The Animal Bones from

Under Whitle, Sheen, Staffordshire

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1. Introduction
   a. Site and environs

All animal bone recovered from the excavations at Under Whitle from June 20th to July 9th 2016 are presented here. The excavations at Under Whitle Farm were conducted by community archaeology project 'Peeling Back the Layers' and commercial archaeology unit, Trent and Peak Archaeology (Malone and Hurford 2016, Parker Heath 2016). The site is located on the Bowland Shale Formation in the River Dove Valley in northeastern Staffordshire between the towns of Longnor and Sheen. The excavation uncovered a 17th to 19th century house platform with extant undercroft at the site of a farmstead with a barnyard and farmhouse indicated by historic maps (Parker Heath 2016).

   b. Phasing and contexts

The animal bones analysed here all originate from Trench 2. The majority of animal bones recovered from Under Whitle originate from contexts (102) and (103), the topsoil on the north end of site and an ashy lens in the interior of the demolished house respectively. Context (101) is a topsoil layer on the south end of the trench while (104) is subsoil which lies underneath (103) and a single bone was found in each. Context (114) has five recovered specimens and is a stony rubble layer on top of stone steps leading to an undercroft.

2. Methodology

Animal bones were hand collected and collected according to 'Guidance for the collection, documentation, conservation and research of archaeological materials' (Parker Heath, 2016). The analysis was conducted according to the recommended best practices in the English Heritage guidance, 'Animal Bones and Archaeology: Guidelines for Best Practice' (Baker and Worley 2014).

Animal bones are presented below (Table 1 and 2) both as NISP, MNE, MNI by context where appropriate (Lyman 2008). Taxonomic identifications of bones and teeth were made with assistance from guides by Barone (1976), Cohen and Serjeantson (1996), and Schmid (1972) with reference to the author's skeletal reference collection. For skeletal elements that could not be identified to taxonomic class, in particular non-diagnostic rib, skull, and long bone fragments, a size category of mammal was given. For example the medium size class is approximately the same size as a domestic pig or sheep. Bone completeness was recorded by the numerical zonation method devised by Dobney (1988), and tooth wear was recorded by Grant (1982). The ages of animals are calculated using fusion age ranges from Reitz and Wing (1999). Fracture type is recorded according to Outram (2001). Measurements were taken according to von den Driesch (1976) and butchery marks are described by the categories in Reitz and Wing (1999). All bird measures and zones were recorded using Cohen and Serjeantson (1996).

3.   Results
   a.   Preservation

The preservation of the bones is moderate to poor, with clear degradation of the bone surface, particularly bones from contexts (103) and (104), with nearly all fragmentation of elements from these contexts exhibiting 'dry' fragmentation, a by-product of taphonomic weathering. Taxonomic identification of some skeletal elements, particularly those from the axial skeleton (the vertebra, ribs, and skull) was not possible for many fragments as they were highly degraded and fragmented and as such many were only identified to size class. Two elements from (102) and (103) show clear evidence for carnivore gnawing. There is no evidence for burning of these elements.

   b.   The fauna

The animals found here include cattle (*Bos taurus),* pig *(Sus scrofa),* chicken *(Gallus gallus),* and sheep *(Ovis aries*). There were 64 pig fragments from the entire site, with the majority of remains originating from context (103) (Table 1). All sides and elements were well represented from the pig, with no significant difference between sides, axial, or appendicular elements. The MNI calculations for pig by context indicate that at least two individuals were deposited in (103) and one individual in (102) (Table 2).

The chicken produced a tarsometatarsus and humerus (leg and wing) and these were found in context (103). The sheep produced a scapula, humerus, and rib (shoulder and upper arm and chest) while the cow produced a rib and these elements were from (101), (102), and (114) (Table 1). Cow and sheep were not found in contexts (103) or (104).

   c.   Age at death

The remains from cow and sheep were too fragmentary to estimate age at death or sex. The pig remains were from a young animal and sex could not be determined. The two individuals from context (103) were younger than 12 months of age, but survived beyond birth. The individual from context (102) also survived beyond birth but did not live beyond 12 months of age.

The chicken bones are from two individuals, apparent from their drastic size difference and fusion stages. The tarsometatarsus was very small and the proximal diaphysis was unfused, which is known to be fused by 139 to 195 days (approximately 4 to 6 months) (Sadler, 1991). It was not possible to determine the sex of these elements due to their juvenile nature.

   d.   Butchery and modification

Cut marks on the proximal end of the left scapula (shoulder joint) and a chop through the left carpals (the ankle) from the pig bones from (103) suggest that the left front limb was butchered. The axis also had cut marks, suggesting the head was removed from the vertebral column. There are also gnawing marks left by a carnivore on the left humerus and ulna, indicating that after this limb was removed from the carcass, the bones were exposed to carnivores, likely dogs.

