Corded Ware Culture in Northern Finland[1]

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It is well known that the Corded Ware (or Battle-Axe) Culture spread to Finland ca. 3200 calBC. It was soon established in the SW part of the country and a sharp cultural border developed against northeastern hunting and fishing communities. However, Corded Ware influence leaked northwards along coastal Ostrobothnia and also influence from the part of the Swedish Battle-Axe culture were felt in the north. This paper is an experiment in the dating and chronology of the Finnish Corded Ware Culture on the one hand and a limited examination of the Corded Ware Culture material of northern Finland.

Introduction

The prehistoric habitation site Rovaniemi 201 Niskala is located on the right bank of the River Kemijoki ca. 12.5 km south of the Arctic Circle and ca. 7 km southwest of central Rovaniemi, capital of the Province of Lapland, northern Finland (Kotivuori & Torvinen 1992: 50). It is one of many Stone Age and Early Metal Age sites on the shores of the Kolpene palaeolake examined by Ari Siiriäinen (2003) in this volume (see also Kotivuori 1996). The first finds from the area were sent to the State Historical Museum of Finland, Helsinki, and the Oulu Provincial Museum as early as 1896. In 1934 the National Museum of Finland (the successor of the State Historical Museum) received Stone Age objects found at the site and in 1935 curator Jorma Leppäaho carried out an excavation at the site. The Archaeological Commission considered his finds and observations important and therefore he was ordered to continue the excavations in 1936. (Purhonen 1973.)

The damming of rivers and the construction of hydroelectric power stations were the incentive to launch an archaeological rescue operation of a wide scope along the River Kemijoki. In 1959 excavations at Niskala were continued, now headed by researcher Jaakko Sarkamo. Important material including Neolithic and Early Metal Age finds was brought to light. Some of the finds were more or less unexpected, such as the sherds of a ceramic vessel representing the Corded Ware culture (Fig.2). (Purhonen 1973: 31–32, Fig. 2-14699:1558. See also Huurre 1983: 190; Kotivuori 1996: 102.)

The Neolithic Corded Ware (or Battle-Axe) culture covered the southwestern part of Finland (Edgren 1993: 86–96). The archaeological material of northern Finland includes finds indicating that Corded Ware cultural influences reached the area both from southwestern Finland and from southern Sweden (Huurre 1983: 187–194; Kotivuori 1996: 101–102). This paper is an experiment in the dating and chronology of the Corded Ware culture on the one hand and a limited examination of the Corded Ware culture material of northern Finland on the other.

The dates quoted here are conventional radiocarbon ages before present (BP, i.e. radiocarbon years before AD 1950; t/2 = 5568±30 yrs) calibrated according to the 'Original Groningen Method' based on cumulative probability analysis included in the Cal25 computer program to correspond

approximately with calendar dates BC (calBC). The margin of error corresponds to 1 σ. (Jungner 1998; Plicht 1993.)

Radiocarbon dates of Corded Ware culture burials

The radiocarbon dates for three Corded Ware culture burials from southern Finland have been published:

VANTAA, JÖNSAS. – Basic map sheet: 294301. Coordinates: x = 668360, y = 354744, z = 30 m. – First find: 1910 (KM 5611: 2); Survey: Veikko Lehtosalo 1960 (KM 14919), 1062 (KM 15408). Excavations 1962, 1971...1977, 1982, 1985 (see literature). – Hel-1006 (charcoal from bottom of burial/1977) 4520±130 BP / 3420(3210)3030 calBC. – Literature: Edgren 1993: 92; Jungner & Sonninen 1983: 32; Ojonen 1983: 7 No. 6; Purhonen 1986.

LIETO, KUKKARKOSKI. – Basic map sheet: 104410. Coordinates: x = 671755, y = 158010, z = 31 m – 38 m. – First finds: 1957, 1958 (KM 14290; 14324). Excavation: C. F. Meinander 1958 (KM 14558); Markku Torvinen 1975, 1976 (KM 19727; 19749; 19991). – Hel-831 (charcoal from burial 9) 4320±170 BP / 3250(2970)2710 calBC. – Literature: Edgren 1993: 92; Jungner & Sonninen 1983: 24; Torvinen 1979: 58–60, 72, 76–77.

PORVOO, FORSBERG. – Basic map sheet: 302204. Coordinates: x = 671510, y = 343270, z = 37,5 m. – First find: 1957 (KM 14163: 1–4). Excavation: Torsten Edgren 1957 (KM 14163: 5–11). – Sch156/H1038-1009 4140±80 BP; Grn-6256 4105±55 BP (charred wood from the container of the corpse or the lining of burial); since the dates do not show statistically significant variation, it is justified to use their weighted average 4120±50 BP / 2830(2700)2610 calBC as the date of the subject. – Literature: Edgren 1959; 1970: 75–77; 1993: 92.

A great number of radiocarbon dates obtained from different parts of the wide area covered

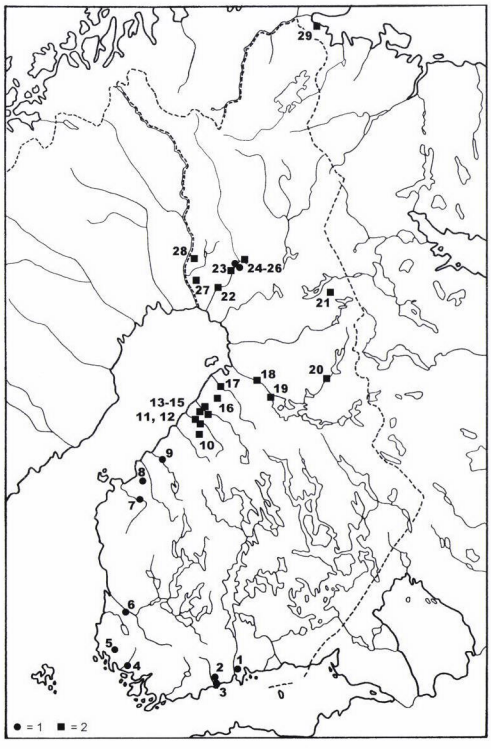

Fig. 1. Location of places mentioned in the text. 1 = ceramics, 2 = stone artefact(s). (1) Porvoo Forsberg, (2) Vantaa Jönsas, (3) Helsinki Kaupintie, (4) Lieto Kukkarkoski, (5) Mynämäki Pyheensilta, (6) Harjavalta Hiittenharju, (7) Ylistaro Troiharinkangas, (8) Oravainen Fårmossen 2, (9) Ähtävä Kvarnnabba, (10) Sievi, (11) Kalajoki, (12) Alavieska, (13) Merijärvi Kuoppakangas (burial), (14, 15) Merijärvi, (16) Vihanti, (17) Ruukki, (18) Utajärvi, (19) Vaala, (20) Hyrynsalmi, (21) Kuusamo, (22) Tervola, (23) Rovaniemi, (24) Rovaniemi 201 Niskala, (25) Rovaniemi *73/74* Kumpuniemi/Ylikärrylä, (26) Rovaniemi, (27) Tornio, (28) Ylitornio, (29) Varanger fiord. The burial site Bolshoj Peskonets on the northern coast of the Kola peninsula remains outside this map. – Drawing C. Carpelan 2003.

by the Corded Ware culture have been published (e.g. Mallory 1989 Fig. 139). Among them the Vantaa and Lieto finds are rather early. In Denmark and Sweden the Corded Ware culture has been dated to the period 2800...2300 calBC (e.g. Burenhult 1982; Nielsen 1993). Sini-Marja Ojonen (1983), who published the date of the Vantaa burial, claimed that it was problematic because in her view it was older than the Corded Ware culture. According to Ojonen the sample was taken from the

bottom of the grave underneath a Corded Ware pot. The pot was the only find.

