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LATE IRON AGE CONTACTS BETWEEN SAAREMAA AND GOTLAND IN THE LIGHT OF THE M-TYPE SPEARHEADS

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This article is a part of an ongoing research project focusing on the Viking Age spearheads from different regions around the Baltic. Here the islands of Saaremaa (Muhu) and Gotland are compared through the spearheads of M type. The background of this survey is an earlier research that suggested a Gotlandic origin of a considerable number of pattern-welded spearheads in Estonia. The investigated material consists of both silver-ornamented spearheads and spearheads without silver decoration. Problems related to the interpretation of weapons in general, both practical and theoretical, are also discussed.

1. INTRODUCTION

The weapon trade of the Late Iron Age has already been discussed during a long time by scholars of different countries (among others in Kruse, 1842; Lorange, 1889; Petersen, 1919; Nerman, 1929; Arbman, 1937; Salmo, 1938; Kivikoski, 1939; Nordman, 1944; Kirpičnikov, 1970; Антейнс, 1973; Selirand, 1975; Lehtosalo-Hilander, 1982; Solberg, 1991; Mandel, 1992; Jakobsson, 1992). The origin of the weapons has always been, and still is the main question. Were there larger production centres from where organized trade was carried out, or was the production based on smaller units on a local level? Should types distributed in vast areas be understood as evidence of long-distance trade or do they rather represent the diffusion of an idea? The explanation may very well vary depending on the type of artefact, which means that the problems connected with swords could be different from those connected with spearheads, even though more advanced handicraft was involved in both cases.

This study will touch upon such problems, but seen from a narrower angle. The basis of the investigation will be spearheads of M type, according to Petersen's typology (Petersen, 1919, p. 35). Chronologically this means a limitation to the Late Iron Age. Geographically, only the islands of Saaremaa (and Muhu) in Estonia and Gotland in Sweden will be discussed. The background of this investigation is earlier research which suggested a Swedish (Gotlandic) origin for a considerable amount of the pattern-welded M-type spearheads in Estonia (Selirand, 1975, p. 179; 1985, p. 33; 1989, p. 117). Is it really possible to establish a "contact" between the islands through the spearheads, in this case the M type?

Within this particular material there are some spearheads with silver-ornamented sockets. They have already been discussed several times by

scholars around the Baltic Sea, mostly with an emphasis on the ornamental questions (Ebert, 1914; Christiansson, 1959; Tõnisson, 1974; Fuglesang, 1980; Lehtosalo-Hilander, 1983; Mägi-Lõugas, 1993). The silver-decorated spearheads have also been discussed in terms of being of Gotlandic origin. In this study, however, the ornamented spearheads will be seen in connection with the others of the same type, which has not been the case before.

The Saaremaa material, which includes only the pattern-welded spearheads from the Institute of History in Tallinn, has been studied separately, but also in connection with the Estonian mainland. This means that all M-type spearheads could be studied together on the same occasion. The pattern-welding was examined in the 1970s. As only the pattern-welded spearheads have been understood as having a possible foreign origin, this limitation was seen as appropriate for this study.

Since there is a different situation as regards earlier research when Gotland is concerned, and the number of finds from this island is smaller, all the available spearheads of M type at the museums in Visby, Stockholm, and Uppsala have been included. More detailed information concerning pattern-welding is not available at the present moment. This means that it is not possible to tell whether the spearheads are pattern-welded or not. Additionally, as the finds are kept in different places, it has not been possible to study the Gotlandic material in the same efficient way as the material of Saaremaa. But keeping the main question in mind, I do not consider these differences of great importance.

This study represents a part of an ongoing research project based on studies in museums in Estonia (Tallinn), Latvia (Riga), Russia (St. Petersburg), Finland (Helsinki), and Sweden (Stockholm, Visby, and Uppsala). I would like to thank all colleagues around the Baltic Sea who have made this study possible through their discussions and practical help.

2. GENERAL PROBLEMS CONNECTED WITH UNDERSTANDING THE SPEARHEADS

When confronted with widely distributed spearheads one ought to take various aspects into consideration, for instance the phenomenon of distance, which includes different societies with disparate traditions and values. The meaning and the use of a spearhead may very well have varied in different areas, both as a weapon and as a symbol. The spatial aspect also has an influence on our understanding of typology both chronologically and stylistically. Behind these factors, the acceptance of new ideas and local creativity are hidden. Who in the society accepted the new idea and was able to persuade others to use it? Or who was the person behind the organization of import? Finally, the conditions for the production of iron objects are not least important. Was the raw material, in this case iron and silver, available or was it necessary to import?

2.1. Typology

In 1919 a typology of Viking-period spearheads was established by the Norwegian archaeologist Jan Petersen. He divided the spearheads into types A, B, C, D, E, F, G, H, I, K, L, and M. His typology was built up on find combinations in Norwegian graves. The find combinations consisted of different weapons in the same grave, which means that an axe and a spearhead found together should be understood as contemporary.

This typology is still used today in several countries, though some

scholars have developed the classification, either by introducing sub-types (Solberg, 1984) or by creating a typology more suitable for the country in question (Selirand, 1975; Кирпичников, 1966; Thålin-Bergman, 1969). It has also been discussed whether it is appropriate to classify certain variants according to Petersen's typology or not. This concerns mainly D and G types (Selirand, 1975, p. 180; Thålin-Bergman, 1969, p. 188).

It is not, however, the main purpose of this article to discuss what the most suitable typology should look like. I would only like to stress that Petersen's typology has a certain value, especially when used for the basic types. I would also like to question whether a new more suitable typology can ever be created (or even should), even though the boundaries between Petersen's types sometimes seem to be too sharp and might mislead us into concentrating on "clean" types. Important factors such as handicraft, creativity, and the process of innovation may be forgotten. These elements must be given more space, especially when dealing with what one could call intermediary types or spearheads differing in other respects.

This is a very important problem in connection with distributional questions of different types in different countries, in this case the M type. How stretchable is the concept of the M type? One country can easily end up with a larger amount of a certain type depending on how much flexibility the researcher allows himself. At the same time one cannot help speculating how one would order an extensive material without knowing about Petersen's typology?

The use of typology in a situation where different countries are involved is of course related to the researcher's standpoint for or against larger production centres. This in turn means different demands as regards similarity.

2.2. Similarities and differences

Notable and very important at the same time is the fact that in many cases similarities can be observed both concerning the external shape and the internal shape, i.e. the pattern-welding. The external similarity is undoubtedly the background of the speculations about larger production centres. However, with inside similarity as well, which has not been known until recently (Solberg, 1984, p. 167), one is more or less forced to make the same assumption. If the spearheads were not produced in larger centres, but in smaller units, one ought to find out whether a certain kind of pattern-welding was connected to a certain type. And why? This is a very interesting problem, which will be investigated more closely in the near future.

How similar are really these spearheads? Or how different are they? As it is very difficult to handle archaeological material in vast areas, many of the comparisons between different countries have so far been based mainly on descriptions and illustrations in publications rather than on studies of the objects themselves. This is a considerable drawback. Discussions have been based on a vague foundation.

After having studied a considerable amount of spearheads from different areas, I want to stress the necessity of not only searching for similarities, but also considering the differences as very important. There is undoubtedly a certain risk that a too narrow use of a typology might block or restrain the study instead of supporting it.

I think these problems should be studied not with a fixed typology as basis, but rather with theoretical discussions of innovation and related phenomena combined with a concrete study of artefacts. Different technical and ornamental details and divergences in shape have to be registered and compared. The use of published pictures is dangerous in this connection.

2.3. Distribution and representativity

Different burial or offering customs are undoubtedly crucial matters when we are dealing with vast geographical areas. These have to be taken into consideration in connection with the interpretation of distributional patterns. But factors such as excavation density and the general interest of the public in bringing stray finds to the museums are also of importance. In many cases the stray finds probably represent remains from destroyed graves, but some archive studies have shown the importance of looking more closely at this matter, especially of investigating possible connections with rituals and offering traditions. The distribution of stray finds also has to be understood in connection with the general development of agriculture.

3. THE M TYPE

The M-type spearhead has a wide distribution, from Iceland to the shores of the Baltic (Solberg, 1984, p. 113) and it is considered to be a so-called international type. Petersen stated that the M type "on the whole gives an Eastern impression and is represented besides Sweden also commonly in Finland and Russia" (*typen gjör i det hele et östligt indtryck, findes foruten i Sverige ogsaa almindelig i Finland og Rusland*). Chronologically it belongs to the 11th century (Petersen, 1919, p. 35).

Petersen describes the M type as not especially long, but with a high mid-rib and a comparatively marked projecting shoulder (in this article called run) between the blade and the socket. The widest part of the blade falls rather high up, compared to the K type. Facets on the upper part of the socket are also significant for the M type (Petersen, 1919, p. 35). The Estonian archaeologist Jüri Selirand, on the other hand, describes the M type (classified by Selirand as IIIA) as long with a wide blade and a long socket (Selirand, 1975, p. 176). According to Bergljot Solberg the M type corresponds to her sub-types VII.3A and VII.3B (1984, pp. 99 ff). In the typology of Anatolij Kirpičnikov the M type belongs to type IIIA (Кирпичников, 1966, p. 7). Lena Thålin-Bergman refers the M type to her group 3, which also includes spearheads of types F, I, and K (1969, p. 192).

The wide blade with a high mid-rib and the long faceted socket are undoubtedly the most obvious characteristics of the M type, but typical is also the squarish rhombic (in section) upper part of the blade, the six-sided transition part between the blade and the socket, and the frequently occurring knobs and mouldings either in connection with the facets or separately.

It is, however, sometimes very difficult to classify a spearhead. Very often the studied object could be understood as a K type instead, especially when the blade has a narrower shape. Signe Horn Fuglesang, for instance, used proportion measurements to classify the spearheads of M and K types, and classifies the specimens falling between them as K/M (Fuglesang, 1980, pp. 30 ff). Similar problems occur when a spearhead has all the distinctive features of type M, but at the same time has a shorter socket. In this case the G type comes very close.

