

ARHEOLOOGILISED
VÄLITÖÖD
EESTIS

ARCHAEOLOGICAL
FIELDWORK
IN ESTONIA

2006

Koostanud ja toimetanud
Ülle Tamla

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Esikaas: 2006. a Palutaja külast avastatud aardes sisalduv
hõbedatud hoburaudsõlg.

Cover: Silver-plated penannular brooch from Palutaja hoard,
discovered in 2006.

Tagakaas: Krõllid Palutaja aardest.

Back cover: Silver beads from Palutaja hoard.

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ARCHAEOLOGICAL RESEARCH ON IHASTE MESOLITHIC SETTLEMENT SITE

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The Mesolithic settlement site of Ihaste is situated on the border of the town of Tartu, in the housing estate of Ihaste, on the higher terrace of the River Emajõgi, on a small cape between the Hipodroomi street and the river plain (Fig. 1). The first Stone Age find was collected in the vicinity of the settlement site already decades ago,¹ after that the site was documented as the find-place of Comb Ware (Metsallik 1995, 25). In spring 1997 Andres Tvauri and Andres Vindi (both from the University of Tartu), inspected the area and found traces from the Neolithic settlement: Comb Ware, flint artefacts, stone debris etc. (Bahovski 1997). Thorough preliminary archaeological research, test-pits with phosphate analysis (Kriiska 1997), in Ihaste were completed by Aivar Kriiska in September of the same year on the order of the city planning department of the Tartu Municipality. It was ascertained that the layer with the Neolithic finds had been taken there probably by the relocation of soil elsewhere in Old-Ihaste. At the same time a Mesolithic settlement site was discovered in the vicinity. However, due a regrettable confusion the settlement site was not presented for the national heritage protection back then.

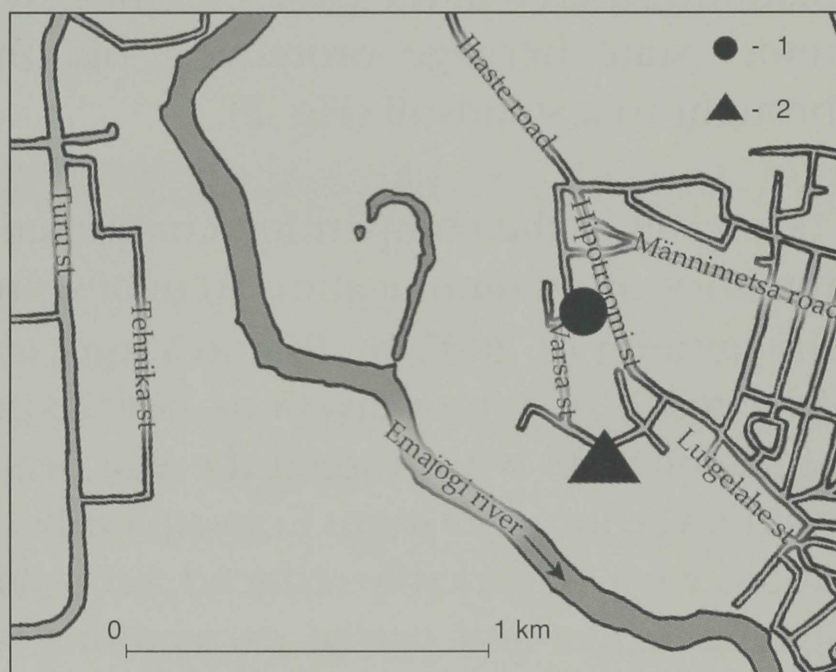


Fig. 1. The Mesolithic settlement site of Ihaste (1) and the remains of the Stone Age settlement site (2) 400 m away.

Jn 1. Ihaste mesoliitiline asula (1) ja kiviaja asula jäänused (2) 400 m eemal.

In connection with the expansion of the town and the building of the planned new residential district on the bank of the River Emajõgi (back then the area was under state protection as a milieu valuable area), the Mesolithic settlement site in Ihaste was again added to the agenda in spring 2005. According to the wishes of real estate agents street network and housing was planned directly on the settlement site and therefore the entrepreneurs requested additional studies in order to specify the extent and intensity of the cultural layer and to calculate the poten-

¹ The Comb Ware sherd was found by Heiki Valk in the beginning of the 1980ies during the field lesson of the military exercise of the University of Tartu (oral commentary by H. Valk 26.05. 2007).

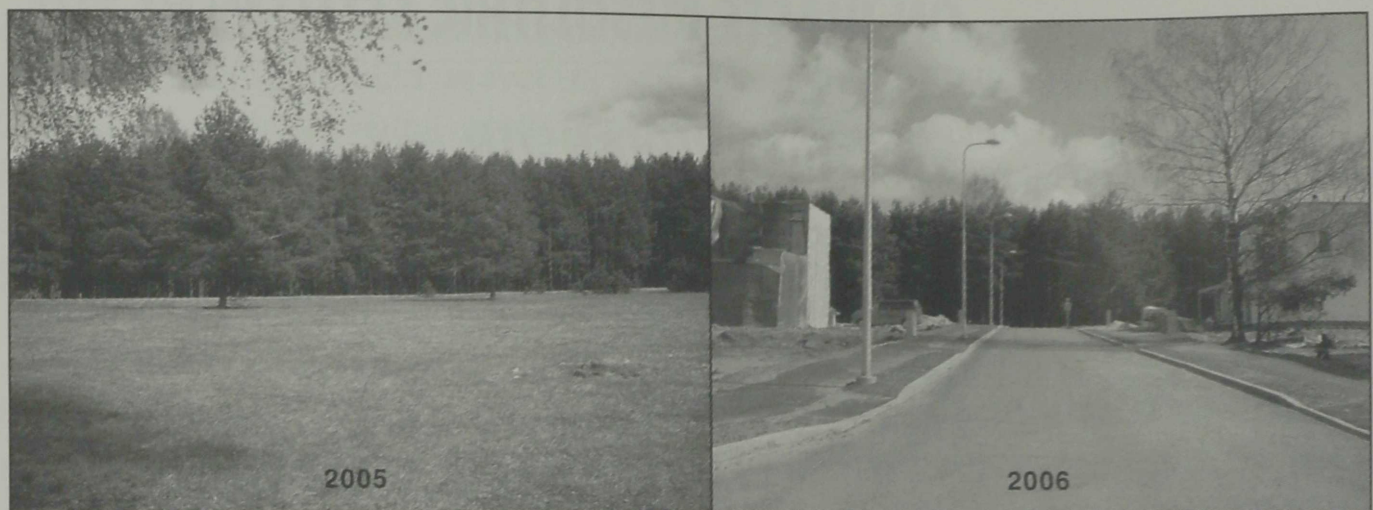


Fig. 2. The Mesolithic settlement site of Ihaste 2005 and 2006 from southeast.
Jn 2. Ihaste mesoliitiline asula 2005 ja 2006. Pildistatud kagust.

tial expenses of the archaeological research. Additional test-pitting on the whole area of the slope until the Hipodroomi street was carried out in May 2005 (Johanson & Kriiska 2005) by the authors of the article. On the basis of the information gathered in the course of these works the settlement site was finally taken under state heritage protection, but the planning of new buildings was not brought to a standstill (Fig. 2).

