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## ARCHAEOLOGY OF THE MEDIEVAL STONE CHURCH OF LEMPÄÄLÄ IN SATA-KUNTA, FINLAND Finds from prehistorical and historical times

# Abstract

The article presents Late Iron Age artefacts found in the excavations of the church of Lempäälä in the province of Satakunta, Southern Finland. The church, dated to around 1500 on architectural grounds, was excavated and studied by the National Board of Antiquities in 1983 as a result of planned alterations to the floor construction. Finds of Medieval coins from the church floor gave support to the above dating. Prehistoric finds include four penannular brooches of silver from the Crusade period and possibly three fragments of bronze spirals. The excavations also brought to light a find unique in the Finnish material: a rock crystal pendant with genuine granulated ornamentation on the frame and suspension loop. Similar artefacts have been found in Gotland and a single specimen is also known from Estonia. The pendants were possibly made in the Slav area. The Gotland finds date the artefact type to the end of the 11th century AD. Other early artefacts from the church include two ring brooches, which however may date from the period when the church was already in use.

The author stresses the fact that the Crusade period artefacts could not have been deposited beneath the church floor through burials or offerings. It is possible that there was a Crusade period cemetery at the site, which was subsequently destroyed in the building of the church and through the burials of Catholic and later Lutheran parishioners under the church floor. The author also underlines the possibility that the artefacts in question were deposited with fill in later construction work.

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In the 1950s and '60s repairs and restoration work on Medieval churches in Finland led to an increased interest not only in architectural features but also in the study of the layers of earth and fill beneath the floors of the churches. This context, though not discussed to any great extent in the literature, has provided a wealth of material for research. Especially sieving of the layers, performed more or less systematically, has brought to light hitherto unknown artefact groups<sup>1</sup>, including those of prehistoric date or pertaining to prehistoric traditions. Without exception the artefacts date from the last two periods of the Iron Age. Their provenance is also characterized by churches located in areas of known Iron Age settlement (Knapas 1983).

Prehistoric artefacts have been found in the following churches in Finland: Mynämäki (National Museum of Finland, Historical collections 59143; Sarvas 1971, 60), Karkku (NM 60127; Palmroth 1963; Meurman 1984), Tyrvää (NM 65078; Tapio 1966) and Laitila (NM 67100; Tapio 1968). In comparison it must be noted that sieving of layers has been carried out in at least 13 other Medieval churches still in use in Finland.<sup>2</sup>

<sup>&</sup>lt;sup>1)</sup> Sieving techniques were used by Björn Cederhvarf in his excavations of the church of Hammarland, Åland Islands, in 1913. However, his pioneering work was not followed by others.

<sup>&</sup>lt;sup>2)</sup> Eckerö, Espoo, Hammarland, Kemiö, Lohja; Messukylä, Perniö, Porvoo, Raisio, Renko, Siuntio, Tenhola, Vårdö. Exact information on all of the churches in the Åland Islands is not available.



Fig. 1. The east wall of the church of Lempäälä. The upper window and the shape of the choir window date from the 19th century. Photo National Board of Antiquities/ P.O. Welin 1980.

To this list we may add the church of Lempäälä, where the culture layers beneath the floors of the old nave and sacristy were totally excavated and sieved in connection with the renovation of the floor in the spring of 1983 (Hiekkanen 1983).

The date of construction of the nave of the church of Lempäälä has been defined as the early 16th century on the basis of stylistic compariisons of architectural elements, a preserved triumphal crucifix and frescoes revealed by Emil Nervander (Fig 1; Nervander 1895; Kronqvist 1932, 42-46, Pettersson 1955, 626-632, 643; 1985, 37-46; Gardberg 1978, 22-23; Drake 1985, 262-268; for earlier views see Rinne 1907; Lindberg 1919). An altar cross in the collections of the National Museum of Finland (possibly 15th century; Nordman 1958, 57-58) and a fragmentary sculpture of Saint George (ca. 1510; Nordman 1964, 592) were not used in the dating.

Archaeological studies of the nave support the



Fig. 2. The nave of the church of Lempäälä in the final stages of excavation. View from the choir. Photo National Board of Antiquities/P.O. Welin 1983.

above dating (Fig. 2). Excavation did not reveal any architectural elements for precise dating, but a total of 15 identifiable Medieval coins were found, thus providing a new body of sourcematerial. The coins were identified by Mr. Pekka Sarvas, lic.phil., intendant of the Coin Cabinet of the National Museum of Finland and the results are presented by the author in fig. 3. They indicate that three coins were found in the nave that were struck already in the early 15th century, although their exact period of use is not known (2 bracteates Malmer KrHY IIc (?), ca. 1410-, NM Coin Cabinet 84033: 2-3; Malmer 1980; and a Tallinn shilling *post* 1424, 84033: 24). The fourth coin (Malmer KrAY II, 84033:4) was minted in the period 1430-1470 or later. Although these four coins give a general indication of the dating of the church, a more precise dating is provided by a total of ten coins dating from ca. 1470 to 1500 (9 specimens Malmer KrHY IIIe, 84033; 5-13, 1 specimen Malmer KrHY IV, 84033: 17), These coins provide ex-



Fig. 3. Coins struck in the Medieval period (NM Coin Cabinet 84033: 1-13, 17, 23-24).

tremely convincing evidence and support the above-mentioned architectural and art-historical dating for the construction of the nave.

