

Azoria 2013 Zooarchaeological Preliminary Report

The analysis of the zooarchaeological material from the 2013 season of excavations at Azoria was conducted at the Institute for Aegean Prehistory, East Crete Study Center (INSTAP SCEC) by W. Flint Dibble with the help of student assistance and INSTAP staff for washing, counting, conserving, and sorting zooarchaeological remains. All identifications were made with the use of the comparative skeletal collection at INSTAP SCEC and standard, published zooarchaeological manuals containing specific criteria. The analysis was conducted using the minimum number of anatomical units (MinAU) as a base record (cf. Halstead 2011).

The analyzed material underwent a series of processing steps after washing. Initially, the material from a pail was strewn according to gross anatomical region (limb, skull, trunk, UNID) and gross taxon (large mammal, medium mammal, small mammal, bird, fish). These categories were counted and weighed for each pail and a quick taphonomic assessment was conducted counting incidences of bad preservation (superficial erosion or otherwise), gnawing, burning, and cutmarks.

After the initial strew, the material identifiable to anatomical elements utilized in the MinAU quantification were bagged with a printed barcode label identifying trench/locus/pail data alongside a sequential unique zooarchaeology specimen number. The anatomical units included in this detailed analysis were horncore/antler, mandible, scapula, proximal and distal humerus, proximal and distal radius, proximal and distal metacarpal, pelvis, proximal and distal femur, proximal and distal tibia, astragalus, calcaneus, proximal and distal metatarsal, first phalanx, second phalanx, and third phalanx.

Context groups were identified (i.e., D1500 floor deposit) and were subsequently strewn together in order to identify precise anatomical element, species (i.e., *Sus scrofa*) or taxon (i.e., ovicaprid), proximal or distal half of an element, and right vs. left side. The combination of larger assemblages of material enables rapid, accurate identification of zooarchaeological material. Strewing enables finding joining or articulating specimens, and the determination of the MinAU unit (i.e., the minimum number of distal tibiae in a context group).

All specimens able to be identified to anatomical element and region and to species or taxon were recorded in an MS Access database designed by W. Flint Dibble. When possible, detailed data regarding taphonomic indicators, fragmentation, cutmarks, age, and biometry were recorded for each specimen. It was decided not to record the small number of pelvises from the season. Due to their low quantity, it will be more accurate to record all the pelvises at once due to a large number of variables (side, sex, and species) and they will be recorded in the following season. While ageing data and biometry have been recorded, the results are not in this report since conclusions will be stronger with additional data. It should be noted that the material from flotation sampling, shells, nor small mammals (predominately hare) nor birds have been analyzed in detail at this time. The radii and ulnae from B4009 have not been studied yet.

This report includes the results from 14 context groups. Chronology and stratigraphic observations in this report are preliminary due to the ongoing nature of the Azoria project. It should also be noted that the NW building is given the most focus in this report as it represents a “finished” assemblage easily identified as a unit. The 14 context groups:

Archaic

1. D1500 Floor- D1515: 1, 2, 4, 5, 7, 10, 13. D1513: 1,2,4,5. (just these loci)
2. D1600 Room 1 Floor- D1614.2-11: 2, 4, 6, 11
3. D1600 Room 2 Floor- D1620.9-16: 9, 16
4. D1600 Room 3 Floor- D1625: 1, 11, 13, 14, 17 (2 bags), 22, 26, 27, 32, 57, 69
5. D700 Floor- D712: 1-2; D714: 1,2,5,6,7,9,10,11; D715: 1,2,3; D716: 1,5
6. Archaic dump debris- B4103: 1-26
7. Early Street packing- B4009.1-3: 1, 2, 3. B4012: 1
8. Later Street packing- B4002: 1-2, 5; B4008.1-2: 1, 2, B4011: 1

EIA

9. LMIIC/SM building- B870: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11
10. B4400 room- B4409.2: 1, 2 B4407.1 (mid to western edge): 1
11. B4100 North, later floor- B4112.1-6: 1, 3, 4, 5, 6
12. B4100 South, later floor- B4114: 1 B4119: 1
13. B4100 South, earlier floor- B4115.6-9, B4118: 1
14. B4000 occupation surface- B4017.1-11: 1, 3, 4, 5, 6, 10

In red are pails that are not included in the study. For locus B870, pails 2, 5, and 9, I was recommended by the trench master to exclude these pails as they represented wall or scarp cleaning, and therefore contained material that was mixed stratigraphically. I am unsure why D1625, pails 1, 26, and 27 as well as B4112, pail 1 were missed but I will make sure to analyze them first thing next year. The above list of pails includes all of those that the Registrar’s database shows retrieved zooarchaeological material, therefore any pails not in this list do not contain zooarchaeological material or were not asked to be included in this report.

Totals

Including unidentifiable specimens, a total of 12,126 zooarchaeological specimens weighing 12,273 grams were recorded from the groups outlined below. In general, the zooarchaeological assemblage is dominated by sheep and goat, in particular goat.