As a result of the competition completed in order to carry out excavations on the territory of communication trenches, archaeological research was continued in the autumn of 2005 by Rünno Vissak and Tanel Moora (see Moora *et al.* 2006). As a result of the excavations new expert evaluation was compiled where the archaeologists who studied the site brought the existence of the Stone Age cultural layer into question. Consequently the restrictions by the National Heritage Board were remarkably reduced. Accordingly, in 2006 several archaeological monitoring works and partial excavations were completed on the territory of the foundation depressions of the planned houses; in the opinion of the authors of the article the methodology and the extent of documentation of these works can hardly be called adequate for the research of a Stone Age settlement site at a modern level. Only the mixed ploughing layer was removed at these places (which was sieved through to collect finds), thereafter depressions and other constructions exposed on the reddish-brown sand (which usually is the intact Stone Age cultural layer) were documented and some of these were dug through. The *in situ* cultural layer was covered with geo-textile and was thus “preserved” under the built houses. On the plots of 3, 4 and 6 Varsa street archaeological monitoring and partial small-scale excavations were completed under the direction of Rünno Vissak and on the plot of Varsa street 2 by Kristiina Johanson.

In addition, in several occasions, in our opinion, this methodological “mitigation” directly led to occasions where the cultural layer was damaged by the construc-

tion workers. On the plot of Varsa street 4 the ploughing layer was removed at once on the whole territory of the planned building and only the depressions and plough-marks revealed on the intact cultural layer were documented. On the plot of Varsa street 3 a 2 m deep communication trench was dug into the foundation hollow without any archaeological research. Additionally wheels of the big construction mechanism constantly destroyed the cultural layer on the whole territory of the settlement site.

Although research on the Mesolithic settlement site in Ihaste continues in 2007 as well, substantial material has been gathered on the field-work completed by the working group of the University of Tartu which on the one hand needs to be published, on the other hand already enables summation and interpretation. The need to publish the preliminary results is also instigated by the fact that our viewpoints differ to a great extent from the opinions of the other task force that were published a year ago.

THE RESULTS OF THE PRELIMINARY INVESTIGATIONS OF 1997 AND 2005

In the course of the first archaeological research carried out in Ihaste in the autumn of 1997 35 test-pits were dug on an area more than 1 ha big (Fig. 3), whereas soil samples for the phosphate analysis were taken from most of the test-pits (Kriiska 1997). The latter indicates at a more intense human activity on the edge of the (upper) fossilized bank terrace of the river (Fig. 4). The investigations had two important results: 1) the Mesolithic cultural layer was detected on the terrace of the River Emajõgi; 2) it was ascertained that the Comb Ware sherds gathered from the nearby field in spring actually referred to a secondary find-spot - the cultural layer containing pottery sherds has probably been relocated from the area of the construction of the nearby equestrian centre (Kriiska 1997). Unfortunately the primary deposition place of the mentioned Neolithic cultural layer was not made certain then and we have not managed to do that up to now.

In 1997 13 flint finds were gathered, a fragment of a grinding stone and 10 small pieces of calcified animal bones. Among the flint finds there are 2 blades (both with one ridge), 2 fragments of flint blades (one-ridged and four-ridged) and 9 flakes. One blade fragment with four narrow ridges (Fig. 5: 3) refers to the using of a pressure technique and one blade fragment with wide proximal end (Fig. 5: 2) to a soft hammer technique. Additional material to the small amount of finds collected from the test-pits dug into the Mesolithic settlement site in 1997 were obtained during the archaeological investigations started again in 2005

- ▮ - excavations of 2006 directed by Kristiina Johanson / 2006. a kaevand (kaevamisjuhataja Kristiina Johanson)
- ▮ - excavations of 2005 directed by Rünno Vissak and Tanel Moora (after Moora *et al.* 2006) / 2005. a kaevandid, kaevamisjuhatajad Rünno Vissak ja Tanel Moora (Moora *et al.* 2006 järgi)
- - test-pits of 2005 / 2005. a kaevatud prooviaugud
- - previous roads / varasemad teed
- == - test-pits of 1997 / 1997. a kaevatud prooviaugud

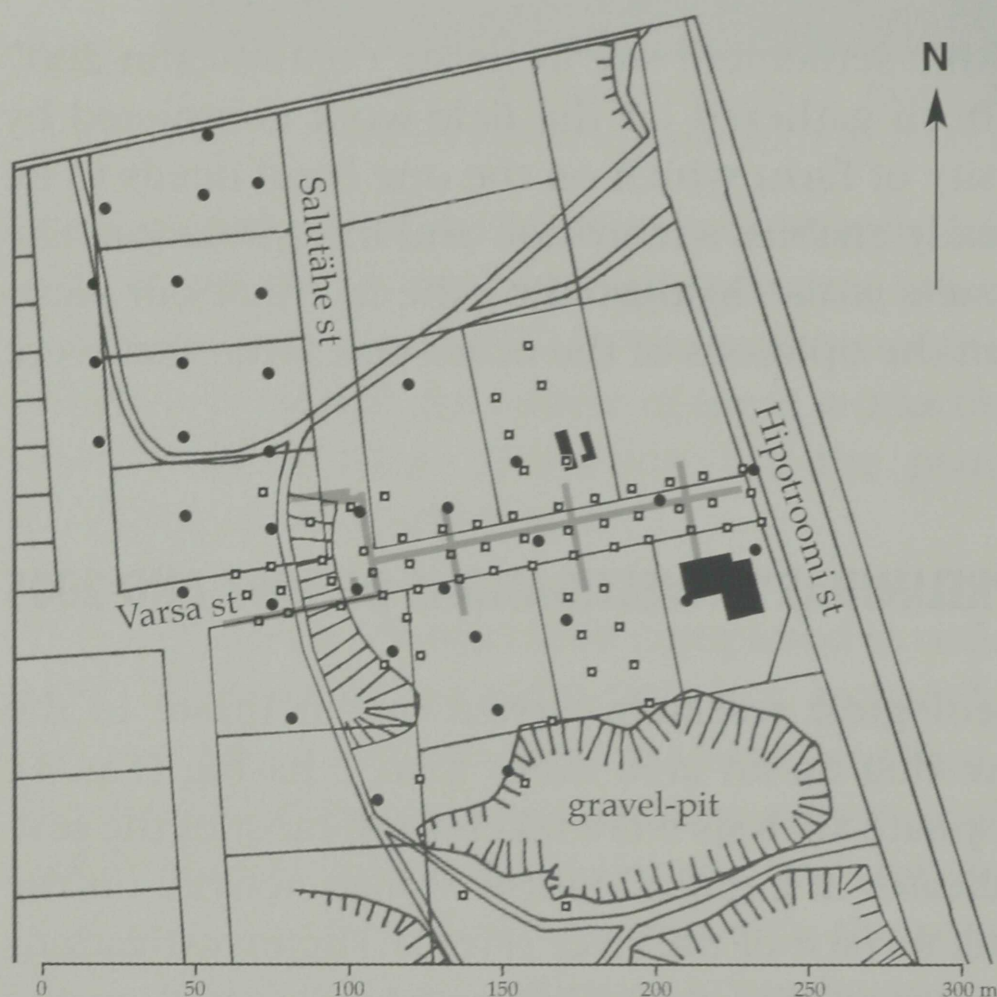


Fig. 3. Test-pits and excavations on a general plan where both old and new road network as well as the new distribution of the plots has been depicted.

Jn 3. Prooviaugud ja kaevandid üldplaanil, kubu on kantud nii vana kui ka uus teedevõrk ja kinnistud.

when, in order to ascertain the extent and intensity of the cultural layer, altogether 69 test-pits were dug into the ground all over the area of the cape, i.e. on a territory of over 17 000 sq. m (Figs. 2; 3).

