



RESCUE EXCAVATIONS ON THE SETTLEMENT SITE AND RURAL CEMETERY OF LOHKVA, TARTUMAA

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The settlement site and rural cemetery of Lohkva are situated northeast of Tartu by the Tartu-Räpina road. In 2012 in the course of renovating the road, archaeological rescue excavations were carried out on the 11th – 17th century settlement site and on the Medieval and Early Modern village cemetery. The investigations were carried out by OÜ Muinaslabor and supervised by Raido Roog. Osteological analysis was conducted by Martin Malve.

THE SETTLEMENT SITE OF LOHKVA

Historical background and previous research

Lohkva is first mentioned in written sources in 1220, when priests Petrus Kaikewalde and Henrik baptized the villagers of Lohkva (*Lovecotte*) (HCL XXIV, 1).

In the 16th – 17th century the village consisted of 9–28 farms, whereas the village reached the largest number of farms in the end of the 16th century (Tootsi 1999, 126). During the Polish-Swedish War in 1600–1611, 2/3 of the farms were destroyed, by the time of the Great Northern War (1700–1721) the village had again grown to 16 farms (*ibid.*).

The settlement site was found by archaeologist Heiki Valk in 1990. Finds gathered on following surveys originate from the Latest Iron Age (11th – 13th century) to Early Modern Period (16th – 18th century). The only previous investigation was carried out in 2005 during the installation of pipelines (Bernotas & Tvauri 2006). The works only concentrated on the area under archaeological protection (Reg. No. 12853) (Fig. 1). The cultural layer on the investigated area was mixed by ploughing and the only find was a dark pit of Early Modern or Modern Period origin dug into the natural soil.

Excavations and finds

Until the renovation of the Tartu-Räpina road the settlement site was thought to be situated on a relatively small area (Fig. 1). In the course of an archaeological survey in spring 2012 preceding the excavations, the boundaries of the Lohkva settlement site were broadened northwards (Jonuks 2012). As a result the initial project of a huge roundabout intended to cover most of the newly discovered settlement site areas was altered. According to the new project with a much smaller roundabout the road still had to be slightly broadened and therefore rescue excavations¹ were carried out.

¹ Finds from settlement: TÜ 2004.

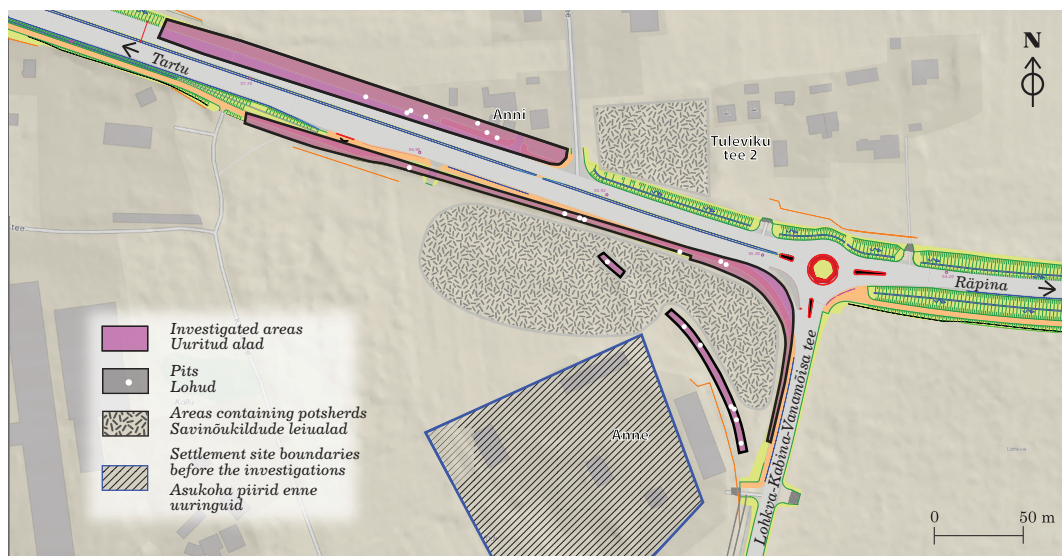


Fig. 1. Location of the settlement site of Lohkva.

