THE EARLY NEOLITHIC AT THE IČA SETTLEMENT SITE (Lake Lubāna Depression)

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Research on the Early Neolithic of the present territory of Latvia is closely connected with the discovery of settlements in the Lake Lubāna Depression and archaeological excavation at these sites. Study of the Early Neolithic began only in the first half of the 1960s, notwithstanding the fact that the first archaeological excavations at the Iča settlement site in the Lubāna wetlands were conducted by Eduards Šturms already in 1938–1939 (Šturms n.d.). The site had been discovered by crop technician of the Lake Lubāna land improvement and building works, engineer A. Turnis, who in 1937, following the straightening of the bed of the River Iča, drew attention to the occupation of the area of the "Swedish Bank" in the Stone Age.

TOPOGRAPHIC CHARACTERISTICS OF THE IČA SETTLEMENT

The Iča site is located in the eastern part of the Lake Lubāna wetlands, at a bend in the bank of the left tributary of the River Aiviekste bearing this same name, where the relief rises above the surrounding wetland area. The site is at one of the last bends in this former riverbed to the west of the hill at Sala, and more than one kilometre east of the former Lake Vējezers, drained in the 1960s (Fig. 1). It is bounded by Bērzpils on one side and the Sala bogs on the other (Nomalis 1943, 296). The River Iča is regulated in its lower course, deepened and straightened for a length of 11 km (Meliorācijas 1970, 51). The mouth of the river is 8 km from the present outlet of the River Aiviekste from Lake Lubāna. The river valley along its lower course is wide, forming an extensive plain on both banks, which was formerly always inundated during spring floods. The drainage basin of the Iča at its confluence with the Aiviekste is 1054 km^2 (Bielis 1974, 24). The River Iča rises in the northern part of the Latgale Uplands, flowing out from Lake Čakšu, and it is 68 km in length (Tomāss 1937, 73), of which the final 28 km pass through the Lubāna Plain. Prior to regulation the waters of the River Iča flowed into the right branch of the Aiviekste, the Kalnupe, entering it at its middle course. Now it joins the Aiviekste south of the former Kalnupe, flowing into the Vērde Canal. The site is on a rise forming an island (Fig. 2), and its occupation layer formed over the course of millennia not only on the island itself, but also on the plain immediately north-west of it when the fall in the water-level in the Lubāna basin permitted settlement on the lower part of the bank as well. Occupation layers have also accumulated at the top of the slope of the former bed of the River Iča, preserving in fragmentary form traces of the earliest occupation. As a result, the Iča site is particularly to be preserved, being a rare site of this type, and in fact the only one among those discovered in the Lake Lubāna Depression and elsewhere, in whose territory Early, Middle and Late Neolithic occupation layers have accumulated, along with finds from a stratified occupation layer of the Bronze Age.

ARCHAEOLOGICAL EXCAVATIONS IN 1938 AND 1939

This article discusses the remains of the initial occupation of the Iča site, both from the washed out occupation layer, and from the occupation layer preserved *in situ*. These can be traced owing, in the first place, to excavations by Eduards Šturms in 1938 and 1939 (Šturms n.d.). In the course of this work it was established that the raised part of the site in the form of an island covered the area of 2300 m^2. Excavation was conducted not only in this area, but also on a shoal in the former bed of the River Iča in the immediate vicinity of its new, straightened bed, where a thick layer of refuse had accumulated, washed out of the occupation layers of the site as the riverbed meandered.

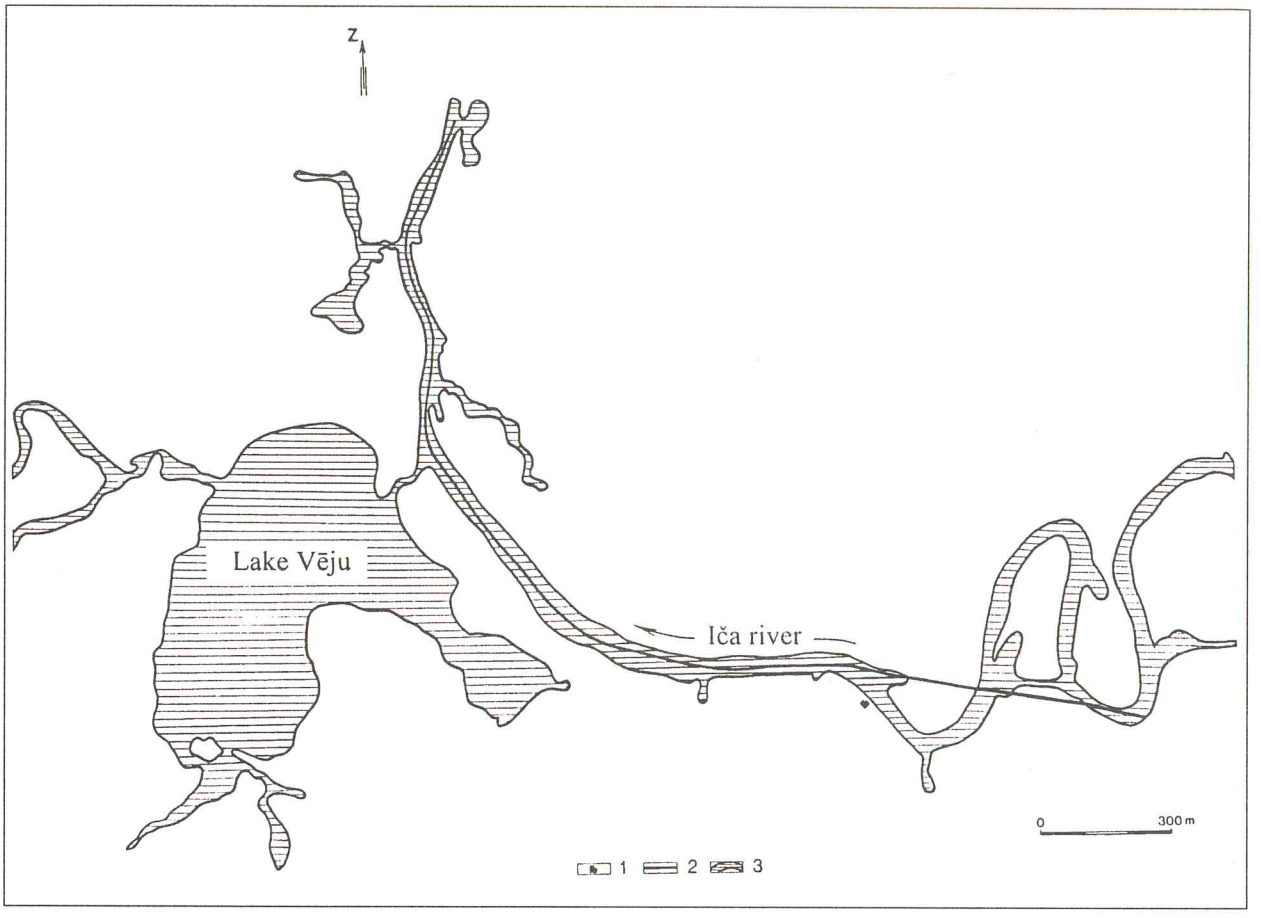

Fig. 1. Location plan of Iča settlement site and excavated areas. Scale 1: 5000.

As noted in the report by Eduards Šturms on the 1938 excavations, "these finds formed a thick layer", where a 2 m wide and 3.54 m long trench was excavated (Šturms n. d.). Up to a depth of 0.50 m, as Šturms writes, "this excavated area consisted entirely of a spread of pot-sherds and animal bones, which disappeared on the left bank of the river" (i.e. the bank where the site was located – I. L.). It was for this reason that the excavation area, which gained the name "Iča Shoal", was laid out right next to the shoal on the left bank of the former riverbed, and the exposure was given the name "Iča Stream Section".

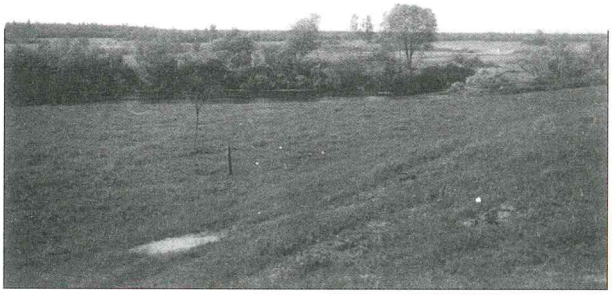

Fig. 2. View of the Iča site from the south- east . Excavations in 1988.

Collected from the shoal were 285 fragments of pottery and 20 bone and antler artefacts in 1938, and 1100 fragments of pottery, 140 bone and 32 antler artefacts in 1939, including finds relating to the Early Neolithic.

The Iča Stream Section on the north-western side of the excavated area was described as follows (Fig. 3): 1) 0.00–0.35 m ploughsoil; 2) 0.35–0.55 m dark sand; 3) 0.55–1.45 m alternating white and dark layers (i.e. alluvium); 4) 1.45–1.60 m layer of white sand; 5) 1.60–1.80 m black layer of washed up wood; 6) 1.80–2.20 m layer of finds; 6) from 2.20 m layer of clay.

