ARHEOLOOGILISED VÄLITÖÖD EESTIS

ARCHAEOLOGICAL FIELDWORK IN ESTONIA

2004

Koostanud ja toimetanud
Ülle Tamla

Muinsuskaitseamet
Tallinn 2005

Esikaas: ehtenaast Viskla II asulast.
Tagakaas: ribmajagaja Kämbla II asulast.
Cover: decorative mount from Viskla II settlement site.
Back cover: strap-divider from Kämbla II settlement site.

Uus 18, Tallinn 10111, Eesti
e-mail: info@muinas.ee

Kujundus ja küljendus:
Jaana Kool

ISSN 1406-3972

ARCHAEOLOGICAL FIELDWORK ON KIVISAARE STONE AGE BURIAL GROUND AND SETTLEMENT SITE

Aivar KRIISKA and Mari LÕHMUS
Tartu Ülikool (University of Tartu), Lossi 3, 51003 Tartu, Eesti (Estonia)
aivar.kriiska@ut.ee

In July and August 2004 the two-year research work (Kriiska *et al.* 2003) in Central Estonia on the Kivisaare Stone Age settlement site and burial ground was continued. The work was conducted through the research projects of the Estonian Science Foundation – "The Mesolithic in Southwest- and Middle-Estonia" and "The Late Neolithic breakthrough – the phenomenon of Corded Ware Culture in Estonia" (grant projects 4558 and 5328 respectively). The writing of the article was supported by Tartu University under the project "Interdisciplinary archaeology: the interactions of culture and natural environment in the past". The graphics, illustrations, Figures for this article was drawn by Kristel Külljastinen.

The excavated area (excavation plot A) in the middle of the drumlin opened in 2003 (Kriiska *et al.* 2004) was finished and northeast of it an enlargement of 20 m² (thus altogether 40 m² for the excavation plot A) was established. A small (4 m²) excavation plot (C) was also made at the southeast end of the drumlin (Fig. 1). At the northeastern and southeastern side of the drumlin about a hundred trial pits were dug to determine the extent and intensity of the cultural layer in this area.

The cultural layer was up to 1 meter thick and contained many finds. Most of the cultural layer from the Stone Age in excavation plot A was not situated in its original position but had been disturbed during agricultural and other activities (the establishment of an oven, gravel mining *etc.*). The lower part of the cultural layer might be in its original position in excavation plot C.

THE REMAINS OF A VAULTED OVEN

From the northeastern part of excavation plot A the remains of a vaulted stone oven were partly unearthed (Fig. 2). The construction was probably demolished during the establishment of a gravel pit. The stones of the vault, of which only one row was in the excavation, were situated directly under the present ground level. The vault of the oven consisted of slate stones bound with calcareous grout. The slate had been coloured red by the fire. At the sides of the oven stood granite

[1] "Granite stone" is used here and hereafter as a term standing for metamorphic and igneous rock.