Jn 1. Lohkva asulakoha asukoht.

Drawing / Joonis: Raido Roog

The cultural layer on the settlement site had been mixed as deep as the natural soil by ploughing and was removed with an excavator. After removing the mixed topsoil, dark pits in the natural soil could be distinguished (Fig. 2). Altogether 21 pits connected to the settlement site were found. The round or oval depressions with a diameter of 0.5–2 m and a depth of 0.1–0.7 m contained charcoal, earthenware and in some cases heat-affected granite stones and/or a few animal bones. Similar remains interpreted as household pits or hearths are typical to settlement sites and have been found for example in Olustvere (Lavi 2005), Alt-Laari (Lillak & Valk 2009) and Uderna.²



Fig. 2. Pits found on the settlement site.

Jn 2. Asulakohalt leitud lohud.

Photo / Foto: Raido Roog

The information gathered from the pits remains scarce, because no remains of constructions were found above the natural layer. In the bottom of some pits heaps of stones or two horizontal levels of soil could be distinguished. As an exception, one round pit contained lots of clay seals with imprints of wood or stone. Additionally lots of heat-affected granite stones and earthenware (126 sherds), half of which had been bloated (Fig. 3), were found from the same pit.

The majority of finds from the pits consisted of earthenware from the Latest Iron Age (11th – 13th century) to Early Modern Period (16th – 17th century).

² Supervised by Ingmar Noorlaid and Karin Vimberg; investigations in progress.

Most of the pits contained relatively small numbers of potsherds, but three cases stood out by holding over a hundred sherds each (more precisely 126, 169 and 443), forming the majority of all finds collected. Interestingly, all of the potsherds from these three pits were Northwest Russian earthenware of type No. 5 originating from the second half of 16th century and 17th century (Tvauri 2000). In addition animal bones and fish scales were found in the depressions. No shifting of the location of the village in different periods could be distinguished on the narrow areas investigated.

The mixed soil previously removed by an excavator was searched through using a metal detector. The metal finds consisted of coins (16th – 19th century), a penannular brooch with rolled ends (13th – 17th century) and two flat ornamented bracelets (13th – mid-15th century).

THE RURAL CEMETERY OF LOHKVA

Previous research on the cemetery

The rural cemetery of Lohkva has been investigated in 1985 during the previous renovation of the Tartu-Räpina road (Tootsi 1999, 125). The research led by Mare Aun unearthed intact inhumations in wooden coffins with coins as grave goods, but no report was written and little is known of the work conducted (*ibid.*).

Excavation and finds

Until the summer of 2012 the village cemetery of Lohkva was known to be situated 50–120 m east of the Jewish cemetery of Lohkva. Due to the fact that the Tartu-Räpina road was to be broadened on the area of the presumable cemetery, preliminary research was carried out there, but a cemetery could not be found (Jonuks 2012). In the course of renovating the Tartu-Räpina road in summer 2012 new power cables were installed on the western and south-western side of the Jewish cemetery (Fig. 4). During the excavation of the trench, intact human burials were unearthed. Closer inspection revealed that the rural cemetery was in fact on the western side of the Jewish cemetery and not on the eastern side as previously thought.

Intact burials were found on an 18.5 m long area of the 4.3 m wide cable trench, on an area of 80 m². Although the trench reached much further south and north, no burials could be found there, indicating the approximate northern and southern boundary of the cemetery. Burials found in the eastern section of the cable trench suggest that the cemetery reached further east – to what extent, is yet unknown. The western side of the trench was destroyed by electricity cables installed in the Soviet Period.