Cattle	92	4.50%							
Pig	243	11.89%							
Sheep&Goat	1614	78.96%	Goat	368	61.30%	Sheep	106	17.66%	
Equid	11	0.54%	Horse	4		Donkey	5		
Dog	46	2.25%							
Deer	31	1.52%	Fallow Deer	20		Red Deer	2		Roe Deer 6
Agrimi	5	0.24%							
Wild Boar	2	0.10%							

Total identifiable counts for species (MinAU excluding neonatal specimens) (percentages for sheep and goat are taken from the total count of sheep/goat proportional to securely identified sheep and goat specimens)

Retrieval Bias

The above analyzed assemblages were for the most part 100% sieved and thus, retrieval bias should be minimal. But it is important to recognize that despite best practices, material is lost and

sometimes destroyed during the processes of retrieval and processing of zooarchaeological material. It is likely that the smaller elements of smaller animals suffered the most due to retrieval bias. Therefore, it is useful to compare large skeletal elements anatomically adjacent to smaller skeletal elements in different taxa: i.e., the larger proximal radius (Rp) with the adjacent smaller ulna (U); the larger distal tibia (Td) with adjacent smaller tarsal elements (A & C); and large distal metapodial (MPd) adjacent to smaller phalanx 1, 2, and 3 (PH1, PH2, PH3). In a complete skeleton there is normally a 1 to 1 relationship between each larger element (i.e., MPd) and each smaller element (i.e., PH1). This technique, first suggested by Payne (1972) is useful since there are few economically advantageous reasons for separating the above adjacent elements in butchery or refuse disposal. Neonatal/fetal specimens are excluded from this analysis since their small size might bias the results.

	COW	PIG	S & G
Rp	6	4	93
Up	2	5	19
Td	2	16	142
A	1	5	30
C	0	3	21
MPd	5	5	122
PH1	3	3	50
PH2	4	2	21
PH3	0	3	11

Table Comparing Anatomically Adjacent Large and Small Elements (MinAU, neonates excluded)

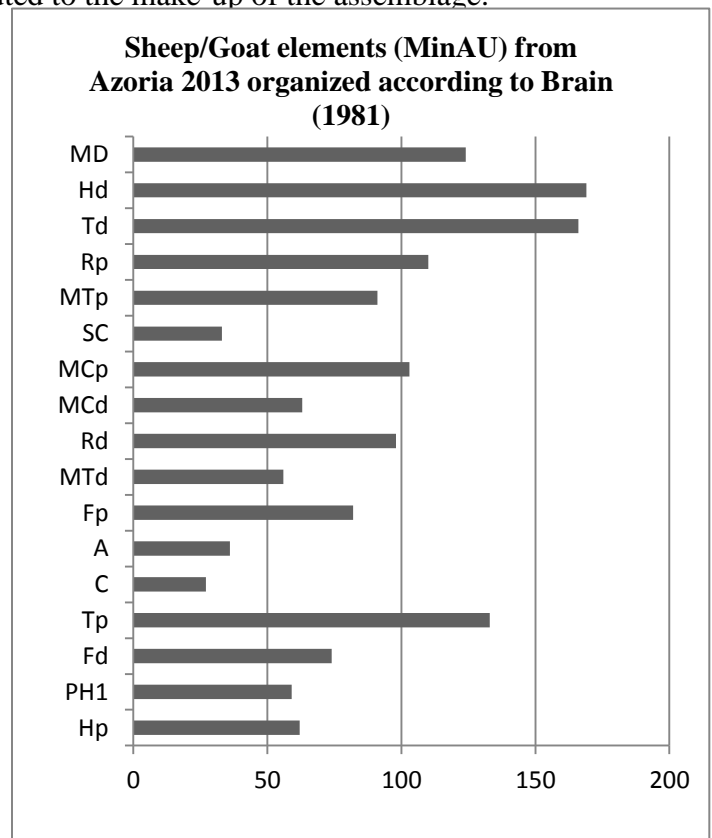
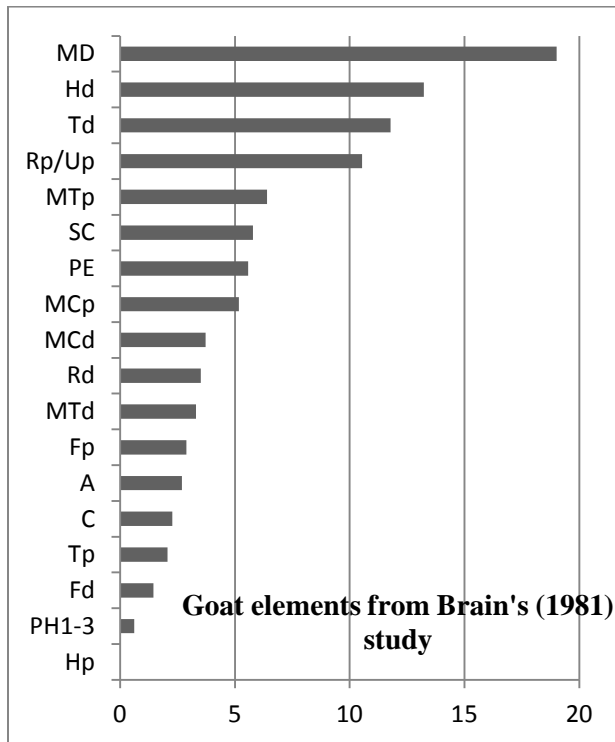
It seems likely that the paucity of smaller sheep and goat elements compared to larger sheep and goat elements (i.e., PH1/MPd = 41% representation) suggests the retrieval of smaller elements was biased against. A bias against smaller elements from smaller species is fairly common on Mediterranean sites but is necessary to acknowledge prior to drawing conclusions. Further testing could be conducted on the zooarchaeological material from the heavy residue, which might confirm or disprove the idea of a retrieval bias in the assemblage, and might provide more specific evidence to contexts where smaller elements are missing. Further analyses, will exclude neonatal/fetal specimens due to their small size.