Excavations of the sacristy, which was older than the nave, revealed a coin from ca. 1370-1380 (Malmer KrHÄ IIh, 84033:1), which is an uncertain indication of the time of construction of the oldest part of the sacristy. Studies carried out in 1983 show that the sacristy was raised in connection with the construction of the nave (see Sinisalo 1985, 95). This is indicated by a horizontal seam in the north wall and a brick arch, possibly the remains of a rosette ornament similar to those found in the gables of the naves of the churches of Ulvila, Tyrvää and Huittinen and the gable of the sacristy in Messukylä.

The find material of the historical period is typical of churches that have been excavated methodically and in detail. The largest groups of artefacts consist of shroud pins (NM, Historical collections 84060: 23-63, total 89; see Varjola 1980), book clasps (:64-89), buttons (:90-116), clasps (118-123), beads (:176-199, total 42 specimens, which on the basis of the finds from the church of Renko are from the 17th and 18th centuries; see Hiekkanen 1985, 202-203) and fragments of window panes (:204-244). The find material also includes a large number of single artefacts including a ring (:10) and a brooch pin (:19). The ring is open and cast in piece with a hatched rhomboid design engraved on the base (Fig. 4). Rings of this type have been found mainly in northern areas, although there are finds from a few churches. They were used mainly in the late 16th and early 17th centuries (Sarvas 1973, 54 figs. 4-6, 11). The upper part of the pin is bent in a trefoil shape (Fig. 5). Two rhomboid plates of copper with stamped floral impressions are suspended from the loops.



Figs. 4 and 5. 4: ring (NM Hist. coll. 84060:10), 5: brooch pin (NM Hist. coll 84060:19). Photo Leena Tomanterä.



Fig. 6. Penannular brooches (NM Hist. coll. 84060:1, 3-4, 2). Photo Leena Tomanterä.

Similar pins have been found in numerous specimens in the excavations of churches (i.a. Kemiö, Laitila, Lemland, Lohja, Mynämäki and Tyrvää). The pins may be of Medieval type although rhomboid plates with stamped floral impressions were used in crucifixes in bridal chains as late as the 16th and 17th centuries (Bergman 1984, 109).

The finds that can be dated to the Iron Age consist of four penannular brooches (Fig. 6; NM Historical collections 84060: 1-4; Salmo's types 12-13; Salmo 1956, 57-63), one with traces of linen (Leena Tomanterä, pers. comm.) and a round rock crystal mounted in a silver frame (NM 84060:18).

Iron Age datings are also possible for three small spirals of bronze (NM 84060:129-131).

None of these artefacts belonged to closed finds, although it must be noted that all of the penannular brooches were found in the southwest part of the nave and the spirals in the choir. The rock crystal pendant was found approximately 2 metres west of the choir in the centre of the cross-arms.

Small penannular brooches of silver or bronze with considerable variation in the forms of the knobs and the arc are among the leading artefact form of the Crusade period (Fig 6; Salmo 1956, 57-60). The most reliable grounds for the dating of these artefacts and the beginning of the Crusade period are provided by coin-dated closed finds, mainly graves (Sarvas 1972). In certain cases small penannular brooches are to be found already in late 10th century contexts.



Fig. 7. The Lempäälä pendant (NM Hist. coll. 84060:18). Photo Leena Tomanterä.

However, they occur in pairs consistently after ca. 1025 AD (Sarvas 1972, 23-25).

As closed finds are lacking, the end of the period of use of the penannular brooches cannot be defined. In any case the latest coin-dated closed finds with one or two penannular brooches are from the late 12th century or even from the beginning of the 13th century (Sarvas 1971, 58-60; 1972, 22-25), in other words they are younger than the conventional period boundary between prehistorical and historical times as applied in Finland. As the penannular brooches from Lempäälä were not from closed finds, they must be dated within the limits presented above; they do not directly offer any new elements for chronology.

The pendant (fig. 7) is formed of a round piece of rock crystal set in a silver frame. Eight triangular protrusions extend from the frame onto the crystal. The size of the protrusions varies rhythmically. The frame and the triangular fields are decorated with granulation (Fig. 8). On the suspension loop there is a Maltese cross in granulation technique (Fig. 9). The diameter of the pendant without the loop is 37 mm and the crystal is 11 mm thick.

