Stensöborg 2015

Excavations in 2015 at Stensö Castle in Östra Husby Parish, Östergötland, Sweden

Report by Martin Rundkvist, Ethan Aines and Mats G. Eriksson
Appended, Rudolf Gustavsson's osteology report in Swedish.

Cover Image: Interior of the South Tower, showing the collapsed vaulting and the early phases of excavation.

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OVERVIEW

Introduction

This report details the 2015 fieldwork at Stensö Castle. For context, see the report on the 2014 excavations, available at archive.org. Fig. 1 on p. 8 presents a map of Stensö, its surrounding environs, and the excavation trenches from 2014 and 2015.

In 2015 we worked for two June/July weeks at the castle with a team of eleven Umeå students. Martin Rundkvist headed the fieldwork. Cambridge PhD candidate Ethan Aines and Umeå MA candidate Mats G. Eriksson acted as seconds-in-command, each overseeing work in one of the larger trenches.

In the following the term greystone denotes local gneiss and granite, following the Swedish use of the word *gråsten*.

The Perimeter Wall: Surface Observations

A main question at Stensö has been the status of the western reach of the perimeter wall, which has been missing since before the first plan was drawn of the site. In 2014 we discovered a stump of the missing reach sticking out of the North Tower in Trench A. Tower and wall are structurally coeval. Trench B proved to be far inside the wall. In 2015 we discovered the base of the western wall reach, visible on the ground surface as a low rubble bank encompassing the western side of the site. Our conclusion is that the perimeter wall has at one time formed a complete circuit with a gate at the south side of the South Tower, and that the wall's western reach has later been demolished, most likely in a purposeful strategic bid to disarm and deactivate the castle.

The absence of more substantial rubble piles along the western wall reach indicates that the building material was removed to some other construction site. Brick flakes and mortar lumps in the test pits at the foot of the castle hill suggest that the material was shipped out.

The East Bailey: Trench D

We laid out this 5 by 2-metre trench along the inside of the perimeter wall to the east with the aim of investigating a pond-like depression and the edge of a tall rubble pile. Under brick rubble from the wall and a number of boulders was a dark culture layer, 7–30 cm thick and rich in bones. Particularly in the western half of the trench, this layer was quite wet, black and greasy, and we secured a sizeable sample of it. But the bedrock and pockets of natural sediment were soon reached, and no structures could be discerned. Nor had the damp in the depression preserved any wood.

Artefact finds from Trench D (figs 24-28 and 34-38) are as follows.

Non-iron metals: a little beaded silver annular brooch (F124, with a close parallel in a major 1190s coin hoard from Tingby in Dörby near Kalmar, SHM 4858), three pieces of copper-alloy sheet metal.

Iron: a knife (F112), a strike-a-light (F107), a slender projectile point (F105), a little wire ring (F110, possibly from ring-mail), a pierced half-pipe mount (F240), a carpentry staple (F111), 16 more or less complete nails including at least five horseshoe nails, a 20.5 cm rod (F114).

Pottery: ten sherds total. Grey unglazed ware, Early Red glazed ware and one sherd each of Green Early Red glazed ware and unglazed red ware.

Bone: a pin made from an ovicaprid ulna.

Stone: a slate whetstone and two flint flakes.

Rubble Pile and Bailey Fill Outside the South Tower: Trench E

Against the northern outer wall face of the South Tower was a c. 40 cm high turf-covered mound that looked like it might hide a stump of the perimeter wall's missing west reach. We laid out a 3 by 1.5-metre trench encompassing the mound, orientated on a tangent with the curved tower wall.

We found that the mound consisted of redeposited bricks and greystones, similar to the

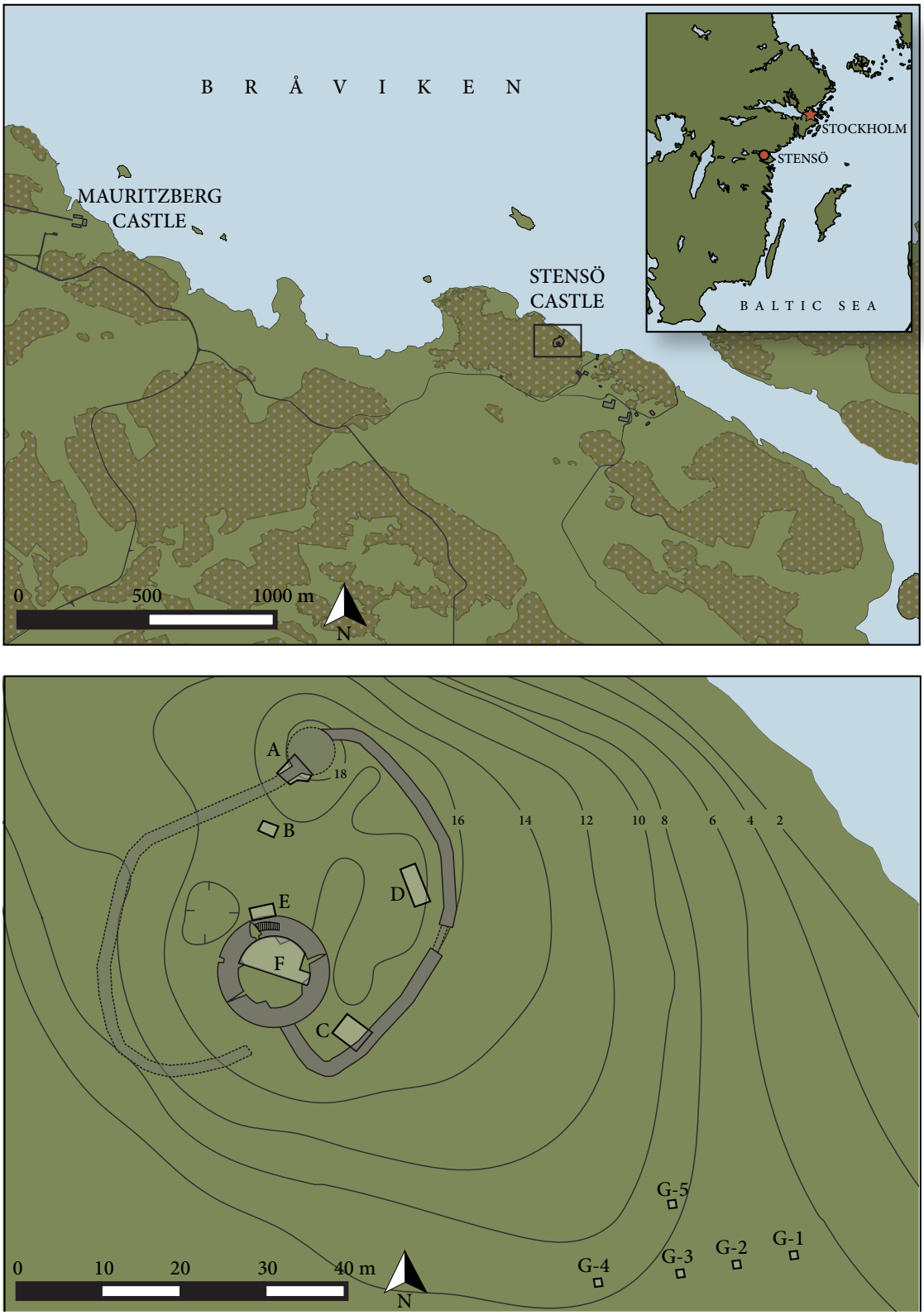


Figure 1: Stensö and environs (top), and Stensö Castle with excavation trenches (bottom). Trenches A - C: 2014, Trenches D - G: 2015. Contains data © Lantmäteriet 2014-2016 All Rights Reserved. Site plan (bottom) based on Lovén, C. Borgar och befästningar i det medeltida Sverige. *1999.*

much taller stacks touched by Trenches C and D. Many of the bricks in Trench E had been neatly stacked while still solid, and had then become cracked in situ by frost cycling so that few could be lifted without collapsing into innumerable flakes. This is important because it a) gave us a better understanding of why so much rubble at Stensö is in tall stacks, b) allowed us to date the mound, and indirectly also something that we found behind it. The mounds and stacks seen here and there inside Stensö's bailey seem to represent quarrying for building material several hundred years ago, where people selected and stacked reusable building stone for future transportation.

The wall face uncovered behind the mound is identical to that seen all around the South Tower: fine greystone masonry with wide intentionally smudged mortar joints. And on one of these joints around modern ground level is a runic inscription made while the mortar was wet (fig. 8 on p. 29). Four runes are well preserved and measure 72–83 mm in height. A fifth is almost entirely covered by a mortar splash. They read *helk*-. Whether the fourth rune has had the dot that would have made it read *g* cannot be determined due to minor damage. The inscription can be read as the male name *Helgi*. The National Heritage Board's head runologist Magnus Källström kindly took the time to visit us during fieldwork and examine the runes, and he agreed with our reading.

Unlike inscriptions on the interior wall plaster of churches, runic inscriptions like this one on the mortar in a Medieval masonry wall are rare. One example is known from Hackås church in Jämtland, where a futhark has been incised into mortar on the outside of the chancel in the later 12th century (M. Persson 2004, *Hackås kyrka*, 3rd ed, Jämtlands kyrkor 27, Östersund, pp. 5, 8). On secular buildings such as the South Tower of Stensö Castle, runic inscriptions are in fact almost unknown.

The pile of building stone had been stacked on a layer of large greystones with many empty cavities among them and many bones, but hardly any trace of mortar. This layer was identical to the one encountered nearby in Trench B. It seems to represent raising and levelling of the bailey after the perimeter wall and North Tower were added to the castle. We were keen to see the wall base of the South Tower, but were kept from reaching it by an unexpected obstacle. About a metre under the ground surface in the NE trench corner, the stones in the trench were locked in place by a hard, flaky, laminated, beige substance that looked like stalagmite. We believe that this substance is redeposited lime that has been leached out of the South Tower's thick walls over the centuries. We came upon it in Trench F inside the tower as well. Not wanting to attack the pseudo-stalagmite with power tools, we left it in place and backfilled the trench, taking care to leave the runic inscription accessible for inspection but protected from the elements. The lowest visible part of the wall in Trench E was at a level of 17.19 m a.s.l.

Artefact finds from Trench E are as follows: one nail and a piece of wall plaster. We also found yet another freak of nature like the one from Trench C, a *marleka* fairy stone.

Floor Layer Inside the South Tower: Trench F

Only the ground floor survives of the South Tower. On its inside walls are four bases for the vaulting that once carried the second floor (fig. 15 on p. 33). We drew a line between the western and eastern vaulting base and excavated most of the floor layer north of it, a roughly semicircular trench covering slightly less than 16 m2. We also excavated half of the floor layer of the stair landing accessed through a doorway on the north side. This meant that we could examine the same thick wall from either side in Trenches E and F.

For the duration of fieldwork, the floor surface south of the dividing line became completely covered by our spoil dumps. The tower has no entrance at ground level. It would have caused us endless pointless work to take the spoil out and then back inside again for backfilling.

Apart from a modern picnic hearth at the centre of the tower floor, our main findings were a layer of brick and greystone rubble on a thin greyish occupation layer with many finds, all resting on an ice-smoothed bedrock surface sloping north. The only notable structure in the rubble was concentrations of trapezoid greystone slabs in front of each vault base. Neat curved stacks of identical slabs still stick out of the tower wall here, demonstrating that the ones in the rubble were originally part of the vaulting and had fallen to the floor as the ruin decayed.

As in Trench E, parts of the lower stratigraphy was fixed in hard, flaky, laminated, beige pseudo-stalagmite. Near the east end of the trench we found wood remains preserved in the substance. But unlike in Trench E, inside the tower we were able to uncover one of the lowest stones of the wall near its northernmost point, despite the pseudo-stalagmite, and see it resting on the bedrock at a level of 17.01 m a.s.l. As the bedrock is uneven, other stones in the wall that we could not uncover are sitting at a lower level. The nearby embrasure's base is at 18.72 m a.s.l.

Mixed in the rubble fill we found sundry artefacts and many bones. The pottery seems to date the layer, and not just the in situ fallen vaulting slabs, to a point in time considerably later than the probable erection of the tower around AD 1200. Inside the ruin of a multi-story building, it is difficult to tell whether the artefacts found in the ground-floor rubble were originally deposited there by people standing on the ground floor, or fell there along with building material from the upper stories during quarrying and centuries of subsequent erosion. The rubble included a few small pieces of plaster-covered brick, materials not seen in the ground floor's fabric. They may have originated higher up.

As mentioned, the bedrock that the tower rests on slopes rather sharply. It seems likely that the builders would have installed a level floor, or it would have been difficult for people inside the tower to reach two of the embrasures, and also to get up onto the stair landing. We

however found no recognisable traces of any flooring prior to the current rubble fill, which is late. In the stairwell, the rubble layer sat on a flat surface of the wall's core. The occupation layer showed a distinct concentration of pottery and bones below the entrance and to the right, from the perspective of someone coming in. This might reflect the placement of a short wooden staircase that acted as a trap for waste.

The tower room has one perplexing detail. The embrasured arrow slits suggest that it was intended to function as the innermost keep, or donjon, of the castle. But a neat hole in the door jamb shows that the only entrance was bolted from the *outside*, in the stairwell (fig. 20 on p. 36). We can see two possibilities in this configuration: that the room may have been used to hold livestock during certain times of the year, or alternatively that it may have been used as prison cell. Such features are common in large royal and ecclesiastical castles in Sweden—most infamously, at nearby Nyköping Castle where the Banquet of Nyköping ended in 1318. However, neither of these conjectures seems entirely reasonable—such bolting of the door would doubtless keep both prisoners and livestock secure in the tower room, but almost excessively so.

Artefact finds from Trench F (figs 29-33 and 39-41) are as follows.

Non-iron metals: a domed sheet-copper object reminiscent of the hinged lid of a beer stein (F123).

Iron: the heads of two crossbow bolts (F119, 121), a little slender tanged point (F120), two joined links of a rather slender chain (F234), 32 more or less complete nails, three various fragments.

Pottery: 29 sherds mainly of Early Red glazed ware largely from the same pitcher, with a few sherds of Green Early Red glazed ware.

Glass: eleven sherds, date uncertain as the modern campers had broken and melted bottles in their hearth.

At the Foot of the Castle Hill: Test Pits G1–5

Just east of the castle hill, the Örbäcken stream debouches into the Bråviken inlet. The current situation with a stream mouth next to the castle hill does not reflect conditions during the castle's lifetime. According to the Swedish Geological Survey's on-line shoreline displacement maps, the castle hill was at one end of an island until some time between AD 1000 and 1500, when the island became joined to the mainland. This fits well with the place-name Stensö: "Stone island" or "Hillfort island". The topography is such that the most convenient spot for the castle dwellers to keep boats would have been in a little cove currently occupied by the stream mouth.

To seek evidence for such a harbour we excavated and screened five 1 sqm test pits on level ground between the castle hill and the stream mouth (fig. 1 on p. 8). The natural was reached at a depth of only 25–38 cm. Finds were scanty and nothing can be dated by eye to before the 20th century. But brick flakes in all five pits, and mortar lumps in pits G1 and G2, are suggestive. The brick may represent building material shipped either to the castle or from the ruin. The mortar only makes sense as traces of material being removed.

Osteology

As with the bones from the 2014 fieldwork, Rudolf Gustavsson has again analysed the bones we found (report appended). And as expected, there are no human bones: this too is mostly food waste. The body parts represented indicate that Trench D just inside the perimeter wall contained meal remains while Trench F inside the South Tower contained more butchery refuse.

The material is dominated by youngish pigs, a tell-tale marker of aristocratic housekeeping, followed by cattle and finally sheep/goat to a lesser proportion than in the 2014 trenches. Chicken, goose, duck and hare were also eaten. Most of the fish species identified would have been available just downhill in the Bråviken inlet.

Turning to other uses for animals than as food, bones of squirrel, cat and dog suggest the production of furs, as do the aforementioned hares. Some cat and squirrel bones have cut marks characteristic of flaying, while some dog bones show signs of butchery.

Summary: Main Findings

We can now confidently map the missing western reach of the perimeter wall at Stensö, and we are able to see the tall rubble piles scattered around the castle in the context of quarrying for building material. The runic inscription on the South Tower is a rare and welcome discovery that records the name of Helgi, perhaps a worker on the original building phase, or more likely the tower's architect.

We now have a total of 40 Medieval potsherds from three trenches inside the castle. This material is dominated by Early Red glazed ware, Sw. *äldre rödgods*, dating to the period c. 1250–1350 (though it pre-dates AD 1200 by a little in Danish and North German towns). The few sherds of other wares also fit nicely in this interval. The pottery serves to bridge the gap between the kastal tower phase around 1200 at Stensö and the time of Lord Holmger's and Lady Sigrid's wedding in 1359. No Late Red ware has been found that could represent occupation after 1359, though.

Note that in the report for 2014 the single tiny potsherd found in Trench C is mistakenly assigned a Late Medieval or Early Modern date because it is partly glazed on the inside. Finds of many much larger sherds of identical ware in 2015 prove that we are dealing with pre-1350s Early Red ware which is glazed on the outside but can have areas of glaze spillage on the inside, including little round spots representing individual grains of glazing sand.

TECHNICAL AND ADMINISTRATIVE DATA

Administrativia

County council permit number: 431-5303-15 invested in the Östergötland County Museum.

Location

Östergötland, Östra Husby parish, Husby-Högstad 2:2, Raä Östra Husby 59

Coordinates of castle centre: N 58° 36.074, E 16° 42,600

Fieldwork

Time: 22 June to 3 July 2015: a total of nine full days' work with a team of 9–13 people, or 108 person-days all together.

Stripped surface: Three trenches totalling 30 sqm + 5 test pits of 1 sqm each.

Staff

Director: Martin Rundkvist

Fieldworkers: Ethan Aines, Sofia Andersson, Henrik Eriksson, Love Eriksson, Mats Eriksson, Natalie Göktas, Thorey Hrolfsdottir, Mari Karlsson, Terese Kuokkanen, Ola Lindgren, Daniel Smeds, Simon Terbrant Säfström

Post-excavation specialists

Osteology: Rudolf Gustavsson

Finds conservation: Acta Konservering

GIS, digital plans, and photogrammetry: Ethan Aines

Funding

Åke Wiberg Foundation, Royal Swedish Academy of Letters, King Gustavus VI Adolphus' Foundation for Swedish Culture, Magnus Bergvall Foundation

TRENCHES AND STRATIGRAPHIC CONTEXT DESCRIPTIONS

Trench D

Coordinates: centre of trench positioned with a hand-held GPS: N58° 36.076, E16° 42.617

Location: along inside of perimeter wall in the E

Dimensions: 5 by 2 m

Excavation units: ten metre squares numbered N 1, E 5, W 6, S 10

Orientation: 340–160°

Depth: 8–56 cm.

Trench D cut through a depression bordering the eastern perimeter wall. The depression was initially interpreted as a result in part of the adjacent bank of rubble from the wall, in part of what seemed to be a boggy depression in square 7. Several boulders and bedrock outcrops were visible above the turf. After deturfing (11 cm in thickness) the dark brown sandy layer L201 was uncovered, containing a large amount of brick fragments, presumably from the wall. L201 ranged from 18-56 cm in thickness and was deepest in square 4. It was completely absent in the western section at the lowest point of the depression. The layer contained a lot of snail shells.

Beneath L201 the black greasy layer L202 appeared. It was interpreted as a Medieval cultural layer and measured from 7-30 cm in thickness.

Most of squares 1 and 6 were obstructed by a large bedrock outcrop. It sloped slightly from the north to the south, descending steeply in squares 4 and 9 and creating a deep pocket in the bedrock at the SE end of the trench.

Throughout the whole trench a large amount of unburned bones were found in layer 202. Square 2 held a tanged knife blade and a nail. During the collection of a bulk sample from the section in square 7 a long iron rod reminiscent of a bent railway spike was found in layer 202. In squares 3 and 8 a whetstone made of pale yellowish slate was found in three pieces. Aside from these finds a large amount of other artefacts were found in layer 202, including a strike-a-light, a number of nails, a small flattened iron ring (possibly from mail armour), a well-preserved annular brooch and a few potsherds.

In layer 201 there were burnt and unburned animal bones and teeth of the same kind as in layer 202.

All of Trench D was excavated down to the bedrock and the soil was screened through 4 mm mesh, except for the top 10 cm of layer 201.

Description by Mats Eriksson, who directed work in Trench D from top to bottom.

Trench E

Coordinates: centre of trench positioned with a hand-held GPS, N58° 36.076, E16° 42.595

Location: along N wall of S tower

Dimensions: 3 x 1.5 m

Excavation units: two 1.5 by 1.5 m squares

Orientation: 80–260°

Depth: about a metre below the ground surface

Against the northern outer wall face of the South Tower was a c. 40 cm high turf-covered mound that looked like it might hide a stump of the perimeter wall's missing west reach. We laid out this trench encompassing the mound, orientated on a tangent with the curved tower wall.

The mound consisted of redeposited bricks and greystones (L301), similar to the much taller mounds touched by Trenches C and D. Many of the bricks in Trench E had been neatly stacked while still solid, and had then become cracked in situ by frost cycling so that few could

be lifted without collapsing into myriad flakes. In this layer only a few bone fragments were found.

The wall face uncovered behind the mound is identical to that seen all around the South Tower: fine greystone masonry with wide intentionally smudged mortar joints. And on one of these joints around modern ground level is a runic inscription made while the mortar was wet.

The pile of building stone had been stacked on L302, a layer of large greystones with many empty cavities among them and many bones, but hardly any trace of mortar. This layer was identical to the one encountered nearby in Trench B. It seems to represent raising and levelling of the bailey after the perimeter wall and North Tower were added to the castle. L302 was sieved though 4 mm mesh, yielding charcoal, a nail, a fairy stone and a small amount of wall plaster.

We were keen to see the wall base of the South Tower, but were kept from reaching it by an unexpected obstacle. About a metre under the ground surface in the NE trench corner, the stones in the trench were locked in place by a hard, flaky, laminated, beige substance that looked like stalagmite (L303). We believe that this substance is redeposited lime that has been leached out of the South Tower's thick walls over the centuries. We came upon it in Trench F inside the tower as well. Not wanting to attack the pseudo-stalagmite with power tools, we left it in place and backfilled the trench, taking care to leave the runic inscription accessible for inspection but protected from the elements. The lowest visible part of the wall was at a level of 17.19 m a.s.l.