Taphonomy

The site of Azoria is located on a sharp gradient and strongly affected by seasonal colluvial processes. The strength of such processes is witnessed in the architecture of the site and the zooarchaeological assemblage has been greatly affected as well. The molecular components of bone dissolve (slowly) in water, and the poor surficial preservation (648/1992 = 32.5%) of much of the zooarchaeological material at Azoria testify to damage from post-abandonment seasonal slope wash. As well, the presence of gnawing marks (501/1992 = 25.2%) testifies to damage done by carnivores, including dogs, pigs, and humans, immediately prior to or immediately after discard or deposition. However, few of the elements with poor preservation also contained evidence for gnawing (78/1992 = 3.9%), potentially indicating that post-depositional processes

destroying the surface of the bone also often destroyed the shallow indentations or grooves left by gnawing. It is likely that both poorly preserved surfaces and gnawing have destroyed much evidence for butchery and thus in the future caution must be taken in the analysis of cutmark frequency. Since most of the assemblage (53.8%) includes evidence for either poor preservation or gnawing, it is important to recognize any biases presented.¹

One way to analyze how much of an affect taphonomy has had upon preservation is to compare the presence of less dense elements with more dense elements. In long bones, denser anatomical elements are those that fuse early (i.e., distal Humerus at 6-10 months for a sheep or goat) in an animal's development and less dense anatomical elements fuse late (i.e., proximal Humerus at 30-42 months). C.K. Brain (1981) presents a graph showing what remained of goat carcasses in a Hottentot village after intensive dog gnawing. In general, the more numerous the anatomical element (i.e., distal humerus Hd) in Brain's graph, the earlier an element fused in the life of an animal (i.e., elements that fuse early are denser and more robust). A comparison of the data from Azoria with that from Brain, suggests that poor preservation does affect the anatomical distribution of sheep and goat elements from the site but the graphs are not exact matches suggesting other factors (anthropogenic) contributed to the make-up of the assemblage.



Graphs comparing goat elements from Brain's (1981) study and sheep/goat elements excavated at Azoria in 2013. It should be noted that pelves (PE) were not studied this last summer and that smaller elements are underrepresented.

¹ NB: Mandibles, mandibular teeth, and horncore are excluded from counts in the above analyses of surface preservation and gnawing, since tooth enamel is far denser than bone and horncore more porous nor attractive to carnivores for gnawing.

NW Building

Two rooms from the NW building, a storeroom and hall, from trench D700 are presented in Haggis et al. 2011b. It concluded that in both rooms “the mix of head, upper-limb, lower-limb, and foot debris [represented material] dumped from a primary butchery location or food preparation area” (p.448). After the excavation of the three rooms located in D1600 and the room in D1500 in 2013, the zooarchaeological assemblage from the NW building can be presented fully.

The assemblage from the floor of each room is rather small, meaning few patterns can be picked out within the building. The assemblage from the five rooms in trenches D700 and especially D1600 show terrible preservation of zooarchaeological remains. The preservation was so bad in the three rooms of trench D1600, that in many contexts most of the unidentifiable remains were teeth splinters since the dentine had eroded away leaving enamel tooth splinters.

	Total MinAU	Total NISP	% Bad Preservation	% Gnawed	% Burned
D1500	65	81	35.1%	10.5%	44.4%
D1600 Room 1	11	11	87.5%	0.0%	0.0%
D1600 Room 2	2	2	100.0%	0.0%	0.0%
D1600 Room 3	12	15	100.0%	0.0%	0.0%
D700 Storeroom	72	87	56.9%	26.6%	1.1%
D700 Hall	46	49	63.8%	23.4%	0.0%

Table presenting taphonomical evidence from the Northwest Building

The terrible preservation evident in the remains from D1600 suggests that other remains extant in the room could have been destroyed due to saturation and mechanical pressure during slope-wash activities: potentially other eco-facts and metal finds. There are very few metal finds from trench D1600: only 3 out of 60 metal finds from the season are from this trench, in comparison D1500, which has better bone preservation had 6 metal finds. Such patterns will need more data to confirm but it is likely that extremely poorly preserved bone is a taphonomic indicator for destroyed bone, metal, and potentially botanical remains.

Overall, little can be said about anything in the D1600 rooms, the most interesting pail was D1620.06, which was not on the list provided by Haggis of pails to examine. In this pail, there were parts of one definitely large agrimi horncores, and 2 other large poorly preserved horncores, likely identified as agrimi. The fact that two were found in two separate clusters of fragments (from a single horncore) is likely more telling of the *in situ* erosive processes causing them to fall apart and necessitate conservation. Overall D1600 contained remains from cattle, pig, sheep/goat, goat, and deer.

