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## **AN IRON-AGE DWELLING SITE AND BURIAL MOUNDS AT RAKANMÄKI, NEAR TORNIO**

### *Abstract*

Our knowledge of iron-age settlement in Northern Finland has been based to date very largely on a few field investigations and a number of stray finds. Settlement during this period has nevertheless become one of the main objects of study in the prehistory of the region in recent years, with efforts being made to discover both dwelling sites and burial grounds datable to the Iron Age in order to shed more light on this little known phase. The Rakanmäki excavations carried out at Laivajärvi near Tornio provide an example of research of this kind.

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One of the principal topics of interest in the prehistory of Northern Finland in recent years has been the question of Iron Age settlement in the region, the fundamental question to have arisen being that of whether there was any permanent settlement during that period. One attempt to resolve the question was the programme of excavations carried out in the Rakanmäki area at Laivajärvi, near Tornio, in 1985–1987, which formed one of the major objects of archaeological investigation by the Department of History of the University of Oulu during those years (Fig. 1).

Rakanmäki had been known for some time as an area where prehistoric remains were to be found, and both the local inhabitants and many archaeologists had been intrigued by the eight burial mounds constructed out of stones from the broad boulder field to be found on the top of this ridge and the regular pentagon also formed out of boulders (Figs. 2 and 3). These remains became known to archaeologists in 1955, when a survey was made of the area, but although the survey was renewed in 1962 (Cleve 1955; Erä-Esko 1962), the site was left undisturbed until 1984.

It was established in the surveys of 1955 and 1962 that the mounds had been constructed of

rocks about the size of a human head and that they rose up directly from the surface of the broad boulder field. Each mound had a more or less distinct crater-like depression in the centre (Fig. 2). The smaller mounds were only about 50 cm high, but some 2–3 metres in diameter and 100–150 cm in height. The regular pentagon built on the boulder field had sides of length six metres and height approx. 150 cm with the crevices between the boulders filled with mosses. One fifth of the length of this structure, the north side, was examined in detail in connection with the survey of 1962, but no finds were made in it or in the surrounding area, nor was there any evidence that prehistoric remains were to be found there (Erä-Esko 1962).

Alongside the Lapinkula burial mound, the Rakanmäki area is perhaps one of the most interesting and spectacular prehistorical remains by the standards of Northern Finland, and thus it was decided that particular care should be taken of both sites. In spite of this, a visit to Rakanmäki in 1984 revealed that the whole area had been transformed within one autumn as a result of the intensified forestry measures practised in Finland, and in the north of the country in particular. The surrounding forests had been felled and the soil turned over with a heavy for-



*Fig. 1.* Foreground: the dwelling site at Rakanmäki; background: the burial site, in forest. Photograph: Katrimaija Mäki vuoti.



*Fig. 2.* One of the largest burial mounds. Photograph: Katrimaija Mäki vuoti.



Fig. 3. The regular pentagon constructed in the boulder field. Photograph: Katrimaija Mäkivuoti.

est plough, the only patch to survive intact being the burial mound area of the boulder field marked off by conservation notices.

In spite of the devastation caused to the landscape and the terrain by this ploughing operation, it did offer an excellent, if unexpected, opportunity for investigating the area surrounding the prehistoric remains. This ploughing involves the use of a harrow of corkscrew design to break up the surface of the ground and raise better soil to the surface for the use of the new seedlings to be planted there. The humus layer is broken up to a depth of 15–20 cm in strips 50 cm wide and about 2–3 metres apart, exposing the original ground surface at these points. For an archaeologist these ploughing traces offer a network of readymade preliminary excavation trenches. The only drawback is that where a cultural horizon may exist it will be broken up in the process.

A number of evenings spent surveying the ploughed area at Rakanmäki in August 1984 served to reveal for the first time one interesting fact concerning the study of prehistoric remains in the north of Finland. Immediately adjacent to the field of burial mounds there appeared to be an extensive prehistoric dwelling site, for the survey showed clear concentrations of charred

stones, iron slag and compressed clay in the ploughing furrows on the eastern slope of the Rakanmäki ridge. One isolated find was made, of an iron currency bar of the 'Norrländ' type.

