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PREHISTORIC RESEARCH IN WESTERN SOUTHLAND

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It is necessary, in considering the prehistory of Western Southland, to avoid any preconceptions based on the relatively well documented sequence from South Otago (Lockerbie, 1959). Apart from Groube's excavations at Riverton, no prehistoric investigations have been undertaken in the area from the Aparima to Te Waewae Bay. This region, however, has a number of attractions for the archaeologist. Its natural vegetation has been analysed in detail (Holloway, 1954). It has seen little systematic fossicking, and the natural resources are sufficiently widely distributed, both territorially and seasonally, for an analysis of settlement forms and site types to be undertaken.

The region is bisected by the Longwood Range (Fig. 1), which still carries native forest cover. As might be expected, vegetation is zoned with altitude. Silver beech predominates on the higher ground, and extends down the stream margins. Podocarp stands have been isolated by the silver beech, a phenomenon which might indicate a recent climatic deterioration (Holloway, op. cit.). The forest extended almost to the shore as recently as fifty years ago (Wild, pers. comm.), where it gave way to matagouri Scirpus nodosus, Phormium tenax and the fern, Blechnum banksii. H. Leach (1968) has recently outlined the attractions of podocarp rather than beech forest for human exploitation. The shore itself is characterised by long, open sandy beaches, interspersed with rocky promontaries. It is particularly open to south-westerly gales. One of the promontaries is composed of high quality argillite. The Foveaux Straights belong to the Forsterian biographic province, with its distinctive marine fauna, poor in species, but rich in terms of population densities. The climate, regulated by the proximity of the sea, is less extreme in temperature range and dryness than is most of the interior of Murihiku.

A preliminary field survey undertaken during August 1967 suggested three principal site-concentrations: the Howell's Point-Tihaka area within the vicinity of the argillite outcrops, the estuary of the Aparima and the neighbourhood of Pahia. Further fieldwork will certainly suggest other areas of importance.

Initially, it was felt desirable to define as wide a range of prehistoric activities as possible. Three sites were therefore selected for examination by excavation.

The first site is situated in the back dunes at Tihaka, Colac Bay. It comprises two distinct entities. In the first area, three ovens associated with bones of the moa and a handful of struck argillite flakes, were uncovered. Approximately 100 yards away, a further series of ovens were located, associated in this case with the bones of a young whale. Again, the incidence of struck argillite flakes was extremely thin.

The site of Wakapatu lies between the fore and rear dunes of the adjoining bay. It is marked by intense industrial activity, and, although badly fossicked and partly eroded, some of the site remained undisturbed. A 12 by 2.5 metre trench was therefore laid out, in order to obtain insight into the nature of the site.

The site has a complex stratigraphy. The earliest level comprised an oven, and an associated small, charcoal-filled pit. These were overlain by a compacted shell midden layer, a layer of burnt dark red sand with intrusions of charcoal, argillite flakes and faunal remains, and, finally, a further level of compacted shell midden. Artefactual material was found in all the three levels which sealed the oven.

The material culture of Wakapatu presents a restricted range of artefacts characteristic of the Archaic phase in Southern New Zealand. The commonest implement is the adze, although none is a finished product. Other types are awls, burins, the spoke shave, one-piece and composite fish-hooks, bone points and pierced oyster shell pendants.

All adzes were made, as far as can be determined without detailed geological analysis, from the local Riverton argillite. Hammer and grinding stones suggest local manufacture. Some adzes were in the later stages of being roughed out before they were rejected. Others bear the marks of hammer dressing. A few fragments had reached the stage of being polished before they, too, were rejected. In one case, the butt of an unfinished adze was converted into an awl.

The most abundant form is quadrangular in cross section, although there are three hog-backed specimens, of generalised Skinner type 4. Perhaps the most interesting point is that hog-backed and small quadrangular specimens are stratified together.

One-piece and barracoutta fish-hooks were also manufactured locally, from bone and ivory. A small bone awl was also recovered, together with two pierced oyster-shell pendants. If the typological characteristics of

the artefact material are taken as a guide to the age of the site, it would be unexpected if the radiocarbon determinations were to fall outside the range 1300-1500 A.D.

