

Archaeological fieldwork at the burial ground, settlement site and ancient field at C. R. Jakobsoni St. 13 in Tallinn

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INTRODUCTION

The city of Tallinn still holds many surprises in the field of archaeology. New information is added nearly each year not only about the medieval town and its inhabitants but also about the earlier periods. There is also much to discover regarding the Early Modern and Modern period, especially outside the town core, due to the lack of written sources or accurate historic maps. This was a case in 19th century suburbs of Tallinn at the intersection of C. R. Jakobsoni and J. Kunderi streets (Fig. 1) where the Modern period cultural layer and buildings, Early Modern period burial site and beneath them, under over a metre thick sand dune, a cultural layer of a settlement site and an ancient field (Fig. 2) were recently discovered.



Fig. 1. The location of the C. R. Jakobsoni Street 13 plot in Tallinn.

Jn 1. C. R. Jakobsoni 13 kinnistu asukoht Tallinnas. Illustration / Joonis: Raido Roog



Fig. 2. The total area investigated during fieldwork in 2018. 1 – number of the burial, a – test pit no 1, b – test pit no 2, c – test pit no 3, d – construction no 1, e – construction no 2, f – construction no 3.

Jn 2. Uuringuala üldplaan, kus on näidatud 2018. aastal tööde käigus avatud ala. 1 – matuse number, a – proovikaevand 1, b – proovikaevand 2, c – proovikaevand 3, d – konstruktsioon 1, e – konstruktsioon 2, f – konstruktsioon 3. Drawing / Joonis: Raido Roog

There are no written records or historic maps portraying the settlement site or burial ground located between the J. Kunderi and Fr. R. Kreutzwaldi streets in Tallinn. During the 17th century the surrounding areas were probably used for farming or as a grassland. A small stream north of the site and a road – today's Tartu Road – are shown on a map from 1688 (RA, EAA.1.2.C-III-1). During the 19th century the land next to C. R. Jakobsoni street was divided into plots and fast building began. On a map from 1849 we can see buildings being erected next to C. R. Jakobsoni street and military barracks by the Tartu Road (RA, EAA.1874.1.3545). In 1885 the eastern side of the C. R. Jakobsoni St. 13 plot is densely populated, while the western side was probably used for farming (RA, EAA.854.4.46). The many houses erected during the 19th and 20th century were finally demolished in 2007 (Kallas 2007).

The first information about a possible burial site comes from October 1935, when, during the construction of a water pipe leading to a nearby private school (now Fr. R. Kreutzwaldi St. 25), burials were found (Russow in prep., cat. no TLN1935.04; TLA 1147.1.30). It was hypothesized that these were the burials of Russian troops that laid siege to Tallinn during the Great Northern War in the beginning of the 18th century. A year later when digging a foundation ditch on the site of Fr. R. Kreutzwald St. 20 (presently J. Kunderi St. 14) more burials were found. In one of the burials the deceased had with him a Swedish Sigmund III coin, dating the burial to the 16th century (Russow in prep., cat. no TLN1936.06; TLA R-285.1.458). Over the years more human remains and burials were unearthed during the construction of nearby buildings. In 1962 and 1966 17th–19th century pottery and stove tiles were found at C. R. Jakobsoni street during earthworks indicating the presence of an Early Modern and Modern period cultural layer (Russow in prep., cat. nos TLN1962.12; TLN1966.18). It is probable that burials were also found during the construction of C. R. Jakobsoni St. 7 buildings, but

archaeologists were not notified (Malve & Reppo 2018, 3). The burial site was rediscovered by Erki Russow in late 2016 when studying notes and papers of the 1930s heritage activities of several individuals at Tallinn City Archives.

Based on these reports of a possible burial site in the region preliminary research was carried out in 2017 on the site due to upcoming construction (Malve & Saage 2017), during which six burials and a well-preserved cultural layer of a settlement site were discovered. Under the cultural layer, in the natural soil, regular dark lines – ancient plough marks – were found. This discovery prompted a larger excavation during the spring and summer of 2018 (Malve *et al.* 2019). In this article we present the results of the excavation of the burial ground, partially uncovered Modern period buildings and preliminary research carried out on the settlement site and ancient field.¹

On the studied area foundations of late 19th and early 20th century buildings were found (Fig. 2, d–f). Around them were many large rubbish pits that had disturbed the foundations and the cultural layer of the settlement site and ancient field situated deeper below the sand dune.

The first construction found was a small square cellar, which was dug into the dune and partially disturbed the earlier cultural layer. The walls were laid out of cut limestone slabs, held together with grainy white lime mortar, and the floor was constructed out of a concrete slab lined with yellow bricks. The inside of the cellar was plastered. A thick cast iron pipe, probably part of the plumbing, was still present inside the southern wall. The walls were covered by a layer of debris consisting of red brick fragments, glazed and unglazed redware, stoneware, coloured glass and glassware fragments, animal bones, textiles and wood. When removing the concrete slab, it was obvious the cellar had partially been dug into the cultural layer beneath.

