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Lithic analysis of the flintlike artifacts, flakes and fragments from the Rävåsen site

The flintlike material of the Rävåsen site (Uino, Hertell & Manninen in this article) was analyzed in detail to check the presumable presence of western material (Swedish) in the samples. This possibility is implied by the find of some fragments of Pitted Ware at the

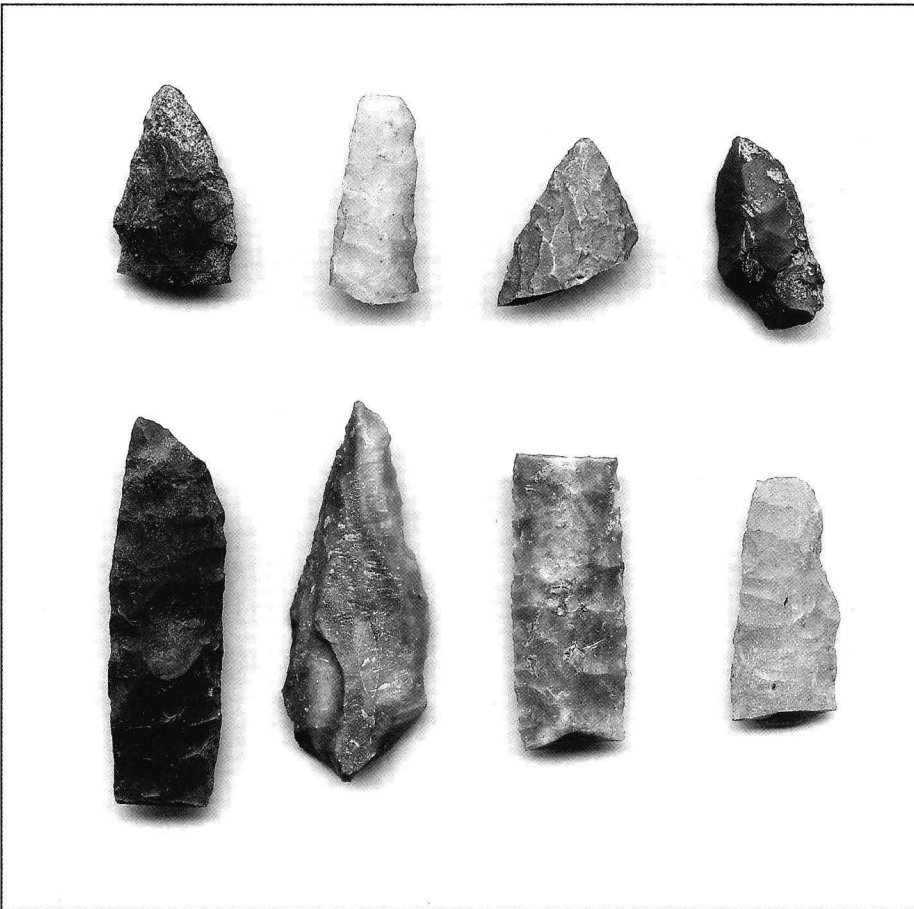


Fig. 1 Collection of chert artifacts manufactured mainly of eastern-type material. Most of the artifacts (classified as arrowheads) are broken and according to the use wear signs they may have been used as knives or scrapers. Top row (from left to right): NM 29610:1751, NM 28863:73, NM 30588:1727, NM 29610:1783 and bottom row NM 28659:260, NM 29610:1797, NM 28863:1070, NM 28863:1684. Length of the largest artifact 37 mm. Photo: Kari A. Kinnunen.

site (Miettinen in this article). Likewise, because of the small quantity of flintlike material in general found at the site (compared to quartz fragments and other stone material), it was important to describe it carefully.

