



b) Cat. no. 71 B6597.

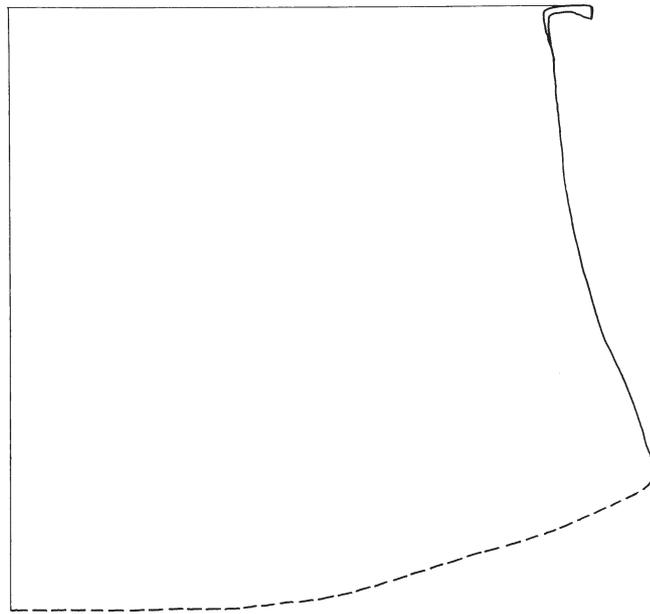


c) Cat. no. 78 B4003.

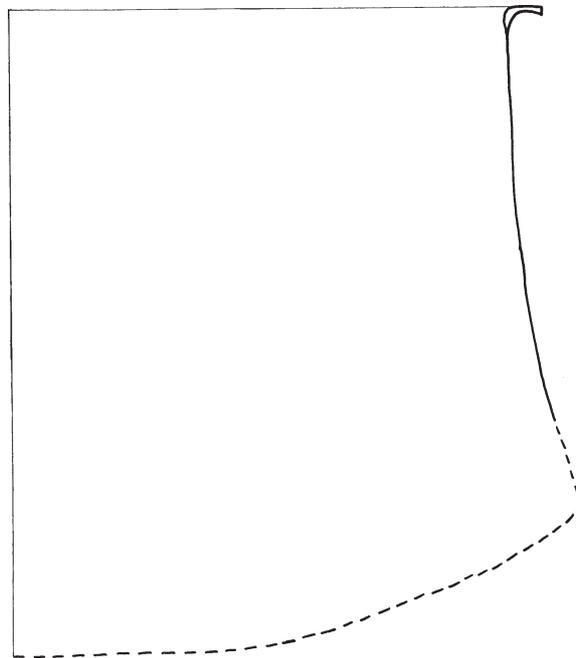


d) Cat. no. 85 B317.

Fig. 73. Type 2D. Scale 1:2.



a) *Cat. no. 87 B321b*



b) *Cat. no. 93 B3516.*

*Fig. 74. Type 2D. Scale 1:2.*

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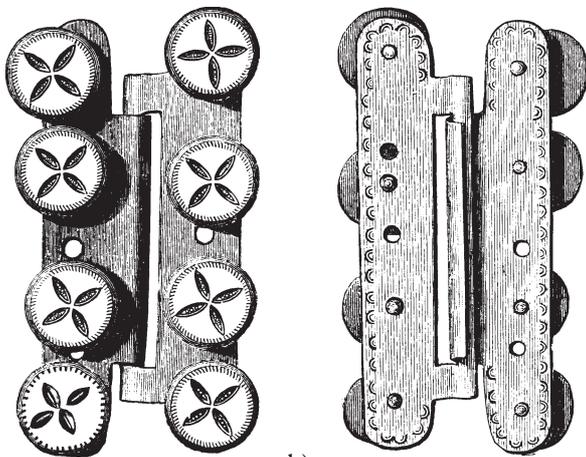
# PLATES







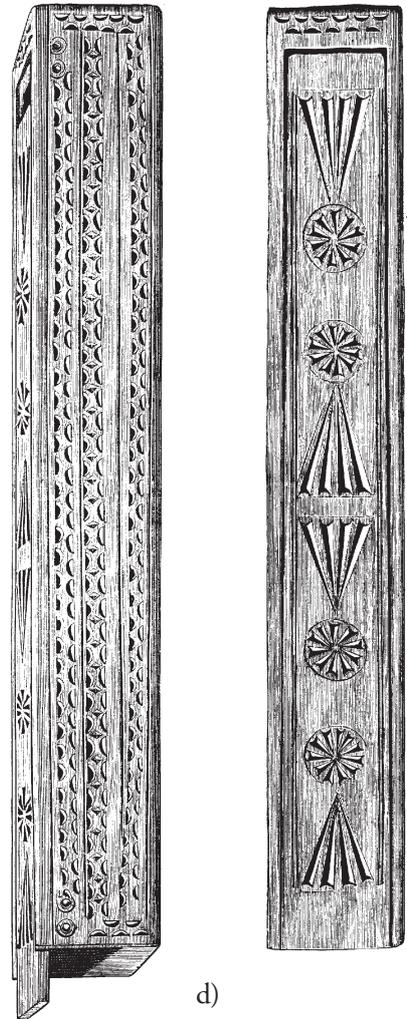
a)



b)



c)



d)

a), b) Cat. no. 1 Østby, Rakkestad k. c), d) Cat. no. 2 Dyster, Ås k.  
b), d) after Rygh 1885. b) 1:1.

PLATE 2



a)



b)

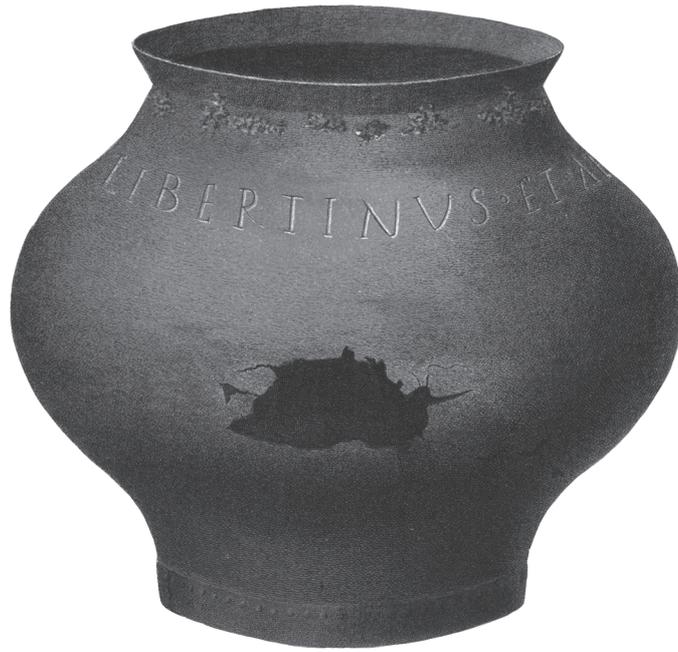


c)



d)

Cat. no. 3 Vestre Hanum, Hamar k.  
All photos © Universitetets kulturhistoriske museer.



a)



b)



c)

a) Cat. no. 4 Farmen, Hamar k. After Lorange 1873. b) Cat. no. 5 Lille Re, Stange k.  
c) Cat. no. 6 Nedre Stabu, Østre Toten k.

PLATE 4



a)



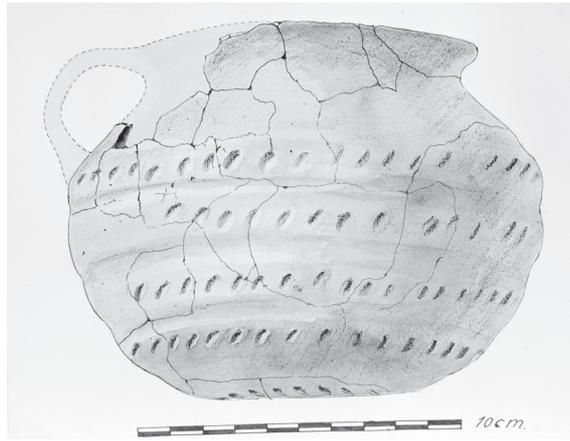
b)



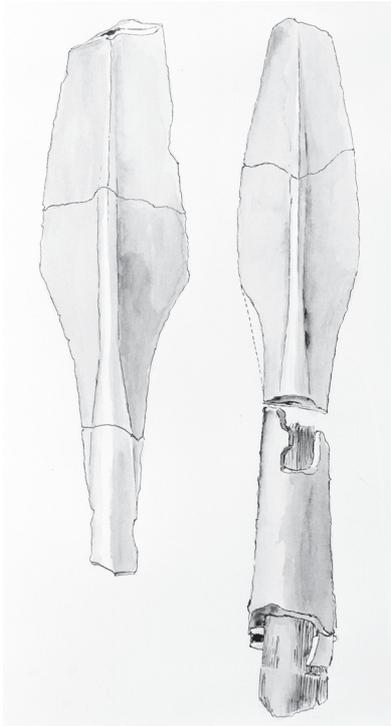
c)

a) Cat. no. 7 Reien, Vestre Slidre k. b) Cat. no. 9 Fosnes, Kongsberg k. c) Cat. no. 10 Haug, Øvre Eiker k.

PLATE 5



a)



b)



c)



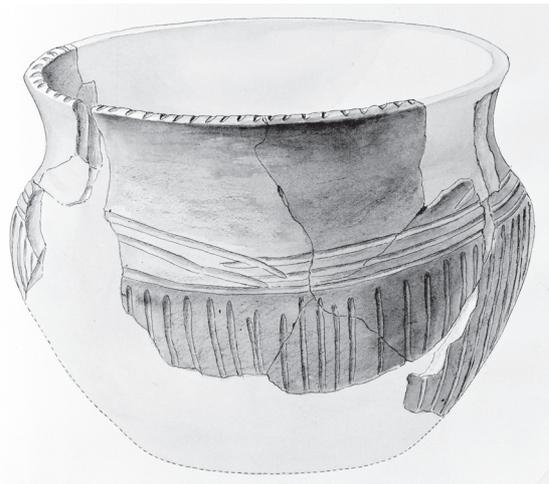
d)



e)

Cat .no. 11-12 Skåra, Larvik k. Drawings by Mary Storm © Universitetets kulturhistoriske museer, Oslo.

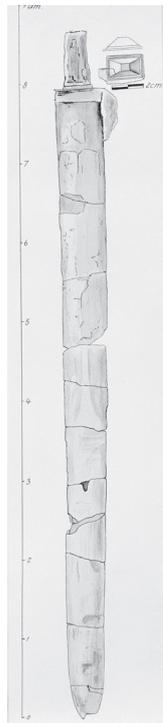
PLATE 6



a)



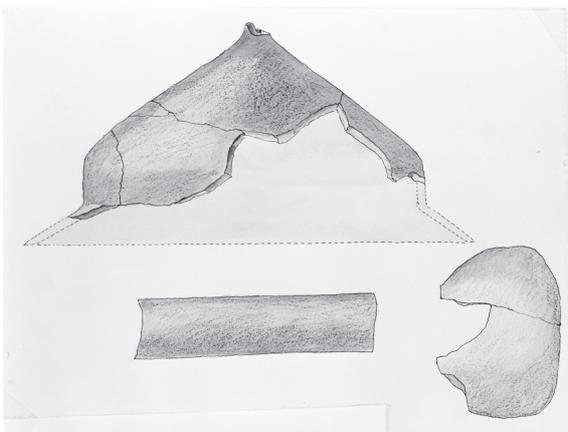
b)



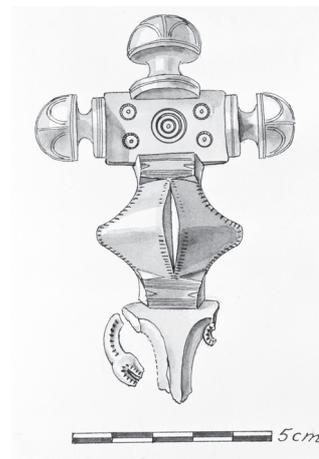
c)



d)



e)



f)

Cat. no. 11-12 Skåra, Larvik k. Drawings by Mary Storm © Universitetets kulturhistoriske museer, Oslo.

PLATE 7



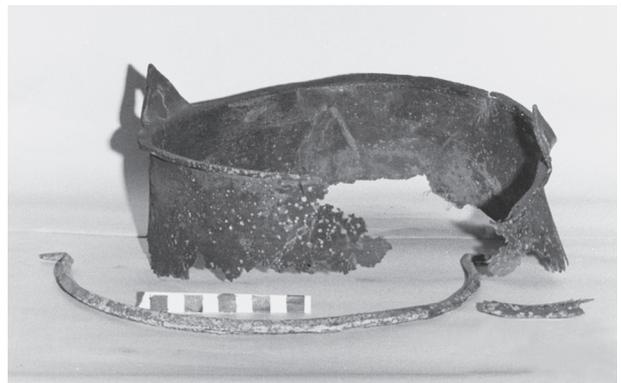
a)



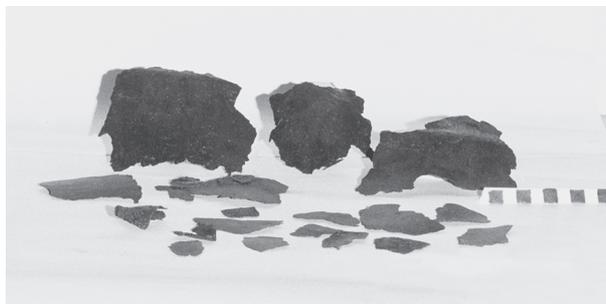
b)



c)



d)

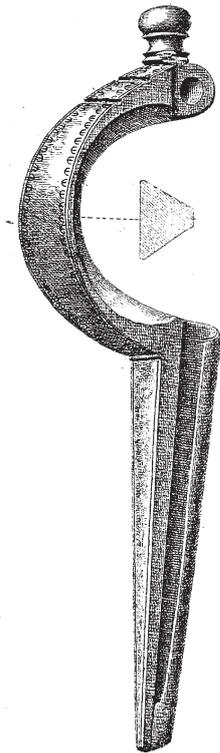


e)

a) Cat. no. 13 Berg, Larvik k. b) Cat. no. 14, Berg, Larvik k. c) Cat. no. 16 Hanes, Skien k.  
d) Cat. no. 17 Vistad, Tokke k. e) Cat. no. 15 Ringdal, Larvik k.



a)



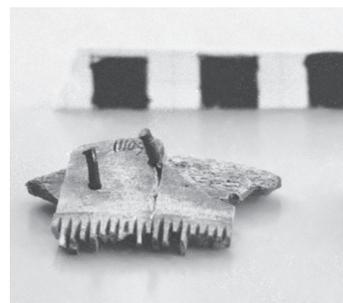
b)



c)



d)



e)

a), b) Cat. no. 18 Børte, Tøkke k. c) – e) Cat. no. 20 Evje verk, Evje og Hornnes k.  
b) after Ab. 1887, d) after Marstrander 1938.



a)



b)



c)



d)

Cat. no. 19 Heggstøl, Vinje k. All photos © Universitetets kulturhistoriske museer, Oslo.



a)

