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## **RECENT DISCOVERIES OF EASTERN BRONZE AGE MATERIALS FROM JEPUA ON THE GULF OF BOTHNIA**

### *Abstract*

In 1991 an atypical Maaninka celt and an even-based flint arrowhead were discovered at Jepua (Sw. Jeppo) on the east coast of the Gulf of Bothnia. The article discusses these artifacts, attributed to the Bronze Age culture of the Finnish inland regions and the distribution and dating of these types in the light of material from Southern Ostrobothnia.

Contacts between the coastal and inland Bronze age cultures are discussed from the perspective of the coastal region with particular reference to the area around the mouth of the Lapuanjoki River. The importance of river valleys as routes of communication and for transmitting contacts is underlined, for example, by the distribution of even-based arrowheads. The boundaries of the respective cultural regions are indistinct, as each extended its influence deep into the territory of the other.

Bronze Age settlement at Jepua belongs to the Bronze Age cultural sphere of the coastal regions. It is a continuation of the Late Neolithic Kiukainen culture which continued in existence until the Early Bronze Age. Despite the presence of cairns and metal artifacts, the Bronze Age dwelling-site finds point to the existence of a hunting-fishing culture.

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Metal artifacts of the Bronze Age are rare in the archaeological record of Finland. The present material consists of some 150 objects. These include only a few excavation finds; most of them are objects interpreted as stray finds or as deriving from caches or votive contexts.

By the beginning of 1991 nine Bronze Age artifacts or fragments of such had been discovered in Southern Ostrobothnia. Six of them can be further defined according to type (Fig. 1):

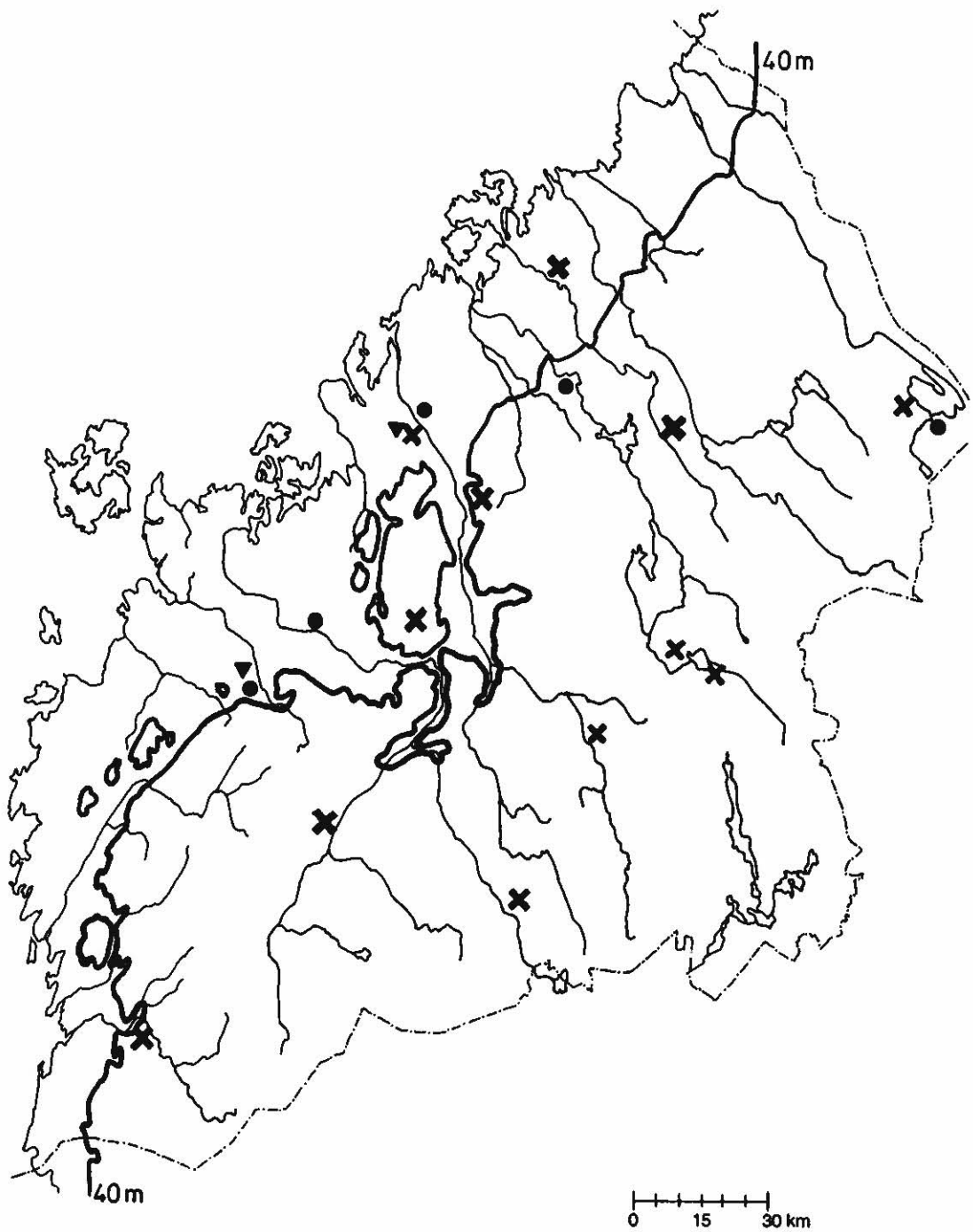
- 1) bronze razor (National Museum of Finland [NM] 703); Peltomaa, Laihia, excavation find from a cairn (Aspelin 1871);
- 2) fragment of bronze plate (NM 1108), Peltomaa, Laihia, excavation find from a cairn (Aspelin 1871);
- 3) bronze sword (NM 714); Laurola, Isokyrö, stray find (Aspelin 1871);
- 4) fragment of bronze plate (NM 10679); Niemenmaanmäki, Isokyrö, excavation find from a cairn (Meinander 1954b);