Trench F

Coordinates: centre of S tower positioned with a hand-held GPS: N58° 36.072, E16° 42.595

Location: N half of S tower's inside

Dimensions: roughly semicircular, covering most of the tower floor's northern half and half of the floor in the stairwell, slightly less than 16 sqm

Excavation units: 23 more or less complete metre squares, see plan fig. 11, p. 31.

Depth: very uneven bedrock topography, trench depths varied from10 cm at the tower's centre to 120 cm by the wall.

Stratigraphical units

101: 1980s camp fire, on top of 102

102: post-collapse era turf accumulation, on top of 103, under 101

103: rubble, on top of 104, 105, 107; under 102

104: 'lived' surface of the tower, on top of 105, 106

105: bedrock, under all layers

106: a thin mortar layer inside the tower, same as calcium concretion (in squares 6, 7, 14, 20) variously both under and on top of 104, always on top of 105

107: a thin mortar floor inside the stairwell, under 103

108: wall core inside the stairwell, under layer 107

109: post-glacial clay, under layer 104 against the northern wall, above layer 105

The primary aims for Trench F were to seek additional small finds related to Medieval settlement on the site, to examine how the foundations of the South Tower were laid, to seek out foundation deposits that could provide a better date for the tower, and to learn more about the fire that damaged the castle later in its tenure, evidence of which was first uncovered in the 2014 field season.

We positioned the semi-circular trench in the northern half of the tower, drawing the back edge of the trench between the eastern and western vault footings in a 6.5 m line. The trench also included half the area at the bottom of the stairs inside the tower wall. All combined, Trench F encompassed an area of slightly less than 16 m^2 (fig. 11 on p. 31). It was the only excavation unit at Stensö in both 2014 and 2015 to have been positioned in a definitively indoors area of the castle during its defensible phase.

Every third bucket of spoil from Layers 101, 102 and 103 along with every bucket of spoil from Layers 104 and 106 were screened through 4 mm mesh.

After clearing the brush from inside the tower, we excavated from the central, northern radial line outward, initially opening the central 12 m^2 area (squares 4, 5, 11, 17, 18, 21, 22). We did so rather than lowering the entire area uniformly in order to observe multiple sections and to assess the depth of rubble inside the tower. When excavating in rubble, it is important to understand how deep it is early in the process, as strategies for the removal of large ashlars, which may block the excavation of crucial layers, become limited in the later stages of excavation. These strategies were further limited when excavating inside the tower, and all spoil had

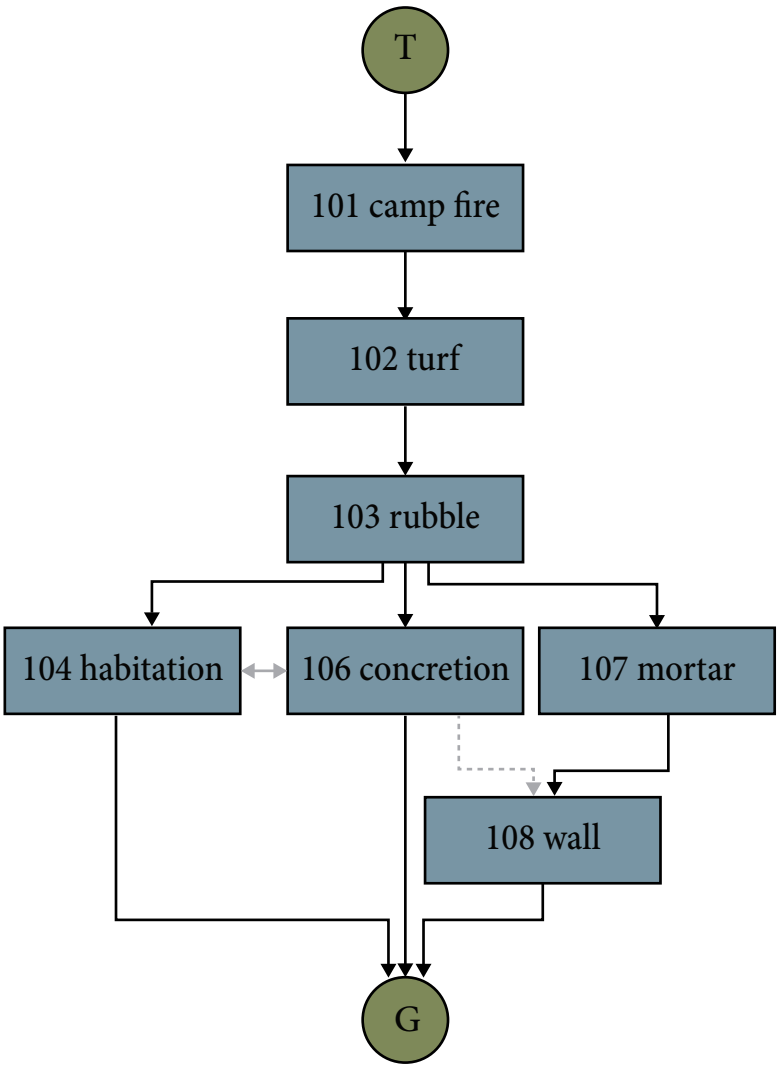


Figure 2: Harris Matrix of the stratigraphic sequence in Trench F.

to be heaped on the southern, unexcavated half of the tower floor. At the end of excavations, all spoil was backfilled into the trench.

Early in the excavation, we found extensive remains of activities that had taken place in the 20th and 21st centuries, from at least the 1940s until the 2010s. This included Layer 101, a large, stone-ringed fire pit, located at the centre of the tower floor, that had been in use sporadically since at least the 1980s as evidenced by a coin and numerous aluminium cans and pop tops from the period mixed in with the ash. Metal detecting—which was carried out throughout the project after approximately every excavation of 10 cm of soil—in the contexts including and surrounding the fire (Layer 102, the turf) uncovered nails from boards burned in the fire, bottle caps, and tin and aluminium cans at depths of up to 25 cm. The remnants of clay pigeons from skeet shooting were also found throughout Layers 101 and 102. We also found the melted remains of several glass bottles in the fire pit.

Furthermore, in the context beneath the turf (Layer 103, the rubble ubiquitous at Stensö), we found caches of used batteries buried along the wall at depths of up to 40 cm. These finds were identified by amateur metal detectorists familiar with 20th century refuse as 1940s era magnesium batteries. More than 80 of these were found in Trench F, and several others were found in 2014 in Trench C. We hypothesize that Stensö, providing rudimentary shelter, was used periodically during the Second World War in much the same way it had been used in the Middle Ages: as a defensive installation to watch Bråviken for hostile water craft.

Layer 103, the rubble, was far from homogeneous, though because it was blended gradiently,

it was not possible to define sub-layers within it. In general, the rubble was composed of fallen vaulting slabs, identifiable by uniform thickness and trapezoidal or diamond shape, brick and brick fragments, ashlars, and wall core. Within the first 30 cm of Layer 103, we found 29 large carpentry nails probably from the castle's wooden superstructure, patches of black burn including large pieces of charcoal, and vitrified brick. Beneath this, the rubble mainly consisted of stone, and evidence of burning decreased at greater depths. This seems to indicate that the upper wood and brick levels of the tower burned and only fell down onto the floor of the tower after the collapse of the stone vaulting. This collapse may have taken place significantly later than the fire. As evidence from Trench E indicates, there was a sustained period of quarrying and or looting following the disarmament of Stensö Castle.

Finds from Layer 103 include 743 g of faunal remains, seven fragments of Red ware pottery, several iron and copper alloy small finds, and eleven fragments of thin, 'oily' glass possibly pre-dating the 19th century. The metal small finds includes two crossbow bolts, a projectile point similar to one found in Trench D, and a copper-alloy lid. It is believed these finds all came from the upper floors of the castle.

Layer 104, beneath the rubble, was a dark grey layer, composed of very fine silt. It contained 148% more bone by weight (166% more bone by number of individual elements) than did Layer 103. It was consistent with a 'living' or 'lived' surface. The finds in Layer 104 also displayed a clear bias in spatial patterning with the preponderance of all finds made in the squares directly adjacent to the door leading into the tower from the stairs. These include 19 fragments of Red ware pottery, most of which seem to have some from one jug. Figures 22 and 23 on p. 38 and 39 illustrate the distribution of bone and pottery inside the tower in Layers 103 and 104.

Although we were concerned that looting in the later phases of the castle had disturbed the lived floor inside the tower, the presence of articulating potsherds seem to indicate that the layer was relatively undisturbed. Rudolf Gustavsson notes much the same occurrence in the osteological report, writing that several faunal elements, particularly distal forelimbs, also articulate. The patterning observed in Layer 104 may therefore be interpreted as refuse being swept over the threshold of the door or as refuse accumulating in the shadow of some type of platform (but see more below). Indeed, substantial piling of Layer 104 was observed in the squares directly adjacent to the door. Although Layer 104 was fairly thin and uniform throughout much of Trench F, in squares 9, 10, 15 and 16 it could be quite thick, approaching 25 cm in part of square 9.

In some places, but not all, Layer 104 was overlain by layer 106, a thin mortar layer. However, in the stairwell at the foot of the stairs a similar yet clearly intentional mortar floor was uncovered (fig. 18 on p. 35). Beneath this mortar floor in the stairwell lay simple wall core (Layer 108). Layers 103, 104, and 106 variously lay on top of Layer 105, the bedrock.

In squares 7 and 8, at the east edge of the tower near the largest embrasure, a thick, solidified calcium-rich layer was uncovered at the bottom of Layer 103. Consistent with the stalagmite layer in Trench E, this seems to have been formed by the action of colloidal calcium solution flowing through the rubble. Originally from the mortar of the thick tower wall, the calcium would have been suspended in rainwater filtering down through the collapsed material. The copper-alloy lid (Find 123) was found encased in the top of the concretion layer in square 7. Because the stalagmite deposition had formed a concrete impenetrable even by pickaxe, excavation was halted in squares 14 and 26, directly below the eastern embrasure.

Throughout the excavation, no evidence of postholes, joist holes or hangers in the masonry were found, supporting the conclusion that during the lifetime of the castle, the floor inside the tower was left unfinished rather than covered by any kind of wooden platform. This would have made for a higher ceiling on the ground floor of the tower particularly directly under the vault ribs by maximizing the volume of the space. But it is unclear how the embrasures and the doorway to the tower were accessed. We assume that there may have been simple steps or planks inside the tower and leading to the door sill—99 cm above the bedrock—and the eastern embrasure —more than 120 cm above the bedrock—though no positive evidence was uncovered. It is also important to emphasize that during the long post-defensible period of looting and quarrying at the castle, flimsier structures utilizing iron or masonry components within the tower's ground floor may have been entirely removed before the vaulting collapsed.

The tower room also perplexed us in that although it might have been expected to function as the innermost keep, or donjon, of the castle, its door bolted from the outside in the stairwell (fig. 20 on p. 36). This feature indicates it had been designed with the intention to bar the door from the outside and thus cannot really be considered defensive in nature; the only way onto to the ground floor was through that door. We can see two possibilities in this configuration: that the room may have been used to hold livestock during certain times of the year, or alternatively that it may have been used as a dungeon or prison cell. Although the latter would be somewhat unusual for a private residence, such features are common in contemporary large royal and ecclesiastical castles in Sweden—most infamously, at the nearby Nyköping castle where the Banquet of Nyköping ended in 1318. However, neither of these conjectures seems entirely reasonable—such bolting of the door would doubtless keep both prisoners and livestock secure in the room, but almost excessively so.

Addressing one of the primary aims of Trench F, it was possible to observe the foundations of the tower touching the bedrock along the north-western side of the tower near the door. The foundation stones had been very precisely cut to the match the contour of the bedrock and were laid in place with mortar. Interestingly, the tower had been placed on very uneven ground (see fig. 21 on p. 37, showing a cross section of the bedrock), sloping sharply downward from south to north. Along the extreme northern wall, the foundations were set on the bedrock in post-glacial clay (Layer 109). The challenging terrain inside the walls of the castle

illustrates the extent of the masons' skill building on the highest available ground without regard to its underlying topography. Unfortunately for us, this construction method meant that no foundation deposits were left, and we still cannot conclusively date the foundation of the South Tower.

Taken all together, Trench F provided fascinating insights, by both direct observation and comparison, to the differentiation of space at Stensö both during and after its defensible phase. Of particular interest is the osteological assemblage, as detailed in Gustavsson's report (p. 58). There are clear differences between the remains uncovered in the tower and those uncovered in the other trenches at Stensö, particularly Trench D, thought to represent a midden. Furthermore, both environmental and mortar samples were taken from different levels and layers of the tower, enabling a more comprehensive analysis at a later date. Despite the lack of foundation deposits or coins—which have been curiously absent at excavations in Stensö thus far—the excavation of Trench F proved successful.

Description by Ethan Aines, who directed work in Trench F from top to bottom.

Test pits G1-G5

Coordinates (positioned with a hand-held GPS severely hampered by foliage cover):

G1 - N58° 36.051, E16° 42.662

G2 - N58° 36.050, E16° 42.655

G3 - N58° 36.051, E16° 42.646

G4 - N58° 36.050, E16° 42.638

G5 - N58° 36.054, E16° 42.647

Location: on slightly sloping ground at the east foot of the castle hill, G1 at the lip of a steeper slope to the seashore.

Dimensions: 1 sqm each

Max depth: 25–38 cm to the natural

G1-4 were all on a 50-230° line laid out with a tape measure. Measuring from the NE and centre to centre, it was G1 at 7 m from G2, G3 at 7 m from G3, and G4 at 10 from G3 (because of a tree). G5 was 7 m NW of G3. All five were screened though 4 mm mesh.

G1 had 10 cm of greyish brown soil up top with brick flakes, mortar lumps, charcoal frag-

ments and a cow tooth. Then greyer and clayier with less culture indicators. Natural grey, gravelly, clayey. Max depth 37 cm.

G2 had 20 cm of black loam with brick flakes, mortar lumps, charcoal fragments and two pig bones. Then similar soil but no bones. Same natural. Max depth 38 cm.

G3 had 10 cm of findless loam, then 10 cm stones with a little charcoal and brick lumps. Natural greyish lightbrown clay. Max depth 31 cm.

G4 had 5 cm loam with two china bottle stoppers, then 15 cm loam with brick flakes, a piece of charcoal and stones. Natural rubbery greyish brown clay with stones. Max depth 25 cm.

G5 had little flakes of blue-on-white glazed china in the turf. Then 20 cm of clayey loam with brick flakes and stones. Natural greyish brown clay. Max depth 38 cm.

PHOTOGRAPHS AND ILLUSTRATIONS

Figure 3: Overview of Trench D from the north.

Figure 4: Overview of Trench D from the south

Figure 5: Stacked bricks in Trench E

Figure 6: Building materials removed from Trench E.

Figure 7: Overview of Trench E from the east.

Figure 8: Close-up of runic inscription found in Trench E.

Figure 9: Overview of Trench E from the north.

Figure 10: Natalie Göktas standing beside the runic inscription (framed in white) in Trench E.

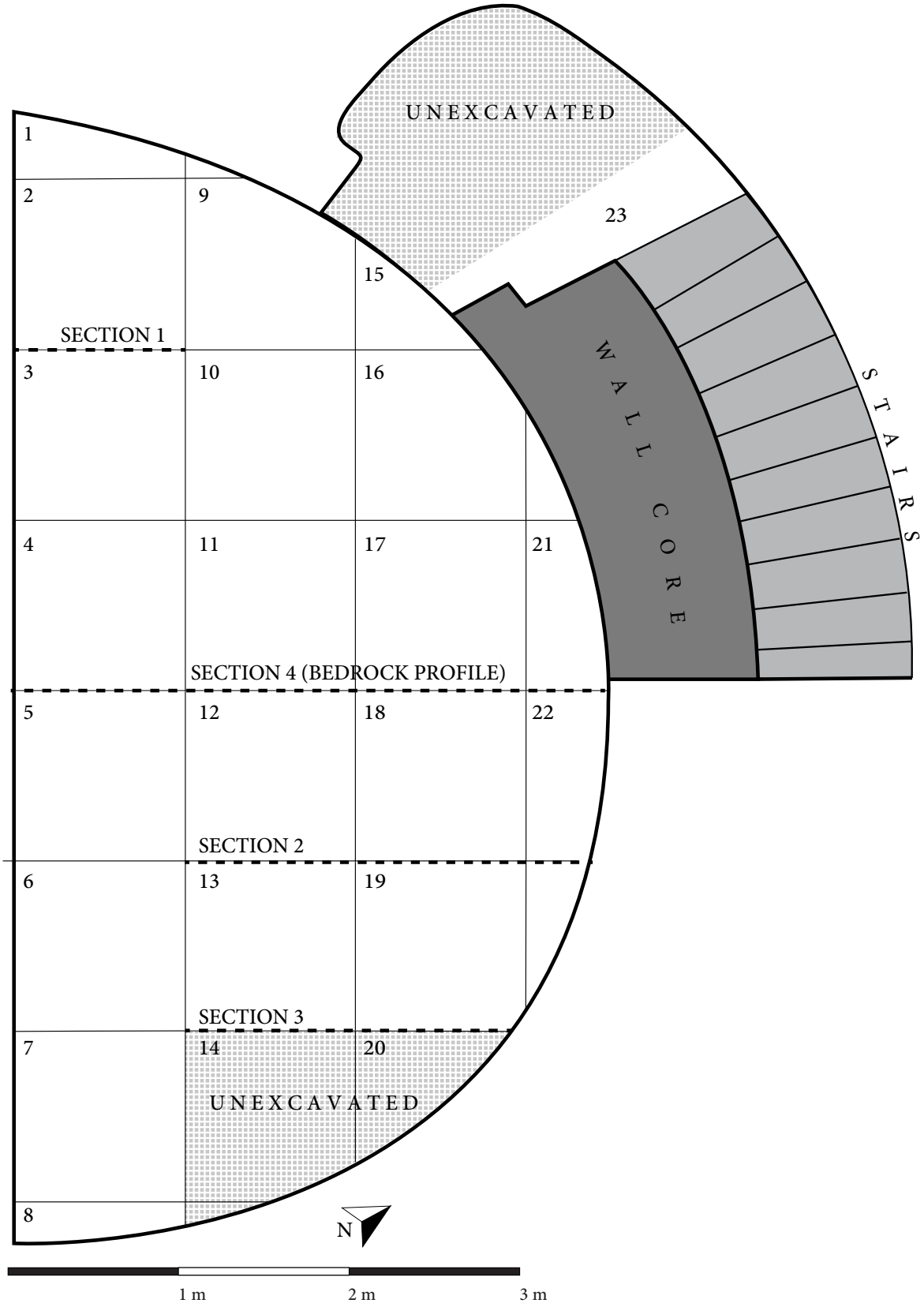


Figure 11: Plan of Trench F in the South Tower with excavation unit numbers and sections.

Figure 12: Overview of Trench F illustrating rubble pattern from collapse of vaulting and upper floors/walls.

Figure 13: Closeup of rubble, including an intact brick, from collapse in Trench F.

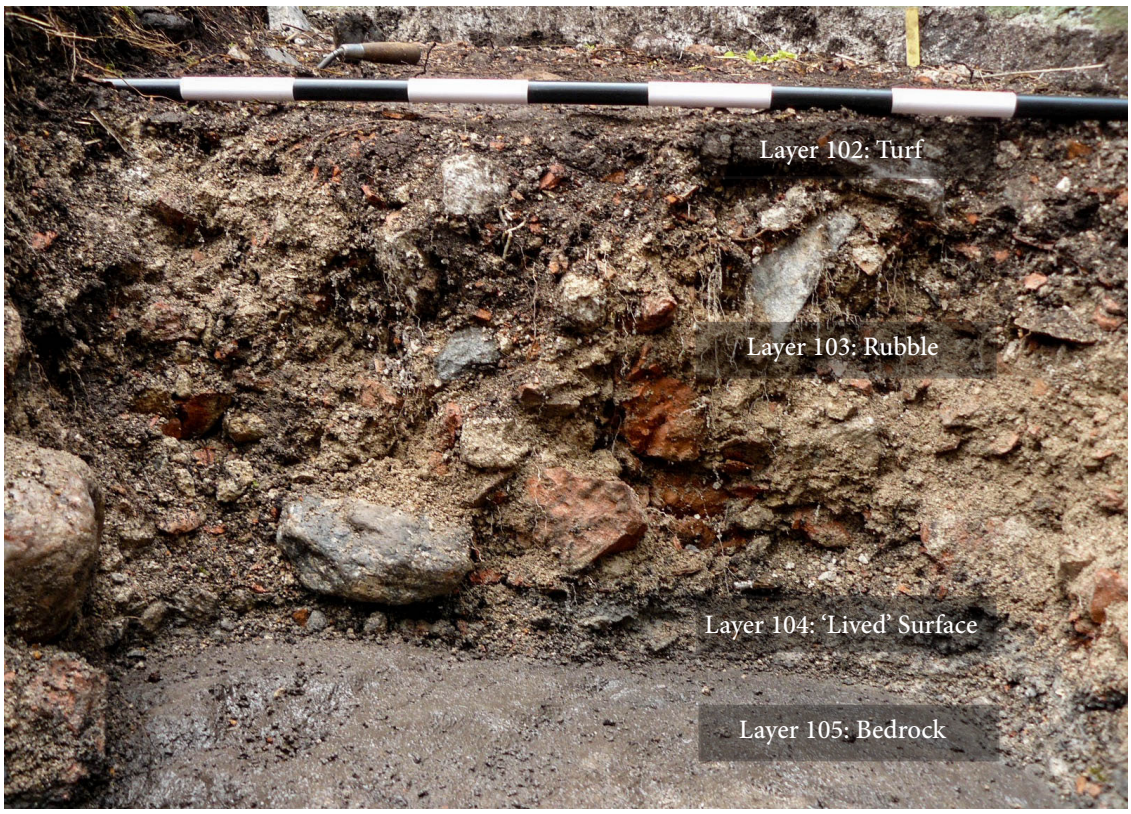


Figure 14: Section 1, Trench F, with visible layers labeled for clarity.

Figure 15: Section 2. Note the trapezoidal-cut stones from the collapse of the vaulting to the left.

