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VÄLITÖÖD
EESTIS**

**ARCHAEOLOGICAL
FIELDWORK
IN ESTONIA**

2003

Koostanud ja toimetanud
Ülle Tamla

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Cover: Bracteate of the 13th–14th century, minted in Livonia.

Back cover: Glass in lead frame (fragment of a stained glass window?) from Pirita.

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TWO IRON AGE HILL-FORTS, A SETTLEMENT SITE AND NEOLITHIC BIRCH BARK PAVEMENT OF KEAVA

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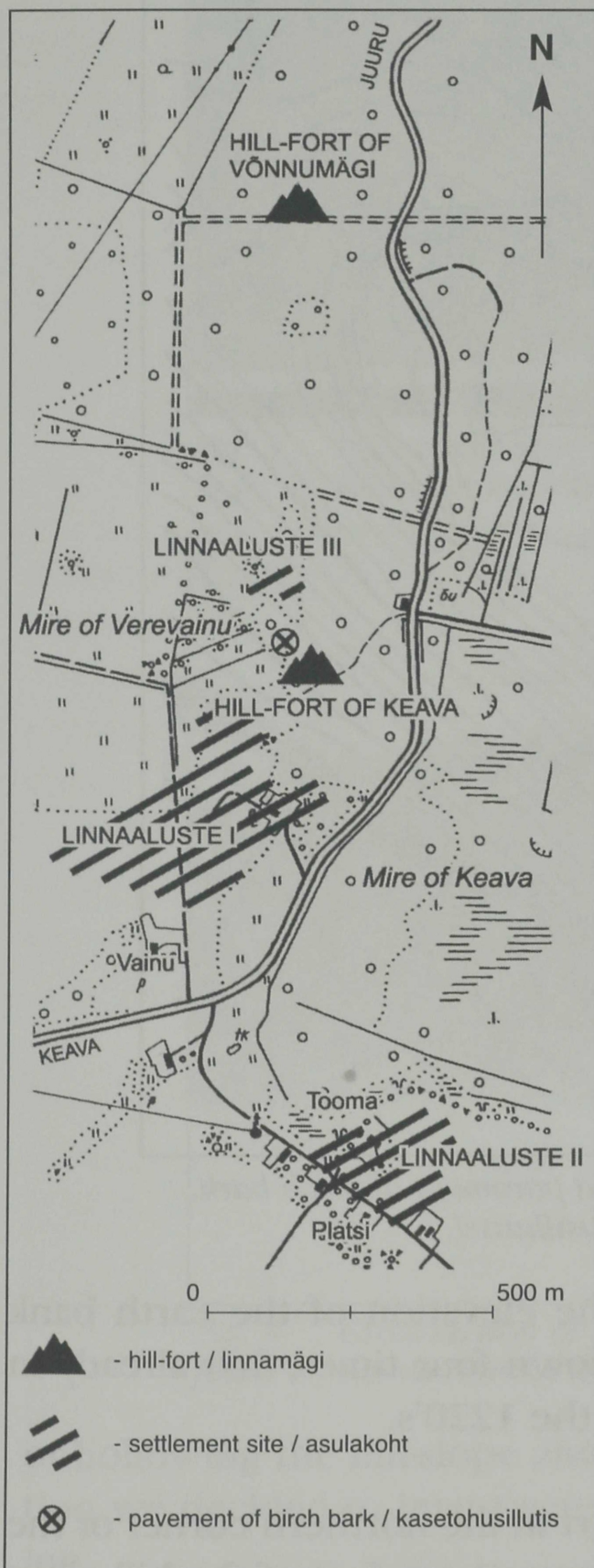


Fig. 1. Sites in the surroundings of Keava excavated in 2003.

Joon. 1. Keava ümbruses 2003. aastal kaevatud muistised.

In 2003, the archaeological fieldwork at Keava was continued according to the research programme followed already in 2001 and 2002 (Lang *et al.* 2002; 2003; Konsa *et al.* 2002; 2003). Excavations were carried out on the hill-fort of Keava (the finishing of the first excavation area and the opening of the second one), the hill-fort of Võnnumägi (two excavation areas) and settlement site II of Linnaaluste (Fig. 1). In the course of the fieldwork, a pavement made of birch bark and branches was discovered and partly excavated on the foot of the hill-fort of Keava (Fig. 2).