One could assume that the problem could be solved by taking into account the influence of old wood in the dated samples. If 400 years were subtracted from the calibrated values, the new dates would be approximately between 2800 and 2300 calBC. However, this would entail that the dated charcoal represents the heartwood of very old trees. I regard this an unlikely possibility. In the case of the Vantaa and Lieto burials the charcoal samples used for dating were procured from the soil at the bottom of the grave pit (Ojonen 1983: 17; Torvinen 1979: 77). I believe that the samples represent the fire used in the burial rituals, a phenomenon observed in several different contexts (e.g. Äyräpää 1932: Edgren 1959). It is unlikely that evidence could be obtained pertaining that the fuel was chopped from logs of large diameter.

In the case of the Porvoo burial the samples represent the container of the corpse or materials used to line the grave pit. If a dugout made of a single thick tree trunk was set inverted on the deceased, as some published observations (Edgren 1959: 28–32) could perhaps imply, old wood could not have influenced the date considerably. According to Edgren (1959; 1970) the frame on the grave was constructed by placing vertical sticks next to each other. A cover of some sort was then placed on the sticks. Again, there is no cause to presume old wood influence in dating results.

Corded Ware culture contacts with the indigenous cultures of Finland

The Corded Ware culture has been considered to represent a new population that migrated to southwestern Finland and had a different culture when compared with the indigenous population. A rigid cultural border was formed between the Corded Ware culture and the cultural area of inner, eastern and northern Finland represented by Middle Neolithic Asbestos Ware (e.g. Edgren 1993: 95–96). However, there are indications considered to demonstrate that contacts between the newcomers and the indigenous population did occur both within the Corded Ware culture area and also across the mentioned border.

It has been suggested that the rim profiles and horizontal ornaments on the upper part of certain clay vessels representing the Pyheensilta Ware were borrowed from the Corded Ware culture (e.g. Äyräpää 1956: 22–23; Edgren 1970: 59–60). Not going into detail I emphasize that this view is a misconception. When C. F. Meinander (1940: 41) published the results of the first excavations at the site Pyheensilta in Mynämäki, SW Finland, he asserted with good grounds that the profiling and associated ornamentation of Pyheensilta Ware can only be understood as a ceramic influence received from the Swedish Pitted Ware culture. Only in the late 1980's and after that some researchers have independently attained views along the same lines (Vikkula 1987: 162–163; Luoto & Terho 1989; Huurre 1991: 219).

The rare finds of boat-shaped battle-axes, representing a Finnish type, in the Asbestos Ware area of inner, eastern and northern Finland (the northernmost find in Hyrynsalmi) outside the Corded Ware culture area, are evidence of connections of some kind between the Corded Ware and the Combed Ware cultures (Äyräpää 1952: 24). The manufacture of imitated boat-shaped battle-axes in the area of the latter highlights the importance of these contacts. These so-called barbaric imitations sometimes conformed to the old local tradition and were provided with a butt shaped as an animal head (Äyräpää 1952). The Finnish boat-shaped battle-axes are divided into two groups: the older types 1a, 1b and 1c, and the younger types 2a, 2b and 2c (Edgren 1993: 92–93). The barbaric imitations manufactured in the Asbestos Ware area as well as the battle-axes imported there include specimens belonging to both groups (Äyräpää 1952).

Corded Ware culture work-axes, some of them shouldered, were more common than the genuine boat-shaped axes outside the Corded

Ware culture area (for northern Finland, see Huurre 1983, figure on p. 192). Outside the Corded Ware area Corded Ware ceramics have only been found at one site, namely the habitation site Rovaniemi 201 Niskala mentioned above. Additionally, Combed Ware type adzes found in Corded Ware burials (see Edgren 1970: 59, 81, 82, picture 32) and, similarly, finds of Combed Ware ceramics at Corded Ware habitation sites indicate contacts between these communities.

Dating of Corded Ware with the aid of extraneous ceramics found in the same context

Some Neolithic habitation sites in Finland classified as Corded Ware culture sites include Late Combed Ware and/or Middle Neolithic Asbestos Ware material, but no older or younger Stone Age material (for Southern Ostrobothnia, see Miettinen 1986: 107). Aware of the problems involved in verifying the internal chronology of a habitation site material (e.g. Edgren 1970: 57–58), I proceed assuming that the following site is chronologically uniform.

HELSINKI, KAUPINTIE. – Topographic map sheet: 204301. Coordinates: x = 668014, y = 254898, z = ?20 m. – Survey: Veikko Lehtosalo 1960 (KM 14911). Excavation Maarit Lönnberg 1973 (KM 19319). – Literature: Edgren 1970: 79.

The Kaupintie habitation site is situated about 4 km southwest of the Jönsas habitation and burial site, on the shore of the same palaeobay of the Gulf of Finland that once filled the River Mätäjoki valley. At excavations conducted in 1973 one could only recognise that the Kaupintie site had been almost completely destroyed by a road and houses built in the area. Only a narrow stretch, partially buried under a landfill, had been preserved intact. The level of the nethermost finds in the site of excavation was ca. 22 m asl but it was not clear whether this was true in the whole area. On the topographic map the 20 m contour forms a cape protruding into the ancient bay from the east. The sheltered south shore running from east to west was the location of the habitation site. When the water level dropped the shoreline pulled rapidly away from the site.

The abundant Corded Ware material indicates that the site would have been a significant object of study prior to its destruction. Of special interest are the ceramics representing two different traditions, namely Pyheensilta Ware and Middle Neolithic Asbestos Ware, found among the Corded Ware ceramics. Among the Pyheensilta ceramics one can distinguish fragments of a flat-bottomed vessel (KM 19319: 273), which is comparable to similarly designed Pyheensilta ceramics found at the Harjavalta, Hiittenharju habitation site (Huurre 1991: 221). Among the Asbestos ceramics there are sherds of at least two vessels, one of Kierikki Ware (e.g. KM 19319: 219) and another of its hatched surface variant (e.g. KM 19319: 337, 350, 351; this variant is present e.g. at the habitation site Rovaniemi 73/74 Kumpuniemi/Ylikärrylä or Kärräniemi, located by the Kolpene palaeolake and mentioned by Siiriäinen 2003, this volume).

