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Late-Medieval Animal Remains in Grave-Like Pits: A Case Study of Rituals in 15th-Century Finland

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DURING ARCHAEOLOGICAL EXCAVATIONS at the site of Kärsämäki manor garden in Turku, SW Finland, the team found clusters of oblong pits resembling human graves in an area between the manor and a late-medieval village. No human remains were recovered from these pits; instead, some of them contained bones of domestic animals (cattle, horse and pig). The radiocarbon dates of the animal bones placed them roughly in the 15th century. This paper analyses the Kärsämäki faunal material using a taphonomical and contextual approach. The questions for which answers have been attempted concern the nature of the site and the interpretation of the animal deposits. The results suggest the presence of selected animal parts in certain pit features was a result of deliberate placement. Deposition of animal remains into grave-like pits have been recorded at other late-medieval sites in Finland, but the bones themselves have not been radiocarbon dated. The Kärsämäki site seems to be a location for different types of ritual activities involving animal remains.

The archaeology company Muuritutkimus Oy excavated the site of Kärsämäki manor garden in Turku, SW Finland, in 2017. The site revealed features and finds from multiple periods with dates from c 2000 BC, c AD 400, and the 15th century. In this paper, discussion will focus on the late-medieval features and finds. The features in question are clusters of oblong pits interpreted during the excavations as possible human graves, while the finds are skeletal remains of domestic animals (cattle, horse, and pig) found in a number of these features. No human bones were uncovered at the site. In Finnish archaeology, there has been a tendency to overlook animal skeletons and unburnt bones found peripheral to settlement sites, or in burial contexts, as modern and/or uninteresting anomalous finds. However, more recently, radiocarbon dates and new contextual studies have challenged this assumption (Bläuer et al 2013; Kivikero 2015; Bläuer 2020b). This paper shows how an understanding of the past can substantially increase when animal deposits are radiocarbon dated and interpreted through a contextual approach.

The Kärsämäki area (also known as Maarian Kärsämäki) is one of the most prominent archaeological sites in the Aurajoki river valley. Several settlement and burial sites

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are known along the sandy hills by the riverbank from the late Neolithic (c 2000 BC) onwards. Archaeological research shows that the area was an important population centre, especially in the early Roman Iron Age (c AD 0–200), and later in the Viking period (c 800–1050) (Tallgren 1944). Historical records mention a manor called 'Hiisi', possibly extending back to the local late Iron Age–Early Middle Ages. The name of the manor suggests the presence of a pre-Christian cult place (Tallgren 1933; Pulkkinen et al 2004). Perhaps indicating that the Kärsämäki area was a significant centre also in the early and high medieval periods. The late-medieval Kärsämäki village is known to have had at least three farms, but there is little direct data concerning the early history of the Hiisi Manor. It was documented as a tax-free farm owned by the mayor of Turku in the 16th century (Oja 1944). On the first map of the area, from 1697, it is visible as being a little separate from the main concentration of the village (as it is even today). On the other side of the narrow Vähäjoki river lies the medieval parish church of Maaria. To investigate the medieval aspects of the vicinity in more detail, the area of the 2016–2017 excavations was located on a sandy hilltop between the village (which has its origins in the local late Iron Age), the medieval manor, and clayey agricultural fields (Fig 1). An old road running across the area, parallel to the river, connects the coast to the interior.

The questions asked of the Kärsämäki material in this paper concern the nature of the site (a cemetery or something else?) on one hand and the interpretation of the animal deposits on the other. The animal remains were investigated through careful osteological analysis and their interpretation was informed by their contextual information. This paper considers the evidence for ritualisation critically and reflects on several possible interpretations. Moreover, it discusses the significance of the Kärsämäki animal remains compared to what is known of the late-medieval period in SW Finland.

FIG 1
The Kärsämäki excavation area (in pink) and the pits (in blue) overlain on the oldest area map dating to 1697 (NAF, A105:33/1-2 Kärsämäki, Bergman, M 1697). Insert shows the location of Kärsämäki in Turku, c 4 km upriver from the medieval town that formed the main ecclesiastical and administrative centre of Finland. *Map by M Helamaa, Muuritutkimus Oy.*

THE RITUALISED TREATMENT OF ANIMALS IN HISTORICAL CONTEXTS

The area of SW Finland became Christianised from the late 12th century. Even though the Christianisation process never completely replaced older beliefs, nor prevented lay people's interpretations of theology, there has been a tendency to assume implicitly that after this time rituals were either conducted by the Church or discontinued. This unfounded assumption seems to persist especially in connection with medieval contexts (in the local chronology c AD 1200–1550). In later periods, evidence of rituals and beliefs belonging to what is called 'folk religion' (or vernacular/popular religion) is more prominent, due to the survival of written sources (especially early modern witchcraft and superstition trial records) and abundant folklore documented in the 19th century (eg Stark 2006; Toivo 2016). Lately, studies concerning the archaeology of folk religion have also been conducted and thus even the late-medieval period is beginning to be seen in a new light (eg Hukantaival 2013, 2016, 2018).

Rituals are actions that are emphasised and made special through different ritualising techniques such as repetition, archaic or foreign language, formalised movement (such as circumambulation), special body positions and gestures etc (Bell 1997; Grimes 2014, 187, 193–4). They may be secular or religious, where the latter communicates with a transcendent element, such as gods, ancestors, or guardian spirits. Unfortunately, most of the ritualising techniques often discussed in ritual studies literature are not likely to leave traces in the archaeological record. Thus, archaeologists need to look at subtle signs of seemingly deliberate action and distinctive contexts. However, it is important to remember that, as Ronald Grimes writes, 'events cannot be usefully understood using only two options: 'ritual' or 'not ritual'. Rather, actions display degrees of ritualisation' (Grimes 2014, 193).