HILL-FORT OF KEAVA

Finishing work on the first excavation area on the hill-fort, begun in 2001, was the first task of the excavations in 2003. The lowermost layers together with the remains of defence structures in the area of the rampart were examined. It was observed that the rampart of an earlier fort had been narrower (2.6 m wide) than and located 75 cm outward of that of the later fort. Remains of a thick burned timber were preserved on the innermost wall of the rampart, and the cultural layer with finds and small stones indicating habitation extended up to this wall but not further to the area of the rampart (Fig. 3). As a result of the excavations it became evident that there had been four phases of fortification at this fort during each of

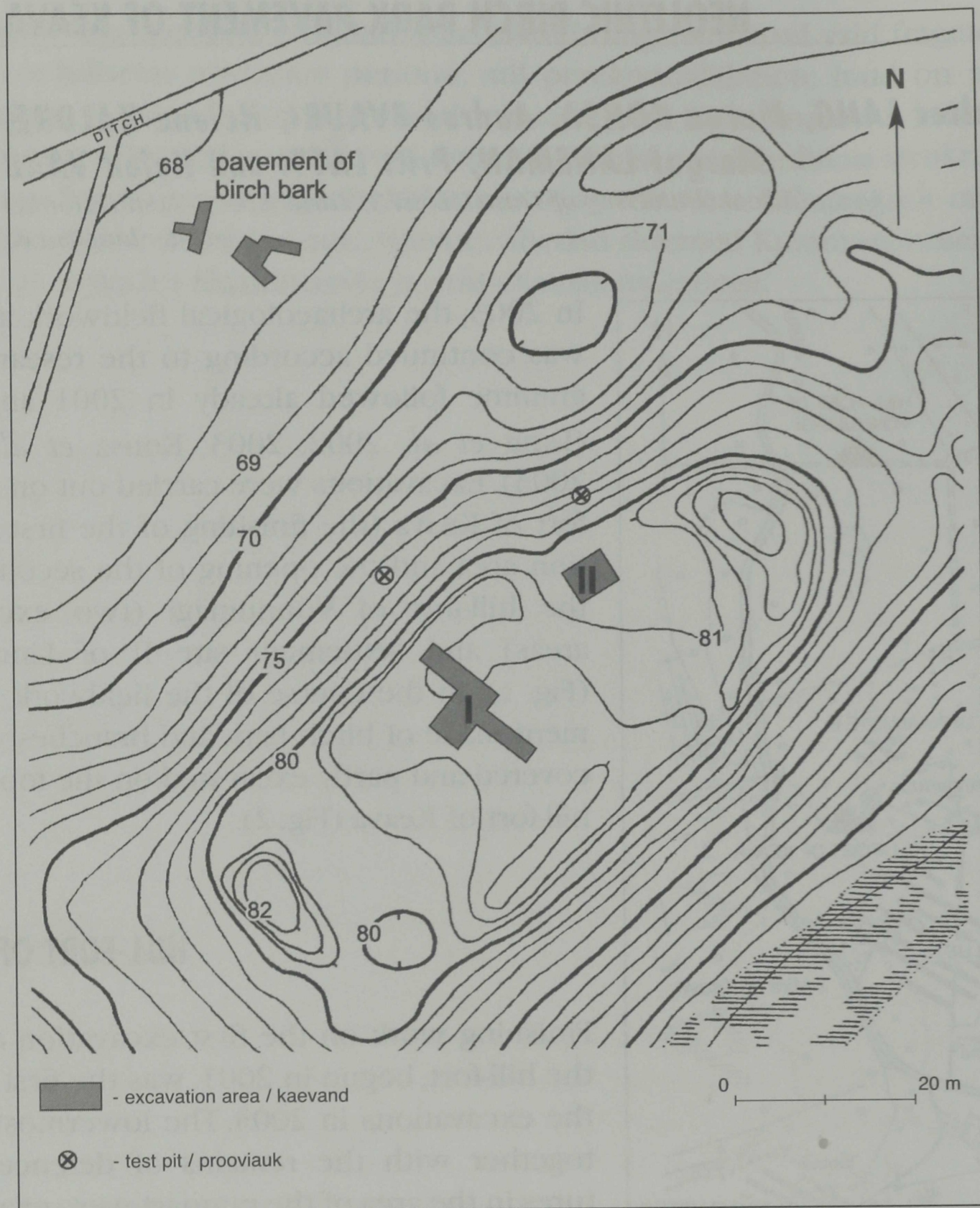


Fig. 2. Excavations on the hill-fort of Keava and pavement of birch bark.
Joon. 2. Kaevandid Keava linnamäel ja kasetobusillutisel.

which the edge of the hill was steepened by the elevation of the earth bank (Fig. 4), and, consequently, the fort was burned down four times, first already in the Migration Period (Table, date no. 5), finally in the 1220's.