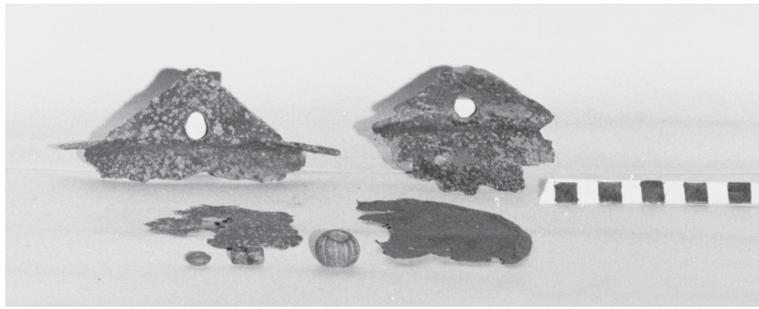


b)



c)

a) Cat. no. 21 Vestre Skogsfjord, Mandal k.  
b), c) Cat. no. 22 Lunde, Farsund k. © Bergen Museum, Universitetet i Bergen.



a)



b)



c)



d)

a), b) Cat. no. 23 Vestre Hauge, Farsund k. b) after Rygh 1885.  
c) Cat. no. 24 Torp, Farsund k. d) Cat. no. 25 Eik, Søgne k.



a)



b)



c)

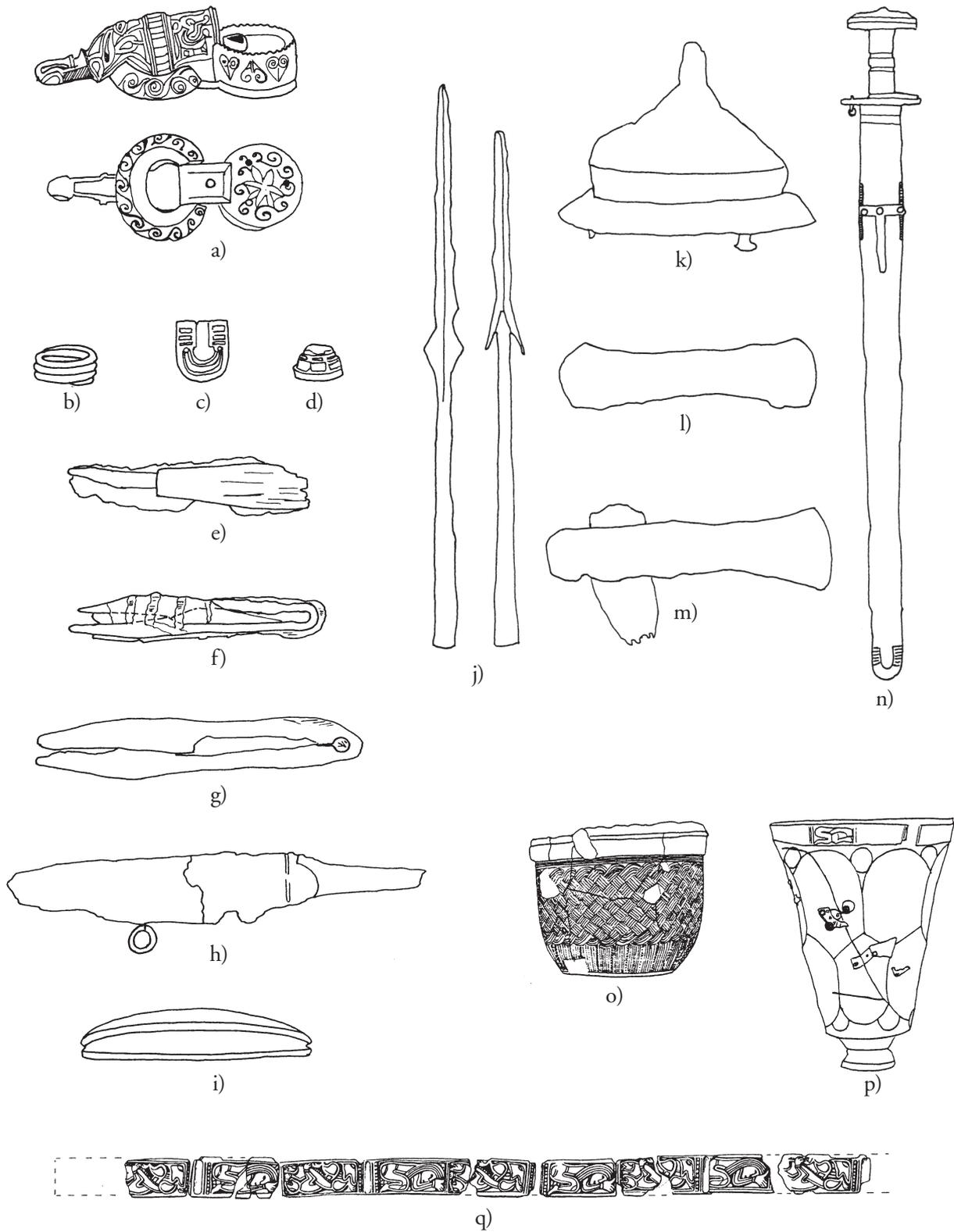


d)



e)

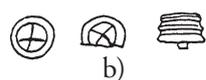
a) – c) Cat. no. 26 Øvre Vemmestad, Lyngdal k. b), c) after Ab. 1878.  
d) Cat. no. 27 Snartemo grave IV, Hægebostad k. e) Cat. no. 28 Snartemo grave V, Hægebostad k.



Cat. no. 28 Snartemo grave V, Hægebostad k. Selected objects, drawn from Hougen 1935 and Straume 1987.



a)



b)



c)



e)



f)



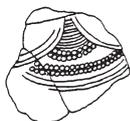
h)



i)



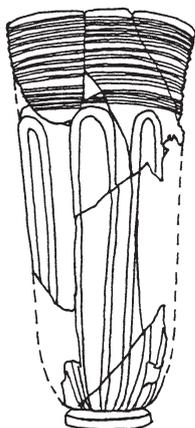
g)



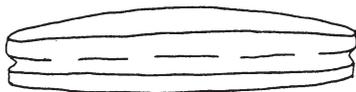
j)



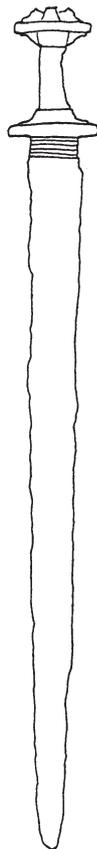
d)



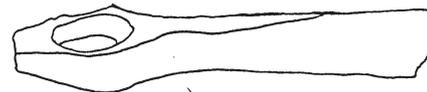
k)



l)



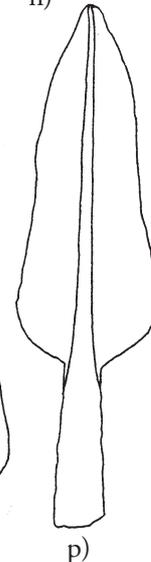
m)



n)



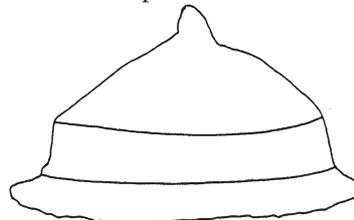
o)



p)



q)



r)

Cat. no. 29 Snartemo grave II, Hægebostad k. Selected objects, drawn from Hougen 1936.  
o) – q) drawn from photo at AmS. a) Detail of the sword hilt. © Arkeologisk Museum i Stavanger.



a)



b)

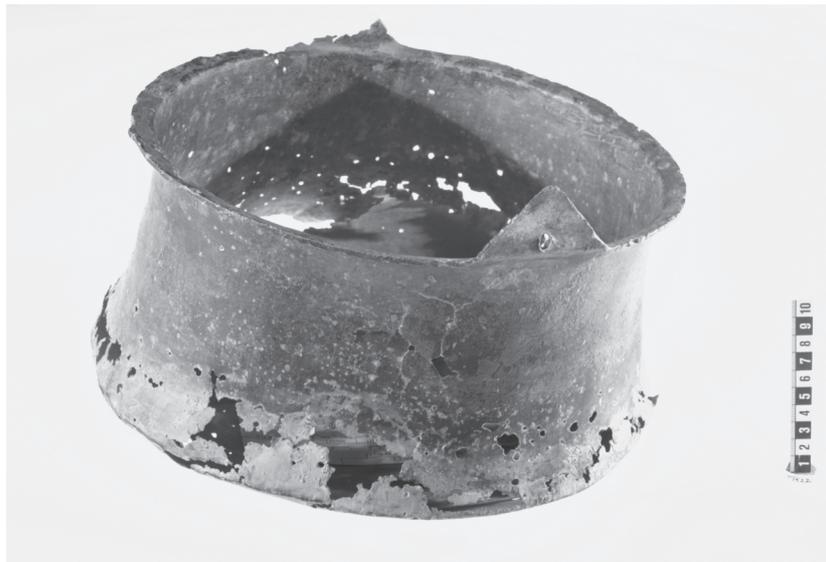


c)

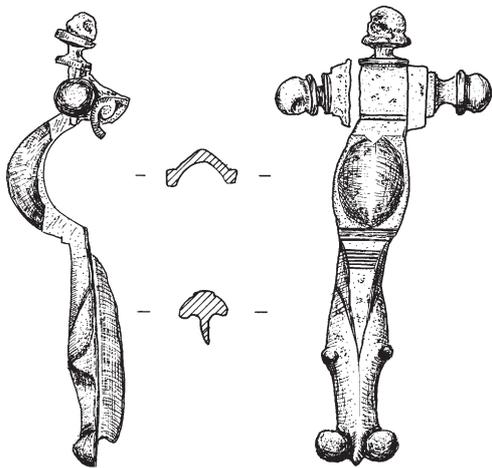


d)

a) Cat. no. 30 Øvre Egeland, Kvinesdal k. b) Cat. no. 31 Tonstad, Sirdal k. c) Cat. no. 33 Unknown locality.  
d) Cat. no. 36 Svebestad, Sandnes k. b) photo by Ann-Mari Olsen. © Bergen Museum, Universitetet i Bergen.  
c), d) Photos by Terje Tveit. © Arkeologisk Museum i Stavanger.



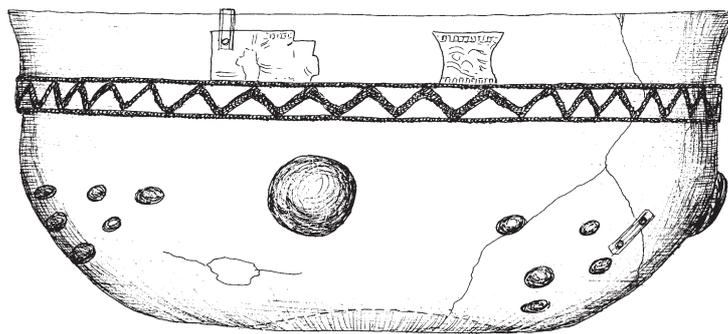
a)



b)



c)

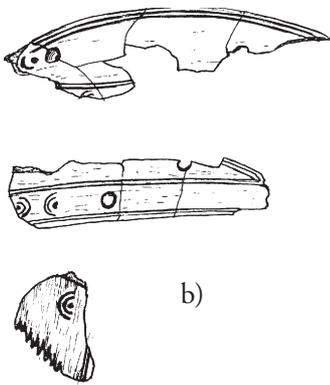


d)

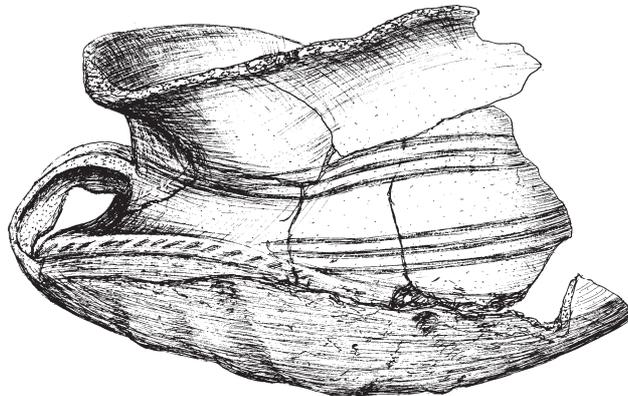
Cat. no. 37 Hogstad, Sandnes k.  
Drawings by Astrid Hølland Berg. Photo: Terje Tveit. © Arkeologisk Museum i Stavanger.



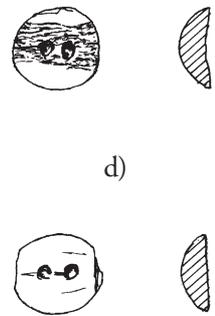
a)



b)



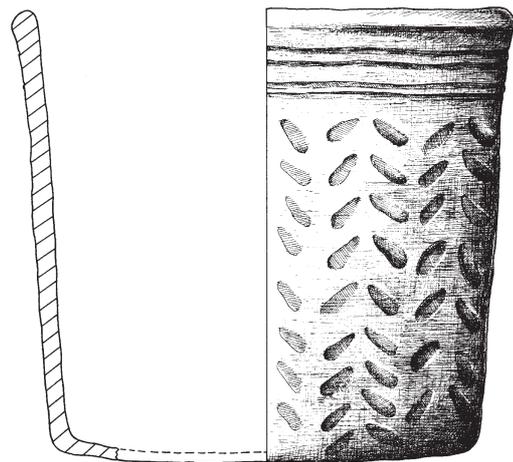
c)



d)



e)



f)

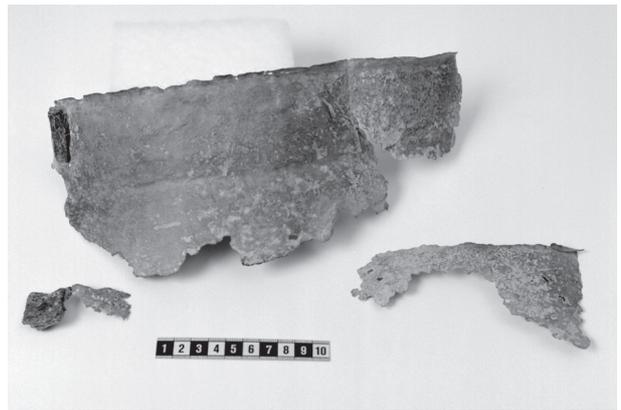
a– d) Cat. no. 38 Hogstad, Sandnes k. Drawings by Astrid Hølland Berg.  
 Photo: Terje Tveit. © Arkeologisk Museum i Stavanger.  
 e), f) Cat. no. 39 Uskjå, Sandnes k. Photo: Ottar Johansen, © Arkeologisk Museum i Stavanger.



a)



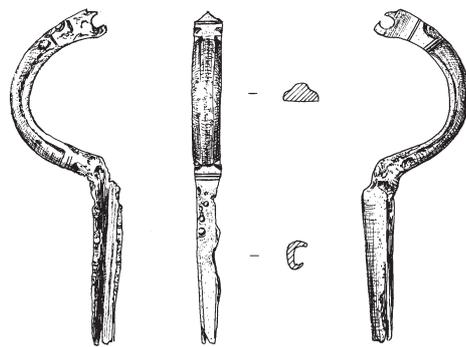
b)



c)

