New data on Early Iron Age settlement in south-eastern Latvia

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The cultural identity of south-eastern Latvia during the Early Iron Age (A.D.1-400) emerged as an archaeological issue in the 1980’s, when excavations were begun along the Daugava river. Prior to this time, three culture-regions associated with the Early Iron Age had been recognized in the territory of Latvia:

1) south-western Latvia, with inhumation burials in shallow graves
2) northern Latvia, with tarand graves
3) middle and eastern Latvia, with inhumation burials in sand barrows surrounded by stone circles (Birons et al. 1974, Figs. 37, 58).

The south-eastern part of Latvia was not recognized as a separate area; instead, this territory was included with the region of middle and eastern Latvia. In the latter half of the 1970’s, archaeological excavations were conducted at several hill-forts in south-eastern Latvia, and in the 1980’s at settlement sites on the banks of the Daugava. Data from these excavations indicated that this area had been sparsely populated in the Early Iron Age, and that the problem of its cultural identification needed to be resolved. In this context, excavations at settlement sites along the Daugava in the Krāslava and Daugavpils Districts were particularly important. This paper will report on excavations conducted at one of these sites — the Kerkūzi settlement. Background on previous research in the region is first presented.

Previous Research

At the Sloboda settlement site, on the right bank of the Daugava, an area of 1300m² was investigated, and two periods of settlement were identified: one from the Early Iron Age and another from the Middle Ages (Zariņa 1988:162). The cultural layer identified with the Early Iron Age remained only in hollows of bedrock and reached a thickness of 0.8m. Four stone hearths were found. Evidence of ploughing (i.e. plough-marks) was also found, and appeared to be older than the settlement site. The plough-marks consisted of deep intersecting lines (5-6cm in width, 5cm in depth) in the light-coloured primary rock (Zariņa
 Artefacts included flint tools, fragments of clay crucibles, as well as pottery with smooth and brushed surfaces. All of this aided in dating the site to approximately the second half of the first millennium B.C.

The Early Iron Age settlement site of Indrica, on the left bank of the Indrica, was located 1.5km from the Sloboda site. It occupied an area of about 0.3ha, of which 0.2ha were investigated (Zariņa 1984: 120). In the 0.4m thick cultural layer, several structures with stone hearths (3-4m x 4m) were discovered. Storage pits of one metre depth were often located near these stone hearths. The artefacts represented a characteristic complex of the Late Bronze Age (1000-500 B.C.). They included flint tools, stone chisels, and waste bore-plugs left from the production of stone shaft-hole axes. A fragment of an iron spear suggested that occupation of the site may have continued into the Early Iron Age. A total of 620 sherds were found: 370 (60%) had a brushed or striated surface; 248 (40%) had a smooth surface; one sherd had an early-style rusticated or coarse surface; and another featured a textile-impressed surface. The characteristic pottery styles and artefact types indicate that the Indrica settlement site was contemporary with Sloboda (first millennium B.C. - first centuries A.D.). It is important to note that in the southern part of the settlement, beneath the cultural layer, traces of furrows made by ancient ploughs were discovered. These furrows covered an area 3m x 15m (Zariņa 1984:122).

The Vīlmaņi settlement site was located on the right bank of the Dauγava, 6km to the west of Krāslava. In fact, three chronologically successive settlement sites were located side by side in this region. These include the Vīlmaņi I, Vīlmaņi II and Vīlmaņi III sites.

Vīlmaņi I, the oldest settlement site, contained a structure with the remains of a stone hearth, along with a stone axe, a flint core and debitage, and pottery with smooth and brushed surfaces. The site dates approximately to the first millennium B.C. (Zagorski and Zagorska 1984: 109).

Both smooth and brushed pottery were found at the Vīlmaņi II site, in a cultural layer under a deposit of river silt, 1.5m in thickness. At the Vīlmaņi III settlement site, an area of 890m² was excavated. The cultural layer began at a depth of 0.2m-0.3m, and included structural foundations dug 10cm into the bedrock. The foundations measured 5m x 5m; 5m x 4m; and 6m x 4m; and contained stone or clay hearths (Zagorski 1988:136). Artefacts typical of the Roman Iron Age predominated at the site: an iron sickle, awls, an iron bracelet, a hammerstone, and quern stones. Some 2,066 pottery sherds were excavated: 73.8% had a brushed pattern, 25.6% were smooth, while 0.5% had a textile-impressed pattern.

Kerkūži Settlement Site

Extensive excavations took place in the Kerkūži settlement site during 1985-1987, and a rich inventory of Early Iron Age material was obtained. The site (Fig. 1) is located on the left bank of the Daugava, some 30km to the east of Daugavpils, at the mouth of the Saltepeka. Although the site is currently covered by a field, it is clear that the settlement occupied the high ground and had an...
area of about 0.7ha. Figure 2 shows that the site is well situated: its elevation on the bank of a small rivulet protects it from the flooding of the Daugava, while the slope of the western bank shields it from the prevailing winds.