It was already observed previously that the rampart in the northern corner of the hill-fort is missing for a length of ca. 20 m. On the northern foot of the hill, right in front of the place with the missing rampart, there is also a large hollow or depression of some 20 m diameter at its bottom. As such a hollow could not be of a natural origin, we suggested that it was dug by the besiegers for the purpose



Fig. 3. Lowermost layer in the area of rampart of the hill-fort of Keava.
Joon. 3. Keava linnuse küljevalli kaevandi alumine kiht.



Fig. 4. Cross-section of the rampart of the hill-fort of Keava.
Joon. 4. Keava linnuse küljevalli läbilõige.

of hollowing the hill-slope and drop the rampart. In order to check this supposition we decided to investigate the edge of the hill where the rampart was missing.

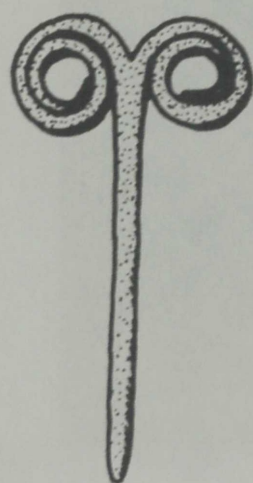
Excavation area II measuring 4.5 x 5 m was established (Fig. 5). After uncovering the area, an irregular stone cover consisting mostly of small limestone slabs with



Fig. 5. Second excavation on the hill-fort of Keava.
Joon. 5. Keava linnuse teine kaevand.

traces of burning became visible. After the removal of this stone cover the natural sand came to light in one portion of the excavation; i.e. the stone cover there was very thin. In the central part, however, was a depression, ca. 1 m wide, running crosswise through the line of the rampart and filled in with stones. It seems quite possible that there had been a narrow gateway through the rampart which was not visible before the excavation. This gateway, apparently a wicket, opened

onto the rather steep slope of the hill; yet the probable path down to the foot of the hill was destroyed by the digging of the large hollow mentioned above.



0 2 cm

Fig. 6. Bronze pin with a double-spiral head from excavation II of the hill-fort of Keava
(TÜ 1260: 26.)

Joon. 6. Prillspiraalpeaga ehtenõel Keava linnuse II kaevandist.

Archaeological finds from this excavation resemble those found in previous years, i.e. predominantly pottery, pieces of clay daub and animal bones. Among the metal artifacts there is a bronze decorative pin with a double-spiral head (Fig. 6), a bronze finger-ring with a grooved forepart, some spirals and glass beads, one of which has a gilded folio. All finds are from the Latest Iron Age. The investigation of this area will be continued in 2004.

We also checked and compared the occurrence or absence of remains of the cultural layer on the slopes of the hill by two trial pits. One of them was

dug in a section of the slope where the circular rampart of the hill-fort was preserved. No traces of a cultural layer were observed there: beneath the 35-cm thick layer of humus there was already the natural ground. The opposite was true in the section of the slope where the rampart on the top of the hill was absent: there we found an at least 1.5 m thick cover of black soil together with burnt stones. There was no doubt any more that one part of the rampart had been fallen down, into the depression made by the besiegers.

HILL-FORT OF VÕNNUMÄGI

Investigations were also started on the hill-fort of *Võnnumägi* that is located 700 m north of the hill-fort of Keava and was discovered in 2002 (Lang *et al.* 2003). The main tasks of these excavations were the establishment of chronological framework of this site and the study of the structure of the rampart. To do that, two excavations were made. The first of these (measuring 3 x 10 m) was dug crosswise through the rampart; still, we did not succeed in finishing the excavations in this area in 2003. It became evident that the rampart consists of an earthen elevation on the top of which a 2.8–3.2 m wide stone wall had been erected (Figs. 7–8). On the interior slope of the rampart there were clear traces of fire. The cultural layer inside the fort, behind the rampart, seemed to be of low intensity: only seven small potsherds and a piece of quartz were found.

