



## PRELIMINARY INVESTIGATIONS OF FOSSIL FIELD SYSTEMS AT LOO

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### INTRODUCTION

The fossil fields at Loo were discovered in the course of a landscape survey in spring 2008 (Lang 2008). The survey was actuated by the plan to establish a limestone quarry in the area between a local municipality Loo and Tallinn – Narva motorway, in the territory of Liivamäe village in Jõelähtme community. In summer 2009, the mapping of the area and excavation of some of the field remains was carried out. The purpose of the preliminary archaeological investigations was to obtain more information regarding the following questions: how large is the area covered with field remains; what are the characteristics of the field system; and how old might these fossil fields be?

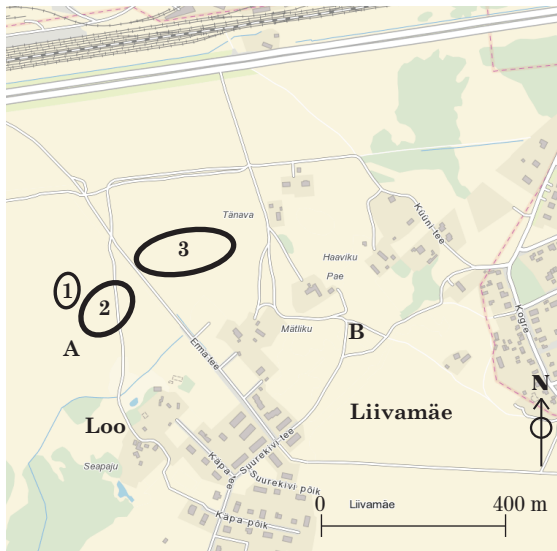


Fig. 1. The plan of Loo fossil fields. Research zones nos. 1–3, Proosa fossil fields (A) and Saha-Loo fossil fields (B).

Jn 1. Loo fossiilsete põldude üldplaan. Uurimisalad 1–3, Proosa muinaspõllud (A) ja Saha-Loo muinaspõllud (B).

Drawing / Joonis: Helena Kaldre

The investigated field remains are situated north, north-east and east of the Proosa fossil fields (no. 27061<sup>1</sup>). It is the same large alvar area west of Lake Maardu, farther south-east of which the fossil fields of Saha-Loo (no. 17625) are recorded (Fig. 1). The fossil fields of Proosa were investigated archaeologically in 1993 (Lang 1994a) and again in 2005 (Lang & Laneman 2006). The survey showed that the block-shaped fields here represent the so-called Celtic fields and are dated to a period from the 6th–5th BC to the 1st century AD. In Saha-Loo the so-called Baltic fields, investigated in 1992–1993 (Lang 1994a; Lang 1994b) and 2004 (Lang *et al.* 2005) are somewhat older: the earliest dates are from the last quarter of the 2nd millennium BC.

The mapping of the area confirmed that research should be carried out in three zones (Fig. 1) which were already determined during the landscape

<sup>1</sup> National Register of Monuments, National Heritage Board (<http://register.muinas.ee>).

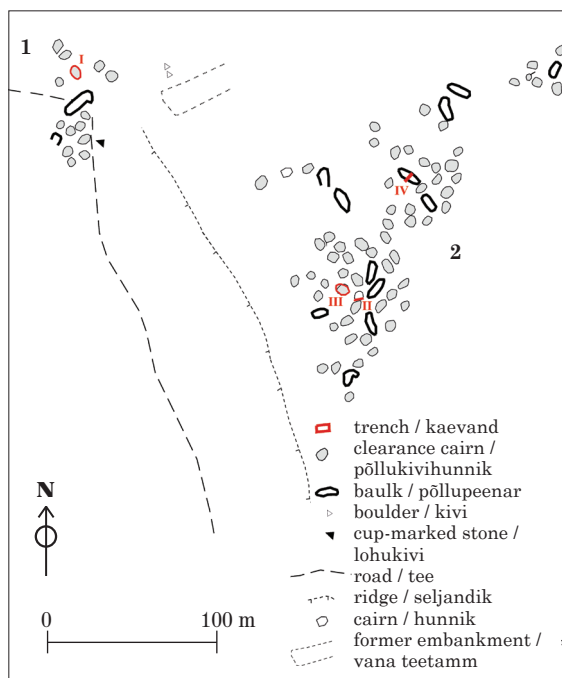


Fig. 2. Research zones nos. 1 and 2.

