

## ARCHAEOLOGICAL EXCAVATIONS ON THE NEOLITHIC SITE OF RIIGIKÜLA IV

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In June and July 1995, archaeological field work was carried out at Riigiküla, on the lower reaches of the Narva River. The settlement site of Riigiküla IV (Fig. 1) was excavated within the framework of this project (the description of the area and location of the sites see: Гурина, 1967; Kriiska, 1995a, 1995b)<sup>1</sup>. The excavations were financed by PACT and the University of Tartu, the extensive phosphate reconnaissance by the Central Board of Antiquities of Estonia. The excavations were carried out as part of practical training for students of archaeology of the University of Tartu.

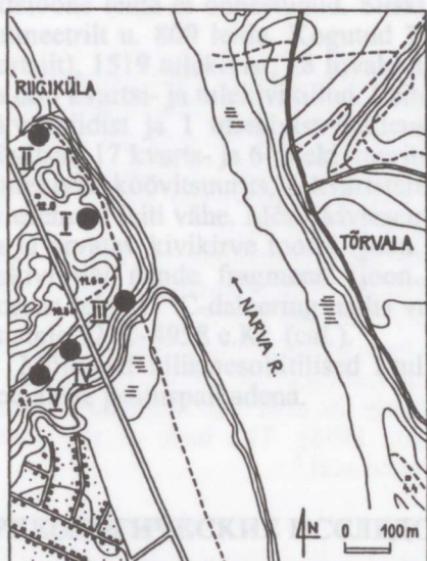


Fig. 1. Location plan of the sites of Riigiküla I–V.

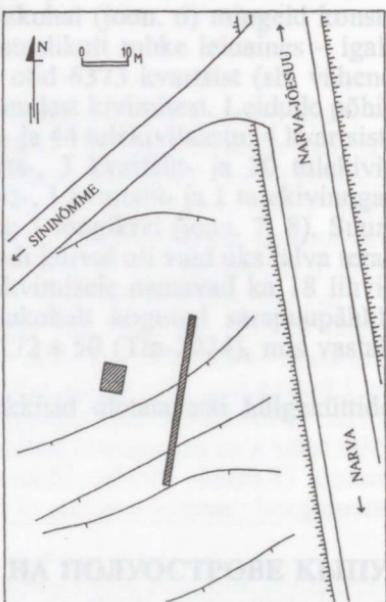


Fig. 2. The plan of the Riigiküla IV site.

<sup>1</sup> The report on the excavations in the archives of the Institute of History.

A trench and an excavation were dug, measuring respectively 30 and 20 m<sup>2</sup> (Figs. 2, 3; Plate II, 1). The soil was screened. In the trench the cultural layer had preserved only in small spots. The 10–50 cm thick ploughlayer yielded numerous finds. In the excavation the cultural layer was preserved under the 15–50 cm thick ploughlayer. Three fire pits deepened 25–40 cm into the ground could be distinguished by black and coaly soil in the excavation. Two of them were almost stoneless, one contained a few stones (Fig. 3). One of the fire pits, measuring 2.5–1.5 m, was completely excavated (Fig. 3; Plate II, 2), two others remained partly out of the excavation. The finds were mostly concentrated around the fire pits. Some coaly soil occurred also between the fire pits.

The find material consists predominantly of pottery of Narva type, 1490 sherds altogether. Judging by the rim sherds these come from more than 30 pots.<sup>2</sup> The clay of the sherds carries traces of some organic admixture (1477 sherds). Nearly 90% of the potsherds had contained some plant admixture, which has burnt out. In about 10% of the sherds, cockleshell rubble is traceable, often together with