The area of the planned Varsa street from the Hipodroomi road until the lower terrace of the river was covered with test-pits more densely. Less test-pits were excavated directly across the Varsa street and dispersedly along the Hipodroomi road to the territory that at first glance seemed to be left outside the settlement site (Fig. 3). In the course of the research the direct edge of the (upper) terrace of the ancient riverbank on the cape slope closest to the river plain was documented as the most intensive area of the cultural layer. There the activity of human occupation was indicated at even by 30–40 flint finds and

more than 60 burnt bone fragments per test-pit. Generally this corresponds to the observations from the phosphate analysis.

Altogether 268 Stone Age finds were obtained from the test-pits (in addition two natural flint lumps were collected): 148 flint, 8 stone and 2 quartz finds, additionally 112 burnt bone fragments. Among the flint finds flakes predominate (121 – 81.8 % of flint finds), there are less blades/blade fragments (17 – 11.4 % of flint finds). Five cores were discerned. These are predominantly of conical shape and with one striking platform (Fig 6), but a single bipolar example (TÜ 640: 23) was gathered as well. Three artefacts of secondary processing were determined: 2 scrap-

ers (Fig. 7: 2) and one middle-burin (Fig. 7: 1). Stone artefacts fragments of two adzes and one stone axe (Fig. 8: 1, 2) were collected from the ground.

In the course of the research it proved that in the case of the Mesolithic settlement site of Ihaste we are dealing with a typical site formed on sandy soil where the cultural layer is difficult to distinguish by the tone of the soil² and only the bigger amount of coal particles give the otherwise reddish-brown sand in places a darker and a "stained" greyish-brown hue. Rather the cultural layer is marked and differentiated by the number of finds – bone fragments and coal particles.

The upper horizon of the cultural layer (with the average thickness of 20–25 cm), the dark brown humus layer, has formed as a result of long-term ploughing. This is indicated by a clear border with the next layer. The reddish-brown 20–25 cm thick sand layer rich in finds – the lower intact horizon of the cultural layer – was located under the plough-layer. Thus the thickness of the cultural layer in places reaches 40–50 cm which in its turn refers to the Stone Age habitation of considerable length and intensity at the place.

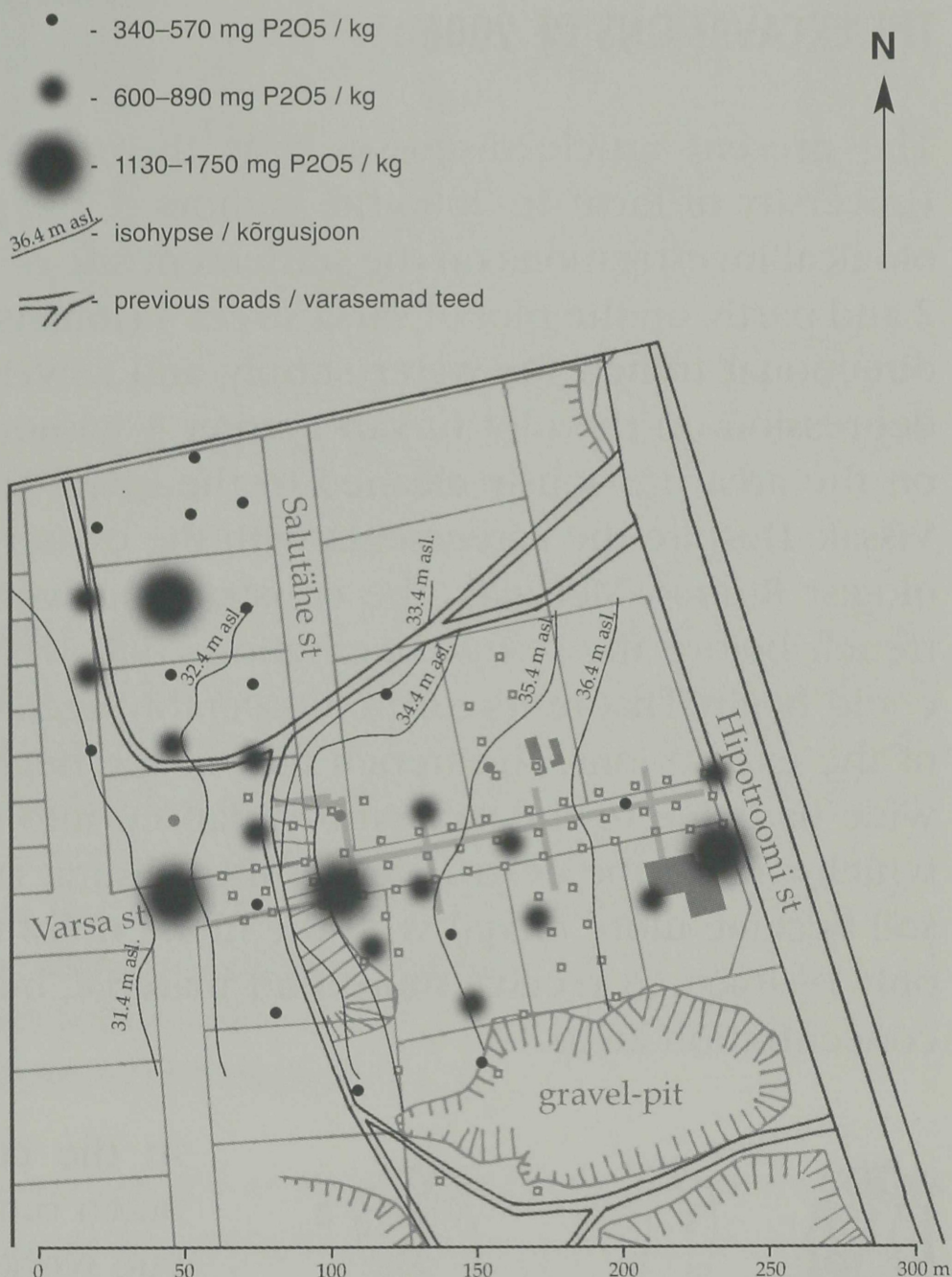


Fig. 4. The results of phosphate analysis on the general plan.
Jn 4. Fosfaatkaardistuse tulemus üldplaanil.

² Plenty of settlement sites are known from Estonia (for example Sindi-Lodja III and Jõekalda Neolithic settlement sites by the Pärnu River) and elsewhere from Eastern Baltic and Fennoscandia (for example Juankosken Akonpohjan Helvetinhardanpuro, Tuusula Likolampi and Kaavi Mustalahdella in Northeastern Finland) where the cultural layer has formed in sandy soil and is not distinguished by colour or is distinguished only in places. Actually these sites in the mentioned areas are rather dominating and only in exceptional cases is the cultural layer clearly followable by colour. In these cases the characteristic feature of the cultural layer is the presence of archaeo- and ecofacts which is correlated by the chemical composition of the soil, first and foremost by a bigger amount of phosphorus in the content.

THE EXCAVATIONS OF 2006

The present article discusses only the results of the working group of the University of Tartu. In 2006 the authors of the present article completed archaeological investigations on the settlement site of Ihaste on the plots of Varsa street 2 and partly on the plot of Varsa street 3 (Johanson 2006). A northwest-southeast directional trench for water supply and sewerage was dug through the house depression on the plot of Varsa street 3 without any archaeological supervision on the area previously cleaned to the intact Stone Age cultural layer by Rünno Vissak. Despite the agreements with the owner of the plot and the town archaeologist Romeo Metsallik, the construction workers succeeded in filling up the trench before the rescue excavations that were planned to start in a few days could begin. This in its turn considerably aggravated and lengthened the course of the excavations. The trench that in the beginning was 10 m long and 1.9 m wide had, due to the soft sand collapsed into the trench, widened to 3 meters which caused the destruction of the cultural layer by up to 30 sq. m. While the soil became more mixed with the filling up of the trench, the sieving of the soil only enabled to receive more find material, but not to determine possible find concentration areas.