This find in particular aroused the interest of the archaeologists, as only one iron currency bar of this kind had previously been unearthed in Finland, and that at Saltvik on the Åland islands (Kivikoski 1973: abb. 984, 127). The northernmost finds in Sweden similarly had been from Brösta in Ångermanland, with none reported at all in Northern Sweden (Hallinder 1978: 30–37; Thålin 1973). It was largely this find, made in an area adjacent to a series of burial mounds, that prompted the decision to begin archaeological investigations. The first phase of the work comprised excavations at the assumed dwelling site, these then being extended in the second phase to cover the burial mounds themselves.

Several hundred square metres of the dwelling site on the sandy eastern slope of Rakanmäki have been studied to date. The dwelling site begins almost at once at the edge of the burial mound field and extends as far as the edge of the bog below. Two terraces can be distinguished within the inhabited area, the lower boundary of the upper terrace following the 17.5 m contour



Fig. 4. Burial mound no. IV, one of those studied in detail. The southern half has been cleaned and the northern half excavated almost to the base. Photograph: Katrimaija Mäkivuoti.

fairly exactly, and that of the lower terrace the 15 m contour, beyond which the boggy ground begins. The bounds of the dwelling site were defined in practice on the basis of the observed distribution of charred stones (Map 1).

The primary purpose of these investigations was to discover signs of permanent remains from which to reconstruct the nature of the settlement concerned. In this sense the material available may be divided into four categories. The first type of evidence is contained in oven pits and the like, of which three have been unearthed in the area, but without finding any other associated structures. The second category comprises open stone ovens or accumulations of stone fragments. Nine of these have been found, but again not in association with any other permanent structures. The third category covers open stone ovens with other structures connected to them and contains to date one example at Rakanmäki, a stone oven which was evidently located in the centre of a tent or shelter. The fourth type of evidence consists of concentrations of charcoal extending deep into the ground, sometimes surrounded by stone structures that resemble the bases for supporting poles. In addition to these, a cultural horizon some centimetres in thickness,

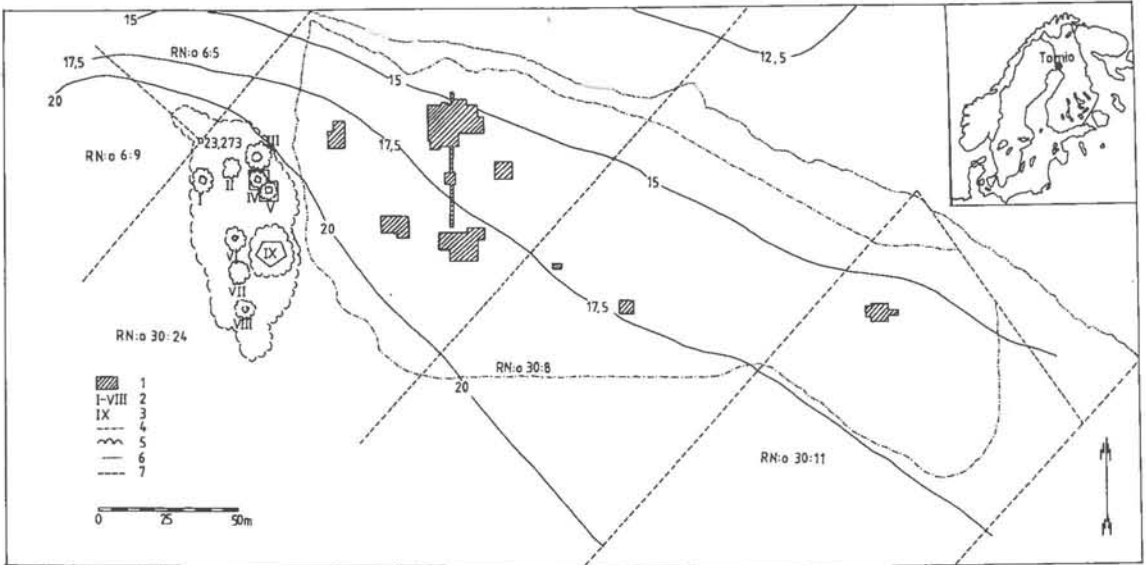
reaching a maximum of 10 cm, is encountered more or less throughout the area.

