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Suspended whetstones from Narva-Jõesuu IIB Corded Ware site (Estonia)

Kerkko Nordqvist & Aivar Kriiska

Abstract

The emergence of the Corded Ware culture (c 2800–2000 BC in Estonia) meant major socio-cultural changes in the eastern Baltic Sea area. One of the key sites from this period is Narva-Jõesuu IIB, located in the Narva-Luga Klint Bay region (northeast Estonia) and excavated in 2011–2018. This article focuses on a small group of material culture: the whetstones, and in particular the suspended whetstones or 'whetstone pendants' found in the settlement contexts and the two burials studied at the site. It presents these finds, and looks for parallels and discusses the suspended whetstones in the broader context of northern and eastern Europe. At present, the whetstones from Narva-Jõesuu seem to be rather unique specimens in the Corded Ware context and might even represent the legacy of forager traditions where suspended whetstones are known.

Keywords: Corded Ware culture, Stone Age, whetstones, settlement sites, burials, Estonia

8.1 Introduction

The 3rd millennium BC was a time of great changes in Europe, many of which also play a prominent role in the works of the jubilarian of the Festschrift, Professor Volker Heyd. In the areas east of the Baltic Sea, many changes are associated with the emergence and development of the Corded Ware culture (henceforwards CWC; in Estonia c 2800–2000 BC). Connected with the appearance of new genetic ancestry in the region (Jones et al. 2017; Saag et al. 2017; 2021; Mittnik et al. 2018), the new socio-cultural conditions are visible in changing ways of life and ideology, the introduction of new settlement pattern, subsistence strategies and burial customs, along with material culture with emblematic pottery vessels and battle axes (Piličiauskas 2018; Ahola & Heyd 2020, Nordqvist & Heyd 2020; Kriiska & Nordqvist 2021). This article focuses on a small and seemingly nondescript subset of material culture: the whetstones, and in particular the suspended whetstones or 'whetstone pendants'. They are discussed through discoveries recently made in two CWC burials and settlement cultural layers at the Narva-Jõesuu IIB site in northeastern Estonia. The paper presents these finds and looks for parallels, as well as discusses the suspended whetstones in the broader context of northern and eastern Europe.

8.2 Narva-Jõesuu IIB: whetstones from burials and settlement

The site of Narva-Jõesuu IIB is located in the Narva-Luga Klint Bay region on the Estonian-Russian border by the Gulf of Finland (Fig. 1). Nearly a hundred Stone Age and Early Metal Period sites (7th millennium BC to 1st century AD) are known in this approximately 350 km^2 area, of which around 25 contain CWC finds (Kriiska et al. 2015; 2016; Gerasimov et al. 2019).

Figure 1. During the 2013 and 2014 field seasons, two burials associated with the Corded Ware Culture were discovered at the Narva-Jõesuu IIB site in northeastern Estonia (map). Grave goods in Burial 2 included a four-sided flint adze (TÜ 2610:1297) and a whetstone (TÜ 2610:1298), both *in situ* in the picture. Photo K. Nordqvist.

The region is one of the densest known clusters of CWC settlement sites and currently the best studied one in northeastern Europe.

The settlement and burial site Narva-Jõesuu IIB was found during an archaeological survey in 2009 and a total of 111.5 m^2 were excavated here under the direction of the authors between 2011 and 2018 (Kriiska et al. 2016; Kriiska & Nordqvist 2021). The site is rare among the often mixed CWC sites in the eastern Baltic area, since it contains just a few finds from periods other than CWC; instead, there appear to be multiple CWC usage phases at the location. In addition to the finds and structures related to the settlement activity, two burials were investigated during the excavations.