The burial density of the cemetery was high and during the rescue excavations 99 burials were unearthed. All human bones that situated anatomically correctly towards

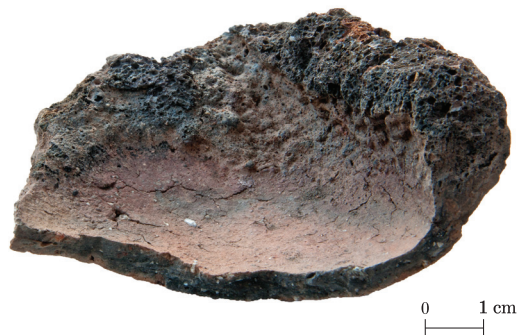


Fig. 3. Bloated potsherd from the settlement site of Lohkva.

Jn 3. Porsunud potikild Lohkva asulakohalt.

Photo / Foto: Raido Roog

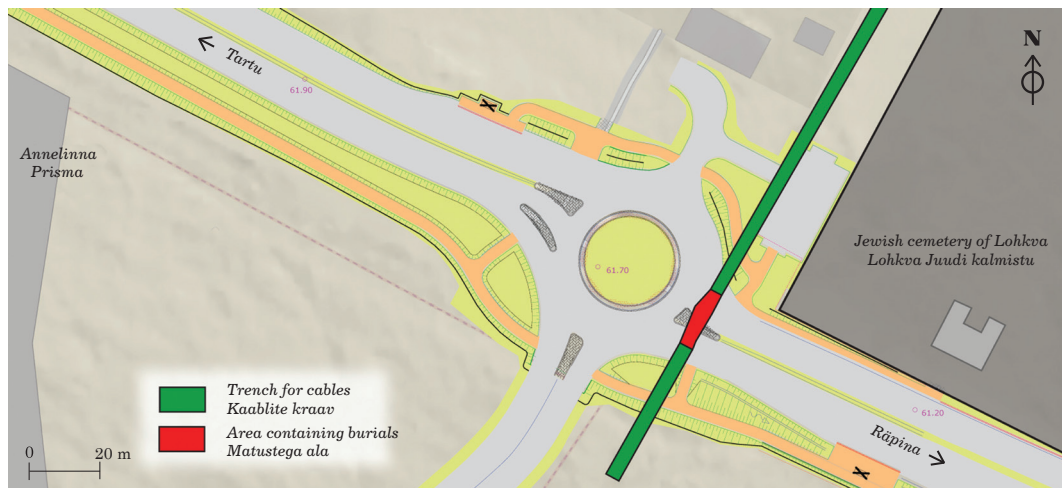


Fig. 4. Location of the rural cemetery of Lohkva.

Jn 4. Lohkva külakalmistu asukoht.

Drawing / Joonis: Raido Roog

each other were considered burials, even if only a few bones were preserved. Due to a high number of secondary burials and previous construction works only 9 skeletons were completely untouched. Preservation of the bones was good, only a few bones had signs of erosion and heavy fragmentation due to decomposition. Most burials were single inhumations, laying with their heads westwards and on their back in stretched positions. Exceptionally one individual (burial no. 29) was buried in prone position, in two cases two individuals were buried together and in addition to inhumations mixed cremated human bones were found in the soil. The majority of the burials included also remains of coffins, such as wood and/or nails.

The following introduction of **finds**³ is not complete, because some finds, especially the textiles, are still under conservation. Finds associated with burials consist of coins, brooches, rings and knives, originating mainly from the second half of 16th century and 17th century. One skeleton situated in the lower part of the trench had a needle-sheath from the 14th – 16th century (Fig. 5: 4) as a grave good, suggesting that the cemetery was in use also in the Middle Ages. Among the coins Swedish öres (e.g. Fig. 5: 3) from 1635–1671 were most numerous, but some coins from the second half of 16th century (Fig. 5: 1–2) were found as well. In addition round brooches (from the 17th century) (Fig. 5: 6), heart-shaped brooches (from the 17th – 18th century) (Fig. 5: 5), a penannular brooch made of twisted bronze wire (from the 16th – 17th century) and a signet ring (from the 17th – 18th century) (Fig. 5: 7) were found in the burials.