Prehistoric rituals involving buried animal remains have been widely studied in archaeology (Pluskowski 2012; Morris 2008, 2011; see also Rainsford 2021 for an early medieval study). In this context, some researchers have suggested using terminology that attempts to omit further (ritual) interpretation of the finds (such as special or structured deposits) (Hill 1995; Morris 2008; Garrow 2012). While all concepts can be deconstructed and there are many problems with trying to avoid interpretative words (Hukantaival 2015; see Josephson-Storm 2021, 53–84 for a comprehensive discussion on the crisis of concepts), the term 'Associated Bone Group' (ABG) is used when describing deposits of bone that have some degree of articulation. Similarly, the term 'burial' is used in connection with animal remains in its meaning 'the act or process of burying', not as a synonym for a funeral.

Another well-studied field in archaeology is building deposits, of which animal remains form a substantial part (Paulsson-Holmberg 1997; Hukantaival 2016). This complex phenomenon is known from both prehistoric and historic periods and all over the world, but it has taken many forms and changed through time. In Finland, post-medieval building deposits are best documented, but some medieval examples are known as well (Hukantaival 2016). A few of these involve animal bones, but since this paper discusses animal bones found in grave-type structures, building deposits will not be considered here.

In contrast to many other types of animal deposits, late-medieval animal remains in grave-like structures, contemporary and similar to the Kärsämäki site, have received less attention in terms of a full contextual interpretation. Lucia Travaini discusses a

buried immature cow (with a coin placed in its mouth) that was discovered in a mid-15th-century church in north-western Lombardy, Italy. The animal was in a pit on the same orientation as the human burials in the church. The deposit was interpreted as a foundation sacrifice (Travaini 2015, 220–1). Another case is a buried harbour porpoise found on the small islet of Chapelle Dom Hue (Guernsey) in the English Channel (Walls et al 2017, 224–7; de Jersey et al 2019). The body of the animal had been cut into pieces and radiocarbon dating confirmed a 15th-century date. The excavating team interpreted the associated feature as a storage pit for food. As can be inferred from these two examples, buried animal remains may result from several types of practices and their interpretation is not always straightforward.

When narrowing down the search for parallels contemporary to the Kärsämäki finds to the Nordic area, no published other examples were located. It seems that, again, prehistoric and Viking-Age animal deposits have received more attention than late-medieval cases. In addition to building deposits, ritualised remains of bears (likely belonging to Sami cultures) have been discussed, but the latter date roughly to the 19th and early 20th centuries (Zachrisson and Iregren 1974; Falk 2006).

MEDIEVAL FAUNAL REMAINS FROM SETTLEMENT SITES AND GRAVE-LIKE FEATURES

Medieval faunal remains from rural settlements in SW Finland are rare, as no well-preserved late-medieval villages have been excavated in the region to date. One small and burnt sample from the rural site of Lieto Vanhalinna includes one bovine bone and two from a sheep or goat (Tourunen 2009). The faunal material recovered from late-medieval rural sites in the Uusimaa and Satakunta regions, consists predominantly of cattle and sheep or goat bones, pigs being less common, with horse bones being rare or not present (Fig 2) (Bläuer 2013; Kivikero 2016). Late-medieval bone samples from the town of Turku and the Naantali Convent in SW Finland represent a similar pattern of species distribution (Tourunen 2008, 2011). According to previous studies, horsemeat was consumed in Finland during the local late Iron Age (early and high medieval periods), but the late-medieval zooarchaeological material does not show any evidence of hippophagy (Bläuer 2015). The occasional horse bones found in the late-medieval settlement material have been interpreted as remnants of craft activities or building rituals (Tourunen 2008; Hukantaival 2016). The historical faunal remains from settlement sites in Finland are typically general domestic waste, including bones from slaughter, butchery, and consumption activities. Thus, bone elements from all anatomical regions are usually present (Bläuer 2020a).

Whereas animal bones found in prehistoric graves are often interpreted as grave-goods, food offerings, or remembrance meals (Wessman 2010; Bläuer 2020a), the animal bones found in Christian grave contexts have received little attention (cf Lehtosalo-Hilander 1982). However, new research has made it possible to study the Christianisation process, burial customs, and grave rituals in Finland in more detail (eg Ruohonen 2017; Kivikero 2015; Haggrén and Rosendahl 2016). It was previously thought that village cemeteries, typical for the local late Iron-Age period, fell out of use in western Finland at the beginning of the local medieval period due to Christianisation. However, archaeological excavations, especially in the rural Uusimaa area, have now

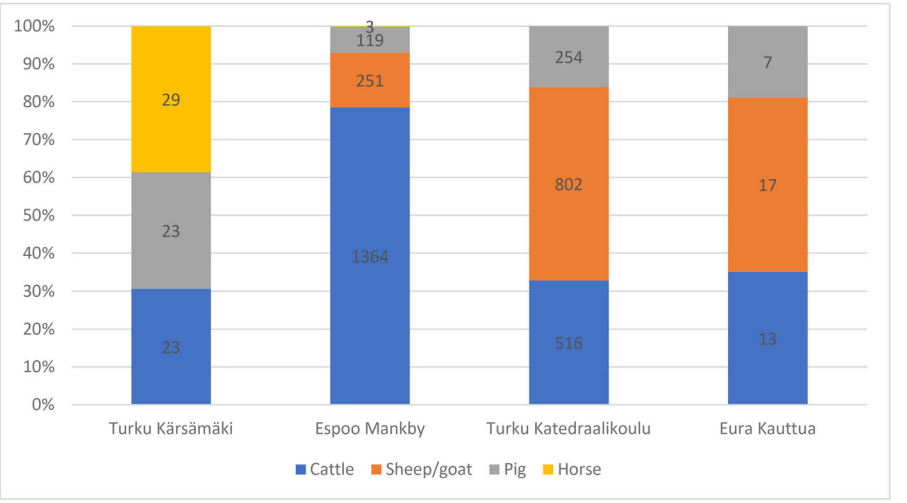

FIG 2
The proportions of cattle, sheep or goat, pig, and horse remains in medieval materials in Finland (NISP (Number of Identified Specimens)). For Kärsämäki, the skeletons were omitted from the calculations (*Espoo Mankby:* Kivikero 2016, *Turku Katedraalikoulu:* Bläuer 2020b, *Eura Kauttua:* Bläuer 2013).

shown that village cemeteries existed throughout the late-medieval period and exhibit evidence of rituals including animal remains (Haggrén and Rosendahl 2016, 81–2).

