



ARCHAEOLOGICAL STUDIES IN THE CHURCH AND CHURCHYARD OF KOSE

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INTRODUCTION

This paper introduces the results of two cases of fieldwork: excavations in 2011 in the so called ‘New Church’ in the northern annex of the nave (Kadakas 2012; 2013) and excavations in 2013 in the northern part of the churchyard while digging a trench for water and sewerage pipes (directed by Malve, Tiidu & Raito Roog).¹

HISTORIC BACKGROUND OF THE CHURCH AND CHURCHYARD

The parish of Kose with the initial church was probably established very soon after conquering North Estonia in 1219 by the Danish king Waldemar II and followed by mass baptising of the area (Johansen 1933, 204). The first building was probably of timber (Raam 1990, 149). Written records shed no light on the building history of the existing stone church. According to Villem Raam the church got its present shape throughout several construction stages (Raam 1988a; 1990; 1997a). The original stone church was erected in the 1370s at the latest as a simple building consisting of a rectangular nave (Fig 1: 2). At first it lacked a separate chancel and the eastern part of the nave functioned as a chancel. The original nave was covered with cross vaults. A turret topped the western gable. A new chancel was added in the 1430s, breaking the chancel arch into the old eastern wall (Fig. 1: 3). While the rest of the building was erected of local limestone, the chancel vault was built of bricks. The large western tower (Fig. 1: 1) was probably constructed only in the 1480s–1490s (Raam 1990, 150; 1997a).

The church was burnt during the Livonian War in 1560 (Russow 1584, 47). Probably the vaults of the nave were also destroyed (Raam 1997a). In 1856 the old sacristy was demolished and replaced with the so called ‘New Church’ – a northern annex connected with the nave by two large doors (Fig. 1: 4) – because the old sacristy decayed and the church became too narrow for the congregation. Two storeys with neo-Gothic decoration and a spire were added on the tower in 1873 (Ederma & Jaik 1939, 53).

¹ In this article the fieldwork of 2011 is introduced by Kadakas, the fieldwork of 2013 by Malve and Tiidu, and the coins as an outstanding part of the find material have been analyzed by Kiudsoo.

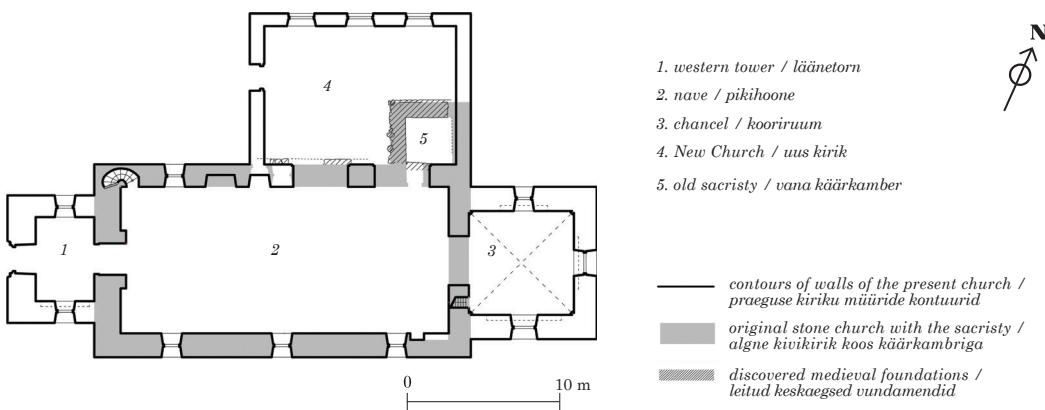


Fig. 1. Plan of Kose church with discovered walls of the sacristy: 1 – western tower, 2 – nave, 3 – chancel, 4 – New Church, 5 – old sacristy.

Jn 1. Kose kiriku plaan koos käärkambri avastatud alusmüüridega: 1 – läänetorn, 2 – pikihoone, 3 – kooriruum, 4 – uus kirik, 5 – vana käärkamber.

Drawing / Joonis: Villu Kadakas

Conclusions by Raam about the medieval building history of the church were largely based on observations and fieldwork of 1987 (Raam 1987). Two test pits were dug: one in the southern outer corner of the nave and the chancel, the other in the south-western inner corner of the chancel to specify the stratigraphic relation of these building parts. The results confirmed Raam's previous hypothesis that the chancel was a secondary annex to the nave. The interior plaster was removed in several places revealing hewn limestone corbels in the chancel, remains of the vaults and original windows of the nave amongst other things. The question of the location of the previous sacristy and its relation to the nave was raised by Raam as one of the most important future research issues (Raam 1987, 10).