4. THE M TYPE ON SAAREMAA

Only the pattern-welded spearheads available at the Institute of History in Tallinn are included in this study. The pattern-welding was studied in the 1970s by Jüri Selirand and Andres Lääne. The whole collection of

about 600 spearheads was examined by mechanical and chemical cleansing. No X-ray examination was made. Bearing in mind the long period, about 100 years, during which this collection was formed, one ought to consider the material studied at that time as representative even for today.

The pattern-welded M-type spearheads on Saaremaa (and Muhu) total 24, and 21 of them are presented in this investigation. The classification as spearheads of M type was made by Selirand in connection with his examination of the pattern-welding. Concerning the pattern-welding, 15 specimens have the pattern of group 1, two the pattern of group 3, two that of group 6 and, finally, two the pattern of group 8 (Selirand, 1975, p. 177 and enclosed list); for pattern-welding groups see Fig. 1. In general, the pattern-welding of group 1 is the most common one among the M-type spearheads also in the rest of Estonia. Among the investigated spearheads six have a silver-decorated socket.

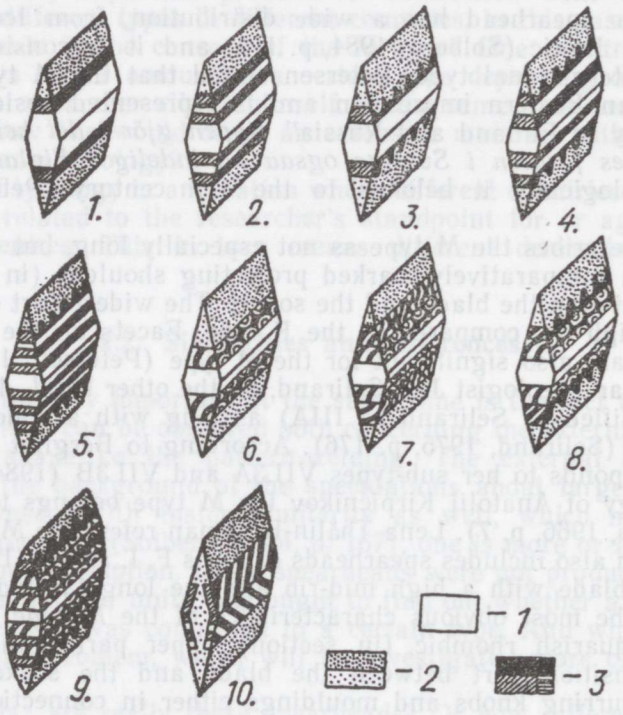
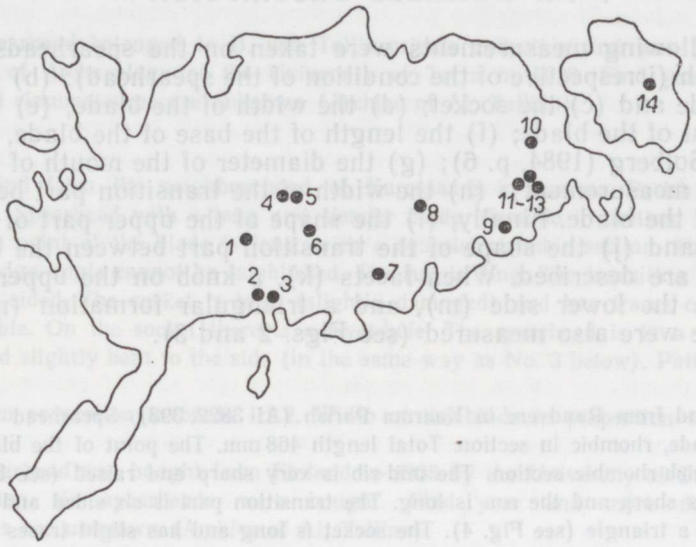


Fig. 1. Groups of pattern-welding by J. Selirand. *1* — iron, *2* — steel, *3* — pattern-welded steel.

A closer look at the find circumstances of the M-type spearheads reveals seven grave finds, seven stray finds, and seven from unknown places. The grave finds are all from stone-settings. No further information is available concerning the stray finds, nor about the finds from unknown places except that they are from Saaremaa.

The M-type spearheads are mostly concentrated to the areas of Kaarma and Pöide, i.e. the south and southeastern region of the island (see Map 1). It is possible to establish a certain divergent distributional pattern when the grave finds are excluded, namely to the Kuressaare area and further inland of the southeastern part.



Map 1. Spearheads of M type on Saaremaa (only the investigated spearheads).

The total number of M-type spearheads on Saaremaa, with and without pattern-welding, should be between 40 and 50 specimens. Among these are several smaller spearheads measuring between 155 and 195 mm in total length (Plate I). There is also one silver-ornamented spearhead from Pajumõis in Kihelkonna Parish, which was not registered as pattern-welded by Selirand (Nerman, 1929, p. 109, Fig. 105).

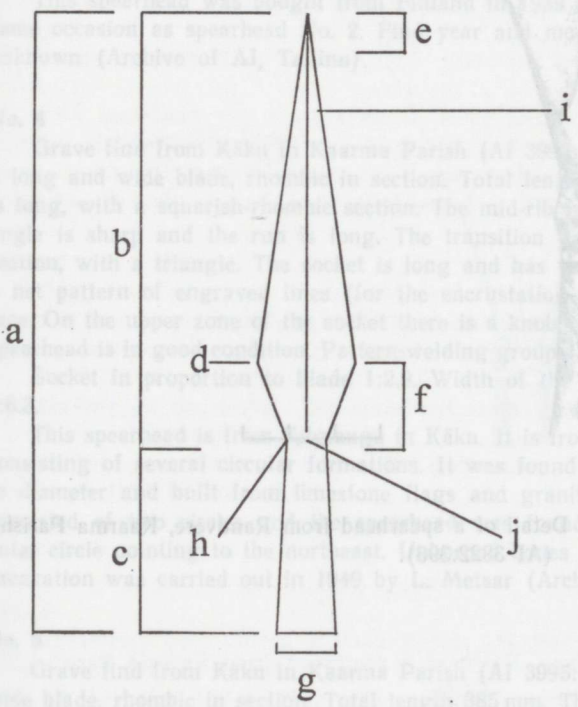


Fig. 2. Measured and described parts of the M-type spearheads. See "5. Detailed description" for legend.

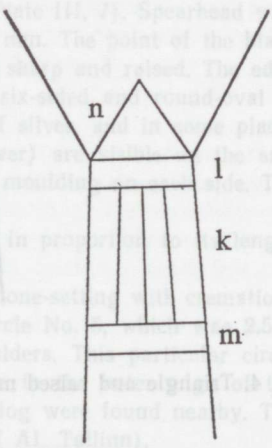


Fig. 3. Measured details of the M-type spearheads. See "5. Detailed description" for legend.

5. DETAILED DESCRIPTION

The following measurements were taken on the spearheads: (a) the total length (irrespective of the condition of the spearhead); (b) the length of the blade and (c) the socket; (d) the width of the blade; (e) the length of the point of the blade; (f) the length of the base of the blade, called the "run" by Solberg (1984, p. 6); (g) the diameter of the mouth of the socket (the outer measurement); (h) the width of the transition part between the socket and the blade. Finally, (i) the shape of the upper part of the blade in section and (j) the shape of the transition part between the blade and the socket are described. When facets (k), a knob on the upper side (l), a knob on the lower side (m), and a triangular formation (n) can be seen, these were also measured (see Figs. 2 and 3).

No. 1

Stray find from Randvere in Kaarma Parish (AI 3822: 393). Spearhead with a long and wide blade, rhombic in section. Total length 468 mm. The point of the blade is long, with a squarish-rhombic section. The mid-rib is very sharp and raised (see Fig. 4). The edge angle is sharp and the run is long. The transition part is six-sided and rounded in section, with a triangle (see Fig. 4). The socket is long and has slight traces of silver (?) and a net pattern of engraved lines (for the encrustation of silver) on its surface. On the upper zone of the socket there is a knob with a moulding on each side. The spearhead is in good condition. Pattern-welding group 1.

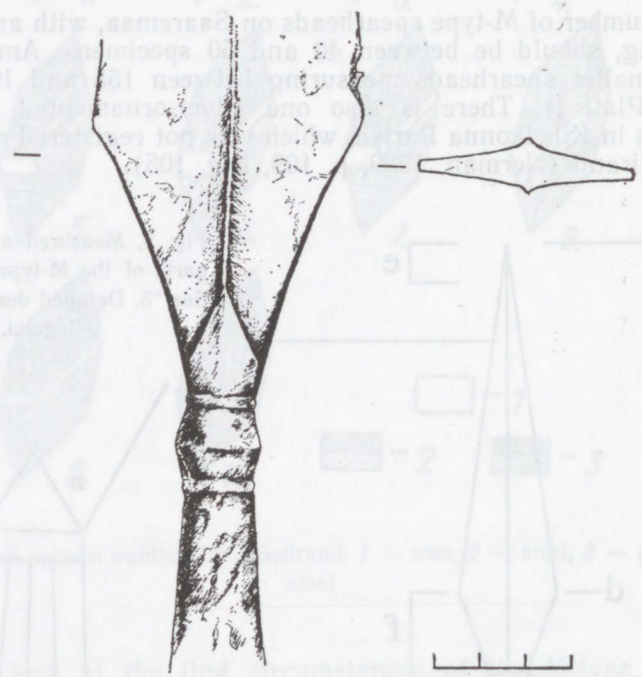


Fig. 4. Triangle and raised mid-rib. Detail of a spearhead from Randvere, Kaarma Parish (AI 3822:393).

Socket in proportion to blade 1:2.3. Width of the blade in proportion to its length 1:5.0.

This spearhead belonged to B. von Toll's private collection and was given to the Department of Archaeology at the University of Tartu in 1939. Find year and more detailed find circumstances are unknown (Archive of AI, Tallinn).