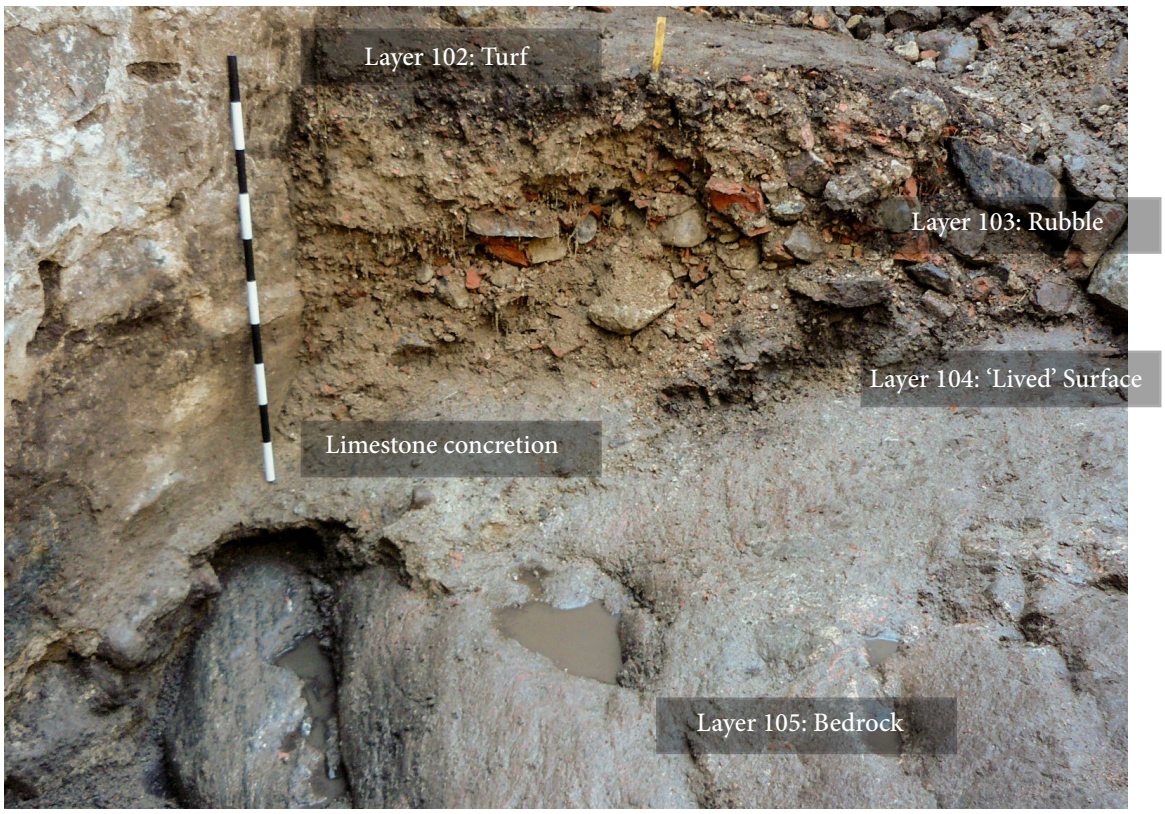


Figure 16: Section 3.

Figure 17: Detail of wooden beam preserved in concretion, Trench F.

Figure 18: Mortar flooring in stairwell, Trench F.

Figure 19: Detail of area beneath door frame in Trench F. The preponderance of all finds from Trench F were found in this area. Note the distance between bedrock and threshold.

Figure 20: Detail of the stairs and the bolt hole on the outside of the door in the South Tower (Trench F).

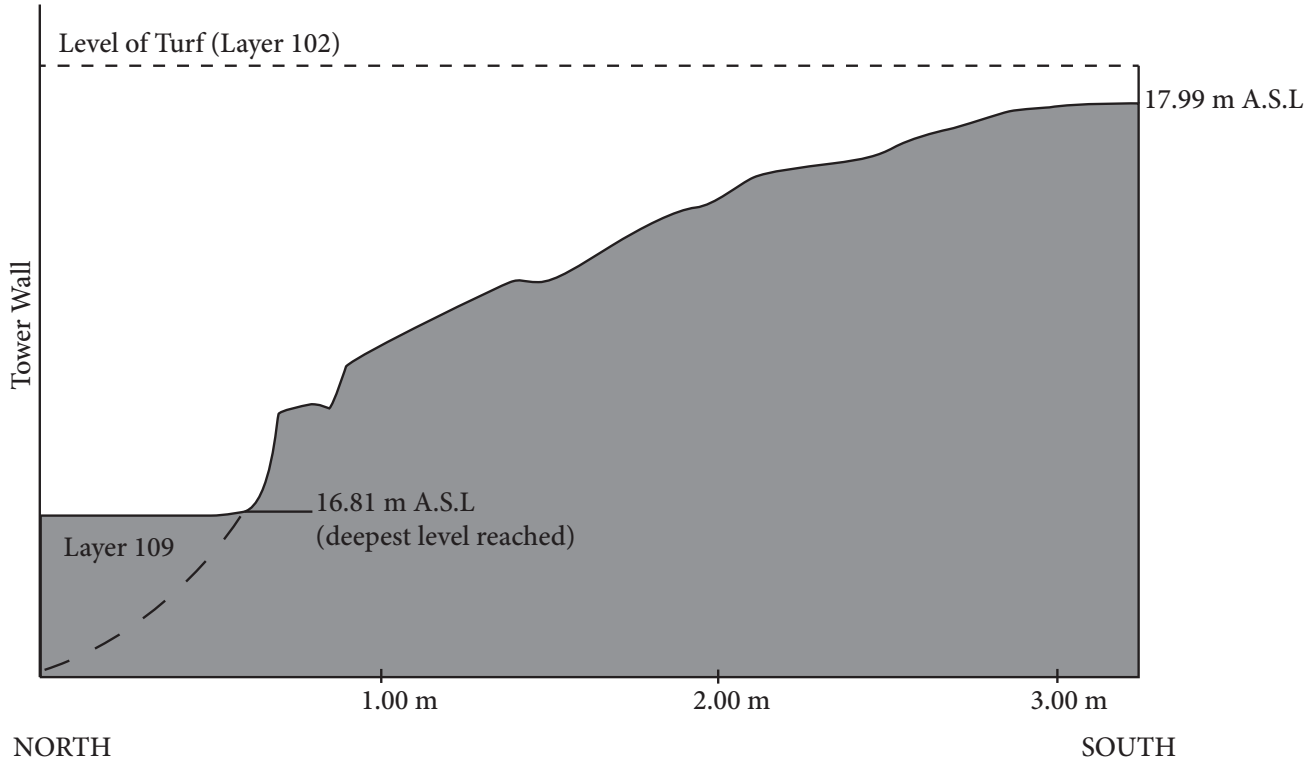


Figure 21: Section 4 in Trench F showing the profile of the bedrock in the South Tower. Note the dotted line is speculative, as 16.81 m A.S.L. was the deepest level reached.

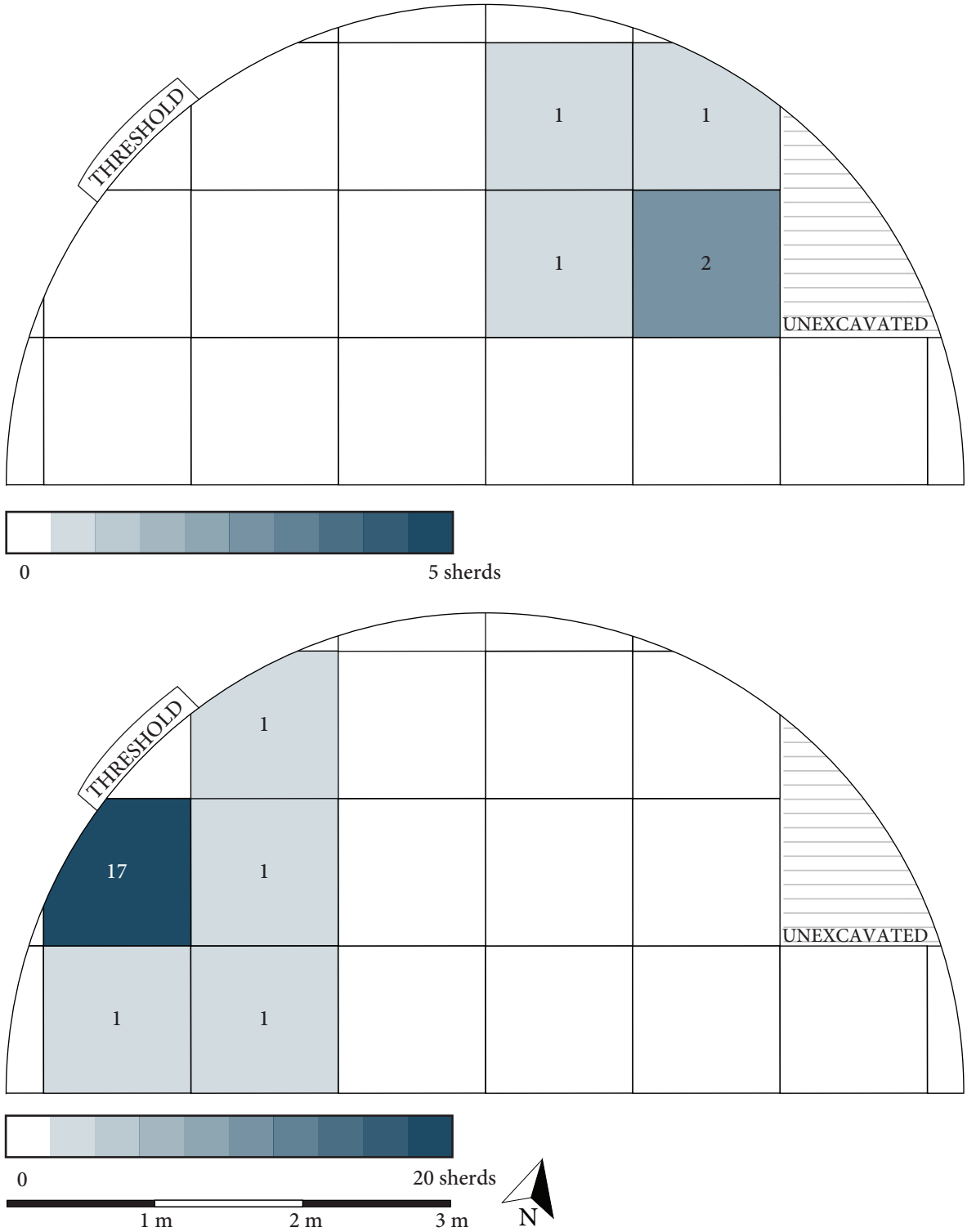


Figure 22: Diagram of Trench F showing the densities of potsherds per excavation unit in Layers 103 (top) and 104 (bottom).

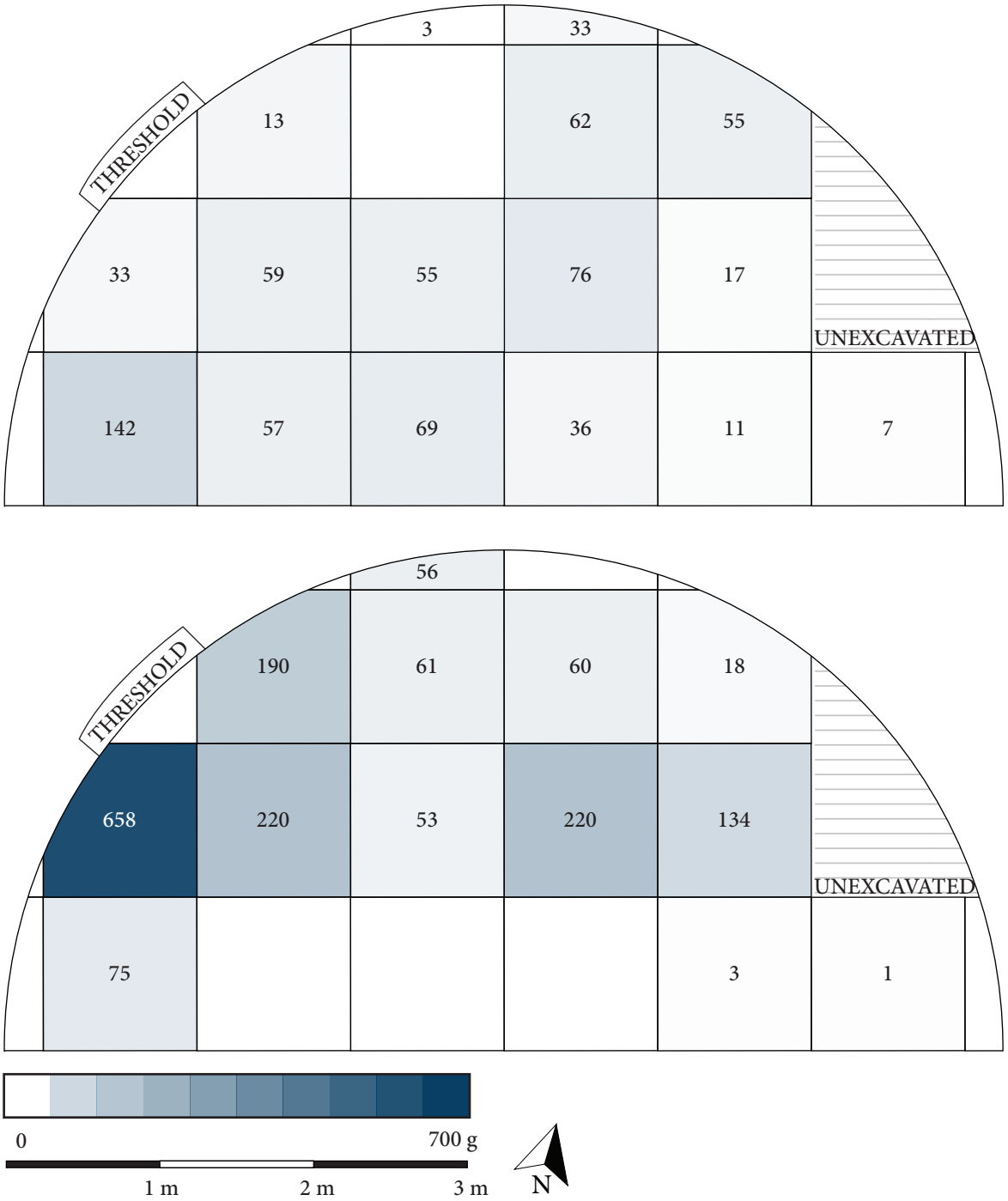


Figure 23: Diagram of Trench F showing the densities of animal bone (g) per excavation unit in Layers 103 (top) and 104 (bottom).

F146

Figure 24: Find 146. A slate whetstone from Trench D.

F237

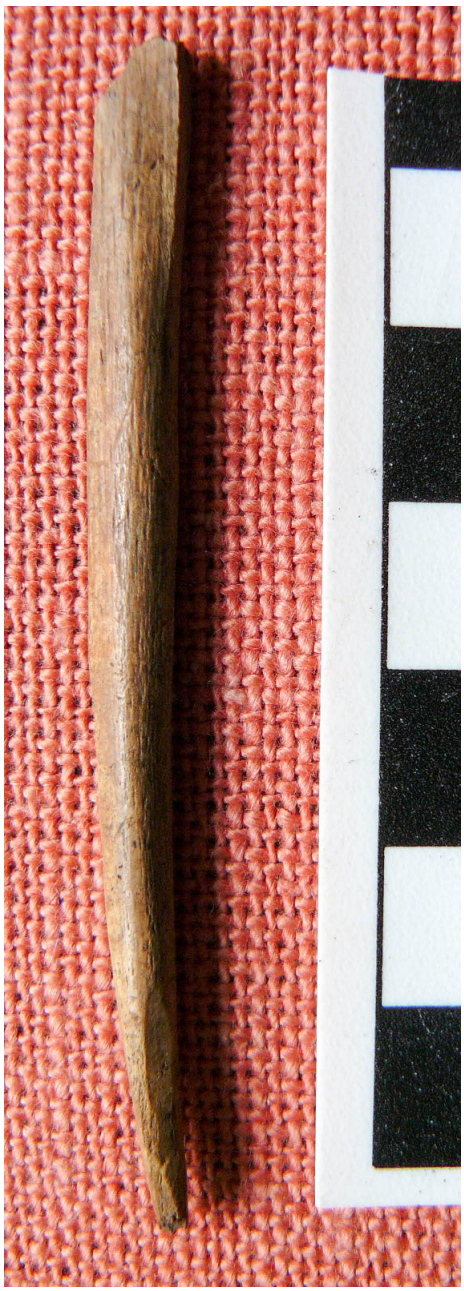


Figure 25: Find 237. A bone pin from Trench D.

Figure 26: Find 124. A small, beaded silver annular brooch from Trench D, post conservation. Photography by Carola Blom, Acta Konservering.

F112

Figure 27: Find 112. An iron knife from Trench D, x-ray before conservation (left), and post conservation (right). Photography by Carola Blom, Acta Konservering.

F 105

Figure 28: Find 105. An iron projectile point from Trench D, post conservation. Photography by Carola Blom, Acta Konservering.

F120

Figure 29 (left): Find 120. An iron projectile point from Trench F, post conservation. Photography by Carola Blom, Acta Konservering.

F119, F120, F121

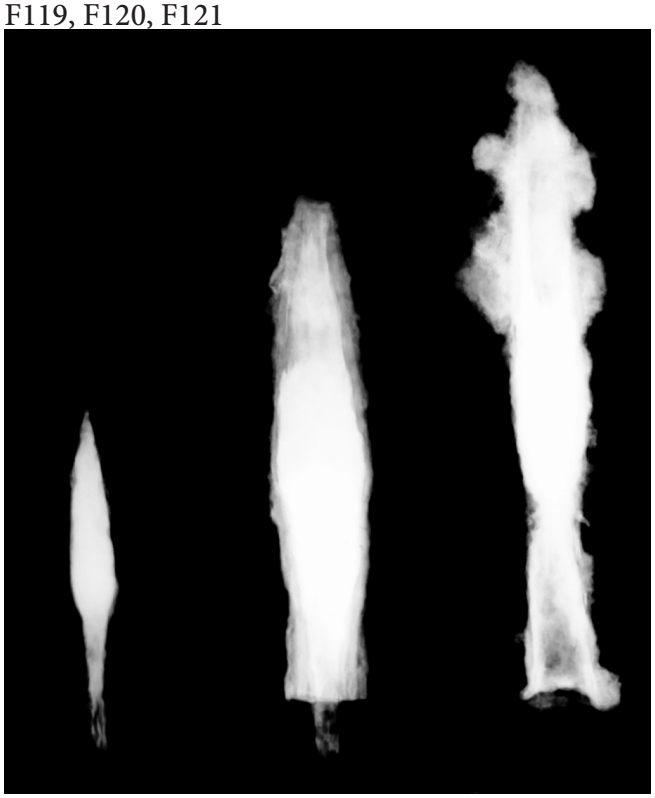


Figure 30 (right): X-ray of Finds 119, 120, and 121, an iron projectile point and two crossbow bolts from Trench F. Photography by Carola Blom, Acta Konservering.

Figure 31: Ola Lindgren holding Find 123, a copper-alloy lid from Trench F, shortly after detecting and excavating it from within the limestone concretion (L106).

F107

Figure 32: Find 107. An iron strike-a-light from Trench D, post conservation (left) and in x-ray (right). Photography by Carola Blom, Acta Konservering.

F234

Figure 33: Find 234. Two links of iron chain from Trench F, post conservation. Photography by Carola Blom, Acta Konservering.

F127

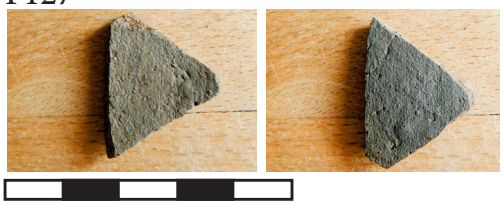


Figure 34: Find 127. A sherd of Grey unglazed ware ceramic found in Trench D. Reverse view (left), and obverse view (right).

F128

Figure 35 (above): Find 128. A sherd of Early Red glazed ware and four sherds of grey unglazed ware ceramic found in Trench D. Reverse view (left), and obverse view (right).

F129

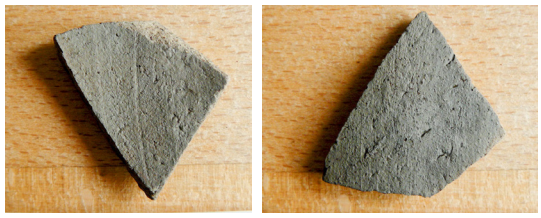


Figure 36: Find 129. A sherd of grey unglazed ware ceramic found in Trench D. Reverse view (left), and obverse view (right).

F130

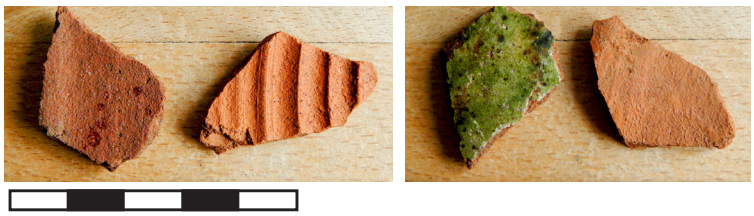


Figure 37: Find 130. One sherd of Green Early Red glazed ware and one sherd of red unglazed ware ceramic found in Trench D. Reverse view (left), and obverse view (right).

F235

Figure 38: Find 235. A sherd of Early Red glazed ware ceramic found in Trench D. Reverse view (left), and obverse view (right).

F131

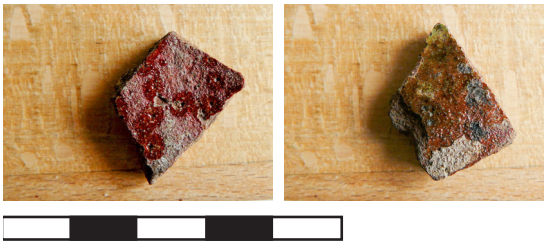


Figure 39: Find 131. A sherd of Early Red glazed ware ceramic found in Trench F. Reverse view (left), and obverse view (right).

F132

Figure 40: Find 132. A sherd of Green Early Red glazed ware ceramic found in Trench F. Reverse view (left), and obverse view (right).

F133

Figure 41: Find 133. Three sherds of Early Red ware ceramic found in Trench F. Reverse view (left), and Obverse view (right).

F134

Figure 42: Find 134. One sherd of Early Red glazed ware and one sherd of Green Early glazed ware ceramic found in Trench F. Reverse view (left), and obverse view (right).

F135

Figure 43: Find 135. A sherd of Early Red ware ceramic found in Trench F. Reverse view (left), and obverse view (right).