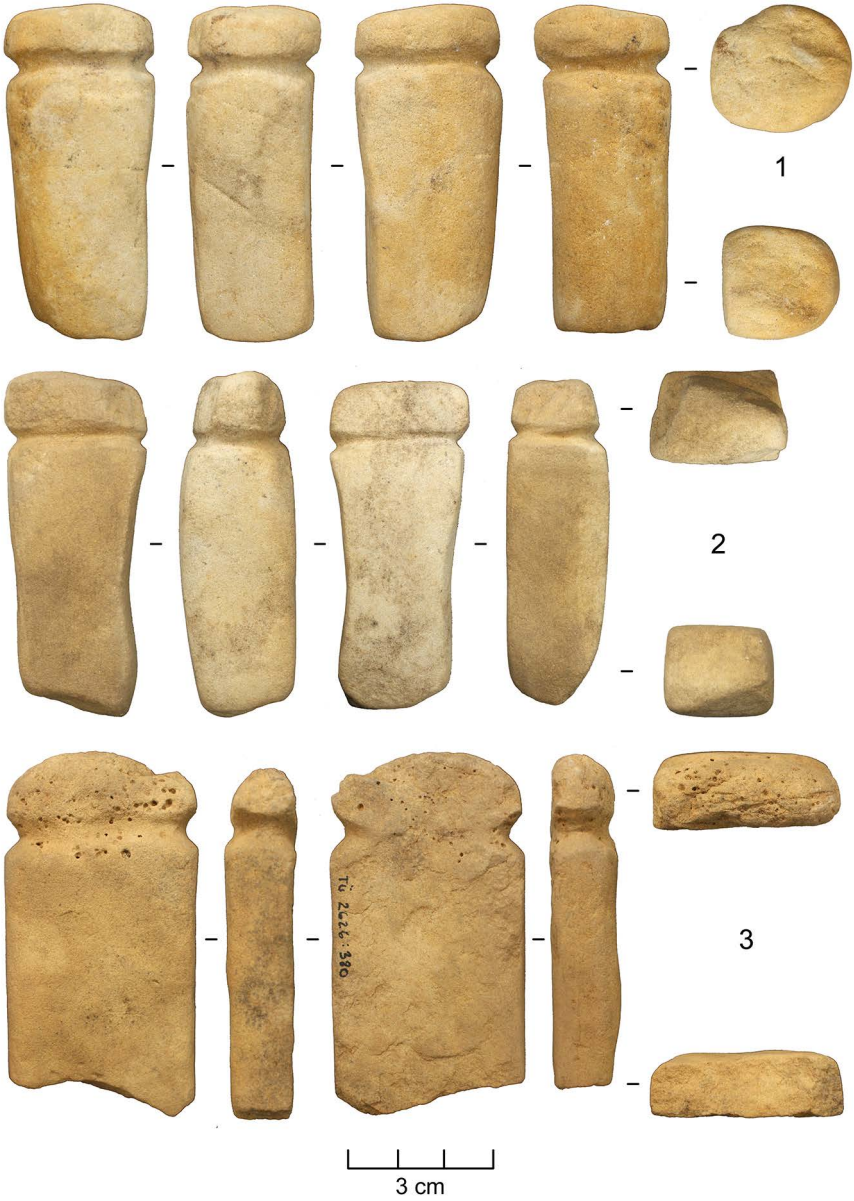
Burial 1 most likely contained two individuals: no bones were preserved, but the size of the grave pit and the presence of two sets of grave goods at op-

posite ends of the pit strongly suggest this. The assemblage consisted of three Corded Ware pottery vessels, two battle axes of crystalline rock, an amber pendant (only the second of its kind found in a CWC burial in Estonia), and a small whetstone. Burial 2 contained just one set of grave goods, including a four-sided flint adze, a whetstone, and a Corded Ware vessel associated with the burial (Fig. 1).

Both whetstones from burials are similar in shape and dimensions and deserve a closer look. Fine-grained light brown sandstone was used for both of them. The whetstone from Burial 1 (TÜ 2623:376) is 69 mm long and weighs 78 g (Fig. 2:1). It has an elongated shape; the upper end is oval in cross-section (30 × 27 mm) and the lower end is a rounded square (24 × 24 mm). The 'cap' at the upper end is 9–10 mm thick and is separated from the 'body' of the specimen by a circumferential, round-bottomed groove about 5 mm wide and 3 mm deep. Both horizontal ends are raw and uneven. Two long sides are concave and worn smooth due to use. Both have clear vertical grooves resulting from abrasion, the more worn side also has two diagonal lines. No other use-wear was visible to the naked eye or a simple magnifying glass. The third long side is only partially polished while the fourth side is convex and unpolished.

The whetstone from Burial 2 (TÜ 2610:1298) is 71 mm long and weighs 72 g (Fig. 2:2). The upper end ('cap') has an irregular triangular cross-section that follows the rock's natural shape (28 × 17 mm), while the lower end is a rounded square (22 × 19 mm). The 'cap' is 10–10.5 mm thick, the groove is 3–4 mm wide, about 2 mm deep and has a U-shaped cross-section. Two opposite sides are strongly convex with heavy abrasion and have vertical and diagonal lines across the surface. The other two sides are straighter and less worn, but also show some vertical striations. Both ends of the artefact and all sides of the 'cap' are unpolished.