The existence of the older sacristy was known only from an unconfirmed text (Ederma & Jaik 1939, 53). No drawings or photos exist of the sacristy, but Raam concluded on the basis of known scant information that it must have been built before the chancel, otherwise it would have been positioned next to the chancel as usual. Nevertheless he admitted that the relation of the sacristy to the nave and their relative chronology have not been established yet. Raam noticed a connection between the sacristy of Kose and the one of Jõelähtme church in north-eastern Harjumaa, where the old sacristy has also been situated on the northern side of the nave, and marked that in no other medieval church in Estonia is the sacristy located in such a position (Raam 1990, 150; see also Kadakas 2010).

Kose churchyard, which is still rarely used as a burial ground, was not archaeologically studied before 2013. Although in 2010 earthwork in connection with installing water and sewerage pipelines was carried out in the churchyard's protection zone, directly outside the present churchyard wall. According to the report nothing archaeologically significant was found (Treuman 2010). As there are no known stray finds from the cemetery, the excavations held in 2013 gave the first opportunity to get information about local inhabitants, who were buried there and to confirm the period the

cemetery was used. The fieldwork in Kose is also the biggest rural churchyard excavation held in North Estonia so far. Earlier only some small-scale archaeological rescue excavations e.g. in Kuusalu (Tamla 2003, 13; Kadakas 2014), Lüganuse (see Kadakas & Jonuks, this volume) and Viru-Nigula (Aus & Tamla 1989; Tamla 1991) churchyards have taken place. The churchyard of Kose was probably used from the first half of 13th century, from the time the church was erected. The active usage of the burial ground ended sometime at the end of the 18th century due to the laws set in 1771–1772, that ordered cemeteries to be established at a certain distance from the churches and settlements (Polnoye 1830, 409, 500, 691). The new cemetery was founded in the first half of the 19th century and is located 1.5 km south from the church.

EXCAVATIONS IN THE CHURCH IN 2011

Foundations of the sacristy

In 2011 during the replacement of the floor of the ‘New Church’, filling layers of demolition debris together with some structures coming from the ‘New Church’ period were removed. In the south-eastern part of the ‘New Church’ the foundations of the western and northern walls of the medieval sacristy were discovered (Figs 1: 5; 2). The outer edge of the old walls of the old sacristy had preserved only in the height of an underground foundation of unworked irregularly laid fieldstones. The inner edge of the walls of the old sacristy had preserved only in the height of one row of stones above the original floor level. Therefore it was difficult to estimate the thickness of the walls of the old sacristy: only in one place the thickness of the northern wall could be measured ca. 100 cm. The eastern wall has obviously been located on the same line as the eastern wall of the ‘New Church’ and has been completely removed. Probably the outer measures of the sacristy were *ca.* 5.35 m in the east-west and *ca.* 4.15 m in the north-south direction, inside *ca.* 3.05 m and 3.15 m respectively.

As there was no vertical joint between the western foundation of the sacristy and the nave, it could be concluded that both were built during the same stage. In the original floor there were both limestone slabs of natural shape and slabs worked into a regular rectangle, also pieces of slabs, probably in secondary use. From the sand and organic soil under the floor some coins and sherds of vessel tiles of a stove were gathered. Among these the more precisely datable coins belong to the period of Wolter von Plettenberg, Master of the Teutonic Order in Livonia (1494–1535), indicating that one of the reconstructions of the floor might have taken place during the first half of the 16th century.

There has been a *ca.* 110 cm wide doorway connecting the sacristy with the nave, later walled up and noticeable by two



Fig. 2. The foundations of the old sacristy of Kose church, from north-west.

Jn 2. Kose kiriku vana käärkambri vundamendid loodest.

Photo / Foto: Villu Kadakas

vertical joints in the masonry. The portal has been facing the nave which is usual in such sacristy doorways. Raam supposed that there has been a sitting niche in the northern wall of the eastern vault, which initially functioned as a chancel. There are similar sitting niches in the walls of the present chancel (Raam 1987, 6). Also in the southern wall of the eastern vault of the nave remains of a similar niche have preserved, distorted when building a secondary doorway and an enlarged window (Raam 1990, 150). If there was a similar niche in the northern wall, then the portal of the sacristy must have been located in this niche. A window could not have existed in the northern wall of the eastern vault, as the space must have been blocked by the roof of the sacristy. The sacristy itself must have had at least one window in its outer wall.