Additionally a few finds from the medieval period and the Livonian War (1558–1583) were found from the soil that had already been removed. For example a fragment of a hanseatic brooch (from the 13th – 14th century) (Fig. 5: 10), a penny of the Bishopric of Dorpat (Tartu) (Andreas Peper 1468–1473) (Fig. 5: 8), a shilling of the Free Town of Riga (from 1564) and a shilling of Reval (Tallinn) (Johan III 1571–1585) (Fig. 5: 9) were found.

³ TÜ 2155.



Fig. 5. Finds from skeletons (1–7) and from mixed soil (8–10). 1–2 – shillings, 3 – 1/6 öre, 4 – needle-sheath, 5 – heart-shaped brooch, 6 – round brooch, 7 – signet ring, 8 – penny, 9 – shilling, 10 – fragment of a hanseatic brooch.

Jn 5. Leiud luustike juurest (1–7) ja segatud pinnasest (8–10). 1–2 – killingid, 3 – 1/6 ööri, 4 – nõelakoda, 5 – südasõlg, 6 – ümarsõlg, 7 – pitsatsõrmus, 8 – penn, 9 – killing, 10 – hansasõle fragment.

(TÜ 2155.)

Photo / Foto: Raido Roog

Rural cemeteries are usually connected with certain villages and are commonly located at a distance of up to 800 m, most often 100–500 m from the villages (Valk 2001, 29). In the case of Lohkva the distance between the settlement site and cemetery is about 800 metres. Considering the matching dates it is possible that the two sites were used by the same community.

OSTEOLOGICAL ANALYSIS

The sex of the deceased was determined by the morphological traits on the pelvis and cranium (Buikstra & Ubelaker 1994, 16–20), in case these skeletal parts were absent the maximum length of humerus, femur and tibia were considered instead (Garmus & Jankauskas 1993, 6–8). The age at death was examined according to changes in the pubic symphyseal face of the adults (Todd 1920, 285–334; Todd 1921, 1–70), closure of the cranial sutures (Buikstra & Ubelaker 1994, 16–20), teeth attrition (Brothwell 1981, 72) and changes in limb joints (Data collection codebook 2005, 31–33).

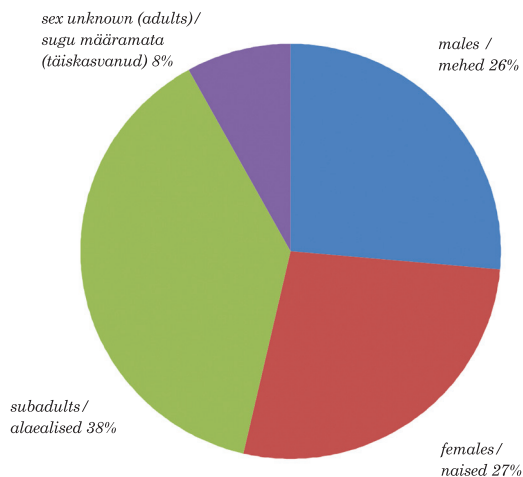


Fig. 6. Percentage of male, female and subadult skeletons found in the cemetery of Lohkva.

Jn 6. Lohkva küllakalmistult leitud meeste, naiste ja alaealiste luustike jaotumus.

Drawing / Joonis: Martin Malve

The sex of the subadults was not determined because clear sexual traits develop only in the end of puberty (Buikstra & Ubelaker 1994, 16). The age of subadults was analysed by the development and eruption of teeth (Ubelaker 1989, 63), epiphyseal fusion (Recommendations 1980, 531), development of the bones (Schaefer *et al.* 2009) and the length of the long bones (Allmäe 1998, 183).