The second construction was a foundation of a larger residential building which was only half uncovered during fieldwork. Aside the outer wall made of cut limestone slabs a middle support wall, a cellar floor, chimney and stove bases were unearthed. Behind the residential building was an attached auxiliary building built of red bricks. The remaining cellar floor was situated next to the western outer wall and south of the middle support wall. It was laid out of granite slabs in a rhombus pattern and the tiles, as well as the middle support wall next to the floor, were worn smooth from use. South of the floor was a three metre long wooden log that ran in NW–SE direction. This was possibly some kind of a wooden wall or partition that separated the cellar and the auxiliary building. In the middle of the building were a chimney and stove bases. Next to the stove base a flue laid of red brick was found heading towards the chimney. All that had remained of the auxiliary building was the outer western wall, which was covered with thick plaster. While uncovering the foundation glazed and unglazed redware fragments, glass fragments, white clay pipe fragments and animal bones were found alongside a coin from the beginning of the 20th century. The whole foundation was built on top of the sand dune.

The third construction was found in the western part of the plot. It was also built out of limestone slabs, being about two metres wide and 0.75 metres high. The wall was dug into the sand dune during which burial no 9 was uncovered – the wall was laid right on top of the individual's feet, damaging one of the remaining leather shoes and removing the left foot.

¹ The fieldwork of the lowest part of the cultural layer was carried out by Paul Ööbik (Agu EMS OÜ) in July–August 2018, the results of this excavation have been excluded from the present paper. They hypothesized that the sherds of pottery were possibly carried here with manure or were broken on site. Based on the finds they think the sherds originate from only a few vessels, which were ploughed across the field. The find density of 0.7 finds to m² seems to corroborate that. In addition, two medieval crossbow bolts were collected (Ööbik & Selin 2018).

Under the asphalt was a thick layer of demolition debris, probably from the buildings that were demolished in 2007, under which a sandy sooty cultural layer was found along with numerous rubbish pits. The layer contained mainly glazed or unglazed redware fragments, printed porcelain, coloured glass and glassware fragments, animal bones, stove tile and brick fragments, and different metal objects, among others several 19th and early 20th century customs seals (e.g. chief customs office of Tallinn). This layer also contained pieces of charcoal. This cultural layer probably originates from the same time as the foundations. The layer was in many places disturbed by large rubbish pits containing roughly the same type of finds as the layer itself, and in some cases had even disturbed the earlier cultural layer under the sand. Some of the rubbish pits could be dated to the same period as the buildings, but some pits had damaged the foundations and are from a later date.

BURIALS

During the rescue excavations at the burial site located at J. Kunderi and F. R. Kreutzwaldi streets in Tallinn, twelve partially or completely preserved burials were found. The graves had been damaged by later burials, and during later earthworks and constructions. The



Fig. 3. Burial no 10 was laid to rest in a plank casket. Jn 3. Matus 10 oli sängitatud laudkirstus. Photo / Foto: Raido Roog

dead were laid in sand dunes. The sandy soil favoured the preservation of organic material. Lids, sides, and bases of the coffins were clearly observable. Coffin wood and nails were found in seven graves. 56 coffin nails were collected, most of which (25) were found with burial no 14. The coffins were basic rectangular plank coffins (Fig. 3) where the planks were held together by carpenter's nails. All deceased were laid to rest in a supine position, head towards west (220°–270°). The position of the hands² was possible to determine in eight burials (nos 3, 7, 8, 9, 10, 12, 13 and 14): their hands were placed on the body. Most of the graves were single burials, but one collective burial with

three adult males (nos 1–3) was also discovered. Although a few burials were in several layers, most were in a single layer, which indicates that the area was the outer edge of the cemetery and was used for only a short period of time.

Finds from the graves

During fieldwork, items were discovered from seven graves. Most were fragments of garments. Among the finds were also some pieces of jewellery, most of which were Orthodox copper alloy cross necklaces (burials no 7, 10, 12 and 14; Fig. 4). The cross was a very personal item that was worn all the time and was buried with the deceased (Štšogoleva 2012, 27). It is a find characteristic to Orthodox burials. Several similar crosses were found from the churchyard of the Church of the Kazan Icon of the Mother of God in Tallinn (Malve & Juus 2018, 40). Three types of cross necklaces were found, all of which were decorated in relief. The discovered cross necklaces were different types of the 17th to 18th century Orthodox crosses

² Determining the position of hands is based on schematics by Valk 2001, 69, fig. 53.

