

APPENDIX 8: ASSESSMENT OF ANIMAL BONE

Kevin Rielly

1. Introduction

- 1.1 Animal bones were almost all recovered during excavation works at Fawkham Junction in Zone 1 (ARC 330 98).
- 1.2 Animal bones were recovered by hand-collection on site and through wet-sieving bulk samples taken in the field. All hand-collected animal bones were washed and air-dried, then bagged and labelled as context groups. Bulk samples were washed using a modified Siraf tank fitted with 1.0mm and 0.25mm flexible nylon mesh to retain the residue and flot fractions respectively. These fractions were visually sorted for floral and faunal remains and labelled as individual sample groups.
- 1.3 The study of the material was carried out to study the following fieldwork event aims,
 - to establish a record of the changing palaeo-environment for all time periods present and the interaction with past economies.
 - to determine the spatial organisation of the landscape, and changes through time.
 - to determine the ritual and ceremonial uses of the landscape.

2. Methodology

- 2.1 All contexts containing faunal remains were analysed and recorded onto the ORACLE CTRL animal bone database. No sub-sampling of contexts was carried out. The information recorded included number and weight of bones per context, species representation (percentage abundance), and the estimated number of identified (to species), measurable, agable, worked and butchered fragments. Notes were taken regarding pathological examples and whether the assemblages were unusual in any way, for example if any bones were obviously part of the same skeleton or if any were burnt.

3. Quantification

- 3.1 A total of 8.78kg, approximately 260 fragments, of animal bones were hand recovered from 22 contexts (all from the Fawkham Junction site), with an additional 0.05kg, or 70 fragments, from 6 soil samples. Of the total fragment count (hand collected), 111 fragments were identifiable to species and body part. This included 51 bones with potential for ageing data, 14 that can be measured and 12 showing evidence of butchery. No worked bones were recovered and none showed any obvious evidence of pathology. Relatively few bones from the samples were identifiable to species (a total of just 4 bones out of a grand total recovered of 70 fragments). This information is shown for all contexts (hand collected and sieved) in the Table 12 below.
- 3.2 The tables show the percentage of identifiable fragments represented by all of the specified species groups. All contexts are recorded in the table, including

environmental samples. It is evident that cattle represent the most consistently high percentage of identifiable fragments, with sheep/goat then pig containing the next highest percentages.

4. Provenance

- 4.1 The majority of the bones are well preserved and moderately fragmented. Notably, most of the assemblages provided a reasonably large proportion of bones which could be identified to species. Given the good condition of the bones, as well as the close dating (see below), it could be supposed that these assemblages had suffered a minimal level of disturbance following their deposition.
- 4.2 These assemblages, all within the Fawkham Junction excavations (ARC 330 98), were recovered from mid to late 1st century AD pit and ditchfills, these features representing settlement enclosures and local activity. Some of the ditchfills provided reasonably sized assemblages, but in general the quantities are rather small. As mentioned above, the proportions of identifiable bones are quite high. In addition, there is a good representation of age, and a moderate proportion of size data.
- 4.3 The species recovered from these assemblages include cattle, sheep/goat, pig and horse. Most of the identifiable bones clearly belong to the first three species, and in particular to cattle. Horse is generally represented by single fragments, with the exception of two partial articulations, composed of forelimb bones, possibly from nearby contexts within the same ditch (contexts [880] and [881]). It can be supposed that these bones are the remains of food dumps, possibly including the horse fragments. One of the articulations described above featured a phalange which had been cut close to the distal end. This could perhaps represent skinning rather than food waste, however, there is no reason to suppose that this animal had not been eaten as well as flayed.
- 4.4 Amongst the food waste there is a scapula from a very young calf. As this exhibits a butchery mark, it can be postulated that this animal had been killed for its meat. There is one other example of a similarly young domesticate – a metapodial from a lamb, which, without any butchery, is perhaps more likely to represent an infant mortality. The latter interpretation would suggest local rearing/stock keeping, while the consumption of such young animals would suggest the presence of a high status household in the vicinity of this site.
- 4.5 There were a small number of samples with bones, each providing rather small quantities. The identifiable fragments mainly belonged to the major domesticates, with the exception of a common shrew mandible from one of the ditchfills.
- 4.6 One sample, from a ditch (context 159) produced a small collection of calcined cattle-size fragments. It is to be wondered whether these may have some ritual significance or perhaps merely represent the cleaned out contents of a nearby hearth.