Altogether 38 subadult and 61 adult skeletons were found. The latter consisted of 26 males, 27 females and 8 adults whose sex could not be determined due to fragmentation of the material (Fig. 6). The high percentage of adult burials (62%), and a rather low percentage of subadult burials (38%), is somewhat exceptional in the context of Estonian Medieval and Early Modern Period cemeteries.

For example, in the rural cemetery of Makita subadults were presented by 60.8% and adults by 39.2% (Heapost 1993), in Tääksi the respective figures were 57.6% and 42.4% (Allmäe 1998) and in Mustla 60% and 40% (Kaldre *et al.* 2011). Adding the numbers of adults and subadults identified among the commingled bones, the percentages of Lohkva do not change much: adults formed 59% and subadults 41%. Of course the relatively small number of 99 skeletons, incompleteness of the skeletons and the limited area investigated provide insufficient information for solid conclusions. The percentages could be explained, for example, by excavations taking place on an area where fewer subadults were buried or by poor preservation of subadult bones.

Another surprising result was the high number (51%) of mature and elderly adults (35+ years) (Fig. 7), and a small number (7%) of those, who died as young adults (20–35 years). The figures suggest a relative longevity among the community.

The average height of females and males was accordingly 156.3 and 169.9 cm based on 11 female and 10 male right femurs.⁴ Compared to other Medieval and Early Modern Period village cemeteries⁵, the results are fairly average. The shortest female was 148.4 cm and the tallest 162.7, among males the respective numbers were 163.6 and 178.9 cm.

The pathologies of Lohkva are typical to a Medieval and Early Modern Period cemetery and lack injuries caused by violence. Pathologies accompanied by ageing (wearing of joints) and injuries of accidents (healed fractures) or lifestyle were common, for example intervertebral disc herniations (Schmorl's nodes) (Fig. 8) that are caused by a long-term hard physical work and in the case of Lohkva were present on both male and female skeletons. In one case a juvenile aged between 12–18 years also had signs of the Schmorl's nodes. In addition to typical pathologies there were also cases of osteomata and anomalies in bone growth.

⁴ The stature of the adults was calculated according to the method of Trotter & Gleser (1952).

⁵ See Kanepi (Heapost 2004), Makita (Heapost 1993), Otepää (Mark 1962), Tääksi (Allmäe 1998).

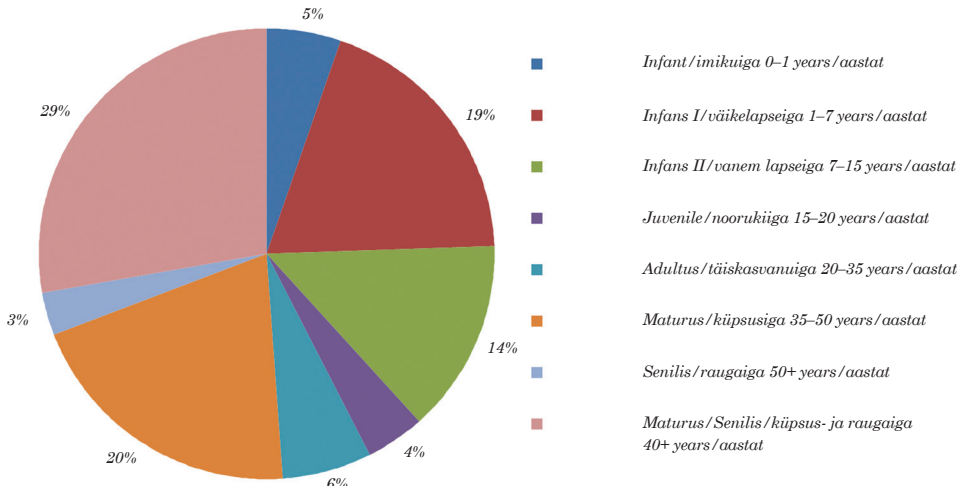


Fig. 7. Age distribution of the buried.
 Jn 7. Matuste vanuseline jaotumus.
 Drawing / Joonis: Martin Malve

SUMMARY

The settlement site of Lohkva is situated on a much wider area than was previously known. During rescue excavations 21 pits dug in the natural soil were found. The pits containing charcoal and heat-affected granite stones are common to settlement sites and represent household pits or remains of hearths. Since the cultural layer was completely mixed by intensive ploughing, remains of houses or hearths were not preserved above the natural layer.

