

# Pingeyrar Faunal Report - 2024 Excavation Season

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The 2024 excavation season yielded a relatively small collection of animal remains (NISP = 1418), slightly smaller than the assemblage from the previous year. Bone preservation at the site was, overall, fairly poor and remains showed a high degree of fragility and fragmentation, with many unrecoverable; only recovered remains were recorded and analysed. All remains are hand-collected. The distribution of the faunal material across the excavated area is, therefore, not necessarily a reflection of depositional practices at the site and biased towards larger and more robust bones and species.

Area E was extended considerably during the 2024 excavation and produced a much larger collection of animal bones than the smaller Area F, while Area D was discontinued (Tab. 1). Due to the extension not all remains can be attributed to medieval, i.e. monastic, levels. Area F yielded only a small assemblage of faunal remains, likely due to its location in the cemetery. The remains were dry-cleaned only, due to their state of preservation; analysis of these remains follows below. The full assemblage is held at the National Museum of Iceland.

Caprines (32%) vastly dominate the assemblage from Area E, followed closely by medium-sized mammals (28%) which are likely to be overwhelmingly caprine remains as well. In area F, caprines make up more than half of the material, followed by cattle (20%). Among the caprines, 191 (Area E) and 22 (Area F) fragments could be identified as belonging to sheep (*Ovis Aries*) while five fragments from Area E showed morphological features more comparable to goat (*Capra hircus*). No goats could be securely identified for Area F. Due to the preservation of bone at Pingeyrar, it was frequently impossible to determine specimen identity beyond their taxonomic class, thus leading to such a large 'mammal' category. Other species and classes are present at much lower frequencies, of which fish (almost exclusively gadids, with Haddock (*Melanogrammus aeglefinus*) the most common; small number of fragments determined simply as 'fish'; see Tab. 2), bird (mostly belonging to *Uria* sp.; see Tab. 2) and cattle remains are the more common. Conversely, bird and fish bones were absent entirely from Area F. Fish and bird also derive almost exclusively from later contexts, and only two haddock bones were found in medieval layers in Area E.

Low numbers of horse can generally be observed in medieval contexts, outside of specialised breeding sites. Here, horse presence is somewhat overrepresented due to the high degree of fragmentation in the assemblage resulting from poor preservation. The presence of marine resources, including molluscs, seals and whales, suggests a regular exploitation of the coastal landscape. Notable are two large whale scapulae found in a mixed turf layer at the edge of the trench's 2023 extent (Fig. 1). They had been chopped,

Table 1: Number of identified specimens per area and taxonomic group for the 2024 excavation season. MA denotes bones exclusively from medieval contexts. \*includes specimens that are probably sheep or goat, respectively, but could not be determined with complete confidence. \*\*includes highly fragmented specimens and is therefore overrepresenting the specie's frequency. \*\*\* includes 37 rib fragments which likely stem from the same individual.

Species/Area	E	E (MA)	F	F (MA)	Total	% of Total
Cattle	64	36	28	1	92	6%
Horse	19**	16	7		26	2%
Sheep/Goat (total)	406	121	76	4	482	34%
Goat*	5	1			5	1%
Sheep*	191	26	22	3	213	44%
Pig	4	4	2		6	0%
Carnivore	1	1			1	0%
Canids	1	1			1	0%
Cat	1				1	0%
Phocids	8				8	1%
Cervids	1	1			1	0%
Cetaceans	38**	37			38	3%
Mammals	154	144	9		163	11%
Mammals, large	35	20	6		41	3%
Mammals, medium	356	272	7		363	26%
Mammals, small	1	1			1	0%
Birds	62				62	4%
Fish	89***	2			89	6%
Molluscs	41**		2	2	43	3%
<b>TOTAL</b>	<b>1281</b>	<b>656</b>	<b>137</b>	<b>7</b>	<b>1418</b>	<b>100%</b>

evidently to even out the slightly curving bones, and were placed flat on the ground. The bones were in a fragile condition and further fragmented during the recovery process; thus, species could not be determined. However, their size suggests one of the larger whale species. Interestingly, most of the cetacean remains come from medieval contexts while seal bones are restricted to the post-medieval layers. With two exceptions, molluscs are also found exclusively in the later contexts.

