DEPLETION AND LOSS OF THE CUSTOMARY FISHERY OF NGATI HINEWAKA:

130 YEARS OF STRUGGLE TO PROTECT A RESOURCE GUARANTEED UNDER ARTICLE TWO OF THE TREATY OF WAITANGI

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29 August 2003

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FOREWORD

"Her Majesty the Queen of England confirms and guarantees to the Chiefs and Tribes of New Zealand and to the respective families and individuals thereof the full exclusive and undisturbed possession of their Lands and Estates Forests and Fisheries and other properties which they may collectively or individually possess so long as it is their wish and desire to retain the same in their possession" (Excerpt from: Article the Second, Treaty of Waitangi, English version, 6 February 1840).

"It was only the land that I gave over to the pakehas. The sea I never gave, and therefore the sea belongs to me. Some of my goods are there. I consider the pipis and the fish are my goods. I have always considered them my goods up to the present time" (Apihai Te Kawau statement to Waitangi Tribunal, Manukau {384}[1]).

"My Committee strongly protest against the issue of such a license. We have had our *kouras* pretty well cleaned up and now our *pauas* is the next to be cleaned up if licenses are granted. *Kinas* will be next" (excerpt from letter of Jack Carter to the Hon. E. R. Tirikatene during the George Te Whaiti petition, 27 August 1957 {168}).

"I recall that over fifty years ago, my friend and I went for a days fishing on the Black Rocks, Palliser Bay. Fishing was plentiful and our bag that day consisted of six one hundred pound groper, a sack of blue cod and two sacks of crayfish. each crayfish weighing between three to four pounds. On my retirement five years ago, I fished the same rock all day and caught nothing. This area, in my view, is totally fished out" (excerpt from supporting statement to the Mita Carter Petition by J.W. Sinclair 19 March 1988 {574}).

[1]Numbers in wiggly brackets {} are page references in the document bank bound in a separate volume accompanying this report.

THE AUTHOR OF THIS REPORT

My name is Foss Leach. I was born in Waipukurau 16 February 1942. I spent my childhood in Martinborough. I attended boarding school at Palmerston North Boys High School, and received my tertiary education at University of Otago. I hold the degrees of Master of Arts in Anthropology, and Doctor of Philosophy in Archaeology. The research for my doctoral dissertation was carried out in Palliser Bay 1969-1972, and was a study of the prehistory of the Māori who lived in that area. I was on the staff of the Anthropology Department at the University of Otago from 1969 until my retirement from teaching as Associate Professor in 1987. From 1988 to 2001 I was curator of Archaeozoology at the Museum of New Zealand Te Papa Tongarewa, during which time I built a laboratory specialising in research relating to the interaction between human communities and marine environments over long periods in both the tropical Pacific and New Zealand. I have published more than 150 scientific articles, books and monographs. I attach a copy of my curriculum vitae (Appendix 1).

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DEPLETION AND LOSS OF THE CUSTOMARY FISHERY OF NGĀTI HINEWAKA: 130 YEARS OF STRUGGLE TO PROTECT A RESOURCE GUARANTEED UNDER ARTICLE TWO OF THE TREATY OF WAITANGI

Foss Leach
29 August 2003

INTRODUCTION - THE PURPOSE OF THIS REPORT

I have been asked by Ngāti Hinewaka to write a report for them as part of the evidence for their Waitangi Tribunal Claim. In particular, I have been asked to document the nature of the inshore fishery in their *rohe*, the decline of this fishery and the reasons for it, the importance of this fishery in the customary fishing activities of Ngāti Hinewaka ancient and modern, and the history of their protests to the Crown about the way their customary fishing rights have been trampled on.

EXECUTIVE SUMMARY

The coastline between Lake Onoke and Flat Point (Te Unuunu) represents the seaward margin of the *rohe* of the Ngāti Hinewaka people, a branch of Ngāti Kahungūnu. The inshore marine habitat in the eastern part of this region is characteristically rocky, once bountiful for its *kaimoana* species. The Pre-European Māori who lived in this area were ancestors of Ngāti Hinewaka. They harvested a wide range of food items from the inshore zone, and this food was an important source of protein in their economic system.

This pattern of subsistence economy spilled over into the post-European period and Ngāti Hinewaka in the nineteenth century considered that the lives of their families would not be safe unless they had continuing ownership of marine resources in front of their lands. They assumed that their fishery would be protected for their exclusive use in front of lands which were designated as Native Reserves during the process of sale of lands to the Crown and other parties. Under the Māori system of customary title, ownership of land extended into the sea to cover all economically important resources.

Ngāti Hinewaka have never relinquished their customary fishing rights in these Reserves, and they have never been fully recognised by the Crown. Ngāti Hinewaka have struggled for 130 years to assert these rights, including petitions to the Government. These petitions focus on fishing rights relating to their Reserves. This report does not address rights relating to the fishery in areas between these Reserves.

As Europeans took up residence along this coastal area and commercial fishing began, it became clear that the fishery in front of their Reserves was not protected for their exclusive use at all. This resulted in active opposition by Ngāti Hinewaka to what they saw as infringement of their customary title. The area of greatest concern is the inshore zone, which is where the bulk of customary fishing has been carried out for many centuries. This is being devastated by commercial fishing. Ngāti Hinewaka have sought, by several petitions to the Crown, to have this destructive process stopped, and their customary fishing rights fully recognised.

The Crown's response has, with minor exceptions, been to ignore these protests. One apparent exception is the Fishing Reserve at Matakitaki a Kupe. This special fishing place was first excluded from lease in 1872, then again in 1889, set aside as a Fishing Reserve for the use of all of Ngāti Hinewaka in 1890, and finally gazetted in 1941. In October 1951 Ngāti Hinewaka were first told by the Crown that this 'fishing reserve' did not actually reserve the fishery as it did not extend beyond the high tide mark. This must have come as a complete shock to Ngāti Hinewaka who, through their ancestors, had sought to have the 20 reserves set aside along the coast not only as important kāinga, but critically as reserves associated with their customary fisheries. That is, it was a corollary of the establishment of these reserves that the customary fishery associated with the kāinga was also being reserved. After all, it is illogical to have a fishing reserve if there is no reservation of the customary fishery.

The other exceptions are two Taiapure at Te Kopi and Te Humenga. The former is largely unsuited to customary fishing activities, being a dangerous and unstable beach, perpetually turbid, with little or no resident shellfish. The latter will be useful for customary fishing when

stocks are rejuvenated so long as the area is actively policed against poachers; however, commercial fishing for crayfish is permitted in this Taiapure. Ngāti Hinewaka have opposed commercial fishing in their customary fishing area in front of their Reserves for over 50 years.

In this report, the following train of argument is presented:

- Ngāti Hinewaka claim that they have inalienable rights to the customary fishery under the Treaty of Waitangi, and that they tried to establish 20 Native Reserves from about 1853 onwards to protect these rights forever. Ngāti Hinewaka would have understood that the creation of these coastal reserves also preserved their coastal fisheries adjacent to the reserves, as their customary title would have included both the land and the customary fishery.

- Several actions on the part of the Crown, such as *Section 4 of the Maori Councils Amendment Act, 1903*, the *Maori Social and Economic Advancement Act 1945*, the *Maori Fisheries Act 1989*, the *Fisheries Deed of Settlement 1992*, the *Treaty of Waitangi (Fisheries Claims) Settlement Act 1992*, and the *Fisheries Act 1996*, have attempted to provide for some rights of Māori to customary fisheries. Not all of these Acts have been fully supported by Government Departments responsible for administering their provisions. They are not regarded by Ngāti Hinewaka as having succeeded, or as having reflected the Crown's duties to protect customary fisheries in accordance with the Treaty of Waitangi.

- To enjoy customary rights, guaranteed by the Treaty of Waitangi, there must be a resource to enjoy. This resource is, for the most part, the inshore fishery comprising the shallow reef platform and extending out to important fishing pinnacles and holes in front of their Reserves. The most important species for Ngāti Hinewaka are kina, paua, crayfish, and groper. These resources have been depleted by commercial fishing beyond recognition to what they were when Ngāti Hinewaka first sought to establish their Native Reserves in 1853.

- Any possible benefits of the legislative actions on the part of the Crown have therefore been illusory, and will continue to be, until commercial fishing ceases in front of their Reserves, and the resources are allowed to rejuvenate to their former abundance, and then be protected and managed by Ngāti Hinewaka for customary use.

- Ngāti Hinewaka claim that the depletion of their customary fishery has come about through Crown actions and inactions.

- Ngāti Hinewaka have petitioned the Crown several times since their Native Reserves were first established. These petitions have not been heard by the Crown with an open mind and a generous heart.

In the report which follows, I first describe the dramatic and far-reaching changes which affected Ngāti Hinewaka during the lead up to the alienation of their lands from 1853

onwards. Ngāti Hinewaka insisted on the establishment of Native Reserves which they believed carried with them exclusive fishing rights.

I next address the issue of traditional property rights relating to the inshore fishery. This is shown to be an integral part of rights to the land. Customary title to property, held in common by a titular chief, extended from the interior forested land, through the coastal flats, and out to sea as far as the reef edge, as a single unit which covered all the economic resources necessary for the maintenance of life of the social unit under control of that chief. Usufruct rights to particular resources could temporarily be given to families or individuals, but the customary title remained with the chief and was held in common for all. This pattern, which is present throughout Polynesia, would have been brought to New Zealand by the first immigrants. Early historical information suggests that this continued in essentially similar form through to the time of European contact. Land alienation took place at a much greater rate in New Zealand compared to Polynesia, and consequently the anthropological evidence for this pattern of traditional land tenure and customary title is clearer in Polynesia. For this reason considerable emphasis is given to the Polynesian background in this Report.

I then review the evidence relating to depletion of the inshore fishery. There are two parts to this — anecdotal evidence and scientific evidence. Unfortunately, anecdotal and historical information about the fishery is not always afforded the status it deserves. However, there is compelling evidence here of massive depletion of inshore stocks which should not be ignored. In the scientific evidence there are also deficiencies because the area of Palliser Bay and East Coast Wairarapa has not been well studied, and it is necessary to look more generally at the status of the New Zealand wide inshore fishery and how this has been downsized in biomass over the period for which we have records. Most of this knowledge has been collated for management purposes, such as setting allowable catch rates and minimum legal size. This source of information also attests massive depletion of the inshore fishery. This review reveals that existing management systems take little or no account of customary fishing rights and needs, and are almost entirely focused on commercial imperatives. Commercial fishing is destroying the very resource required for customary fishing.

This is followed by a short descriptive section of the inshore coastal areas in the *rohe* of Ngāti Hinewaka.

The next section is concerned with the importance of the fishery to the ancestral Māori groups who lived in this area for 600 years before Europeans arrived. Fortunately, we know a great deal about the nature of the subsistence economy of these people and what kinds of fish and shellfish they caught, as a result of archaeological research carried out 30 years ago. This also attests the importance of the forested interior for birding. The people who lived in this part of New Zealand were horticulturalists from the beginning of occupation, growing kūmara, and probably other root crops imported from Eastern Polynesia.

This is followed by a large section describing how important the inshore fishery has been for the Ngāti Hinewaka people following the arrival of Europeans. During the process of land alienation, they tried to establish 20 Reserves from about 1853 onwards, which would enable them to maintain contact with ancestral land and *kaimoana* forever. Not all of these Reserves were established by the Crown. The threat of commercial fishing to customary fishing rights began in 1949 when Ngāti Hinewaka first approached the Crown about this problem. Despite

Crown reassurances that any fishing licenses would not be given in areas important to Ngāti Hinewaka and later assurances that paua would not become an export item, these things did in fact come to pass. Ngāti Hinewaka embarked on a long history of protest to the Crown, leading up to the present day. Their voice is not being adequately heard by the Crown.

In the final section, I present the various conclusions which have been reached in the body of the report.

NGĀTI HINEWAKA AND THE UPHEAVALS OF THE EARLY HISTORIC PERIOD

Before beginning a discussion about Ngāti Hinewaka and their customary fishery, it is appropriate to provide a few comments about some of the important events which took place around them during the early historic period. It is not generally appreciated just what a turbulent time the early post Captain Cook period was for most Māori, especially the first 50 years of the 19th century. In several places in this report I refer to the nature of the traditional economic system of Ngāti Hinewaka, and the role which fishing played in it. Certain events which occurred between the time of Captain Cook and about 1850 were the cause of enormous social and economic upheavals for Ngāti Hinewaka, which led to equally dramatic changes in settlement pattern and population distribution. It is useful therefore to describe some of these events by way of background to the fierce determination on the part of Ngāti Hinewaka to retain their customary fishery. The main events I am referring to are illustrated in Figure 1.

At the dawn of the 'historic' era (the close of the 'pre-historic' period), when Captain Cook first visited New Zealand, the Ngāti Hinewaka people dwelt almost exclusively along the coast of Palliser Bay and East Coast Wairarapa. For reasons which are more fully explained later in this report, it was almost impossible for people living in the Cook Strait region to live inland away from the sea for any period of time. The reasons for this are concerned with certain basic requirements of human nutrition, and in particular the need for around 80% of caloric energy to be derived from fat or carbohydrate foods. In Cook Strait in the earliest period of human occupation, around 800 years ago, these needs could easily be satisfied with blubber from sea mammals which were common at that time, but being intelligent animals very soon migrated much further south away from human hunters. The alternative source of this energy was kūmara; but this could only be grown and stored in frost free areas, notably close to the sea, which has an ameliorating effect on climate. Consequently, the settlement pattern of Ngāti Hinewaka at the time of Captain Cook was entirely coastal. They grew kūmara on the sandy soils along the coastal flats of Palliser Bay and further up the coast of Wairarapa and exploited the forest and sea for their protein. Of course, they would also have embarked on short-term sojourns for various purposes into the interior, such as the Wairarapa valley, but long-term occupation of this area would have been impossible. For the same reason, occupation of most of the interior parts of the Marlborough Sounds, which we might think of as an attractive place to live in, was excluded for pre-European Māori.

When potatoes and pigs were introduced into New Zealand by Captain Cook and other early European visitors everything changed forever.

It is impossible to over-emphasise the impact that the introduction of these two new items of food had on Māori throughout New Zealand. Although of similar force throughout the country, the impact was variable in character. In the northern third of New Zealand, Māori settlement was always possible both inland and on the coasts and kūmara cultivation was not affected by frosts to the same extent as in Cook Strait, so the settlement pattern in these parts was not influenced to the same extent by the introduction of potato. When Europeans first started establishing their own settlements, there was widespread movement of Māori closer to these centres, but that is another issue. In the Cook strait region the introduction of potato

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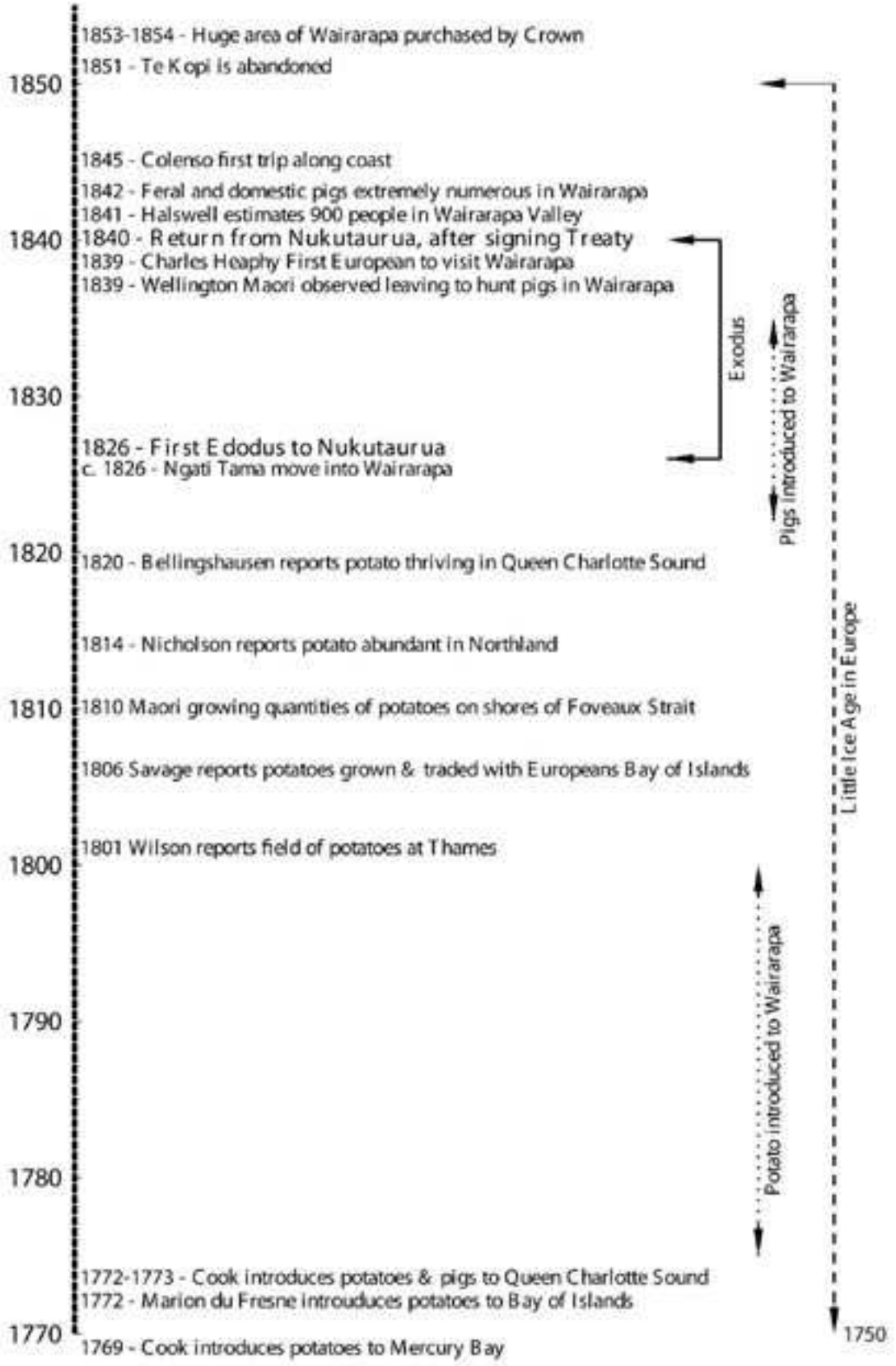

Figure 1: Early historic events significant to Ngāti Hinewaka.

did have a dramatic impact on settlement pattern. This plant enabled Māori to grow a carbohydrate-rich plant away from the coast, and in particular in the main Wairarapa valley and all its subsidiary river valleys, such as Turanganui and Huangarua.

Hargreaves summed up the importance of potato for Māori throughout New Zealand as follows:

> "Thus by the 1830's the potato was the basic food crop of New Zealand, preferred by the Maoris above all their traditional crops. This was no doubt in large measure due to the ease, and, because of its far greater climatic tolerance, the certainty with which the crop could be grown in all parts of New Zealand. Another major factor which added to its attractiveness was its better keeping qualities when lifted as compared with the traditional kumara" (Hargreaves 1963: 104).

Belich makes a further interesting observation about potato, and its influence on warfare:

> "The key constraint on the range, duration and frequency of Maori campaigns had always been economic. It was loosened around 1818 by a Maori agricultural revolution, pioneered by Te Pahi and Ruatara, the key element of which was the mass production of pigs and potatoes. Potatoes were hardier than kūmara and had a better ratio of output to labour. Maori were good cultivators of roots crops. Their potato gardens allegedly compared favourably with those of New South Wales, and they achieved much higher tonnages per hectare than kūmara. Maori agriculture at last had a reliable surplus. Potatoes helped feed long-range expeditions, to an extent limited by carrying capacity, and more importantly helped replace absent warriors in the home economy. It may well have been in 1818 that acreages of potatoes and other crops became really substantial and reliable amongst all the Northern groups. 'Potato Wars', might therefore be more accurate than 'Musket Wars'" (Belich 1996: 159).

Another aspect of potato, perhaps not so well appreciated, is the capacity it had to lead to increased population in some areas. This certainly would apply to the Cook Strait region, where population density was always low compared to further north. The carrying capacity of Wairarapa lands was greatly increased by potato, precisely because inland areas could then be occupied; however, other events, such as the introduction of European diseases and dispossession of lands, intervened to offset such a process. Pre-European Māori did not suffer from the common infectious diseases, such as measles, rubella, scarlet fever, mumps and chicken pox, venereal diseases, etc. (Houghton 1980: 130 ff.) The effect that the introduction of these infectious diseases by Europeans had on early historic Māori has been well documented.

The introduction of pig also had the capacity to influence settlement pattern. Here for the first time was an animal of considerable size, which carried substantial body fat, and which either feral or domesticated could provide all-important non-protein caloric energy which would enable permanent occupation of lands away from the coast.

It is useful then to briefly review some of the sparse evidence relating to the introduction and spread of potato and pig in early historic New Zealand to fill out the timeline presented in Figure 1.

Potatoes and other vegetables were introduced to several different parts of New Zealand between 1769 and 1774. According to Te Taniwha, in 1769 Cook gave Māori at Mercury Bay some potatoes which were carefully grown for several years to build up the stock before any were eaten (Salmond 1991: 207). Marion du Fresne's expedition established a garden of potatoes and other vegetables in the Bay of Islands in the winter of 1772 (Ollivier 1985: 167). During Cook's second voyage, several gardens of potatoes and other vegetables were planted in Queen Charlotte Sound (Beaglehole 1969: 167,168).

For the next 30 years, potatoes proliferated and spread. In 1801, observers on the *Royal Admiral* noted potatoes at Hauraki and recorded that they were available for trade to the ship's crew (Missionaries' Journale in the Royal Admiral from Port Jackson to Matavia, Taheiti, cited by Best 1980: 68; Salmond 1997: 259, 263). John Savage reported that in the Bay of Islands in 1805 potatoes were growing well, cropping twice a year. Most of the crop was kept for trade with Europeans (Savage 1807: 54–57). By 1810, Maori were growing potatoes on the shores of Foveaux Strait (*Sydney Gazette* 25 August 1810, cited by Leach 1984: 99, 137). In 1814 Nicholas saw extensive potato gardens in the Bay of Islands and elsewhere and was frequently served potatoes at meals (for example Nicholas 1817 (I): 110, 138–139, 143, 171, 223, 246, 252, 211, 276, 278–279, 315, 325–326, 331–332, 334, 341–342, 400–401).

The earliest record of Māori potato gardens in the Cook Strait region appears to be from Bellingshausen's expedition in 1820, when Māori were growing potatoes for their own use in Queen Charlotte Sound (Barratt 1979: 38, 44, 82–84). It is possible that these were descended from the potatoes planted in 1773–1774. In view of the regular contacts across Cook Strait, it is likely that potatoes had also reached the Wairarapa by 1820, and quite probably long before that time.

From these various early observations about potato there is a clearly expressed view that the yield of potato greatly exceeded kūmara, and that it was possible for Māori to get two harvests of potato per annum.

We now have some modern comparative data on kūmara yields for the Cook Strait region from experimental research plots in both Palliser Bay and the Marlborough Sounds, growing traditional varieties of the plant (Burtenshaw *et al*. 2003). The average yield in Robin Hood Bay over four harvests is 9.4 tonne per hectare, and the average in Palliser Bay over three harvests is 8.8 tonne per hectare.

Unfortunately, the evidence relating to early potato yields tends to be qualitative rather than quantitative, however, there is some information on this point. Harris, an authority on the early varieties of Māori potato, citing Anderson, has this to say:

> "Anderson (1998:129) wrote — Potatoes which were the primary item of trade with Europeans, cropped prolifically in the south, at rates of seven to fourteen tons per acre, so that even large shipments represented only modest areas under cultivation. Initially the price of European supplied items was high in the early years of contact with a single spike nail costing about 55 kg of potatoes in 1813 at Bluff and an iron adze as much as 1600 kg of potatoes as late as 1827" (Harris 2000: 65).

The suggested 7 to 14 tons per acre is equivalent to 18 to 35 tonne/hectare. Harris comments: "The world average today is not much more than the lower end of this range, although 100 tonne per hectare is possible nowadays. Yields vary according to region and a whole lot of other factors. In Australia (1990), average yields of potatoes ranged from 18.5 tonne per hectare in Queensland to 44 tonne per hectare in Tasmania. In 1820 in early New Zealand the average yield could have been 15 tonne per hectare" (Harris 2003: pers. comm.). If two crops were harvested each year then the yield would perhaps be double this at 30 tonne per hectare. The estimate of 14 tons per acre (35 tonne per hectare) derives from an observation by James Williamson of Dunedin in 1848:

> "The ground is very fertile; for instance, — from one seed or cut of potatoes, there will be an average produce of about fifty-five to fifty-eight potatoes, and large, many of them weighing upwards of a pound English. Nothing like this could be produced in Scotland, and they sell just now at 4*l* 10*s* per ton[2], an acre producing about fourteen tons" (Williamson 1848: 295 {737}).

One more early historical source is available relating to potatoes being grown in the vicinity of Lower Hutt:

> "The first potatoes raised in the new settlement were produced on Hopper, Petre and Molesworth estate[3]. The first yield was a splendid one, being about eighteen tons to the acre [45.2 tonne per hectare], and then about three tons of small or waste potatoes were left [7.5 tonnes per hectare]. The first shipment was sent to Sydney in the schooner Lady Leigh, the vessel in which Mr. (now Sir William) Fitzherbert came from England. Previous to this traders bought flax and potatoes from the natives, but these potatoes were small and brought very low prices" (Leys 1890: 519 {736}).

It is not certain who is responsible for this passage. Leys was the editor of the volume. R.A.A. Sherrin was responsible for notes up to 1840 and J.H. Wallace from 1840 to 1845 {735}.

Turning now to the introduction and spread of pigs; although de Surville gave pigs to Māori in the far north in 1769 (Ollivier and Hingley 1982: 25, 81) and Cook gave pigs at various places, including Queen Charlotte Sound and Hawkes Bay (Beaglehole 1969: 279, 291), they apparently did not survive. The effective introduction of pigs to New Zealand seems to have been when King sent 56 pigs to Northland in three ships in 1804–1805. By 1808 there were enough for trade (Belich 1996: 146). Belich suggests that it was from this Northland stock that pigs spread throughout the North Island by the 1820s.

There were no pigs in Queen Charlotte Sound when Bellingshausen visited in 1820. In 1826, Dumont D'Urville noted that people in Astrolabe Bight (in Tasman Bay) "have no pigs which

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[2]£4 10s

[3]According to Scholefield Henry Pentre went into business with Hopper and Molesworth 'at the Hutt' where they farmed and put up a flour mill. He also had a residence at Petone (Scholefield 1940: II: 163). According to Stirling, the farm is likely to have been Lower Hutt, as this was early 1940s, and Waiwhetu and anything above there was still occupied by Maori (Bruce Stirling, 2003: pers. comm.).

they only know as a name, Pouaka" (Wright [1950]: 77). However, when the *Astrolabe* was off Tolaga Bay about two weeks later, D'Urville bought pigs and potatoes from Māori in two canoes that came alongside and noted "they told us that pigs were very plentiful in Tolaga and that we could buy them very cheaply" (Wright [1950]: 115). If pigs were so plentiful on the East coast by 1826, it is very probable that they had reach the Wairarapa by that time.

> "In 1839, Deans (MS) and Wakefield (1840: 5) observed Māori setting off to hunt pigs in the Wairarapa. It is not known when these animals first reached or were liberated in that district, but they were certainly extremely common by 1842 (Kettle, 1843: 218), and the Wairarapa Māori of the 1840s frequently killed many more pigs than they needed (Taylor, 1966: 265–267; Weld, MS: 2/5/1845) and also kept tame pigs (Lovat, 1914: 56; Kemp, 1850: 87)" (Mair 1979 :20).

We can therefore be certain that there were abundant feral pigs in the Wairarapa in 1839. How long it took them to become plentiful enough to make it worthwhile to have hunting parties in such a large area is a moot point, but at least a decade seems a reasonable estimate.

Thus characterised, the introduction of potato and pigs had two important effects on Wairarapa Māori — it led to a dramatic change in settlement pattern away from coastal areas to the interior, and it permitted, but did not necessarily result in, increased population. There certainly were significant changes in population during the early historic period, and this should also be commented on further (See Figure 2).

During the pre-European era we believe that the coastal settlement pattern permitted villages of around 30–40 each (Leach and Leach 1979: 266). In Palliser Bay, where most is known of the pre-European groups, there were seven river valley based communities (Leach and Leach 1979: 251):

> Moikau Valley and Whangaimoana
> Putangirua Valley and Te Kopi
> Whatarangi and Makotukutuku Valley
> Te Humenga and Pararaki Valley
> Waiwhero and Kawakawa Valley
> Ngawi and Black Rocks
> Matakitaki and Mangatoetoe Valley

This would suggest a population of from 210 to 280 people in Palliser Bay, though not all people would necessarily be present at any one time. Helen Leach has carried out detailed research on garden areas in Palliser Bay and estimates the population as 225–319 people (H.Leach 1976: 182, 214). From Cape Palliser to Flat Point, there is less information, but there could easily have been ten similar communities, accounting for a further 300 to 400 people. Thus, the climax coastal population of Ngāti Hinewaka at the beginning of the European era would have been about 510 to 680 people. Of course there were coastal communities further north of Flat Point too, which would be included in what we now know as the Wairarapa district, but even less is known about these people.

At some stage between the time of Captain Cook and 1820, the coastal Ngāti Hinewaka people started to expand into the main Wairarapa Valley, founding settlements with an

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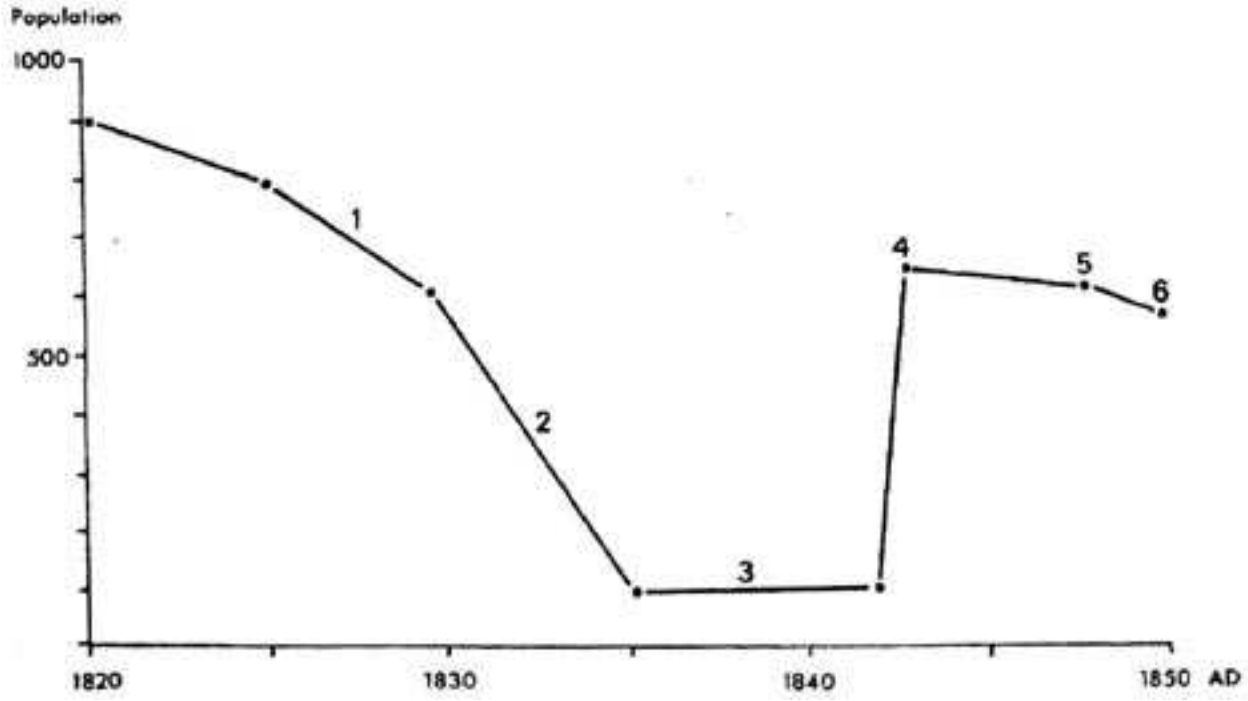

Figure 2: Population changes in Wairarapa 1820 to 1850 (after Mair 1979: 15).

economy transformed by potatoes and pigs. No doubt some people continued to live in the coastal villages, maintaining property rights to land and sea at traditional homelands.

About this time, another influence appeared on the scene — muskets. In 1823 the Ngapuhi chief Te Wera and his *hapū* had accepted an invitation to settle at Mahia and help defend Ngāti Kahungūnu. Mahia thus became a safe place of refuge, not merely for Wairarapa people, but for many of the Ngāti Kahungūnu from Heretaunga and elsewhere (Crosby 1999: 135). As a result of musket raids into the Wairarapa Valley by Taranaki Māori who had come south with Te Rauparaha, south Wairarapa Māori fled to a place known as Nukutaurua, which is an area on Mahia Peninsula. This movement out of Wairarapa began about 1825 (Mair 1979: 13), initially with a few people.

The major exodus followed the fall of Pehikatea (near Greytown) to Ngāti Tama in 1830 (Crosby 1999: 225–226). It is believed that a few people remained in Wairarapa to keep the home fires burning. Estimates of how many people were involved in this exodus vary; Hadfield's figure of 600 is often cited, but Mair thinks this might be exaggerated because the estimate referred to only the first phase of the return to Wairarapa (Mair 1972: 222).

> "the estimates for the Wairarapa Valley are unreliable during the decade following the return of the hapuus from Nukutaurua. The report which Halswell compiled in 1841 set the total population of the Wairarapa Valley at 900 persons (Halswell, 1842: 112). Hadfield had reason to believe that 600 people had returned from Nukutaurua shortly before his visit there in 1844" (Mair 1972: 222).

In 1839 Heaphy travelled over to the Wairarapa Valley, and this was the beginning of European interest in this region. On his twice yearly trips to Wellington from Hawkes Bay, the missionary William Colenso visited settlements on the coast as well as in the valley. Figure 3 shows the location of various coastal and inland villages. The open circles plus Te Kopi are those villages for which population estimates were made by Kemp and Colenso 1845–1850. The filled circles are the location of coastal Native Reserves and Crown Grants[4] made to Māori following 1853 land sales. These were also located at settlements. Although the land at Maungaroa was confiscated in 1845, a small reserve called Opouawe was established there.

Colenso makes very useful observations about the villages he encountered during these trips. The journeys are summarised by Bagnall and Petersen (1948), drawing on Colenso's journals. They describe the first journey in March-April 1945 in the greatest detail (Bagnall and Petersen 1948: 212–216). The first settlement south of Flat Point was Wharaurangi, Te Wereta's village, where they stayed three nights. This seems to have been the major village on the east coast at that time. They then visited Pahaoa, Huariki 'sheltered with stunted trees', and Oroi (larger than Huariki). After calling at Barton's station, they continued on around the coast to Te Kopi, the 'port' for the few white settlers in the Wairarapa Valley and apparently

[4]The distinction between 'Native Reserve', 'Crown Grant', and 'Fishing Reserve', is not always maintained in historical documents and various commentaries. Frequently, the term 'Reserve' is used to refer to any one of these. A case in point is Matakitaki a Kupe, which is a Crown Grant, a Fishing Reserve, and an Historic Area, but is usually referred to simply as 'the reserve'. In this report, therefore, the term 'Reserve' often refers to land other than Native Reserve in the strict sense.

the largest settlement on the coast. Here they spent Easter, and 200 natives attended the service on Good Friday. On March 24th they reached Okorewa, a small fishing village at the mouth of the lake.