Because of intensive ploughing, some areas of the site have been ploughed down to the bedrock. In these areas, the remains of structures were found only in crevices of the bedrock, and artefacts were scarce. In contrast, the western area of the site featured a more robust cultural layer, some 50-60cm in thickness, with much coal and gravel, and it was here that most of the artefacts and remains of structures were found. During the course of three field seasons, an area of 2,310m² was excavated in the western and southern parts of the site: 260 artefacts and 13,800 sherds were found (Vasks 1986: 126-129; Vasks 1988: 145-151).

**Structures**

Wooden remains of structures were not encountered at Kerkūži, only the remains of the structural foundations were found. These took the form of depressions, posthole patterns, sand or stone floors, and areas of charcoal remains. According to these foundation remains, structures were of three types:

1) pole structures built on the surface
2) structures set into the bedrock or "sunken huts"
3) timber structures built on the surface

Remains of pole structures were found in the light bedrock and appeared as greyish round post-holes with a diameter of 0.2-0.4m. Although evidence of pole-type buildings was found in the entire site, separate areas stood out where they were more abundant, as well as areas where they were rare (Fig. 3: 9). In some areas, postholes were faint and the contour was blurred; therefore, it

![Stone hearth](image)

![Map of the excavations and main features of the Kerkūži settlement](image)
was not always possible to distinguish whether the pole was associated with the building, or if it served a different purpose. Another problem was that some postholes have been ploughed under. Nevertheless, the majority of posthole patterns at the site clearly represent buildings.

Contours of two pole buildings could be traced by the patterns of postholes in Excavation II. The earliest (Building No.1) measured 4 x 4m, with the orientation of its walls coinciding approximately with the four cardinal directions. In the middle part of the building, an area was discovered measuring 1 x 1.6m in width and 0.2m deep, with remains of a stone hearth. In the same location, a later structure was found (Building No. 2), of which only a corner and two walls remained. The orientation of the walls of Building No.2 differed from Building No.1. They were situated at an angle of approximately 45 degrees away from the four cardinal points. As will be discussed later, this corresponds to the later orientation of the surface timber houses.

The wall of another pole structure was discovered in Excavation VIII, in a 0.2m wide area with a scattering of charcoal. Diameters of postholes measured 0.10 - 0.20m. The other walls had been destroyed when Building No. 4 was constructed. Elsewhere in the settlement, more exact contours of buildings could not be identified from the posthole remains. Remains of stone hearths were frequently found in these structures. In Excavation X, for example, the remains of six stone hearths were found throughout an area of 6 x 8m. The hearth stones were piled on top of small hollows (up to 0.10m) in the bedrock, consisting of fist-sized stones and larger boulders, some of which had split or completely disintegrated from the heat. The hearths were usually round, with a diameter of 0.5 - 0.65m (Fig. 4).

At the Kerküzi settlement, pole buildings represented the oldest period of habitation. These buildings were not associated with specific artefacts (except a few fragments of pottery in the hearths), and, therefore, it is difficult to precisely date the buildings themselves. Most of the stone artefacts can be dated to the Late Bronze Age. These artefacts include three shaft-hole axes and six wedge-shaped hafted axes (Fig. 5: 1, 2), and were found near the areas of the posthole patterns. Only ten flint flakes were found, some with traces of superficial retouching (Fig. 5: 3, 4). Artefacts from other sites of the Late Bronze Age in Latvia indicate that during the first millennium B.C. the use of flint tools was widespread, but with increasing access to metal, their production decreased. Bone tools, another diagnostic artefact of this period, were not found in the cultural layer of the Kerküzi settlement. Based on the remains of the buildings and the artefacts, the early population of the settlement was not large.

A second building type in the Kerküzi settlement site is a "sunken hut" with its structural foundations set into the bedrock. These were discovered in five areas (Fig. 3: 2). The first appeared in the light bedrock of Excavation VII as a large black oval area measuring 4.5 x 3.5m (Building No.3). When the dark cultural layer was excavated, a 0.45m deep pit with slanting edges was exposed in the bedrock. The longer axis of the pit, like the majority of the buildings during the main population period of the settlement, was oriented from north-west to south-east. At the north-west corner of the pit, on the slanted edge, a round 0.8m stone hearth was found. The stones were split to a great

Fig. 5. Artefacts found at the Kerküzi settlement (for descriptions see the accompanying text).

5 pav. Artefaktai radi Kerküzi gyvenvietėje.
extent, some of them fully disintegrated from the heat. Among these hearth stones, a fragment of a stone axe was found. Found in the pit itself were a flint chip, a grinding stone (Fig. 6: 13), an iron tablet and a small iron awl (Fig. 5: 12). The fragment of a stone axe from Building No. 3 appears to be associated with the early period of population. It should be noted, however, that the axe was fragmentary and unfit for use, and was used consequently as building material for a structure of a later period.

The two iron artefacts found in the hearth pit date to the Iron Age. The awl has a flattened wedge and resembles bronze awls found at sites of the Late Bronze Age (Graudonis 1967: 99, Pl. XX: 14; Birons et al. 1974: 83, Pl. 10: 1; Baudou 1960: 40, 41, 226). It is known that during the Iron Age some iron tools were continued to be made using the old bronze models. The awl from Kerkūži provides such an example, and can be dated to the second half of the first millennium B.C. Later designs of iron awls were either more slender, or more massive, with the pointed wedge having a square or round end (Fig. 5: 13, 14, 26).