It is conspicuous that the surface of the southern wall of the sacristy is not aligned with the rest of the walls which have been positioned with notably correct geometry. This deviation in regularity could be explained by a hypothesis that the observable southern wall is in fact a thin lining wall built next to the original southern wall of the sacristy. Consequently the original wall surface could be hidden inside the present wall, i.e. the interior of the sacristy would have reached into the northern wall of the nave. For example the sacristy of Martna church (Raam 1996a) has been built in a similar manner and possibly also the sacristy of Jõelähtme (Kadakas 2010, 107–108). In Estonia such a solution is rare, but it is common in Finland, e.g. Sauvo, Ulvila, Hollola, etc. (Hiekkanen 2007). It could be the result of a building sequence when an existing sacristy with thin walls has been integrated into a new nave (or a new chancel) with thicker walls. In Finland it was common to build a stone sacristy next to a timber nave as the first stage of a stone church (Hiekkanen 1992, 25; 2003, 78–79). In Estonia such a sequence has been suspected in Jõelähtme church (Kadakas 2010, 108) and it cannot be excluded in the case of Kose. Nothing supports this interpretation in Kose at the present stage of research.

Northern portal

In the northern wall of the nave in the south-western corner of the ‘New Church’ a vertical joint emerged after some plaster fell off. It appeared that a doorway – a northern portal – walled up long ago, has had a hewn limestone portal. Two stones of the arch could be cleaned, but the stones of the vertical part of the portal have been removed while walling up. The discovery was a surprise because previously the doorway had not been considered medieval. The portal has not been positioned on the central axis of the middle vault probably because it could not fit with a rather high window which has been walled up while building the ‘New Church’.

Churches with a sacristy located next to the nave

Many medieval churches in Estonia have been built without a sacristy and several of them even never got one. Therefore it would not have been surprising if Kose church did not have one, either. The most significant aspect about the discovered sacristy is its location next to the northern wall of the nave, not next to the chancel. In fact, the discovery of the sacristy in such a place proves that there has been no earlier chancel, narrower than the present one. Previously the existence of such a narrower chancel could not be excluded. The location of the sacristy next to the nave is obviously related

to the fact that originally there was no chancel. However, such a solution is rare in the whole area of Old-Livonia, e.g. only five other such medieval rural parish churches are known from Estonia. There have been many more churches with neither a chancel nor a sacristy. A type of ground plan consisting only of a simple nave spread especially in North and West Estonia under the influence of the Dominicans, mostly during the 14th century (Raam 1970, 35).

There are two churches originally consisting of a single nave with a sacristy in West Estonia: Martna and Käina, but these apparently come from a much later period, from around 1500 (Raam 1996a; 1996b). The other three comparable churches are all close to Kose in eastern Harjumaa. The church of Jõelähtme with its three aisles and a sacristy located next to the centre of the northern wall of the nave is rather different and probably earlier than Kose (Raam 1990, 148 & 155; Kadakas 2010). The churches of Jüri and Harju-Jaani, located in the neighbouring parishes, had been probably built roughly at the same time. Both churches, which were demolished already in the 19th century, had a similar nave with three vaults and a sacristy located next to its northern wall (Raam 1988b; 1997b) as the original stone church of Kose. The similarity of the three churches has been noted and associated with the activities of Bishop Ludovicus de Monasterio (1352 – ca. 1389) of Tallinn (Markus 2006, 13).

The type of church with a sacristy attached to a single nave has been widely spread e.g. in Finland (Hiekkanen 2007) and former East Prussia (Herrmann 2004, 144–145), but at the present stage of research there is no basis to claim direct influences to the architecture of Kose church from these areas.

Finds

The most significant among the few finds gathered from the debris covering the foundations of the sacristy was a fragment of limestone masonry detail worked into a shape of a human head (Fig. 3). It could be a fragment of a corbel of the vaults of the nave or a piece from the western portal, which have not been preserved. Little can be said about the sculpture. The human has worn a cap or a helmet, indicated by a welt above the eyes. A piece of a special brick of a double rib of a vault, found from the debris might come from the still preserved vault of the chancel or be an unused extra piece made for it. Although it cannot be excluded, there is no reason to suggest that the sacristy itself had a brick vault, as it appeared that the sacristy had been built together with the nave, in an earlier building stage than the chancel. An ample quantity of pieces of roof-tiles with S-profile was discovered covering the foundations of the sacristy. These came from the last roof of the old sacristy, built probably in the 17th or 18th century.



*Fig. 3. Fragment of a limestone masonry detail worked into the shape of a human head.
Jn 3. Tahutud paekivist inimpea kujuline raidkivi tükk.
(AI 7073: 18.)
Photo / Foto: Villu Kadakas*



Fig. 4. Finds from the old sacristy: 1 – sherd of a Siegburg stoneware beaker or a jug (ca. 1400–1550), 2 – pfennig of the Teutonic Order in Livonia, Tallinn (ca. 1515–1555), 3 – scherf of the Teutonic Order in Livonia, Tallinn (ca. 1515–1520), 4 – Swedish 1 öre (1691), 5 – lock's decorative plate.