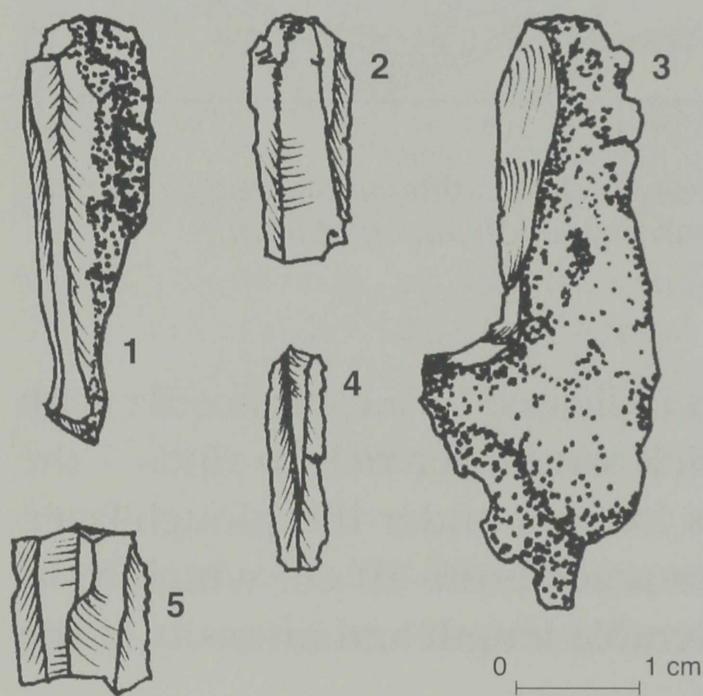


Fig. 5. 1, 3 - flint blades, 2, 4, 5 - blade fragments from the Mesolithic settlement site of Ihaste.

Jn 5. 1, 3 - tulekivilaastud, 2, 4, 5 - laastukatked Ihaste mesoliitilisest asulast. (TÜ 640: 161, 2, 5, 89, 161.)

In the course of the sieving of the soil taken out from the trench during the rescue works 252 flint and quartz finds were gathered (including flakes, blades and artefacts) and 56 bone fragments.³ Considering that when the trench was opened up, it was not opened completely to the communication pipes, there was unsieved soil left in the trench that would have increased the find concentration even more. A single greyish patch measuring 20-30 cm in diameter that contained some coal was unearthed in the Stone Age cultural layer. The patch was uncovered in the profile of the communication trench in the depth of 25-50 cm from the border of the humus and the Stone Age cultural layer. Judging by the profile it can be concluded

³ On average it makes 10 finds per square meter.

that the patch is not connected to the humus layer mixed by later farming but has formed during the Stone Age habitation. The reddish-brown sand layer rich in finds that has been deposited on the supposed storage pit or hearth shows the continuing of settlement at the same place during the

Mesolithic after the pit was no longer used. The remains of this depression vividly demonstrate that by removing only the humus layer/mixed soil it is not possible to decide on the intensity of the Mesolithic habitation. This also shows that in Estonia the common canonized research method of the underbidding system (the chosen research methods determine the cost of the object and thus the competitiveness) practiced by the National Heritage Board, in the course of which only the humus horizon is removed and only the depressions and patches rich in coal that are exposed directly under the reddish-brown cultural layer are excavated through, is not sufficient for the documentation of the settlement site.

While the constructional peculiarities of the dwelling house on the plot of Varsa street 3 presumed some deepening of the ground in the eastern part of the foundation, then a 8.4 sq m big L-shaped excavation plot was made on the area of the house depression cleaned to the reddish-brown cultural layer. The finds ended in the "stained" reddish-brown sand that contained a little coal in the depth of 20-25 cm from the upper border of the cultural layer. The cultural layer was predominantly distinguished on the basis of the distribution of finds whereas no change in the tone or fraction between the layer with finds and the natural soil without finds was difficult to observe. To some extent it was possible to notice

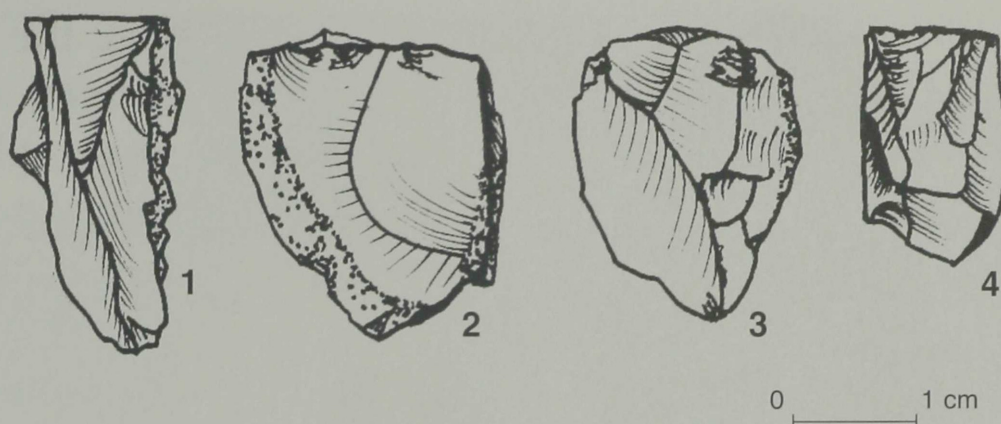


Fig. 6. Flint cores from the Mesolithic settlement site of Ihaste.
Jn 6. Tulekivinukleused Ihaste mesoliitilisest asulast.
(TÜ 640: 70, 9, 23, 159.)