Jn 2. Uurimisalaad 1 ja 2.

Drawing / Joonis: Helena Kaldre

ferred to the general plan by mapping the edge points of the baulks and clearance cairns visible in the landscape and later connecting the points with the computer program MapInfo Professional 6.5. The locations of other noticeable objects on the landscape, such as boulders, roads, ridges, etc. were mapped in a similar way.

Due to high-growing grass in research zone no. 3 (Fig. 5), not all field remains were visible on the landscape, thus a different methodology was used here. The terrain reliefs were recorded with a total station by taking thousands of elevation readings across the whole area. A similar methodology for investigating field remains had been previously applied at Saha Loo in 2004 (Lang *et al.* 2005, 118) and at Proosa in 2005 (Lang & Laneman 2006). In these cases, the field areas were mapped using a surveyor's level and by taking measurements according to a regular rectangular grid of 1 m steps. In Loo, the measurements were more irregular, following the principle that more readings should be taken in areas of higher terrain elevation variability (for the method, see Tvauri & Saimre 2009, 200). The collected data was processed by a computer program Vertical Mapper V.2 in order to interpolate<sup>2</sup> elevations between the measured points. Based on notes taken on the field, not all elevation points were incorporated to the analysis in order to better reflect the structure of the fields themselves (instead of the holes and turfs of a more modern origin). The maps were completed

survey in 2008. Altogether five trenches were made in the whole research area to investigate two baulks and three clearance cairns. However, two of the cairns (trenches I and II) turned out to be heaps of sand and debris. Two radiocarbon dates from the charcoal obtained from the lowermost layers of the clearly distinguishable field remains in the research zones 1 and 2 suggest that the field systems here are about 3400 years old.

### MAPPING OF THE AREA

For mapping the area (65 000 m<sup>2</sup>), a total station Trimble 3600 (software TrimbleSurveyController v12.10) was used and only after the mapping was complete, the relative zero-point together with the relative elevation and other applied reference points were linked with the absolute geographical coordinates.

The fossil field remains in research zones nos. 1 and 2 (Fig. 2) were trans-

<sup>2</sup> The interpolation method used was 'triangular with smoothing'.

in four sections, in between the sections lied larger or smaller areas without visible field remains. Contour lines are presented on the plans with a 2 cm interval, so that the relatively low fossil field remains would be brought forth as precisely as possible.

## **THE RESULTS OF INVESTIGATIONS**

### ***Research zone no. 1***

Although research zone no. 1 (Fig. 2) lied outside the borders of the proposed strip mine, it was still decided to map the fossil field remains and make a trench there for initial inspection and later comparison. The research zone lies directly north of the protected Proosa fields, partly overlapping with the protective zone of the aforementioned and located on the same north – south oriented ridge. To the north and north-east lies woodland with no field remains, although clearance cairns were present more north-west and north-northwest, but were not mapped due to their poor visibility on the landscape. To the west of the research zone no. 1, the removal of topsoil in the previous century had changed the terrain, so that any fossil field remains that might have existed there once, had not preserved. The total extent of the mapped area here stretched 88 m north – south and 67 m east – west.

Altogether 14 clearance cairns (one of which – trench I – turned out to be a heap of debris, piled together in the recent past) and two segments of baulks were mapped. The average diameter of the clearance cairns and the width of the baulks was 6–7 m. One incomplete baulk segment was 5 m in length, while another was almost intact and stretched 24 m from east to west. Any field plots were difficult to distinguish during the investigation. This was because of the relatively small size of the investigated area, but also due to the inability to distinguish between actual fossil field remains and more recent heaps piled up from old rubble or topsoil. In addition to the clearance cairns and baulks, a possible cup-marked stone, discovered from the southern part of the research zone during the landscape survey in 2008 and showing at least two or three depressions that seemed man-made, was mapped.

### ***Research zone no. 2***

Research zone no. 2 (Fig. 2) lies about 11 m south-east from the previous research zone, on the other side of the higher ridge and to the east of the protected Proosa fossil fields. From the north it is bordered by woodland, whereas the soil in the area between the woodland and the field remains was disturbed and at places even stripped down to the limestone bedrock. From the south the research zone was lined with war-time trenches, the construction of which had also disrupted the soil. To the east lies a lower and damper area, most likely a location of a former water body. Compared to the previous research zone and the Proosa fossil fields, research zone 2 was situated in a relatively shallower and damper ground which became even lower toward west and south-east. The maximal extent of the mapped area was 178 m north – south, 272 m east – west and up to 309 m north-east – south-west. The overall level of soil disturbance by various factors made the mapping of this area and the later interpretation of the results difficult.