(Kolpakova & Kostuchuk 2017). Inside the heart shaped end of the cross necklace from burial no 14 a possible silk garment fragment was preserved (Fig. 4). Around the neck of a young woman (burial no 8) was a necklace made of lead buttons. This burial of a 14to 18-year-old girl was the richest in items. Under the lower part of the back, the 1st lumbar vertebra, fragments of a 1.5 cm wide woolen ribbon, most likely from a belt, were found. Hair under the nape was preserved, some of it woven in a braid of which a 15 cm long part was preserved. A light patterned silk ribbon and a few textile fragments were tied around the braid. On top of the distal part of the right tibia seven 1.3 cm wide fragments of a woolen textile were found.

During the preliminary research, atop of the head of the coffin a sword (Fig. 5) with wood from the coffin lid stuck to the blade was found. The sword is most likely a double-edged Russian dragoon sabre dating from the first half of the 18th century.³ The handle of the sword was carved of wood and had a twisted copper alloy wire wrapped around it. The pommel and guard were also of copper alloy. The guard was heart-shaped and bore the initials of the maker of the sword 'DC' (Russian "ДС").

Under the right ilium of burial no 9, a decorated copper alloy button and some textile were found. Around the right foot was a leather boot with a copper alloy buckle (Fig. 6). The heel of the boot was fastened with nails. The corrosion from the buckle had preserved some of the shavings on the bottom of the coffin. These were the shavings from the making of the coffin. Placing the leftovers into the coffin under the dead body was a widespread custom (Malve *et al.* 2012, 202). Based on the design, the boot dates from the 17th to the 18th century.⁴ In addition, a child's left boot was discovered when excavating burial no 14.



- Fig. 4. Orthodox cross necklaces found during excavating the burials.
- Jn 4. Matuste välja puhastamisel leitud õigeusu kaelaristid.

Photo / Foto: Janika Viljat



Fig. 5. A double-edged, most likely Russian dragoon sabre discovered atop the casket of burial no 8 dating from the first half of the 18th century.

Jn 5. Matus 8 kirstu pealt avastatud kaheteraline tõenäoliselt vene tragunimõõk 18. sajandi esimesest poolest. Photo / Foto: Janika Viljat



Fig. 6. The boot with a copper alloy buckle found on the foot of burial no 9.

Jn 6. Matus 9 parema jalalaba ümber oli säilinud vasesulamist pandlaga nahast saabas.

Photo / Foto: Raido Roog

³ Pers. comm. Jaak Mäll (SALM).

⁴ Pers. comm. Krista Sarv (AM).

An extraordinary find was discovered in the collective burial: a chained shackle (Fig. 7) was locked around the lower part of an adult male's (no 3) tibia. This is a clear indication that the man had been a prisoner. It is possible that the rest of the dead in the collective burial were also prisoners.



Fig. 7. Shackle locked around the lower part of an adult male's (no 3) tibia.

Jn 7. Täiskasvanud mehe (matus 3) vasaku jala sääre alaosa ümber oli lukustatuna ahelaga jalaraud.

Photo / Foto: Raido Roog



Fig. 8. Braided hair of a 14- to 18-year-old woman (burial no 8).

Jn 8. Noore 14–18-aastase naise säilinud punutud pats (matus 8).

Photo / Foto: Janika Viljat

Skeletons

Of the twelve skeletons only three were complete (Table 1).⁵ The rest had been damaged by various earthworks. The bones were in good condition; there was little erosion and some mechanical damage. The sandy soil favoured also the preservation of hair that was present in two burials (nos 8 and 14). In both cases the hair was braided (Fig. 8).

The skeletons presented mostly with dental pathologies. Teeth were preserved in nine skeletons (203 teeth altogether). The most prevalent dental pathology was dental calculus (seven burials), followed by dental enamel hypoplasia (six burials) and dental caries (five burials). Less common were alveolar reduction (four individuals), ante mortem tooth loss and periapical lesions (both present in three individuals). Skeletons (nos 7 and 13) presented with all of the abovementioned dental pathologies. One woman aged 18 to 25 years presented with impacted mandibular canines. Dental growth anomaly was also present in burial no 8.

The most prevalent skeletal pathology was intraosseous disk herniation or Schmorl's nodules (burials no 1, 2, 3, 4, 9 and 11) that are most likely the result of hard labour at a young age. Schmorl's nodules were observed

on the thoracic (T6–T12)⁶ and first lumbar vertebrae (L1–L3) of six skeletons. Spondylosis or age-related degeneration of the vertebral column was observed on thoracic and lumbar vertebrae in five burials (burials no 1, 2, 4, 13 and 14), both in males and females. The skeletons were mostly middle aged or older; one younger, 25- to 35-year-old male also presented with peripheral osteophytes indicative of hard labour at a young age.