No. 2

Stray find from the neighbourhood of Kuressaare in Kaarma Parish (AI 3375:1; Plate II, *1*). Spearhead with a long and slender blade, rhombic in section. Total length 400 mm. The point of the blade is long, with a squarish-rhombic section. The mid-rib is sharp. The edge angle cannot be established. The run is long. The transition part is most probably six-sided. The socket is long (slightly damaged) and has traces of facets. No knob is visible. On the socket there is a rivet-hole. The spearhead is in a rather good condition and slightly bent to the side (in the same way as No. 3 below). Pattern-welding group 1.

Socket in proportion to blade 1:2.2. Width of the blade in proportion to its length 1:7.2.

This spearhead was bought from Finland in 1935 by the University of Tartu. On the same occasion six spearheads were bought. Find year and more detailed find circumstances are unknown (Archive of AI, Tallinn).

No. 3

Stray find from the neighbourhood of Kuressaare in Kaarma Parish (AI 3375:4; Plate II, *2*). Spearhead with a long and slender blade, rhombic in section. Total length 390 mm (the top of the point is missing). The upper part of the blade is squarish-rhombic in section. The mid-rib is sharp. The edge angle cannot be established. The run is long. The transition part is six-sided and oval in section. The socket is long (damaged) and has traces of facets with narrow knobs on each side. The spearhead is in rather good condition apart from the damage on the socket and the broken top. The spearhead is bent to the side in the same way as No. 2. Pattern-welding group 1.

Socket in proportion to blade 1:2.1 (estimated). Width of the blade in proportion to its length 1:5.8 (estimated).

This spearhead was bought from Finland in 1939 by the University of Tartu on the same occasion as spearhead No. 2. Find year and more detailed find circumstances are unknown (Archive of AI, Tallinn).

No. 4

Grave find from Käku in Kaarma Parish (AI 3995:853; Plate III, *1*). Spearhead with a long and wide blade, rhombic in section. Total length 520 mm. The point of the blade is long, with a squarish-rhombic section. The mid-rib is very sharp and raised. The edge angle is sharp and the run is long. The transition part is six-sided and round-oval in section, with a triangle. The socket is long and has traces of silver, and in some places a net pattern of engraved lines (for the encrustation of silver) are visible on the surface. On the upper zone of the socket there is a knob with a moulding on each side. The spearhead is in good condition. Pattern-welding group 1.

Socket in proportion to blade 1:2.9. Width of the blade in proportion to its length 1:6.3.

This spearhead is from Kilgiaugu in Käku. It is from a stone-setting with cremations consisting of several circular formations. It was found in circle No. 5, which was 2.5 m in diameter and built from limestone flags and granite boulders. This particular circle consisted of two circles and the spearhead was found close to the outer edge of the outer circle pointing to the northeast. Unburned bones of a dog were found nearby. The excavation was carried out in 1949 by L. Metsar (Archive of AI, Tallinn).

No. 5

Grave find from Käku in Kaarma Parish (AI 3995: 324). Spearhead with a long and wide blade, rhombic in section. Total length 385 mm. The point of the blade is long with

a squarish-rhombic section. The mid-rib is distinctly marked. The edge angle is sharp and the run is long. The transition part is six-sided (hardly visible) and oval in section. The socket is long and has vague traces of a knob. No facets are visible. Inside the socket is a rivet. The spearhead is in bad condition, which makes some measurements somewhat unreliable. Pattern-welding group 1.

Socket in proportion to blade 1:2.4. Width of the blade in proportion to its length 1:4.4 (estimated).

This spearhead was found at Kilgiaugu in a stone-setting (the same as No. 4) with several circular formations and with cremations. It was found outside circle No. 6 pointing to the northeast. The excavation was carried out by L. Metsar in 1949 (Archive of AI, Tallinn).

No. 6

Stray find from Kaarma Parish (AIK 67: 1; Plate II, *4*). Spearhead with a long and wide blade, rhombic in section. Total length 373 mm (the socket is missing). The point of the blade is long, with a rhombic section. The mid-rib of the blade is sharp. The edge angle is sharp and the run is long. The transition part is six-sided and rounded in section. The socket is missing except from the upper part, which has a knob with a double moulding on each side (Fig. 5). The blade of the spearhead is in good condition. Pattern-welding group 3.

Socket in proportion to blade — (not possible to determine). Width of the blade in proportion to its length 1:5.8.

No further information about find circumstances is available for this spearhead. The archive of AI gives a reference to a similar spearhead in RK 239.

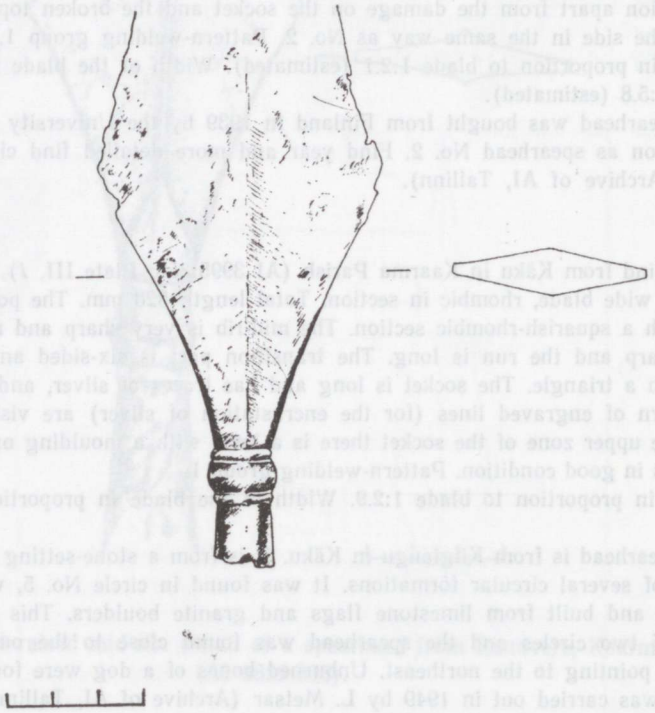


Fig. 5. Knob with double mouldings. Detail of a spearhead from Kaarma Parish (AIK 67:1).

No. 7

Grave find from Ilpla in Püha Parish (AIK 1:52). Spearhead with a long and slender blade, slightly rhombic in section. Total length 364 mm. The point of the blade is rather long with an oval-rhombic section. The mid-rib is marked. The edge angle is less sharp and the run is comparably short. The transition part is six-sided with rounded edges and oval in section, with a narrow knob. The socket is long with two rivet-holes. The spearhead is in good condition. Pattern-welding group 3. This spearhead has to be considered as an intermediary type, or perhaps a K-type spearhead.

Socket in proportion to blade 1:2.6. Width of the blade in proportion to its length 1:6.7.

This spearhead was found in a stone-setting close to Kalmu farm. The stone-setting was 130×70 m (Archive of AI, Tallinn).

No. 8

Stray find from Valjala Parish (AI 3822:482). Spearhead with a long and wide blade, rhombic in section. Total length is 440 mm. The point of the blade is long and rhombic in section. The mid-rib is sharp. The edge angle cannot be established. The run is long. The transition part is six-sided and oval in section. The socket is long and slightly damaged. No decorations are visible on the socket. The spearhead is in rather good condition. Pattern-welding group 1.

Socket in proportion to blade 1:2.0. Width of the blade in proportion to its length 1:5.0 (estimated).

This spearhead belonged to B. von Toll's private collection and was given to the Department of Archaeology at the University of Tartu in 1939. Find year and more detailed find circumstances are unknown (Archive of AI, Tallinn).

No. 9

Grave find from Randvere in Põide Parish (AI 3895:410). Spearhead with a long and wide blade, rhombic in section. Total length 398 mm. The point of the blade is long with a rhombic section. The mid-rib of the blade is sharp. The edge angle is sharp and the run is long. The transition part is six-sided and oval in section. The socket is long and has visible facets surrounded by knobs (hardly visible) in the upper zone. On the socket there is a rivet. The spearhead is in rather good condition. Pattern-welding group 1.

Socket in proportion to blade 1:1.7. Width of the blade in proportion to its length 1:5.1.

This spearhead was found close to Matsi farm in a stone-setting with cremations. Certain circular formations were seen. For political reasons the excavation had to be done in a hurry; further information is not available. The excavation was carried out in 1940 buy R. Indreko and M. Schmiedehelm (Archive of AI, Tallinn).

No. 10

Stray find from Põide Parish (AI 2712:14). Spearhead with a long and wide blade, rhombic in section. Total length 330 mm (the top of the blade is missing). The mid-rib of the blade is sharp. The edge angle is sharp and the run is long. The transition part is six-sided and oval-round in section. The socket is long with turned up edges. There is a rivet-hole on the socket. The spearhead is in rather good condition apart from the broken top. Pattern-welding group 1.

Socket in proportion to blade 1:2.2 (estimated). Width of the blade in proportion to its length 1:4.3 (estimated).

This spearhead comes from the National Museum in Tartu. No further information is available (Archive of AI, Tallinn).

No. 11

Grave find from Viltina in Põide Parish (AI 3884:1671). Spearhead with a long and wide blade, rhombic in section. Total length 425 mm. The point of the blade is long (one side of the point is damaged) with a rhombic section. The blade is slightly bent. The

mid-rib is very sharp and raised. The edge angle is sharp and the run is long, with traces of silver on the side. The transition part is six-sided and oval in section, with a triangle. The socket is long (slightly damaged in the lower zone) and has silver decoration in the Ringerike style. In some places there is a net pattern of engraved lines on the surface. On the upper zone of the socket there is a knob with a moulding on each side. On the socket there is a rivet. The spearhead is in good condition, except for some minor damages. Pattern-welding group 1.

Socket in proportion to blade 1:2.4. Width of the blade in proportion to its length 1:5.0.

This spearhead is from a large stone-setting (3000 sq m) on Peerna farm, with cremations and inhumations. The stone-setting, which had been used during a long period, contained different constructions including boat-shaped ones, which partly overlapped each other. In many cases the artefacts were deliberately destroyed and not burnt. The spearhead comes from a grave called Ruttirängas and was found with the socket at a depth of 10 cm and its point at a depth of 23 cm, pointing to the northeast. The excavation was carried out by O. Saadre, M. Schmiedehelm, and A. Vassar in 1940 (Archive of AI, Tallinn).