F136

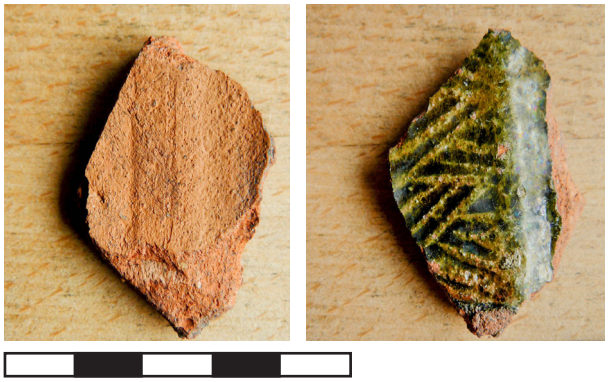


Figure 44: Find 136. A sherd of Green Early Red glazed ware ceramic found in Trench F. Reverse view (left), and obverse view (right).

F137

Figure 45: Find 137. A sherd of Early Red ware ceramic found in Trench F. Reverse view (left), and obverse view (right).

F140

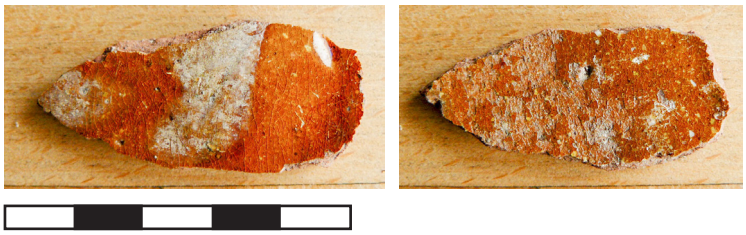


Figure 46: Find 140. A sherd of Early Red glazed ware ceramic found in Trench F. Obverse view (left), and reverse view (right).

Figure 47: Find 138. Fourteen sherds of Early Red glazed ware and Early Green Red glazed ware ceramic from Trench F. Note the articulation and carbon accumulation on the interior. Reverse view.

Figure 48: Find 138. Fourteen sherds of Early Red ware ceramic from Trench F. Note the articulation and carbon accumulation on the interior. Reverse view.

F138

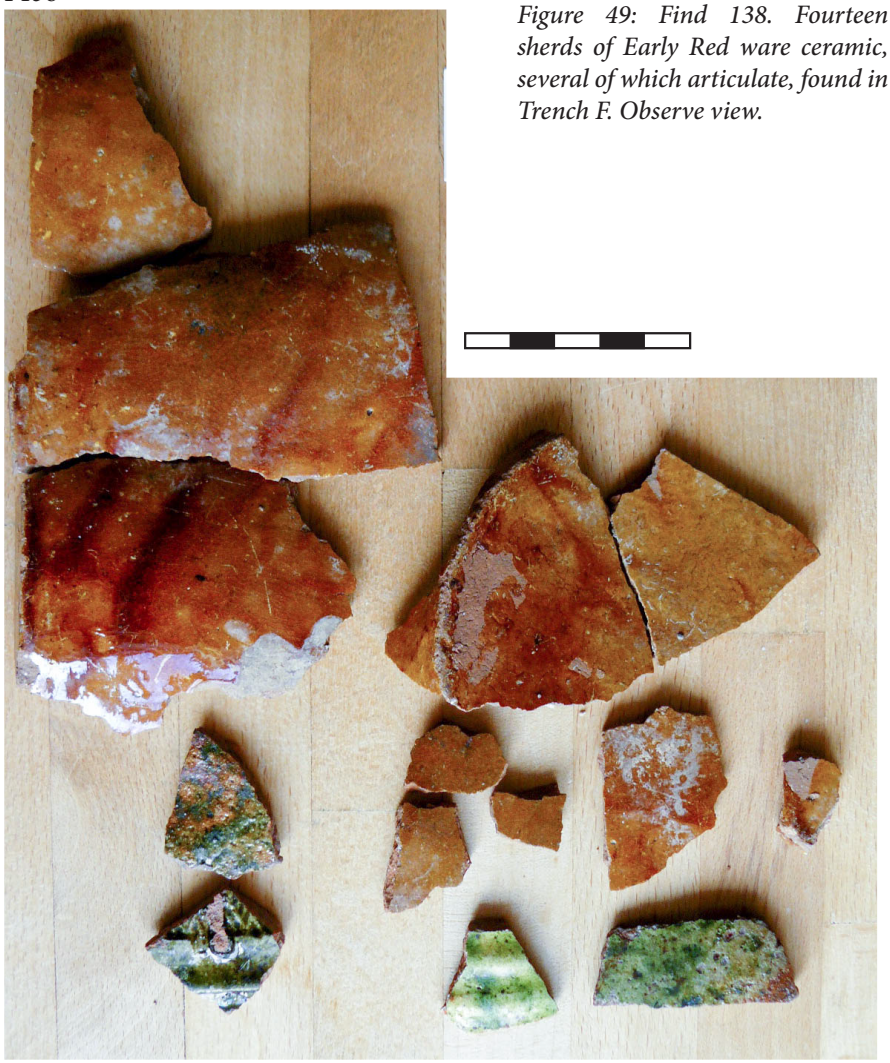


Figure 49: Find 138. Fourteen sherds of Early Red ware ceramic, several of which articulate, found in Trench F. Observe view.

F139

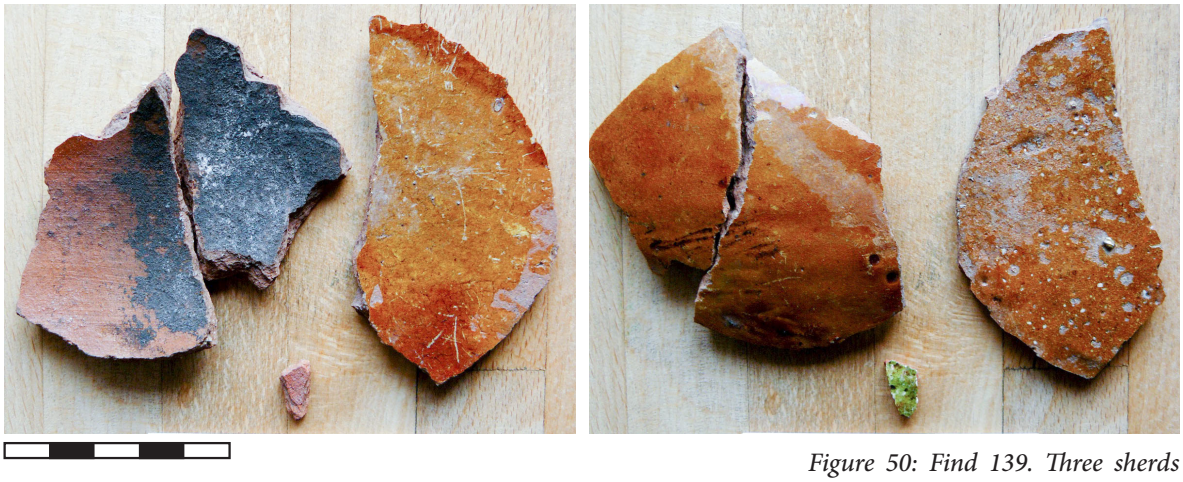


Figure 50: Find 139. Three sherds of Early Red ware ceramic from Trench F. Note the articulation and carbon accumulation on the interior. Reverse view (left) and obverse view (right).

FINDS LIST

Find no	Trench	Context	Depth	Square	Material	Type / spec	Weight g	Frags
101	D	202		8	Fe	Nail	23	1
102	F	103		?	Fe	Nail	345	29
103	F	103		?	Fe	?	20	2
104	D	202		10	Fe	Nail	10	2
105	D	202		7	Fe	Nail + point	190	5
106	D	202		6	Fe	Nail	30	3
107	D	202		2	Fe	Strike-a-light	51	1
108	D	202		5	Fe	Nail	21	2
109	D	202		4	Fe	Nail	9	2
110	D	202		5	Fe	Ring	2	2
111	D	202		3	Fe	Staple	19	1
112	D	202		2	Fe	Knife	40	1
113	D	202		2	Fe	Nail	41	1
114	D	202		1	Fe	Rod	83	1
115	E	302	35	W	Fe	Nail	22	1
116	F	104		9	Fe	Nail	10	1
117	F	104		10	Fe	Nail	9	1
118	F	103		22	Fe	Nail	9	1
119	F	103		5	Fe	Crbow bolt	37	1
120	F	103		17	Fe	Point	8	1
121	F	103		5	Fe	Crbow bolt	55	1
122	F	103		11	Fe	?	11	1
123	F	106		7	Cu	Lid	211	1
124	D	202		8	Cu	Brooch	5	1
125	D	202		10	Cu	Sheet	4	2
126	D	202		9	Cu	Sheet	14	1
127	D	202		3	Pot	Grey	2	1
128	D	202		7	Pot	Grey + Early Red	16	5
129	D	202		8	Pot	Grey	5	1
130	D	202		10	Pot	Unglazed Red + Green Early Red	6	2
131	F	103		4	Pot	Early Red	3	1
132	F	103		12	Pot	Early Red	4	1
133	F	103		13	Pot	Early Red	15	3
134	F	103		18	Pot	Early Red + Green Early Red	9	2
135	F	103		19	Pot	Early Red	3	1

Find no	Trench	Context	Depth	Square	Material	Type / spec	Weight g	Frags
136	F	104		2	Pot	Green Early Red	7	1
137	F	104		3	Pot	Unclass	1	1
138	F	104		9	Pot	Early Red + Green Early Red	192	14
139	F	104		10	Pot	Early Red + Green Early Red	75	4
140	F	104		16	Pot	Early Red + Green Early Red	8	1
141	G4				China	Bottle plug	45	2
142	G5				China		6	7
143	F	103		2	Glass		1	4
144	F	103		4	Glass		1	1
145	F	103		?	Glass		7	6
146	D	202		3	Slate	Whetstone	106	3
147	E	302	35	W	Fairy stone		20	1
148	F	104		3	Fairy stone		17	3
149	D	202		8	Bone		137	
150	D	202		5	Bone		685	
151	D	202		10	Bone		955	
152	D	202		9	Bone		876	
153	D	201		8	Bone		189	
154	D	201		7	Bone		12	
155	D	201		9	Bone		179	
156	D	202		7	Bone		173	
157	D	201		5	Bone		8	
158	D	201		1	Bone		240	
159	D	201		4	Bone		99	
160	D	202		4	Bone		1815	
161	D	202		1	Bone		150	
162	D	202		2	Bone		105	
163	D	202		3	Bone		21	
164	D	202		6	Bone		21	
165	D	201		2	Bone		12	
166	D	202		?	Bone		19	
167	F	103		3	Bone		57	
168	F	104		21	Bone		56	
169	F	104		17	Bone		61	

FINDS LIST

Find no	Trench	Context	Depth	Square	Material	Type / spec	Weight g	Frags
170	F	104		19	Bone		18	
171	F	104		2	Bone		75	
172	F	104		10	Bone		220	
173	F	104		7	Bone		1	
174	F	104		6	Bone		3	
175	F	104		11	Bone		53	
176	F	104		13	Bone		134	
177	F	104		18	Bone		60	
178	F	104		12	Bone		220	
179	F	104		16	Bone		190	
180	F	103		12	Bone		76	
181	F	103		16	Bone		13	
182	F	103		15	Bone		18	
183	F	103		13	Bone		17	
184	F	103		18	Bone		62	
185	F	103		22	Bone		33	
186	F	103		19	Bone		55	
187	F	103		21	Bone		3	
188	F	103		11	Bone		55	
189	F	104		9	Bone		658	
190	F	103		4	Bone		69	
191	F	103		2	Bone		142	
192	F	103		5	Bone		36	
193	F	103		6	Bone		11	
194	F	103		9	Bone		33	
195	F	103		7	Bone		7	
196	F	103		10	Bone		59	
197	F	106		7	Bone		2	
198	F	106		4	Bone		9	
199	E	302	50	W	Charcoal		7	
200	D	202		10	Charcoal		2	
201	E	302	75	W	Charcoal		3	
202	D	202		9	Charcoal		5	
203	D	202		5	Charcoal		18	
204	D	202		10	Charcoal		12	
205	D	202		5	Charcoal		3	
206	D	202		7	Charcoal		4	
207	D	202		9	Charcoal		8	
208	D	202		8	Charcoal		3	
209	D	201		7	Charcoal		4	
210	D	202		6	Charcoal		9	
211	D	202		9	Charcoal		2	

Find no	Trench	Context	Depth	Square	Material	Type / spec	Weight g	Frags
212	G4				Charcoal		2	
213	G5				Charcoal		1	
214	F	103		14	Plaster		26	
215	E	302	65	?	Plaster		11	
216	F	103		16	Stalagmite		33	
217	F	104		?	Plaster + brick		11	
218	F	106		7	Stalagmite + wood		123	
219	F				Mortar	Below door	111	
220	F				Soil	Under L103, section 3		
221	F	106		7	Stalagmite	Under copper lid		
222	F	107			Mortar	Staircase 1		
223	F	104			Soil	Under in situ rock by door		
224	F	104		?	Soil			
225	D	201		2	Soil			
226	D	202		7	Soil	From section		
227	E	302	65	W	Soil			
228	G1				Bone		18	
229	G2				Bone		24	
230	E	302	65	?	Bone		3	
231	E	302	50	E	Bone		45	
232	E	301	25	E	Bone		5	
233	E	302	50	W	Bone		113	
234	F	104		9	Fe	Chain	80	1
235	D	202		9	Pot	Early Red	3	1
236	D	202		4	Flint		5	1
237	D	202		10	Bone	Pin	1	1
238	D	202		9	Fe	Nail		1
239	D	201		2	Flint		1	1
240	D	202		4	Fe	Mount	3	1

Osteologisk analys

Benmaterial från 2015 års arkeologiska undersökning vid Stensö borg i Östra husby socken, Östergötland.

SAU rapport 2016:5 O

Rudolf Gustavsson

SOCIETAS
ARCHAEOLOGICA
UPSALIENSIS

Benmaterial från 2015 års arkeologiska undersökning vid Stensö borg i Östra husby socken, Östergötland.

Rudolf Gustavsson
SAU (Societas Archaeologica Upsaliensis)
rudolf.gustavsson@sau.se

Inledning

Materialet i denna analys kommer från en mindre forskningsundersökning vid Stensö borg i Östra husby socken, Östergötland, som företogs sommaren 2015 under ledning av Martin Rundkvist. Undersökningen 2015 är en fortsättning av 2014 års mera prospekterande undersökning vid Stensö borg. Analysen är gjord på uppdrag av Martin Rundkvist.

Metod

Benmaterialet har så långt som möjligt identifierats till art, då detta inte varit möjligt har grupperingar av arter använts. Exempel på detta är stort/litet klövdjur, hunddjur eller liten andfågel. I denna analys har inga människoben noterats, och gruppen däggdjur omfattar inte människa. För identifieringen har referenssamlingen vid SAU använts.

De enskilda elementen har delats in i registreringszoner för att underlätta kvantifiering till MNE (*minimum number of elements*) och därifrån härledda enheter. Beskrivning av zonerna är bilagda benkatalogen. Som exempel har de långa rörbenen delats in i 5 delar där 1 och 5 är själva epifyserna och 2-4 diafysen. I de jämförande sammanställningarna används dock endast fragmentantal och vikt och MNE används som en del av sammanställningen av åldersdata genom epifysfusionering.

De fragment som väger mindre än 0,1 gram har tilldelats vikten 0,1 g. Fragment med passform i nya brottytor har registrerats som ett.

De enskilda fragmentens förbränningsgrad har registrerats med en fyrgradig skala:

0 – obränt
1 – eldpåverkat till helt svartbränt
2 – svartbränt med vitbrända partier
3 – vitbränt

Gnagspår och styckningsspår har registrerats som närvarande eller inte närvarande. Gnagspåren har separerats i grupperna carnivora/omnivora-typ och gnagartyp, C respektive R. I praktiken innebär detta hund/svin-gnag respektive råttgnag. Styckningsmärken har registrerats efter vilken typ av redskap som använts, tunna ytliga spår och linjer som K – kniv, och djupa eller kapande som Y – yxa eller klyvare. Inga märken av delning med såg har noterats.

Åldersbedömning har gjorts både enligt epifysfusionering och tandslitage. Epifysfusioneringen har ålderskorrelerats med data från Silver (1969), Moran & O'Connor (1994) och Zedar m.fl. (2015) och tandslitaget har registrerats enligt Grant (1982) och ålderskorrelerats mot data sammanställt av Payne (1985), Vretemark (1997: 85, 89, 95), Davis (1996, 2000), Gustavsson (2003) och Lemoine m.fl. (2014).

Könsindikerande kriterium har registrerats men inte kvantifierats och analyserats på grund av den ringa mängden. Meterisk könsbedömning har gjorts på bäckenbenet av slidhornsdjur enligt måttet MRDA (Davis 1996:596ff, Vretemark 1997:43ff). På grund av materialets fragmenteringsgrad har morfologiska könsbedömningar på bäckenen inte kunnat göras. Hörntänderna hos svin är dock inte lika känsliga för fragmentering och även om tanden saknas i käken kan form och storlek på alveolen för densamma användas som grund för könsbedömning (Schmid 1972).

Övriga mått har tagits enligt definitionerna av von den Driesch (1976).

Materialet

2015 års undersökning tog fram 6103,9 gram ben fördelat på 1910 enskilda fragment, vilket ger fragmenteringsgraden 3,19 gram per fragment. Samtliga ben är obrända och kommer från fyra olika klasser; däggdjur, fågel, fisk och groddjur, där däggdjuren är helt dominerande och groddjuren troligtvis är individer som avlidit under övervintring i borgens sten- och jordmassor.

De vilda djuren utgör en väldigt liten del av materialet, och boskapsdjuren nöt, svin, får/get utgör hela 80,5 % av den totala benvikten.

Schakt D och F är det mest benrika schakten där D har en fragmenteringsgrad på 3,3 gram och F på 2,7 gram per fragment.

Tabell 1.
Benmaterialets fördelning i olika identifieringsgrupper.

Grupp	**Antal**	**Vikt**	**% Antal**	**% Vikt**
Boskapsdjur	530	4914,9	27,7	80,5
Tamdjur	18	69,7	0,9	1,1
Vilt	4	2,4	0,2	0,0
Grupp micro	24	1,1	1,3	0,0
Grupp liten	24	6,1	1,3	0,1
Grupp mellanstor	161	204	8,4	3,3
Grupp stor	134	460	7,0	7,5
Obest däggdjur	724	360,5	37,9	5,9
Hönsfåglar	16	14,2	0,8	0,2
Sjöfåglar	11	23,8	0,6	0,4
Obest fåglar	42	29,3	2,2	0,5
Saltvattenfiskar	4	0,5	0,2	0,0
Sötvattenfiskar	61	6,7	3,2	0,1
Obest benfiskar	143	9,7	7,5	0,2
Groddjur	14	1	0,7	0,0
TOTALT	1910	6103,9	100,0	100,0

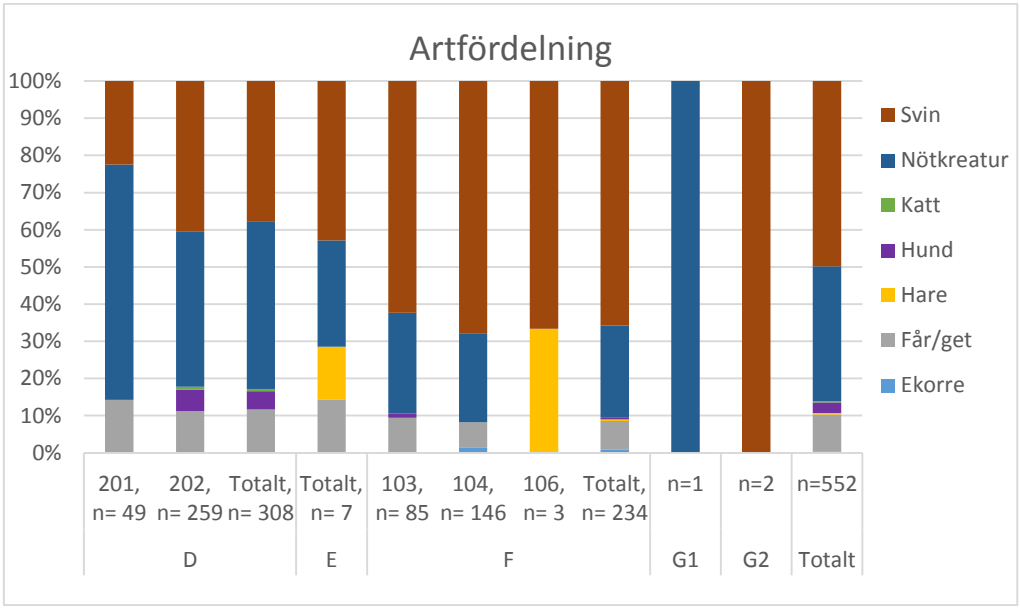
Tabell 2.
Materialets fördelning mellan undersökningsschakten och kontexterna i dessa.

		Artbestämt		Gruppbestämt		Klassbestämt		Totalt	
Schakt	Kx	NISP	Vikt, gr.	NISP	Vikt, gr.	NISP	Vikt, gr.	NISP	Vikt, gr.
D	201	49	463,8	19	48,8	42	40,5	110	553,1
	202	261	2701,5	207	433,4	621	302,6	1089	3437,5
	Summa	310	3165,3	226	482,2	663	343,1	1199	3990,6
E	302			1	1,7			1	1,7
	-	8	139,8	4	10,7			12	150,5
	Summa	8	139,8	5	12,4			13	152,2
F	103	87	451,5	54	71,3	104	53,3	245	576,1
	104	147	1212,7	72	99,7	189	41,9	408	1354,3
	106	3	2,9	21	2,2	2	1,4	26	6,5
	Summa	237	1667,1	147	173,2	295	96,6	679	1936,9
G1		1	11,4					1	11,4
G2		2	4,1	16	8,7			18	12,8
Totalt		558	4987,7	394	676,5	958	439,7	1910	6103,9

Artfördelning

Materialet kommer som inledningsvis konstaterats främst från schakten D och F, och inom dessa schakt förefaller det inte vara någon större skillnad mellan kontexterna i artsammansättningen. De övriga schakten, E, G1 och G2, innehåller endast en mindre mängd ben och sammansättningen i dessa kan då bli något svårtolkad.

Däggdjur



Figur 1.
Fördelning av det artbestämda däggdjursmaterialet mellan schakt och kontexter.