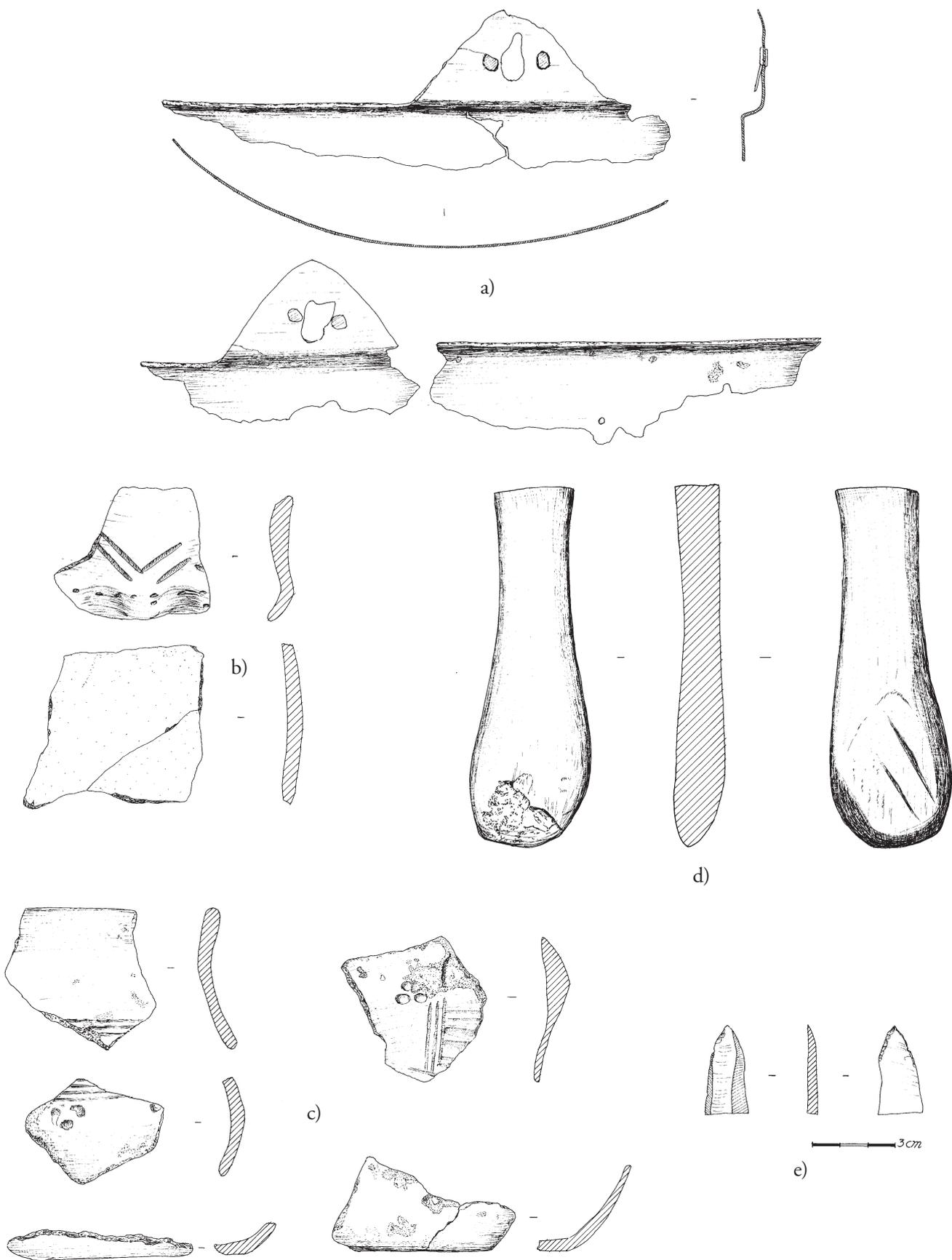


d)

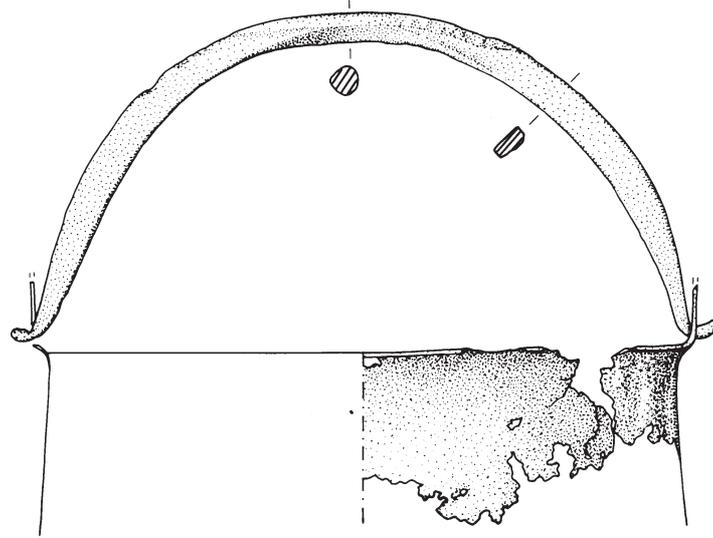


e)

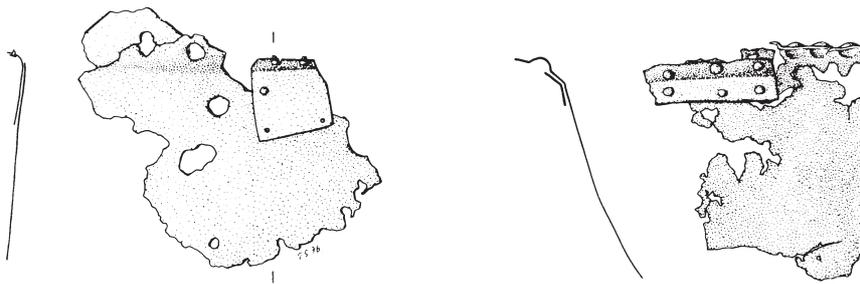
a) Cat. no. 40 Hinna, Stavanger k. b) Cat. no. 41 Motland, Hå k.  
 c– e) Cat. no. 42 Bø, Hå k. Drawing by Astrid Hølland Berg,  
 photos by Terje Tveit and Åge Pedersen. © Arkeologisk Museum i Stavanger.



Cat. no. 43 Voll, Hå k. Drawings by Astrid Hølland Berg.

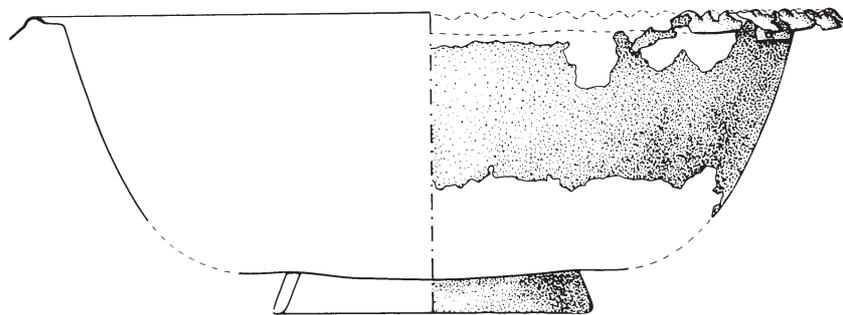


a)



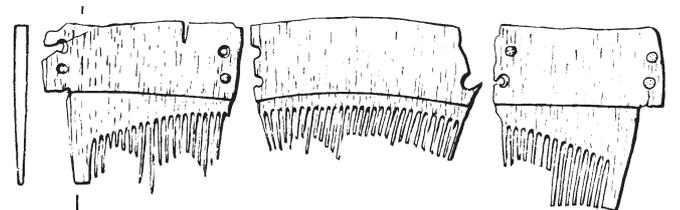
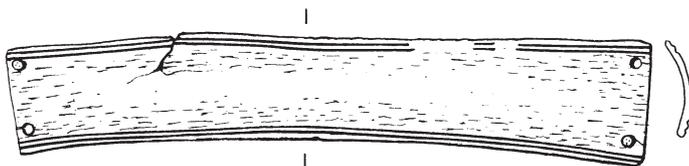
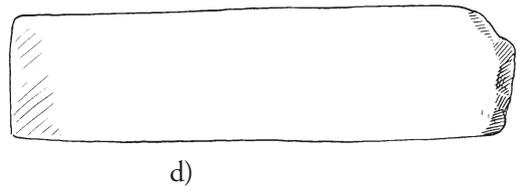
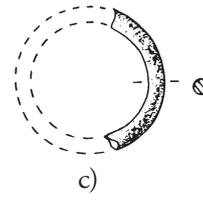
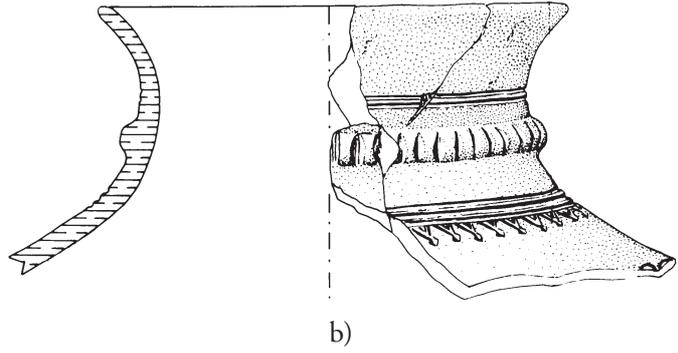
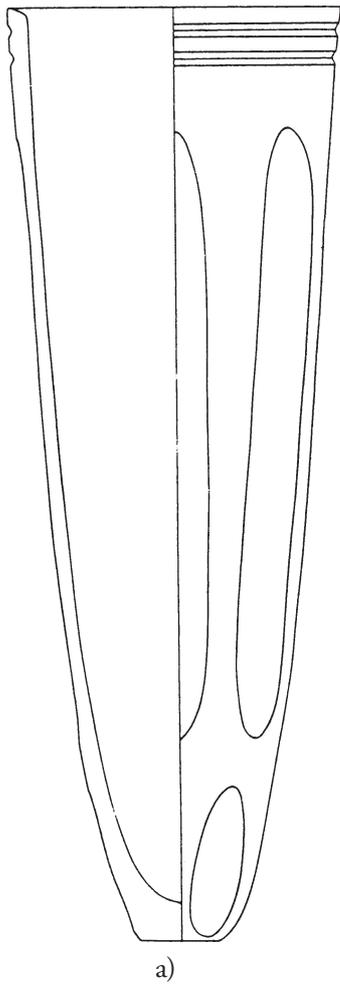
b)

c)



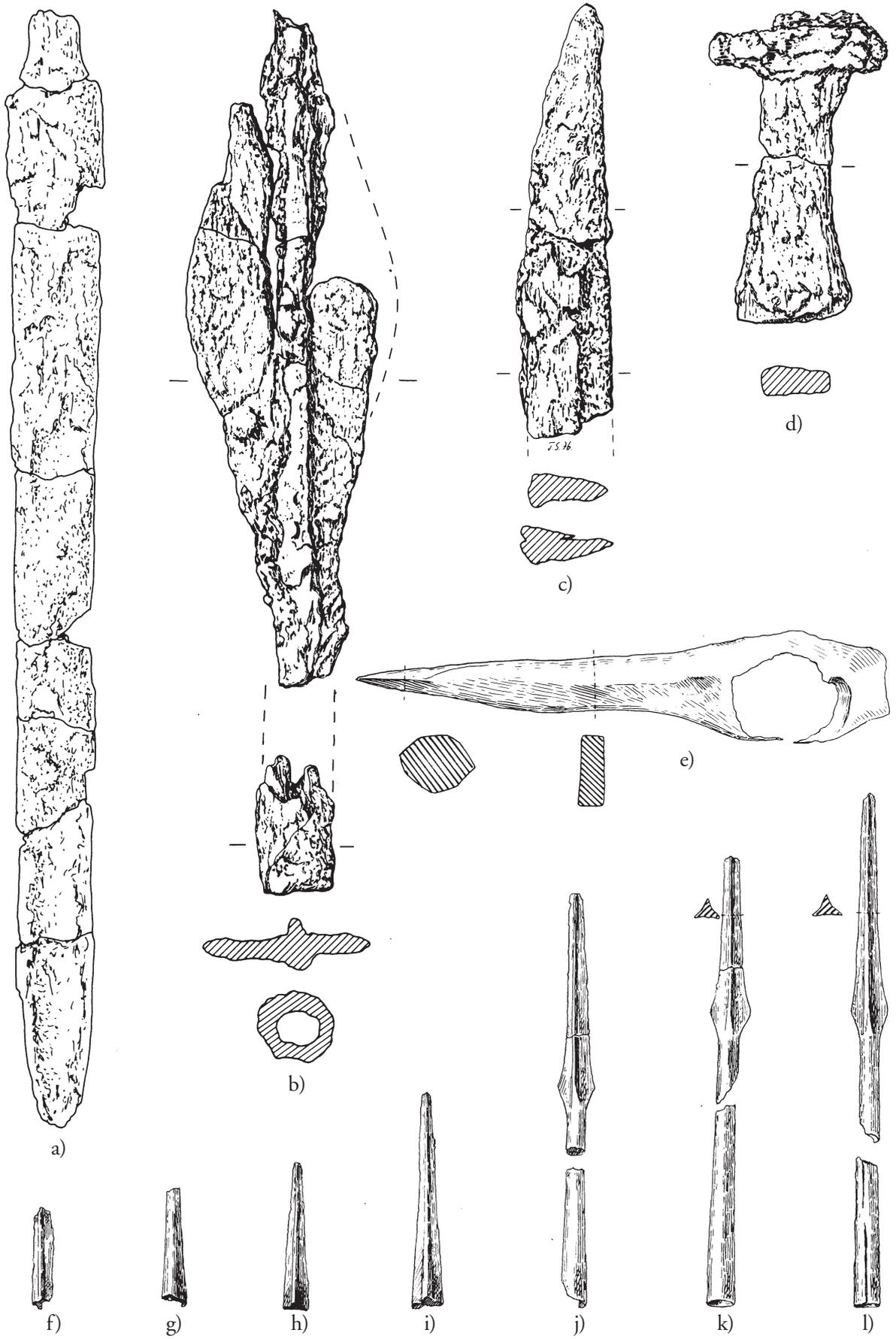
d)

Cat. no. 44 Vasshus, Klepp k. After Straume 1987. All objects 1:3

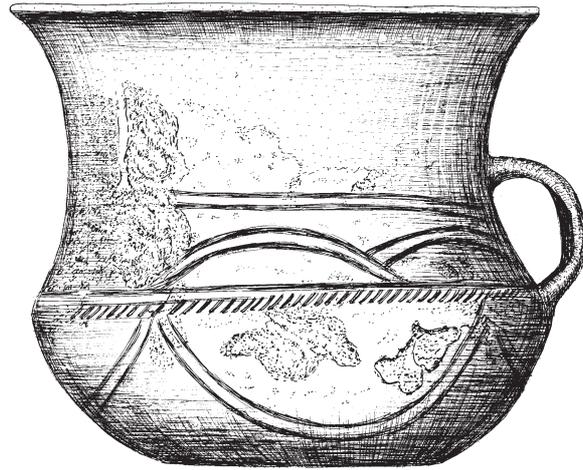


e)

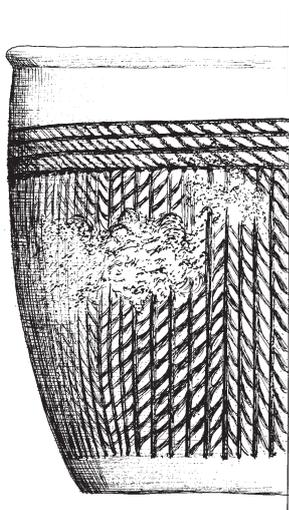
Cat. no. 44 Vasshus, Klepp k. After Straume 1987. a) – d) 1:2, e) 3:4



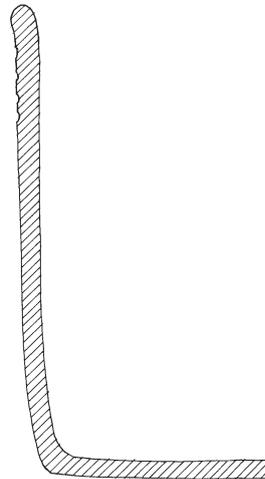
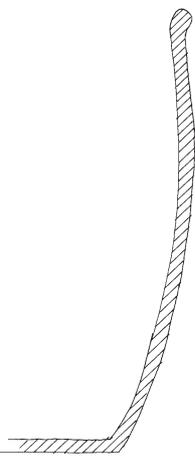
Cat. no. 44 Vasshus, Klepp k. After Straume 1987. a) 1:4, b) – l) 1:2.