No. 12

Grave find from Viltina in Pöide Parish (AI 3884:2367). Spearhead with a long and wide blade, oval-rhombic in section. Total length 306 mm. The point of the blade is not very long. The blade is partly damaged, especially its upper part. The mid-rib of the blade is slightly marked, probably due to wear. The edge angle is sharp and the run is long. The transition part is six-sided and oval in section. The socket is not very long and slightly damaged. On the upper zone of the socket traces of a knob are visible. The spearhead is in rather good condition. Pattern-welding group 1. The spearhead has to be considered as an intermediary type, between the M and G, due to its short socket.

Socket in proportion to blade 1:2.5. Width of the blade in proportion to its length 1:4.7.

This spearhead is from the same stone-setting as No. 11, on Peerna farm, but more detailed information is not available (Archive of AI, Tallinn).

No. 13

Grave find from Viltina in Pöide Parish (AI 3884:3905; Plate III, *2*). Spearhead with a long and wide blade, rhombic in section. Total length 425 mm. The point of the blade is long with a squarish-rhombic section. The mid-rib is very sharp and raised. The edge angle is sharp and the run is long. The run has traces of silver on the side. The transition part is six-sided and oval in section, with a triangle. The socket is long and silver decorated in the Ringerike style. On the upper zone of the socket there is a knob with a moulding on each side. In the middle of the knob a moulding occurs. On the socket there is a rivet. The spearhead is in good condition. Pattern-welding group 1.

Socket in proportion to blade 1:3.1. Width of the blade in proportion to its length 1:5.7.

This spearhead is from the same stone-setting as No. 11 and No. 12, on Peerna farm. The spearhead was found in the northwestern part of the grave (Archive of AI, Tallinn).

No. 14

Stray find from Muhu (AIK 43: 3; Plate III, *3*). Spearhead with a long and wide blade, rhombic in section. Total length 335 mm. The point is rather long with a squarish-rhombic section. The mid-rib of the blade is very sharp and raised. The edge angle is sharp and the run is long. The run has traces of silver on the side. The transition part is four-sided and oval in section, with a triangle. The triangle has traces of silver decoration. The total length of the socket cannot be determined, due to damage. The socket has silver decoration in the Ringerike style. On the upper zone of the socket there is a knob. The spearhead is in good condition. Pattern-welding group 6.

Socket in proportion to blade 1:2.8 (estimated). Width of the blade in proportion to its length 1:4.9.

There is no further archive information available for this spearhead.

No. 15

Stray find from Saaremaa from an unknown place (AIK 88:191). Spearhead with a long and slender blade, rhombic in section. Total length 270 mm. The upper part of the blade cannot be determined, due to its condition. The mid-rib of the blade is sharp. The edge angle is sharp and the run is comparably short. The side of the run has traces of silver decoration. The transition part is four-sided and oval in section, with a triangle. The socket is long (slightly damaged) and has traces of silver. On the upper zone of the socket there is a narrow knob. The spearhead is in rather good condition. Pattern-welding group 6. This spearhead has to be considered as an intermediary type, due to the slender blade.

Socket in proportion to blade 1:2.1. Width of the blade in proportion to its length 1:5.2.

There is no further archive information available for this spearhead.

No. 16

Stray find from Saaremaa from an unknown place (AIK 88:197). Spearhead is in bad condition. The socket and the top of the blade are missing. Total length 22 mm. The mid-rib of the blade is hardly visible. No decoration can be seen. The only part indicating a spearhead of M type is the run, which is long with sharp edge angles. The transition part is most probably six-sided and round-oval in section. Pattern-welding group 8.

Socket in proportion to blade — (not possible to determine). Width of the blade in proportion to its length — (not possible to determine).

There is no further archive information available for this spearhead.

No. 17

Stray find from Saaremaa, from an unknown place (AIK 85:7; Plate II, *5*). Spearhead with a comparatively short and wide blade, oval-rhombic in section. Total length 311 mm. The point is short with an oval section. The mid-rib of the blade is slightly marked. The edge angle is less sharp and the run is long. The transition part is round in section. The socket is long and its upper part continues onto the blade in a triangle as on spearheads of type G. There is a rivet on the socket. Pattern-welding group 8. This spearhead has to be considered as an intermediary type due to several divergences.

Socket in proportion to blade 1:1.7. Width of the blade in proportion to its length 1:4.3.

There is no further archive information available for this spearhead.

No. 18

Stray find from Saaremaa, from an unknown place (AIK 85:4). Spearhead with a long and wide blade, rhombic in section. Total length 400 mm. The point of the blade is long, with a rhombic section. The mid-rib of the blade is marked (due to wear). The blade is damaged. The edge angle is sharp and the run is long. The transition part is six-sided and oval in section. The socket is long and has traces of facets. The facets are surrounded by a larger knob on the upper side and traces of a knob on the lower side. On the socket there is a rivet-hole. The spearhead is in rather good condition. Pattern-welding group 1.

Socket in proportion to blade 1:1.9. Width of the blade in proportion to its length 1:4.4.

There is no further archive information available for this spearhead.

No. 19

Stray find from Saaremaa, from an unknown place (AIK 88:188; Plate II, *3*). Spearhead with a long and slender blade, rhombic in section. Total length is 467 mm. The point of the blade is long, with a squarish-rhombic section. The mid-rib is sharp. The edge angle is less sharp and the run is long. The transition part is six-sided and oval in

section. The socket is long and has vague traces of facets and a knob. On the socket there is a rivet-hole. The spearhead is in rather good condition. Pattern-welding group 1. This spearhead should be considered as an intermediary type, between M and K, due to its elongated and slender shape.

Socket in proportion to blade 1:2.6. Width of the blade in proportion to its length 1:7.8.

There is no further archive information available for this spearhead.

No. 20

Stray find from Saaremaa, from an unknown place (AIK 85:36). Spearhead with a long and wide blade, rhombic in section. The blade is bent forwards. Total length 380 mm. The upper part of the blade is most probably rhombic in section and the point is long (part of the blade is damaged). The mid-rib is sharp and slightly raised. The edge angle is sharp and the run is long. The transition part is six-sided and oval in section, with a triangle. The socket is long, but slightly damaged, and has a knob in the upper zone. The knob has a double moulding on each side. On the socket there is a rivet-hole. The spearhead is in rather good condition, apart from the top of the blade. Pattern-welding group 1.

Socket in proportion to blade 1:2.8. Width of the blade in proportion to its length 1:5.6.

There is no further archive information available for this spearhead.

No. 21

Stray find from Saaremaa, from an unknown place (AIK 89:6). Spearhead with a long blade, rhombic in section. Total length 290 mm. The point of the blade is rather short, with a rhombic section. The mid-rib is marked (due to wear). The edge angle and the run cannot be determined, due to their bad condition. This also concerns the width of the blade. The transition part is six-sided and round-oval in section. The socket is long and has hardly visible traces of facets and a knob. The spearhead is in rather bad condition. Pattern-welding group 1.

Socket in proportion to blade 1:1.8. Width of the blade in proportion to its length — (not possible to determine).

There is no further archive information available for this spearhead.

6. ANALYSIS

6.1. The role of Saaremaa

I consider it very important to look at the situation on Saaremaa without too much influence from earlier research, just keeping in mind the fact that about half of the total number of spearheads found on the Estonian territory are from Saaremaa (Selirand, 1974, p. 109). This applies both to the pattern-welded spearheads and to those without pattern-welding. Concerning representativity it is possible to see the same distributional pattern when the grave finds are excluded, which shows that Saaremaa is "rich" in spearheads. These facts must be taken into consideration when interpreting the spearheads in relation with the society in general. It is also significant that field studies in the last decade have shown that Saaremaa was an important area of iron production at the same time (Peets, 1991, p. 77). Additional iron production sites have been found on Saaremaa recently (oral information from Jüri Peets, 1994).

Although this discussion is based on only 21 specimens, I think it is possible to single out some frequent details.

6.2. Measurements

The total length of the spearheads of M type from Saaremaa falls between 270 and 520 mm. Eight spearheads are 400 mm and longer. Ten spearheads are between 300 and 400 mm long.

The length of the blades varies between 182 and 385 mm. Six spearheads have a longer blade than 300 mm and eleven are longer than 200 mm. The width of the blades falls between 35 and 65 mm.

The sockets are between 88 and 148 mm. Nine spearheads have a longer socket than 120 mm. The diameter of the sockets is between 22 and 31 mm.

The width of the transition part between the socket and the blade varies between 11 and 17 mm. The most common shape of the transition part is six-sided with oval section.

The socket in proportion to the blade is between 1:1.7 and 1:3.1. The width of the blade in proportion to its length is between 1:4.3 and 1:7.8.

For a general survey see Table 1.

6.3. Details

Six spearheads have traces of silver decoration. In three cases it has been possible to establish a pattern similar to the Ringerike style (Mägi-Lõugas, 1993, p. 214).

A closer look at the details shows that six spearheads have more or less visible facets. The faceted area is always limited to the upper zone of the socket. In a few cases, when it has been possible to measure the length of the facets, it has been found to be around 30 mm. In some cases knobs and vague traces of knobs are visible on each side of the facets.

Twelve spearheads have a knob on the transition part between the blade and the socket. The knobs vary in size between 3 and 21 mm vertically and are mostly surrounded by mouldings. In seven cases there is a triangle above the knob. The side measurements of these triangles vary between 13 and 18 mm. These triangles are most common among the silver ornamented spearheads. Only one spearhead with a triangle (No. 20) has no traces of silver.

Another detail which has to be discussed is the shape of the mid-rib. Petersen described the M type as having a high mid-rib and this feature can easily be seen in the material from Saaremaa. A considerable number have not only a sharp mid-rib but also a notably raised one. Six spearheads have a raised mid-rib. Raised mid-ribs are especially common among the spearheads with a triangular-shaped decoration.

For a general survey see Table 2.

