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**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER**



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SUBSISTENCE AT POUNAWEA : AN INTERIM REPORT

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Over the past five years it has become increasingly obvious that the deeply-stratified midden site at Pounawea, South Otago, is being eroded at an ever-increasing rate by both the Catlins and Owaka Rivers. Since a total loss of its particular faunal assemblage would have created an unacceptably large gap in our knowledge of subsistence patterns on these southern coasts, the New Zealand Historic Places Trust funded a salvage excavation there in February 1979. From 29 January to 23 February between seven and fifteen people, mostly students and staff from the Anthropology Department of the Otago University, worked on the site, sieving and retrieving all material except sand from 20m<sup>2</sup>.

There are six major sites on the Catlins coast (Nugget Point to Waikawa Harbour), all of them close to the mouths of major rivers: Pounawea, Hinahina, Cannibal Bay, Papatowai, Tautuku Point and Tautuku Peninsula. Most have easy access to all the major food-producing habitats of the Catlins, i.e. forest, wetland, river, shoreline and sea. Pounawea is distinctive in that it is on the edge of the only extensive lake cum estuary in the area and probably had easier access to the inland plains and industrial rock sources of Southland than the other large sites.

Manuka Point on which the Pounawea site is situated has had a diminishing history (Figure 1). The first survey of 1865 shows the point as a triangular sand spit, 350m across at the base and 650m long. At least 150m have been lost from the end of the spit since 1865 and the site now consists of a flat, sandy islet 22m long, three to four metres wide, separated by a tidal channel from the causeway which replaced part of the spit in 1933 (Plates 1 and 2). Our excavation showed that occupation material covered only the landward 13m of the island, and consisted of a shelly layer overlying a sandy black layer (Figure 2). At the north end the shelly layer was 50-60cm thick and the black layer 30cm, both decreasing to the south. The shell mound petered out into 20cm of grey sand and sparse shell lying over 20cm of the black layer, the two layers being much more difficult to separate at the southern edge of the site. Using a Dumpy level, we found that the bottom of the black layer in our excavation was 75-90cm above mean high water. Spring tides did submerge our datum peg at MHW by 15-20cm, but during the two cycles of spring tides which we observed, the water did not rise to the level of the occupation material as Lockerbie reports it doing (Lockerbie, 1959). Either the material that he excavated was in a lower

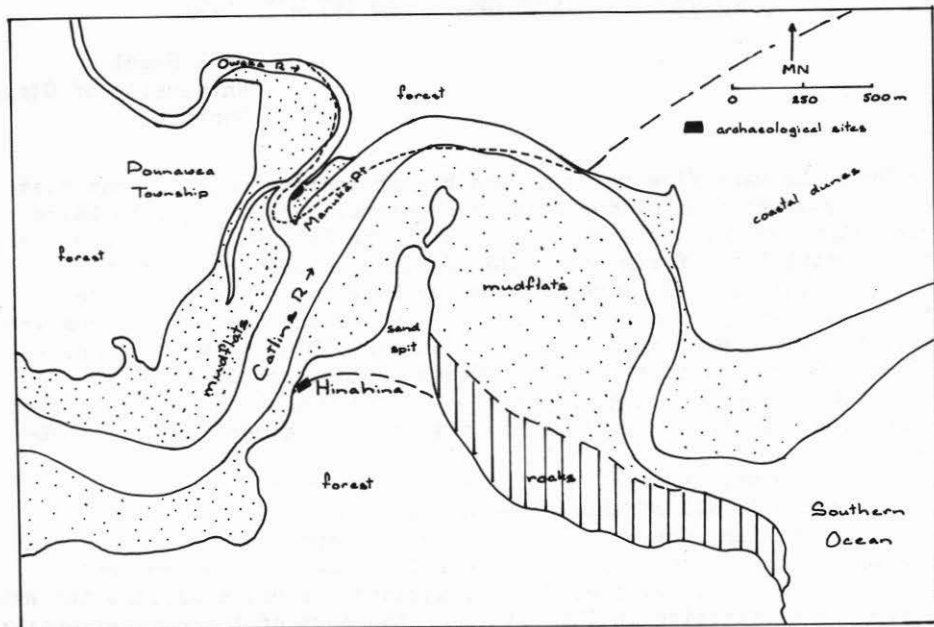


Figure 1. Sketch from 1976 aerial photograph showing location of sites on Manuka Point and at Hinahina. Dotted line shows extent of Manuka Point shown in the 1865 survey.

