Assessment of the hand-collected animal bones from Longstone Edge

Polydora Baker, March 8th/02 (corrected March 19th/02)

The site at Longstone Edge, located in the Peak District National Park, comprises two adjacent Neolithic-Bronze Age barrows. Barrow 2 had been excavated in the 19th century and was heavily disturbed. For Barrow 1 the broad sequence of construction and use consists of a pre-barrow excarnation platform, a cist with skeletons and a stone cairn, followed by a Food Vessel cremation and a larger stone and earth barrow mound.

The cist and mound of Barrow 1 yielded a very large quantity of microvertebrate remains, which were recovered primarily in heavy residues from flotation and by wet-sieving, and which have been assessed by Peter Andrews of the Natural History Museum, London (Andrews 2002). In addition, a small quantity of animal bones was recovered by hand excavation. It is evident from the assemblage size and poor preservation of most of these that they hold little potential for informing on local economy or environment, apart from providing a species list. The assessment was undertaken in order to determine the potential of the remains to inform on depositional history - presence of possible predators and prey - and activities associated with the monument. With regards to the latter, deposits of single and articulated animal bones were noted during the excavations (P. Reeves, Site Diary) and thought to represent possible offerings: human and animal bones had apparently been placed on the cleared rock surface below Barrow 2 (2059) while a 'leg of pork' was noted alongside one of the skeletons in the cist beneath Barrow 1.

The bones are stored in two boxes (17 and 96) at the Centre for Archaeology, English Heritage, Portsmouth.

Methods

Given the small assemblage size, all of the bones were scanned and recorded in detail where identifiable to taxon. For mammals, the following bones and bone parts were recorded: all identifiable main limbbones, where over half of the medial or lateral side of the distal or proximal articular or epiphysial surface was present; the innominate and scapula, where at least half of the acetabulum and glenoid respectively were present. All carpals and tarsals, astragalus and calcaneum were recorded regardless of fragmentation (all were over half complete). All phalanges were recorded where at least half of the proximal or distal articulation was present. The upper and lower teeth (where more than half of the crown was present) and occipital condyle were recorded. For birds, all longbones were recorded and the presence of the bony part of the beaks was recorded also but these were not identified to taxon. Measurements were recorded following von den Driesch (1976) and Payne and Bull (1988). Tooth wear in cattle and pigs was recorded following Grant (1982) and that of sheep/goat follows Payne (1987). Sheep and goat bones and teeth were distuinguished where possible following Boessneck (1969), Payne (1985) and Prummel and Frisch (1976). The few secure identifications of postcranial elements are of sheep, but one deciduous fourth premolar may be from goat.

Results

The remains are poorly preserved, with most consisting of highly weathered unidentified fragments; only a small quantity are identifiable to taxon or element. A total of 282 bones were recorded, 266 from Barrow 1 and only 16 from Barrow 2. The latter are listed in Table 1 but do not merit further discussion, except for one foetal bone from context 2008 (see below).

Barrow 1

The assemblage includes 241 specimens identified to order, family, genus or species, eight identified to mammal size (MM2 or hare-fox size), four amphibian bones and thirteen bones of foetal animals, including one from a canid (Table 1). Further work is required to identify these latter to taxon, where possible. Small mammal remains were quantified but not identified to taxon. Almost all appear to be from the water vole, *Arvicola terrestris*. The sieved remains of small mammals provide a more secure indication of species and element distributions in the deposits (Andrews 2002)

Taxonomic distribution

The taxonomic distribution is listed by area and phase in Table 1 and the number of ageable and measurable bones and teeth are provided in Tables 2 and 3. Highly disturbed or contaminated deposits or contexts are distinguished (e.g. barrow mound contexts with Roman disturbance; fissure) from the more secure ones. The full archive of bone identifications is available on request.

Cattle, sheep/goat and pig dominate the assemblage. Dog bones and teeth are common also and are primarily from medium-large size dogs, with at least one or more approximating the size of a greyhound. Less common taxa include equid, fox, cervid, hare and amphibia. The few bird bones include probable Galliformes, Columbidae (pigeon), small corvid and a passerine size bird.

Element distribution

No clear deposition of animal skeletons or part carcasses was identified within the assemblage. In context 1053 (subsoil, excarnation deposit), three bones of a juvenile caprine (scapula, radius, humerus) show a similar stage of ossification and may be associated. A number of foetal bones recovered from the barrow mound (context 1055) may be associated also, but further work is required to determine taxon (see below).

Age

Only a few bones and teeth provide fusion or tooth wear data, but the state of ossification of many other specimens suggests that they are from juvenile animals. In fact, the proportion of bones from juvenile-subadult animals seems high, but it is not known whether this is a feature of Barrow activity, with the deposition of whole or part carcasses of young animals within the monument, or representative of local husbandry and economy. Bones of juvenile-subadult cattle, sheep/goat and pig were noted in most deposits. Foetal bones are present in Barow 1, cist (75502/03) and barrow mound (1055

and 1052), as well as in Barrow 2 (2008) (Tables 1, 2). Some or all of the foetal specimens from the barrow mound (Barrow 1) may be from canids, dog or fox, and if so may indicate denning.

Measurements

Very few measurements were recorded for the main domestic animals (cattle, sheep/goat, pig). These will provide limited information about Bronze Age livestock. A number of dog bones and teeth provide measurements and indicate the presence of at least two different sized dogs.

Worked bone

Two fragments of worked bone were recovered in the following contexts:
-1055 (72452): fragment of cortical bone from large mammal worked into a point;
- 75502 (72545): fragment of polished bone (or antler?), possibly part of a pin

Recommendations

The assemblage of hand-collected bones is very small and provides little information about local diet, economy or husbandry, other than to indicate the livestock raised in the area. Little further work is required to complete the archive.