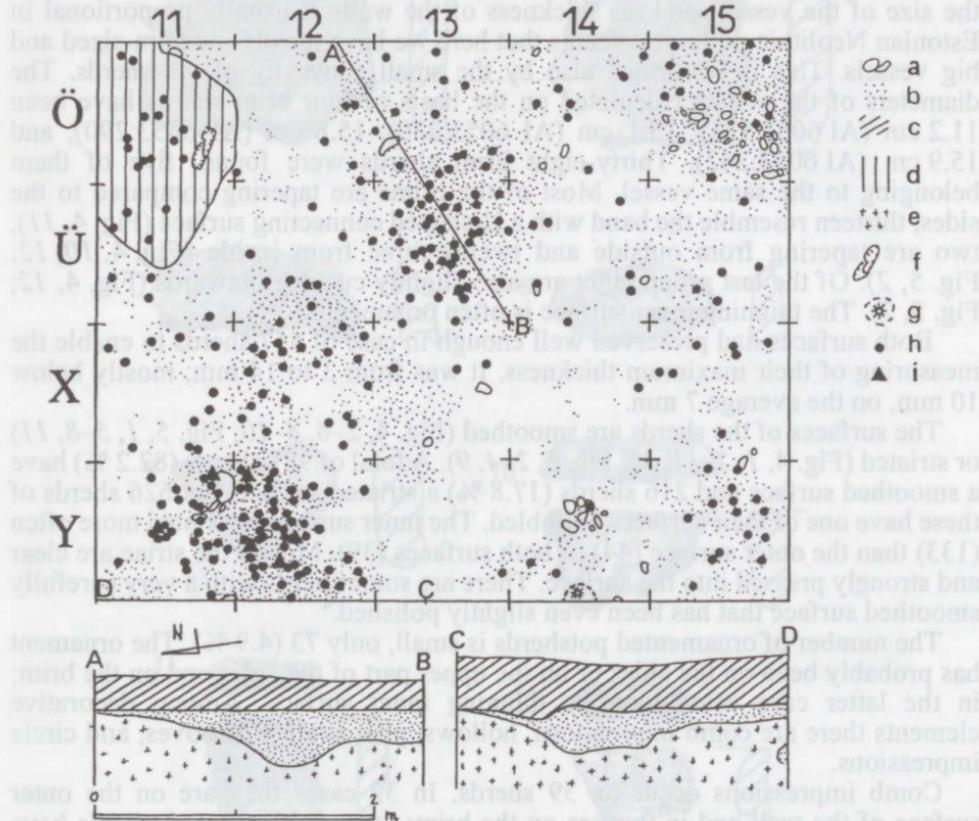


Fig. 3. Riigiküla IV. The general plan of the excavation. a stones, b coaly black surface, c ploughlayer on profile drawings, d shell-crater, e sand on profile drawing, f shell fragments, g stabilizer of the trench-mortar mine, h Neolithic finds, i Late Corded Ware.

<sup>2</sup> AI 6053:2–485.

plant admixture. Thirteen sherds contain a considerable amount of mineral admixture: in five cases only stone rubble, in one case sand, six sherds contain sand with plant admixture, and one stone rubble with plant admixture. The other indicators (band technique, the shape of the connecting surfaces of the bands, etc.) link these sherds with a mineral content to the Narva type. The finding conditions also confirmed this.

The vessels have been moulded in band technique except the bottom, which has been pressed of a single clay lump. The majority of the bands have U-shaped connecting surfaces (Fig. 4, 3, 7, 9; Fig. 5, 9). Also N, H, or combined shapes occur (on the connecting techniques see: Kriiska, 1995b). Of the 369 bands that have a determinable connecting surface, 269 (72.9%) are of U type, 64 (17.3%) of N type, 12 (3.3%) of H type, 16 (4.3%) of N/U type, and 8 (2.2%) of H/U type. Both connecting surfaces had preserved in 196 bands, so their width could be measured. The bands are 3–35 mm wide. The width of 148 bands (75.5%) is less than 10 mm. The wider bands belong mostly to the N type. More than 90% of the 1.5 cm wide bands have N- or N/U-type connecting surfaces.

The sherds found are too fragmentary to yield enough information about the size and shape of the vessels. The four bottom or near-bottom sherds indicate a conical bottom. Among the sherds there is also a fragment of a bottom tip<sup>3</sup>. As the size of the vessels and the thickness of the walls is usually proportional in Estonian Neolithic pottery, it seems that here we have mostly medium-sized and big vessels. This is confirmed also by the small convexity of the sherds. The diameters of the orifice calculated on the basis of four brim sherds have been 11.2 cm (AI 6053:131), 15.1 cm (AI 6053:230), 15.8 cm (AI 6053:290), and 15.9 cm (AI 6053:242). Thirty-eight brim sherds were found, five of them belonging to the same vessel. Most of the brims are tapering compared to the sides, thirteen resemble the band with a U-shaped connecting surface (Fig. 4, 11), two are tapering from outside and twenty-three from inside (Fig. 4, 10, 12; Fig. 5, 2). Of the last group eight are also slightly curving outwards (Fig. 4, 12; Fig. 5, 2). The thinning inner surface is often ornamented.

Both surfaces had preserved well enough in case of 557 sherds to enable the measuring of their maximum thickness. It was from 3 to 14 mm, mostly below 10 mm, on the average 7 mm.

