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Status Report on the faunal analysis from the 2007 Midden excavation at Möðruvellir, Eyjafjörður, N Iceland

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NORSEC Status Report

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The Möðruvellir Midden – Öskuhóll:

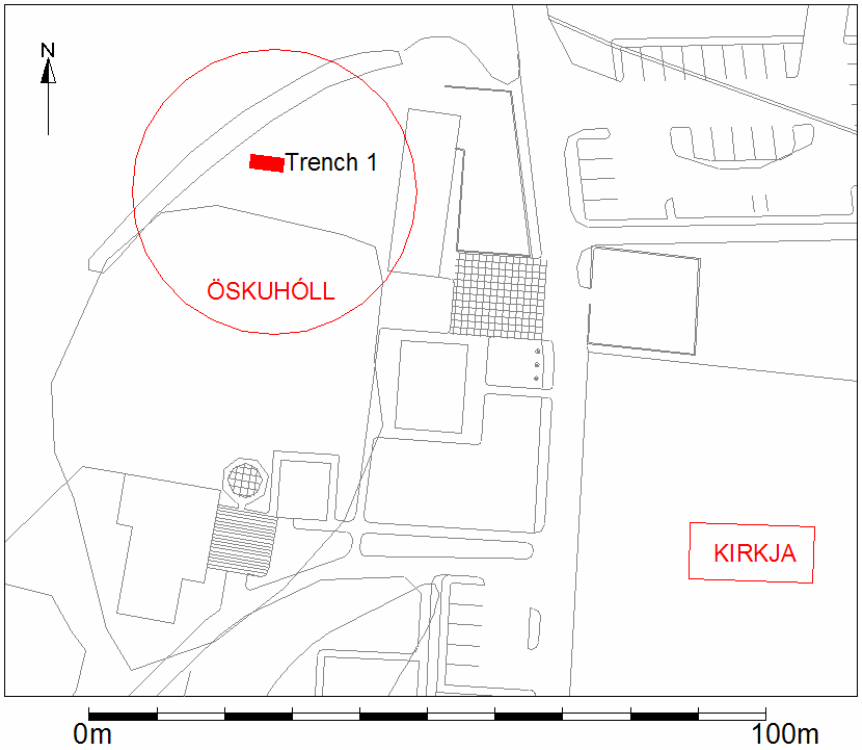

Figure 1 – Source: Harrison & Roberts, 2006.

Summary

This status report is only a 'work-in-progress' statement and cannot be seen as final report of the archaeofaunal analysis from the 2007 Möðruvellir Midden excavation which built on and extended the exploratory trench from 2006 (Harrison & Roberts, 2007).
The excavation was undertaken by Fornleifastofnun Íslands, FSI (Icelandic Archaeological Institute), under supervision of Ramona Harrison and Howell M. Roberts. The Möðruvellir project is part of an ongoing regional project directed by Howell M. Roberts and aims at gathering information on subsistence strategies in late medieval Eyjafjord, with special focus on Hörgárdalur.

The 2007 excavation resulted in close to 21 kg of bone materials (vs. ca 12 kg in 2006).
As in 2006, faunal, artefactual, and environmental remains were collected from the deeply stratified midden to be analyzed by various specialists. Analysis of the **faunal remains** was carried out at the CUNY Northern Science & Education Center laboratories as part of the North Atlantic Biocultural Organization cooperative effort, with funding provided by the **National Science Foundation (NSF) International Polar Year (IPY**) Grant. Almost 100 % of the faunal remains from the two most numerous deposits, context [041] and [072], have been analyzed already and their data can offer an idea on the animal management at the Möðruvellir site over time.
While the midden trench was extended from 2x5 m to 2x8m, the required depth containing relevant medieval deposits from ca. AD 1200 to 1500 could not be reached.