The find material consisted primarily of earthenware, which fitted the earlier dating of the village: the 11th – 17th century. Remarkably, most of the potsherds were found from only three pits and are of the same type and date – the second half of the 16th and 17th century.

During the renovation of the road, the location and nature of Lohkva rural cemetery was considerably clarified. The rescue excavations unearthed altogether 99 skeletons, most of which date from the 17th century. One burial, with a 14th – 16th century needle-sheath as a grave good suggests that the cemetery was in use earlier. This is also confirmed by medieval finds found in the mixed soil.



Fig. 8. Schmorl's nodes of thoracic spine.
 Jn 8. Schmorli sõlmed selgroo rinnalülidel.
 Photo / Foto: Martin Malve

The osteological material of Lohkva represents a common peacetime rural cemetery of Medieval and Early Modern Period, including typical diseases and injuries. Interestingly, the percentage of subadults was unexpectedly low, whereas the percentage of adults was above average. The pathologies of Lohkva are typical to a Medieval and Early Modern Period cemetery. The stature of the people was fairly average. Considering the 800 m distance from each other, and the matching dates, the settlement site and the rural cemetery of Lohkva might have been used by the same community.

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PÄÄSTEKAEVAMISED LOHKVA ASULAKOHAL JA KÜLAKALMISTUL

Raido Roog ja Martin Malve

Lohkva asulakoht ja külakalmistu asuvad Tartu kirdeküljel Tartu-Räpina mnt ääres. Seoses maantee renoveerimisega toimusid 2012. aastal 11.–17. saj asulakohal ja kesk- ning varauusaegsel külakalmistul päästekaevamised.

Lohkva asulat on esimest korda mainitud 1220. aastal, kui preestrid Petrus Kaikewalde ja Henrik viisid Lohkva (*Lovecotte*) külas läbi ristimist. 16.–17. saj Lohkva küla koosnes 9 kuni 28 talust ning selle suurim ulatus saavutati ilmselt 16. saj lõpus. 1600–1611 toimunud Rootsi-Poola sõjas hävis 2/3 taludest, kuid Põhjasõjaks oli küla taastunud 16 taluni.

Kuni Tartu-Räpina mnt renoveerimiseni teati Lohkva asulakoht asuvat suhteliselt väikesel alal (jn 1), kuid 2012. a kevadel avastati, et asula piirid ulatuvad tunduvalt põhja poole. Selle tulemusel projekteeriti asulakohale kavandatud suur ringristmik oluliselt väiksemaks, kuid teede laiendamise tõttu tuli siiski korraldada päästekaevamised. Kultuurikiht oli intensiivse kündmisega kuni loodusliku pinnaseni segatud ning seetõttu kaevati välitööde käigus kopaga. Kasvupinnase eemaldamise järel eristusid looduslikus pinnases tumedad lohud (jn 2), mis arheoloogiliselt läbi uuriti.

Kokku leiti 21 sütt, kuuma saanud kive, potikilde ja üksikuid loomaluid sisaldanud lohku, mida võib tõlgendada majapidamislohkude ja ahjujäänustena. Informatsioon jääb paraku napiks, sest looduslikust pinnast kõrgemal polnud mingeid konstruktsioone säilinud. Üksikutel juhtudel eristusid lohkude põhjas kaks horisontaalset tasapinda või kivikuhjad. Erandlikult leiti ühest ümarast lohust ka hulgaliselt puidu või kivi jäljenditega savitihendeid, kuuma saanud raudkive (jn 2) ja lihtkedrakeraamika katkeid (126 kildu), millest umbes pooled olid porsunud (jn 3).