The surfaces of the sherds are smoothed (Fig. 4, 2–6, 8–10; Fig. 5, 1, 5–8, 11) or striated (Fig. 4, 1, 7, 11, 12; Fig. 5, 2–4, 9). A total of 981 sherds (82.2 %) have a smoothed surface and 216 sherds (17.8 %) a striated surface, but 626 sherds of these have one of their surfaces crumbled. The inner surface is striated more often (133) than the outer surface (44) or both surfaces (39). Mostly the striae are clear and strongly pressed into the surface. There are some sherds with a very carefully smoothed surface that has been even slightly polished.<sup>4</sup>

The number of ornamented potsherds is small, only 73 (4.9 %). The ornament has probably been on the sides or on the upper part of the sides and on the brim; in the latter case usually on its thinning inner surface. Among decorative elements there are comb impressions, hollows, pits, notches, grooves, and circle impressions.

Comb impressions occur on 39 sherds. In 32 cases they are on the outer surface of the wall and in 9 cases on the brim; among the latter, 2 sherds have been ornamented with comb impressions both on the edge and the side wall. Mostly it was not possible to measure the length of the impressions but all comb impressions on the edge and on the side walls of five sherds are short – less than 25 mm (Fig. 4, 1, 12; Fig. 5, 2). Comb impressions are about 0.5–4 mm, mostly 1–2 mm wide. In two cases the impression is curved. On 27 sherds it was possible

<sup>3</sup> AI 6053:246.

<sup>4</sup> E.g. sherds AI 6053:222, 243.

Hollows, i.e. impressions less deep than half the sixteen sherds, in fifteen cases the hollows are on the outer surface. In one case the hollows are round and shallow, in another below a rim-shaped, often into the surface with an ornamentation motive; in five cases the hollows (Fig. 4, 6, 10) and in two cases in a diagonal line.

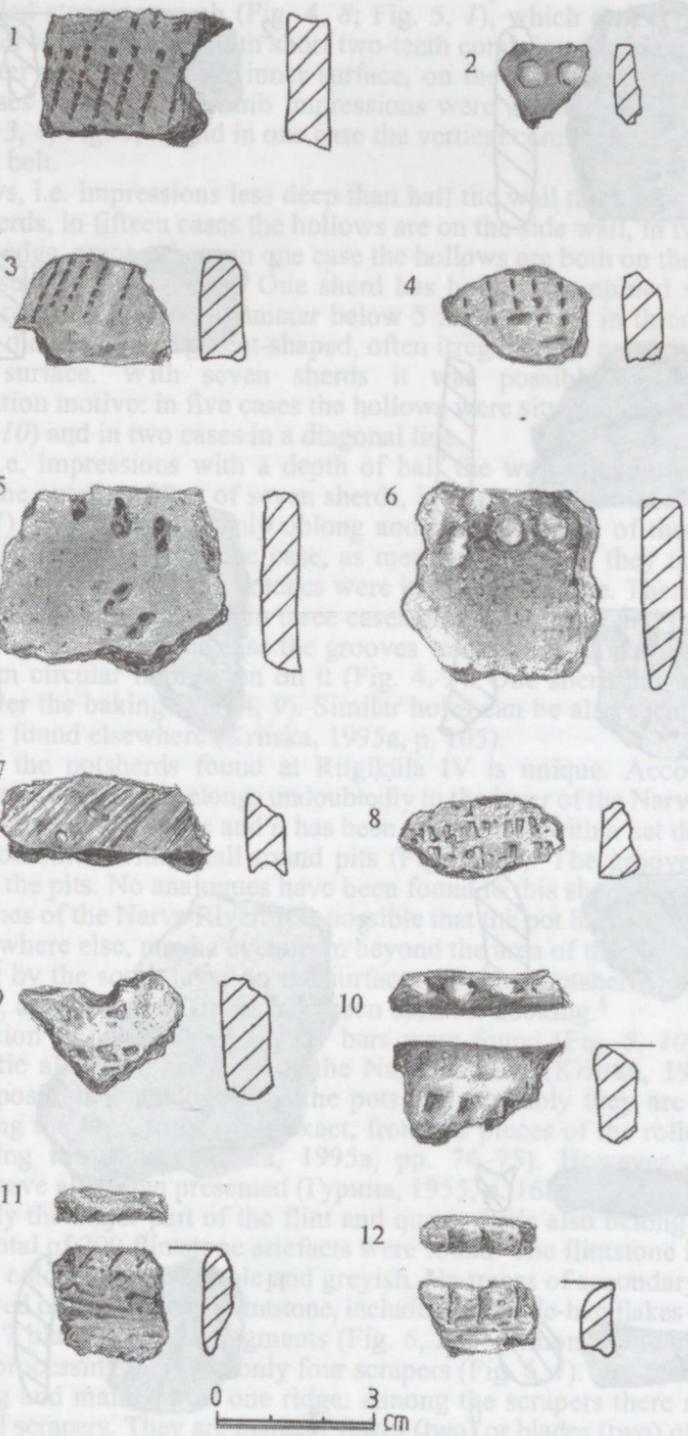


Fig. 4. Pottery of Narva type from the Riigiküla IV site (AI 6053: 127, 44, 267, 143, 74, 60, 59, 103, 413, 198, 245, 139).

