



Inju Vanatoa rural cemetery in Lääne-Viru County

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INTRODUCTION

Small-scale excavations took place on a previously little studied burial place at Inju Vanatoa, Lääne-Viru County (historically in Viru-Jaagupi parish) in July 2022. Although the current state of archaeology and science funding in general in Estonia conditions fieldwork to be carried out mainly for salvage, i.e. initiated by various construction projects, the excavations at Inju stand out in this context – the initiative came from the local community, especially from history enthusiast Kalju Vaga, who is interested in the nature of the site and concerned about its preservation. During the excavations the neighborhood showed great interest in the work process. In total, three *in situ* burials were opened. The finds are preserved in the archaeological collection of the Foundation Virumaa Muuseumid, Rakvere (RM A 185).

DESCRIPTION OF THE SITE AND HISTORICAL BACKGROUND

The burial place of Inju Vanatoa is situated on a sandy hillock with smooth slopes and an area of approximately 50 × 60 m (Fig. 1). The original appearance of the site shows several traces of human activity. According to the local people there used to be a building on the hill until the early 20th century.¹ The construction of Tõrma-Koeravere road cut through the western slope of the burial site; in addition, a number of sand pits have been dug into the hillock, which are visible to this day. Large-scale earthworks have taken place here during the construction of



Fig. 1. The cemetery from the Early Modern Period is situated on the hillock of Inju Vanatoa. View from the south.

Jn 1. Varauusaegne kalmistu asub Inju Vanatoa nimelisel künkal. Vaade lõunast.

Photo / Foto: Martin Malve

¹ Information from a local inhabitant Valdur Sursu given during the fieldwork in July 2022.

overhead power lines and a pig farm in the Soviet period. At that time the site was also occasionally used for celebrating St John's Day. A few years before the current excavations the cemetery got damaged by a bulldozer in making a north-southward route for a new local road with a width of about 4 m.

Presumably not the entire hillock has been used for burials – data about the human remains and graves concentrate mainly to its central and southern part. In the 1960s during the installation work of the posts for the overhead power lines allegedly a skeleton in a sitting position was found from the hillock. The very first trial excavations took place in 2016 when Kalju Vaga introduced the site to Anu Lillak, official of the National Heritage Board. The test pit revealed an intact skeleton (presumably without grave goods) about 115 cm deep from the contemporary surface, but the remains were not entirely unearthed (Kivirüüt 2016).

Kalju Vaga had a hypothesis that the site is a burial ground of fallen Swedish soldiers of the Great Northern War (1700–1721). Indeed, as mentioned by some of the final preserved notes of the chronicler Christian Kelch (1657–1710) who served as a cleric in Viru-Jaagupi parish, the battle between the Russian and Swedish troops took place nearby between Vinni and Pajusti on the 16th of August 1708, during which the Swedes were defeated and many escaping soldiers were killed in Inju (Kelch 2009, 403–404). Still, as it is often nearly impossible to distinguish the graves of the soldiers from the local civilians, archaeologists came up with a hypothesis that the site was used for burying during a longer period, both at times of peace and war.

So far, scientific research of the rural cemeteries of the medieval and Early Modern period in Virumaa (northeast Estonia) has been scarce. Among the more thoroughly researched burial places, cemeteries in Järva (Jõhvi parish, excavated in 1946–1947), Tammiku (Simuna parish, excavated in 1958), and Sillamäe (Vaivara parish, excavated in 2020–2021) can be mentioned. Therefore, although from the very beginning the fieldwork in Inju was planned small-scale, it was hoped that it would provide valuable information about the local burial customs and health of the people in the past.

BURIALS AND HUMAN REMAINS

During the excavations of 2022 (Fig. 2) three *in situ* burials were discovered from the sandy soil of the Inju Vanatoa hillock. All the dead had been buried in coffins in a stretched position. The longevity of the burial site is indicated by stray human bones in the fill of the graves, originating from earlier burials. Among the three intact burials two belonged to adults (one of them likely a male, another a female) and one to a young child.

