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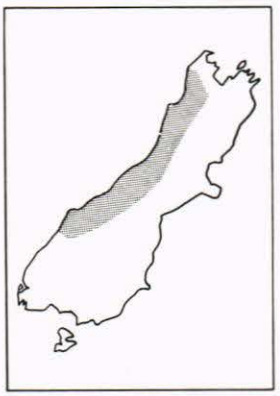
THE FIRST THOUSAND YEARS

Regional Perspectives in New Zealand Archaeology

Edited by Nigel Prickett

WEST COAST, SOUTH ISLAND

Atholl Anderson



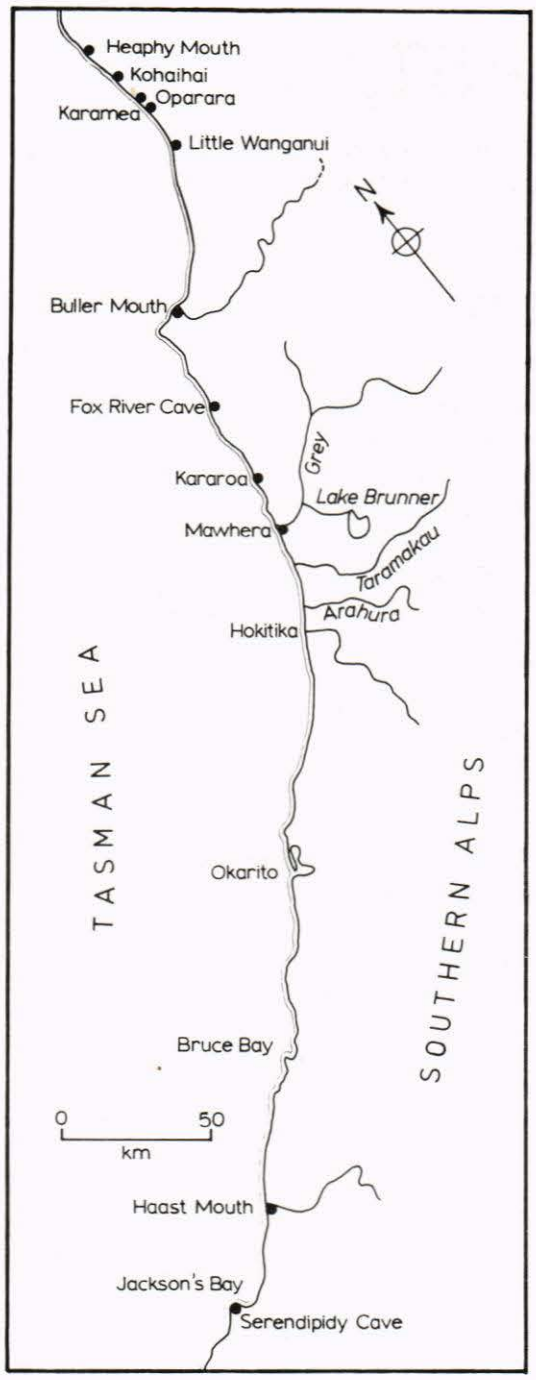
The West Coast is all but an archaeological *terra incognita*. The only intensive research was conducted between the years 1962-1970 and it amounted to no more than a handful of excavations for a region stretching 450 km from Jacksons Bay to the Heaphy River. How fairly this slender effort serves as a sample of the prehistoric remains, however, is presently difficult to tell. Nineteenth century explorers encountered only some 100 Maoris living along the West Coast,[1] and if the population density they represent — about one person per 80 km^2 of usable land[2] — was typical of earlier times as well, then comparatively few sites are likely to be found by systematic recording.