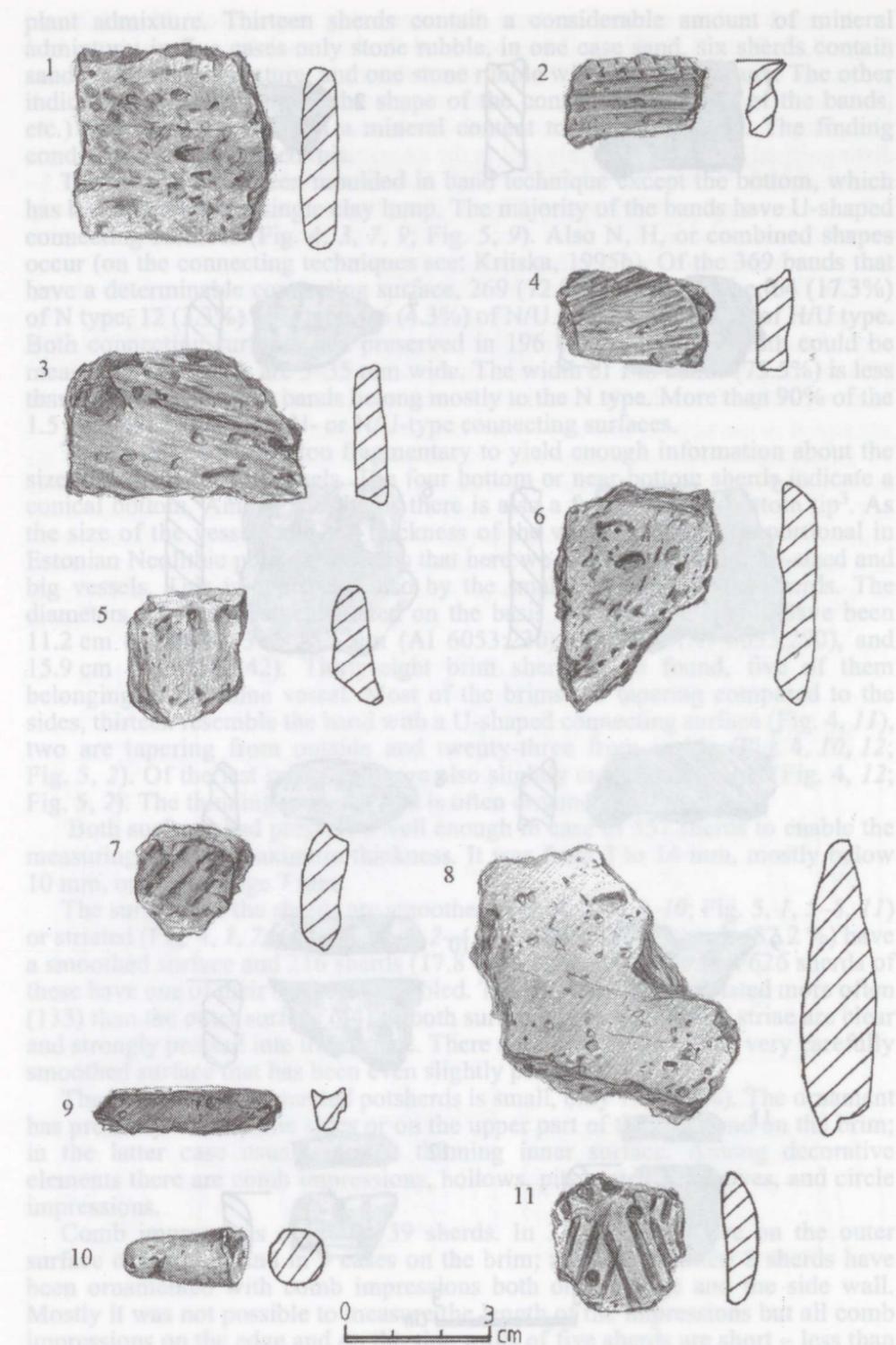


Fig. 5. Pottery of Narva type from the Riigiküla IV site (AI 6053: 244, 357, 459, 458, 253, 363, 289, 91, 411, 138, 230).