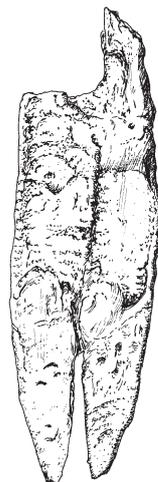
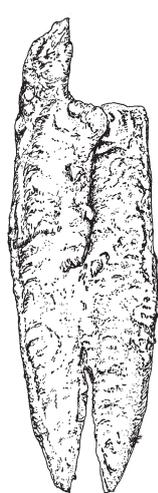
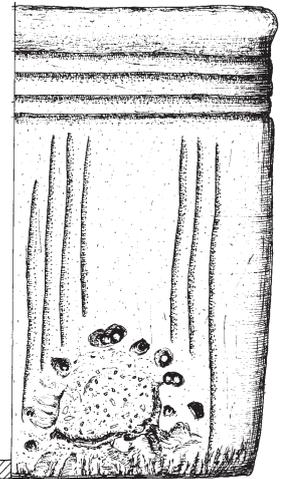
a)



b)



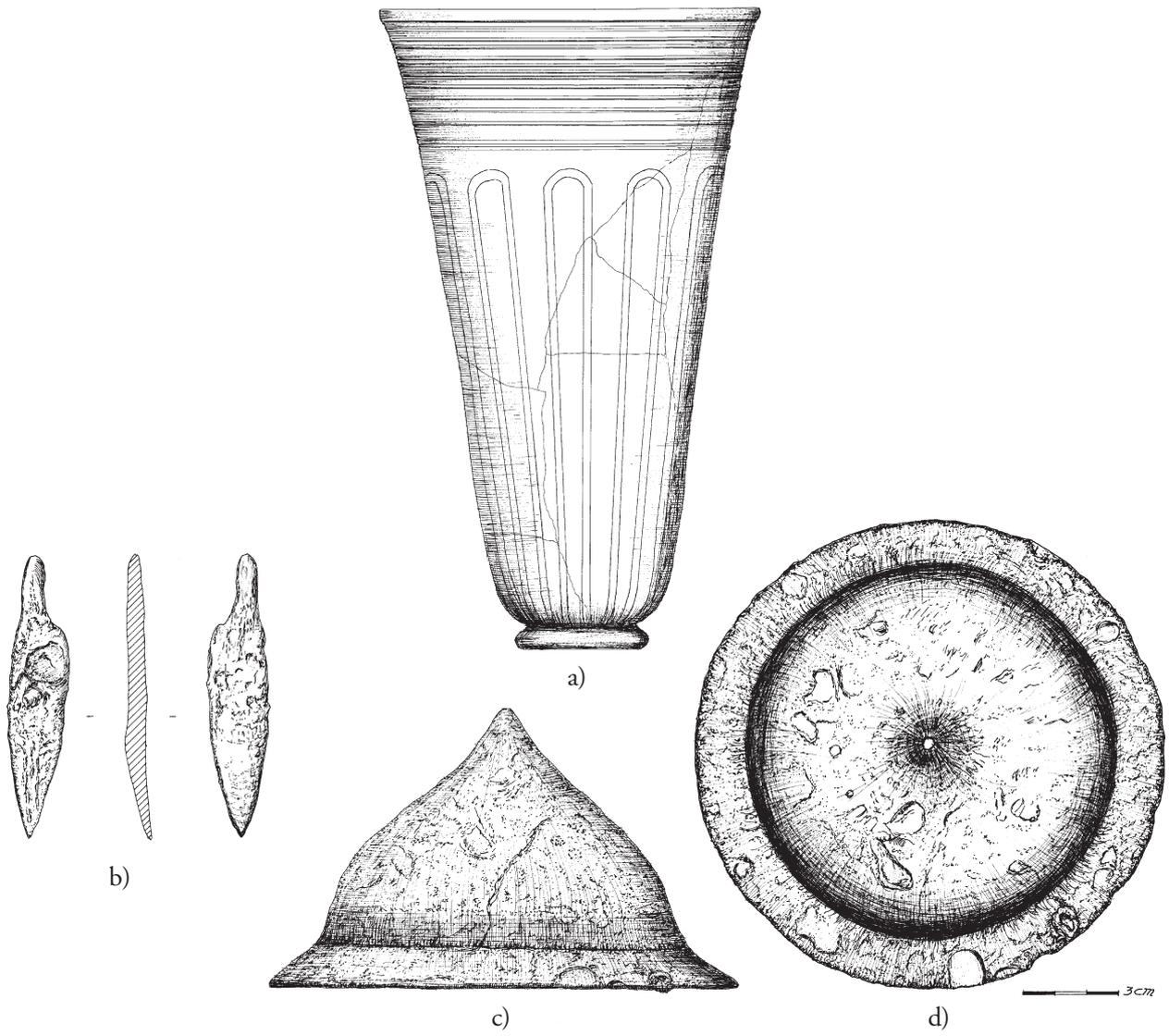
c)



d)

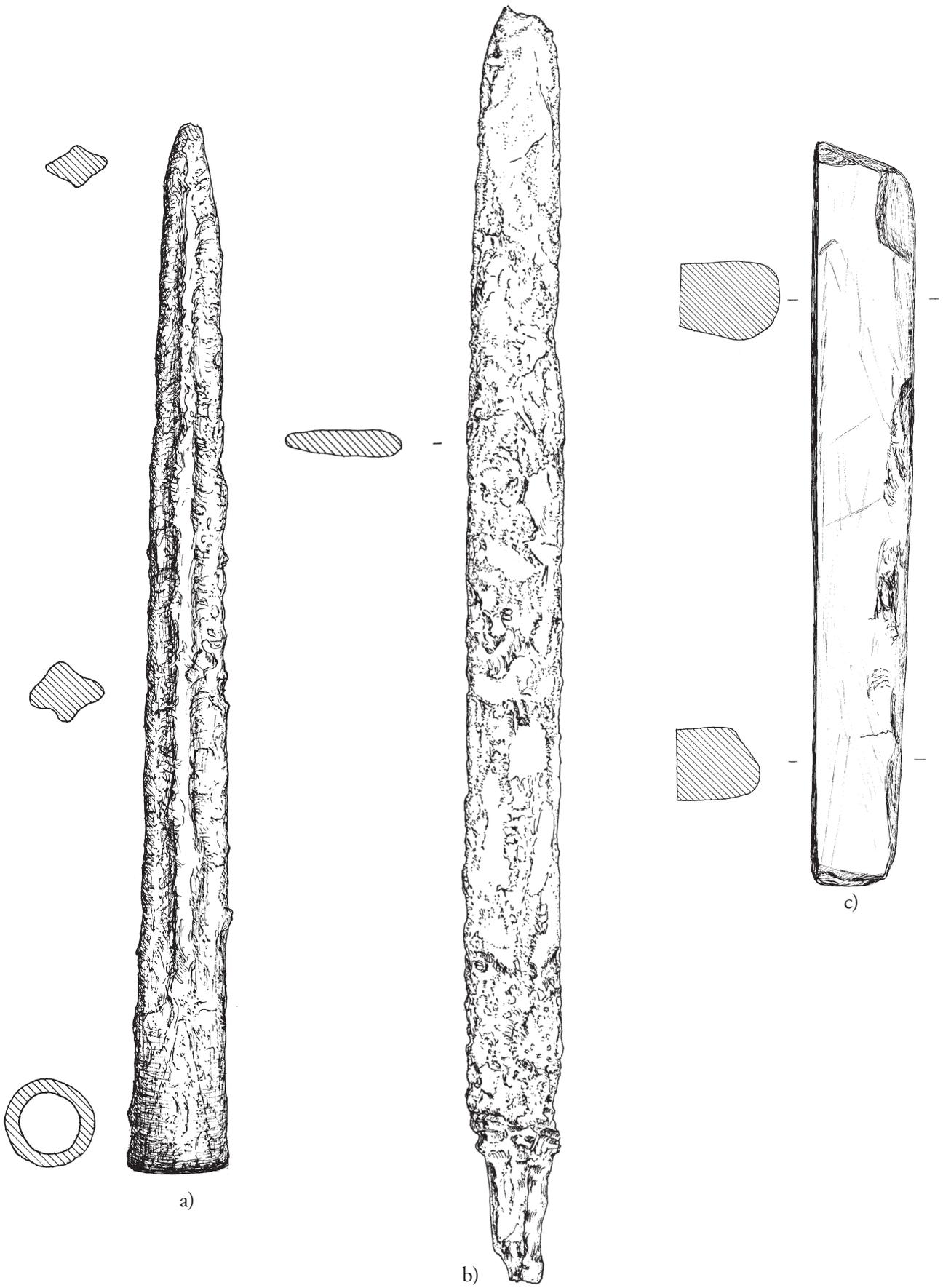
3cm

Cat. no. 46 Tu, Klepp k. Drawings by Astrid Hølland Berg.

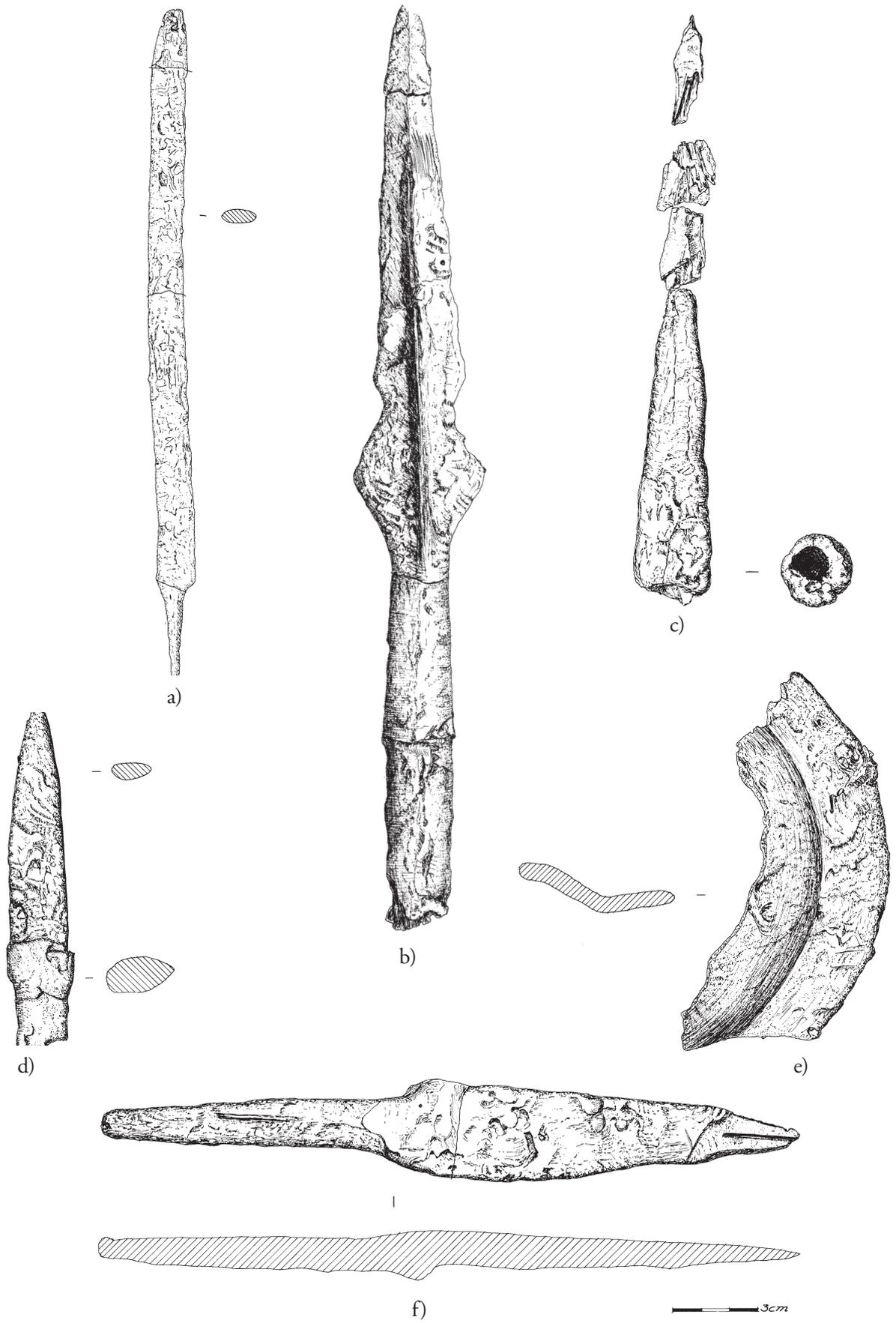


e)

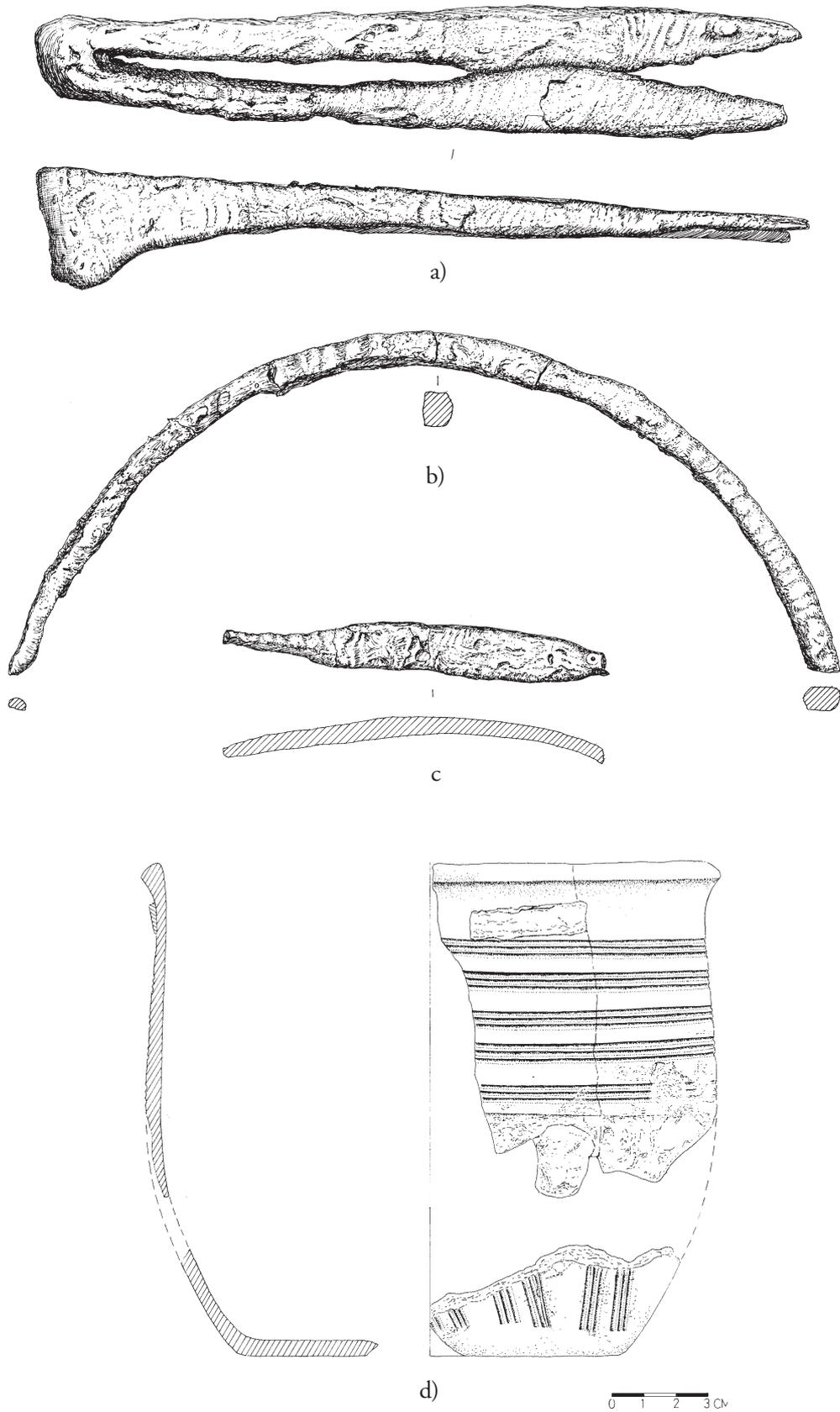
Cat. no. 46 Tu, Klepp k.  
Drawings by Astrid Hølland Berg. Photo: Terje Tveit. © Arkeologisk Museum i Stavanger.



