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2000. aasta välitööde tulemused

**ARHEOLOOGILISED
VÄLITÖÖD
EESTIS**

**ARCHAEOLOGICAL
FIELD WORKS
IN ESTONIA**

2000

Koostanud ja toimetanud
Ülle Tamla

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THE HILLFORT OF KALANA

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In the written sources of the early 13th century, Mõhu (*Mocha*, *Moge*) is mentioned as one of the small counties of Central Estonia. It covered mainly the area of the later Põltsamaa parish. The belonging of the Kursi parish to Mõhu is doubtful since it has been considered, historically as well as geographically, rather a part of Vaiaamaa (Kenkmaa 1933, 70). Hitherto the supposition about an ancient hillfort having stood on the territory of the Põltsamaa medieval order castle has not been confirmed. However, an ancient Estonian hillfort is known to have been in Kalana, 10 km north of Põltsamaa, where up to now only small-scale provisional investigations have been carried out (Lavi 2000). To obtain more information about the date and the nature of the cultural layer of this hillfort of a small county, trial excavations were carried out on the Kalana Otisaare hillfort in connection with the project "Centre and periphery: town, hillfort, land and power in Estonia from pre-historic period to the Middle Ages."

To the east of the Põltsamaa River, in the slightly wavy moraine relief of the neighbourhood of Pajusi – Kalana, higher hillocks and ridges offering favourable natural defence for an ancient hillfort are rare. The ancient hillfort was founded on a relatively small hillock west of Kalana (Fig. 1 and Photo 1). In 1920ies the hillfort was still surrounded by quite a marshy meadow (Allik & Markus 1923, 46). The hillfort covers about 2500 sq. m of the higher northern end of the 200 m long north-south oriented ridge. In the east and south it was protected by 7–8 m high, sporadically quite steep slopes. It is hard to explain the traces of only slight fortifications in the SW part of the hillfort, where the relatively mild slopes complicated the defence. It is possible that the original appearance of this area was damaged later when building the road along the slope. In the south, the round end wall, with a height up to 2 m from the outer foot, separates the hillfort from the lower part of the ridge. Since the eastern part of the end wall is somewhat higher, it might indicate a former tower-like construction. Additionally, the southern side of the hillfort was protected by a ditch, 28 m long and up to 12 m wide in the upper part, extending crosswise through the ridge. Its depth was barely 1–1.5 m in the lower part of the ridge and 3 m on the hillfort side. While the southern fortifications are still conspicuous, the area of the enclosure of about 2000 sq. m, mostly lacking the cultural layer, makes an indistinct impression. In the northern part of the enclosure lies a 2 m high natural knoll.

RESULTS OF INVESTIGATION

The trial excavation was dug as a trench, 1 m wide, traversing the lower western part of the southern end wall from the enclosure to the outer foot of the wall (Fig. 1). In the excavation area measuring 20 sq. m, the thickness of the cultural layer varied from 40 to 150 cm. The earliest traces of settlement came to light under the 1-1.5 m thick filling layer outside the wall. In the central part they merge into the later cultural layer below the wall (Fig. 2: A). At the foot of and outside the southern wall, the earlier layer is a greyish streak, about 10 cm thick, which grows into a 30-40 cm thick layer containing charcoal. In this layer, at a depth of 120 cm, traces of east-west oriented brands and transverse remains of decayed wood were discovered, as well as a fragment of hand-moulded pottery (AI 6454). The C^{14} analyses of the brand (Tln. 2552) gave the result 1564 ± 60 BP, with calibration (1 sigma) AD 427-543 (Fig. 2: B). While the earlier layer at the outer foot of the wall evidently comes from the original vegetation on the hillock, the thicker layer in the higher part of the wall, together with the brand remains may indicate the wooden fortifications of