The Early in the North Project dating program (Carpelan 2003c this volume) has provided charred crust datings of 13 Middle Neolithic vessels, four of which represent the Kierikki Ware proper, three its hatched surface variant (including the specimen from Kärräniemi) and six the Pöljä Ware. The Kierikki Ware and the hatched surface variant were used in the same period and they were replaced by Pöljä ceramics between 3100 and 3050 calBC. This would also be a terminus post quem non for the Kaupintie habitation site. In addition to the rare flat-bottomed variant of Pyheensilta Ware, also Kierikki ceramics has been collected from the Harjavalta Hiittenharju habitation site (Huurre 1991: 221). The uniform special characteristics of the Hiittenharju and Kaupintie materials indicate that the sites were inhabited practically simultaneously. Assuming that the shoreline of the Hiittenharju habitation site was 38 m asl (Huurre 1991: 221),

this would date the end of settlement to the 32nd century calBC.

If the different components of the Kaupintie ceramic material are accepted as parts of one context, the presented datings suggest that it is in good agreement with the dating of the Jönsas burial/1977. I find it plausible to assume that the Corded Ware culture spread to southern Finland ca. 3200 calBC or in the 32nd century calBC.

Corded Ware habitation sites and shore displacement chronology

The Kaupintie habitation site, dealt with above, actualises the possibility to shoreline date Corded Ware habitation sites. In Southern Ostrobothnia there are a number of Corded Ware habitation sites whose location can be dated by shore displacement. The sites represent the initial and final stages of the Corded Ware culture.

YLISTARO, TROIHARINKANGAS. – Basic map sheet: 231105. Coordinates: x = 699318, y = 243250, z = 50 m. – Survey: Aarne Kopisto 1954 (KM 13664). Excavation: Kopisto 1954 (KM 17201). Inspection: Kerttu Itkonen 1968. – Literature: Edgren 1964: 23 Fig. 9, 26, 27; 1970: 100 and pl. 15 E.

The investigation at Troiharinkangas in the municipality of Ylistaro, Southern Ostrobothnia, has been limited and the documentation of results insufficient. However, it is clear that Pöljä Ware (KM 13664: 2; Edgren 1964 Fig. 9) was retrieved there in addition to Corded Ware ceramics (KM 17201: 2, 13, 27; Edgren 1970 pl. 15 E). As noted earlier, the charred crust datings available to the Early in the North project indicate that the Pöljä Ware appeared between 3100...3050 calBC. If one estimates on the basis of the basic map, that the shoreline during the habitation coincided with the present 50 m asl contour line, the date of the site would be ca. 3000 calBC. If correct, this would support the somewhat earlier dates of Jönsas and Kaupintie, assuming that the Corded Ware culture spread first to the southern coastal zone of Finland and then from there northwards.

ORAVAINEN, FÅRMOSSEN 2. – Basic map sheet: 133410+231201. Coordinates: x = 701656, y = 142673, z = 46 m. – Survey: Mirja Miettinen 1984 (KM 22373). Excavation: Mirja Miettinen 1985 (KM 23016). – Literature: Miettinen 1986.

ÄHTÄVÄ, KVARNNABBA. – Basic map sheet: 232110. Coordinates: x = 704682, y = 246192, z = 46 m (areas I, III), 44 m (area II). – Survey: Aarne Äyräpää 1934 (KM 9950). Excavation: Äyräpää 1935 (KM 10173). Survey: Mikko Ahvenlampi 1971. – Literature: Edgren 1970: 98–99; Meinander 1954a: 40–42.

The Kvarnnabba Corded Ware habitation site has been considered a shoreline site comparable to Combed Ware sites and as such, an example of how Corded Ware societies were forced to give up cultivation and adapt to foraging in Finland, at the northern periphery of their occurrence (e.g. Meinander 1954: 149). Assuming that the shoreline of the Corded Ware section of the Kvarnnabba habitation site, represented by excavations I and III, was 46 m asl, this would date the end of settlement to approximately 2500 calBC. Evidently Fårmossen 2 is a comparable site and also its dating is the same, 2500 calBC.

The ceramics from Kvarnnabba I and III and Fårmossen 2, respectively, include sherds of pots with corded ornamentation, with line ornamentation and without ornamentation (Meinander 1954a: 42, 149; Edgren 1970: 98–99, pl. 15 D; Miettinen 1986 101,103, Fig. 1D, E). In addition, the Fårmossen 2 material includes ceramics that differs from Corded Ware and which Miettinen (1986: 101, Fig. 1A–C) has compared with Kiukais Ware. Corresponding ceramics were collected from Kvarnnabba site II as almost sole material; only two asbestos-tempered pieces of ceramics were found amongst it (Meinander 1954a: 42). The dating of Kvarnnabba II at the level of 44 m asl is ca. 2350 calBC.

The Kvarnnabba sites I and III and Fårmossen 2 represent the relatively lowest and, consequently, the youngest sites known to me among sites with 'genuine' Corded Ware ceramics. It seems that during the habitation of Fårmossen 2 around 2500 calBC a new 'late Corded Ware' tradition was adopted in ceramics, which in due course led to the emergence of the so-called 'Intermediate zone' ceramics. Intermediate zone ceramics was produced in a zone reaching from southern coastal Finland to Ostrobothnia during the Late Neolithic, when Kiukais Ware was produced on the west and southwest coasts (Carpelan 1979: 14–15; Lavento 2001: 24–25, 113).

Corded Ware in northern Finland

As indicated in the beginning, Corded Ware has been found at one spot in northern Finland.

ROVANIEMI 201 NISKALA. – Topographic map sheet: 361204. Coordinates: x = 737307, y = 342903, z = 74 m. – Finds, surveys, excavations 1934...1961 (see literature). – Literature: Edgren 1970: 100, pl. 15 C; Kotivuori & Torvinen 1992: 50; Purhonen 1973.

The large and long-inhabited site Rovaniemi 201 Niskala material includes, not only locally made slate objects, but objects imported from various directions. A type A 13 Corded Ware pot of which two sherds remain (Fig.2; Edgren 1970: 100, Plate 15 C; Purhonen 1973: 31–32, Fig. 2-14699:1558) is probably an imported object because the River Kemijoki region is clearly outside the area of the Corded Ware culture. This small pot may have been brought there for instance by a member of a Pöljä Ware society with contacts in the Corded Ware culture (cf. Huurre 1983: 190, 193; Kotivuori 1996: 102). Sherds of Pöljä Ware have indeed been collected at Niskala (Purhonen 1973: 23_24). In the light of the above, the Corded Ware pot must have been brought to Niskala between 3200...2500 calBC. It probably happened early in this period when Corded Ware culture was still actively expanding.

