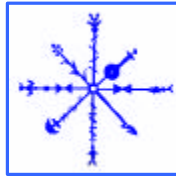


## Preliminary Report of Animal Bones from Skalholt, Iceland 2002 Season

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**Abstract**

This report will present a preliminary analysis of the mammal bones from unit 454 at Skalholt. This unit was found in Midden Test D, excavated by Dr. Jim Woollett, Dr. Mike Church, Matthew Brown, and Kate Krivogorskaya during June and July of 2003. The methodologies followed, as well as descriptions and discussion regarding the other Midden Test Pits can be found in Dr. Jim Woollett’s report in the Skalholt 2003 report.

Unit 454 represents roughly two-thirds of the total volume of bones excavated in 2003 at Skalholt. The remaining third is made up of a great number of small (one-bag) units. Work on these units is ongoing.

**Unit Context**

Unit 454 is a midden deposit broadly dated to the last half of the eighteenth century, when Skalholt was a large proto-urban diocesan headquarters for southern Iceland. This unit was, according to contemporary maps, close to and possibly associated with a butcher. The midden is extremely dense with little soil or amendments spread between bone material (see figures 5+6 in Woollett, this report; Woollett, Brown, and Krivogorskaya, personal communication).

The unit is apparently accretional, made up of several discrete dumping episodes (Woollett 03). Yet it is a peculiar deposit, especially in comparison to other Icelandic and North Atlantic assemblages.

**Overview of Species Present**

First of all, cattle represent 92% of the identifiable mammal elements in this assemblage. Caprines come in at a distant second with 5.5% of the assemblage, while sheep are at 2.5%. Horses are represented by a solitary whole metatarsus. Birds are not present. The fish are not yet analyzed.

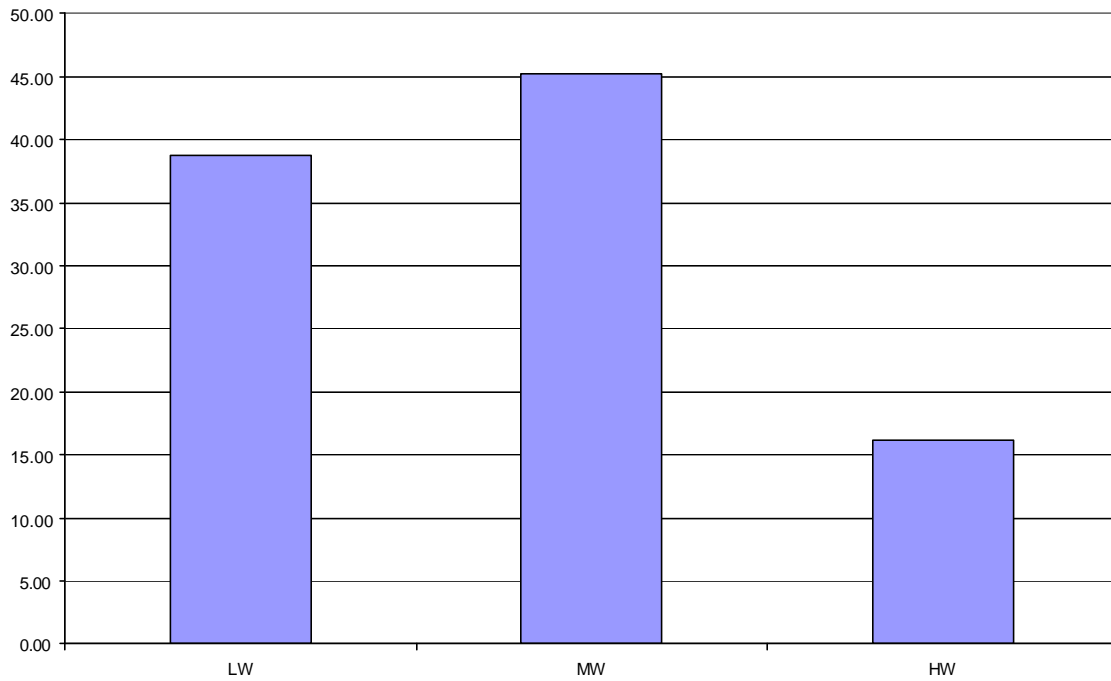
Cattle ( <i>Bos taurus</i> )	481	Large Terrestrial Mammal	491	Cattle	91.79%
Dog ( <i>C. familiaris</i> )	present	Medium Terrestrial Mammal	18	Horse	0.19%
Horse ( <i>Equus caballus</i> )	1	Small Terrestrial Mammal	1	Sheep	2.48%
Sheep ( <i>Ovis aries</i> )	13	Mammal TNF	5483	Caprine Total	5.53%
Caprine Total	29	Fish TNF	1092	Caprine	8.02%
Caprine Total domesticate	42	TNF	6575		
	524				
NISP	524				