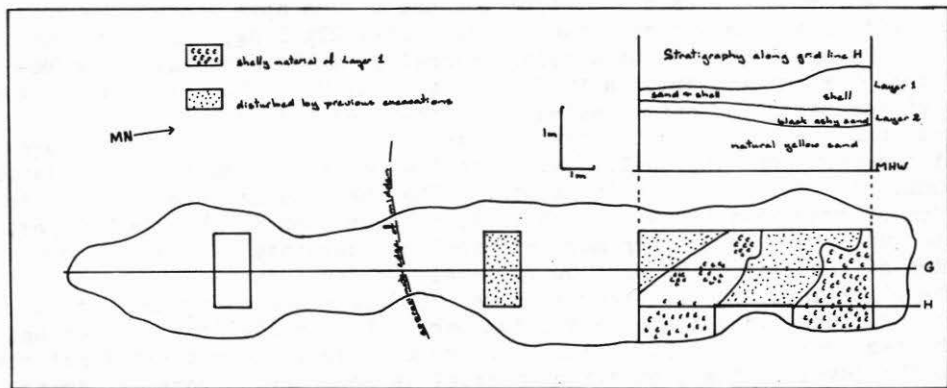


Figure 2. Excavated areas and sectioning, Manuka Point, February, 1976.

lying hollow than ours or there were some higher tides during his period of observation, both reasonable possibilities.

There is little evidence of structures or activity areas at Pounawea. Local people reported ovens showing in cross section in the eroding western bank some years ago; Lockerbie found two double rows of post holes (Lockerbie:pers.comm.), and during our excavations we found two small oval postholes about 20cm in diameter and about 25cm deep, dug into the bottom layer. The upper shell layer did vary in shell density from a definite shell mound with lenses of fish bone at the north end of the site to scattered patches of shell at the south end but the lower black layer appeared relatively homogeneous during excavation. Bone and stone artefacts seemed to be generally dispersed through both layers.

The black layer changed abruptly underneath to clean yellow sand which was fairly flat where not disturbed by previous excavations. From the flatness of the substrate and the lack of sand lenses in the stratigraphy, I assume that at the time of occupation the sandspit was a flat vegetated area, possibly with low sand hills around the edges providing protection from the frequent cool winds of the region. In its present exposed state, the point is a distinctly inhospitable place to live.

Lockerbie has obtained about 16 radiocarbon dates from Pounawea using charcoal and shell, and all except one fall in the period A.D. 1000-1450 (Lockerbie:pers.comm.). The site can reasonably be considered as having been occupied between the 11th and 15th centuries.

This preliminary report is not the place to present details of the midden contents, which are still being analysed. I can however make some general statements about subsistence patterns at Pounawea. Fishing and shellfishing was limited to relatively few species but a wide range of bird species was taken, a pattern also found at several sites near Dunedin (Leach and Hamel, 1978). In both layers at Pounawea, pipis and cockles make up 90% of all shellfish taken, with mudsnails never rising to more than 10%. All three species are abundant on the adjacent mudflats at present. A few rocky shore species such as mussels, limpets, catseyes, paua and Diloma are also present but in very small numbers. The nearest rocky shore is about one and half kilometres by boat from the site. The fish bone consists of about 80% barracouta with red cod and ling the next most abundant species, i.e. the same species in similar proportions to those found in sites around Dunedin, both Classic and Archaic. A few individuals of blue cod, trumpeter, spotty and one flounder are also present (R.Fyfe:pers.comm.). The most popular fish with local fishermen in the area today are blue cod and flounder which can both be caught inside the estuary.

Partial analysis of the bird bone material suggests that forest species were much more sought after at Pounaweia than is usual for Otago coastal sites, possibly because Pounaweia is two kilometres from the open coast. Among the 60 individuals identified so far, 19 species are represented, of which seven or eight species are forest birds, five are shoreline, four are from the lake and wetlands and two were probably taken at sea. Of the forest birds, tui, parakeet and pigeon seem to have been the most popular, and some of the extinct species which Lockerbie (1959) recorded for Pounaweia - eagle, swan and goose - are also present. Moa species noted so far range from the small Megalapteryx, through Anomalopteryx, Emeus crassus, Euryapteryx gravis to the heavyweight Pachyornis elephantopus. Moa bones are relatively more abundant in the lower layer than in the shell mound as are fur seals and sea lion bones. Dog bones are present throughout the site.