The second excavation (2 x 5 m) was made on the southwestern corner of the hill-fort in order to find out the existence of fortifications along the edge and the character of cultural layer. The latter was sparse in finds there as well. Its thick-

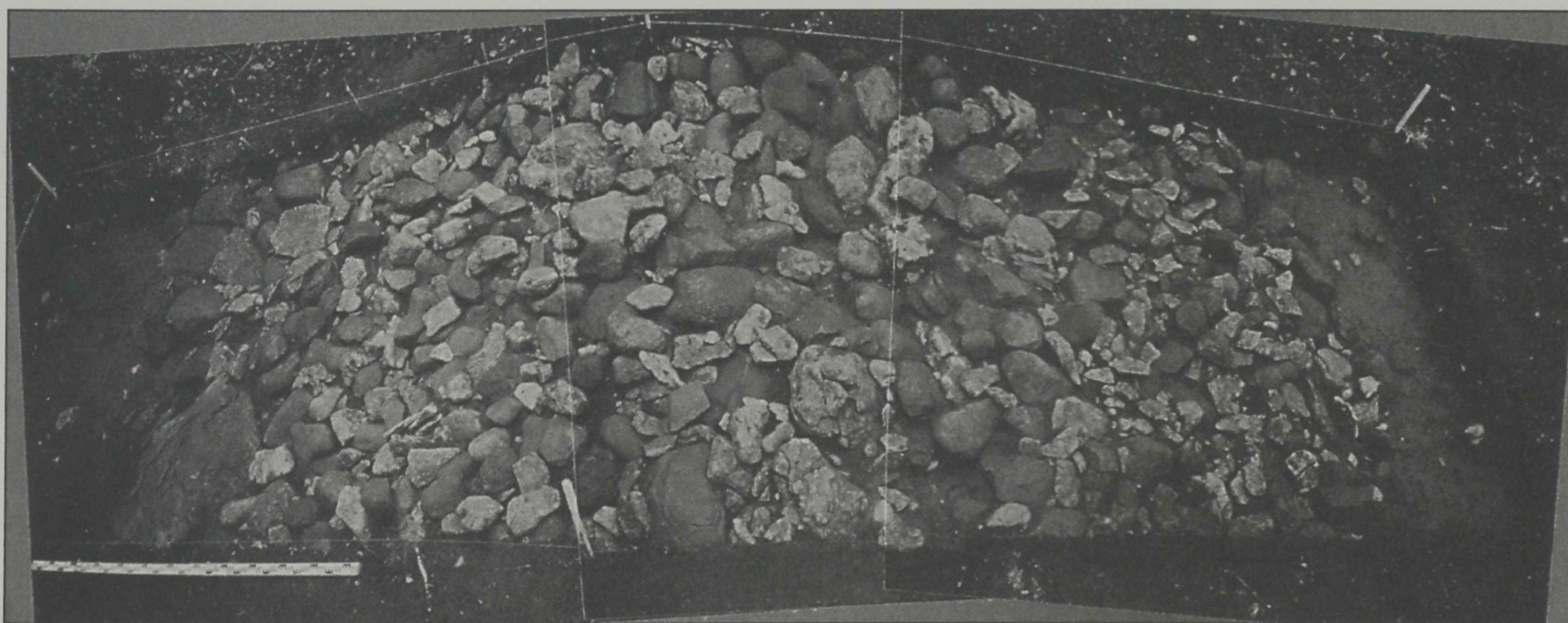


Fig. 7. Uppermost stone cover in the area of rampart of the hill-fort of *Võnnumägi*.
Joon. 7. *Võnnumäe* otsavalli ülemine kivikiht.



Fig. 8. Stone wall on the rampart of the hill-fort of Võnnumägi.
Joon. 8. Võnnumäe otsavalli kivituumik.

ness was more than 10 cm but it was disturbed (by ploughing, perhaps) and poor: only 12 potsherds, 2 fragments of animal bone and a piece of iron slag were found. No clear evidence of fortifications was observed, although there was a probable post-hole and quite a number of (smaller) stones over the excavation area.

According to first two radiocarbon samples, the hill-fort of Võnnumägi can be dated to the early Pre-Roman Iron Age (Table, dates nos. 3–4). The 19 potsherds found so far are very small and hard to identify more exactly. They originate from hand-moulded vessels, some of which had striated surfaces (Fig. 9). Such pottery can be dated to the Early Iron Age as well, thus they confirm the radiocarbon dates.