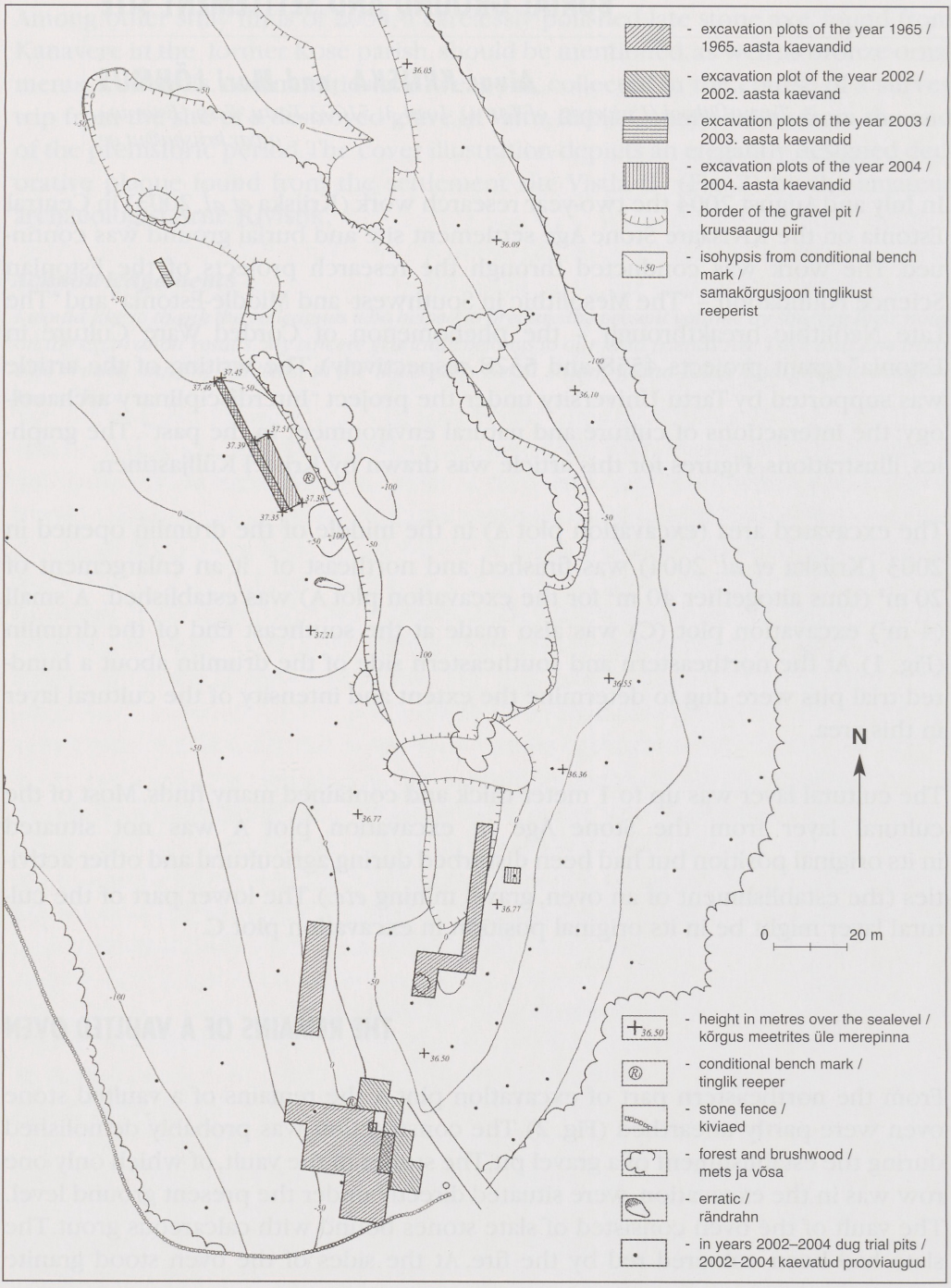

Fig. 1. The general map of Kivisaare.
Joon. 1. Kivisaare üldplaan.

Fig. 2. The remains of vaulted oven from Kivisaare.
Joon. 2. Võlviga ahjujäänus Kivisaarest.

stones.[1] In front of the vault was a hollow 1.0 x 1.75 m in size containing lots of ash and coal. Near the construction there was a tight cluster of stones, which included stones disintegrated and crumbled by fire and in some cases even stones with a vitrified surface. The period the oven was in use can probably be dated with a Russian Denga (TÜ 1113: 3070) found from the ashes in front of the vault. Such coins were minted during the periods of 1730-1731, 1734-1741 and 1743-1754.[2] It is likely to be a commercial establishment. In consideration of the area's orientation to glass manufacturing, an oven for potash burning can be inferred.

A PROBABLE REBURIAL OF A STONE AGE SKELETON

During the fieldwork in 2004 an assemblage of human bones discovered during the previous season was investigated (Kriiska *et al.* 2004, 29). The bones were situated compactly in an area of ca. 35 x 50 cm (Fig. 3). The disturbance of the soil did not allow the determination of the boundaries of the concavity dug to bury the bones. The soil was gravely with an abundance of pebbles in the immediate vicinity of the bones as well as in its surroundings.

The bones derive probably from an earlier burial. The time of the reburial can be dated with an embossed black glass button with an image of a flower (TÜ 1113: 3062). The button was found among the bones and may be dated to the beginning of the 20th century. The location of the button near the bones is probably not a coincidence but may be intentional - a nonesuch grave good.

The age of the human bones can not be dated with finds because the artifacts

[2] Determined by M. Kiudsoo (AI).

Fig. 3. Assemblage of human bones from Kivisaare.
Joon. 3. Inimluude kogum Kivisaarest.

gathered among them do not differ from other finds on the settlement site and none of them can be associated with the bones for certain. The age of the Kivisaare burials has been problematic for a long time. The number of individuals may now total 40, but due to the fact that the bone material gathered during the excavations since the year 2000 is fragmentary it can not be determined exactly (Kriiska *et al.* 2004, tab 1.). Martin Boltz, who began the research, dated the burial site to the Neolithic[3] (1914, 15), Aarne Michaël Tallgren, who conducted small excavations in 1921, dated it to a time period which by modern division corresponds to the Late Mesolithic (1922, 49) and Richard Indreko, who conducted excavations in Kivisaare in 1931, dated the antiquities to the Neolithic and the Bronze Age (1935, 10). With the human bones that were excavated in 2002 this question arose again. Based on a comparison of both the new and previously found dog tooth pendants to the North-Latvian Zvejnieki Stone Age burial material, the paleozoologist Lembi Lõugas has suggested that at least some of the burials are from the Neolithic (Kriiska & Johanson 2003, 52). However, in the burials discovered to date there are no finds indicative of the Middle and Late Neolithic.

The AMS dating of one skeleton has clarified the issue somewhat. The bones of a child with a tooth pendant excavated in 1965 were dated to 5450±40 ^{14}C years (Poz-10840) which corresponds to a calibrated date of 4360–4230 BC[4] (with 95.4% probability) and is Early Neolithic.