<sup>3</sup> Al 6053:245.

<sup>4</sup> Egg sherd Al 6053:222, 343.

to determine ornamentation motives more precisely. In 14 cases the motive was the so-called stepping comb (Fig. 4, 8; Fig. 5, 1), which on two sherds of the same vessel was combined with short two-teeth comb impression under the brim on the outer wall and on the inner surface, on the thinning part of the rim. In twelve cases the diagonal comb impressions were situated in a horizontal belt (Fig. 4, 1, 3, 4; Fig. 5, 7) and in one case the vertical comb impressions were in a horizontal belt.

Hollows, i.e. impressions less deep than half the wall thickness, are found on sixteen sherds, in fifteen cases the hollows are on the side wall, in two cases they are on the edge, among these in one case the hollows are both on the edge and on the outer surface (Fig. 4, 10). One sherd has hollows combined with notches. Hollows are usually small (diameter below 5 mm), except in three cases. They are round, diamond- or segment-shaped, often irregular and only slightly pressed into the surface. With seven sherds it was possible to determine the ornamentation motive: in five cases the hollows were situated in a horizontal line (Fig. 4, 6, 10) and in two cases in a diagonal line.

Pits, i.e. impressions with a depth of half the wall thickness or more, are found on the outer surfaces of seven sherds, in one case combined with grooves (Fig. 5, 11). Notches are mainly oblong and possibly some of them have been made with a finger-nail. In one case, as mentioned before, they occur together with hollows. In one case the notches were in a diagonal line. There are grooves on four sherds (one with pits), in three cases on the side wall and in one case on the edge (Fig. 4, 11). In one case the grooves were in a diagonal line. One sherd has a 5-mm circular impression on it (Fig. 4, 2). One sherd has a hole drilled through after the baking (Fig. 4, 9). Similar holes can be also seen in pottery of Narva type found elsewhere (Kriiska, 1995a, p. 105).

One of the potsherds found at Riigiküla IV is unique. According to the conditions of discovery it belongs undoubtedly to the layer of the Narva culture, but it contains mineral admixture and it has been ornamented with a net design of long grooves, combined with small round pits (Fig. 5, 11). The grooves have been made after the pits. No analogues have been found to this sherd elsewhere on the lower reaches of the Narva River. It is possible that the pot has been brought there from somewhere else, maybe even from beyond the area of the Narva culture.

Judging by the sooty layer on the surfaces of some potsherds, the pottery of Narva type, at least part of it, has also been used for cooking.<sup>5</sup>

In addition to potsherds, five clay bars were found (Fig. 5, 10), which are characteristic also of other sites of the Narva culture (Kriiska, 1995a, p. 74). Their composition is analogous to the pots and probably they are the leftover from making the pots, to be more exact, from the pieces of the rolled clay used for moulding the band (Kriiska, 1995a, pp. 74–75). However, other interpretations have also been presented (Гурина, 1955, p. 168, 1967, p. 40).

Evidently the major part of the flint and quartz finds also belong to the same period. A total of 209 flintstone artefacts were found. The flintstone is of varying quality and colour; mostly purple and greyish. No traces of secondary processing were observed on 154 flakes of flintstone, including 33 blade-like flakes (Fig. 6, 4, 5). There are 17 blades or their fragments (Fig. 6, 2, 3). Amongst the artefacts with secondary processing there are only four scrapers (Fig. 6, 1). The blades are up to 2.8 cm long and mainly with one ridge. Among the scrapers there are two side and two end scrapers. They are made of flakes (two) or blades (two) of 1.2–3.5 cm length. The edges are mostly narrow (five) and convex (five) or concave (three).

A total of 167 quartz and 4 quartzite artefacts were found. Of these 164 were quartz flakes and 2 quartzite flakes, 2 were quartz blades and 1 was a quartzite blade. In addition, there was one blade-like flake of quartz and a quartzite scraper. The scraper is trapezoid and with a wide straight edge.

<sup>5</sup> E.g. sherds AI 6953:76, 95, 242, 260, 288, 402, 456, etc.