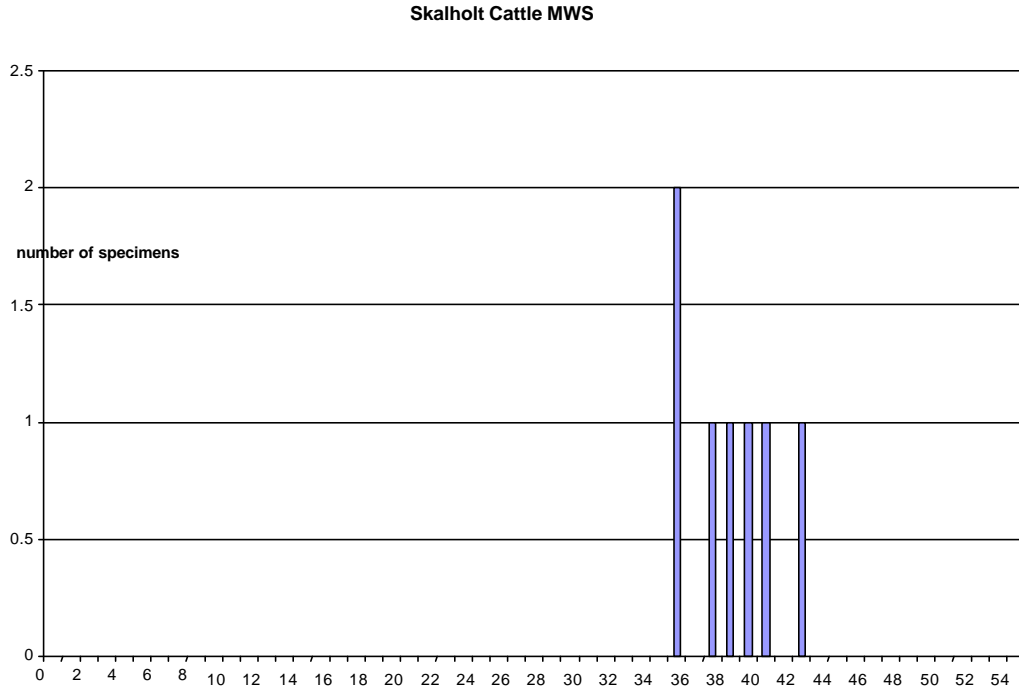
Second, the cattle represented are all adults. Neonates are barely represented in this assemblage.

Cattle Neonatal %	
Adult & Juv	99.17
neonatal	0.62

On the other side of mortality, very old cattle are not represented at all. According to tooth wear on mandibles, as well as wear on the maxilla, the cattle present in 454 were in the prime of bovine life.