6.4. Groups

Basing on the general shape of the spearhead, it is possible to divide the spearheads of the M type from Saaremaa into two main groups. The first group consists of the longer and heavier spearheads, all with a sharp and raised mid-rib and frequently silver-ornamented (Plate III). The following spearheads belong to this group: No. 1, No. 4, No. 11, and No. 13. This group also includes No. 20, even though the raised mid-rib is not so evident. Spearhead No. 18 is also heavy and long, but due to the worn mid-rib it is difficult to make further statements. Spearhead No. 14 from Muhu also has a raised mid-rib and is silver-ornamented as well, but much smaller in size. No. 4, No. 11, and No. 13 are grave finds. The last two come from the same stone-setting. All these spearheads have the same pattern-welding, except No. 14.

Table 1

Measurements (mm) of the M-type spearheads from Saaremaa

No.	M-number	Place	Parish	Fi	TL	BL	BW	RL	TSW	SL	SD	KA1	KA2	TriS	Fac
1	AI 3822:393	Randvere	Kaarma	S	468	326	65	65	14	142	26	19	0	18	0
2	AI 3375:1	Kuressaare	Kaarma	S	400	275	38	37*	12	125	25	0*	0*	0	30*
3	AI 3375:4	Kuressaare	Kaarma	S	390	265*	46	42	13	125	24	0*	0*	0	30*
4	AI 3995:853	Käku	Kaarma	G	520	385	61	65	16	135	31	21	0	18	0
5	AI 3995:324	Käku	Kaarma	G	385	270	62*	60	15	115	26	0*	0	0	0
6	AIK 67:1	Kaarma	Kaarma	S	373	347	60	68	13	0	0	11	0	0	0
7	AIK 1:52	Ilpla	Püha	G	364	262	39	40	13	102	25	2	0	0	0
8	AI 3822:482	Valjala	Valjala	S	440	292	59*	50	13	148	27	0	0	0	0
9	AI 3895:410	Randvere	Pöide	G	398	250	49	45	14	148	25	0*	0*	0	30*
10	AI 2712:14	Pöide	Pöide	S	330	228*	53	50	15	102*	22*	0	0	0	0
11	AI 3884:1671	Viltina	Pöide	G	425	300	60	65	13	125	24	13	0	13	0
12	AI 3884:2367	Viltina	Pöide	G	306	218	46	35	13	88	29	0*	0	0	0
13	AI 3884:3905	Viltina	Pöide	G	425	320	56	42	12	105	24	15	0	14	0
14	AIK 43:3	Muhu	Muhu	S	335	246	50	43	12	89*	23*	5*	0	15*	0
15	AIK 88:191	Saaremaa	Unknown	U	270	182	35	23	12	88	22	3	0	15	0
16	AIK 88:197	Saaremaa	Unknown	U	22	0	53	35	11	0	0	0	0	0	0
17	AIK 85:7	Saaremaa	Unknown	U	311	194	45	35	12	117	24	0	0	12	0
18	AIK 85:4	Saaremaa	Unknown	U	400	264	60	45	17	136	29	5	0*	0	0*
19	AIK 88:188	Saaremaa	Unknown	U	467	337	43	53	11	130	25	0*	0*	0	0*
20	AIK 85:36	Saaremaa	Unknown	U	380	280	50	40	11	100	26	10	0	13	0
21	AIK 89:6	Saaremaa	Unknown	U	290	187	40*	40*	11	103	22	0*	0	0	0*

No. = Number in this publication. M-number = Museum number. Fi = Find circumstances: S = Stray find; G = Grave find; U = Unknown. TL = Total length (this measurement irrespective of condition). BL = Length of the blade. BW = Width of the blade. RL = Length of the run. TSW = Width of the transition part. SL = Length of the socket. SD = Diameter of the socket. KA1 = Total area of the upper knob. KA2 = Total area of the lower knob. TriS = Length of the side of the triangle. Fac = Length of facets. * = measurement uncertain.

Table 2

Survey of the M-type spearheads from Saaremaa

No.	M-number	Place	Parish	Ag	Met	Rm-r	Sm-r	Mm-r	Fm-r	K	KM	Tri	Fac	PsD	PD	BsD	BD	SsD	SD	Be	Ri	RiH
1	AI 3822:393	Randvere	Kaarma	×*	–	×	–	–	–	×	×	×	–	–	–	×	–	×	–	–	–	–
2	AI 3375:1	Kuressaare	Kaarma	–	–	–	×	–	–	?	–	–	×	×	–	–	–	×	–	×	–	×
3	AI 3375:4	Kuressaare	Kaarma	–	–	–	×	–	–	×	–	–	×	–	×	×	–	×	–	×	–	–
4	AI 3995:853	Käku	Kaarma	×	–	×	–	–	–	×	×	×	–	–	–	–	–	–	–	–	–	–
5	AI 3995:324	Käku	Kaarma	–	–	–	–	×	–	?	–	–	–	–	–	–	×	–	–	–	×	–
6	AIK 67:1	Kaarma	Kaarma	–	–	–	×	–	–	×	×	–	–	–	–	–	–	–	×	–	–	–
7	AIK 1:52	Ilpla	Püha	–	–	–	–	×	–	–	–	–	–	–	–	–	–	–	–	–	–	×
8	AI 3822:482	Valjala	Valjala	–	–	–	×	–	–	–	–	–	–	–	–	×	–	×	–	–	–	–
9	AI 3895:410	Randvere	Pöide	–	–	–	×	–	–	?	–	–	×	–	–	–	–	–	–	–	×	–
10	AI 2712:14	Pöide	Pöide	–	–	–	×	–	–	–	–	–	–	–	×	–	–	×	–	–	–	×
11	AI 3884:1671	Viltina	Pöide	×	–	×	–	–	–	×	×	×	–	×	–	×	–	×	–	×	×	–
12	AI 3884:2367	Viltina	Pöide	–	–	–	–	×	–	×	–	–	–	–	–	×	–	×	–	–	–	–
13	AI 3884:3905	Viltina	Pöide	×	–	×	–	–	–	×	×	×	–	–	–	–	–	–	–	–	×	–
14	AIK 43:3	Muhu	Muhu	×	–	×	–	–	–	×	–	×	–	–	–	–	–	–	×	–	–	–
15	AIK 88:191	Saaremaa	Unknown	×	–	–	×	–	–	×	–	×	–	×	–	–	–	×	–	–	–	–
16	AIK 88:197	Saaremaa	Unknown	–	–	–	–	–	×	–	–	–	–	–	×	–	×	–	×	–	–	–
17	AIK 85:7	Saaremaa	Unknown	–	–	–	–	×	–	–	–	×	–	–	–	×	–	–	–	–	×	–
18	AIK 85:4	Saaremaa	Unknown	–	–	–	–	×	–	×	–	–	×	–	–	–	×	–	–	–	–	×
19	AIK 88:188	Saaremaa	Unknown	–	–	–	×	–	–	?	–	–	?	–	–	–	–	–	–	–	–	×
20	AIK 85:36	Saaremaa	Unknown	–	–	×	–	–	–	×	×	×	–	×	–	×	–	×	–	×	–	–
21	AIK 89:6	Saaremaa	Unknown	–	–	–	–	×	–	?	–	–	?	–	–	–	×	–	–	–	–	–

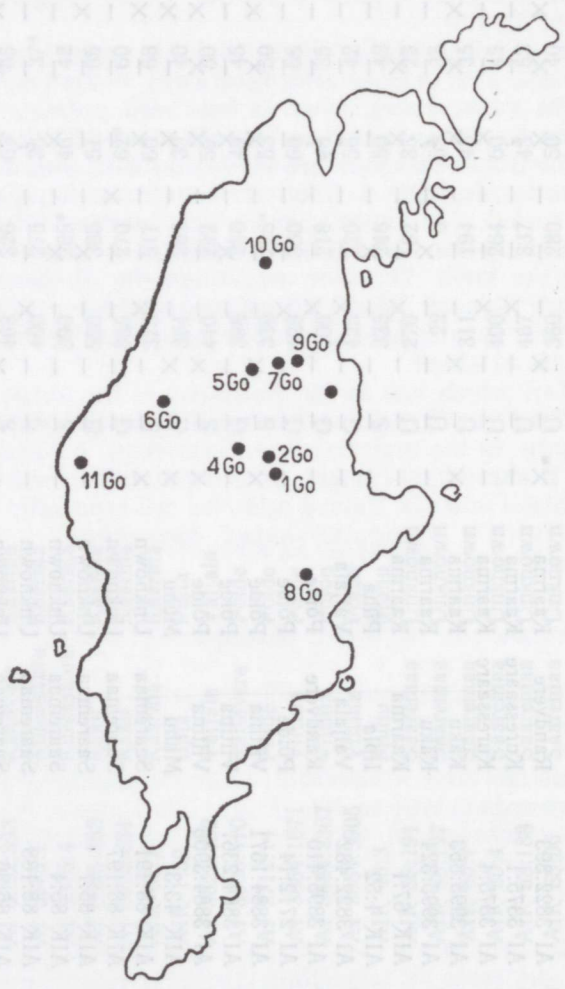
No. = Number in this publication. M-number = Museum number. Ag = Silver-decorated. Met = Other metal. Rm-r = Raised mid-rib. Sm-r = Sharp mid-rib. Mm-r = Marked mid-rib. Fm-r = Flat mid-rib. K = Knob. KM = Knob with moulding. Tri = Triangle. Fac = Facets. PsD = Point slightly damaged. PD = Point damaged. BsD = Blade slightly damaged. BD = Blade damaged. SsD = Socket slightly damaged. SD = Socket damaged. Be = Spearhead bent. Ri = Rivet in the socket. RiH = Rivet-hole on the socket. * = Uncertain.

The second group consists mostly of spearheads with a slenderer and more elongated shape. The mid-rib is sharp, but not raised. Facets are frequent among these spearheads (Plate II, *1—3*). This group includes the following spearheads: No. 2, No. 3, No. 5, No. 8, No. 9, No. 10, and No. 19. Spearhead No. 21 probably also belongs to this group, but due to its condition it is difficult to make a reliable statement. All these spearheads have the same pattern-welding.