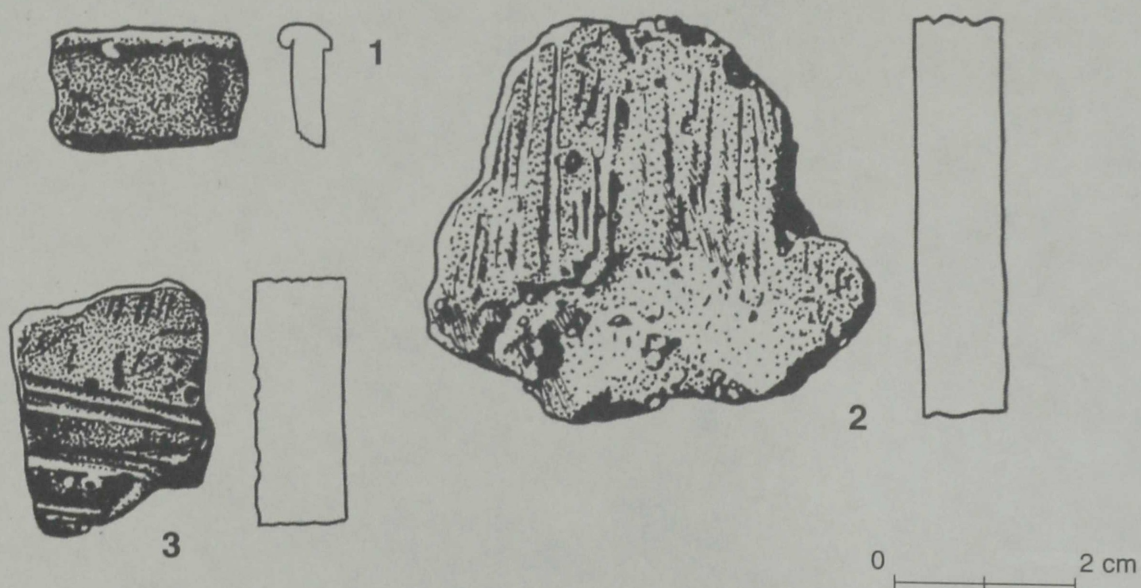


Fig. 9. Pottery from the hill-fort of Võnnumägi (TÜ 1256: 6, 9, 8.)
Joon. 9. Keraamikat Võnnumäelt.

SETTLEMENT SITE II OF LINNAALUSTE

In 2001 and 2002, open settlement sites I and III, actually two parts of the same village located close to the hill-fort of Keava, had already been investigated to some extent (Konsa *et al.* 2002; 2003). Both sites belonged to the Pre-Viking and Viking Ages, as the inhabitants left their farms on the foot of the hill-fort in the late 11th century. This could have had different causes, one of which being connected with the raid of Prince Izjaslav in the middle of the 11th century, another – with some notable changes of social, economic and settlement historical character that took place all over Estonia at that time. Our suggestion was that the inhabitants of Keava moved away from the closest vicinity of the hill-fort and settled down in what is today the village of Linnaaluste (called settlement site II of Linnaaluste in archaeological terms). In the Danish account-book *Liber Census Daniae* of the early 13th century, the place called *Litnanas* was measured with 14 ploughlands.

For the purpose of studying the cultural layer of site II, distributed over 4 ha, and to determine its sequence, an excavation (13 m²) was made between the farms of Platsi and Tooma, north of a village road. The uppermost and major part of the 40–50 cm thick cultural layer was disturbed by ploughing and contained finds of different periods, both late prehistoric and medieval. Only in one small area (2 m²) was a pile of stones discovered. After the removal of this irregular stone pile a patch of cultural layer (130 x 80 cm) came to light. Black earth filled in a depression that reached 40 cm into the original ground. In the centre of this depression there was a post-hole (30 cm in diameter) with stones for wedging. However, the cultural layer was disturbed to such an extent that the connection of this feature with any probable building structure remained unclear.