As always the most abundant artefacts are unmodified flakes, there being about equal volumes of porcellanite, silcrete and 'other types'. The latter consist mostly of argillites and volcanics, and about a quarter of them show signs of hammerdressing and polishing, indicating their origin from broken adzes. Several very small adzes and portions of adzes were found or picked up from the surrounding beach. One of these was made from the distinctive Ohana argillite from D'Urville Island. Other artefact types included scrapers, drills, files of different sorts, cutters, long blades and a large, bi-directional, prismatic, silcrete core (Plate 3). Most of the small flakes of obsidian found were green, with only one grey piece noted so far. The relative paucity of flaked stone material can be associated with the lack of any local source of suitable rock on the Catlins coast. The nearest sources are the porcellanite and possible silcrete deposits in the Mataura Valley (G.Mason:pers.comm.) and some argillites near the mouth of the Clutha River (M.Watson:pers.comm.).

Among the shell artefacts were two Dentalium reels, and there were also two bone reels. Quite a high proportion of bone artefacts was found (Plate 4), including awls of different sizes, both one-piece and two-piece fish hooks, tabs, cores and many pieces of worked bone. Among the fish hooks was a large, well-made example in the shape typical of one-piece hooks but made in two pieces with lashing grooves to bind the two sides together. Lockerbie (1959) noted a similar example but with holes drilled in each side for the lashings.

The faunal and artefactual material from the excavation is being analysed in the Anthropology Department of the Otago University, which has provided equipment, laboratory space and the use of facilities for this excavation. As well as identification to species, faunal samples are being quantitatively analysed for numbers of individuals present, body parts represented and for variation between squares and layers. Artefactual material is being examined for rock types used

and for details of distribution within the site. For some of these tasks, specialists in several fields are assisting and the results of these basic analyses will be submitted in a report to the New Zealand Historic Places Trust.

A major aim of this excavation has been the acquisition of a large provenanced faunal sample from the Catlins coast. This material should enable us to make comparisons between subsistence behaviour patterns at Pounaweia and other coastal sites in the interesting period prior to the abandonment of the Catlins coast about A.D.1500, an event worthy of considerable study.

#### Acknowledgements

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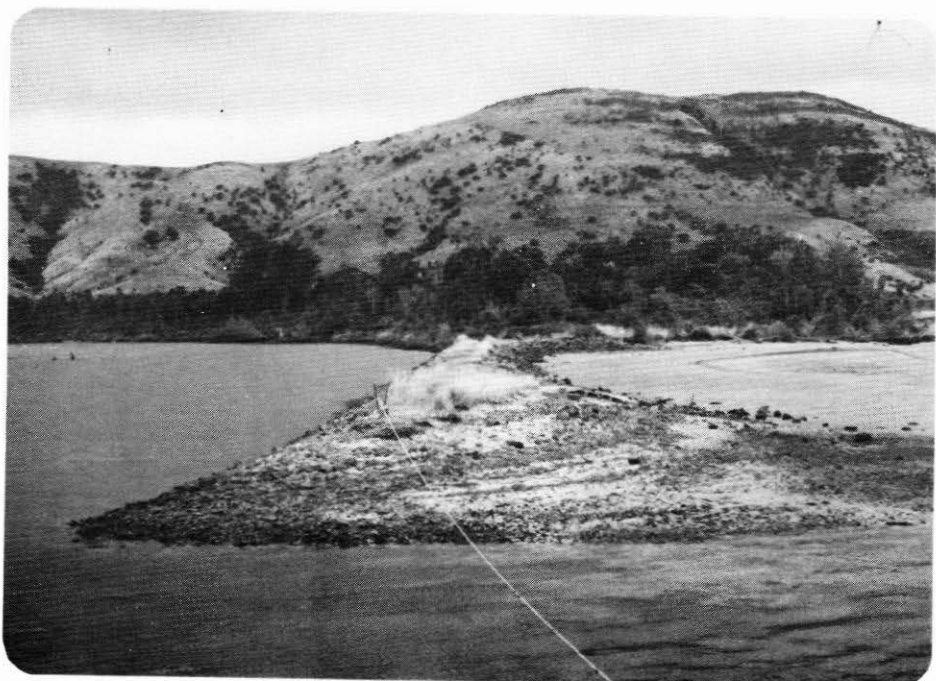
I am also grateful to the Waihopai Maori Committee for their approval and good wishes. Financial support for this excavation came mainly from the New Zealand Historic Places Trust with assistance from the University of Otago and the Labour Department.