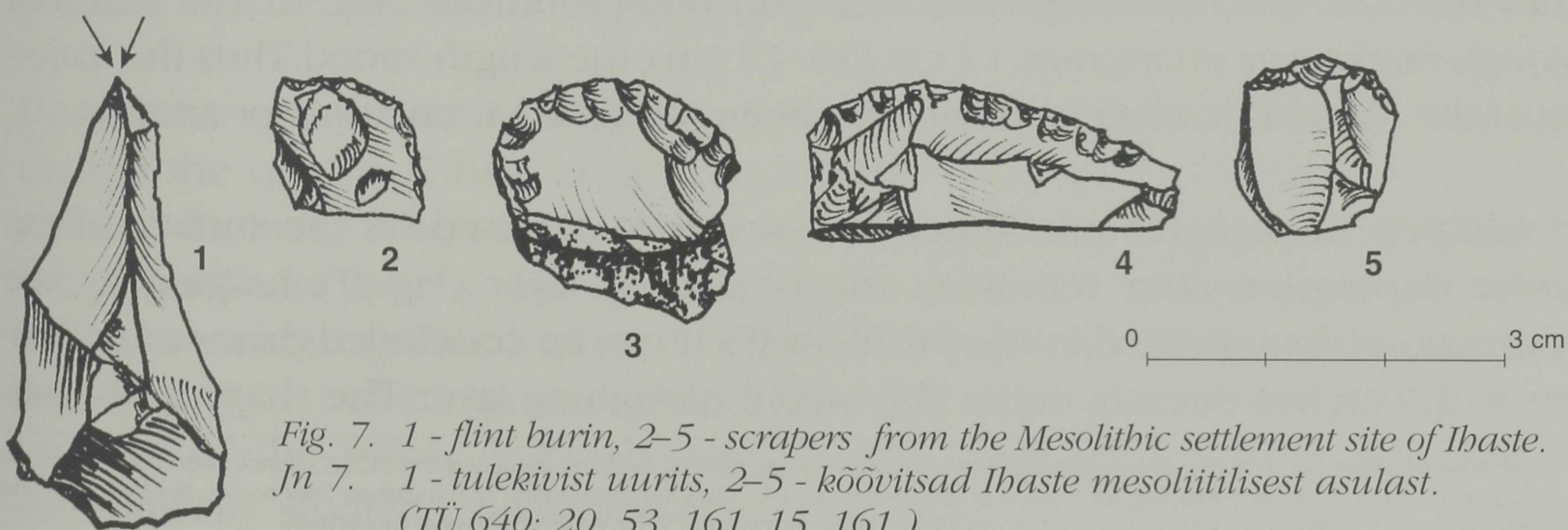


Fig. 7. 1 - flint burin, 2-5 - scrapers from the Mesolithic settlement site of Ihaste.
Jn 7. 1 - tulekivist uurits, 2-5 - kõõvitsad Ihaste mesoliitilisest asulast.
(TÜ 640: 20, 53, 161, 15, 161.)

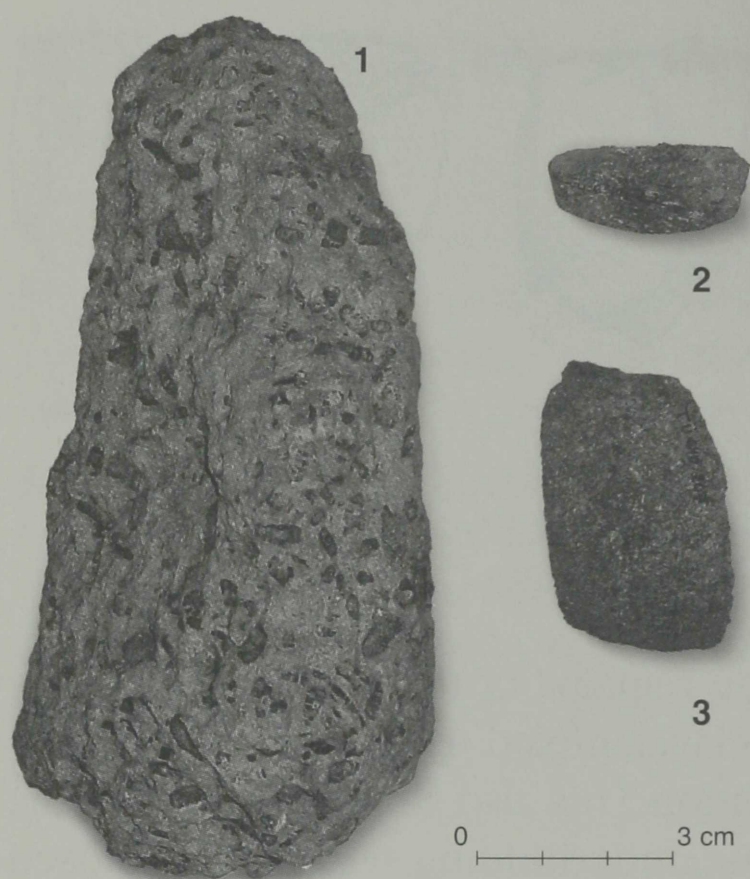


Fig. 8. Stone axe and the fragments of adzes from the Mesolithic settlement site of Ihaste.

Jn 8. Kivikirves ja kivitallbade katked Ihaste mesoliitilisest asulast.
(TÜ 640: 49, 12, 207.)

that the soil changed to more coarse-grained and darker. Of the features only single plough-marks and a trace from some later depression were found on the area of the excavation.

In August and September 2006 the authors of the present article carried out archaeological investigations on the plot of Varsa street 2: turf and ploughing layers were removed from the area of the planned house up to the intact cultural layer (approximately 210 sq. m). In the edges of the house depression the cultural layer was excavated through until the natural sand for the foundation trenches.⁴

On the territory of the future building several post-holes depressed into the Stone Age cultural layer during the last century were opened. The majority of these were filled with macadam, in addition some were betonized as well.

The majority of the post-holes were discovered from the eastern and northeastern part of the planned building where the turf and humus layer above the post-holes was very thin and filled with macadam. Altogether 6 betonized post-holes and 18 holes filled with only macadam were documented on the territory of the excavation plot (Fig. 9). Directly after removing the humus layer the whole area of the house depression was cleaned to the intact sand layer. On the whole area of the building depression plough-marks were exposed that were distinguished on the reddish sand as darker crosswise lines directed northeast-southwest and northwest-southeast (Fig. 9). The width of plough-marks was on average 12 cm (10–15 cm), the length varied. Thus the majority of the Mesolithic settlement site has been ploughed at one time or another.

In addition to plough-marks other features were exposed on the surface of the house depression after removing the ploughing layer (Fig. 9). Judging by the depressions documented in the profile walls it can be concluded that we are dealing with patches directly under the mixed ploughing layer. The shape and diam-

⁴ According to earlier confirmation of the officials of the National Heritage Board to the authors and the expert council of archaeology at the National Heritage Board (the meeting took place in Ihaste on May 19, 2006) the instauration of foundation trenches on the territory of the settlement site in Ihaste was totally excluded. All the buildings were planned to be erected on sheet foundation.

eter of the patches filled with coal varied. They usually measured between 15 and 50 cm, single features reached up to 1 m in length. According to the depressions in the profiles it may be assumed that the patches were depressed into the reddish-brown sand by 15 cm on average. Although no intact sand layer was possible to observe above the coaly patches and under the ploughing layer, they may all be Stone Age objects whose upper horizon has been ploughed away. Considering the radiocarbon datings from the coal gathered from the patches opened in 2005 (Moora *et al.* 2006, 149), we can suppose that the majority of our depressions date from a considerably later period than the Stone Age as well.



Fig. 9. The excavation cleaned to the cultural layer on the plot of Varsa 2, seen from southeast.

Jn 9. Puutumatu kultuurkihini väljapuhastatud kaevand Varsa tn 2 kinnistul. Vaade kagust.

80 cm wide excavation plots were made in the edges of the house depression for the foundation trenches, altogether a 53 sq. m big territory was opened (Fig. 9) where the cultural layer was methodically excavated through until the natural sand. The cultural layer consisted of reddish-brown sand with coal particles which contained very few (altogether 56) finds or approximately only one find per square meter. The scarcity of finds in the cultural layer refers to the periphery of the settlement site. We reached the same result during the test-pitting of 2005 when the pits dug into the area by the Hipodroomi street practically contained no finds.

During the excavations of 2006 considerably numerous find material was gathered in the course of the rescue excavations of the plot of Varsa street 3 (altogether 946 finds), whereas the inventory collected from the house depression of the plot of Varsa street 2 during removing the humus layer and digging the foundation trenches remained modest (229 finds). Leaving out the most numerous find category – bone fragments that were collected together with artefacts – the majority of the sieved through filling of the communication trench and the methodically studied excavation of plot of Varsa street 3 consists of 395 flint

finds. The most numerous of these are flakes (318), whereas blades (29), blade fragments (27) and cores (8) are less. As already visible from the material of the investigations of 1997, different techniques have been used for flaking, including detaching blades. Flaking technique is the most common. Flakes and blades have been stroke from the cores as well as pressed (for example 5, 1). Platform technique prevails.