The number of permanent structures unearthed is fairly large in relation to the extent of the excavation, whereas the collection of artefacts recovered is by no means abundant. One might even say that the site was poor in artefacts, although there are admittedly certain very interesting features about the items that have been recovered, e.g. the 'Norrländ' iron currency bar, two oval halves of striking-stones, a fragment of bronze spiral, a spearhead fragment with central crest, a number of iron rivets, concentrated clay, reduction slag resulting from iron smelting, waste from a smithy, pieces of a crucible, some with drops of bronze attached to them, and some charred bone. In addition to the above there are also obvious artefacts fashioned from quartz and quartzite.

Excavations were carried out in the area of the mounds themselves only during one summer, 1987, when two mounds, numbers IV and V (Map 1), were opened up. Both of them consisted of stones about the size of a man's head piled up on the broad boulder field, and both had a crater-like depression in the centre.

Mound no. V yielded no finds whatsoever, al-





Map 1. The excavation site at Rakanmäki: 1. Areas studied in 1985–1987, 2. Burials mounds, 3. Pentagon, 4. Boundary of the dwelling site (distribution of charred stones), 5. Edge of boulder field, 6. Edge of bog, 7. Boundary of property. Drawn by Katrimaija Mäkivuoti.

though it did contain within it a distinct annular structure which stood out from the rest of the mound by virtue of the larger size of the stones.

Mound no. IV, on the other hand, proved to have no discernible internal structure and to consist throughout of stones about the size of a human head. This mound did yield some finds, however, comprising just under of 200 grammes of charred bone spread over an area of about two square metres and three fragments of bronze rings covered with a patina attributable to fire. These fragments are of circular cross-section and are almost certainly from neck rings that were expandable by forcing their ends apart (Fig. 7).

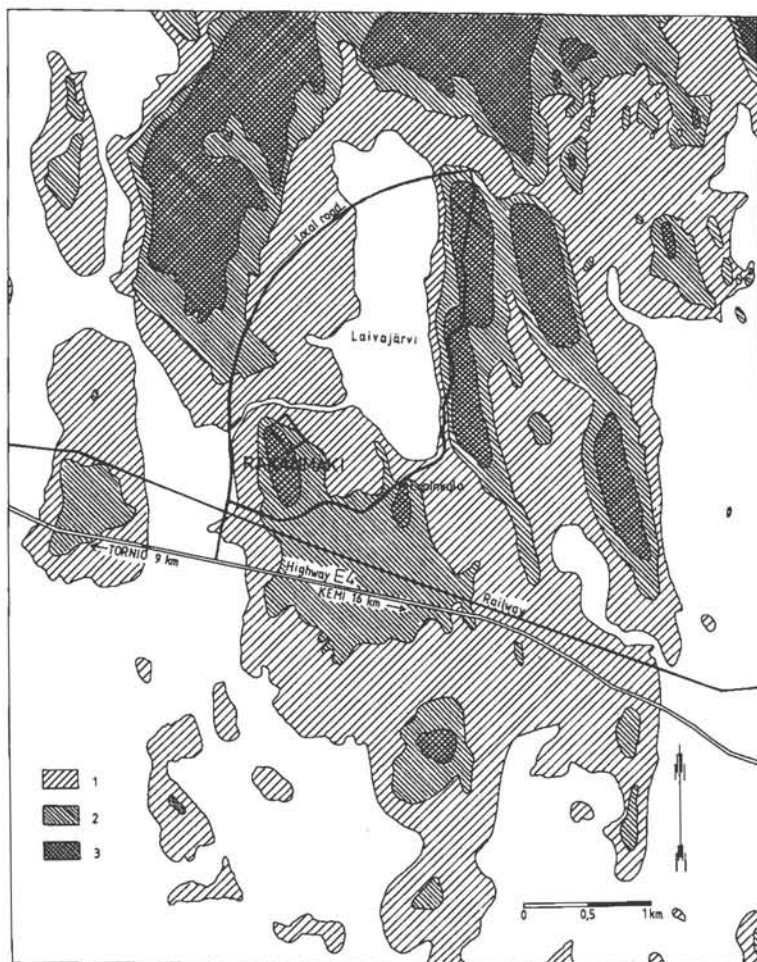
Scarcely any research at all has been carried out into Iron Age dwelling sites in Northern Finland, nor has any technique been known for finding such sites, the only ones to have emerged to date having been discovered accidentally. This Rakanmäki site represents one such accidental discovery. The only actual studies on Iron Age dwelling sites in the region prior to this have been on the island of Jatulinsaari near Kemijärvi (Siiriäinen 1964) and to some extent at epineolithic sites in the Kainuu region, the finds to emerge from which suggest that they were inhabited during the first half of the Iron Age (Huurre 1982, 1983, 1986a). Otherwise it should