Numerous sherds originating both from hand-molded and wheel-made pots were found at the excavation area (Fig. 10). Although a portion of these potsherds resembles those found at the hill-fort of Keava, most of the ceramics are from sim-

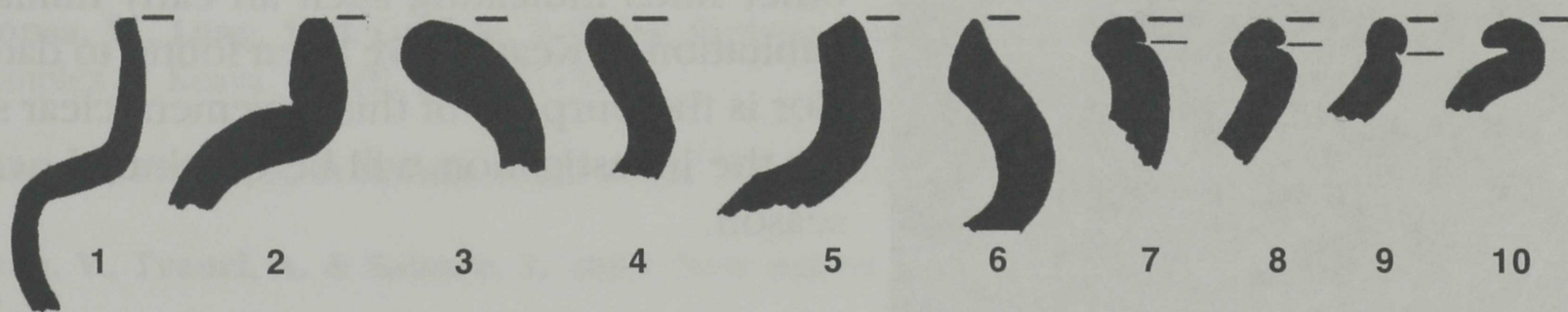


Fig. 10. Profiles of hand-molded (1–2) and wheel-made pottery (3–10) from settlement site II of Linnaaluste (TÜ 1228: 180, 238, 20, 25, 205, 103, 24, 16, 2, 11.)

Joon. 10. Käsi- (1–2) ja kedrakeraamika (3–10) profiile Linnaaluste II asulakohalt.

ple wheel-made pots of the 14th-15th centuries. One fragment of medieval stoneware imported from what is today Germany was also found. In addition, there are also bronze pincers (Fig. 11), a small whetstone, bronze spirals, a fragment of a bronze plaque and a bead of bone among the finds. The majority of these finds belong to the Latest Iron Age and Middle Ages, some also to the Modern times, as for instance a silver pin of a ring-shaped brooch.

PAVEMENT OF BIRCH BARK

Traces of a pavement were sporadically found on the edge of the Verevainu Bog, close to the northwestern foot of the hill-fort of Keava, in front of the narrow gateway discovered on the edge of the fort (see above; Fig. 2). A few-cm thick layer of birch bark



Fig. 12. Detail of the pavement of birch bark.

Joon. 12. Osa kasetohusillutisest.

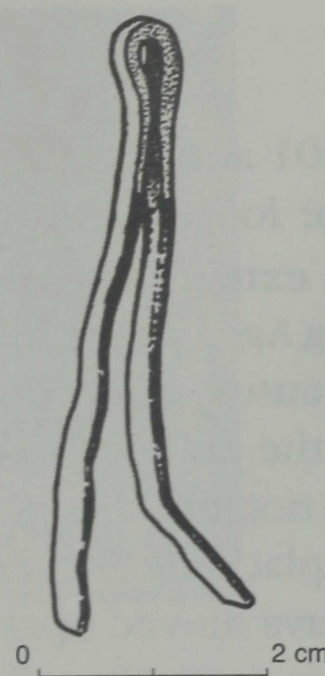


Fig. 11. Bronze pincers from settlement site II of Linnaaluste (TÜ 1228: 72.)

Joon. 11. Pronksist pintsetid Linnaaluste II asulast.

(Fig. 12) was discovered under a 50-60 cm thick peat cover, located 16 metres west of the foot of the hill. It became clear that the pavement, which covered an area measuring at least 15 x 4 m, was built of both birch bark and branches. At least in some places two-three layers of birch bark were observed, located on top of each other, indicating that this pavement was repeatedly renewed. According to two radiocarbon samples (Table, dates nos. 1-2), this pavement was already built in the early fifth millennium BC, i.e. in the Early Neolithic. No other finds indicating such an early human habitation in Keava have been found to date. Nor is the purpose of this pavement clear so far; the investigation will be continued next season.

