

## 12. PALEOENVIRONMENTAL ASSESSMENT

### 12.1 Fish, mollusca and crustacean remains

*Ruby Cerón-Carrasco*

#### 12.1.1 Sand.

12.1.2 Twenty-seven contexts with fish remains were examined; in all the remains are identifiable to species or family group. The species noticed during scanning of these samples included Gadidae species such as saithe (*Pollachius virens*), pollack (*Pollachius pollachius*), cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*) and whiting (*Merlangius merlangus*). Species from other groups were also noticed, these included wrasse (*Labridae* family), mackerel (*Scomber scombrus*), herring (*Clupea harengus*) and flatfishes. A small amount of Salmonids (salmon/trout) were also noticed.

12.1.3 A few of the fish remains were burnt white and black or partially burnt which would indicate burning at high temperature possibly as a result of domestic rubbish disposal.

12.1.4 Three contexts contained crustacean remains, most were burnt.

12.1.5 Thirty-five contexts were examined with marine shell and these contain the remains of edible species such as limpets, periwinkles, mussel, cockles, clams, oyster, razor shell and scallops. Remains of non-edible species were also noticed, these included dog whelk and flat periwinkles.

#### 12.1.6 Test Pits

12.1.7 SFS 22 (Crowlin 3)

12.1.8 Two contexts with fish remains were scanned. The Gadidae species noticed included saithe (*Pollachius virens*), pollack (*Pollachius pollachius*), cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*), it is possible that other Gadidae may be found in a more thorough examination of these remains. Species from other family groups include cartilaginous fish (either skate or shark).

12.1.9 Some of the fish remains were burnt white, grey and black indicating domestic rubbish burning.

12.1.10 Crustacean remains were also noticed in one context, all were burnt, and are identifiable to species.

12.1.11 One context also was scanned for marine shells, these were rather fragmentary but limpets, periwinkles and mussel were present, and many of the fragments were burnt black.

12.1.12 SFS ??Toscaig ?? note there are 9 toskaig sites all with their own numbers

12.1.13 Twenty-one contexts were examined which contained fish remains. These consisted mainly of saithe, cod, haddock and whiting. Gurnard (*Triglidae* family) was also present.

12.1.14 Thirteen contexts were examined containing marine shell remains, these consisted mainly of limpets, periwinkles, mussel, clams, and non-edible dog-whelk.

12.1.15 Three contexts containing crustacean remains were also examined; these fragments were all burnt.

12.1.16 SFS 89, or 90?? Coire Sghamadail there are two bay of cave sites each with their own number

12.1.17 Two contexts were examined which had marine shell; these were mainly limpets, periwinkle, cockles and oyster shell.

12.1.18 SFS 58 (Rubha Chuaig)

12.1.19 One context was examined with marine shell, these were mainly limpets and non-edible dog whelk.

#### **12.1.20 Discussion**

12.1.21 The preservation of the fish bone is excellent and it is clear that a variety of marine habitats were exploited.

12.1.22 The marine molluscan remains, including crustacea, are also in excellent condition. They are all easily identifiable. Most samples examined contained burnt fragments of marine shell indicating the domestic nature of these resources. It is clear that they would have formed a substantial part of the diet.

#### **12.1.23 Recommendations**

12.1.24 It is recommended that all the fish remains are analysed. Analysis promises to supply a range of information with respect to environmental and site economy interpretations. It would also help to establish modes of exploitation and seasonality.

12.1.25 In addition it is recommended that analysis and evaluation of the marine molluscan remains, including crustacea, be done in order to provide a rounded picture of all the marine resources exploited.

#### **12.1.26 Conclusion**

12.1.27 The site at Sand and many of the other sites provide excellent preservation conditions for bone and shell. They thus have great potential for both environmental and economic information, data that is so far lacking in the archaeological record for the area and periods represented.

### **12.2 Assessment of the mammal and bird remains from S.F.S. excavations, summer 2000**

Jennifer Thoms

12.2.1 Three boxes of animal bones were submitted for assessment.

12.2.2 Aims. The aim was to determine their suitability for future analysis, to assess their general preservation condition and summarise the archaeological potential of the finds. The finds came from several test pits, which have been assessed together (*can we sep these to indiv test pits and list them as Ruby did?*), and also from Sand.

**12.2.3 Methodology.** The material was scanned briefly by eye, and identifiable mammal and bird bone was noted. Any fish bone and shell present in the bags were noted also. All bags in Box 9 were examined as this material appeared more variable than that in the other two boxes. Due to constraints of time boxes 1 & 2 were sampled and 50% of the bags were scanned. (*If we are going to write like that we need to give list of three boxes and where they came from as that is not a helpful statement if not*)

#### **12.2.4 Results**

**12.2.4.1 Sand.** Ninety samples were scanned of which 51 contained identifiable bone fragments. Most were bird bone and no attempt was made to identify them to species or genus. The mammal bone included fragments from pig (*Sus* sp) and red deer (*Cervus elaphus*). There was no human bone.

12.2.4.2 In general the bone was in good condition with only 10% of the samples containing friable, fragile bone fragments. Thirty seven samples contained bone fragments which had been burnt or charred.

12.2.4.3 Four of the samples contained bone which had been worked or modified.

**12.2.4.4 Test pits.** *Twenty-eight samples were scanned and eighteen found to contain identifiable bone fragments. A metapodial fragment revealed the definite presence of red deer (Cervus elaphus) but no further identification was undertaken at this stage. No human bone was present. (does this mean identification was more difficult than at Sand - I think we should say so if so - or did she just run out of time if so re-phrase)*

12.2.4.5 The material was well preserved and no friable, crumbling bone was noted in this initial examination. Seventeen samples contained burnt bone, a higher percentage than observed in the samples from Sand.

12.2.4.6 Six samples contained worked bone.

## **12.2.5 Conclusion**

12.2.5.1 The presence of burnt and worked bone confirms the domestic nature of the contexts sampled.

12.2.5.2 The good condition of the bone fragments means that further analysis will provide valuable information on the economy and environment of the study period.

## **12.2.6 Recommendations for further work**

12.2.6.1 These samples should be analysed further in order to determine species and to look for age at death information and for butchery marks. This data will provide information on food procurement, seasonality and general animal exploitation.

12.2.6.2 The worked bone should also be examined and catalogued.