Similarly to other archaeological populations, periostitis was present (burials no 12, 13 and 14), mostly on the tibiae and fibulae (burials no 12 and 14) and in burial no 14, also on

⁵ The sex of the burials was determined according to the morphological traits on the pelvis and cranium (Buikstra & Ubelaker 1994, 16–20) and the 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 wearing of the teeth (Brothwell 1981, 72), pubic symphyseal face (Todd 1920; 1921; 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 (Ubelaker 1989, 63) and the epiphyseal fusion of the long bones (Schaefer *et al.* 2009). Pathological conditions were identified with the aid of Ortner & Putschar (1985) and Roberts & Manchester (2012). On teeth the degree of dental calculus and alveolar reduction was estimated (Brothwell 1981, 155 and Fig. 6.14 a, b). Stature was calculated according to the formula of Trotter and Gleser (Trotter 1970) using measurements of the right femora.

femora. It is a non-specific infection caused by bacteria, systemic disease, or a minor trauma (Connell & Miles 2010, 44).

Healed fractures were observed in two adult males. A 25- to 35-year-old (burial no 13) presented with healed fractures on the body of the right 11th rib and of the distal part of the left 1st metacarpal. Skeleton no 3, buried with a shackle, had a healed trauma on the distal part of the right 1st metacarpal. The injuries on the hand of both skeletons could be indicative of a fist fight or could have also been the results of work accidents. No perimortem injuries were observed in any of the skeletons.

A 14 to 18-year-old (burial no 8) presented with scoliosis of the thoracic vertebra caused by a developmental disorder of the vertebral column. Part of the 6th thoracic vertebra had not developed and therefore a semi-segmental hemivertebra was present (Fig. 9). The left part of the vertebra was missing, resulting in the spinal sideways curve. The ossification of a vertebra starts from two ossification centres and a hemivertebra is the result of one of the two not appearing (Aufderheide & Rodriguez-Martin 1998, 64). Scoliosis is the result of asymmetry that causes the vertebral column to become imbalanced (*ibid*.)

During the fieldwork, 330 human bones or bone fragments were collected from the soil mixed by earlier earthworks. One adult male skull without the mandible was also found (Fig. 10). The cap of the skull had been removed with a saw: a craniotomy had been conducted. The cap had been removed quite close to the orbits and base of the skull; almost all of the parietal bones and most of the occipital and frontal bones had been removed. The cut traversed only the squama of the temporal bones. The width of the cut was approximately 3 mm. It was located slightly higher on the right side of the skull and





slightly lower on the left side. The starting point of the cut was most likely the upper part of the squama of the right temporal bone. The frontal bone had been cut slightly diagonally: approx. 45 mm above the right and 37 mm above the left orbit. The occipital bone was halved 13 mm below the external occipital protuberance. The left side of the skull was cut with a single horizontal cut that ended on the right side of the occipital squama. Cranial vault was then removed by breaking off the 10 mm wide uncut section just before the lambda suture. After that another 26-mm-long cut was made. The second 10-mm-wide uncut section of the parietal bone was also then broken apart. The uniform manner in which the cap has been removed indicates an experienced practitioner. The cause for the craniotomy was most likely to investigate the man's cause of death.

- **Table 1.** Osteological age, sex and pathologies of the recorded skeletons from J. Kunderi and F. R. Kreutzwaldi streets,
Tallinn burial site.
- Tabel 1. Tallinnast J. Kunderi ja F. R. Kreutzwaldi tänavate piirkonnas paiknevalt matmispaigalt leitud luustike osteo-loogiline vanus, sugu ja patoloogiad.