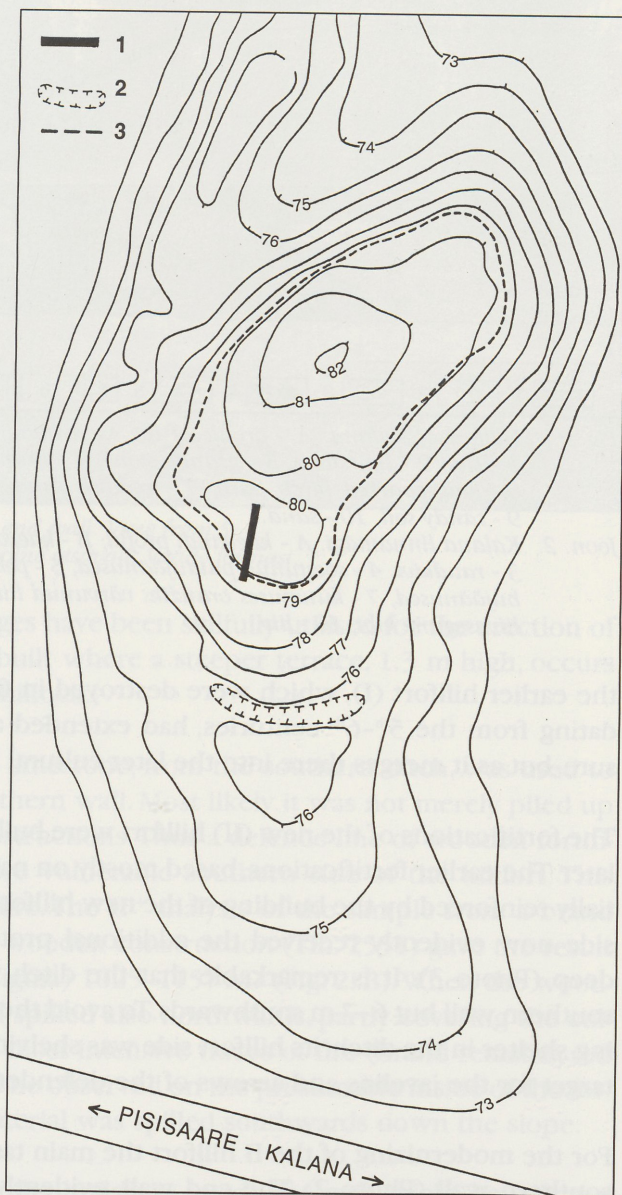


Fig. 1. Hillfort of Kalana. Plan of the hillfort. 1 - excavation plot of 2000, 2 - ditch, 3 - hillfort area.

Joon. 1. Kalana linnamäe plaan. 1 - 2000. a. uurimiskaevand, 2 - kraav, 3 - linnamäe ala.

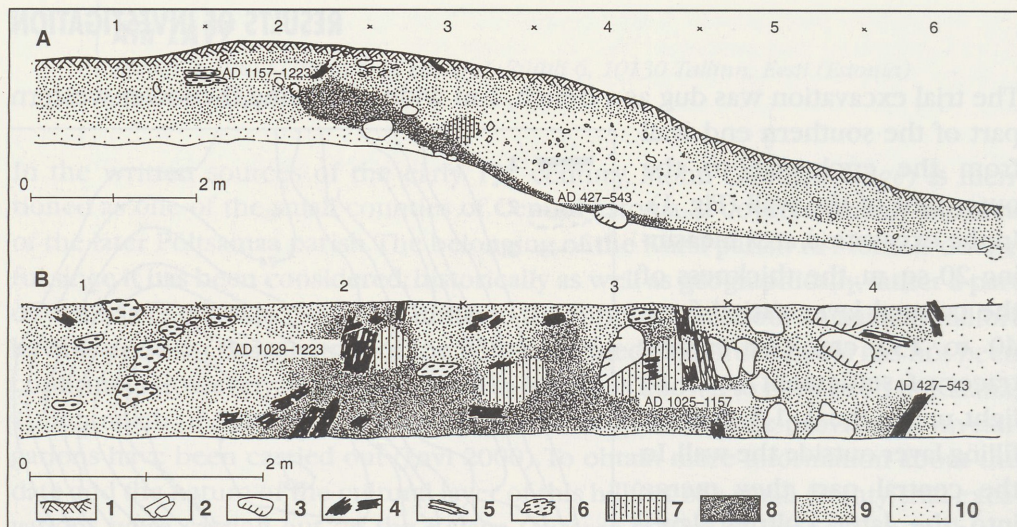


Fig. 2. Hillfort of Kalana. A - profile of the excavation; B - general plan of the excavation. 1 - sod, 2 - limestone, 3 - granite stone, 4 - brand remains, 5 - rotten beam remains, 6 - half-charred birch bark, 7 - reddish sand, 8 - charcoal and brand fragments, 9 - sandy soil, 10 - sand.

Joon. 2. Kalana linnamägi. A - kaevandi profiil; B - kaevandi üldplaan. 1 - kamar, 2 - paekivi, 3 - raudkivi, 4 - söestunud puidujäänused, 5 - pehkinud puit, 6 - poolsöestunud kasetobujäänused, 7 - kuumuses oranžiks värvunud liiv, 8 - söe- ja tukijäänused, 9 - mulla-liivasegune kiht, 10 - liiv.

the earlier hillfort (I), which were destroyed in fire. Most likely the earlier layer, dating from the 5th-6th centuries, had extended also further towards the enclosure, but as it merges there into the later cultural layer, it is no longer discernible.