be noted that Iron Age investigations in Finland as a whole have tended to concentrate on burial grounds, with only a few exceptions, of which the most recent and perhaps the best example is the work carried out at Salo by members of the University of Helsinki (Uino 1986).

Even as far as burial grounds are concerned, whether studies of a single barrow or a more extensive site, it should be noted that no such work has been carried out in the north of Finland other than a few investigations on the northern edge of Southern Ostrobothnia (Huurre 1973; Mäkivuoti 1984, 1985).

Consequently the Rakanmäki excavations provide in many respects entirely new information on the Iron Age in Northern Finland, our picture of which had until the summer of 1987 been of necessity based very largely on isolated finds alone.

The Rakanmäki site consists of a continuous dwelling area about 300 m long and 150 m broad at its widest point located on the eastern slope of an esker (Map 1). The reason for this positioning was without doubt the fact that this provided a sheltered site with suitable terrain. A survey of the western slope of Rakanmäki revealed no evidence of habitation whatever, presumably because that slope faced the open sea (Map 2) and offered a very different kind of



Map 2. Shaping of Rakanmäki as a consequence of land uplift: 1. Shoreline approx. 1350 years B.P. (present 12.5 m contour), 2. Shoreline approx. 1600 years B.P. (15 m contour), 3. Shoreline approx. 2100 years B.P. (20 m contour). Drawn by Katrimaija Mäki vuoti

terrain. Nowadays the western slope comprises a boulder field which is exceedingly difficult to cross. The dwelling site bears a close resemblance to typical Stone Age sites, and only its low-lying position, between the 15 m and 20 m contours, renders a Stone Age or Bronze Age identification impossible.

All the permanent remains at the site suggest that the dwellings, if there were any, must have been of a very flimsy construction (cf. Siiriäinen 1964: 26–29), for no substantial foundations of houses were discovered at all. The only signs of any more solid constructions are a few pits about 20 cm in diameter filled with soil mixed with charcoal and partly ringed by stones which could

represent the bases of upright poles, although they cannot be proved to be such with any certainty (cf. Uino 1986).

When examining the structure and permanent remains of the dwellings at Rakanmäki one is inevitably faced with the question of what the nature of the settlement at the site could have been. Should one speak of permanent settlement, a seasonal dwelling site or perhaps a base for hunting expeditions into the open country? And another closely related question is the possible connection between the burial mound area and the site where fire was handled.