In Building No. 3, some 455 fragments of clay vessels were found. If we exclude 154 tiny fragments of vessels, 15 fragments of bases, and 40 rim fragments, the fragments of vessel side walls can be classified as follows: 68 (27.6%) were smooth and 178 (72.4%) were brushed. (The preference for brushed pottery at Kerkūži continued until about the end of the first century B.C.). Judging from the fragments of vessel side walls, one type of pot with a smooth surface had a poorly expressed S-shaped form, while of six vessels with a striated surface, one had an I-C form and five had a K-form. Since the latter form spread through eastern Lithuania and south-east Latvia during the last quarter of the first millennium B.C. (Grigelavičienė 1986: 83), Building No. 3 can be dated to this period.

The depth of Building No. 4 in Excavation VIII was 0.2m. The oval pit measured 2.5 x 3.5m and its long axis, like that of Building No. 3, was oriented from north-west to south-east. No evidence of a hearth was found. The only artefact connected with this building was a fragment of an iron ornament, perhaps a pin. An iron knife with a curved blade was found 1m south of the structure (Fig. 5: 15). Such knives were used in the beginning of our era.

1 Fragments of rims are not included because of the uncertainty of whether they represent smooth or brushed types. Brushed pots, particularly those of K form, often had smooth rims. For the same reason, fragments of pot bottoms are excluded.
2 To describe vessel profiles, alphabetical letters are used in this report. In the pottery under consideration here, three groups of vessels are distinguished. The first includes pots with straight walls (bucket or barrel shaped vessels). In one of the variants, the side contour of the pot is a straight line (I form), in the other variant, it is slightly bent outwards (C form). In profiling the walls of the second group, the neck and shoulder of the pot is distinguished. In one variation (G3 form), these signs are poorly expressed and these pots appear to be from a transition stage from the C to the S form. In vessels of the other variation, the neck and shoulder area is well distinguished and the entire contour resembles the letter S. In the third group there were vessels with a shoulder edge. This shoulder is the border between the neck and sides. The contour of the pot somewhat resembles the right side of the letter K. Walls of the neck of the K form pots are more or less slanted and slightly directed inwards in most cases, but the may be straight (K-1) or concave (K-2). The small size of the rim fragments did not allow us to determine variation within groups of fragments. In such cases only the group is mentioned.

Fig. 6. Reconstruction of ceramic vessels (1-6) and quern stones found at the Kerkūži settlement.
6 pav. Keramikinį indą rekonstruojant (1-6) ir trintuvą rastį Kerkūži gyvenvietėje.
A third building depression was found during Excavation XIII (Building No. 5). Here were two pits, partly merged together. The base of the larger pit was approximately 0.15-0.20m deep into the bedrock and resembled a quadrangle of 3 x 3m with rounded corners. Edges were oriented at an angle of approximately 45 degrees away from the four cardinal points (Fig. 7). In one section of the cultural layer of the pit, two thick streaks (2-3m) of yellowish sand were noted, which indicated there were two stages of development in this area. The foundation of the building had been leveled and light sand was scattered over the ground. (This is similar to another tradition, in which surface buildings had sand floors). Another smaller pit, measuring 2.5 x 2.2m wide and 0.35m deep, was connected to the larger pit on the east wall. The layout of both pits showed that the building, when reconstructed, had shifted its position a bit, and, furthermore, the earlier structure was connected with the smaller depression. No traces of a hearth were found. In total, 271 pottery fragments were found: of 152 fragments, 55.3% had a smooth surface and 44.7% had a brushed pattern (105 tiny splinters and 14 rim fragments are excluded, for reasons previously explained).

The fourth depression at Excavation XIV, Building No. 6, appeared similar to the others and probably had a similar function. It measured 3 x 3m in width, and had a depth of 0.3m. One end of the pit continued beyond the excavation area. At this unit, only two pottery fragments with a smooth surface were found.

The fifth building depression was found next to Building No. 7. It measured 2.6 x 2.6m wide and had a depth of 0.35m deep. It had the form of a quadrangle with rounded corners and the edges were oriented at an angle of approximately 45 degrees towards the four cardinal points. Seven smooth sherds and three brushed fragments were found.

Posthole patterns were not found at any of these locations. Each of these pits had roughly rounded contours, and their superstructure probably consisted of huts not unlike those known from ethnographic investigation (Andernianis 1933, Fig. 136; Arenda 1938: 152).

In general, the sunken buildings at Kerkůži seem to be more recent than the pole structures. This was observed at Excavation VIII, where the depression of Building No. 4 was dug into the location of the older pole structure. Unfortunately, artefacts useful for more exact dating were obtained only in Building No. 3. Percentages of pottery types, however, were used for dating the pithouse depressions. In the period B.C., brushed pottery predominated at Kerkůži, and, for example, in Building No. 3 it made up 72.4% of the total pottery. In the first centuries of our era, striated pottery decreased, with a corresponding increase of pottery with a smooth surface. Also in this period, pottery with a textile pattern first appeared. For example, the percentage of brushed pottery in Building No. 5 was 44.7%. Since it also contained the remains of a sand floor (similar to those found in the surface timber houses), it can be assigned a more recent date, possibly the first quarter of the first millennium A.D.