On the return journey, on April 1st, they found a great number of Māori gathered at Okorewa to catch eels. They travelled a mile up the lake side to Upokokirikiri and then on to Te Kopi. From there they retraced their steps by beach for two miles, then turned inland up steep cliffs at Maramatitaha and headed north inland. They passed the small village of Omoekau (normally containing about 30 people who were absent), crossed to the upper reaches of the Turanganui, and travelled down the valley about three miles to Parikarangaranga with about 20 inhabitants. Then they headed north towards Oteraia, which at that time was deserted, and on to Huangarua, camping at Ahierutu. Next they crossed the Ruamahanga and went on to Kaikokirikiri, the main village of the upper Wairarapa with about 100 people. Here Colenso gave the chief, Te Koro 'some good advice relative to his lands situated in the Wairarapa; which the grasping and never-contented settlers are strenuously striving to get hold of' (ibid.: 216). They then passed Tukua (only 3 miles from Kaikokirikiri), travelling through uninhabited bush for two days, reaching the coast at Whareama, where there were only a few people in the village.

On subsequent journeys only one other coastal settlement is mentioned — Te Awaiti, just south of Huariki. There is no mention of this settlement in 1845; a year later there was nobody at Huariki but food was being cooked for Colenso's party at te Awaiti (ibid.: 227); by the spring of 1847, Huariki had been abandoned because of the menace of an overhanging cliff (ibid.: 264).

A striking point that emerges from Colenso's repeated visits is the highly mobile nature of the population. People seem to have moved around for at least two reasons — seasonal food gathering pursuits, and what might be described as hui to meet the itinerant missionary, whose visits were known in advance and who would perform baptisms and marriages as well as preaching and giving advice.

Thus the population of Okorewa was greatly increased in autumn 1845 by people gathered there for eel fishing (ibid.: 215). In late October 1848 the coastal population north of Wharaurangi had scattered in search of food as there was a seasonal shortage (ibid.: 280). In autumn 1846 the population of Oroi was greatly increased by a party from inland waiting to travel by canoe to Palliser Bay (ibid.: 227). In autumn 1845 not only Omoekau but also Oteraia were temporarily uninhabited (ibid: 216). Waipupu on the coast north of Flat Point was also deserted when Colenso passed through in autumn 1845 (ibid.: 212).

In Autumn 1846 there were only a few people residing at Wharaurangi, a fact which Colenso attributed to the chief Te Wereta's bad behaviour (ibid.: 226), but two years later in autumn 1848, Te Wereta and 106 of his tribe attended the Good Friday service (ibid.: 274). Some of these had travelled for three days to take part in this hui. Church attendances between 200 and 300 at various times at Te Kopi, Turanganui, Tauanui, Huangarua and Kaikokirikiri also appear to reflect hui which would have swelled the populations far above normal (Mair 1972: Table 16).

It is thus very hard to make reasonable estimates of the population. Colenso did not normally

visit Catholic (Omoekau) or Wesleyan (Wangaiwakarere) settlements. The first censuses carried out by Kemp excluded the coastal settlements. People might be missed completely because of temporary absence or counted twice because of their mobility.

The two largest settlements in the 1840s appear to have been Te Kopi and Kaikokirikiri. After the abandonment of Te Kopi, Turanganui may have been the largest settlement in the southern part of the valley. Apart from the church attendance of 107 at Wharaurangi in 1848, there are no figures for the east coast settlements. We may surmise that Wharaurangi was the largest, probably followed by Pahaoa and Oroi. The latter was larger than Huariki, and it may be that Huariki and Te Awaiti were the smallest. The total population on the east coast is unlikely to have been more than 100–150 in the 1840s.

Colenso also provides some valuable comments on the environmental and social conditions of his flock at this time. In autumn of 1848, before the earthquake of October that year, he noted new land slips at Te Kopi (Bagnall and Petersen 1948: 278). After the earthquake he commented on its marked effects on the littoral strips south of Pahaoa, and particularly for many miles in the vicinity of Cape Palliser (ibid.: 281). His journals also contain a number of comments about the low birthrate of the Māori population, the large number of deaths, and the poverty, sickness and demoralisation of the people (e.g., ibid.: 240, 283, 298).

TABLE 1
Estimates of Population for Villages in Wairarapa Valley 1845–1851
Key: C=Observations by Colenso, L=Observations by Kemp
After Mair 1972: Table 15.

Village	**1845**	**1846**	**1847**	**1848**	**1849**	**1850**	**1851**
Te-Kopi	-	200C	100C	150C	-	-	-
Omoekau	30C	150C	-	100C	-	-	
Turanganui	-	-	-	-	60K	124K	-
Parikarangaranga	20C	-	-	-	-	-	
Peretanginoa	-	-	-	-	71K	-	-
Tauanui	-	70C	-	-	31K	-	-
Otaraia	35C	-	-	40C	94K	75K	30C
Kaupeahinga/Waihinga	-	-	-	-	68K	39K	-
Huangarua	-	21C	200C	-	24k	57k	-
Hurinuiorangi	-	-	-	-	33K	55K	-
Kaikokirikiri	60C	100C	-	-	196K	184K	-
Te-Hawera/Te-Iharaua	-	41C	-	17C	-	29K	-
Matiti	-	-	-	20C	16K	-	-
Taununu	-	-	-	-	11K	-	-
Totals	**145**	**582**	**300**	**327**	**604**	**563**	**30**

Population estimates from Colenso and Kemp are summarised in Table 1. An interesting feature of these is that Kemp's survey in 1848–1849 of 604 persons had a ratio of adult males to females of 1.49 to 1; and the 1850 survey of 563 persons had a ratio of 1.66 to 1 (Mair, 1972: 224–225). Pool has shown that a higher than normal male imbalance is typical of 19th century Māori, and provides figures of 1.37 to 1 for adult Māori in 1857 and 1.22 to 1 in 1901 (Pool 1991: 48, 102). The Wairarapa figures are therefore rather high.

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Figure 3: Map showing the location of various coastal and inland villages.

The best way of describing the period from about 1820 to 1850 for the Ngāti Hinewaka people is that it was tumultuous. In the space of one single life-time a series of dramatic changes took place which changed their way of life forever. Apart from the normal culture shock which accompanied all European expansion and colonization, such as accepting new technologies and ideology, Ngāti Hinewaka had to contend with a complete change in the basis of their economic system, a different settlement pattern and distribution of population, the introduction of new killer diseases, marauding groups of musket-bearing Taranaki Māori, the process of Christianisation, an exodus to Nukutaurua and a later return, and finally the alienation of at least 70% of their traditional lands. This was a lot to contend with.

From a quiet life along the coast of Palliser Bay and East Coast Wairarapa at the beginning of the 19th century, by 1850 Ngāti Hinewaka were not in a very good position to negotiate with the Crown over land sales and establishing reserves to secure their future prosperity in a changed world.

As a final observation in this short commentary about the upheavals in the early 19th century for Ngāti Hinewaka, I will provide a passage from Colenso's discussions with Captain W.M. Smith 18 September 1846. This shows prophetic insight into a matter which would soon become a burning issue:

> "He told Smith that he had as a private person advised the natives:
> (1) Not to sell their lands in the Wairarapa;
> (2) not to lease them beyond twenty-one years;
> (3) not to lease the whole of their good grazing land, but to retain some and use it for grazing sheep and cattle, growing wheat, etc.,
> (4) not to lease it in very large blocks, such as ten mile 'runs' of good pasture, to one person;
> (5) to make a deliberate choice of those to whom they would let it;
> (6) faithfully to fulfil their leases; and
> lastly, to be kind to the whites" (Bagnall and Petersen 1948: 240)

TRADITIONAL PROPERTY RIGHTS RELATING TO THE INSHORE FISHERY

INTRODUCTION

A basic issue in any economic system is maintaining property rights[5] over resources which will enable human communities to survive — that means access to the fundamental requirements of human nutrition: in particular, a ready source of protein, and a source of caloric energy. The main sources of protein in pre-European times in both the topical Pacific and in New Zealand were fish and shellfish from the sea and forest birds from the interior. The two main sources of caloric energy available were carbohydrate foods such as root crops (kūmara, taro etc.), and fat from birds, sea mammals and other animals. Human survival therefore required property rights over three separate domains:

- the forest
- land suitable for cultivation
- the sea (mainly the inshore area)

It will be shown later in this report that Ngāti Hinewaka have consistently tried to affirm and re-affirm their property rights to this last mentioned economic zone, not for purposes of commercial gain, but for *kaimoana* for families and *hapū*. It must be noted at the outset that the Crown has now accepted that Māori did not extinguish rights to the sea, specifically in relation to its commercialisation, as the following passage makes clear (see also Boast 1993 :169 {399}):

> "In 1987, the Muriwhenua tribes of the Far North brought a case before the Waitangi Tribunal against the Government's Fisheries Quota Management System. The tribe argued that the granting of Individual Transferable Quota (ITQ) to fishermen (to catch particular species of fish) effectively created a property right in the sea, from which they had been excluded. That was a clear breach of Article Two of the Treaty of Waitangi which guaranteed 'tino rangatiratanga' (absolute chieftainship) over fisheries. After hearing evidence of traditional use of fisheries up to 32 kilometres out to sea, the Tribunal gave an interim ruling that the area of sea referred to in the Muriwhenua claim was owned as property in the same way that land was owned. If the Crown wanted to use the sea in a commercial way it had to acquire the right from the traditional user" (Walker 1992: 517, {81}).

This landmark decision has been followed by a negotiated settlement between Māori and the Crown to allocate a portion of the commercial fishery to Māori through the Fisheries Commission, which still debates the best way of passing this on to iwi and *hapū*.

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[5]Throughout this report, the anthropological term 'customary title' frequently appears in discussions of traditional property rights. This term is not intended to convey a modern legal meaning. It is used to refer to permanent property rights, usually vested in a chief or other titular head. This is in contrast to 'customary rights', which could be of a more temporary nature, such as usufruct, and could be allocated to individuals or families.

The fact that the Crown has finally recognised that Māori do indeed possess property rights in the sea, and that negotiations are underway to share profits which can be made from it, does not of itself imply that all aspects of this traditional ownership have been thoroughly explored. In particular, the implications which these property rights confer to customary fishing, as distinct from commercial fishing, are worthy of careful attention. Customary fishing is primarily concerned with the inshore area. Compared to the offshore fishery, it is only relatively recently that this inshore marine zone has been subjected to intense commercial pressure, primarily from export driven activities. The consequent effect that this has had on customary fishing rights, quite separate from commercial rights, is the main focus of this report.

The activity known as 'Customary fishing' is a modern-day continuation of a traditional economic system. It is not concerned with the cash economy, where someone goes to the supermarket to buy fish. It is concerned with traditional foraging for food for family and *hapū*, as a continuation of the traditional subsistence economy. As such, it is best understood in its traditional setting. In some cases, such as with unemployed people, customary fishing can be a matter of economic necessity. In many cases, however, customary fishing is a matter of affirmation of Māori values and spirituality concerning the sea, and a sense that it doesn't matter if one has to take a day off work and it costs money for petrol. The benefits of gathering *kaimoana* far outstrip any financial cost of doing so.

It is useful to begin this discussion of traditional property rights relating to inshore marine resources by looking at those which prevail in the tropical Pacific, where the New Zealand Māori came from. There are two reasons for doing this.

Firstly, it will readily be seen in what follows that there is strong consistency throughout Polynesia in how these rights are affirmed and maintained, and there is therefore good reason to infer that the underlying patterns of expressing property rights to the inshore fishery in Polynesia can be extended to pre-European New Zealand.

Secondly, land alienation to immigrant Europeans was much more rapid and extensive in New Zealand than in the tropical Pacific, leading to acculturation, and change of settlement pattern so that Māori were closer to European farmers and other settlements. Consequently, the anthropological literature describing property rights relating to fishing is far more extensive for Polynesia than it is for New Zealand, and therefore a much clearer and consistent picture can be reconstructed from these sources. This relative dearth of knowledge for New Zealand was noted by Best, writing in 1929. He commented that "unfortunately I can do but little to supply the deficiency, having never resided among coast-dwelling natives" (Best 1977: 1, {78}).

LAND-SEA TENURE IN TROPICAL POLYNESIA

The basic land division in many parts of Eastern Polynesia is in a series of narrow strips which start in the interior of an island and run down to the sea across the lagoon and beyond to the reef edge. Kirch sees this pattern as a natural consequence of population growth on a small Pacific island. He states:

> "As local groups fission, they expand to occupy new territory, so that a typical high island came to be divided in a radial fashion, with each local group occupying a pie-shaped slice running from the island's core out to the reef. Such a territorial pattern has fundamental ecological implications since (in theory at least) the territorial units lie transversely across the environmental grain of the land. That is, since island micro-environments are in general concentrically arranged, each local group's radial segment includes all major resources: forest uplands, agricultural land, coastal plains, and marine resources. Of course, local variations in topography and distribution of particular resources (e.g., isotropic stone) dictate that such an ideal pattern is never fully realized. Nevertheless, these territorial groups, such as the Futunan *kainga*, the Rarotongan *tapere*, and the Hawaiian *ahupua'a* do tend toward economic self-sufficiency... This tendency toward economic independence of local ramages is one of the centripetal forces of Polynesian society which were in opposition to those of the greater political economy" (Kirch 1984: 32–33, {1-2}).

The final part of this passage employs a slightly odd metaphor, but it appears that Kirch is suggesting that these economically independent units carry with them a certain degree of political independence too. Historically varying processes of political fission and fusion are better known to anthropologists as segmentary opposition (Evans-Pritchard 1940: 142 ff.), and are a strong feature of traditional Māori society, as well as a number of tropical Polynesian societies.

The essential ingredient of this land tenure system being described is a high degree of economic independence; that means property rights to the three main economic zones — forest, horticultural land, and the sea. Such property rights are not necessarily one of ownership, they could also be rights of exclusive access and use (usufructuary rights).

Kirch describes the Hawaiian economy (See Figure 4) as being:

> "centered upon agricultural production, and land-use was linked to a tiered system of land divisions. Whole islands or parts of large islands constituted *moku*, independent chiefdoms, which were divided into a large number of radial land sections, *ahupua'a*. These generally ran from the forested uplands, across the agricultural lands, and out to the coast and sea, encompassing the resources of both land and ocean" (Kirch 1985: 2 {3–6}).

In the Cook Islands this land division is known as the *tapere*, and is well illustrated for Rarotonga (see Figure 5), but applies to other islands in the group too. The island of Rarotonga is roughly circular in shape, so the *tapere* units radiate out from the centre of the island, a bit like a pie diagram. Each *tapere* of land is associated with a particular descent group. A lineage is prefixed with word Ngāti, just like in Māori society, and the people trace their descent to a common eponymous ancestor. There can be several lineages in any one *tapere*. Ron Crocombe describes the property rights relating to the *tapere* as follows:

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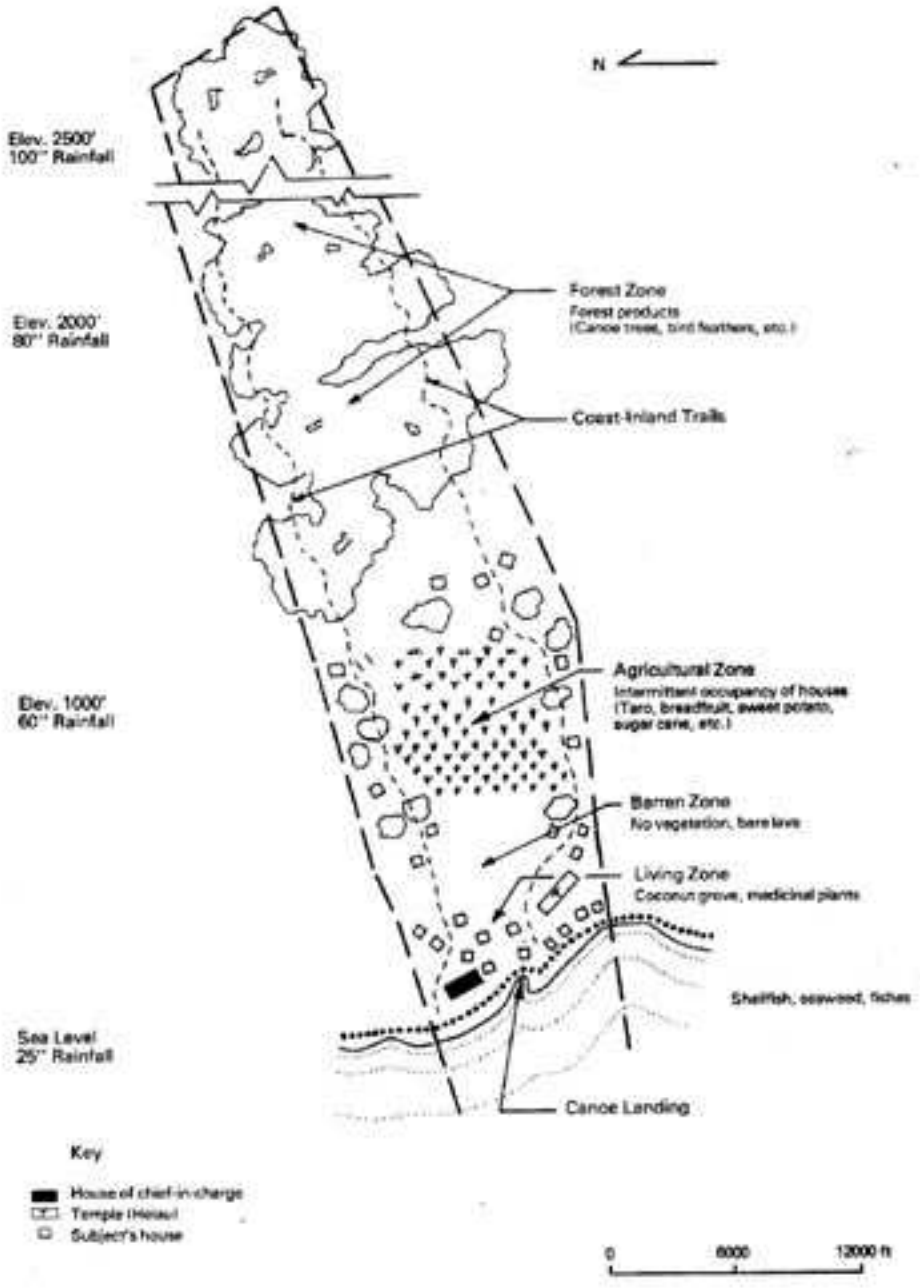

Figure 4: A typical land division in Hawai'i, known as *ahupua'a*, covering resources of forest, agricultural land, and out to sea. After Kirch 1985: 4.

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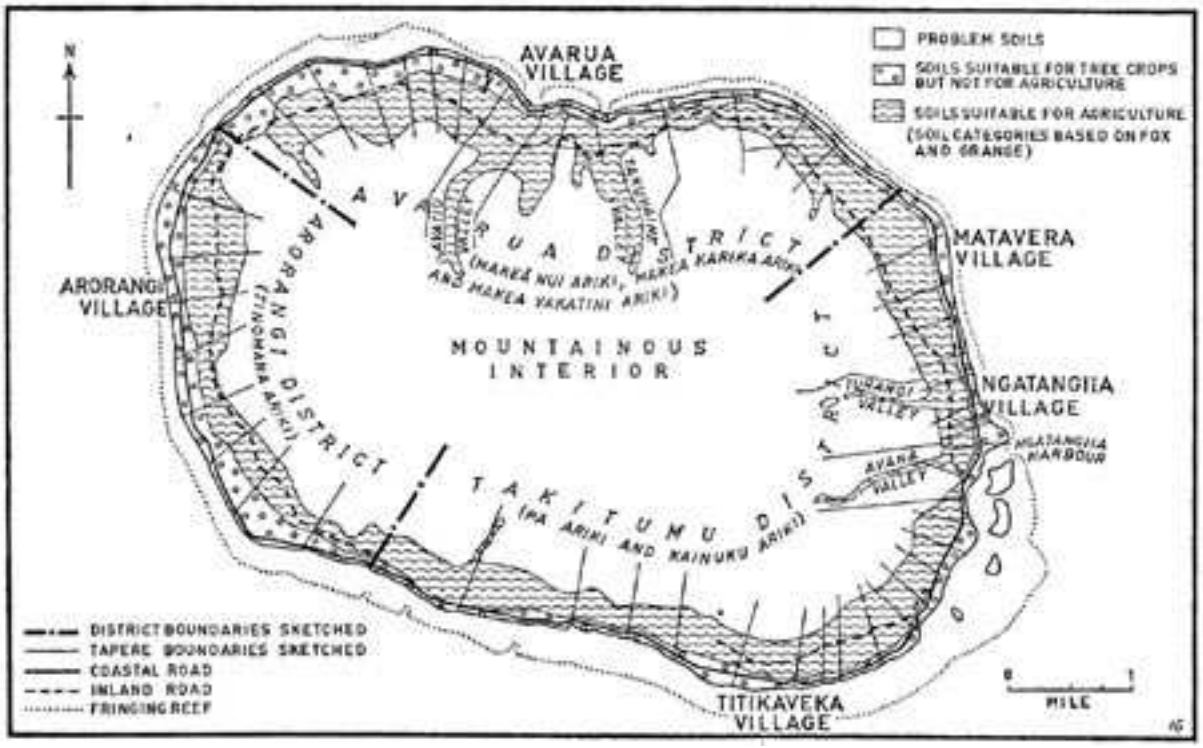

Figure 5: The division of Rarotonga in the Cook Islands into *tapere* land districts, each of which encompasses the mountainous interior, agricultural land, and the inshore area of the sea. After Crocombe 1964: 17.

> "Rights to the lagoon and its products were generally exercised by the *matakeinana* occupying the *tapere*... There was certainly no system of artificial marking within the lagoon, though named coral rocks were often quoted in early court cases as being boundary marks. Fish-weirs belonged to the extended family whose ancestors had built them, and the use of them without permission was regarded as theft. Reef passages giving access from the lagoon to the open sea were associated with the senior title of the major lineage of the *tapere* in which they were found. Traditions amply confirm the right of the title holder to be given a part of the catch by any fisherman using that passage..." (Crocombe 1964: 41–42, {7–11}).

Thus it can be seen that property rights extended beyond the land into the sea at least as far as the edge of the reef where deep waters begin.

A very similar system prevails on the island of Mangaia, described by Peter Buck (see Figure 6). There are six major land districts referred to as puna; these are divided up into sub-districts, known as *tapere*. "Each subdistrict... had a portion of the makatea and reef awarded to it so that all subdistricts should have a share in the rau-tuitui and the lagoon and reef" (Buck, 1934: 127, {12–16}). Once again it is evident that property rights extended into the sea so that descent groups had access to protein foods as well as starchy foods which they could grow on the land.

Moreover, the chief who was the head of each *tapere* had the right to declare closed seasons on food supplies, known as *ra'ui*, to ensure that they were not depleted too far. This chief "also inspects the lagoon within the district boundaries to note whether the catches of fish are getting smaller. Should he think it necessary, he calls the district chief and the subdistrict chiefs... together in council. The matter is discussed, and if a closed season is decided upon, the *ra'ui* is promulgated through the district.... The closed season affects the land food supplies... or the sea" (Buck, 1934: 141, {17–19}).

This illustrates that control over issues of depletion of marine resources is a matter inherent in the powers and rights associated with the land which is adjacent to the sea. That is, these rights are localised.

Walter describes the land tenure system on Ma'uke, also in the Cook Islands, as "closely tied to the tapere system which has been described by Crocombe (1964) for Rarotonga" (Walter 1998: 23, {20–22}), and appears to have survived almost intact since the arrival of Europeans (ibid.: 24).

On the island of Mangareva, in the Gambier archipelago, the land districts are also separate economic zones (see Figure 7). Buck, always on the look out for parallels with New Zealand Māori, found a number of interesting points of correspondence. Once again, it is evident that property rights extended into the sea from the land as the following makes clear.

> "A country or island was termed *nuku* and landed property, *kaiga*. Every part of the land had an owner, for the mountainsides up to the top of the ridges went with the cultivable land of the shore and valley flats. Ownership also applied to the sea and the coasts" (Buck 1938: 161, {23–30}).

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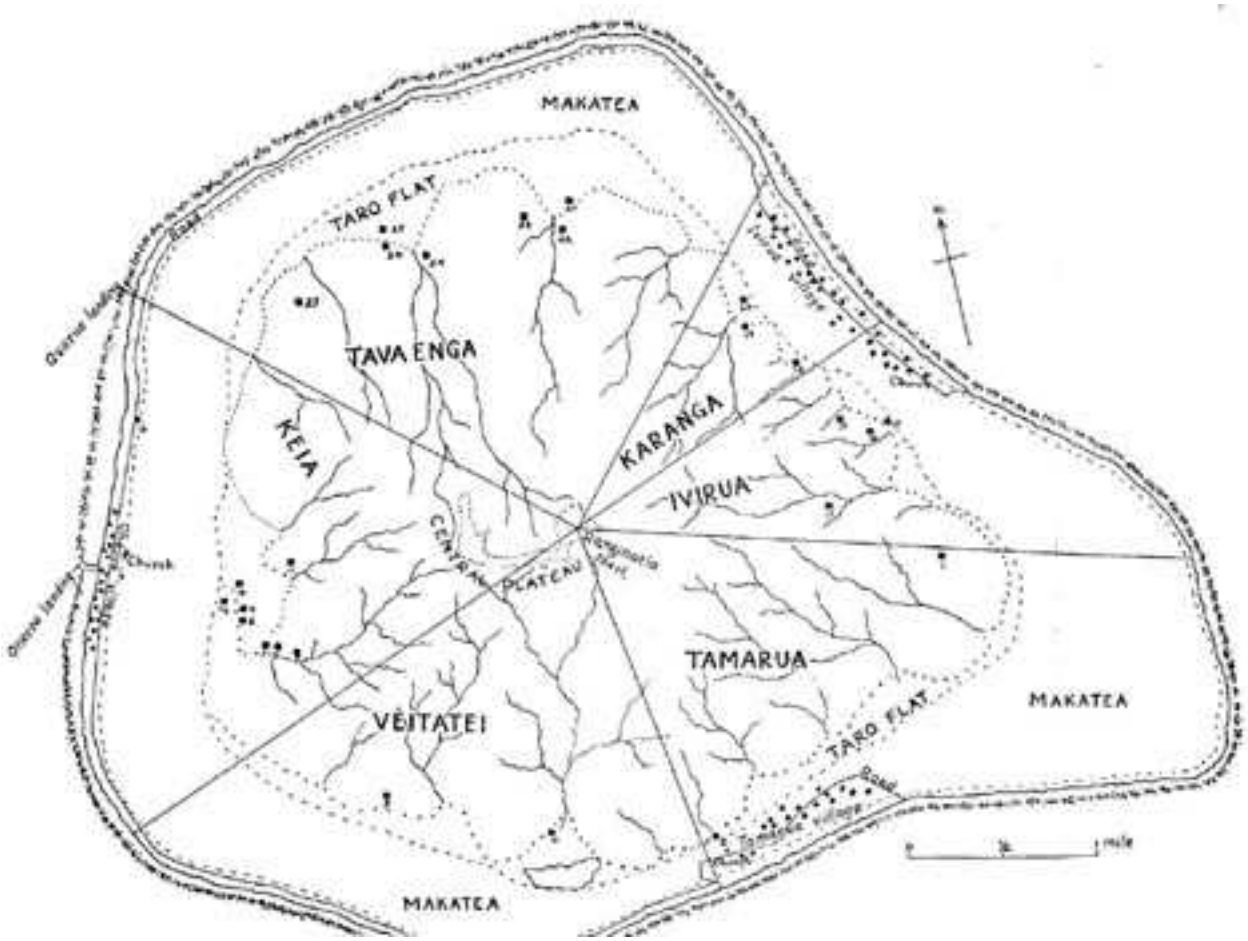

Figure 6. Land districts on the island of Mangaia in the Cook Islands, showing a similar pattern to Rarotonga. After Buck 1934: 125.

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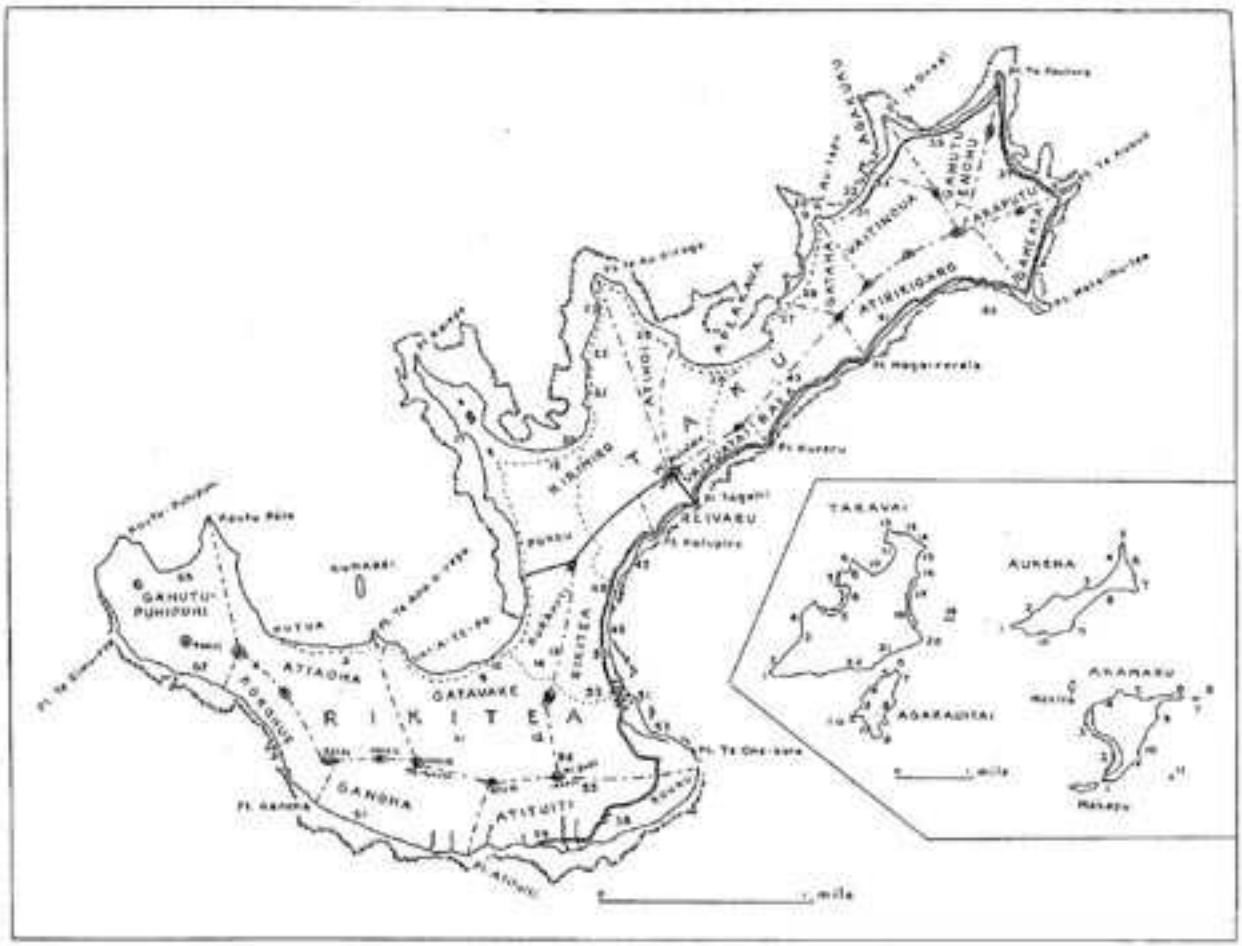

Figure 7. Land districts on the island of Mangareva in the Gambier archipelago. After Buck 1938: 7.

Buck also describes closed seasons *ra'ui* which applied to food resources including those in the sea. The declaration of these was a matter for the ruling chief for the district involved (Buck 1938: 161, {23–30}).

Further information on Mangareva is summarised from various sources by Williamson:

> "there was not in Mangareva an inch of land that did not belong to some one. The uncultivated mountains, and the rocks in the sea had their owners. As regards fishing, each family in the Mangarevan cluster had its own small nets; but there were very large ones, which were generally the property of all the inhabitants of an island or a valley, and all that was caught in these last was distributed in equal proportions among the different members of the tribe. The people were not free to cast their nets anywhere indiscriminately; each island had its sea, each proprietor had his shore; and it was only in the open sea that fishing was free to everyone" (Williamson 1924: 302–303, volume 3, {37–38}).

On the island of Futuna, to the north of Fiji (See Figure 8) Edwin Burrows described property rights thus:

> "The land owned by a kindred is called *kainga*, a word used in two senses: for the property shared by a kindred; and for the kindred itself. .... Typically a *kainga*, in the sense of property, consists of a strip of land running from the sea to the upland wilderness. It includes a site for one or more dwellings on the lowland strip; site for a cookshed with the plantation about it; part of the irrigated taro patches, in villages which have them; and sites for upland plantations" (Burrows 1938: 81, {43}).

This type of land division on Futuna, encompassing a narrow strip containing all the resources necessary for subsistence, including those of the sea, is graphically illustrated in Figure 9.

By the time Burrows studied Futuna, fishing activities were in dramatic decline (ibid.: 145–146, {50–51}). There is no shallow calm lagoon on Futuna and inshore fish are very small. Even so, fish are important in the diet.

Further afield in the western Pacific, on the island of Tikopia, Firth notes:

> "The reef is not vested in any specific ownership, but tacitly the area of it fronting a village is worked by the local people. Some families have erected *fota*, converging lines of stones to assist them in their netting of fish, and they have a proprietary interest in these. Though other people are not debarred from using these fish-corrals, the folk who maintain them expect some acknowledgement to be made" (Firth 1957: 405, {58}).

In the central Pacific in Samoa the pattern of land property rights and those of fishing resources is more similar to the situation in Eastern Polynesia than on Tikopia.

> "According to Turner, the lagoon, as far as the reef, was considered to be the property of those off whose village it was situate" (Williamson 1924: 240, volume 3, {31}).

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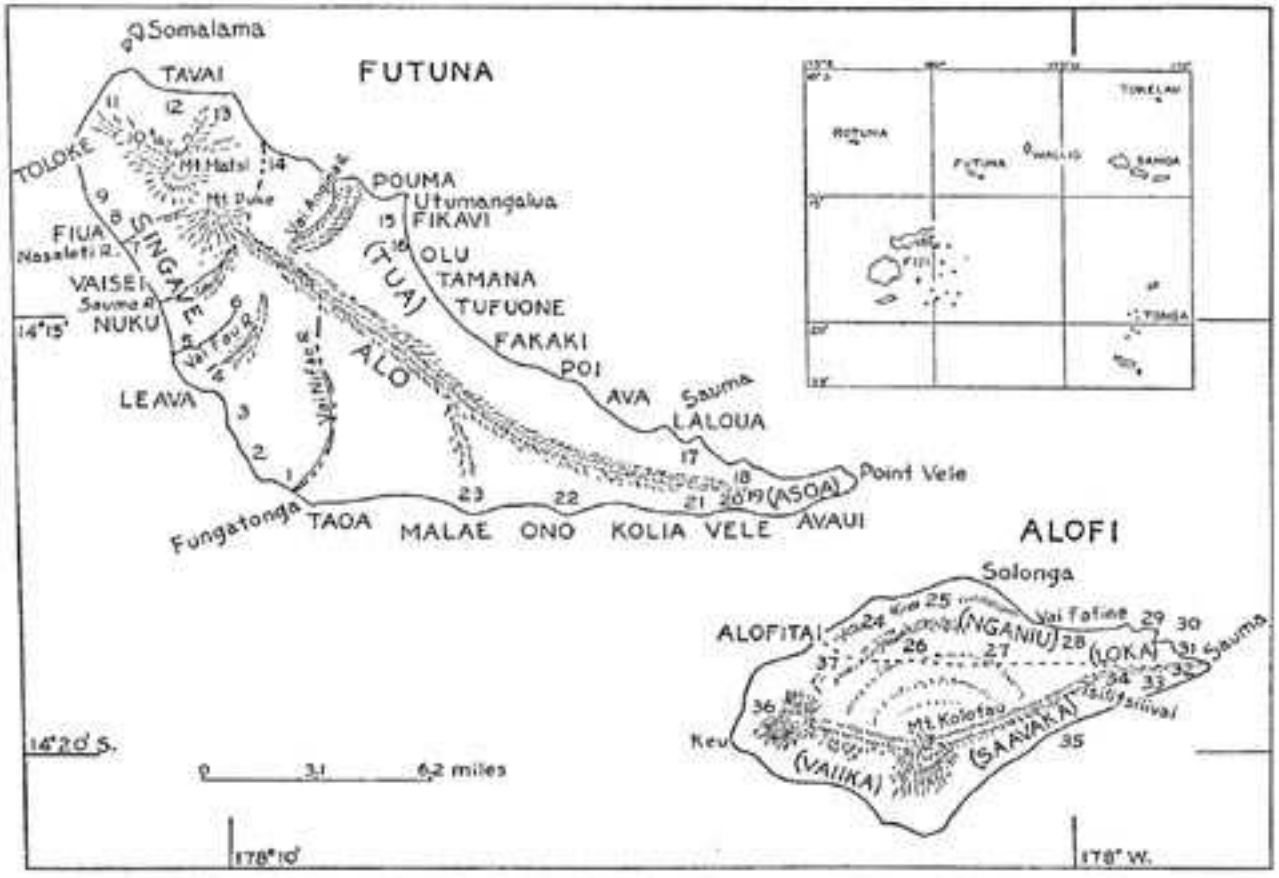

FIGURE 1.—Map of Futuna and Alofi. Places of traditional interest: 1, Kaifula; 2, Luanuku; 3, Lifu; 4, Matea;

Figure 8. Land districts on the island of Futuna, to the northeast of Fiji. After Burrows: 1936: 6.