Jn 4. Leide vanast käärkambrist: 1 – kivistäramilise Siegburgi pääritolu kannu või peekri katke (u 1400–1550), 2 – Liivi Ordu penn, Tallinn (u 1515–1555), 3 – Liivi Ordu šerf, Tallinn (u 1515–1520), 4 – Roots 1 öör (1691), 5 – luku ehisplaat.

(AI 7073: 11, 3, 4, 6, 9.)
Photo / Foto: Villu Kadakas

Surprisingly a sherd of a bottom part of a stoneware jug or a beaker, made between ca. 1400–1550 in Siegburg, Germany was discovered from 20th century debris (Fig. 4: 1). Siegburg stoneware is a common find in Estonian towns (see Russow 2006, 49), e.g. Tallinn, less in villages close to Tallinn, but not at all in medieval churches of Estonia. As Communion chalices were normally of metal, the jug or beaker of Kose church might have been a simple drinking vessel or used as a vase for flowers.

From the soil under the floor of the old sacristy several Late Medieval coins of the Teutonic Order in Livonia were gathered. Three coins of five – one *pfennig* and two *scherfs* (Fig. 4: 3) – belong to the time of Master Wolter von Plettenberg (1494–1535), additionally one more vaguely datable *pfennig* (1515–1555; Fig. 4: 2) could originate from the same time period. A *pfennig* of Henning Scharpenberg (1424–1448), Archbishop of Riga, represents an earlier period. The only *pfennig* from the time of W. von Plettenberg was minted in Riga, while the three other coins of the Order were minted in Tallinn. This is the first assemblage of coins gathered during an archaeological excavation in a sacristy of a medieval church in Estonia.

A couple of sherds of stove tiles of vessel tile type from the 17th – 18th centuries were found from under the floor, along with some small sherds of painted window glass. The latter should not be automatically connected to the window of the sacristy – these might come from the windows of the chancel.

The finds from debris covering the foundations of the sacristy included Swedish copper and silver coins, a copper alloy lock plate with stamped ornament and a cross-shaped keyhole (Fig. 4: 5). The item has been fixed with four small nails belonging supposedly to a small chest. Also abundant mixed human bones were gathered and reburied.

THE EXCAVATIONS IN 2013

The field season in 2013 was divided into several periods: preliminary excavations in the pre-planned trench area in May (Malve & Roog 2013), rescue excavations in June² and a small survey regarding the instalment of the air source heat pump in September. During the excavations an *ca.* 55 m long, 1 m wide and approximately 2 m deep trench was opened in the summer of 2013 (Fig. 5). The trench started from the western gates of the present churchyard wall and finished in front of the 'New Church' sacristy door.

The burials and the paving

During the excavations approximately 118 inhumations³, one cremation and fragments of two coffins without any human remains were unearthed. The dead had mostly been placed into the graves in extended supine position. The only exception was a double burial in which one child (burial no. 48) was placed prone on top of the other (burial no. 49). The majority of the deceased were headed towards west as was common in the Christian belief. However, 10 burials with their heads directed to east and few towards north (burial nos 108 and 114) and north-east (burial no. 107) were also discovered. The hands of the deceased were placed equally on the chest, stomach and belt area, seldom on sides. Due to high burial density numerous commingled bones and skeletons that had been partly destroyed by later inhumations were found. About a third of the dead had been buried in board coffins which can be inferred by remnants of decayed wood, nails next to human remains and the position of the skeleton inside the grave pit. Noteworthy was burial no. 100 in which a well-preserved infant's coffin (75 × 21 cm) was fixed with 30 iron nails. The other burials had maximum four nails per coffin.

During excavations 65 adults (54.2%) and 54 subadults (45.8%) were unearthed. Skeletons were preserved quite well as no erosion was noted on their surface. However, the soil in the churchyard is naturally limestone-rich, so the weight of the earth has caused fractures on the bones. From two of the burials only remnants of the coffin had preserved. In one case (burial no. 47) a corner of the coffin was found, the rest of it had probably been destroyed by later inhumations. The second coffin (burial no. 112) was observable in a larger extent so it was possible to ascertain that it had belonged to a child.

The burial layer in the western part of the churchyard near the cemetery gates started about 60 cm below the present-day ground level and it included only one layer of burials. On the other hand, in the northern side of the church inhumations started in the depth of about *ca.* 1 m and the layer was approximately 70 cm thick containing many burials on top of each other. It is possible that some soil together with the upper burials had been removed while the gate and wall in the western



Fig. 5. Opened trench in the Kose churchyard.

Jn 5. Avatud trass Kose kirikuaias.