Answers may be sought to these questions by close analysis of the material discovered, and se-

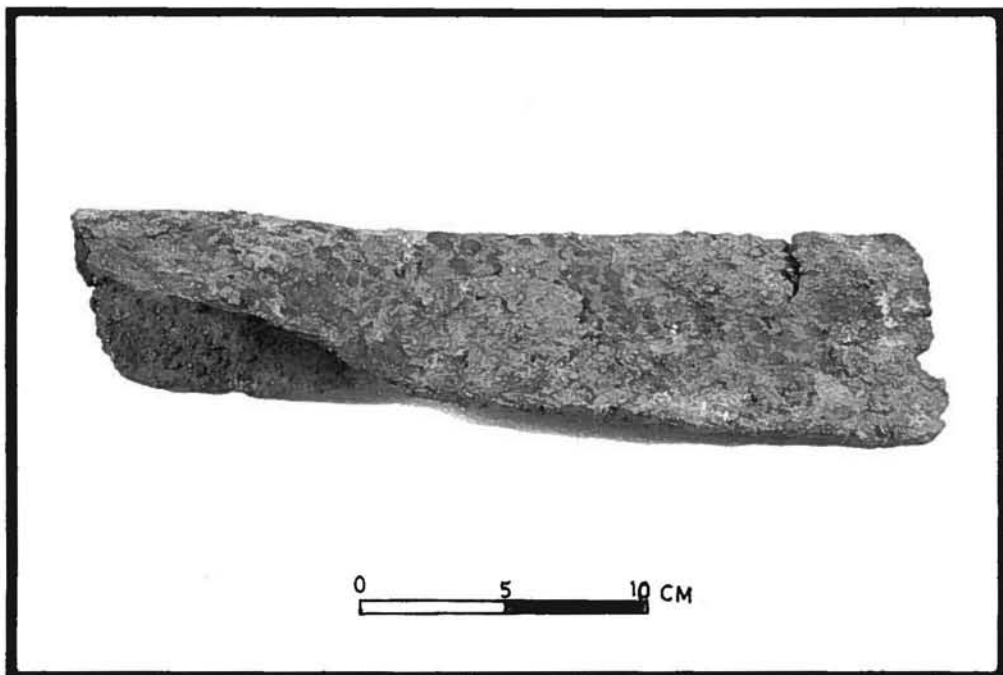


Fig. 5. One of the most interesting finds, a spade-shaped iron currency bar. Photograph: Seija Poutiainen-Leinonen.

condly by looking to see what help may be forthcoming from the natural sciences.

The best and most interesting object among those found at the site is without doubt the spade-shaped iron currency bar. As noted above, only one specimen of this type has previously been found in Finland, and iron currency bars in general are not numerous in this country (Purhonen 1982). It can certainly be said that this is the northernmost such find to be reported in either Finland or Sweden (Hallinder 1978; Christiansson 1973; Serning 1973; Zachrisson 1976). Although iron currency bars are essentially bound up with iron smelting, it would be dangerous to rush to very far-reaching conclusions on the basis of this one artefact at Rakanmäki. It may, however, be said that the evidence includes a fairly large amount of iron slag, suggesting that the people who lived here possessed certain technical capabilities, evidently including the smelting of iron and the forging of some implements from the product. The iron currency bar itself must be regarded as imported into the area, however, presumably from Central Sweden, where items of this kind have been found in large numbers and where they are

thought to have been produced in a semi-industrial manner (Hallinder 1978: 30–37, Fig. 7).

Even though the iron currency bar must be regarded as an import from Central Sweden, we ought still go into the question of metalworking at Rakanmäki a little further. The finds of iron slag at the site fall into two distinct groups, some of it obviously having been formed in the process of iron smelting, while other examples consist of droplets which could only have been produced during forging. That derived from smelting can be easily recognized by the clay from the smelter walls attached to its surface and by the presence in the material of a number of broken slabs of what could only be furnace slag. Thus although even the concentrated efforts made in the summer of 1987 failed to reveal any remains of a smelting furnace, the amounts of smelter slag surviving are such that one can assume that iron was in fact smelted here and not merely forged. What kind of smelter was used is very difficult to say at this stage, but it may well have been a simple pit of the kind found earlier in a couple of locations in Northern Finland (Kehusmaa 1972: 80–88; Mäki vuoti 1987: 59–71; Schultz 1986: 169–173).