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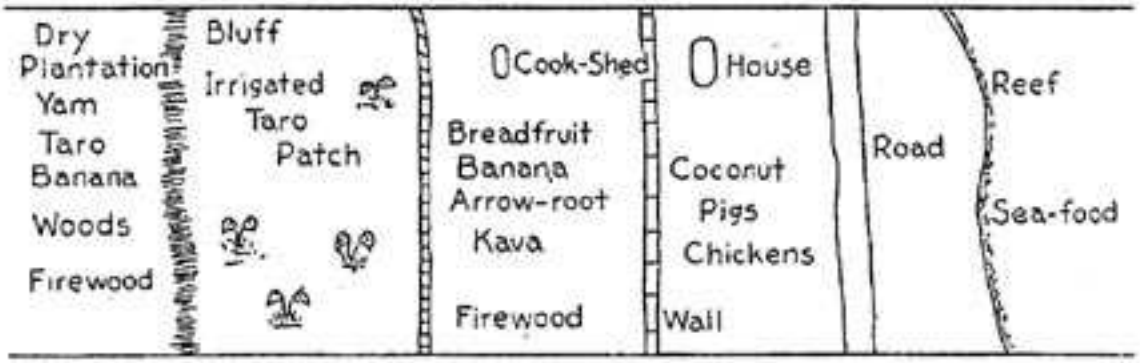

FIGURE 3.—Distribution of food supplies on a schematic Futunan landholding (*kainga*).

Figure 9. The landholding unit known as *kainga* on the island of Futuna, showing the distribution of food resources.

Unfortunately, like New Zealand, significant changes in the culture of Samoans had taken place by the time historical records were made concerning property rights, and Williamson was very wary of accepting a number of customs concerning fishing rights which were described by Von Bülow at the end of the 19th century as indigenous. However, it is of special interest that regarding alienation of the land, and presumably the adjacent sea also, the Samoans did not conform to European concepts. They had no notion of selling in the sense of parting forever with ownership. They believed that the title to land could be obtained from a chief, but that the Samoans living on the land would forever retain the use of it. This caused serious problems with Europeans (See Williamson 1924: 241–242, volume 3, {32–33}). This type of problem occurred in 19th century New Zealand too, but I do not believe that the issue of alienation (or non-alienation) of rights to use the sea's resources adjacent to a parcel of land has been fully explored and understood.

Oliver, in describing property rights in Tahiti observed this:

> "Within any one political unit — and every one of these included fishing grounds — every resident probably enjoyed some fishing rights. This is not to deny that some individuals, and not necessarily those living on the shore, fished more often than others. It merely means that within any one political unit differences in proximity to fishing resources cannot have had a very decisive influence upon social relations — though the reverse may well have occurred" (Oliver 1974: 309, {60}).

Further information on Tahiti is provided by Williamson, who was fascinated by the fact that many islands were divided into eight districts, whatever their size, and the inhabitants into an equal number of *mataeinaa* or divisions. He cites Tahiti, Ra'iatea, Huahine, Moorea, and Borabora as examples (Williamson 1924: 182, volume 1, {39}). Regardless of the number of districts and sub-districts, the pattern of dividing up the land is the same as in so many other islands in Polynesia, pie-shaped slices, taking in all the important economic resources, including those in the sea, required for an economic system which is independent of other tribal units (See Figure 10).

Further explicit information on marine property rights in the Society islands is summarised from various sources by Williamson:

> "the sea, like the land, was divided into properties. The chiefs generally possessed the reefs, which were the best fishing grounds, and the most frequented passages. Sometimes they interdicted the use of them to all those who were not of their own family, but more often they confined themselves to collecting a rent. Just as the coral banks, and generally all the fisheries situate in the reefs, were special properties, just as were all parts of the land, so also the sea outside belonged to such and such an island, or to such and such a district, from one island to another. For example, the island of Moorea (Eimeo) possessed very little sea beyond its reefs, whilst Huahine had more than any other, since the whole space separating it from Moorea was supposed to belong to it. The island of Borabora possessed perhaps a greater extent in the west. These possessions had names and boundaries, which they never failed to mention at the consecration of kings and at other ceremonies of this kind" (Williamson 1924: 279, volume 3, {34}).

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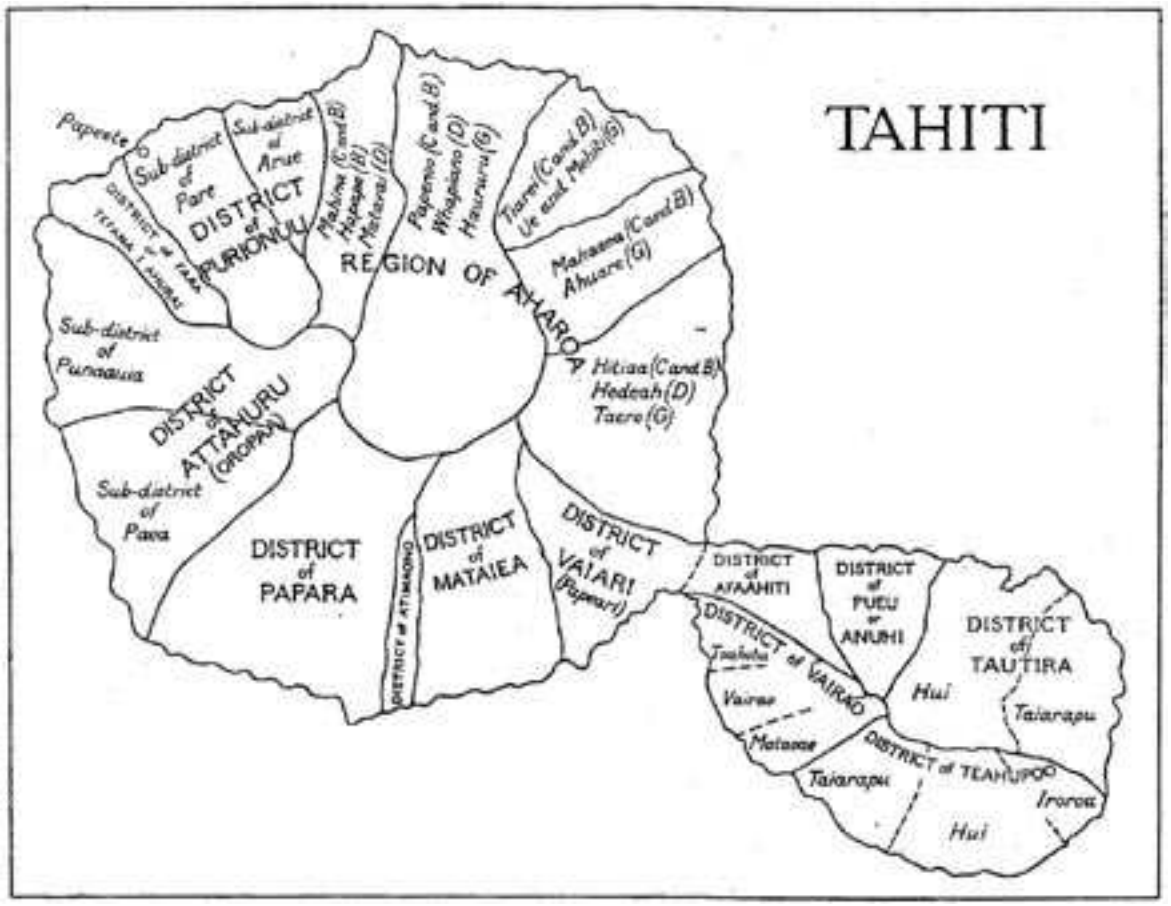

Figure 10. Land divisions on the island of Tahiti, showing the economic independence of each. After Williamson 1924: opposite page 70, volume 1.

A more recent reviewer commented as follows:

> "Before the arrival of the Europeans, the Ma'ohi lived in harmony with the environment, taking from the land and sea only what was needed to feed themselves. The ocean was almost their only source of protein. Because retrieval of these resources was vital, customary regulations ruled their relations with the sea and rivers. Each man and his family could live on that part of the foreshore which was allocated to them. The right to fish belonged to residents of the adjacent coast" (Tetiarahi 1987: 48, {180}).

In the Marquesas Islands, property was defined thus:

> the right to live on such and such a piece of land, and ... if a native wished to give one of his lands to another, he told him so in the presence of several witnesses, whereupon the property changed its master. The necessity of fixing boundaries for the property of bays and valleys was so innate in the natives, that they divided the sea itself, and did not permit a tribe's coming to fish in waters which they themselves claimed to own; and disputes as to fishing rights had ended in war.... A native could not sell the land on which he was settled, but he could let it" (Williamson 1924: 296–297, volume 3, {35–36}).

On Rapanui (Easter Island) Van Tilburg makes this interesting observation:

> "Because Rapa Nui lacks a reef, the extension of landownership reaches out to sea, and six named and discrete fishing zones existed wherein specific types of marine resources were harvested. Various sorts of crabs, urchins, crayfish, slugs and shellfish were obtainable by scavenging in tidepools" (Van Tilburg 1994: 98, {62}).

This is the only example I have come across which suggests that marine property rights in Polynesia might have been differentiated according to whether or not a fringing reef existed around an island. It is evident from many archaeological studies in both the Pacific islands and New Zealand that the bulk of food which was obtained from the sea was taken from close to the shore (see for example Leach and Davidson 1998), and it is easy to understand why property rights should be so strong for the inshore lagoon and reef area. As can be seen from the foregoing, the reef edge is often mentioned as the seaward boundary of property rights extending from the land. This zone, where the reef falls off into much deeper water, is a very clear boundary where the waves break. This suggestion from Rapanui that in the absence of such a clear boundary property rights might extend much further out to sea has possible implications for other islands, including New Zealand. When Tupaia accompanied Captain Cook on his visit to New Zealand in 1769–70, Banks recorded in his journal a curious comment about a canoe standing alongside their ship off the Thames River on the Coromandel coast:

> "They answerd him in their usual cant 'come ashore only and we will kill you all'. Well, said Tupia, but while we are at sea you have no manner of Business with us, the Sea is our property as much as yours. Such reasoning from an Indian who had not had the smallest hint from any of us surprized me much and the more as these were

> sentiments I never had before heard him give a hint about in his own case" (Banks 1963 :435, {64}).

Tupaia was an ari'i and priest from the island of Ra'iatea in the Society Islands, and was living in Tahiti when Cook arrived there (Banks 1963: 270). All these islands have reefs, and Tupaia would have been familiar with property rights relating to land and sea for such islands. The interesting point here is that Tupaia's comment about the lack of property rights in the open sea may only apply for such islands. Williamson provides additional information on this when he comments on property rights in the Society islands extending out into the open sea in specific areas where albacore fish are found. He observed:

> "The association between the family name, the *marae tupuna*, the tutelar deity, and rights to property probably extended to the ownership of those well-defined areas of sea over which off-shore fishing was carried out. These, as we have seen, were the property of the people who owned estates bordering upon the part of the sea in which they occurred, and were probably associated with the titles to such lands" (Williamson 1937: 254, {41}).

Further explanation of this is provided in the passage:

> "Albacore fishing was always conducted over limited and well-defined areas of sea, termed *apoo aahi*, or 'albacore holes', which were the property of those landowners whose estates abutted that part of the sea in which they occurred. These albacore holes were few in number — according to Mr Nordhoff's estimate there were not more than a dozen of them around the whole coast of Tahiti. Why albacore should frequent these sharply defined areas of sea presents a problem. Mr Nordhoff is inclined to accept the explanation of an experienced native fisherman that *apoo aahi* are parts of the sea where conflicting currents set up a condition like the *nini* or 'cowlick', at the back of the head. The theory is that small fry are swept there by the currents, and that the albacore resort to these places in search of food" (Williamson 1937: 244, {40}).

The albacore mentioned here are tuna, probably of the skipjack kind, and Williamson's source of information is the series of papers published by Nordhoff (1930) which describe this rare and remarkable fishing activity in the Society Islands. It is not surprising that property rights prevailed over a few specific and well-known areas of the open sea where these fish congregated, and this in no way conflicts with Tupaia's statement that "the [open] Sea is our property as much as yours" (Banks 1963 :435, {64}).

In the foregoing examination of property rights relating to the sea there is ample and unequivocal evidence that such rights did indeed occur throughout tropical Polynesia, and in many cases are still intact today. Such rights are closely associated with the block of land adjacent to the area of sea involved, and belonged to that land owner. The owner was usually a collective descent group associated with an eponymous ancestor. Rights to use any area of the sea so owned could be given by the owner to a person, or a family or a group of families either temporarily or permanently. Such complexities are probably a natural bi-product of population growth on small islands and ongoing processes of fission and fusion of descent groups.

It is important to note that Polynesian property rights do not extend very far out to sea, but mainly refer to the inshore area. The reef edge is frequently mentioned as the extent of these rights. Beyond the reef edge, in the open sea, questions of ownership and rights are clearly more relaxed. This is not merely a matter of difficulty of enforcing such rights, it is more fundamental than that. The edge of the reef is a very important environmental boundary for all human communities living on small tropical Pacific islands, not just for Polynesians. The reef edge is known as the place where the waves break, *te 'ulu'ulu*, in many Polynesian languages. This is the effective boundary between the land and the open sea. It is also the boundary between safety and danger. To the landward of the reef edge is a safe place where people of all ages can forage for food; on the seaward side one can be swept away and it is a place where only canoes venture. The place between the reef edge and the dry land is an intermediate zone of shallow intertidal water, rich with marine food for the taking. It is hardly surprising that this intermediate zone is owned as part and parcel of the adjacent dry land.

With this form of land-sea tenure system so widespread in tropical Polynesia the first immigrants to New Zealand would have continued the same kind of system. The evolution of rights to the land and sea would no doubt follow a similar pattern to that described for the Hawaiian islands by Kirch, but because New Zealand is a larger landmass, the pattern would take a longer period to impress itself on the land and sea. We can expect that in areas where reefs exist, such as along the coastline of eastern Wairarapa, property rights pertaining to the land will certinly have covered the inshore area, and an unknown extent of the adjacent open sea. However, in other areas of New Zealand where no reef existed, land property rights may have extended a considerable distance out to sea. Cutting across this simple division, specific fishing rocks or holes offshore would also have had property rights tied to the adjacent land.

Conclusion 1[6]

LAND-SEA TENURE IN EARLY NEW ZEALAND

One of the earliest historical records of property rights relating to the fishery is to be found in Nicholas's records of the New Zealand Māori when he accompanied the Reverend Samuel Marsden during a voyage to New Zealand 1814–1815. When visiting Kawakawa 29 December 1814 he commented

> "These people are very industrious in attending to their fisheries, which are here numerous and well supplied; the coves in particular have a great abundance, and the right of fishing in certain places is recognized among them, and the limits marked out by stakes driven into the water. We observed several rows of these stakes belonging to the different tribes, each having respectively their prescribed boundaries, beyond which they durst not venture to trespass, without incurring the resentment of all the others, who would instantly punish them for any violation of the general compact" (Nicholas 1817: 235, {66}).

It is important to realise that these comments refer to the inshore fishery. Stakes driven into the water refer to shallow waters.

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[6]Numbered conclusions reached in the body of this report appear in full page 181 ff.

Colenso has an interesting discussion about several different kinds of property rights, and notes that "permanent usufruct rights often originated in transfers or gifts, and generally continued in the first line of descent. They were mostly easily managed by the New Zealanders before the incoming of the European, or rather before the younger natives became infiltrated with novel European notions" (Colenso 1968: 363, {69}). The permanent usufruct rights [on someone else's land] he is discussing here are:

> "the right of a man to a hidden rock, or shoal, at sea for cod-fishing; to a tidal bank for shell-fish; or to a certain wood, or tract of land, for taking certain birds; or to a defined portion of a plain for quail and rats; or to a forest, for *hinau*, *tawa*, or *karaka* berries; or to a defined portion of a flax swamp for cutting flax; or to a spot for an eel-weir; or to a hill, &c., for digging fern root" (ibid.);

He goes on to describe similar temporary usufruct rights on someone else's land, lasting for perhaps a year or a season, and that "in all such cases the right was generally made known by a pole being stuck up with fragments of wearing apparel, or a bunch of flax, grass, or such like, tied around it; and this was usually respected" (ibid.). The important point to note here is that fishing grounds and inshore shellfish beds were owned, and that the rights to use these could be transferred to others. These resources were not open to anyone to use.

Shortland in 1868 noted that the New Zealand Māori laid claim to vast tracts of relatively unpopulated land between tribal units; in his view this reflected the origin of the Māori from small islands in the tropical Pacific where there is a constant threat of overpopulation curtailing the lands of each tribe. His comments on this are interesting:

> "Such a system of colonization tended to disperse these settlers over very extensive limits, and we consequently find that other chiefs started inland, each little family taking possession of a separate locality at a wide interval from any neighbour. The different territories thus acquired became the lands of their descendants, who came to be distinguished as a sub-tribe of the Arawa, the name by which all sub-tribes were known when spoken of as a body.
>
> The territory of a sub-tribe belonged to the whole body, excepting such parts thereof as had been specially appropriated to families or individuals as cultivation grounds, fisheries, or otherwise; and their rights passed to their descendants. Other members of the sub-tribe had no right to meddle in any way with lands so appropriated; at the same time, lands never appropriated specially belonged to the whole tribe" (Shortland 1868: 332, {71}).

The several levels of property rights being described here closely resemble the situation on small islands in the tropical Pacific. It should also be noted that the property rights for functional economic units such as families or an amalgamation of families cover sufficient resources for an effective subsistence economy ('cultivation grounds, fisheries, or otherwise'. The main additional ingredient covered by 'otherwise' is likely to be forest resources). Once again, this feature of property rights covering the main economically important resource zones closely parallels the Polynesian pattern.

Firth, writing of the New Zealand Māori in 1929 was at pains to show that "In this analysis

of the Māori system of land tenure it has been clearly shown that the simple description of it as 'communal' or 'communistic' is grievously inadequate" (Firth 1959: 382, {73}). In this respect, Firth is closer to the views expressed by Colenso, cited earlier, in which the rights of individuals, or families, are singled out. Firth had this to say:

> "economic privileges secured to families or to individuals within the lands of the *hapu* were of a varied nature. They comprised rights to birding trees, shaggeries, deposits of red ochre, fishing stands, subdivisions of rat runs, shell banks, patches of fern-root, clumps of flax, places for setting eel traps, and the like" (Firth, 1959: 381, {72}).

He also recounts instances of quarrels over property rights relating to fishing, for instance:

> "the usurpation of the fishing rock of an elder brother by the younger, who coveted it, and the appeal of the dispossessed one to their father... The father held that he should have killed the trespasser first and asked questions afterwards!" (Firth, 1959: 381–382, {72–73}).

And further:

> "In some cases a private right to an agricultural plot, a fishing ground, or a birding tree was exercised by one individual alone, in others by a number of people in common, such as the members of a family. This later was often the case where the original holder left a body of descendants, who might then agree to regard the fishing ground or cultivation as joint property" (ibid.).

Regardless of whether or not individuals had property rights, as Firth was so keen to establish, there is no doubt that *hapū* had over-arching rights too. Firth comments: "Within the territory of the tribe each *hapū* held its lands in exclusive possession and within this again were various species of ownership" (Firth 1959: 382, {73}). The important point I wish to draw attention to here is that these property rights, whether of *hapū* or individual, extended beyond the high tide mark and into the sea. Boundary markers, demarcating special fishing grounds were well known (Firth 1959: 390, {74}).

Best, also writing in 1929, made some useful comments about property rights relating to fishing, although one needs to bear in mind that Best had very little first hand knowledge of coastal Māori, and most of his observations relate to inland people such as those in the Ureweras, Wanganui, and Rotorua:

> "Fishing-grounds were looked upon as tribal property, and we know that such grounds in lakes, estuaries, and other shoal waters were sometimes marked off by a series of stakes, so as to define community rights. Any trespass on such areas for purposes of fishing by unauthorized persons met with vigorous opposition, and even fighting between families or clans might result. Fishing claims were so marked in Lake Rotorua in former times, and Nicholas describes other such boundary-marks seen by him in the far North" (Best 1977: 4 {79}).

Later 20th century studies of the New Zealand Māori have drawn heavily on the works of Best, Buck and Firth in introductory chapters about Māori society at first contact with

Europeans. This was stated explicitly by Metge (1967: 4–5, {182}), who later, in a brief discussion of land, mentioned that within the *hapū*, nuclear families and individuals held rights of use over specific resources, including fishing-stands and shell-fish beds (1967: 16, {183}). Kawharu (1977), in his book on Māori land tenure, cites Best as the source of his brief references to rights to and subdivision of fishing grounds (1977: 49, {185}, 60, {187}). In a more recent paper on Māori land tenure (but one still written before the 1987 Fisheries Claim by Muriwhenua tribes), he mentions only briefly the Te Atiawa Claim about pollution of traditional fishing grounds by sewage and industrial waste, and the Tainui Claim for the seabed and tidal lands of the Manukau Harbour to be vested in their tribe (Kawharu 1987: 159, {201}).

Turning now to the specific area of importance to Ngāti Hinewaka, that is the coastal lands from Lake Onoke to Flat Point, on the east coast of Wairarapa. Ngāti Hinewaka have consistently expressed their firm belief in their property rights extending into the sea in a number of ways. One important source of this is evidence given in Wairarapa Māori Land Court hearings.

At the Te Kopi Waitutuma hearing held in Greytown during June 1895, Aporo Hare was conducting the case of his wife, Ruihi Aporo (nee Te Miha), in the Court. She was claiming rights to the Te Kopi Waitutuma block by descent from Ngarangitopetopea and Te Haumokai — respectively the great-grandson and granddaughter of Hinewaka. Ruihi's grandmother was a sister of Te Kaiatekokopu and Te Maarioterangi. Her father was Hiu te Miha. Aporo begins his evidence on 7 June 1895 as follows:

> "We claim by ancestry from Ngarangitopetopea and Rangitawhanga and permanent occupation.
>
> The whakapapa of the claimants was given in the Matakitaki and other cases and is in the books of the court.
>
> This land was given by Te Kai o Te Kokopu to Ngaitahu after the return from Nukutaurua as a reward for their having avenged the killing of Te Maari by some west coast people. When Te
> Whenuamahue returned from captivity at Wharekauri and Hiu te Miha from Kapiti, Te Hamaiwaho a Ngaitahu chief seeing that the descendants of Ngarangitopetopea and Te Haumokai had no land for their occupation returned this to them" (MLC1 1895: 33, {691–693}).

Hohepa Aporo had this to say 10 June 1895:

> "On leaving he said to his daughter Te Hauraumati[7]
> 'Te Pikitanga ki Kautao[8] is payment for the canoe

[7]his daughter's name

[8]This named land is believed to be at the back of the lighthouse area in the vicinity of the 'stone wall', which is at the mouth of the Waitutuma Stream.

> I am going away in. Te Ruaara Roa a Hapuku[9]
> fishing ground is also to be payment for the canoe
> I am leaving in'. Te Hauraumati afterwards gave
> Te Pikitanga ki Kautao and the Toka hapuku to
> her husband Te Rakau who gave it to
> Te Ranginohopuku and Manokiaitu who then first
> acquired a right to this land, before the gift
> they only had 'Mana Rangatira' over the hapus" (MLC1 1895: 41, {267}).

This passage makes it clear that the well-known hapuka fishing rock, named as *Te Ruaara Roa*, discussed elsewhere in this report, was considered as property in the same way that land was, and ownership to it could be transferred from one owner to another.

Aporo Hare had this to say 14 June 1895:

> "All the inhabitants of these places caught
> fish in the sea, that is to say each hapu
> had its own fishing grounds, and also had
> the right to hunt & collect food on the main
> land in the [places]" (MLC1 1895: 62, {82}).

Aporo Hare is therefore plainly stating that property rights in the sea were held by separate *hapū* in addition to similar rights on the land.

The modern-day cadastral maps of East Coast Wairarapa and Palliser Bay suggest how this ancient system of land-sea tenure was imprinted in the minds of Ngāti Hinewaka. It will be seen in Figures 11 to 14 that when Native Reserves were divided into portions for different *hapū* they were narrow strips at right angles to the coast, running from the sea inland. This provided each socio-political unit with all the resources required for sustaining life in their subsistence economy. These resources ranged from the interior forested land, through the lowland cultivation areas, to the inshore marine resources.

Conclusion 2

In the passages just quoted at the Wairarapa Native Land Court hearings 1890–1895 it is clear that the fishing grounds were seen as property. That was the point of citing them in this report. However, they also speak to us about another issue as well. In the context of the Native Land Court at the time, these statements about fishing spots helped to establish legitimacy of association with parcels of land by asserting fishing rights nearby. But they also serve to assert *manawhenua–manamoana*, and to identify that fishing rights were considered to extend further out to sea, beyond the immediate inshore area. This is closely paralleled in Polynesia, as has been described above. I list below some of the statements relating to offshore fishing in these Native Land Court minutes in order of the original testimony, starting with June 1890 at Greytown:

[9]This hapuku fishing rock or reef is well known in Ngati Hinewaka traditions.

1207

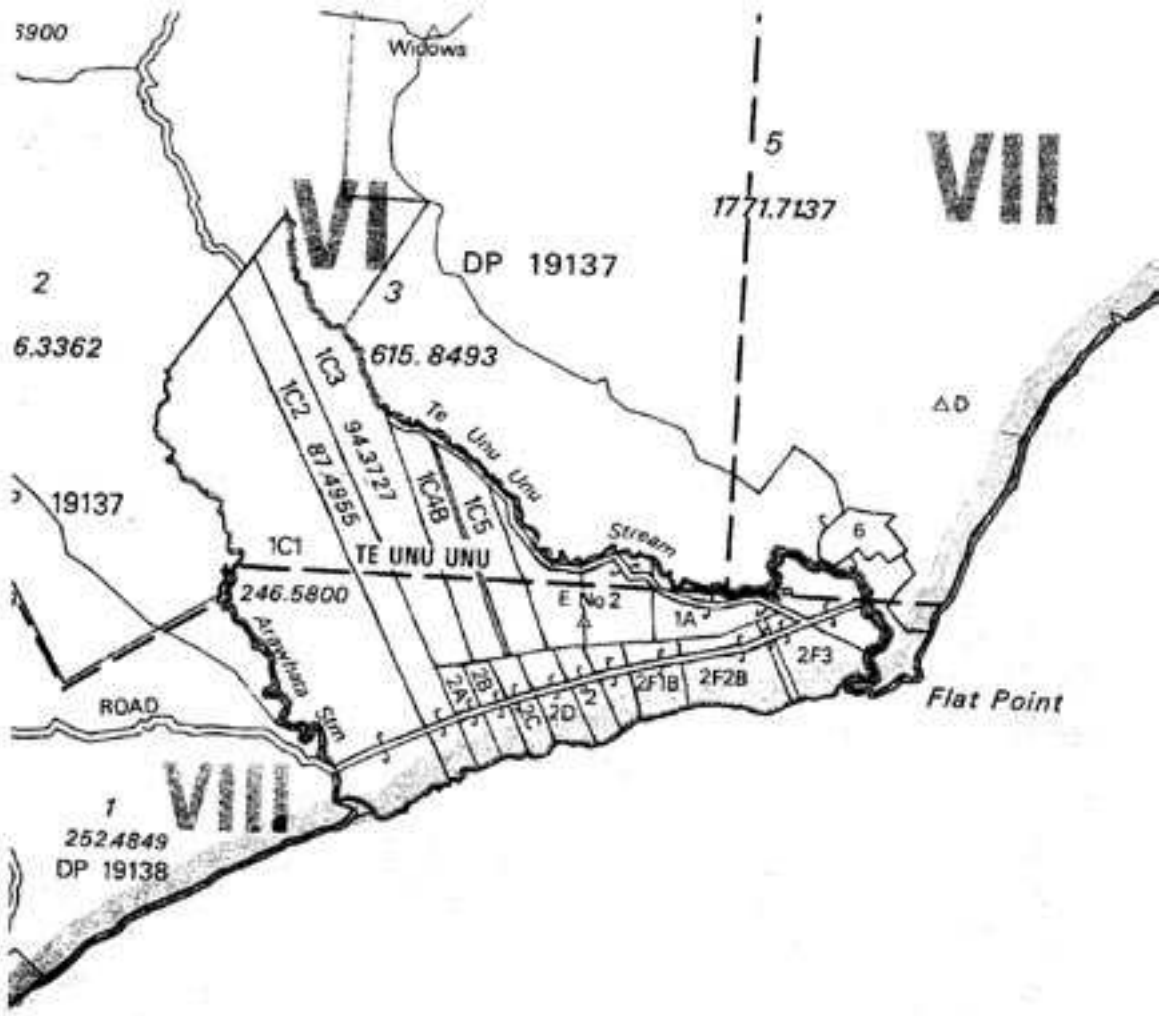

Figure 11. Resource-based strips of land in the Native Reserve at Te Unuunu.

1208

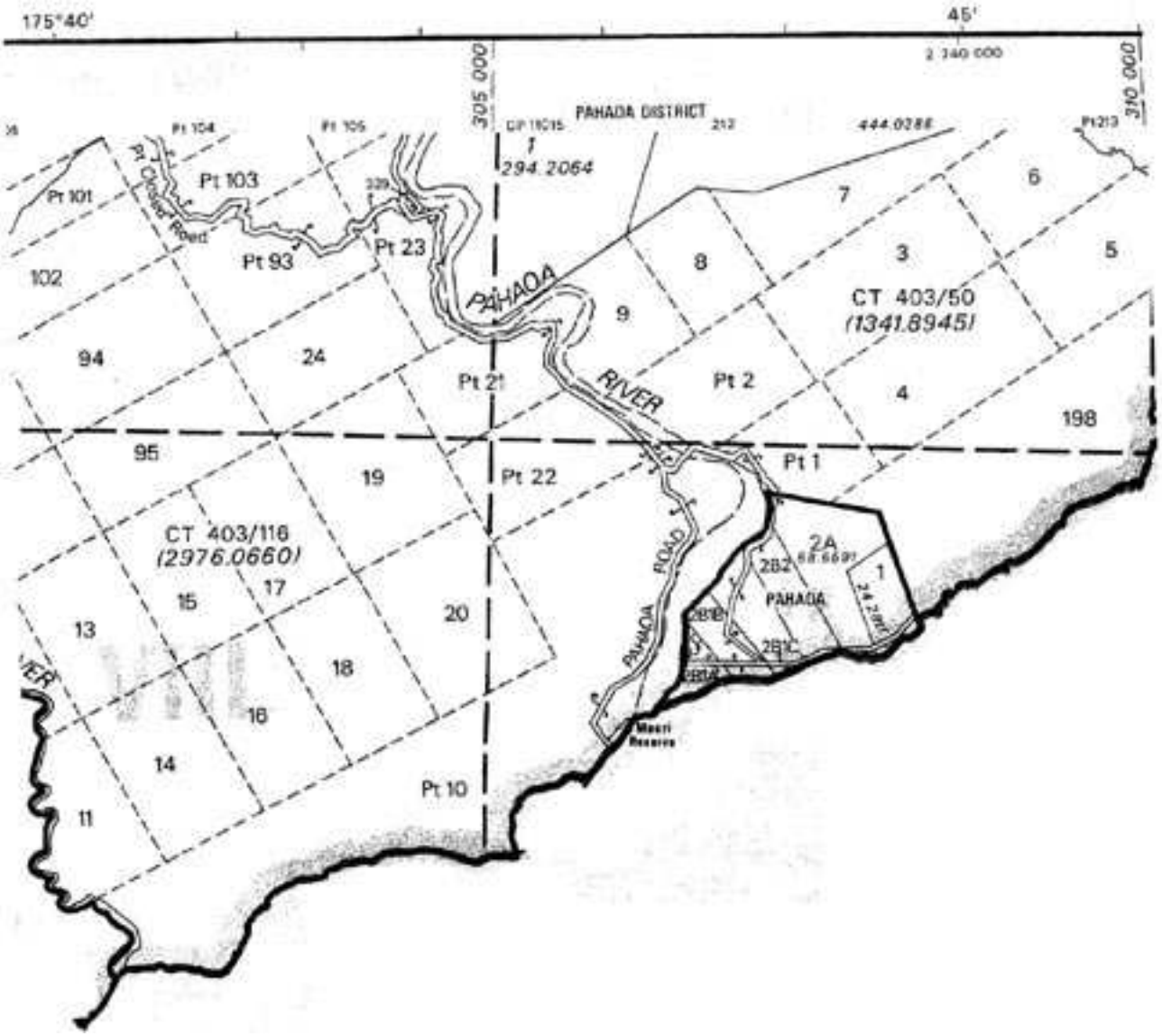

Figure 12. Resource-based strips of land in the Native Reserve at Pahaoa.

1209

Figure 13. Resource-based strips of land in the Native Reserve at Waikekeno.

1210

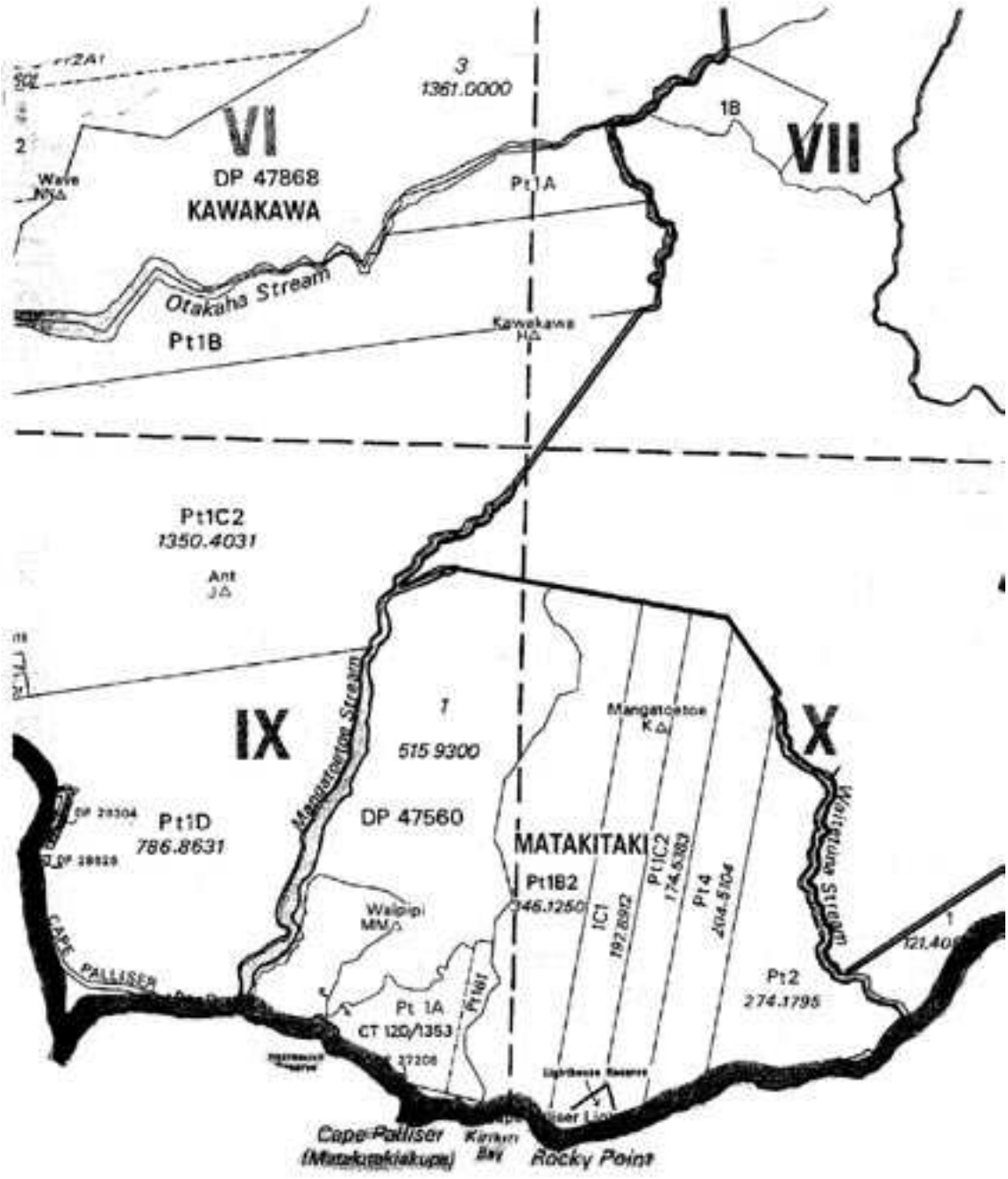

Figure 14. Resource-based strips of land in the Native Reserve at Matakitaki.