On the other hand, the modest assemblage from D1500 presents some interesting patterns. There seems to be two distinct assemblages present: 1) a very badly preserved assemblage and 2) a heavily burnt assemblage. There is almost no overlap between the two with only one element both burnt and badly preserved. On a whole D1513 is worse preserved and less burnt while D1515 is more burnt and better preserved.

The burnt assemblage is almost entirely made up of goat elements (13 goat, 16 sheep/goat, 2 pig MinAU). The assemblage of sheep/goat bones is dominated by horncores (9 MinAU), and metatarsal fragments (8 MinAU). In fact, excepting 2 sheep/goat femur fragments, 2 sheep/goat proximal tibia fragments, and 1 pig proximal tibia fragment, the entire assemblage is from non-meaty elements perhaps suggesting primary butchery. However, if this is the case, there are too few mandibles/mandibular teeth, tarsals, and phalanges (all are small elements and potentially present in flotation samples). Amongst the unburnt, yet well-preserved assemblage there is a distal tibia and astragalus pair from a large goat or agrimi that articulate together. The discard of the ankle joint together suggests that at least the better preserved, and largely burnt assemblage provides evidence for pre-abandonment activities.

The unburnt assemblage largely resembles the burnt assemblage in the presence of sheep/goat and goat non-meaty elements; however, it is not dominated by horn and metatarsal but instead contains less meaty front leg elements (distal humerus, radius, and metacarpus). One distinct difference is a scattering of elements from additional species: cattle, dog, and fallow deer.

Potentially the D1500 goat assemblage represents the discard from one stage of the butchery process, potentially supported by the find of a possible iron blade in the room (13-1357). The animal had either been previously slaughtered at which time the feet were separated from the carcass, or slaughtered in the room (testable if there are phalanges and other cranial elements in the flotation samples). The remains from this room potentially represent refuse from the next stage of butchery where the horns and lower legs were removed. The almost absolute lack of meatier ribs and vertebrae potentially support this hypothesis, as does a skinning mark on a distal metacarpus. However, none of the horns nor metatarsal elements contained any cutmarks to absolutely confirm this hypothesis. Two femur fragments, a tibia, and a humerus betray signs of filleting (removing meat from the bone).

Explaining this fairly structured assemblage from D1500 is difficult. Strangely, all the goat horns (burnt and unburnt) were left-sided.² In fact, most of the assemblage is left-sided, except for the metapodials, which are all right-sided. While burnt sacrifice is a possibility, perhaps it should be excluded since the room clearly underwent a fiery destruction exposing elements to a strong fire. The unburnt elements were somehow protected (perhaps embedded in the collapsed roofing clay). The upper levels (D1513) of the deposit were exposed to slope-wash and thus poorly preserved, and perhaps intrusive. However, the strange anatomical pattern is suggestive of ritual sacrifice.

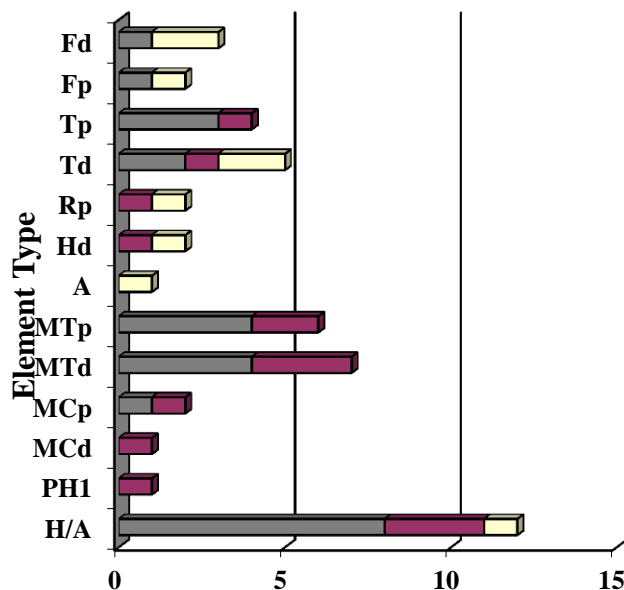
An examination of the elements, poorly preserved and not, ranked in the amount of meat and marrow associated with an element, as laid out in Binford's meat general utility index (MGUI) also suggests that the poorly preserved elements could be intrusive. After all, almost all the specimens near the upper end of the graph (next page) derive from the poorly preserved assemblage. As well, the vast majority of non-goat specimens derive from the poorly preserved assemblage.

Therefore, it is likely that butchery activity, focusing on goats, took place within D1500 prior to its burning episode. The trend of left-sided horncores and right-sided metatarsals could suggest

² I don't remember having noticed this pattern earlier. So, needless to say, I will check this pattern next summer.

ritual butchery, or could be due to the small sample size. The overall small number of remains within the area suggests cleaning activity often removed remains. Potentially, the burnt remains, dominated by metatarsals and horncores from at least 9 goats were from a last single butchery activity, clearly represented by an articulated ankle joint from a large goat or agrimi (although the tibia and astragalus were unburnt but well preserved). Due to the odd assortment of burnt left-sided goat horns and right-sided metatarsals, it is possible this was some sort of sacrificial event, in which case it could be the material was burnt prior to the building's fiery destruction.