The six remaining spearheads, No. 6, No. 7, No. 12, No. 15, No. 16, and No. 17, differ both with respect to their external and internal qualities and also between each other. Some of them must be regarded as intermediary types. Among these spearheads four different groups of pattern-welding can be seen (Plate II, *4*, *5*).

7. THE M TYPE ON GOTLAND

In the museums of Stockholm, Visby, and Uppsala 11 spearheads of M type were classified. This is a small group compared to Saaremaa, especially when only the pattern-welded spearheads from Saaremaa are taken into consideration.



Map 2. Spearheads of M type on Gotland.

A closer look at the find circumstances of the M-type spearheads reveals that they are all stray finds. One of these is, however, possible to interpret as a grave find, due to the find circumstances, since it was found with an axe and a skeleton, according to the archive information.

Geographically the spearheads come from the northern part of the island (see Map 2). Only Vallstena and Ganthem parishes have yielded more than one specimen. Two spearheads of M type are from Vallstena and Ganthem respectively.

8. DETAILED DESCRIPTION

The spearheads from Gotland have been measured in the same way as the ones from Saaremaa. As already mentioned, the pattern-welding remains unknown for the present moment. This means that it is only possible to compare the external shape.

No. 1Go

Stray find from Gardese in Ganthem Parish (SHM 17291:3; Plate IV, *1*). Spearhead with a long and wide blade, rhombic in section. Total length 482 mm. The point of the blade is partly broken. The upper part of the blade is squarish-rhombic in section. The mid-rib is sharp. The edge angle is sharp and the run is long. The transition part is six-sided and oval in section. The socket is long and silver-ornamented. No pattern is visible on the silver surface, except for some stripes. Vague traces of a knob, but no facets. On the socket there are two rivets. The spearhead is in rather good condition.

Socket in proportion to blade 1:2.0. Width of the blade in proportion to its length 1:5.0 (estimated).

This spearhead was brought to the museum in 1923 together with two swords. There is no information whether they were found together or not (Museum catalogue).

No. 2Go

Stray find from Kumla in Ganthem Parish (SHM 12957). Spearhead with a rather long and wide blade, rhombic in section. Total length 322 mm. The point of the blade is long with a squarish-rhombic section. The mid-rib is sharp. The edge angle is sharp and the run is long. The transition part is six-sided and rounded in section. The socket is long with remains of a knob in the upper zone. No mouldings are visible. The spearhead is in good condition.

Socket in proportion to blade 1:1.9. Width of the blade in proportion to its length 1:4.0.

This spearhead was found in a field on Kumla farm and sold to the museum in 1906 (Museum catalogue).

No. 3Go

Stray find from Gothem Parish (SHM 7314; Plate IV, *2*). Spearhead with a long, slender but solid blade, rhombic in section. Total length 457 mm. The point of the blade is partly damaged. The mid-rib is sharp. The edge angle is less sharp and the run is short. On the side of the run there are traces of silver. The transition part is six-sided and oval-round in section. The socket is long and silver-ornamented in the Mammen style. On the upper zone of the socket there are facets, also in silver, with an interlaced pattern. The facets are surrounded by thin knobs. On the socket there is a rivet. The spearhead is in good condition. This spearhead has to be considered as an intermediary type, between M and K.

Socket in proportion to blade 1:2.7. Width of the blade in proportion to its length 1:8.3.

This spearhead was found in a field during ploughing. In the socket there were remains of wood. The spearhead was registered in the museum in 1883 (Museum catalogue).

No. 4Go

Stray find from Halla Parish (SHM 10658:27). Spearhead with a long, slender but solid blade, rhombic in section. Total length 350 mm (socket broken). The point of the blade is partly broken. The mid-rib is sharp, but worn. The edge angle cannot be determined and the run is short. The transition part is six-sided and round-oval shaped. The socket is broken. The spearhead is in bad condition. It has to be considered as an intermediary type, between M and K.

Socket in proportion to blade — (not possible to determine). Width of the blade in proportion to its length — (not possible to determine).

No further information is available about this spearhead. It was registered in the museum in 1898 (Museum catalogue).

No. 5Go

Stray find from Källunge myr in Källunge Parish? (SHM 12360:8). Spearhead with a long and slender blade, slightly rhombic in section. Total length 367 mm. The blade is broken into two pieces. The point is partly damaged. The mid-rib is flat, but worn. The edge angle is difficult to determine, due to a damage just above the angles (on both sides), but most probably sharp. The run is short. The transition part is six-sided and oval in section. The socket is long but slightly broken. On the upper zone of the socket there are traces of a knob. The spearhead is in bad condition.

Socket in proportion to blade 1:1.9 (estimated). Width of the blade in proportion to its length 1:6.2 (estimated).

According to the archive the spearhead was bent with a rivet in the socket. No further information is available. It was registered in the museum in 1905 (Museum catalogue).

No. 6Go

Stray find from Klinte in Follingbo Parish (SHM 10194; Plate IV, *3*). Spearhead with a long and slender blade, rhombic in section. Total length is 458 mm. The point of the blade is partly broken and slightly bent with a squarish-rhombic section. The mid-rib is sharp surrounded by furrows, especially on one side of the blade. The edge angle is difficult to determine, due to damage, and the run is long with traces of silver on the side. The transition part is six-sided and oval in section. The socket is long and has ornamentation in the Ringerike style, with silver and gold. The mouth of the socket is slightly broken. Between the transition zone and the blade there is a four-armed rosette-shaped part, measuring 50×45 mm, with leaf bunches in gold and silver on the arms and with perforations between the arms. On the upper zone of the socket there are facets with an interlaced pattern. No knobs are visible. The spearhead is in good condition apart from some small damages.

Socket in proportion to blade 1:1.3 (estimated and the rosette-shaped part counted as a part of the socket). Width of the blade in proportion to its length 1:5.3 (estimated).

This spearhead was found in Vidangarsmyr during hoeing in the field and registered in the museum in 1896 (Museum catalogue).

No. 7Go

Stray find from Bjerges in Vallstena Parish (SHM 10528). Spearhead with a long, slender, and solid blade, rhombic in section. Total length is 482 mm. The spearhead is bent. The point of the blade (partly damaged) has a squarish-rhombic section. The mid-rib is sharp, but worn. The edge angle is difficult to determine, due to the condition. The run is long. The transition part is probably six-sided and oval in section. The socket is broken. No facets or knobs are visible. The spearhead is in bad condition. This has to be considered as an intermediary type, between K and M.

Socket in proportion to blade — (not possible to determine). Width of the blade in proportion to its length — (not possible to determine).

This spearhead was brought to the museum in 1898 together with seven spearheads and an iron axe. No further information (Museum catalogue).

No. 8Go

Grave find (?) from Alskog Parish (UMF 1079). Spearhead with a rather long and wide blade, rhombic in section. Total length is 275 mm. The point of the blade is partly broken. The mid-rib is marked. The edge angle is sharp and the run is long. The transition part is six-sided and oval in section. The socket is long but broken. No traces of facets or knobs. The spearhead is in rather good condition.

Socket in proportion to blade 1:1.9 (estimated). Width of the blade in proportion to its length 1:4.5.

This spearhead was found in a field in sandy soil together with an axe and a skeleton in 1830 (Museum catalogue).

No. 9Go

Stray find from Gudingsåkrarna in Vallstena Parish (GF C 8892). Spearhead with a long, slender, and solid blade, rhombic in section. Total length is 460 mm. The point of the blade is slightly damaged, with a squarish-rhombic section. The mid-rib is sharp. The edge angle is less sharp and the run is short. The transition part is six-sided and oval-round in section. The socket is long and filled with either iron or wood. On the upper zone of the socket there are facets surrounded by thin knobs. The spearhead is in good condition. The spearhead has to be considered as an intermediary type, between K and M.

Socket in proportion to blade 1:1.9. Width of the blade in proportion to its length 1:7.4.

This spearhead was found 1 km south of Bjerges. It was registered in the museum in 1938 (Museum catalogue).

No. 10Go

Stray find from Tingstäde Parish (GF C 8947). Spearhead with a long and slender blade, rhombic in section. Total length is 345 mm. The point of the blade is short with a squarish-rhombic section. The mid-rib is marked (due to wear). The edge angle is less sharp and the run is long. The transition part is six-sided and oval-round in section. The socket is long, slightly damaged. In the upper zone of the socket there are facets and a thin knob visible. The spearhead is in good condition. This spearhead has to be considered as an intermediary type, between K and M.

Socket in proportion to blade 1:2.3. The width of the blade in proportion to its length 1:6.0.

This spearhead was found south of Tingstäde church during road work and brought to the museum in 1938 together with a fragment of a single-edged sword. No information whether they were found together (Museum catalogue).

No. 11Go

Stray find from Ansarve in Tofta Parish (GF C 9070). Spearhead with a comparatively short and wide blade, rhombic in section. Total length is 280 mm. The point of the blade is blunt and rhombic in section. The mid-rib is sharp. The edge angle is less sharp and the run is long. The transition part is six-sided and oval in section. The socket is long and has facets in its upper zone, which are surrounded by thin knobs. The socket is cracked and has two rivet-holes. The spearhead is in good condition apart from the cracked socket. This spearhead is divergent with the blunt point. It might be a spearhead from another period.

Socket in proportion to blade 1:1.2. Width of the blade in proportion to its length 1:4.4.

The spearhead was found 1 km SSW of Tofta church, when ploughing a field. It was brought to the museum in 1939 (Museum catalogue).

9. ANALYSIS

9.1. The role of Gotland

No information is available about the exact number of spearheads from the Late Iron Age found on Gotland and the Swedish mainland. But broadly speaking, there are more finds of spearheads from the Early Viking Age on Gotland, especially during the transition period from the Vendel to the Early Viking Age (Thålin-Bergman, 1983, p. 267). The later spearheads such as the G, K, and M types are more sparsely represented. One factor behind this phenomenon is a change in the burial customs. Most types of weapons were apparently not put into the graves any longer and have therefore seldom been preserved to our days. However, it is possible to observe an increase of axes among the grave goods instead (Carlsson, 1988, p. 93).