Careful excavation according to stratigraphic layers on a midden mound such as Möðruvellir is time consuming due to the centuries of accumulation that need to be dealt with. Once the deeper strata that are now known to be earlier in time can be reached, absolute **Dating** methods such as the Radiocarbon Method can be applied to the bone materials. At present, the best way to date the excavated materials is by using pottery and other artefactual typologies that have been established to follow a chronological order.
Artefacts from the 2007 excavation place the contexts between the late 1800s and late 1600s AD. Tephrochronology will be helpful once a volcanic layer can be reached.
The soil samples collected for each deposit will be processed at FSÍ and further analyzed by Dr. Mike Church at Durham University.

The total Number of Fragments or TNF of **5,490** for the two contexts discussed below is almost the same as the total number of all the 2006 bone fragments and raises the total to a **TNF** of **11,047**. Since only two deposits have been analyzed to date, this number is likely to increase to close to 15,000 fragments upon completion of bone analysis by early April of 2008. The Number of Identified Specimens or **NISP** is now **3,062**, and was **2,560** in 2006. This means that a total of **502** elements from the 2007 could be speciated at least to taxon so far. This number will also increase upon further analysis.

While context numbers [041] and [072] give a good indication of the change in waste disposal that happened during at least one hundred years, more analysis will offer better data and thus a more complete report can be expected to allow for better insight into the change in animal management over time at Möðruvellir.

Contexts [041] and [072] were lumped for a TNF and NISP count, but below they will be discussed individually, as they represent to different events in time divided by phasing used to lump contemporaneous deposits while separating them from the ones that are either older or younger. As mentioned in the excavation report (Harrison & Roberts 2007), a structural deposit was revealed and potentially belongs to a burnt building from 1826 (Vésteinsson 2001, 12), which would make context [041] more recent than that and context [072] older (see profile in figure 2 below).