**Sheep/Goat elements (MinAU) from D1500
Floor organized according to MGUI (Binford
1978)**



Graph showing MinAU for various sheep/goat elements in D1500 (gray=burnt, purple=poorly preserved, light tan=neither burnt nor poorly preserved). Elements are ranked according to MGUI (Binford 1978), so elements at the top (i.e., distal Femur) contain large amounts of meat and marrow; while those near the bottom (i.e., horncore/antler) contain very little meat or marrow. Clearly most of the remains (63%) contained little or no meat (from below the ankle or wrist) and there are almost as many meatless horncores (12) as there are meaty elements (18)

The D700 assemblages from the storeroom and hall contained cattle, dog, goat, hare, pig, roe deer, sheep/goat, and sheep elements. As pointed out above, the assemblages derived from a variety of different elements including lower and upper limbs and cranial elements. The meatier vertebrae and ribs are practically absent. The presence of skinning marks on two sheep/goat elements, filleting marks on pig and sheep/goat elements, and dismembering marks at the joint on cattle, hare, and sheep/goat elements suggest this assemblage was formed from food processing remains. Four out of nine of the cutmarks were chops from cleaver butchery.

Cleaver butchery appears to be located predominantly in Archaic period civic or ritual contexts on the site and is largely absent from domestic contexts. The publication on the civic buildings at Azoria repeatedly reports elements with evidence for cleaver butchery present in the Communal

Dining Building (A600, A800, and A1900), in the Monumental Civic Building, and in the Hearth Shrine (D1000).³ Every single assemblage contained multiple elements with chop marks, sometimes described as “numerous.” However, there are only five mentions of chops from a cleaver in the report on the Archaic houses: B3400, B3500, B3800, D700, and D800. Excepting D700, the remaining household assemblages contained only single examples of cleaver butchery with two in D800. There are no mentions of cleaver-butchery in other domestic assemblages: A2100, D1200, D1300, B3200, B3700, B3900, and E100.⁴ It is clear that cleaver butchery was more commonplace in civic contexts than domestic. I aim to elaborate on this trend in the future.

The large size, large space set aside for storage, and unique nature of the finds (a marble perrirhanterion) from the Northwest Building suggest it to be something other than a cookie-cutter typical suburban Azoria Archaic home. The large number of chop marks from D700 supports such a claim, as such a pattern is more similar to civic buildings suggesting a connection between this structure and civic ritual. The zooarchaeological evidence from D1500 also supports the idea of large-scale feasting with the metatarsals and horncores of at least 9 goats exposed on the floor at the time of the fiery destruction of the building. The zooarchaeology cannot alone answer whether it *was* a civic building. However, the presence of cleaver butchery certainly suggests it, or alternatively that this structure was different from the majority of houses on the site. The burnt assemblage from D1500 could suggest a ritual function.

Archaic Period Dump Debris: B4103

In the Archaic period, the two rooms of the EIA building discovered in trench B4100 were filled in with a large deposit of sediment and entrained material (locus B4103). The zooarchaeological assemblage from this deposit is quite large. However, the deposit contained at least 414 zembilia of sediment and material suggesting that despite the size of the assemblage this was not a dump of animal remains.⁵ The large assemblage included a diverse range of species: cattle, pig, sheep, and goat, in addition to dog, donkey, horse, fallow deer, roe deer, and hare. Most of the remains were sheep/goat, with goat outnumbering sheep about 3:1. Most of the species, except for horse, showed evidence of cutmarks.