The late-medieval village site of Mankby in Espoo was extensively excavated in 2008–2009 (see Harjula et al 2016). This village was deserted in the 16th century. The excavations revealed three grave-like features at the southern village limits (Haggrén and Rosendahl 2016, 81–3). These were, however, difficult to interpret, since no clear cemetery confines were identified and no human bones were found. When discussing these features, Georg Haggrén and Ulrika Rosendahl point out that not finding human bones in grave-like pits is common in the acidic Finnish soils. The Mankby pits did not contain many finds, only a whetstone, an iron nail, and some charred wood. However, a bovine cranium was found under a large stone in one of the pits. Haggrén and Rosendahl note that this could indicate that the feature was a carcass pit (where a dead animal that could not be utilised was disposed of), but that the skull could be a sign of ritual behaviour as well. A radiocarbon date was not taken from the cranium, however in a contemporary pit close by some charred barley grain was sampled and radiocarbon dated to AD 1226–1228 (95.4%). The date suggests that the features belong to the earliest phases of the village (Haggrén and Rosendahl 2016, 81–3).

In some ways, the excavated features at the site of Yttilä Otta in Säkylä (Köyliö) resemble the pits of Mankby. The site has long been thought to be a late Iron-Age/early medieval period (c AD 1000–1200) inhumation cemetery, but archaeological studies on the site are sporadic and inconclusive. In 2005, four of the several grave-like depressions on the site were excavated (Lehtonen et al 2005; Uotila 2011, 18–21). Again, the team found no human remains. In one of the pits some charcoal was discovered, in another a piece of quartz, two pieces of burnt clay and several pieces of iron slag, and in yet another some burnt clay and iron slag. One pit is of special interest here, since it contained the remains of a calf (Lehtonen et al 2005, 12–13). In addition to the remains of the animal, the pit contained some charcoal and a small piece of iron

slag. Auli Bläuer (nee Tourunen) identified the bones as belonging to a young bovine, though not a neonate (Lehtonen et al 2005, 13). The context was radiocarbon dated to the 14th century (Uotila, 2011, 21). Given the nature of the material recovered, the excavating team could not conclusively interpret the studied features as graves.

The late-medieval village site of Finno in Espoo was excavated in 2006 (Haggrén et al 2006). Next to the village limits, the excavators observed 43 grave-like pits that were interpreted as a village cemetery. The team excavated 33 of them and in 12 of these, bone was recovered, but human bones were identified in only two of them. The remaining bones, found in the upper layers of the fillings, were identified as animal. The species could be determined in only four cases, all of them being bovine. The skeletal remains included teeth, a mandible, a humerus, and a scapula (Kivikero 2015, 98). In at least two of the pits, the bones were identified as being from a young bovine. Otherwise, finds were rare, in five of the pits a piece of iron slag was found and in another two pieces. Charcoal deposits and stones were common components of the fills (Haggrén et al 2006, 21, 24–5). The cemetery was still in use in the 15th century, perhaps even in the 16th century (Haggrén 2008, 46).

Both the excavation team and the zooarchaeologist Hanna Kivikero suggest that the animal-bone deposits in the Finno village cemetery may be the remains of food offerings to the deceased or of funerary/remembrance meals eaten on the graves (Haggrén et al 2006, 26; Kivikero 2015, 101). Kivikero states that the bovine mandible was found in the top layers of one of the pits and the grave would already have been filled when the remains of the feast or offering was left on top of the fill. In other cases, bone deposits seem to have been placed either on top of a coffin, or somewhere in the middle of the fill. Kivikero points out that these bones were from the meat-rich parts of the animals, which points to them being food offerings to the deceased (Kivikero 2015, 101).

THE KÄRSÄMÄKI EXCAVATIONS OF 2016 AND 2017

The excavations at the Kärsämäki Manor Garden site started in 2016 with trial excavations followed in 2017 by large-scale excavations which lasted 6 months (Uotila and Helamaa 2016, 2019). The excavations were carried out prior to the reconstruction of a junction of the Puustellinkatu and Heikki Huhtamäenkatu roads, affecting an area of c 2000 sq m. To the west of the crossroads, the excavation area included the eastern part of the now-overgrown manor garden. Later, during improvements to the garden area, the team excavated a series of small pits for new tree planting, and monitored trenching for new electric cables (covering c 200 sq m).