Consideration of the subsistence difficulties posed by the natural environment reinforces that likelihood. Described by an officer with D'Urville as 'one long solitude with forbidding sky and impenetrable forest',[3] the West Coast comprises a narrow strip of fluvio-glacial terraces and low hills bounded by the Southern Alps and their northern outliers, which rise abruptly to the east and by the stormy shores of the Tasman Sea to the west (Fig.6.1). Annual rainfall totals of 2000 mm in the north rising to 5000 mm in the south and creating abundant swamps and fast, cold rivers. There are few secure harbours or tidal lagoons, an almost unbroken cover of dense rain forest and marginal conditions for the growing of Polynesian cultigens.

The Archaic phase

Archaic adzes have been found along most of the West Coast, especially near the river mouths. On the south bank of the Haast River a cache of fifteen adzes included seven large 1A specimens[4] and another three of this type come from the lower Grey Valley.[5] Similar finds, amongst which large 1A and 4A types are prominent, have been made at the mouths of the Buller, Karamea, Oparara, Kohaihai and Heaphy Rivers to the north[6] and probably elsewhere along the southern coast as well. Almost without exception these adzes have been fashioned in Nelson-Marlborough argillites. Other distinctly Archaic implements have been found less frequently and include minnow lure shanks from the Haast, Buller[7] and Little Wanganui[8] river mouths and a slate knife (ulu) from the Buller mouth.[9] Excepting the Heaphy mouth excavations (see below) the only structural evidence of probably Archaic age consists of a rectangular raised-rim pit at the Kohaihai mouth; within it were found several large Archaic adzes near a stone-kerbed hearth.[10]

There have been systematic excavations conducted at two Archaic sites: the Heaphy and Buller mouths (Figs 6.2, 6.3 and 6.4). At the latter, a site where evidence extends over some 2.4 ha, Orchiston excavated 20 m^2 in 1970.[11] He



6.1 Archaeological sites and main features of the West Coast.

found a single occupation layer, up to a metre deep, within which were two cooking areas and a midden which was mainly composed of pipi shell. Faunal refuse is said to have included moa, seal, and small bird and fish bone. One of the oven areas provided a charcoal radiocarbon date of A.D. 1339 ± 40, and the midden, a shell radiocarbon date of A.D. 1485 ± 25. Further confirmation of the Archaic status of the occupation comes from artefacts recovered on the site after ploughing: a number of Archaic adzes in argillite, three slate knives, and three minnow lure shanks. A greywacke patu was also recovered, which might suggest later occupation of the site as well.

Excavations at the Heaphy River mouth in 1962-1963 exposed over 240 m^2 of

a site which may once have extended for 2.8 ha. along the south bank of the river (Figs 6.2, 6.3 and 6.4).[12] Since it is the only comprehensively known prehistoric site on the West Coast it is worth looking at in some detail. For the most part, there is a single cultural layer, 25-60 cm thick, within which are located the remains of various activity areas. Along the river bank are approximately 30 shallow oven pits and immediately east of these a dense shell midden. South of this area are three stone pavements and six small clusters of postholes. Whether the postholes represent dwellings is not clear, especially since no hearths were found, but this is

6.2 Heaphy River mouth, the location of a 16th century Maori settlement excavated in the early 1960s (R. Scarlett).

6.3 A view looking across the excavation and up the Heaphy River valley. The picture shows the high, still densely forested, hills and the broad tidal estuary at the river mouth (R. Scarlett).

6.4 Excavations under way at the Heaphy River mouth site, May 1962 (R. Scarlett).

likely in the case of clusters III, IV, V, and VI which appear to be associated with artefact concentrations. Clusters I and II may be the remains of cooking shelters.[13]

The pavements are constructed of loosely packed limestone slabs and granite boulders. Over pavement I is a high concentration of fragments from finished adzes, along with numerous obsidian, greenstone and 'heaphyite'[14] flakes, and this evidence suggests an area of woodworking and adze repairing. Pavement II carried a similar concentration of flakes but also, along with pavement III, most of the small files, drill points and minnow lure shanks in the site. The manufacture of fishing gear is suggested as a principal function of these two areas.