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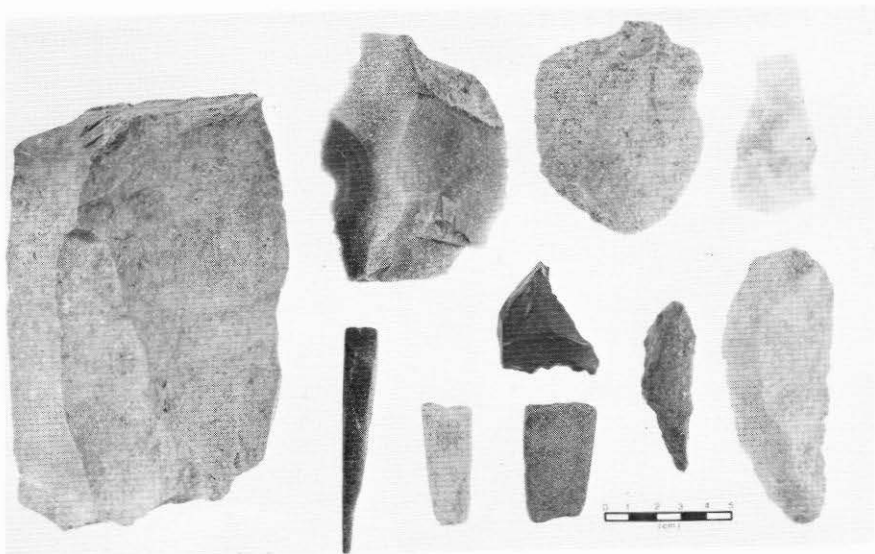


POUNAWEA Plate 1. View across junction of Catlins and Owaka Rivers.  
The site is on the bushed islet in the middle background.

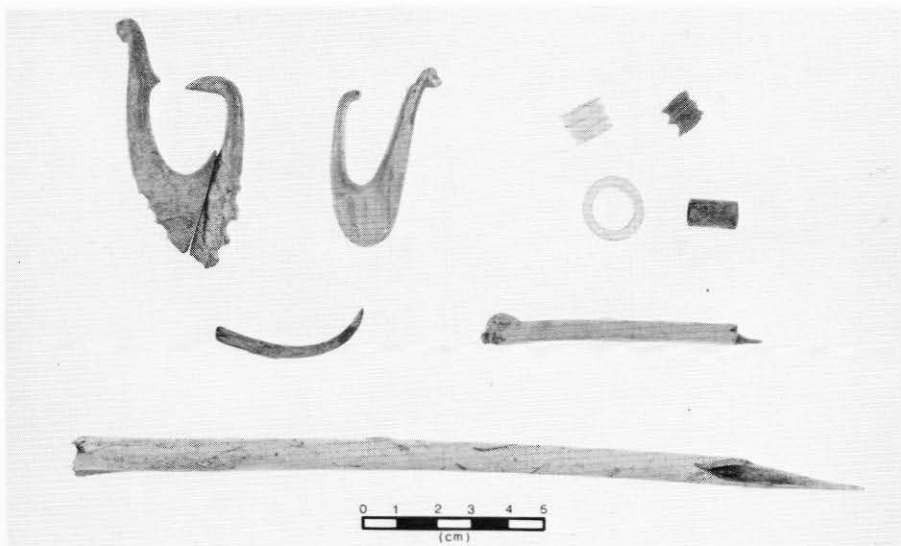


POUNAWEA Plate 2. View north from the site along the causeway which  
used to link site with the forested hills.





POUNAWEA Plate 3. Stone artefacts. Left: large silcrete core.  
 Top: silcrete scrapers. Middle: porcellanite scraper.  
 Bottom: three files, silcrete drill, silcrete blade.



POUNAWEA Plate 4. Bone artefacts. Top: fish hooks, two (white dentalium shell reels, dog bone reel (dark), bird bone section. Centre: 'barracouta' point, awl with stepped bevel. Bottom: awl with smoothed bevel.