[3] Into consideration has to be taken the fact that at that time a dyadic division was used: (1) the Paleolithic and (2) the Neolithic Period. Boltz did not give any absolute dates.

[4] The basis for calibration is Reimer *et al.* (2004); OxCal v3.10 Bro nk Ramsey (2005); cub r:5 sd:12 prob usp[chron].

FINDS

Altogether 1579[5] finds were gathered from the excavation plots and trial pits during the fieldwork in 2004; most of them can be dated to the Stone Age. Some later finds were gathered mostly from excavation A, alltogether 48 artifacts or artifact fragments: three pieces of glass, a cartridge case, a piece of brick and a fragment of structural ceramics, 17 fragments of burnt clay, an iron knife blade, a pipestem piece of kaolin clay, a fragment of a bronze item, 16 fragments of glazed ware, two fragments of the same wheelthrown pot without glaze and a coin of the 18th century already mentioned above and a glass button. From the cultural layer, some animal and human bones were also gathered.

Most of the finds are of stone - altogether 1319; 1236 of these are of flint (93.7% of the stone finds), 40 of quartz[6] (3.0%) and 43 of other rocks (3.7%). The flint is mostly of local origin and of various quality. As already observed previously (Kriiska *et al.* 2004, 31), some of the flint found in 2004 was broken off from limestone bedding and was brought to Kivisaare from further away. Some of the flint (at least 19 pieces, 1.5% of the flint finds) may be from outside of Estonia. The pinkish or purplish coloured flint (of which we have flakes as well as a fragment of a blade and a scraper) may originate from Central Russia, and the grey or brownish grey samples (of which we have flakes as well as a fragment of a blade and nucleuses) may come from the south - such flint occurs in Southern Lithuania and Belarus. Some of the flint finds have indications of having been in fire.

Various techniques have been used to work the flint. During the primary processing both blades and flakes have been detached. In the case of 33 blades and blade fragments (11.9% of the blades and blade fragments or items made of them) it is possible more accurately (or at least speculatively) to suggest the technique that was probably used: in 19 cases a soft (of organic material; Fig. 4: 2) and 9 cases a hard (stone; Fig. 4: 3) hammer technique was used, and in 5 cases a pressure technique may have been used. There are some specific flakes in the cultural layer of Kivisaare which indicate rejuvenation of the core striking platform - the so-called "core tablet". The flakes and blades have been detached by the freehand technique and, judging by one single-platform core (TÜ 1113: 2526), by supporting it on an anvil. The latter may be associated with a fragment of an anvil of metamorphic rock of size 18-15-12,5 cm (TÜ 1113: 2404), which has percussion markings on its flat surfaces.

[5] The gross amount includes 30 lumps of flint, which mostly are probably natural. With only 4 specimens it is possible that humans carried them to the settlement site and they will be taken into consideration in further analysis. In addition to 26 lumps of flint 146 fragments of animal bone are also excluded from the analysis.

[6] Including one flake of quartzite.

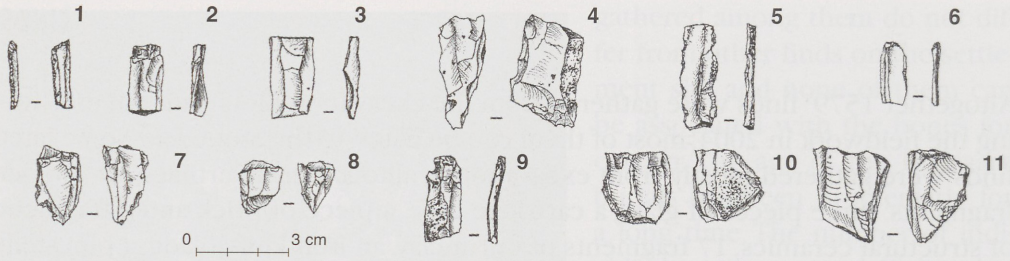

Fig. 4. Finds from Kivisaare.
1 - flint microlith (TÜ 1113: 2109), 2 - fragment of a flint blade from proximal end of blade, soft hammer (TÜ 1113: 2553), 3 - fragment of a flint blade, hard hammer (TÜ 1113: 2039), 4 - conical single-platform flint core (TÜ 1113: 2454), 5 - medial fragment of a flint blade with retouch (TÜ 1113: 2127), 6 - proximal fragment of a flint blade with retouch (TÜ 1113: 2205), 7 - conical single-platformed flint core (TÜ 1113: 2141), 8 - conical single-platform flint core (TÜ 1113: 2219), 9 - proximal fragment of a flint blade (TÜ 1113: 2094), 10 - conical single-platform flint core (TÜ 1113: 2799), 11 - conical single-platform flint core (TÜ 1113: 2749).

