NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER

THE OTOKIA MOUTH SITE AT BRIGHTON BEACH, OTAGO

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This site was first reported by Julius von Haast, who called it 'Otokai Creek', in 1879. It lies on the edge of the Brighton Domain and on a small islet located some 40 m to the north-east. The islet and the domain are composed of micaceous schist overlain by loess and a compact sand into which the single occupation layer extends. It is probable, as Haast (1879:150) observed, that the two parts of the site were joined at the time it was occupied. Today a blackened layer can be traced for approximately 400 m around the perimeter of the domain and along the mainland edge of the islet (Fig. 1). This layer is 15-30 cm deep, has no significant soil development upon it and lies approximately 5 m above high tide level.

Excavations

Haast and R. Gillies excavated a trench 30 feet by 2 feet on the islet and observed that, "... quite a thick layer of cores, implements, flakes and chips exists, all manufactured from hard basaltic boulders, having been collected along the beach, derived from Cragg's (Scrogg's) Hill and the other basaltic cones in the neighbourhood." Included in this material were some large flat boulders they thought had been used as flaking anvils and some cylindrical schist cobbles which were probably used as hammerstones. The manufactured artefacts consisted of, "... knives, saws, drills, and spear-heads ..." (Haast, 1879:152), as well as the adze blanks. None of the implements were polished and no polishing or grinding artefacts were to be found. In addition to the basalt there were several worked-out cores of 'flint' (a term often used in those days to refer to silcrete) and 'chalcedonic chert'. A small bone fish hook was also recovered. Haast and Gillies found sparse midden scattered through the occupation layer. This consisted of shells and seal, dog, bird and fish bone. No moa bone was found but in one place there were pieces of human femur. None of the faunal or artefactual material they recovered was deposited in the Otago Museum.

There were further excavations on the islet in 1950 by Skinner and Adam and again in 1955 by Scott, Lockerbie and Collett. The Otago Museum collection mainly consists of the

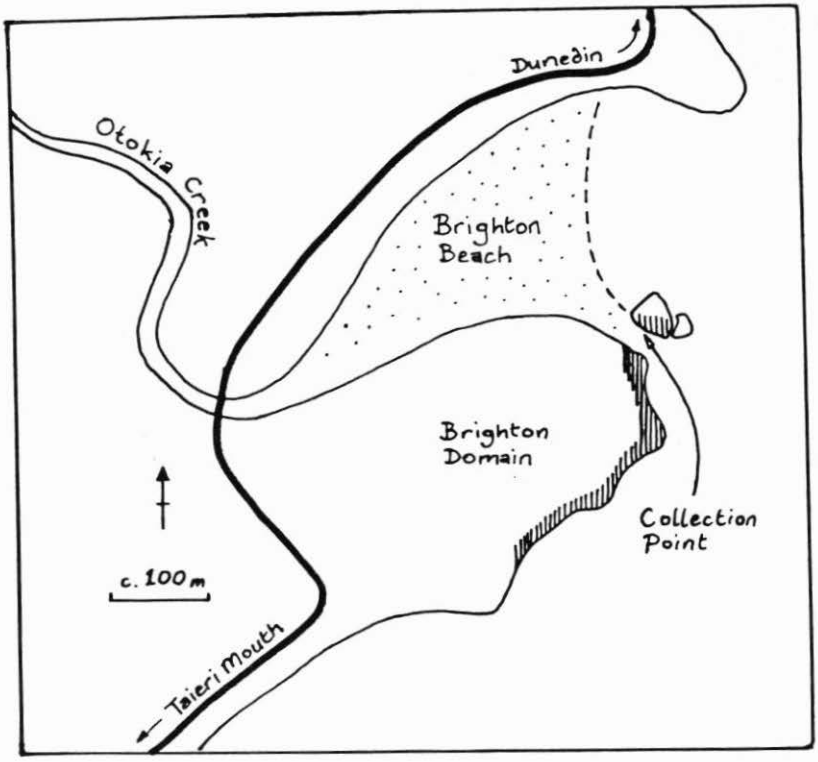

FIGURE 1. Location of the Otokia mouth site (S163/1).

material from these, supplemented by odd pieces brought in over the last 60 years. Most of the approximately 220 stone pieces are cores and flakes of a dark grey, granular basalt and many retain traces of stream or beach rolled surfaces. Large primary and secondary trimming flakes from adze manufacture (see Leach and Leach, 1980:113) are common and they include various blade forms up to 12 cm long. All the cores appear to be broken preforms for quadrangular and, less frequently, triangular cross-sectioned adzes. None of them show any evidence of hammer dressing or polishing, but there are a few pieces of finished adzes in other materials. These are a reduced butt section of a small quadrangular adze in fine-grained basalt (D50.294), two mid-sections of quadrangular adzes which appear to be of Nelson-Marlborough argillite (D45.1470 and D50.295), and a small polished adze flake

(D78.254). There is also a large complete hogback adze (type 4A) in a dark green ?argillite (D23.125) attributed to 'Brighton District' and which may come from the Otokia mouth site. In addition to adzes and adze manufacturing debitage there are five beach or stream cobble hammerstones, three schist files and two sinkers (D50.299 and D50.300). Of bone there is a partly ground point (D45.1472), a ground moa bone tab (D50.29B), a cut section of dog mandible (D55.388) and a small barracouta lure point (D41.450, Hjarno (1967) type A.1). The faunal material, which is also mainly from the 1950's excavations has been identified and is listed in Table 1.