The problems concerning the representativity of spearheads cannot be discussed only in terms of grave finds on Gotland because a considerable number of spearheads have been found as offering finds. In all, 463 spearheads have been recorded from the most famous place, Gudingsåkrarna in Vallstena Parish (Engström, 1972, p. 11), which was used as an offering place during a long period. The earliest finds are from the Early Iron Age, but the majority belong to the Early Viking Age (Stenberger, 1964, p. 741; Engström, 1972, p. 15). The latest finds are from the 11th century (Engström, 1972, p. 15). There are also other places with offerings on Gotland, for instance Gane in Bäl Parish (Thålin-Bergman, 1983, p. 264).

In this light it may seem difficult to discuss and compare the Gotlandic material with the material from Saaremaa. This is a well-known problem, but it has to be better elucidated. We have a concrete material and the conclusions have to be drawn from this even though some uncertainty will always exist, due to representativity problems.

The discussion of the Gotlandic M-type spearheads is based on 11 specimens.

9.2. Measurements

The total length of the spearheads of M type from Gotland falls between 275 and 482 mm. Five spearheads are over 400 mm long. Four spearheads are between 300 and 400 mm.

The length of the blades varies between 155 and 400 mm. Five spearheads have a longer blade than 300 mm and four blades are longer than 200 mm. The width of the blades falls between 35 and 62 mm.

The sockets are between 90 (estimated) and 162 mm (No. 6Go not included). Six spearheads have a longer socket than 120 mm. The diameter of the socket is between 23 and 30 mm.

The width of the transition part between the socket and the blade varies between 10 and 18 mm. The most common shape of the transition part is six-sided with oval section.

The socket in proportion to the blade is between 1:1.2 and 1:2.7. The width of the blade in proportion to its length is between 1:4.0 and 1:8.3.

For a general survey see Table 3.

9.3. Details

Three spearheads have traces of silver decoration. One also has inlays of gold. In two cases it has been possible to establish a pattern similar to the Mammen and Ringerike styles.

A closer look at the details reveals five spearheads with more or less visible facets. The faceted area is always limited to the upper zone of the socket. In a few cases, when it is possible to measure the length of the facets, one can establish a length falling between 20 and 28 mm. Knobs can also be seen on each side of the facets. They measure between 3 and 5 mm vertically.

Two spearheads have a knob on the transition part between the socket and the blade. One of these measures about 5 mm vertically, the other spearhead could not be measured due to a poor state of its preservation. Neither triangles nor knobs with mouldings can be seen in the Gotlandic material.

As regards the mid-rib, this is never raised on Gotland. Eight spearheads have sharp mid-ribs.

For a general survey see Table 4.

9.4. Groups

As the Gotlandic spearheads of M type are only represented by 11 specimens it may be difficult to generalize, but the first impression is that the spearheads are heterogeneous. A small group can be formed by four spearheads which have a long, slender, and solid blade in common: No. 3Go, No. 4Go, No. 7Go, and No. 9Go. Furthermore, they can all be considered as intermediary types between M and K.

10. A COMPARISON

10.1. Measurements

Summing up the facts, it is possible to see that only on Saaremaa there is a spearhead longer than 500 mm. On Gotland the longest spearhead is 482 mm.

A comparison of the averages of the measurements of the Saaremaa and Gotland finds shows the following: the length of the blades 274 mm and 267 mm, the width of the blades 51 mm and 44 mm, the length of the sockets 120 mm and 130 mm, and the diameter of the sockets 26 mm, respectively.

These figures show that the blades of the M-type spearheads on Saaremaa are both longer and wider than the Gotlandic ones. On the other hand, the sockets seem to be longer on Gotland, while the diameters are similar on both islands.

10.2. Details

On Saaremaa there are six silver-ornamented spearheads and on Gotland three. Among these three are decorated in Ringerike style on Saaremaa. On Gotland, one has Ringerike style and one has Mammen style.

Four spearheads with clear facets are from Saaremaa and five are from Gotland. The Gotlandic facets seem to be shorter.

Knobs (not in connection with facets) at the transition part between the socket and the blade are more frequent on Saaremaa. Ten are from Saaremaa, while two are from Gotland. Additionally, there are neither mouldings nor triangles on the Gotlandic spearheads of M type.

There are no raised mid-ribs on Gotland. Six spearheads on Saaremaa have a raised mid-rib.

Table 3

Measurement (mm) of the M-type spearheads from Gotland

No.	M-number	Place	Parish	Fi	TL	BL	BW	RL	TSW	SL	SD	KA1	KA2	TriS	Fac
1Go	SHM 17291:3	Gardese	Ganthem	S	482	320	62	70	18	162	30	0*	0	0	0
2Go	SHM 12957	Kumla	Ganthem	S	322	212	53	50	10	110	23	5*	0	0	0
3Go	SHM 7314	Gothem	Gothem	S	457	332	40	40	15	125	26	4	5	0	24
4Go	SHM 10658:27	Halla	Halla	S	350	300*	35*	35	12	50*	0	0	0	0	0
5Go	SHM 12360:8	Källunge myr	Källunge?	S	367	242*	39	35	11	125*	26*	0*	0	0	0
6Go	SHM 10194	Klinte	Follingbo	S	458	263	50*	52	13	195*	23*	0	0	0	0*
7Go	SHM 10528	Bjerges	Vallstena	S	482	400	40*	35*	15	82*	0	0	0	0	0
8Go	UHM 1079	Alskog	Alskog	G	275	180	40	40	12	95*	21*	0	0	0	0
9Go	GF C8892	Gudingsåkrarna	Vallstena	S	460	304	41	30	17	156	23	3	3	0	21
10Go	GF C8947	Tingstäde	Tingstäde	S	345	240	40	40	15	105	26	0*	0*	0	0*
11Go	GF C9070	Ansarve	Tofta	S	280	155	35	35	16	125	25	5	3	0	28

See Table 1 for legend.

Table 4

Survey of the M-type spearheads from Gotland

No.	M-number	Place	Parish	Ag	Met	Rm-r	Sm-r	Mm-r	Fm-r	K	KM	Tri	Fac	PsD	PD	BsD	BD	SsD	SD	Be	Ri	RiH
1Go	SHM 17291:3	Gardese	Ganthem	×	–	–	×	–	–	?	–	–	–	×	–	×	–	–	–	–	×	–
2Go	SHM 12957	Kumla	Ganthem	–	–	–	×	–	–	×	–	–	–	–	–	×	–	–	–	–	–	–
3Go	SHM 7314	Gothem	Gothem	×	–	–	×	–	–	×	–	–	×	×	–	×	–	–	–	–	×	–
4Go	SHM 10658:27	Halla	Halla	–	–	–	×	–	–	–	–	–	–	×	–	×	–	–	×	–	–	–
5Go	SHM 12360:8	Källunge myr	Källunge?	–	–	–	–	–	×	×	–	–	–	×	–	–	×	–	×	×*	×*	–
6Go	SHM 10194	Klinte	Follingbo	×	×	–	×	–	–	–	–	–	×	×	–	×	–	×	–	×	–	–
7Go	SHM 10528	Bjerges	Vallstena	–	–	–	×	–	–	–	–	–	–	×	–	×	–	–	×	×	–	–
8Go	UHM 1079	Alskog	Alskog	–	–	–	–	×	–	–	–	–	–	×	–	–	–	–	×	–	–	–
9Go	GF C8892	Gudringsåkrarna	Vallstena	–	–	–	×	–	–	×	–	–	×	×	–	×	–	–	–	–	–	–
10Go	GF C8947	Tingstäde	Tingstäde	–	–	–	–	×	–	×	–	–	×	–	–	–	–	×	–	–	–	–
11Go	GF C9070	Ansarve	Tofta	–	–	–	×	–	–	×	–	–	×	–	–	–	–	×	–	–	–	×

See Table 2 for legend.

10.3. Shape and "models"

Regarding the shape, at least two different more common "models" can be sorted out. The first is formed by the spearheads with a long and wide blade with a long run, sharp edge-angles, and a long socket. The second has a long, slender, and solid blade with a shorter run and less sharp edge-angle. It also has a long socket. This model often falls between types K and M. The first model seems to be more common in Estonia, while the second is better represented in Sweden.

10.4. Bent and broken

Four of the Saaremaa and three of the Gotland spearheads are slightly bent. Looking closely at different kinds of damage it is possible to see that four of the Saaremaa and eight of the Gotland spearheads have a slightly damaged point. Three spearheads from Saaremaa and none from Gotland have a more damaged point. Both Saaremaa and Gotland have seven spearheads with a slightly damaged blade. On Saaremaa there are four damaged blades within the material and on Gotland there is one. Concerning the damages on the sockets it is possible to see nine slightly damaged ones on Saaremaa and three on Gotland. Three Saaremaa spearheads and four Gotland ones have a severely damaged socket.

11. DISCUSSION

11.1. General

The very first look at the material from the islands of Saaremaa (Muhu) and Gotland immediately reveals the differences. On Saaremaa the material is abundant and it is possible to divide the spearheads into two main groups. On Gotland, however, no strikingly recurrent features can be observed, except for the solid blade. The M-type spearheads seem to form a very disparate group.

11.2. Find circumstances

The difference in burial customs on the islands is a serious drawback for this investigation. But with the support of the stray finds it is possible to form a certain picture. It is of course very interesting to speculate whether the M-type spearheads registered as stray finds on Gotland represent grave goods or offerings or something else.

It also has to be kept in mind that seven spearheads on Saaremaa have been registered as stray finds and additional seven are from unknown find places. These 14 spearheads represent more than 67% of the whole group. No certain offering finds have been found on Saaremaa, however. The general opinion is that the stray finds come from destroyed graves, which may very well be the case when we bear in mind the development of agriculture. A survey of the probable find years and museum numbers indicates that the stray finds are mainly from the 19th century or from the beginning of this century. On Gotland the stray finds show a similar picture, at least in this investigation.