Burial no / Matuse nr	Sex / Sugu	Age / Vanus	Pathologies / Patoloogiad	Stature / Kehakasv
1	ð	40+ y / a	Ankylosis of the 3rd and 4th cervical vertebrae, spondylosis of the 3rd, 4th, and 5th thoracic vertebrae, Schmorl's nodules on the 7th thoracic and 1st, 2nd, and 3rd lumbar vertebrae.	163.7 ± 3.27 cm
2	8	25-40 y / a	Spondylosis of the 4th, 5th, 6th and 7th thoracic vertebrae, Schmorl's nod- ules on the 7th, 9th, and 10th thoracic vertebrae, sinusitis in the maxillary sinuses. Teeth: slight dental calculus, remarkable alveolar reduction, dental caries, <i>ante mortem</i> tooth loss, dental enamel hypoplasia.	
3	6	25-40 y / a	Schmorl's nodule on the 8th thoracic vertebra, healed trauma on the distal part of the right 1st metacarpal.	-
4	Ŷ	40-50 y / a	Osteoarthritis of the shoulders, hips, and knees, spondyloarthrosis on the 1st and 2nd cervical vertebrae, osteochondrosis on the 5th, 6th, and 7th cervical vertebrae, spondylosis on the 4th, 5th, 6th, 7th, and 12th cervical and 1st and 2nd lumbar vertebrae, Schmorl's nodules on the 6th, 7th, 8th, and 12th thoracic vertebrae. Teeth: remarkable alveolar reduction, dental caries, periapical lesion, <i>ante mortem</i> tooth loss.	155.1 ± 3.72 cm
5	?	Adult / Täiskasvanu	-	-
7	5	35-45 y/a	Teeth: slight dental calculus, medium alveolar reduction, dental caries, periapical lesions, ante mortem tooth loss, dental enamel hypoplasia.	-
8	Ŷ	14–18 y / a	Scoliosis of the 4th, 5th, 6th, 7th, and 8th thoracic vertebrae. Teeth: lower left PM2 abnormal eruption, dental enamel hypoplasia.	-
9	Ŷ	18-25 y / a	Schmorl's nodules on the 9th and 12th thoracic and 1st lumbar vertebrae, spondylolysis on the 5th lumbar vertebra. Teeth: medium dental calculus, lower right I1 and I2 abnormal eruption, dental enamel hypoplasia.	-
10	ð	18-21 y / a	6th lumbar vertebra, Schmorl's nodules on the 8th, 9th, 10th, 11th, and 12th thoracic and 1st, 2nd, and 3rd lumbar vertebrae. Teeth: slight dental calculus, dental enamel hypoplasia.	172.1 ± 3.27 cm
12	Ŷ	25-40 y / a	Periostitis on the tibiae and fibulae, <i>os trigonum</i> of the left talus, sacraliza- tion of the 5th lumbar vertebra.	158.3 ± 3.72 cm
13	8	25-35 y / a	Periostitis on the distal parts of the femora and on the tibiae and fibulae, healed fracture on the body of the right 11th rib, healed fracture on the proximal part of the left 1st metacarpal, spondylosis of the 3rd, 4th, 5th, 7th, 10th, and 12th thoracic and 1st, 2nd, and 3rd lumbar vertebrae. Teeth: slight dental calculus, remarkable alveolar reduction, dental caries, periapical lesions, <i>ante mortem</i> tooth loss, dental enamel hypoplasia.	168 ± 3.27 cm
14	Ŷ	40+ y / a	Periostitis on the tibiae and right fibula, spondylosis of the 5th, 6th, and 11th thoracic vertebrae. Teeth: slight dental calculus, dental caries, abnormal eruption of the mandibular incisors and canines.	158.5 ± 3.72 cm

CULTURAL LAYER OF THE MEDIEVAL SETTLEMENT SITE AND PLOUGH MARKS

The cultural layer of the settlement site and ancient field, which had been disturbed partly by Modern period pits, trenches, buildings and burials, was observable on the whole site during fieldwork. To explore the nature of this cultural layer, three test pits $(1 \times 1 \text{ m})$ were dug (Fig. 2, a–c).

The upper part of the layer was disturbed by the formation of thick sand dunes that covered the settlement site. The settlement site's cultural layer was black or grey coloured and 5–20 cm thick. It contained very fragmentary pieces of local coarseware pottery, stoneware, burnt clay or red brick fragments, some unburnt and burnt animal bones and a few iron finds (nails, calk etc.). Many small pieces of charcoal were also collected. Based on the recovered 4 sherds of imported pottery (Rhenish stoneware: SIEG3a, Brühl, LANG2; Lower Saxon stoneware: LASX3, identification is based on Russow 2006), dated between the end of the 13th century and the first half of the 15th century, the cultural layer was dated to the medieval period. Most notable was the absence of redware in this layer.

Extensive plough marks were preserved under the cultural layer of the settlement site (Fig. 11). The criss-cross, mostly E-W and N-S-directional plough marks point to the use of a hook ard. During fieldwork it was impossible to determine if the field had been farmed before or after the settlement site was abandoned. There is no argument in favour of either. When dealing with a thinner cultural layer it is possible to plough through and into the subsoil, but it is unlikely with thicker layers as seen in at least some areas of the site. This would seem to indicate that the field is older than the settlement site. The fragmentation of finds could be indicative of ploughing through the settlement site and so the field could be much younger, which seems more likely. But this again is just speculation as there is no empirical evidence



Fig. 10. The skull of an adult male presenting with craniotomy.

