APPENDIX G THE ANIMAL BONE

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1.0 INTRODUCTION

Five skeletal elements were recovered from Late Iron Age features, enclosure ditches F37 [1369] and F43 [1168] produced three cattle bones these include the fragmented remains of an upper premolar and lower molar, and the complete shaft of a right metacarpal. Faunal remains were also recovered from posthole F209 [1277] which contained the fragmented remains of a cattle upper molar and a discrete layer of ash and charcoal F232 [1303] which produced the calcined remains of a sheep sized ?tibia shaft.

In addition, a very small sample of heavily burnt animal bone was recovered from the disuse of a linear gully, F35. The central fill of the gully contained an irregular deposit of grey material containing charcoal and fragments of burnt bone, designated C1303 F232. It was thought that the deposit could be cremated bone and pyre residue, placed or dumped within the gully. The entire context was sampled.

2.0 ASSESSMENT

It is assumed that this selective representation of skeletal elements is a product of poor preservation conditions, as well as the properties of individual skeletal elements and calcified tissues rather than the result of selective human action. Compact bones such as the metacarpal from F37 weather more slowly than other skeletal elements. Tooth enamel is wholly inorganic (96-97%) in comparison to bone (70%) and will therefore be little effected by the decomposition of its organic component. The fragmentation of the cattle teeth recovered from these features therefore appears to be due to the decomposition of the underlying dentine which supports it thus causing the enamel to fracture (Hillson, 1986: 119). Further, in the instance of the calcined fragments from F232, bone survival is enhanced by the presence of charcoal and/or ash which has the effect of neutralising the acidity of the surrounding soil matrix.

The recovered calcined bone from F232 weighed only 10.2g, of which 4.5g proved to be identifiable to some degree. Only four fragments were greater than about 5mm in length; the majority were smaller than 5mm. The majority of fragments were calcined in appearance; that is, burnt to a hard white or creamy-white appearance. The larger fragments were white or greyish-white on the surface, but where the interior of the bone was visible at broken edges, it was greyish-black or black. The surface of the fragments was slightly worn in appearance. None of the fragments had any trace of butchery marks or gnaw marks made by humans, rodents or dogs.

The four identifiable fragments all appeared to be from the shaft of a right tibia of a sheep of goat, though given the small size and slightly worn appearance of the pieces this identification must be judged as highly probable, rather than definite.

Bone brunt to the degree in these examples is unlikely to be the product of simple cooking, which might char the bones to a black or brown colour. The temperatures reuqired to produce the characteristic calcined appearance are likely to be of the order of 500-800 degrees Celsius or higher. These temperatures can be achieved at the heart of a domestic fire, but the bone would have had to be in fire for some time (Nicholson 1993). Whether the cremation was a deliberate act, or the result of throwing bones into a domestic fire, cannot be resolved by the small sample represented here.

References

Hillson, S. 1986 *Teeth* (Cambridge)

Nicholson, R.A. 1993. 'A morphological investigation of burnt animal bone and an evaluation of its utility in archaeology', *Journal of Archaeological Science* 20, 411-428