Ecologically, the inhabitants of Wakapatu were involved with the resources of the sea, the forest and the nearby Lake George. As may be seen in Table 1, the shell fish sample is characteristic of open, rocky shores. The mussel dominates in each level, followed by Lunella smaragda and Lepsiella scobina. Paua are surprisingly rare, and four oyster shells have been identified. The cockle and pipi, so common on sites adjoining relatively sheltered sandy beaches, are extremely rare.

Now one characteristic common to many of the shell species found at Wakapatu is a marked series of arrested growth lines. As B. F. Leach (1968) has shown, these correspond, in the case of the cockle, to retardation of growth during the winter. If this holds for Lepsiella scobina, then it appears very likely that the site was occupied during early summer, since only a limited amount of presumptive summer shell formation has occurred.

By far the most abundant species of bird is the orange-fronted parakeet, followed by the wood pigeon and white-faced storm petrel (Table 2). Many of the petrel and kakariki specimens were found with their bones still in articulation. This does not mean that they were valued only for their feathers, the plucked bodies being thrown on the midden. During the European contact period, birds were filleted, roasted in their own fat, and stored in gourds or kelp containers.

It is well known that some ecological niches in Southern New Zealand were transformed during part of the year. The arrival of the mutton birds, for example, provided a seasonal abundance on certain islands off the coast of Stewart Island. This seasonal transformation attracts groups with mutton birding rights to the breeding areas and may well have done so during the prehistoric period also. Wakapatu is peripheral to the main mutton bird islands and is not situated near the headlands where mutton birds choose to nest. The bones of this species, then, could be an important indicator of the season and nature of certain sites. At Wakapatu, the incidence of titi bones suggests strongly that we are not dealing with a site where mutton birding was a major activity. Nevertheless, the presence of these specimens suggests an occupation season of between October and April, because the birds overwinter in California.

A localised group of bones in the red sand level represents 14 individual white-faced storm petrels. This species spends five months of the year way out at sea. Early in October, the petrels

arrive to nest on small islets off Stewart Island. A detailed study of the Wheru Island population has shown that there are no storm petrels on the island between April and September (Oliver, 1955: 103). Here, therefore, is convincing evidence for occupation at Wakapatu between October and March.

There are three principal species of sea-fish. In the basal shell midden, the spotty or paekerikeri is the commonest, followed by the barracoutta and cod. Spotty is far less common in the upper levels, but cod and barracoutta continue important throughout the sequence. Of these species, barracoutta has a particular relevance, because it is found only seasonally in Southland waters (H. Leach, 1968). Its presence, assuming of course that the fish were caught at the site and not brought there ready dried from elsewhere, suggests occupation during the period October to April. Ethnological studies have shown that eels were very important in some areas, but not in others. Little attention, however, has been paid to the presence or absence of eel bones in prehistoric sites. Eels are, indeed, represented at Wakapatu, but only very sporadically; one jaw bone from the lower shell midden, two from the upper shell midden. It does seem that nearby Lake George was exploited, but not to a marked degree.

Mammalian faunal remains are scarce. Dog is represented sparsely in all levels, there are a few young seal bones, and a handful of whale bones. In no case do the numbers suggest anything other than spasmodic occurrence. This site is not a little Papanui, with its abundant remains of the seal.

The third site examined lies on the foreshore at Pahia. Early European accounts mention the existence there of a permanent agricultural village during the 1820's. Two areas were examined. Both provided evidence for continued argillite working, fishing and shellfish collecting, as well as trading in gun flint, pottery, iron nails and clay pipes. There is no archaeological evidence for potato cultivation, nor for permanent occupation of the site.

There are several ways of approaching the interpretation of the data presented. In the first place, it would be possible to incorporate it with the prehistoric sequence for Otago and South Canterbury, ascribing Tihaka and Wakapatu to the late Moa-Hunter period (despite the absence of moa at the latter) and Pahia to the proto-historic Classic Maori Culture. Alternatively, a survey of the literature for Murihiku as a whole might give rise to a complicated, but hypothetical developmental model within which the data could be manipulated. It is advocated, however, that it is essential, in dealing with the prehistory of Southland, to give priority to basic fundamentals. What, for example,

were the principal limiting ecological factors in Southern New Zealand? What evidence is there for prehistoric man's reaction to the series of micro-environments which give character to our area?