In addition, excavations brought into light a third whetstone with a groove for suspension (Fig. 2:3). This artefact (TÜ 2626:380) is of similar fine sandstone to the other two, but its general shape is flat. It weighs 84 g, is 80 mm long and has the cross-section of a rounded rectangle (top 40 × 13 mm, bottom 42 × 14 mm). The 'cap' is irregular and rounded, 11–15 mm thick, the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round-bottomed groove is 4–7 mm wide and 1–3 mm deep at the front and narrow sides but disappears at the back. The front is smooth and has various intersecting striations, while the back is an uneven fractured plane with only partial polishing here and there (from wearing the artefact while it was hung?). The sides are straight and have vertical markings. The sides of the 'cap' are unpolished showing a natural porosity of the material, the bottom is broken and has a fractured surface.

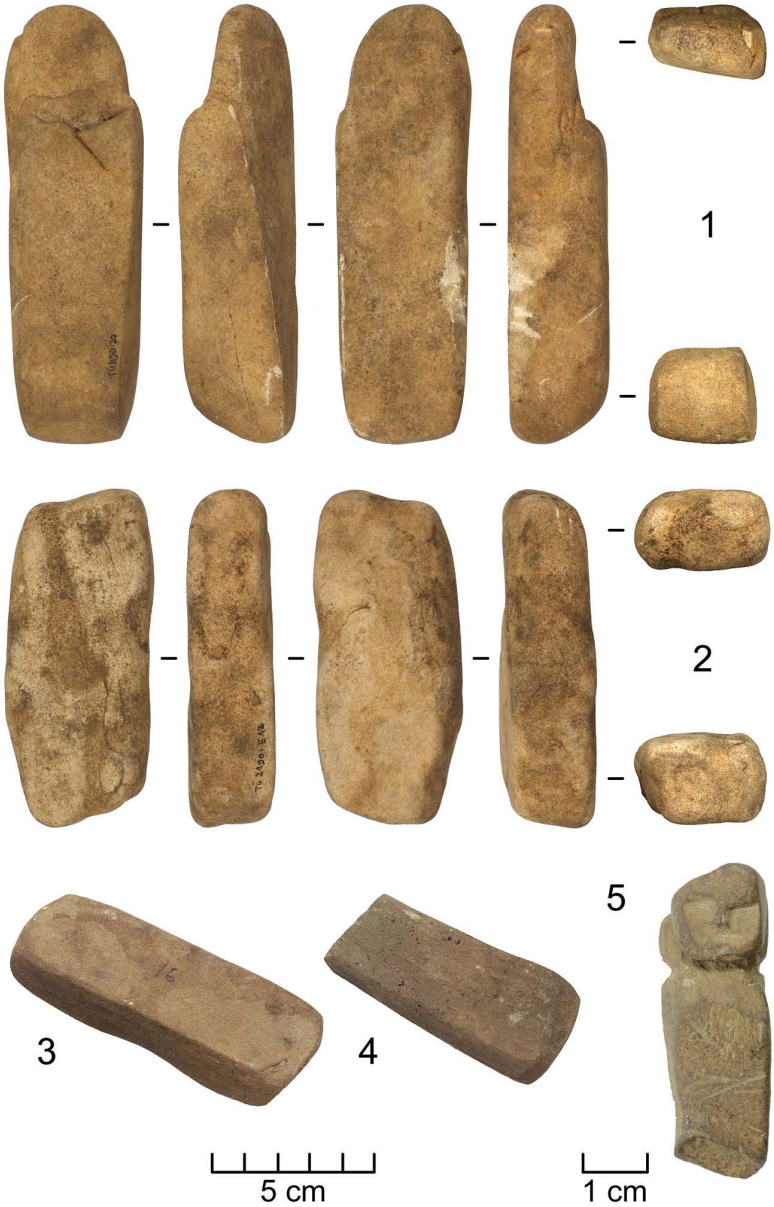
The third whetstone cannot be directly linked to the burials, although it was found near Burial 2, in the overlaying cultural layer. In addition, the cultural layers of Narva-Jõesuu IIB have contained numerous other hand-held whetstones of sandstone and their fragments, ranging from small pieces to implements 10–15 cm long with elongated flat surfaces (Fig. 3:1–2).

The burials at Narva-Jõesuu date from around the mid-3rd millennium BC. No direct date was obtained for Burial 1, but ^{14}C-dated burned mammal bone from the overlaying cultural layer gives a *terminus ante quem* date for both graves, 2290–2040 BC (Kriiska et al. 2015). In addition, charred plant remains associated with Burial 2 date it to 2470–2300 BC (Vanhanen et al. 2023). The older end of CWC activities is indicated by a burned bone from a cultural layer in an adjacent part of the site, dating to 2910–2670 BC (Kriiska et al. 2015).