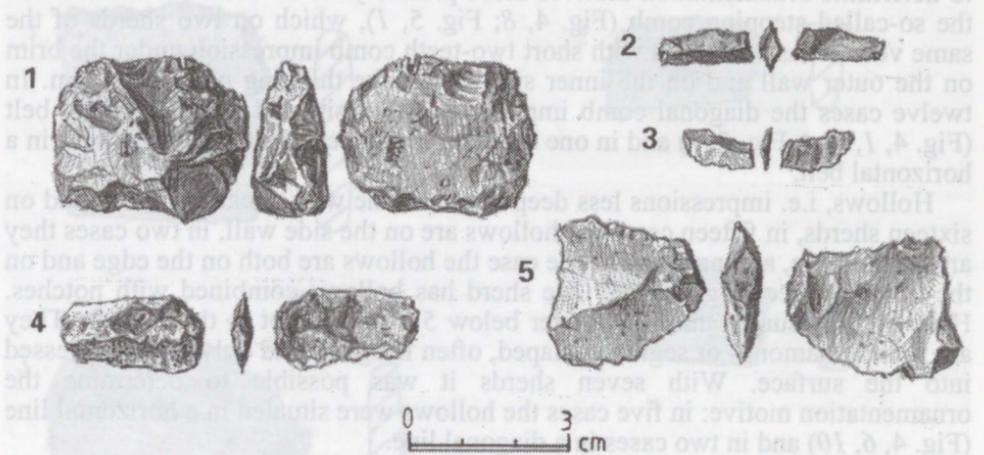


Fig. 6. Flintstone scraper (1), blades (2, 3), and blade-like flakes (4, 5) from the Riigiküla IV site (AI 653: 129, 112, 173, 78, 427).

The finds of other rocks number 57; of these 45 are stone flakes, 3 are flake-like blades, 6 sandstone fragments, one of which is a fragment of a polishing stone. Three fragments of polished stone artefacts were found. Two smaller fragments can belong to wedges, and one is part of a polished stone stick.

The only bone artefacts are a 8 cm point with a slanting corner blade and a fragment of a harpoon.<sup>6</sup>

The <sup>14</sup>C analyses of the charcoal gathered from the fire pit in the squares X-Y/11-12 gave the result  $5624 \pm 115$  BP (Tln-1990), which with a 95% probability corresponds to 4760–4230 BC (cal.). The coal gathered in the cultural layer of the western part of the excavation was dated  $6023 \pm 95$  BP (Tln-1989), corresponding to 5213–4710 BC (cal.).

Sherds of other types of Neolithic pottery were found as well. There is reason to connect two sherds with Typical and three with Late Comb Ware. However, these sherds are very small, they yield little information, and are not typical, so they can be classified only speculatively. A clearer and bigger group is formed of 22 potsherds of Late Corded Ware. Nineteen of these were found in the excavation, three in the trench. Most of the sherds were found in the ploughlayer and some in the upper part of the cultural layer. A bigger concentration could be noted in the northwestern part of the excavation, where the sherds were found in the cultural layer (Fig. 3). There seem to be fragments of only three or four pots.

In the composition of Late Corded Ware an important feature is the absence of the mineral admixture; only single, probably occasional mineral grains can be seen. The porosity of sherds indicates a sort of organic admixture that has burned out. On the broken surfaces very small round holes can be seen. There are many sharp impression traces on the surfaces, these may originate from hairs. Both these phenomena suggest that hairs have been mixed with clay. I have assumed it already earlier, in the case of Narva Joaoru Late Corded Ware (Kriiska, 1994, p. 48). A similar phenomenon is represented also in Finnish so-called Imitated Textile-Impressed Pottery (Carpelan, 1970, p. 27; Arponen, 1994, p. 11).

<sup>6</sup> AI 6053:351.

It was possible to measure the wall thickness of 13 sherds. It varies from 7 to 11 mm, nearly a half of the walls were 10 mm thick. The pots have been big with straight walls. The two bottom fragments found there indicate a flat bottom, with a convex transition from bottom to side. One brim fragment is unprofiled, as thick as the side wall and the upper part of the rim is slanting inside.

The surfaces of the pots are smoothed or striated. Out of thirteen sherds with both preserved surfaces, eight are smoothed on both sides, three striated, and two sherds have a striated and smoothed outside. Among the fragments that have one preserved surface there are eight sherds with smoothed outer side and one with striated outer side. Of the sherds with two preserved surfaces nine have hair impressions on both sides (Plate III, 1–12), two sherds have hair impressions only on the outer side, and two have no clear impressions. Among the sherds with one preserved surface there are seven with hair impressions and only one is without. Such impressions are characteristic also of the Late Corded Ware found in other parts of Estonia (Kriiska, 1994, p. 49).