Burial no. 1 belonged possibly to a male² at an age of 39 to 66 years. He was placed in an approximately 80 cm deep grave (measured from the present surface) in a trunk coffin made of an upper and a lower part (Fig. 3) which were fixed together with two long iron nails on both ends. Although trunk coffins do occur in the burial tradition of Estonia throughout the medieval and Early Modern Times (log coffin finds from Siksälä rural cemetery: Laul & Valk 2007; Tartu St John's church: Tiirmaa 1997; Tartu St Mary's churchyard: Malve *et al.* 2012, 140) a trunk coffin made of two halves is a rare find to which the authors of the current paper do not know any parallels. The dead was lying in the grave with his head in the east, contrary

² The sex of the burials was determined according to the morphological traits on the pelvis and cranium (Buikstra & Ubelaker 1994, 16–20), maximum length of the long bones (Garmus & Jankauskas 1993, 6–8), and tarsal bones (Garmus 1996, 2). The age at death was determined according to tooth wear (Brothwell 1981, 72), pubic symphyseal face (Todd 1920; Brooks & Suchey 1990), and age caused changes on the limb joints (Ubelaker 1989, 84–87). The age of subadults was determined by examining the development and eruption of the teeth (AlQahtani *et al.* 2010) and epiphyseal fusion (Schaefer *et al.* 2009). Pathological conditions were identified based on Ortner & Putschar (1985) and Roberts & Manchester (2012). Stature was calculated according to the formula of Trotter and Gleser (Trotter 1970), using measurements of the left femora.

to the common Christian practice. It cannot be ruled out that the head and foot ends of the coffin were accidentally switched during the burial ceremony. Cases of opposed orientation have been detected in the excavations of several cemeteries (including even burials under the floor of the St Nicholas' Church in Tallinn belonging to wealthy townspeople; see Malve 2022). The arms of the deceased were placed on the body. A simple round brooch of copper alloy was found on the area of the right shoulder (Fig. 4: 1), as well as a Swedish $\frac{1}{4}$ öre from the last third of the 17th century with poorly preserved textile fragments on the bottom of the coffin near the right knee.

Of the 32 teeth 28 had remained. Among the identified pathologies, most occurred on the teeth. Four molars had been lost *ante mortem*. The teeth of both upper and lower jaw had slight calculus. Caries and periapical cavities were observed only on molars. Upper and lower incisors and canines showed 1–2 horizontal stress grooves.

Since the person was middle aged or elderly, his skeleton bore a number of age-related changes. The entire spine had osteophytes and porosity of the joint surfaces. As on the spine, bone osteophytes also occurred on the limbs, especially on the joint of shoulders, elbows, knees, and high ankles. The bodies of vertebrae were remarkably worn (spondylosis). The right sides of the III–V and VIII–X thoracic vertebrae had bone osteophytes which had not been joined yet. Such an emergence of the osteophytes on the right side of the vertebrae may indicate Forestier's disease which is caused by calorie rich food or diabetes (type II) (Jankauskas 2003, 290). In addition, scoliosis or a sideways curve was detected on the person's spine – the III–V vertebrae curved to the left. Probably the high age and great physical activity had deformed the XI and XII thoracic vertebrae into a wedge-like shape. It is a compression where the adjacent vertebrae are forcefully pressed together. Great physical stress and traumas of the back were also indicated by the small depressions on the upper and lower surfaces of the thoracic and lumbar vertebrae which is a typical symptom of intraosseous disk herniation, also known as Schmorl's nodes.



Fig. 2. Map of the rural cemetery. 1–4 – test pits. Red dots mark various metal finds.

Jn 2. Külakalmistu plaan: 1–4 – proovikaevandid. Puna-sed ringid tähistavad erinevaid metall-leide.

Drawing / Joonis: Monika Reppo



Fig. 3. Burial no. 1 in a trunk coffin.

Jn 3. Matus nr 1 pakk-kirstus.