The methods used are described in detail in Kinnunen et al. (1985). In total 38 rock pieces were examined. Only non-destructive methods were used without chemical analyses (see MatisKainen et al. 1989) and grain size measurements, which both would have required chips to be removed from the samples. The observations were performed under a stereomicroscope (magnification from 10 x to 100 x) and the surfaces were wetted (clean water) to improve the visibility of the microfossils and other microstructures. The observations were rock type identification, morphological description (flake, fragment, pebble or artifact), identification of the main microfossil groups, notes on the presence or absence of retouch and usewear. Because of the many uncertainties in usewear analysis (see Grace 1996), the results are given at this stage only as presence or absence observations.

The material was found to consist of chert-type flint and of rock types, which can be classified as local. Some chert pieces show foraminifera microfossils, which prove the provenance of the material from the eastern direction, Valdai – Lake Onega carboniferous area (cf. Kinnunen *et al.* 1985). Likewise, the natural surface markings, because of the pebble origin of the material, are characteristic of the eastern source area of chert (Kinnunen *et al.* 1985). The other rock types observed may be local as suggested but the occurrence of these rock types is widespread especially as pebbles. Their origin may therefore be in the same areas from where the cherts originate. No certain western type flints were observed in the material. It is possible that some of the whitish cherts with very small unidentifiable microfossils may originate from southern Sweden area (on the basis of geological reasoning), but the observations in this study can not answer to this question. According to Huggert (1984), “Russian flint” was imported to Upper Norrland in Sweden through Finland about 2000 B.C. This proves that the connection existed but with more northern Swedish areas than the Pitted Ware cultural area would suggest.

The reuse of old (broken?) weapons composed of superior quality flintlike material as implements (Fig. 1) indicates that this material was scarce on this site. The small quantity of debris type flakes of chert in this site shows likewise that the possibilities to obtain top-quality flintlike material were limited.

Detailed results of the microscopic study of the flintlike materials from Rävåsen site:

Specimen: NM 28659:260
Rock type: reddish chert
Morphological type: artifact
Microfossils: foraminifera
Retouch: on both sides
Usewear: present, weak on edge
Interpretation: eastern type

Specimen: NM 28863:73
Rock type: grey chert
Morphological type: artifact
Microfossils: foraminifera

Retouch: present
Usewear: present, on edges
Interpretation: eastern type

Specimen: NM 28863:1070
Rock type: light brown chert
Morphological type: artifact
Microfossils: crinoid moulds
Retouch: on both sides
Usewear: on both edges
Interpretation: foreign

Specimen: NM 28863:1684
Rock type: yellowish grey chert
Morphological type: artifact
Microfossils: spines of echinoderms, bryozoan fragments
Retouch: on both sides
Usewear: not observed
Interpretation: foreign

Specimen: NM 29610:1751
Rock type: dark grey chert
Morphological type: artifact
Microfossils: foraminifera
Retouch: present
Usewear: on one side only
Interpretation: eastern type

Specimen: NM 29610:1754
Rock type: whitish chert
Morphological type: two flakes
Microfossils: not observed
Retouch: present
Usewear: present on both flakes
Interpretation: probably eastern type

Specimen: NM 29610:1759
Rock type: bluish chert
Morphological type: flake
Microfossils: foraminifera, bryozoan fragments, ostracod valves
Retouch: not observed
Usewear: not observed
Interpretation: eastern type

Specimen: NM 29610:1759
Rock type: whitish chert
Morphological type: 4 flakes
Microfossils: present but too small for identification
Retouch: not observed
Usewear: not observed
Other: natural pebble surfaces observed
Interpretation: foreign. Flaked from natural pebbles.