As can be seen from the photograph by Šturms (Fig. 3), the layer of finds at a depth of 1.80–2.20 m was perfectly conserved and had remained intact up

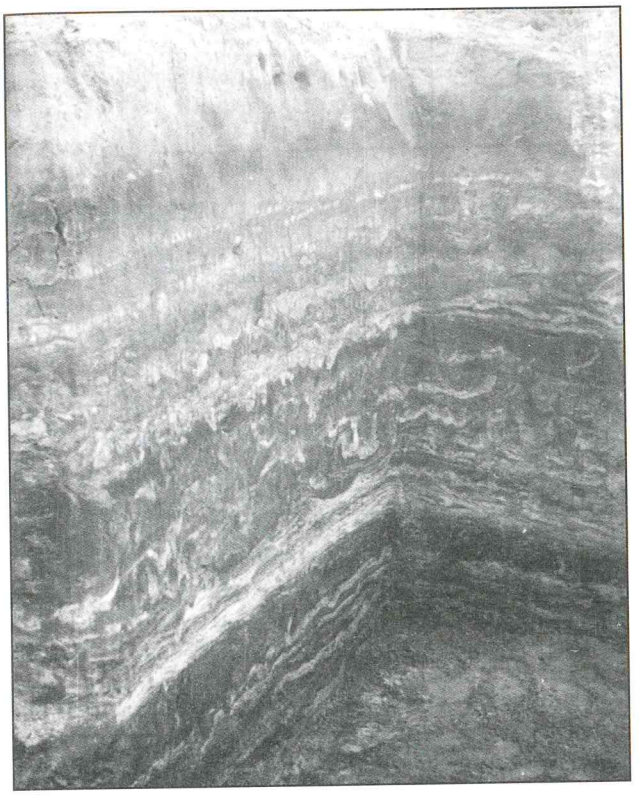

Fig. 3. South- east section of the Iča stream. Excavations by Eduards Šturms in 1939. (Archive. Museum of History of Latvia, No. 225: 11).

to the time of excavation. There is reason to believe that at this particular depth below the peaty layer Early Neolithic artefacts and pot-sherds may also have been concentrated *in situ*. Unfortunately, there are no more specific notes by Šturms regarding this excavation and the section of the shoal. However, in the lower part of the photograph it can be seen clearly that below the white alluvial sand there is a darker layer, and below this there are 3–4 thin alluvial sand layers of varying thickness overlying the clay. This latter stratigraphy may have permitted recovery of *in situ* finds, which was not given enough attention because time was short.

Especially now that excavations have also been conducted on the lower part of the bank at the Iča site to the north-west of the raised part of the site, where the areas excavated by Eduards Šturms in the 1930s and Francis Zagorskis in 1964 producing Middle Neolithic material are located, the collection of Early Neolithic implements and pot-sherds has become the third largest series of Early Neolithic artefacts and collection of pottery after the Osa and Zvidze settlements.

THE DEVELOPMENT OF THE CONCEPT OF THE EARLY NEOLITHIC IN THE EASTERN BALTIC

Development of this concept relates to research in the 1950s, since the material recovered from the shoal at the Iča site, as can be seen in the master's degree paper by Ērika Krūmiņa form the 1940s, has been treated as belonging to the Comb-and-Pit Ware and Corded Ware Cultures (Krūmiņa n. d.). The situation changed rapidly in the 1950s when Estonian archaeologist Lembit Jaanits began detailed research on Neolithic settlement sites, and it was established that Early Neolithic pottery, much earlier than the Comb-and-Pit Ware, could be traced stratigraphically in Estonia. This was found in a multi-layer site immediately above the natural subsoil below layers containing Comb-and-Pit Ware. It was at the Akali settlement site at an ox-bow lake of the River Emajogi near the western shore of Lake Peipus, that a refined method of find recording, establishing the pottery ware and find depth, and a very fine system of find coordinates permitted introduction into Eastern Baltic archaeological literature of a pottery complex which had previously not been distinguished (Janits 1959, 122–127). Jaanits noted that this early pottery is possibly also to be found at the Iča site, but that stratigraphically undisturbed Neolithic layers had not been found at this site and, since most of the pottery had been obtained as stray finds (i.e. from the shoal in the former Iča riverbed – I.L.), this Early Neolithic pottery is very hard to distinguish from the late Comb-and-Pit Ware, also noting that the former had some common features with the latter (Janits 1959, 125).

That Jaanits was not wrong in the first aspect of this question can be seen from the fact that, after becoming acquainted with Early Neolithic pottery through participation in excavations led by Jaanits at Narva in 1962 and visiting the collections of the Estonian Institute of History at Tallinn to work with pottery from this same period obtained at the Kääpa settlement site on the bank of the River Vihandu in south-eastern Estonia, it already became clear to the author at the beginning of the first half of the 1960s that pot-sherds and series of artefacts from this period really had been found on the shoal in the former Iča riverbed (Loze ms.).

ARCHAEOLOGICAL EXCAVATIONS IN 1988 AND 1989

Because of the interruption of systematic research on the Lubāna wetlands in 1984 due to work in the flooding zone of the Daugavpils Hydro-Electric Station, the connection between the stratigraphy of the "Iča Shoal" and the various pottery complexes found there remained unclear until to the late 1980s. The polder construction plan for the lower Iča, prepared by Working Group III of the Latvian State Land Improvement Institute under the direction of Danilsons and Milliņš, envisaged the commencement of construction of this polder in the 1990s with the building of a polder dam several tens of metres in width on the left bank of the new bed of the River Iča , which would also affect the area of the Iča settlement site. For this reason it was necessary to organise excavations and conduct the study of this archaeological monument in the late 1980s.

In the course of two seasons of excavation in 1988 and 1989, over three-and-a-half months, eight areas lying close next to one another were excavated (D–K), including areas along the shore of the former Iča riverbed, which are of interest here (Loze 1990, 106–109; 1993, 21). In three excavated areas (D, E and J) with the total area of 102.5 m^2 an Early Neolithic layer was uncovered in those parts of the areas lying closest to the former riverbed.

Through a study of the relief of the Iča site, the line of the left bank of the former riverbed and the features of the new riverbed, and examination of the places where Eduards Šturms had excavated in 1938 and 1939 (the Middle Neolithic areas still being well visible, but the areas on the shoal and its limits being unidentifiable), and taking into account the sketches of the excavations by Šturms kept in the archive of the Archaeology Department of the Latvian History Museum, the distance from the centre of the settlement site to the excavations on the Iča Shoal was estimated.

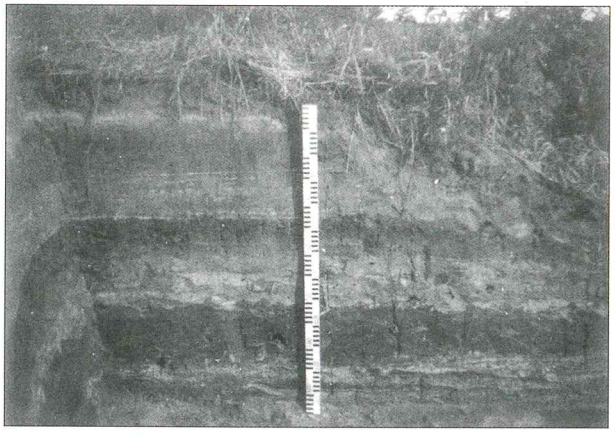

Fig. 4. North section of Area D. Excavations in 1988.

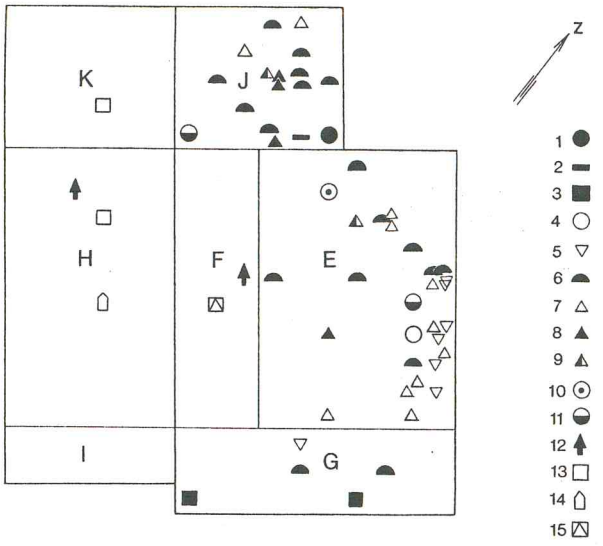

Fig. 5. Layout of excavated areas in 1988 and 1989 showing the distribution of Early Neolithic artefacts , pot– and lamp sherds: 1 – bottom of pot, 2 – rim of pot, 3 – wall of pot, 4 – needle for braiding fishing net, 5 – fragment of lamp, 6 – antler polishers, 7 – bone arrow heads, 8 – bone awls, 9 – artefacts with a blade at 45 degree angle, 10 – bone daggers, 11 – flint micro – and end scrapers, 12 – flint tanged point, 13 – flint blade with oblique edge, 14 – flint blade with edge re- touch, 15 – bone spear head.

