

16. APPENDIX 2: CREMATED BONE

Sue Anderson

A small quantity of cremated bone was recovered from eleven contexts. The bone from the bulk samples was processed via flotation, and extracted bone from the larger groups was sieved into fractions (<2mm, >2mm, >5mm and >10mm) during analysis. All but the smallest fraction were sorted. All bone was sorted into five categories: skull, axial, upper limb, lower limb, and unidentified. All fragment groups were weighed to the nearest tenth of a gram. Measurements of maximum skull and long bone fragment sizes were also recorded. Observations were made, where possible, concerning bone colour, age, sex, dental remains and pathology. Identifiable fragments were noted. Methods used follow the Workshop of European Anthropologists (Ferembach et al 1980) and McKinley (1994; 2004).

Table 2 shows the bone weights and percentages of identified bone from each context, and the proportions of bone identified from the four areas of the skeleton (skull, axial, upper limb, lower limb). Expected proportions are provided based on McKinley (1994: 6).

The total weight of bone is low. Mays (1998: table 11.2) notes that the combusted weight of an adult skeleton has a mean of around 1500g for females and 2300g for males. The total quantity of bone in this assemblage therefore represents only *c* 16% of the combusted weight of an average adult female skeleton.

The degree of fragmentation was high, and all fragments were heavily abraded, with soil concretions adhering. This is reflected in the low identification rate for every context. The largest fragment of skull was 26mm across and the largest individual piece of long bone was 63mm long. However, these were the exceptions, with the majority of bone occurring in the >2mm and >4mm fractions.

All bone in this group was fully calcined, oxidised, and white in colour. The presence of a high proportion of white bone indicates firing temperatures in excess of *c* 600°C (McKinley 2004: 11), but can also relate to preservation of material in acidic soil, as any interred material which was not fully calcined is likely to have been lost post-burial.

Cranial fragments were considerably over-represented amongst the identifiable material, with

almost no axial and no upper limb bones identified. However, the majority of unidentified material in all contexts appeared to be fragments of long bone shafts and it is certain that more arm and leg bones were present in the assemblage than could be recognised. The thinner and lightweight axial material was generally not represented, however, again perhaps due to post-burial decay.

Three groups of cremated bone were thought to be discrete deposits. Context (012), found below the chamber floor, contained a high proportion of cranial vault fragments, one tooth root of a molar, fragments of a small patella, femoral shaft and pieces of toe phalanges including an unfused proximal epiphysis. The skull fragments included some which appeared adult and at least one fragment which was probably juvenile. The group may therefore include at least two individuals. The nearby deposit (013) contained no identifiable material, although it is possible that two large joining fragments could be burnt antler fragments. Context (017) was slightly larger than (012), and also contained a high proportion of cranial vault fragments, together with a single tooth root (canine or premolar), some femur and tibia fragments, and most likely comprised the remains of an adult.

All other deposits comprised small groups of bone weighing less than 10g each. Only (037) and (039) contained any identifiable material, the former a fragment of molar root and the latter a small cranial vault fragment and a fully formed single tooth root. This latter suggests an individual of at least 8–10 years of age, but possibly adult.

The poor condition of the material and the lack of any useful biological information regarding the people buried at this site means that the assemblage is not really comparable with other contemporary groups. However, the presence of at least two individuals, an adult and a child, in one of the deposits is a common occurrence in prehistoric burials of most periods and can indicate the re-use of pyres, the deliberate cremation of more than one individual at a time, or the curation of bone for later burial. It is possible that the several groups of bone recovered from this site were part of the two individuals identified in (012), as no duplication of parts was observed, but this could not be confirmed with the available evidence.

Table 2 The cremated bone from Carmahome

Context	Sample	Total wt(g)	% ident	% skull	% axial	% upper limb	% lower limb
<i>Expected*</i>				18.2	20.6	23.1	38.1
012	2	82.2	28.6	64.3	2.1	0.0	33.6
013	3	44.6	0.0	-	-	-	-
017	4	83.1	14.3	69.7	0.0	0.0	30.3
030	16	0.5	0.0	-	-	-	-
032	17	7.3	0.0	-	-	-	-
033	18	1.0	0.0	-	-	-	-
034	19	0.6	0.0	-	-	-	-
035	-	5.9	0.0	-	-	-	-
036	14	0.1	0.0	-	-	-	-
037	SP1	6.1	3.3	100.0	0.0	0.0	0.0
039	15	8.6	5.8	100.0	0.0	0.0	0.0
Total		240.0					