Photo / Foto: Martin Malve



Fig. 4. Grave finds (1–2) and stray finds (3–10) from the Inju Vanatoa rural cemetery: 1 – a round brooch (burial no. 1), 2 – an Orthodox cross pendant (burial no. 2), 3 – a round brooch, 4 – a heart-shaped brooch, 5 – a Swedish ¼ öre, 6 – a Swedish ¼ öre, 7 – fragment of a cast iron bell, 8 – a book clasp, 9 – fragment of an unknown item of copper alloy, 10 – fragment of a porcelain dog figurine.

Jn 4. Inju Vanatoa külakalmistu esemed haudadest (1–2) ja juhuleiud (3–10): 1 – rõngassõlg (matus nr 1), 2 – kaelarist (matus nr 2), 3 – rõngassõlg, 4 – südamekujuline sõlg, 5 – Rootsi ¼ öör, 6 – Rootsi ¼ öör, 7 – malmist kellukese katke, 8 – raamatu lukkum, 9 – tundmatu vasesulamist eseme katke, 10 – portselanist koerakujukese katke.

(RM A 185: 3–4; 6–12; 15.)

Photo / Foto: Martin Malve

A bone fragment (*Os trigonum*) had been separated from the posterolateral region of the right talus, but it had been rejoined. The bone forms when a small part of the talus fails to fuse with the rest of the bone (*Os trigonum* syndrome) during growth (Yilmaz & Baykara 2008, 147). Possibly because of a trauma a bone fragment with some cartilage had been separated from the distal articular surface of the left tibia – this type of injury is called *Osteochondritis dissecans*.

The skeleton had several genetic variations. For example, instead of a regular 24 vertebrae the individual had 25 – there was an extra lumbar vertebra. The lower part of the sternum had a hole (sternal foramen) which evolves when the ossification center from where the bone is formed itself remains unossified.

In his lifetime the total length of the individual was possibly about 160.9±3.27 cm.

Burial no. 2 was situated only about 10 cm north-east of the previous burial, being at the same depth. The burial belonged to a non-adult who had died at the age of 2.5 years. The grave was positioned crosswise to the common orientation of the graves – the head of the buried was situated in the north-north-east. Around the skeleton were the remains of a board coffin with nails. The arms were placed on the body. Under the back, in the area of the right ilium (hip bone) was an Orthodox cross pendant of copper alloy (Fig. 4: 2), wearing a very simplistic motif of Golgotha. The cross, which also preserved fragments of textile and wood, can be dated to the 16th–18th century (Kolpakova & Kostyuchuk 2017, 51).

In general, the skeletal remains of burial no. 2 were in poor condition due to the acidic sandy soil (the preservation of the small and fragile bones of the non-adults tends to be more affected by the environment than those of adults). Among the preserved parts were most of the neurocranium, mandible, and a few fragments of the facial skull, as well as a few ribs, vertebrae, and partly long bones of the limbs. A frontal side of the enamel of the lower right

canine teeth wore a depression, possibly a marker of hypoplasia. The defect may have been caused by metabolism stress or some sort of pathology.

Burial no. 3 was found from trench no. 2. The skeleton probably belonged to a female who at the time of death was about 35 to 45 years old. The person was buried in a board coffin fastened with iron nails. The original depth of the grave is difficult to estimate due to recent bulldozer work on the cemetery (it was 60 cm deep from the temporary surface but definitely deeper originally). The head of the burial was situated in the west, arms crossed on the stomach. On the lower left part of the torso was a kopeck of the Russian Emperor Peter I (1st quarter of the 18th century).

The skeleton was preserved intact, but several smaller bones, ribs, vertebrae, and the distal parts of the long bones were partially decomposed. 25 teeth were preserved. Four molars had fallen out *ante mortem*. All incisors, canines, and premolars of the upper jaw, as well as all the incisors and canines of the lower jaw were heavily worn (Fig. 5), possibly due to some kind of repetitive/hard labour. Also detected were significant reduction of alveolar processes, slight dental calculus, caries, and numerous periapical abscesses. Compared to skeleton no. 1 the oral health of skeleton no. 3 had been much worse.