I hela materialet är svin den dominerande arten med 50 % av de artbestämda fragmenten. Nötkreaturen utgör ca 35 % av materialet, och får och get ca 10 %. Andra artbestämda däggdjur är katt som förekommer i schakt D i form av ett kranium med spår av flåning, hund som främst finns i schakt D men även förekommer i schakt F, hare i schakt E och F samt ekorre i schakt F. Dessa övriga arter har alla hugg- och snittspår. Hare och ekorre är de enda vilda däggdjursarter som finns i materialet, även om det inte går att avgöra om katten är vild- eller tam.

I schakt D är nötkreaturen den mest frekventa arten med några få procentenheter över svin, medan svinbenen utgör runt 65 % av materialet i schakt F. Får och get har en relativt jämn spridning mellan alla schakt och kontexter med runt ca 10 % av materialet. Ett fragment har artbestämts till får, inget till get.

Fågel

Av de 27 artbestämda fågelbenen dominerar tamhönan följt av gås och andfåglar samt en obestämd hönsfågel. Gässen kan inte bestämmas till tam- eller vildgås och endast andfåglarna kan sättas som vilda. Någon mera omfattande jakt på fåglar förefaller inte ha skett vid borgen. Artsammansättningen är mycket lik 2014 års material. Höns med medullarben finns vilket indikerar en äggläggande population.

Tabell 3.
Antal fågelben per schakt och kontext.

Kx	Andfåglar	Gås	Tamhöna	Hönsfåglar	Fåglar	Totalt
201			1			1
202	1	4	4		12	21
D tot	1	4	5		12	22
103	1	1	6		13	21
104	3	1	4	1	14	23
106					1	1
F tot	4	2	10	1	28	45
Totalt	5	6	15	1	40	67

Fisk

Fiskbenen återfinns främst i schakt F. Karpfiskar är de dominerande arterna tillsammans med enstaka fragment av gädda, strömming, abborre och torsk. Karpfiskarna, gädda och abborre representerar ett strandnära fiske som kan vara lokalt, medan torsken och strömmingen representerar havsfiske. Båda de senare arterna är klassiska handelsfiskar, men även torkade karpfiskar och gäddor har varit stora handelsvaror. Torsken representeras av en kota, medan de övriga arterna främst representeras av kraniedelar. Karpfiskarna är den enda större gruppen, och här finns båda kotor, revben och kraniedelar. Torsken kan sannolikt tolkas som importerad torrfisk.

Tabell 4.
Antal fiskben per schakt och kontext.

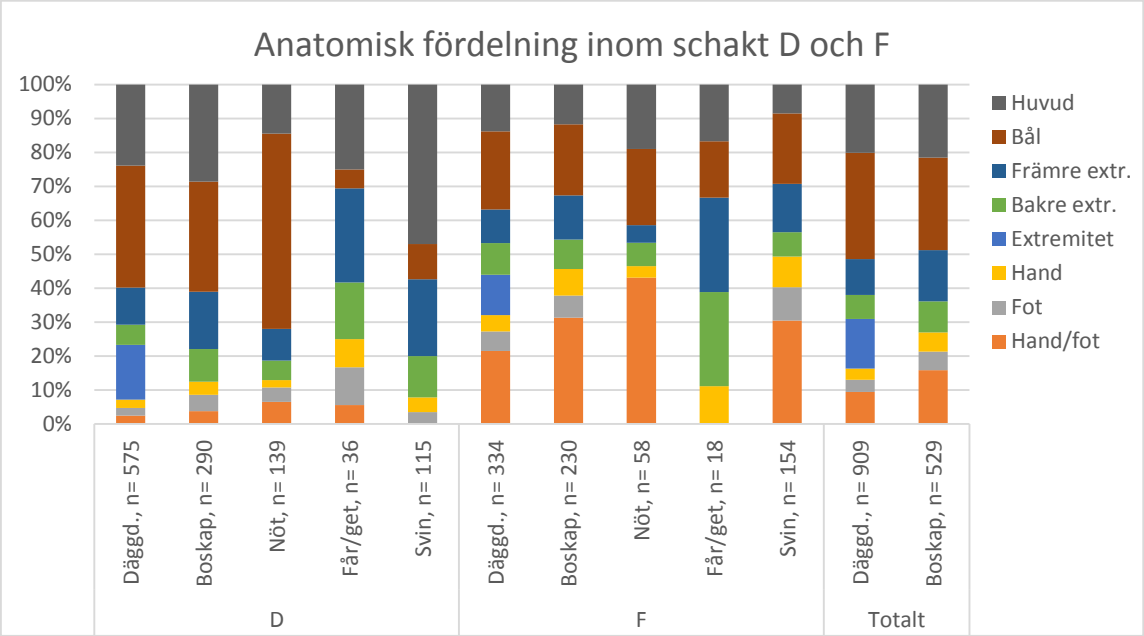
Kx	Strömming	Karpfisk	Gädda	Torsk	Abborre	Fisk	Totalt
201		1					1
202		4	1	1			6
D tot		5	1	1			7
E tot		1			1		2
103	2	18	3			33	56
104	1	14	1		1	110	127
106		16					16
F tot	3	48	4		1	143	199
Totalt	3	54	5	1	2	143	208

Anatomisk fördelning

Diagrammet figur x visar den anatomiska fördelningen för de två benrika schakten samt en summering av dessa. Stapeln *Däggdjur* omfattar även det gruppbestämda materialet där t.ex. alla revbensfragment utan artkarakteristiska drag hamnar. Stapeln *Boskap* är en summering av det artbestämda boskapsdjuren för att fungera som jämförelse mot *Däggdjur*. Skillnaden mellan dessa förefaller främst ligga i att kategorin *Extremitet*, dvs. mest obestämbara rörbensfragment tar plats från främre- och bakre extremitet och delar från hand och fot. De artbestämda fragmenten ser således ut att väl representera den anatomiska fördelningen.

Schakten D och F uppvisar sinsemellan stora skillnader i anatomisk fördelning. Arterna följer ungefär samma trend inom schakten, utan schakten visar snarare på skillnader i den generella kötthanteringen på lokalen.

För schakten som helhet ligger den största skillnaden i andel fragment från de yttersta delarna av extremiteterna, dvs. hand och fot element. Dessa utgör för den artbestämda boskapen ca 11 % i schakt D och ca 46 % i schakt F. Kraniefragment och delar av bålen utgör ca 30 % vardera i schakt D, medan motsvarande andel i schakt F är ca 15 och 20 %. Med en grov generalisering kan man säga att schakt D främst motsvarar ”matavfall” och schakt F ”slaktavfall”. Att kraniefragmenten av svin då finns i schakt D och nötkreaturens i schakt F kan spegla det högre användandet av svinkranier till syltor.

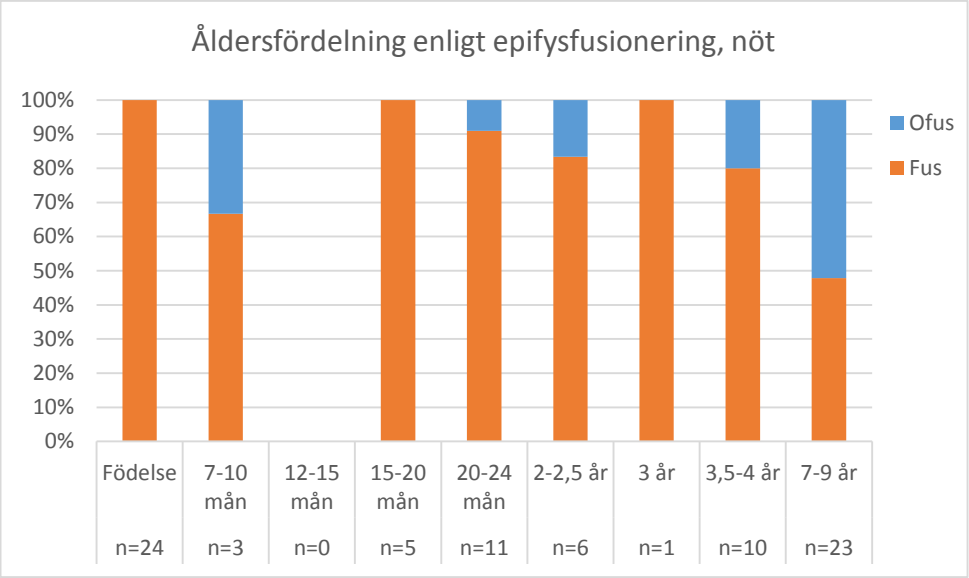


Figur 2.
Anatomisk fördelning för schakten D och F. Däggdjur omfattar den artbestämda boskapen samt stort- och mellanstort hovdjur/däggdjur. Boskap är en summering av nöt, svin, får och get.

Inom schakt D finns en liten skillnad i andel kraniefragment av svin mellan kontexterna 201 och 202, där 202 har den högre andelen. Skillnaden i anatomisk fördelning mellan kontexterna i schakt F är obetydlig.

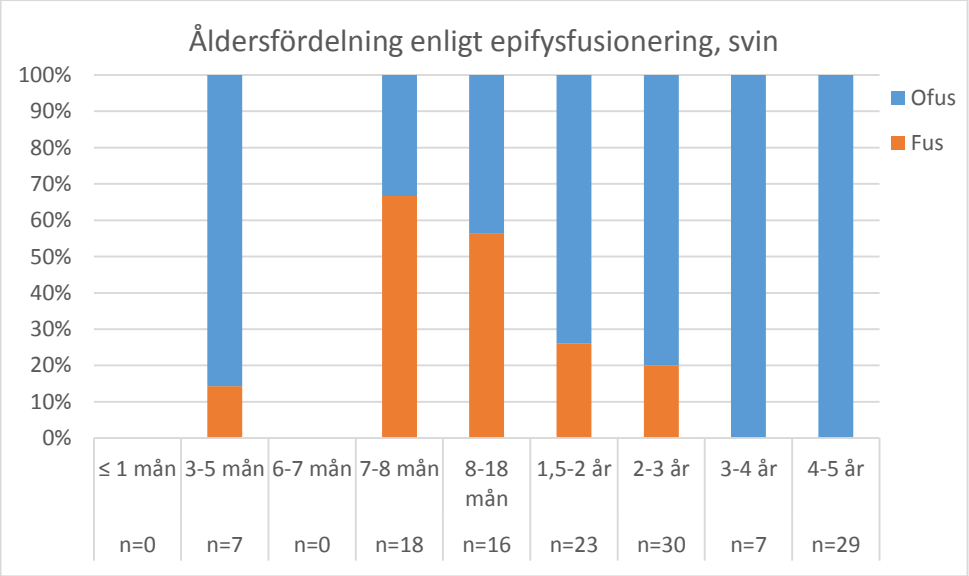
Åldersfördelning

Till åldersfördelningen har data från 2014 och 2015 års undersökningar använts. Olika leder växer samman vid olika tidpunkter och en öppen led representerar då ett djur som slaktats före den ålder, och en sammanvuxen visar då att djuret passerat den åldern. Den äldsta och den yngsta gruppen i diagrammen representeras av olika sammanväxningar i ryggkotorna, och kan på grund av deras antal i kroppen ge något skev bild mot de övriga åldersgrupperna som främst består av olika rörben. Kotor i fragmenterat tillstånd är dock svåra att knyta till specifik art och bestäms därmed oftast i storleksgrupper, så problemet jämnar ut sig något.



Figur 3. Åldersfördelning enligt epifysfusionering för nötkreatur. Material från 2014 och 2015 års undersökningar.

Fragmenten av nötkreatur kommer främst från äldre individer. Ett nötkreatur anses uppnå sin fulla slaktvikt vid ca 2,5-3 års ålder. En svag utslaktning ses i materialet i detta åldersspann, men nästan hälften av kotorna kommer från individer över sju års ålder. Diagrammet staplar följer inte ett fallande idealmönster vilket kan bero på det låga underlagsmaterialet till varje åldersgrupp, men kan också bero på transport av köttprodukter både in eller ut från borgen som påverkar de olika grupperna olika.



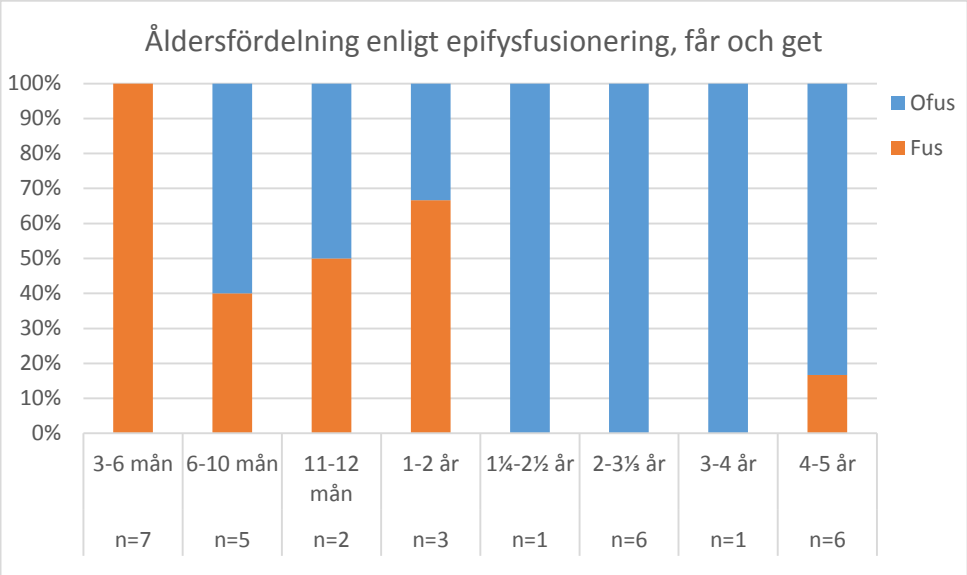
Figur 4. Åldersfördelning enligt epifysfusionering för svin. Material från 2014 och 2015 års undersökningar.

För svinen ses en stor utslaktning mellan grupperna 8-18 månader och 1,5-2 års ålder där andelen sammanvuxna leder minskar från ca 55 % till ca 25 %. Svinen uppnår sin fulla slaktvikt vid ca 2 års ålder och i materialet finns inga sammanvuxna leder representerande djur över 3 års ålder. Stapeln 3-5 månader ger en avvikande bild mot resten av diagrammet. Denna visar kotor av spädgris och kan vara ett utslag av endast två olika individer, men gruppen 7-8 månader visar att ca 35 % av stocken slaktats innan den åldern.

Av svin finns även 9 slitagebedömda tänder från 2015 och två från 2014. Följer man slitagebedömningarna och åldersättningen presenterad av Lemoine m.fl. (2014) blir en i ca 1 års ålder, 8 i spannet 1,5-4,3 års ålder och två i spannet 6-8 års ålder. Räknar man MNI för denna tanduppsättning rör det sig dock endast om fyra säkerställda individer. Tänderna visar dock en närvaro av individer i en ålder som inte förekommer i epifysfusioneringen, där inga svinben i fusioneringsåldrarna 3-5 år vuxit samman.

Tabell 5. Åldersfördelning för svin baserat på tandslitage. Material från både 2014 och 2015 års undersökningar.

Ålder	Tänder	MNI
ca 1 år	1	1
1,5-4,3 år	8	2
6-8 år	2	1



Figur 5. Åldersfördelning enligt epifysfusionering för får och getter. Material från 2014 och 2015 års

Diagrammet för får och get är något svårtolkat, vilket kan bero på det låga antalet åldersobservationer. Här kan också in- eller utförsel av färdiga köttprodukter såsom fårbogar och -fioler som konserverats efter höstslakten förändra ålderssammansättningen. En del individer från förstaårs slakten finns representerade, men även någon över 4-5 års ålder.

Tafonomi

Gnagspår

Gnagspår av råttor finns endast i liten mängd, totalt på 8 av 1618 fragment. Sju av dessa kommer från schakt F, med en svag viktning mot kontext 103.

Gnagspår av rovdjur eller allätare, i praktiken hundar och svin, finns på 67 av 1618 fragment. Detta motsvarar ca 4,1 % av materialet och är koncentrerat till schakt D där 5 % av fragmenten har gnagspår. Schakt F har endast 1,7 % fragment med gnagspår.

Schakt F kan tolkas ha haft mera restriktioner mot lösa hundar och svin än området kring schakt D där råttorna istället kunnat smyga omkring.

Hugg- och snittspår

Hugg- och snittspår finns på totalt 9,7 % av fragmenten. Inom schakt D är värdet 7,6 % och i schakt F 13,2 %. Det rör sig främst om styckning av boskapsdjur, men några enstaka exempel på hantering av pälsdjur finns också.

I Fnr 158, schakt D kontext 201, finns ett strål- och armbågsben av får eller get med ett flertal parallella tunna snittspår. Detta är ett exempel på hur konserverat kött, troligen rökt eller torkat, skurits upp i skivor. Bogdelen av får är ett stycke som är väl lämpat för konservering.

Figur 6.
Detalj av armbågsben av får eller get med spår av att köttskivor skurits loss mot benet.

Bland de övriga djuren finns bland annat ett kattkranium med spår av flåning från Fnr 151 i schakt D, kontext 202. Ett flertal snittspår finns bl. a. på överkäken och hjässan. Ett annat pälsdjur som också uppvisar snittspår är ekorre. Ett mellanfotsben med två grupper snittspår har identifierats i Fnr 175 i schakt F, kontext 104.

Figur 7.
Kattskalle med flera snittspår efter flåning.

Inte heller hundarna har undgått styckning. I Fnr 160 från schakt D, kontext 202, finns ett flertal olika ben av hund med snitt- och huggspår. Här finns också kotor som har plattorna sammanvuxna med kotkroppen, vilket sker vid ca 2 års ålder, tillsammans med rörben fortfarande lösa ledändar. De flesta leder växer samman med benskaftet före ett års ålder. Denna skillnad skulle då indikera att det rör sig om flera individer. Av hund har man tillvaratagit både hud och fett.

Hantering av pälsdjur förefaller ha förekommit både i området för schakt D och F.

Figur 8.
Mellanfotsben av ekorre med två grupper av snittspår tvärs över benskaftet

Kommentarer kring bevaringen

I flera fall hittar man delar av samma ben med passform, eller ledändor och benskaft som inte vuxit samman men som ligger i samma fyndnummer.

Detta indikerar att materialet inte rörts om eller omdeponerats i någon nämnvärd utsträckning efter den första deponeringen. I F167, schakt F, kontext 103, finns tre delar av en svinfot som huggits av. Att delarna tillvaratagits tillsammans och går att pussla ihop visar tydligt hur de deponerats med mjukdelarna kvar och legat ostört sedan dess.

Sammanfattning och tolkning

Schakt D och F som undersökts år 2015 varierar något i artsammansättning mot schakt B och C från 2014. Detta syns främst i den lägre andelen får/get 2015 och istället högre andel nöt. Svinen dominerar helt med runt 50 % av materialet i samtliga schakt. Under 2014 noterades en låg andel kotor, hand/fot och kranieelement, vilket tillsammans med skillnaderna i anatomisk fördelning mellan schakt D och F visar att det finns relativt stora skillnader i kött- eller benhanteringen inom området.

Med mera underlag för sammanställning av slaktåldrar har nötpopulationens slaktålder förskjutits uppåt. Flera djur i högre ålder tillsammans med ett antal slaktade kalvar indikerar en mjölkproduktions inriktning. Detta säger dock inte om nötkreaturen hör till borgen eller omlandet.

Svinen har slaktats i tidig ålder, och ett inslag av spädgris finns också i materialet. Några individer har lämnats till reproducerande ålder. För gruppen får/get är ålderssammansättningen svår. Litet underlagsmaterial och troligen en import av färdiga köttstycken påverkar resultatet. Får och get förefaller ha en mindre betydelse vid borgen, medan svinen möjligen är den viktigaste egna köttproducenten.

Två olika vilda djurarter har påträffats; hare och ekorre. Hare har jagats både som kött- och pälsdjur, och ekorre som pälsdjur. Det mellanfotsben av ekorre som identifierats har också snittspår som indikerar att man tagit tillvara på pälsen. Annan pälshantering som identifierats är genom en kattskalle med snittspår efter flåning. I materialet finns också styckad hund, och här har man troligen tagit tillvara både hud och fett.

Sammansättningen av fågel och fisk är likartad den från år 2014. Tamhönsen dominerar, men ett inslag av vilda andfåglar finns i materialet. Gåsfåglarna kan vara både tama och vilda, men troligen representerar de tamdjur. Hönsen har också producerat ägg, vilket ses genom förekomsten av medullarben, och har varit en viktig del av borgens matproduktion med både ägg och kött.

Bland fiskarna finns nu en ryggkota av torsk och några kraniefragment av strömming vilket antingen kan indikera de första importerade fiskarna till borgen, eller fiskefärder ut i östersjön som endast ligger en kort seglats mot öster. Karpfiskarna representeras av kraniedelar, kotor, revben och fenstrålar och har troligen fångats lokalt. Detsamma gäller abborre och gädda.