Tamati Marere. When the rua koura[10] and the toka hapuka[11] was opened by Ngatihinewaka and Ngaituohongia and other hapus Ngatihinewaka went there to procure koura and hapuka {255}.

Tamati Marere. Matakitaki was e taupaho[12]; Te Karetu was also a taupaho and e tauranga[13]; Pukeatua was the pa there. These were all the pahi's of Ngatihinewaka of Pahura; Ikatatari and Ngarangitopetopea. The Toka Hapuka was called Matakitaki. Taweke was a Tatai koura[14] {255}.

Piripi te Maari. I runga te Mana o nga uri ka noho te Ranginohopuku and Manukiaaitu i runga i te whenua. Manukiaaitu was taken to Te Humenga this part was given with Toka Hapuka (Toro Apuru) to him. The outer part was given to Manukiaitu and the inner part was retained by the original owners. The descendants of Te Ikahoungata extended their occupation over all the land through their descent and the intermarriage with the other hapus {255}.

Piripi te Maari. Matakitaki in my time was a fishing place of repute. Kapuarangi and Te Hauria were the names of the important fishing places on the rocks. Te Mawe was a tauranga waka also Te Kirikiri, Te Karetu and Hinerua. These were the chief landing places on that part of the coast. Ngapuruakoura were Tutaiwererei and Te Puna orakai kaewa. I was the person who used to go fishing more frequently than others in former days. Leave that kind of work now for the young people {255}.

Piripi te Maari. Tauahi left the land because of a quarrel about the toka hapuka called Ruaarero at Matakitaki he settled at Huariki and when Te Haeata was born he was placed on the land at that end. Te Kohai and Hineipokia remained away at that part of the district. Te Whakakohu settled at Turanganui Te Wharetoitoi resided at Wairarapa. Te Pou and Te Ariki lived at Oroi but used to go to and fro to Te Kawakawa to catch fish {255–256}.

The next series are from the minutes of the Wairarapa Native Land Court hearing at Greytown June 1895:

Hohepa Aporo. On leaving he said to his daughter Te Hauraumati Te Pikitanga ki Kaitao is payment for the canoe I am going away in. Te Ruaara Roa a Hapuku fishing ground is also payment for the canoe I am leaving in. Te Hauraumati afterwards gave Te Pikitanga ki Kaitao and the Toka hapuku to her husband Te Rakau who gave it to Te Ranginohopuku and Manokiaitu who then first acquired a right to this land, before

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[10]A crayfish hole

[11]A rock or underwater pinnacle where groper are found

[12]A camping place

[13]A landing place

[14]A gathering place for crayfish

the gift they only had Mana Rangatira over the hapus {265}.

Hohepa Aporo. The land referred to as Te Pikitanga ki Kaitao and the Toka Hapuku comprise the whole of the country I claim as a descendant of Tuohongia. It was given by Hauraumati to Te Rakau who gave it to Ranginohopuku and Manokiaitu descendants of Hinewaka {265}.

Niniwa Kawana. When Katia went away he said to Te Rakau, Te Pikitanga ki Kaitao is for the canoe I go away in Te Ruaararoa[15] is also for that canoe {265}.

Niniwa Kawana. I never heard that Te Kowhai was prevented from fishing at Te Ruaararoa {265}.

Aporo Hare. These are the descendants of the daughter of Katia viz Hinewaikouka who came away with him to Wairarapa in the canoe spoken of. The small piece of land I have described was the only land given for that canoe. The Toka Hapuku was also given. It is off the coast about opposite Tuhirangi {265}.

Aporo Hare. The latter was placed at Te Kakau by N Hinewaka. Ngarangitopetopea was the principal man at Te Kawakawa. These are the descendants of Hinewaka who have rights to this block. Manokiaitu lived at Kawakawa, the Ngatirua allowed him to fish on their fishing grounds there opposite Kumenga[16] {265}.

Aporo Hare. All the inhabitants of these places caught fish in the sea, that is to say each hapu had its own fishing grounds, and also had the right to hunt and collect food on the main land {265–266}.

Piripi te Maari. I know the land awarded to the descendants of Hinewaka. I have a right to it from Mataoperu to Te Hurupi from occupation as a descendant of Hinewaka. My ancestors, parents and I myself lived permanently at Te Kopi. We had a large house there after return from Nukutaurua. We built it under our ancestors directions. We also lived at Te Humenga when fishing off the coast. Te Kawakawa was a permanent kainga of ours, we collected food and caught fish there {266}.

Piripi te Maari. We had no meeting house at Te Humenga it was a settlement used while collecting food. I have not seen the Wairarapa people collecting food there for any length of time, although they have fished there {266}.

Hori Te Huki. I am a N' Ngapuoterangi and a descendant of Hinewaka. Know land before the court. I have lived on it. My father lived on it. My ancestors lived on it. My ancestors and father both had houses and pas on it at Te Kawakawa. My father and I lived permanently at Te Kopi and Otakoha. Cultivated at both places also at Te Kawakawa and Ngawi. We fished only at the latter place {266}.

---

[15]This is the Toka Hapuka Ruararoroa

[16]This is probably Te Humenga

The final series are from the minutes of the Wairarapa Native Land Court hearing at Greytown September 1899:

> Ropoama Meihana. I live at Te Whiti. I know the land on plan before court. I have a claim to it an ancestral right and also a right by gift. Manukiaitu is the Ancestor from whom I claim. Ngatirua was the hapu that made the gift also Ngaitamanuhiri Ngatiwhao, Ngatiira, Ngatitekaharoa. I tuku e whakatiputanga i a Manukiaitu, ka tuku te whenua ka tuku to toka Hapuku. Toka purua was the name of the rock (i.e. the fishing place). The Island adjacent was also included in the gift. The other fishing grounds were retained by the hapu's referred to {276}.
>
> Ropoama Meihana. My take to Matakitaki is a different take Hei waka tera take. Hei tauranga kīwaha mo te Rakau ka uru noa mo te Hauraumate. The waka was called Tuarawhati and was taken by Katia. When Katia took the waka he called out to Hikaraumate. The Pikitanga ki kaitao is for the canoe I have taken. The Toka Hapuka Ruararoroa was the fishing place also given {276}.
>
> Ropoama Meihana. I hear from Piripi and others about Tokoakura the Toka Hapuka given to Manukiaitu. I don't know whether there is any statement about this Toka in the Court Books {276}.
>
> Ahitana Matenga. My matuas told me that Ngatirua had fishing places along the Coast Te Whatu o Haere {276}.
>
> Ahitana Matenga. I know the Toka Hapuka off Te Humenga but I don't know it by the name of Tokaapuru. Don't know of Ngarunu?takiri a Toka hapuku at Te Kopi nor yet of the Toka pakirikiri at Pararaki nor yet of Ruararoa at Waitutumu {276}.
>
> Ahitana Matenga. Te Rua a puru is the name of the Toka hapuku of the Humenga. Te Rua takina is the name of the Toka that was found by the people after the return from Nukutaurua. I don't know the names of the channel of the Toka one is said to be guarded by a Taniwha and the other on the eastern side is a Hapuka ground {276–277}.
>
> Ahitana Matenga. Hamahona was in occupation of the land at the time of the heke to Nukutaurua. Hei mahi ika ana mo Ngatitematangi e utu mo ou ratou kai. I know of this through the waiata of Nuku. He enquired where Mahanga was. He was told that he had gone to the Kopi to obtain fish. I don't know the Waiata perfectly but Ngahui does and she can repeat it {277}.
>
> Ahitana Matenga. Te Roa a punga was the Toka hapuka where the fish were caught for the kai-haukai. Hamahona Te Wehe Ngatangaroa Pokoiwi and their young people caught the fish {277}.
>
> Ahitana Matenga. The kaihaukai was taken to the pa of Ngatitematau i te Pahuri. I don't know the name of the hapu of Ngatitematanga. There was no one interfered with Ngatirua for fishing at the Toka called Te Roa a punga {277}.

Karaitiana Korou. The kawakawa is a general name for the locality. It takes its name from a kūrae[17]. The name starts at Te Waiwhero and extends to Te Matakitaki o Kupe. Witness pointed out Cape Palliser as the kūrae known to him as Te Kawakawa. The name applies to the part between Te Waiwhero and Cape Palliser but I don't know how far it extends — to the eastward. Don't know the origin of the name but the growth there is kawakawa and flax. There is a Tauranga waka there but the most important thing there is a Toka Hapuka {277}.

Karaitiana Korou. I did not hear that Hamahona gave the Toka Hapuka and other fishing places to the several hapus who returned from the Heke but the people used to go fishing. Did not hear of the Tuku called Ngawhatu. The only Toka that I saw was the one at Matakitaki {277}.

Karaitiana Korou. I remember the tuku by Te kai o te Kokopu at the mouth of the Lake hei tukunga Hinake anake. No rohes were fixed {278}.

Aporo Hare. Minamina is a toka hapuka at the Matamata o Ngawi ka timu te tai ka heketia. The practice was to remain there until the tide rose and fell {278}.

Aporo Hare. The Ngatirongopotiki who were living at Te Kawakawa took Manukiaitu hei tamaiti whāngai ka noho ki Ngawi ka tukua te Toka hei kai whangaitanga mo Manukiaitu. Kei reira te tauranga ko Punaruku te Taupahi kei te Kawakawa tetahi tauranga kei te taha mauru o te Ngautuawa. Between Mangatoetoe and Waipipikaha there is a place called Papapakihaunga o Manukiaitu. The Toka which Ropoama spoke of its proper name is Toroapura. From Te Humenga the point called Te Rimurapa beyond Turakirae can be seen. Te Hohonu o te Toka off Te Humenga is 8 fathoms deep. Ngaitamanuhiri were the people who had the right over that Toka. Ngawhati o Haere is at Makotukutuku alongside the track. The Toka is not far distant. There is no taniwha there as Ahitana stated Te Tohu is Okihi near Whangaimoana. Ngarun?utakena is a Toka off Te Kopi {278}.

Aporo Hare. At the mouth of the Waitutumu Te Ruarararoa hei Toka Hapuku is situated. At the hearing of Mapunatea it was stated that Ngatihinewaka and Ngatirongomaiaia had a conflict in that locality. Te Waha o te Marangai is another fishing place. Te Maire is the name of the Tauranga waka in that locality {278}.

Aporo Hare. Some of the people who returned with the heke lived at Te Karitu. Ko Hinerua te One a fishing place and a Landing {278}.

Aporo Hare. The people stopped at Te Humenga because it was a suitable place to fish from {278}.

Hohepa Aporo. Tokaapurua hei Toka Hapuka there Te One a paoa was a landing place for rats. There was another One at Waimihia where the rats landed. Nga puatahere were up Makotukutuku and Pararaki. Hei whonau hei Ti hei Miro hei Tawa nga rākau

[17]A headland

tāhere. These were the places that were made over to Manukiaitu as well as the Landing and fishing places {278–279}.

Hohepa Aporo. The summer was the time the fishing season was carried on {279}.

Aporo Hare. Kaitao the tino wahi patunga kiore on the Waitutuma Block. The Rua-ara raroa (Toka Hapuka) {279}.

It is tempting to try and locate some of these named crayfish and hapuka fishing places, but this is now very difficult. Some names certainly recur quite frequently. Those which appear distinctive are set out below.

Name	**Purpose**	**Location**
Matakitaki	Toka hapuka	Matakitaki
Kapuarangi	Fishing rock	Matakitaki
Te Hauria	Fishing rock	Matakitaki
Ruaarero	Toka hapuka	Matakitaki
Te Ruaara Roa	Hapuka fishing ground	?
?	Toka hapuka	Off the coast about Opposite Tuhirangi
Toka Purua	Toka hapuka	?
Toroapura (same as above)	Toka hapuka	?
Ruararoroa	Toka hapuka	?
Tokoakura	Toka hapuka	?
?Tokaapuru	Toka hapuka	Off Te Humenga
Te Rua a Puru	Toka hapuka	Off Te Humenga
Ngarunu?takiri	Toka hapuka	Te Kopi
Toka Pakirikiri	Fishing ground	Pararaki
Ruararoa	Fishing ground	Waitutuma
Te Rua Takina	Fishing Toka	?
Te Roa a Punga	Toka hapuka	?
Minamina	Toka hapuka	Matamata o Ngawi
Te Hohonu o te Toka	Fishing hole ?	Off Te Humenga
Taweke	Tatai koura	?
Te Mawe	Tauranga waka	?
Te Kirikiri	Tauranga waka	?
Hinerua	Tauranga waka	?

The Toka Pakirikiri either refers to a special blue cod ground or perhaps for one of the large labrids, such as the banded parrotfish, but as can be seen from this list most of these special offshore fishing places were singled out for attention by Māori because of groper. It will be seen below that in the George Te Whaiti petition, Ngāti Hinewaka asked for protected fishing grounds out to two or even three miles from shore {135}. No doubt this would have been one of the reasons for this request.

THE LOSS OF RIGHTS TO THE INSHORE FISHERY

The British brought to New Zealand a land tenure system that was quite separate from any consideration of the sea. They failed to appreciate the different nature of the Polynesian system, which should perhaps be called *resource tenure* rather than simply *land tenure*. The intense focus on the land, which was vital to the interests of European settlers, and the systems developed to facilitate its transfer from Māori to European ownership, simply ignored the existence of what Māori considered their customary title to parts of the inshore marine zone. Thus it could come about that standard works on Māori land tenure, whether written by a Māori Land Court judge (Smith 1960) or by a Māori anthropologist (Kawharu 1977) make little or no mention of property rights in resources other than dry-land itself.

Initially, although many aspects of the Māori economy changed dramatically, Māori continued to enjoy adequate access to *kaimoana*, and the extent of the problem was therefore not apparent for many years. It was only when significant commercial exploitation of the inshore zone began from the 1950s onwards that Māori realised that their customary title to the resources of this zone, even where it was adjacent to land they still owned, had somehow, in practice, been extinguished as if it had never existed. The worse case of this, described elsewhere in this report, is the inshore fishery in front of Native Reserves.

This diminution of indigenous property rights is not unique to New Zealand. Crocombe describes similar but wider changes, sometimes by deliberate act rather than through oversight, in the tropical Pacific.

> "One very widespread change since contact has been the diminution or disappearance of the traditional pattern of water rights. This has been partly due to increased mobility and to more efficient fishing equipment which works over larger areas, as well as to imported canned and frozen fish and meats which have made the sea much less important. Moreover, following European precedents, many colonial governments have passed laws declaring lagoons, reefs and coastal waters public" (Crocombe (1987a: 3, {190}).

Elsewhere in the same volume he notes that

> "There has been a resurgence of traditional claims by adjacent indigenous clans or communities to swamps, lagoons, reefs and coastal waters — and these claims are receiving increasing recognition from the elected governments" (Crocombe 1987b: 390, {194}).

Several papers in the same volume mention traditional rights to fishing grounds and their post-contact separation from land rights. Meller and Horwitz (1987: 26, {196}) note that in Hawaii, "...the boundaries of many ahupua'a extended a short distance into the sea to include fisheries. Some of these ocean fishing rights are still recognized, although no longer as appurtenances to the adjoining land". And for Kiribati, Lambert (1987: 178, {199}) reports that "Rights to fish ponds, the foreshore and lagoon areas have become obsolete. The colonial government has never enforced claims to the sea or its products".

Thus the wider Pacific provides a context, not merely for the probable nature of traditional Māori property rights in the inshore fishery, but for the changes that have taken place and are continuing to take place today.

CONCLUSION

The system of property rights in ancestral Māori society was imported from Polynesia, where there is abundant recorded evidence that customary title extended from the interior of an island to the foreshore and beyond to the edge of the reef. This encompassed all the necessary economic zones for survival in a subsistence economy — the interior for forest birds, the lowland areas for cultivation of root crops, and the shallow water of reef flats for harvesting shellfish and reef fishes. I believe that an essentially similar system prevailed in pre-European New Zealand right up to the period of contact with Europeans. When Ngāti Hinewaka sold their land to the Crown on the East Coast of Wairarapa and Palliser Bay, they established reserves to live on with the expectation that they would continue to have undisturbed and exclusive rights to the land and the inshore areas adjacent to their land.

Conclusion 3

DEPLETION OF THE INSHORE FISHERY IN THE POST-EUROPEAN ERA

INTRODUCTION

In 1868 Colenso wrote an important essay 'On the Maori Races of New Zealand'. In this he states that "They were not (as many have rashly supposed) deficient in food; although ... what they had and used was not to be obtained without a large amount of daily labour" (Colenso 1868: 345 {76}). And further, "the seas around their coasts swarmed with excellent fish and crayfish; the rocky and sandy shores abounded with good shell-fish" (ibid.).

> "Sometimes they would go in large canoes to the deep-sea fishing, to some well-known shoal or rock, five to ten miles from the shore, and return with a quantity of large cod, snapper, and other prime fish; sometimes they would use very large drag nets, and enclose great numbers of grey mullet, dog-fish, mackerel, and other fish which swim in shoals, of which (especially of dog-fish and mackerel) they dried immense quantities for winter use. They would also fish from rocks with hook and line, and scoop-nets; or, singly, in the summer, in small canoes manned by one man and kept constantly paddling, with a hook baited with mother-of-pearl shell, take plenty of *kahawai*; or with a chip of *tawhai* wood attached to a hook, as a bait, they took the barracouta in large quantities. Very fine crayfish were taken in great numbers by diving, and sometimes by sinking baited wicker traps. Heaps of this fish, with mussels, cockles, and other bivalves, were collected in the summer, and prepared and dried; and of eels also, and of several delicate fresh-water fishes, large quantities were taken in the summer, and dried for future use" (Colenso 1868: 346 {77}).

This should leave the reader with no doubt of the super abundance of fish around New Zealand waters during the early period of settlement by Europeans, and the fact that Māori depended on the fishery as a source of protein for their subsistence. The mention, several times, of storing food for winter, shows how important it was to maximise the gathering of food in summer for this purpose. Easy access to large quantities of fish and shellfish in the summer was therefore essential to continued year-round existence.

When Cook visited Queen Charlotte Sound 16 January 1770 the crew used a seine net in Ship Cove and "made a few hawls and caught 300 pounds weight of different sorts of fish which were equally distributd to the Ships Compney" (Cook 1968: 235 {213}). Banks comments, on this incident, that they "caught more fish in the Seine than all our people could possible destroy" (Banks 1963: 453 {214}).

Parkinson also described this event in his journal thus:

> "we alfo hauled a fein, and caught a large draght of fifhes, some of which weighed twenty-one pounds; and, on the fhore, we found mufcles, and other forts of fhell-fifh, in great plenty. All the coves of this bay teem with fifh of various kinds, such as cuttle-fifh, large breams, (fome of which weighed twelve pounds, and were very delicious food, having the tafte of fine falmon,) fmall grey breams, fmall and large baracootas, flying gurnards, horfe-mackarel, dog-fifh, foles, dabs, mullets, drumns,

> fcorpenas or rock fifh, cole-fifh, the beautiful fifh called chimera, and fhaggs" (Parkinson 1972: 114 {215}).

Beaglehole gives possible identifications of these as "squid, snapper, tarakihi, barracouta, gurnard, blue cod, horse mackerel, dogfish, soles and dabs, grey mullet, Drums[18], scarpee, elephant fish" (Banks 1963: 453, footnote 3 {214}).

The Marlborough Sounds in 1770 was clearly a magnificent fishing ground. Cook describes it thus: "The sea abounds with a variety of fish and in such plenty that without going out of the Cove where we lay [Ship Cove], we caught daly what with the Saine hook and line quite sufficient for all hands" (Cook 1963: 247 {216}).

Anyone familiar with the modern-day Marlborough Sounds will be astonished at these descriptions of the fishery at the time of Captain Cook. It would be impossible to catch a dozen species of fish with a few hauls on a seine net in this area today, and certainly not in the quantity described. The modern-day marine resources are a pale reflection of the fishery described by Cook and his crew in 1770. The picture being painted depicts a marine environment which was bountiful with fish after 600 years of Polynesian occupation.

There are two useful conclusions to draw from this description by the first European explorers to New Zealand. Firstly, whatever impact the pre-European Māori may have had on the fishery, this pales into insignificance when compared to the devastation which has occurred since the arrival of Europeans. Secondly, catching fish for food presented no real problem for Māori. This is not merely a matter of the available technology and skill which the Māori possessed, but signifies that there was a ready supply of protein for their diet which was simply there for the taking without too much difficulty.

Conclusion 4

What has happened to the inshore fishery since the time of Captain Cook is the subject of this next section of this report. In what follows attention is focused almost entirely on four species, which are of special concern to Ngāti Hinewaka. These are:

- kina
- paua
- crayfish
- groper

The first three of these species was traditionally taken in shallow inshore waters in Palliser Bay and East Coast Wairarapa. The fourth species is also of special interest to Ngāti Hinewaka, and in former times was readily available in shallow inshore waters too.

Without intending to pre-empt the discussion which follows, I don't think that any person in

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[18]Beaglehole thought this might be a fish of the Sciaenidae family (croakers). This is a current family (Nelson 1994: 364), occurring in Australian waters (Roughley 1951: 70), but it is not present in New Zealand. It is possible that this fish was either the marblefish or greenbone, which can also make a noise when landed.

New Zealand with the slightest familiarity with the inshore fishery would disagree that this has been greatly reduced in general abundance during at least their own lifetime. Trying to quantify this decline is a most difficult task, but in what follows I shall try to indicate the broad scale of this decline.

ANECDOTAL EVIDENCE OF DEPLETION OF THE INSHORE FISHERY

At the conference of the Fish Remains Working Group of the International Council for Archaeozoology in Paihia October 2001, Tony Pitcher from the University of British Columbia gave a presentation on a research project with which he is involved in Canada, entitled 'Back to the Future'. This project is aimed at reducing the alarming depletion of the world's fisheries by adopting a different approach in modern fisheries management, that of rebuilding ecosystems:

> "Driven by a progression of clever human harvest technologies, three ratchet-like processes have brought about episodes of depletion. 'Odum's ratchet' is ecological in nature, comprising depletion and local extinction. 'Ludwig's ratchet', economic in nature, is a positive feedback loop between increased catching power and serial depletion, driven by the need to repay borrowed money. 'Pauly's ratchet' is cognitive, shifting the baseline of what each generation regards as primal abundance and diversity. Third, a rebuilding policy goal is distinguished from that of sustaining current catches and biomass, since the baseline can refer to present misery. In this sense, present policies can inadvertently foreclose future options for the generation of food, wealth, and services from ocean resources. A policy to rebuild ecosystems can reverse this trend and maximize economic value in tomorrow's markets, where supply will vastly outstrip demand for high quality fish products. Fourth, I outline a novel methodology, termed 'Back to the Future', that can implement a goal of ecosystem rebuilding" (Pitcher 2001: 601).

> " 'Pauly's ratchet', refers to the psychological tendency for us to relate changes in the system to what things were like at the time of our professional debut: Accounts of former great abundance are discounted as anecdotal, methodologically naive, or are simply forgotten (Pauly 1995). Sustainability as a policy objective, therefore, tends to be applied to a ratchet-like baseline" (Pitcher 2001: 606).

'Pauly's ratchet' is of special significance when reviewing anecdotal and historical evidence relating to our inshore fishery. Pitcher argued that our human perspective of the historical nature of any local fishery is distorted by this moving baseline. Each person knows about the fishery in his or her own lifetime, and nothing before or after that period. Consequently, the perspective is forever changing from one lifetime to another. In my own case, I know what the inshore fishery in Palliser Bay was like when I was a young boy, and I know what it is like now. It has changed dramatically for the worse in my lifetime. Similarly, my father knew what it was like when he was a boy; but my view of the inshore fishery does not incorporate my father's view, and is not built upon it. I have seen a dramatic decline in the availability of paua, crayfish and snapper in my lifetime, and I suppose I would be very happy if the local supplies could now be rejuvenated to what they were like when I was a boy. My father felt exactly the same, but his baseline, no doubt, would be very different to mine. Therein lies a

fundamental problem in assessing anecdotal oral evidence about the nature and decline of the inshore fishery. We are not in a very sound position in evaluating what the fishery was really like beyond our own limited timescale because of this moving baseline, called 'Pauly's Ratchet'. It is true that we have clues, and important clues at that, about what it was like in our parents' and grand-parents' generation, but quantifying those clues is an objective which is largely elusive. This means that we probably will never be able to define clearly what marine resources were truly like in the 19th century, and even less so at increasingly distant time in the past. An important parameter in modelling sustainable yield and other tasks in modern fisheries management is what is known as 'virgin biomass'. Paradoxically, this is an unknown and can only be guessed at. Archaeological evidence may help to define the general character of marine environments at different periods over centuries and even thousands of years, and the changes that we observe are a blend of human induced change and those resulting from broad natural changes, such as climate.

Thus we must accept that any view we can reconstruct of the depletion of the New Zealand inshore fishery is essentially an underestimate of the true nature of its scale, and is never likely to be quantitative. MacIntyre *et al*. (1995), using anecdotal evidence, inferred "that the biomass of fish and other exploitable organisms along the North Atlantic coast of Canada now represents less than 10% of that two centuries ago" (Pauly 1995: 430 {665}. See also Pauly and Watson 2003: 39 {698–702}). Other recent research suggests that the residual biomass of predatory fishes in many parts of the world are now of this order also. The estimated residual biomass for temperate Pacific catches between 30–45 ˚S is about 5.6–12.1% (Myers and Worm 2003: 281 {732}). We have hints of the enormous scale of depletion in New Zealand from the earliest observations of explorers like Captain Cook and others, but these are only tantalising glimpses of what things were like before Europeans first came here. Similarly, both historical and modern anecdotal evidence offer only glimpses of the true situation, and suffer from the problem of a 'moving baseline', mentioned above.

In what follows, I shall try and give some 'glimpses' of what fishing was like during the first half of this century in the *rohe* of Ngāti Hinewaka. This serves to contrast with the present-day, and testifies to the extent of depletion of the inshore fishery since then.

> "The hapuka, which were caught in large numbers off Kupe's Rock, were bought home by pack horse. Packing methods were to place the fish whole (as gutting was left until reaching home) on sacking with wet seaweed packed around, then securely wrapped with wet sacks. There were usually four hapuka to a pack horse as the pack horse train moved off it was a sight to see the hapuka tails protruding from it's covering" (Carter 1982: 13 {655}).
>
> "Commercial fishing at Ngawi began in 1821 [sic 1921], when two men, Harry Stewart and Archie Haycock started their business with a 18 ft clinker boat powered by a Lister engine, and a Ford T truck. The boat was purchased in Wellington by Haycock and sailed to Ngawi by Harry Stuart but due to mechanical failures, the boat was blown ashore at the Queen Vic rock, and lost. The partners continued fishing from a 12ft dinghy. Mrs Kerr of Martinborough, relates how her father Harry caught 90 sacks of crayfish off the reef" (Carter 1982: 14 {656}).

Harry Stuart relates how he "once caught seven groper off Matakitaki Rock in half an hour — a problem being we had to carry the fish across a stretch of sand to our vehicle" (Carter 1982: 16). It's hard to imagine anyone today complaining that they have to carry their fish across the sand.

> "John Harvey and his son fished the Gap and it was nothing unusual to catch about thirty butterfish and moki. We fished from a nine foot clinker boat about 500 yards offshore and would catch as many blue cod as we wanted, all around five pounds. You couldn't give the fish away, but the Maoris would take all the fish, cut them in strips and hang the strips out to dry" (Carter 1982: 17 {658}).

Jim Thorner, now deceased, came to Palliser Bay in 1929, and in 1935 took out a fishing licence. He had a boat called the Wonga, which was a double ended carvel of 17 ft, powered by a 5 H.P. Johnson outboard motor. He recounts the following:

> "I could remember when I first started fishing, putting out a set line of one hundred hooks and every hook had a snapper on. I was using turbot wings for bait. I took the catch to Pirinoa and sold the fish at a shilling each. I sold about a quarter and gave the rest away... On many occasions I went to Lake Ferry entrance to fish for turbot[19] using a 120 yards net with the bunt of 18 feet. The average catch was about 60 to 70 per trawl and the average weight about six pounds. In those days crayfish averaged about five to seven pounds, or sixty to the chaff sack. One day I caught twelve groper, close to the shore, using turbot and flounder bait, the fish weighing around seventy pounds each. I must say that many people would be dubious what I am saying" (Carter 1982: 20 {660}).

When I was a boy in the 1950s, we used to catch snapper off the beach, but I have not heard of many snapper being caught in recent years. I have never heard of turbot being caught in recent years either. Catching groper from the rocks in shallow water is something my father spoke about in his experience. It is inconceivable today.

Another old timer in Palliser Bay was Colin Campbell, now deceased, who described how the Māori families at Kohunui would head for the Matakitaki rocks about November each year. He recorded the following:

> "Each family had about three to four packhorses and they would leave Kohunui at sunset and would travel through the night as it was cooler for the horses... They would stay around the rock for over two weeks, drying the pauas and crayfish tails. They gathered karengo or sea-weed and dried that too. On the way home, each packhorse would be laden with groper, caught that morning. The fish would be wrapped in sea-weed and the cleaning of the fish would be left on arriving home. The paua and crayfish tails were strung on flax woven cords. As they passed Whata-rangi, they would drop off as much of the fish we wanted. All you could see was the groper tails

[19] Turbot is not familiar to many modern fishermen. It is a flatfish (*Colistium nudipinnis*), with pale apricot coloured flesh similar to Brill. Averages 25–45 cm, reaching at least 80 cm in size.

> sticking out of the sacks. This was the only fish the Maoris would catch and was caught off Kupe's platform" (Carter 1982: 28 {661}).

The area at the mouth of Lake Onoke has always been regarded as a great fishing spot, less so now than formerly. Mita Carter recorded an event in the first half of this century when the Martinborough police were warned of some cars coming to town which were carrying poached fish:

> "An inspection revealed a catch of 24 trout and 2 quinnat salmon, the lot weighing 70 pounds... Large catches of fish were made off the Lake Ferry. One party caught two hundred snapper besides other varieties of fish using sail lines. Also, large catches of eels averaged one ton each night, were made by local Maoris" (Carter 1982: 44 {662}).

More information about early fishing at Lake Ferry in the 1920s is contained in the following passage:

> Fishing at Lake Ferry, by the use of raft and line, was regarded as the best in N.Z. In 1925, a party of local Maoris, fishing at the Paa Rock just east of the Ferry, netted ten kerosine tins or 400 lbs of whitebait in one day using scoop nets. In 1927, it is recorded that Messrs Tom Tuffery, Sid Young and Tom Hobbs, using hand lines, landed fourteen gropher [sic] and other assorted fish, directly opposite the Ferry... Today one wonders whether we will ever see the fishing of yester years" (Carter 1982: 61 {663}).

Between 10–12 March 2003 I carried a series of interviews with several men and women, who have had considerable experience fishing in the Palliser Bay and East Coast Wairarapa area, to get their view on the nature of the local fishery and any changes they have observed during their lifetimes. These people were (in order of the interviews):

1: Leighton Hale — Ngāti Hinewaka, expert free-diver for Wairarapa marae and hui
2: Matthew Paku — Ngai Tumapuhia, commercial fisherman, East Coast Wairarapa
3: Mac Carter — Ngāti Kahungungu and Ngāti Raukawa, recreational fishing on the coast for many years
4: John Clarke — From Northland but married into Ngai Tumapuhia, recreational fishing on the coast for many years
5: Niniwa Munro — Ngāti Hinewaka kuia, inshore fishing Palliser Bay many years
6: Frank Campbell — expert free-diver for Kohunui marae, ex commercial fisherman, Palliser Bay
7: Sunny Te Maari — Ngāti Hinewaka kaumatua, recreational fishing on the coast for many years
8: Pai Te Whaiti — Ngāti Hinewaka kaumatua, recreational fishing on the coast for many years
9: Dick Te Whaiti — Ngāti Hinewaka kaumatua, recreational fishing on the coast for many years

10: Maire Te Whaiti — Ngāti Hinewaka kaumatua, recreational fishing on the coast for many years

11: Alan Hart — recreational fishing on the Palliser Bay coast for many years

Interviews 3 and 4 were carried out in a group at a family home, and interviews 7–10 were carried out in a group session at the Kohunui marae. The other interviews were single informant sessions. Haami Te Whaiti accompanied me at all interviews, but did not participate. Each interview lasted from 1 to 2 hours, and covered a series of structured questions, about the nature of the fishery during their lifetime. Each interview started with the same preamble spoken out loud by me, and then was followed by 15 questions which were read out from a notebook. The preamble and questions were:

> "My name is Foss Leach. I am collecting information on the fishery in Palliser Bay, especially the inshore fishery. That is from the shoreline to about 300 metres out. I am collecting personal observations of fishermen over their lifetime.
>
> Why ? This is part of my broad interest in the New Zealand fishery, especially of old people before it is too late to record their experiences. I make my findings public so that anyone may use this data for their own purposes. Today is [date and time of interview], and I am talking to [Person's name] at [location]"
>
> Question 1: When did you first come to the coast ?
>
> Question 2: Did your family or friends come before that ?
>
> Question 3: What times of the year did you go fishing ?
>
> Question 4: Have you noticed any changes in weather patterns in your lifetime ?
>
> Question 5: What kind of methods of fishing did you use and where roughly did you do most of your fishing. For example, did you use a boat, hand lines, nets, traps, diving, hand collecting, rock fishing ?
>
> Question 6: What are your favourite caches ? For example, crays, paua, groper ?
>
> Question 7: My father used to catch groper with a kontiki from the beach in Palliser Bay — have you ever heard of people doing that ?
>
> Question 8: Can you tell me about your blue cod catches. Good catches ? What about size?
>
> Question 9: Can you tell me about your crayfish catches. Good catches ? What about size?
>
> Question 10: Can you tell me about your paua catches. Good catches ? What about size?
>
> Question 11: Can you tell me about your tarakihi catches. Good catches ? What about

size?

Question 12: Can you tell me about your snapper catches. Good catches ? What about size?

Question 13: Can you tell me about your kina catches. Good catches ? What about size?

Question 14: What is the greatest catch of fish in your lifetime. I mean your most memorable experience ?

Question 15: To summarise — during your lifetime do you think that the inshore fishery has improved or deteriorated ?

Listed below are a selection of the comments made by these informants, which are especially germane to the issues of this report. For a number of reasons it is desirable to respect the privacy of individuals who provided this information, and therefore where comments are quoted below, I refer to a person as Individual A, B, C, etc. rather than by their name. The order of presentation is not the same as the list above.