The first trial excavation area D, covering 7.50 m^2 was laid out in the area closest to the Iča Shoal. Here it was established that the lithological sequence, including the occupation layer, had not been disturbed. At a depth of 1.17 m above the natural subsoil under Late Neolithic layers 0.40 m in thickness there were found in situ remains of an Early Neolithic hearth of erratic stones with Early Neolithic pot-sherds and artefacts. The north section of this area (Fig. 4) showed layers of fine gravel and grey and light sand accumulated during the Early Neolithic. The following stratigraphy was found in the south part of the area (Figs. 4, 5): 1) 0.00–0.05 topsoil; 2) 0.05–0.15 m shoreline soil; 3) 0.15–0.25 m dark yellow layered sand; 4) 0.25–0.45 m light sand; 5) 0.45–0.50 m zone of contact with alternating light and dark sand; 6) 0.50–0.70 m light sand; 7) 0.70–0.95 m Late Neolithic dark occupation layer rich in ash and other organic remains; 8) 0.95–1.00 m mixed accumulation of layered sand; 9) 1.00–1.02 m thin layer of dark sand; 10) 1.02–1.10 m thin layer of fine gravel; 11) 1.10–1.12 m thin layer of dark sand; 12) 1.12–1.17 m light-coloured alluvial sand; 13) 1.17–1.27 m lower occupation layer,

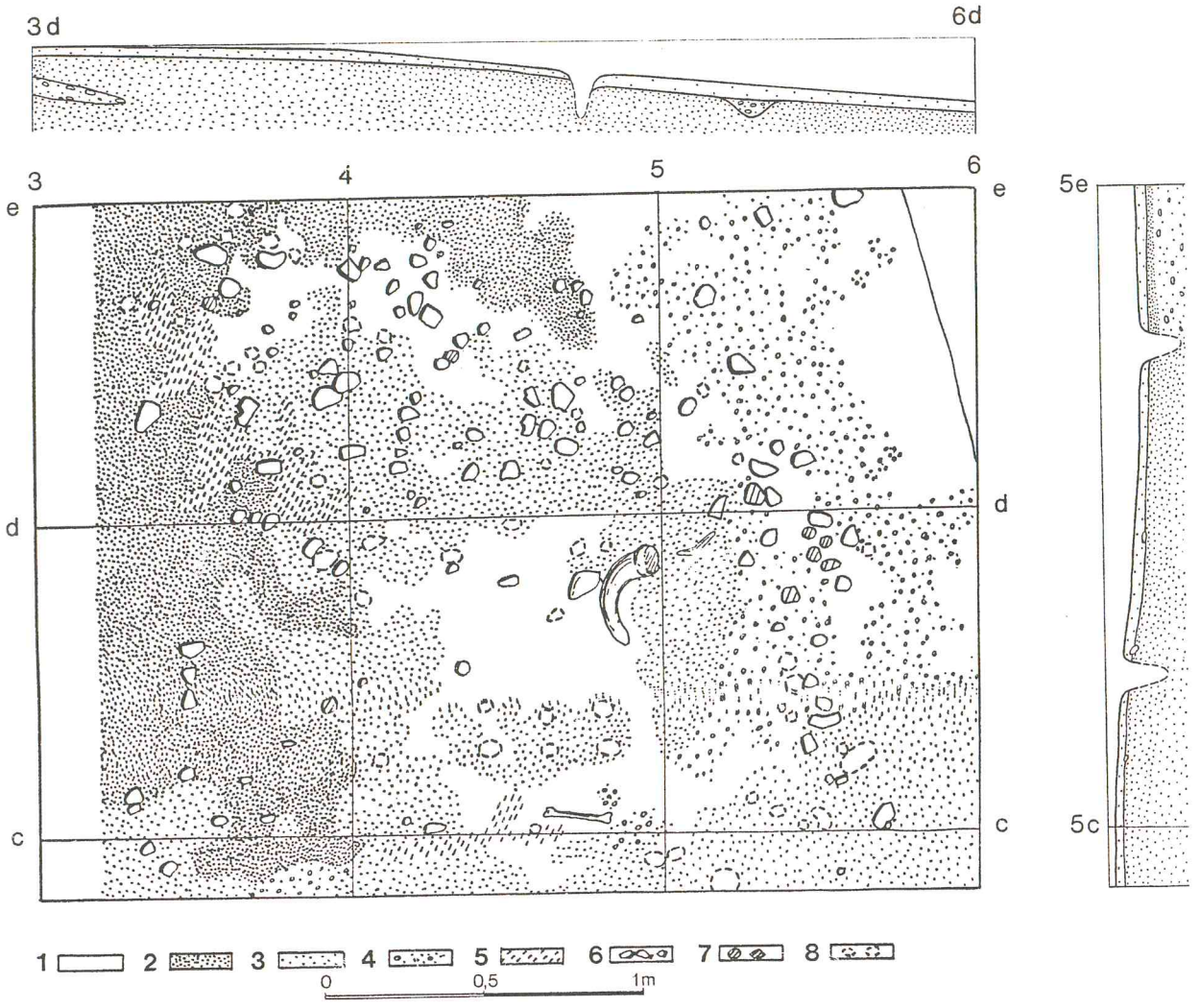

Fig. 6. Remains of Early Neolithic hearth in Area J with an aurochs horn in the centre. Excavations in 1989: 1 – hearth layer (1), 2 – light stand, 3 – hearth layer (2), 4 – gravel, 5 – dark sand, 6 – stones of hearth, 7 – finds of fragments of clay pots and lamps, 8 – places of the lower edge of stakes.

corresponding to the Early Neolithic, with fine charcoal and hearth remains.

The remains of the hearth could be traced in the southern part of the excavated area in the form of shattered, very angular erratics, which did not form a round shape, but rather had been transported over a zone 2.80 m long in an east-west direction and 0.60–1.00 m wide in a north-south direction, when the hearth had been destroyed by floodwaters. That this hearth really had belonged to the earliest period of occupation is shown by the fact that it lay on natural compacted fine-grained sand above the clay. Between the stones of the hearth was found the conical base of a large Early Neolithic vessel with a double line of fine "stabbed dots" around the tip of the base, as well as antler artefacts from this period.

In view of these finds, the excavation area was extended by adding Area E, covering 70 m^2, on the south-eastern side of Area D and in this area, in the part of it closest to the Iča riverbed over an area of 20 m^2 on the edge of the slope the same Early Neolithic fine gravel and variously coloured sand layers were found at the same depth on the bank of the former riverbed, also including fragments of Early Neolithic pottery and artefacts.

Continuing this work, Area J, covering 11.5 m^2, was opened on the north-western side of Area D, and here the remains of a second Early Neolithic hearth were found, with an aurochs horn in the centre (Fig. 6).

Thus, traces of Early Neolithic habitation were found over an area of about 39 m^2, providing stratified archaeological material and evidence, albeit frag-

mentary, of possible Early Neolithic dwelling remains in the form of stake-holes in the subsoil. In order to establish the distribution of these stake-holes and their dating specifically to the Early Neolithic period, a careful record was kept of the colour and structure of the fills of the stake-holes, because, as described above, this part of the site had also been occupied during the Late Neolithic. It was established that the stake-holes forming part of the construction of the Early Neolithic dwellings, unlike those of the Late Neolithic, were filled with coarse, light sand. That the partly uncovered dwellings were located in the immediate proximity of the former riverbed can be seen from the finds assemblage and pot-sherds found in their areas. These were found *in situ* in the areas of these dwellings, particularly in the south-eastern part of Area E, where these stake-holes were concentrated in a 10 m^2 area and where, next to a household pit no deeper than 0.35 m, there lay a bi-conical Early Neolithic arrow-head.

THE FINDS ASSEMBLAGE

So far there is no published description of the Early Neolithic assemblage from Iča collected in the years 1938–1939. For this reason it is appropriate to consider this material along with the finds obtained in 1988–1989, particularly since the stratigraphic position of the latter artefacts is known. The assemblage consists of more than ten flint artefacts and around one hundred bone and antler artefacts.

The **flint** implements include: blades with obliquely truncated and retouched ends (Fig. 7:9,16), micro-burins (Fig. 7:11), micro-scrapers (Fig. 7:12, 13), end scrapers (Fig. 7:10), a tanged point (Fig. 7:5), blades with edge re-touch (Fig. 7:9,17), as well as blades with traces of wear along the edges visible only under the microscope (Fig. 7:2,4,7,8,15). This flint technology is a continuation of Mesolithic traditions at the sites of the Lake Lubāna Depression.

The main series of artefacts consist of **bone and antler implements**, comprising over 99% of the total assemblage. These include bone arrow-heads used for hunting, antler polishers needed for everyday activities, artefacts with a blade bevelled at a 45 degree angle, daggers and awls.

The Early Neolithic bi-conical bone arrow-heads found at Iča, including examples characteristic of the Eastern Baltic, but not the Eastern European Forest Zone, include various, both long and short forms. These were established for the first time as typical for the Early Neolithic by Lembit Jaanits, working at the Kääpa site in south-eastern Estonia (Jaanits 1965, Fig. 4:8–11). These arrow-heads include examples with a short, conical tip, and without such a tip. At the site under discussion several arrow-heads of these types have been found, including examples from the Iča riverbed (Latvian History museum collections: A 10085:207,210), as well as pieces found during the excavations of the 1980s (Fig. 8:1). The following subtypes can be distinguished: 1) long, slender examples with a tang comprising almost half of the total length of the implement (up to 14 cm in length) (Fig. 8:1); 2) medium-sized examples (up to 8 cm long) (Latvian History Museum collections: A 10988:2); 3) small examples (up to 4.5 cm long) with a short tip and short tang (Latvian History Museum collections: A 10095:207).