Photo / Foto: Raido Roog

² The article focuses on the rescue excavations held in June 2013.

³ The total number may change as the osteological analysis is in progress.



Fig. 6. An unearthed limestone paving near the north-western corner of the tower of Kose church.

Jn 6. Välja puhatatud paekivisillutis Kose kiriku torni loodenurga juures.

Photo / Foto: Raido Roog



Fig. 7. Male skull (burial no. 84) with fatal cut wound on the neurocranum.

Jn 7. Surmagav löikejälg mehe ajukolju osas (matus nr 84).

Photo / Foto: Martin Malve

side of the churchyard was built. On the other hand natural soil rises towards the west, which could be the reason why the cultural layer is thinner there. In front of the gates the trench running through the burial ground and the main pipeline (see Treuman 2010) were connected. From the pipeline trench fill incomplete skeletons along with scattered bones were recovered. It appears the burial ground continued outside the western churchyard wall and those burials were partly disturbed during the excavations in 2010.

Surprisingly a limestone paving (Fig. 6) was unearthed near the north-western corner of the church 60 cm below the present-day ground level. The preserved length of the pavement was three metres, the width could not be determined as it extended to the northern and southern profile. It was probably buried during the construction work of the church, e.g. in 1856 when the foundation for the new sacristy was built. Under the western part of the paving was a dark area with pieces of charcoal where burnt human bones were collected (cremation no. 1) – mostly fragments of cranium and tubular bones. Some burnt bones were collected as stray finds from the other parts of the trench; these originate from disturbed cremations.

Fatal cranial trauma

The most interesting osteological find was a cranium of a man⁴ (burial no. 84), which had a 7.6 cm long *peri mortem* cut mark on the vault (Fig. 7). It is of the same colour with the rest of the cranial bones and has sharp edges. Since the cut is narrow and clean, it can be concluded that the blow was made with a narrow-bladed object, e.g. a sword. The man was aged 25–35 years⁵ when he died. The blade had cut deep into the skull injuring soft tissues

⁴ Sex is determined according to the morphology of pelvic bone and cranium (Buikstra & Ubelaker 1994, 16–20).

126 ⁵ Age is determined according to the occlusal wearing of the molars (Brothwell 1981, 72).

and therefore was fatal to the individual. Additionally the lower third of his sternum had a penetrating diamond-shaped (1×0.4 cm) injury that could have been caused by an arrow or a piercing weapon.

Finds

Altogether 140 finds were gathered during the excavations. More than a third of them were coins which were found scattered in the soil. Only one coin, which could be associated with a male burial (no. 43), was found. The poor preservation of the coin did not allow dating it. Grave-goods, ornaments or details of clothing were found only in ten burials out of 121 which is a remarkably low ratio compared to the churchyards from South Estonia. So far all similar studies have shown that scantiness of grave-goods is characteristic to Medieval and Early Modern graveyards of North and West Estonia (Valk 2004, 105). Rings were completely lacking and only one penannular bronze brooch (Fig. 8) with rolled ends was found scattered in the soil. This type of brooches were numerous from the 13th to the late 17th centuries (Valk 2001, 45). Exact dating of the burials is complicated due to the small number of grave goods and their long period of usage. Since some of the soil from the western part of Kose churchyard has been probably removed and the burial density is very high, it is extremely difficult to base the dating on the depth of the inhumations.

The most remarkable burial (no. 7, Fig. 9) belonged to a juvenile⁶ who was wearing a necklace consisting of seven cowry shells, eight bells and one very poorly preserved *Biser*-type bead (AI 7119: 4). The cowry shells can be dated from 13th to the 18th century, *Biser*-type beads found in Estonia belong to the find complexes dating from 13th to 16th cen-



Fig. 8. Penannular brooch (13th – 14th century).

Jn 8. Kose kirikuast leitud 13.–14. saj hoburaudsõlg.

(AI 7119: 22.)

Photo / Foto: Martin Malve



Fig. 9. Medieval juvenile burial (no. 7) with a necklace.

Jn 9. Keskaegne nooruki matus kaelakeega (nr 7).

(AI 7119: 4.)

Photo / Foto: Martin Malve

⁶ Sex is determined according to the formation and eruption of teeth (Ubelaker 1989, 63).



Fig. 10. Male burial (no. 43) with a knife on his chest.

Jn 10. Mehematus (nr 43), kus panusena hauda asetatud nuga paikneb rinnal.

Photo / Foto: Raido Roog

finds occur sometimes even in 17th century burials (Valk 2001, 54). In a man's burial no. 78 two round iron belt rings (AI 7119: 11/1–2) were found which can be dated to the Medieval or Early Modern times (*ibid.*). In a burial no. 108 an iron needle (AI 7119: 12) was found on top of the child's chest. It was probably used for fastening clothes or shroud. In a man's burial no. 109 a bronze thimble (AI 7119: 13) was collected. The thimble lay next to the right knee inside the coffin.