The fortifications of the new (II) hillfort were built on the hillock about 500 years later. The earlier fortifications, based mostly on natural preconditions, were essentially reinforced by the building of the new hillfort. The more vulnerable southern side now evidently received the additional protection from a ditch up to 3 m deep (Photo 3). It is remarkable that the ditch was not dug at the foot of the southern wall but 6-7 m southwards. To avoid the possibility of the assailants finding shelter in the ditch, its hillfort side was shelving, to leave the assailants an easy target for the javelins and arrows of the defenders.

For the modernizing of the II hillfort the main task was the reinforcement of the southern wall (Photo 2). The end wall, evidently consisted of wooden fortifications and the buildings behind them, on the enclosure side. Presently the area is 8-9 m wide. The 40-70 cm thick cultural layer is rather dark, containing charcoal fragments, brand remains, limestone turned orange by heat, and crumbling gran-



Photo 1. Hillfort of Kalana. Southern end wall. View from S.
Foto 1. Kalana linnamägi. Lõunapoolne otsavall. Vaade lõunast.

ite cobbles. The natural advantages have been skilfully utilised for the erection of the fortifications: the wall was built where a steeper terrace, 1.3 m high, occurs on the rather mild slope of the hillock.

The soil mixed with gravel and limestone, from the southern ditch, was used to reinforce the outside of the southern wall. Most likely it was not merely piled up but used to fill the wooden constructions. Thus a defence line of wooden fortifications was formed on the more vulnerable southern side of the hillfort. This fortress was also destroyed by fire. The C^{14} analysis of the sample from a brand fragment from the inside of the wooden construction (Tln. 2551) gave the result 950 ± 44 BP, with calibration (1 sigma) 1025–1157 AD (Fig. 2: B). When the wooden constructions burned, the fill spilled also northwards, partly covering the cultural layer of the enclosure. The most intensive traces of fire (brand remains, red burnt sand and limestone) could be observed on the presumable inside of the fortifications. Most of the filling material was spilled southwards down the slope.

Deciding by the brand remains, the buildings inside the wall might have had a diameter of 3–4 m, built of horizontal beams, most likely corner-jointed. However, a post framework was also used in the fortifications. This is indicated by a trace of a post, with a diameter of about 20 cm and surrounded by wedges of fist-sized



Photo 2. Hillfort of Kalana. Sand and gravel layer, 1.2 m thick, brought from the ditch, can be observed in the profile of the outer slope of the southern end wall. View from S.

Foto 2. Kalana linnamägi. Lõunapoolse otsavalli välisnõlva profiilis on nähtav kraavist siia toodud kuni 1,2 m paksune liiva-kruusakihit. Vaade lõunast.

cobbles at the inside of the wooden fortification. The C¹⁴ analysis of the massive charred beam fragment (Tln. 2548) discovered in the lowest layer of the buildings at the wall gave the result 889±44 BP, with calibration (2 sigma) 1029–1223 AD. The analysis of a brand remain from the house ruins (Tln. 2547) gave the result 864±44, with calibration (1 sigma) 1157–1223 AD. At the inside of the end wall, half-burnt fragments of birch bark were found in a 4 m wide area throughout the cultural layer (Fig. 2: B). The 25–30 cm long birch bark fragments were also placed below the bottom beams of the buildings, to protect them from the damp of the soil. They could also have been used to make the roofs waterproof. The abundance of birch bark remains might also be explained by the fact that the area in question might have been used to store various building materials, including birch bark.

The other sides of the hillfort lack the traces of walls. Evidently the rather high and steep slopes of the hillock still offered enough protection, so that simple wooden fortifications were sufficient. Still, the mixed covering layer which can be observed at the sides of the enclosure area indicates that the upper part of the slope was elevated and most likely also steepened.



Photo 3. Hillfort of Kalana. Ditch on the southern side. View from NW.

Foto 3. Kalana linnamäe lõunapoolsel küljel asuv kraav. Vaade loodest.

CONCLUSIONS

The absence of a cultural layer, pottery and other finds as well as osteological material characteristic of garbage indicates that the hillfort was not permanently inhabited. It means that it may have been a refuge hillfort used only on the occasions of danger. Still, a small guard must have lived there permanently, since such a labour-intensive construction could not be left completely unguarded.