Several traces of healed traumas and fractures were observed on the skeletal remains. It cannot be determined whether the person had gotten them simultaneously or during several incidents. The skull bore two healed depressed injuries: on the right side of the frontal bone (18.4 mm × 7.6 mm) and on the right parietal bone (19.22 mm × 6.5 mm). On the left side of the thorax were healed fractures on the angles of the VIII–X ribs, one fracture on each rib. In addition, the person had injured her left elbow joint. The distal end and the joint surface of the left humerus were deformed and the distal 1/3 of the diaphysis was thickened, indicating a healed bone fracture. The left humerus had shortened, likely due to trauma (it was 1.7 cm shorter than the right humerus). Also, the joint part of the left ulna next to the humerus was deformed (Fig. 6). The proximal 1/3 of the left ulna was thickened, presumably because of the fracture.



Fig. 5. Abnormally heavy attrition of frontal upper teeth (skeleton no. 3).

Jn 5. Ülalõualuu eesmise hammaste ebaloomulikult tugev kulumus (luustik nr 3).

Photo / Foto: Martin Malve

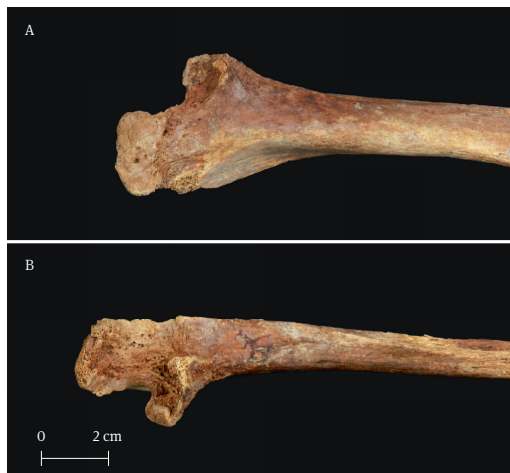


Fig. 6. Deformed distal joint of the left humerus (A) and proximal joint of the left ulna (B) of skeleton no. 3 is probably caused by an injury.

Jn 6. Skeleti nr 3 vasaku käe õlavarreluu distaalne (A) ja küünarluu proksimaalne liiges (B) on deformeerunud tõenäoliselt trauma tagajärjel.

Photo / Foto: Martin Malve



Fig. 7. Healed fracture on midshaft and distal $\frac{1}{3}$ of the left tibia (skeleton no. 3).

Jn 7. Paranenud luumurd vasaku sääreлуу keskosal ja distaalsel kolmandikul (huustik nr 3).

Photo / Foto: Martin Malve

The woman had also broken her left tibia, the midshaft and distal $\frac{1}{3}$ of which was thickened (Fig. 7). All fractures were well healed but the deformed left elbow joint which had limited functionality definitely affected the rest of the life of the person.

In her lifetime the total length of the individual was about 159.1 ± 3.72 cm.

In addition to the *in situ* burials 37 bones and their fragments were collected from the grave fills. They belonged to some older burials of adults. Due to the scarcity of the osteological material it is difficult to estimate the exact number of individuals.

STRAY FINDS

Altogether nine metal items were collected from the soil of trench no. 1 and the southern slope of the Vanatoa hillock with the help of a metal detector (the northern slope did not contain any finds; Fig. 2). Most of these could be associated with burials, including a round brooch (Fig. 4: 3), a heart-shaped brooch (Fig. 4: 4), Swedish $\frac{1}{4}$ and $\frac{1}{6}$ öres (Fig. 4: 5–6), two iron nails, a fragment of a bell of probably cast iron (Fig. 4: 7), a book clasp (Fig. 4: 8), and a fragment of an unknown copper alloy item (Fig. 4: 9).

The surface of the cemetery had several sherds of redware and faience which may be connected with the building situated on the hillock in the 19th and early 20th century. The ceramic material also contained a fragment of a porcelain dog figurine (Fig. 4: 10) – either a toy or a decorative item.