- 5) piece of bronze plate (NM 10851); Niemenmaanmäki, Isokyrö, excavation find from a cairn, which also contained a burial of the 6th century AD (Meinander 1954b);
- 6) bronze eye fibula (NM 22813); Linjebacka, Ähtävä, stray find (Edgren 1986);
- 7) bronze celt (NM 20650); Jungar, Jepua, stray find (Miettinen 1984);
- 8) bronze spearhead (NM 17032); Anttila, Lestijärvi, dwelling-site find (Siiräinen 1978);
- 9) bronze celt; Kylänpää, Laihia, stray find, only a drawing of the artifact exists (Aspelin 1871; Meinander 1954b).

In the autumn of 1991 a bronze celt discovered at Jepua became the latest addition to the Bronze Age material of Southern Ostrobothnia.

### **FINDS CONTEXT**

The bronze celt and flint arrowhead (NM 26681:1–2; Fig. 2–3) purchased from the finder by the Na-



*Fig. 1.* Bronze Age type metal artifacts and even-based arrowheads from Southern Ostrobothnia in relation to the Early Bronze Age shoreline (40 metres).

- × even-based arrowhead
- western bronze artifact
- ▼ eastern bronze artifact

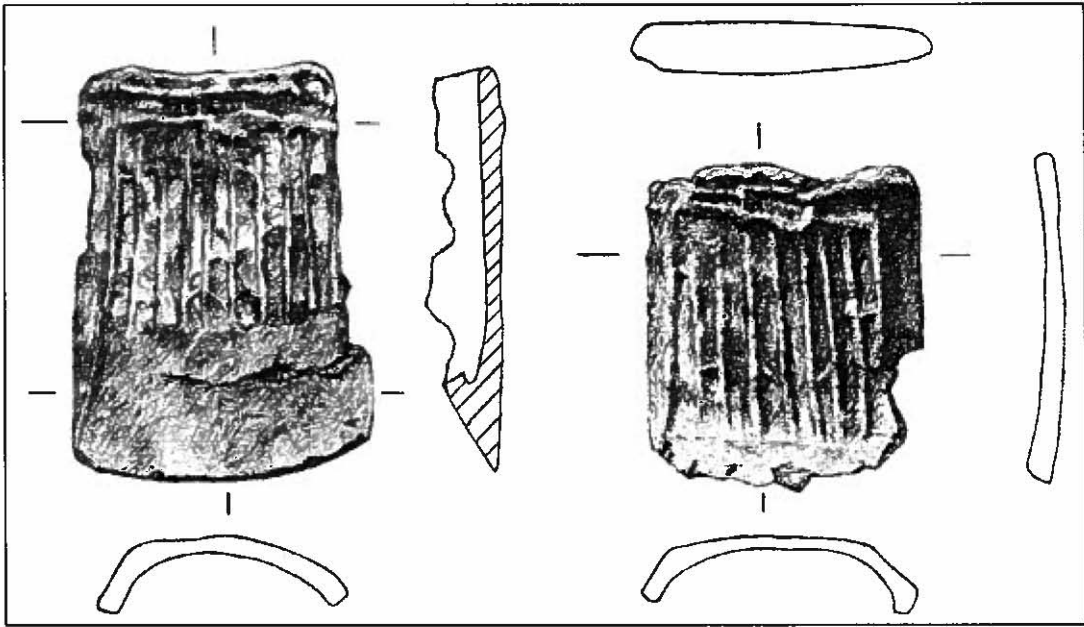


Fig. 2. Bronze celt from Asplandet, Jepua (NM 26618:1). Drawing by Seppo Hyypiä/National Board of Antiquities.

tional Museum of Finland in September 1991 had already been found in 1961 in the northern reaches of Jepua (presently belonging to the municipality of Uusikaarlepyy) in a forested area near the border with the parish of Alahärmä. The finder, Viking Back, who was ten years old at the time, had been building a hut with his friends in the crater-like depression of a large cairn. The boys also excavated the centre of the cairn, although they knew this was forbidden. To their surprise, they discovered the above-mentioned objects in the gravel at the bottom of the cairn. At first, they were afraid to show them to their parents. Even later, they had no idea of the significance of what they had found, and it was not until 1991 in connection with a local heritage event that the real value of the objects was realized. It was almost a miracle that the artifacts were now found in a shed at Back's farm among moped parts.