The main fossil field remains at research zone no. 2 were clearance cairns. In total 63 heaps, situated in close proximity, were mapped. The area also contained 12



Fig. 3. The uppermost stone layer in trench III.

Jn 3. Pealmine kivikiht III kaevandis.

Photo / Foto: Ülle Aguraiuja

century running beneath the formation. Further similar heaps with uncertain origin were noted in this research zone, but due to the limited time schedule of the field work, no surveys to distinguish clearance cairns from heaps of sand or debris were carried out.

Trench III was an excavation of a clearance cairn in the close vicinity of the heap of sand where trench II was made. It was visible as a heap 40 cm in height and approximately 5–6 m in diameter with some bigger stones sticking out from the turf layer. The cairn was slightly oval-shaped in a south-east – north-west direction and it was decided to excavate it within the borders of a 5 × 6 m trench. When it later became evident that the edges of the cairn stretch further out at the western side, the measurements of the trench were extended to 5 × 7 m. Under a relatively thin turf layer the first layer of stones was somewhat uneven. It comprised entirely of limestone slabs: the biggest of these had diameters up to 50 cm and were mostly situated aslant at the edges of the cairn (Fig. 3). The majority of stones in the first layer were about 15–20 cm in diameter. The soil between the stones was mostly dark brown, but there were patches of lighter, yellowish rubble. The western part of the cairn seemed to have had experienced some later disturbance since bigger limestone slabs stretched more than 1 m over the original edge of the trench. Limestone bedrock was revealed at about 50 cm from the top of the utmost layer of stones.

The consecutive stone layers followed the preceding pattern. No regularities could be observed in the construction of the cairn and the stones were situated relatively sparsely. In the bottom layers, limestone slabs of about 10–20 cm in diameter dominated, although some smaller granite stones were also present. The construction of the cairn became more interrupted in the western edge and it became evident that this area had been pushed apart at some point which would explain the elongated shape of the cairn. This is also supported by the fact that another piece of the same blue wire, first encountered in trench II, was uncovered from that part of the cairn between the stones. The soil continued to exhibit two various colors: on the edges and on the northern side the soil was darker, but in the center and on the southern side it was yellowish and gravel-like, probably caused by eroded sandstone of which more compact pieces were present in the bottom layers.

baulks or segments of baulks. The average diameter of the clearance cairns fell between 6–8 m, although larger heaps also occurred. The width of the baulks was 5–6 m and they were mostly 15–16 m in length.

Altogether three trenches (II–IV) were made in research area no. 2. Not all of the mapped clearance cairns and possibly some baulks could be identified as actual fossil field remains with certainty. For example, a presumed clearance cairn (trench II) turned out to be a heap of sand, probably erected in the recent past because of the existence of a blue wire from the last cen-



The limestone bedrock was relatively uneven, situated in layers and at times disrupted and covered with chasms. In the eastern side of the trench a relatively deep hole was uncovered in the bedrock, filled with yellowish gravel and limestone rubble. The reason of this hole is unknown.

A big part of the findings consisted of botanical remains and animal bones. A zoo-archaeological study<sup>3</sup> determined the bones to belong to one cow, one horse, one pig and at least two sheep or goats. The soil about 10 cm above the bedrock was very dark black and presented numerous small charcoal finds. Due to the small size of charcoal pieces, only one of them was suitable for radiocarbon dating. This gave an estimated age of  $3030 \pm 40$  BP (cal. 95% 1400–1190 BC, 1140–1140 BC; cal. 68% 1380–1330 BC, 1330–1260 BC)<sup>4</sup> to this cairn. Yet some of the finds<sup>5</sup> from this trench support a later time of use, for example several pieces of glazed pottery and parts of a horse-shoe. However, the newer finds were present at the upper layers while the charcoal that produced the radiocarbon date originated from the soil near the bedrock.

Trench IV measuring  $1 \times 5$  m was made into a low baulk that was approximately 6 m wide and 17 m long and was situated in the north-east corner of the middle part of the research area no. 2. The landscape around the baulk was heavily interrupted due to human activity; at places the soil had been removed up to the limestone bedrock. This also complicated the successful differentiation of heaps formed in the recent past from actual fossil field remains.