A small number of pig remains was found in both areas; pig is rarely encountered in post-settlement sites in Iceland. Another unusual find is the tiny, but diagnostic fragment of a

deer metapodium. Deer are not native to the island and were not introduced until the late 18<sup>th</sup> century (Thórisson 1984). This specimen must therefore derive from an import, though whether this was in the form of meat, bones or a live animal cannot be determined.

A small number of human remains was found amongst the animal bones. These were mostly singular teeth and tarsal bones; the latter possibly belonged to some of the burials in Area F and were (accidentally) removed as subsequent burials in the area disturbed the older graves and thrown in with the normal refuse. These disarticulated, isolated human remains were not further recorded by the author.

Table 2: Species list for bird and fish specimens. % NISP is the percentage from the total of birds/fish, not the overall NISP of specimens. \*includes two specimens of a similar size to *Anas platyrhynchos* as well as one smaller duck.

Species	NISP	%	Species	NISP	%
Anatidae*	3	5%	Gadidae	1	1%
<i>Cygnus sp.</i>	1	2%	<i>Gadus morhua</i>	9	10%
<i>Gavia stellata</i>	1	2%	<i>Melanogrammus aeglefinus</i>	39	44%
<i>Haliaeetus sp.</i>	2	3%	Pisces	40	45%
<i>Lagopus muta</i>	1	2%			
<i>Mareca penelope</i>	1	2%			
<i>Uria aalge</i>	13	21%			
<i>Uria lomvia</i>	2	3%			
<i>Uria sp.</i>	6	10%			
Aves	32	52%			
<b>TOTAL</b>	<b>62</b>	<b>100%</b>	<b>TOTAL</b>	<b>89</b>	<b>100%</b>



Figure 1: Whale scapulae in situ.

Indeterminate and unidentified long bone fragments make up nearly a quarter of the assemblage, a result of the preservation at the site (Fig. 2). Loose teeth and lower limb bones, i.e. metapodia and phalanges, are the next most common anatomical elements. Teeth tend to preserve better, making them commonly one of the most prevalent faunal finds. Crania, on the other hand, are prone to fragmentation due to their fragility, which may be why they are so present at this site. Meat-bearing bones such as the upper limbs are somewhat underrepresented in this assemblage.

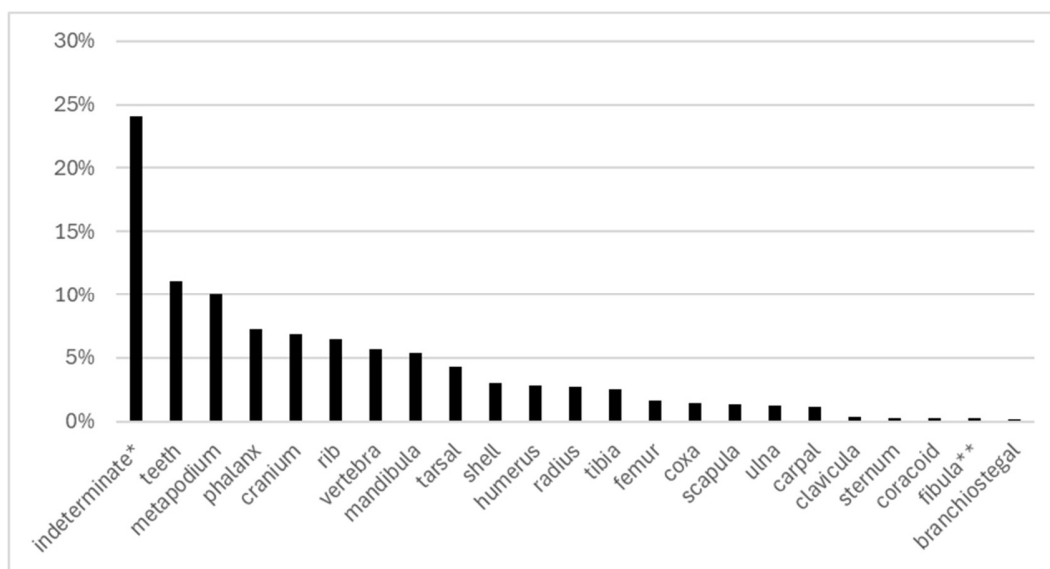


Figure 2: Graph showing the distribution of anatomical elements across the complete 2024 assemblage.