Decoration could be traced only on one sherd, on a brim fragment (Plate III, 2). There are two horizontal impressions 9 mm below the edge at a distance of 10 mm. The upper one is groove-like in the preserved part but the lower one is a clear cord impression. The upper one was probably made with a cord, too. Originally the impressions surrounded the perimeter of the pot.

The same site has yielded considerably later finds as well. Six hand-moulded Iron Age potsherds were found, of which two sherds with striated surfaces may date from the Pre-Roman Iron Age (Plate III, 13, 14). The other and considerably bigger group of finds belongs to the 16th–19th centuries. Also 93 unglazed and 116 glazed sherds of wheel pottery, 3 stoneware, and 47 faience sherds date back to the same period. Twelve pipe fragments of kaolin clay were found, too, among them three from a bowl part. One bone and one glass fragment were found. Of the metal objects, a presumable buckle fragment (Fig. 7, 1), a thin ribbon of bronze sheet (Fig. 7, 2), a bronze plaque (Fig. 7, 3), a silver button base, and some nails can be connected with that settlement period. All those objects were found in the mixed layer.

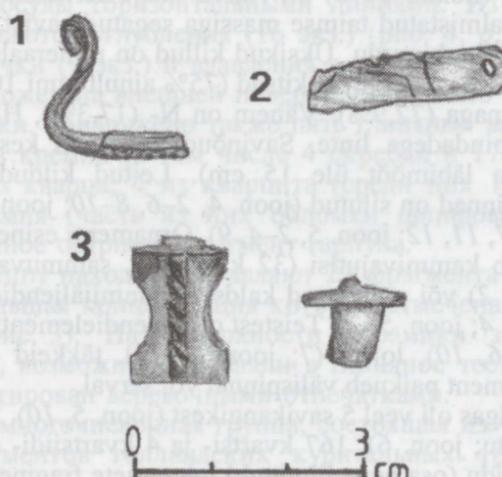


Fig. 7. Bronze finds from the Riigiküla IV site: 1 buckle fragment, 2 ribbon of bronze sheet, 3 bronze plaque (AI 653: 130, 171, 121).

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## ARHEOLOOGILISED VÄLJAKAEVAMISED RIIGIKÜLA IV NEOLIITILISEL ASULAKOHAL

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1995. aastal tehti arheoloogilisi kaevamisi Riigiküla IV asulakohal (transee 30 m<sup>2</sup> ja proovikaevand 20 m<sup>2</sup>; joon. 1, 2; tahv. II, 1). Transees oli kultuurkihti säilinud ainult laiguti. Proovikaevandist leiti kolm maapinda süvendatud tuleaset. Neist üks, ovaalse kujuga 2,5 × 1,5 m suurune kivideta kolle jäi kaevandisse kogu ulatuses (tahv. II, 2), teised kaks ainult osaliselt (joon. 3). Tuleasemed, nii nagu enamik leiuainestki, kuuluvad Narva kultuuri perioodi. Proovikaevandist kogutud söest saadi kaks <sup>14</sup>C-dateeringut – 6023 ± 95 (Tln-1989) ja 5624 ± 115 (Tln-1990), mis kalibreeritult vastavad aastatele 5213–4710 e.Kr. ja 4760–4230 e.Kr.

Leidude põhiosa (kokku 1490) on Narva tüüpi keraamika killud. Enamasti (u. 90%) on nöud valmistatud taimse massiga segatud savist. Harvem (u. 10%) on savisse lisatud teokarbipuru. Üksikud killud on mineraalse lisandiga. Nöud on vormitud linnitehnikas. Lindid on kitsad (75% ainult kuni 10 mm) ja põhiliselt U-tüüpi ühenduspinnaga (72,9%). Vähem on N- (17,3%), H- (3,3%) või komponeeritud ühenduspindadega linte. Savinöud on olnud keskmise- või suuremõödulised (suuava läbimõõt üle 15 cm). Leitud kildude seinapaksus on keskmiselt 7 mm. Pinnad on silutud (joon. 4, 2–6, 8–10; joon. 5, 1, 5–8, 11) või riibitud (joon. 4, 1, 7, 11, 12; joon. 5, 2–4, 9). Ornamenti esineb vaid 4,9% kildudel. Rohkem kohtab kammivajutisi (32 kilda) nn. sammuva kammi motiiviga (joon. 4, 8; joon. 5, 2) või paiknevad kaldsed kammijäljendid horisontaalvöönditena (joon. 4, 1, 3, 4; joon. 5, 7). Teistest ornamendielementidest esineb lohundeid (16; joon. 4, 6, 10), lohke (7; joon. 5, 11), täkkeid (9) ja sõõrvajutisi (1; joon. 4, 2). Ornament paikneb välispinnal või serval.