The excavations unearthed archaeological layers and features from settlement sites spanning from the end of the late Neolithic to the early modern period. The prehistoric settlement sites were represented by postholes, hearths and cooking pits and plough marks dating from the late Neolithic (c 2000 BC) to the local middle Iron Age (c AD 400) (Uotila and Helamaa 2016, 2019; Tokoi 2020). Due to the prolonged occupation of the site, the phased deposits and features displayed a significant amount of disturbance from subsequent usage especially during the active gardening period of the 18th and 19th centuries. The focus of this paper is on the Puustellinkatu location of the excavation area where a concentration of late-medieval features was revealed. A cluster of SE/NW oriented, oblong, grave-like pits covered a region of about 12×7 m. Some similar features, but more scattered, both SE/NW and SW/NE oriented, continued to the west of

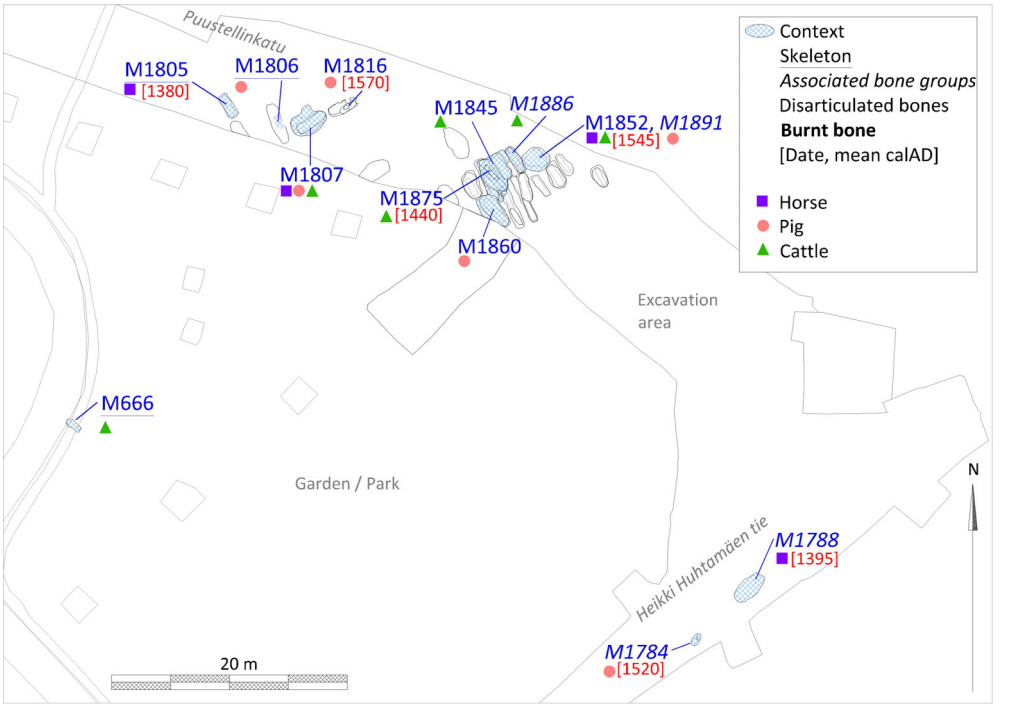

FIG 3
Map of the animal-bone contexts (including mean dates) and the other oblong pits. Underlined context numbers indicate skeletons, italicised indicate associated bone groups, plain numbers indicate disarticulated bones, and numbers in bold indicate burnt bone. *Map by M Helamaa, Muuritutkimus Oy.*

the cluster. The area with these oblong features was about 240 sq m in total including 23–25 pit-type features (Fig 3).

The pits in question were quite regular, being rectangular with slightly rounded edges. Their size in plan varied from 1.6 × 0.5 m to 2.5 × 0.9 m, with depths of 0.7 to 1.2 m below ground level. The walls of the pits were straight or slightly sloping with some rare stepped sides being encountered and the bases usually flat. The pits were in two or three rows running NE to SW with some evidence of intercutting (Fig 4). The team uncovered no human remains or grave furniture, such as bone, teeth, discolouration, organic residues, or remnants of coffins. The backfill of the pits was mid-brown fine sand with some lighter-coloured sand mixed in. The natural soil in the area was light-brown to yellowish sand and silt. Scarce finds such as small fragments of tile and/or burnt clay, prehistoric pottery fragments, as well as some glazed red earthenware sherds were found randomly distributed in the fills. The earthenware fragments were too small and worn for further identification or exact dating. The overall dating for such pottery types in Finland ranges roughly from the 15th to 20th century.

THE RESULTS OF THE OSTEOLOGICAL ANALYSIS

On the Kärsämäki site, the excavating team recovered animal bones and teeth from the fills of 11 pits and from one soil layer (Tab 1; M 1852/M1891 are fills of the

FIG 4
Aerial view of the clustered oblong pits during the excavation (the top of the picture is towards north). *Photograph by M Helamaa* 2017, *Muuritutkimus Oy*.

same pit, layer 1845 covered pit M1875). The species identified were cattle (*Bos taurus*), horse (*Equus caballus*) and pig (*Sus scrofa*). The remains range from complete or almost complete skeletons (M666, M1805, M1806), associated bone groups (M1784, M1788, M1886, M1891), to disarticulated bones (M1807, M1816, M1845, M1852, M1860, M1875).

A complete adult cattle skeleton (context M666) was found in an oblong, SE/NW oriented, grave-like pit c 30 metres from the main cluster of the pits. It was 1.55 × 0.8 m in plan and approximately 0.6 m deep. One small fragment of unidentified prehistoric pottery was mixed in the sandy fill. Based on the measurements from a complete femur and tibia, the calculated withers height of the animal was between 0.95 and 0.99 m, respectively (based on measurements of von den Driesch 1976 and the index by Matolsci 1970). The wear on the mandibular teeth indicates a mature age ('M3 stage j' according to Grant 1982; 'Elderly Class' in O'Connor 2003). The morphological characteristics of the pelvic pubis bone suggest it was a male. However, the measurement of the medial edge of the acetabulum is more characteristic of a female. Unfortunately, the other bones that could have been used for sexing the individual, metapodials and horn cores, were too abraded for measurement.