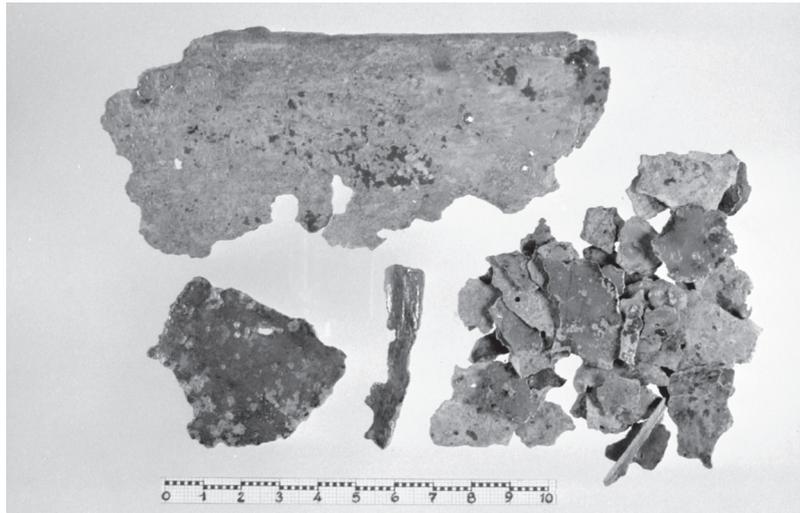
Cat. no. 46 Tu, Klepp k. Drawings by Astrid Hølland Berg.



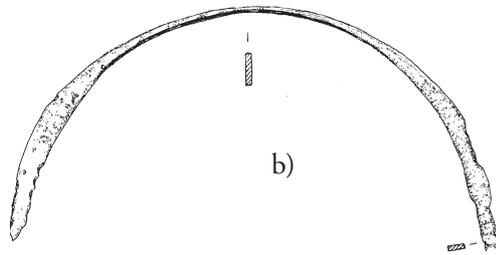
Cat. no. 47 Sør-Braut, Klepp. Drawings by Astrid Hølland Berg.



Cat. no. 47 Sør-Braut, Klepp. a) –c) drawings by Astrid Hølland Berg, d) drawing by Mardon Rasmussen.



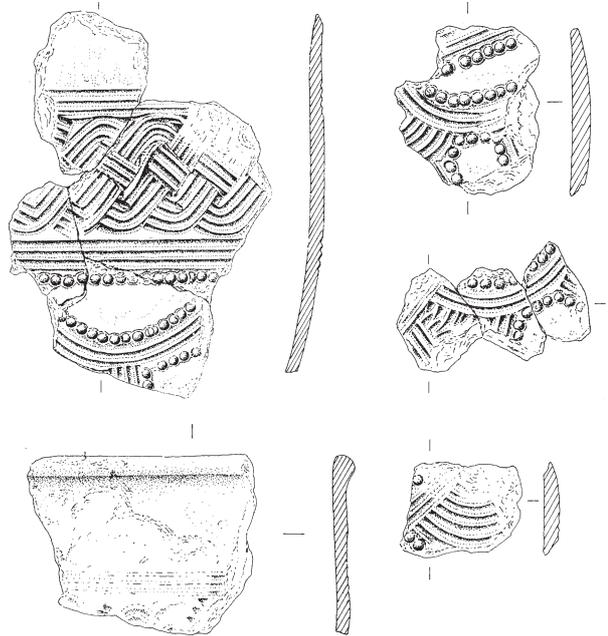
a)



b)



c)

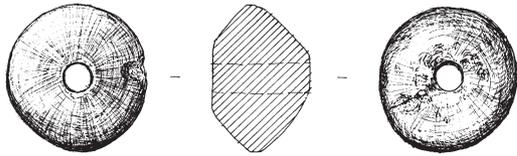


d)

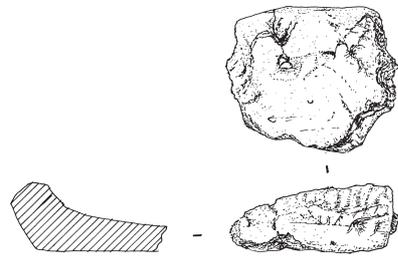
Cat. no. 47 Sør-Braut, Klepp k. b), c) drawings by Astrid Hølland Berg, d) drawing by Mardon Rasmussen. Photo © Arkeologisk Museum i Stavanger.



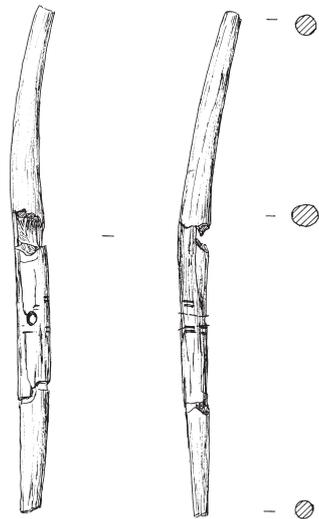
a)



b)

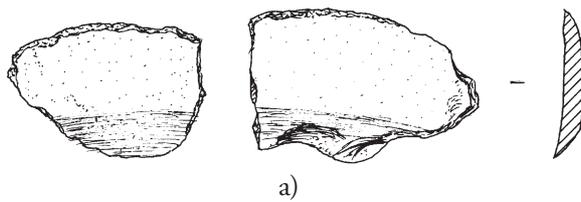


c)

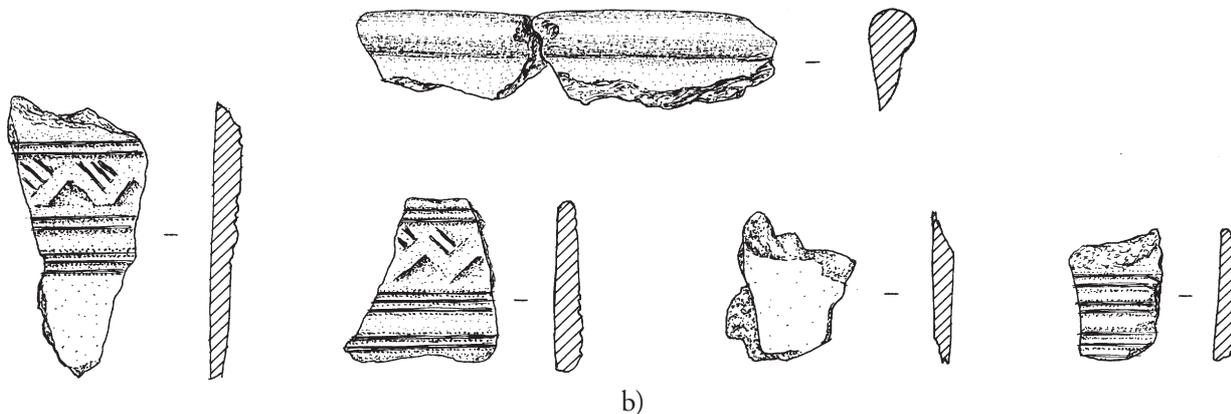


d)

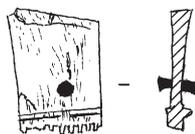
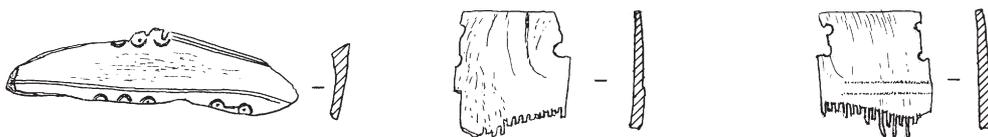
Cat. no. 48 Sør-Braut, Klepp k.  
Drawings by Astrid Hølland Berg. Photo: Åge Pedersen. © Arkeologisk Museum i Stavanger.



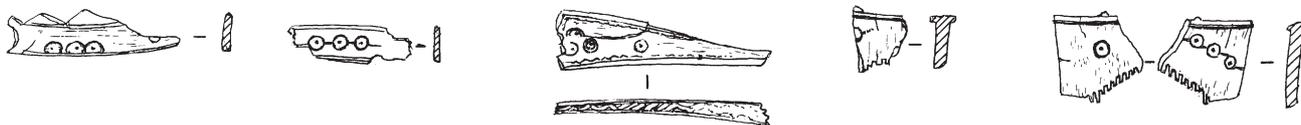
a)



b)



c)



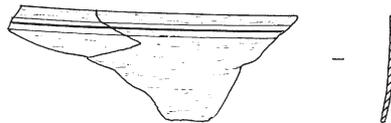
d)



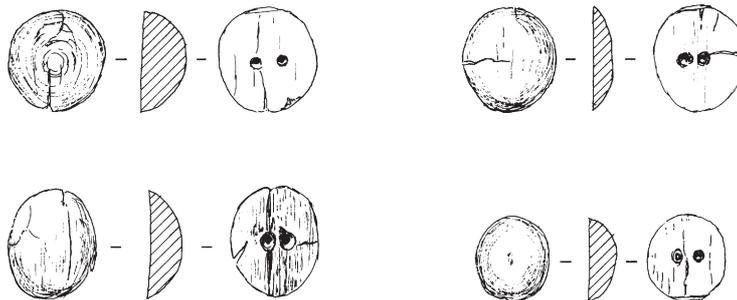
Cat. no. 49 Midtre Salte, Klepp k. Drawings by Astrid Hølland Berg.



a)



b)



c)

3cm

Cat. no. 49 Midtre Salte, Klepp k. Drawings by Astrid Hølland Berg.  
Photo: Terje Tveit. © Arkeologisk Museum i Stavanger.

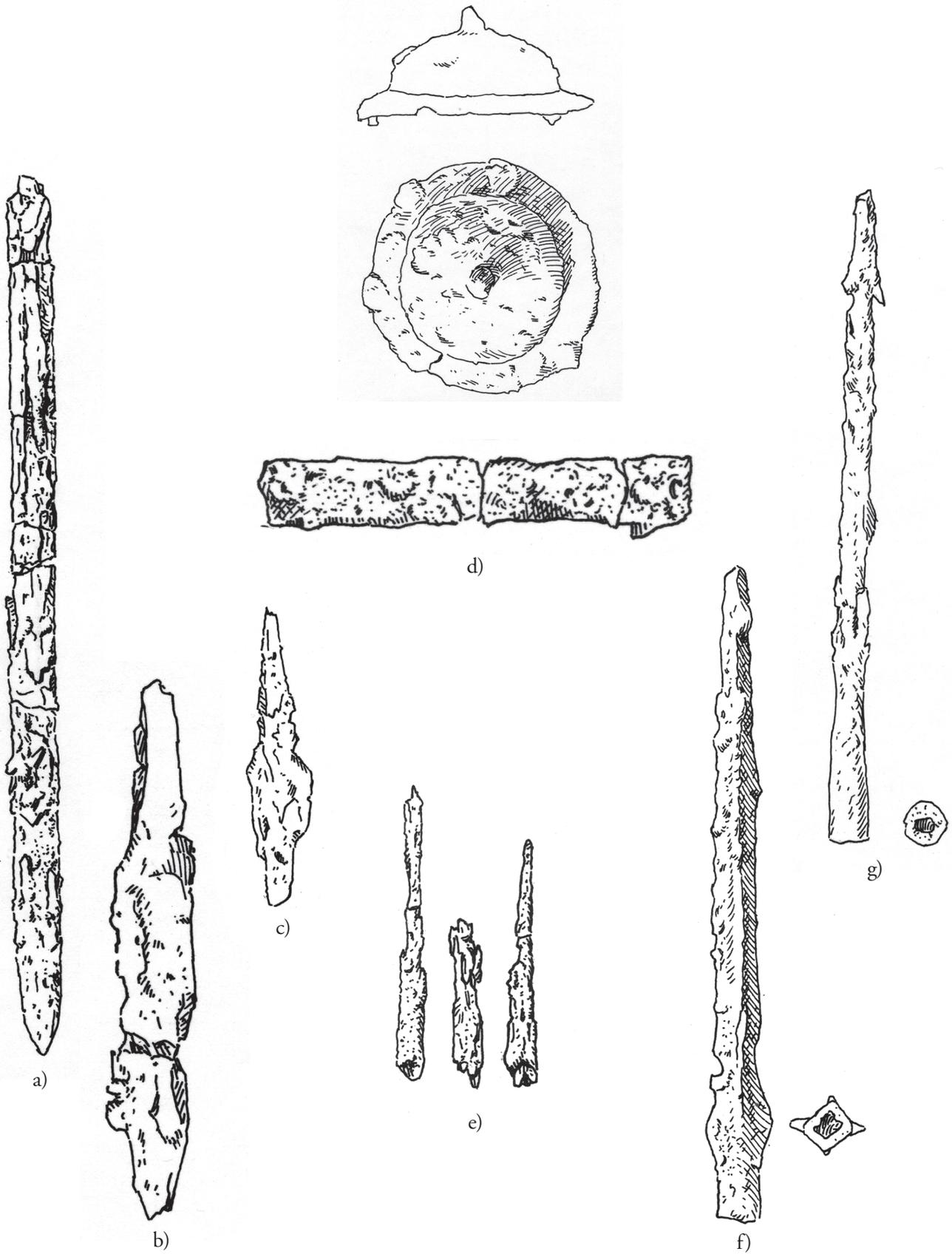


a)