Jn 10. Kraniotoomiaga täiskasvanud mehe kolju. Photo / Foto: Martin Malve



Fig. 11. Plough marks in test pit no 2. Jn 11. Künnijäljed proovikaevandis 2. Photo / Foto: Janika Viljat

in Estonia about the effects of ploughing on pottery and other finds. Small objects are also predominant in places that have never been ploughed but intensely trampled. For now, the ancient field remains undated, but in any case it was used before the formation of the sand dune, which in turn had to happen before the 18th century.⁷

DISCUSSION AND CONCLUSIONS

After the Great Northern War, the suburbs of Tallinn began to rapidly expand as a result of the construction of Orthodox churches and military campuses (Üprus 1976, 381). This caused the continued use of the burial ground at J. Kunderi and F. R. Kreutzwaldi streets. During this period, the percentage of Russians was highest in the suburbs (Pullat 1976, 339) and many of them were soldiers (Pullat 1992, 18). The higher sandy areas and dunes located in and near the Tallinn suburbs were often used as burial grounds in the Early Modern period since they were not suitable for neither farming nor construction. It was not until the town expanded and the nearby plots were already occupied, when the previously unsuitable locations were taken into use. Not only have burials dated to the 18th century been discovered on the J. Kunderi street and F. R. Kreutzwaldi street burial site, but burials from the Swedish period

⁷ The question of the relation between the settlement site and ploughing, and also the dating of the plough marks might be answered with the concluding excavations (see footnote 1). However, since the archaeological report has not been finished at the time of writing the present paper we do not possess the required data to be able to offer an answer to this problem.

have been found. Similarly to the cemetery at Pärnu Road 59b, Tallinn (plague graves in Liivamäed; Laane 2002, 34) which was used to bury plague victims in both single and collective graves (Malve & Juus 2018, 40), it is possible that the burial site was also already founded in the 16th–17th century. After the Great Northern War the site was used as an Orthodox burial ground. The observed pathologies are characteristic to Early Modern period cemeteries. No signs of violence were found of the skeletons and this indicates that this was a peacetime burial site.

Based on historical town maps, the C. R. Jakobsoni St. 13 plot as well as the nearby plots were used as meadows or farming land as late as the 17th century (Malve & Reppo 2018, 2). On a map from 1825, C. R. Jakobsoni street has been depicted with suburb plots: there are some buildings with gardens (RGVIA.349.Revel.631) and barracks south-west of the area. The barracks are also depicted on a map from 1856 and north-west of them is an empty sandy area (Raid 2011, map 27). Buildings are erected only at the end of the 19th century and the start of the 20th century.

Bones and skeletons presenting with craniotomy have been found from other post-Great Northern War cemeteries dating from the 18th century: Tallinn Cemetery of the Navy and Land Forces' Hospital, Haapsalu gallows hill (Malve *et al.* 2015) and Tõnismäe cemetery (Malve 2017, 42). No skeletons with signs of autopsy dating from earlier periods have been found. All skulls presenting with craniotomy that have been found in Estonia date from the 18th century. The annexation of Estonia by the Russian Empire brought with it medical progress and craniotomies were conducted by surgeons working at the garrison hospitals. At first it was allowed to conduct autopsies only on criminals and those who had committed suicide. One of the autopsied skeletons discovered at Haapsalu gallows hill belonged to Rein Buxhöveden who hanged himself in 1798 and was autopsied before his burial (Malve *et al.* 2015, 206). Based on this, it is possible that the skull discovered at J. Kunderi and F. R. Kreutzwaldi street burial site belonged to a criminal or a prisoner of war. In 1938, two skeletons were discovered in Kadriorg (specific location is not known) (Russow in prep., cat. no TLN1938.08) that were joined with handcuffs. It is possible that they were also buried at the same cemetery.

The medieval settlement site and ancient field located near town is undoubtedly an interesting find. Medieval settlement sites and fields are not rare in Estonia, but one buried under a sand dune is quite exceptional. Earlier sites have usually been disturbed by later activity but in this case the probably short-lived settlement site has remained undisturbed. There are a few similarly buried sites and fields in Estonia, the best comparison being Jägala Jõesuu and Jägala-Joa in northern Estonia. There sand dunes also covered numerous settlement sites from different time periods ranging from the Stone Age up to the Viking Age (Kriiska *et al.* 2009; Kriiska & Sikk 2014). Many buried fields have also been found in NW Saaremaa (Lõugas 1980, 54).

The overall picture of fields in Tallinn and Jägala regions is quite similar, pointing to the fact that sandy coastal areas were suited for farming during the prehistoric as well as the medieval period. These kinds of sandy soils were also ideal for farming in neighbouring countries (e.g. Carlsson 1979, 163; Mikkola *et al.* 2016, 149). Similarly, Tallinn, Jägala and northwestern Saaremaa regions seem to have experienced a natural disaster – the extensive movement of sand dunes that buried human habitations that were used up to that point. This is probably the direct result of intensive land cultivation in coastal areas with hazard of dune formation.