DISCUSSION

In general, all three investigated burials were quite typical to the rural cemeteries of Early Modern Period in Estonia, although some details stood out. While the board coffins fixed with nails, in which the non-adult and supposedly female adult were buried, have been common in the Estonian rural cemeteries for centuries, the coffins made of a single trunk of wood (in which the probable male was buried) are relatively rare. Such coffins are known in a handful of rural and urban cemeteries (mostly in South Estonia, e.g., Siksälä and Tartu). All the burials of Inju had a different orientation but due to the lack of wider data it is impossible to make any regional comparisons.

All the skeletons were accompanied with items which helped to date the burials. The probable male was likely buried in the second half of the 17th century or the beginning of the 18th century. The non-adult and supposed female were probably buried either during the Great Northern War or after it, as indicated by the Russian copeck and the Orthodox cross pendant. In addition, several bones disturbed by repeated earthworks were collected, as well as coins and other finds. In general, based on the current information the burial ground can be dated to the 17th or the first half of the 18th century.

Although the cemetery of Inju lies in the vicinity of the battle of 1708 and was in use at that time, the small-scale excavations of 2022 did not reveal any direct evidence of burials of the fallen soldiers. The possibility of the latter cannot be entirely ruled out because the Estonian

folk tradition (even though exaggeratedly) is rich in lore about the burials of the soldiers from the Great Northern War (also known as the ‘Swedish War’) (see Valk 1995, 456–457; however, no such stories are recorded about the Inju cemetery). The three burials which belonged to two adults and a young child indicate the use of the cemetery for a longer period. We may assume that those who used this site for burials were the local Inju people. The closest known archaeological settlement site³ in the core area of the historical Inju village lies about 1000–1100 m northwest of the grave. A bit closer, slightly over 600 m northwest is the centre of the Inju manor⁴ but the nature of the burials and the grave goods characteristic to the peasant culture rule out the possibility of the grave site belonging to a Baltic German aristocratic family. According to a map from 1804, the burial place was situated outside arable lands, not far from a road which ran through the woods from Koeravere to Karitsa (Atlas 1805, Part 1. P). The road still follows its historical route in most parts.

In medieval and Early Modern Times, the common practice in Estonian villages was to bury the dead in local cemeteries situated about a few hundred metres from the houses (Valk 2001, 28–29; the statistical data refer specifically to South Estonia). Although being slightly further than the majority of comparable cases, Inju Vanatoa burial place can also be put into this context. The parish church of Viru-Jaagupi, about 7 km east-south-east, was already likely too far for the people of Inju. The Holy Trinity church of the town of Rakvere is also about 9 km away. Despite the scarcity of data, it seems that several other villages around Inju had their own cemeteries. For instance, Kabelimägi of Koeravere⁵ is about 3 km, Aburimägi of Pajusti⁶ 4.6 km, and the two burial places of Levala⁷ about 4 and 4.5 km from the Inju Vanatoa site. This supports the assumption that the community using the Vanatoa cemetery was limited to the inhabitants of the Inju village.

CONCLUSION

Despite the small scale of the fieldwork, the research proved that the Inju Vanatoa hillock was indeed used as a historical burial site. The three *in situ* burials belonging to two adults (likely a male and female) and a non-adult dating from the 17th and the first half of the 18th century indicate that the cemetery was used by the local rural community. The grave finds (coins, brooches, in East Estonian context also an Orthodox pendant cross) are all typical burial inventory of the period. Among the common board coffins a trunk coffin made of two halves proved a rare case. It cannot be excluded that in times of war the fallen soldiers could have been buried at Inju but no definite evidence about it was found in 2022.

The skeletal remains bore many pathologies typical to the Early Modern Times’ osteological material, tooth pathologies being the most common. The adults had various age-related changes on joints, spine, and limbs. The supposed female had quite an unusual amount of healed traumas which may have been caused by hard labor, accidents, or violence. The heavy wearing of her frontal teeth indicated that she might have used them in repetitive work.

³ No. 10640 in the National Registry of Cultural Monuments.

⁴ The manor of Inju was first mentioned in written records in 1479.

⁵ No. 10647 in the National Register of Cultural Monuments.