Joon. 4. Leide Kivisaarest.
1 - tulekivist mikroliit (TÜ 1113: 2109), 2 - tulekivist laastu katke, proksimaalots, pehme lööktehmika (TÜ 1113: 2553), 3 - tulekivist laastu katke, proksimaalots, kõva lööktehmika (TÜ 1113: 2039), 4 - kooniline üheplatvormiline tulekivist nukleus (TÜ 1113: 2454), 5 - tulekivist laastu katke, keskosa, serval retušš (TÜ 1113: 2127), 6 - tulekivist laastu katke, proksimaalots, serval retušš (TÜ 1113: 2205), 7 - kooniline üheplatvormiline tulekivist nukleus (TÜ 1113: 2141), 8 - kooniline üheplatvormiline tulekivist nukleus (TÜ 1113: 2219), 9 - tulekivist laastu katke, proksimaalots (TÜ 1113: 2094), 10 - kooniline üheplatvormiline tulekivist nukleus (TÜ 1113: 2799), 11 - kooniline üheplatvormiline tulekivist nukleus (TÜ 1113: 2749).

There are quite a few indications of bipolar percussion. It is mostly seen on the cores and flakes, but in a few cases also on fragments of blades. Different techniques have sometimes been combined as well. Examples are two flakes detached by bipolar percussion from a single-platform blade-flake core (TÜ 1113: 2679 and 2808). Similar observations have been noted also in knapping quartz in Finland (Rankama 2002, 85) and Sweden (Callahan 1987, 60–61).

The greater part of the finds consists of remains of processing flint, quartz and other rocks and the products of primary knapping – flakes, blades and blade fragments. Of the 976 (74.0% of the stone finds) flakes gathered, 910 are of flint (73.6% of the flint finds) (Fig. 5: 9, 10), 34 of other rocks (79.0% of the finds of other rocks) and 36 of quartz (90.0% of the quartz finds). 278 blades and blade fragments of flint were gathered (22.5% of the flint finds); only two blade fragments were of quartz. The 225 more accurately identified blade fragments derive from blade distal (44) and proximal (121, Fig. 4: 2, 3, 6, 9) ends, and their middle parts (60, Fig. 4: 5). Among the blades and blade fragments there were specimens with two (Fig. 4: 2, 3, 6, 9) to four ridges, and a few without a ridge. In one case,

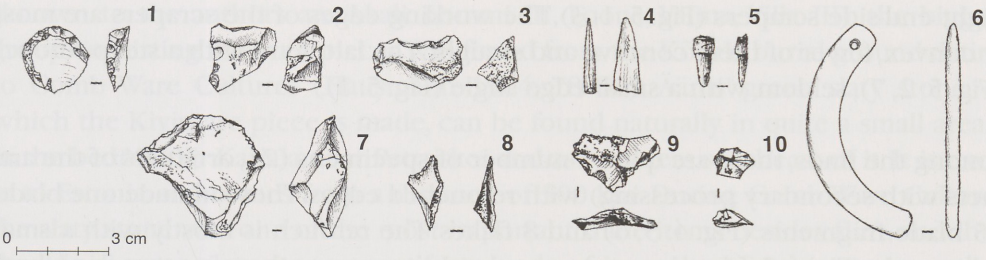

Fig. 5. Finds from Kivisaare.
1 - flint end-side scraper from flake (TÜ 1113: 2129), 2 - flint end scraper from flake (TÜ 1113: 2422), 3 - flint end-side scraper from flake (TÜ 1113: 2130), 4 - arrow or spearhead fragment, bone (TÜ 1113:2584), 5 - fragment of a double-conic arrow head, bone (TÜ 1113: 2903), 6 - ring fragment of Äänis' green slaty (TÜ 1113: 2226), 7 - flint end-side scraper from flake (TÜ 1113: 2757), 8 - flint borer (TÜ 1113: 2416), 9 - flint flake (TÜ 1113: 2386), 10 - flint flake, distal end of the core (TÜ 1113: 2561).

Joon. 5. Leide Kivisaarest.
1 - tulekivist otskülgkõõvits, killust (TÜ 1113: 2129), 2 - tulekivist otskõõvits, killust (TÜ 1113: 2422), 3 - tulekivist otskülgkõõvits, killust (TÜ 1113: 2130), 4 - noole- või odaotsa katke, luust (TÜ 1113: 2584), 5 - kaksikkoonilise nooleotsa katke, luu (TÜ 1113: 2903), 6 - Äänise rohekiltkivist rõnga katke (TÜ 1113: 2226), 7 - tulekivist otskülgkõõvits, killust (TÜ 1113: 2757), 8 - tulekivist puur (TÜ 1113: 2416), 9 - tulekivikild (TÜ 1113: 2386), 10 - tulekivikild, nukleuse distaalots (TÜ 1113: 2561).

there is a little microblade probably detached from a blade while making a burin on a blade (TÜ 1113: 3052).

Altogether 27 flint cores (2.2% of flint finds) and one quartz pre-core were gathered in 2004. Bipolar cores were predominant in 2003 (Kriiska *et al.* 2004: 33), but now single-platform (Fig. 4: 4, 7, 8, 10, 11), conic and double-conic cores are prevalent, but there are also other cores with pyramidal, prismatic, trapezoidal, irregular and oval shape. The biggest core is of size 5,6 x 4,6 x 4,5 cm and the smallest 1,5 x 0,7 x 0,7 cm.