The presence of very juvenile-subadult animals is of interest and comparison, albeit based on few data to assemblages from other Bronze Age sites, including settlements and monuments, may indicate if this pattern is particular to this site or represented in the wider Bronze Age economy. The recovery of bones from foetal animals is of particular interest. The bones of foetal livestock may indicate local stockraising. Some if not all of the foetal bones from the barrow mound may be from canids and as such may indicate denning within or near to the monument. These will be identified to taxon where possible, using foetal fox, pig and sheep reference material, and published guides (Prummel 1987; Amorosi 1989). The presence of adult dogs and foxes may indicate burial of domestic animals, or denning within the barrow mound also, and should be considered further. This information would add to that provided by the microvertebrates, about the taphonomic history of the site.

The bird bone identifications will be finalised and an appendix of measurements from all taxa will be provided as part of the final archive.

Time estimate

Two days are required to complete the archive and report.

References cited

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Table 1: Longstone Edge, hand-collected assemblage: Taxonomic distribution by area and phase (bone counts).
N.B. Disturbed contexts are distinguished; cleaning and surface layers are excluded.
Counts in [ ] refer to non-countable specimens (e.g. antler, pig metapodials 2 and 4)
Carn: carnivore; MM2: hare-fox size mammal
Small mammals: x 1-10; xx 11-50; xxx 51-100; xxxx 101-150

Area	Phase	Description	Taxonomic distribution Cattle	Sheep/goat	Pig	Equid	Large Cervid	Roe deer	Dog	Fox	Canid	Hare	Other mammals	Small mammals	Bird	Amphibia	Foetal animal
Barrow 1																	
1\2	0	subsoil below barrow										1					
12	0\1\2	excarnation deposit	4	8	3				2	1			1carn	x			
12	1	enclosure wall and tumble	1		1												
12	2	cist and skeleton	5	10	9				1	3	1		1MM2	x	2		4
2	3	stone mound	3			1								xxx	1		
12	4	barrow mound	23	27	12	1	[1 antler]	1	8	5	4		4MM2	xx	4	1	7
12	4	barrow mound-Roman disturbance	8	10	8	1			2	1			1MM2	xx	1		1
12	4	grave fill (3030)	2		2	[1]											
1\12	4	barrow material with human bone	10	12	4	1	[1 antler]		12				1MM2	xx		2	
12	4\6	barrow mound (1081)		2	[1]				2						1		
12	6	fissure	3	7	1				5					xx	2	1	
Total Barrow 1			**59**	**76**	**40**	**4**	**[2antler]**	**1**	**32**	**10**	**5**	**1**	**8**	**xxxx**	**11**	**4**	**12**
Barrow 2																	
4	0	subsoil	7														
4\5\6	4	barrow mound	6											x		1	
5	4\6	basal grave fill (2066)			1									xxxx			1
Total Barrow 2			**13**		**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**xxxx**	**0**	**1**	**1**

Table 2: Longstone Edge hand-collected assemblage: numbers of ageable animal bones and teeth
Ageable teeth refer to teeth with recordable wear stage; for canids, tooth counts refer to presence of adult dentition, except where indicated
dvt: ageing based on juvenile state of ossification and size; counts in [ ] refer to non-countable specimens (e.g. pig metapodials 2 and 4)

Area	Phase	Description	Taxonomic distribution Cattle	Sheep/goat	Pig	Equid	Large Cervid	Roe deer	Dog	Fox	Canid	Hare	Other mammals	Small mammals	Bird	Amphibia	Foetal animal
Barrow 1																	
1\2	0	subsoil below barrow										1					
12	0\1\2	excarnation deposit	4	8	3				2	1			1carn	x			
12	1	enclosure wall and tumble	1		1												
12	2	cist and skeleton	5	10	9				1	3	1		1MM2	x	2		4
2	3	stone mound	3			1								xxx	1		
12	4	barrow mound	23	27	12	1	[1 antler]	1	8	5	4		4MM2	xx	4	1	7
12	4	barrow mound-Roman disturbance	8	10	8	1			2	1			1MM2	xx	1		1
12	4	grave fill (3030)	2		2	[1]											
1\12	4	barrow material with human bone	10	12	4	1	[1 antler]		12				1MM2	xx		2	
12	4\6	barrow mound (1081)		2	[1]				2						1		
12	6	fissure	3	7	1				5					xx	2	1	
Total Barrow 1			**59**	**76**	**40**	**4**	**[2antler]**	**1**	**32**	**10**	**5**	**1**	**8**	**xxxx**	**11**	**4**	**12**
Barrow 2																	
4	0	subsoil	7														
4\5\6	4	barrow mound	6											x		1	
5	4\6	basal grave fill (2066)			1									xxxx			1
Total Barrow 2			**13**		**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**xxxx**	**0**	**1**	**1**

Table 3: Longstone Edge: hand-collected assemblage: numbers of measurable bones and teeth of the domestic mammals and canids

Area	Phase	Description	Cattle		Sheep/goat		Pig		Dog		Fox	Canid
			teeth	bones	teeth	bones	teeth	bones	teeth	bones	bones	bones
Barrow 1												
1\2	0	subsoil										
12	0\1\2	excarnation deposit						1	2		1	
12	1	enclosure wall and tumble										
12	2	cist and skeleton										1
2	3	stone mound	1									
12	4	barrow mound			2	4	3		1	3	1	
12	4	barrow mound-Roman disturbance							1			
12	4	grave fill (3030)										
1\12	4	barrow material with human bone					1		2	6		
1	4?	barrow material with human bone (1098)										
12	4\6	barrow mound (1081)										
12	6	fissure				1			1	2		
Total			**1**	**0**	**2**	**5**	**4**	**1**	**7**	**11**	**2**	**1**