After removing the turf, the first layer was revealed, where stones were situated quite sparsely (Fig. 4). The limestone bedrock was already exposed from both sides of the baulk at a width of about 1 m. The area in the trench that consisted of limestone was about 3 m wide, but considering that the baulk had probably slumped to some



Fig. 4. The uppermost stone layer in trench IV.

Jn 4. Pealmine kivikiht IV kaevandis.

Photo / Foto: Liis Livin

<sup>3</sup> All the animal bones found in trenches III–IV were determined by Eve Rannamäe (TÜ).

<sup>4</sup> Beta-265928.

<sup>5</sup> TÜ 1770: 1–14.

extent in time, it is presumable that it had initially been narrower. The top layer consisted of 6 larger limestone slabs that were quite oblate and smaller friable slabs that were situated near the larger ones. The stones were rather mixed and the soil between them light brown with a tone of yellow. While cleaning out the stones, animal teeth belonging to a sheep or a goat were found under a limestone slab.

The second stone layer consisted only of limestone and the concentration of the stones remained on the 3 m wide area in the middle of the trench. Here also the limestone slabs were not situated compactly and the color of the soil remained lighter brown, although deeper down it soon started turning darker. The lighter brown soil in the middle of the trench also included some small charcoal pieces. Two animal bone fragments, also belonging to a sheep/goat under a limestone slab were found while cleaning the stones from soil. The bottom soil was darker, even blackish at times, although orange blotches were found sporadically in the soil just a little above the bedrock. Great differences in elevation were detected comparing the bedrock in the trench's edges to the one under the baulk: the latter was much lower. Charred botanical remains were found on and later under the limestone bedrock. Charcoal pieces were found about 5 cm lower from the compact limestone bedrock. Charcoal was also present in many locations on the exposed bedrock and was used for a radiocarbon analysis which was dated to the present day. It is probable that the sample was contaminated and thus a new analysis should be made in the future.

### ***Research zone no. 3***

Research zone no. 3 (Fig. 5) was located about 190 m north-east from the previous research zone, whereas there was an extensive lower area between the two zones, where no fossil field remains were possible to identify. At some places the topsoil had been removed all the way down to the limestone bedrock, which could explain the lack of field remains. Equally, this shallower and damper area might have never been cultivated in the first place. A swampy area, most likely a former water body, was situated to the south-west of the research zone. From the north, north-east and east the area was bordered by a road leading from the Tallinn – Narva motorway to the new Liivamäe village. From the west and north-west the research zone was lined by woodland, where the original landscape had been disturbed by planting the forest. The south-eastern border is also the border of the total area covered with fossil field remains, since no further clearance cairns, baulks or bases of stone fences were discovered south of this boundary. The mapped area extended up to 280 m north – south and 640 m east – west.

In the area north of the road leading to Liivamäe village and south of the Tallinn – Narva motorway, sparsely located fossil field remains were discovered during the landscape survey in 2008. These included single cairns and one bottom of a stone fence. Because of the lush midsummer vegetation, only few field remains were identifiable and it was also evident that the soil had been greatly disturbed here. With increasing time shortage, it was decided not to map this area between the two roads for the time being.

In the lower, western part of the research zone, there were cairns that were most certainly erected during land cultivation, but no field plots surrounded by baulks were