The southern part of Murihiku offers a number of manifest advantages over adjacent areas to the north. One of these is the presence of argillite outcrops within the immediate vicinity of substantial food resources. Tiwai Point and Riverton argillite deposits, for example, are ringed by working floors associated with midden deposits. As has been shown, however, food resources vary markedly with the season (Leach, H., 1968).

Recent research by Hole and Flannery (1967) and Higgs (1967) has stressed the importance of ascribing function and season of occupation to the sites of hunting and gathering cultures. This situation holds for New Zealand. Indeed, it is argued that an assessment of the range of site-types and their season and approximate date of occupation is a necessary preliminary to considering the means whereby Polynesian culture adapted to the conditions of Southern New Zealand.

The research undertaken last summer resulted in the recognition of three types of site. The two exposures at Tihaka may be defined as transitory camps, the occupation periods of which may be measured in hours or days, and where a particular kill, in the one case a moa, and in the other a young whale, was butchered and eaten. At Wakapatu, we are dealing with a one-phase site where the local food resources were intensively utilized, and both adzes and fish-hooks were manufactured. No moa were hunted, although specimens of Megalapterix were probably present in the area (Falla, 1962). Occupation took place during the summer.

Archaeological and literary evidence suggest that Pahia was a permanently occupied village, where potatoes were traded for articles of European manufacture.

Certain important components of the Southern New Zealand eco-system have been mentioned. The presence of moa, the distribution and population dynamics of which are so little known. The forest with its distinct avifauna and supplies of raw materials, the importance of the sea, for its food resources and opportunity for rapid transport, the long period of frosts, which rules out tropical agriculture. The streams and lakes with their heavy eel population, the localised distribution of high quality stone, and the favourable nature of lake or sea shore sites for potato growing due to their relative warmth. Three broad adaptive adjustments to the eco-system have been proposed. A period of moa hunting, a period of residual coastal hunting and gathering, and a period of post-European contact potato growing.

These, however, over-simplify the situation by stressing only the most obvious elements in the changing biotope. Intensive research must precede the establishment of a more meaningful pattern.

Prehistoric research in Southland remains at a stage where the definitions of units of ecological activity is an urgent necessity. It is only when a substantial number of such units have been defined in terms of time and space that we can begin fully to appreciate Southland's past.

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Fig.

The area of Western Southland under discussion. Small circles indicate known pre- or protohistoric sites, large circles depict excavated sites. Land over 100' in height is indicated by vertical hatching.

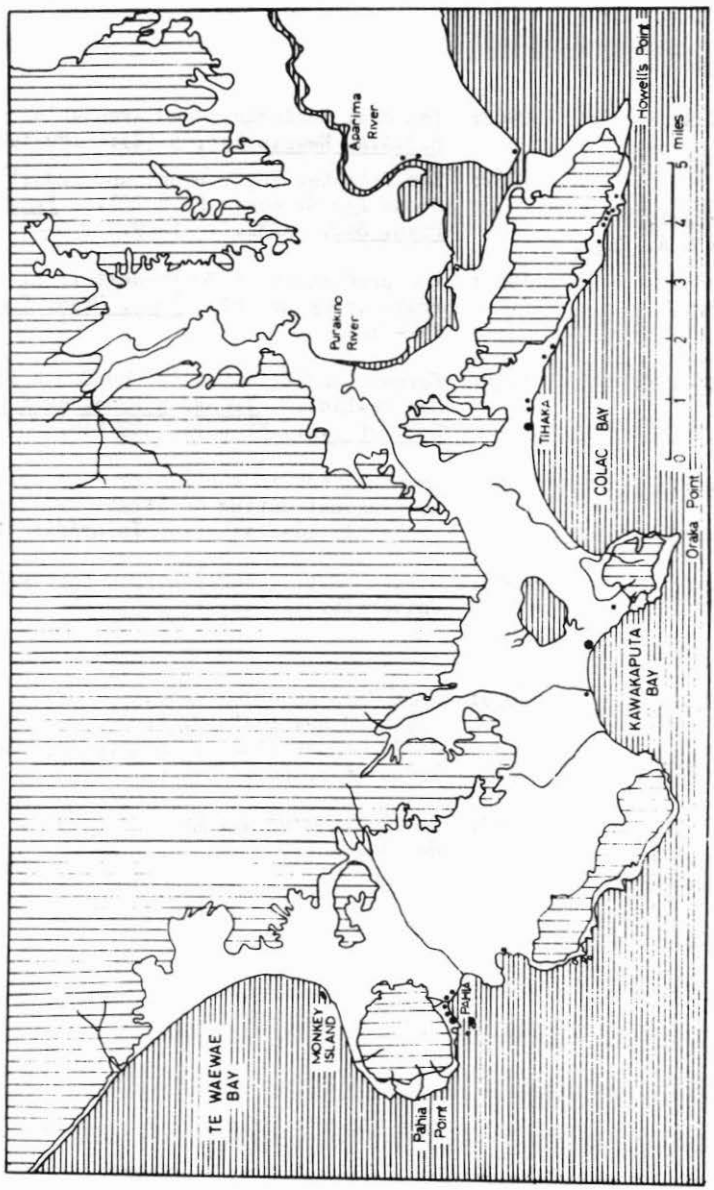
TE WAEWAE BAY
MONKEY ISLAND
Pahia Point
Pahia
Aparima River
Purakino River
TIHAKA
COLAC BAY
KAWAKAPUTA BAY
Howell's Point
Oraka Point
0 1 2 3 4 5 miles