⁶ No. 10654 in the National Register of Cultural Monuments.

⁷ Nos 10344 and 10345 in the National Register of Cultural Monuments.

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REFERENCES

- AlQahatani, S. J., Hector, M. P. & Liversidge, H. M.** 2010. Brief communication: The London atlas of human tooth development and eruption. – *American Journal of Physical Anthropology*, 142: 3, 481–490.
- Atlas 1805** = Атлас топографической съемки части Эстляндской губернии вдоль морского берега от границ Лифляндской губернии до Ревеля от берега внутрь расстоянием на 50 верст. Сочинена чинами свиты Вашего Императорского Величества по Квартирмейстерской части 1804 года. *Original in the Russian State Military Archive (РГВИА Ф.846 оп.16 д.19826 ч.1 л.5.)*
- Brooks, S. & Suchey, J. M.** 1990. Skeletal age determination based on the os pubis: A comparison of the Acsádi-Nemeskéri and Suchey-Brooks methods. – *Human Evolution*, 5, 227–238.
- Brothwell, D. R.** 1981. *Digging up Bones*. New York.
- Buikstra, J. E. & Ubelaker, D. H. (eds)** 1994. Standards for Data Collection from Human Skeletal Remains. *Arkansas Archeological Survey Research Series no. 44*. Arkansas.
- Garmus, A.** 1996. *Lithuanian Forensic Osteology*. Vilnius.
- Garmus, A. & Jankauskas, R.** 1993. Methods of person's identification from the skeleton in Lithuania. – *Medicina Legalis Baltica*, 3–4, 5–23.
- Jankauskas, R.** 2003. The incidence of diffuse idiopathic skeletal hyperostosis and social status correlations in Lithuanian skeletal remains. – *International Journal of Osteoarchaeology*, 13: 5, 289–293.
- Kelch, Chr.** 2009. Liivimaa ajaloo järg (Liefländische Historia. Continuation 1690 bis 1707). Transl. by I. Leimus, ed. by K. Tafenu. Tartu.
- Kivirüüt, A.** 2016. Inspektsiooniaruanne Vinni vallas Koeravere ja Inju külaades asuvate võimalike kalmistute otsinguist. Rakvere-Tartu. (*Manuscript in MA.*)
- Kolpakova & Kostyuchuk** 2017 = Колпакова, Ю. В. & Костючук, Л. Я. Хронология псковских нательных крестов с изображением Голгофы. – *Археология и история Пскова и Псковской земли*, 32 (62). Псков, 36–56.
- Laul, S. & Valk, H.** 2007. Siksälä. A Community at the Frontiers. Iron Age and Medieval. *CCC Papers, 10*. Tallinn-Tartu.
- Malve, M., Roog, R. & Tvauri, A.** 2012. Rescue excavations in St Mary's churchyard and its surroundings in Tartu 2010–2011. – *AVE*, 2011, 137–150.
- Malve, M.** 2022. Jõukate tallinlaste luustikud Niguliste kiriku põranda all. – *Tutulus*, 2022, 26–28.
- Ortner, D. J. & Putschar, W. G.** 1985. *Identification of Pathological Conditions in Human Skeletal Remains*. Washington.
- Roberts, C. & Manchester, K.** 2012. *The Archaeology of Disease*. Third Edition. Cornell.
- Schaefer, M., Black, S. & Scheuer, L.** 2009. *Juvenile Osteology. A Laboratory and Field Manual*. Second edition. Amsterdam.
- Tiirmaa, U.** 1997. Tartu Jaani kiriku alumise matuse- tooni kirstudest ja etnograafilisest võrdlusmaterjalist. – *Arheoloogilisi uurimusi*, 1. Ed. by H. Valk. Tartu Ülikooli Arheoloogia Kabineti Toimetised, 9. Tartu, 73–98.
- Todd, T. W.** 1920. Age changes in the pubic bone. I: The male white pubis. – *American Journal of Physical Anthropology*, 3: 3, 285–334.
- Trotter, M.** 1970. Estimation of stature from intact long bones. – *Personal Identification in Mass Disasters*. Washington, 71–83.
- Ubelaker, D. H.** 1989. *Human Skeletal Remains. Excavation, Analysis, Interpretation*. Manuals on Archaeology, 2. Washington.
- Valk, H.** 1995. Lõuna-Eesti XIII – XVII/XVIII sajandi külakalmistud rahvatraditsioonis ja uskumustes. – *Rahvausund tänapäeval*. Ed. by M. Hiimeäe & M. Kõiva. Tartu, 454–471.
- Valk, H.** 2001. *Rural Cemeteries of Southern Estonia 1225–1800 AD*. 2nd edition. *CCC Papers, 3*. Visby-Tartu.
- Yilmaz, H. & Baykara, I.** 2008. Os trigonum syndrome in ancient Anatolian settlements. – *Anthropologischer Anzeiger*, 66: 2, 147–153.