Although the evidence is not clear as might be wished, the conjunction of the posthole clusters and the pavements, does seem to suggest that a small village stood here. Within it, one or two dwellings, perhaps no more than temporary shelters,[16] were associated with paved working floors amongst which the various manufacturing activities of the community were divided.

Some 40 argillite adzes were recovered during the excavations. The dominant form of this collection is the triangular cross-sectioned type 4, amongst which the typically Archaic 4A is prominent. Seven small greenstone adzes and gouges appeared to have been made by perfunctory flaking and grinding, rather than the scarfing method of later prehistory.[17] Other artefacts included 19 minnow lure shanks, two fragments of moa bone bait hooks, bone awls, stone abraders, files and drill points, a moa bone imitation whale tooth pendant and a bone dart head (or teka).[18]

The large shell midden was mainly composed of mussel *(Perna canaliculus)*, but most of the animal food consumed on the site probably came from the fur seal *(Arctocephalus forsteri)*. Other species represented were the elephant seal, Polynesian dog, small 'bush' moa *(Anomalopteryx didiformis)*, possibly *Dinornis robustus* as well. penguins and odd remains of forest birds (kaka, pigeon, kiwi, tui) and sea birds (mollymawk, shearwater and shags). Fish bone was found only in small quantities.

The Heaphy mouth site, dated to A.D. 1518 ± 70 contains much in common with Archaic sites elsewhere in the South Island, in the range and type of arte-

facts, in the dietary refuse, and in the layout of the various activity areas.[19] If these similarities suggest that the occupants of Heaphy mouth were visitors from elsewhere in the South Island, or had strong connections outside the West Coast, then that impression is strengthened by the quantity and variety of raw materials represented. Amongst the 5000 flakes recovered, 50% were of Nelson-Marlborough argillite and 13% were of obsidian. Other exotic materials included chert and serpentine. Greenstone accounted for a respectable 4% of the flakes and the remainder of the collection comprised rock types found in the immediate vicinity of the site. The unusually high proportion of exotic stone varieties, which is also reflected amongst the artefacts, may indicate that the Heaphy mouth site was an outpost of an Archaic exchange system in the Cook Strait area and was, perhaps, the main re-distribution point for argillite adzes being traded to the West Coast in exchange for greenstone (but see below).