Viking Back remembered having found the artifacts in a large cairn in the woods, which he estimated to be the largest known cairn in the parish. Measuring c. 12 x 11 metres in area and over 2 metres in height, it is located at a place known as Asplandet on an outcrop of bedrock. Even today, there is a large pit-like depression in the centre, which had come about decades or possibly centuries ago. Next to this cairn is another almost equally large and long cairn. According to subsequent information the original site of the finds could also be a cairn at Vargholmen in the parish.

Vargholmen is to the east of the Lapuanjoki River over 5 kilometres ESE of Back's part of the village, which is to the west of the river. Asplandet is c. 2 km SW of the Back farm. The precise location of the find must therefore remain open. In any case, the objects are from a cairn near the border of Jepua and Alahärmä parishes, in an area containing a large number of cairns at Bronze Age shore elevations.

#### THE BRONZE CELT

The bronze celt is in three fragments, the largest consisting of the blade and one face. The second fragment is a narrow piece dislodged from one edge of the face. The third fragment consists of the incomplete other face of the celt. Fitted together, these fragments form an almost intact celt. The points where the object had broken into pieces appear to be so fresh that we may assume that it was broken when discovered and soon afterwards (Fig. 2).

The maximum length of the celt is 5.7 cm. The widest part at the blade is 4.4 cm; the object tapers only slightly towards the other end. The socket is of flat oval section and of weakly discernible hexagonal form on the outside. The wall is thickest (4 mm) at the side of the socket, and thinnest at the faces (c. 2 mm).

On the outside surface of the side of the socket

are two low raised bands 1–2 mm wide and located 1.5–2 mm from each other. On the opposite side of the celt are four weakly discernible connecting raised bands between the first-mentioned bands.

On both faces of the celt are low raised bands of even width running parallel to the socket (10 on one face and 9 on the other). These cover over half of the surface of the faces; the blade is unornamented. The cast ornamental features are of low profile with smooth contours. They suggest casting in a clay mould or with the *cire perdue* or lost wax method (Edgren 1981). The surface was not finished after casting, although the blade may have been slightly beaten and ground or polished. The blade is worn blunt.

In Finland, parallels to this celt are found among the so-called Maaninka type (previously known also as the Pielavesi type) celts. At present the following specimens are known:

Location	NM	Dimensions	Length/width index
Paimio	10545	l. 10.1 cm	1.9
Maaninka	5311	l. 10.1 cm	2.3
Tottijärvi	10811	l. 9.5 cm	2
Lapinlahti	18351	l. 7.1 cm	1.9
Liekksa	11313	l. 11.9 cm	2.7
Jepua	26618	l. 5.7 cm	1.3

Also included in this type are unornamented socketed axes or celts with thickenings at the rim or edge of the socket from Karjaa (NM 11644) and Snappertuna (NM 10783) (Salo 1981, 265; Meinander 1954b, Tf. 10, e,f). Of the two bronze celts from Porvoo (NM 3502, Porvoo Museum 26; Meinander 1954b, Tf. 11: d,e), the one with raised band ornament is included in this group with certain reservations. The same concerns the celts from Fröslunda and Sparrsätra in Sweden (Meinander 1954, 41 ff; Edgren 1992, 145). Both celts from Porvoo have later been described as atypical Ananyino celts (Edgren 1992, 145).

The Maaninka type has been described by Tallgren (1911) and Kivikoski (1937), followed by Meinander (1954b), Salo (1984), Huurre (1986), Edgren (1992) and others, as a form that developed in the area of Finland on the basis of eastern influences. Researchers have regarded the zig-zag and hatched ornament of the socket and the parallel raised bands of the faces as particularly eastern details (Edgren 1979, 24). Salo, however, points to similar raised ornament and thickenings of the socket rims in the axes of the Lausitz type (Salo 1981, 256). Despite the wide occurrence of elements of form and ornament of the Maaninka type, there are no exact parallels to it outside Finland in the east nor in the west.