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TABLE 1. Wakapatu: percentage frequencies of shell species from three levels.

	Lower Shell Midden		Red Sand		Upper Shell Midden	
SPECIES	N	%	N	%	N	%
Mytilis edulis	1055	61.0	173	62.2	381	71.9
Lunella smaragda	291	16.9	57	20.6	40	8.1
Lepsiella scobina	229	13.2	25	9.0	45	9.1
Halistis iris	15	0.9	1	0.3	0	0.0
Chione stutchburyi	14	0.9	0	0.0	1	0.2
Sigapatella	10	0.6	3	1.0	4	0.8
Aulacomya maoriana	4	0.2	0	0.0	0	0.0
Cardium edulis	5	0.3	2	0.8	0	0.0
Siphonaria zelandia	5	0.3	0	0.0	2	0.4
Mactra discors	42	2.4	4	1.5	2	0.4
Benthamina	13	0.9	4	1.5	8	1.6
Maoricolpus	2	0.1	1	0.3	1	0.2
Zethalia	27	1.6	7	2.6	6	1.2
Scutus breviculis	6	0.3	1	0.3	6	1.2
Amphidesma forsteriana	6	0.3	0	0.0	0	0.0
Zediloma	7	0.4	0	0.0	0	0.0
Cookia sulcata	0	0	0	0.0	1	0.2
N	1728		278		497	

TABLE 2. Wakapatu: The number of individual birds per species, and associated percentage frequencies, from three levels.

SPECIES		Lower Shell Midden		Red Sand		Upper Shell Midden	
		N	%	N	%	N	%
Prosthemadera novaeseelandiae	Tui	2	3.6	3	9.1	1	2.8
Coturnix novaezelandiae	Quail	1	1.8	0	0.0	0	0.0
Phalacrocorax carbo	Shag	1	1.8	0	0.0	0	0.0
Eudyptula minor	Southern Blue Penguin	2	3.6	0	0.0	0	0.0
Puffinus griseus	Mutton Bird	1	1.8	0	0.0	0	0.0
Puffinus gavia	Fluttering Shearwater	1	1.8	1	3.0	0	0.0
Cyanoramphus novaezelandiae	Orange-fronted parakeet	32	57.1	11	33.4	31	88.7
Haematopus ostralegus	Oyster-catcher	1	1.8	0	0.0	0	0.0
Pelagadroma marina	White-faced storm petrel	1	1.8	14	42.4	0	0.0
Hemiphaga novaezelandiae	Wood pigeon	13	23.1	3	9.1	3	8.5
Eudyptes atratus	Erect-crested penguin	1	1.8	1	3.0	0	0.0
	N	56		33		35	