The Classic phase

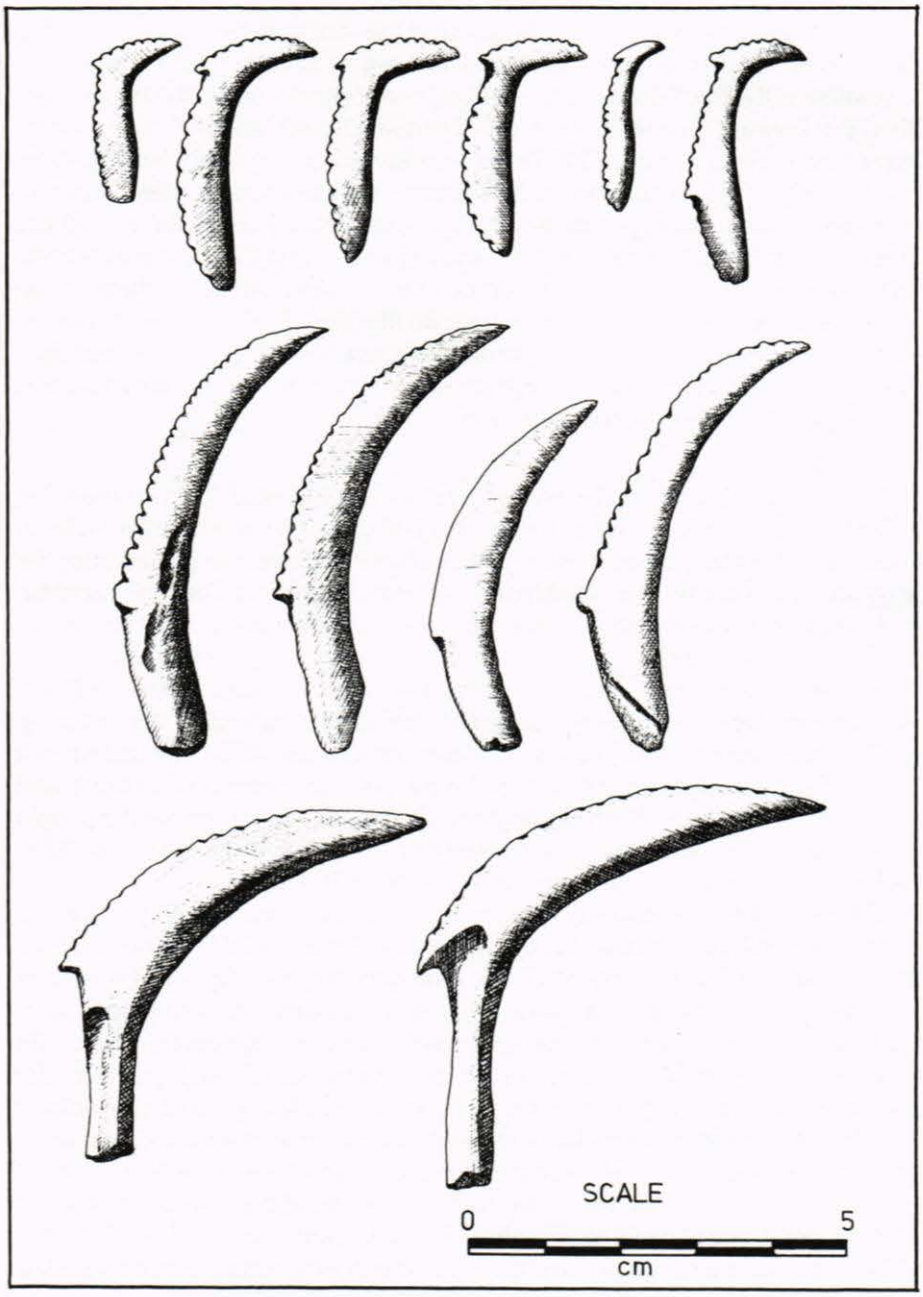
Two sites attributable to this phase have been investigated. The first is a large limestone cave at the mouth of the Fox (or Potikohua) River, where excavations were carried out by Graeme Mason.[20] No publication has yet eventuated since the large quantities of midden recovered are still being processed. The main constituent is mussel shell of various species, but there are also small quantities of fish bone, which include at least the following species: ling, barracouta, horse mackerel, banded parrotfish, eel (either freshwater or marine) and probably warehou and tarakihi. This site is believed to be late on the grounds that tattooing implements have been recovered there, and the site was still being used when it was visited by Heaphy in 1846: 'In it the natives have erected bed places and stages for the purpose of drying dogfish, which in the summer time the people from Araura catch on an adjacent isolated reef.'[21] Further analyses of the midden will include tests for the presence of elasmobranch denticles.

The second site, Serendipity Cave, is located at Jacksons Bay. Within it was a scatter of midden, including catseye, paua and fish and bird bone. In addition, there was a remarkable cache of Classic phase implements (Fig.6.5). These were recorded and removed to the Otago Museum by a group of science students in 1965 and the site was investigated in the same year by Les Groube. The cache consists of 27 barracouta lure points, nine composite bait hook points of the Oruarangi type, two large composite bait hooks, partially worked dog mandibles and human cranial and femoral fragments, a piece of shaped wood, two small greenstone adzes and three greenstone gouges.[22] The bone points are in almost pristine condition and the serrations decorating some of them are so sharply cut that the possibility of metal tools having been used cannot be ruled out. Certainly the hook styles are typical of late Classic and protohistoric sites elsewhere in New Zealand.

Fox River and Serendipity Caves appear to be fishing camps of the Classic Phase. In this respect they can hardly be thought typical of the time, for as we know from historical evidence, the exploitation of marine resources was of minor importance in the subsistence patterns of the West Coast.