From the artifacts of secondary processing 9 scrapers were distinguished (Fig. 7: 3, 5). All the finds were obtained from the intact reddish-brown cultural layer, a single flint flake was collected from the supposed test-pit with mixed soil from the year 2005. Nine quartz flakes and 1 blade were obtained. In addition 11 flakes of chrystalline rocks were collected that could have been used by humans. From the ground 2 fragments of stone artefacts were obtained, one of them may be a blade fragment from an adze. Three sherds of hand-moulded pottery are too small to be determined, but on the basis of the temper it could be supposed that they do not belong to Stone Age pottery. From later periods single pottery sherds with glazed surfaces were collected. The scarcity of quartz finds is hardly surprising in the context of Eastern and Central Estonian Mesolithic material. The amount of quartz among all stone finds in the find material of the excavations of 2006 is comparable with the material gathered from the test-pits dug in Ihaste in 2005 and similar to the finds from the Kivisaare Mesolithic settlement site located in the drumins of Kolga-Jaani, where it was also only 2–3 per cent of stone finds (Kriiska *et al.* 2003, 34). A little surprising is the difference of Ihaste from the Kavastu Mesolithic settlement site east of Tartu where the amount of quartz among the stone finds reached 14.3 % (Tvauri & Johanson 2006).

Altogether 229 finds were gathered from the plot of Varsa 2 during the investigations, 56 of which were obtained in the course of excavating the intact reddish-brown cultural layer in the foundation trenches, the rest, 173 finds, were gathered from the dark grey mixed ploughing layer. However, Stone Age material is prevailing among the finds (135 or more than half of all the finds) – the most numerous are flint flakes (93), blades (9) and blade fragments (16). In addition a flint core and some flint artefacts of secondary processing were obtained: 5 scrapers and a knife. Altogether 21 quartz flakes were collected. Of Stone Age artefacts a single stone flake and a blade fragment of a stone adze are worth mentioning as well (Fig. 8: 3). In addition to the finds dated to the Stone Age ample material indicating at a later, predominantly medieval and modern habitation, were gathered. Also a single hand-moulded pottery sherd was obtained, which, judging by its temper and surface finish, does probably not belong to the Stone Age, but may refer to Iron Age human activity. Numerous glazed pottery sherds, fragments of

faience vessels, burnt pieces of clay, clay daub and fragments of iron artefacts confirm the Modern Age activity. In addition USSR copecks indicating at the 20th century and cartridges, cartridge cases and bullets referring to the activity of the army were found.

DISCUSSION AND CONCLUSION

The investigations of 2006 in Ihaste confirmed the conclusions that had been presented already after the preliminary excavations in 2005. The site is definitely a Stone Age settlement site. We firmly disagree with the line of reasoning by Tanel Moora, Rünno Vissak and Kaarel Jaanits according to which the area of the trenches investigated by them in 2005 is not a Stone Age settlement site and thus the place does not need any thorough research applying excavation methods necessary for studying Stone Age settlement sites (Moora *et al.* 2006, 155). The site of Ihaste definitely deserves archaeological attention and not only from the so-called local historian point of view.

We cannot agree with the statement that there has been no cultural layer in Ihaste or it has been completely destroyed (*ibid.*). Although the upper horizon of the cultural layer has really been mixed by ploughing, the thickness of the intact Mesolithic layer preserved on the whole territory of the cape under the ploughing layer is at least 10–15 cm, in places even 20–25 cm. The cultural layer formed in sandy soil does not need to be distinguished by notably darker colour and organic-rich character as is usual in the case of settlement sites from later periods. The Stone Age cultural layer is often differentiated by a slightly perceived darker hue of the soil, the existence of coal particles, burnt bones and find material. According to the distribution density of burnt bones and stone finds which on the periphery of the settlement site is on average only 1 find per square meter, in the central part of the excavated terrace reaches 10–15 finds per square meter, but in areas richer in finds can be even many times higher (for example some test-pits of the earlier investigations of 2005 in the part of the bank terrace closer to the river), the settlement site in Ihaste is a considerably conventional Stone Age site. The amount of finds in settlement sites varies, depending on the duration and intensity of habitation, and is different within the dwelling places as well. We could take the Pulli settlement site as an example where the number of flint finds is on average only 2 per square meter and not even together with bone artefacts and animal bones does the total number of finds per square meter raise more than twice that number. Still, nobody has doubted that Pulli is a settlement site. One cannot agree with the conclusions of Moora *et al.* that a great part of flint flakes are in the freezing zone of the ground and have been crumbled on the spot after

plough has raised them to the ground (*ibid.*) and thus these are not artefacts worked on by humans. The majority of Stone Age finds were, however, obtained from the intact layer under the ploughing horizon where they had been preserved in situ and have never been moved by the plough. On the other hand the majority of the flint finds have specific and various flaking markers that cannot be formed during natural crumbling processes. The authors have gathered information on Estonian flints for some time now and collected artefacts as well as natural rocks from the currently ploughed fields and have not found naturally crumbled calcedony anywhere. Flint flakes can be found only in Stone Age sites, lumps with rounded edges occur elsewhere. True, exceptionally small pieces can be broken off from lumps but these have probably been detached not as a result of natural crumbling but mechanical crushing during agricultural activity. These lumps are more numerous on the fields rich in pebbles.

Another statement by Moora *et al.* 2006 arouses deep confusion. Namely, according to this despite the existence of “squares” rich in finds and those poor in finds, no garbage pits defining the settlement site and consisting of flint and bone flakes were found. These, however, are according to Moora *et al.* signs of Stone Age cleaning work and were necessary for the Stone Age people to prevent injuries to their feet and were thus a major marker of a Stone Age settlement site (*op. cit.*, 155). This naive opinion is unfortunately not justified neither by archaeological excavations nor cultural anthropological observations.

The function(s) of Ihaste settlement site cannot be explained on the basis of the data gathered so far. First it requires a total analysis of animal bones (the general picture is, however, affected by the fact that in 2005 animal bones were not collected systematically), thorough comparison of find material with the finds from sites with trustworthy interpretations and a series of AMS-datings in order to establish the using time of the site. By now it is completely clear that the find material of the site is varied, including flint tools for scraping, cutting and carving, cutting tools of chrystalline rocks, but also grinding stones used for making tools and certainly plenty of primary products and residue of stone working. Tools have been prepared on the spot, they have been taken there and taken from there. Cursory observation of animal bones enables to say that both fish and animals have been consumed on the spot. This is quite usual material in the context of Stone Age settlement sites of inland Estonia – in dwelling sites with shorter or longer habitation – and it does not give any basis for the supposition presented by Moora *et al.* according to which in the case of Ihaste we are dealing with a “find-place and working site of flint” (*ibid.*).

Special stone working places have not been found in Estonia nor elsewhere in Eastern Baltic. True, a couple of Estonian sites have been considered quartz working places located separately from dwelling sites (Moora 1998, 16; Valk 2005, 60), but no convincing basis for these interpretations can be found (see critique in Kriiska & Kihno 2006, 44 pp).⁵ It is common in the southeastern and eastern districts of the Baltic Sea where predominantly, and especially in the case of flint, pebbles have been used as raw material and only very scarcely rock broken from the limestone depositions. So far special stone workshops found in Europe are connected with natural massive find-places of rock where some of the flaking processes, like removing the crust, preparing the cores etc, have been carried out. In the southeastern and eastern districts of the Baltic Sea the rock has been carried as lumps to shorter- or longer-term dwelling sites which principally serve as stone workshops at the same time. In our opinion there are few possibilities to interpret it as a special flint workshop, however, much stone has been worked in the settlement site. Although according to our observations made during the excavations smaller natural flint lumps occurred in the sandy soil of the settlement site, the majority of the raw material has been carried to the site.