Fig. 6. Two broken oval striking-stones found at the dwelling site. Photograph: Sinikka Lumijärvi.

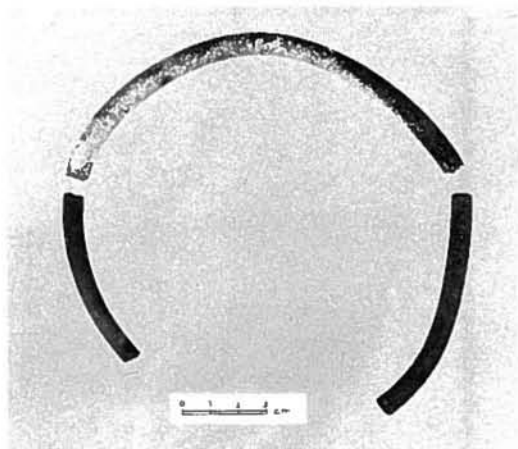


Fig. 7. Three fragments of a bronze neck ring found in burial mound no. IV. Photograph Sinikka Lumijärvi.

The drop-shaped iron fragments, evidently connected with metalworking, probably arose during the process of forging or beating out lumps of crude iron, presumably at the point when they were removed from the furnace and beaten while in a red-hot state, causing small drops or fragments to fly off on the workshop floor. An alternative explanation is that actual iron implements or other artefacts may have been fashioned at the site, work which would obviously have generated large amounts of drop-shaped waste (on iron smelting in Scandinavia and the interpretation of slag fragments, see Serning 1979).

Also related to this same metalworking theme are the finds of crucible fragments, the drops of bronze in which provide clear evidence of some casting of metal objects at the site. No other finds related to bronze casting have emerged, however, and certainly no evidence of foundry structures or moulds. The existence of a knowledge of bronze casting techniques in Northern Finland would not as such be out of character in any way in the light of the general background during the Early Metal Age (Huurre 1982, 1986b: 51–57), but the fact that iron and bronze were apparently worked simultaneously at the same site would indeed be a matter of some interest.

Further evidence for metalworking consists of the finding of a clay protector for a bellows nozzle. This had admittedly been smashed into a number of pieces, but reconstruction in the laboratory shows that it was without doubt a simple

nozzle protector which had been thrown aside presumably upon wearing out.

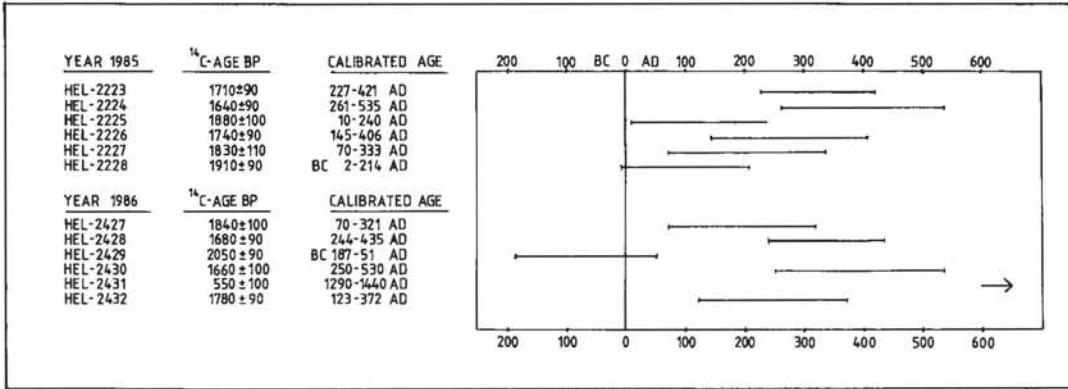
In spite of these signs of intensive metalworking at Rakanmäki, there have been no finds of objects which could be said for certain to have been produced on the site. The only small metal artefacts to emerge to date are a few pins or rivets and about 1 cm of spiral bronze wire. These could have been made there, but could equally well be imported items that had been lost in the sand at some stage.