Some remarkable finds were gathered from the mixed layer. These included three silver plaques with gilded avers (AI 7119: 20, 21, 98) which were sometimes used as pendants in necklaces during the 15th – 16th centuries (Kiudsoo 2008, 117–119). Additionally a number of bronze plaques and spirals, a fragment of a silver decoration (AI 7119: 99), a set of ornamented tweezers (AI 7119: 24), a fragment of a bracelet (AI 7119: 30), a tiny round piece of amber (AI 7119: 117) and a flat rhombus-shaped sheet pendant (AI 7119: 27) which dates from the first centuries of the Middle Ages (Valk 2001, 52) were present. Noteworthy are the pieces of a leather item (AI 7119: 23), probably a shoe⁷, which was decorated with thick bronze spirals. Also a few Medieval and Early Modern fragments of ceramics, an iron belt buckle (AI 7119: 42), iron ice nail (AI 7119: 128) and a wooden button or gaming piece (AI 7119: 130) were unearthed. Remarkable were four sherds of burnished pottery (AI 7119: 131–133) which cannot be dated later than Latest Iron Age (11th – early 13th century) (Tvauri 2005, 85–86).

Coins

During the rescue excavations 53 coins were collected from the northern side of the church. They were absent in the trench in front of the north-western corner of the building. All coins were found from the topmost mixed layer (up to 1 m). Therefore all the coins were probably lost or sacrificed by placing them between the floor splits. They were dug out during some extensive earthwork inside the church, e.g. in the second half of the 19th century when the foundation for the new sacristy was constructed.

Besides the finds from the historical period two Gotlandic pennies (*ca.* 1140–1210/20) struck before the Christianisation of Estonia were also brought to light in Kose (Fig. 11: 1). It is very interesting because so far no prehistoric coins are known

tury (Valk 2001, 51–52). Considering previous, the necklace is dated to the 13th – 16th century, making it the only definite inhumation from the Medieval Period.

The most numerous grave-goods were knives – these were found in five burials (nos 5, 43, (Fig. 10), 56, 75 and 111) (AI 7119: 3, 8–10; 14), two of which belonged to women. Additionally seven knives and a fragment of a knife-handle were recovered scattered. A bronze spiral (AI 7119: 5) was found on the chest area of a female skeleton (burial no. 20). Those were mostly used for decorating clothing in the 13th – 14th century, but single

⁷ Pers. comm. Riina Rammo (TÜ), 06.06.2014.

from other Estonian churchyards. In addition, two Visby pennies were struck just after the German and Danish local crusade campaign in the second quarter of the 13th century. There was also one early Livonian bracteate depicting a bishop's head with a mitre of a crescent shape, which belonged to the period of Bishop Nicolaus (1231–1253) in Riga.

From the perspective of coin history in Livonia the most unique find from Kose is undoubtedly the earliest type of *seestling* (Fig. 11: 2), which was minted in Tallinn by the Livonian Order (*ca.* 1363/64–68) – the first such coin to reach Estonian museum collections. Until now that type has been found only in Finnish churches (Nemirovitsch-Dantschenko & Pärn 1980, 76; Leimus 2001, 79). Rare coins were also seven *scherfs* struck in Tallinn during the reign of Wolter von Plettenberg (1494–1535), Master of the Livonian Order. Establishing the very precise time of minting and circulation of *scherfs* is complicated because they are mainly found from sacrificial sites and cemeteries. With the exception of a few coins they do not occur in hoards (Kiudsoo 2004, 81). It is believed that possibly this coin type might have been minted in the years following the coin regulation of 1515 (Leimus 1990, no. 1331–1332; Kiudsoo & Leimus 2008, 225).

CONCLUSIONS

In 2011 foundations of the western and northern walls of the medieval sacristy were discovered in the south-eastern part of the 'New Church'. It appeared that the sacristy had been erected next to the northern wall of the nave. Such type of church is rare in the whole area of Old-Livonia. In the northern wall of the nave in the south-western corner of the 'New Church' a medieval portal was discovered. The most significant finds gathered from the church were a copper alloy lock plate with a stamped ornament and a keyhole in the shape of cross, a sherd of Siegburg stoneware and a fragment of limestone masonry detail worked into the shape of a human head. In addition to that Late Medieval and Early Modern silver and copper coins, a couple of fragments of stove tiles of vessel tile type, sherds of painted window glass and a fair amount of pieces of roof-tiles with S-profile were unearthed.