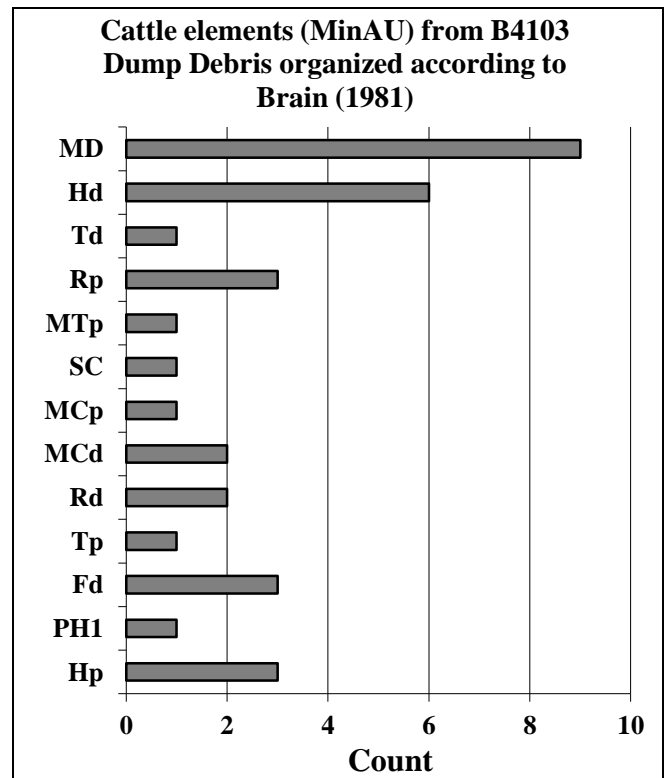
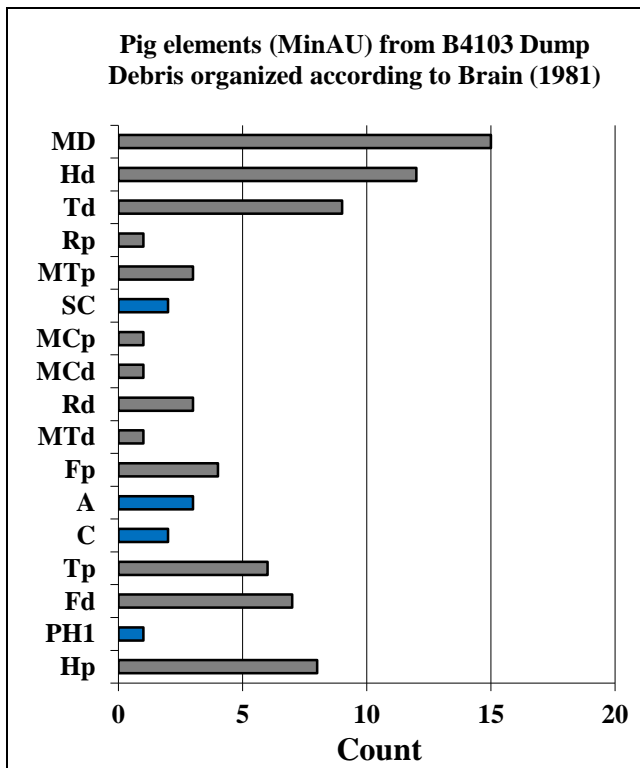
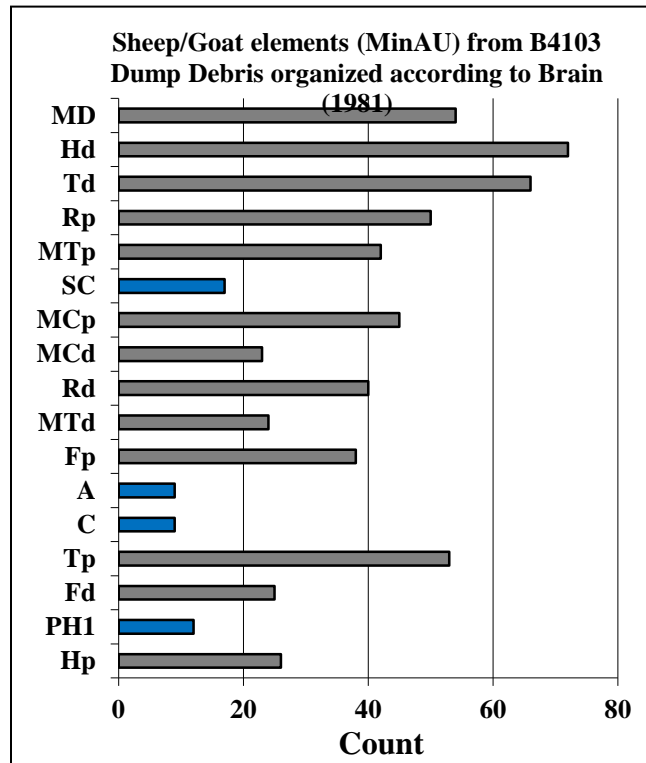
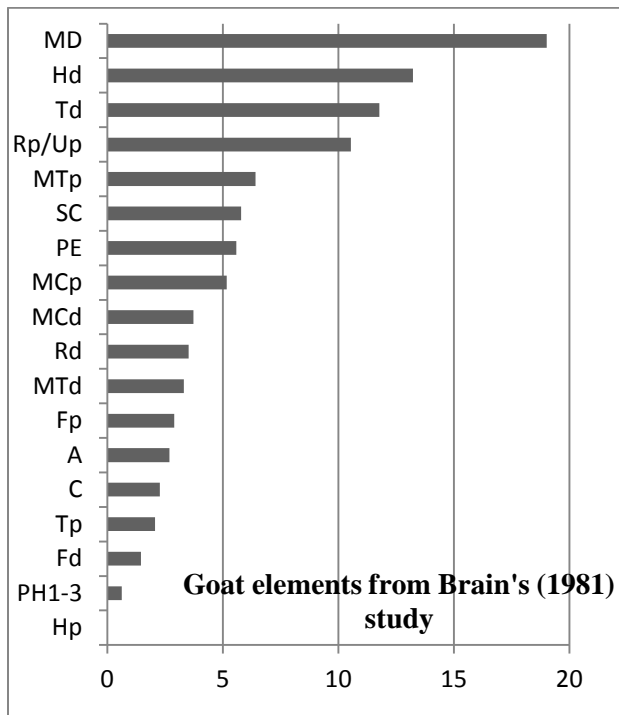
B4103	Total MinAU	Total NISP	% Bad Preservation	% Gnawed	% Burned
Cattle	37	44	15.9%	11.4%	2.3%
Pig	80	96	24.0%	31.3%	0.0%
Goat	121	134	17.9%	17.2%	0.0%
Sheep	41	44	18.2%	15.9%	2.3%
Sheep/Goat	473	718	23.1%	33.4%	1.1%
Deer	13	10	20.0%	20.0%	10.0%
Dog	23	26	15.4%	3.8%	0.0%
Equid	8	19	15.8%	5.3%	0.0%

³ Haggis et al. 2011a: 9, 11, 12, 14, 24, 37.