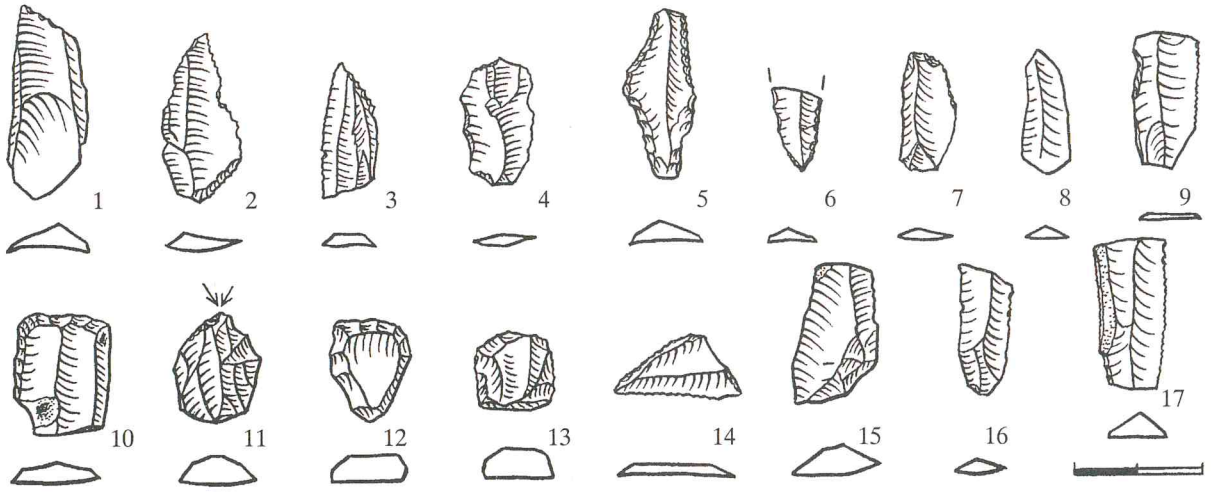

Fig. 7. Flint tools found *in situ* in the ocupation layer of areas of excavations in 1988 and 1989 (1–7, 10–16) and on the shoal in excavations in excavations in 1938 and 1939 (8, 9, 17) (Department of Arch. , Museum of History of Latvia, Inv. No. A 10926: 6).

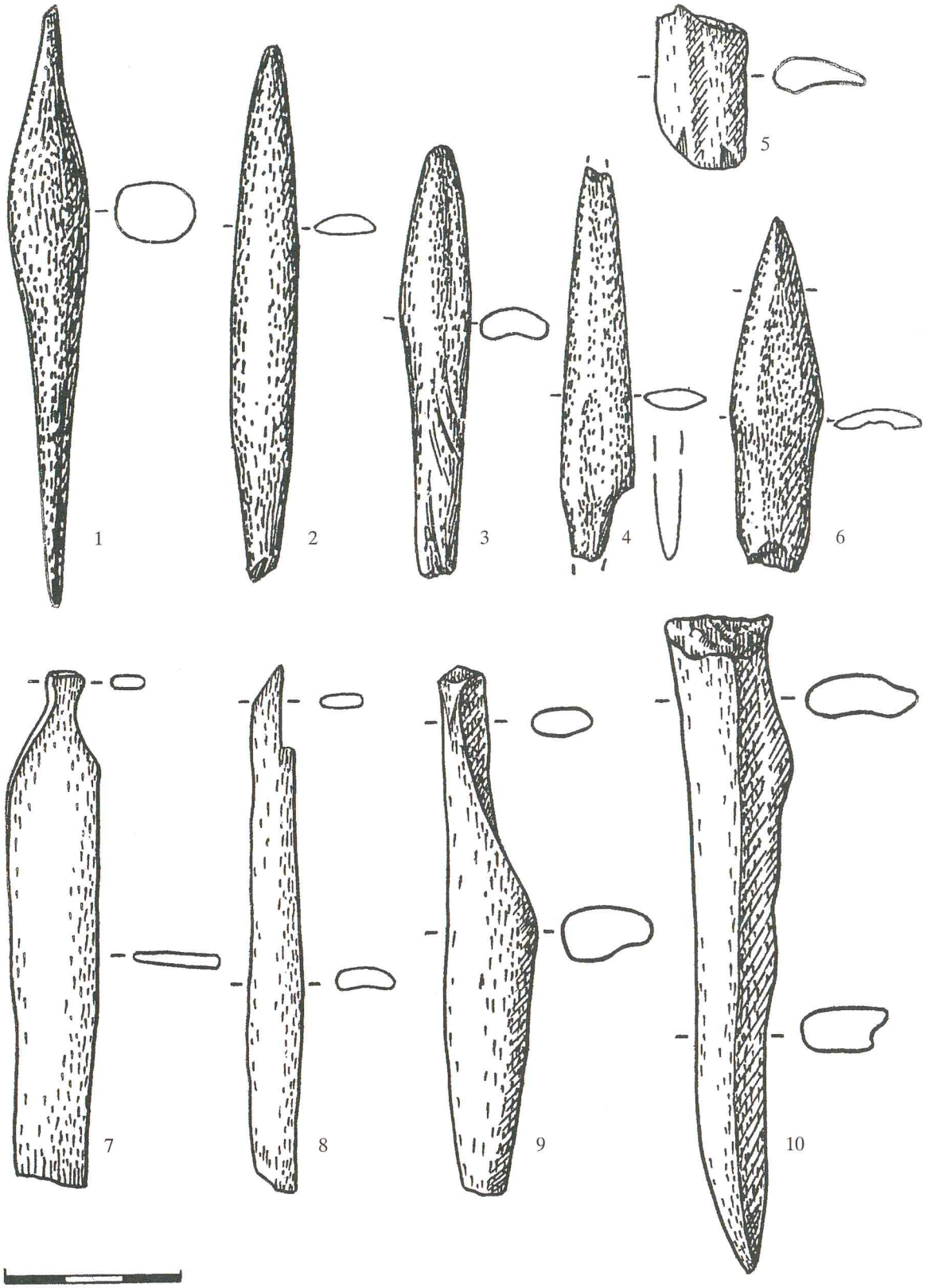

Fig. 8. Bone arrow- heads (1–3), spear- head (4), chisels (5, 8, 9) and bobbin (7) found *in situ* in areas of excavations in 1988 and 1989.

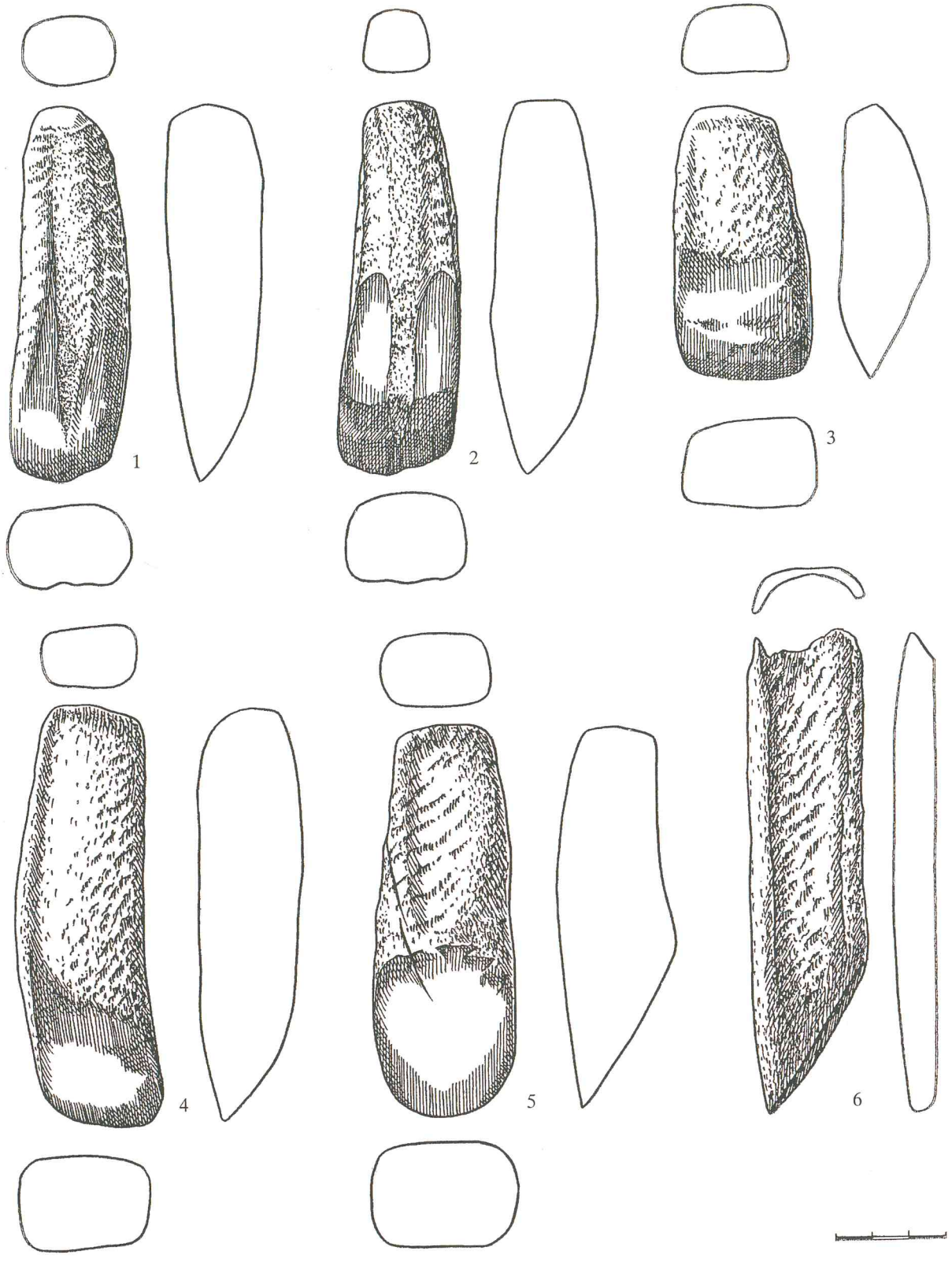

Fig. 9. Antler polishers (1–5) and bone implement with a blade bevelled at a 45 degree angle (6) found *in situ* in areas of excavations in 1988 and 1989.