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Element		
Latin	Förkortn.	Svenska
Atlas		1:a halskota
Axis		2:a halskota
Calcaneus		Hälben
Carpalia		Handrotsben
Cornu		Horn
Costae		Revben
Coxae		Bäckenben
Acetabulum		Höftbenets ledskål för lårbenet.
Cranium		Kranium
Dentale		Underkäke, fisk.
Dentes		Tänder
Incisivus	I	Framtand
Canini	C	Hörntand
Premolar	P	Främre kindtand
Molar	M	Bakre kindtand
Alveol		Hål för tandrot
Femur		Lårben
Fibula		Vadben
Frontale		Pannben
Humerus		Överarmasben
Hyoideum		Tungben
Lacrimale		Tårben
Mandibula		Underkäke
Maxilla		Överkäke
Metacarpal		Mellanhandesben
Metapodiae	Mp	Mellanhands- och -fotsben
Metatarsal	Mc	Mellanfotsben
Occipitale	Mt	Nackben
Parietale		Hjässben
Patella		Knäskål
Phalanges 1-3	Ph 1-3	Finger- och tåben
Premaxilla		Överkäksben
Radius		Strålben
Sacrum		Korsben
Scapula		Skulderblad
Sphenoidale		
Sternum		Bröstben
Sternebrae		Del av bröstben
Talus		Språngben
Tarsalia		Fotrotsben
Temporale		Klippben
Tibia		Skenben
Ulna		Armbågsben
Vertebrae cervicale	Ve. cerv.	Halskotor
Vertebrae coccygis	Ve. cocc.	Svanskotor
Vertebrae lumbale	Ve. lumb.	Ländkotor
Vertebrae sacrale	Ve. sacr.	Korsbenskotor
Vertebrae thoracalis	Ve. thor.	Bröstkotor
Zygomaticum		Okben

Arter	
Latin	Svenska
Mammalia	Däggdjur
Ungulat	Hovdjur
Carnivora	Rovdjur
Rodentia	Gnagare
Bos taurus	Nötkreatur
Canis familiaris	Hund
Capra hircus	Get
Felis catus	Katt
Lepus timidus	Skogshare
Ovis aries	Får
Rattus sp.	Råtta
Sciurius vulgaris	Ekorre
Sus domestica	Svin
Vulpes vulpes	Räv

Amphibia	Groddjur
Anura	Fam groddjur

Aves sp.	Fågel
Anatidae	Fam andfåglar
Antaidae – P	Liten andfågel
Anatidae – M	Stor andfågel
Anser sp.	Gås
Gallus gallus	Höna
Galliformes	Hönsfågel

Piscs sp.	Fisk
Teleostei	Bensfisk
Clupea harengus	Strömming
Esox lucius	Gädda
Gadus morhua	Torsk
Cyprinidae	Fam Karpfiskar
Perca fluviatilis	Abborre
Rutilus rutilus	Mört

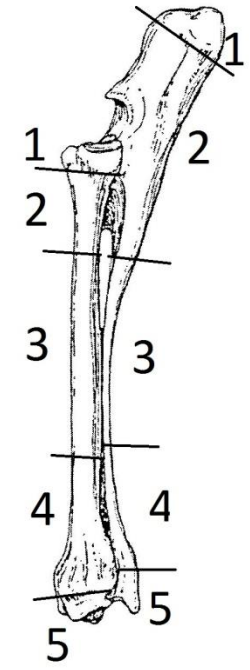
Storlekar	
Mikro-	Mycket liten
Parva-	Liten
Meso-	Mellan
Mega-	Stor

Riktningar	
Dexter; Dx	Höger
Sinister; Sin	Vänster
Medial	Mot bålen
Lateral	Från bålen
Caudal	Från craniet
Cranial	Mot craniet

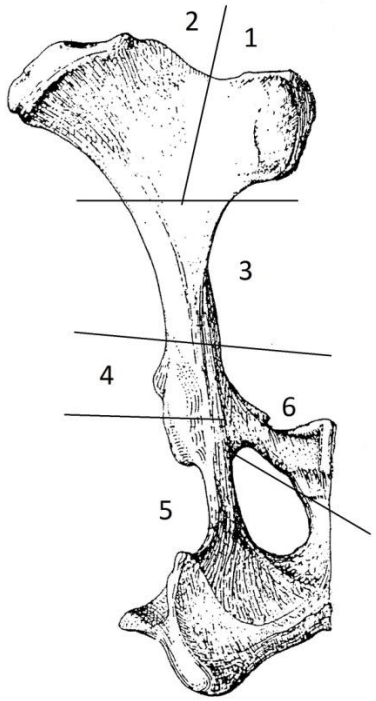
Stensö borg 2015

BENKATALOGEN:

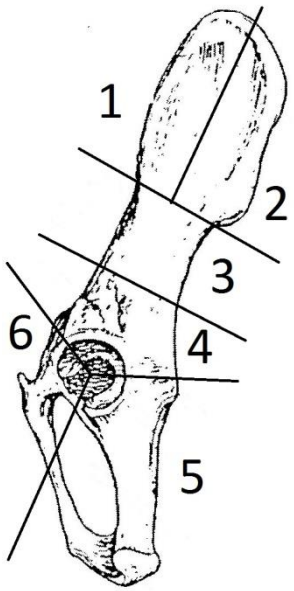
Delkodning för olika elementtyper



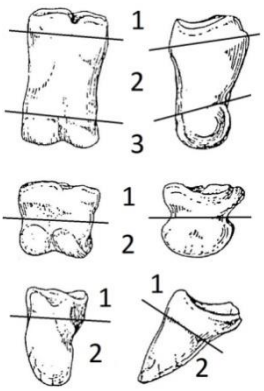
Långa rörben



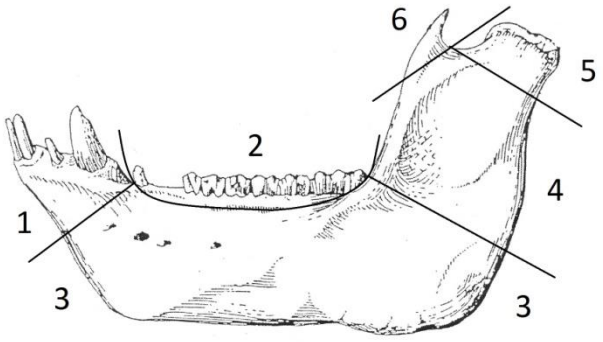
Bäckenben, stora gräsätare



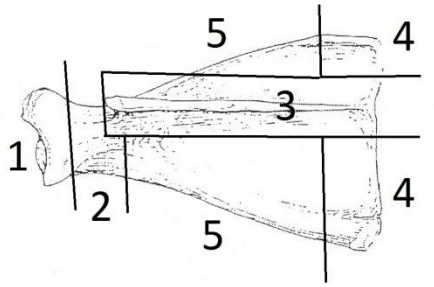
Bäcken, mindre däggdjur



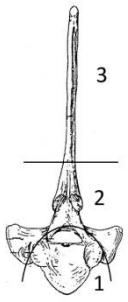
Tåben 1-3



Underkäke med tänder



Skulderblad



Kotor. Lösa plattor nr 5

Benkatalog

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
149	Bos taurus	Scapula	Sin	Fus		x	x					2	0	1	9,8				
149	Mammalia	Indeterminata										0	0	38	29,3				
149	Sus domestica	Dentes	Sin									0	0	1					
149	Sus domestica	Mandibula	Dx							x		0	0	1					
150	Anatidae	Carpometacarpus										0	0	1	0,9				
150	Aves sp.	Coracoideum										0	0	1	0,5				
150	Bos taurus	Occipitale										0	0	1	6,3	x			
150	Bos taurus	Ph 1						x				0	0	1	1,3				
150	Bos taurus	Dentes										0	0	4	17,1				
150	Bos taurus	T2+T3	Dx									0	0	1	3,2				
150	Bos taurus	Temporale	Sin									0	0	1	30,4				
150	Bos taurus	Ulna	Sin					x				0	0	1	10				två frag, passform
150	Bos taurus	Radius	Sin		Fus	x	x	x	x	x		0	0	1	137,4			y	två frag med passform
150	Bos taurus	Radius	Sin		Fus				x	x		0	0	1	37,2	x			
150	Bos taurus	Ph 2		Fus		x	x	x				0	0	1	9,3				
150	Cyprinidae	Pharyngeum inf.										0	0	1	0,2				
150	Gallus domesticus	Scapula										0	0	1	0,2				
150	Mammalia	Cranie frag										0	0	27	38,2				
150	Mammalia	Indeterminata										0	0	34	28,4				
150	Megaungulat	Ve. cerv.		Fus	Ofus							0	0	1	5,8				
150	Megaungulat	Ve. lumb.			Ofus					x		0	0	2	9,6				en hel, en i tre delar
150	Megaungulat	Costae						x				0	0	4	4,1				
150	Mesomammalia	Ve. lumb.					x					0	0	2	1,4			y	
150	Mesomammalia	Ossa longa										0	0	10	17,1				
150	Mesomammalia	Ossa longa										0	0	1	1,2	x			
150	O/C	Occipitale										0	0	1	1,5	x			
150	O/C	Dentes										0	0	2	3,8				
150	O/C	Temporale	Sin									0	0	1	1,5				fac art
150	Sus domestica	Femur		Ofus		x						0	0	1	2,4	x			
150	Sus domestica	Mandibula	Sin			x						0	0	1	1,3				
150	Sus domestica	Mandibula						x				0	0	2	3				
150	Sus domestica	Scapula						x				0	0	1	1,2				
150	Sus domestica	Costae						x				0	0	2	1,1				
150	Sus domestica	Cranie frag										0	0	1	1,9				
150	Sus domestica	Mandibula	Dx						x			0	0	1	1,5				
150	Sus domestica	Costae				x	x					0	0	1	0,8			y	
150	Sus domestica	Mc IV	Sin			x	x	x				0	0	1	2,1				
150	Sus domestica	Ulna	Dx				x	x				0	0	1	7,3	x			
150	Sus domestica	Dentes	Dx									0	0	2	7,3				
150	Sus domestica	Dentes										0	0	2	3				
150	Sus domestica	Temporale	Sin									0	0	2	16				
150	Sus domestica	Mandibula	Dx				x		x			0	0	2	22,7				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
150	Sus domestica	Maxilla	Sin									0	0	1	35,3				m3 frambruten, men inte i slitage än
150	Sus domestica	Zygomaticum	Sin									0	0	1	8,1				
150	Sus domestica	Humerus	Sin						x			0	0	1	6,1	x			
150	Sus domestica	Tibia	Sin				x	x	x			0	0	1	24,5	x			
150	Sus domestica	Humerus	Dx						x			0	0	1	11,9	x			två frag med passform
151	Anser sp.	Femur					x	x	x			0	0	1	4,1				
151	Aves sp.	Tibiotarsus										0	0	1	0,1				
151	Bos taurus	Zygomaticum	Sin									0	0	1	6,8				
151	Bos taurus	Ph 1		Ofus			x	x				0	0	1	10	x			
151	Bos taurus	Os sesamoideus										0	0	1	0,7				
151	Bos taurus	Ve. lumb.					x					0	0	1	5,2			y	
151	Bos taurus	Ve. thor.					x					0	0	1	7,8				
151	Bos taurus	Ve. thor.		Fus	Fus	x						0	0	2	27,2			k	
151	Bos taurus	Sacrum										0	0	9	68,7				
151	Bos taurus	Scapula	Sin			x						0	0	1	31,1	x		y	
151	Bos taurus	Ve. thor.		Fus	Fus	x						0	0	2	27,2			y	
151	Bos taurus	Femur	Dx		Ofus					x		0	0	1	12,8	x		y	
151	Bos taurus	Ve. lumb.		Fus	Fus	x	x					0	0	1	36,1	x		y	
151	Bos taurus	Humerus	Sin		Fus				x	x		0	0	1	56,8	x			
151	Cyprinidae	Keratohyale										0	0	1	0,1				
151	Cyprinidae	Ve. caud.										0	0	1	0,1				
151	Felis catus	Cranium										0	0	1	5,3			k	8 fragment med passform. S+D frontale, D parietale, occipitale, D zyg, D max, D i. Flera snittspår på hjässan och höger fram på maxilla.
151	Gadus morhua	Ve. caud.										0	0	1	0,2				
151	Gallus domesticus	Humerus										0	0	1	1,2				
151	Gallus domesticus	Tibiotarsus										0	0	1	0,6				
151	Mammalia	Cranie frag										0	0	6	4,1				
151	Mammalia	Indeterminata										0	0	79	26,4				
151	Mammalia	Scapula										0	0	4	5,1				
151	Megamammalia	Ve. indet.				x						0	0	5	15,2				
151	Megamammalia	Ve. indet.										0	0	2	4,7	x			
151	Megamammalia	Ossa longa										0	0	1	1,5	x			
151	Megamammalia	Ve. indet.			Ofus					x		0	0	2	3,5				
151	Megaungulat	Cranie frag										0	0	3	6,9				
151	Megaungulat	Coxae										0	0	1	33				
151	Megaungulat	Costae						x				0	0	23	60				
151	Megaungulat	Costae		Fus		x						0	0	3	6,5				
151	Mesomammalia	Scapula										0	0	3	2,2				
151	Mesomammalia	Ossa longa										0	0	2	2,3			k	
151	Mesomammalia	Ossa longa										0	0	25	40				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
151	Mesomammalia	Ossa longa										0	0	5	3,1	x			
151	Mesoungulat	Ve. lumb.					x					0	0	1	0,4			y	
151	Mesoungulat	Costae						x				0	0	8	7,7				
151	Mesoungulat	Costae						x				0	0	1	0,7			k	
151	Mesoungulat	Costae										0	0	5	8,3			y	
151	Mesoungulat	Costae						x				0	0	1	0,7			y	
151	O/C	Ulna						x	x			0	0	1	1,1				bearbetat, nål/stylus.
151	O/C	Humerus	Sin						x			0	0	1	0,9	x		k	
151	O/C	Temporale	Dx									0	0	1	1,1				pp
151	O/C	Costae				x						0	0	1	0,3				
151	O/C	Coxae	Dx	Fus					x			0	0	1	1,3				
151	O/C	Mp			Fus					x		0	0	1	3				
151	O/C	Radius	Dx					x	x			0	0	1	7			k	
151	O/C	Mt	Dx					x	x			0	0	1	6,8	x			
151	O/C	Tibia	Dx				x	x				0	0	1	16,8	x			
151	O/C	Tibia	Sin					x	x			0	0	1	12,8	x			
151	Ovis aries	Radius	Sin			x	x					0	0	1	8,2				
151	Ovis aries	Ulna	Sin				x					0	0	1	2,3				hör ihop med radius i samma fnr
151	Ovis aries	Mc	Sin			x	x	x	x			0	0	2	17,4				
151	Parvamammalia	Ossa longa										0	0	1	0,4				
151	Parvamammalia	Cranie frag										0	0	3	1				två frag har passform
151	Parvamammalia	Temporale	Dx									0	0	1	0,6				pp
151	Parvamammalia	Ossa longa										0	0	3	0,6				
151	Sus domestica	Humerus	Sin						x			0	0	1	2,4	x			
151	Sus domestica	Sphenoidale										0	0	1	1,2				
151	Sus domestica	Lacrimale	Sin									0	0	1	2,7				
151	Sus domestica	Frontale	Sin									0	0	1	0,8				
151	Sus domestica	Coxae	Dx	Fus					x	x		0	0	1	21,2	x		y	
151	Sus domestica	Coxae	Dx	Fus					x	x		0	0	1	15,5	x			
151	Sus domestica	Coxae	Dx	Fus						x		0	0	1	5,6				två frag med passform
151	Sus domestica	Femur	Sin					x	x			0	0	1	18,7	x			
151	Sus domestica	Ulna	Dx				x	x	x			0	0	1	10,7			y	
151	Sus domestica	Tibia	Dx		Fus				x	x		0	0	1	6,3				
151	Sus domestica	Calcaneus	Dx	Ofus		x	x					0	0	1	7,2				
151	Sus domestica	Radius	Sin			x	x	x	x			0	0	1	12,6	x			
151	Sus domestica	Ci	Dx									0	0	1	2,1				
151	Sus domestica	Cu	Dx									0	0	1	1,2				
151	Sus domestica	Talus	Sin									0	0	1	5,1				
152	Anser sp.	Ulna										0	0	1	0,3				
152	Aves sp.	Ossa longa										0	0	5	7,2				stor fågelart
152	Bos taurus	Ve. thor.		Fus	Ofus	x						0	0	1	7,8				
152	Bos taurus	Ve. lumb.					x					0	0	4	17			y	

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R	typ	
152	Bos taurus	Costae					x	x				0	0	2	27			y	
152	Bos taurus	Costae					x	x				0	0	1	13			y	
152	Bos taurus	Costae					x	x				0	0	2	27			k	
152	Bos taurus	Tibia	Dx		Fus				x	x		0	0	1	21,9				
152	Bos taurus	Ph 1		Fus		x	x	x				0	0	1	14,7				
152	Bos taurus	Tibia	Dx		Fus			x	x	x		0	0	1	105				
152	Felis catus	Zygomaticum	Sin									0	0	1	0,3				
152	Gallus domesticus	Carpometacarpus										0	0	1	0,5				
152	Mammalia	Indeterminata										0	0	3	6,1			y	
152	Mammalia	Indeterminata										0	0	2	4,3	x			
152	Mammalia	Indeterminata										0	0	185	55,3				
152	Megamammalia	Ve. indet.										0	0	3	1,6				
152	Megamammalia	Ossa longa										0	0	9	41,1				
152	Megaungulat	Costae										0	0	6	15,3				
152	Megaungulat	Costae						x				0	0	2	27,2			y	
152	Megaungulat	Costae						x				0	0	1	7,5			k	
152	Megaungulat	Scapula								x		0	0	1	6,5				
152	Mesomammalia	Coxae										0	0	2	1,7				
152	Mesomammalia	Ossa longa										0	0	10	13				
152	Mesomammalia	Femur				x						2	0	1	1,5				starkt vittrad
152	Mesoungulat	Costae						x				0	0	3	1,4				
152	O/C	Nasale	Dx									0	0	1	0,8				
152	O/C	Frontale										0	0	1	0,9				
152	O/C	Maxilla	Dx									0	0	1	15,1				
152	O/C	Talus	Sin									0	0	1	1,4				
152	O/C	C2+C3	Sin									0	0	1	0,7				
152	O/C	Femur	Sin	Ofus			x	x	x			0	0	1	11,2			k	
152	O/C	Talus	Dx									0	0	1	1,4				
152	Sus domestica	Cranie frag										0	0	1	1,2				
152	Sus domestica	Costae					x	x				0	0	2	5,3			y	
152	Sus domestica	Costae						x				0	0	1	1,9			y	
152	Sus domestica	Zygomaticum	Sin									0	0	1	3,6				
152	Sus domestica	Lacrimale	Sin									0	0	1	1,6				
152	Sus domestica	Coxae	Sin	Fus					x		x	0	0	1	5,4				två frag - passform
152	Sus domestica	Coxae	Dx							x		0	0	1	3,3	x		y	
152	Sus domestica	Radius	Dx			x	x					0	0	1	2,6				
152	Sus domestica	Ulna	Dx	Ofus			x	x	x			0	0	1	13,9				
152	Sus domestica	Radius	Dx		Ofus	x	x	x	x			0	0	1	15				
152	Sus domestica	Radius	Dx	Linje		x	x	x				0	0	1	9,2				
152	Sus domestica	Scapula	Sin	Fus		x	x					0	0	1	17,7			k	
152	Sus domestica	Scapula	Sin	Fus		x	x					0	0	1	17,7			y	
152	Sus domestica	Humerus	Dx		Fus				x	x		0	0	1	16,1				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
153	Bos taurus	Ve. cerv.										0	0	1	6,9				
153	Bos taurus	Ulna	Sin				x					0	0	1	16,9				i fyra fragment
153	Bos taurus	Scapula	Sin			x	x					0	0	1	34,6	x		y	
153	Cyprinidae	Ve. caud.										0	0	1	0,1				
153	Mammalia	Indeterminata										0	0	12	10,9				
153	Megamammalia	Indeterminata										0	0	1	8,1				frag av scapula eller coxae
153	Megamammalia	Ossa longa										0	0	11	29,7				
154	Mammalia	Indeterminata										0	0	3	5				
155	Bos taurus	Ve. indet.					x					0	0	4	20,8				
155	Bos taurus	Ve. thor.					x					0	0	1	12,5				
155	Bos taurus	Ph 3				x	x					0	0	1	3,8				
155	Bos taurus	Ve. lumb.		Fus	Fus	x	x					0	0	2	49,2			y	
155	Bos taurus	Ve. thor.		Fus	Ofus	x						0	0	1	13				
155	Mammalia	Cranie frag										0	0	2	2,3				spår av alveoler
155	Mammalia	Indeterminata										0	0	13	13				
155	Sus domestica	Tibia	Dx	Ofus		x						0	0	1	4,9				
155	Sus domestica	Scapula	Sin							x		0	0	1	3,8				
155	Sus domestica	Tibia	Dx	Ofus			x	x				0	0	1	28,1				
156	Bos taurus	Femur	Dx		Fus					x		0	0	1	82,6				
156	Bos taurus	Femur				x						0	0	1	6,4				
156	Mammalia	Indeterminata										0	0	41	4,5				sannolikt delar av svinkäken i samma fnr
156	Sus domestica	Mandibula	Dx			x	x	x				2	0	1	17,9				kraftigt fragmenterad
157	O/C	Talus	Sin									0	0	1	3,6				
158	Bos taurus	Zygomaticum	Dx									0	0	1	10,1				två frag med passform
158	Bos taurus	Scapula						x				0	0	1	2,8			k	
158	Bos taurus	Ve. indet.		Fus	Ofus	x				x		0	0	3	9,2				
158	Bos taurus	Ve. cerv.					x					0	0	1	10,4			y	
158	Bos taurus	Ve. lumb.					x					0	0	6	18,6				
158	Bos taurus	Ve. lumb.		Fus	Fus	x	x					0	0	1	66,6			k	
158	Bos taurus	Ve. cerv.		Fus	Ofus	x						0	0	1	36,9			y	lösa plattor med perfekt passform
158	Gallus domesticus	Tibiotarsus										0	0	1	0,9				
158	Mammalia	Indeterminata										0	0	9	8,6				
158	Mesoungulat	Costae						x				0	0	1	1,6				
158	O/C	Mandibula	Dx			x						0	0	1	1				
158	O/C	Ulna	Dx				x	x				0	0	1	4,7			k	Tunna snittspår. tre frag med passform. hör ihop med radius i samma Fnr.
158	O/C	Ph 2		Fus		x	x	x				0	0	1	1,4				
158	O/C	Radius	Dx	Fus	Ofus	x	x	x	x	x		0	0	1	24,7	x	x	k	Flera parallella snittspår vinkelrätt mot diafysen. två frag med passform, brutet i halvfärskt tillstånd (impact scar)