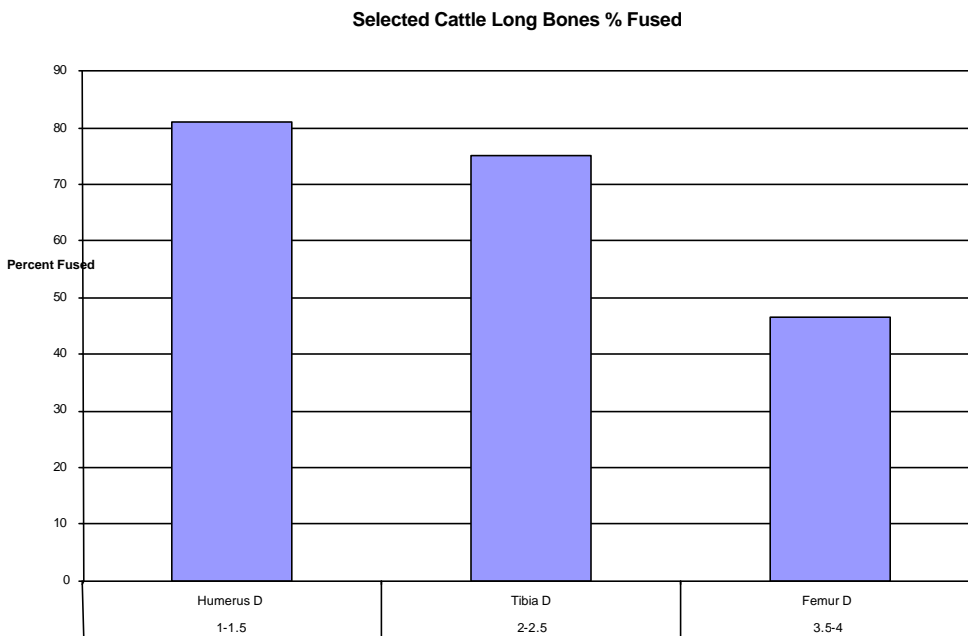
Cattle Maxillary M3 wear





Light and medium wear accounts for roughly 85% of the sample (total # of maxilla). The mandibles tell a similar story, suggesting that the majority of the cattle represented by unit 454 lived until somewhere into their fourth year.

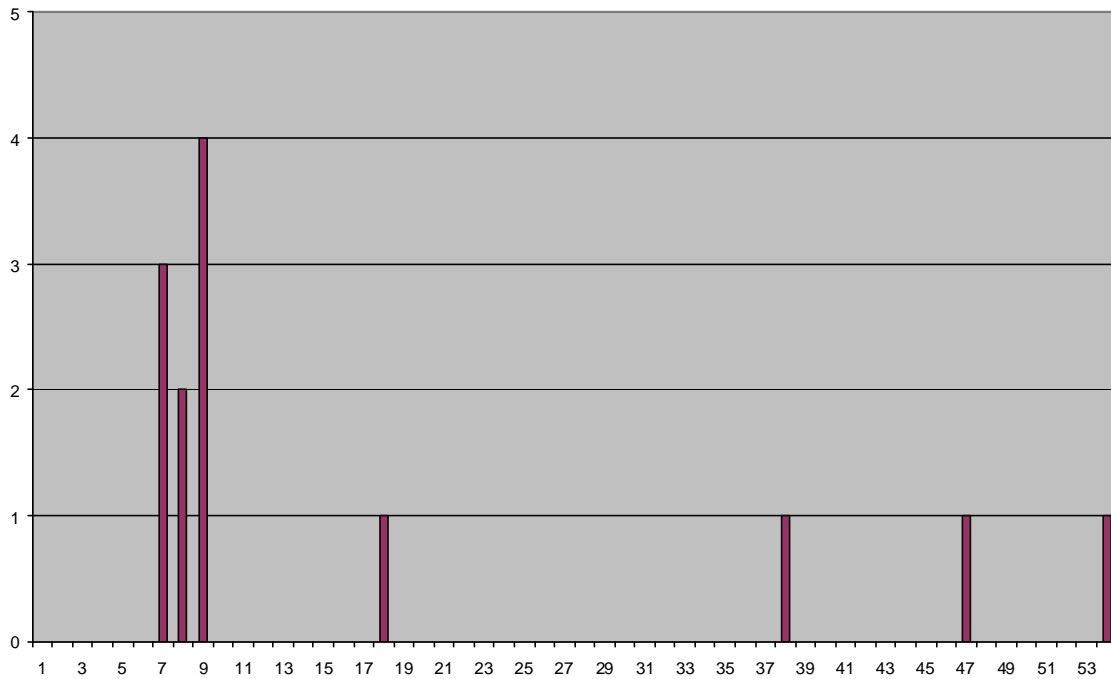
The fusion states of the cattle long bones reinforce this perception.