⁴ Haggis et al. 2011b: 436, 442, 448, 451, 453, 457, 459, 460, 462, 475, 476

⁵ I did not have zembil counts for B4103.01-03

Taphonomically, the assemblage was not terribly preserved, likely protected from extreme erosion by the intact wall of the EIA structure. However, over one quarter of the assemblage contained evidence of gnaw-marks suggesting attrition due to carnivores. The assemblage contains a somewhat different profile to that of Brain's study of dog gnawing from a Hottentot village in South Africa suggesting a bias exists within this material. The largest bias is likely to be that of archaeological retrieval with smaller elements from smaller species shaded in blue all appearing in low numbers. Fragmentation patterns also suggest that the assemblage was not principally formed due to carnivore attrition. Binford's ethnoarchaeological studies of the Nunamiut suggest that human extraction of marrow leaves a large number of long bone ends, end splinters, and shaft splinters. Similar studies into dog gnawing suggest that often the least dense ends of the bones are consumed as the dog tunnels for marrow, leaving shaft cylinders and shaft splinters. Thus, a ratio of long bone end fragments and splinters with shaft cylinders should shed light on carnivore activity. The number of end fragments and splinters, 82, is over two times the number of shaft cylinders, 30, suggesting that carnivore gnawing has not biased the assemblage tremendously. However, the presence of gnawing suggests that some of the material was accessible to carnivores, meaning deposition was not immediate.



Graphs organizing elements according to Brain (1981) in order to determine affect of dog gnawing on the composition of the assemblage. In blue are highlighted elements prone to retrieval biases.

In fact, a look at the sheep/goat assemblage suggests, with the exception of smaller elements, anatomical elements are found in fairly equal numbers across lower and upper limb, as well as cranium. This is expected in a dump of animal remains from varied sources.

Cutmarks indicate a wide range of activity including skinning marks on lower leg elements, dismembering marks at all joints, and fillet marks providing evidence of meat removal. Cleaver butchery was more common on larger species: two out of three cut cattle and two out of three cut fallow deer elements. Proportionately fewer pig (2/7) and sheep or goat elements (4/78) contained evidence for cleaver butchery. No cleaver marks were present on two cut dog (ulna and scapula) elements, one cut donkey element (humerus), and one cut roe deer element (radius).

A study of the animal husbandry patterns from age-able and sex-able elements will have to wait for now as the pelvises are unstudied and it will be possible to produce more precise mortality profiles after a study of additional mandibles and mandibular teeth from Azoria.

Overall, the waste stream for the material from B4103 seems to be varied. A third of the assemblage was gnawed by carnivores, but this activity does not define the formation of the assemblage. Butchery patterns indicate that the remains derive from a variety of activities (primary butchery and skinning, dismembering, and meat removal for food preparation), and the scattered presence of chop marks suggests (hypothetically, at this point) animal remains from both domestic and civic/ritual activities mixed in this assemblage. Overall, this assemblage is an important background assemblage with which to compare contemporary material. Future comparative analysis of cutmarks and animal husbandry patterns from this deposit will hopefully reveal information about animal foodways (rearing, processing, and consumption) at Azoria.

B4000 Street Packing

The road in B4000 included deposits associated with an earlier and a later surface (including the “sandwich” in between). As a road, one would expect a great degree of trampled material, in theory reduced in size and identifiability and potentially weathered. In particular these trends are pronounced in B4000 Later Surface, which has a very small average weight per zooarchaeological fragment and a qualitatively “whiter” appearance, likely indicative of weathering (photo not included). Taphonomically, this makes sense as the earlier surface (B4009 and B4012) was excavated together with its packing, which included material derived from elsewhere to create a level surface. Since the road was in use for a long time, the assemblage from above the earlier road surface and incorporated into the later road surface derives from discarded material that was largely trampled and exposed to weathering processes.

	Count	Weight	Avg. Weight	% UNID	% UNID Limb	% Poorly Preserved
Azoria 2013 Total	12126	12273	1.01	38.1%	55.8%	32.5%
B4000 Early Surface	1410	1308	0.93	Check in 2014	Check in 2014	34.0%
B4000 Later Surface	2258	1639	0.73	46.5%	68.4%	44.5%

Table displaying total counts, weights, average weights, percentage of specimens unidentifiable to gross anatomy (cranium, trunk, limb), percentage of specimens identifiable to gross category of limb but unidentifiable to both taxon and anatomical unit, percentage of specimens poorly preserved (from NISP).