Specimen: NM 29610:1766
Rock type: greyish chert
Morphological type: flake
Microfossils: not observed
Retouch: not observed
Usewear: not observed
Interpretation: foreign

Specimen: NM 29610:1770
Rock type: whitish grey chert
Morphological type: flake

Microfossils: foraminifera
Retouch: not observed
Usewear: not observed
Interpretation: eastern type

Specimen: NM 29610:1770
Rock type: whitish chert
Morphological type: smaller flake with the same number
Microfossils: not observed
Retouch: not observed
Usewear: not observed
Interpretation: probably eastern

Specimen: NM 29610:1774
Rock type: porphyritic quartz feldspar schist, brownish grey
Morphological type: larger flake on the same number
Microfossils: not present
Retouch: not observed
Usewear: not observed
Interpretation: local rock type

Specimen: NM 29610:1774
Rock type: brownish white chert
Morphological type: two smaller
Microfossils: not observed
Retouch: not observed
Usewear: not observed
Interpretation: probably eastern

Specimen: NM 29610:1783
Rock type: reddish chert
Morphological type: artifact
Microfossils: very small ones present
Retouch: on two sides
Usewear: not observed
Interpretation: eastern type

Specimen: NM 29610:1787
Rock type: yellowish grey chert
Morphological type: two flakes
Microfossils: not observed
Retouch: not observed
Usewear: not observed
Interpretation: probably eastern

Specimen: NM 29610:1793
Rock type: yellowish grey chert
Morphological type: three flakes
Microfossils: not observed
Retouch: not observed
Usewear: not observed
Interpretation: probably eastern

Specimen: NM 29610:1797
Rock type: brownish grey chert, banded
Morphological type: artifact
Microfossils: foraminifera, ostracods
Retouch: observed
Usewear: not observed
Interpretation: eastern type

Specimen: NM 29610:1798
Rock type: brownish grey
metaporphyritic quartz feldspar schist
Morphological type: three flakes
Microfossils: not observed
Retouch: on the larger flake some traces,
on the smaller flake none observed
Usewear: not observed
Interpretation: local ? rock type

Specimen: NM 29610:1860
Rock type: larger yellowish grey chert,
smaller greenish grey schist
Morphological type: two flakes
Microfossils: not observed
Retouch: not observed
Usewear: not observed
Interpretation: larger flake foreign,
smaller flake local ? rock type

Specimen: NM 30588:462
Rock type: greyish white chert
Morphological type: flake
Microfossils: not observed
Retouch: some observed
Usewear: not observed
Interpretation: foreign material ?

Specimen: NM 30588:1727
Rock type: whitish chert
Morphological type: artifact
Microfossils: very small present, but can
not be identified
Retouch: present
Usewear: strong present
Interpretation: foreign material. Surface coloration
hinders more detailed observations. The strong use
wear markings indicate other use than as an ordinary
projectile point. Or it has been reused.

Specimen: NM 30588:2868
Rock type: whitish chert
Morphological type: artifact
Microfossils: not observed
Retouch: observed on both sides
Usewear: weak markings on the other edge side

Interpretation: foreign rock type. The presence of
rhombohedral cavities indicates dissolved carbonate
mineral inclusions.

Specimen: NM 30588:3108
Rock type: brownish chert
Morphological type: fragment with one natural
erosion surface showing the origin as a pebble
Microfossils: plenty of microfossils, foraminifera,
bryozoa
Retouch: observed on two edges
Usewear: not observed
Interpretation: eastern type chert originating as
pebble material

Specimen: NM 30588:3108
Rock type: whitish chert and light brown chert
Morphological type: two flakes with natural
erosion surface markings on the whitish chert
showing its pebble origin.
Microfossils: very small microfossils in the
whitish chert
Retouch: on one edge of the whitish chert
Usewear: not observed
Interpretation: foreign both. Whitish chert
originates as pebble material.

Specimen: NM 30970:259
Rock type: light brownish coarse-grained chert
Morphological type: flake
Microfossils: very small observed
Retouch: not observed
Usewear: not observed
Interpretation: foreign rock type

Specimen: NM 30970:792
Rock type: whitish yellowish chert
Morphological type: flake with two natural
erosional surfaces showing the pebble origin of the
material
Microfossils: observed but too small for
identification
Retouch: not observed
Usewear: not observed
Interpretation: foreign with pebble origin

References

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