There are 59 (3.8% of stone finds) artifacts with secondary processing, all of flint. Of these, the biggest class consists of 28 scrapers (47.5% of the artifacts with secondary processing), four of them being fragmentary. 17 scrapers are made from a flake (Fig. 5: 1, 2, 3, 7), 4 from a blade or blade fragment, and one from a bipolar core fragment (TÜ 1113: 2158). The shape of the scrapers varies – there are trapezoidal, triangular (Fig. 5: 2, 3), oval, rounded (Fig. 5: 1), segmental (Fig. 5: 7) and irregular shapes. Seven of them are end scrapers (Fig. 5: 2), nine side scrapers and

eight end-side scrapers (Fig. 5: 1, 3). The working edges of the scrapers are mostly convex, fewer of them concave and straight. The latter are with a steep retouch (Fig. 5: 2, 7), seldom with a small edge angle (Fig. 5: 1).

Among the finds, there are quite a number of specimens (24, or 30.7% of the artifacts with secondary processing) with retouched edges. These include one blade, 15 blade fragments (Fig. 4: 5, 6) and 8 flakes. The retouch is mostly with a small edge angle (Fig. 4: 5, 6) and covers one edge. In two cases there is retouch on both edges and in only seven cases the retouch is steep (29.2% of flakes and blades with secondary processing). In at least three cases one may presume that the specimen is an insert. In addition, one should note a microlith (of size 2.3 x 0.7 cm), which is retouched steeply at one edge and one end (Fig. 4: 1).

From excavation plot A, two scraper-burins (TÜ 1113: 2587, 2877) were found, both made of a blade fragment. One scraper-burin on a single-ridged blade fragment (2.3 x 1.1 cm) is trapezoidal in shape, having a scraper with a steep retouch at one end, and a burin at the other end made by detachment of a burin spall. The other (1.5 x 1.1 cm) is irregular in shape and of a foreign grey flint. The burin is at the side of the blade, at the end of the scraper edge with a steep retouch.

There were some unique specimens found from excavation A – a crescent shape flint knife (TÜ 1113: 3018) sharpened on one side with two-faced retouch (5.7 x 2.7 cm of size), a flint borer (Fig. 5: 8) made of a flake (2.3 x 1.2 cm of size) irregular in shape and retouched on one side, and a flint burin with its working part on the side of a double-ridged blade fragment (TÜ 1113: 2418).

As in previous years, the portion of chopping tools is small among the finds: only two fragments of a stone axe/wedge and one fragment of a polished stone artefact, all from excavation plot A. Among the finds of 2004 there are also one fragment of abrading stone made of red quartzite and *worn* on both faces, and a pebble with percussion marks – it could be a hammerstone used in knapping.

In addition, one should note a fragment of a stone ring (Fig. 5: 6) found from a trial pit (no. 87) in the southeast end of the Kivisaare drumlin. It is polished on the whole surface and has on one end a hole drilled through from both faces. Both ends of the piece are polished or worn (width 1.1 cm, thickness 0.5 cm). Such rings or even their fragments were worn as pendants during Comb Ware Cultures in several places in the Baltic Sea region, especially in Finland (Halinen 1999, 175), on Karjala isthmus (Huurre 2003, 223) and in Karjala (Витенкова 1996, 116). In Estonia there are also some specimens found from settlement sites

(known to the authors are Akali, Lommi III, Loona, Valma, Villa III); the biggest group consisting of seven pieces was found from the Kõljala burial ground dating to Comb Ware Cultures (Hausmann 1904, 78–80). Äänis' green slaty stone, of which the Kivisaare piece is made, can be found naturally in quite a small area – in the bedrock in Karjala near Petroskoi and as boulders southeast of it. It is exotic to Estonia and comes from a distance of 500 km. During Comb Ware Cultures the slaty stone was one of the most important trade items besides flint, and thus the Äänis' green slaty stone or artifacts made of it reached Estonia. Among other items, the six Kõljala rings mentioned above are made of this rock.

Bone artifacts constitute a very small part of the finds. From a trial pit (no. 92) at the southeast end of the drumlin, a processed animal bone and an arrowhead or spearhead fragment (Fig. 5: 4) polished on the whole surface (TÜ 1113: 2241) was found. From excavation A were found a bone artefact polished on both sides and with a hole drilled in one end and a fragment of a double-conic arrow head (Fig. 5: 5). From the same place a dog tooth[7] pendant with a groove cut into the root (TÜ 1113: 2675) was found.

There were few finds of prehistoric ceramics. 13 of the 27 potsherds were too small to determine their type accurately and to assign a date. Among these were sherds with both organic temper and rock debris (in some also chamotte) mixed with fragments of clay vessels. In two cases it is possible to determine that the vessels were made of N-type contact surfaces coils.

