The lower midden layer (20472) largely represents a quickly accumulated and undisturbed deposit, as indicated by the presence of articulated bones and elements from foetal animals, as well as by generally good surface conditions. Part of the assemblage, however, is covered with concretion, and is interpreted as fill.

The upper part of the midden (20449) is more osteologically heterogeneous. Surface condition ranges from good to poor, and the colour of bones from light brown to dark brown, with a higher percentage of darkly stained bones than usual. Some bones look very fresh; others look quite worked over. Some of the pieces are covered with concretion and some have root marks. Overall, the material looks like a mixed midden and fill deposit deriving from a variety of sources. This supports excavators' suggestion that this part of the midden was disturbed.

The midden assemblages contain a high percentage of digested bone (ca. 40%). They are biased toward feet, especially from sheep-sized animals (all such elements are digested), although cranial and other postcranial elements are also present. Digested bones far outnumber gnawed ones. Coprolites provide additional evidence for carnivore activity. Apart from teeth and some phalanges and carpal/tarsals, the elements in these deposits are fragmented; the bones from (20449) are more processed than those from (20472).

	(20472)	(20449)
Burning	1-10%	1-10%
Gnawing	1-10%	1-10%
Surface condition	good	variable
Cattle-sized specimens	20-50%	1-10%
Sheep-sized specimens	>50%	>50%
Other specimens	1-10%	1-10%

**Table 9.9.** Comparison of the midden sequences from North area, Spaces 489 and 490.

## **TPC**

In space 494 an infill deposit and cluster of animal bones (20255, 20276, 20277, 20278, 20279, 20280, 20281) found between the walls of Buildings 110 and 111 and the oven contained 356 faunal specimens (86% caprine; table 10) as well as worked stones, ground stones, large ceramic sherds, shells, and phytoliths. The infill was arbitrarily divided into western, central, and eastern parts. Notable among these remains was a collection of 199 caprine astragali. They include 84 lefts and 96 rights, a minimum of 96 individuals whose ages range from foetal to adult. There is evidence of periostitis (active at the time of the animal's death) visible in one specimen's sulcus tali.

About 30% of the astragali are modified into what is commonly termed 'knucklebones' and they have been flattened on one or both sides. A similar deposit of 128 astragali was recovered from the fill of Building 67 (4040.H) (Russell et al, in press-b). Other worked bones in the deposit included the first phalanx of a small-medium equid with four modified surfaces and a bone point made on a caprine metapodial.

The infill also contained several articulated bones. Among these were caprine-sized lumbar vertebrae and ribs; cervical and thoracic vertebrae that probably derive from a hare; and sheep metatarsals articulated with tarsals and phalanges. One of the metatarsals appears pathological:

swelling noted on the lateral part of the distal shaft. This pathology is similar to that noted in Unit 19387, South.M. (see above) and may be an osteological reaction to some sort of restraint.

Other bones in the deposit included horn cores of sheep and goats (caprine foetal bones were found around the horn core); sheep and cattle scapulae; a large cervid antler; a roe deer tibia; a pig astragalus; a loose fox lower tooth; caprine-sized ribs; and the wing of large bird. A goat horn core, a sheep scapula, and a small ruminant rib were deposited on top of phytoliths, having lain perhaps on matting (analysis is in progress). The characteristics of the material suggest that portions of the assemblage were intentionally selected for purposeful deposition as special/foundation deposits.

Taxon	NISP	DZ
Bird	0.84%	0.00%
Bos sp.	1.12%	0.00%
Capra	12.92%	19.65%
Capreolus capreolus	0.56%	0.50%
Cow-size	0.28%	0.00%
Homo	0.28%	0.00%
Large bird	0.28%	0.00%
Large cervid	0.28%	0.00%
Lepus	0.56%	0.00%
Ovis	42.42%	63.73%
Ovis/Capra	30.90%	14.61%
Sheep-size	8.43%	0.00%
Small-medium equid	0.56%	1.01%
Sus scrofa	0.28%	0.50%
Vulpes vulpes	0.28%	0.00%

Table 9.10. Relative proportion of taxa in TPC infill (Space 494).

## **West Mound Trench 5**

Only two weeks were available for study of the West Mound faunal material in 2012. During this limited time, analysis was focused on material from Building 98, particularly (a) a series of fills within space 340, and (b) deposits found directly on the floor of the building in all spaces.

## A note regarding recording protocol changes

The changes made to the recording protocol by the East Mound faunal team this season (see above) presented a considerable dilemma for the West Mound research. Until now every effort has been made to ensure direct compatibility between faunal data the two mounds, and data from all areas continues to be entered into a single database. From 2012, however, it has regrettably been necessary to allow some divergence between the recording systems used on the two mounds.

It is important to distinguish between streamlining of the protocol - i.e. reduction in the number of variables recorded or removal of redundancy - and more fundamental changes which may introduce biases between datasets. The last major changes in recording protocol, during the 2007 season (Russell et al., 2007), were restricted to streamlining measures - primarily a reduction in the amount of taphonomic data collected - and did not prevent direct comparison with earlier data in all other respects.