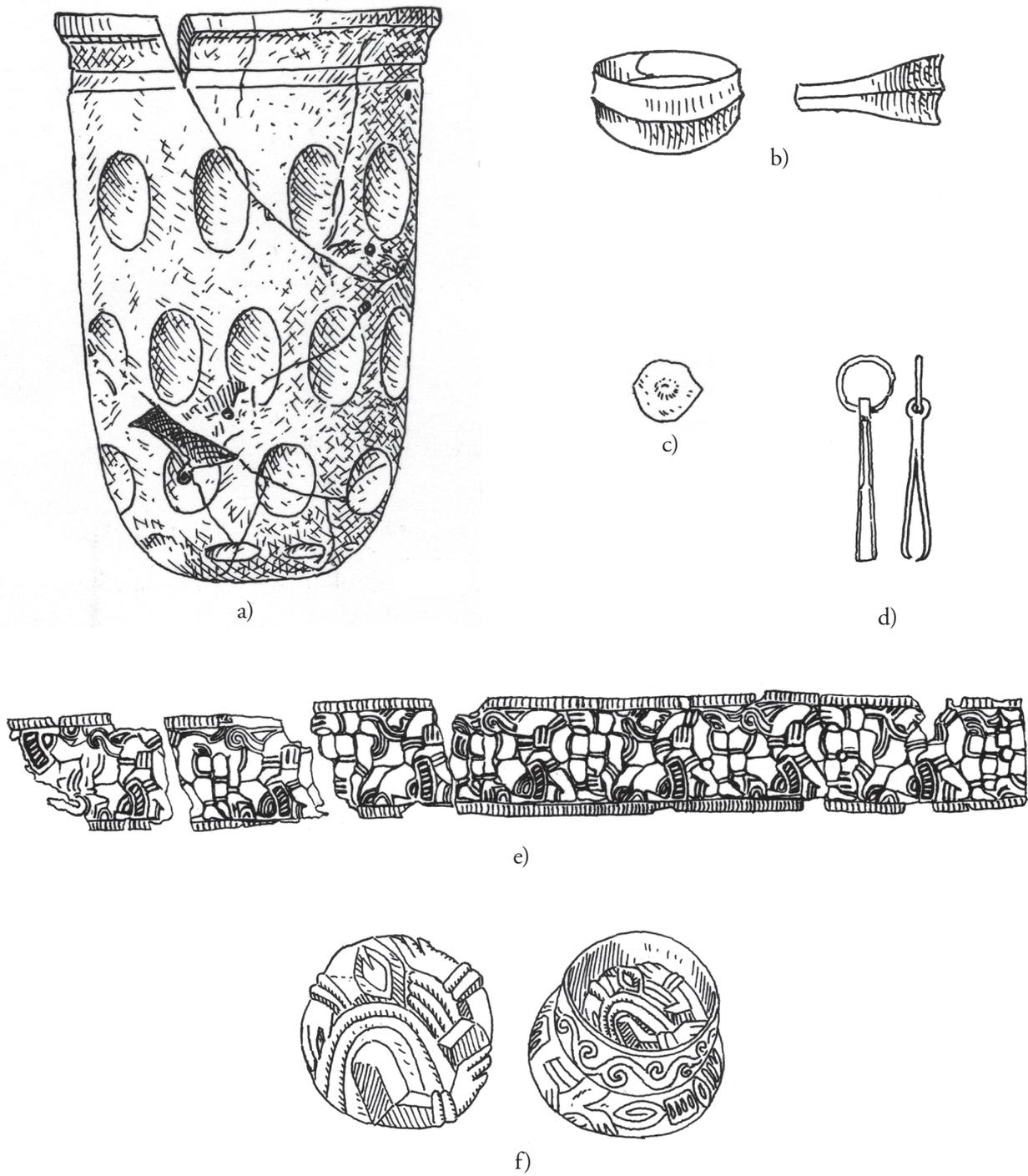


b)

- a) Cat. no. 50 Re, Time k. Photo: Ann-Mari Olsen. © Bergen Museum, Universitetet i Bergen.  
b) Cat. no. 51 Vestly, Time k. Photo: Terje Tveit. © Arkeologisk Museum i Stavanger.



Cat. no. 51 Vestly, Time. Modified after Inventaria Archaeologica. Scale: a) 1:5, b)-e) 1:2, f)-g) 1:3.



Cat. no. 51 Vestly, Time. Modified after Inventaria Archaeologica. Scale: a)-c), e) 1:1, d) 1:2, f) 2:1.



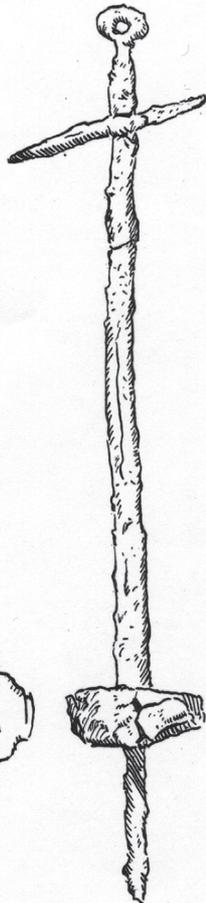
a)



b)



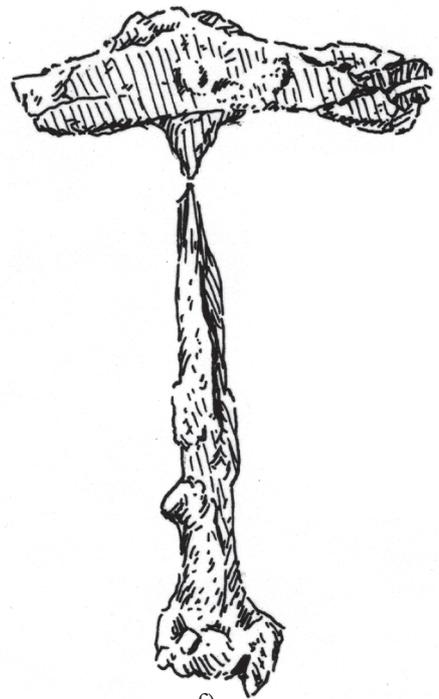
c)



d)



e)



f)

Cat. no. 51 Vestly, Time. Modified after Inventaria Archaeologica. Scale: a)-b), e)-f) 1:2, c)-d) 1:3.



Cat. no. 51 Vestly, Time. Modified after Inventaria Archaeologica. Scale: a)-f) 1:2, g)-h) 1:3.



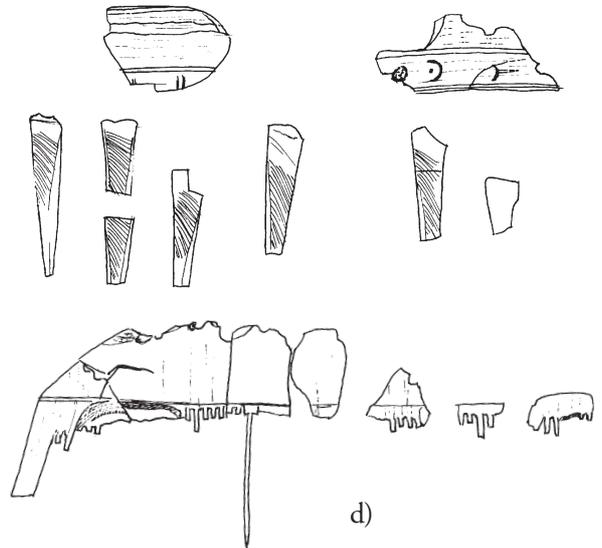
a)



b)



c)



d)



e)

a) Cat. no. 52 Unknown locality, Sola k. b) Cat. no. 54 Sandane, Suldal k.  
 c), d) Cat. no. 55 Foldøy, Suldal k. Drawing by Astrid Hølland Berg. e) Cat. no. 57 Utstein kloster, Rennesøy k.  
 Photo: Terje Tveit (a, b) and Åge Pedersen (c, e). © Arkeologisk Museum i Stavanger.



a)



b)



c)



d)

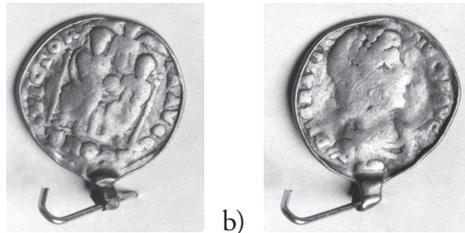


e)

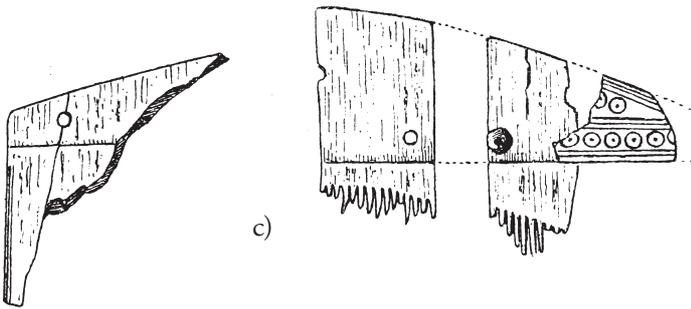
a) Cat. no. 58 Avaldsnes, Karmøy k. b) Cat. no. 60 Hatlestad, Bergen k.  
c) Cat. no. 62 Tunes, Bergen. d) Cat. no. 63 Auastad, Etne k. e) Cat. no. 68 Døsland, Kvinnherad k.  
Photo: Svein Skare (b) and Ann-Mari Olsen (d, e) All photos © Bergen Museum, Universitetet i Bergen.



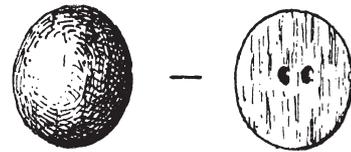
a)



b)



c)

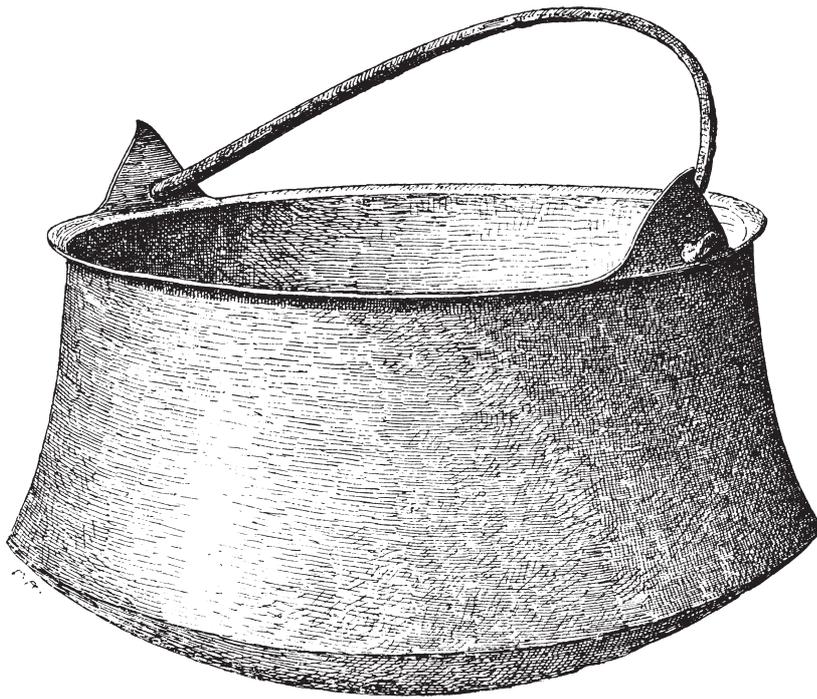


d)

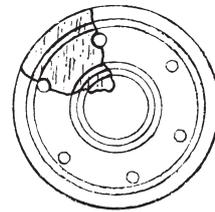


e)

Cat. no. 69 Sæbø, Kvinnherad k. c), d) After Shetelig 1912a.  
e) Photo: Ann-Mari Olsen. All photos © Bergen Museum, Universitetet i Bergen. b), c), d) 1:1



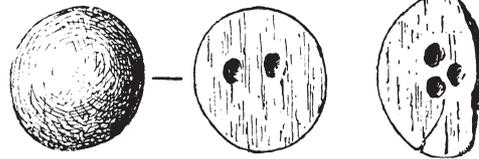
a)



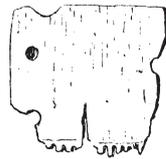
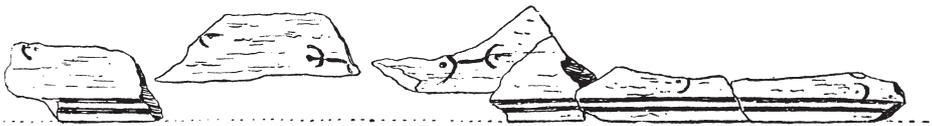
b)



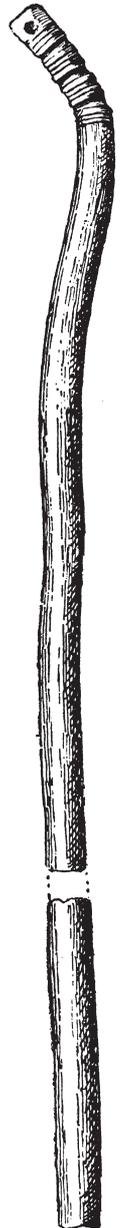
c)



d)

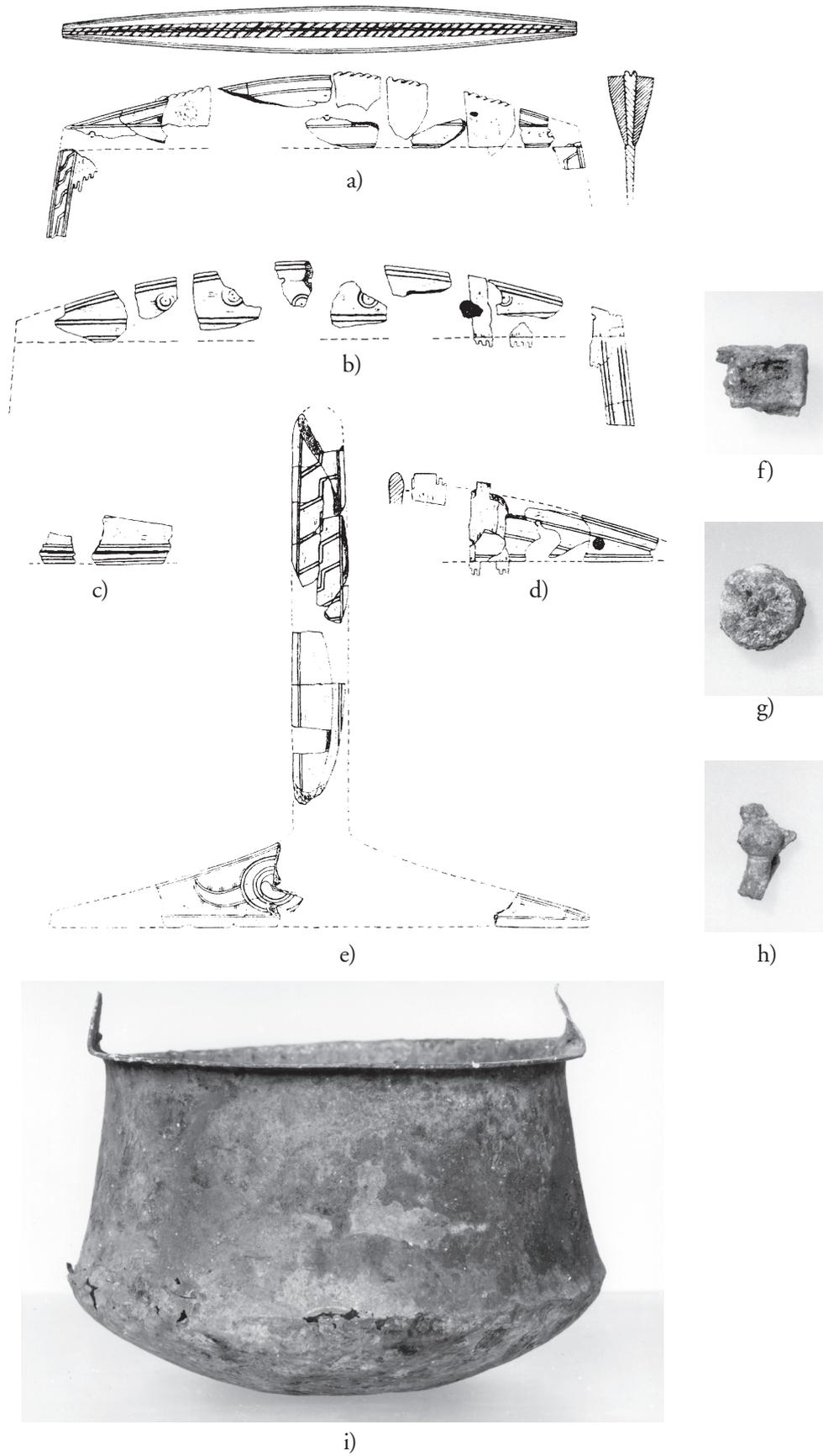


e)



f)