Fourteen potsherds are of corded ware vessels. In the process of making these vessels organic temper (8), organic temper and sand (3), organic temper and chamotte (1), rock debris (1) or rock debris and organic temper (1) was used. The surfaces were either smoothed (3 of the extant surfaces on one and 7 on both sides) or striated (2 potsherds of extant surfaces on inner and 1 on outer surface). The thickness of the sidewalls could be measured on 13 potsherds. It varies from 4 mm to 10 mm, mostly 6–7 mm. The sherds are from pots; only in one case (with a wall thickness of 4 mm) a beaker could be assumed.

CONCLUSION

As in the previous years, in 2004 the finds in Kivisaare were also mostly from the Mesolithic (probably mainly the Middle Mesolithic) period. It became apparent that in the whole area of excavation plot A the cultural layer was highly disturbed

[7] Identified by L. Lõugas (AI).

by later (in the end of the 19th and in the beginning of the 20th century) agricultural and other digging activities and (presumably in the beginning of the 18th century) by the construction of a vaulted stone oven. Thus the finds were not located *in situ* and features were absent.

The human bone assemblage discovered in 2003 and excavated during the last season was not located in its original position. It is probably a reburial of a skeleton discovered in the beginning of the 20th century.

Nevertheless, rich material was gathered - with many remains of flint processing and small items - to provide a good basis for comparative analyses of the Mesolithic complexes in Estonia and the neighbouring countries.

The AMS analysis of the skeleton found in 1965 dated it to 4300 years cal BC averaged. This indicates the place had been used as a burial ground at least in the Early Neolithic. Evidence for this period on the Kivisaare drumlin was established as a result of the excavations in 2004, when among the ceramics, also, a few potsherds of Narva-type were found (Kriiska & Johanson 2003, 50).

References

Bolz, M. 1914. Das neolitische Gräberfeld von Kiwisaare in Livland. – Baltische Studien zur Archäologie und Geschichte. Arbeiten des Baltischen Vorbereitenden Komitees für den XVI. Archäologischen Kongress in Pleskau 1914 herausgegeben von der Gesellschaft für Geschichte und Altertumskunde der Ostseeprovinzen Russlands. Riga, 15–32.

Callahan, E. 1987. An Evaluation of the Lithic Technology in Middle Sweden during the Mesolithic and Neolithic. – AUN, 8.

Halinen, P. 1999. Burial Practices and Structure of Societies during the Stone Age in Finland. – Dig it all. Papers dedicated to Ari Siiriäinen. Helsinki, 173–179.

Hausmann, R. 1904. Ueber Gräber aus der Steinzeit im Ostbaltikum: Grabfunde in Woisek und Kölljal. – Sitzungsberichte der Gelehrten Gesellschaft, 1903. Jurjew, 71–81.

Huurre, M. 2003. Viipurin läänin kivikausi. – Karjalan synty. Viipurin läänin historia, I. Jyväskylä, 151–244.

Indreko, R. 1935. Viljandimaa muinasaeg. – Viljandimaa. Eesti, IV. Tartu, 3–60.

Kriiska, A., Allmäe, R., Lõhmus, M. & Johanson, K. 2004. Archaeological investigations at the settlement and burial site at Kivisaare. – AVE, 2003, 29–44.

Kriiska, A. & Johanson, K. 2003. Kivisaare kiviaja asulakoht ja matmispaik. – Viljandi Muuseumi Aastaraamat 2002. Viljandi, 39–55.

Kriiska, A., Johanson, K., Saluäär, U. & Lõugas, L. 2003. The results of research of Estonian Stone Age in 2002. – AVE, 2002, 25–1.

Rankama, T. 2002. Analyses of the Quarz Assemblages of Houses 34 and 35 at Kauvonkangas in Tervola. – Huts and Houses. Stone Age and Early Metal Age Buildings in Finland. Jyväskylä, 79–108.

Tallgren, A. M. 1922. Zur Archäologie Eestis, 1. Vom Anfang der Besiedlung bis etwa 500. n. Chr. – *Acta et Commentationes Universitatis Tartuensis (Dorpatensis)*, III: 6. Dorpat.

Витенкова И. Ф.1996. Культура гребенчато-ямочной керамики. – Археология Карелии. Петрозаводск, 105–125.

ARHEOLOOGILISED VÄLITÖÖD KIVISAARE KIVIAEGSEL MATMISPAIGAL JA ASULAKOHAL

Aivar KRIISKA ja Mari LÕHMUS

2004. aastal jätkusid 2002. aastal alanud uurimistööd Kesk-Eestis Kivisaare kiviaegsel asulakohal ja matmispaigal. Lõpetati voore keskosas avatud ala (kaevand A) kaevamine ning sellest kirde suunas rajati 20 m² laiend (kokku 40 m²). Väikesemõõtmeline (4 m²) proovikaevand (C) tehti ka voore kaguotsale (joon. 1). Voore kirde- ja kaguosale kaevati sadakond prooviauku selleks, et teha kindlaks kultuurkihi ulatus ja intensiivsus.