At Excavations II-VII, buildings of the third type, ground-level timber houses, were concentrated in the western area of the settlement (Fig. 3: 1). After clearing away the surface layer (15 x 70m wide), we found three sectors (each 10 x 10m) that contained a black cultural layer, very dense with artifacts and remains of buildings. Each of these sectors may be interpreted as separate areas of buildings — where log houses had been successively built, over a
long period of time. In contrast, in the territory that surrounded the areas of black earth, the cultural layer was less defined, greyish in color, and contained few artefacts.

The first building area was found in the western portion of Excavations VII-VIII, and appeared to continue into the uninvestigated region of the settlement further west (Fig. 8). Building remains at both of the excavations were quite diverse. Virtually the entire spectrum of building types characteristic of the Kerki küi settlement site was uncovered at Excavation VII, in the 0.2-0.4m thick cultural layer. Three variants of houses could be distinguished here; remains of a pole structure, a pit-house, as well as timber (or log) houses.

The oldest type of structure is associated with peculiarly formed hearths. The hearths consist of piled builders, and were located in oval pits carved into the bedrock in an area measuring 1.0-1.8 x 1.4 - 2.7m wide and 0.15-0.30m deep. One of these hearths was connected to Building No.8, a corner of which was marked by the contour of a charcoal-rich cultural layer. Judging from this layer, the building would have been about 4 x 4m in area. The hearth was located in the eastern part of the pit and measured 1.8 x 2.7m in width and 0.20-0.35m in depth.

An important factor in dating Building No.8 was the artefacts obtained in the hearth pit. In the upper layer, an iron pin ornament was found with a slightly bent neck and a snail-like twisted head (Fig. 5: 9). Similar iron pins were widespread in neighboring regions and date to the second half of the first millennium B.C. The pin from Kerki küi can be assigned to the last quarter of the first millennium B.C. This dating does not contradict the composition of the pottery found in the hearth pit. Out of 168 pottery fragments, 77 represented vessel side walls and of these 61.6% were brushed and 31.4% were smooth.

Two similar hearths were found at Excavation VIII, which failed to produce any contours of structures. Judging from the two iron awls found in the hearths (Fig. 5: 26) and the character of the pottery, the hearths may be dated from the last quarter of the first millennium B.C. to the beginning of our era. It should be noted that one of the hearths was covered with the sand floor of the later Building No.9.

These buildings characterized the second variation of timber houses. Similar sand floors were noted in all three areas of surface buildings. In the same area, many burnt and split stones were found, sometimes consisting of entire layers. On the sand floors, there were fewer stones and most of them were concentrated on either side of the floor. The first building area in Excavations VII-VIII revealed that the sand floors were not related, but represented two different building traditions. In these excavations, the sand floors and stone layers were located at some distance from each other and indicated the existence of two buildings (Nos. 9 and 10).

The sand floor of Building No. 9 was located in the western region of Excavation VIII and continued beyond the excavation. The uncovered floor marked the location of a wall oriented towards the northeast, at a distance of about 5m and that of the perpendicular wall, directed towards the south-east, at a distance of 4m. The floor had been once renovated. Furthermore, the contours of the two floors, upper and lower, did not coincide, but had shifted a bit. It appears, therefore, that along with the second floor, the whole building had been rebuilt, with some shifting away from the former foundation. The two floors were visible only at the edges of the building, where a layer of dark soil lay between them. In the middle area of the building, both floors merged together and their common thickness was 0.15m. In Building No. 9, there was evidence of a hearth with a clay border. On the sand floor, a clay zone was discovered, some 0.20m long and 0.10m wide, indicating the remains of the border of the hearth. Unlike stone hearths, clay hearths tend to be poorly preserved. Such hearths are known at several sites in Latvia, in association with brushed pottery (Vasks 1987).

In the lower sand floor of Building No.9, an iron loop-headed pin was found (Fig. 5: 8). In grave complexes of Estonia, similar pins are dated to the 1st-2nd centuries A.D. (Löugas 1971: 21, 22, Abb. I: 1). This artefact can be dated to the same period. The date of the building is confirmed by the composition of the pottery found inside. Brushed pottery made up 68.6% of the recovered fragments (Table 1b).

Building No.10 was discovered to the south of Building No. 9. It was marked by a 3 x 4m layer of burnt stones. As it continued beyond Excavation VII, the complete size of the building was not determined. Evidently, this stone layer or floor, as well as those in similar buildings, was formed from burnt hearth stones. The inhabitants had scattered them in the building, and then put new stones in the hearth. Stones of Building No.10 shared the same stratigraphic level with the upper sand floor of Building No. 9. It may be assumed, then, that both buildings existed during the same time.

In the second building area, at a depth of 0.35-0.40m., remains of a 1cm thick sand floor were found with layers of burnt stones around it. Neither the sand floor, nor the stone layers were sufficiently preserved to allow identification of the remains of buildings. Separate details showed that the buildings had probably been oriented from north to south or east to west, with a 45 degree deviation from these directions.

Two bronze Roman coins were important for determination of the chronology of the second building area. They were discovered at the southern edge of the area, and were found on the bedrock, about 0.5m apart. One coin dates to the reign of Alexander Severus (A.D. 222-235), while the other had been struck in Paphlagonia during the reign of Caracalla (A.D. 211-217).