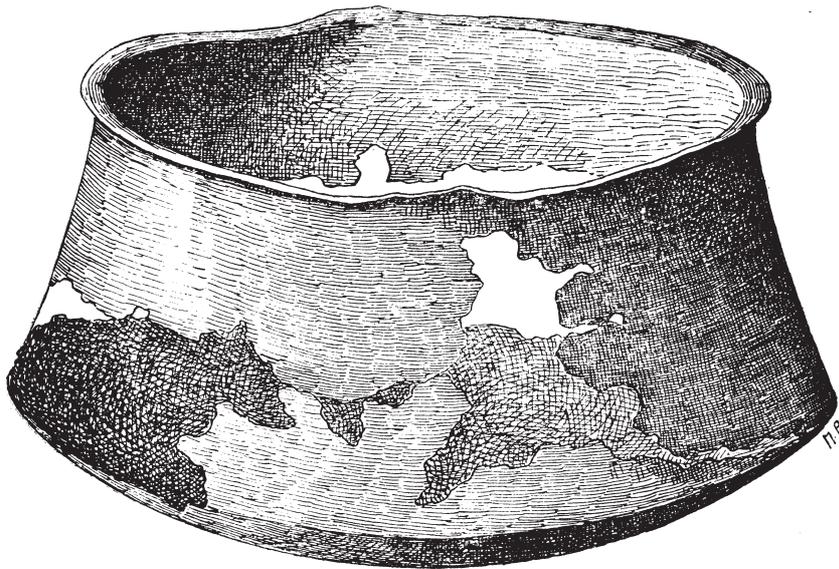
Cat. no. 70 The Vicarage, Jondal k. After Shetelig 1912a. a) 1:3, b)-f) 1:1.



Cat. no. 71 Opedal, Ullensvang k. a)-e) after Bakka 1963a, f)-i) © Bergen Museum, Universitetet i Bergen. a) – e) approx. 1:2.



a)



b)



c)

a) Cat. no. 73 Revheim, Osterøy k. Photo: Ann-Mari Olsen © Bergen Museum, Universitetet i Bergen.  
b), c) Cat. no. 74 Solheim, Radøy k. After Shetelig 1912a. b) 1:3, c) 1:1



a)



b)



c)

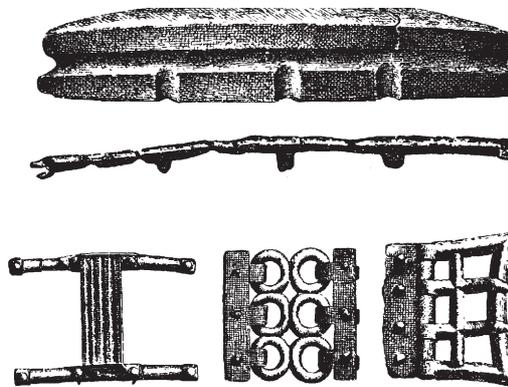


d)

a) Cat. no. 76 Midgården, Lindås k. b) Cat. no. 77 Eiknes, Lindås k. c) Cat. no. 78 Skardet, Lindås k.  
d) Cat. no. 79 Skardet, Lindås k. All photos © Bergen Museum, Universitetet i Bergen.



a)

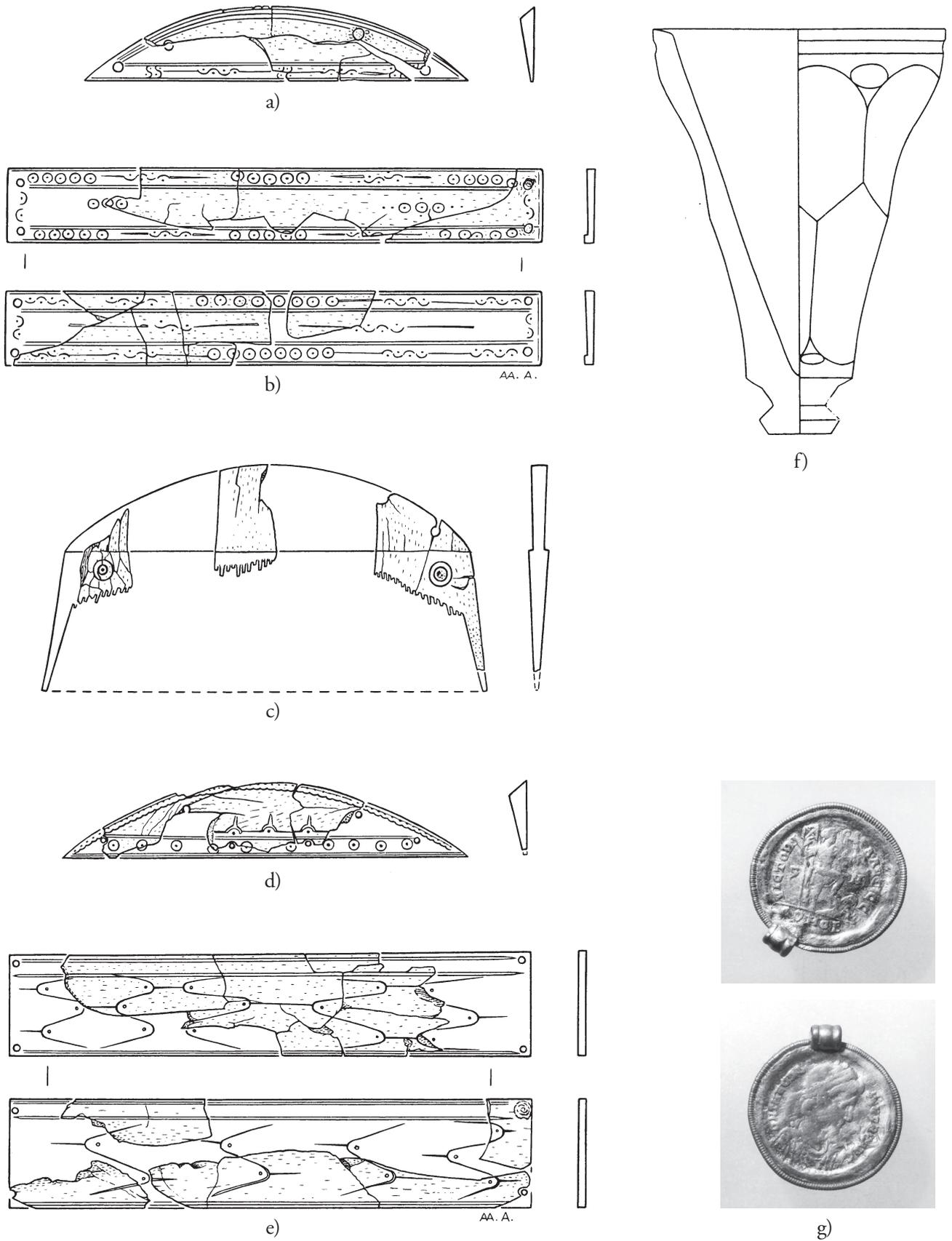


b)



c)

a) –c) Cat. no. 82 Stadheim, Vik k. b) after Shetelig 1912.  
d) Cat. no. 83 Hamre, Leikanger k. © Bergen Museum, Universitetet i Bergen. b) 1:2



Cat. no. 83 Hamre, Leikanger k. a)- f) after Straume 1987.  
 g) © Bergen Museum, Universitetet i Bergen. a)-e) 3:4, f) 1:2.



a)



b)



c)



d)

a) Cat. no. 84 Kvam, Sogndal k. b) –d) Cat. no. 85 Hauge, Luster k.  
d) after Axboe et al. 1985. All photos: Ann-Mari Olsen © Bergen Museum, Universitetet i Bergen.



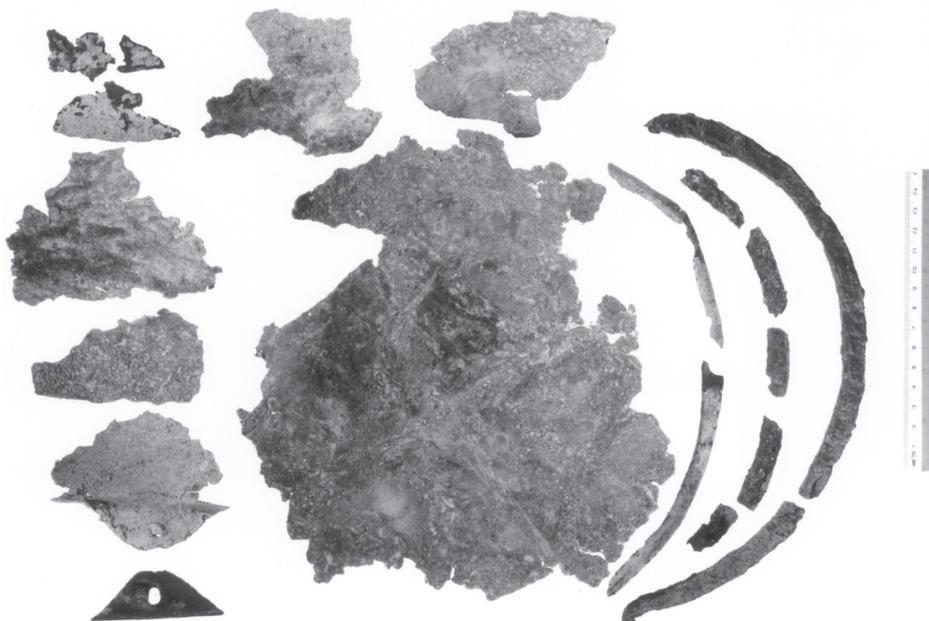
a)



b)

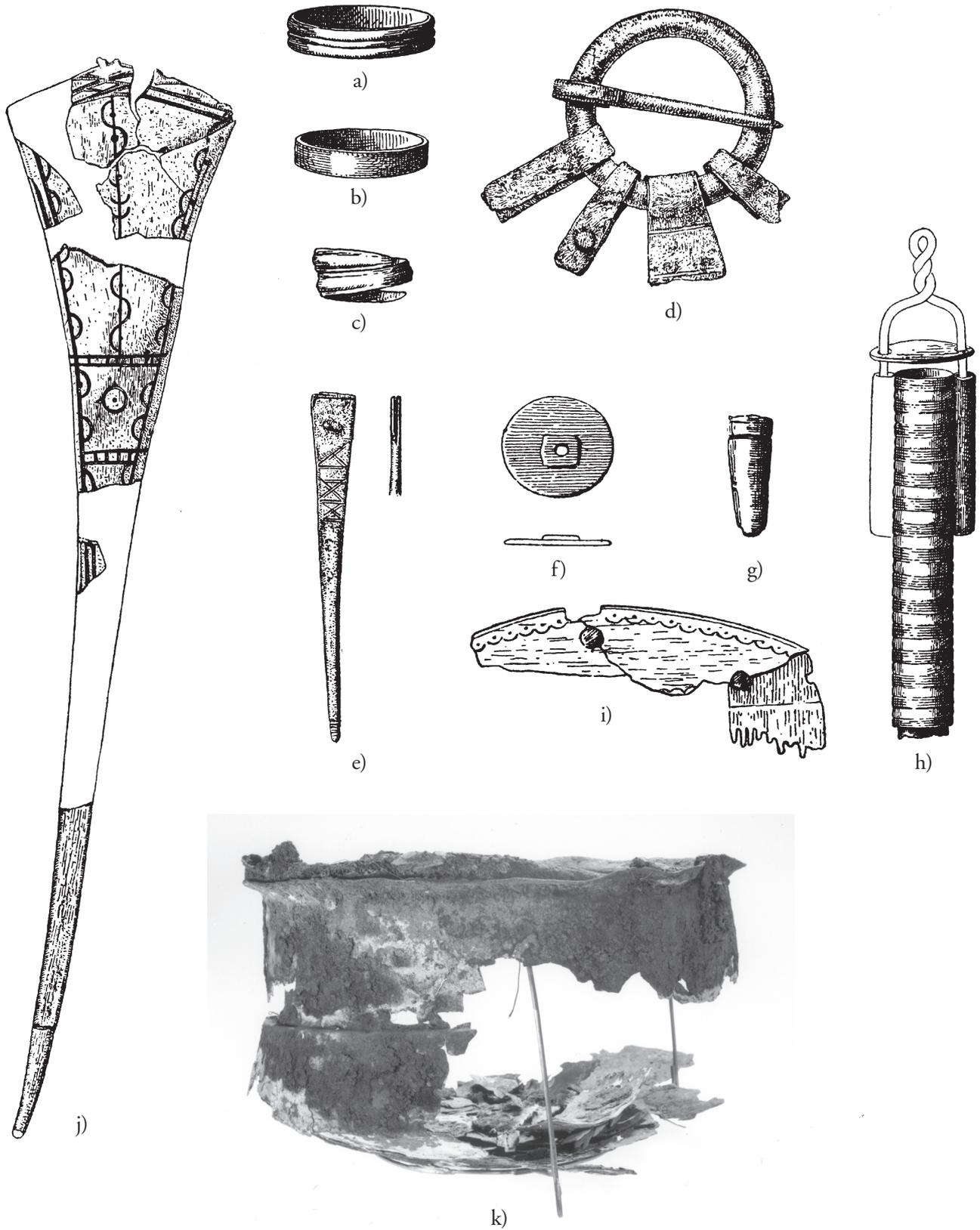


c)



d)