During the rescue excavations in summer 2013 approximately 118 inhumations and one cremation were found. A little less than half (45.8%) of them were subadults. Most of them were inhumed according to Christian traditions, one third of the deceased were buried in coffins. Grave-goods were found only in a few cases, which is characteristic to the North Estonian cemeteries. Osteologically the most interesting was burial no. 84 – a man with a fatal cranial wound. Near the north-western corner of the church tower a limestone paving, probably a path, was unearthed 60 cm below



Fig. 11. Rare coins from Kose churchyard.

1 – Gotlandic coin, struck before 1220,
2 – Livonian Order, Tallinn, seestling,
ca. 1363/64–68(?)

Jn 11. Haruldased mündid Kose kirikuaiast.

1 – Enne 1220. aastat valmistatud Gotlandi
münd, 2 – Liivimaa Ordu, Tallinn, seestling,
u 1363/64–68(?)

(AI 7119: 75, 79.)

Photo / Foto: Martin Malve

the present-day ground level. Local inhabitants probably started using the churchyard as a burial ground at the same time as the church was built, in the first half of the 13th century. Excavations revealed that the burial area extended outside the modern western churchyard wall. The finds included 51 coins collected from the northern side of the church. The earliest of them were two Gotlandic pennies (*ca.* 1140–1210/20) which are the only prehistoric coins found in Estonian churchyards. In addition to that the earliest type of *seestling* which was minted in Tallinn by the Livonian Order (*ca.* 1363/64–68) was unearthed.

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ARHEOOGILISED UURINGUD KOSE KIRIKUS JA KIRIKUAIAS

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Artikkel käsitleb kahtede arheoloogiliste välitööde tulemusi: 2011. a uuringud nn Uues kirikus, 19. sajandi keskpaigas ehitatud põhjatiivas⁸ ning 2013. a uuringud kirikuua lääne- ja põhjaosas.

2011. a nn Uue kiriku, kirkuhoone põhjatiiva põranda vahetuse käigus avastati samal kohal varem asunud käärkambi alusmüürid (jn 1: 5; 2), millest teati seni vaid kinnitamata kirjalike teadete põhjal. Vana käärkamber lammutati 19. sajandi keskpaigas nn Uue kiriku rajamisel juurdehitisesa keskaegsele pikihoonele. Kuni 2011. aastani oli teada, et algne kivikirik koosnes vaid praegusest pikihoonest (jn 1: 2), millel oli kolme võlviga lagi ja viilutorn läänefassaadil. Kitsam kooriruum ja massiivne läänetsorn (jn 1: 3; 1) on lisatud 15. sajandil. Algelt täitis pikihoone idapoolse otsa vastas on paiknenud u 1 m paksuste seintega ja ruudule läheneva põhiplaaniga ($u\ 4,15 \times 5,35$ m interjöör) käärkamber. Niiviisi selgus algelt ilma pikihoonest kitsama eraldi kooriruumita ja läänetsornita püstitatud algse kivikiriku põhiplaanviimane teadmata osa (jn 1).

Leiumaterjal koosneb mõnedest hiliskeskaegsetest ja varauusaegsetest hõbe- (jn 4: 2–4) ja vaskmünditest, maalitud aknaklaasi kildudest, katusekivide tükkeidest, erandlikuna väärivad ära märkimist Siegburgi kivikeraamilise kannu või peekri kild (15. sajand – 16. sajandi II pool; jn 4: 1), vaskplekist ornamenteeritud ristikujulise lukuauguga lukuplaat (jn 4: 5) ning inimpea kujuga raidkivi fragment (jn 3), mis arvatavasti pärib pikihoone hävinud konsoolilt või portaalilt.

Pikihoone küljes asuva käärkambriga ja ilma kitsama kooriruumita kirkuhoone tüüp on Eesti ja kogu Vana-Liivimaa keskaegsete maakirikute hulgas haruldane. Naaberkihelkondade Jüri ja Harju-Jaani kirkud, mis mõlemad lammutati 19. sajandil, rajati Kosega ligikaudu samal ajal. Töenäoliselt puudus kõigil algelt kitsam kooriruum, kuna mõlemal oli käärkamber ehitatud pikihoone külge. Taoline kirkuhoone tüüp on Levinud nt Soomes ja endisel Ida-Preisimaal, kuid praeguses uurimisseisus ei ole alust väita, et nendel piirkondadel oli otsene mõju Kose algse kivikiriku arhitektuurile.