MAMMALS

Canis familiaris (dog): tibia, very immature fibula.
Arctocephalus forsteri (New Zealand fur seal): humerus, 2 ulnae (same side), 3 phalanges, 1st metacarpal, 3 ribs. All probably from 2 subadult males. Right mandible from adult. One vertebra (possibly sea lion).
Mirounga leonina (elephant seal): maxilla fragments, probably from adult male.

BIRDS

Moa, probably Euryapteryx gravis: 5 fragments of tibio-tarsus.
Moa (Emeus crassus or Anomalopteryx didiformis): fragments of left tarso-metatarsus and left femur.
Eudyptes p. pachyrhynchus Gray (Fiordland crested penguin): left femur.
Diomedea cauta (white-capped mollymawk): right humerus.
Leucocarbo carunculatus chalconotus Gray (Stewart Island shag): right humerus.
Small rail, probably Rallus philippensis assimilis (banded rail):

TABLE 1. Fauna from Otago Museum collection.

Surface collection

Last August I visited the site and saw that there had been a small amount of disturbance along 2 m of the exposed cultural layer on the southern side of the islet resulting in approximately 0.05 m^3 of material being strewn down the rock face below. This included a portion of a triangular cross-sectioned adze preform, a large flake retouched along one edge, several flakes and blades all in basalt, a small porcellanite flake struck from a cobble and a flake of obsidian (grey translucency)

which has unifacial damage along one edge. There were also faunal remains which have been identified and are listed in Table 2.

MAMMALS

Canis familiaris (dog): immature caudal vertebra.
Arctocephalus forsteri (New Zealand fur seal): hyoid, vertebra, metacarpal/metatarsal, ribs from one adult (probably male) and one juvenile.
Cetacea (probably dolphin): scapula.

BIRDS

Penguin, most probably Fiordland crested (Eudyptes p. pachyrhynchus Gray), but possibly erect crested (E. pachyrhynchus sclateri): left tibiotarsus, left coracoid, left ulna.
Podiceps cristatus australis Gould (southern crested grebe): anterior sternum.
Puffinus gavia (fluttering shearwater): left sternal fragment.
Shag, almost certainly Stewart Island (Leucocarbo carunculatus chalconotus Gray): right tarsometatarsus, right furculum.
Shag, spotted (Stictocarbo p. punctatus Sparrman) or Blue (S. punctatus steadi Oliver): right carpometacarpus.
Egretta alba modesta Gray (white heron): cervical vertebra.
Anas s. superciliosa Gmelin (grey duck): left tibiotarsus.
?Extinct goshawk (Accipiter eylesi Scarlett): immature left radius, and fragments of very immature tibiotarsus. Because of the immaturity of the bone Scarlett is not totally certain of the identification.
Hemiphaga n. novaeseelandiae Gmelin (New Zealand pigeon): left coracoid.

FISH

Physiculus bachus (red cod): right dentary.
Polyprionum oxygeneious (groper): right maxilla.
Leionura atun dentatus (barracouta): left premaxilla.

SHELLFISH

Haliotis iris 1
Diloma nigerrima 1
Argobuccinum tumidum 1
Aulacomya ater 1
Mytilus edulis 1
Perna canaliculus 3

TABLE 2. Fauna from surface collection.

Discussion and conclusions

The Otokia Mouth site (also known as Otokai Creek, Brighton Beach, Brighton Island and Barney's Island) is an important adze manufactory. The working floor, which is largely confined to the islet, is not as extensive as those at Riverton (Leach and Leach, 1980), Tiwai Point or any of the northern centres of this industry but it is the only specialised site of this kind which is presently known to have utilised the abundant basalt resources of the Otago Peninsula volcanic massif. There are almost certainly others (there is, in fact, hearsay evidence of quarries around Blueskin Bay) which need to be located and have their material and technology characterised because it is very likely that many of the numerous adzes collected in Otago have a local origin. One interesting point about the Otokia mouth site is that it appears to have been only a preform manufactory from which, "... many, if not all of the more perfect specimens in the form of adzes, were destined to be polished at a more propitious season and in a more favourable locality" (Haast, 1879).

The faunal material reflects the exploitation of coastal species, most of which are found in the area today. There are, however, some interesting identifications amongst the birds. The extinct goshawk has not previously been found in sites south of Banks Peninsula. It is a rare species generally and occurs mainly in archaeological sites of some antiquity such as Wairau Bar, Kaupokonui and Moa-bone Point Cave (Scarlett pers. comm.). Together with the moa remains it may indicate that Otokia mouth was occupied at an early period. The southern crested grebe and, especially, the white heron are also unusual finds. The latter is today confined to breeding colonies near Okarito on the West Coast although it disperses widely in the spring and summer.

If the faunal remains are representative of the subsistence activities at the site, the main emphasis would seem to have been upon seals, especially the fur seal which is frequently seen about the rocky headlands of Brighton Beach today, and secondarily upon shags and penguins. Fishing is poorly represented, possibly because sea conditions are less favourable for offshore forays along the southern part of Otago Peninsula than to the north where there are a number of early fishing camps recorded (Anderson, 1981; Leach and Hamel, 1981).

The Otokia mouth site thus appears to have been an adze preform manufactory utilising beach boulders of local basalt. It was probably used by people from elsewhere on the Otago coast

on a temporary basis in much the same manner as Riverton served the needs of the Foveaux Strait district. On the evidence of the avifauna and the imported adzes, occupation during the Archaic phase, and possibly quite early during it, may be suggested

Acknowledgements

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