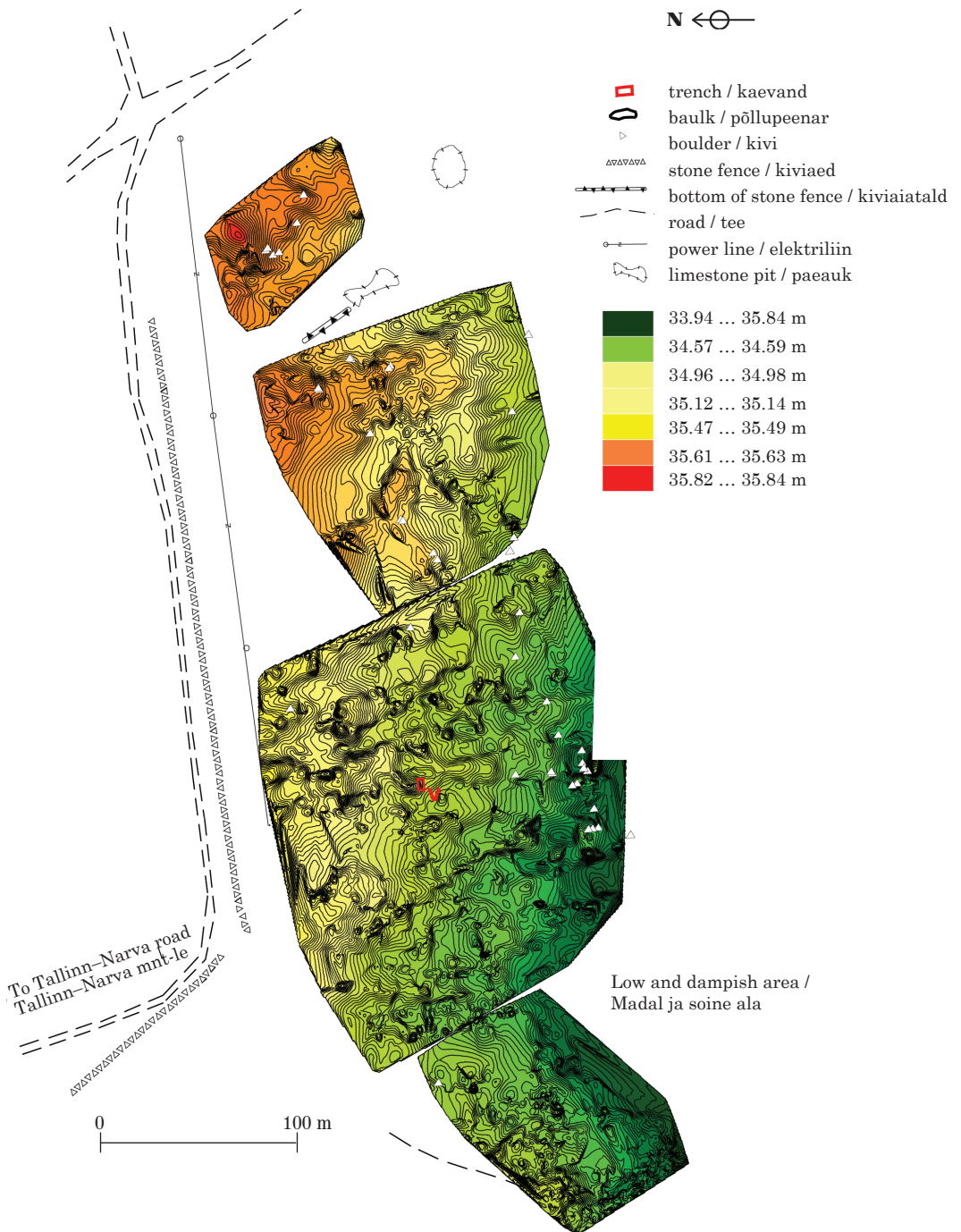


Fig. 5. Research zone no. 3.  
Jn 5. Uurimisala 3.  
Drawing / Joonis: Helena Kaldre



visible. On the other hand, distinct field plots with associated clearance cairns, low baulks (into one of which trench V was made) and segments of baulks emerged in the central part of the research zone. At least 15 field plots with an average size of 200 m<sup>2</sup> could be distinguished in that area. In the higher, more eastern section of the research zone, the fossil field remains were situated as fragmentary as in the western side – several cairns and solitary field plots surrounded by baulks were detected, but at least some of them have been created during later land improvement. In addition, the zone contained standalone fragments of stone fences and their foundation bases, of which some can also be the evidence of much later land use.

Trench V was situated in the middle of the research area. The trench, 2 × 4 m in measurements, was made into a baulk that was easily recognizable from the surroundings despite the fact that it was rather low (20 cm from the ground). Under a 10 cm thick turf layer there was a compact stone layer, mainly consisting of limestone slabs. The stones were positioned tightly and horizontally together, lying on and under one another. The larger limestone had an average diameter of 20–30 cm and the smaller ones 10 cm. The soil between the stones was dark brown and included charcoal pieces. While cleaning the first layer from soil, even bigger limestone slabs appeared in the north-east corner of the trench. Cleaning out the second layer of stones in the trench more charcoal pieces were found. Furthermore the soil also included charred botanical remains. The oblate limestone slabs in the second layer were mostly positioned horizontally (Fig. 6). The soil in the second layer remained dark brown. In this phase of the excavation the limestone bedrock in the north-west side of the trench was already completely exposed. The third layer comprised of limestone slabs positioned compactly together and the color of the soil did not differ from the previous layers. Nevertheless, a considerably great amount of charcoal pieces was found from the soil. The stones in the third layer were situated mainly in the middle part of the trench; limestone bedrock had already been reached in the north-east and south-west sides of the trench in a 1 meter wide range. The limestone bedrock in trench V was even and comprised of 3–4 larger limestone slabs that had fractured. The color of the soil remained more or less the same in the course of excavating and no differences were detected by the visual observation of the trench's profile, although the soil samples later demonstrated some slight variations in colors.