8.3 Whetstones in a broader context

At present, whetstones are only reported in one other instance out of the about 30 CWC burials in Estonia. At Kunila, in central Estonia, about 150

◄ Figure 2. Whetstones with a groove for suspension from Narva-Jõesuu IIB: 1 – Burial 1 (TÜ 2623:376); 2 – Burial 2 (TÜ 2610:1298); 3 – cultural layer of the settlement site (TÜ 2626:380). Photos K. Nordqvist.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km southwest of Narva-Jõesuu, two burials were investigated in 1948 (Yanits 1983). One whole and one fragment of a whetstone (AI 3989:16–17) were found in a badly disturbed Burial II, in addition to a four-sided flint adze similar to the one found at Narva-Jõesuu (Figs. 1, 3:3–4). The whetstones are made of sandstone, 100 × 37 × 26 mm (whole) and 80 × 36 × 18 mm (fragment) in size, oblong in shape and quadrangular in cross-section, both with concave sides resulting from their use (Yanits 1983: 89). No suspension groove was visible in these specimens. Burial II at Kunila dates roughly contemporaneously, 2580–2310 BC (human bone; Kriiska et al. 2007: 85 Table 1), with the burials (or at least Burial 2) at Narva-Jõesuu IIB.

Elsewhere in the eastern Baltic Sea area, whetstones are similarly seldom included in CWC burial assemblages. Of the more than 20 burials known in Finland, only one contained a fragmented elongated hand-held whetstone (with no visible groove; Europaeus 1915) and another a larger polishing stone (Äyräpää 1932; Ahola & Heyd 2020: 107 Appendix), in Latvia and Lithuania no whetstones are known in CWC burials (Piličiauskas 2018: 115 Table 2; Macāne & Nordqvist 2021: 13). In southern Sweden and Norway, (multi-faceted) whetstones are associated with Corded Ware/Battle Axe culture burials in a few dozen cases (Malmer 2002: 162), while whetstones are very rare in Fatyanovo and Middle Dniepr burial contexts in Russia and Belarus (Kraynov 1972: 82; Artemenko 1987: 39–41), and are not among the most discussed grave goods in other European regions either (e.g. Bourgeois & Kroon 2017). Instead, whetstones are mostly found in the settlement contexts. In addition to polishing slabs, elongated quadrangular or multi-faceted whetstones in particular are described in the Baltic Sea area (Edgren 1970: 45; Malmer 2002:

◄ Figure 3. 1–2 – other examples of whetstones from the Narva-Jõesuu IIB settlement (TÜ 2190:70 and TÜ 2190:E12); 3–4 – whetstones from Burial II at Kunila (AI 3989:16–17); 5 – whetstone with a human face from Rovaniemi Niskala (KM 14699:3158; note different scale). Photos K. Nordqvist (1–2), P. Kraas (3–4) and Archaeological Collections, Finnish Heritage Agency (5).

162). The simple, oblong quadrangular specimens may resemble the Narva-Jõesuu whetstones – often including the raw material (Europaeus 1922: 122; Edgren 1970: 45) – but lack the groove and 'cap'.

Unknown to us from other undisputed CWC contexts, suspended whetstones or 'whetstone pendants' are considered, at least for the time being, to be a regional speciality found within the Estonian CWC. They may represent a local innovation or the preferences of a small group of people living in the Narva region, but at the same time could be another indication of features that potentially derive from the forager traditions in the context of Estonian CWC and the eastern Gulf of Finland area (see Nordqvist 2016). Hand-held whetstones are not an exceptional group of finds at hunter-fisher-gatherer sites in northeast Europe (Europaeus 1922: 122; Edgren 1966: 137–140; Yanits 1983: 89). Their dimensions, shapes and the types of stones used (slate, quartzite, sandstone) may vary, but it is noteworthy that although unknown in Estonia, numerous specimens with various grooves and notches (suitable for hanging) are known in the neighbouring areas to the north (Edgren 1966). Quadrangular or rectangular oblong whetstones are also known, although the shapes are more often flat than bar- or rod-like as at Narva-Jõesuu.