As mentioned earlier, the head of an iron loop-headed pin (Fig. 5: 18) was found near the building area. In the second building area, a small iron sickle was found with a thin shaft wedge and a short blade (Fig. 5: 6), along with fragments of clay crucibles (Fig. 5: 24).

In the second building area, the quantity of brushed pottery was smaller than that of the first area and, moreover, pottery with a slipped surface was found. The increase in the amount of textile-patterned pottery in the upper first layer is also significant (Table 1c). As shown in Table 4a, the smooth pottery of the K form predominates here, whereas the CS-S form is most common among the brushed pottery. The number of striated pottery sherds is too small to attach importance to their ratios.

Comparison of pottery between the first two building areas indicates that

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2Identification of the coins was kindly provided by V. Brabich, Hermitage Museum
a) Total number of sherds

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b) Number of sherds in 1st area (of buildings)

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<td>67.0%</td>
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c) Number of sherds in 2nd area

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c) Number of sherds in 3rd area

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<td>29.7%</td>
<td>3.0%</td>
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</table>

Table 1. Kerküzi pottery types by surface treatment.

1 lentelé. Kerküzi keramikos tipai pagal paviršiaus bučius.

the first area is older. Taking this into consideration, along with the dating of the artifacts, the second building area can be dated to the 2nd-4th centuries.

In Excavations II-III, representing the third building area, the distribution of burnt, split stones as well as the remains of sand floors, revealed the existence of three buildings. The buildings dated to different periods. The size (4 x 4.5m) and outline of the oldest building (No.11), could be followed according to the pattern of burnt stones. In the south-eastern part of this building, the stones seem to have been removed when Building No.12 was erected and its sand floor formed. The size of this building was 5 x 5m. The floor had been renewed once, as evidenced by a 1 to 2cm thick streak of black soil. Under this, another sand floor was found, similar to the 3cm thick sand floor above it. Building No.13 appeared as a compact layer of stones at the south-eastern end of Building No.12, partially covering the sand floor of this building. The approximate size of Building No.13 was 3.3 x 4m. Unlike Buildings No.11 and 12, where hearths were not found, Building No.13 had remains of a hearth marked by a charcoal area mixed with gravel. Its size, however, was impossible to determine. In the eastern part of Building No.13, as well as beyond its territory, several spots of burnt red clay were found. Possibly these represent the remains of a hearth with a clay border.

A very important artefact recovered in the third building area was an iron sickle (Fig. 5: 5). In the hoards found at the Mūkukalns hill-fort (Graudonis 1964:32) and Kentskalns (Stubavs 1976: 35, Fig. 31) similar sickles were dated to about A.D. 500. The Kerküzi sickle was found on the sand floor, and represents one of the most recent artefacts found at the settlement.

Other artefacts were also useful in dating the building area. An iron brooch with an unbent foot and a bronze wound wire (Fig. 5: 7) can be dated to the 3rd-4th centuries (Okulicz 1973, Fig. 190: e, 203: e). A fragment of a bar-shaped strike-iron (Fig. 5: 27) cannot be dated precisely. A similar find was made in the Kivti settlement in Latvia, where Čner dates it to approximately A.D. 200 (Čner 1978: 60, Fig. 19: 51). Such strike-irons, however, were used later; in fact, they were used throughout the entire first millennium A.D. (Smirnov 1974: 60). An iron loop headed pin (Fig. 5: 10) is somewhat older than the artefacts described above. An iron knife, whose blade tapers into a narrow tip, is characteristic of the Early Iron Age (Fig. 5: 16). In the third building area, a decorated clay nozzle (Fig. 5: 19) and fragments of a clay crucible (Fig. 5: 23) were found. Further, in Building No.13, thirteen quern stones were discovered. This was the only location in the entire site where a concentration of this size was found. It can be assumed, therefore, that in Building No.13 work was carried out using these tools.

The pottery in the third building area differs from that found in the first two areas. The quantity of burnt pottery is not great (29.7%), and that of the slipped pottery is even less, 12.5% (Table 1). Textile-patterned pottery in the lower, third layer represented only 1.4% of the ceramic total, but in the first layer was slightly greater (3.7%).

Among the smooth pottery, the K-form prevailed (Fig. 6: 3), although both I-C and CS-S forms were found. In the burnt pottery, the K form is seen occasionally, along with the I-C form (Table 3b). The slipped pottery style is only seen with the K-form (Fig. 6: 2). The composition of the pottery complex and the chronology of the artefacts allow the third building area to be dated to the 4th-5th centuries A.D. Among the three building areas, this is the most recent.

In seven locations in the Kerküzi settlement site, round pits of a peculiar character were discovered (Fig. 3: 3). Their diameter was 1.9-2.6m and they were dug 0.50-0.75m deep into the bedrock. The slanting walls of the pits were covered with a 0.10m thick layer of dark soil. One area of each pit was filled with the cultural layer, another area with a small mound of yellow sand (Fig. 9).

Within the dark soil of the pit, several pottery fragments were found, mainly of the brushed pattern. The function of the pits is not clear. They seem to have
been covered with wood and a layer of sand, and may have served as storage pits.