Fig. 6. The second stone layer in trench V.

Jn 6. Teine kivikiht V kaevandis.

Photo / Foto: Liis Livin

<sup>6</sup> Beta-265930.



The last layers presented a similar pattern in the size and placement of the stones, color of the soil and the large amount of charcoal present. One very compact charcoal blotch (diameter 10–15 cm) was found quite in the corner of the south side of the trench. A radiocarbon analyses was made from a sample taken from this charcoal blotch and it revealed its age to be  $2970 \pm 40$  BP (cal. 95% 1360–1350 BC, 1310–1050 BC; cal. 68% 1270–1120 BC).<sup>6</sup>

### **DISCUSSION AND CONCLUSIONS**

The fossil fields in Loo cannot be regarded as the most well-preserved and intact ones in Estonia. The landscape here is much altered and the soil partly removed, there are also damages from limestone pits and the activity of the previously nearby located Soviet military base. Thereby the distinction of the field remains from the recent heaps and baulk-like formations turned out to be the biggest challenge and almost impossible to distinguish by visual observation. It was most difficult with the heaps of 6–8 m in diameter which were mapped as possible field remains despite the fact that during excavations two of such cairns turned out to be piled up from sand and debris in the recent past. Therefore it has to be taken into consideration that some of the mapped field remains might be similar and not associated with fossil fields at all.

Presupposing that most of the cairns in research zone no. 2 were evolved in the course of agricultural practices, it might be concluded that the field system here is a typical clearance cairn field. A fact supporting that conclusion is the relatively dense concentration of clearance cairns. The system, which has been in use from prehistory up to the Modern Times, is characterised by more or less irregular distribution of clearance cairns on the landscape. It is not completely certain yet, where the field plots were located inside the system, but it seems plausible that the tilling took place in between the cairns (for the more detailed discussion of the possible situation of arable field plots (see Kaldre 2007).

Sometimes the clearance cairns might aggregate and form lines and sometimes even merge to form field plots, bordered at least at some extent with baulks. The alignment of the cairns seems to occur at times in the research area no. 2, despite the fact that the system here is generally very irregular. The oval-shaped baulk-like formations might have also been evolved with the merging of the cairns, but this, along with the possible duration of the land tilling in the particular place did not become clear during the investigations. A further question that might arise from the preceding reasoning would be if the joining of the cairns into baulks and thereby the evolving of the field plots would necessarily have to be the next morphological step in the progress and development of field systems. It is rather doubtful, because, as already mentioned, the tilling of land in the form of clearance cairn field systems with no special regularity or distinguishable field plots is quite common. In the case of the fossil fields in the research zone no. 2 it seems to be a distinctive feature.

In the middle part of the research area no. 3 the field system consists of small field plots, bordered with low baulks and partly only cairns. The difference between the research area no. 2 is that here the field plots are also traceable. By appearance and possible developing process, the system resembles the ancient field systems, situated further south-east at Saha-Loo, a north-western part of which was more thoroughly investigated

in 2004. It has been suggested that the baulks and thereby field plots at Saha-Loo were formed stepwise between initial single clearance cairns during long-term agricultural activity (Lang 1995, 147; Lang *et al.* 2005, 120). From the topographic map (Fig. 5) of the Loo fields it is also recognisable that there were higher sections in the baulks, which probably mark the initial single clearance cairns. There are also parcels, only surrounded by cairns. The resemblance of these irregular block-shaped field systems at Loo and Saha-Loo is supported by the fact that they both are dated to be about 3300–3400 years old. It cannot be excluded that the field areas in question formed an integral whole in prehistoric times.