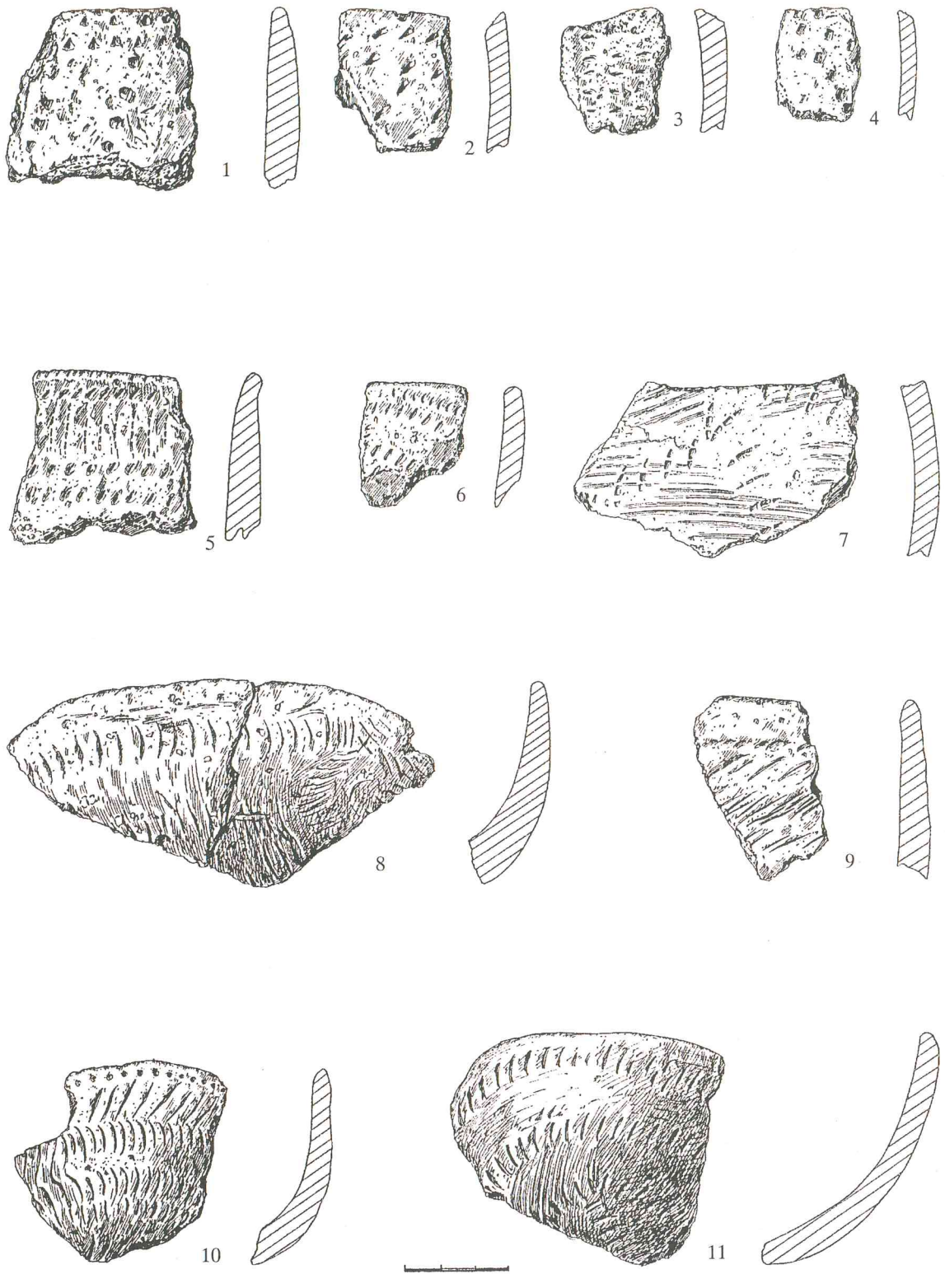

Fig. 10. Pottery fragments collected from the shoal on the old riverbed (Dept. of Archaeology, Museum of History of Latvia, No. A 10920: 71, 92, 93, 94).

These series of arrow-heads are well represented in the collection from Lake Lubāna of the late 1930s, when local enthusiasts collected artefacts lost in the shallows of the lake in the Stone Age (Vankina 1999, Figs. LXXVII–LXXIX: 1–12), and forms with and without a separate conical tip are known from stratified settlement occupation layers at Zvidze (Лозе 1988, 26, 77, Plate X: 1, 2, LIX: 1–3), Osa (Zagorskis 1973, Fig 5: 1–3), Zvejsalas (Loze 1975, Fig. 4: 2, 3), and as stray finds from the former bed of the River Lisina (immediately after the water was let into the new bed, when the riverbed was dry and the artefacts easily recovered) (Latvian Institute of History collections: 106: 6, 13, 19–21) and next to a ditch dug in the course of drainage work in the interfluve of the mouths of the Malmuta and Suļka (Latvian Institute of History collections: Stray find). They have also been obtained as stray finds from the River Dviete and the left bank of the River Daugava in the late 1930s (Šturms 1938, Fig. 2: 2).

Another possible Early Neolithic arrow-head type is represented by pieces with a fairly broad, leaf-shaped blade and a markedly narrowed tang (Fig. 8:6). The example shown here comes from the area excavated in the 1980s, and a second was found in Square 1 of Šturms's excavation area of 1938 (Latvian History Museum collections: A 10928:5).

Two more types of arrow-heads may be noted: one is slender, segmental in cross-section (Fig. 8:2), while the other has a leaf-shaped blade and a flattened tang (Fig. 8:3). The only spear-head found *in situ* has a long blade with an asymmetrically placed barb (Fig. 8:4).

Among everyday utensils is a bone bobbin (Fig. 8:7), fragmentary bone chisels (Fig. 8:5, 8, 9) and awls (Fig. 8:10), as well as artefacts with a blade bevelled at a 45 degree angle (Fig. 9:6).

These latter implements are particularly characteristic of the Early Neolithic at the settlement sites of Osa, Zvidze and Kääpa (Loze 1993, Fig. 14: 18; Zagorskis 1973, Fig. 4: 6–9; Jaanits 1965, Fig. 5:1–3), while at Narva-Riigiküla I and III sites an area where they were manufactured has been discovered, and here this bone-working activity has been described in detail (Gurina 1967, Figs. 80–84), thanks to use-wear analysis (Semenov 1968, 145–146). It has been established that these implements were made of the metapodials of ungulates, split with a quartzite "saw" first along the long (vertical) axis, and then making two saw cuts at a 45 degree angle to the body of the implement, thus producing an artefact with the distal epiphysis of the metapodial (Latvian History Museum collections A 10085:63, 196, 197; A 10987:13).

Implements manufactured from tines of elk antler and from red deer antler, known in the archaeological literature as "polishers", comprise a collection of about 50 examples. These were made from 6.8 to 13.1 cm long antler tines, with a ground working face comprising half to a quarter of the total length of the antler.

Used for this purpose were mainly straight sections of antler tines, more rarely curving sections (Latvian History Museum collections: A 10085:159,161), evidently producing a particular effect for working wood or some softer material (hide?). The blade is always asymmetrically cut. The character of the grinding as well as the traces of use permit the distinction of different variants: 1) with the blade ground throughout without a clearly marked upper limit (Fig. 9:1,3); 2) with curving traces of grinding on the blade (Fig. 9:5); 3) with a particularly strong traces of grinding the blade, approaching a 45 degree angle; and 4) with the blade ground in two parallel vertically arranged grooves, separated by about 1 cm (Fig. 9:2).

These antler artefacts can be divided into short, broad examples, with a length:thickness ratio of 2:1 or 3:1, and long, narrow examples, with a ratio of 4:1 or even 6:1. A third group can also be distinguished, having very thick margins, corresponding to about half of the total length of the implement. In certain cases the implements are distinguished by particularly careful working of the butt, which has been given a quadrangular form.

These artefacts, as can be seen from an example recovered in archaeological excavations at Zvidze settlement site, were fixed in an egg-shaped wooden socket with a shaft-hole (Loze 1980, Fig. 2: 6). The handle of this implement was 30.5 cm long. Studies by use-wear analysts have shown that the polishers were oriented 30–35° to the surface being worked (Gurina 1967, 34).

THE POTTERY FRAGMENTS

The collection of pottery from the Early Neolithic consists mainly of fragments of large pots and elongated bowls found in 1938 and 1939 on the Iča Shoal (Museum of History of Latvia, Dep. of Arch. Inv.No.A 10920), supplemented with the pieces found in the 1988 and 1989 excavations. The fragments of Early Neolithic pottery, quite large and well preserved, provide a lot of information. These give an idea of the large pots and permit in particular a characterisation of the series of small bowls. The vessel fabric contained crushed shell and some other organic material. The vessel surfaces are smooth, striated or, rarely, burnished.