The skeleton of a foal was recovered in another pit (M1805). This was a SE/NW oriented regular grave-like pit, with vertical sides and a flat base, approximately 0.8 m wide and 2.2 m long. A few small fragments of tile or burnt clay were found in the mixed sand fill (M1803). The lower limb bones (carpi, tarsi, metapodials, and phalanges) were missing. Based on the in-situ photograph, this would appear to be deliberate and not the result of poor preservation (Fig 5). All the observed epiphyses are unfused. The arch or cervical vertebra is in process of fusing to the centre. According to Silver (1963), this happens at or just after birth. A femur of the foal was radiocarbon dated to 1315–1355, cal AD 1385–1430 (95.4% probability) (Tab 1).

TABLE 1
Identified species (NISP) in the Kärsämäki material.

Context	Feature	Cattle	Horse	Pig	Large ungulate	Small ungulate	Not identified	Total	Sample no	Radiocarbon date 95.4%	Mean CalAD
666		64					12	76			
1784				5			*1*	6	Hela-4405	AD 1445–1525, 1570–1630	1520
1788			26				90	116	Hela-4406	AD 1320–1350, 1390–1435	1395
1805			81					81	Hela-4407	AD 1315–1355, 1385–1430	1380
1806		*3*		28			*9*	40			
1807		6	2	1	1		10	20			
1816				*2*		*12*	*127*	141	Hela-4496	AD 1490–1605, 1610–1650	1570
1845	*	1						1			
1852	1E.40	6	1				16	23	Hela-4408	AD 1450–1530, 1550–1635	1545
1860				13				13			
1875	*	1						1	Hela-4409	AD 1420–1465	1440
1886		6			1			7			
1891	1E.40			3				3			
Total		87	110	52	2	12	265	528			

*m1845 is a layer above fill m1875. Italics indicate burnt bone.

FIG 5
The skeleton of the foal *in situ* (M1805). Seen from N-NW. *Photograph by M Helamaa* 2017, *Muuritutkimus Oy*.

The skeleton of an immature pig was found in one of the pits lying on its back (M1806). The feature aligned SE/NW and was 3.4 m long, 1 m wide and 0.9 m deep. During post-excavation analysis, the excavation team noted that a smaller, irregular oval pit (approx 1 × 0.5 m), with a slightly darker fill, was dug in the middle of the larger pit for the animal. This context was only 2.5 metres east of the foal skeleton (M1805). The porcine skeletal remains were in a state of poor preservation with the lower limbs absent. Based on the morphology of the unworn and probably un-erupted mandibular canine, the animal is male. The arches of the vertebrae have not been fused to corpus, and according to Silver, this happens in pigs at an age of three to six months (Silver 1963). The state of the eruption of the teeth, however, would suggest an age of seven to 12 months (M2 recently erupted but PM4 not yet erupted; Silver 1963). This pit also contained burnt-bone fragments of a bovine metacarpal and of an unidentified skull.

The contexts M1784 and M1788 were c 38–40 metres south-east from the main area of the oblong pits where the majority of the other bone and skeleton were recovered from. The skull, mandible, atlas and axis vertebrae of a female pig and one burnt-bone fragment were recovered from context M1784, which was an oval, shallow pit with concave walls and a tapered base (Fig 6). It was 1.1 × 0.6 m in plan and 0.45 m deep. There was some charcoal and soot as well as some intrusive prehistoric finds mixed with the sandy fill since the pit cut the prehistoric cultural layers identified on site. The wear of the mandibular M3 indicates that the pig skull belonged to an adult animal (Stage g, Grant 1982; Adult Class 3 in O'Connor 2003). The radiocarbon date

FIG 6
The skull of an adult female pig *in situ* (M1784). *Photograph by S Salomaa* 2017, *Muuritutkimus Oy*.

for one porcine molar from M1784 was calculated to 1445–1525, 1570–1630 AD cal AD (95.4% probability).

M1788 was the backfill of a large oval pit (c 3 × 1.55 m and 0.7–0.8 m deep) with concave walls and a flat base. This pit again cuts through the prehistoric layers and consequently Neolithic finds including pottery fragments and stone flakes were recovered from the backfill. The pit contained horse bones from the head (skull, mandible), both the right and left pelvic bones, and a left hind limb (femur, tibia, calcaneus, talus, metatarsal, phalanxes 1 and 2). During the excavation work, the level of articulation of the remains could not be ascertained with any degree of accuracy but it seems likely that they were from one individual. Unfortunately, the bones were not well-enough preserved for the measuring and calculation of the withers height, but they would appear to belong to a small, pony-sized animal typical for the historical period in Finland (Bläuer 2015). One of the teeth was radiocarbon dated to 1320–1350, cal AD 1390–1435 (95.4% probability).

Context M1886 was the backfill of one of the grave-like, rectangular pits measuring 2.5 m x 0.85 m in plan and 1.2 m deep with variable vertical and stepped sides and a flat base. The backfill was mid-brown fine sand, mixed slightly with organic material, very similar to the soil observed in the other grave-like pits. A few fragments of intrusive prehistoric pottery, burnt clay, and tile were mixed in the backfill, in addition to unidentified bone fragments. In this pit, the milk teeth belonging to a calf were identified together with a femur fragment belonging to an adult large ungulate, ie cattle, horse, elk (*Alces alces),* or wild forest reindeer (*Rangifer tarandus fennica*). The abundance of teeth fragments suggests that the remains could belong to a calf's head where the skull and mandible bones have decayed.