The exact dating of the Ihaste settlement site remains open at the moment. The flint finds from Ihaste are comparable with artefact collections intrinsic to the Late Mesolithic and Early Neolithic (so-called Narva Culture), which is dominated by local flint and where blade technique is missing among the working techniques. The cutting tools found are also characteristic to the same time periods. The abundance of blades and applying of pressure technique is in the opinion of the authors rather more typical to the Mesolithic. The latter is indicated by the absence of Narva type pottery.⁶ Before more exact radiocarbon datings arrive about the find material we assume that the site may be dated to the Middle or Late Mesolithic.

To sum up, there is no doubt that Ihaste is a settlement site which was in intensive use during the Mesolithic. The upper horizon of the settlement site is mixed by farming, but there the intact Mesolithic find-rich cultural layer has preserved, under which places richer or poorer in finds refer to the human activity of different intensity. Further investigation of the site does not mean only the increasing the number of finds as it has been claimed (Moora *et al.* 2006, 155–156), but would be important from the point of view of the research early habitation in Eastern Estonia as well as Eastern Baltic as a whole. The exact documentation and

⁵ We cannot exclude that special stone working places will be found in future.

⁶ At the same time it is possible that in short-term camp sites pottery has not been used or it has not broken to pieces there and thus left behind in sherds.

mapping of finds is especially important which, via spatial analysis, increases the interpretation possibilities to a great degree. The alleviated protection applied at the moment and methodological claims proposed by the National Heritage Board have cardinally minimized the amount of the obtained data and led the site basically to destruction.

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ARHEOLOOGILISED UURIMISTÖÖD IHASTE MESOLIITILISEL ASULAKOHAL

Kristiina JOHANSON ja Aivar KRIISKA

Ihaste mesoliitiline asulakoht asub Tartu linna piiril, Ihaste elamurajoonis, Emajõe kõrgemal terrassil väikesel neemikul Hipodroomi tänava ja jõelammi vahele jääval alal (jn 1). Esimene kiviaegne leid saadi sealt 1980. aastate algul; 1997 leiti mesoliitiline asulakoht ja neoliitilisi asustusjälgi.

Seoses elamurajooni kavandamisega toimusid 2005. a kevadel Ihaste muistisel täiendavad uuringud kultuurkihi ulatuse ja intensiivsuse täpsustamiseks ning kalkuleerimaks arheoloogiliste uuringutega kaasnevaid kulusid. Nende tööde käigus kogutud teave alusel võeti asulakoht riikliku kaitse alla, kuid uusehitiste planeeringut ei peatatud (jn 2). Mahukamad välitööd algasid samal aastal kommunikatsioonikraavide läbiuurimisega. Kaevamiste tulemusel koostati uus eksperthinnang, milles seati kahtluse alla kiviaegse kultuurkihi olemasolu. Selle tulemusel vähendati asulakohal muinsuskaitselisi piiranguid. 2006. a tehti arheoloogilist järelevalvet ja väljakaevamisi Varsa tn 2, 3, 4 ja 6 kruntidel. Neid töid koos eeluuringute tulemustega tutvustatakse käesolevas artiklis.

Esimeste Ihastes läbiviidud arheoloogiliste uuringute käigus 1997. a sügisel kaevati u 1 ha suurusele alale 35 proovauku (jn 3) ja võeti fosfaatanalüüsiks pinnaseproove. Saadud tulemus osutab intensiivsemale inimtegevusele fossiilse kaldaterrassi servaalal (jn 4). Toonasel uurimistööl oli kaks olulist tulemust: 1) selgitati välja mesoliitilise kultuurkihi olemasolu Emajõe terrassil, 2) tehti kindlaks, et kammkeraamika kilde sisaldav pinnas on toodud sinna kaugemalt. 1997. a leiti 13 tulekivileidu, üks lihvimiskivi katke ja 10 kaltsineerunud väikest loomaluu tükki. Tulekiviaineses on 2 laastu, 2 tulekivi-laastu katket ja 9 kildu. Üks nelja kitsa laastunegatiiviga laastu katke (jn 5: 3) osutab surutehnika kasutamisele ja üks laia proksimaalotsaga laastukatke (jn 5: 2) on valmistatud pehme lööktechnikaga.

2005. a eeluuringutel kaevati u 1,7 ha suurusele neemikualale 69 prooviauku (jn 2: 3). Uurimistöö näitas, et kultuurkihi kõige intensiivsem osa paikneb jõe muinaskalda (ülemise) terrassi serval neemiku lammipoolsemal nõlval, kust leiti kohati 30–40 tulekivileidu ja üle 60 põlenud luukillu šurfi kohta. Kokku saadi 268 kiviaegset leidu: 148 tulekivist, 8 kivist ja 2 kvartsist, lisaks veel 112 põlenud luukildu. Tulekivi hulgas domineerivad killud (121), vähem on laaste ja laastukatkeid (kokku 17); nukleusi on 5. Teisese töötusega esemeid on kolm: 2 kõõvitsat (jn 7: 2) ja keskuurits (jn 7: 1). Lihvitud kiviesemetest saadi kahe talva katked ja kivikirves (jn 8: 1–2). Kinnitus tõsiasi, et Ihaste mesoliitilise asula puhul on tegemist tüüpilise liivapinnale tekkinud muistisega, kus kultuurkihti on pinnase tooni järgi raske või lausa võimatu eristada. Üksnes seal, kus pinnases esineb rohkem söetükikesi, on punakaspruuni värvi liival kohati hallikaspruun tumedam varjund. Kultuurkiht eristub arheo- ja ökofaktide ning söetükkide arvukuse järgi. Kultuurkihi 20–25 cm paksune huumuserikas pealmine horisont on segatud pikaajalise kündmisega. Künnikihi all on punakaspruun kuni 25 cm paksune leide *in situ* sisaldav liivane kultuurkiht. Nii on kultuurkihi paksus paiguti 40–50 cm, mis omakorda osutab arvestatava pikkuse ja intensiivsusega kiviaegsele asustusele.

2006. a toimusid Ihaste asulakohal siinse artikli autorite juhatusel arheoloogilised uuringud Varsa tn 2 ja osaliselt ka Varsa tn 3 krundil. Varsa tn 3 krundil tehti uuringuid seal, kus MTÜ AEG ekspeditsiooni poolt puutumatu kiviaegse kultuurkihini puhastatud alale oli kaevatud arheoloogilise järelevalveta vee- ja kanalisatsioonitrass (kokku 30 m²). Kinnisobjektidest kaevati kiviaegsest kultuurkihist (25–50 cm sügavusel pealmise huumuse ja kiviaegse kultuurkihi piirist) välja 20–30 cm läbimõõduga sütt sisaldanud majapidamislohk või tulease. Päästetööde käigus kraavist väljatõstetud pinnase sõelumisel koguti 252 tulekivi- ja kvartsileidu (sh killud, laastud, tööriistad) ning 56 loomaluu tükki. Kuna Varsa tn 3 krundile rajatava elamu ehituskonstruksioonilised iseärasused eeldasid pinnase

mõningast süvendamist, siis rajati veel 8,4 m² suurune L-tähe kujuline kaevand MTÜ AEG poolt puutumatu kultuurkihi puhastatud alale. Vähesel määral sütt sisaldavas ja kohati "määrdund" punakaspruuni värvi liivas lõppesid leiud 20–25 cm sügavusel puutumatu kultuurkihi algusest. Varsa tn 2 krundil eemaldati mätta- ja künnikiht puutumatu kultuurkihi kogu planeeritava elamu alalt (u 210 m²) ning selle äärtes kaevati vundamendikraavide jaoks kultuurkiht läbi kuni loodusliku liivani (53 m²). Kaevandi alal dokumenteeriti eelmise sajandi teisel poolel rajatud 24 postiauku, künnijälgi (laius keskmiselt 12 cm) ja kuni 1 m läbimõõduga söeseid laiuke (jn 9). Leidude vähesus kultuurkihis osutab, et tegemist on asulakoha servaalaga.