Subsistence and settlement patterns

On the basis of so little archaeological evidence it is impossible to deduce very much at all about prehistoric ways of life on the West Coast. Fortunately, some clearer indications of the likely patterns are afforded by the accounts of local Maoris and early explorers.[23] These indicate that the main subsistence activities were freshwater fishing for eels, grayling and whitebait, and forest fowling for weka, kakapo, pigeon, kaka and tui. Most of these resources were procured during the summer months, although wekas in particular were mainly taken in winter. The birds and eels were preserved in fat and packed into kelp bags, and the



6.5 Bone points for composite fishhooks from Serendipity Cave, South Westland (F. Leach).

fish and whitebait were dried or smoked; in both cases the preserved food was intended mainly for winter consumption.

Marine resources, with the exception of rocky shore shellfish, were very difficult to obtain. Some rocky shore fish were caught in baited nets and flatfish were speared or netted in the lagoons, but open sea species such as groper, ling and dogfish were rarely able to be sought and seem to have been regarded as somewhat of a delicacy. The dogfish caught near Potikohua Cave, for example, were dried and taken 80 km to the south for consumption at the Mawhera (Grey River mouth) village. Fish remains are poorly represented in the West Coast archaeological sites and fishing gear seems to be dominated by trolling devices which could have been used in sheltered estuaries to take kahawai. The principal vege-

table foods were podocarp berries and tree fern pith. With the exception of the mamaku these were difficult to preserve for more than a few weeks. Bracken fern root, a staple elsewhere in New Zealand, was rarely found, except in the rain shadow area of the Grey Valley, and the nikau palm was restricted to the northern part of the coast. Polynesian cultigens could probably not be grown much south of Hokitika,[24] although this range might well have been extended prior to the 16th century when temperatures were slightly warmer than today. On the other hand, the fact that no kumara cultivation was observed in the 19th century, and no structures usually associated with it are known on the West Coast, may indicate that horticulture was not practised until the presumed introduction of taro and European vegetables early in the 19th century.[25]

The settlement pattern which integrated the hunting and gathering activities of the 19th century consisted of more or less permanently occupied villages near the mouths of the major rivers, in which the people congregated during the winter, and seasonal camps at fishing and fowling stations elsewhere, to which most of the population dispersed in the summer. The majority of these settlements, especially the villages, were located along the coast between Kararoa and Hokitika, an area favoured for the foods available from four large rivers, Lake Brunner and the Grey Valley as well as by the greenstone available in the Arahura and Taramakau Valleys. Secondary settlement concentrations were found near the mouth of the Buller and at Okarito and Bruce Bay.

The subsistence patterns were no doubt broadly similar throughout West Coast prehistory except that moas, and possibly a higher availability of seals towards the north, may have formerly enabled the support of a somewhat greater or less mobile population. Settlement patterns on the other hand appear to have been rather different. Although the evidence is slim, it does seem that Archaic settlement was concentrated along the northern coast and possibly in the far south as well, whereas these regions were largely abandoned in favour of the central coast by early historical times.

Explanation of this apparent difference might be sought in terms of population replacement. The people observed in the 19th century were mainly Poutini Ngai Tahu from the North Island who had arrived some 200 years before but had recently been subjected to the severe disruption of several raids by the Ngati Toa and their allies. Yet population replacement of this kind was probably just as common in earlier times — certainly traditional evidence suggests continual feuding between the Poutini Ngai Tahu, who mainly dwelt in Westland and the Ngati Tumatakokiri who held the Buller region to the north; and of course, the Poutini Ngai Tahu are said to have taken the West Coast from the Ngati Wairangi by force of arms.[26]