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ARHEOLOOGILISED UURINGUD MATMISPAIGAL, ASULAKOHAL JA PÕLLUJÄÄNUSTEL TALLINNAS C. R. JAKOBSONI TN 13

Martin Malve, Janika Viljat, Erki Russow ja Aivar Kriiska

Tallinnas J. Kunderi ja F. R. Kreutzwaldi tänavate piirkonnas paiknevalt matmispaigalt on inimluid leitud tõenäoliselt juba 19.-20. sajandi vahetusel, esimest korda mainitakse puutumata üksik- ning ühishaudu 1935. aastal. Toona pakuti, et tegemist võiks olla linna Põhjasõjas piiranud vene vägede laagri matmispaigaga. Järgmisel aastal kaevati sealtsamast välja arvukalt matuseid ja sängitatute juurest saadi ka rootsiaegseid münte, mis viitab hoopis varasemale matmispaigale. 1930. aastatest pärinevate arhiiviteadete põhjal toimusid 2017. aastal seoses uusehitise rajamisega Tallinnas Jakobsoni tn 13 krundil (jn 1) arheoloogilised eeluuringud, mille käigus leiti liivaluitesse rajatud matmispaik ja luiteliiva alt asulakoha kultuurkiht ja künnijäljed. Tööd jätkusid 2018. aastal väljakaevamistega (jn 2). Käesolevas artiklis esitatakse nende uuringute tulemused.

Uuringualal dokumenteeriti kolme 19./20. sajandi hoone vundamente. Välja puhastati kaks nelinurkset keldrit ja osa eluhoone vundamendist. Ehitusjäänuste ümber oli säilinud samaaegne tumehall liivane kultuurkiht. Peamiseks leiumaterjaliks olid punane glasuurkeraamika, portselani ja erivärvilise klaasi katked, loomaluud, ehituskeraamika ning plekk jm metalldetailid.

Kogu avatud alal oli uusaegsete asustusjälgede ja matuste ning kuni 1 m paksuse luiteliiva all 5–20 cm paksune asulakoha kultuurkiht, mida paiguti lõhkusid uusaegsed sissekaeved, hoonestus ja matused. Kihi ülaosa oli mõnevõrra segatud luitestumise käigus. Söetükikesterohke mustjat värvi kultuurkiht sisaldas savinõukilde, põlenud savi- ja tellisetükke, loomaluid ja üksikuid raudesemete katkeid (jäänael, naelad jt). Märkimisväärne on varase punase glasuurkeraamika puudumine. Leitud kivikeraamika alusel võib asulakoha dateerida 13. sajandi lõppu ja 15. sajandi esimesse poolde.

Asulakoha kultuurkihi all olid looduslikus liivapinnas künnijäljed (jn 11). Nende ristsuunaline paiknemine osutab konksadra kasutamisele. Võimalik, et künd on toimunud läbi asulakoha kultuurkihi ja põllujäänused on seega nooremad kui asulakoht. Avatud ala väikeste mõõtmete tõttu on see siiski vaid oletus, mitte tõestatud väide.

Päästekaevamistel avastati 12 osaliselt või terviklikult säilinud matust. Haudu oli lõhutud nii ülematmiste kui ka hilisemate mullatööde ja hoonestuse rajamisega. Surnud olid sängitatud liivaluidetesse. Hästi olid jälgitavad nii kirstu kaaned, küljed kui ka põhjad. Kõik surnud olid maetud selili-siruli asendis peaga läänekaartesse. Valdavalt oli tegemist üksikmatustega, kuid leiti ka üks ühishaud, kuhu oli sängitatud kolm täiskasvanud meest (nr 1-3). Esines ka üksikuid ülematmisi, enamasti olid surnud kõik ühes kihis ning väga hõredalt, viidates kalmistu äärealale ja lühiajalisusele. Välitööde käigus leiti esemeid seitsmest hauast, enamasti oli tegemist riideesemete katketega, kuid avastati ka üksikuid ehteid. Enim saadi vasesulamist õigeusu kaelariste, nn ihuriste (matus 7, 10, 12 ja 14; jn 4). Surnute juurest avastatud kaelaristid esindavad erinevaid 17.-18. sajandi õigeusu ristide tüüpe. Noore neiu (matus 8) kaela ümber oli pliist nööpidest kee. 14-18-aastase neiu matus oli kõige leiurohkem. Selja alaosa, täpsemalt esimese nimmelüli tagant, leiti 1,5 cm laiuse villase paela jäänused, mis pärinevad tõenäoliselt vööst. Parema sääre kaugema osa peal oli säilinud seitse 1,3 cm laiust villasest tekstiilist paelte katket. Matus 8 kirstu päitsi kohalt leiti eeluuringute käigus tõenäoliselt vene tragunimõõk (jn 5), mille tera küljes oli säilinud kirstukaane kõdupuidu fragmente. Matus 9 parema jalalaba ümber oli säilinud vasesulamist pandlaga 17.-18. sajandi nahksaabas (jn 6). Erakordse leiuna saadi ühishauas olnud täiskasvanud mehe (nr 3) vasaku jala sääre alaosa ümbert lukustatuna ahelaga jalaraud (jn 7), mis viitab, et maetu oli vang. Võimalik, et ka ülejäänud ühishauas olnud surnud olid vangid.