Varsa tn 3 krundi päästekaevamiste käigus koguti 946 ja Varsa tn 2 krundilt 229 leidu. Jättes kõrvale loomluude katked, moodustab valdava osa Varsa tn 3 krundilt kogutud leiumaterjalist 395 tulekivileidu, mille hulgas on 318 kildu, vähem laaste (29), laastude katkeid (27) ning nukleusi (8). Tulekivi lõhestamisel, sh laastude eraldamisel on kasutatud erinevaid tehnikaid. Kilde ja laaste on nukleuste küljest lahti löödud ja ka surutud (nt jn 5: 1). Domineerib platvormtehnika. Teisese töötusega esemete hulga eristati 9 kõõvitsat (jn 7: 3, 5). Kvartsikilde ning -laaste saadi kokku 10. Lisaks koguti 11 kristalsete kivimite kildu. Lihvitud kiviesemete katkeid saadi 2, neist üks kivitalva terafragment. Kolm käsitsi vormitud savinõu kildu on määramiseks liiga väikesed, ent koostise põhjal võib oletada, et need ei ole kiviaegsed. Hilisemast ajast on pärit üksikud glasuuritud pindadega savinõukillud.

Varsa tn 2 krundilt kogutud 229 leiust saadi 56 puutumatu punakaspruuni värvi kultuurkihi kaevamise käigus vundamendikraavidest ja 173 künnikihist. Domineerib kiviaegne materjal (135 e üle poole leidudest). Arvukamalt on tulekivikilde (93), -laaste (9) ja -laastude katkeid (16). Lisaks saadi tulekivinukleus ning mõned teisese töötusega tulekiviesemed: 5 kõõvitsat ning nuga. Kvartsikilde saadi 21. Kiviaegsetest leidudest tuleb nimetada veel üksikuid kivikilde ning kivitalva terakatket (jn 8: 3). Lisaks koguti ohtralt kesk- ja uusaegsele asustusele viitavat materjali. Saadi ka üks väike käsi-keraamika kild, mis ei kuulu tõenäoliselt kiviaega, ent võiks osutada rauaaegsele inimtegevusele.

2006. aasta uurimistöö kinnitas põhijäreldusi, mille esitasime 2005. aasta eeltöö lõppedes: Ihastes on tegemist kiviaegse asulakohaga. Seega ei saa nõustuda Tanel Moora, Rünno Vissaku ja Kaarel Jaanitsa poolt 2005. aasta Ihaste välitööd kajastavas artiklis esitatud mõttekäiguga, mille kohaselt 2005. aastal uuritud trasside ala ei ole kiviaja asulakoht ning seega ei vaja koht süvitsi minevaid uuringuid kiviaegsetele asulakohtadele vajalikku kaevamismetoodikat kasutades (Moora *et al.* 2006, 155). Väide, et Ihastes kultuurkihti ei ole olnudki või on see täielikult hävitatud, on ekslik. Ehkki kultuurkihi pealmine horisont on kündmisega segatud, on puutumatu mesoliitiline kiht kogu neemiku alal künnikihi all säilinud kuni 25 cm paksuselt. Liivapinnases kujunenud kultuurkiht ei pea eristuma märgatavalt tumedama värvuse ja orgaanikarohkuse poolest, nagu on enamasti iseloomulik hilisemate perioodide asulatele. Kiviaegne kultuurkiht eristubki sageli vaid vaevu eristatava tumedama varjundi, söetükkide, põlenud luude ja leiumaterjali esinemise poolest. Otsustades põlenud luude ja kivileidude levikutiheduse järgi (asulakoha servaalal on see keskmiselt üks ja terrassi keskosa kaevandites keskmiselt 10–15 leidu ruutmeetri kohta; leiutihedamates piirkondades võib see olla ka mitmeid kordi suurem, nt mõned 2005. a eeluuringute šurfid kaldaterrassi jõe-poolses osas), on Ihastes tegemist tavapärase kiviaja asulakohaga.

Seda, milline(sed) on olnud Ihaste asulakoha funktsioon(id), on praeguseks kogunenud andmestiku põhjal veel raske kindlaks teha. Ennekoike eeldab see loomaluude põhjalikku analüüsi, leiumaterjali võrdlemist teiste usaldusväärsete muististe leidudega ning muistise kasutusaja määramiseks AMS-dateeringute tegemist. Praeguseks on selge, et Ihaste leiuaines on mitmekülgne, sisaldab tulekivist kaape-, lõike ja uuristusriistu, kristalsetest kivimitest raieriistu aga ka tööriistade valmistamiseks kasutatud lihvimiskive ning rohkesti kivitöötlemise esmaseidprodukte ja jäätmeid. Tööriistu on

valmistatud kohapeal, aga neid on sinna ka toodud ja ära viidud. Loomaluude põgus analüüs võimaldab öelda, et söödi nii kalu kui ka loomi. See on üpris tavapärane materjalikooslus Sise-Eesti kiviaja asulakohtades ning ei luba nõustuda T. Moora, R. Vissaku ja K. Jaanitsa poolt esitatud oletusega, et Ihaste puhul võiks tegemist olla tulekivi leiu- ja töötlemiskohaga.

Spetsiaalseid kivitöötlemise kohti ei ole Eestist ega mujaltki Ida-Baltikumist seni leitud. Euroopa alalt leitud kivitöökojad liituvad üldiselt kivimite massilisemate looduslike leiukohtadega, kus on läbi viidud osa lõhestusprotsesse, nagu kooriku eemaldamine, nukleuste valmistamine jms. Läänemere kagu- ja idapiirkonnas on enamasti kivimid/mineraalid toodud elupaikadesse töötlemiseks kamakate-na, mis tähendab, et teatavas mõttes on need olnud ka kivitöökojad. Ihaste puhul on meie arvates väga vähe võimalusi, mis lubaks tõlgendada seda spetsiaalse tulekivitöökojana, küll aga on sealses elupaigas rohkesti kive töödeldud.

Lahtiseks jääb esialgu ka Ihaste asulakoha täpsem dateering. Sealt saadud tulekivileiud on võrreldavad hilismesoliitikumile ja varaneoliitikumile omaste leiukogudega, milles domineerib kohalik tulekivi ja mille töötlemistehnikate hulgas puudub labatehnika. Ka leitud raieriistad on omased samale ajajärgule. Laastude rohkus ja surutehnika rakendamine on siinse artikli autorite arvates siiski rohkem iseloomulik mesoliitikumile. Viimasele osutab ka Narva-tüüpi keraamika puudumine. Kuni radiosüsiniku dateeringute valmimiseni võib leiuainese järgi oletada asula kesk- ja hilismesoliitilist vanust.