According to the results of investigations, the early, quite slight fortifications of the hillfort or fortified refuge were erected here in the 5th-6th centuries AD. The site lacked walls and other traces of earthwork undertaken to improve the defensive powers of the hillfort. The new fortifications were erected on the hillock in the first centuries of the 2nd millennium. It is possible that the necessity for a fortified foothold reappeared in the 1st half of the 11th century when Prince Jaroslav of Kiev Russia captured the hillfort of Tartu. It is quite likely that the expeditions of Russians undertaken from the new foothold reached also the county of Vaiaamaa, north of Emajõgi and threatened also its western neighbour Mõhu. In Kalana, the fortifications were especially reinforced on the southern side by the

ditch and the end wall. Reflecting on the calibrated C¹⁴ dates of the brand remains from the hillfort of the beginning of the 2nd millennium, it seems that the hillfort was destroyed in the late 12th century or, more likely, in the early 13th century during the period of the ancient struggle for independence. Relying upon Henrik's Livonian Chronicle, 8000 crusaders came on a foray to Vaiga and Järvamaa. Returning with the loot and captives "... they burned the villages and counties in the neighbourhood, namely Mõhu and Normegunde..." and traversing then the frozen Lake Võrtsjärv they returned to Livonia (HCL XV: VII). The inhabitants of Mõhu were baptized 8 years later, in 1220, by the priests Henrik and Theoderich. Staying in Mõhu for the whole week they baptized 300–500 people a day, both men and women. Judging by this, the population of Mõhu must have numbered 2100–3500 at the beginning of the 13th century. Comparing the datings of the later layer of Kalana hillfort and the data from the chronicle we may assume that the fortifications of Otisaare hillfort were burned during the crusaders' foray in 1212. Neither Henrik's Livonian Chronicle nor any other written source mentions the capturing of Kalana hillfort. It is possible that the hillfort with poor natural defence and slight fortifications could not resist long the well developed sieging technique of the crusaders and was captured rather easily, thus not being mentioned in the chronicle.

Kalana district was a rather secluded farming settlement unit, with a diameter of about 2.5 km, surrounded by woods and marshes, in the northern part of a fertile moraine plain of Põltsamaa. The traces of the ancient centre of Kalana – a settlement layer and a couple of cup-marked stones – can be observed at the northern end of the Kalana-Sulustvere road, on the southern and northern slopes of a shallow depression. The hillfort of Otisaare lies about 1.7 km WNW of the ancient settlement of Kalana. Considering the rather secluded location of the hillfort in the periphery of the county as well as its small size and slight fortifications, we have no reason to assume that it was of any great significance in ancient Mõhu. It seems to have been rather a fortified refuge erected by the inhabitants of Kalana and the nearest neighbourhood, and used in the times of peril.

The ancient centre of the small county of Mõhu apparently was on the territory of the present-day Põltsamaa. In the NW part of the town, mainly on the western bank of Põltsamaa River, a rather extensive ancient settlement layer has been discovered. In 1939, a hoard of about 500 Arabian coins was found here in the course of tilling the land. The hoard dates from the mid-10th century (Tõnisson 1962, 207). It is remarkable that the castle of the order, as the medieval power centre, was built in the 2nd half of the 13th century (Tuulse 1942, 148; Aluve 1993, 24) just in the area which had become a regional centre already in the prehistoric period.

At the beginning of the 13th century, Möhu as well as the other small counties of Central Estonia, were protected from external menace by the larger neighbouring counties. Compared to the border districts, the forays were rarer and apparently did not warrant the building of fortifications. Analogous traits can also be observed in other ancient counties of Central Estonia. For example no ancient hillfort has been discovered in the small county of Nurmekund; in the county of Järvamaa, which is remarkably greater, only the hillfort of Jäneda is definitely known. When discussing the origin and development of hillforts in general, the importance of social factors has been emphasised, but in estimating the role of the refuge hillforts used only in times of peril, their defensive function evidently appears to have been more important.

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KALANA LINNAMÄGI

Ain Lavi

13. sajandi alguse kirjalikes allikates on mainitud Möhu (*Mocha*, *Moge*) Kesk-Eesti ühe väikemaakonnana, mis hõlmas peamiselt hilisema Põltsamaa kirikukihelkonna territooriumi. Põltsamaalt 10 km põhja pool asub Kalana Otisaare linnamägi, mida seni polnud arheoloogiliselt uuritud. Saamaks informatsiooni muistise ajalise kuuluvuse ja kultuurikihi iseloomu kohta, toimusid 2000. aastal Kalana linnamäel proovikaevamised uurimisprojekti "Keskus ja ääremaa" raames.