5. Conservation

- 5.1 It is recommended that all material be retained for the next stage of analysis and for any future comparative work.

6. Comparative material

- 6.1 The Roman bone assemblages from this site can be compared to those recovered from contemporary deposits throughout the sites in this project, and in particular from Northumberland Bottom (ARC WNB 98) and Hazells Road (ARC HRD 99) in Zone 3. Further sites within this project include Thurnham Roman Villa (Oxford Archaeological Unit), which has provided extensive remains including a possible shrine or temple. In addition, comparisons within North Kent include the large collections from the Roman villa at Keston within the London Borough of Bromley (Locker 1999).

7. Potential for further work

- 7.1 The relatively good condition of these bones would suggest that there is a reasonable potential for further study. While the quantities are not large, the available information could be suitable for a basic study of species representation and exploitation practises. The major potential is therefore to answer, at least in part, the fieldwork event aim concerned with past economies,

- *to establish a record of the changing palaeo-environment for all time periods present and the interaction with past economies.*

- 7.2 Here it should be possible to determine meat preferences and, to a limited extent (due to the small quantities of bones) how the various identified animal domesticates were used. This can be achieved by comparing the abundance (total fragment counts) of each identified species and through an analysis of the agable and sexable bones belonging to the major domesticates (cattle, sheep/goat and pig) respectively. Of interest regarding the food use of these animals is the presence of a butchered horse toe bone. This cut undoubtedly suggests this animal was skinned, though not necessarily eaten. However, it is possible that this may be evidence for a continuation of the practise of eating horseflesh from the Iron Age into the early Roman period (see Maltby 1981. 184). This in turn may suggest that the local populace were less than completely romanised. Finally there is one tantalising glimpse of high status food, as shown by the presence of a possible veal calf.

- 7.3 There is very little potential for a study of the first part of this event aim, that is for palaeo-environmental change. This would be dependant on the presence of environmental indicators as small rodents, certain birds and amphibians. These unfortunately are underrepresented or absent from the samples taken at this site.

- 7.4 The second event aim has some potential for further study. This was:

- *to determine the spatial organisation of the landscape, and changes through time.*

- 7.5 It was noticed that the bone assemblage at this site was very largely composed of cattle fragments. These were noticeably represented by adult individuals, which

may have been milch animals or those used for traction purposes. It can be suggested that the larger the number of oxen, the greater the quantity of nearby land given over to arable farming. Thus, assuming most of these adult individuals were oxen, it can be suggested that a large proportion of the surrounding landscape was given over to arable rather than pasture. An important element regarding the achievement of this aim will be to deduce the sex ratio of the adult cattle represented at this site.

7.6 Regarding information concerning the ritual landscape:

- *to determine the ritual and ceremonial uses of the landscape*

7.7 It was noted that a small collection of calcined bones were recovered from one of the ditchfills. These appear to be cattle-size rather than human fragments. While they may represent the remains of a cremation, they could equally be the remains of a hearth deposit.

7.8 A possible new research aim/objective could include a study of the size of the domesticates. It was noticed that there were a number of measurable bones, particularly belonging to cattle and horse. As well as determining the size/type of domesticates present at this site, the size information can also be used to determine sex. This could help towards a clarification of the problem concerning the use of cattle at this site.

8. Bibliography

- Locker, A. 1999. The animal bone. In Philp, B., Parfitt, K, Willson, J and Williams, W. *The Roman villa site at Keston, Kent. Second Report (Excavations 1967 and 1978-1990)*. Eighth Research Report in the Kent Monograph Series. The Kent Archaeological Rescue Group. 145-159.
- Maltby, M. 1981. Iron Age, Romano-British and Anglo-Saxon animal husbandry - a review of the faunal evidence. In M. Jones and G. Dimbleby (eds). *The environment of man: the Iron Age to the Anglo-Saxon period*. B.A.R. British Series 87. 155-203.