Closely related to the discussion of the find circumstances are the different damages of the spearheads. Is it a question of wear due to time or have the spearheads been deliberately destroyed? If the latter is the case, is there a difference between grave rituals and offerings? This is a very interesting issue, especially when studied from a wider angle. The agri-

cultural implements can of course not be overlooked as "destroyers" to a certain extent.

From this limited investigation it is, however, possible to see 18 damages on blades and 12 damages on sockets within the Saaremaa material. On Gotland 16 damages on blades and 7 damages on sockets have been registered. Looking more closely at Saaremaa in this respect, and still within the scope of this investigation, it is possible to see a tendency towards less destroyed spearheads among the grave finds than among the stray finds. It might just be a coincidence or just be due to the fact that they have not been exposed to fire. In the excavation reports from both Randvere and Viltina it is mentioned that the weapons seem to have been destroyed by force rather than by fire (Archive of AI, Tallinn).

The speculations upon rituals automatically lead further to the possible reason for the damage. Traditions and rituals in connection with weapons can very well have differed in different areas but there seem to be similarities as well. For instance, the ritual of laying down the spearheads on the ground as a sign of cease-fire can be obtained in a capitular by Charles the Great at the beginning of the 9th century (Menghin, 1980, p. 245) and in Henric's Chronicle from the beginning of the 13th century (HL. I, XII, XIII, XVII and passim).

On Gotland, Odin's law has been seen as a possible source in connection with the hidden silver hoards. The Icelander Snorre Stularsson tells us in the 13th century about Odin who made laws stating that what was hidden in the ground during a person's lifetime should give him pleasure after death (Stenberger, 1958, p. 309; Jansson, 1983, p. 219). Perhaps Odin's law could be related to the stray finds from the fields, as Odin was also the god of war, and the spearhead was one of his attributes.

11.3. Islands and innovations

In spite of the differences in burial and offering customs it ought to be interesting to study two separate geographical areas, both having that in common that they are islands. Both areas were more or less isolated from the mainland, and both were on the "traffic route" across the Baltic Sea. These factors must to a certain extent have affected the process of innovation. There may have been a tendency to take a more conservative attitude towards new ideas, which is a well-known phenomenon concerning islands. Perhaps only a few more powerful persons in a leading position were ready to accept new ideas from outside. For this group the novelties may have been a way of legitimating their position. Later on the ideas may have been either accepted or rejected by the others.

On the other hand, local peculiarities may have been preserved and remained unaffected by certain areas. This may of course be difficult to notice on a limited number of spearheads, in this case the M-type spearheads, but disregarding a too narrow and fixed typology and allowing oneself to cross "the type boundaries" it might be possible to observe such peculiarities. I see a chance of getting closer to the problems concerning import and local production in this way, and all that it means in terms of understanding the society of that time.

11.4. The silver-decorated spearheads

Let us have a closer look at the silver-ornamented spearheads. Now we have a situation where the type is accompanied by a pattern which, to a certain extent, is believed to indicate the geographical origin as well as the chronological position. These patterns have been divided and redivided

into many groups, often based on specimens where the ornamentation is preserved in a poor condition. For the moment, I do not believe that we can come any closer to the origin of these spearhead by studying only the ornamental factors. Concerning chronological questions I think we have to be more cautious and pay more attention to the possibility of recurring ideas and tendencies in general. We cannot describe the work of our ancestors in terms of a fixed pattern. An excellent indication of that is a G-type spearhead with a silver-decorated socket in geometric style found in Torslunda Parish on Öland in Sweden. This style normally belongs to the Early Viking Age and not to the G type.

On Gotland there are only three spearheads of M type with silver ornamentation. They all vary in both shape and details. The material from Saaremaa again shows a completely different picture. The silver-ornamented spearheads of M type are very similar in all respects. I refer to similarities such as the triangle on the transition part between the blade and the socket, the knobs with mouldings, and the very sharp and raised mid-rib.

11.5. Chronology

The aim of this study has not been to discuss chronological questions. The material itself and all other conditions are too limited for any conclusions. Neither the stray finds on Gotland nor the finds from Saaremaa contribute very much to a discussion of the chronology. For the moment, Petersen's dating to the 11th century is still valid. Scholars such as Lehtosalo-Hilander, Fuglesang, and Solberg seem more or less to agree upon this dating (Lehtosalo-Hilander, 1982, p. 35; Fuglesang, 1980, p. 41; Solberg, 1984, p. 100). Fuglesang dates the transitional phase between the Mammen and Ringerike style to the end of the 10th century, and she considers the Ringerike style to have been fully developed between 1025 and 1070 (Fuglesang, 1980, p. 18). Selirand on the other hand dates the spearheads of M type later, mainly to the end of the 11th century and the 12th century (Selirand, 1975, included list).

12. CONCLUSION

12.1. The origin

From this discussion it is possible to maintain that no silver-decorated pattern-welded spearheads of M type on Saaremaa are of Gotlandic origin. At least this is what the investigated material indicates. Regarding the spearheads without silver ornamentation I cannot see any striking similarity between Saaremaa and Gotland either. It is of course possible to point out some similarities, but only with reference to the general features of the M type, for instance the facets. Divergent details bring out the differences.

I think we are now prepared to test the hypothesis of local production on Saaremaa. This I am ready to say partly as a result of this investigation, but also based on a wider study of the M-type spearheads around the Baltic Sea. The skilful handicraft and the high level of artistry behind the ornamentation in the Ringerike and Mammen styles can of course be further discussed in terms of Scandinavian master smiths moving from place to place. But why are the spearheads themselves so different then?

12.2. The society behind the spearheads

Through the spearheads it is possible to gain insight into a strong society with plenty of creativity. This is testified both by the general abundance of spearheads but also by the luxury specimens. On Saaremaa there apparently existed a society that was ready to accept and develop new ideas. Behind there is not only creativity but also the need. If something is needed there is also a demand. The inhabitants of Saaremaa themselves may have needed the spearheads for defence at that time. This seems very possible due to the island's geographical position. But there may also have been economic reasons. This ought to be studied in connection with the development of agriculture in order to create a clearer picture of the economy.

But who was the owner of the big, silver-decorated spearheads? Hardly a commoner! This allows us to speculate about a nonegalitarian society on Saaremaa at that time. The hillforts on Saaremaa also hint at similar conclusions.

Additionally, I would like to speculate about the triangle on the transition part between the socket and the blade. Can it have been a trade mark belonging to a certain workshop on Saaremaa?

12.3. The background of this investigation

The background of this survey was Estonian research, which believes that a considerable number of spearheads of M type both with and without silver are of Gotlandic origin. What are the reasons for this? One factor is undoubtedly the practical difficulties for the scholars to travel and even obtain foreign literature during the Soviet period (1940—91). The research work had to be based on published pictures and descriptions as far as possible.

This is all understandable, but from where comes the idea of Gotland as the place of origin? Because of the sparse material, very few pictures have been used for the interpretation. Conclusions must have been drawn upon a loose basis or influenced by some general ideas. This concerns both the silver-ornamented spearheads and those without silver.

The short distance between the islands is of course a weighty reason. But I would rather suggest that the phenomenon of Gotland itself is one of the underlying reasons. As mentioned earlier, there are plenty of weapons during the Vendel and the Early Viking Age on Gotland. Later on, the picture changes and the weapons are less common among the prehistoric finds. It is hardly worthwhile speculating or believing that weapons became less important, even though the sparse material could indicate that. On the contrary, finds of considerable slag remains show that smithery work was important in Visby in the 12th century (Nihlén, 1927, p. 693). Magnusson has later estimated the slag remains to 7500 cu m (Magnusson, 1989, p. 169). As additional proof of the smithery activity in Visby at that time we have the bull of Pope Gregory IX from 1229, according to which the weapon trade to different countries in the east was forbidden (Diplomatarium Svecanum Nos. 250 and 253). The richness of silver hoards on Gotland is another factor contributing to an interpretation in favour of export — trade and creativity in general. Gotland is also mentioned many times in Henric's Chronicle.

Gotland must have been very important in many ways, but this should not cause us to consider Saaremaa as less important or less developed. I do not accept a starting point for an interpretation of prehistory based on an understatement of the capacity of our ancestors. We are partly blocked by earlier research. Looking back at publications from earlier

periods it is possible to see a close connection between politics and archaeology resulting in both ethnic and general statements on both sides of the Baltic Sea. At the same time our own interpretation of prehistory is influenced by the society of today including everything from our own values to our experience (Keller, 1978). In other words there are many ways of understanding prehistory and our ancestors, which means an ongoing changing prehistory through time. "Understanding material culture is an act of translation. Meaning depends on context and on the position of the interpreter in relation to his context, whether prehistoric social actor or contemporary archaeologist" (Shanks & Tilley, 1987, p. 211).

12.4. Contacts in the light of the M-type spearheads

From this study it seems that the contacts between the islands of Saaremaa and Gotland in the light of the M-type spearheads have been less active than was believed earlier. I cannot see any indication of Gotlandic origin in the pattern-welded M-type spearheads on Saaremaa. On the contrary, there is one spearhead on Gotland, namely No. 1Go, which could possibly be understood as a Saaremaa product. This spearhead has no visible triangle (due to wear this is not possible to see), but vague traces of a knob. On the other hand, the general shape is divergent. This "model" is also very rare in the rest of the investigated area around the Baltic Sea. It appears to have had a strong foothold on Saaremaa.

So far, I have only seen two M-type spearheads with a triangle and a knob outside Estonia within the whole investigated area. One is from Kirchholm in Salaspils in Latvia (RK, Table 23; 9) and the other one is from Valsgärde in Uppland in Sweden (Christiansson, 1959; Fig. 143; Stenberger, 1964, Fig. 271; Fuglesang, 1980, Plate 6 A). These spearheads have to be considered as a possible "export" from Saaremaa.

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Abbreviations

AI = Ajaloo Instituut, Tallinn
AIK = The collection of Kuressaare at Ajaloo Instituut, Tallinn
SHM = Statens Historiska Museum
GF = Gotlands Fornsal, Visby
UMF = Uppsala Universitets Museum för nordiska fornsaker
RK = Katalog der Ausstellung zum X. archäologischen Kongress in Riga 1896