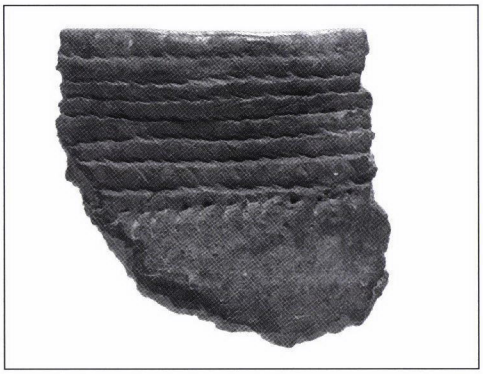

Fig. 2. Sherd of Corded Ware vessel from *Rovaniemi 201 Niskala*. – Photo MV/R. Bäckman 1992.

Corded Ware culture stone objects in northern Finland

According to Huurre (1983: 187–190) and Kotivuori (1996:101–102) a total of 20 stone artefacts representing the Corded Ware culture have been collected in northern Finland. Of the objects 18 are occasional finds and the list below only indicates the municipalities in which they have been found (I shall deal with the two so-called boat-axe imitations from Merijärvi later in connection with the examination of their context). Of the listed items 9 are boat-shaped battle-axes, 8 work-axes and 1 a whetstone. The typological determinations of the two first battle-axes are merely based on 'impression'.

BATTLE-AXE from Hyrynsalmi Hautalahti (Fig. 3a; KM 9147). – Aarne Äyräpää (1940 Fig. 19; 1952: 24 note 2) first regarded it as Swedish but later changed opinion and regarded it as a Finnish axe. Huurre (1983: 187) considers it Finnish "of the older group" (i.e. Äyräpää's group 1, particularly type 1c; cf. Edgren 1992: 92–93). If Swedish, it would compare with type D:1a or Hurva 1a (cf. Malmer 1975: 95, Fig. 67), Because the object is a blade-half of an axe, broken at the shaft hole, the type cannot be determined according to the guidelines suggested by Mats Malmer. – Literature:

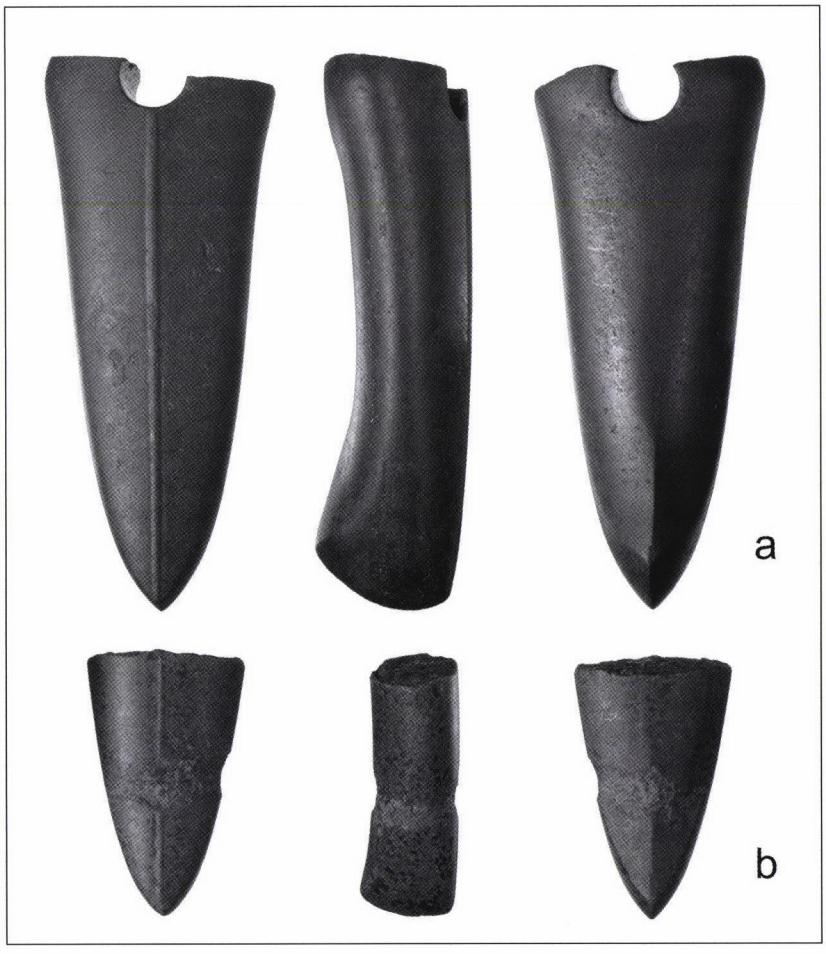

Fig. 3. Pieces of battle-axes (a) from *Hyrynsalmi Hautalahti* (KM 9147); (b) from *Ruukki Ranta-Pehkola* (KM 3483: 2). Not to scale. – Photo MV/M. Haverinen 2003.

Huurre (1986: 64 and Fig. page 65 below).

BATTLE-AXE from Ruukki 17 Rantapehkola (Fig 3b; KM 3483: 2). – Huurre (1983: 189) has compared it with the Swedish type D:1b or Hurva 1b (cf. Malmer 1975: 95, Fig. 67). It could be compared with the Finnish group 1 as well (particularly type 1c; cf. Edgren 1992: 92–93). Because the object is a blade-part of an axe, broken between the shaft hole and the cutting edge, the type cannot be determined according to Malmer's guidelines.

BATTLE-AXES from Rovaniemi 56 Petäjäskoski (Fig. 4b; KM 2508: 7) and Kuusamo 5 Kokkoniemi (Fig. 4a; KM 5520, 8837) of Swedish type C:2 or Sösdala 2 (cf. Malmer 1975: 95, Fig. 66). – Literature: Erä-Esko (1957: 35–36 and Fig. 9); Huurre (1983: 190 and Fig. on page 189); Kotivuori (1996: 102 and Fig. 16); Sarvas (1986: 00 and Fig. 31).

BATTLE-AXE from Tornio 12 Isosaari (Fig. 4d; KM 14025) of the Swedish type E:2 or Vellinge 2 (cf. Malmer 1975: 95, Fig. 67). – Literature: Erä-Esko (1957: 34–35 and Fig. 8)

BATTLE-AXE from Ylitornio 20 Tasala (Fig. 4c; KM 7668: 1) is an imitation, made in mica-gneiss, with a general shape of the Swedish main type E or Vellinge (cf. Malmer 1975: 95, Fig. 67). – Literature: Äyräpää (1952: 15)

BATTLE-AXES from Kalajoki 1015 Takalo (Fig. 5; KM 15012), Merijärvi 8 Ilvessalo (Merijärvi Museum 59) and Vaala 138 Nuojua (PPM 4696: 3) of Finnish tapering-butted type (cf. Soikkeli 1912). – Huurre (1983: 187).