In the other pits, the team recovered unburnt fragments of skulls and limb bones. The bone material in context M1807, which was a mixed, somewhat sooty, dark-brown

sandy backfill of a large irregular and shallow pit (3 × 2 x 0.5 m), was badly preserved. The remains included a cattle skull, talus and metatarsus, a horse humerus and radius, and a tusk, likely a male mandibular canine, of a pig. A fragment of a whetstone was the only other object found in the backfill. This NE/SW oriented feature was next to the grave-like pit with the pig skeleton (M1806). In one pit, a cattle mandible was recovered from the backfill (M1875) and in the overlying soil layer M1845, which extended beyond the pit cluster, a cattle scapula was observed. M1875 was a mixed backfill covering two or more intercutting oblong pits. These underlying features became more defined after the removal of this deposit. A few small fragments of tile or burnt clay and a shard of glazed red earthenware were recovered in the backfill of this pit. A cattle tooth in M1875 was radiocarbon dated to 1420–1465 cal AD (95.4% probability).

Another pit revealed two clusters of bones within the fill sequence. One horse first phalanx, two right cattle mandibles from different adult individuals, and a skull of a young bovine with lightly worn pd4's were recovered from M1852. Below them in context M1891, a fragment of a pig humerus and remnants of a mandible and maxilla were recovered. These bones probably all derive from the head of one animal approximately six months old individual (M1 erupted but in wear, Silver 1963). Contexts M1852 and M1891 are the upper and lower fills of a large, round pit situated on the NE edge of the cluster of oblong pits. This feature differs from the others in the area due to its round shape. This pit with sloping walls was c 1.5–2 m in diameter and 1.1 m in depth and fragments of tile and glazed red earthenware were recovered from the same contexts. The radiocarbon date for the horse phalanx in M1852 is 1450–1530, cal AD 1550–1635 (95.4% probability).

In context M1860, only the remnants of unworn pig molar crowns remained, indicating perhaps the deposition of a skull or mandible of a piglet. M1860 was the mid-brown fine-sand fill of an oblong, SE/NW-oriented, grave-like pit. The sides of this 0.9 m deep feature displayed a significant degree of sloping compared to other similar features, as the surface plan dimensions were 3.2 × 1.2 m whereas the flat base was only 2.5 × 0.6 m.

Context M1816 differs from the others, as the bone material was completely burnt and the pit was oval and shallow, only 0.8 × 0.3/0.4 m in plan. The identified material consists of two pig skull fragments (lacrimal and parietal) and 12 rib fragments belonging to a small ungulate (a pig, sheep, or goat). Among the unidentified material, there were four skull fragments, possibly from a pig. The burnt bone was mixed with charcoal, burnt crumbled stone, and sooty, burnt sand. It remains unclear whether the burning was *in situ* or had taken place elsewhere. This feature cuts two NE/SW-aligned oblong pits adjacent to M1806. The radiocarbon date for the burnt bone in M1852 was calculated at 1490–1605, 1610–1650 AD (95.4% probability).

DISCUSSION

The identified late-medieval faunal material at Kärsämäki consists of cattle, horse and pig bones. The distribution of species present does not represent typical domestic-waste deposits of the period, where cattle and sheep or goat bones are common with horse bones rare or absent. In the Kärsämäki material, no sheep or goat bones were identified, while horse bones are abundant. Similarly, the anatomical distribution does not resemble domestic waste, with complete or almost complete skeletons, associated

bone groups, and a paucity of bone elements belonging to the trunk in the disarticulated material. Furthermore, the elements present in the Kärsämäki material do not represent waste created by slaughter, tannery, or crafts, where metapodials, horncores, or butchered skull pieces would be expected to be present (Serjeanson 1989; Bläuer 2020b; Bläuer et al 2020). Instead, the material appears to represent the deliberate deposition of selected animal parts in pits. The location of the deposits is not in the immediate vicinity of the settlement, a point demonstrated also by the scarcity of settlement debris, but in between the late-medieval village and the manor.

It was noted that the archaeological features could be categorised into different groups according to the pit structure and type of animal remains present. The almost-complete skeletons were placed in their own grave-like pits. Two of them (the foal in M1805 and the pig in M1806) lay next to each other while the third (the bovine in M666) was further away to the south-east by itself. However, some grave-like pits also included disarticulated bone material (M1860, M1886), or bones that were located in the soil layers above them (M1845, M1875). These remains do not show any specific deliberate placing. However, some bones were placed within the grave-like pits in discrete clusters such as in M1807 and M1852. As was the case with the almost complete skeletons, the articulated bones of a single animal species were placed in their own designated pits. The pig's head in M1784 and the horse bones in M1788 were in the old road area. Given the date and the stratigraphy, it is probable that the bones were buried on the side or under the road. The burnt bones in M1816 that had been deposited in a small, separate pit were a unique phenomenon.

There thus seems to be remains of different types of practices present at the site. For some reason, this area became a focus for what appears to be ritualised practises involving animals. The final act of these practises was situated between a manor and a village, near a road, and in the border area of fields and forest where the sandy soils made it relatively easy to dig pits. Naturally, complete skeletons could be remnants of animals that had died of some disease or due to other misfortune and were disposed of further away from the settlement site. Folklore documented in the 19th century shows that when a farm animal died of such causes, it was important to dispose of the body in a manner that ensured that the misfortune would not remain on the farm. For example, one account explains that animals dying of disease should be buried in the middle of the village road or preferably under the road to the church so that the bad luck would be picked up by people walking over the grave to be dispersed far away from the inflicted farm (SKMT 4 (2) 1933, 14, 135). Even though the Kärsämäki bones found under or by the road were not complete skeletons, a similar kind of belief might have motivated their burial at this place.