INJU VANATOA KÜLAKALMISTU LÄÄNE-VIRUMAAL

Martin Malve ja Anti Lillak

Lääne-Virumaal Inju külas (ajaloolises Viru-Jaagupi kihelkonnas) toimusid 2022. aasta juulis kohaliku ajaloentusiast Kalju Vaga algatusel välitööd seni uurimata matmispaigal. Uuringu teeb erakordseks asjaolu, et arheoloogiliste kaevamiste põhjus oli kohalike inimeste mure muistise säilimise pärast ja soov teada saada, mis laadi paigaga on tegemist.

Inju Vanatoa matmispaik asub liivasel u 50 × 60 m laugelt kerkival kõrgendikul (jn 1), mille algset kuju on erinevate ehitus- ja pinnasetõdega praeguseks tugevasti muudetud.

Inimluid ja infot haudade kohta leidub peamiselt künka kesk- ja lõunaosast. Matmispaigas toimusid esimesed uuringud 2016. aastal, mil prooviaugust avastati terviklikult säilinud skelett, kuid luud põhjalikumalt välja ei puhastatud.

Kalju Vaga pidas võimalikuks, et matusepaika on sängitatud Põhjasõjas (1700–1721) langenud Rootsi sõdurid. 16. augustil 1708 toimus Vinni ja Pajusti külade juures lahing Vene ja Rootsi vägede vahel, milles Rootsi väed said lüüa ning paljud sõdurid tapeti põgenemisel Inju all. Väikesemahulistel arheoloogilistel välitöödel (jn 2) avastati 2022. aasta juunis Vanatoa liivasest künkast kolm terviklikku matust. Surnud olid sängitatud kirstudes, selili-siruli asendis, käed keha peal. Kalmistu pikaajalisusele viitasid hauatäites olnud varasematest matustest pärinevad lõhutud skeletiosad. Luustikest kaks olid täiskasvanud ning kolmas väikelaps.

Matus 1 kuulus tõenäoliselt mehele vanuses 39–66 aastat (pikkus eluajal u 160,9 cm). Ta oli hauda sängitatud ühepuukirstus (jn 3), mis koosnes ülemisest ja alumisest osast ning oli mõlemast otsast kokku löödud ühe pika sepanaelaga. Kahest pooltest kokku pandud pakk-kirstud on Eesti kesk- ja varauusaegsetel kalmistutel haruldased. Surnu oli hauda sängitatud peaga ida poole, vastupidiselt tavapärasele kristlikule praktikale. Luustiku parema öla piirkonnast leiti lihtne vasesulamist vitssõlg (jn 4: 1) ning parema põlve juurest kirstu põhjast Rootsi ¼ öör 17. sajandi viimasest kolmandikust koos halvasti säilinud tekstiilikatkega.

Maetult tuvastati rida hambahaigusi – eluajal väljalangenud hambaid, kergelt hambakivi, kaariest, periapikaalseid tühimikke ja horisontaalseid stressijooni. Luustikul esines rohkelt vananemisega kaasnevaid muutusi, nagu lülisamba liigespindade (spondüloartroos) ja lüliskehade kulumist (spondüloos) ning luukasviseid jäsemeliigestel (osteoartroos). Selgrool täheldati ka vildakselgust ehk skolioosi. Selja suu-

rele koormusele ja traumadele viitasid Schmorli sõlmed ja selgroolülilihade kompressioonid.