4. Discussion

The ashy dump of context (103) was the richest context, providing the majority of bones for analysis. The bones from this dump did not have evidence of burning, suggesting that the bones were combined with ashes before being deposited outside the house before the demolition of the structure. The majority of identifiable bones from this context are from two juvenile pigs which did not live beyond 12 months of age. One of these animals had evidence of butchery on the left side, suggesting that this animal was butchered on-site for consumption. Two chickens at different stages of growth are evident from two juvenile leg and wing bones.

The bones from other species found in this and all other contexts are suggestive of primary butchery waste, as evidenced by the high numbers of vertebral and rib fragments. This supports the interpretation of this structure as a farm, as meat was not purchased as butchered joints, but slaughtered, jointed, and deposited on site.

The identifiable fragments of sheep and cow both pre- and post-date the demolition of the structure and are located both above the demolition layer of the building in context (101) and below the demolition layer in contexts (104) and (114), indicating the butchery of both these species at site in addition to pig and chicken through the formation of these contexts. These contexts have been interpreted as dumping of rubbish both before and after the demolition of the house, indicating that these animals could have originated from the period when the farmhouse was in active use, but also from a later period when the house and associated cellar was used as a domestic rubbish dump. No comparable animal bone reports from rural post-medieval contexts are published and available through the Archaeological Data Service (ADS). This only highlights the importance of the excavations at Lower Whitle Farm and the contribution of this work to a greater understanding of rural post-medieval contexts in England.

5. Summary

The animal bones from the 2016 season of excavation at Under Whitle Farm originate from contexts that post-date the occupation of the farmstead and undercroft but pre-date their collapse (17th- mid 19th centuries A.D.). More detailed dating of these contexts is awaiting ceramic analysis. There are no remains of wild animals, such as deer or rabbits, which would indicate poaching. The remains of domesticated animals which were typical of British farmsteads of that period were found, which include cattle, sheep, pigs and chickens. The pigs were the most numerous, contributing a majority of the fragments, although only three individuals (MNI) were found. These individuals were less than 12 months old when slaughtered, and the diversity of skeletal elements indicates that they were slaughtered at or around this location. As this is such a small assemblage, a more detailed report is not possible, however context (103), an ashy layer mixed with fragments of ceramics, gives an indication of the type of domestic rubbish which was deposited. In this context, unburned animal bone showed a variety of butchery, dog gnawing, and surface weathering, further supporting the interpretation of this context as a domestic rubbish dump.

6. Bibliography

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7. Tables

Table 1: NISP Counts by Context and Taxon

Context	Domestic fowl (Chicken)	Cattle	Medium Mammal	Pig	Sheep	Total
101		1				1
102			23	10	2	35
103	2		103	51		156
104		1				1
114			2	3	1	6
Totals	2	2	128	64	3	199

Table 2: MNE and MNI for Pig from Context (103), left, and (102), right.

Elements	NISP	MNE	MNI		Elements	NISP	MNE	MNI
Cranium	0	0	0		Cranium	2	1	1
Mandibula	0	0	0		Mandibula	0	0	0
Atlas	0	0	0		Atlas	0	0	0
Axis	1	1	1		Axis	0	0	0
Cervical Vert	12	3	1		Cervical Vert	0	0	0
Scapula	0	0	0		Scapula	2	2	1
Humerus	4	3	2		Humerus	3	1	1
Radius	3	1	1		Radius	0	0	0
Ulna	4	1	1		Ulna	0	0	0
Carpals	4	4	1		Carpals	0	0	0
Metacarpals	4	3	1		Metacarpals	0	0	0
Pelvis	0	0	0		Pelvis	0	0	0
Femur	0	0	0		Femur	0	0	0
Tibia	2	2	1		Tibia	0	0	0
Fibula	0	0	0		Fibula	0	0	0
Astragalus	1	1	1		Astragalus	0	0	0
Calcaneus	3	2	1		Calcaneus	0	0	0
Tarsals	5	5	1		Tarsals	0	0	0
Metatarsal	2	2	1		Metatarsal	0	0	0
3/4th Phalanges	2	1	1		3/4th Phalanges	0	0	0
2/5th Phalanges	1	1	1		2/5th Phalanges	0	0	0
Ribs	3	3	1		Ribs	0	0	0
Teeth	0	0	0		Teeth	3	1	1