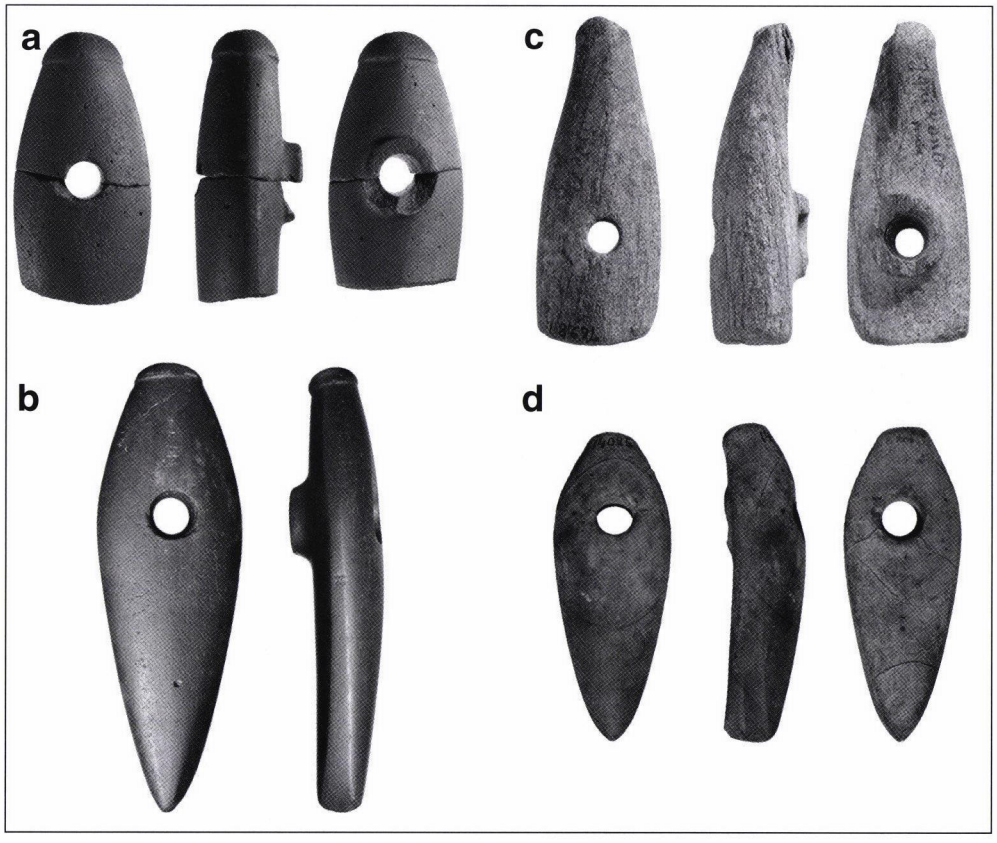

Fig. 4. Battle-axes and pieces of battle-axes. (a) From *Kuusamo Kokkoniemi* (KM 5220, KM 8337); (b) from *Rovaniemi Petäjäskoski* (KM 2508: 71); (c) from *Ylitornio Tasala* (KM 7628: 1); (d) from *Tornio Isosaari* (KM 14025). Not to scale. – Photos MV/A. Erä-Esko 1957 (b); MV/M. Haverinen 1999 (d), 2003 (a); MV/T. Syrjänen 1977 (c).

Work-axes from Alavieska 5 Tolonen (KM 2478: 14), Merijärvi 27 Vitoperä (KM 19401), Sievi 44 Ylimäki (KM 11069: 1), Vihanti 110 Pikku-Rulla (KM 3770), Vihanti 5 Aartokangas (KM 9552: 20), Vihanti 48 Majakangas (KM 12213), Utajärvi 79 Kukkola (KM 11755) and Tervola 29 Saraoja (KM 14018: 1) of Finnish type, one of which shouldered. (See Figs. 6, 7).

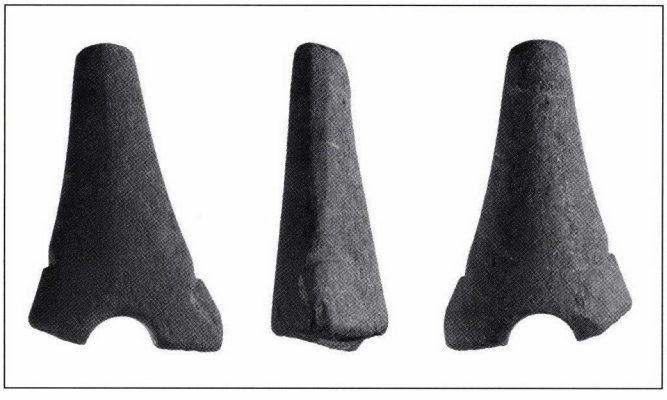

Fig. 5. Piece of battle-axe from *Kalajoki Takalo* (KM 15012). Not to scale. – Photo MV/M. Haverinen 2003.