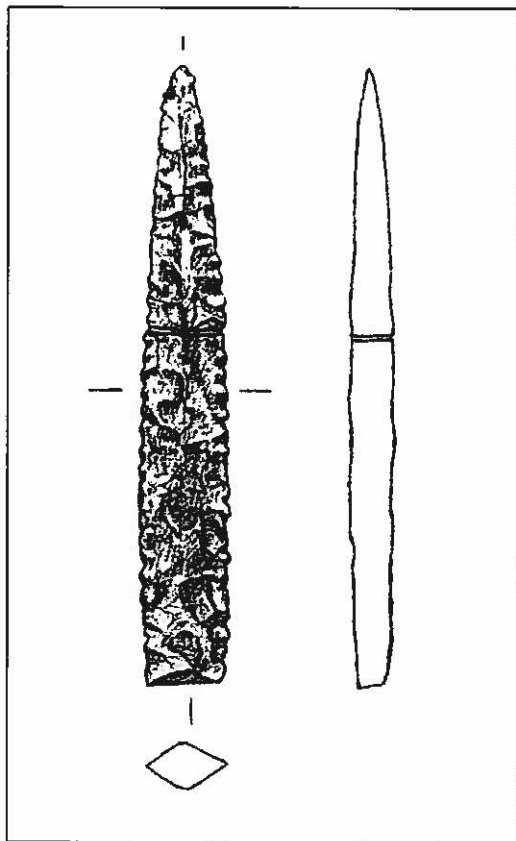


Fig. 3. Even-based flint arrowhead from Asplundet, Jepua (NM 26618: 2). Drawing by Seppo Hyypiä/National Board of Antiquities.

A closer comparison with Maaninka-type axes from Finland reveals a number of interesting details that are of importance for an interpretation of the celt from Jepua.

The celts vary in length from 11.9 to 5.7 cm. The Jepua celt is the shortest of the above-mentioned six, coming after the celt from Lapinlahti. Both of these small celts contain other features differing from the characteristics of the type.

The shape of the celts can be illustrated with the aid of an index or ration of length to maximum width as measured at the blade. With the exception of the celt from Jepua this index varies between 1.9 and 2.7; in other words, a typical celt is roughly two times the length of its maximum width. The length/width index of the celt from Jepua is 1.3, being thus less than one-and-a-half times as long as it is wide.

The thickening of the socket rim, a characteristic of the Maaninka type, is found in all the celts except those from Lapinlahti and Jepua. In the Lapinlahti celt (Edgren 1979, Fig. 3) there is a zone or band of rhomboid designs between the raised bands

on the socket and its rim. This part is in a section of approximately the same width that contains the thickening of the rim in other celts. In the Jepua celt this zone and rim thickening are completely lacking. Both the Lapinlahti celt and the Jepua celt have the same number of raised bands: 9 on one face and 10 on the other. The celts from Tottijärvi, Maaninka and Lieksa have 9–10 raised band ornaments, while the Paimio celt has only 6. The blade of the Jepua celt is straighter than in the other and the whole object is of almost equal width, while in the other celts of the type the blade is slightly more curved and wider than the rest of the artifact.

In dimensions and form the celt from Jepua differs the most from the typical Maaninka celts. With regard to its shape it is closer to the short and wide Ananyino celts. The only typical Ananyino celt found in Finland is from Maaria (NM 9685). It is 5.0 cm long, with a length/width index of 1.1. The two celts from Porvoo that have been classed in this type (Meinander 1954b, Tf. 11:d,e) have corresponding indexes of 1.1 and 1.3 respectively. The indexes of certain celts found at Ananyino and presented in the literature vary from 1.0 and 2.1 (Edgren 1979, 25, Fig. 4; Meinander 1954b, Abb. 29; Tallgren 1916).

There is, however, no doubt that the ornament of the Jepua celt is related to the typical Maaninka celts, even despite the fact that certain characteristics such as the rim thickening with its often occurring zig-zag ornament are lacking.

The unique mixture of elements in the celt from Asplandet in Jepua may point to local, Finnish origin and manufacture. This artifact does not change our previous concept of the Finnish origin of the Maaninka type, but it nevertheless introduces new features.

The Maaninka celts belong to the Bronze Age culture of the Finnish inland regions. Their dating has proven difficult since all the specimens are stray finds. With reference to typical features, mainly the rim thickenings, Edgren dates the typical Maaninka celts and the celts from Karjaa and Snappertuna mainly to periods V or VI of the Bronze Age (Edgren 1992, 145).

The Ananyino celts belong to the Ananyino culture of Central Russia, which is dated to c. 800–400 BC. In the final stages of the Ananyino culture iron metallurgy had become known even in the inland regions (Meinander 1954b; Carpelan 1977; Huurre 1986, 54).

Although the Jepua celt was discovered in a cairn, the available information on the conditions and context of the find offer little help for dating. The cairns at Asplandet are on an outcrop of bedrock at slightly above 35 metres above sea level.