Gemologist Seppo Hornytzkyj (F.G.A.) has given the following statement concerning the pendant (dated September 8, 1986): "The refractive index of the material was measured with Na light using a gemmological refractometer. So-called distant-vision technique was used which has been especially developed for circularground materials. The refractive index was 1.55  $(\pm 0.01)$  and double refraction was relatively small. On these grounds the material is rock crystal or crystallized quartz. Double convex grinding makes the crystal act as a kind of "magnifying glass", with a magnifying power of approximately 4 x." (Ahlström 1950; Arbman 1964).

The pendant is unique in the Finnish material and exceptionally striking in the Iron Age find material. There are, however, two specimens of silver-mounted rock crystals from Taskula, Maaria (NM 10833:8,9) and three from Humikkala in Masku (NM 8656: 8, 14, 33) However, only one of the specimens from Maaria displays some degree of similarity with the Lempäälä pendant (triangular silver extension on the crystal; see Kivikoski 1939, 171 and fig. XLI:1; Kivikoski 1973, 142). There are also a few finds of rock crystal beads from the Åland Islands (Kivikoski 1963, 97–100; Kivikoski 1968, 637).

According to the literature of Nordic archaeology artefacts similar to the Lempäälä pendant are known only from Gotland, where they have been found in the Hejslund and Lilla Rone hoards ("precious jewellery type") and in two graves of the cemetery of Stånga. The available literature lists a total of 21 pendants from Gotland (Stenberger 1958, 202).

However, Gotland is not the only area where these pendants have been found. A pendant of the same type as the Lempäälä specimen was found in 1938 in the Kostivere hoard in Harju, Northern Estonia (Lavi-Rõuk 1982, 709 and fig. 3; Jaanits *et al.* 1982, 356, 362; Tõnisson 1962 does not mention the pendant in discussing the hoard, but according to his verbal communication no other pendants similar to the Kostivere specimen have been found in Estonia; see map. Fig. 10).

As a find group the rock crystal pendants differ clearly from other groups of artefacts, but there are also considerable differences among the artefacts themselves. Differing features include the number of protrusions of triangular form with granulation that extend onto the crystal. Their number may be 4, 5, 6 or 8. In the Lempäälä and Kostivere specimens the number is eight and in the two pendants from Lilla Rone the corresponding number is eight. In most cases the extensions are of the same size, but there is also rhythmic variation. In most of the pendants from Gotland the suspension loop is decorated





Fig. 9. The Lempäälä pendant. Suspension loop with Maltese cross in granulation technique. Photo Leena Tomanterä.



Fig. 10. Find locations of rock-crystal pendants: 1. Hejslund, 2. Lilla Rone, 3. Stånga, 4. Kostivere, 5. Lempäälä.

with stamped triangles and dots whereas the frame and the triangular extensions bear genuine granulation. This contradiction is apparent as commented by Wladyslaw Duczko in his study of Slavic silver jewellery (1972, 85): "The presence of stamped triangles, purely Gotland motifs on the suspension loops is very puzzling. It is surprising that one part of the pendant is decorated with an imitation of granulation whereas the other part is covered with splendid quality granulation patterns." However, the suspension loops of both of the pendants from Hejslund and the Lempäälä pendant are decorated with Maltese crosses executed in granulation technique and they differ considerably in quality from the rest of the material. According to Tonisson (pers. comm.) there is no Maltese cross design on the Kostivere pendant. According to the published illustration (Stenberger 1958, fig. 250:4) one of the Hejslund pendants is close to identical with the Lempäälä pendant. The origin of rock crystal pendants of the same type as the Lempäälä specimen cannot be resolved on the basis of the available literature.

Both Stenberger and Duczko are of the opinion that the stamped decoration of the suspension loops is typical of Gotland. However, on the basis of details of granulation technique Stenberger is of the opinion that is most probable that the crystals and their frames were made outside of Gotland. He suggests the "west or south-western Russian area" as the most probable alternative (Stenberger 1958, 203), although pendants of the type in question have not been found there. According to Duczko the Maltese cross in the suspension loops of certain pendants "also points to the Slavonic sphere" (Duczko 1972, 85). At this stage it is not necessary to deliberate on the questions of the point of origin and route of the pendant to Lempäälä. Suffice it to refer to the widely discussed firm contacts between Finland, the East Baltic area and Gotland (see i.a. Voionmaa 1919; Nordman 1924; 1935; 1942; 1944; Lehtosalo-Hilander 1983; Malmer 1985; Nylén 1985).