It is also possible that these remains belonged to animals that were killed specifically to be buried at this place. These types of ritual practices have been documented in many cultures, but this interpretation is often dismissed when discussing phenomena dating to the Christian era. At first thought, the motivation for animal sacrifice might be challenging to imagine in a Christian setting. However, the aforementioned bovine buried inside the church in Lombardy, Italy, was interpreted as a sacrifice (ie a deliberate killing connected with the deposition; there were no signs of butchering or disease, thus it was suggested that it had been jugulated), so this is not completely unprecedented. Moreover, later folk religion in Finland has included, for example, sheep sacrifices on St Olaf's day or at Michaelmas (Sarmela 2009, 121–3; Hukantaival and Bläuer

2017). The latter connected with securing the fertility of the livestock, and may be founded on seasonal Pre-Christian sacrificial feasts (Sarmela 2009, 121–3). The uneaten remains (bones, entrails, and blood) of the animals were deposited at the designated offering place of the household (Harva 1948, 301–2). In any case, the activities at Kärsämäki did not always call for complete or almost complete animals. Some of the bones found in the fill material of the pits resemble the cases found at late-medieval village cemeteries discussed above.

This renews the question of the grave-like pits: are they human graves or not? As previously mentioned, there are numerous instances of similar oblong pits being interpreted as human graves even when there are no such remains present. One of the many challenges relating to Finnish archaeology is that the local soil is acidic and bones usually decompose quickly. However, the body often leaves a discolouration in the soil even after decomposition. In the Kärsämäki case, no such discolouration was observed. Since this was also true in the case of the animal remains, the soil at the site may be of a type that does not preserve discolouration. However, as animal bone has been recovered, in varying states of preservation, it would suggest that if these features are human graves, they are likely to be earlier and unfurnished. This leads to the question of whether a disused cemetery remained as place-lore in the memory of the late-medieval inhabitants of Kärsämäki. If it did, then this site would have been the logical focus of these rituals, perhaps, to soothe the ancestors so they do not disturb the activities of the living (Bläuer 2020a). However, it seems that the exact locations of the pits were known when the deposition of animal remains took place. This suggests that the grave-like pits and animal remains belong to the same period. Comparison to the other sites with similar features (Mankby, Finno, Yttilä) reveals a pattern of animal-bone deposition in association with grave-like pits and it is not certain whether any of these oblong pits originally contained human remains.

If this site was not a cemetery, why were the pits dug in this oblong manner? Another possibility could be that the Kärsämäki features were symbolic graves (cenotaphs) made for people who died in ways where the body could not be retrieved for burial (abroad or by drowning). In this case, the animals might have been intended as offerings of food and/or companions for the lost people. There is no known evidence confirming that this type of symbolic burial practice was performed in late-medieval Finland. It was also considered whether the site could have been a periodic temporary grave, from where the bodies would have been moved to a more suitable, permanent place when appropriate, and in which the animals were deposited in connection with this event. However, except for in the case of the pig in M1806, the team discovered no signs that the pits have been re-cut. It is also possible that funerary or crisis rituals that were not allowed to be enacted at the churchyard were carried out at this site at symbolic graves instead. However, this is highly speculative, and no evidence for or against this idea could be presented. So, for the time being, it remains inconclusive as to whether a cemetery, symbolic or otherwise, was situated here.

Since the Kärsämäki site shows signs of ritual activities, the question of the name of the manor, Hiisi, needs attention. In Finnish, the word *hiisi* has been used to refer to a sacred grove, a cemetery, a rocky area in the forest, a forest/hunting deity, and later even the Christian Hell (Koski 1990; Pulkkinen et al 2004; Wessman 2009). The connection between *hiisi* place names and local Iron-Age settlements was noted early in archaeological discussions (Tallgren 1933). It is widely accepted that the

name is associated with sacred places of the pre-Christian tradition but no trustworthy written sources have survived depicting rituals conducted at such places (only some folklore survives, see below). It should be noted that in mythology, *hiisi* has a connection with wild forest animals, but it is with the horse that it has especially strong ties (eg Siikala 1994, 199; Frog 2020, 641–2; Hukantaival 2020, 185). Moreover, according to a folk tale of unknown age there has been an altar where animals were sacrificed at the Kärsämäki *hiisi* (Tallgren 1944, 32). While it might be tempting to see a continuation or re-interpretation of some *hiisi*-rituals in late-medieval Kärsämäki, other possibilities should not be dismissed. It should also be noted that the other similar sites (Mankby, Finno, Yttilä) do not have a similar preserved close relationship with hiisi place names.

The practice of depositing animal remains at Kärsämäki may have its roots in local late Iron-Age rituals, where especially heads and legs of horses and cattle were placed in old cemetery sites, or where animals or parts thereof were part of the grave-goods (Lehtosalo-Hilander 1982; Riikonen 2003; Wessman 2010; Bläuer 2020a). However, the animal remains from Kärsämäki date roughly to the same century, which indicates that the animal rituals conducted here were not practices that continued from prehistoric times through to the late-medieval period. Still, the date range does suggest that the practices were not part of a single event, and most likely the practitioners were not part of a single generation either. Nevertheless, the Kärsämäki rituals seem to have been a relatively short-lived tradition, at least in this particular location. This might suggest that the animal remains were part of reactive crisis rituals performed due to specific types of crises.

While many questions remain unanswered, the Kärsämäki site provides new information on the rituals of late-medieval people in SW Finland. Although the Maaria parish church was not far away from this site, the locals still felt a need to conduct rituals involving animal remains in the uninhabited area between the manor and village. This observation provides an insight into a type of late-medieval practice that is not represented in the surviving written sources of this period.

CONCLUSION

The Kärsämäki faunal material was interpreted with a contextual and taphonomic approach, including analysis of the species, the anatomical distribution, and the context of the deposition. The site was interpreted as having significance in terms of being the place for ritual activities involving animals. It is inconclusive as to whether the site was an old cemetery, a symbolic cemetery, or a ritual site with cemetery-resembling features. In addition to the grave-like features, animal remains were also found under an old road. The location of the site between the manor and village, by the old road, is likely to have played a role in the meaning of the place; although it should also be noted that the sandy soil was suited to the digging of pits.