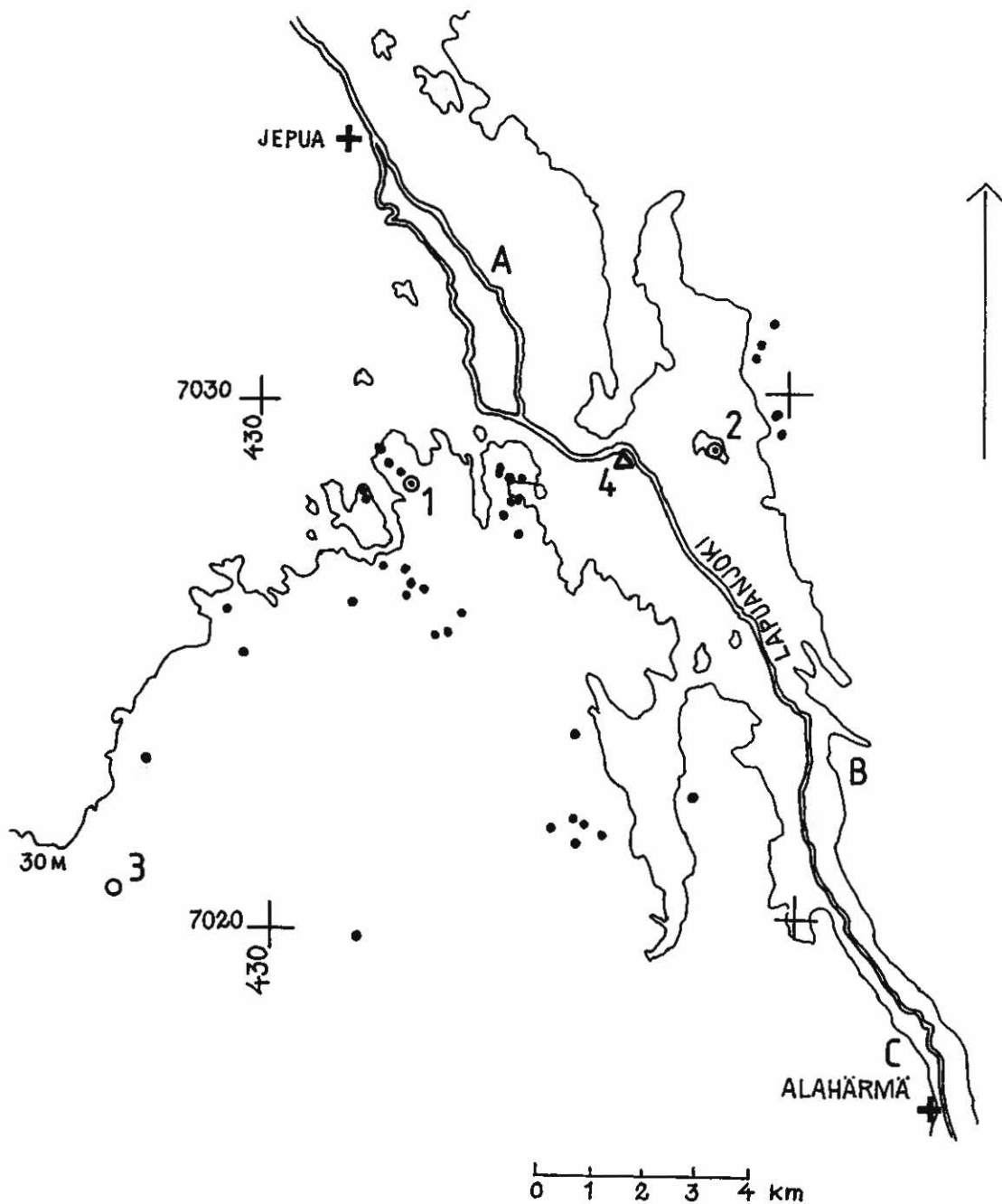
When the cairns were erected the shoreline was probably at c. 30 metres above present sea level, at a distance of over 200 metres from the cairns. At the time, the outcrop by the open sea was the highest and most visible place in the west part of a cape or point running NW-SE. This geographical feature was over a kilometre wide and approximately two kilometres long (Fig. 4). With only one exception, the other cairns on the ancient cape were to some degree or even considerably smaller and lower. Moreover, some of them are at clearly lower elevations and may accordingly be later, possibly from the time of the 27.5 metre a.s.l. shoreline. According to standard shore displacement chronology, the 30 metre shoreline corresponds roughly to c. 1000–800 BC. The shore was at 27.5 metres above present sea level at the end of the Bronze Age around 500 BC (Meinander 1977 12; Siiriäinen 1978).

Because the cairn in which the celt and the arrowhead were found have not been archaeologically investigated, we have no information on its structure, number of burials and other possible finds. The relationship of the finds to other, possibly several, burials remains unclear. The young finders naturally did not pay any attention to details such as fragments of burnt bone or pot sherds.

Only a few of the large cairns at Bronze Age shore elevations in Ostrobothnia have been investigated. With the exception of a partially destroyed cairn which was excavated in the 1980s and revealed no finds, the cairns at Jepua remain uninvestigated. But, for example, all the large cairns at Asplandet have been tampered with over the years, although there is only information on the finds discussed in this article.

With reference to shore displacement chronology, the Asplandet cairn is at the earliest from c. 900 BC, the end of the Early Bronze Age. The Maaninka celt can be dated on the grounds of style to the very end of the Bronze Age, or even to a slightly later time. The following possibilities present themselves with regard to the celt: 1) it belonged to a secondary burial in the cairn either separately; or 2) together with the flint arrowhead; 3) the cairn, celt and arrowhead are all of the same date; 4) the cairn and the arrowhead are from the same primary burial and the celt is a secondary feature; 5) the cairn and the celt belong to the primary burial and the arrowhead is secondary.

