Scotland's First Settlers – Test Pit Data

Jacqui Mulville and Adrienne Powell

Methodology

Excavation, sampling and recovery

The animal bone was retrieved by hand and it spatial location was recorded with reference to a particular square and context.

Identification

The animal bone was identified using the reference collection at the Universities of Cardiff and York. When possible, sheep and goat were distinguished (Boessneck 1969) but where diagnostic features were not present due to fragmentation or poor preservation, they were classified under the single heading sheep/goat. Those fragments which could not be identified to species level were classified as 'cattle-size', 'sheep-size' for ribs and vertebra; other material was classed as 'unidentified'. Fragmentation information for longbones was added using a zoning method following Serjeantson (1991), zones being recorded when over 50% present.

Quantification

The total number of fragments (NISP) was calculated for all species. No further quantification was attempted, as the small sample sizes precluded any detailed analysis.

Ageing & Sexing

The presence of wear on all teeth was recorded, where possible wear stages were recorded for dP4s, P4s and permanent molars of the domestic species using Grant (1982) and grouped into age stages following the methods of Halstead (1985) and Payne (1973). The fusion stage of post-cranial bones was recorded and related age ranges taken from Getty (1975).

Although is possible to distinguish the sexes using morphological characteristics of the pelves and the canines, no material was complete enough for this to be undertaken. Similarly it is possible to detect the sexual composition of a population through metrical analysis, but the number of measurements produced for individual bones and species was small in this assemblage and precluded any conclusions.

Measurements

Measurements were taken on cattle, sheep/goat, pig, horse red and roe deer bones/teeth, following von den Driesch (1976), Davis (1992) and Payne (1969).

Gnawing, butchery, burning and condition

For all identified bones gnawing and butchery marks were recorded. Butchery marks were described as “chop” or “cut” marks. The colour of bone was noted and any burning was recorded. To investigate differences in preservation the prevalence of eroded/worn bone was noted. In order to examine the post-mortem use of bone, material that appeared to be worked, worn or polished was also noted.

Intrusive Material

Species considered to be intrusive and/or non-anthropogenic in origin (rabbits, hares, amphibia and small mammals) have been recorded and considered in this analysis.

Recovery

The material was recovered through hand-picking and sieving, the latter probably accounting for the recovery of many of the small mammal and amphibian bone. Sample size, mesh and numbers are recorded in the archive but, due to the small proportion of identifiable material precluding any comparative quantification of these assemblages, all material is considered in the following analysis.

Results

This report only considers the material that can be identified to species or group of species. The archive contains a record of the 8956 fragments recorded, which includes large quantities of material recorded as unidentifiable bone or to a size grouping. A total of 359, only 4% of fragments were identified to species or group of species from twenty-two test pit sites.

Table 1 demonstrates the distribution of the data between the different sites and the contexts within those sites. There was only a single site with over 50 identifiable fragments, Toscaig 2. There is a range of species present with both wild and domestic terrestrial mammals recorded, in addition to a number of sea birds and mammals.

Alt na Criche

Red deer was recovered from this site but the material derived from surface layers and shows evidence of root etching, associated with surface material. A sheep radius, charred humerus and tooth fragments were recorded. The only other material was from small mammals, with water vole, bank vole and mouse species present, and as for sheep some of this material was charred. Burnt material was recovered from four contexts, 6812, 6814, 6822 and 6823, suggesting anthropogenic activity at this site.

Ard Clais Slacher 2

The bone from this site derived from three midden contexts and was dominated by domestic species, cattle, sheep and pig. Smaller quantities of bone came from small mammals with a single amphibian bone.

Camusteel 2

Identified animal bone at this site included ten bones from context 7711; a surface layer that contained modern material. This was mostly sheep bone and as much of it was neonatal this material probably represents non-anthropogenic material. The lower stratified layers contained sheep/goat and

pig bone in addition to a single fragment of red deer metacarpal. Other material was of a non-anthropogenic origin with toads, voles, shrews and other amphibia and small mammals present.

Camusteel 3

The only material identified as of anthropogenic origin at this site was fragments of cancellous bone which may have derived from cetacean bone. All other identified bone was natural in origin with frog, vole and other amphibia and small mammal bones present.

Coire Sgamhadail 1

This site has equal amounts of cattle and red deer bone, with a lesser amount of the other domestic mammals pig and sheep/goat. Of note is a juvenile badger left humerus shaft from 8921, which bore cut marks, and a roe deer radius.

Cattle are represented by skull/tooth fragments and bones of the lower limbs and red deer by a cut radius and two metapodia. Pig bones include jaw and tiny fragments of the upper fore limb bones whilst sheep/goat bones are restricted to vertebra and a metapodia fragment. The only other identified bone was a vole tooth which may be associated with the other small mammal remains recorded.

Coire Sgamhadail 3-6

This assemblage is dominated by the remains of more than one leveret, (young hare); these demonstrate no evidence of butchery marks or carcass division and are probably non-anthropogenic in origin. The remainder of the assemblage is dominated by the loose teeth of sheep/goat, with lesser amounts of red deer, pig and cattle teeth present. This bias toward teeth may be a result of the poor preservational conditions. The jaw and a loose tooth of a field vole was also recovered with other small mammal long bones.