The rims of the large vessels are usually straight and thinner than the walls, the wall thickness being

0.8–1.2 cm. The rims are slightly rounded or, more rarely, cut off completely straight. There is a tendency for some of the vessel rims to be formed slightly flaring (Fig. 10:5, Fig. 11:15). The vessels are 17 to 35 cm in diameter. The vessel surface is smooth or striated, with the striations in groups or sometimes forming a net pattern on the vessel surface (Fig. 10:11). The interior of the vessels mostly had horizontal striation, evidently produced in the course of vessel forming. The large vessels had a conical base (Fig. 12:11).

A proportion of these vessels were made using the so-called "U" method of coil joining, which has been widely discussed in the archaeological literature, starting with the publications of the material from the Narva-Riigiküla I and III settlement sites (Gurina 1967, 34), and this question is still a subject of study (Kriiska 1996, Fig. 6). This method of joining clay coils, so that when one coil was placed on another, the convex top of one coil extended into the concavity of the lower part of the next coil, is characteristic not only of the Early Neolithic pottery of the Eastern Baltic, but is also well-known in the area of the western and southwestern shore of the Baltic: in the Ertebølle Culture of the islands of Denmark and the coast of Jutland (Mathiasen 1948, Fig. 226; Andersen 1974, Fig. 49–52, 54–56; Nielsen 1987, Fig. 7) and in the pottery of the Ellerbek Culture in Schleswig-Holstein (Schwabedissen 1980, Fig. 8).

The Early Neolithic vessels at the Iča site were used both for storing products and for cooking. Large rim and body sherds from the large vessels have been found with traces of burning or with burnt food crust on the inside.

A proportion of the fragments of large vessels from Iča, including rims, are not decorated. The upper parts of the vessels were ornamented, in certain cases with a zone of decoration in the middle part of the vessel and even around the tip of the conical base. The vessels were ornamented with the following decorative elements: 1) curved fine comb impressions; 2) fine notches or, less commonly, long striations; 3) shallow round pits; 4) quadrangular stamp impressions.

One decorative element was mostly used for ornamentation, more rarely two elements. The style of decoration of the large vessels shows little variation, often with designs consisting of very simple motifs, including horizontal rows of fine curved comb impressions.

The designs on the large vessels consist of:

1) curved comb impressions arranged straight or sloping in horizontal or diagonal rows, occasionally supplemented with rows of fine notches (Fig. 11:1,2,5; Fig. 12:6);

2) horizontal fine or large notches, including curved ones (Fig. 10:6,9; Fig. 11:9) arranged horizontally in one or more rows, with these same rows of fine notches arranged above them at an angle to the vessel surface (Latvian History Museum collections: A 10290:92);

3) horizontal rows of small pits around the rim of the vessel (Fig. 10:1–4; Fig. 11:8), these being supplemented with rows of these same pits or rows of small stabbed dots (Latvian History Museum collections: A 10290:92);

4) rows of curved notches combined with a zigzag line of fine notches or even a triangular design;

5) rhythmic groups of three lines incised diagonally (Latvian History Museum collections: A 10290:92);

6) horizontally arranged fine notches in a single line, forming an interrupted line (Latvian History Museum collections: A 10290:92);

7) fine stabbed dot ornamentation, arranged in two widely spaced vertical rows (Fig. 12:7).

Vessel rims were occasionally decorated with fine notches. The base of a pot was decorated with two concentric circles of fine stabbed dot impressions around the tip of the base (Fig. 12:11). A smaller fragment from another pot base was similarly decorated (Fig. 11:10).

The elongated clay bowls, represented by several tens of examples from the shoal in the river, supplemented by 8 more finds of bowls obtained in the course of archaeological excavations, are preserved as fragments, and include mostly fragments of the upper part, for the most part with decoration that forms various designs. The clay bowls are made with their walls thicker than the rims, using the same principle of vessel forming as was used for the large vessels. The rim is slightly rounded, less commonly flat, and in rare cases with a row of fine notches. The bases of the bowls, judging from quite small fragments, were rounded. The bowls are often blackened with soot on the outside, with evidence of burning on the inside, too, particularly around the rim, where burnt residues of food or other organic material are preserved. These fragments of residue, found also along the inside of the rim and walls of the large vessels, could be used for chemical analysis to permit determination of the use of the bowls. It has been suggested that they may have been used for lighting indoors or as a light in eel fishing (Bērziņš 1999, 23). Judging from studies by ichthyologist Jānis Sloka, Lake Lubāna was not rich in this species of fish. However, the right jaw of an eel (*Anquilla anquilla* (L.)) from an individual 0.77 m in length, with a weight of around 1 kg, has been found at the Early Neolithic site of Osa (Sloka 1968, 90–91).

The bowls are of sufficient capacity for holding dry food, having an average height of 6 cm and with a length ranging, possibly, from 10 to 20 cm, but they

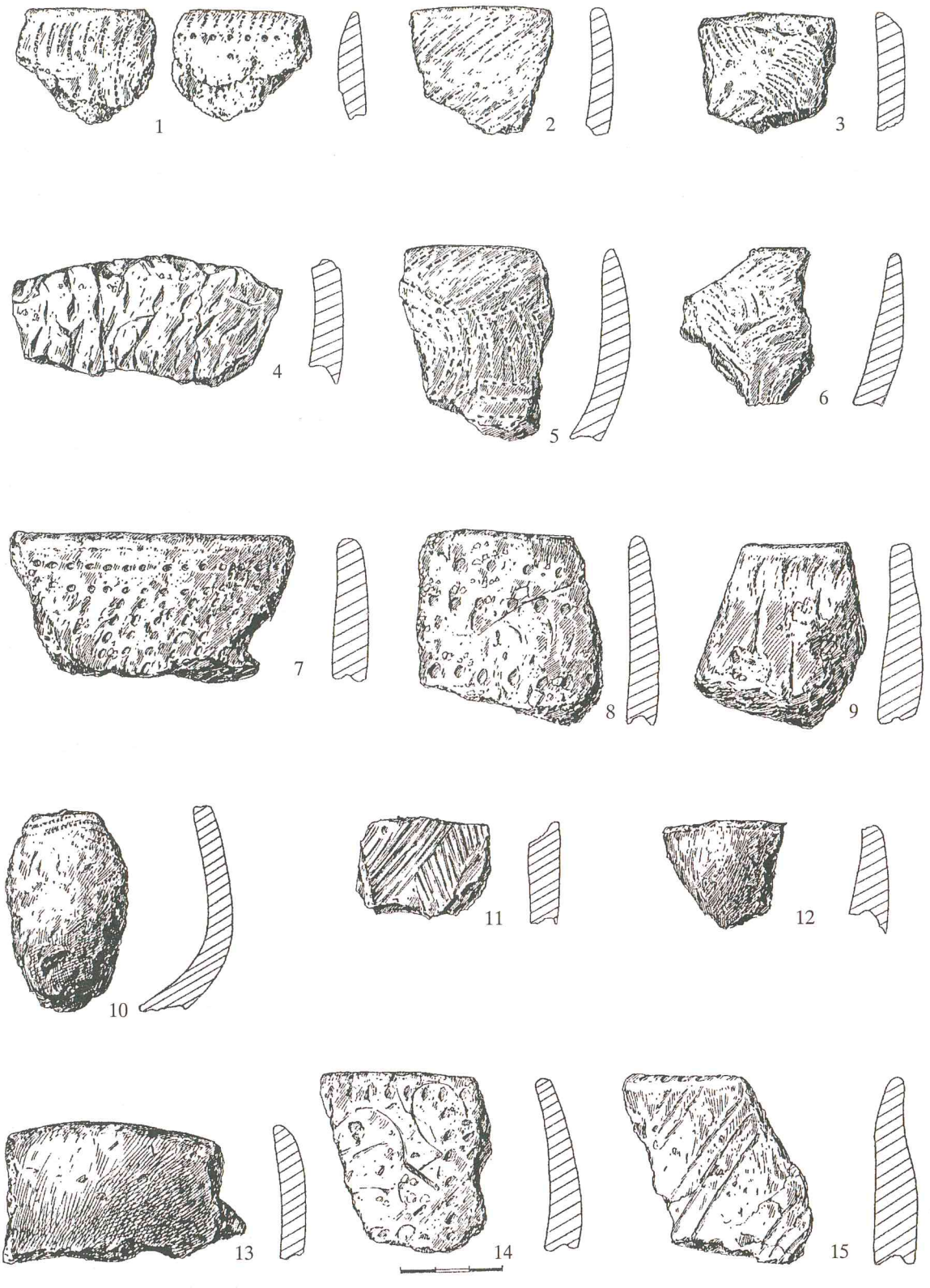

Fig. 11. Pottery fragments collected from the shoal on the old riverbed (Dept. of Archaeology, Museum of History of Latvia, No. A 10920: 89, 92, 93).