Leiumaterjali hulgas oli veel 5 savikangikest (joon. 5, 10), 209 tulekivi- (sh. 4 kõõvitsat ja 17 laastu; joon. 6), 167 kvartsi- ja 4 kvartsiidi- (sh. 1 kõõvits), 57 teistest kivimitest leidu (osa neist lihvitud kiviesemete fragmendid), 1 luust teravik ja harpuuni fragment.

Omaette leiurühma moodustavad 22 hilise nõörkeraamika kilda, mille leitud hedus oli suurem proovikaevandi loodenurgas (joon. 3). Kildude pindadel esineb karvajäljendeid. Võimalik, et karvu on segatud savimassi. Üks servatükk on ornamendifititud nõõrivajutistega.

Teine ja märksa suurem leiurühm, mis sisaldab keraamiliste nõude kilde (259), kaoliinsavist piipude fragmente (12) ning pronksesemeid ja nende fragmente (joon. 7), on dateeritav 16.–19. sajandisse.

## РАСКОПКИ НЕОЛИТИЧЕСКОГО ПОСЕЛЕНИЯ РИЙГИКЮЛА IV

Айвар КРИЙСКА

В июне–июле 1995 г. были проведены в ходе полевых археологических исследований раскопки поселения Рийгикюла IV (траншея общей площадью 30 кв. м и разведочный раскоп площадью 20 кв. м) (рис. 1, 2; табл. II, 1). Культурный слой в траншее сохранился лишь отдельными пятнами. В раскопе обнаружено три углубленных в материк очага. Один из них овальной формы и размером 2,5 x 1,5 м, без камней, попал в раскоп полностью (табл. II, 2), два других частично (рис. 3). Судя по находкам, очаги относятся к периоду нарвской культуры. Отобранные на  $^{14}\text{C}$ -анализ образцы угля дали две даты –  $6023 \pm 95$  (Tln-1989) и  $5624 \pm 115$  (Tln-1990), что с учетом калибровки соответствует 5213–4710 и 4760–4230 гг. до Р. Х.

Основную часть находок составляют черепки керамики нарвского типа, всего 1490 экземпляров. Преобладают сосуды из глины с растительной примесью (90%), реже в глину добавлены толченые раковины (10%) и еще реже минеральные добавки. Сосуды изготовлены ленточным способом. Ленты обычно узкие (75% до 10 мм) и в основном U-образного сечения (72,9%). Реже соединительный шов имеет N-, H-образное (соответственно 17,3 и 3,3%) или комбинированное сечение. Размер сосудов средний или крупный (диаметр горлышка более 15 см). Толщина стенок в среднем составляет 7 мм, их поверхность заглажена (рис. 4, 2–6, 8–10; рис. 5, 1, 5–8, 11) или покрыта расчесами (рис. 4, 1, 7, 11, 12; рис. 5, 2–4, 9). Орнаментировано всего лишь 4,9% фрагментов керамики. Преобладают гребенчатые вдавления (32 экз.), нанесенные в виде т.н. шагающей гребенки (рис. 4, 8; рис. 5, 2) или диагонально (рис. 4, 1, 3, 4; рис. 5, 7), опоясывающие сосуды горизонтальными линиями. Из других элементов орнамента встречаются углубления (16 экз.) (рис. 4, 6, 10), ямки (7 экз.) (рис. 5, 11), насечки (9 экз.) и вдавления в виде круга (1 экз.) (рис. 4, 2). Орнамент расположен на внешней поверхности или по венчику сосудов.

Кроме керамики, обнаружено также пять глиняных валиков (рис. 5, 10), 209 предметов из кремня (в том числе 4 скребка и 17 пластин) (рис. 6), 167 предметов из кварца, 4 из кварцита (среди них 1 скребок) и 57 из других пород камня (часть из них обломкишлифованных изделий), а также одно костяное острье и фрагмент гарпуна.

Отдельную группу находок составляют 22 фрагмента поздней шнуровой керамики, наибольшая концентрация которой отмечена в северо-западном углу раскопа (рис. 3). На поверхности керамики заметны отпечатки шерсти, которую, возможно, добавляли в глиняное тесто. Один фрагмент венчика орнаментирован веревочными отпечатками.

Другая, более многочисленная группа, состоящая из черепков керамики (259 экз.), фрагментов голландских курительных трубок (12 экз.) и бронзовых предметов (рис. 7), датируется 16–19 вв.