The limited number of radiocarbon datings from the fossil fields of Loo brings up a question of their reliability and credibility. The dating from the trench V is supported by their appearance and parallels with fields of Saha-Loo, but the situation is not so clear with research area no. 2. Although the radiocarbon date from the trench III is almost the same as in trench V, it is complicated by the fact that the cairn itself was not very compact (i.e. there was quite a lot of light gravel in between the sparsely situated stones) and the upper layers contained finds from the Modern Times. According to that it is possible to conclude that the cultivation took place in at least two phases – in the Bronze Age and later again in Modern Times. Nevertheless, there still remains a problem concerning the interpretation of the charcoal found from beneath the stones of the cairn – does it refer to the clearing of the land with fire before the first cultivation or is it more likely to be connected with some other (human) activity? Since the landscape here is rather low and dampish, it might have also been that the area was unsuitable for tilling in prehistory. In that case the cairns in the area are rather to be connected with later land use. Only further investigations could provide answers to these questions.

There still remains a set of unanswered questions in case of fossil fields in Loo, mostly about the precise essence of the field systems and the reliability of the existing datings. Even so the discovering of the fields and the primary conclusions fill a gap in understanding the landscape, formerly existing between the ancient fields of Proosa and Saha-Loo.

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## ARHEOLOOGILISED EELUURINGUD LOO MUINASPÕLDUDEL

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2009. aastal toimusid arheoloogilised uuringud aasta varem avastatud fossiilsetel põldudel, mille ajendiks oli lubjakivikarjääri kavandamine Loo alevikust põhja pool. Uuringute eesmärgiks oli põllujäänustega kaetud ala plaanistamine ja kaevamine põldude vanuse kindlakstegemiseks. Loo muinaspõldud asuvad eelrooma rauaaegsetest Proosa muinaspõldudest vahetult ida ja kirde poole jääval ligi 65 000 m<sup>2</sup> suurusel alal. Sellest kaugemale kagu poole jäävad Saha-Loo fossiilsed põldud, mille vanimad dateeringud ulatuvad vanema pronksiaja lõppu. (jn 1).

Loo põldude plaanistamisel veenduti juba inspeksiooni käigus eristatud põllujäänuste jagunemises kolme erinevasse rühma (jn 1). Uurimisala 1 (jn 2) paiknes Proosa põllusüsteemist vahetult põhjas, osaliselt selle kaitsetsooniga kattudes ning samal kõrgemal põhja – lõuna-suunalisel seljandikul. Kokku plaanistati seal 14 põllukivihunnikut ning kaks põllupeenrajuppi. Kuna ühte väliste tunnuste põhjal põllukivihunnikut (kaevand I) kaevates selgus, et tegemist on hoopis hiljuti kokku lükatud rusuhunnikuga, siis võib oletada, et sugugi mitte kõik plaanistatud kuhjatistest pole põllujäänused.

Uurimisala 2 (jn 2) jäi eelmisest umbes 11 m kagu poole, paiknedes kõrgemast seljandikust madalamal. Maapinda oli siin kohati üsna tugevalt rikutud, mis tegi plaanistamise ja hiljem plaanide tõlgendamise keeruliseks. Plaanistati 63 põllukivihunnikut ja 12 peenart või peenrakatket. Ka siin ei olnud ilmselt kõikide hunnikute ja võimalik et ka peenarde puhul tegemist põllujäänustega – näiteks II kaevand näitas, et tegemist oli liivahunnikuga. Ühe põllukivihunniku (kaevand III; jn 3) alusest mullakihist leitud sõe dateerimine andis vanuseks 3030±40 radiosüsinikuaastat, kuid pealmistest kihtidest saadi hoopis uusagseid leide (hobuse- rauakatkeid, glasuuritud keraamikat ja klaasikilde). Läbi põllupeenna rajatud kaevandist IV (jn 4) saadud peenraaluse sõe dateering oli lähiminevikust.

Uurimisala 3 (jn 5) jäi eelpool mainitust 2. uurimisalast u 190 m kirde poole ja nende vahel oli üsna ulatuslik põllujäänusteta ala. Uurimisala hilisemate mullatöödega rikutud madalamas läänepoolses ja kõrgemas idapoolses osas oli põllujäänuseid üsna vähe. Seevastu ala keskosas joonistusid põllulapid ning neid ümbritsevad põllukivihunnikud,

madalad peenrad ning peenrakatked selgelt välja. Kokku võis eristada vähemalt 15 põllulappi, mille keskmine suurus jäi kõigest 200 m<sup>2</sup> piiresse. Valdavalt paekividest kokku visatud peenrale rajatud V kaevandist (jn 6) saadi sõedateering, mis andis vanuseks 2970±40 radiosüsinikuaastat. Uurimisalal 3 oli näha ka üksikuid juppe kiviaedadest ja kiviaeataldadest, mis on väljanägemise põhjal suhteliselt hilised.