12 leitud luustikust olid terviklikult säilinud vaid kolm (Tabel 1), ülejäänud olid saanud kannatada erinevate pinnasetöödega. Liivane pinnas oli soodne ka juuste säilimisele, neid leiti kahe matuse juurest. Mõlemal juhul (nr 8 ja 14) oli tegemist punupatsiga (jn 8). Enim tuvastatud patoloogiad luustikel olid seotud hammastega. Hambaid oli säilinud üheksal skeletil (kokku 203 hammast). Hambapatoloogiatest leiti arvukamalt hambakivi, stressijooni, kaariest, vähem avastati alveolaakaarte taandumist, eluajal väljalangenud hambaid ja periapikaalseid tühimikke. Skelettidel tuvastati enim lühivaheketaste songi e Schmorli sõlmi, mis tõenäoliselt on seotud suure füüsilise koormusega noores eas. 14-18-aastase nooruki (matus 8) selgroo rinnalülidel tuvastati skolioos, mis on tingitud lülisamba arenguhäirest (jn 9). Välitöödel koguti kokku 330 inimluud või selle fragmenti, mis pärinevad varasemate mullatöödega segi keeratud pinnasest. Selle käigus leiti ka üks täiskasvanud mehe kolju ilma alalõualuuta (jn 10). Koljul oli ajukolju ümberringi saega lahti lõigatud ehk läbi oli viidud kraniotoomia. Kolju oli avatud küllaltki silmakoobaste ja koljupõhimiku osa lähedalt, mistõttu eemaldusid kiiruluud peaaegu täielikult ja suuremas osas ka kukla- ning otsmikuluu. Kolju oli avatud küllaltki ühtlaselt, mis viitab kogenenud praktiseerijale. Kraniotoomia viidi läbi tõenäoliselt mehe surma põhjuse uurimiseks.

Pärast Põhjasõda hakkasid Tallinna eeslinnad seoses sõjaväelinnakute ja õigeusu kirikute rajamisega hoogsalt laienema, selle käigus jätkus matmine ka J. Kunderi ja F. R. Kreutzwaldi tänavate piirkonnas paiknevale matmispaigale. Venelaste osakaal oli tollal suurim just eeslinnades, nende seas oli rohkelt sõjaväelasi. Tallinna eeslinnadesse ja nende kõrvale jäänud liivaseid kõrgemaid alasid ning luiteid kasutati tihtipeale varauusajal matmispaikadena, kuna need ei sobinud põllu- ega ehitusmaaks. J. Kunderi ja F. R. Kreutzwaldi tänavate piirkonnas paiknevalt matmispaigalt ei ole avastatud ainult 18. sajandist pärinevaid haudu, vaid ka rootsiaegseid matuseid 16.–17. sajandist. Võimalik, et õigeusu matmispaik kujunes siia alates 1710. aastast – sarnaselt Tallinna Pärnu mnt 59b kalmistuga (katkuhauad Liivamägedes), kuhu sängitati katku surnuid üksik- ja ühishaudadesse ning hiljem maeti sinna eeslinna kolinud vene õigeusu kogukonda. J. Kunderi ja F. R. Kreutzwaldi tänava piirkonnast leitud skelettidel tuvastatud patoloogiad on omased varauusaegsetele kalmistutele, neil puudusid vägivalla tunnused ja seetõttu võib öelda, et leitud haudade puhul on tegemist rahuaja matmispaigaga.

Kraniotoomiaga luid ja skelette on leitud ka teistelt Põhjasõja järgsetelt matmispaikadelt: Tallinna Mereja maaväehospidalikalmistult, Haapsalu võllamäelt ja Tõnismäe kalmistult. 18. sajandi eelsest ajast seni ühtegi lahkamistunnustega skeletti leitud pole. Eesti alade liitmine Vene tsaaririigiga tõi kaasa ka meditsiini arengu, käesolevaid protseduure viisid läbi garnisonide juures hospidalis töötanud kirurgid. Esialgu võis lahata vaid kurjategijaid ja enesetapjaid. Seega on võimalik, et J. Kunderi ja F. R. Kreutzwaldi tänavate piirkonnas paiknevalt matmispaigalt leitud kolju kuulus näiteks mõnele sõjavangile või kurjategijale.