\*includes indeterminate long bone fragments; \*\* includes one malleolus.

### Modifications

While approximately half of the assemblage did not show signs of modification, such as butchery marks for example, 30% evidenced the influence of fire or heat. Mostly, these specimens were at least partially calcined; light traces of singeing or burning were rare. A small amount of the bones (2%) exhibited gnawing marks of carnivores, indicating that they had been either available to scavengers or deliberately fed to dogs or perhaps cats who lived at the monastery. Perforated metapodia are a frequent occurrence in the assemblage and are found exclusively on caprine metapodia. Double perforation, i.e. one through the proximal epiphysis and one through the distal shaft (anterior-posterior direction), is the most common; single perforation (most commonly through the proximal epiphysis) also



occurs though fragmentation of the specimens occasionally obscures a possible second perforation of the bone. Metacarpals and metatarsals are equally likely to have been treated in this way. This method of marrow extraction left the bones' surface intact for bone working (Hamilton-Dyer 2010). Among the medieval remains, burning is even more common and well over half (64%) of the specimens show signs of fire or heat. Butchery marks were evident in 12% of the bones while gnawing was completely absent. This may indicate different disposal practices in monastic and post-monastic times. The medieval contexts also yielded only a single bone with the typical perforation pattern found on caprine metapodia.

The two whale scapulae showed both chop and cut marks, with the chop marks being largely restricted to the edges while the cut marks were visible mostly on the flat surfaces of the bones (Fig. 3).



*Figure 3: Cut marks on one of the whale scapulae found in context [34825].*

### *Radiocarbon Dating*

Samples of animal bones were sent for radiocarbon dating with Beta Analytics; of the fifteen samples only eight yielded enough collagen for analysis (Tab. 3). Sample selection was largely based on and limited by availability of faunal material for the chosen contexts. This often meant that the samples were not ideal, e.g. from marine mammals or with poor collagen preservation.

While the results for samples TNG24\_4, TNG24\_8, TNG24\_10 and TNG24\_11 suggest a date in the very early phases of the monastery or possibly even pre-monastic, the other results are more difficult to interpret. Samples TNG24\_5 and TNG24\_6 were taken from the two whale scapulas found in an otherwise sterile mixed turf layer. TNG24\_3 derives from a whale bone as well, therefore, these three results are subject to the Marine Reservoir Effect (Alves *et al.* 2018). It is unclear whether BETA Analytics ran the corresponding correction.

The only cremated sample to yield results was TNG24\_12; that condition may be the cause of the very early date. This particular sample was found in close proximity to the only cervid bone fragment. Unfortunately, it was the only sample from that context to produce a radiocarbon date at all.

*Table 3: Radiocarbon samples with their respective conventional and calibrated date ranges. \*Whale bones – it is unclear whether the correction for the Marine Reservoir Effect was utilised.*