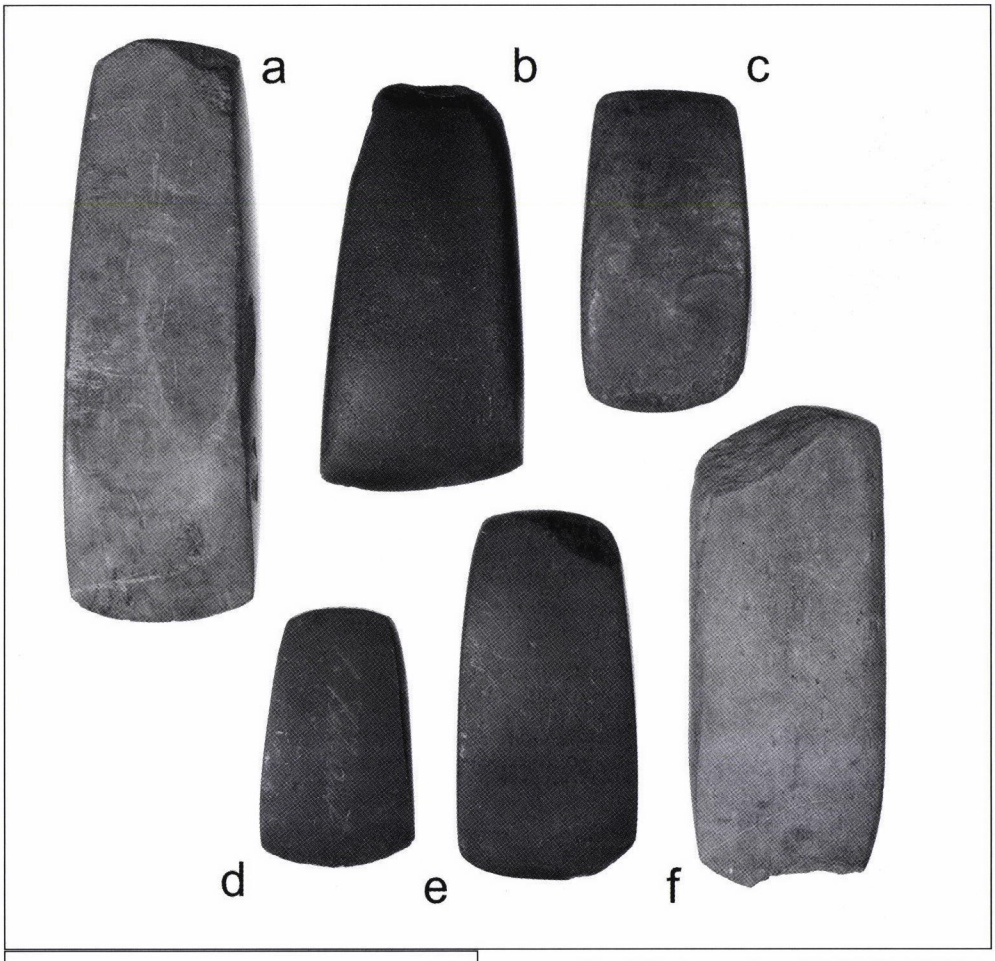

Fig. 6. Work-axes from (a) *Utajärvi Kukkola* (KM 11755); (b) *Merijärvi Vitoperä* (KM 19401; (c) Sievi Eskola (KM 11069: 1); (d) *Vihanti Rullavuori* (KM 3770); (e) *Alavieska Tolonen* (KM 2478: 14); (f) from *Vihanti Aartokangas* (KM 9552: 20). Not to scale. – Photo MV/M. Haverinen 2003.

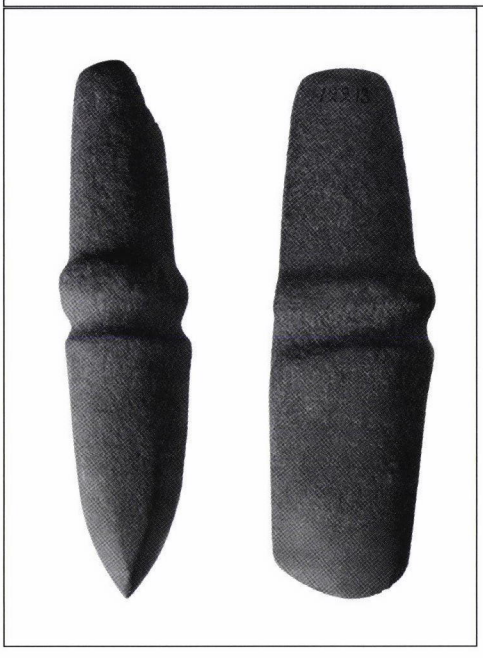

Fig. 7. Shouldered work-axe from Vihanti Majakangas (KM 2003). Not to scale. – Photo MV/M. Haverinen 2003.

Fig. 8. Whetstone from Rovaniemi (KM 594: 19). Not to scale. – Photo MV/M. Haverinen 2003.

WHETSTONE from Rovaniemi 7 Taavettila (Fig. 8; KM 594: 19) of Swedish multi-faceted type (cf. Malmer 1975: 88, Fig. 63). – Literature: Kotivuori (1996: 102); Kotivuori & Torvinen 1992: 17 nr. 4)

The areal distribution of this material has attracted the interest of several researchers (Äyräpää 1940 Fig. 19; 1973: 207; Huurre 1983: 187–194; Kotivuori 1996: 101–102). Two zones with Corded Ware influences – a southern and a northern, each with a special character – can be separated in northern Finland.

Six (or 30%) of the 20 Corded Ware culture stone artefacts from northern Finland originate in the northern zone. Of these, three battle-axes and a multi-faceted whetstone (67% of the relevant artefacts) are of Swedish type and manufacture. The battle-axe from Ylitornio may be regarded as a local or regional copy of a Swedish made of a bad type of stone. The work-axe, however, can be considered as of Finnish origin. Although corresponding axes made of stone are known in Swedish Corded Ware culture, too, they are very rare and their distribution is limited to the southernmost part of the country (type B; Malmer 1975: 84–85, 172 Fig. 61). It is unlikely that a single such axe would have travelled from Southern Sweden, through several provinces where they were not manufactured or used, to the River Kemijoki. I suggest that the Tervola work-axe represents an influence originating in the Finnish Corded Ware culture, as does the Corded Ware pot from Niskala.

Fourteen (70%) of the Corded Ware culture stone artefacts of North Finland originate in the southern zone. Half of them are work-axes, apparently originating in the Finnish Corded Ware culture. The seven battle-axes (10 %) represent two or three different types. Two of the axes have been compared with Swedish types in spite of the fact that they are critically broken pieces. They can bee compared with the Finnis type 1c with the same degree of probability. Three of the axes are of the Finnish tapering-butted type and two are presumably locally manufactured boat-axe imitations, which will be mentioned later. In the southern zone of Corded Ware stone artefacts, there are no certain specimens of Swedish type and manufacture; all of the artefacts are probably of Finnish origin. The composition of the material is thus converse when compared with the northern zone, as is also the proportion of battle-axes.

The chronological distribution of Corded Ware culture stone artefacts in northern Finland is also interesting. The work-axes did not change in appearance and were used throughout the period of the culture, but the Rovaniemi multi-faceted whetstone and the battle-axes do offer chronological clues. According to Äyräpää (see Edgren 1993: 92–93), the Finnish battle-axes fall into two main typological groups: 1 and 2, in addition to a third group, the tapering-butted axes. I tentatively suggest the following chronological succession: the shift from the main group 1 into the main group 2 took place in the 27th century calBC, and the substitution of the main group 2 with the tapering-butted axes in the 25th century calBC. I suggest that these dates also correspond with changes in ceramics, so that the type B, characterised by fishbone ornaments (Edgren 1970: 19–26), appeared alongside the cord-ornamented type

A ca. 27th century calBC, and that the shift to Late Corded Ware ceramics took place in the 25th century calBC, as I postulated when dealing with Kvarnnabba and Fårmossen 2.

Malmer (1975: 30, 99 and Figs. 25, 69) has suggested a periodisation for the Swedish battle-axe types, which is connected to a general periodisation of the Swedish–Norse Battle-Axe Culture. It falls in five periods of a constant length (plus a sixth transitional period). Considering that this branch of the Corded Ware / Battle-Axe Culture lived for 500 years (2800...2300 calBC) I roughly assume that each period lasted a century and use this as a tentative chronology.