Only one Bronze Age cairn in Ostrobothnia has revealed a datable artifact: a razor with a spiral end dated period V of the Bronze Age (c. 800–600 BC) and found in excavations in the 19th century at Peltomaa in Laihia (Meinander 1954b, 57). At Peltomaa, the shoreline was probably at c. 30–32 metres a.s.l. when the cairns were erected. Assum-



**Fig. 4.** The mouth of the Lapuanjoki River with Early Metal Period sites at the 30-metre shore level. A Mälär celt, Jepua (NM 20650), B arrowhead, Alahärmä (NM 7817), C ceramics, Puisaari site (NM 22506)  $\Delta$  dwelling site,  $\bullet$   $\odot$  cairns  
 1. Asplandet, cairn; 2. Vargholmen, cairn; 3. Finndalen, cairn; 4. Karkaus, dwelling site.



ing that the razor belonged to the primary burial – this can no longer be verified (Aspelin 1871) – it can be deduced that large, high cairns typical of the Bronze Age were built in Ostrobothnia as late as period V.

The large cairns at Asplundet can be dated by shore displacement chronology to c. 900–500 BC, but there are no further grounds for more precise dating. In view of the Maaninka celt and its late date, it is also possible that the cairn is from the end of the Bronze Age.

## THE FLINT ARROWHEAD

The flint arrowhead, found in two fragments, has an overall length of 86 mm; its widest part measures 16 mm slightly from the middle towards the base. The object is of lightly mottled yellowish-violet flint. The edges are skillfully denticulated and there is transverse retouch over the whole surface. The base is straight and slightly bevelled towards one face. The arrowhead is of rhomboid section in the middle (Fig. 3).

The artifact belongs to the group of so-called even-based arrowheads. By the early 1980s 145 of these had been discovered in Finland (Huurre 1984, 49). There have been subsequent finds, including a few in Ostrobothnia. The even-based arrowheads are particularly numerous in Kainuu and Northern Finland, where some three-quarters of all finds locations are situated (Salo 1984, 174; Huurre 1986, 53).

These arrowheads were made of quartz, quartzite and flint. They vary in shape from long and narrow specimens to short and broad points, depending on material and possibly other factors. On the average the flint points are the longest (4.5–10.5 cm); the quartzite points are between 4.6 and 8.4 cm long; and the quartz arrowheads vary from 2.5 to 7 cm in length. The arrowhead from Jepua belongs to the group of long flint points.

This artifact type has a wide distribution from the Atlantic coast and the Baltic Sea to the Ural Mountains. It is considered to be of eastern origin and its spread westward is assumed to have occurred in connection with the migration of Arctic populations from Northern Russia towards the north-west and the west (Carpelan 1962; Salo 1984, 306; Äyräpää 1951, 95–98).

It has been suggested that this type of point made its appearance together with a new type of bow (Carpelan 1962 16), and that its distribution marked the areas utilized by the Lapp population. Salo (1981) suggests that even-based arrowheads found in the coastal parts of Satakunta are evidence of

contacts between the coastal and inland populations. According to him, eastern Seima-type bronze axes found in Satakunta are similar evidence (Salo 1984, 306–307).

In Finland, this arrowhead type is dated to the Kiukainen culture and partly to the Early Bronze Age (Salo 1984, 304; Carpelan 1962, 16). Most of the points are stray finds, while some are from long-occupied dwelling sites containing, among other material, Sarsa-Tomitsa textile-impressed ware belonging to the Bronze Age culture of the inland regions.

It is possible that the type remained in use for a long time. This could be suggested by a recent find of an even-based quartz point (NM 27804: 14) at the Hämeensaari site in Pihtipudas. The site is on a small island and was obviously used for a long period; the finds include material from the Late Stone Age/Bronze Age, Iron Age, and subsequent periods (Miettinen 1993). It is not possible to place the Hämeensaari point with any confidence in any of the above periods. In view of the traditional date given to the type, the object would be from the Bronze Age or Early Iron Age.

The dating of the point from Jepua is no doubt influenced by the Maaninka celt also found in the cairn. But is no longer possible to verify the connection of these artifacts, for example as belonging to the same burial. The finds from Jepua suggest, however, that even-based points were still used at the time of the Maaninka celt, i.e. at the end of the Bronze Age and the beginning of the Pre-Roman Iron Age.

The following arrowheads of this type are known from the present area of the Province of Vaasa (Southern Ostrobothnia) (Fig. 1):

Locality	Cat.no.	Remarks
Alahärmä	NM 7817	quartz
Alajärvi	NM 13085	flint
Alajärvi	PHM 956	quartz
Jepua	NM 26618:1	flint
Kruunupyy	NM 9922	quartz
Kuortane	HM 1191:51	flint
Kurikka	NM 14713	quartz
Lappväärtti	NM 7959:3	quartz
Lestijärvi	NM 21539:1	flint
Peräseinäjoki	NM 23938	quartzite
Veteli	NM 2675:3	quartz
Ylistaro	private coll.	quartz

Of the twelve arrowheads, four are of flint and one is of quartzite, while the remainder are of quartz. The arrowheads have been found in various parts of

Southern Ostrobothnia, at highly different elevation above sea level.