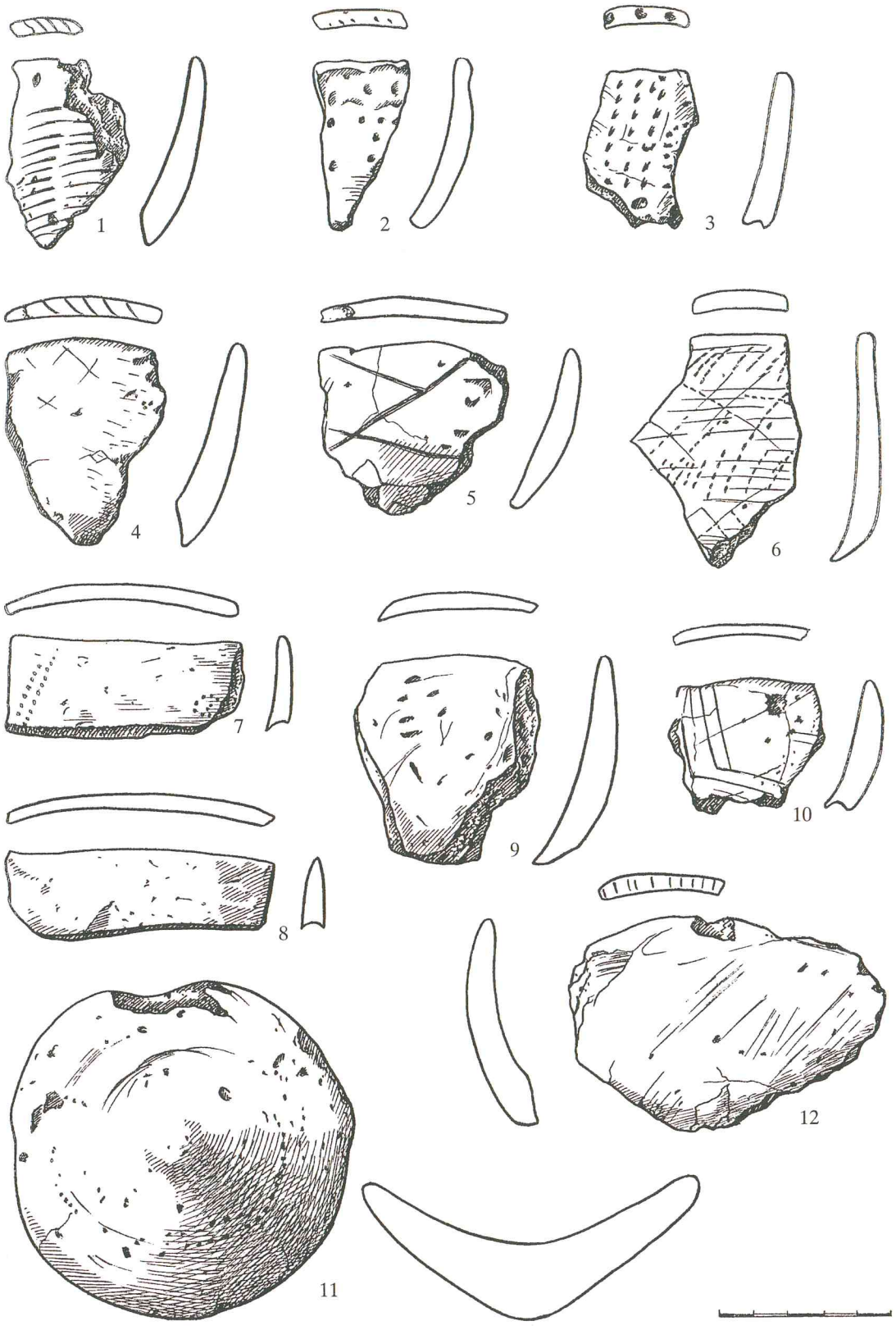

Fig. 12. Pottery fragments recovered *in situ* in archaeological excavations in 1988 and 1989.

could not have been used for holding large quantities of liquid. Seal blubber, used by the inhabitants of coastal areas, was not available to the people living in the Lake Lubāna Basin. This can be seen from the Early Neolithic bone material, which has been analysed in detail.

The surfaces of the most bowls are decorated, but undecorated examples are also found (Fig. 12:2). The same elements were used for decoration as were used on the large vessels. The designs consisted of:

1) rows of widely-spaced horizontal curved comb impressions along the rim of the vessel (Latvian History Museum collections: A 10920:93);

2) fine curved comb impressions arranged in one horizontal row along the rim of the vessel, and with these same impressions covering the rest of the surface in diagonal arrangement (Latvian History Museum collections: A 10933);

3) curved comb impressions arranged in a vertical zigzag (Latvian History Museum collections: A 10920:94);

4) closely-spaced curved comb impressions arranged both at an angle and horizontally in relation to the surface of the vessel, or else forming a more complicated design (Fig. 11:3,5,6);

5) horizontal rows of fine curved impressions (Fig. 12:1), arranged on the surface of the base of the bowl as well (Fig. 10:8,10,11);

6) a horizontal row of fine notches along the rim of the vessel and below them rows of the same notches arranged vertically (Latvian History Museum collections: A 10920:94) or with these notches arranged in groups, with part of the vessel surface left undecorated (Latvian History Museum collections: A 10920:93) or forming vertical rows (Fig. 12:1);

7) horizontal incised zigzag lines in two rows, supplemented with a row of fine notches along the rim of the vessel (Latvian History Museum collections: A 10920:92);

8) rows of fine pits along the rim of the vessel (Fig. 11:7; Fig. 12:2), this decoration being supplemented with double rows of these same pits arranged diagonally (Latvian History Museum collections: A 10920:94);

9) rows of sub-oval pits arranged diagonally (Fig. 12:9);

10) carelessly incised groups of lines (Fig. 12:5,10)

11) widely-spaced vertical rows of fine stabbed dot ornament (Fig. 12:7).

Comparison of the Early Neolithic pottery from Iča with the unmixed pottery assemblages from Osa and Zvidze shows up certain differences, namely that the latter have a greater proportion of fine pits and stabbed dot ornamentation (Zagorskis 1973, Fig. 1: 3, 2: 3–5, 11; Loze 1993, Fig. 12). Also, there are greater variations in vessel size, compared with the pottery from Iča, there being a group of large pots at the Zvidze site with an S-shaped rim profile (Loze 1993, Fig. 11:5, 8).

There is considerable similarity between the pottery assemblage from Iča and the pottery from the Kääpa site in south-eastern Estonia in terms of the choice of vessel form and application of the ornamentation. There are differences connected with the use of particular ornamental motifs not found at Iča, for example the "marching comb" motif or the incised triple triangle motif, and also in terms of the greater variation in rim form (rims flattened or sloping on both sides) (Jaanits 1965, Fig. 9), with the same conical form of base.

DATING AND CULTURAL ORIGINS

The pottery assemblage and series of artefacts from the Iča site belong to the classic variant of the Narva Culture, in the fullest meaning of this term, of the Early Neolithic (Para-, Sub- or Forest Neolithic) of the Eastern Baltic. It can be suggested that the Early Neolithic occupation of the Iča site coincides with the occupation of the Osa site. This is shown not only by the similarity in assemblages, but also by the fine curved comb impression motifs, not characteristic of the Early Neolithic pottery designs of the Zvidze site, the latter being occupied for a longer period.

It is thought that the Iča settlement site, whose territory rose in the form of an island above the level of the surrounding fairly shallow lake during the second half of the Atlantic Period, was inhabited for a shorter length of time than the Zvidze site, which was in the shore zone of this former lakebed. Thus, the datings for Osa include also the time of occupation at Iča: 4583–3970/3780 b.c. (Zagorskis *et al.* 1984, 55–57), although more precision would require dating also from Iča.

It is an open question as to whether the Early Neolithic settlement site at Iča was permanently inhabited, or whether it had the character of a seasonal or satellite camp at the same time as the people living at the Osa site were occupying a base camp.

It should be emphasised that the inhabitants of the Iča site belonged to a culture that extended only between the mouth of the River Narva in the north and the Lake Lubāna Depression in the south, and that, being the earliest makers of pottery, they had their roots in the Mesolithic population. This is shown not only by the flint, antler and bone industry, but

also by the fact that the Mesolithic dot (*pointele*) technique of bone ornamentation, including anthropomorphic representations, continued in the stabbed dot decoration technique of the Early Neolithic pottery, as well as in stylistic features of anthropomorphic figures (Loze 1980, 183–189)

Analogies with the flint implements of the Iča site can be found in the early phase of the Dnieper-Donets Culture sites, where Mesolithic forms of flint artefacts were still characteristic, regardless of the fact that the people were already making pottery (Telegin 1968, 32, 35; Telegin 1998, 17) The spread of early pottery north from the region of the Dnieper-Donets Culture area is not in doubt. That the inhabitants of the Lake Lubāna Depression initially borrowed the knowledge of pottery-making by a process of diffusion is shown by the fabric and form of the vessels and the curved fine comb impressions, fine notches and linear motifs on the surfaces of the large pots and bowls.

In spite of the fact that the sites of this culture are located in Volhynia, in the Dnieper and North Donets basins, the impulses for pottery making had reached the inhabitants of the Lake Lubāna Depression and they developed them further according to their own wishes and abilities, guided by their own experience and other impulses which could come from west or east. Elongated clay bowls were also made, which later became characteristic of the Ertebølle and Ellerbek Cultures of Jutland, the islands of Denmark and Schleswig-Holstein (Andersen 1974, Fig. 22; Schwabedissen 1980, Fig. 2:3–5), but which were unknown to the people of the Dnieper-Donets Culture.

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ANKSTYVASIS NEOLITAS IČOS GYVENVIETĖJE (Lubanos ežero žemuma)

Ilze Loze

Santrauka

Latvijos ankstyvojo neolito tyrinėjimai yra glaudžiai susiję su Lubanos ežero žemumos gyvenviečių kasinėjimais. Pirmieji archeologiniai radiniai ir paminklai čia buvo aptikti 1937 m., atliekant melioracijos ir kitus ūkinius darbus.