Whetstones are commonly associated with the manufacture of various items and commodities. They were used in the bone and antler industry, as well as in the processing of lithic raw materials and, for example, amber. However, their use is not limited to 'practical' functions; whetstones have also embodied symbolic aspects. In some later contexts, whetstones were associated with authority and power: for example, in the Late Iron Age and early medieval Baltic Sea region and northern Europe, whetstones were commonly linked with the control of metal trade and metal production, i.e. smithing and forging (e.g. Ježek 2013; Jessen & Taube 2021). Since no metal is known from the eastern Baltic CWC contexts, the connection between metal and whetstones is not obvious. However, the small hand-held whetstones may have been the equipment of a stone tool maker who produced battle axes that in turn imitated metal examples. Consequently, whetstones have also been associated with great symbolic meaning in the CWC society

(Malmer 2002: 163). At the same time, no evidence of battle axe or any polished tool production has been observed at Narva-Jõesuu IIB, and the site is actually located in a sedimentary basin completely devoid of any sources of crystalline rock.

A brief excursion into the world of hunter-fisher-gatherers further illustrates the potentially diverse and overlapping meanings and uses of whetstones in the north. In 1959 a 'whetstone pendant' (KM 14699:3158) was discovered at the Rovaniemi Niskala (Niskanperä) settlement site close to the Arctic Circle in Finnish Lapland (Fig. 3:5). It is made of sandstone, has a quadrangular cross-section and is 48 × 18 × 22 mm in size. Traces on its sides show that it has been in use as a whetstone (Purhonen 1973: 36). In this respect the object resembles the artefacts from Narva-Jõesuu. What distinguishes this item is the human face depicted on one side of its 'cap', separated from the 'body' by a groove. Carved in the same schematic style as most other hunter-fisher-gatherer depictions of humans, it has therefore also been relegated to the realm of the symbolic – although there is no reason to suppose that this would preclude its function as a whetstone.

The Niskala artefact was found in a plough layer without a clear context at a multi-period settlement site and was previously linked with the north-Scandinavian slate culture (Purhonen 1973: 37). It is still intriguing that Niskala is the northernmost location where some sherds of Corded Ware pottery have been found in Finland – and in Europe (Purhonen 1973: 32; Carpelan 2004: 52). Linking this and the Narva-Jõesuu finds is highly speculative, and there is also approximately 800 km between Rovaniemi and Narva.[1] The similarities in form and function can be simply explained by the physical properties of the raw material used, although in general the connection between the hunter-fisher-gatherer traditions and the finds from Narva-Jõesuu cannot be ruled out. Another loose example can be taken from the Island of Gotland (Sweden) where, on the contrary, Corded Ware-style whetstones have been found in two graves associated with the Pitted Ware culture and interpreted to represent the blending of traditions (Palmgren & Martinsson-Wallin 2015: 301).

[1] Interestingly, there is another suspended whetstone (KM 18967:57; 58 × 36 × 11 mm) from an adjacent site, Rovaniemi Kolpene, that bears a close morphological similarity to the flat whetstone found at Narva-Jõesuu (TÜ 2626:380). Kolpene is a forager settlement site that was inhabited at least in the 4th millennium calBC, but there are no reports of its investigations (see Siiriäinen 2004).

8.4 Conclusions

At present, the whetstones from Narva-Jõesuu appear to be rather unique specimens. They find no direct parallels elsewhere in the CWC sphere and may represent the legacy of forager traditions where suspended whetstones are known. Nevertheless, the parallels are limited to the form and use – suspension – and not to the context of deposition, since whetstones are not common in the grave assemblages of hunter-fisher-gatherers in Estonia or the eastern Baltic Sea area in general. Most likely, the importance of these artefacts is related to the activities performed with them or the outcomes associated with those actions, but the current data is too sparse to explore this further. There is little information as to whom they were buried with, but in the case of Kunila, aDNA indicates that the deceased was a male carrying new genetic ancestry (Saag et al. 2017; Mittnik et al. 2018). In the poorly preserved burials, the position of the whetstones in relation to the buried individuals is unclear, and no analysis has yet been done to see what materials may have been processed with them. One or two new finds may easily change the picture, as CWC burials are still rare in the eastern Baltic area and the material is only slowly accumulating – the burials at Narva-Jõesuu were the first CWC graves investigated in Estonia since the excavations at Kunila, which took place 65 years earlier.

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After reviewing the manuscript, another artefact that bears some resemblance to the Narva-Jõesuu and Rovaniemi finds caught our attention. The specimen (KM 14594:568) has a downwardly tapering body with a rectangular cross-section (80 × 22 × 15 mm), a suspension groove that is deeper on the narrow sides, and a pointed flame-shaped ‘cap’. It was found in 1958 at the Espoo Mynt settlement site, west of Helsinki in southern Finland. Unfortunately, no excavation report exists and the find context remains unclear. Finds from this multi-period site include some Corded Ware pottery and Bronze

and Early Iron Age material, but most notably evidence of forager presence at the site during the 5th–4th millennium BC (see Europaeus 1922: 55–56).

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