The three areas of surface buildings in the western region of the settlement (in the east and north), had once been separated from the rest of the site by a post fence (Fig. 3: 6). The northern fence continued further to the west into the unexcavated area of the settlement. The location of the fence was revealed by a 0.2m wide zone of dark soil, which appeared immediately after removing the surface layer. Deeper, into the light bedrock, we discovered a row of dark stains that contrasted sharply with the surrounding soil, and were of irregular shape (average diameter of 0.5-0.10m), located at intervals of 0.05-0.15m. These stains represented postholes and had been dug into the bedrock 0.15-0.20m. In the northeast corner of Excavation VIII, the northern and eastern fences intersected at an angle of 105-110 degrees (Fig. 10). As the eastern fence continued further to the north, into an unexcavated area, a T-shaped junction of the two fences was discovered. The eastern fence was 10-20m from the buildings, but in the north, it passed 1m further from the buildings of the first area.

It would appear, then, that in earlier times the northern fence had been located further to the north into the unexcavated area. Excavation VIII suggested that the fence had been erected later, when Buildings No.9 and 10 no longer existed. The eastern fence continued southward as far as the gully of the rivulet, and from that point it was impossible to trace further. It should be noted that here, in the southern part of the settlement, at the rivulet, the eastern fence was approached by yet another fence from the east, approximately at a right angle. The two fences did not connect, however, and were separated by a space 4m wide. The second fence continued eastward for 12m, turned at an angle of approximately 120 degrees toward the rivulet, and vanished after 13-14m.

Analysis of excavated material from the Kerkëzi settlement site showed the following development of building styles: the oldest buildings, related to the Late Bronze Age, were built with pole construction, with an average size of 4 x 4m. For heating, hearths were simply made from piles of stones. The hearths were either placed directly on the surface or dug slightly into the bedrock. In some cases, the hearths were arranged within a larger pit, occupying only a small area of it. Data on buildings of this period at the settlement is scarce, and the number of associated artefacts and pottery is small. There is evidence, however, that the Late Bronze Age settlement pattern differed from that of the later period. Most of the areas where pole buildings were found coincide to some extent with areas of timber houses dating to the later period.

Log houses were more recent than pole buildings. Based on details of floors, three variants of log houses have been distinguished. The earliest buildings date from the last quarter of the first millennium B.C. and were marked by contours of a dark cultural layer. Traces of flooring were not observed, and it can be assumed that the buildings had a soil floor. One of the structures that was more clearly defined measured 4 x 4m. These structures were characterized by stone hearths arranged within pits.

The second variant, log houses with floors of sand or burnt stone, appeared by the beginning of our era. Their floor dimensions were approximately 4.5 x 3-4m. Structures with sand floors had hearths bordered with
clay, rather than stone. Buildings with stone floors, on the other hand, featured hearths with both stone and clay borders.

The third type of building is a "pithouse" with its structural foundations set into the bedrock. It may have had a hut-like superstructure. The oldest of these buildings at the Kerküzi settlement has been dated to the last quarter of the first millennium B.C. The floors of the structures had either a round, oval, or quadrangular shape, with rounded corners. In comparison to the log houses, they are smaller, measuring about 2.5-3.5m x 2.6-4.5m. As the two building types were contemporary, it is possible they had different functions.

Patterns of Settlement

During its primary period of occupation (the last quarter of the first millennium B.C. - middle of the first millennium A.D.), the Kerküzi settlement consisted of three clusters of the above-mentioned types of structures, and a surrounding fence. The three clusters were located along a line that ran north-northwest to south-southeast. The distance separating the groups of buildings was about 15m. The general axis along which the structures are located is not exactly parallel to that of the eastern fence, but the direction is similar. These features would seem to suggest that all three areas were inhabited at the same time. The artefact chronology, however, does not support this. Rather, it indicates that the first group of structures is the earliest, while the third group is the most recent. It may be assumed, therefore, that the first and second groups existed simultaneously for some time, followed by contemporaneous occupation of the second and third groups. The first and third groups were never inhabited at the same time.

Since a fence bounded the area of buildings to the north and east, it seems logical to assume that a similar fence had also enclosed the western side, opposite the rivulet. The distance of the western fence could not have exceeded 15-20m, as a sharp uplift of the terrain began (the slope of the bank). The approximate distance between the eastern and western fences is estimated to have been 30-35m. As the length of the eastern fence was about 80m, the fence enclosed a total area of about 2500-3000 square metres. During the first quarter of the first millennium A.D., when the first group of structures existed, the enclosed territory was apparently larger, as the northern fence was located further to the north.

Why were the older buildings situated further from the Šaltepka, and the more recent structures located closer to the rivulet? The answer may be related to a change in building traditions. In the last quarter of the first millennium B.C., when the first log house appeared (e.g. building No.8), and in the beginning of our era, when sand floors appeared in the log houses, structures of pole construction continued to be used in the settlement on the Šaltepka rivulet. Their remains, although not precisely dated, are found in Excavation X. In Excavation II, the pole buildings Nos. 1 and 2 appear to have been reconstructed, during the course of which the new building No. 2 was repositioned, by 45 degrees, in order to be aligned along the four cardinal directions. Over the course of time, new traditions of building evolved and the importance of pole construction diminished. Consequently, when it became necessary to refurbish buildings in the southern part of the enclosure, log houses were built instead of pole structures.