Another interesting group of artefacts recovered from Rakanmäki comprises the pair of oval striking-stones both fragmentary. All the striking-stones previously discovered in Northern Finland have been isolated finds, usually interpreted as having been lost by hunters or having served as sacrificial offerings (Hackman 1905: 241–252; Huurre 1983: 332–334; Meinander 1950: 133–136). Now for the first time such stones can be linked with a dwelling site in this part of the country. About 20 striking-stones have been found in Northern Finland, and close on 500 in the country as a whole. It may be said, in fact, that oval striking-stones constitute one of the most common types of prehistoric artefact over the whole Scandinavian region (Huurre 1983: 332–334; Kivikoski 1973: 39, Abb. 186–189).

What is particularly interesting about the Rakanmäki stones is that they are fragments, as the stones previously reported from graves or thought to have been sacrificial offerings have almost without exception been intact specimens.



Table 1. Calibrated radiocarbon dates, calculated by Tapio Seger (after Stuiver & Pearson 1986; Stuiver & Reimer 1986).



This question, like that of the oval striking-stones in general, must be left for the moment, however, to wait for someone who is prepared to go into this particular aspect in greater detail. All that may be said here is that the better preserved of the two represents the very common tapering oval style, whereas the other one is made of extremely coarse-grained quartz polished to produce very clear-cut edges (Fig. 6).

What, then, can be said about the dating of this dwelling site? A solution can be sought by setting out from three major factors: Dating of artefacts, shoreline displacement and radiocarbon dating.

The artefacts include only a few items which could be used for dating purposes. Spade-shaped iron currency bars of the Norrland type have been dated by Swedish investigators mostly to the middle and late Iron Age (Hallinder 1978: 33-34), although there are some indications that they may have been in use somewhat earlier (see Nihlén 1939: 104). The strikingstones are almost as indeterminate as far as dating is concerned. Most of them have been placed in the Younger Roman Period and the Migration Period, i.e. between the second and sixth centuries A.D. (Kivikoski 1973: 39; Salo 1984: 238), although oval striking-stones would again appear to have been in use earlier as well (Salo 1968: 169-170). The remainder of the finds would be still more difficult to use for dating purposes in view of the small numbers of items involved and their fragmentary condition. This is certainly the case as far as the spearhead fragment with central ridge, the piece of bronze spiral and the few small iron objects, possibly rivets, are concerned.

The second dating method available alongside the artefacts themselves is approximate placement of a site with relation to the time-scale of shoreline displacement. The highest points on Rakanmäki reach just over 20 m above present sea level, which, given a mean rate of land uplift in the Tornio district of 85 cm per hundred years, would mean that these points emerged from the sea about 2100 B.P. Correspondingly, the lower terrace of the dwelling site itself must have been dry land about 1600 B.P. Reservations should always be made, however, when dating sites by reference to shoreline displacement for the fact that local irregularities, sometimes of considerable magnitude, can occur in the rate of land uplift, and one such area where irregularities have been encountered is around the head of the Gulf of Bothnia. Even so, this approach gives us an approximation for the date when the Rakanmäki site would have been available for human use (on land uplift, see Siiriäinen 1978; see also Map 2).

The most reliable method available at the present time for dating a site such as Rakanmäki is radiocarbon dating. Two series of dates have been obtained so far for the permanent remains at the site, i.e. the ovens and assumed bases to upright poles (see Table 1). These suggest that the site dates back roughly to Roman times.