Informant A:

Yes, well I first went down there when I was about six years old [about 1925] and my grandmother used to take us there for our Xmas holidays. Our grandfather used to take us down there on a horse and cart. We were there for three weeks, and we more or less had to hunt for the food to eat. I remember when we went there the first time my grandmother all she had was a bag of flour some butter and she used to cook us Maori fried bread. We had to go and hunt for anything else to eat. She was one of those old ladies from the South island. She used to go to the muttonbird Islands and probably that's the way they used to live there. They looked around for the kai. She made us go and look for pupus and anything crawling in the water and paua — there was plenty in those days — paua — go into the water up to your ankles and find them at that time... at Ngawi, closer to the lighthouse... all we had to sleep on, she used to cut the mingimingi, and put a tarpaulin over the top of that, and a blanket. She taught us the way that she was brought up to do.

Informant B:

My grandfather used to make us go and get the pauas. Put them on a rock to dry. When we got them home we used to bang them. Used a pocket knife to cut it off. We used to eat it raw, like chewing gum... Didn't have to get wet to get pauas out there at Ngawi.

Crayfish used to be plenty at Ngawi one time, in the shallow water. Not so much now.

Last Xmas we were out for 4 days and didn't get enough paua to take home.

Informant C:

Well, since I've been back here and become involved in the commercial side of it, I've spent a lot of time on the coast talking with the old people back at home and my father and that, really my experiences of their fishing, there was a lot of inshore fishing. Hapuku you caught off rocks on the beach standing on the beach. All of their fish, fishing was based on the beach basically apart from going out to the hapuku ground and the depth of bass and the other fish that they caught out there

I suppose it's hard for people to understand why I'm always getting phone calls from MAF — why are you at the coast all the time ? Why were you at the coast ? If you have a look at my fridge now, have a look at what we got for kai tonight, it's paua, and smoked eel. We live off the sea, we live off the sea still today. I would say there's not a fortnight goes past that I haven't spent three days on the coast. Rough or fine. Because we know where to go and get the kai. Like just this last week got kai for the St Joseph's College in Napier. Rough as, easterly out here, got rung up by one of the politicians, who was going up there to do a bit of canvassing and wanted some kai to go up there. We went out and got it. Nobody else was on the beach. But we, you know, we should still have places where we can go and get kai for our people. So I fish all year round. Because people just don't die in the summer time here and that's where we basically fish for our tangis and things.

Back home on the Kaiwaka and at Flat Point, my old man he's gone now but when he was, when I first come back here we went to the coast and he was showing me where they used to catch the hapuku. It was right on the beach in shallow water like, off the rocks where they fished. They got gears, a bit different from down Ngawi and that, no depression like where he was telling me they were catching the hapuku and that, it was right in 15 foot of water... but then talking to one of the old fishermen from Glenburn like, Russ Broughton, why all the fish were in here, and his theory was that there was an abundance of crayfish in close. Now whether the... and the hapuku they chased the soft shelled crayfish and ... he says that when he started crayfishing here back in the 50s he used to run 11 drop pots. He never set a pot, he'd drop a pot, drop his 10 pots, 11 pots, go round and pick up and he'd pick up 14 15 chaff sacks of crayfish. [Dropped] just off the boat just in the rocky shoreline. The crayfish were, there was that many crayfish there that you didn't ever set pots and even back in those early 50s and that's why he said all the hapuku was there for old man and them and he reckoned himself they used to catch hapuku right on the beach.

When I first started diving on there, two of us would dive three hours and have 700 kilos of paua between us. Next three hours we'd have it loaded on the boat, back on shore and ready to go home. Today, if I can go out there in a five hour day, and get 100 kg, I'm happy. We're all happy. That's how much it's gone, that area of that reef, you possibly would have to know how big it is, I would say it would have to be something like at least 70 acres of area there that we actually dive on is stripped. We're talking possibly to 25 ft on the outside of the reef. Once you get into that there's a lot of weed and that and the pauas are not there, but there's a lot of broken ground on the reef it's a bit like diving at Turakirae, straight into, the hills straight into the sea there and you're getting 20 foot of water in no time. But there's a lot of broken ground,

bouldery country, it looks like it's sort of been a bit of upheaval out on Flat Point and there's certain parts of that reef there's broken ground that you can look through, and those places now is where I dive off the Flat Point reef, I don't go swimming all around the reef like we used to do; I head straight to the broken ground because the paua are in those cavities and they come out all the time. We take what's there it's sense to restock it itself possibly in a month we can go back there and there's a good supply of paua just below the broken ground near the same place. I would say it's probably 5% of what it used to be in 1987 when I was used to diving there. That's how bad it's got.

From the Palliser lighthouse down to Hamenga, when we used to dive there we would get 3 to 400 kilos in a 4 hour day. Today when we go down there we can swim for 5 to 6 hours and get 100 kilos and we are doing extremely well. We get $45, $47 to $54 in the shell, 45% return on meat and guts, $120 to $130 for meat. Its about $35 for meat on the black market. [Quota system restoring the paua fishery ?] No, the surveys done by MAF are not worth much because it is not in the best interests of the commercial paua divers to tell them the truth. There is a major depletion here [of paua]. This coast here needs to have the quota cut in half, before its too late to keep the stocks here.

Kina inshore where our families have been going for years — they are gone, because there are too many of us on them now. Inshore where everyone can get them, they are gone. We have access all along the coast — we just beach our boats and dive. We are getting kinas in ankle deep water in some places. There is an abundance of them. But you go back to the public access where there is access for people to get into — kinas are gone. You get a few, but compared to what it used to be like, stacks 6 deep on the bottom, and in piles on the beach; it's gone for sure.

Informant D:

[Paua] We used to be able to go out there with a sugar sack and fill it up in 10 minutes without getting your feet wet — can't do that now.

Crayfish are still there, but you got to go out a bit. They are not in amongst the rocks now.

Used to catch them [groper] off the rocks all the way round here. Fisherman's rock, they used to catch them off that.

[Fish generally] they are not there now, because they have been fished — people have got greedy, especially commercial. They come in here and hammer it. There's less and less.

When we were first here we used to put crayfish pots in around the rocks, and we used to pull them next day and they would be clinging to the outside. There would be no room inside for any. They would be full. They would be chocker. Now you can't do that.

[Paua] Heaps here. Now that the public come here... more people coming all the time... Today smaller ones. If prepared to dive, can get. When I was young could get them in the rocks. That's gone.

An old fella comes along — 60 and wants a feed of paua ... Henry was the best one of the lot. He used to come out here. He would go down there and get half a dozen about that size [indicates small size]. It was enough for him for a feed. Now you wouldn't blame him because that's a feed for him, and at his age he can't go out into 10 ft of water and get legal sized paua. It's not very often he gets a legal paua. He's 68 or 78 — he's 78 [confirmed by wife]. Now you can't expect him to go diving for them at his age because he would get knocked around to hell.

At certain times of the year used to be great for kahawai. We used to go out there and see acres and acres of kahawai. You don't even see that now. Because they got in and fished them out. They just netted — they had planes — spotter planes here —and they were going out with their nets and catching them and sending them to Aussy to make ...

Informant E:

[paua] In the last 6 years I have noticed a big change. There are babies plentiful. As for bigger paua, those that we eat today are much further out. In one and a half hours I only found 3 legal size.

Informant F:

[paua] In those days [1940s] there were no restrictions on paua. We used to go for smaller types and pickle them. ... Lots of paua around, but very small now — very tender.

Most of the groper and snapper were caught off the beach at Lake Ferry ... that's not the case now.

Snapper is a rarity now. Down from the Hurupi — set nets used to get snapper.

Informant G:

Summer holidays mostly to gather kaimoana. When kowhai bloomed we would go down there to gather paua. It was littered with pauas — we would hang them out to dry.

Informant H:

I go down to the coast all year round. It's sort of hit-and-miss on the winter months, and stuff like that. We actually didn't have things like permits, and stuff like that, you know, if we wanted a feed we went down and got one. Our grandfather used to say that the sea is there for... that's your cupboard, basically, you know. And if you want a feed, you just go and help yourself.

[Mataikona] That's where we used to go, yeah. And he always said... my grandfather was Te Hiho Taita. He's my mother's father. He said you should never be afraid of the sea. That it's there for your use, and so long as you respect that, no harm will ever befall you. I've sort of taken that right through to nowadays.

He told me a few things about putting back the first one. Make sure you don't shuck your pauas up on the shore. Always take them away. Things like that. That I sort of can understand, and why. But it's a respect thing eh.

[My favourite kaimoana] has to be the kina. Kina and paua. [Crayfish ?] Oh yeah. Yeah I like it. That's sort of like the third one down the list, of my favourite kaimoana, I guess.

There's a lot of fishing contests now... cleaning it out. Fishing contests, commercial fishermen. It just seems to be harder to get a feed these days. Especially the more accessible places. We used to go there before, and there used to be an abundance, but now there's like Mataikona there's nothing there now. A few years ago I went for a dive where our grandfather used to take us all the time, and we always used to get a feed. And sometimes it used to be ten, fifteen of us, and we'd get heaps of kai, and take it home.

You just feel under the rocks, and lift them over. As long as you put the rock back, and stuff like that, you know. It's sort of stuff that our grandfather taught us, you don't disturb it. Try and put it back the way you found it.

Once I did find out that there were still good paua stocks down at Cape Palliser, I was going there all the time. Not to clean it out or anything like that. Mainly to have a good look around, because I never dove there before. It was a good experience for me just to have a look around and see what was there, take my ten pauas for a feed, but then the huis started coming, the tangis, and stuff like that. We tried to stay off our land, and say go somewhere else, just to leave our stocks, if we could. But it just, sometimes the weather doesn't allow us to do that. So we just go for the cleanest and calmest spot, that's available.

Yeah. I'm just finding it really hard to find kina. You've got to search far and wide, basically. And I've never hit a decent bed yet. Admittedly so, I don't dive very deep. I would say about ten feet is probably about my limit. So I prefer to stay inshore, I don't go outside the breakers, stuff like that. Just too many things can go wrong out there. But, yeah, the kina is tough ... I find it really hard to come by.

> The one experience [relating to a hui] that sticks in my mind, was a wedding... it had to be actually bussed up to the wedding, because we weren't going. Somebody had to go. The person who was going up to the wedding had to take it on the bus with them. We went diving, there was four of us diving. Went to the best place that we could think of. At the time we don't have to be in the water too long. And we got about two hundred pauas that day.
>
> [I have been] working with paua, shucking paua for, on the season. I guess, you know, I've only been doing it for two seasons, and I've already noticed that the size of the pauas have already depleted. You know, you used to get them ... like when you can't put your hands over them. That's last season. Just to shuck them. This year they were nothing like that. This year. I don't know why is that. Because they cleaned them out last season or not. I'm not quite sure. I actually think that they've got it all arse about face, myself. They should be taking the smaller ones, rather than the bigger ones, the breeders. They're taking all the breeders out, and leaving us with an ocean full of immature pauas.
>
> I've come across one decent bed [of kina]. Then I went back there another year, and they were all gone. Whether somebody else had got them, or cleaned them all out, or they had moved, I don't know. But they weren't there the next time I went there. But as far as the pauas are concerned, I actually think they are being depleted, you know. Some places where we used to go before, where there used to be plenty, there's bugger all. Whether that's the poachers, because it's more close to shore, well I don't know.

The Department of Conservation in Masterton carried out a series of interviews recently of Tangata Whenua in the district to record observations about coastal Wairarapa, and produced some large illustrated posters which have been on display at various venues in the Wairarapa during 2003. The posters are entitled *Nga Whakamaramatanga o te Moana. Personal reflections gathered as part of an investigation into marine protection on the Wairarapa Coast by the Department of Conservation in association with Rangitaane o Wairarapa and Ngati Kahungunu ki Wairarapa.* The following comments are taken from two of these posters, with permission and assistance from Department of Conservation. They are observations by two well known Ngāti Hinewaka women.

> **Niniwa Munro**: There has to be a partnership. Marine protection, marine reserves. We've got nothing now have we ? We've got nothing. There's nothing out there now unless you're a good diver and can get right out in the deep to be able to get kaimoana and unfortunately we, the older ones, can't do that. Reserves as protection? Taiapures I find quite useless. I think we need some strict "no take" areas. I believe marine protection should be a combined effort. Not entirely DoC or MAF. I believe older people need to be involved, not the younger generation. When we talk about educating people, there are too many people out there who really don't want to listen. Don't want to know. That's how I look at it. But for the reserves, mataitais, yes, if ever it happens. The taiapure is certainly not working for us along Te Kopi to Hamenga Point. We haven't got the resources to be able to police that sort of area. It's too big an area. All you can do is sit on the road and watch people doing their thing. There has to be a big resource there of crayfish and kina. You can't do anything. What does a Trustee mean? What does a Trustee have to do with all that

when you're up on top of the cliffs and looking down on it all happening? I believe that it has to work both ways regardless. Whatever that is needed for us to be able to manage the taiapure and the maitaitai I believe there has to be a partnership between the Department (of Conservation) and ourselves to be able to manage it. We should be involved in managing it. But that's the only area that I believe the older people should be involved in. The actual setting up of that partnership.

What's a kaumatua? I believe the authority given to kaumatua to approve taking of kaimoana should be centralised. What's a kaumatua? Many people ask that today. I believe that it should be centralised with the taiwhenua. Anyone and everyone should get their permits from there. Likewise they and the taiwhenua should be very, very much aware of how it should be managed. Only they would know how many permits had been issued and whereabouts. It should be limited to certain areas at certain times. Not allowing people to go wherever they want to. Those areas should be stipulated. I believe that a copy of that permit should be followed up by MAF or a person who has been given that responsibility. To make certain that they have got 100 or 50 or should they have that amount. It should be limited by the Taiwhenua. That copy should be followed up to make certain then brought back to the Taiwhenua to show that is exactly what has happened. That's the only way I see that it can develop and safeguard those areas. But then how many other people go out with out permits? But at least you have got some sort of control on those who are going to respect it for the future.

There's plenty of room for education I reckon! We, as a family have taught our grandchildren when and where to go to. What to do, what not to do. There's plenty of room for education I reckon! How do you get that across though? I would say it's too late. Maybe this is an area where we the kaumatua and grandparents today, we can come together as a people with our grandchildren to find out whether they really do understand how these things should develop for the future. Educating them at school. What a paua is all about. How it grows. How it came to be a little.whatever. The development of life. Probably be where it all starts from but its sad that it has to go down the track for so long before people see that it's not a gold mine but a food. Likewise, this in itself could be an area of learning for our mokopuna and the generations to come, with the Conservation Department. Together. Do you think that's one way of learning for the future? Is there ever going to be a future for kaimoana?

Carol Fox: It was all whanau. The first time I went to the coast that I can remember I would have been about seven or eight. In those days the whole village used to go to the beach at certain times. Sleep there to gather the kai, enough for the winter season. That was out at Uruti. We didn't go anywhere else, only Uruti. That was 1950, when I was seven. I can recall us going as families. The whole village used to all go down together. There was so much kai we used to go straight off the front. Not way down the beach as we do now. Sometimes though two or three of us kids had to drag big bags of pauas back from the point. All the way round from the point. There were no motorbikes then. Well, they were around but no one had one. We'd be all pulling and pushing, all the kids. It was awesome. All our cousins were there and uncles and aunties. When they got crayfish in our day well, you don't get crayfish now from where we got them. They were monsters. It might be because we were kids

that they looked like monsters but perhaps not because I can remember the size of the legs, they were that big. The crayfish you get today, we never saw those, we never even saw them at such a small size.

Everybody dived. When I was about ten, just in our own family I used to have to dive with the brothers. So then our Dad would line us all up and say "get in the hole", say where the crayfish were. There were crayfish holes all along the ledges. So you went in, cleaned them out and moved along. But they were always full when you came back. See that's how we did it ay? We only went at one season. That's another thing, we were never allowed to have a mimi down by the sea. There were designated spots for that. We had a couple of long drops. That was part of what we had to do. Clean up the long drops. Uncle used to make all sorts of whare paku. From a plastic bag to a drum with a seat. We had everything. We had everything. I reckon we were better off out there than when we moved to town. Wild pork, animals everywhere. Rongoa, the ngaio tree down the road for any scabby legs, cobwebs for the bleeding and sea water for the sores. We had everything. You name it we had it. Pigs, deer, rabbits. It was all around us. Everything belonged to everyone. We never heard of any mate Maori in those days. Any wedding or big do they would go and get kaimoana. It was organised by David Morris's grandfather. He was the kaumatua. The only one that practiced those sort of things. I remember Uruti. You would walk along the rocks and look in the water and see the pauas sitting there. We weren't allowed to take the pauas right inshore. We had to go right into the water.

We used to all live there for two or three days, usually at weekends so that we would have kai from the sea as well. Kind of like how we do camping now. It was all whanau. Uruti is the only place you can crab and get them in one hit at low tide. On the other beaches the rocks are not flat like Uruti. I've never known of anywhere else to crab like how we crab. Do you know how we crab? When the tide comes in we chase them on the rocks. We used to have kerosene tins then. They were for the crabs to go in and we had Tilley lamps, kerosene lamps. They were for crabbing at night. As the waves came in all the crabs would come in and run along. They would scatter and you could just pick them up. The kids love it. The best time to go is between November and February. They're fattest around that time. You need to strike a tide right on dark. We weren't brought up with the rituals. We were taught don't turn your back to the sea and don't go alone. We never really had karakia like we do as a family (now). We didn't have that as kids. But we were taught the important things. Things about how you are not allowed to eat on the sea. We had to wait until everyone got back. Now, hey! People will go there get the paua and eat it straight away. Even about the karengo. We were taught to do it with our hands.

Everyone shared. Karengo, in our day remember? We used to come home with sacks and sacks. Very seldom you get it like that now. They used to make these big long wire netting tables to dry the karengo out. It was the kids job to turn it every night. If it rained they had sacks. Big thick sacks to cover it. In those days the weather wasn't like this. You knew when it was going to rain. You could predict it all. So you were prepared. I remember we used to do all our eating while we were staying there so that what we took home was all stores. Tahu pauas as well as tahu meat. We used to put it in either beef fat or pork fat.

There were some landmarks in the sea. Paddy used to tell us "if you can see that you've got a good tide". Can't do it today. Hardly goes out. Especially at Uruti. Hard to get a good tide there. Our families from out there are familiar with everything along there. Our mokos today do what we did when we were kids. When we go now we take other people so that they can have the experience that we had. People just get blown away. It's that togetherness thing. Bringing everyone together. If you think about our families today and how a lot of them are disoriented. I reckon some of the things that kept us all together were what our generation did for us. So we haven't lost those values. But you can see the families that have lost those values or didn't know them, especially urban families. When you think about it. Today's society has to be taught all of those things. If you think about when our people used to go fishing. They looked at the moon and when it was midnight, moonlight or mid day tide they knew that was a good time for fishing or gathering kai.

They were the only fats that they used. You have got to do it properly ay? You have to make sure all the water is out. When you tahu them there is a certain amount of water there so you have to keep cooking them until all the water is out. Ooh that was yummy! Probably not the best nutrition today. Yummy in those days! They went fishing at another time to get the shark and dry it. They'd strip them and salt them and hang them. I think we had more seafood on our washing lines than clothes! There were lots of eels out there but I don't recall us ever catching them. They were so easy to get. You could just go down the river. Kids did those jobs. Not parents. And they were big eels. They weren't what you get today. When there were eels, they were done properly too. Preserved. I don't even recall all the Pakehas out there going to the beach. Because I think the Maoris used to just give them their bit! Everybody got the kai for all those who couldn't get there. You just shared it along the way. The Morrises, the Akuiras, the Masons, the Pakus and the Waakas. They were big, big families. We were the main families there. That was the village. It was good y'know because in those days if you didn't have a butter, you'd just get on the horse and go to the next farm and just keep going until you got it!

But no one went without. We were whanau. Just like one big family and everyone shared. The Akuiras had the shearing contract and a truck. So when we went to the beach we all got on the truck. We were never allowed to go to the beach on our own. Our kids obeyed that. Uruti was the main beach for us although just below our place was a pipi point, so we used to walk down there. There are other beaches the other way. We were never allowed to go there. I don't really know why. But we knew we were not allowed to go. Must have been tapu. I think there were some pa sites down there. Our mokos at Uruti today.

Conclusion 5

THE PRICE OF PAUA AND THE COMMERCIAL IMPERATIVE

Although there is a well-known black market for paua in New Zealand, there is little readily available information on the legitimate sale of paua to the public and what the value of paua is on the open retail market. To provide some indication of this a pilot telephone survey was carried out of retail fish outlets in the Wellington and Auckland areas in June 2003. The results were:

Retail Price in the Wellington Area

Deep Blue Seafoods	do not sell paua to the public
Alicetown Seafoods	do not sell paua to the public
Wellington Trawling Company	do not sell paua to the public
Cook Strait Seafoods	do not sell paua to the public
John's Fish Market	do not sell paua to the public, but estimate a price of $200/kg
Ocean Ranch	do not like selling to the public, but supply a few restaurants, and export overseas. Would consider selling to the public, provided it was a big enough sale, price is $140/kg

Retail Price in the Auckland Area

Mac's Seafood	do not sell paua to the public
Sealord	do not sell paua to the public
Seafood Bizarre	do not sell paua to the public
Toby's Seafood	do not sell paua to the public
The Shellfish Man	cultured paua, 55 mm long, sold individually for $6.50 each
NZ Wholesale Seafoods	$180/kg
Seamart Ltd	$250/kg

Such high prices are astonishing to the average person in the street, and especially to anyone who recalls how easy paua were to collect in former times in shallow inshore waters around rocky coasts. It would be interesting to know what proportion of New Zealanders would be prepared to pay such high prices as those listed above. No wonder they are referred to as "black gold". Such a high value for a commodity which at one time was obtained so easily by foraging in shallow waters must surely have the effect, on the one hand of promoting a strong black market including undersized specimens, and on the other of devastating the resource for customary fishing.

Historical Trends in the Price of Paua

In the New Zealand Official Yearbook for 1973, the Fisheries Report for the year included the following observations:

> "Relatively few years ago paua was, strictly speaking, a non-commercial shellfish. Maoris have traditionally taken paua as a regular item of diet, but it was largely unutilised for food by the pakeha until very recent years. Even now it is only a small item in the retail sales of fish in New Zealand. The recent change in the demand for

> paua has come about in the context of the ban on the export of unprocessed meat, which would have been processed overseas, since some New Zealand canners have solved the problems of bleaching and canning the meat to produce an article acceptable at substantial prices in, primarily, South-east Asian markets" (NZOY 1973: 450).

In 1976, the same source records "A close [sic closed] season for paua from 1 February to 31 May each year was introduced in 1972. Stocks are believed to have declined slightly during 1974, but a management plan, designed to produce a steady yield, has now been prepared" (NZOY 1976: 428). This closed season is mentioned in the Fisheries Report in the New Zealand Official Yearbook from 1974 to 1981. In the 1983 report it is stated that only 10% of the paua landings are being sold on the domestic market (NZOY 1983: 462).

I decided to examine the historical value of paua. Sources of information on this are scattered and incomplete in any one source. The annual *Report on Fisheries of the Marine Department*, which later became the annual *Report on Fisheries of the New Zealand Ministry of Agriculture and Fisheries*, and then later the *Fish and Shellfish Landings by Domestic Fishermen, Fisheries Research Division, Occasional Publication Series* are valuable sources of primary data on many aspects of the fishery including landed quantities and FOB (free on board) value. After 1984, such data is increasingly difficult to locate, and not all sources agree on details ! However, Statistics New Zealand, The Ministry of Fisheries, Seafood Industry Council, and the annual Report on Fisheries, published in the New Zealand Official Yearbook, all provided information on landings, exports, and FOB (free on board) value. These were cross-checked against each other and used to construct Figure 15. Since the value of the New Zealand dollar is constantly fluctuating and its purchasing power is affected by changing rates of inflation, the historical paua values are compared with crayfish values in Figure 15. This graph should be compared with Figures 21 and 22, which plot the historical landings of paua and crayfish respectively.

The upturn in paua landings which was mentioned in the New Zealand Official Yearbook in 1973 appears to have started about 1970 (Figure 21), and its unit value starts to rise about that time too (Figure 15); however, paua unit value starts to increase greatly in the 1980s, and by 2000 the average export value was $84/kg. By 1990, the unit value of paua per kg outstripped that of crayfish, and is now nearly twice its value per kg. Only wealthy New Zealanders can afford to purchase crayfish, and I do not know anyone who purchases whole paua.

Conclusion 6

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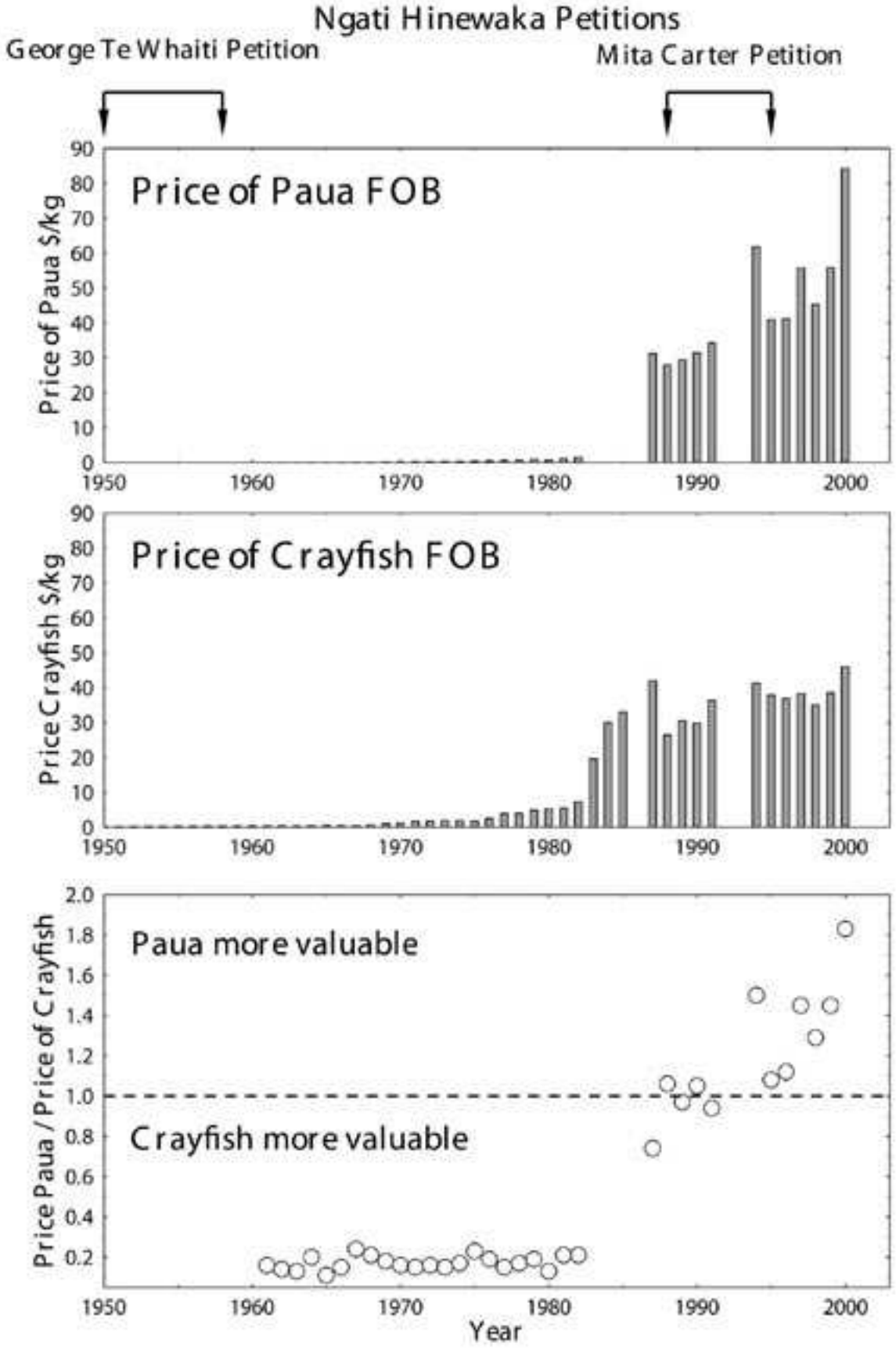

Figure 15: The changing value of paua and crayfish from 1961 to 2001.

SCIENTIFIC EVIDENCE FROM THE SCIENCE GROUP OF MINISTRY OF FISHERIES AND OTHERS

The most useful information about the nature of the New Zealand fishery, both inshore and offshore, is contained in the Fishery Assessment Plenary Reports which are periodically compiled by the Ministry of Fisheries. These are species by species stock assessments and are useful from many points of view since they summarise current knowledge about the biology of a species, the current status of the stock, and historical trends. They also provide valuable forecasts of the future of fishstocks, assuming current catch rates and other regulatory mechanisms, such as minimum legal size, using statistical simulation modelling procedures. In turn, these models permit changing parameters, such as catch rates, to forecast the effect on a fishery. The over-riding objective of our fisheries management system is sustainability of the fishery, so that it is not mortally depleted, like the North Sea cod fishery has been. However, not all scientists agree that this focus on single-species sustainability is the best way to ensure a satisfactory long term fishery. Pitcher and Pauly express the view:

> "We propose that rebuilding ecosystems, and not sustainability per se, should be the goal of fishery management. Sustainability is a deceptive goal because human harvesting of fish leads to a progressive simplification of ecosystems in favour of smaller, high turnover, lower trophic level fish species that are adapted to withstand disturbance and habitat degradation. Present fisheries management seems unable to reverse this trend for several reasons" (Pitcher and Pauly 1998: 311).

It is a sign of healthy science when different scholars express such diverging views. In what follows here, I shall examine the scientific data relating to the four most important species to Ngāti Hinewaka in their inshore fishery — kina, paua, crayfish and groper. It should be pointed out that in summarising this data, my intention is to seek out any evidence of a decline in these stocks which would limit the capacity of Ngāti Hinewaka to carry out their customary, not commercial, rights to the fishery as guaranteed by the Treaty of Waitangi. It will be appreciated that this scientific evidence was not initially put together with such a purpose in mind. On the contrary, it was formulated primarily with stock assessment in mind as a means of regulating the commercial fishery. I am therefore using the data for a purpose that it was not designed to fulfil. However, it is one of the best sources of data available for my purpose.

Kina — Sea Egg, *Evechinus chloroticus*

Kina is of special interest to Ngāti Hinewaka. It is one of the four most important species to them, and is top of the list to many members of the *hapū* I have spoken to. The first reports of commercial landings of kina by the Marine Department was in 1974. From 1985 onwards landings rose steeply as the species gained commercial importance (See Figure 16).

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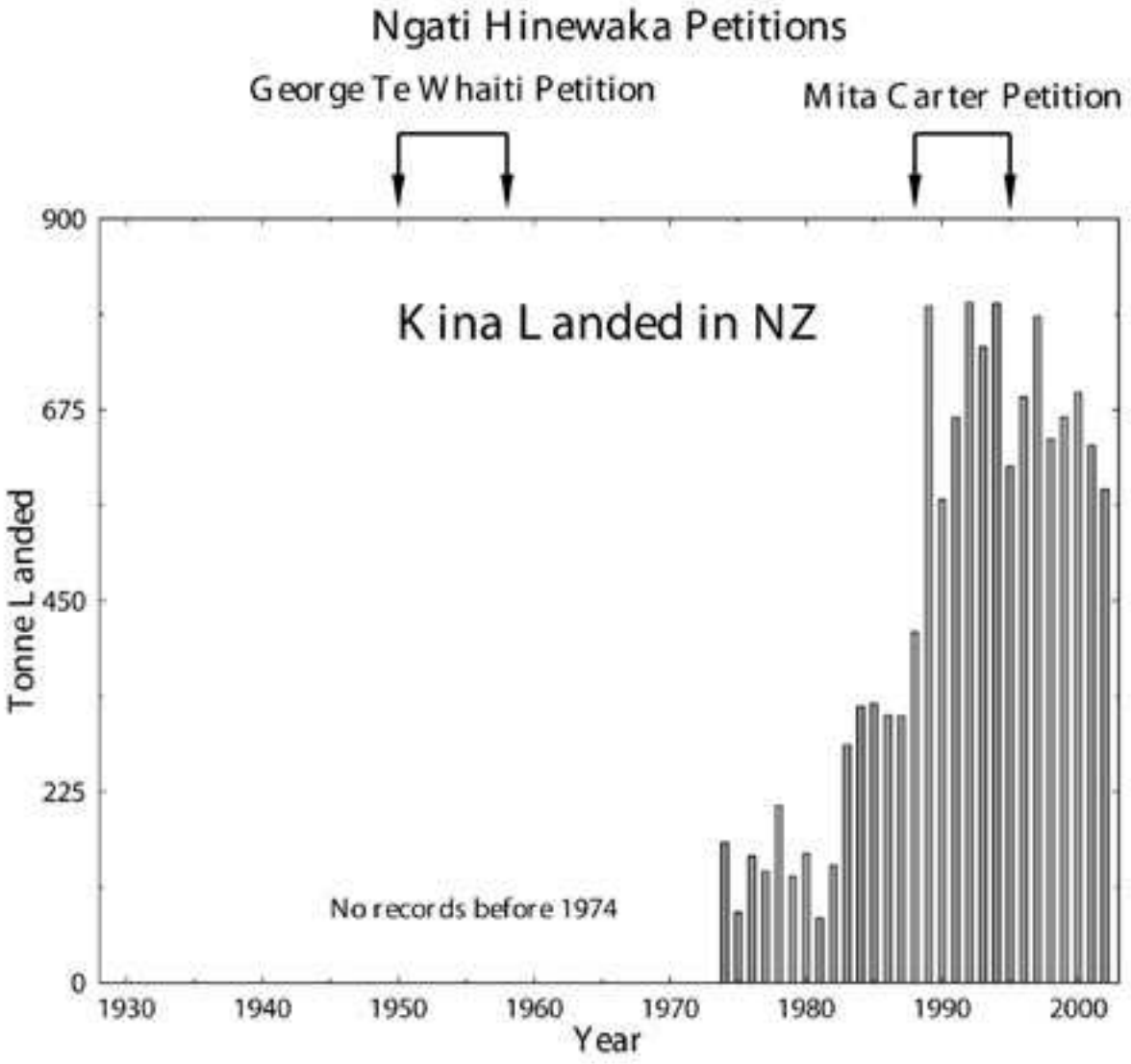

Figure 16: Reported commercial landings of kina in New Zealand.

In what follows, unless otherwise stated, scientific information on this species is summarised from Annala *et al*. (2002: 279 ff.).

Kina are abundant in small patches within areas of large brown algae and compete with a range of invertebrate herbivores, including paua. There is some evidence of a negative association between kina and paua, but the ecology is complicated. Kina take 8–9 years to reach 100 mm (total diameter (TD). Some kina live to 20 years. At the Leigh Marine Reserve there is evidence of a direct link between increase in snapper and crayfish size and a long term decline in kina. Dr Russell Babcock, a marine scientist at the University of Auckland, says he has proved that a decline of snapper numbers leads to an explosion of kina and the destruction of ecologically valuable kelp beds. Surveys of the Leigh Marine Reserve had shown up to eight times the number of snapper inside the reserves than in nearby non-reserves. The snapper were found to be larger, and samples of gut content confirmed that most fed on kina. Since the Leigh reserve was established in 1978, areas of reef devoid of kelp or other algal growths had declined by 80% to just over 3% of the rocky area. That was because snapper, crayfish and other fish were more prone to feed on kina and urchins in the area. While many countries had suspected the connection, finding proof was only possible in New Zealand because of its 14 marine reserves.

Most kina are found in waters less than 10 m deep. Commercial catches are taken by breath-hold diving, but in some QMAs (Quota Management Areas) 10% is obtained by dredging. There is no minimum legal size (MLS). Until now almost all kina is captured for the domestic market.

Kina were introduced into the QMS (Quote Management System) October 2002. Ngāti Hinewaka's *rohe* is in a large QMA SUR2 which extends from Cape Runaway down the east coast, through Cook Strait, and up to Wanganui. Annala *et al*. (2002: 283) note that "there are few consistent trends in catch rates in the dive fisheries for kina .... Differences among years are erratic and probably do not reflect trends in stock size. .... More generically, the use of catch rate information gathered at such broad spatial scales for stock assessment of sedentary invertebrates like kina should be approached with great caution. This is particularly the case given the lack of contrast in much of the data". Catch per unit effort (CPUE) data are provided for kina in the SUR2 area. This ranges from 206 kg per diver-hour in 1989 to 317 kg in 2002, with little evidence of a consistent trend.