CONCLUSIONS

In 2003, both the construction and stratigraphy of the rampart of the hill-fort of Keava were finally clarified. It was also established that one part of the northernmost rampart together with a narrow gateway was brought down by the siegers. The investigation of the hill-fort of Võnnumägi was also begun and its Pre-Roman Iron Age date established. The settlement site Linnaaluste II belonged entirely to the 2nd millennium as expected previously. A real surprise was the discovery of a Neolithic birch bark pavement on the edge of the Verevainu Bog. The excavations at Keava will be continued next season.

Table. Radiocarbon dates from different sites of Keava.

Tabel. Keava kaevamistelt kogutud söeproovide analüüsitulemused.

No	Site and find conditions	Lab. no.	C ¹⁴ date	Calibrated date (1 sigma)	Calibrated date (2 sigma)
1	Pavement; birch bark	Tln-2796	5735±92	4690-4460 BC	4780-4360 BC
2	Pavement; peat beneath the central layer of birch bark	Tln-2797	5913±80	4910-4690 BC	4990-4550 BC
3	Võnnumägi; charcoal from ruins of the wall	Tln-2809	2265±61	400-200 BC	410-160 BC
4	Võnnumägi; charcoal from ruins of the wall	Tln-2810	2308±65	410-200 BC	800-150 BC
5	Hill-fort of Keava; burnt layer of the earliest fort	Tln-2808	1561±62	420-560 AD	360-640 AD

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KAKS RAUAAJA LINNAMÄGE, ASULAKOHT JA NEOLIITILINE KASETOHUSILLUTIS KEAVAS

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2003 jätkati asustusrheoloogilisi uuringuid Keavas: kaevati Keava linnamäel (lõpetati 2001. a. avatud vallikaevand ning alustati teise kaevandiga), Võnnumäe-nimelisel linnamäel, Linnaaluste II asulakohal ning samal suvel avastatud kasetohust sillutisel (joon. 1–2).

KEAVA LINNAMÄGI

Keava linnamäe küljevalli läbilõike alal uuriti kõige sügavamaid kihistusi. Selgus, et vallis võib ühtekokku eristada nelja kindlustuskihti, kusjuures varasematel järkudel oli vall olnud madalam ja kitsam (2,6 m; joon. 3–4). Radiosüsiniku dateeringu põhjal võib vanima ehitusjärgu dateerida juba rahvasterännuaega, kõige hilisem hävitati aga saksa-taani vallutuse käigus.

Teine kaevand rajati linnamäe põhjaserval kohta, kus küljevalli pole olnud või ei ole seda säilinud. Selle koha vastas linnamäe jalamil on suur, mitmekümne meetrise põhjaläbimõõduga kunstlik lohk. Oletati, et suur lohk ja valli puudumine peavad olema omavahel seotud, s.t linnuse piirajad on mäe alt õõnsaks kaevates kukutanud ka osa vallist. Seetõttu rajasime mäeveerele 4,5 x 5 m suuruse kaevandi, kus paljandus väga ebakorrapärane ja õhuke kivilade, mis koosnes peaasjalikult väikestest põlenud paekivitükkidest (joon. 5). Kaevandi keskel läks risti läbi valliaseme u. meetri laiune nõgu, kuhu suuremad kivid olid kusagilt kõrgemalt risti-rästi sisse kukkunud. Arvatavasti oli tegu muistse kitsa väravakohaga, mis avanes linnamäe küllaltki järsule nõlvale.

Lisaks kaevasime linnamäe nõlvale kaks proovikaevandit: ühe sinna, kus ülal oli küljevall olemas, ja teise kohta, kus vall eeldatavasti oli maha varisenud. Tulemused kinnitasid ülalmainitud oletust täielikult. Esimeses augus kultuurkiht puudus, aluspõhja moreeni kattis kuni 35 cm paksune pruun huumusekiht. Teises augus tuli päevavalgele aga vähemalt pooleteise meetri paksune kultuurkiht, täis samasuguseid kive, nagu neid võis leida ülal vallikaevandis.

II kaevandi leiumaterjal sarnaneb I kaevandist leituga, s.t domineerivad keraamika, savitihendid ja loomaluud. Esemeleidudest võiks eraldi nimetada pronksist prillspiraalpeaga linikukee nõela (joon. 6), soonitud esiosaga pronkssõrmust, mõningaid pronksspiraale ning paari klaashelmest, millest üks on kaunistatud kuldfooliumiga.