Kalana linnamägi asub Kalana külast u. 1 km läänesihis u. 200 m pikkusel künkjal, mida varem ümbritses soine heinamaa (joon. 1 ja foto 1). Muinaskants on rajatud künka põhjapoolsele kõrgemale otsale nii, et ida ja põhja poolt tõhustasid kaitset 7–8 m kõrgused, kohati üsna järsud nõlvad. Lõuna poolt on linnamägi eraldatud madalamast lauge nõlvaga künkaosast kuni 2 m kõrguse ida-lääne suunalise valliga (foto 2). Täiendavalt kaitses linnamäge künka lõunaosast risti läbi kaevatud 28

m pikkune ja 1–3 m sügavune kraav (foto 3). Linnamäe 1900–2000 m² suurune hooviala on jäänud ebatasaseks ning kultuurkihti seal enamasti pole.

Uurimiskaevand rajati linnamäe lõunapoolse otsavalli veidi madalduvale lääneosale eesmärgiga saada läbilõige hooviala kultuurkihist kuni valli välisjalamini. 20 m² suuruses kaevandis oli kultuurikihi paksus erinev, ulatudes 40–150 cm. Varasemad asustusjäljed tulid nähtavale otsavalli välisküljel 1–1,5 m paksuse täitekihi alt (joon. 2: A). Lõunavalli jalamil ja välisküljel kujutas varasem kiht endast keskmiselt 10 cm paksust hallikat viirgu, mis künka kõrgemal osal muutus 30–40 cm tusedusega söepuru ja tukijäänuseid sisaldavaks kihiks. Tukkidest võetud söe C¹⁴ analüüs andis selle kihi vanusemääranguks 1564±60 BP ja kalibreeritult aastad AD 427–543. Tõenäoliselt oli sellel ajal ehitatud siia suhteliselt nõrk puitkindlustus (I linnus), millel puudusid mullatöödega kuhjatud vallid.

Uus kindlustus (II linnus) rajati samale künkale teise aastatuhande algul. Vastu ohustatud lõunakülge kaevati siis kraav (foto 3) ning lõunapoolse otsavalli alale rajati palktaranditest kaitsevöönd, mis täideti kraavist pärit liiva ja kruusaga. Linnuse mahapõlemisel valgus osa täiteliivast hoovi suunas, põhiliselt aga siiski mööda kallakut lõuna poole, moodustades valli väliskülje profiilis selgelt nähtava kuni 1,3 m paksuse liivakihi (foto 2). Kaitsevööndi taha jäi rida 3–4 m läbimõõduga rõhtpalkehiti, mida ohu korral kasutati varjumiseks ning rahulikumal ajal panipaikadena. Palkehitiste hävimisel moodustus vallis 40–70 cm paksune tumeda värvusega kiht, mis sisaldas söetükke, tukijäänuseid, kuumuses oranžiks värvunud paetükke jms. Et kaitsta ehitiste alumisi palke maapinna niiskuse eest, pandi nende alla kasetohtu. Linnamäe teistel külgedel vallijäänused puuduvad, mistõttu võib arvata, et kõrgete nõlvade puhul piisas kergematest puidust kaitseehitistest. Kuna II linnuse uurimisel leide ei saadud, põhinevad selle ehitusjärgu dateeringud kaitsetarandite ja vallitaguste rajatiste tukkidest tehtud C¹⁴ analüüsidel (joon. 2: B). Nende põhjal püstitati II linnus 11. sajandil. Kindlustuse taastamine võis osutuda vajalikuks seoses 1030. aastal toimunud Tartu linnuse vallutamise. Kiievi Vene vürst Jaroslavi juhtimisel ette võetud sõjaretkede oht võis olla ajendiks ka Kalana kindlustatud tugipunkti püstitamisele. Siinne linnus võis püsida kasutusel kuni Muistse Vabadusvõitluse sündmusteni 13. sajandi alguses. Võimalik, et Kalana muinaskants häviski 1212. aasta varatalvel, kui ristisõdijate röövretk läbis ka Möhu alasid. Kalana piirkond kujutas endast Möhu põhjaosas asuvat, metsade ja soiste aladega piiratud suhteliselt eraldatud asustusüksust. Silmas pidades linnamäe asukohta, tema küllaltki tagasihoidlikku pindala ja nõrku kaitseehitisi, pole põhjust pidada Kalana kantsi kesket tähtsust omanud kaitserajatiseks. Näib, et selle linnamäe näol võis olla tegemist pigem Kalana ja tema lähiümbruse elanike poolt rajatud ning peamiselt ohu korral kasutamist leidnud pelgupaiklinnusega.