Another possibility is that Classic settlement patterns were strongly influenced by the needs of the greenstone industry. Evidence that greenstone was exploited from the early Archaic phase onwards is widespread in South Island sites, but far from abundant until sites of the Classic phase are encountered. The question of why this should be the case is a long standing one in New Zealand prehistory and worth briefly reviewing here. One hypothesis argues that greenstone exploitation intensified significantly following the decline of New Zealand-wide Archaic exchange systems involving other lithic materials (argillites, obsidians), and subsequently became a major component of revived Classic exchange systems.[27] Why it should have done so is not clear, but amongst the possibilities are suggestions that a major logistical obstacle was overcome by the discovery of Alpine passes after the 17th century,[28] that a technological impediment was removed with the late Archaic development of sawing and scarfing techniques,[29] and that the development of Classic material culture favoured greenstone for fine woodworking tools and items of value and status.[30] Since Archaic evidence is

widely scattered in the South Island interior and sawing and scarfing were at least known in the early Archaic,[31] the first two suggestions appear unconvincing. The third, however, is demonstrably true, even if it begs the question of why it was greenstone that acquired such prestige rather than some other material. Nevertheless, it is not difficult to see that a material which had comparatively suddenly acquired a value beyond basic technological, logistical or economic considerations — in fact, a medium of prehistoric wealth — might well have had an over-riding influence in the location of settlements along the West Coast as, indeed, it may also have had in Western Otago.[32]

Conclusions The role of greenstone, and perhaps also of horticulture, is likely to be a crucial one in the development of West Coast prehistory, but so little archaeological evidence is available in general, and almost none from the important central region, that it is only possible to speculate about the implications. At the moment the few facts of West Coast archaeology indicate that settlement began during the Archaic phase and the Archaic communities had unimpeded access to the products of the north-east South Island, especially argillite adzes. Their settlements appear to have been concentrated towards the north and economically based upon fowling and sealing. In later times small fowling, freshwater fishing and forest-gathering supported communities based in the central area where greenstone exploitation was intensively pursued.

Notes

1. Heaphy, 1846; Brunner, 1848.
2. Little, if any, resources were available from high ground. About 8000 km^2 of the West Coast lies below 300 m.
3. May, 1960.
4. Collection in Otago Museum.
5. Duff, 1956a, p. 151.
6. Orchiston, 1971 (Buller). Other collections seen by author.
7. Duff, 1956a, p. 207; Orchiston, 1971.
8. Seen by author.
9. Orchiston, 1971.
10. Seen by author and discussed with excavator.
11. Orchiston, 1974, Appendix 2.
12. Wilkes and Scarlett, 1967.
13. Wilkes and Scarlett, 1967, p. 192, interpret Cluster I in this way.
14. According to Wilkes and Scarlett, 1967, p. 198, this is a local fine-grained silicified sandstone.
15. Wilkes and Scarlett, 1967, p. 198.
16. Small shelters of bark and foliage were observed in Dusky Sound by early European explorers.
17. Scarlett, 1967.
18. Duff, 1967.
19. The wide range of Archaic artefacts and the layout of the site with a possible line of huts behind discrete midden, oven and working floors is very reminiscent of Archaic southern South Island sites such as Waitaki mouth, Shag River mouth and Hawksburn. On these grounds, if not also in comparison with the Buller mouth dates, the Heaphy mouth radiocarbon estimate seems about 200 years too young.
20. Personal communication.
21. Heaphy, 1846, in Taylor, 1959, p. 233.
22. Lyon,. 1965.
23. Heaphy, 1846; Brunner, 1848; Skinner, 1912; and see summaries in McCaskill, 1954 and 1960; and H. M. Leach, 1969.

24. This seems to have been the southern boundary, though not necessarily ecological limit, of taro gardens; as observed by Brunner, 1848, p. 286.
25. McCaskill, 1954; Leach, 1969, pp. 65-66.
26. McCaskill, 1954.
27. Ritchie, 1976, p. 56.
28. Skinner, 1912.
29. Jones, 1972, p. 20.
30. Duff, 1956a, pp. 246-247.
31. Ritchie, 1976, p. 55.
32. See Anderson, this volume, Chapter 7.