The elevations of the sites of the finds in relation to shorelines at the end of the Stone Age and during the Bronze Age are as follows:

Over 40 m	40–27.5 m	<27.5 m
Alajärvi 115 m	Jepua 35 m	Kruunupyy 15.5 m
Alajärvi 100 m	Lappväärtti 35 m	
Kuortane 90 m	Alahärmä 32 m	
Kurikka 70 m	Ylistaro 37.5 m	
Lestijärvi 140 m		
Veteli 95 m		
Peräseinäjoki 95–100 m		

Four of the South-Ostrobothnian arrowheads were discovered in “chronologically correct” locations by the Bronze Age shoreline; one is from an elevation that is too low; and the remainder are from the inland. There are no finds of these arrowheads from Late Stone Age shore elevations, c. 55–45 m.

The arrowhead from Lappväärtti is from the Langäng site dated to c. 1200/1100 BC at the end of the Kiukainen culture (Meinander 1954a). The arrowhead from Jepua is from the above-mentioned cairn, but the other even-based points are stray finds. All the inland finds are from the local river valleys and the upper reaches of the rivers near lakes. These objects find a natural connection with water routes and the utilization of inland bodies of water (Miettinen 1990).

The inland Bronze Age population or their contemporaries on the coast, or possibly both no doubt fished in the inland lakes. For example, finds from the Anttila site at the southeast end of Lake Lestijärvi include a Scandinavian-type bronze spearhead and pottery of the coastal Bronze Age culture (Siiriäinen 1978). The even-based arrowhead from Lake Lestijärvi was found in low water by the west shore of the lake. The nearest dwelling-site finds are at a distance of some 20 metres from the shore bank and it is possible that the point was originally from the site. During the Bronze Age, the lake was a suitable location for the activities of both the coastal population and the hunter-fishers of the inland, at different times or possibly simultaneously. The bronze spearhead from Anttila belongs to a type dated to the end of the Bronze Age (Siiriäinen 1978), while the flint point lacks any precise date. It can be from the end of the Stone Age or from the Bronze Age.

It is possible that there were more or less established sites for meeting and trading with other groups at Lake Lestijärvi, as also on other major water routes in the inland. These sites could have provided contacts with the customs and views of other communities.

## JEPUA IN THE BRONZE AGE CULTURE OF FINLAND'S COASTAL REGIONS

With the possible exception of its northernmost reaches, the coastal zone along the Gulf of Bothnia belonged to the western coastal culture of the Bronze Age. Typical features of this culture are cairn burials (adopted from the West), metal artifacts – albeit rare – of Scandinavian origin, and a specific type of Bronze Age pottery, which continued the traditions of indigenous Kiukainen Ware. C.F. Meinander (1950) was the first to point to the connections between the Kiukainen culture and the cairns on the coast of Ostrobothnia.

Bronze Age settlement in Jepua is still mostly unknown. Owing to the lack of sufficient surveys, only cairns at Bronze Age shore elevations are known at present. Of these, only the remains of one have been investigated.

The presently known cairns at Bronze Age shore elevations at Jepua and both bronze celts found in the parish, a western Mälär celt from Jungar (Miettinen 1984) and the Maaninka celt from Asplandet, indicate the existence of a Bronze age concentration of settlement, that can be compared to corresponding areas at Pirttikylä and Laihia.

With reference to the smaller cairns at lower elevations and the Epineolithic site of Karkaus in Alahärmä, settlement around the mouth of the Lapuanjoki River continued from the Bronze Age to the Early Iron Age in the same way that it has been observed to have continued in various parts of the coastal zone of Southern Ostrobothnia (e.g. Siiriäinen 1978; Miettinen 1980, 1982, 1986; Kotivuori 1992).

In view of their type and locations, the groups of cairns at Asplandet and its environs are characteristic of the Bronze Age culture of the coastal regions. The bronze celt and flint arrowhead from Asplandet are in turn artifact types of the eastern-influenced inland culture. This is an exceptional combination requiring a closer review of prehistoric sites, remains and finds in the area.

The shoreline elevations, dates and main finds of Early Metal Period sites at the mouth of the Lapuanjoki River are given in Table 1.