When evaluating the dating results it is naturally interesting to see how the burial mounds relate in age to the dwelling site. No dates are available so far for the mounds other than via the artefacts found in them, and in this respect only one object, the broken neck ring has been dated. It is somewhat presumptuous to attempt

to date a structure on one fragmentary artefact, but even so the exercise offers interesting prospects as far as the whole problem surrounding Rakanmäki is concerned.

If we set out from the assumption put forward in the above description of the excavation of the mounds, that the object is in fact a neck ring openable at the ends (Fig. 7), this would date it to the Migration Period, although one cannot entirely exclude the possibility that rings of this kind may have been worn earlier (Kivikoski 1973: 48, *abb.* 253). It is difficult, however, and perhaps impossible, to date a structure on the basis of such a simple single artefact, and thus the true age of the mounds remains an open question.

The major problem in mind when the Rakanmäki investigations were being planned was whether evidence could be found of Iron Age settlement in Northern Finland, and if some was to be found, then what could be said of such settlement on the basis of the site? Now that the work has been in progress for three years one may attempt to render at least a preliminary account of the findings.

Rakanmäki may be regarded as the site of an extensive Iron Age settlement datable primarily on radiocarbon evidence to the Roman Period, some time between the birth of Christ and A.D.400. Nothing concrete can be said about the culture which this population represented, nor about their origins, but the artefacts recovered suggest that they were in contact with the central areas of Iron Age civilization in the surrounding regions.

The finds to date are heavily weighted towards metalworking, and the site was clearly used for both the smelting and forging of iron and for the casting of bronze, for which there is a certain amount of evidence.

The principal source of livelihood for the population would seem to have been hunting and fishing, excellent opportunities for which were provided by its location close to the sea and to two major rivers, the Tornionjoki and Kemijoki. There are no finds or samples that give any suggestion of farming or animal husbandry, and it is interesting to observe that no ceramics at all have been found at the site.

Finally, we should look for an answer to the question put forward at the beginning of this paper as to whether settlement at the site was of a permanent or a seasonal nature. For this purpose it is naturally essential first to determine what we mean by permanent settlement. Under Finnish conditions we tend to use this phrase to

refer to Iron Age settlements that remained relatively firmly anchored in one place and existed mainly on agriculture. It is also assumed that such a population will have buried its dead in the immediate vicinity. Regions characterized by permanent settlement of this kind are traditionally held to be Southern Finland, South-Western Finland and at least parts of Southern Ostrobothnia (Huurre 1983: 314; Meinander 1950), while the north of the country is traditionally thought of as having been inhabited only by a hunting and fishing population referred to as Sami, or Lapps, and otherwise as having been a target for hunting expeditions setting out from the areas inhabited by the dominant population in the south (Huurre 1983: 414–429, 435–442).

Considered against this background, the Rakanmäki finds offer clues that can be explored in a number of directions. On the one hand its structural remains are indicative of more long-term settlement, while on the other hand there are some signs suggestive of only temporary occupation. The large number of permanent remains in the form of stone structures would suggest that a certain population either returned to the same site regularly or else lived there permanently for a certain period, whereas the small number of finds leads us to think that settlement there was never particularly intensive.

It would seem difficult to find any definitive answer at this stage in the research, and Rakanmäki itself is only the first place at which it has been possible to make a systematic study of a dwelling and burial site in Northern Finland. Thus it would seem wisest to leave the question of the nature of the settlement open for the time being.

The work carried out at Rakanmäki to date has nevertheless succeeded in demonstrating that evidence of Iron Age settlement is to be found in the north of Finland, and that the hundreds, or possibly even thousands, of stone mounds to be found on the coast around the head of the Gulf of Bothnia should be treated seriously and regarded as possible indicators of some kind of settlement in the region (*cf.* Miettinen 1986). Thus it is to be hoped that we can return to the question of the nature, extent and origin of this settlement at a later stage, when a few more sites of this kind have been examined.

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## ABBREVIATIONS

- SM = Suomen Museo  
 SMYA = Suomen Muinaismuistoyhdistyksen Aikakauskirja