Landings in SUR2 have been erratic, with 33 tonne 1982–83, and as high as 292 tonne in 1989–90. However, landings in the last few years have been quite modest with only 11 tonne in 2000–01. Similar variation is present in other QMAs. In 2000-01 the total New Zealand catch was 832 tonne, so SUR2 contributed only 1.4% of the landings.

There are few figures available for recreational catches but in 1996, the take from SUR2 was assessed as 61,000 kina (15.1 tonne).

No figures are available for the customary catch from SUR2, but Ngai Tahu have provided figures from 1998 onwards suggesting an annual take of about 400 kg per annum.

Annala *et al*. (2002: 282) comment that "although there is a wealth of information on the biology and ecology of this species... there is relatively little that can be used to assess the

status of exploited stocks. There have been no assessments of sustainable yield nor are there estimates of biomass or trends in relative abundance for any Fishstock...". Further, "MCY has not been estimated for any SUR fishstock" (ibid.: 283), and "For all Fishstocks it is not known if current catch levels of proposed TACCs (Total Allowable Commercial Catch) are sustainable, or if they are at levels which will allow the stocks to move towards a size that will support sustainable yields" (ibid.: 284).

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Paua — *Haliotis iris*

In what follows, unless otherwise stated, scientific information on this species is summarised from Annala *et al*. (2002: 387 ff).

Paua are found in shallow waters (usually less than 6 m depth) in rocky shore coastal areas of New Zealand. Paua are herbivores, grazing on algae. The commercial fishery for paua dates to the mid-1940s when shell was marketed and the meat generally discarded. There is a small market for the meat in fish and chip shops as paua patties, but it is only in recent years that paua has become economically important with demand from other countries driving an export market. Since the 1986–1987 season, the paua fishery has been managed with an individual transferable quota system. The MLS (Minimum Legal Size) is 125 mm.

The *rohe* of Ngāti Hinewaka is in the fishstock PAU2, which runs from Cape Runaway, southwards and through Cook Strait to Wanganui. Landings in this stock are about 120 tonne per annum, which is about 10% of the New Zealand total. The recreational catch in this area is thought to be about 30–90 tonne per annum.

Biomass estimates are only available for PAU6, 5B, 5D and 7.

For the area from Kahurangi Point to the Heaphy River in PAU6, the biomass is estimated to be 141 tonne. The MCY (Maximum Constant Yield) is estimated to be 3.53 tonne. MCY has not been estimated for any other paua fishstocks. The TACC (Total Allowable Commercial Catch) for this area has been set at 1 tonne, and is regarded as sustainable. The landing figures for the year 2000-2001 are listed as zero !

Considerable research has been carried out on paua fishstocks PAU5B, 5D and 7, to obtain quantitative stock assessment data. Historical figures for the annual catch in PAU5B (Stewart Island area) are given in Figure 17. This shows a rise in the 1970s, and falls off after the QMS (Quota Management System) was introduced.

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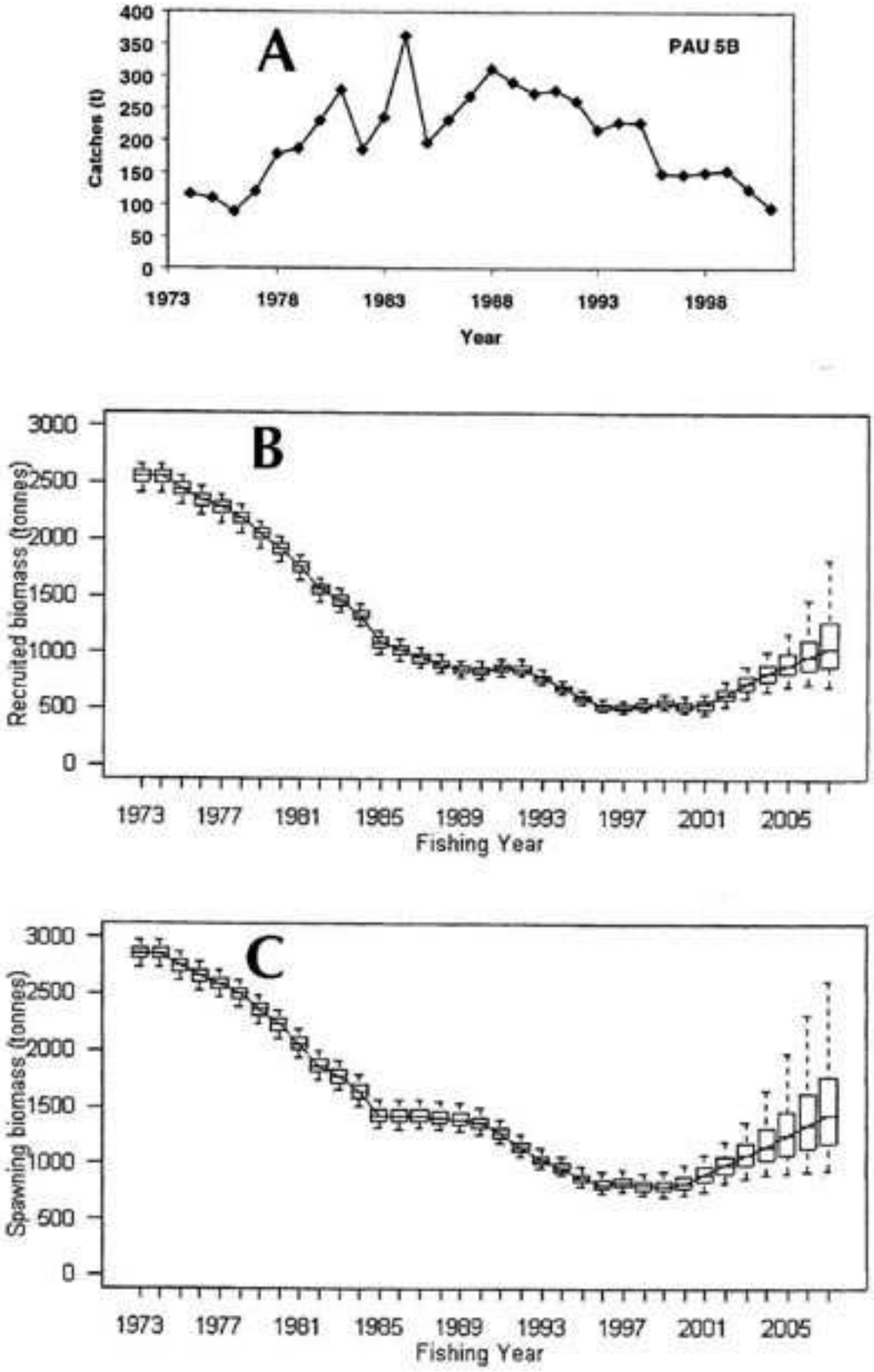

Figure 17: A: Historical catch rates (tonne) for the PAU5B fishstock (Stewart Island area). B and C are estimates of biomass (B: recruited, C: spawning) after modelling various biological and exploitation rate parameters.

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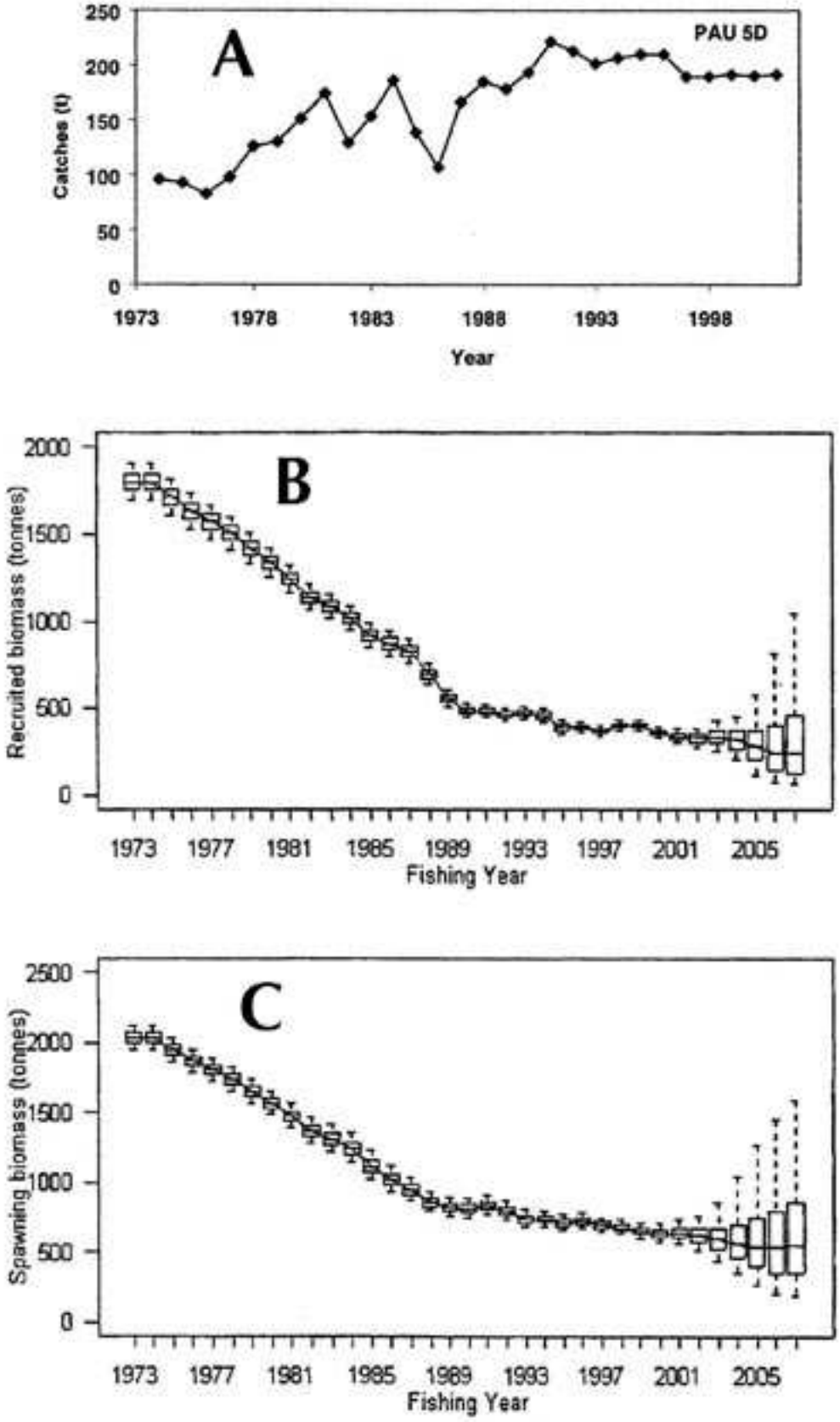

Figure 18: A: Historical catch rates (tonne) for the PAU5D fishstock (Southland/Otago). B and C are estimates of biomass (B: recruited, C: spawning) after modelling various biological and exploitation rate parameters.

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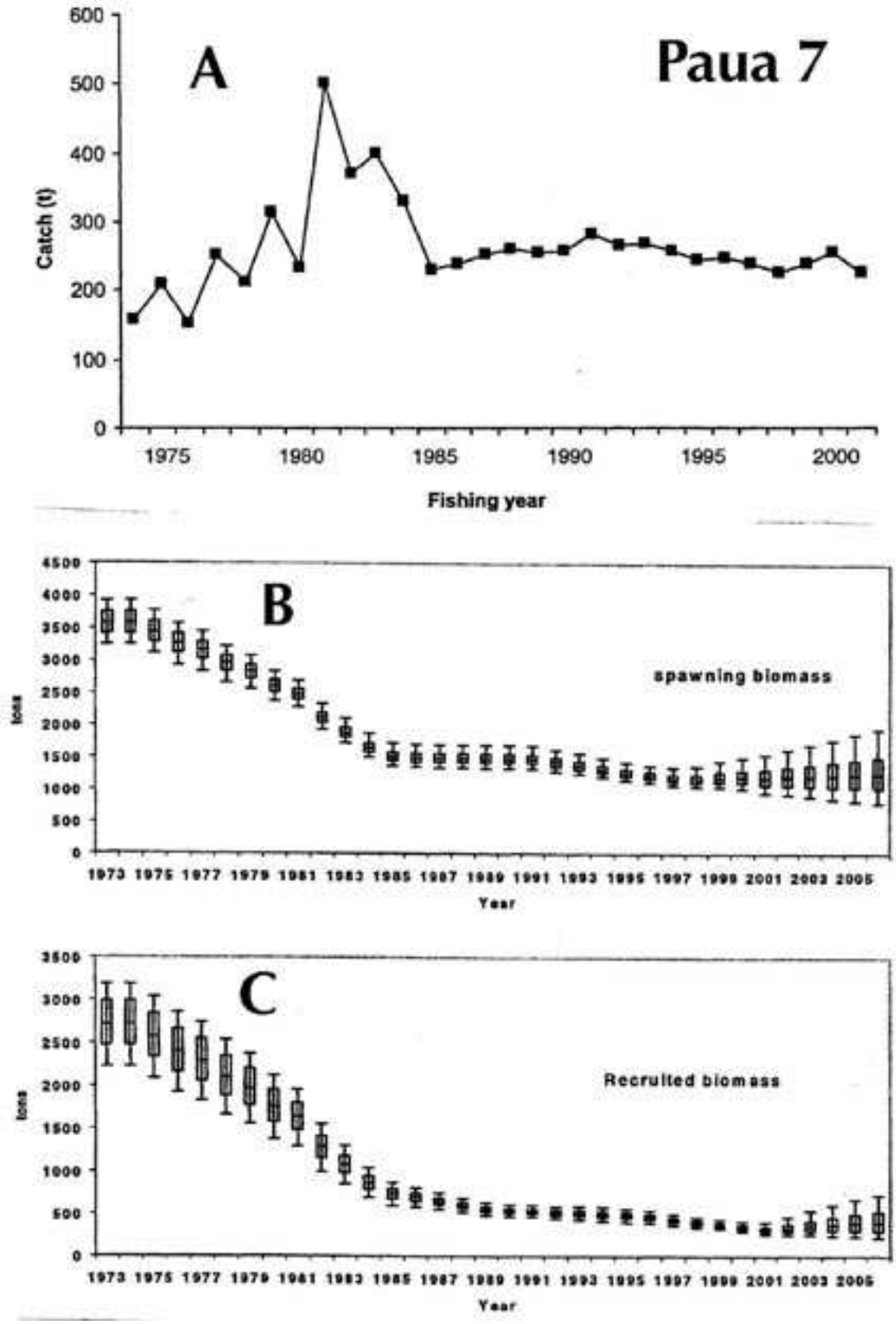

Figure 19: A: Historical catch rates (tonne) for the PAU7 fishstock (Northern South Island). B and C are estimates of biomass (B: recruited, C: spawning) after modelling various biological and exploitation rate parameters.

A Bayesian stock assessment model has been developed by fisheries scientists which takes into account historical data on CPUE (catch per unit effort), relative abundance, exploitation rate (from observed catch and model biomass), and biological data such as growth and recruitment rates. This allows posterior estimates to be made of what the recruited and spawning biomass might have been backwards in time as an historical series, and to project what they might be in the future, given that the exploitation rate and other parameters remain unchanged. The recruited biomass refers to paua which are greater than 125 mm (the minimum legal size MLS), and the spawning biomass refers to paua able to spawn (greater than 90 mm). Some readers may not be familiar with the terms 'spawning' and 'recruited' biomass used here; these are illustrated in Figure 20.

It is important to realise this model is based upon spawning (S_{ref}) and recruited (B_{ref}) biomass indicators which refer to the period 1985–1987. This was a period when these two biomass indicators were relatively stable, shown as a flat spot in the curves given in Figures 17 (B and C). Biomass seems to have stabilised following a fishing down period which started in the early 1970s. By contrast, in the period 1985–1987 the exploitation rate was relatively moderate. Annala *et al*. state:

> "This period is a reference against which current and projected stock sizes and exploitation rates can be compared and should not be considered as a management target" (Annala *et al*. 2002: 396).

In spite of this reassurance, they conclude:

> "The posterior summaries... suggest that the current spawning and recruited biomass are both almost certainly less than in the reference period (1985-1987), and that current exploitation rate is in the range 15-21%. Projections made with the current catch and MLS suggests that both biomass indicators will increase, perhaps as much as twice, from the current values, with a median expectation that they will be close to the reference values at the beginning of 2007. There is only a small percentage risk that their biomass indicator will decrease, and about a 50% chance that these indicators will remain below the reference biomass after 5 years" (Annala *et al*. 2002: 398).

It is clear from this that the 1985–1987 biomass estimates are being implicitly used as a yardstick worth achieving. That sounds very like a 'management target' to me, and one should be crystal clear on this question — **what recruited or spawning biomass should one aim for as an achievable management target for any one paua fishstock ?** This is the bottom line question which real people on the ground care about. If the target is too low then collecting 'food for table' (customary fishing) can be seriously jeopardised.

In Figure 21 I show the historical figures for total landings of paua for the whole of New Zealand in the period 1961 to 2001. In 1961 the total landings were 79 tonne, and it can be seen that this was relatively stable until 1970 when this leapt to almost 10 times this figure (the huge total for 1971 may be an error in the database). It is true that the landing figures for the period 1985–1987 in this graph are fairly stable, but it must be manifestly obvious that this rate of exploitation is 15 times as high as it was in the 1960s. Why choose a target for

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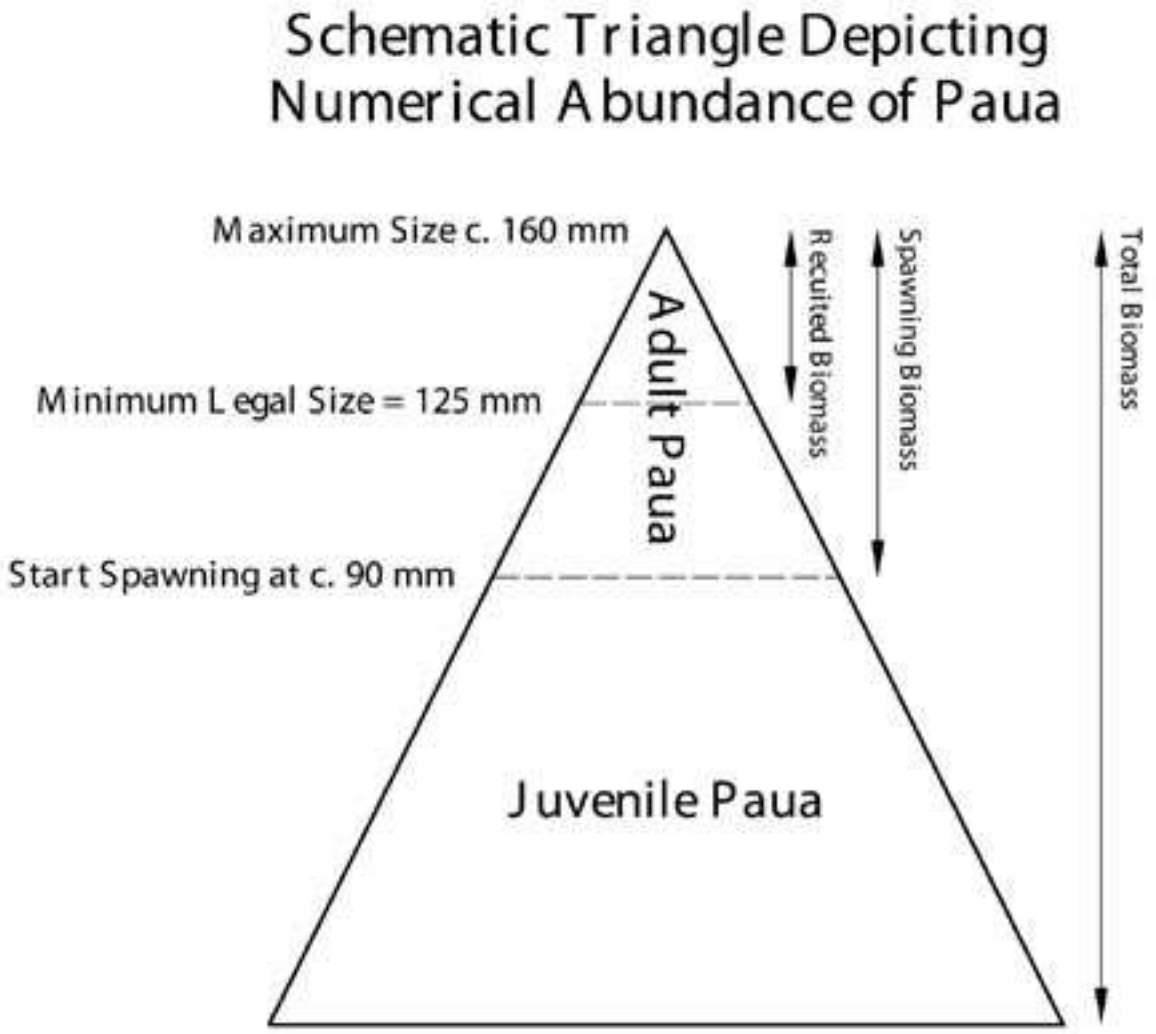

Figure 20: Schematic diagram showing the difference between the three types of biomass referred to in the text. Recruited biomass are those specimens which can be taken for food. Spawning biomass are adults which spawn and refurbish the juvenile stock.

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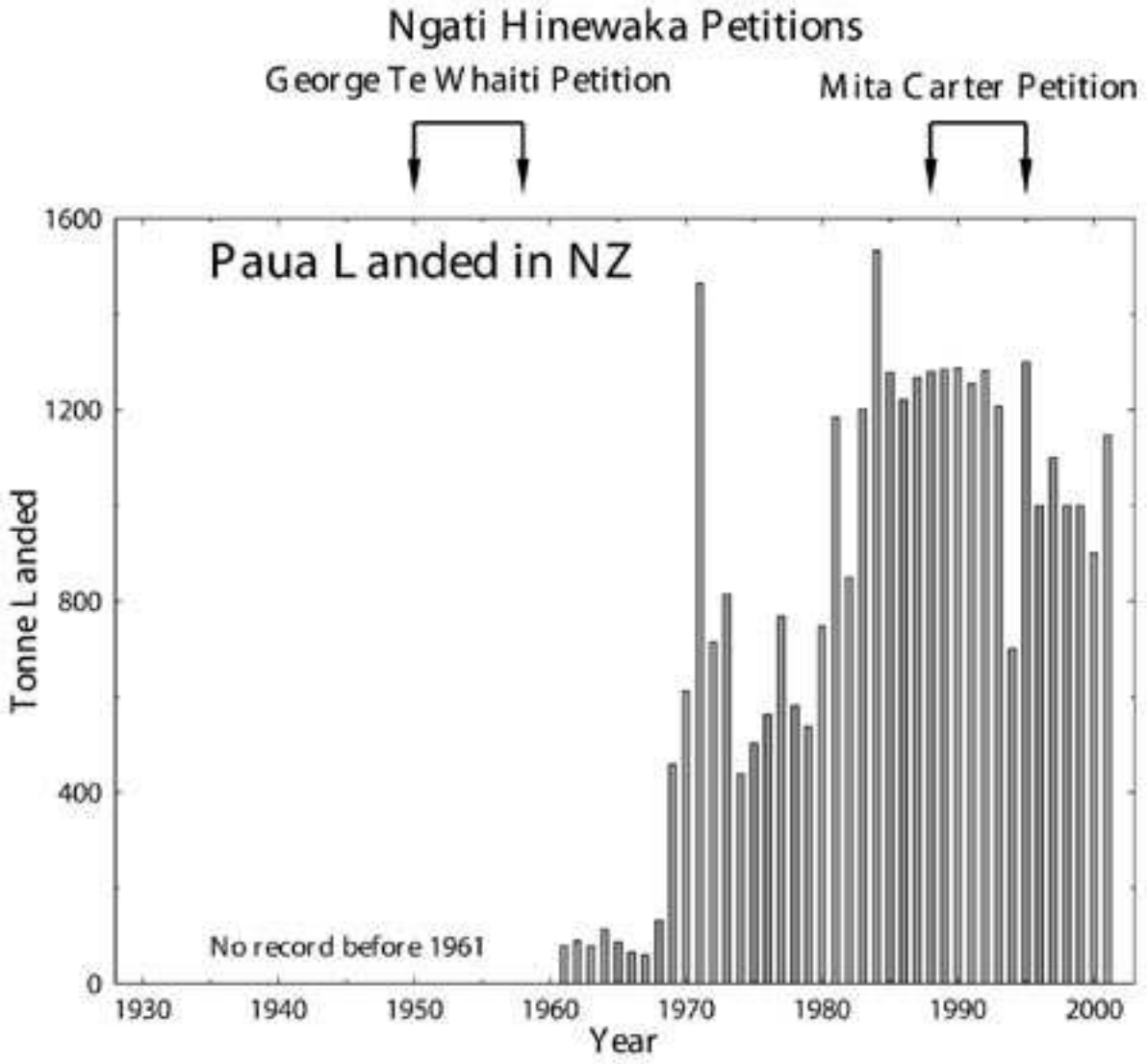

Figure 21: Total landed paua (tonne) in New Zealand 1961 to 2001. Data extracted from Marine Department Annual Reports, Statistics New Zealand, and Annala *et al*. 2000.

a sustainable fishery based on the highest period of exploitation, when the biomass is almost at rock bottom. Surely it would make more sense to choose a period of much higher biomass for a management target; and calculate the MCY (maximum constant yield) which would keep this higher biomass intact. This would provide a much better resource for exercising the rights of customary food gathering.

However, there is a much more serious concern with this implicit attitude that the paua biomass in the period 1985–1987 is something worthy of aiming for; and that is it takes no account whatever of the impact that such a depleted fishstock has on people who collect food for table in the shallow inshore waters as part of their customary fishing activities. Such a management target has a devastating effect on elderly Māori people and young children, who rely on the inshore region for gathering food. It is the reason why successive generations of Ngāti Hinewaka keep complaining to Government about the failure to manage the inshore fishery in Palliser Bay and coastal Wairarapa at stock levels adequate for customary fishing. Their voice is not being heard.

In the PAU5B fishstock, the recruited biomass has fallen from 2500 tonne in 1973 to about 600 tonne today. Figures for the recruited biomass in 1960 are not provided, but must have been several multiples of 2500 tonne.

This attempt to model the response of biomass in the face of human exploitation is not without its hazards as Annala *et al*. point out:

> "Local stocks may be disproportionally depleted compared to the average depletion; in paua or abalone this can result in small-scale recruitment failure. Further, it is difficult to sample heterogenous populations to obtain estimates that are representative of the whole population. These problems result in a mismatch between the spatial scales at which abalone fisheries can be practically managed and the much smaller scales at which population dynamics are thought to operate. Serial depletion, if it occurs, may cause model results to be overly optimistic with respect to the part of the population that is being fished or surveyed. Hyperstability in CPUE could also cause model results to be to be overly optimistic" (Annala *et al*. 2000: 400).

Whatever the caveat, this model is the best predictive device we have at present, and we should take notice of conclusions being drawn from it.

In paua fishstock PAU5D (Otago Southland area) a similar situation prevails. In Figure 18(A) the same rise in catch rate can be seen in the 1970s. Catches do not appear to have been very stable during the 1985–1987 period, but once again these were chosen as reference years for modelling. Commercial catches are about 150 tonne, to which can be added about 22 tonne recreational catch, and a further 0.8 tonne customary catch. It can be seen from Figure 18(B) that the recruited biomass has fallen from about 1800 tonne in 1973 to about 400 tonne in 2001. Annala *et al*. conclude:

> "Projections made with the current catch and MLS suggest that both biomass indicators have some chance of increasing: 42% for spawning and 38% for recruited biomass; the median expectations are for decreases, with much uncertainty as seen in

> the trajectories. At the current catch and MLS, there is little chance that the indicators will [be] above the reference values in 5 years" (Annala *et al*. 2000: 408).

and further:

> "These results suggest that the current catch level is not sustainable and will likely cause the stock to decrease further from reference levels of biomass in the next five years" (Annala *et al*. 2000: 410).

The final area for which there is detailed knowledge is the PAU7 fishstock (northern South Island from Kahurangi Point on the west coast, the Marlborough Sounds, and down to Clarence River mouth). The historical catch data and modelled biomass indicators are provided in Figure 19. The TACC for 2001 was 267.48 tonne. The recreational catch is estimated to be about 2–7 tonne, and there is no estimate for customary catch.

Once again the period 1985–1987 was chosen as reference years. Annala *et al*. state that:

> "This is an arbitrary reference period considered to represent at [sic] time when the fishery was in 'good shape', i.e. a period in which the model suggests exploitation rates were around 30%, and the biomass had just entered a long period of relative stability" (Annala *et al*. 2000: 417).

This seems an astonishing conclusion to draw. How could anyone suggest that a fishery could be in 'good shape' when it has been ravaged by 17 years of massive catches prior to 1985. The problem with these graphs is that they only show the story from 1973 to the present day! They are therefore only showing part of the period of decline of the inshore fishery. A fuller picture is given in Figure 21, which gives the commercial catches from 1961. Annala *et al*. conclude from the modelling of PAU7:

> "The mean expectation from model projections is that the fishable biomass [>125 mm MLS] will increase by 2006... and there is a 27% chance fishable stocks will decline... The mean expectation from model projections is that spawning biomass [>90 mm] will remain about the same level... and there is a 44% chance that spawning biomass will decline... The current very high exploitation rate... means that most paua were harvested in the fishing year they reach the minimum legal size (MLS)" (Annala *et al*. 2000: 419).

This does not inspire much confidence and looks very riding on a knife-edge. The recruited biomass estimate for 2000–01 (> 125 mm) is 325.5 tonne, and the TACC (total allowable commercial catch) is 267.48 tonne, which is more than 82% of those paua which have reached the minimum legal size.

Unfortunately, similar quality scientific information is not available for other areas of New Zealand, and in particular for PAU2, which is of special interest to Ngāti Hinewaka. Actually, PAU2 is a huge length of coastline, and what is really needed is some quality information from the Palliser Bay–East Coast Wairarapa area. We have no way of knowing how this fishery fares compared with other parts of New Zealand, except from anecdotal evidence (this

is considered in another section of this report). However, it can be seen from the foregoing that for the only areas where there presently is quality information — two areas at the bottom of the South Island, and one area on the shores of Cook Strait — the story is very similar: the minimum legal size (MLS) and total allowable commercial catch (TACC) are set at such levels that improvement of the inshore paua fishery is uncertain at best. There is every reason to believe that the situation in the *rohe* of Ngāti Hinewaka is essentially the same as in those which have been studied.

During an ecological survey from Cape Palliser up the East Coast, relative abundance of paua was noted in the subtidal zone at 18 different sites. Glassey noted that few paua were to be seen except juveniles in a number of these sites, and attributed this to harvesting pressure. Correspondence and cluster analysis provided a quantitative assessment of this compared to other species (Glassey 2001: 81 ff.), and although he noted that paua are "common on the Wairarapa coast [they are only] abundant at sites with limited accessibility" (Glassey 2001: 99).

Finally, it should be mentioned that until paua became a valuable export item it was commonly used as bait for crayfish pots. It would be useful to assess the effect this had upon the fishery in modelling the effects of human predation upon it. It was precisely this use of paua for the crayfish industry which first alerted Ngāti Hinewaka to the possibility that the inshore fishery in their *rohe* would suffer unacceptable damage, and resulted in a petition to the Government.

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Koura — Crayfish, Rock Lobster, *Jasus edwardsii*

In what follows, unless otherwise stated, scientific information on this species is summarised from Sullivan and O'Brien (2002).

There are two species of crayfish in New Zealand: the common crayfish, also known as red rock lobster, *Jasus edwardsii* and the packhorse crayfish *Jasus verreauxi*. I am only concerned with the common crayfish in this report.

Crayfish were once very common throughout New Zealand, living around rocky coastal areas in shallow water, down to about 60 metres depth. They also go offshore on relatively clean ground to 250 metres depth. Crayfish are scavengers, eating any dead animal matter and seaweed. As Paul points out "Because of heavy fishing pressure, the average size of rock lobster in most areas is only a little larger than the legal minimum size" (Paul 1986 :150).

Crayfish came under the Quota Management System (QMS) 1 April 1990. Before that time, there were regulations controlling Minimum Legal Size (MLS), a prohibition on taking berried females and soft-shelled crayfish, and some local area closures.

The coastline of Ngāti Hinewaka is in the management fishstock of CRA4, which extends from Mahia Peninsula through Cook Strait to Wanganui. The Minimum Legal Size (MLS) is now based on tail width (TW), which is 60 mm for females and 54 mm for males (there are special conditions in Otago and Gisborne areas).

In the annual report of the Marine Department to the Government for 1950, it was noted that an apparent downturn in the wet fish reported for the year was "in part due to the number of boats concentrating their efforts on crayfishing in view of the buoyant export market for crayfish tails" (Marine Department 1951: 15). Figure 22 shows the annual tonnage of commercial crayfish landings in New Zealand for the period 1928 to the present day. The upturn reported by the Marine Department in 1950 is clearly visible in this graph; however, this upturn pales into insignificance compared with what came later, as this graph also shows. In 1950 crayfish landings stood at 52,989 cwt (2698 tonne). The 1969 figures were more than four times this amount.

Since the Quota Management System (QMS) was introduced in 1990 in New Zealand, the Catch Per Unit Effort (CPUE) rate has shown signs of significant increases where it has been studied. However, these rates are only relevant to the period 1979 to the present day. Catch per unit effort would have been even greater when stock biomass was at its peak before the huge increase in crayfish being landed commercially.

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The recreational catch for the CRA4 fishstock has been estimated to be in the vicinity of 25 to 73 tonne (1992, 1993, 1994, 1996 national telephone and diary surveys), compared to commercial catches in this area of 490 to 580 tonne over the same period (about 10%). Māori customary catch data is available for only four of the New Zealand fishstocks, and range from 0.2 to 16.5 tonne (no data for CRA4). Illegal catch has been estimated for CRA1 and CRA2 and has been increasing from about 5 tonne in 1979 to about 80 tonne in 1997.

Sullivan and O'Brien point out that:

> "Legislation required that New Zealand fisheries be managed to maintain stocks at or above B_{MSY}, the recruited biomass associated with the maximum sustainable yield (MSY). However, B_{MSY} is not defined in the legislation" (Sullivan and O'Brien 2002: 31).

Moreover, B_{MSY} will vary depending on the harvest strategy, which is frequently undefined. Sullivan and O'Brien cite the outcome of a workshop on this matter as follows:

> "a more pragmatic approach, consistent with the Purpose of the Act, is to ensure that stocks are managed above, for example, the lowest observed stock size that has been known to give rise to good recruitment" (Sullivan and O'Brien 2002: 31, citing Stokes *et al*. 2001).