The results of this paper show that this kind of method reveals significant details of past life and can reveal aspects of the world view and connections to the complexity of beliefs of late-medieval Christians. The type of deposits that in past studies have been dismissed as insignificant or anomalous has proven to form a similar pattern present on several sites. This paper also underlines the importance of radiocarbon dating animal burials since significant aspects of past traditions may be missed if they are simply

dismissed as modern carcass pits. While this is true in all countries, it is particularly important to analyse the few cases that do exist in places like Finland where the soil is so acidic and bone rarely survives. Cross-cultural comparisons could not be effectively made at this stage, so it is hoped that this paper will encourage researchers to discuss similar phenomena throughout Europe and beyond, to further our understanding of the diverse ritual practices of late-medieval people.

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Abbreviations

NAF	The National Archives of Finland, Helsinki
SKMT	Suomen Kansan Muinaisia Taikoja [Ancient Magic of the Finnish People] (source publication)

Résumé

Restes animaux de la fin du Moyen-Âge dans des fosses en forme de tombes : étude de cas des rituels en Finlande au 15e siècle *par* Sonja Hukantaival, Auli Bläuer, Maija Helamaa *et* Kari Uotila

A l'occasion de fouilles archéologiques sur le site du jardin du manoir de Kärsämäki à Turku, dans le sud-ouest de la Finlande, l'équipe a retrouvé des groupes de fosses oblongues ressemblant à des tombes humaines dans une zone située entre le manoir et un village de la fin de l'époque médiévale. Des restes humains n'ont pas été mis à jour dans ces fosses qui renfermaient plutôt des ossements d'animaux domestiques (bétail, chevaux et cochons). La datation au radiocarbone fait remonter les ossements d'animaux grosso modo au quinzième siècle. Ce papier analyse les matériels fauniques de Kärsämäki en utilisant une approche taphonomique et contextuelle. Les questions auxquelles on a tenté de répondre concernent la nature du site et l'interprétation des dépôts animaux. Les résultats suggèrent que la présence de certaines parties animales à certains endroits caractéristiques des fosses résultait d'un placement délibéré. Le dépôt de vestiges d'animaux dans des fosses en forme de tombes a été enregistré dans d'autres sites de la fin de l'époque médiévale en Finlande, mais les ossements proprement dits n'ont pas fait l'objet de datation au radiocarbone. Le site de Kärsämäki semble être le lieu de différents types d'activités rituelles faisant intervenir des restes d'animaux.

Zussamenfassung

Spätmittelalterliche tierische Überreste in grabähnlichen Gruben: Eine Fallstudie über Rituale im Finnland des 15. Jahrhunderts *von* Sonja Hukantaival, Auli Bläuer, Maija Helamaa *und* Kari Uotila

Bei archäologischen Ausgrabungen im Garten des Gutshofs Kärsämäki in Turku, Südwestfinnland, fand das Team in einem Gebiet zwischen dem Gutshof und einem spätmittelalterlichen Dorf Gruppen von länglichen Gruben, die menschlichen Gräbern ähneln. Aus diesen Gruben wurden keine menschlichen Überreste geborgen, aber einige von ihnen enthielten Knochen von Haustieren (Rindern, Pferden und Schweinen). Die Radiokarbondaten der Tierknochen datieren sie ungefähr auf das fünfzehnte Jahrhundert. In diesem Beitrag wird das Faunenmaterial von Kärsämäki anhand eines taphonomischen und kontextuellen Ansatzes analysiert. Die Fragen, die man zu beantworten versuchte, betreffen die Art des Fundortes und die Interpretation der Tierablagerungen. Die Ergebnisse deuten darauf hin, dass das Vorhandensein ausgewählter Körperteile von Tieren in bestimmten Bereichen der Gruben auf eine bewusste Platzierung zurückzuführen ist. Die Ablagerung tierischer Überreste in grabähnlichen Gruben wurde auch an anderen spätmittelalterlichen Fundorten in Finnland

verzeichnet, aber die Knochen selbst wurden nicht radiokarbondatiert. Der Fundort Kärsämäki scheint ein Ort für verschiedenartige rituelle Aktivitäten gewesen zu sein, bei denen tierische Überreste verwendet wurden.

Riassunto

Resti animali tardomedievali in fosse dall'apparenza di tombe: uno studio analitico sui rituali nella Finlandia del XV secolo *di* Sonja Hukantaival, Auli Bläuer, Maija Helamaa *e* Kari Uotila

Durante gli scavi archeologici nel giardino della grande dimora situata in località Kärsämäki a Turku, nel sudovest della Finlandia, vennero alla luce gruppi di fosse oblunghe simili a sepolture umane, situate nell'area tra la grande dimora e un villaggio tardomedievale. In queste fosse non si rinvennero resti umani, ma alcune di esse contenevano invece ossa di animali domestici (bovini, equini e suini). La datazione al radiocarbonio ha fatto risalire le ossa all'incirca al XV secolo. Questo studio analizza il materiale animale di Kärsämäki con un approccio tafonomico e contestuale. Le domande a cui si è cercato di dare una risposta riguardano la natura del sito e l'interpretazione delle sepolture animali. I risultati indicano che la presenza di specifiche ossa animali in certe parti delle fosse derivava da una precisa scelta della loro posizione. La sepoltura di resti animali in fosse dall'apparenza di tombe è stata documentata in altri siti tardomedievali in Finlandia, ma le ossa non sono state datate al radiocarbonio. Nel sito di Kärsämäki sembrano avere avuto luogo diversi tipi di attività rituali di cui facevano parte resti animali.