2013. a suvel Kose kirkuua lääne- ja põhjaküljel toimunud välitööd (jn 5) olid ühed seni kõige ulatuslikumad ja põhjalikumad maakirkuua kaevamised Põhja-Eestis. Trassi pikkus oli u 55 m ja laius u 1 m. Välitööde käigus avati ja võeti üles u 118 laibamatust. Kahe matuse puhul oli säilinud vaid kirstude katked (nr 47 ja 112). Kirikutorni kirdenurga lähedalt kaevati maapinnast ligi 60 cm sügavuselt välja u 3 m pikku-selt jälgitav paekivist sillutis ehl kunagine teekoht (jn 6). Tee oli pinnasesse mattunud töenäoliselt kiriku ehitustööde käigus, võimalik et 1856. aastal, mil rajati uus käärkamber. Tee alt leiti üks põletusmatus, üksikuid kremeeritud luid leidus ka mujal trassi alal.

Leitud matused kuulusid kesk- ja varauusaega. Surnud olid enamasti sängitatud selili-siruli asendis peaga lääne suunas, kuid esines ka üksikuid erandeid. Kümme surnut oli sängitatud peaga itta, kaks põhja ja üks loodesse. Ainus kaksikmatus koosnes kahest lapsest (matus nr 48 ja nr 49), kus üks laps oli kõhuli teise peale asetatud. Maetute käed olid asetatud nii rinnale, kõhule kui ka vööle, harvem külgdedele. Säilinud oli kirstupuit ja -naelu. Märkimisväärne oli väikelapse matus nr 100, kus pisike kirst (75×21 cm) oli kinnitatud 30 naelaga. Ligi pooled matustest kuulusid lastele ja noorukitele (45,8%), mis on selle perioodi kalmistute iseloomulik. Huvitava osteoloogilise leiuina väärib märkimist surmava vigastusega noore mehe kolju (matus nr 84; jn 7) ja võimaliku noolevigastusega rinnakulku.

Kalmistu kultuurkihis oli hulgaliiselt segamini immluid ja lõhutud luustikke, mis viitab väga suurele matmistihedusele. Kaevamiste käigus täheldati, et kirkuua lääneosas algavad matused u 60 cm sügavusel tänapäevalasest maapinnast ning need on säilinud vaid ühes kihis. Samas kiriku põhjaküljel esineb mitmes kihis matuseid vahemikus u 1–1,7 m tänapäest maapinnast. Võimalik, et kirkuua läänevärava ehitamisel on maapinda kooritud ja selle käigus ülemised hauad ära kaevatud. Samas võib põhjus olla looduslikus pinnases, mis tõuseb läänesuunas kõrgemale. Välitööde käigus ilmnes, et kalmistu ala laineb kirkuua tänapäevalasest läänemürist väljapoole.

Välitööde käigus koguti 140 leidu, millest üle kolmandiku saadi juhuleidudena segatud pinnases. Vaid kümne matuse juurest leiti esemeid. Panuste vähesust on täheldatud ka teiste kesk- ja varauusaegsete Põhja- ja Lääne-Eesti kalmistute puhul. Märkimisväärseim avastus oli seitsmest kauriteokarbist, kahekast kuljusest ja ühest halvasti säilinud kudrushelmost koosneva keega nooruki matus (matus nr 7), mis on dateeritud 13.–16. sajandisse (jn 9). Lisaks oli matustega seostuvate panuste hulgas viis nuga (jn 10), kaks võörongast, münt, pronksspiraal, nööl ja sõrmkübar. Kaevamistel saadi ka ehisnaaste (sh. kaks hõbedat, kullatud esiküljega eksemplari, mida võib dateerida 15.–16. sajandisse), pronksist pintsetid ja käevöru katke, pronksspiraalidega kaunistatud nahkeseme (jalatsi?) katke ning 53 kesk- ja varauusaegset münti. Ülk-

⁸ 2011. a välitööde tulemused on varem eesti keeles avaldatud (Kadakas 2013).

latavalt puudusid leiumaterjalis sõrmused, mis Lõuna-Eestis on väga levinud panuseks. Segatud materjali hulgast leiti lühikeste rullotstega hoburaudsõlg, mis on dateeritud 13.–14. sajandisse (jn 8).

Kose kirikuaiast leitud müntide seas domineerivad keskaegsed vermingud. Lisaks on meil tegemist esimese juhtumiga, kus kirikuaiast avastatud mündimaterjal ulatub tagasi juba muinasaega. Nimelt on neljast sealst päevalvalgele tulnud Gotlandi pennist kaks valmistatud perioodil 1140–1210/20 (jn 11: 1). Vana-Liivimaa rahadest tuleks eraldi esile tõsta Liivimaa Ordu Tallinna rahapaja seestlingi varaseimat tüüpi (u 1363/64–68) (jn 11: 2), millist oli siiani avastatud üksnes Soome kirikutest. Haruldaseks tüübiks võib pidada ka Wolter von Plettenbergi (1494–1535) aegseid šerfe.