Table 17: Assessment of Animal Bone – quantity of identifiable bones, age, measurements and butchery

Site	Context	S.No	N. iden	N. Agable	N. Meas	N. Butchered	N. Worked
ARC 330 98	512	0	2	1	0	0	0
ARC 330 98	512	229	1	0	0	0	0
ARC 330 98	515	0	1	0	0	0	0
ARC 330 98	760	0	1	0	0	0	0
ARC 330 98	158	0	4	1	0	0	0
ARC 330 98	159	0	0	0	0	0	0
ARC 330 98	159	27	0	0	0	0	0
ARC 330 98	516	0	1	1	0	0	0
ARC 330 98	772	0	3	1	0	0	0
ARC 330 98	883	0	0	1	0	3	0
ARC 330 98	886	0	0	0	0	0	0
ARC 330 98	886	271	1	1	0	0	0
ARC 330 98	800	0	6	4	0	2	0
ARC 330 98	860	0	1	1	0	0	0
ARC 330 98	868	0	1	0	0	0	0
ARC 330 98	876	0	6	2	0	1	0
ARC 330 98	877	0	5	3	2	1	0
ARC 330 98	877	265	2	0	0	1	0
ARC 330 98	882	0	25	12	1	2	0
ARC 330 98	882	266	0	0	0	1	0
ARC 330 98	870	0	15	6	4	0	0
ARC 330 98	880	0	10	4	2	1	0
ARC 330 98	881	0	20	10	5	2	0
ARC 330 98	804	0	1	0	0	0	0
ARC 330 98	802	0	2	0	0	0	0
ARC 330 98	782	0	6	4	0	0	0
ARC 330 98	782	278	0	0	0	0	0
ARC 330 98	316	0	1	0	0	0	0

N - approximate number of bones. Iden - bones identifiable to species/species group.

Table 18: Assessment of Animal Bone – species, quantity and interpretation

Site	Context	S.No	Interpretation	Period	% of identified fragments								
					Sheep/Goat	Cattle	Pig	Horse	Dog	Small mammal	Bird	Fish	Oth
ARC 330 98	158	0	Ditch	RO	75	25	0	0	0	0	0	0	0
ARC 330 98	159	0	Ditch		0	0	0	0	0	0	0	0	0
ARC 330 98	159	27	Ditch		0	0	0	0	0	0	0	0	0
ARC 330 98	316	0	Ditch	RO	0	100	0	0	0	0	0	0	0
ARC 330 98	512	0	Ditch	RO	50	50	0	0	0	0	0	0	0
ARC 330 98	512	229	Ditch	RO	0	0	0	0	0	100	0	0	0
ARC 330 98	515	0	Ditch	RO	100	0	0	0	0	0	0	0	0
ARC 330 98	516	0	Ditch	RO	0	100	0	0	0	0	0	0	0
ARC 330 98	760	0	Ditch		0	100	0	0	0	0	0	0	0
ARC 330 98	772	0	Ditch		33	67	0	0	0	0	0	0	0
ARC 330 98	782	0	Ditch	RO	0	100	0	0	0	0	0	0	0
ARC 330 98	782	278	Ditch	RO	0	0	0	0	0	0	0	0	0
ARC 330 98	800	0	Ditch	RO	0	100	0	0	0	0	0	0	0
ARC 330 98	802	0	Pit	RO	0	50	0	50	0	0	0	0	0
ARC 330 98	804	0	Pit	RO	0	100	0	0	0	0	0	0	0
ARC 330 98	860	0	Ditch	RO	0	100	0	0	0	0	0	0	0
ARC 330 98	868	0	Ditch	RO	0	100	0	0	0	0	0	0	0
ARC 330 98	870	0	Ditch	RO	10	65	15	10	0	0	0	0	0
ARC 330 98	876	0	Ditch	RO	20	20	60	0	0	0	0	0	0
ARC 330 98	877	0	Ditch	RO	60	20	20	0	0	0	0	0	0
ARC 330 98	877	265	Ditch	RO	0	50	50	0	0	0	0	0	0
ARC 330 98	880	0	Ditch	RO	10	10	0	80	0	0	0	0	0
ARC 330 98	881	0	Ditch	RO	40	40	0	20	0	0	0	0	0

Site	Context	S.No	Interpretation	Period	% of identified fragments								
					Sheep/Goat	Cattle	Pig	Horse	Dog	Small mammal	Bird	Fish	Other
ARC 330 98	882	0	Ditch	RO	33	33	34	0	0	0	0	0	0
ARC 330 98	882	266	Ditch	RO	0	0	0	0	0	0	0	0	0
ARC 330 98	883	0	Ditch		0	0	0	0	0	0	0	0	0
ARC 330 98	886	0	Pit		0	0	0	0	0	0	0	0	0
ARC 330 98	886	271	Pit		100	0	0	0	0	0	0	0	0