The Hyrynsalmi axe (KM 9147) is typologically the oldest battle-axe in northern Finland. If it were of the Finnish type 1c, it would have made its appearance in the southern zone by 2600 calBC. The Swedish type D:1a, again, was produced in Malmer's periods 2 and 3, ca. 2700...2500 BC. In the case of the axe of Ruukki, the possible Swedish type D:1b was produced fron the middle of Malmer's period 2 to the middle of period 3, ca. 2650...2450 BC. According to the above, the Finnish tapering-butted axes were probably produced ca. 2500...2300 BC. The Swedish type C:2, represented by the axes of Tornio, Rovaniemi and Kuusamo, was produced in Malmer's period 3 and the first half of period 4, ca. 2600...2450 BC. Finally, the Swedish main type E, represented by the imitation in mica-gneiss from Ylitornio, was produced from the middle of Malmer's period 4 to the end of period 5, ca. 2450...2300 BC. The first multi-faceted whetstones seem to have appeared in Sweden during Malmer's period 3, but the main occurrence is clearly in periods 4 and 5. Although multi-faceted whetstones have been discovered in Corded Ware contexts in Southern Finland, too (Edgren 1970: 45), I assume that the Rovaniemi specimen travelled there along the Swedish coast in the wake of the C and E type battle-axes.

In conclusion I suggest that the indisputable wave of influence from the side of the Swedish corded Ware / Boat-Axe culture touched the northern zone in Malmer's periods 4 and 5, ca. 2500...2300 BC. The northward wave of influence starting in southern Finland reached northern Finland earlier than the Swedish one, possibly as early as the 30th century BC, in any case in the first quarter of the 3rd millennium BC representing the expansion phase of the Corded Ware culture in Finland. This wave appears to have reached as far north as Rovaniemi although battle-axes of Finnish type have not yet been brought to light there. This activity ebbed away soon but the South Finnish influence shows a second peak. In addition to the earlier one, the Tapering Butted battle-axes represent a later phase of influence simultaneous with the Swedish wave of influence towards the northern zone. At this point the northward wave of Finnish influence stopped around the River Oulujoki.

The Merijärvi burial

The northernmost documented burial with Corded Ware pottery has been discovered at Perttulanmäki in the municipality of Kauhava (Äyräpää 1932). The object of this section is a burial with certain characteristics in common with 'genuine' Corded Ware culture burials. It was discovered in the coastal zone of Northern Ostrobothnia ca. 140 km north-northeast of the Perttulanmäki burial, ca. 100 km northeast of the Kvarnnabba habitation site and ca. 255 km south-southwest of the Niskala habitation site.

MERIJÄRVI 16 KUOPPAKANGAS. – Topographic map sheet: 243204. Coordinates: x = 713504, y = 251878, z = 52,5. – First finds: 1931 (KM 9463). Excavation: Äyräpää 1932 (no finds). – Literature: Äyräpää 1952; Sarkkinen & Ranta 1996: 144.

Gravel hauling in winter brought up two boat-shaped battle-axes, which had been in a pit under the ends of an elongated accumulation of stones. According to the description of the finders and the observations made personally at the site Äyräpää (1952: 5–6) concluded that the find spot was a burial pit with two bodies, probably so that "the head

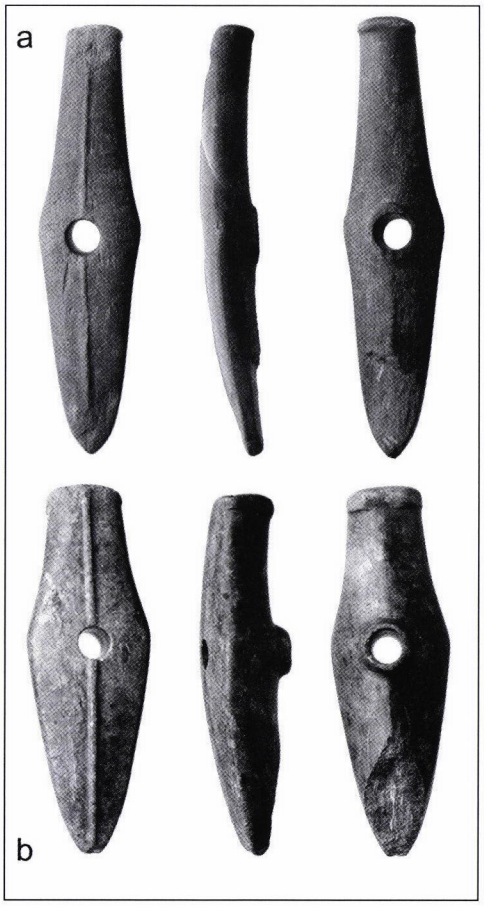

Fig. 9. Battle-axes with intentionally damaged blades from burial at Merijärvi Kuoppakangas: (a) KM 9463: 2; (b) KM 9463: 1. Not to scale. – Photo MV/E. Laakso 1932.

and the weapon of one were placed in the east end, the other's to the west end of the grave". Äyräpää was aware of corresponding double burials within the Corded Ware culture of Jutland, Denmark. According to Malmer's (1975: 40) estimate ca. 10% of the Swedish Corded Ware burials were double burials.

According to Äyräpää the accumulation of stones covering the grave pit was "a strange phenomenon here" [i.e. in Finland], correspondence to which could be found in southern Swedish Corded Ware culture graves. Malmer (1975: 36–39) claims that the stone structures in the Swedish Corded Ware culture are especially prominent in the province of Skåne (71% of the documented cases) and less common in other provinces (42% of the documented cases in the Lake Mälaren region). The stone structures are either of a "frame type" or a "conical type", the former of which appears during period 3 (beginning ca. 2600 calBC) and the latter that appears alongside during period 5 (beginning ca. 2400 calBC). There is information on similar structures in Southern Finland, which would date from between ca. 2600...2300 calBC (Edgren 1970:36–37 and footnote 6) according to the chronological connections presented above. The following observation by Äyräpää (1952: 6) is important for the interpretation: "The stone accumulation of the Merijärvi grave may have been created accidentally, the soil is so stony that the grave is almost filled with stones that were uprooted when it was dug." As a point of comparison he mentions a recent horse's grave close by, "where one can see an elongated accumulation of stones that rises slightly above the surface of the ground".

On the basis of abnormal type of rock and atypical details in shape, the axes from the Kuoppakangas burial are so-called barbaric boat-axe imitations, made outside the 'genuine' battle-axe tradition (Äyräpää 1952). One of the axes (KM 9463: 1), made of green, light-spotted stone with a matrix similar to soapstone, resembles mostly four-sided battle-axes of the Finnish type 1c. Äyräpää's explanation (1952: 7 and footnote 2), that "the shimmering-walled shaft hole and a more convex underside with a ridge running along its length" would represent "influences received from Russia via the connections kept by the Combed Ware culture, which have later been mixed to the traits of Finnish boat axes" is at present no longer relevant. It is possible to include the other axe (KM 9463: 2), of mica schist, despite its stretched dimensions, in the Finnish type 1c.