Kultuurkihi tüsedus oli kohati üle 1 m ja see sisaldas rohkesti leide. A-kaevandis ei paiknenud suurem osa kiviaegsest kultuurkihist algses asendis vaid oli segatud nii maaharimise kui ka muu inimtegevusega. C-kaevandis võis kultuurkihi alumine osa olla veel kohati algses asendis. A kaevandi kirdeosast kaevati osaliselt välja kividest võlviga ahjujäänused (joon. 2). Ahjukonstruktsioon oli tõenäoliselt lõhutud kruusaaugu rajamisega. Võlvi kivid, millest jäi kaevandisse vaid üks rida, paiknesid vahetult tänapäevase maapinna lähedal. Ahjuvõlv koosnes lubimördiga seotud paekividest, seevastu ahju äärtes asetsesid raudkivid. Võlvi ees oli 1,0 x 1,75 m suurune rohkesti tuhka ja sütt sisaldav süvend. Konstruktsiooni lähedal paiknes tihe kivilasu, mis sisaldas tules porsunud, murenenud ja üksikuid klaasistunud pinnaga kive. Arvatavasti dateerib ahju kasutusaega võlviesisest tuhast leitud Venemaa denga, milliseid vermiti Venemaal 18. sajandil.

2004. aasta välitöödel avati ka eelmisel hooajal avastatud inimluude kogum. Luud paiknesid kompaktselt u. 35 x 50 cm alal (joon. 3). Ilmselt pärinevad inimluud lõhutud hauast. Nende luude vanust ei aita dateerida kaasleiud, sest sealtsamast kogutud seemed ei erine muust asulakoha leiuainesest ning kindlalt ei või neist luukogumiga siduda ühtegi. Kivisaare matuste vanus on pikka aega olnud problemaatiline ning kalmistut on dateeritud mesoliitikumist pronksiajani. Nüüd toob probleemi mõningast selgust ühest luustikust Poznani Ülikoolis tehtud AMS dateering: 1965. aastal välja kaevatud hammasripatsitega lapseluustik andis vanuseks 5450±40 ^{14}C aastat (Poz-10840), mis vastab kalibreeritult 95,4% tõenäosusega aastatele 4360–4230 e.Kr. ning kuulub nii varaneoliitikumi.

Kivisaare kaevanditest ning prooviaukudest saadi 1579 leidu, millest enamuse saab dateerida kiviaega. Mõnevõrra (peamiselt A-kaevandist) saadi ka hilisemaid leide. Kultuurkihist koguti samuti looma- ja inimluid.

Suurem osa leide on kivist – kokku 1319, neist 1236 tulekivist (93,7%), 40 kvartsist ja 43 muudest kivimitest. Valdavalt kohalikku päritolu tulekivi on erineva kvaliteediga ning osaliselt murtud Kivisaarest eemal paljanduvatest lubjakiviladametest. Osa tulekivist (vähemalt 19 eksemplari, 1,5% tulekivileidudest) võib pärineda väljapoolt Eestit, oletatavasti Kesk-Venemaa ja Lõuna-Leedu või Valgevene alalt.

Kivisaarest leitud tulekivi lõhestamisel on kasutatud erinevaid tehnikaid. Esmase töötlemise käigus on eraldatud nii laaste kui ka kilde. Kasutatud on nii pehmet (orgaanilisest materjalist löögiriistaga), kõva (löögikiviga) lõhestustehnikat kui ka surutehnikat. Kilde ja laaste on eraldatud nukleusi käes hoides ja ühe üheplatvormilise tulekivinukleuse järgi otsustades ka alasile toetades. Viimase lõhestusviisiga liitub üks moondekivimist alasi katke, mille lamedatel pindadel oli löögijälgi. Üpris rohkesti on märke bipolaarsest lõhestamisest. Erinevaid tehnikaid on ka kombineeritud.

Suurema osa leidudest moodustavad tulekivi, kvartsi ja teiste kivimite töötlemisjäägid ja esmase lõhestuse produktid – killud, laastud ning nende katked. Kilde saadi 976 (74,0% kivileidudest), millest omakorda 910 (73,6% tulekivileidudest) on tulekivist, 34 muudest kivimiliikidest ning 36 kvartsist. Tulekivilaaste ja laastukatkeid koguti 278 (22,5% tulekivileidudest), vaid kahe laastu katked olid kvartsist. Laastukatked pärinevad nii laastude distaal- või proksimaalotstest või ka keskosast.

Ühtekokku koguti 2004. aastal 27 tulekivinukleust (2,2% tulekivileidudest) ning üks kvartsist pronukleus. Domineerivad üheplatvormilised, koonilised ja kaksikkoonilised nukleused, teiste seas leidub ka püramiidi-, prisma-, trapetsi- ning ebakorrapärase ja ümara kujuga eksemplare.