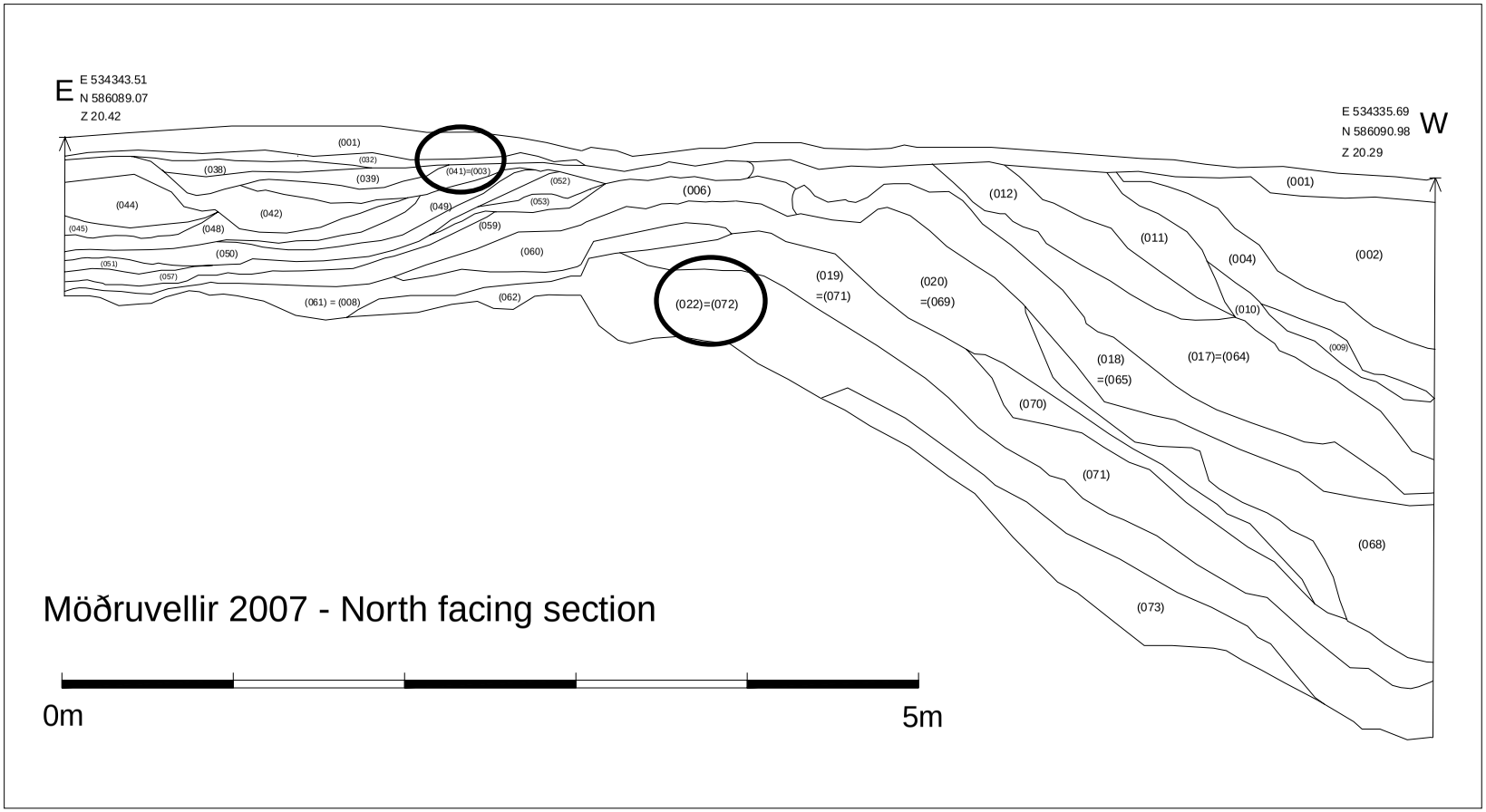

Figure 2 – North facing section, emphasis on contexts [041] ad [072].

Context [041]

This context is very well preserved and has a quite diverse archaeofauna, as Table 1 demonstrates.

Species Code	Species	Sum Of Count
AVSP	Unidentified Bird species	10
BOS	Cattle (*Bos taurus*)	2
BUCCINUM undatum	COMMON WHELK	1
COD	Cod (*Gadus morhua*)	29
CRA	Goat (*Capra hircus*)	6
GAD	Gadid family	6
GALLUS gallus	Domestic chicken	1
HAD	Haddock (*Melanogramus aeglefinus*)	2
Mollusk species	Small gastropod - snail	1
OVCA	Caprine (Sheep/Goat)	343
OVI	Sheep (*Ovis aries*)	30
PSP	Unidentified Seal species	5
	NISP	**436**
MM	Marine Mammal	1
MTM	Medium Terrestrial Mammal (sheep, goat, pig sized)	311
LTM	Large Terrestrial Mammal (horse, cow sized)	4
UNIM	Unidentified Mammals	281
	TNF	**1033**

Table 1 – Context [041] species distribution.

Table 1 displays the numbers of fragments counted per species. The low number of UNIM fragments indicates that the elements in this context were complete enough to be placed into matching element categories.

One particularly interesting find is a small gastropod whose outside shell is made from mother of pearl. This mollusk will see further analysis.

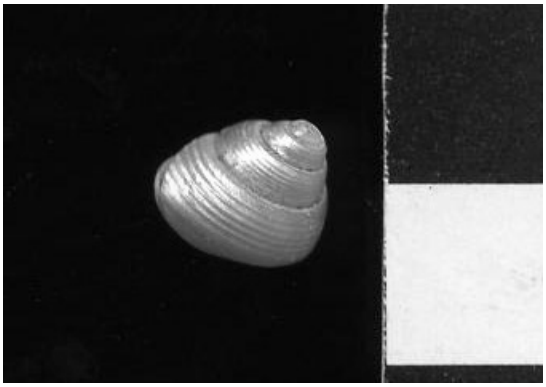

Figure 3 – Small gastropod.