The primary spread of buildings in the settlement in a north-south direction, and to a much lesser extent along a east-west axis, was determined by the peculiarities of the terrain and the threat of spring flooding. Figure 1 shows that the later populations at the site were situated on the high ground of the flood zone, in the western portion of the site. To the east, in the direction of the Daugava, the flood zone was lower (the difference in height between Excavations VII-VIII and XV was 3-4m). In Excavation XV, located in the east part of the site, several layers of dark soil were noted: they were separated from one another by streaks of river sand from the spring flooding of the Daugava. All of this data suggests that the eastern part of the settlement was submerged during periods of high flooding, and was less suitable for inhabitation than the western zone. It should also be noted that the intensity of flooding was probably correlated to the growing usage of clearance agriculture in the Early Iron Age, in particular, by the clearing of forest along the river bank.

The archaeological data does not provide an explanation as to why the settlement was abandoned during the middle of the first millennium A.D. One possible factor, however, is a rise in the river-level of the Daugava, due to increased humidity during the second half of the first century A.D. (Dolukhanov 1984: 29).

Ceramic Analysis

The problem of relating the Kerküzi site, and other sites along the Daugava, to a specific culture of the Early Iron Age is best approached through an examination of the ceramic artefacts. Most of the pottery derives from Kerküzi: at present, it represents the largest pottery complex of the Early Iron Age recovered in southeastern Latvia.

Out of 13,885 pottery sherds from Kerküzi, some 4,476 tiny fragments (32% of total) belonged to a type that is at present unidentified. Another 491 fragments (4% of total), representing the bottoms of vessels, also remain unidentified. The remaining 8,918 fragments are classified by type in Table 1a. To understand the paste composition of the pottery, 61 vessels were analyzed using a binocular microscope. It was found that, in general, a single type of paste was used in both brushed and smooth pottery forms (clay of a different type was found in only six cases). Two methods of paste preparation were identified, based on temper inclusion. One is the "simple" recipe: only gravel temper was added to the clay. The second method, the "mixed" recipe, included the use of both gravel and organic temper (manure).

In comparing pottery from settlements dating from the last quarter of the first millennium B.C. to those from the second quarter of the first millennium A.D., it was found that during both periods vessels were made using both methods. Over the course of time, however, the use of the "mixed" recipe increased, while usage of the "simple" recipe decreased (cf. Tables 2a, 2b, 3a,
### a) Last quarter of the 1st millennium B.C. – beginning of the 1st millennium A.D.

<table>
<thead>
<tr>
<th>Concentration of added gravel</th>
<th>Clay : gravel</th>
<th>Clay : gravel : manure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:3, 1:4</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>1:5, 1:6</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>1:7, 1:8</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>12</td>
<td>20</td>
</tr>
</tbody>
</table>

### b) Second quarter of the 1st millennium A.D.

<table>
<thead>
<tr>
<th>Concentration of added gravel</th>
<th>Clay : gravel</th>
<th>Clay : gravel : manure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:3, 1:4</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>1:5, 1:6</td>
<td>2</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>1:7, 1:8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>14</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 2. Paste composition of brushed pottery (calculation based on number of vessels).

b) 2nd area (of buildings)

<table>
<thead>
<tr>
<th>Shape of vessel</th>
<th>Surface</th>
<th>I-C</th>
<th>CS-S</th>
<th>K</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smooth</td>
<td></td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Brushed</td>
<td></td>
<td>-</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 4. Shape of vessels and surface treatment (calculation based on number of vessels).

### 3b). During the last centuries B.C., for example, the “mixed” recipe began to prevail at Kerkūzi, and this trend continued into the first half of the first millennium A.D. For comparison, note that brushed pottery of the Late Bronze Age — found at the Dievukalns hill-fort and the Madalūni hill-fort — was made for the most part with paste of the “simple” recipe, i.e. clay and gravel.

Our investigation measured the percentage of gravel temper in the clay paste. For all areas, the ratio of gravel to clay ranges from 1:3 to 1:8. Tables 2 and 3 show that most of the Kerkūzi pottery is characterized by two levels of gravel temper: 1:3, 1:4 as well as 1:5, 1:6. (In a few samples, the concentration is 1:7 or 1:8). The two levels are found in brushed and smooth pottery from both early and late time periods. Paste with a greater amount of gravel temper is more characteristic of the earlier pottery. Through time, this type of pottery diminished, while that of pottery with gravel concentrations of 1:5 and 1:6 increased (Tables 2a, 2b). This trend was particularly evident in paste prepared according to the “mixed” recipe.

During the major occupation of the Kerkūzi settlement, two traditions existed in the adding of temper during the preparation of potter’s clay. One tradition added gravel to the clay in the concentration of 1:3 or 1:4; while the other tradition used less gravel, in concentrations of 1:5, 1:6 and added manure temper as well. In south-eastern Latvia, the first tradition was more associated with the pottery of the Late Bronze Age, while the second tradition achieved its maximum popularity during the Early Iron Age. It should be noted, however, that there are no sites where one method is used exclusively - rather the predominance of one method over the other is associated with the age of the site.