Teisese töötlusega esemeid leiti 59 (3,8% kivileidudest), kõik tulekivist. Suurima alarühma moodustavad 28 kõõvitsat või selle katket (47,5% teisese töötlusega esemetest). 17 kõõvitsat on valmistatud killust ja 4 laastust või selle katkest ning üks bipolaarse nukleuse fragmendist. Seitse neist on otsteraga, 9 külgteraga ning 8 otskülgteraga, enamasti kumerad, harvem nõgusad ja sirged terad on retušitud järsult, harvem laugelt. Suhteliselt arvukalt (24, mis on 30,7% teisese töötlusega esemetest) on leidude hulgas retušitud servaga laaste (1), laastukatkeid (15) ja kilde (8). Retušš on enamasti lauge ja asub ühel serval. Vaid kahel juhul on retušitud mõlemad servad ja järsku retušši esineb vaid seitsmel juhul. Vähemalt kolmel juhul võib arvata, et tegemist on pistikteraga. Eraldi võib neist esile tuua ühelt servalt ja otsalt järsult retušitud mikroliiti.

Kahe eksemplariga on esindatud kõõvitsuuritsad, ühega servalt kahepoolse retušiga teritatud poolkuukujuline tulekivinuga ühelt poolt retušitud teraga tulekivipuur (joon. 5: 8) ja kaheharjalise laastu katkest tehtud külgteraga tulekivist uurits.

Sarnaselt varasemate aastatega on raieriistade osakaal asulaaineses väike. Leiti vaid kahe kivikirve/talva katke ning üks lihvitud kivieseme fragment. 2004. aasta materjali hulgas on ka üks punasest kvartsiidist mõlemalt laiemalt pinnalt kulunud lihvimiskivi fragment ja üks löögijälgedega veeris – võimalik, et tulekivi lõhestamisel kasutatud löögikivi. Eraldi tuleks esile tõsta Kivisaare voore kaguotsale tehtud šurfist leitud kivist rõnga katket (joon. 5: 6). Tegemist on kogu pinnalt lihvitud esemega, mille ühes otsas on kahelt poolt sissepuuritud auk. Niisuguseid rõngaid või isegi nende fragmente kanti kammkeraamika kultuuride ajal mitmel pool Läänemere piirkonnas, eriti aga Karjalas ripatsitena. Ka Eestist on üksikuid eksemplare saadud asulakohtadest; suurim, seitsmest rõngast koosnev kogum on leitud Kõljala kammkeraamika kultuuride aegsest matmispaigast. Äänise rohekiltkivi, millest Kivisaare ese on tehtud, paikneb looduslikult suhteliselt piiratud alal umbes 500 km kaugusel paikneva tänapäeva Petroskoi ümbruses Karjalas. Muuhulgas on sellest materjalist valmistatud ka kuus eelpool mainitud Kõljala rõngast.

Luuesemed moodustavad kogu leiumaterjalist väga väikese osa. Voore kaguotsal paiknenud šurfist leiti üks töödeldud loomaluu ning kogu pinnalt lihvitud oda- või nooleotsa katke. A kaevandist leiti mõlemalt pinnalt lihvitud ning selle ühte otsa puuritud auguga luuese ja kaksikkoonilise nooleotsa katke (joon. 5: 5). Samast saadi samuti üks juureosasse sisselõigatud soonega koerahambast ripats.

Mõnevõrra leiti ka esiajaloolist keraamikat. 27 killust 13 on liiga väikesed, et määrata täpsemat tüüpi ja anda kindlamat dateeringut. 14 kildu on nöörkeraamiliste anumate fragmendid. Nõud on olnud valmistatud taimse massiga (8), taimse massi ja liivaga (3), taimse massi ja šamoti (1) või kivipurruga (1) segatud savist, ühe nõu savimassi on lisatud orgaanikat ning kivipurdu. Pinnad on kas silutud või riibitud. Seinapaksus varieerub 0,4 cm kuni 1 cm, sealjuures valdavaks paksuseks on 0,6–0,7 cm. Killud pärinevad arvatavasti pottidest, vaid ühe (0,4 cm seinapaksusega) killu puhul võiks oletada peekrit.

Kokkuvõtvalt võib tõdeda, et nii nagu varasematel kaevamistel saadi Kivisaarest ka 2004. aastal peamiselt mesoliitilist – põhiosas tõenäoliselt keskmesoliitikumist pärinevat leiuainest. Ilmnes, et A-kaevandis oli kogu avatud alal kultuurkiht hilisemate (19. saj. lõpu ja 20. saj. alguse) põllu- ja kaevetööde käigus ning (oletatavasti 18. sajandil rajatud) võlvitud kiviahju ehitusega lõhutud, mistõttu ei paiknenud leiud *in situ* ning puudusid kinnisobjektid. Oma algses asendis ei paiknenud ka avastatud inimluude kogum. Tõenäoliselt on nende näol tegu 20. sajandi algul leitud kiviaegsete matuste ümbermatmisega. Vaatamata sellele on kogutud rikkalik materjal – rohked tulekivi töötlemise jäägid ja väikeesemed – heaks aluseks kompleksi analüüsiks ja võrdluseks nii Eesti kui ka naaberalade mesoliitilise ainesega.

1965. aastal väljakaevatud luustikust 2004. a. tehtud AMS-analüüs andis selle vanuseks ligikaudu 4300 aastat e.Kr., mis osutab, et kalmistuna on seda paika kasutatud vähemalt varaneoliitikumis.