This context had an assemblage of Sheep/Goat (Caprine) elements that are indicative of butchery remains: mostly phalanges, foot bones, and metapodials remain. Most of the meat bearing long bones such as humerus, femur, and tibia are missing and may have been discarded somewhere else. The metacarpal in figure 3 is special as it was first used for bone marrow extraction, indicated by the bi-perforation (Bigelow, 1985), and then made into an artefact, indicated by the polished surface and the variety in coloration. It may have served as a spool for wool or other materials.

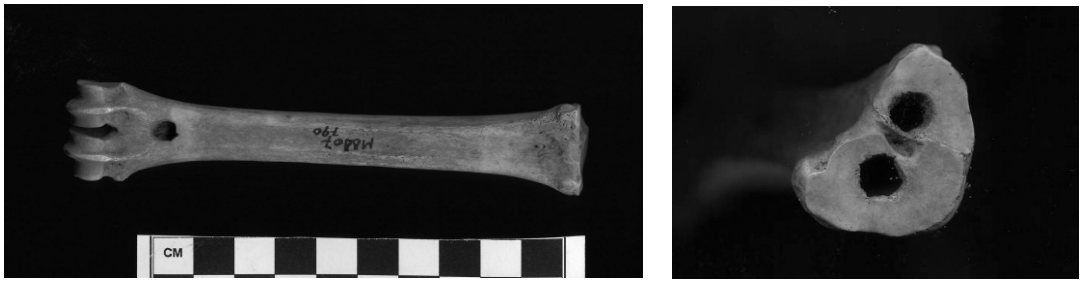

Figure 4 – Sheep (Ovis aries) metacarpal, bi-perforated, polished, and used as artefact.

Further evidence for the nature of caprine butchery to be found in this context is the sheep head in figure 5. The hole on the animal's forehead area (frontal bone) indicates that it received a blow to the head to make it unconscious prior to its death. After the animal expired, it was dehorned and finally the skull split in half to make svið.

Figure 5 – Sheep head with damaged frontal bone. Horn(s) chopped off and skull split into half.

Context [072]

This context did not contain any faunal elements that were particular enough to be photographed. It represents an earlier deposit of midden material than the context discussed above and rather than whole bones in similarly good preservation stage, it contained very fragmented and frequently burnt elements that were beyond speciation.

Species code	Species	Sum Of Count
AVSP	Unidentified Bird species	10
BOS	Cattle (*Bos taurus*)	3
FISH	Unidentified Fish species	6
GAD	Gadid family	4
MOLSP	Mollusk species	9
OVCA	Caprine (Sheep/Goat)	33
OVI	Sheep (*Ovis aries*)	1
	NISP	**66**
STM	Small Terrestrial Mammal (dog, cat sized)	1
MTM	Medium Terrestrial Mammal (sheep, goat, pig sized)	150

LTM	Large Terrestrial Mammal (horse, cow sized)	11
UNIM	Unidentified Mammal	4124
UNI	Unidentified Element	106
	TNF	**4458**

Table 2 – Context [072] species distribution.

The heavy destruction in bone from context [072] is indicated by the high number of unidentified species. Also, about 95% of the bones from this deposit are burnt, and 84 % of the elements are only between 1 and 2 cm long (Lyman 1996, Shipman & Scheninger 1984). Clearly, the faunal material was treated differently than the one in context [041].

Conclusion

This status report presents only a brief discussion of analyzed archaeofauna from two of the Möðruvellir Midden contexts excavated in 2007. The two contexts alone yielded as many bone fragments as the total trench excavated in 2006.
Analysis of the total 2007 archaeofauna will be completed by April 05, 2008. Beyond basic speciation and count of the faunal remains present, methods of analysis will include:

- Domesticate age at death reconstruction through tooth row analysis and study of long bone fusion (Grant 1982 , Reitz & Wing 1999)
- Size reconstruction on fish bone where applicable (Mainland 2005, Perdikaris et al 2002)
- Overall comparison of non-contemporaneous contexts.

Acknowledgments

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