Ethnographic studies (Bobrinski 1978: 242) indicate that ceramic traditions, including the preparation of paste, involved the direct passing of technical information from generation to generation of a lineage and this ensured the conservation of specific methods and processes. With this mechanism acting to inhibit other traditions, a pottery tradition could remain unchanged for a very
long time in the pre-trade period of a society. With the arrival of new populations, however, more rapid changes were possible in the technology of pottery.

This situation is reflected by the new tradition of paste preparation in the brushed pottery of the Kerküzi site. From the last quarter of the first millennium B.C. up to the middle of the first millennium A.D., foreign elements essentially did not influence the development of pottery at Kerküzi. Users of both ceramic traditions lived together for a long time, maintaining contact between their respective communities through exogamous marriage. As a result, ceramic paste with gravel temper at Kerküzi reflects an early tradition, while the addition of manure temper is characteristic of a later tradition.

In comparing Tables 2a with 2b, it is observed that of 20 brushec vessels from the last quarter of the first millennium B.C. only six are made of the old paste. The remaining 14 pots reflect either the tradition of the new paste or a "hybrid" of both traditions. In contrast, in a sample of 18 brushed vessels representing the second quarter of the first millennium B.C., the ratio has moved to 2:16, in favor of the paste of the new tradition (including vessels of the hybrid paste).

Trends in the composition of ceramic paste, by themselves, do not represent sufficient evidence to conclusively prove the presence or absence of foreign influences at Kerküzi. In fact, foreign influences are indicated by the appearance of new types of ceramics during the first half of the first millennium A.D., e.g. textile pottery (Fig. 6: 1). This pottery was not found at Kerküzi during the last quarter of the first millennium B.C. or in the beginning of our era (one exception: a single fragment [intrusive?] was recovered from Building No.2). Textile pottery first appears at the site in 2nd-5th century contexts in the second and third areas of buildings (Tables 1c, 1d). It is known that during the Early Iron Age, textile pottery was the dominant ceramic type in northern Latvia. The appearance of this pottery type at Kerküzi therefore suggests an important link with northern Latvia.

Coinciding with the appearance of textile pottery at Kerküzi was the arrival of slipped pottery, in vessels of the K-form (Fig. 6: 2). It differs substantially from other ceramics at the site by its fine paste, which was prepared by adding a temper of organic matter, fine gravel and sand to the clay paste. Before firing, the surface of the vessel was sometimes polished. It is unclear where this ceramic tradition originated. Northern Latvia can not be excluded, since textile pottery is often found there in association with slipped and polished ceramics.

Finally, our survey of the Kerküzi ceramics will briefly examine the relationship between brushed and smooth pottery. Complicating the issue is the fact that the two ceramic traditions co-existed in a very close manner. As a result, some "hybrid" vessels were even produced — with a brushed neck and smooth sides — which makes it difficult for the analyst to assign them to either group (Fig. 6: 4). Nevertheless, Table 1a shows that, in general, smooth pottery represents the dominant type at Kerküzi. In Tables 1b, 1c, and 1d, however, it is observed that there is much variation in the amount of brushed pottery found at various buildings and through different periods. In the early period,
Okulicz, J. (1973) Pradzieje ziem pruskich od północy paleolitu do VII w.n.e.
Wrocław: Ossolineum.

Nauji duomenys apie ankstvojo geležies amžiaus gyvenvietes pietryčių Latvijoje

ANDREJS VASKS

Santrauka

Straipsnyje pateikiami arheologinių kasinėjimų rezultatai, gauti kasnėjant vėlyvojo bronzos-ankstvojo geležies amžiaus iki tol mažai tyrinėtas pietryčių Latvijos gyvenvietės, ypač Kerkūzė gyvenviete ant Dauguvos kranto. Iki šių kasinėjimų, Latvijoje ankstvojo geležies amžiaus buvo nustatyti trys kultūriniai regionalai: 1) pietvakarinė Latvija su negligais nedeigintais kapais; 2) šiaurė Latvija su "tarand" stilizuotais kapais; 3) vidurinė ir rytinė Latvija su nedeigintais kapais smėlio pilikapiose. Remiantys Kerkūzė gyvenvietės medžiaga galime išskirti ketvirtąjį kultūrinių regionu — pietrytinę Latviją, kuri identifikuota kaip brūkšniniuotos keramikos kultūros dalies (kartu su rytų Lietuvos ir šiaurėscentrine Baltarusijai).

Römische Münzen in den Gräberfeldern Litauens

MYKOLAS MICHELBERTAS


Zweitens erlauben die Funde römischen Münzen in Gräberfeldern eine viel genauer Datierung der Gräberkomplexe und Einzelzeugnisse. Drittens belegt die Münzeneignung in den Gräbern den kulturellen Einfluss der römischen Provinzen auf die Balten.

Zuerst möchten wir einige allgemeine Angaben über die Funde römischen Münzen in den Gräberfeldern vom 1. - 4. Jh. in Litauen anführen. Insamt wurden römische Münzen in 32 Grabdenkmälern, die zu einigen kulturell...