The assemblage from this roadway includes cattle, pig, sheep, goat, fallow deer, and roe deer. There are too few specimens nor any clear patterns to the assemblage, as would be expected

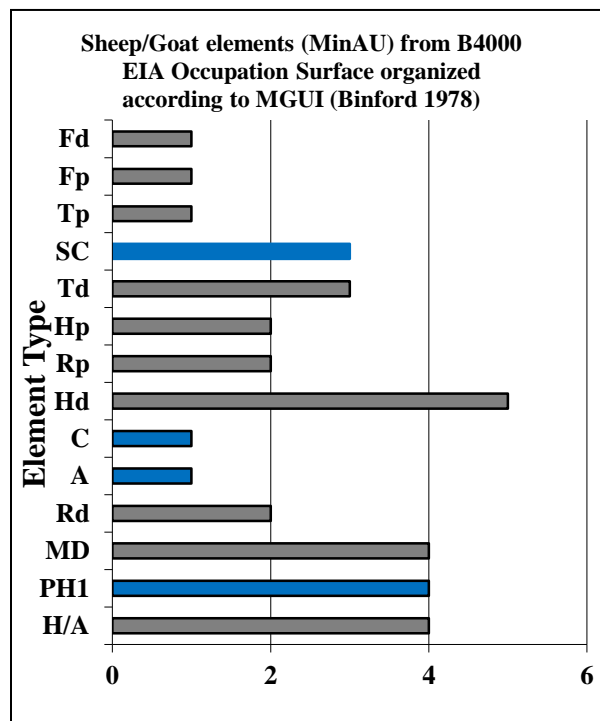
from road refuse, not associated with any particular activity. Cutmarks are found on lower limbs for skinning and on upper and lower limbs for dismembering and meat removal. Only one chop from a cleaver was found on a sheep metatarsal, likely for hide removal, in the packing for the earlier surface (thus, unclear whether the material derived locally or not). Overall, the zooarchaeological evidence supports the identification of this feature as an open air surface with trampling and weathering.

LM IIIC/SM Building: B800

Little can be said about the assemblage from the B800 LM IIIC/SM Building. The assemblage is too small and poorly preserved (70.8% NISP) to be used for any clear identification of the use of space. The extremely poor preservation suggests the material was in an area experiencing heavy slope wash, or that the material was simply intrusive. This would predict few other fragile finds from this context, which is confirmed by only one metal find from the trench. There are only 24 identifiable specimens including cattle, pig, sheep/goat, and dog. A sheep first phalanx had two skinning cutmarks from a knife.

B4017 EIA occupation material

The material from B4017 potentially derives from occupation activities embedded in the roofing clay and above the occupation surface; however, it is quite small for any interesting conclusions (62 NISP). About a third were poorly preserved (35.4%) and very few were gnawed (9.7%). Not a single one was burnt. The assemblage contains cattle, pig, sheep, and was dominated by goat. Sheep and goat comprised the majority of the assemblage (82.5%), with fifteen goat specimens (MinAU) outnumbering a single sheep specimen. When organized in order of Binford’s meat general utility index, it seems as if elements with lower meat utility (21 specimens) are more common than those with higher meat utility (13 specimens). The fact that this trend goes against the previously noted retrieval bias suggests it could be indicative of past activity. The cutmarks (all made with knives) include two filleting/meat removal marks, one on a sheep/goat humerus and the other on a goat humerus and a dismembering mark on a sheep scapula. The few elements in this location might have derived from early and middle stage butchery activities, whether this was due to local activity or brought in from elsewhere, it is difficult to tell.



EIA Building

Most of the assemblages from the EIA building are too small and/or too terribly preserved to be able to discern the use of space clearly.

The occupation levels from the B4400 room contained only 23 identifiable specimens, of which 13 (56.6%) were poorly preserved. It included cattle, pig, and mainly sheep and goat (91.7%). The ratio of sheep (4) to goat (3) is fairly similar. A distal radius is from a very large goat or perhaps even an agrimi. A cattle radius included a cleaver-chop for dismembering at the proximal end, a sheep/goat humerus and femur included fillet marks from knives.

The assemblage associated with the later floor of B4100, North room contained 108 identifiable specimens, only a few of which (15) were poorly preserved. Only 13 specimens contained signs of gnawing and six were burnt. In general, it is a fairly even distribution of elements including cranial, upper limb, and lower limb. The five specimens with cutmarks (cattle, pig, and sheep/goat) are all knife marks on the shaft of long bones (humerus, radius, femur, tibia) suggestive of meat removal during food preparation and/or perhaps consumption.

The assemblage associated with the later floor of B4100, South room contained only 10 identifiable specimens. It was generally well preserved and included cattle, pig, sheep/goat, and dog. There were no cutmarks and little can be said of this assemblage.

The assemblage associated with the earlier floor of B4100, South room contained 132 identifiable specimens. It is somewhat less well preserved (32.6% bad preservation and 16.7% gnawed). However, this does not seem to have biased it tremendously. It contains a mix of cranial, upper limb, and lower limb elements. The five specimens with cutmarks (from pig and sheep/goat) were all made with knives mainly for the purpose of joint dismemberment, with one meat-removal mark.

There are few clear conclusions to be made from the assemblage from the EIA building. However, the assemblage does not provide any additional evidence to the hypothesis that this building was a temple. Very few of the remains were burnt (7/273 NISP or 2.6%). Nor is there any clear pattern to the elements present. However, the diversity of species, both domestic (cattle, dog, donkey, goat, pig and sheep) and wild (boar, fallow deer, hare, and very likely agrimi) indicate the importance of this large structure. Such diversity is not common throughout the site. The presence of a chop mark on a cattle radius helps support the idea that this was not a domestic space. In the future a closer analysis of the remains from this structure will be conducted in comparison to other EIA period deposits from the site in order to further elucidate its importance and understand the use of space

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