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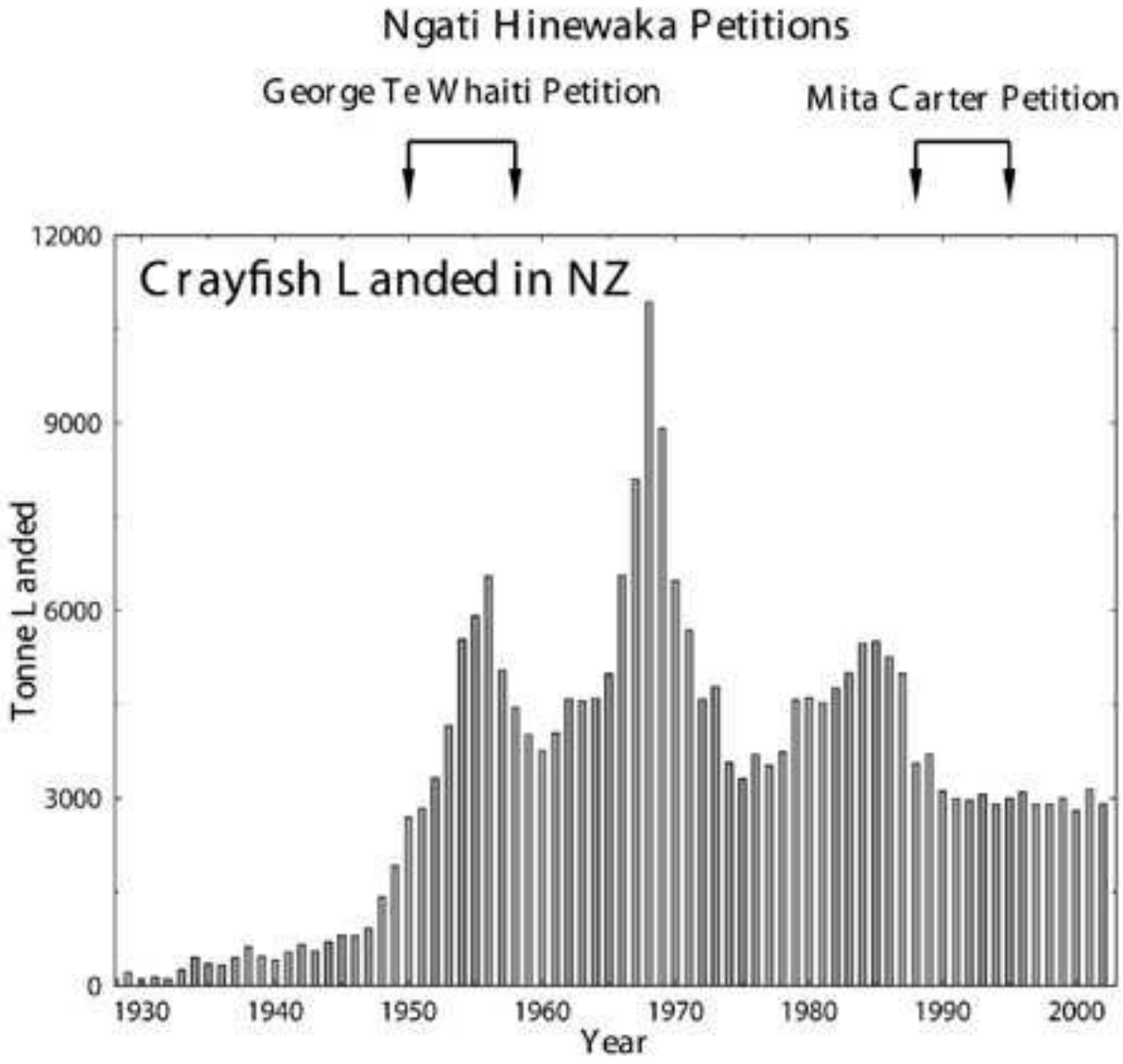

Figure 22: Reported commercial landings of crayfish in New Zealand.

This looks suspiciously like a case of infinite regress — endlessly replacing one problem with another, since "good recruitment" may be equally difficult to define. The suggestion that "A target CPUE that is nearly twice the recent level should serve as a reasonable and achievable reference point" (Sullivan and O'Brien 2002: 31) is simply arbitrary. Why aim for a "standardised CPUE value of 2.0, why not 4.0, or some other higher figure ? What is important to Ngāti Hinewaka is what the catch per unit effort is in maintaining their customary fishing rights. An increase by a factor of 2.0 may be perfectly satisfactory for a commercial fisherman with a powerful modern boat with winches and large numbers of pots, but is it satisfactory for a group of Ngāti Hinewaka diving in shallow water and catching crayfish by hand for their marae as food for table ?

On the whole, there seems to be very little interest in protecting and managing the fishery at a level which is satisfactory for Māori customary fishing rights, but we must applaud the effort and thinking behind trying to work out something sensible in the face of such a depleted fishstock.

Information from the fishstocks CRA1 and CRA2 has been used by fisheries scientists to assess the status of the fishery using a number of performance indicators.

> "The RLFAWG [Rock Lobster Fishery Assessment Working Group] did not consider that virgin biomass or B_{MSY} were appropriate reference points, given the difficulty of accurately estimating these quantities. Therefore the assessment used performance indicators based on biomass levels for the ten years 1979 to 1988. This is the earliest period for which we have CPUE [Catch per unit effort] data and base case fits for both CRA1 and CRA2 suggested that biomass was relatively stable during this period" (Sullivan and O'Brien 2002: 37).

The assessment results are summarised in Figures 23 and 24. These show the vulnerable biomass in tonne for the Autumn-Winter and Spring-Summer seasons for CRA1 and CRA2.

In the case of both CRA1 and CRA2 the current vulnerable biomass is about 50% higher than the reference period 1979–1988. At the current levels of catch the median expectation is that biomass will remain at current levels over five years, but with considerable uncertainty (Sullivan and O'Brien 2002: 38). As Figure 23 shows, the vulnerable biomass in 1972 for CRA1 was about 500 tonne compare with 1945 when it was about 3000 tonne. This shows the massive depletion of the crayfish stock which has taken place during this period, which left only 17% of the vulnerable stock intact. This graph serves to vindicate the anecdotal evidence, cited earlier, of so many Māori and European fishermen who have seen the virtual disappearance of the inshore fishery in their lifetime. In the New Zealand Official Yearbook for 1990 the sorry history of crayfish exploitation in New Zealand is summarised thus: "the grounds had been decimated. The crayfish catch declined, and today is about half the 1968 figure" (NZOY 1990: 476).

In the case of CRA4 (the area of most concern to Ngāti Hinewaka) "the assessment concluded that, at an assumed level of catch for the next five years equal to the current catch, and with recruitment varying about its estimated average, the stock was likely to decline" (Sullivan and O'Brien 2002: 44).

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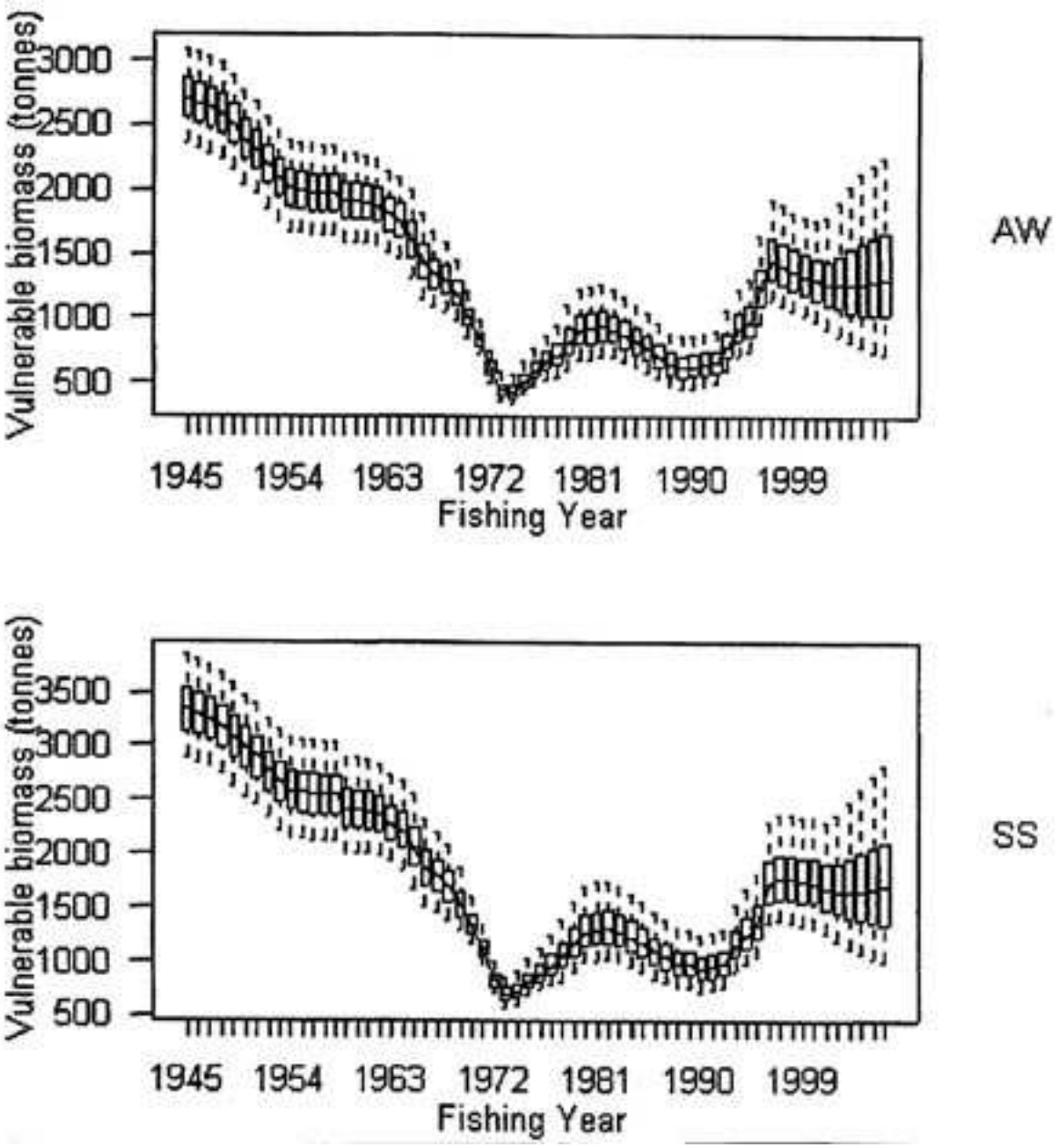

Figure 23: Estimated vulnerable biomass of crayfish for CRA1 fishstock from the assessment simulation model. AW = Autumn-Winter, SS = Spring-Summer.

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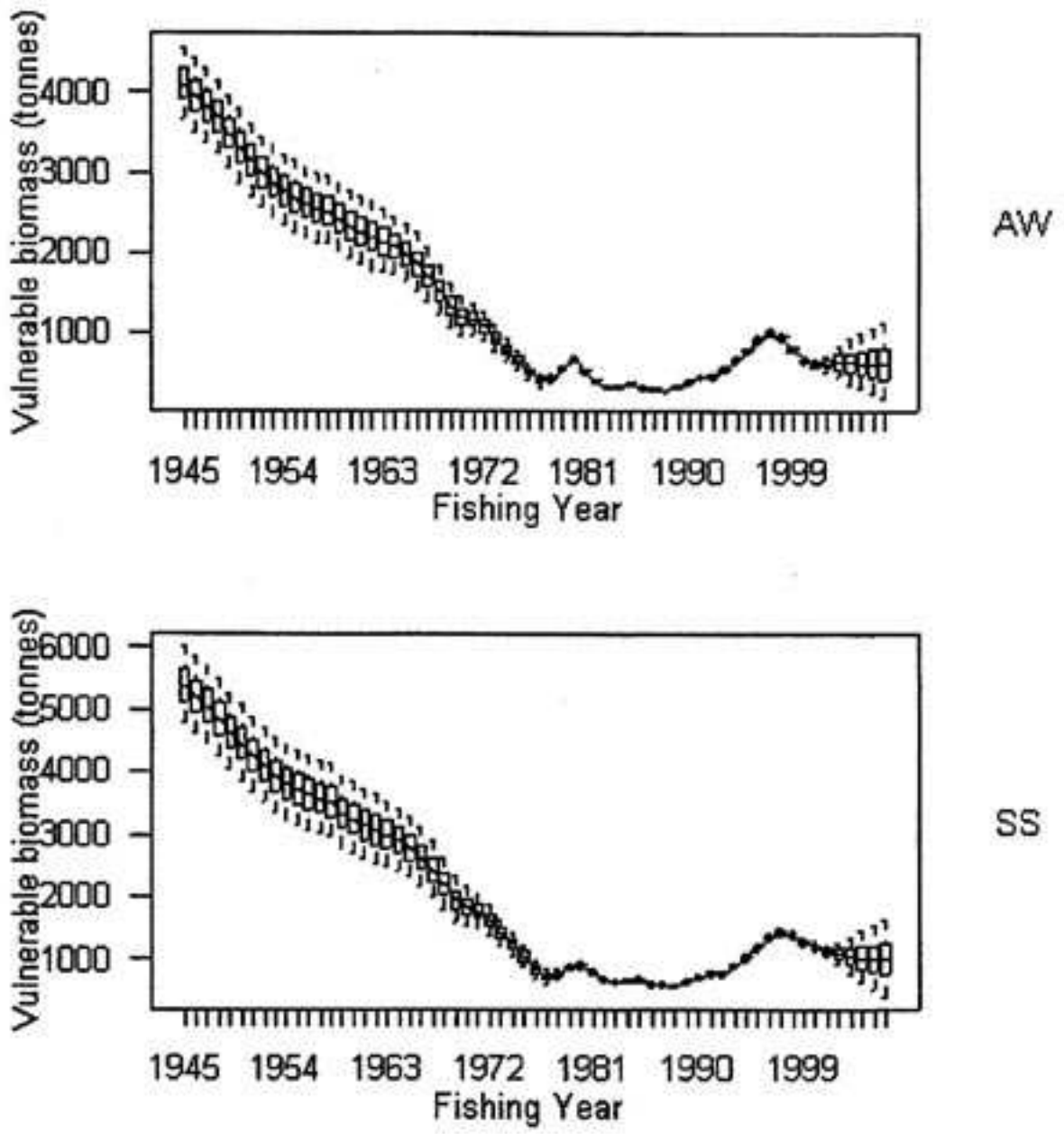

Figure 24: Estimated vulnerable biomass of crayfish for CRA2 fishstock from the assessment simulation model. AW = Autumn-Winter, SS = Spring-Summer.

Conclusion 25
Conclusion 26
Conclusion 27
Conclusion 28

Hapuka — Groper, *Polyprion oxygeneios*

In what follows, unless otherwise stated, scientific information on this species is summarised from Annala *et al*. (2002: 217 ff).

Groper are large fish, averaging about 80–100 cm in length, which reach 180 cm and 100 kg in weight. They are widespread in New Zealand waters and occupy a wide depth range from shallow water (only a few metres) to at least 800 metres. They are migratory, but little is known of their seasonal movements (Paul 1986: 82). Groper are predators, eating a wide range of other fishes, squid and crustaceans. Groper become sexually mature at about 10–13 years of age and may live longer than 60 years. Cook Strait groper mature over a wide size range, with 50% maturing at 80–85 cm total length (TL) for males and 85–90 cm total length for females. Spawning occurs during winter. Commercially caught groper range from 50–140 cm, with a broad mode between 70 and 100 cm. Tagging experiments in Cook Strait show a high proportion of local returns, but about 5% of these fish have moved up to 160 km north and south. Annala *et al*. comment:

> "Other information is largely anecdotal and speculative. It is known that good fishing grounds, particularly pinnacles and reefs or ledges, can be quickly fished out and take some time to recover, suggesting a high degree of residency (except perhaps for the spawning season" (Annala *et al*. 2002: 220).

This observation is especially germane when considering the customary fishing rights of Ngāti Hinewaka, who rely upon continued access to groper in the inshore area of their *rohe*. The allowable catch would have to be very low to ensure ongoing supplies. Paul also makes an important observation:

> "Although total landings have remained fairly steady for many years, this has depended on increased fishing effort and the regular discovery and exploitation of new offshore reefs and pinnacles. There is a strong possibility that the stocks are being overfished" (Paul 1986: 83).

This comment shows how easily one could be led astray by considering statistical data alone, without the benefit of practical down-to-earth observations by fishermen. Landing figures and catch per unit effort are not the only things to consider when trying to assess the health and viability of a fishery.

Ayling and Cox note that groper "were formerly abundant all round New Zealand and southern Australia but they are a prime commercial species and fishing pressure has severely reduced their numbers. The fact that they can be fished out easily in any area and do not

recover their former numbers for many years if at all reinforces the belief they are, in fact, slow growing, long-lived fishes" (Ayling and Cox 1987: 204).

Graham also has some useful comments to make about groper:

> "Since 1927, these splendid fish have decreased and considerably fewer fish were caught; this was due to fishing during July and August which is their spawning season. No law has been made to protect this valuable fish and in consequence large Groper were rare. At one time in the summer months Groper were plentiful anywhere in-shore in from five to twenty fathoms... during summer months a few could be caught inside the Otago Heads. Mr Broadley told me that the dropping of a line and baited hooks in comparatively shallow water off Purakanui, Tyrone, Blueskin Bay and other parts in 1910, or even later, would result in catching groper" (Graham 1956: 227–228).

Graham describes at some length the decline of the groper fishery and urges action to be taken in protecting the species from overfishing.

In reviewing landing figures for New Zealand, Annala *et al*. comment:

> "The Cook Strait region has always supported the main groper fishery, followed by Canterbury Bight; both show the same slow decline from 1949 to 1986" (Annala *et al*. 2002: 218).

This statement does not quite conform to published data on landings (See Figure 25). Although there does appear to be an overall decline in landings from 1949 to 1986, there is a dramatic rise centred on a few years around 1980, followed by an equally dramatic crash after that.

> "Total landings of groper have been relatively stable since 1992-93 and have generally ranged between 1400 t and 1600 t over the past nine years... catches have generally remained within the quotas for individual Fishstocks, and total landings have amounted to around 60-70% of the total TACC [Total Allowable Commercial Catch] since 1992-93" (Annala *et al*. 2002: 218).

As an example, the total landing for 2000–2001 was 1519 tonne and the allowable catch was 2181 tonne. The fact that the allowable catch is 44% above the current landings is a clear indication that the Crown considers that stocks are being **under-exploited.**

The *rohe* of Ngāti Hinewaka is within the fishstock known as HPB2, an area from Cape Runaway down through the northern side of Cook Strait to Mana Island. The Total Allowable Commercial Catch (TACC) for this fishstock is 266 tonne, and reported commercial landings average about 85% of that permitted. The recreational catch in this stock has been estimated to be 10,000 fish, or 45–85 tonne (1992–1993 survey) and 23,000 fish or 75–125 tonne (1996 survey). Annala *et al*. comment on the Māori customary fishery as follows:

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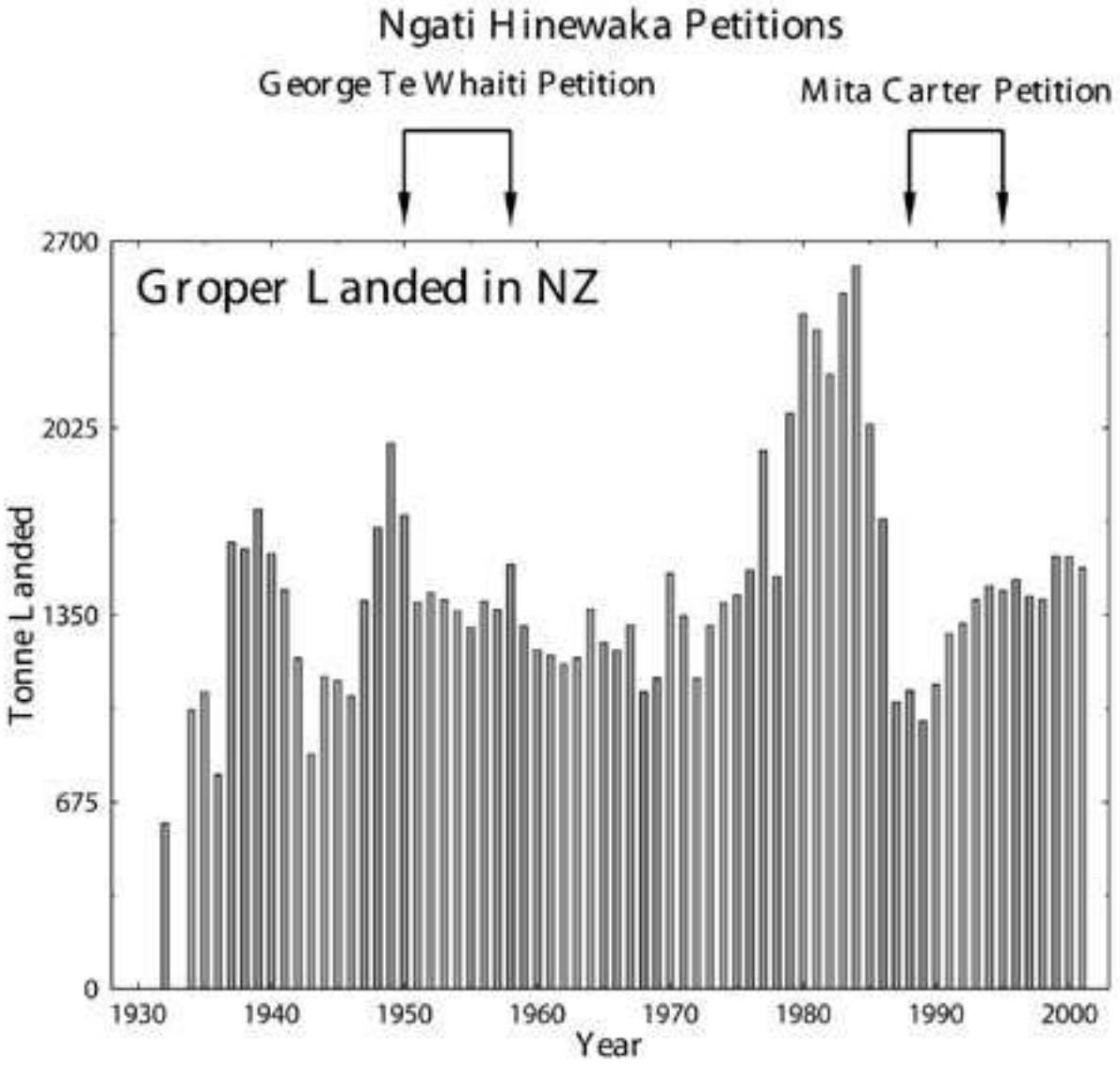

Figure 25: Historical landing figures of groper (tonne) in New Zealand waters.

> "Groper (hapuku and bass) were certainly taken by early Maori, and would have been available in greater numbers in shallower depths than is the case at present. Traditional groper grounds are known in several regions. Quantitative information on the current level of Maori customary catch is not available" (Annala *et al*. 2002: 219).

There is no MLS (Minimum legal size) for groper in New Zealand, either for recreational or commercial fishing.

There are no available estimates of current or reference biomass for groper.

The level of risk to the stock of harvesting at the estimated MCY (Maximum Constant Yield), which is 1327 tonne, cannot be estimated.

Current Annual Yield (CAY) cannot be estimated (because there are no estimates of current biomass).

Annala *et al*. conclude as follows:

> " Recent catches are less than the MCY [Maximum Constant Yield] estimates, are considered sustainable, and are probably at levels that will allow the stocks to move towards a size that will support the maximum sustainable yield. Current TACCs [Total Allowable Commercial Catches] are larger than the MCY [Maximum Constant Yield] estimates and it is not known if they are sustainable or at levels that will allow the stocks to move towards a size that will support the maximum sustainable yield" Annala *et al*. 2002: 222).

Although one must appreciate the bare honesty of this and many other appraisals of the current state of knowledge of the New Zealand fishery, it is nevertheless somewhat terrifying that so little is known about the possible implications of continuing with current catch levels and other aspects of the management system.

On the whole, there appears to be a considerable divide between the scientific opinions expressed by the Science Group of the Ministry of Fisheries, and other forms of anecdotal evidence about the health of the groper fishery. The Ministry seems perfectly content with current TACC (Total Allowable Commercial Catch) levels, while at the same time pointing to the fact that basically nothing is known about current biomass, or what is happening to it as a result of commercial and recreational fishing. This is an unhealthy situation. As far as the groper fishery in shallower waters is concerned, there is general agreement that high rates of residency means that this species is very fragile to fishing pressure in inshore waters.

Conclusion 29
Conclusion 30
Conclusion 31

CONCLUSION

This review of oral, anecdotal and scientific evidence about the inshore fishery should leave no doubt that the resources available to present-day Ngāti Hinewaka for their customary fishing have been depleted to a point which would be beyond recognition to their ancestors who lived on this coast before them. In the case of kina, this has been under increasing pressure only in the last 10 to 12 years, and there is profound concern as to what will happen to this species in the future. Paua have been under immense pressure following the growth of a highly lucrative export market over the past 15 years, and are now much harder to find than formerly. Crayfish have been under threat since the early 1950s, with several boom periods which has left the inshore area of Palliser Bay and East Coast Wairarapa a pale reflection of what it was in former times. Finally, in the case of groper, whereas once Ngāti Hinewaka could catch these with hand lines off the rocks, nowadays one must venture a long way out to sea. No-one knows what proportion of the biomass of these four species now remains in the inshore waters of the *rohe* of Ngāti Hinewaka, compared to that which was present when Europeans first came to New Zealand. I earlier referred to a scholarly estimate relating to coastal Canada: "that the biomass of fish and other exploitable organisms along the North Atlantic coast of Canada now represents less than 10% of that two centuries ago" (MacIntyre *et al*. 1995, cited by Pauly 1995: 430 {665}), so perhaps the scale of the depletion in Palliser Bay and East Coast Wairarapa is of this order of magnitude too.

Conclusion 32

Although the Crown has negotiated a settlement with Māori concerning the commercialisation of the New Zealand fishery, this settlement does not impinge on rights relating to customary fishing. The inshore area is the primary zone where customary fishing takes place. The depletion of this inshore fishery has continued unabated by this settlement of commercial rights, and has had an adverse impact on the ability of Ngāti Hinewaka to enjoy the benefits of customary fishing rights. The present management systems in place for controlling the inshore fishery have only a commercial imperative in mind. That is, they are primarily designed to protect commercial and economic interests by maximising catch rates commensurate with a level of sustainable biomass which is far too low for Māori people trying to exercise their customary rights. Moreover, these management regimes give little confidence that the situation will improve, and there is a real risk that biomass will decline even further. Ngāti Hinewaka believe that the Treaty of Waitangi guarantees them greater involvement in the management of the inshore fishery in their *rohe* than the Crown has permitted. This is the reason why they have been consistently trying to set aside and protect Fishing Reserves for their exclusive use since the 1870s.

Conclusion 33

THE SETTING — THE FISHERY IN THE *ROHE* OF NGĀTI HINEWAKA

The *rohe* of Ngāti Hinewaka covers the coastline from Lake Ferry to Flat Point (see Figure 26). This area encompasses a variety of marine habitats, from high energy sandy beaches in the vicinity of Lake Ferry to rocky headlands such as Cape Palliser. Notably missing in this region are estuarine bays which support different types of marine resources than are found here. A great deal of the coastline in this *rohe* is characterised by rocky headlands and reef platforms. This type of environment once supported a rich and diverse range of species of flora and fauna, unfortunately much depleted today. The inshore area is the main habitat of those species of special interest to Ngāti Hinewaka — kina, paua and crayfish. The rocky headlands permit fishing from the rocks for wet fish species. Deeper water fishing also took place further out over specially named rock pinnacles and holes. Customary food gathering is traditionally focused precisely on this part of the ecosystem, the area where whole families, from young children to old men and women, can get into the water and forage in shallow water for *kaimoana*. In some parts of this coastline where there is a sandy beach and an apparent lack of a nearby rocky reef, such as between the Makotukutuku River and Te Humenga Point, the inshore area is still a suitable habitat for kina, paua and crayfish. The shallow inshore waters are strewn with large sub-tidal boulders, providing protected niches filled with calcareous algae and other seaweeds which are the main diets for both kina and paua, as well as suitable territories for crayfish. Unfortunately, there is a dearth of biomass data for any species in the area between Lake Ferry and Flat Point, but no-one would dispute that the habitats found here are capable of supporting substantial marine food resources compared with many other regions of coastal New Zealand. As recently as the 1960s, at these inshore areas with rough ground, such as the one just alluded to west of Te Humenga Point, one could easily obtain food for one's family by fossicking in shallow water. This is no longer the case.

Two excellent marine ecological surveys have been carried out along the coastline from Cape Palliser northwards (Glassy 2001 and Foude 2001). Glassy chose 18 rocky intertidal reef stations along the coastline and adopted a stratified quadrat sampling method to collect, count and measure specimens. He also made many useful general notes about habitats and signs of predation pressure by humans. In most areas surveyed he noted that few paua or kina were to be seen, and in some cases only juveniles. He attributed this to harvesting pressure by people and ease of access. In a few cases kina and paua were more abundant at more isolated stations. Glassy described the geology and geomorphology thus:

> "a general geomorphological pattern is apparent on the intertidal platforms; layers of horizontal strata are tilted to varying degrees and softer sediment is eroded forming troughs while parallel ridges of more resistant rock run along the shore... The pattern is influenced by local conditions and underlying geology. The resultant rocky intertidal reefs vary from near vertical cliffs in the south, to extensive wave-cut platforms in the north" (Glassy 2001: 5).

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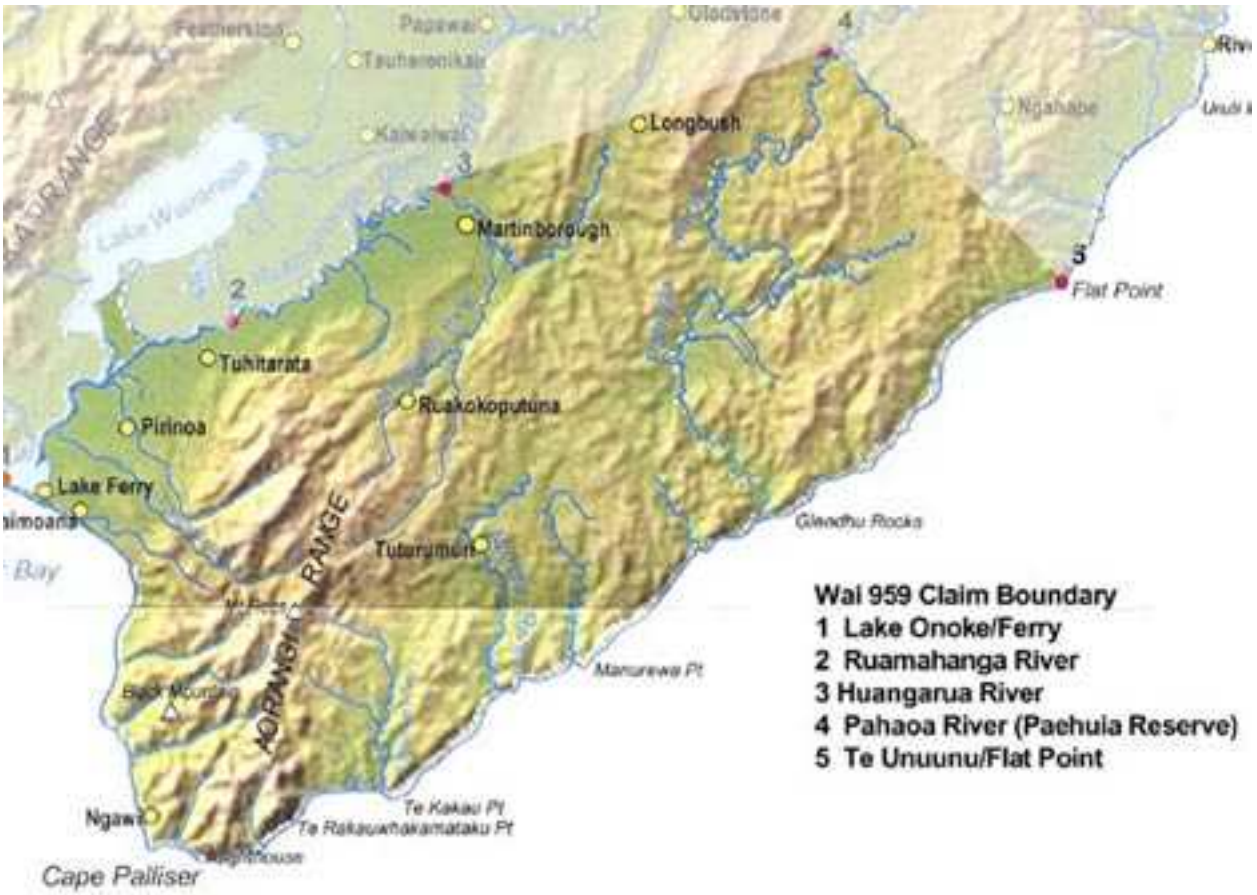

Figure 26. The *rohe* of Ngāti Hinewaka.

Of special interest is the only station which was surveyed in Palliser Bay itself. This was at the place Glassy refers to as 'Te Kawakawa Rocks'. This is actually Ngawi Point, known locally as Black Rocks, just west of Matakitaki a Kupe (marked on many maps as Cape Palliser). He comments:

> "The steep and narrow boulder fringe ... that makes up the intertidal zone of this terrace was relatively depauperate. Below the rocky beach, boulders had low densities of *Nodolittorina antipodium* and *Nodolittorina cincta*. *Melagraphia aethiops* and *Diloma arida* were present down the entire length of the shore and the red anemone *Isactinia tenebrosa* was only occasionally seen. Limpets including *Cellana denticulata*, *Cellana ornata*, *Cellana radians*, and *Notoacmea* spp. were found on boulders down the entire shore" (Glassy 2001: 78).

This area has been surveyed before using similar quadrat sampling methods by Anderson in 1971–1972, and it would certainly not be described as depauperate at that time. Anderson used the marine survey data to work out species density at various points around the Black Rocks peninsula to ascertain which part of the coastline the pre-European Māori were mostly using for gathering their food. He laid out 2 m wide transects to 30 m offshore, and randomly chose ten one square metre quadrats along each transect for the quantitative study. The fish survey was carried out by diving in the subtidal area and was qualitative:

> "This survey showed that the commonest species on the intertidal platform was the limpet, *Cellana ornata* (28.5% of all individuals counted), followed by *Melagraphia aethiops* (17.6%), *Cellana denticulata* (14.6%), *Cellana radians* (13.3%), the small chitons (11.7%), *Lunella smaragda* (6.7%), *Haliotis iris* (4.3%), and a large variety of other shellfish, crabs and crayfish in small quantities. Stocks of all major species were most dense on the western shore" (Anderson 1979: 58).

Anderson's survey is further discussed below when considering the archaeological evidence of former occupation in Palliser Bay, but at this point it is worth noting that there has been significant qualitative change between 1971 and 2001 in the relative abundance of available food at Black Rocks, mainly of shellfish.

Froude's marine survey was at eight localities along the same length of coastline, and was designed to collect qualitative and quantitative information about sub-tidal habitats. The quantitative surveys involved 3–4 sites at each locality in 6–18 m water. Transects 30 m long were laid out for quantitative studies. She also surveyed three spots near Cape Palliser: Rocky Point, Matakitaki a Kupe and Black Rocks. At Matakitaki a Kupe no paua were seen, but reasonable numbers of kina. At Black Rocks relatively low numbers of rock lobster were seen compared to other sites in the project. At Rocky Point she saw good numbers of rock lobsters.

One of the most interesting features of her study was the very high numbers of labrids (wrasse) seen in the fish survey (See Figure 27). Banded wrasse and scarlet wrasse account for 52% of all fish seen in the eight locations. Second in abundance was blue cod (23%), followed by butterfish (greenbone 6%), and somewhat surprisingly kelpfish (hiwihiwi 6%). This latter species is usually fairly rare this far south. As will be seen later, wrasses were extremely important to the Māori who lived in Palliser Bay in pre-European times.