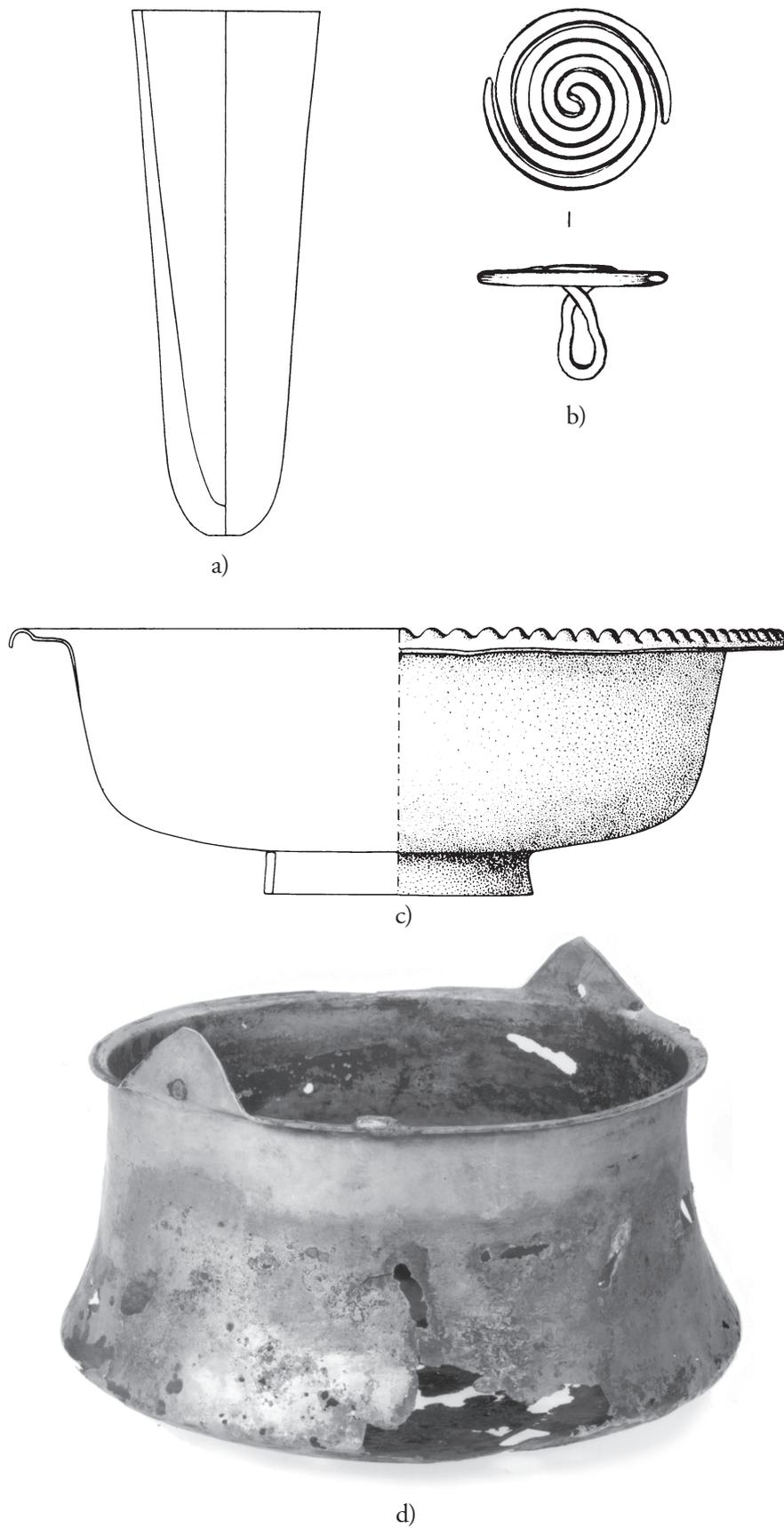
a) –b) Cat. no. 92 Indre Bø, Stryn k. c) Cat. no. 94 Kyrkjeide, Stryn k.  
d) Cat. no. 96 Kyrkjeide, Stryn k. All photos: Ann-Mari Olsen © Bergen Museum, Universitetet i Bergen.



Cat. no. 97 Vinje, Stordal k.

a)-j) after Shetelig 1912a, k) photo: Ann-Mari Olsen © Bergen Museum, Universitetet i Bergen.

a)-g), i), j) 1:1, h) 3:4.



Cat. no. 98 Blindheim, Giske k. a) –c) after Straume 1987.  
d) photo: Ann-Mari Olsen © Bergen Museum, Universitetet i Bergen.



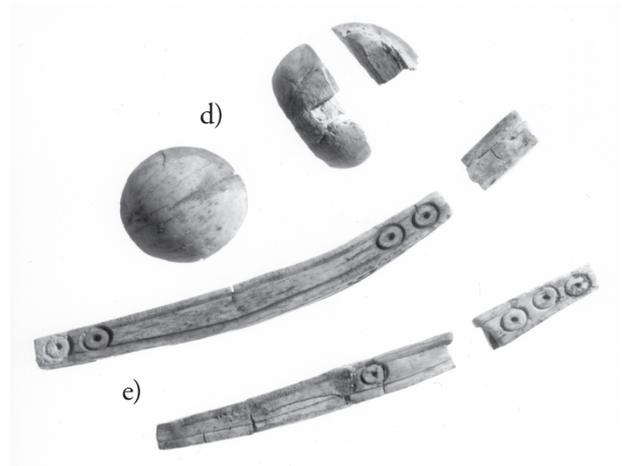
a)



b)



c)



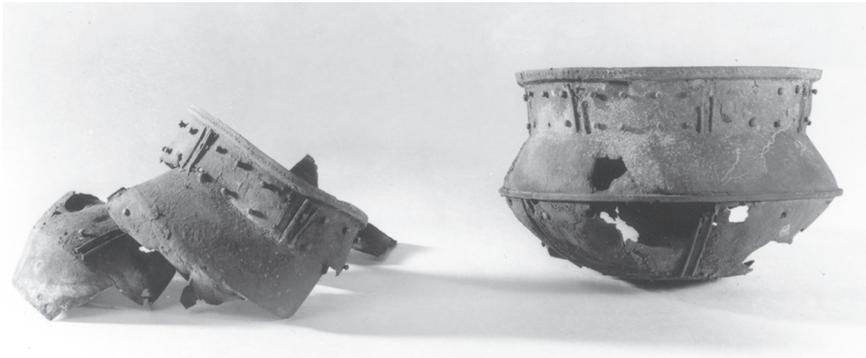
d)

e)

Cat. no. 101, 102 Jangarden, Giske k.  
Photo: Ann-Mari Olsen © Bergen Museum, Universitetet i Bergen.



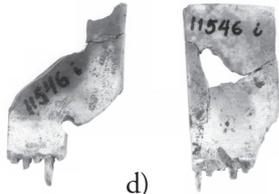
a)



b)



c)



d)



e)

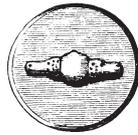


f)

Cat. no. 102 Godøy, Giske k.  
d), f) photo: Ann-Mari Olsen. All photos © Bergen Museum, Universitetet i Bergen.  
e) after Axboe et al. 1986.



a)



b)

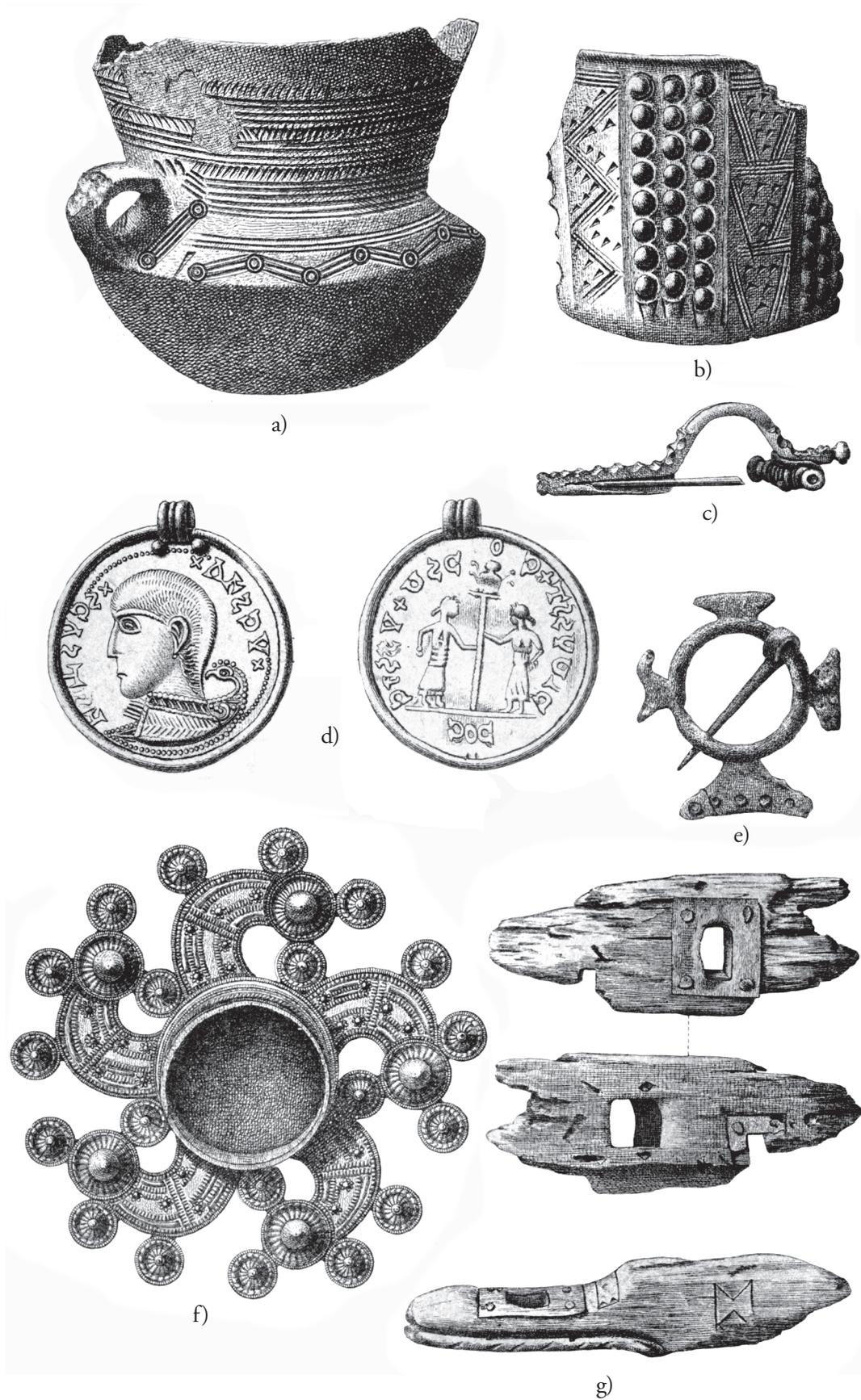


c)

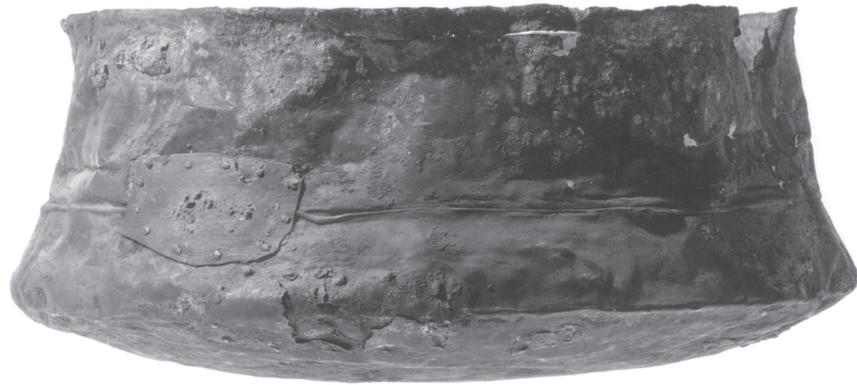


d)

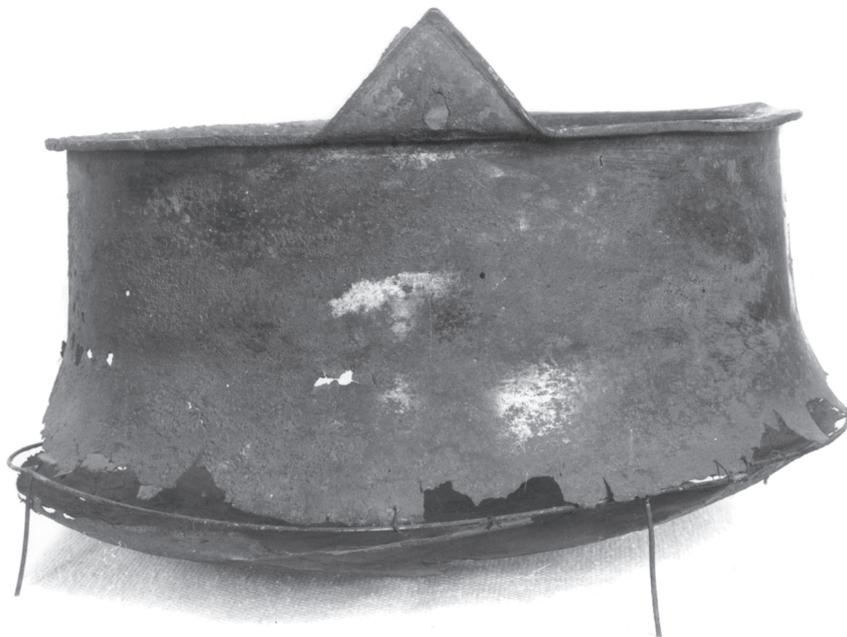
a) – c) Cat. no. 103 Åk, Rauma k. b), c) after Rygh 1885. d) Cat. no. 104 Åk, Rauma k.  
b), c) 1:1.



Cat. no. 104 Åk, Rauma k. After Ab. 1872



a)



b)

- a) Cat. no. 108 Gjeite, Levanger k. Photo: Per E. Fredriksen © Vitenskapsmuséet, NTNU, Trondheim.  
b) Cat. no. 109 Svedjan av Salthammer, Levanger k. © Vitenskapsmuséet, NTNU, Trondheim.





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Arkeologisk museum i Stavanger (Museum of Archaeology, Stavanger) publishes manuscripts in Norwegian (Danish and Swedish) and English (or any other world language). The main objective of the museum is to study the interaction between human society and nature and the environment in the pre-Reformation period. Manuscripts with an interdisciplinary and/or theoretical approach, manuscripts on experimental research, as well as manuscripts with a creative form will be given priority. The same applies to new knowledge within museum work, such as preservation, field work, including search methods, conservation and education. Geographically manuscripts dealing with Southwest Norway will be emphasized, but other material will also be published.

The series AmS-Skrifter publishes theses (monographs) and articles (in compilations of articles). AmS-Skrifter is published in English, but in exceptional cases in a Scandinavian language with a comprehensive summary in English.

**The manuscript** must be printed on A4 paper. Pages should be numbered. Good copies of figures should be included when the manuscript is submitted for consideration. Original illustrations should only be sent once the manuscript has been accepted for publication.

The manuscript should be arranged according to the following sequence:

1. Short, appropriate title without abbreviations and parentheses.
2. The author's name, unabridged.
3. Abstract of 200 words maximum which summarizes the purpose of the thesis or article, its methods and conclusions. The abstract should always start with the name of the author, the title of the manuscript and AmS-Skrifter.
4. The full name of the author, business address, telephone number, fax number and e-mail address.
5. The main text should be organized in no more than three levels. Foreign language should be corrected by a competent person.
6. Figures should be submitted as separate files. Requested placing of figures should be marked in the left margin of the paper copy. Figure captions should be submitted together at the end of the manuscript. Figures may consist of several units which should then be marked A, B etc. Reference to a figure should be abbreviated to Fig. in the text.
7. A short acknowledgement of grants and assistance should be placed between the text and the reference list.
8. References, see examples below and earlier numbers of AmS-Skrifter.

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In the text:

Lillehammer (1996), Fægri & Iversen (1975).

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Fægri, K. & Iversen, J. 1975: *Textbook of pollen analysis*. Munksgaard, København, 295 pp.

Lillehammer, G. 1996: Død og grav. Gravskikk på Kvasheimfeltet, Hå i Rogaland, SV Norge. *AmS-Skrifter* 13, 1-221.

Løken, T. 1991: Forsand i Rogaland – et lokalt sentrum i de sørlige Ryfylkefjordene? In Wik, B. (ed.): Sentrum – Periferi. Sentra og sentrumsdannelser gjennom førhistorisk og historisk tid. *Gunneria* 64, 207-221

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- When all names are the same, chronological order should be used.

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The author will receive ten free copies of his or her contribution.

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