Peamiseks leiumaterjaliks lohkudes olid kedral valmistatud savinõude killud (11.–17. saj), lisaks esines looma- ja kalaluid. Valdav enamik savinõukilde leiti kolmest lohust, mis dateeriti 16. saj. II p – 17. saj. Metallidetektoriga otsiti läbi ka varemalt kopaga kooritud segatud pinnas, millest saadi münte (16.–19. saj), üks rullotstega hoburaudsõlg (13.–17. saj) ja kaks lamedat ornamenteeritud käevõru (13. saj – 15. saj keskpaik).

Lohkva külakalmistut on varem uuritud 1985. aastal Tartu-Räpina mnt eelmise renoveerimise käigus. Mare Auna juhendatud kaevamiste käigus leiti laibamatuseid, millel olid panustena kaasas mündid. Kuni 2012. a suveni arvati külakalmistu asetsevat 50–120 m Lohkva Juudi kalmistust ida pool. Kuna nimetatud alal oli plaanis maanteed laiendada, viidi seal läbi eeluuringud, kuid kalmistut ei leitud. Tartu-Räpina mnt renoveerimise käigus paigaldati Lohkva Juudi kalmistu lääneküljel tee alla uusi elektrikaableid (jn 4). Kaevetööde käigus leiti matuseid ning selgus Lohkva külakalmistu tegelik asukoht. Põhja-lõuna-suunaline kaablite kraav, pikkusega 18,5 m, ulatus kalmistu ühest otsast teiseni, selgitades selle umbkaudsed mõõtmed. Kalmistul avatud ala suurus oli u 80 m².

Matustega seotud leiud – mündid, sõled, sõrmused ja noad (jn 5) – pärinevad peamiselt 16. saj II poolest ja 17. saj-st. Üks matus, mis asus kaevise sügavamas osas ja millel oli panusena kaasas 14.–16. saj dateeritud nõelakoda, kuulub keskaega. Müntidest olid kõige arvukamalt esindatud rootsi öörid (1635–1671). Lisaks leiti matuste juurest ümar- (17. saj) ja südaspõlgesid (17.–18. saj), pronkstraadist keeratud hoburaudsõlg (16.–17. saj) ning pitsatsõrmus (17.–18. saj). Juba eemaldatud pinnasest leiti ka mõned keskaegsed ja Liivi sõja aegsed leiud. Näiteks hansasõle fragment (13.–14. saj), Tartu piiskopkonna penn (Andreas Peper 1468–1473), Riia vabalinna killing (1564) ja Tallinna killing (Johan III 1571–1585) (jn 5).

Päästekaevamiste käigus leiti 99 *in situ* paiknenud luustikku. Kokku võeti üles 38 lapse ja 53 täiskasvanu (27 naist ja 26 meest) luustikku (jn 6). Lisaks veel 8 täiskasvanu skeletti, kelle sugu ei olnud võimalik määrata luude vähese säilivuse tõttu. Kalmistut iseloomustab suur täiskasvanute (62%) ja väiksem laste matuste (38%) osakaal (jn 7), mis võib olla tingitud nende luustike halvast säilivusest või maetigi antud kalmistu ossa vähem alaealisi. Keskmise kehapikkus naistel oli 156,3 cm ja meestel 169,9 cm. Võrreldes teiste kesk- ja varauusaegsete linna- ning maakalmistutega, võib järeldada, et Lohkva külakalmistu puhul on tegemist üsnagi keskmist kasvu populatsiooni matmispaigaga. Leiti külakalmistute luuainesele iseloomulikke haigusi ja vigastusi, näiteks selgroolülide vaheketaste songa (Schmorli sõlmed, jn 8) ja paranenud luumurde. Üldiselt esindab Lohkva külakalmistult leitud osteoloogiline materjal küllaltki tüüpilist kesk- ja varauusaegset külakalmistut.