Äyräpää (1952: 8) was probably right in suggesting that the axes "are likely the work of former Middle Ostrobothnian people". In both axes the downward-projecting corner of the cutting edge has been chipped off, which is very rare in 'genuine' boat-axes. According to Äyräpää (1952: 8), it "implies that the maker of the axes was faced with an unusual task, and could not choose or handle the chosen

type of stone correctly". Of course this is possible but alternatively the axes may have been intentionally broken in connection with the burial ritual. If the axes of the Kuoppakangas burial are derivatives of the Finnish boat-axe type 1c, they would, according to the above, date to the period before 2600 calBC, i.e. to the time before the use of stone grave structures in Skåne and little by little elsewhere. Thus, in addition to chorological reasons, chronological arguments support the notion that "the stone accumulation of the Merijärvi grave may have been created accidentally".

Concluding remarks

Aarne Äyräpää (1973: 207) compared the northeastern border of the Corded Ware culture in Finland with a Great Wall, which effectively cut the spread of cultural traits to the other side. There was some leakage, however, and the main channels for this leakage were located in the coastal zone both in the east (Gulf of Finland) and in the north (Gulf of Bothnia). This paper has presented material from the latter direction of spread.

The distribution of stone artefacts indicates that the influence emanating from the side of the Finnish Corded Ware culture shows two temporal peaks. During the earlier in the first quarter of the 3rd millennium BC the Finnish influence reached as far north as the River Kemi close to the Arctic Circle. During the later peak ca. 2500...2300 BC the wave of influence stopped in the River Oulu region, ca. 65° N latitude while north of this the stone objects of the period originate in the Swedish Corded Ware or Battle-Axe culture. They represent a logical continuation of the chain of Battle-Axe culture finds along the Swedish coast of the Gulf of Bothnia (Baudou 1989; 1995: 71–74). It is interesting to note that battle-axes of early Swedish types, found in Northern Norrland (Malmer 1962: 655–656 and Tables 64, 71), did not spread across the River Tornionjoki during the period of influence from the side of the Finnish Corded Ware culture.

In this connection it is important to note that a Swedish battle-axe identified by Malmer (1962: 655–656 and Tables 64, 71) as of type E was found as far north as the Varanger fiord, Northern Norway (Olsen 1994: 91–92, Fig. 57). This may be the end point of a line of connections opened by the Swedish Battle-Axe culture in its later phase. The impressive Bronze Age caches from the Municipalities of Sodankylä and Inari (Meinander 1954b: 88, 229–230) probably indicate that the connections along this line continued in the Bronze Age (Carpelan 2003b: 53–54). Another find from the coast of the Barents Sea, published by Nina Gurina (1981; 1997: 97–99, 152, pl. 49, 57–5, 8), should also be mentioned. The impressive grave find from a habitation site at the bay Bolshoj Peskonets on the northern coast of the Kola Peninsula included, among other things, flint implements (a gouge and two daggers or spearheads) which according to Gurina (1997: 152) resemble "by shape and raw-material the Scandinavian finds associated with the corded-ware culture assemblages". If correct, this illustrates how rare alien objects, having been transported to the Varanger fiord, were distributed widely in great demand. A flint dagger or spearhead discovered on the River Kemijoki in the municipality of Rovaniemi could be a relevant find (Huurre 1983: 198, Fig. on p. 197, right).

The Scandinavian Corded Ware or Battle-Axe culture is dated by radiocarbon to 2800...2300 calBC (e.g. Burenhult 1982; Nielsen 1993). This falls within the chronological frame of the later part of the Neolithic of northern Norrland, Sweden (Baudou 1995 fig. 31). In Finnish Lapland this is a period of influence originating precisely in northern Norrland (Carpelan 2003a this volume; 2003b: 39) and so it is possible that the Battle-Axe connections proceeded towards the northeast in the wake of the general trend. In northernmost Norway, Period III of the Stone Age is dated to 3000...1800 calBC (Olsen 1994: 56–59). The transition from the older to the younger phase takes place around 2500 calBC. Judging from the type of battle-axes the connections probably fall entirely within the younger or Gressbakken phase.

In the Kola Peninsula, Gurina (1997: 73–96, 139, 151–152) runs into an anachronism when she dates the Neolithic/Early Metal Age transition to 2500 BC. This, however, is not a calibrated date but a value obtained by subtracting 1950 years from the original radiocarbon age BP. Consequently the Early Metal Age would have begun 4450 BP, which would correspond to ca. 3140 calBC, which means that this period would have begun earlier than the Battle-Axe culture began in Scandinavia. The date suggested by Gurina must be due to an error or a mistake, or it refers to something else (Carpelan 2003a this volume; 2003b: 46, note 6).

Turning to the southern zone of Corded Ware culture influence on northern Finland, the question of the beginning of the Finnish Corded Ware culture occurs. The radiocarbon date of the Jönsas burial, in addition to several cases of indirect dating, suggests that the Finnish battle-axe culture began ca. 3200 calBC or in the 32nd century calBC. From the eastern side of the Baltic Sea, namely from Latvia, a couple of dates of the same order are reported (Loze 1992). This is as expected, because it is clear that the Corded Ware culture spread to Finland through the Baltic countries. Further to the south a burial representing the first period of the Sub-Carpathian Corded Ware group on the upper Dniester is dated to ca. 3360 calBC (Carpelan & Parpola 2001: 66). This gives a general idea of time and place of origin of the Corded Ware culture.

Thus the Corded Ware culture reached Finland 300–400 years earlier than it appeared in southern Scandinavia. This is in agreement with a notion presented by Edgren (1970: 60) according to which the Finnish Corded Ware culture presents a significantly older character than its Danish and Swedish equivalents. The Finnish Corded Ware culture influence also reached northern Finland earlier than did the Swedish Battle-Axe culture influence. This makes it possible to understand the presence of the Corded Ware ceramics at Niskala on the River Kemijoki in the zone where the Swedish Battle-Axe culture influence dominated. This little pot, the starting point of my paper, was taken there much earlier.

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Footnote:

1) This paper was written in 1998 as a draft for a section of a planned larger work. As this has not yet materialised, I find it appropriate to publish the text in this collection of articles, only slightly modified. The reader will find references to dates based on shoreline displacement, arrived at using a graphical method that I developed on the basis of the method published by Ari Siiriäinen (1969; 1974). Although this method is unpublished, too, I have not omitted the dates because I find them still quite plausible.