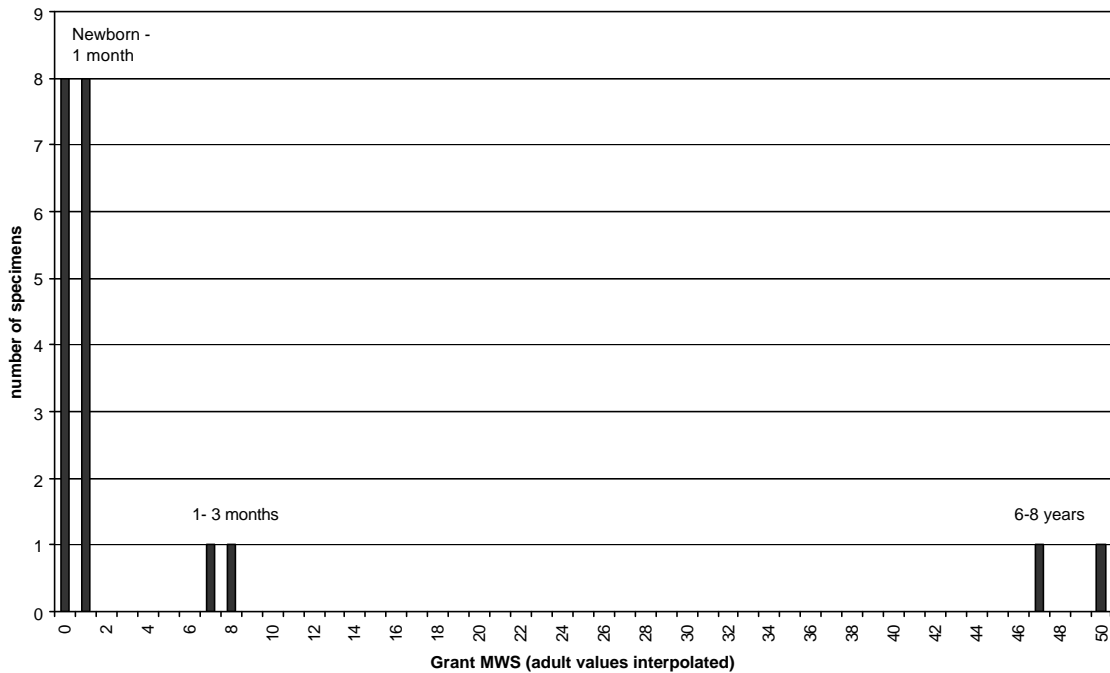
These fusion percentages suggest that the majority of these animals perished sometime between their third and fourth year of life. This is odd in that a meat producing cattle farm bone assemblage ordinarily shows animals being

slaughtered between their first and second year. This is more efficient in that a pastoralist is using only that amount of fodder needed to get the animal to a productive size, no more. In a zooarchaeological assemblage from dairy economies, most of the Icelandic assemblages for example, one finds a large amount of bones from neonates and then again from older animals, past their prime. The following examples from the site of early medieval sites of Hofstadir and Sveigakot illustrate this pattern well.

Hofstadir Cattle MWS Prelim



**Sveigakot Cattle MWS**



In both these cases we see large scale culling of young cattle, presumably for herd population management. At Sveigakot the animals are being culled immediately after birth, while at Hofstadir it seems that they are being allowed some time to grow for greater meat productivity. In both cases we also see evidence of very old cattle, presumably being killed after they have left their prime milking years.

The animals represented in unit 454 at Skalholt are in their milking prime, and a few years beyond their slaughtering for meat efficiency prime. These cattle could be representative of a high production dairy herd that might have been kept nearby in the infield of a farm. These cattle represent great value, and they are being slaughtered for meat at the peak of their dairy efficiency. Why?

There are extensive butchery marks on a large number of bones. These butchery marks can be preliminarily described as indicative of both primary processing and consumer use.

The element distribution for the cattle strongly suggests that these cattle were slaughtered onsite.

The Sheep and Caprine elements, though small in comparison to the cattle show a fairly similar profile. They have a broad element distribution and their dental

wear profile shows mature sheep being slaughtered. Yet their numbers do not allow for any in depth analysis.

### ***A Few Possible Hypotheses***

Though this work is in the very early stages, these possible hypothesis are being offered as discussion points. Obviously, further analysis as well as further excavation might dramatically change the conditions that these hypothesis are loosely based upon.

- This was not an accretional midden but a catastrophic one. Earthquakes and flourosis poisoning from a volcanic eruption (the catastrophic eruption of 1783-1784 for example) are possible culprits. This could explain the death of a prime dairy herd.
- This is an accretional deposit indicative of a very wealthy economy. Could this be a form of eighteenth century conspicuous consumption?
- This could be the result of one or more feasting episodes.
- This bone profile is the result of tithing of valuable cattle from surrounding farms.
- 454 could be the result of a change in farming strategy, from dairy to meat.

### ***Conclusion***

The extent of this unit should be determined and possibly excavated in order to better understand the deposition processes behind it. An attempt must be made to determine the temporal and cultural origin of this unit.

Historical research on the Bishop's economy must be brought into the zooarchaeological analysis.

Attempts will be made to determine if and where other major 18<sup>th</sup> century midden deposits exist at the site of Skalholt. Zooarchaeological material from the 18<sup>th</sup> century from surrounding farms should be excavated for comparative purposes.

For 454 in detail, there will be further analysis of the butchery patterns as well as size estimation. MNI and other appropriate analytical tools will be calculated. Long bone measurements will be plotted to try to determine the sex and size profile of this population. Thin section analysis as well as micro-ware analysis of the teeth will help determine the season of death and possibly the pasturing profile of the population.