Ičos senovės gyvenvietė buvo įsikūrusi prie to paties vardo upelio, pakilumoje, apimančioje 2300 m^2. 1938 ir 1939 m. paminklą tyrinėjo Eduardas Šturmas. Buvo aptikta akmens amžiaus keramikos šukių, kaulinių ir raginių dirbinių, tame tarpe ir ankstyvajam neolitui būdingų radinių. Nors archeologinių radinių kolekcija iš Ičos buvo viena gausiausių Latvijoje, tačiau būta sunkumų siejant dirbinius su konkrečiais stratigrafiniais sluoksniais.

1988 ir 1989 m. straipsnio autorė ištyrė 102,5 m^2 paminklo. Trijuose kasinėtuose plotuose aptikti du židiniai, stulpaviečių ir ūkinių duobių pėdsakų, surasta titnaginių, raginių, kaulinių dirbinių, keramikos šukių. Titnaginių radinių kolekciją sudaro skeltės įžambiai nulaužtais ir retušuotais galais, mikrorėžtukai, gremžtukai, kotinis strėlės antgalis, skeltės su darbo žymėmis. Titnago inventoriuje įžvelgiamos mezolitinės technikos tradicijos. Ypač gausu raginių ir kaulinių radinių – surasta apie šimtą dirbinių, jų tarpe kaulinių strėlių antgalių, raginių gludinimo įrankių, durklų, ylų, dirbinių 45° kampu suformuotais galais. Gyvenvietės keramikos kolekcija susideda iš stambių smailiadugnių puodų ir pailgų dubenėlių-lempučių fragmentų. Indų molio masė liesinta grūstų kriauklelių ir kitų organinių medžiagų priemaišomis. Keramika ornamentuota duobutėmis ir įkartėlėmis, sukomponuotomis eilėmis bei zigzagais.

Ičos gyvenvietės radinių kompleksas yra būdingas klasikiniams ankstyvojo neolito Narvos kultūros paminklams.

ILIUSTRACIJŲ SĄRAŠAS

1 pav. Ičos gyvenvietės planas ir iškastas plotas. Mastelis 1:5000.

2 pav. Ičos archeologinio paminklo vaizdas iš pietryčių. 1988 metų kasinėjimai.

3 pav. Pietrytinis Ičos upės pjūvis. Eduardo Šturms 1939 metų kasinėjimai (Archyvas. Latvijos Istorijos muziejus, Nr. 225: 11).

4 pav. Ploto D šiaurinis pjūvis. 1988 metų kasinėjimai.

5 pav. 1988 ir 1989 metais iškastų plotų planas, kuriame parodytas ankstyvojo neolito dirbinių, puodų ir žibintų išsidėstymas:

1 – puodo dugnas, 2 – puodo lankas, 3 – puodo sienelė, 4 – adata žvejų tinklams pinti, 5 – žibinto fragmentas, 6 – poliravimo įrankis iš elnio rago, 7 – kaulinis strėlės antgalis, 8 – kaulinės ylos, 9 – dirbiniai su ašmenimis 45° kampu, 10 – kauliniai durklai, 11 – titnaginiai mikrograndikliai ir galinio apdirbimo grandikliai, 12 – titnaginė ietis su kotu, 13 – titnaginė skeltė su įžambiu kraštu, 14 – titnaginė skeltė su retušuotu kraštu, 15 – kaulinis ieties antgalis.

6 pav. Ankstyvojo neolito žaizdro liekanos su stumbro ragu centre, rasti plote J. 1989 metų kasinėjimai:

1 – žaizdro sluoksnis (1), 2 – žibinto stovas, 3 – žaizdro sluoksnis (2), 4 – žvyras, 5 – tamsus smėlis, 6 – žaizdro akmenys, 7 – molinių puodų ir žibintų fragmentų radiniai, 8 – apatiniai stulpų galai.

7 pav. Titnaginiai įrankiai, rasti *in situ* per 1988 ir 1989 metų kasinėjimus (1–7, 10–16) ir negiliai per 1938 ir 1939 metų kasinėjimus (8, 9, 17) (Archyvų Departamentas, Latvijos Istorijos muziejus, Inv. Nr. A 10926: 6).

8 pav. Kauliniai strėlių antgaliai (1–3), iečių antgaliai (4), kalteliai (5, 8, 9) ir verpstas (7) , rasti *in situ* per 1988 ir 1989 metų kasinėjimus.

9 pav. Poliravimo įrankiai iš elnio rago (1–5) ir kaulinis įrankis su 45° kampu pasuktais ašmenimis (6) , rasti *in situ* per 1988 ir 1989 metų kasinėjimus.

10 pav. Keraminių indų fragmentai, surinkti iš negilaus sluoksnio upės senvagėje (Archyvų Departamentas, Latvijos Istorijos muziejus, Nr. A 10920: 71, 92, 93, 94).

11 pav. Keraminių indų fragmentai, surinkti iš negilaus sluoksnio upės senvagėje (Archyvų Departamentas, Latvijos Istorijos muziejus, Nr. A 10920: 89, 92, 93).

12 pav. Keraminių indų fragmentai, rasti *in situ* per 1988 ir 1989 metų kasinėjimus.

ИССЛЕДОВАНИЯ РАННЕГО НЕОЛИТА В ПОСЕЛЕНИИ ИЧА

Илзе Лозе

Резюме

Исследования раннего неолита в Латвии тесно связаны с раскопками поселений Лубанской низменности. Первые археологические находки и памятники тут были выявлены в 1937 г. при мелиорационных и других хозяйственных работах.

Поселение Ича расположено у одноименного ручья, на возвышенности, занимающей 2300 кв.м. В 1938 и 1939 гг. в памятнике проводил раскопки Эдуардс Штурмс. Были найдены фрагменты керамики каменного века, костяные и роговые изделия, в том числе характерные и для раннего неолита. Хотя коллекция археологических находок из поселения Ича была одной из самых многочисленных в Латвии, проявилисъ трудности при попытках связать конкретные находки со стратиграфией.

В 1988 и1989 гг. автором статьи исследовано 102,5 кв.м памятника. В трех раскопах обнаружено 2 очага, столбовые ямы, следы хозяйственных ям, найденны кремневые, роговые и костяные изделия, фрагменты керамики. Коллекцию кремневых находок составляют пластины со скошенными и ретушированными концами, микрорезцы, скребки, черешковый наконечник стрелы, пластины со следами утилизации. В кремневом инвентаре прослеживаются традиции мезолитической техники.

Особенно многочисленен костяной и роговой инвентарь – найдено около ста изделий, среди них костяные наконечники стрел, роговые абразивы, кинжалы, приколки, орудия под углом в 45°.

Керамика поселения представлена фрагментами остродонных горшков и мисок-лампочек. В тесте сосудов прослеживаются примеси органики и ракушек. Керамика орнаментирована ямочками и наколами, скомпонированными в линии и зигзаги.

Комплекс находок из поселения Ича характерен для классических памятников раннего неолита Нарвской культуры.

СПИСОК ИЛЛЮСТРАЦИЙ

Рис. 1. План поселения Ича и раскопанная площадь. Масштаб 1:5000.

Рис. 2. Вид археологического памятника Ича с юго-востока. Раскопки 1988 года.

Рис. 3. Юго-восточное сечение реки Ича. Раскопки Эдуардса Штурмс в 1939 году (Архив. Музей Истории Латвии, № 225: 11).

Рис. 4. Северное сечение площади D. Раскопки 1988 года.

Рис. 5. План площадей, раскопанных в 1988 и 1989 гг., на котором показано распределение черепков изделий, горшков и факелов раннего неолита:

1 – дно горшка, 2 – обод горшка, 3 – стенка горшка, 4 – игла для плетения раболовной сети, 5 – фрагмент факела, 6 – инструмент для полирования из оленьего рога, 7 – костяной наконечник стрелы, 8 – костяные шилья, 9 – изделия с лезвием, наклонённым под углом 45° , 10 – костяные кинжалы; 11 – кремнёвые микроскребки и скребки для окончательной обработки, 12 – кремнёвое копьё с рукояткой, 13 – кремнёвый колун с косым краем, 14 – кремнёвый колун с ретушированным краем, 15 – костяной наконечник копья.

Рис. 6. Остатки кузнечного горна раннего неолита с рогом зубра в центре, найденные на площади J. во время раскопок 1989 года:

1 – слой горна (1), 2 – опора факела , 3 – слой горна (2), 4 – гравий, 5 – тёмный песок, 6 – камни горна, 7 – находки фрагментов глиняных горшков и факелов, 8 – нижние концы столбов.

Рис. 7. Кремнёвые орудия труда, найденные *in situ* во время раскопок в 1988 и 1989 гг. (1–7, 10–16) и неглубоко во время раскопок 1938 и 1939 гг. (8, 9, 17) (Департамент Архивов, Музей Истории Латвии, Инв. № А 10926: 6).

Рис. 8. Костяные наконечники стрел (1–3), наконечники копий (4), маленькие долотца (5, 8, 9) и веретено (7), найденные *in situ* во время раскопок в 1988 и 1989 гг.

Рис. 9. Инструменты для полирования из оленьего рога (1–5) и костяное орудие труда с лезвием, повёрнутым на 45° (6), найденные *in situ* во время раскопок в 1988 и 1989 гг.

Рис. 10. Фрагменты керамической посуды, собранные в неглубоком слое в старом русле реки (Департамент Архивов, Музей истории Латвии, № А 10920: 71, 92, 93, 94).

Рис. 11. Фрагменты керамической посуды, собранные в неглубоком слое в старом русле реки (Департамент Архивов, Музей истории Латвии, № А 10920: 89, 92, 93).

Рис. 12. Фрагменты керамической посуды, найденные *in situ* во время раскопок в 1988 и 1989 гг.

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