The near vicinity of Asplandet is an area with dwelling sites of the coastal culture, cairns, and finds from the Kiukainen culture to the Pre-Roman Iron Age. The finds from Karkaus and Råbacken contain elements of both the coastal and inland cultures from the transition from the Bronze Age to the Pre-Roman Iron Age. The eastern finds from the coastal regions of Southern Ostrobothnia are all from the very end of the Bronze Age and the beginning of the Pre-Roman Iron Age. Space does not



**Table 1**  
Early Metal Period sites near the mouth of the Lapuanjoki River at the 30-metre a.s.l. shoreline.

Site	Shore (m)	Date/max	Coastal culture	Inland Culture
Jepua Asplandet	30–32	900 BC	cairns	Maaninka celt, even-based arrowhead
Alahärmä Karkaus <sup>1</sup>	25	500 BC	Morby Ware coastal site	Sär-2 Ware
Alahärmä Puisaari <sup>2</sup>	30–32	900 BC	Bronze Age ceramics coastal site?	
Oravainen Finndalen <sup>3</sup>	42–45	1300 BC	Bronze Age ceramics cairn	
Oravainen Paljak <sup>4</sup>	45	1300 BC	Kiukainen Ware coastal site	
Vöyri Vitmossen <sup>5</sup>	33	1250/ 1000 BC	Bronze Age ceramics coastal site	
Uusikaarlepyy Råbacken <sup>6</sup>	25	400 BC	cairn	Sär-2 Ware

<sup>1</sup> Siiriäinen 1978

<sup>2</sup> Ceramics from Puisaari NM 22506:1–3 (Miettinen 1986, 105).

<sup>3</sup> Excavation of the Finndalen cairn at Oravainen 1988, finds NM 24286.

<sup>4</sup> Sites of the Kiukainen culture at Paljak in Oravainen (Miettinen 1986).

<sup>5</sup> The cairn and dwelling-site complex of Vitmossen in Vöyri is located 24 km southwest of Asplandet (Kotivuori 1988, 1993). It should be noted that there is a hill of bedrock at Jepua (known locally as *Hednatempel*) with similar cleared features as at Vitmossen.

<sup>6</sup> The Råbacken cairn group in Uusikaarlepyy is located c. 7.5 km northwest of Asplandet. The largest of the cairns is a low construction covered with red sandstone and measuring 9 x 12 metres in area. It was excavated in 1986–87. Radiocarbon dates from the bottom layer date a cremation in the cairn to c. 400 BC (2310 ± 90, SU-1596; 2430 ± 110, Hel-2557; 2990 ± 110, Hel-2558; Kotivuori 1992). Cairns of similar construction with sandstone are found at shore elevations of 25–30 metres a.s.l. to the south and southeast of Vaasa, and they can be definitely linked to the Morby Ware population of the coast (Miettinen 1989; Kotivuori 1992).

permit a more detailed discussion of these influences, but it should be noted that the Råbacken cairn combines the burial type of the coastal population (which made and used Morby Ware) with ceramics of inland type that suggest the presence of individual settlement units of the inland culture on the coast.

The finds from Jepua do not provide any decisively new information of the nature of the coastal Bronze Age culture. Despite the presence of cairns and the few metal artifacts this population must still be described as a hunter-fisher culture. The specific nature of this culture, for example in comparison with the Comb Ware culture, must remain the subject of further studies.

The appearance of eastern finds at the end of the Bronze Age and the presence of material of the coastal culture in the inland show that the boundary between these two cultures in Ostrobothnia did not necessarily correspond to the eastern perimeter of the area of cairns. A similar situation has been ob-

served at Laihia, another important area of Bronze Age settlement in Ostrobothnia. The Viirikallio site, which was originally on the shore of the open sea, is dated to the transition from the Bronze Age to the Pre-Roman Iron Age. Finds from Viirikallio include pottery of the coastal culture and Sarsa-Tomitsa Ware typical of the inland (Miettinen 1994). This site may also have been occupied at the same time by bearers of different ceramic traditions, or the maritime resources of the location were exploited in turn according to some agreed manner.

The eastern artifacts from the cairn at Asplandet are articles of trade and exchange, which local chieftains and men in power could have given to each other. The objects themselves do not require the presence of an eastern population, unlike the eastern pottery at Råbacken and particularly at Viirikallio.

Studies on the prehistory of the inland regions underline the diffuse nature of cultural boundaries and increasing western influence around the end of

the Bronze Age (Taavitsainen 1990; Simola et al. 1994). Thus far, the boundaries of cultural zones and areas have been based more on ceramics than on the finds material as a whole. Many new finds of pottery and metal artifacts will however force us to review and redefine the present definitions and boundaries of the coastal and inland cultures. This requires a systematic survey of the whole material and investigations of Epineolithic finds, which are poorly known and have not been studied to any great extent.

Present studies on the so-called Lapp cairns of the inland tend to give these structures a Bronze Age date, as opposed to earlier conceptions. They have been regarded as indications of western expansion or even as evidence for the exploitation of the inland regions by the coastal culture (Taavitsainen 1990, Edgren 1992, Vilkuuna 1993). The small number of finds and studies, however, still preclude any further conclusions.

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## ABBREVIATIONES

- FM Finskt Museum  
 SM Suomen Museo  
 SMYA Suomen Muinaismuistoyhdistyksen Aikakauskirja  
 HM Hämeen museo  
 NM Kansallismuseo/National museum  
 PHM Pohjanmaan hist. museo