Crowlin 3

The remains of juvenile rabbits dominates this collection of bone, and as such probably represents material of a non-anthropogenic origin. Domestic mammals were represented by a few pig and sheep bones and a fragment of goat jaw. A tiny piece of red deer antler was recovered and evidence for sea bird exploitation was demonstrated by the cut mark on a shag ulna found in association with a shag humerus. Also present were the bones of other small and medium sized examples of the auk species. Finally fragments of a mouse (unidentified to species) was also recovered.

Crowlin 4

The incisor and femoral proximal epiphyses of a sheep/goat were the only two fragments identified.

Crowlin 7

The majority of material at this site was identified as sheep. At least three individuals can be identified from the aging information, one older animal over 3.5 years with a proximal fused tibia, one between 2 and 3.5 years with proximally fused and distally unfused radius and one neonate identified from a first phalange and humerus. A couple of rabbit bones were also recorded. There is no evidence for cultural modification of any of the range of elements present. Some material was identified as modern from its preservational condition, whilst the presence of articulating sheep ribs and vertebra suggest that these remains may be the remains of natural deaths.

Fergus's Shelter

The only species identified at this site was sheep/goat. Surface peat layers contained loose teeth and juvenile bones, whilst the lower occupation layer held a jaw, a lower tooth and an unfused first phalange.

Fraisers Croft

A single right sheep upper molar was the only identified material recovered.

Loch a Sguuir

A single cattle metacarpal and a neonatal sheep/goat femur and navicular cuboid was the only remains of food species present. Frog and amphibia bone was also identified.

Meallabhan

The only contexts containing bone at this site are those identified as surface finds, or coming from a surface midden. There are three red deer teeth, a juvenile cow calcaneum, three sheep/goat teeth, an unfused distal humerus epiphyses and metapodia. A rabbit vertebra was also present.

Ob Chuag

A single shrew jaw was recovered from this site.

Rhuba Chuaig

The only bone recovered from the midden at this site was a charred otter second toe, this cultural modification suggests that these remains are anthropogenic in origin.

Toscaig 1

The midden at the site produced only two field vole teeth.

Toscaig 2

This test pit contained red deer, cattle, pig, seal and vole. The assemblage was dominated by deer, fragments of at least two adult deer (two left distal tibia) and the unfused metapodia of a neonatal animal were present. The majority of deer bone was derived from the extremities with bones of the head, feet and lower limbs present. There is also the rodent gnawed tip of an antler tine.

Cattle are also represented by the extremities, with only a fragment of cattle tibia representing the main limbs. All other material is from the lower limbs, from carpals/tarsals downwards, including a pair of first phalanx and a single loose tooth. A cattle navicular cuboid was recovered from surface vegetation. Pig bone from the upper limbs, radius and pelvis, and the extremities, skull

fragments, metapodials and phalanges was identified. The upper limb bones both derive from an animal of less than one year, and the maxillary teeth also indicate a young animal (second molar just erupting). Of the eight sheep bones, half come from surface layers, the remainder are mostly teeth with a hyoid bone was also recovered. Two red deer bones, one cattle bone, three pig bones, and two sheep teeth were burnt and this material was derived from occupation layers, shell layers and shell midden, and indicate human activity.

Seal is present at this site with a seal jaw fragment, a loose tooth and proximally unfused toe present. Only the left ascending ramous of the seal jaw was present which bore a cut mark, probably associated with disarticulation. The loose tooth was identified as Common seal.

Non-anthropogenic species recorded include bank and field vole teeth (two teeth are associated with a modern hearth) and a number of amphibia longbones.

Toscaig 3

A cattle lower molar was recovered from this site.

Toscaig 4

This assemblage includes both domestic and wild species. Material identified as of modern origin, from contexts 4111 and 4112, has been excluded from this discussion. The few cattle bones were an incisor, a calcaneum and a first phalanx. Sheep/goat remains came from at least two animals, and included skull fragments, metapodials and toes.

Wild food species include red deer and common seal. A red deer tibia and pelvis were recorded; the latter showed evidence of eburnation, polishing of the joint surface due to degenerative joint disease. Common seal is represented by a lower right mandible.

Other material identified includes a few elements of frog, modern rabbit and small mammal.

Torrain 1 (Raasay)

Only amphibian bone was identified from this site

Uags 1

The only material identified was from a layer of sheep droppings and was a cattle tooth and a small mammal vertebra.

Discussion

The range of sites and species identified here demonstrates a diverse resource base within the study area. The presence of domestic stock at almost all sites suggests a post-Mesolithic date for many of the contexts examined. The sites lacking domestic material, Camusteel 3, Coire Sgamhadail 2, Ob Chuaig, Rhuba Chuaig, Torrain 1 (Raasay), Toscaig 1, are generally small sites suggesting sample size may be the reason for the lack of domestic species. The majority of sites have both domestic and wild animals present; red deer are the most abundant wild species, although the presence of butchered seal, badger and shag bones and the charred otter bone are of particular interest and suggest the utilization of a wide range of species.

The test pits have demonstrated the potential for analysis and the state of preservation at a range of sites. As such, this analytical stage should be seen as providing valuable information upon which decisions for the further investigation and management of these sites can be based.

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