KEAVA VÕNNUMÄGI

2003. a. alustati kaevamisi eelmisel suvel avastatud Keava Võnnumäel. Peamiseks uurimisülesandeks oli välja selgitada linnuse kaitsevalli ehitus ja vanus. Selleks rajati 3 x 10 m suurune I kaevand risti üle valli. Selgus, et vall on olnud laotud küllaltki suurtest raud- ja paekividest, selle tuumikosa laius oli 2,8–3,2 m (joon. 7–8). Kultuurkiht valli kõrval oli äärmiselt väheintensiivne, leiumaterjal napp. II kaevand (2 x 5 m) rajati linnamäe edelaservale, et kindlaks teha kultuurkihi ja kaitseehitiste olemasolu. Selgus, et mingit kaitseehitist selles osas ei olnud ning kultuurkiht oli samuti äärmiselt nõrk ja segatud. Radiosüsiniku analüüside põhjal otsustades kuulub Võnnumägi varasesse eelrooma rauaagega. Vähesed savinõukillud, millest osa on riibitud pindadega (joon. 9), sobivad selle dateeringuga hästi kokku.

LINNAALUSTE II ASULAKOHT

Varasematel aastatel uuriti Keava linnamäe juures olevat Linnaaluste I ja III asulakohta, mis kuuluvad eelviikingi- ja viikingiaega. Sellel suvel alustati uuringuid II asulakohal, mis paikneb praeguse Linnaaluste küla majade vahel u. 4 ha suurusel alal. 13 m² suurune kaevand rajati Platsi ja Tooma talude vahelisele alale, külateest põhja poole. Kuigi ülemine osa kultuurkihist oli kündmisega segamini pööratud, leiti sealt siiski mitmekesisist materjali erinevatest aegadest. Ainult 130 x 80 cm suurusel alal oli säilinud kultuurkihti, mis ulatus 40 cm sügavuseni esialgsesse maapinda. Lohu keskel avastati 30 cm läbimõõduga postikiilustik, kuid seda ei õnnestunud siduda ühegi ehitisega.

Lisaks rohkearvulistele savinõukildudele nii käsitsi kui ka kedral vormitud nõudest (joon. 10) leiti väike luisk, pronksist pintsetid (joon. 11) ning rõivakaunistuseks kasutatud pronksspiraale. Enamik kogutud materjalist kuulub hilisrauaaega ning keskaega, üksikud esemed osutavad ka uusaegsele asustusele.

KASETOHUSILLUTIS

Sillutise jäänused – õhuke kasetohu ja roigaste kiht – avastati juhuslikult linnuse loodekülgel, jalamist 16 meetri kaugusel, Verevainu soo servas (joon. 2). Pinnaseks on siin niiske turvas; omal ajal oli siin olnud soo. Proovikaevamistel selgus, et tegu on ulatusliku sillutisega, mis kattis vähemalt 15 x 4 m suuruse ala. Muistise täpsema iseloomu kindlaks tegemine jääb 2004. aastasse, kuid on juba selge, et see koosneb roigastest ja kasetohust, mille ribad on hoolikalt üksteise kõrvale asetatud (joon. 12). Kohati oli võimalik jälgida, et kasetohukihid paiknevad mõne sentimeetriste vahedega üksteise peal – järelikult on seda sillutist mitu korda uuendatud ja parandatud. Kahe radiosüsiniku analüüsi põhjal kuulub kõnealune sillutis varaneoliitikumi, 5. aastatuhande esimesse poolde eKr.

KOKKUVÕTE

2003. a. selgitati lõplikult välja Keava linnamäe küljevalli ehitus ja stratigraafia. Ühtlasi selgus, et põhjanurgas olev küljevall koos seal leidunud väravaga oli piirajate poolt maha kaevatud. Õpiti lähemalt tundma Võnnumäe linnamäge ning avastati, et tegu on eelrooma rauaaja muistisega. Linnaaluste II asulakoht osutus ootuspäraselt kuuluvaks 2. aastatuhandesse. Tõeliseks üllatuseks kujunes aga varaneoliitilise kasetohusillutise avastamine Verevainu soo servas. Välitööd Keavas jätkuvad järgmisel hooajal.