Sample ID	Conventional Age	Calibrated Age
TNG24_3*	1270 +/- 30 BP	(84.2%) 664 - 775 cal AD (1286 - 1175 cal BP) (11%) 788 - 827 cal AD (1162 - 1123 cal BP) (.2%) 861 - 862 cal AD (1089 - 1088 cal BP)
TNG24_4	940 +/- 30 BP	(95.2%) 1028 - 1174 cal AD (922 - 776 cal BP) (.2%) 1196 - 1197 cal AD (754 - 753 cal BP)
TNG24_5*	1340 +/- 30 BP	(64.4%) 645 - 706 cal AD (1305 - 1244 cal BP) (31%) 738 - 773 cal AD (1212 - 1177 cal BP)
TNG24_6*	1410 +/- 30 BP	(95.4%) 598 - 663 cal AD (1352 - 1287 cal BP)
TNG24_8	940 +/- 30 BP	(95.2%) 1028 - 1174 cal AD (922 - 776 cal BP) (.2%) 1196 - 1197 cal AD (754 - 753 cal BP)
TNG24_10	920 +/- 30 BP	(88.9%) 1035 - 1180 cal AD (915 - 770 cal BP) (6.5%) 1189 - 1209 cal AD (761 - 741 cal BP)
TNG24_11	980 +/- 30 BP	(63.3%) 1060 - 1157 cal AD (890 - 793 cal BP) (29.1%) 1019 - 1053 cal AD (931 - 897 cal BP) (2.9%) 995 - 1004 cal AD (955 - 946 cal BP)
TNG24_12	3020 +/- 30 BP	(69.1%) 1322 - 1192 cal BC (3272 - 3142 cal BP) (21.8%) 1391 - 1335 cal BC (3341 - 3285 cal BP) (2.3%) 1143 - 1128 cal BC (3093 - 3078 cal BP) (2.2%) 1175 - 1159 cal BC (3125 - 3109 cal BP)

## *Conclusions*

The excavations at Þingeyrar in 2024 yielded a small faunal assemblage. Due to the often poor preservation taxonomic identification was frequently impossible beyond class. Caprines vastly dominate the identifiable remains in both areas. In contrast to the 2023 assemblage, the 2024 material includes both bird and fish remains, albeit in relatively small numbers considering the proximity to both fresh and marine water bodies. However, these derive almost exclusively from post-monastic contexts, suggesting a shift in depositional practices and/or the use of wild animals. Bones of cetaceans and seals indicate regular exploits of marine resources, though there appears to be a change from using (presumably stranded) whales in medieval times to active hunting of seals in later periods. However, the wide-reaching network of farms owned by and supplying the monastery may have had an impact on the presence and distribution of certain species and/or anatomical elements on site. It is possible that some meat may have been brought in without bones or, similarly, some parts of an animal carcass or even entire animals may have been exported from the monastery, thereby skewing the faunal evidence at the site.

Aside from the large amount of indeterminate specimens, teeth, lower limb bones and cranial fragments are the most common anatomical elements while meatier body parts such as upper limbs are underrepresented. Though butchery marks are not particularly prevalent, nearly a third of the entire assemblage and over 60% of the medieval remains showed evidence of intense burning. This may not necessarily be related to food preparation but could instead indicate the use of bones for fuel. The prevalence of perforated caprine metapodia, a common practice in medieval Iceland, evidences the consumption of bone marrow, at least for the post-monastic period (Hamilton-Dyer 2010). Some carnivore gnawing on bones suggests that at least some animal remains were accessible to cats, dogs and/or foxes living in the area. However, it appears that for the most part carcasses were disposed of quickly and securely, i.e. out of reach of scavengers. This is particularly true for the monastic period where no clear evidence for gnawing could be detected.

The faunal assemblage suggests an economy relying heavily on caprines, likely mostly sheep. Larger domestic animals, such as cattle and horse, are present at the site and may have been used for their meat and secondary products as well as labour. The inhabitants of the site made use of marine resources, such as mussels, seals, fish and whales, though there seem to be some differences between monastic and post-monastic practices. It is unclear whether these resources stemmed from local exploits or if they were brought in from farms owned by the monastery.

## *References*

- Alves, E. Q., Macario, K., Ascough, P., & Ramsey, C. B. (2018). The Worldwide Marine Radiocarbon Reservoir Effect: Definitions, Mechanisms, and Prospects. *Reviews of Geophysics*, 56(1), 278–305. <https://doi.org/10.1002/2017RG000588>.
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- Thórisson, S. (1984). The history of reindeer in Iceland and reindeer study 1979 - 1981. *Rangifer*, 4(2), 22–38. <https://doi.org/10.7557/2.4.2.500>.