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
159	Bos taurus	Dentes	Dx									0	0	3	11				Tänderna oslitna
159	Bos taurus	Maxilla	Dx									0	0	2	2,7				
159	Mammalia	Indeterminata										0	0	3	0,7				
159	Megamammalia	Ossa longa										0	0	1	3,8	x			
159	Mesomammalia	Ossa longa										0	0	2	2,1				
159	Mesomammalia	Ossa longa										0	0	2	3,4	x			
159	O/C	Coxae	Dx								x	0	0	2	1,8			y	
159	Sus domestica	Costae						x				0	0	1	0,6			k	
159	Sus domestica	Mandibula	Dx					x	x			0	0	2	16,5				två frag har passform
159	Sus domestica	Radius	Sin	Ofus	Ofus	x	x	x	x			0	0	1	13,7			k	två frag med passform
159	Sus domestica	Radius	Sin			x	x	x	x			0	0	1	16			y	två frag med passform
159	Sus domestica	Dentes	Sin									0	0	1	2				
159	Sus domestica	Radius	Dx			x	x	x				0	0	1	10,1				
160	Anser sp.	Carpometacarpus										0	0	1	3,1				
160	Anser sp.	Synsacrum										0	0	1	6,7				
160	Aves sp.											0	0	5	1,9				
160	Bos taurus	Os sesamoideus										0	0	1	1,1				
160	Bos taurus	Scapula								x		0	0	1	5,5			y	två frag med passform
160	Bos taurus	Atlas		Ofus		x						0	0	1	4,5			y	
160	Bos taurus	Costae							x			0	0	2	7,7				
160	Bos taurus	Costae							x			0	0	1	12			k	
160	Bos taurus	Costae					x	x				0	0	1	14,9	x		k	
160	Bos taurus	Costae					x	x				0	0	1	4,8				
160	Bos taurus	Costae						x				0	0	11	55,4				
160	Bos taurus	Costae					x	x				0	0	1	14,9	x		y	
160	Bos taurus	Ve. indet.					x					0	0	6	34,6				
160	Bos taurus	Ve. indet.		Fus	Ofus	x						0	0	1	4,6			y	
160	Bos taurus	Ve. thor.		Fus	Ofus	x						0	0	4	18,2				
160	Bos taurus	Ve. lumb.					x					0	0	2	19,7			y	
160	Bos taurus	Ve. lumb.		Fus	Ofus							0	0	1	27	x		y	två frag med passform
160	Bos taurus	Ve. sacr.		Fus	Ofus	x						0	0	1	23,7			y	
160	Bos taurus	Dentes	Sin									0	0	1	6,7				
160	Bos taurus	Dentes frag										0	0	1	1,7				
160	Bos taurus	Os hyoideum										0	0	1	2,9				
160	Bos taurus	Maxilla	Sin									0	0	1	66,8				
160	Bos taurus	Humerus	Dx				x	x				0	0	1	24,2	x			
160	Bos taurus	Femur	Sin	Ofus			x					0	0	1	71,3				
160	Bos taurus	Calcaneus	Dx			x						0	0	1	10,5				
160	Bos taurus	Ve. thor.		Fus	Linje	x						0	0	1	20,5				
160	Bos taurus	Tibia	Sin		Fus				x	x		0	0	1	45,7				
160	Bos taurus	Femur	Dx				x	x	x			0	0	1	73,1				
160	Bos taurus	Ci	Dx									0	0	1	8				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
160	Bos taurus	Os malleolare	Sin									0	0	1	3,6				
160	Bos taurus	Scapula	Sin			x	x	x				0	0	1	73,3				
160	Bos taurus	Cu	Dx									0	0	1	7,2				
160	Bos taurus	Ct	Dx									0	0	1	19,6				
160	Bos taurus	Cr	Dx									0	0	1	10				
160	Bos taurus	Ph 1		Fus		x	x	x				0	0	1	14,3			k	
160	Bos taurus	Ph 1		Fus		x	x	x				0	0	1	19,2				
160	Bos taurus	Radius	Dx		Fus				x	x		0	0	1	58,5				
160	Bos taurus	Ph 1		Fus		x	x	x				0	0	1	14,3			y	
160	Bos taurus	Mt	Dx		Fus	x	x	x	x	x		0	0	1	117,6				Kraftiga sen/muskelfästen distalt, dorsalt
160	Bos taurus	Talus	Sin									0	0	1	42,6				
160	Canis familiaris	Scapula										0	0	1	0,6				
160	Canis familiaris	Ph 1		Fus		x	x	x				0	0	1	0,2				
160	Canis familiaris	Ve. lumb.		Fus	Fus	x	x					0	0	2	8,8				
160	Canis familiaris	Costae						x				0	0	1	1,1				två frag med passform
160	Canis familiaris	Ve. lumb.		Fus	Fus	x	x					0	0	3	9,2			y	
160	Canis familiaris	Mc II	Sin		Fus	x	x	x	x	x		0	0	1	1,5				
160	Canis familiaris	Ph 1			Fus	x	x	x				0	0	1	0,5				
160	Canis familiaris	Ulna	Sin	Fus	Ofus	x	x	x	x			0	0	1	10,8			k	Tre frag med passform
160	Canis familiaris	Mc V	Dx			x	x	x	x			0	0	1	1,8	x			
160	Canis familiaris	Humerus	Sin	Ofus	Fus	x	x	x	x	x		0	0	1	14			k	ett flertal snittspår. diafysen bruten i två dela, modernt brott
160	Canis familiaris	Radius		Ofus	Ofus	x	x	x	x			0	0	1	10			k	diafysen bruten i två delar (nytt brott) lös, passande prox epi.
160	Canis familiaris	Scapula	Sin	Fus		x	x	x				0	0	1	5,4				två frag med passform
160	Esox lucius	Ve. indet.										0	0	1	0,1				
160	Mammalia	Indeterminata										0	0	55	35				
160	Mammalia	Indeterminata										0	0	1	2,9			y	
160	Mammalia	Indeterminata										0	0	4	2,1	x			
160	Megamammalia	Ulna					x					0	0	1	1,1				
160	Megamammalia	Ossa longa										0	0	3	14,5				
160	Megamammalia	Ve. indet.			Ofus					x		0	0	6	9,1				
160	Megaungulat	Costae						x				0	0	8	9,6				
160	Mesocarnivora	Dentes										0	0	1	0,2				Mindre än hund, större än katt. inte räv.
160	Mesomammalia	Ve. indet.										0	0	2	1,3				
160	Mesomammalia	Tibia					x					0	0	1	6,2	x			
160	Mesomammalia	Carpi/Tarsi										0	0	1	0,7				
160	Mesomammalia	Ossa longa										0	0	3	6,6	x			
160	Mesomammalia	Ossa longa										0	0	3	1				
160	Mesoungulat	Costae						x				0	0	3	5,6	x			
160	Mesoungulat	Costae						x				0	0	6	5,4				
160	O/C	Humerus	Sin						x			0	0	1	5,2	x			

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
160	O/C	Radius	Dx			x	x	x				0	0	1	7,8	x			två frag med passform
160	Parvamammalia	Ossa longa										0	0	1	0,3				
160	Sus domestica	Costae							x			0	0	1	1,1				
160	Sus domestica	Costae					x					0	0	2	2,7			y	
160	Sus domestica	Mandibula						x				0	0	2	5,5			y	
160	Sus domestica	Atlas										0	0	1	1,2				
160	Sus domestica	Ca	Sin									0	0	1	0,3	x			
160	Sus domestica	Cr	Sin									0	0	1	1,2				
160	Sus domestica	Cranie frag										0	0	4	8,1				
160	Sus domestica	Cranie frag										0	0	5	6,8				
160	Sus domestica	Maxilla	Sin									0	0	1	4,9				
160	Sus domestica	Mandibula						x				0	0	2	6,2				
160	Sus domestica	Parietale	Sin									0	0	1	5,5	x			
160	Sus domestica	Temporale	Sin									0	0	1	6,8				
160	Sus domestica	Dentes	Sin									0	0	1	1,6				
160	Sus domestica	Frontale	Sin									0	0	1	6				
160	Sus domestica	Dentes	Sin									0	0	1	2,8				
160	Sus domestica	Dentes	Dx									0	0	2	17,8				
160	Sus domestica	Mandibula	Dx				x					0	0	1	9,9				
160	Sus domestica	Dentes	Dx									0	0	1	1,8				
160	Sus domestica	Mandibula	Dx				x	x				0	0	1	14,1				två frag med passform och relativt lös M1
160	Sus domestica	Maxilla	Sin									0	0	1	23,3				två frag med passform. lös m3 anlag
160	Sus domestica	Calcaneus	Dx	Ofus		x	x					0	0	1	6,2				
160	Sus domestica	Scapula	Dx					x				0	0	1	2,3				två frag med passform
160	Sus domestica	Humerus	Dx		Fus				x	x		0	0	1	19,7	x		k	
160	Sus domestica	Fibula	Sin		Fus				x	x		0	0	1	0,6				
160	Sus domestica	Ulna	Dx				x					0	0	1	8,6				
160	Sus domestica	Ulna	Dx				x	x				1	0	1	7,4				
160	Sus domestica											0	0	1					
160	Sus domestica	Ulna	Dx					x	x			0	0	1	5,1				
160	Sus domestica	Radius	Dx	Fus		x	x	x	x			0	0	1	15,6			y	
160	Sus domestica	Radius	Sin	Fus		x	x	x				0	0	1	5,3				
160	Sus domestica	Scapula	Dx	Fus		x	x					0	0	1	11,9				
161	Bos taurus	Ve. lumb.		Fus	Fus	x						0	0	1	26,4				
161	Bos taurus	Temporale	Dx			x						0	0	1	6,6				pp
161	Bos taurus	Occipitale										0	0	1	14,7				
161	Bos taurus	Temporale	Sin			x						0	0	1	29,5				inkl pp
161	Mammalia	Cranie frag										0	0	9	8,3				
161	Mammalia	Indeterminata										0	0	17	5,1				
161	Sus domestica	Parietale										0	0	1	2,2				
161	Sus domestica	Costae						x				0	0	1	2,7			y	
161	Sus domestica	Parietale	Sin									0	0	1	1,8				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
162	Bos taurus	Costae		Ofus		x						0	0	1	2,3			y	
162	Bos taurus	Costae		Fus		x	x					0	0	1	5,7			y	
162	Mammalia	Indeterminata										0	0	45	9,7				
162	Mesomammalia	Coxae							x			2	0	1	3,4				
162	Mesomammalia	Costae						x				0	0	1	0,6				
162	Sus domestica	Femur	Sin		Ofus					x		0	0	1	7,2				
162	Sus domestica	Tibia	Sin	Ofus	Fus	x	x	x	x	x		0	0	1	37,1				brutet i tre delar vid framtagandet och lös prox epifys med perfekt passform
162	Sus domestica	Radius	Dx			x						0	0	1	2,5				
163	Bos taurus	Costae					x					0	0	1	7				
163	O/C	Scapula	Dx			x	x					0	0	1	5				
163	O/C	Ve. lumb.		Fus	Linje	x	x					0	0	1	3,3			y	
164	Cyprinidae	Pharyngeum inf.										0	0	1	0,1				
164	Mammalia	Indeterminata										2	0	48	10,3				
165	Sus domestica	Mt IV	Dx			x	x					0	0	1	4,9				
166	Megaungulat	Costae										0	0	5	7,5				
166	Megaungulat	Ve. indet.			Ofus					x		0	0	1	5,2				
167	Anser sp.	Sternum										0	0	1	1,6			y	
167	Bos taurus	Dentes	Dx									0	0	1	3,5				kraftigt sliten
167	Cyprinidae	Cleithrum										0	0	1	0,2				
167	Cyprinidae	Branchiostegale										0	0	2	0,2				
167	Cyprinidae	Keratohyale										0	0	1	0,2				
167	Mammalia	Indeterminata										0	0	4	0,1				
167	Megamammalia	Ossa longa										0	0	1	2,2				
167	Mesomammalia	Femur		Ofus		x						0	0	1	1,8			y	
167	Micromammalia	Dentes										0	0	2					
167	Micromammalia	Coxae	Sin	Fus		x	x	x	x	x	x	0	0	1	0,1				
167	Micromammalia	Femur	Dx	Fus	Ofus	x	x	x	x			0	0	1	0,1				
167	Sus domestica	Fibula	Dx				x	x	x			0	0	1	2				
167	Sus domestica	Fibula	Dx		Ofus				x			0	0	1	1,2			k	
167	Sus domestica	Ph 3				x	x					0	0	1	1,5				
167	Sus domestica	Mc II	Dx		Ofus	x	x	x	x			0	0	1	1,8			k	
167	Sus domestica	Tibia	Dx		Ofus					x		0	0	1	3,3				
167	Sus domestica	Ulna	Dx	Ofus			x	x				0	0	1	6,3				
167	Sus domestica	Calcaneus	Dx	Ofus		x	x					0	0	1	9,5			y	
167	Sus domestica	Talus	Dx									0	0	1	8,4			y	
167	Teleostei	Costae										0	0	11	0,1				
167	Teleostei	Cranie frag										0	0	11	0,6				
167	Teleostei	Lepidothrichia										0	0	5	0,1				
168	O/C	Costa 1				x	x					0	0	1	2,8			y	
168	O/C	Tibia	Sin	Ofus	Fus		x	x	x	x		0	0	1	45				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
168	Parvamammalia	Ossa longa										0	0	1	0,4				
169	Aves sp.	Indeterminata										0	0	1	0,1				
169	Aves sp.	Synsacrum										0	0	1	0,3				
169	Bos taurus	Ph 1		Fus		x	x	x				0	0	2	35,4				
169	Cyprinidae	Costae										0	0	1	0,1			y	
169	Mammalia	Indeterminata										0	0	1	0,1				
169	Sus domestica	Costae				x	x					0	0	1	0,3				
169	Sus domestica	Tibia	Dx	Ofus	Ofus		x	x	x			0	0	1	14,9				
169	Sus domestica	Ph 3				x	x					0	0	1	0,9				
170	Anatidae	Humerus				x	x	x				0	0	1	1,1				
170	Bos taurus	Costae				x	x					0	0	1	9,1			y	
170	Mesomammalia	Ossa longa		Ofus								0	0	1	3,7				trochanter/tubercel på antingen humerus eller femur
171	Aves sp.											0	0	3	1,5				
171	Bos taurus	Os sesamoideus										0	0	1	1	x			
171	Bos taurus	Dentes										0	0	1	2				
171	Bos taurus	Ph 2		Fus		x	x	x				0	0	1	10,4				
171	Bos taurus	Os sesamoideus										0	0	2	2,5				
171	Clupea sp.	Operculare										0	0	1	0,1				
171	Gallus domesticus	Synsacrum										0	0	1	0,5				
171	Gallus domesticus	Radius										0	0	1	0,6				
171	Mammalia	Indeterminata										0	0	8	1,8				
171	Megamammalia	Cartilago costae										0	0	3	5				
171	Parvamammalia	Ossa longa										0	0	2	0,4				
171	Sus domestica	Calcaneus	Sin	Ofus			x					0	0	1	0,7				
171	Sus domestica	Ph 3				x	x					0	0	1	0,3				mp 2/5
171	Sus domestica	Mp					x	x				0	0	1	1			k	mp 2/5
171	Sus domestica	Ve. indet.		Ofus	Ofus	x						0	0	1	0,2				
171	Sus domestica	Costae						x				0	0	1	1,1			k	
171	Sus domestica	Humerus	Dx			x						0	0	1	3,8			y	trochanter major
171	Sus domestica	Scapula						x				0	0	2	1,6			y	
171	Sus domestica	C3	Sin									0	0	1	1,7				
171	Sus domestica	Mp				x	x	x				0	0	1	1,5		x		mp 2/5
171	Sus domestica	Temporale										0	0	1	4,4				bt
171	Sus domestica	Ph 1		Linje		x	x	x				0	0	1	4,1		x		
171	Teleostei											0	0	88	4,4				
172	Anser sp.	Carpometacarpus										0	0	1	1,7				
172	Anura sp.	Ossa longa										0	0	1	0,1				
172	Aves sp.	Indeterminata										0	0	2	0,1				
172	Bos taurus	Dentes										0	0	1	2,2				
172	Bos taurus	Ph 3				x	x	x				0	0	2	30,8				
172	Bos taurus	Ve. lumb.		Fus	Fus	x	x					0	0	1	65,3				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
172	Cyprinidae	Cleithrum										0	0	2	0,2				
172	Cyprinidae	Keratohyale										0	0	1	0,1				
172	Cyprinidae	Coracoideum										0	0	1	0,3				
172	Cyprinidae	Costae										0	0	1	0,1				
172	Esox lucius	Cleithrum										0	0	1	0,2				
172	Gallus domesticus	Tibiotarsus										0	0	1	2,5				
172	Gallus domesticus	Coracoideum										0	0	1	0,3				
172	Mammalia	Indeterminata										0	0	4	2,6				
172	Megamammalia	Ossa longa										0	0	2	13,1				
172	Megamammalia	Ve. indet.			Ofus					x		0	0	1	0,4				
172	Megamammalia	Ve. indet.					x					0	0	1	2,7			y	
172	Megamammalia	Costae						x				0	0	1	1,7				
172	Mesomammalia	Ossa longa										0	0	5	7,1				
172	Mesomammalia	Ossa longa										0	0	1	0,3			y	
172	Mesoungulat	Costae										0	0	4	0,9				
172	Mesoungulat	Ve. lumb.					x					0	0	1	1,2			y	avhuggna proc
172	Micromammalia	Mandibula	Dx			x	x	x				0	0	2	0,1				
172	O/C	Ve. thor.		Fus	Fus	x	x					0	0	1	5,9			y	
172	O/C	Ve. thor.		Fus	Fus	x	x					0	0	1	5,9			k	
172	O/C	Ulna		Ofus			x	x	x			0	0	1	7,4				
172	Parvamammalia	Ve. thor.		Fus	Ofus							0	0	1	0,3			y	
172	Parvamammalia	Ossa longa										0	0	3	0,5				
172	Sus domestica	Costae					x	x				0	0	1	0,2				
172	Sus domestica	Costae						x				0	0	2	1,7				
172	Sus domestica	Costae					x	x				0	0	1	1,4			y	
172	Sus domestica	Costae		Ofus		x	x					0	0	1	1,2				
172	Sus domestica	Costae					x	x				0	0	1	1,6			k	
172	Sus domestica	Costae					x	x				0	0	1	1,6			y	
172	Sus domestica	Ph 2		Fus		x	x	x				0	0	1	0,4				ph 2/4: 2
172	Sus domestica	Costae				x	x					0	0	1	4,1			y	
172	Sus domestica	Ph 2		Ofus		x						0	0	1	0,5				
172	Sus domestica	Ph 1		Ofus			x	x				0	0	1	0,7				ph 2/4 :1
172	Sus domestica	Ph 2		Fus		x	x	x				0	0	1	2,2				
172	Sus domestica	Ph 2		Ofus			x	x				0	0	1	1				
172	Sus domestica	Calcaneus	Sin	Ofus		x	x					0	0	1	8,4		x		
172	Sus domestica	Ph 1		Fus		x	x	x				0	0	1	4,8				
172	Sus domestica	Mt III	Dx		Fus	x	x	x	x	x		0	0	1	10,7				
172	Teleostei	Indeterminata										0	0	3	0,1				
173	Parvamammalia	Tibia						x				0	0	1	0,4				
174	O/C	Premaxilla	Dx									0	0	1	1,1			k	
174	Sus domestica	Dentes										0	0	1	0,6				
174	Teleostei	Costae										0	0	1	0,1				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
175	Anura sp.	Ossa longa										0	0	4	0,1				
175	Aves sp.											0	0	1	0,2				
175	Bos taurus	Ph 3				x	x					0	0	1	9,4				
175	Cyprinidae	Ve. praec.										0	0	1	0,2				
175	Mesomammalia	Ossa longa										0	0	1	0,8				
175	Sciurus vulgaris	Dentes										0	0	1	0,1				
175	Sciurus vulgaris	Mt			Fus	x	x	x	x	x		0	0	1	0,1			k	metapoderna i referenssamlingen omärkta pga storleken
175	Sus domestica	Coxae	Dx	Ofus		x	x	x				0	0	1	0,6				
175	Sus domestica	Ve. lumb.		Ofus	Ofus	x						0	0	1	0,1				
175	Sus domestica	Costae		Fus		x	x					0	0	1	2,1			k	
175	Sus domestica	Cranie frag										0	0	2	0,8				
175	Sus domestica	Ph 3				x	x					0	0	1	0,4				mp 2/5 : 3
175	Sus domestica	Costae		Fus		x	x					0	0	1	2,1			y	
175	Sus domestica	Ph 1		Ofus			x	x				0	0	1	3				
175	Sus domestica	Ph 2		Fus		x	x	x				0	0	1	1,9			k	
175	Sus domestica	Mt III	Dx	Fus	Fus	x	x	x	x	x		0	0	1	6,8				
175	Sus domestica	Ulna	Sin	Ofus			x	x				0	0	1	16,3			y	
175	Teleostei											0	0	17	1				
176	Anatidae	Humerus				x	x					0	0	1					
176	Anura sp.	Ossa longa										0	0	1	0,1				
176	Bos taurus	Costae						x				0	0	1	19			y	
176	Mammalia	Indeterminata										0	0	1	0,7				
176	Megaungulat	Ve. lumb.					x					0	0	1	3,1			y	
176	Mesomammalia	Ve. thor.		Ofus	Ofus		x					0	0	1	0,5				
176	Mesomammalia	Scapula										0	0	1	1,4				
176	Mesoungulat	Ve. lumb.			Ofus					x		0	0	1	0,7				
176	Mesoungulat	Costae						x				0	0	2	0,4				
176	Sus domestica	Mt IV	Sin		Ofus	x	x	x	x			0	0	1	5,5				
176	Sus domestica	Humerus	Sin		Fus				x	x		0	0	1	27,5			k	
176	Sus domestica	Radius	Sin		Ofus	x	x	x	x			0	0	1	25,1			y	
176	Sus domestica	Mt IV	Dx		Ofus	x	x	x	x			0	0	1	5,4				
176	Sus domestica	Ph 1		Fus		x	x	x				0	0	1	1				mp 2/5
176	Sus domestica	Radius	Sin		Ofus	x	x	x	x			0	0	1	25,1			k	
176	Sus domestica	Ph 2		Ofus			x	x				0	0	1	2				
176	Sus domestica	Costae				x	x					0	0	1	2,8	x		y	
176	Sus domestica	Ph 1		Fus		x	x	x				0	0	1	5,1				
176	Sus domestica	Ph 1		Ofus		x	x	x				0	0	1	4,3				
177	Bos taurus	Dentes										0	0	1	2,8				
177	Megamammalia	Indeterminata										0	0	1	3,7				
177	Mesomammalia	Femur			Ofus					x		0	0	1	3,1				
177	O/C	Scapula	Dx				x	x				0	0	1	2,3				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
177	Sus domestica	Mp					x	x	x			0	0	1	1,5				MP 2/5
177	Sus domestica	Scapula	Sin	Fus		x	x					0	0	1	8				
177	Sus domestica	Dentes	Sin									0	0	1	4,7				
177	Sus domestica	Mc IV	Dx	Fus	Ofus	x	x	x	x			0	0	1	5,4				
177	Sus domestica	Radius	Sin	Fus	Ofus	x	x	x	x			0	0	1	21,9				
178	Bos taurus	Ci	Dx									0	0	1	4,4				
178	Bos taurus	Ph 1		Fus		x	x	x				0	0	1	19,8				
178	Bos taurus	Cu	Dx									0	0	1	7,5				
178	Bos taurus	Radius	Dx		Fus				x	x		0	0	1	87,8				
178	Bos taurus	Costae					x	x				0	0	1	15,1			y	
178	Cyprinidae	Keratohyale										0	0	1	0,2				
178	Mammalia	Indeterminata										0	0	6	1				
178	Mammalia	Indeterminata										0	0	1	1			y	
178	Megamammalia	Cartilago costae										0	0	1	3				
178	Megamammalia	Indeterminata										0	0	1	5,4			y	
178	Mesomammalia	Ossa longa										0	0	2	3				
178	Mesomammalia	Tibia		Ofus		x						0	0	1	1,1				
178	Mesoungulat	Ve. indet.		Ofus	Ofus	x						0	0	1	1,8				
178	Mesoungulat	Ve. sacr.		Ofus		x						0	0	1	1,7				
178	O/C	Dentes frag										0	0	1	0,5				
178	O/C	Femur	Sin		Ofus					x		0	0	1	12				
178	O/C	Ve. thor.		Fus	Ofus	x	x					0	0	1	4,3				
178	Parvamammalia	Ossa longa										0	0	2	0,3				
178	Sus domestica	Mp			Ofus					x		0	0	1	1,2	x			
178	Sus domestica	Dentes	Sin									0	0	1	8,2				
178	Sus domestica	Mc II	Dx		Ofus	x	x	x	x			0	0	1	1,5				
178	Sus domestica	Ph 3				x	x					0	0	1	0,2				mp 2/5
178	Sus domestica	Mp			Ofus		x	x	x			0	0	1	1,4	x			
178	Sus domestica	Humerus	Dx	Ofus	Ofus		x	x	x			0	0	1	2,4				
178	Teleostei	Costae										0	0	1	0,1				
179	Anatidae	Humerus				x	x	x	x	x		0	0	1	3,9				
179	Aves sp.											0	0	1	0,5				
179	Bos taurus	Ve. lumb.		Fus	Fus	x	x					0	0	1	61,3				
179	Cyprinidae	Parasphenoidale										0	0	1	0,2				
179	Cyprinidae	Costae										0	0	4	0,4				
179	Megaungulat	Ve. indet.		Fus	Ofus	x						0	0	1	9,4			y	
179	Mesomammalia	Ossa longa										0	0	1	2				
179	O/C	Radius	Dx			x	x	x				0	0	1	19,4				
179	Parvamammalia	Ossa longa										0	0	1	0,1				
179	Sus domestica	Mp			Ofus		x	x	x			0	0	1	1,5	x			mp 2/5
179	Sus domestica	Costae						x				0	0	1	0,6	x			
179	Sus domestica	Maxilla	Dx									0	0	1	4,7				två frag, passform