Uurimisel oli üheks kõige suuremaks probleemiks põllujäänuste eristamine hilisemal ajal kokku lükatud pinnasehunnikutest. Kui suuremate ja ebakorrapäraste hunnikute puhul võis olla kindel, et need on kuhjatud lähiminevikus ning neid plaanile ei kantud, siis tavapärased 6–8 m läbimõõduga kuhelikud plaanistati võimalike põllujäänustena. Kuna aga kaevates osutusid kaks oletatavat põllukivihunnikut rusu- ja liivahunnikuteks, siis tuleb silmas pidada, et nii mõnedki teised ei pruugi olla seotud kunagise põlluharimisega.

Võttes aluseks eelduse, et suurem osa uurimisalal 2 olevaid hunnikuid on siiski tekkinud põlluharimisega, võib süsteemi pidada põllukivihunnikute väljaks. Seda süsteemi, mis on olnud kasutusel pronksiajast kuni uusajani, iseloomustab põllukivihunnikute rohkem või vähem ebakorrapärane paiknemine maastikul. Põllukivihunnikud võivad koonduda ridadesse ning seeläbi moodustuda põllulappe, kuid on selliseidki põllukivihunnikute välju, kus hunnikud paiknevad koos väga tihedalt ning näilise korrapära. Uurimisalal 2 plaanistatud põllukivihunnikute väli näib esindavat just viimast varianti, kuigi siingi võis täheldada osade hunnikute ridadesse koondumist. Põllukivihunnikute väljadele on iseloomulik ka see, et pikemaajalise põlluharimise tulemusena võisid hunnikud liituda lühemateks peenardeks. Just sellisel moel võisid tekkida ovaalsed peenralaadsed moodustised uurimisalal 2. Üldiselt pole aga siin hunnikute paiknemise põhjal võimalik põllulappe eristada.

Uurimisala 3 keskosas koosneb maaharimissüsteem väikestest põllulappidest, mida ümbritsevad madalad peenrad ja kohati vaid põllukivihunnikud. Väljanägemiselt ja arvatavalt kujunemisprotsessilt meenutab süsteem kaugemal kagu pool paiknevaid Saha-Loo muinaspõlde, kus põllupeenrad on kujunenud pikaajalise maaharimise käigus ning põllukivihunnikute liitumisel. Ka Loo põldude

nivelleerimisplaanilt (jn 5) näeb, et põllupeenardes on kõrgemaid kuhjatiselaadseid löike, mis suure tõenäosusega tähistavad esialgseid põllukivihunnikuid, millest hiljem kujunesid peenrad. On ka selliseid nelinurkseid põllulappe, mida ümbritsevadki ainult põllukivihunnikud. Loo ja Saha-Loo põldude sarnasusega haakub ka see, et mõlema põllustiku vanimad dateeringud on 3300–3400 aastat vanad. Välistatud pole ka see, et kunagi moodustasid alad ühtse terviku.

Loo põldude vähene dateeringute arv tõstatab küsimuse nende representatiivsusest. Uurimisalalt 3 saadud söe dateeringut toetavad nii põllujäänuste väljanägemine kui paralleelid Saha-Loo põldudega, kuid uurimisala 2 puhul on rohkem küsitavusi. Kuigi ka III kaevandi alumisest mullakihist saadud söe dateering langeb samasse aega V kaevandi

tulemusega, teeb asja keeruliseks see, et põllukivihunnik polnud väga kompaktne ning pealmistest kihtidest leiti uusaegseid leide. Selle põhjal võiks oletada, et põldu hariti siin vähemalt kahes etapis – pronksiajal ja hiljem taas uusajal. Siiski jääb küsimuseks kivihunniku alt saadud söe dateeringu tõlgendamine – kas see viitab maa tule abil puhastamisele enne esimest maaharimist või on see seotud mingi muu (inim)tegevusega? Kuna uurimisala 2 on suhteliselt madal ja niiske, siis võib olla tegu muinasajal maaharimiseks sobimatu alaga ning hunnikud seotud hoopis hilisema maakasutamisega. Vastuseid neile küsimustele annaks vaid põhjalikum uurimine. Ometi täidavad Loo põldude avastamine ja esmased uurimistulemused justkui lünga maastikus, mis jäi enne Proosa ja Saha-Loo muinaspõldude vahele.