The Lilla Rone and Hejslund hoards according to Stenberger, date the pendants to the latter half of the 11th century, however to before the year 1080 (Stenberger 1958, 201). The same dating is obtained for graves in Gotland with these pendants. The Kostivere treasure is from the second or third decade of the 13th century (Jaanits *et al.* 1982, 362). However, the Kostivere find contains artefacts considerably old with respect to their deposition and thus there is no chronological contradicition with the finds from Gotland. On these grounds, the dating of the rock crystal pendant from Lempäälä is the latter half of the 11th century.

Three bronze spirals found in the choir part of the church may possibly be dated to the Iron Age as well. However, it is also completely possible that they are from the period of use of the church and that they were not used at all in clothing.

Mention must also be made of two ring brooches of silver that were found in the church. Wereas the small penannular brooches are regarded as the leading artefact type of the Crusade period the ring brooches represent the following period, which is difficult to define archaeologically and which may be termed the Hansa period (see Sarvas 1971). The early limit of the period can be set around the year 1200 (Sarvas 1971, 59-63), while the later limit cannot be determined. In any case, ring brooches and derivatives of the type were used as late as



Fig. 11. Ring brooches (NM Hist. coll. 84060:6, 5). Photo Leena Tomanterä.

the 18th century (see Sirelius 1921, 421-422; Stenholm 1976, 299; Pylkkänen 1955). One of the Lempäälä brooches with an arc of circular section and cross-wise grooves (Fig. 11; NM 84060: 6) is hard to date even approximately. I would, however, be prepared to regard it as relatively young. In any case there is no reason to accept Serning's dating to the 11th or 12th centuries (Serning 1956, 30; Serning 1982, 85). However, the other brooch with half of the arc wound and the other half smooth (Fig. 11; NM 84060: 5) is paralleled by a find from Kirkailanmäki in Hollola, where a similar artefact was found in grave 4 of the 1936 excavations together with a bracteate from Götland struck in 1250-1275 (Sarvas 1971, 61 and fig. 5; Hirviluoto 1985, 32). This provides a tentative chronological horizon for the period of use of the brooches in question. The brooches found in Karelia are dated by Nordman to the 13th century and the early 14th century. Nordman also suspects that some of them may be of younger date (Nordman 1924, 176-179).

The rock crystal pendant and the penannular brooches from the church represent the same chronological horizon, the Crusade period. The dating of the bronze spirals is uncertain but the ring brooches may be of younger date than the Crusade period and possibly even from the time the church was already in use. In my opinion, it cannot be assumed that the Iron Age artefacts were deposited in burials under the church floor. Because the church was built around 1500 the hiatus involved would be too great. Archaeological studies have not revealed any signs of an earlier church nor does the chronological distribution of the coins suggest this possibility, although we must take into account the emptying of the layers beneath the church floor and its effect on the representativeness of the coins. The first phase of the sacristy cannot be assumed to be older than the latter half of the 14th century.

The most plausible explanation is that there had been a Crusade period burial ground at the subsequent site of the church. The graves of this cemetery were destroyed in building activity and through repeated Catholic and Lutheran burials.

This interpretation can also be criticized as certain events in the history of the church in the 18th and 19th centuries suggest a different explanation. Namely, the artefacts could have been deposited beneath the floor of the church along with fill, which was brought into the church to cover up the open family and dirt graves after the parish had decided to forbid burials inside the church in 1780 (church assembly minutes and accounts). It is also known that in 1835-1838, when the cross arms were built, the floor of the nave was emptied of coffins and soil, with new fill brought into place (Palmgren-Sundman 1981). This can be clearly seen in the small number of artefact finds - especially coins - of the 1983 excavations. It is also possible that fill was transported and laid under the floor in connection with repairs carried out in 1894-1895 (estimate of costs by architect Berndt Blom, December 1894). Furthermore, we must also take into account the fact that we have no knowledge of the kind of repairs requiring earth fill that were carried out in the church in previous centuries.

The village area near Lempäälä church is the site of extensive Iron Age settlement, which supports the assumption of an original cemetery or deposition of artefacts in fill, although neither can be proved definitely. It is clear that a similar problem of interpretation applies also to other churches with prehistoric finds or other artefacts clearly older than their time of construction.

The results of the Lempäälä excavations demonstrate the importance of detailed and methodical archaeological study of the sub-floor layers in situations where the old floor structure is to be replaced. The excavations provided new source-material for Iron Age studies and the study of early parish-type organisation. The coins offer a reliable means of dating, that was not previously available in studying the construction phases of the church. On the other hand, the find material of the historical period is of cultural-historical interest.

Despite the above research results, which in themselves are encouraging, the renovation of the church of Lempäälä entailed a significant loss for our cultural heritage: centuries of human activity have been replaced by a floor slab of concrete anno 1983.

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