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
179	Sus domestica	Coxae	Dx	Ofus						x		0	0	1	4,1	x			
179	Sus domestica	Mc III	Sin		Ofus	x	x	x	x			0	0	1	8,8				
179	Sus domestica	Mandibula	Dx				x	x				0	0	1	8,8				tre frag
179	Sus domestica	Dentes	Sin									0	0	1	15,3				
179	Sus domestica	Ph 1					x	x				0	0	1	3,6				
179	Sus domestica	Mandibula	Dx								x	0	0	1	2,3			y	
179	Sus domestica	Tibia	Dx	Ofus		x						0	0	1	2				
180	Aves sp.											0	0	3	1,3				
180	Bos taurus	Ph 1						x				0	0	1	5,9				
180	Bos taurus	Costae						x	x			0	0	1	24,7				
180	Mammalia	Indeterminata										0	0	7	1,2				
180	O/C	Scapula	Dx				x			x		0	0	1	2,7				
180	Sus domestica	Ulna	Sin		Ofus				x			0	0	1	2,7				
180	Sus domestica	Costae		Ofus		x	x	x				0	0	1	0,6			y	
180	Sus domestica	Costae		Ofus		x	x	x				0	0	1	0,6			k	
180	Sus domestica	Mt IV	Dx			x	x	x	x			0	0	1	5,6				
180	Sus domestica	Mc IV	Sin		Ofus	x	x	x	x			0	0	1	5,1				
180	Sus domestica	Mt IV	Dx		Ofus	x	x	x	x			0	0	1	12,2				
180	Teleostei	Cranie frag										0	0	2	0,3				
181	Aves sp.	Ossa longa										0	0	1	0,2				
181	Bos taurus	Os sesamoideus										0	0	1	1,5				
181	Gallus domesticus	Scapula										0	0	1	0,4				
181	Sus domestica	Mc V	Dx		Ofus	x	x	x	x			0	0	1	1,8				
181	Sus domestica	Ph 2		Ofus			x	x				0	0	1	3,3				
181	Sus domestica	Mc II	Sin		Ofus	x	x	x	x			0	0	1	1,6				
181	Teleostei	Lepidothrichia										0	0	1	0,1				
182	Anatidae	Radius				x	x	x	x	x		0	0	1	0,4				delad i två
182	Anura sp.	Ossa longa										0	0	1	0,1				
182	Aves sp.	Ossa longa										0	0	1	3,2				flera fragment, samma diafys
182	Mammalia	Ossa longa										0	0	1	1,2			y	ofus diafysdel, kluven
182	Mesomammalia	Ossa longa										0	0	1	3,3			y	
182	O/C	Humerus	Dx		Ofus				x			0	0	1	2,6				
183	Anura sp.	Ossa longa										0	0	2	0,2				
183	Aves sp.	Ossa longa						x				0	0	1	1,3				
183	Megamammalia	Indeterminata										0	0	2	10,9				
184	Bos taurus	Ph 1		Fus		x	x	x				0	0	1	24,9				
184	Bos taurus	Dentes										0	0	1	1,7				
184	Gallus domesticus	Femur				x	x					0	0	1	1,2				
184	Mammalia	Indeterminata										0	0	2	4,6				
184	Micromammalia	Humerus										0	0	1	0,1				
184	Micromammalia	Mandibula	Dx									0	0	1	0,1				
184	O/C	C4	Dx									0	0	1	0,7				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
184	Sus domestica	Radius	Sin	Ofus			x	x	x			0	0	1	23,9			k	
185	Aves sp.	Indeterminata										0	0	1	0,1				
185	Bos taurus	Dentes										0	0	1	2,6				
185	Micromammalia	Femur		Fus		x	x	x				0	0	1	0,2				
185	Parvamammalia	Femur	Sin		Ofus					x		0	0	1	0,4				katt eller hare, passar på båda
185	Sus domestica	Ve. lumb.		Fus	Ofus	x	x					0	0	1	16,6			y	
185	Sus domestica	Mp			Ofus					x		0	0	1	1,6				
185	Sus domestica	Costae				x	x	x				0	0	1	5,8			y	
186	Anura sp.	Indeterminata										0	0	3	0,3				
186	Bos taurus	Costae		Ofus		x	x					0	0	1	19,9			y	
186	Bos taurus	Dentes										0	0	1	3,5				
186	Cyprinidae	Costae										0	0	1	0,1				
186	Esox lucius	Cleithrum										0	0	1	0,2				
186	Mammalia	Indeterminata										0	0	1	0,1				
186	Mesomammalia	Ve. indet.										0	0	1	1,6			y	
186	Mesoungulat	Costae										0	0	1	0,2				
186	Micromammalia	Mc V			Fus	x	x	x	x	x		0	0	1	0,1				inte ekorre...
186	Sus domestica	Mc IV	Dx		Ofus	x	x	x	x			0	0	1	5,8				
186	Sus domestica	Ulna	Sin		Ofus				x			0	0	1	3,6				
186	Sus domestica	Ulna	Sin	Ofus			x	x				0	0	1	13,6				
186	Teleostei											0	0	2	0,1				
187	Aves sp.	Synsacrum										0	0	1	0,3			y	
187	Micromammalia	Cranie frag										0	0	10	0,1				ung liten gnangre eller sork.en underkäke finns
187	Micromammalia	Dentes										0	0	1					gräns parva/micro storlek. Gnagartand, inte hare eller ekorre.
187	Micromammalia	Os cruris			Ofus		x	x	x			0	0	1	0,1				
187	Sus domestica	Ph 1		Ofus			x	x				0	0	1	0,7				
188	Aves sp.	Ossa longa										0	0	1	4,9			k	stor fågel. örn?
188	Bos taurus	Os sesamoideus										0	0	1	0,7				
188	Bos taurus	Costae		Fus		x	x					0	0	1	1,2			y	
188	Bos taurus	Costae						x				0	0	1	7,6			k	
188	Bos taurus	Costae						x				0	0	1	7,6			y	
188	Bos taurus	Ph 2		Fus		x	x	x				1	0	1	11				
188	Cyprinidae	Operculare										0	0	1	0,1				
188	Esox lucius	Keratohyale										0	0	1	0,1				
188	Esox lucius	Epihyale										0	0	1	0,1				
188	Gallus domesticus	Scapula										0	0	1	0,3				
188	Mammalia	Dentes frag										0	0	1	0,1				emaljfrag
188	Mammalia	Indeterminata										0	0	1	0,8				
188	Micromammalia	Femur	Dx				x	x	x			0	0	1			x		sciurus? två frag med passform
188	O/C	Dentes										0	0	1	0,1				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
188	Sus domestica	Costae		Fus		x	x	x				0	0	1	3,4			y	
188	Sus domestica	Ph 1		Fus		x	x	x				0	0	1	3,8				
188	Sus domestica	Ph 2		Ofus			x	x				0	0	1	2,5				
188	Sus domestica	Mc IV	Sin	Fus	Fus	x	x	x	x	x		1	0	1	4,8				
189	Aves sp.											0	0	5	1,2				
189	Bos taurus	Costae					x	x				0	0	1	17,1				
189	Bos taurus	Dentes										0	0	2	4,2				
189	Bos taurus	Tibia	Sin	Fus		x	x	x				0	0	1	108			k	tre frag med passform. eventuellt spräckt som färskt.
189	Bos taurus	Coxae	Dx					x				0	0	1	32,9			y	
189	Bos taurus	Femur	Sin	Fus		x	x	x				0	0	1	91,7				
189	Bos taurus	Tibia	Sin	Fus		x	x	x				0	0	1	108			y	tre frag med passform. eventuellt spräckt som färskt.
189	Bos taurus	Humerus	Sin			x						0	0	1	3,6			y	
189	Bos taurus	Femur	Sin		Fus				x	x		0	0	1	40,1			y	
189	Bos taurus	Ph 3				x	x					0	0	1	12,6				
189	Bos taurus	Os sesamoideus										0	0	2	2,6				
189	Bos taurus	Ph 1		Fus		x	x	x				0	0	3	44,2				
189	Cyprinidae	Operculare										0	0	1	0,1				
189	Galliformes	Furcula										0	0	1	0,4				
189	Mammalia	Indeterminata										0	0	29	9,1				
189	Megamammalia	Ossa longa										0	0	1	7,9				
189	Megamammalia	Cartilago costae										0	0	1	2,1				
189	Mesomammalia	Ossa longa										0	0	4	8,5			y	
189	Perca fluviatilis	Operculare										0	0	1	0,1				
189	Sus domestica	Costae						x				0	0	2	2,3			k	
189	Sus domestica	Costae					x	x				0	0	2	0,6			y	
189	Sus domestica	Costae						x				0	0	2	2,3			y	
189	Sus domestica	Talus	Sin									0	0	1	5,2				
189	Sus domestica	Costae				x	x	x				0	0	3	0,6				
189	Sus domestica	C4	Sin									0	0	1	1,3				
189	Sus domestica	C4	Dx									1	0	1	1,3				
189	Sus domestica	Humerus	Sin	Ofus	Ofus		x	x	x			0	0	1	2,3				
189	Sus domestica	Femur	Sin	Ofus		x	x					0	0	1	3,8				diafys + troch maj
189	Sus domestica	Humerus	Dx		Ofus			x	x			0	0	1	9,2				
189	Sus domestica	Humerus	Dx		Ofus					x		0	0	1	3,6				
189	Sus domestica	Ph 1		Ofus		x						0	0	1	0,8				
189	Sus domestica	Mp					x	x	x			0	0	1	3				
189	Sus domestica	Ph 2		Fus		x	x	x				1	0	1	1,9				
189	Sus domestica	Ph 1		Ofus			x	x				0	0	4	6,5				
189	Sus domestica	Scapula	Dx			x	x	x		x		0	0	1	24,5			y	
189	Sus domestica	Ph 3				x	x					0	0	6	7,2				

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
189	Teleostei											0	0		2,6				
190	Bos taurus	Os sesamoideus										0	0	1	4				
190	Cyprinidae	Costae							x			0	0	1	0,1				
190	Mammalia	Indeterminata										0	0	1	0,9				
190	O/C	Femur	Sin	Ofus	Ofus		x	x	x			0	0	1	43,1				
190	Sus domestica	Costae						x				0	0	1	0,5			k	
190	Sus domestica	Costae						x				0	0	1	0,5			y	
190	Sus domestica	Fibula						x				0	0	1	0,5			y	
190	Sus domestica	Costae				x	x	x				0	0	1	6,7			y	
190	Sus domestica	Ph 3				x	x					0	0	1	1,7				
190	Sus domestica	Dentes										0	0	1	1,1				
190	Sus domestica	T4	Dx									0	0	1	4,9				
191	Bos taurus	Costae						x	x			0	0	1				y	två frag med passform i moderna brottytor
191	Bos taurus	Costae							x			0	0	1	4,1			y	
191	Bos taurus	Costae						x				0	0	1	13,1			y	
191	Bos taurus	Humerus	Sin			x						0	0	1	9,4				
191	Bos taurus	Costae							x			0	0	1	4,1			k	
191	Canis familiaris	Dentes	Sin									0	0	1	0,2				
191	Clupea sp.	Cleithrum										0	0	1	0,1				
191	Clupea sp.	Operculare										0	0	1	0,1				
191	Cyprinidae	Cranie frag										0	0	2	0,1				
191	Cyprinidae	Squama										0	0	4	0,1				
191	Cyprinidae	Costae										0	0	3	0,1				
191	Cyprinidae	Ve. caud.										0	0	2	0,4				
191	Gallus domesticus	Femur	Sin	Fus	Fus	x	x	x	x	x		0	0	1	3,3			k	
191	Mammalia	Indeterminata										0	0	4	2,2				
191	Megamammalia	Ve. indet.		Fus	Ofus	x	x					0	0	1	6,6			y	
191	Megaungulat	Cartilago costae										0	0	1	4,4				
191	Mesomammalia	Ossa longa										0	0	1	0,8		x		sus mp 2/5?
191	Mesomammalia	Ossa longa										0	0	1	0,4			y	
191	O/C	Coxae	Dx						x			0	0	1	3,4		x	y	
191	O/C	Femur	Dx		Ofus				x	x		0	0	1	18,9		x		diaf del och dist epi med perfekt passform
191	Sus domestica	Ve. thor.		Ofus	Ofus							0	0	1	0,5			y	passform mellan corpus och arcus, hugget ej genom hela vägen över till arcus.
191	Sus domestica	Dentes	Dx									0	0	1	0,4				
191	Sus domestica	Mp			Ofus					x		0	0	1	0,3				mp 2/5
191	Sus domestica	Ve. thor.		Ofus	Ofus	x	x					0	0	3	2,4				3 st kotor med perfekt passform mellan ofus corpus och arcus.
191	Sus domestica	Ph 3				x	x					0	0	1	2				
191	Sus domestica	Fibula	Dx	Ofus			x	x				0	0	1	2,9				
191	Sus domestica	Radius	Sin	Fus	Ofus	x	x	x	x			0	0	1	15,6			k	

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-typ	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R		
191	Teleostei	Indetrminata										0	0	1	0,1				
192	Bos taurus	Os sesamoideus										0	0	1	1,7				
192	Bos taurus	Ph 3				x	x					0	0	1	10,6				
192	Mammalia	Indeterminata										0	0	1	10,5				Epifysliknande fragment inkapslat i mycket hårt kalkbruk eller liknande
192	Mesomammalia	Ossa longa										0	0	1	6,1				
193	Bos taurus	Os sesamoideus										0	0	1	1,4				
193	Bos taurus	Dentes										0	0	2					
193	Mammalia	Indeterminata										0	0	2	1,5				
193	Mesomammalia	Ve. indet.					x					0	0	1	1			y	
194	Gallus domesticus	Scapula										0	0	1	0,5				
194	Gallus domesticus	Coracoideum										0	0	1	0,8				
194	Mammalia	Indeterminata										0	0	2	1,3				
194	Megamammalia	Ossa longa										0	0	1	12,4				
194	Mesomammalia	Ossa longa										0	0	1	0,7				
194	Sus domestica	Tibia	Sin	Ofus	Ofus		x	x	x			0	0	1	1,4				
194	Sus domestica	Mt III	Dx		Fus	x	x	x	x	x		0	0	1	10,4				
195	Anura sp.	Ossa longa										0	0	2	0,1				
195	Mesomammalia	Ossa longa										0	0	1	3,2				
196	Aves sp.	Femur	Sin	Fus	Fus	x	x	x	x	x		0	0	1	2,2			k	
196	Aves sp.	Ossa longa										0	0	3	0,3				
196	Mammalia	Indeterminata										0	0	6	4				
196	Megaungulat	Cartilago costae										0	0	1	3,7				
196	Megaungulat	Ve. lumb.		Fus	Fus	x						0	0	1	9,2			y	
196	O/C	Cu	Sin									0	0	1	0,7				
196	Sus domestica	Ve. thor.		Ofus			x					0	0	1	0,2				
196	Sus domestica	Ulna	Sin	Ofus			x	x	x			0	0	1	4,1				
196	Sus domestica	Radius	Sin	Ofus			x	x	x			0	0	1	2,8				
196	Sus domestica	Mt IV	Sin			x	x	x				0	0	1	1,8				
196	Sus domestica	Mc II	Sin		Ofus	x	x	x	x			0	0	1	1,9				
196	Sus domestica	Ph 1		Ofus			x	x				0	0	1	1,8				
196	Sus domestica	Mc III	Dx		Ofus	x	x	x	x			0	0	1	5,7				
196	Sus domestica	Tc	Dx									0	0	1	3,3				
197	Mammalia	Indeterminata										0	0	1	0,1				
197	Micromammalia	Radius		Fus	Ofus	x	x	x	x			0	0	1	0,1				
197	Parvamammalia	Ossa longa										0	0	1	0,3				
198	Aves sp.	Humerus						x	x	x		0	0	1	1,3				
198	Cyprinidae	Costae										0	0	16	0,8				
198	Lepus sp.	Femur	Sin	Fus		x	x					0	0	1	2,1			k	
198	Lepus sp.	Femur	Sin	Fus		x	x					0	0	1	2,1			y	
198	Mesomammalia	Ossa longa										0	0	1	0,9				
198	Parvamammalia	Ossa longa										0	0	2	0,1				

Benkatalog

Fnr	Art	Element	Sida	Epifys		Del						Weathering	Förbränning	Antal	Vikt	Gnag		Stycken-	Kommentarer
				Prox	Dist	1	2	3	4	5	6				gram	C	R	typ	
198	Sus domestica	Dentes										0	0	1	0,1				
198	Sus domestica	Scapula	Sin	Ofus		x	x	x	x			0	0	1	0,7				
228	Bos taurus	Dentes	Dx									0	0	1	11,4				
229	Megamammalia	Ossa longa										0	0	3	5,7				
229	Mesomammalia	Ossa longa										0	0	13	3				
229	Sus domestica	Mp			Fus				x	x		0	0	1	2,8				
229	Sus domestica	Ulna	Dx				x					0	0	1	1,3				
230	Mesomammalia	Costae						x				0	0	1	1,7				
231	Bos taurus	Mc	Sin			x	x					0	0	1	34				
231	Megaungulat	Ve. indet.										0	0	1	5,5	x			
231	Megaungulat	Ve. indet.										0	0	1	3,3			y	
231	Perca fluviatilis	Operculare	Dx			x	x					0	0	1	0,1				
232	Cyprinidae	Cleithrum	Dx			x						0	0	1	0,9				
232	O/C	Ve. thor.					x	x				0	0	1	2,1			y	
233	Bos taurus	Costae					x					0	0	1	10,9			y	
233	Lepus sp.	Ve. thor.		Fus	Ofus	x						0	0	1	0,1				
233	Mesoungulat	Costae						x	x			0	0	1	1			y	
233	Sus domestica	Dentes										0	0	1	2,7				
233	Sus domestica	Dentes										0	0	1	1,8				
233	Sus domestica	Mandibula	Sin			x	x	x				0	0	1	88,1				

Tagna mått

BenId	Fnr	Art	Element	Sida	Antal	Vikt	Måttnamn	Måttvärde	Kommentar
111846	151	Sus domestica	Talus	Sin	1	5,1	GL	35,9	
111927	152	O/C	Talus	Dx	1	1,4	GLl	21,9	
111928	152	O/C	Talus	Sin	1	1,4	GLl	25	
111269	160	Bos taurus	Mt	Dx	1	117,6	GL	209,1	
111269	160	Bos taurus	Mt	Dx	1	117,6	Bd	47,2	
111270	160	Bos taurus	Talus	Sin	1	42,6	GLl	62	
111270	160	Bos taurus	Talus	Sin	1	42,6	GLm	56,5	
111434	169	Sus domestica	Tibia	Dx	1	14,9	GL	98,5	Ofus prox och dist
111484	175	Sus domestica	Mt III	Dx	1	6,8	GL	70,6	
111685	189	Sus domestica	Humerus	Sin	1	2,3	GL	48,4	ofus p+d, som åldersind.
111630	194	Sus domestica	Mt III	Dx	1	10,4	GL	71,8	

Tandslitage

BenId	Fnr	Art	Element	Sida	dp4	p4	m1	m2	m3
111959	149	Sus domestica	Dentes	Sin					7
111804	150	Sus domestica	Mandibula	Dx					6
111805	150	Sus domestica	Dentes	Dx			16	7	
111503	156	Sus domestica	Mandibula	Dx		7			7
111313	160	Sus domestica	Mandibula	Dx	16		8		
111315	160	Sus domestica	Mandibula	Dx				10	
111316	160	Sus domestica	Dentes	Dx		7			
111317	160	Sus domestica	Dentes	Sin				13	
111264	233	Sus domestica	Mandibula	Sin				10	8