Võimalikule traumale viitas parema kontsluu tagumisest kandluumisest pinnast murdunud ja taas kokku kasvanud luuosa (*os trigonum*). Vasaku sääreluu distaalsest liigespinnast oli tõenäoliselt vigastuse tagajärjel eemaldunud luutükk koos kõhrega (lõhestav osteokondroos). Geneetilise eripärana oli luustiku selgrool üks lisa-nimmelüli. Rinnakuluukeha alumises osas oli luustumatuna jäänud mulk.

Matus 2 – 2,5-aastaselt surnud väikelaps – paiknes eelmise matuse päitsiosast vaid umbes 10 cm kirdes. Haud oli risti tavapärase ida-lääne suunaga – maetu pea asus põhjakirdes. Luustiku ümber leidus naelttega ühendatud laudkirstu jäänuseid. Maetu selja all asus vasesulamist õigeusu kaelarist 16.–18. sajandist (jn 4: 2), mille küljes oli säilinud tekstiilikatkeid ja puidukiude.

Lapsel oli ühe alumise silmahamba kroonil lohk, mille puhul võib tegemist olla hüpoplaasiaga. Defekt on tingitud arvatavasti ainevahetusstressist või mõnest patoloogiast.

Matus 3 asus kaevandis 2. Luustik on määratud tõenäoliselt naiseks vanuses 35–45 (kehapiikkus eluajal umbes 159,1 cm). Ta oli sängitatud naelttega kokkulöödud laudkirstus. Maetu pea asus läänes. Rindkere vasaku poole alaosal paiknes Peeter I kopekas 18. sajandi I veerandist.

Sellelgi täiskasvanul oli mitmeid hambapatoloogiaid, nagu eluajal väljalangenud hambad, alveolaarkaarte taandumine, kerge hambakivi, kaaries ja periapikaalsed tühimikud. Eesmisel hambad olid tugevalt kulunud (jn 5); tõenäoliselt oli ta kasutanud neid mingi korduva töö või tegevuse käigus. Skeletil tuvastati mitmeid eluajal paranenud traumasid ja murde. Koljul oli kaks paranenud lohukujulist vigastust, rindkere vasaku poolel esines paranenud roidemurde. Lisaks oli isik murdunud vasaku küünarnuki (jn 6) ja vasaku sääreluu (jn 7). Mõlemad traumad olid paranenud, kuid küünarliigese liikuvus jäi sellest peale pärsituks.

Kaevand 1 pinnasest ja Vanatoa künka lõunaküljelt koguti otsinguvahendiga üheksa metallist juhuleidu, millest enamik võib algselt pärineda samuti matustest. Need olid vitssõlg (jn 4: 3), südamekujuline sõlg (jn 4: 4), Rootsi ¼ ja ½ öörid (jn 4: 5–6), kaks rauast naela, arvatavasti malmist kellukese katke (jn 4: 7), raamatu lukum (jn 4: 8) ning vasesulamist tundmatu otstarbega eseme katke (jn 4: 9). Kalme pinnal leidus arvukalt punaste savinõude ja fajansist nõude

katkeid, mida võib seostada 19. sajandil ja 20. sajandi algul künkal asunud hoonega. Märkimisväärne oli üks portselanist koerakujukese katke (jn 4: 10).

Kuigi Inju matusepaik jääb tõenäoliselt 1708. aasta lahingu lähikonda ning oli nähtavasti ka sel ajal aktiivses kasutuses, ei andnud 2022. aasta proovikae-

vamised tõendeid sinna maetud sõduritest. Leitud kolm matust, mis kuulusid arvatavalt mehele ja naisele ning väikelapsele, viitavad pigem Inju kalmistu kasutusele pikema aja vältel. Võib arvata, et sellesse mattis eelkõige Inju küla rahvas 17. sajandil ning 18. sajandi esimesel poolel.