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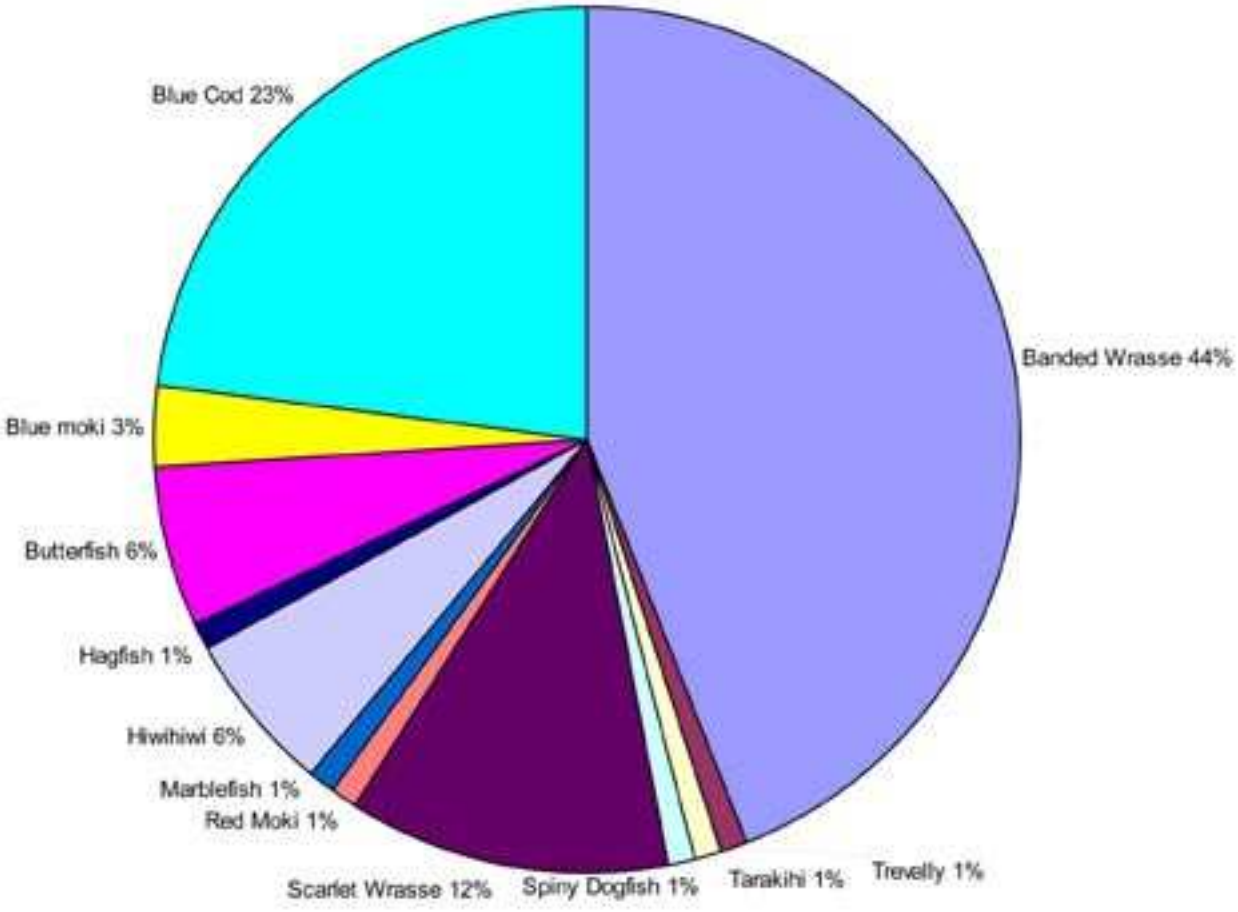

Figure 27. Relative abundance of different fish species in the *rohe* of Ngāti Hinewaka.

THE IMPORTANCE OF THE FISHERY TO NGĀTI HINEWAKA IN PRE-EUROPEAN TIMES

INTRODUCTION

Information about the importance of the fishery in pre-European times before the introduction of written history in New Zealand comes from two sources — oral traditions and pre-historic archaeology. Oral traditions, no less than historic records, frequently suffer from a problem concerning authenticity testing. That is to say, when someone speaks the following words (oral history), or writes them down on a piece of paper (written history), there is no guarantee that the statement is an accurate reflection of reality. It could, for example, be an exaggeration, or even a downright falsehood. Moreover, the statement itself is subject to various interpretations. Here is such a statement:

> "fish and shellfish were very important to me and my family"

This statement does not necessarily mean that this person and/or his family ever ate fish and shellfish. It could mean that they were professional fishermen and caught them for sale to someone else, and that is why they were important. In other words, the cultural context of such statements contains a great deal of the meaning of spoken and written statements. In addition, this statement, no matter how forcefully it is put forward, contains no quantitative meaning. Moreover, the word 'important' itself has several different senses which need to be kept separate if statements are to be correctly understood. Here are some examples of what 'important' could mean:

> commercially (for sale)
> culturally (for prestige, barter, or gift exchange)
> economically (in the food quest, the subsistence system)
> spiritually (ideologically in the magico-religious system)
> recreationally (for fun and pleasure)

This is not merely playing with words or linguistic trickery. These distinctions are significant, and need to be kept in mind when discussing fishing. It is so easy to be misunderstood with unclear use of language, or equivocate between one meaning or sense and another.

I shall try to keep these different senses in mind when using the term 'important' in what follows. It should be made clear at the outset that archaeological data tells us a great deal about subsistence economics, but very little about cultural, spiritual or recreational aspects of fishing. We can infer some of these things using modern analogues, for example by reference to ethnographic descriptions of similar small scale societies.

When it comes to fishing, there is an added problem — people frequently exaggerate everything about fishing, or even make up fabulous stories. How many they caught, how big they were, etc. Sometimes, these falsehoods or exaggerations are done quite unwittingly. For almost all Pacific island peoples, especially Polynesians, fishing is culturally important and one's standing in a community can rest on one's prowess as a fisherman. Consequently a

fisherman may emphasise certain species in his catch when recounting the day's fishing and not mention other species that are more easily caught and in greater abundance. In my experience working in small Pacific islands, when fishermen come home from the sea, fish are often laid out on mats in the village and then shared amongst the community. However, the fish on these mats are the prestigious species. The bulk of the catch is left in the canoe away from sight; and these are the easy to catch fish that do not carry prestige. In the case of fishing behaviour, an anthropologist must look beyond what people say and what people show him/her.

Archaeological data does not contain this problem, so inherent in oral and written history. The bones of fish and shellfish provide quantitative information on which species a group of people were gathering, and their relative abundance in the economic system. Archaeological data has a number of other problems, but this is not one of them. We can rely on the simple story which bones and shellfish tell us about the species captured and their relative abundance.

If an archaeological site contains a lot of fish bones or a lot of shellfish, we might be tempted to conclude "fish or shellfish were (economically) important to the community concerned". However, such a conclusion is not justified without some additional information. Suppose there were the remains of 8,000 fish in the site we are examining. That may sound like a lot of fish. But they could have been deposited over a period of 800 years. That would be 10 fish a year, which is only a few. Obviously we need information about the duration of the archaeological layer we are dealing with as well. Suppose we use the best dating methods and find that the 8,000 fish were caught over a period of one week. We might then be tempted to conclude that fish was (economically) important to this community. However, it might be a very large community, and once again we appear to be back at square one, requiring information about population size as well.

The inescapable fact is that an enormous shell mound, or an enormous quantity of fish bones, does not, by itself, lead to a statement 'fish or shellfish was (economically) important to this or that pre-historic community'. Actually, the only fully reliable way of assessing the quantitative importance of marine food in ancient human diet is by examining vestiges of human tissues that are found in archaeological sites, such as a fragment of human bone, or hair, or some other tissue. Analysis of the isotopes of ^{13}C, ^{15}N and ^{34}S is the only known method by which the quantitative importance of marine food in the diet of ancient people can be determined. I will return to this subject below.

Although the analysis of fish bones and shellfish remains from archaeological sites needs to be carefully considered before assessing the quantitative role that these sources of food played in the economic system, it does tell us a great many other things about the activities of a group of pre-historic people. For example, we can easily see which species were the most important to the community, and if the people ventured far out to sea to catch them, what influence they had on their marine environment over long periods, etc. Those are relatively simple things to assess.

I shall discuss the importance of fish and shellfish in the subsistence economy of the Ngāti Hinewaka people in two sections: using archaeological data and from modern historic sources.

ARCHAEOLOGICAL EVIDENCE SHOWS WIDE-RANGING FOOD QUEST

Over a period of three years, between 1969 and 1972, an archaeological research programme was carried out in Palliser Bay (Leach and Leach 1979). Considerable quantities of midden remains (shellfish and animal bones) were studied from the Washpool site (Makotukutuku River) by myself (Leach 1979a, 1979b, 1979c), and from four different sites at Black Rocks near Cape Palliser by Anderson (1973, 1979). These two archaeological studies have provided a wealth of basic data from which a great deal of knowledge has been gained about the subsistence behaviour of pre-European Māori in Palliser Bay, and in particular the ancestors of the Ngāti Hinewaka people.

Anderson also carried out surveys of the marine environment in the vicinity of Black Rocks for comparative purposes (Anderson 1973, and Appendix 3). In this survey, Anderson laid out 14 transects 30 m long and 2 m wide randomly chosen around the coastline at Black Rocks (Anderson 1973: 55 ff). Ten paired (side-by-side) 1 x 1 m quadrats were randomly chosen along each transect, covering 20 square metres of the 60 available in each transect. Species were identified in each square and counted, and for each third square all specimens were bagged and taken ashore for measurement. This methodology was followed to provide quantitative data on population structures of all shellfish species in the inshore area, so that the archaeological finds could be compared with this to assess pre-European harvesting strategies.

Quantitative information on the Minimum Number of Individuals (MNI) of different species of fish, shellfish, birds, and mammals at the Washpool and Black Rocks is summarised in Appendix 2. The various sites cover the entire range of pre-European occupation of Palliser Bay from the 12th to 19th centuries. This provides an overview of the nature of the food quest, rather than going into fine details for different periods of time. Thus, the data is presented for two areas — the Washpool site all periods combined, and for Black Rocks all layers and the four sites combined.

These data are also summarised in graphical form. Figure 28 shows the relative abundance of the different types of fish caught by the pre-European people who lived in Palliser Bay. It is readily seen that the catch at the Washpool is somewhat different in character than that at Black Rocks. At the Washpool there are roughly equal catches of wrasses, tarakihi and crayfish. At Black Rocks crayfish greatly dominate the catch, with wrasses second in abundance.

Fish belonging to 25 families were caught at the Washpool and 18 at Black Rocks. This is a diverse range of fish, compared with other archaeological sites in New Zealand, and shows that these people had considerable experience of marine fishing. This is illustrated in Figure 29, where the catches from 126 archaeological sites scattered from one end of New Zealand to another are plotted. The X axis shows the number of families of fish, and the Y axis is Shannon's H statistic, which is a measure of catch diversity. It is evident that the two largest sites at Black Rocks (BR3 the Black Midden, and BR4 the Crescent Midden) and the Washpool plot out at the top right hand corner of the ranges, showing great catch diversity. This partly reflects the rich rocky shore habitat in Palliser Bay, and partly testifies to the fishing prowess of the pre-European fishermen who lived there. Other archaeological sites plotting in the same vicinity of this graph are from other areas of Cook Strait, Foveaux Strait,

and the Chatham Islands. Most pre-European Māori in New Zealand focused their fishing activities on a small number of target species, but not the people of Palliser Bay, who were clearly wide-ranging in their fishing activities.

The crayfish catches in pre-European times in Palliser Bay are of special interest. Crayfish are represented in archaeological sites by parts of the mandible, which are quite durable and common in favourable soil chemical conditions, such as calcareous deposits (shellfish remains) or ash deposits. The live size of the crayfish may be estimated from these mandibles (Leach and Anderson 1979, Leach 1979a). Figure 30 gives the size frequency diagram of prehistoric crayfish catches at Black Rocks (N=472), compared with a sample of mandibles from a modern dump of crayfish bodies in the same general area (N=189). Several things are apparent in this Figure. Firstly, prehistoric people were not averse to taking crayfish, which, by modern standards, are undersized. This pattern of exploitation is common for many species throughout pre-European New Zealand. This feature will be returned to later. Secondly, there was clearly an abundance of large and very large crayfish in pre-European times compared to the modern era. By far the bulk of crayfish were well above the modern minimum legal size. The modern sample has nowhere near as many above the minimum legal size with a very strong peak around the MLS. This can be compared with the crayfish population structure in 1999 from the Te Humenga Taiapure (discussed in detail elsewhere in this report), shown in Figures 31 and 32. This shows hardly any specimens above the minimum legal size.

In the very early period of occupation at Black Rocks, the crayfish catch was mainly composed of very large individuals, and over a period of time the mean size of the catch appears to fall significantly (Figure 33).

Details of the shellfish harvested by pre-European Māori are also provided in Appendix 2, and plotted out in Figure 34. At the Washpool, 'tusk shells' (*Dentalium nanum*) appear as the most abundant species. These shells were used not for food but for decoration and should be ignored in any consideration of subsistence economy. Of the food species, paua were the most important to the people living there. Some 30 species of shellfish were collected by these people. Unfortunately the abundance value for kina cannot be considered reliable, and is greatly underestimated. This is due to problems determining MNI for this species. It is notable that tuatua and pipi are present in small numbers at both the Washpool and at Black Rocks. These species are not locally available, and must have been brought in, perhaps as part of the gift exchange network with other groups[20].

At Black Rocks, 51 species of shellfish were being gathered by the people who lived there. I know of no other series of archaeological sites in New Zealand with such a diverse range of species. The natural abundance curve for different species of shellfish in Anderson's marine survey is illustrated in Figure 35. Spotted topshell, limpets, catseye and paua are dominant, and were in similar proportions in the archaeological sites.

The sizes of paua being harvested by the people living at Black Rocks are indicated in Figure 36. This shows that almost no paua being collected were above the modern-day minimum

[20]According to elderly Māori, pipi, but not tuatua, were once present in small numbers at the sandy beach at Te Kopi and snapper used to come there and eat them.

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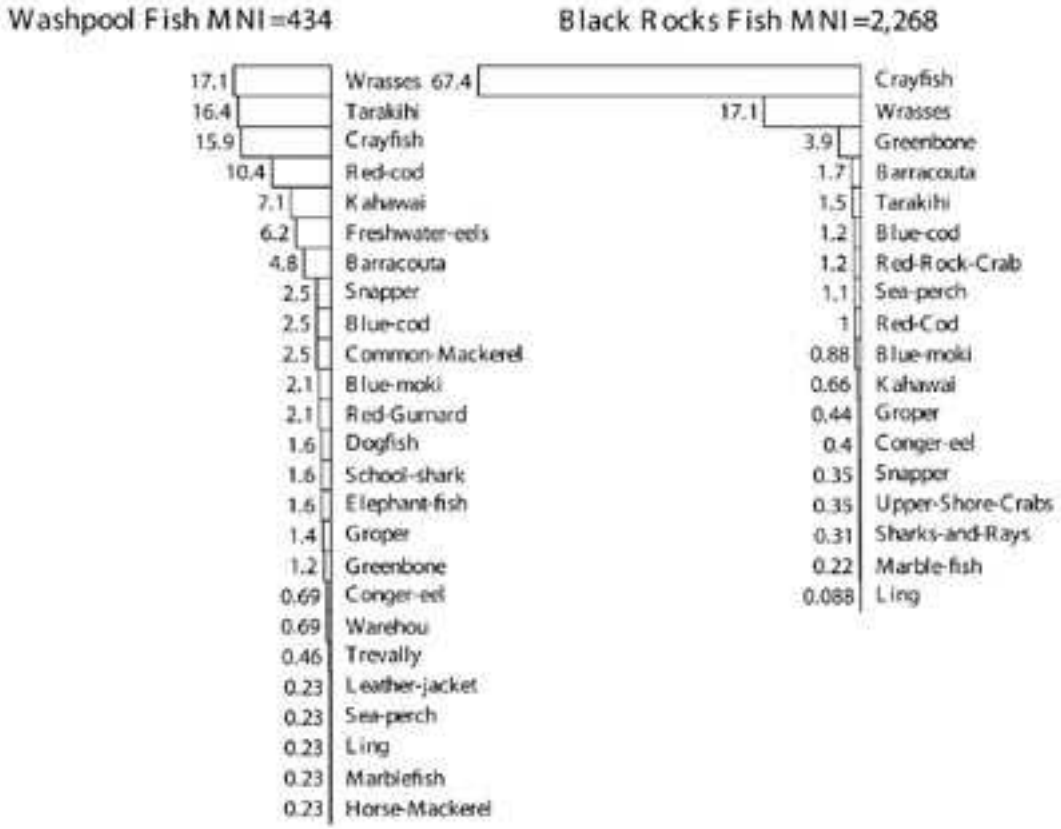

Figure 28: Relative abundance of different families of fish at the Washpool and Black Rocks caught by pre-European Māori.

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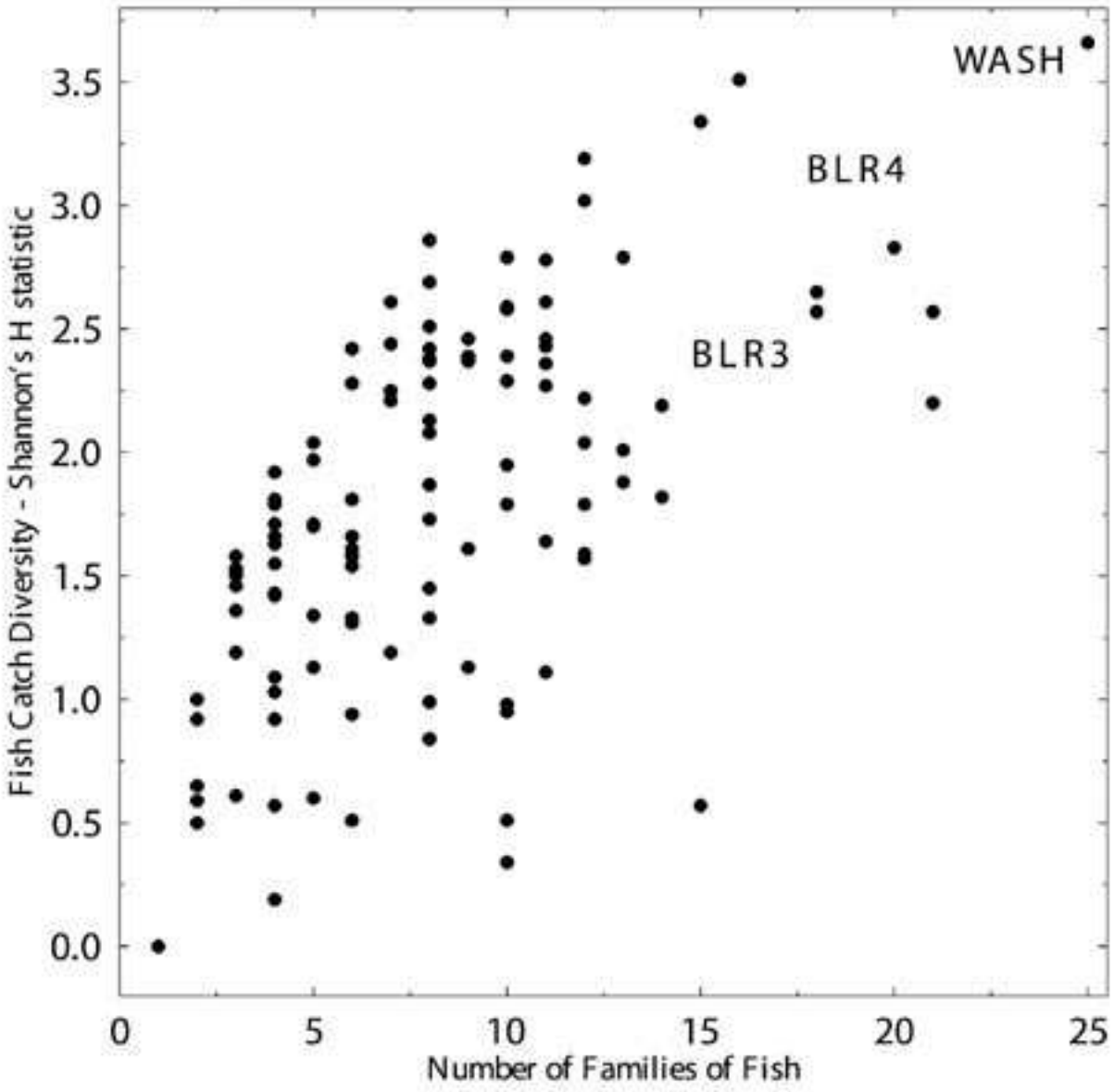

Figure 29: The diversity of fish catches for 126 archaeological sites throughout New Zealand.

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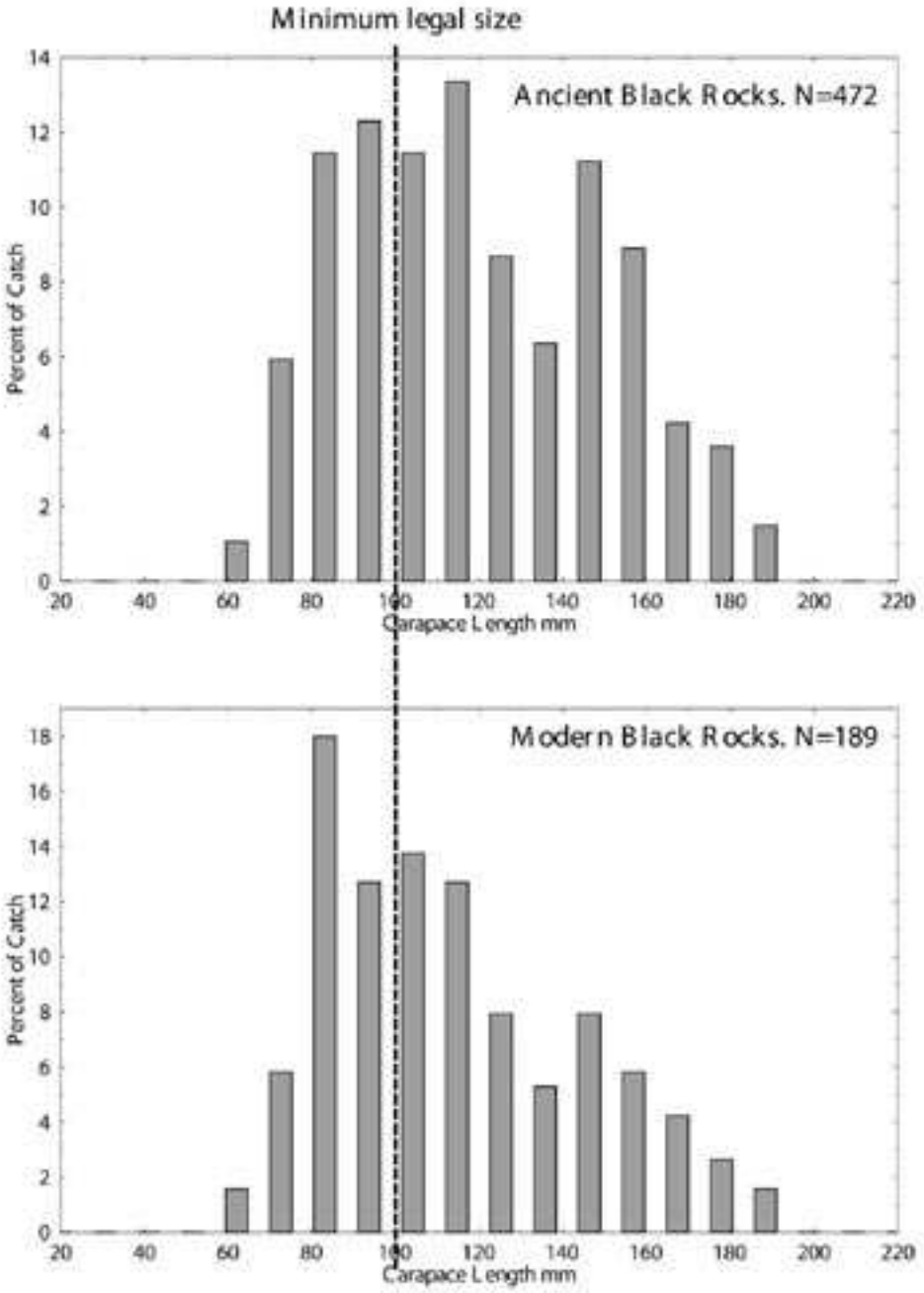

Figure 30: Reconstructed crayfish catches for prehistoric Black Rocks compared with a modern sample from the same area.

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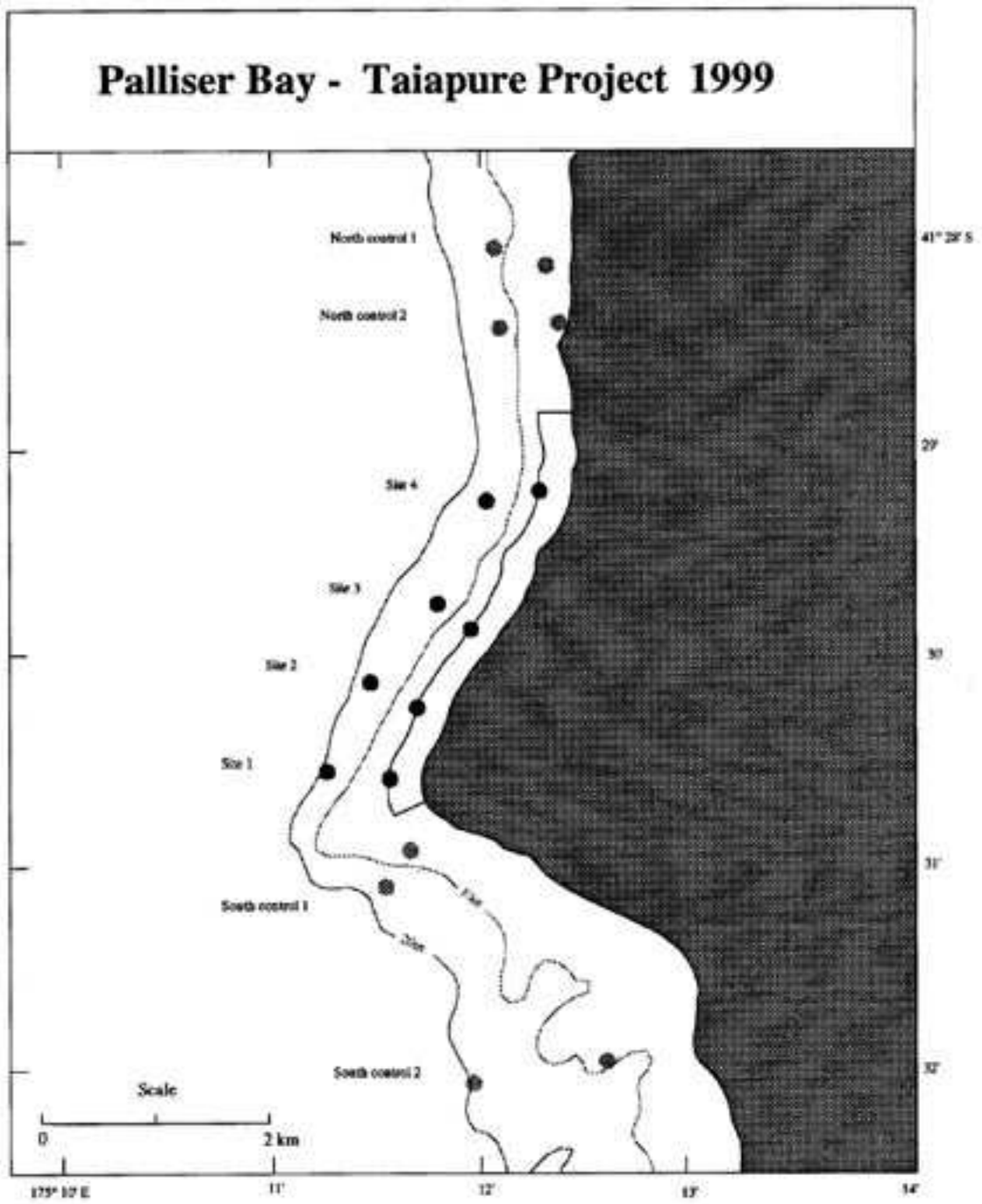

Figure 31: Map of the Te Humenga Taiapure area showing the location where samples were taken for estimating the population structures of kina, paua and crayfish (Stewart and MacDiarmid 2003).

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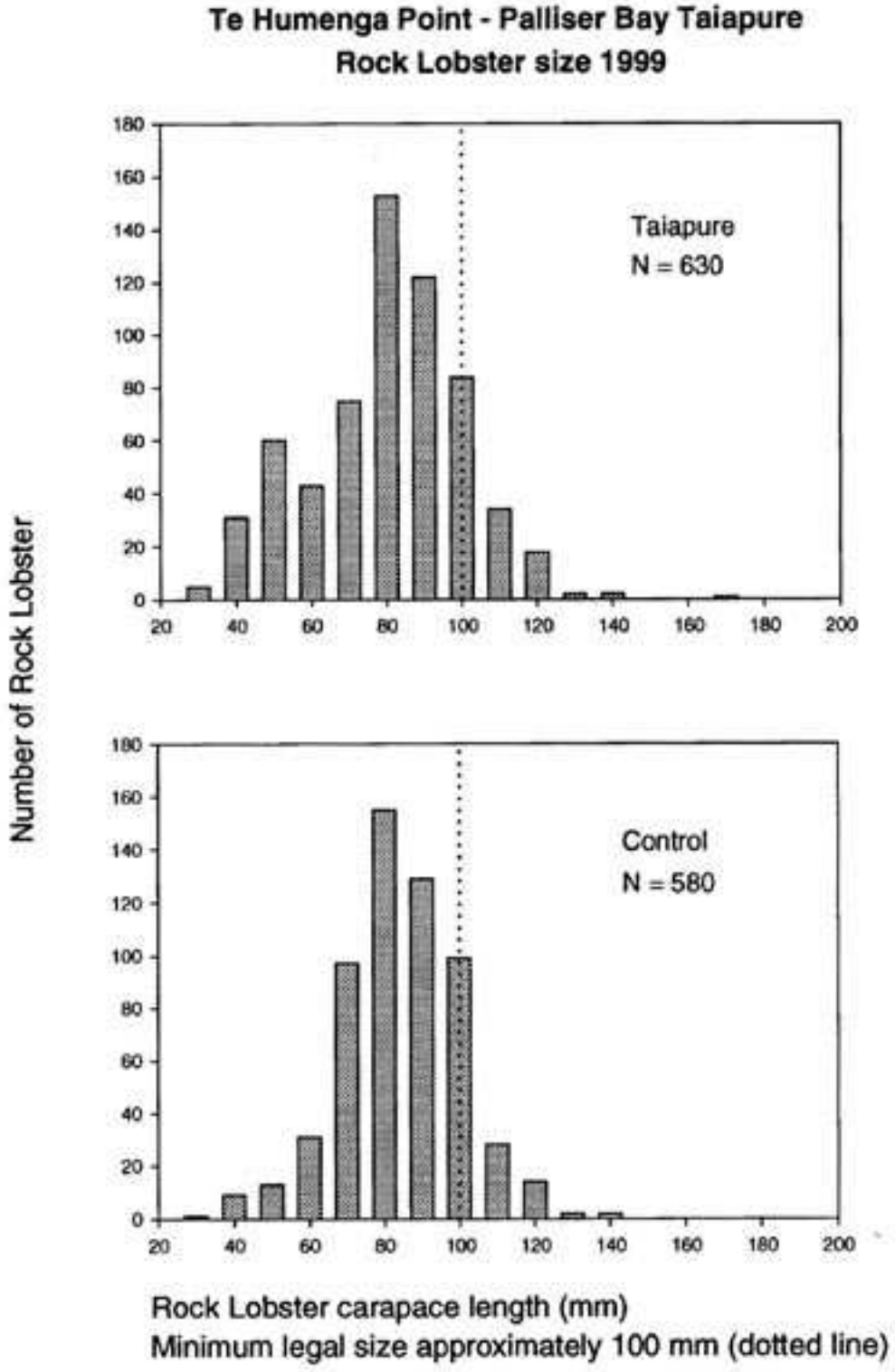

Figure 32: Size frequency curves of crayfish from the Te Humenga Taiapure and the control samples nearby (Stewart and MacDiarmid 2003).

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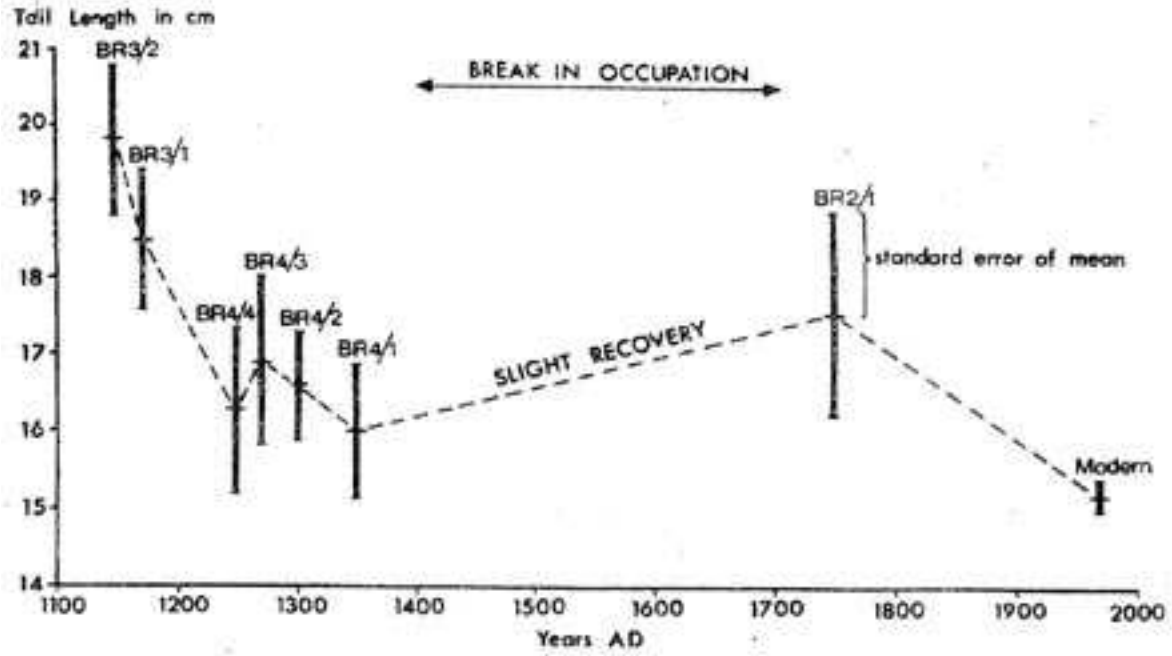

Figure 33: Changes in mean crayfish size through time at prehistoric Black Rocks (after Leach and Anderson 1979: 160).

legal size. In fact, people had a clear preference for gathering very small specimens, many of which are about the size of limpets. This can be compared with the 1999 survey from the Te Humenga Taiapure (Figure 37). The Taiapure appears to have more than half well above minimum legal size which is in marked contrast to the Black Rocks survey. This is probably attributable to the survey method used for the Taiapure which did not involve lifting boulders where juveniles are normally found (Stewart and MacDiarmid 2003, {210-212}). Strictly speaking therefore these size frequency diagrams are not population structures, but represent individuals which are not hidden from view.

As mentioned above, kina are typically found in such a highly fragmented condition in archaeological sites that it is very difficult to estimate relative abundance or to reconstruct the size frequency diagram of prehistoric catches. The size frequency diagram for the Te Humenga Taiapure is given in Figure 38, together with that from the nearby control area. There is no minimum legal size for kina (Annala *et al*. 2002a: 279). Once again, this size-frequency diagram cannot be said to represent the population structure because juveniles living under boulders were not included. It is therefore biassed towards larger individuals.

Although we are primarily concerned with marine resources in this report, mention must also be made of food resources from the land which contributed to the prehistoric subsistence economy. This helps to show how the system of land tenure which traditional Māori had in New Zealand was an integration of property rights extending from the forested interior, down to the lowlands, and out to sea.

Birds were another significant component in the early economy of the Palliser Bay Māori. Again, the details are provided in Appendix 2, and summarised in Figure 39. Some 28 species were being taken for food at Black Rocks, and as many as 45 species at the Washpool. This latter range of birds is remarkable for any pre-European Māori community in New Zealand. Birding was clearly an important activity of these people. In both parts of Palliser Bay, birds from the forested interior form a large part of the assemblage, with the bulk of the remainder made up of sea birds. Moa are present, but only in very small numbers.

Other aspects of the subsistence economy represented in the middens are bones of Polynesian rat, Polynesian dog, southern fur seal, dolphin/porpoise, sea lion, elephant seal, pilot whale and baleen whale (Appendix 2).

What these middens in Palliser Bay reveal are aspects of the subsistence economy relating to protein foods, and in the case of sea mammals, information about fat consumption. These middens show extensive use of marine resources for food and also resources from the forested interior of the Aorangi mountains. What middens do not tell us is about the utilisation of carbohydrate foods; that is, about the utilisation of the lowland coastal flats between the forested interior and the sea. In Palliser Bay, the gardening activities of the pre-European people have been studied in great detail by H. Leach (1976, 1979a, 1979b)

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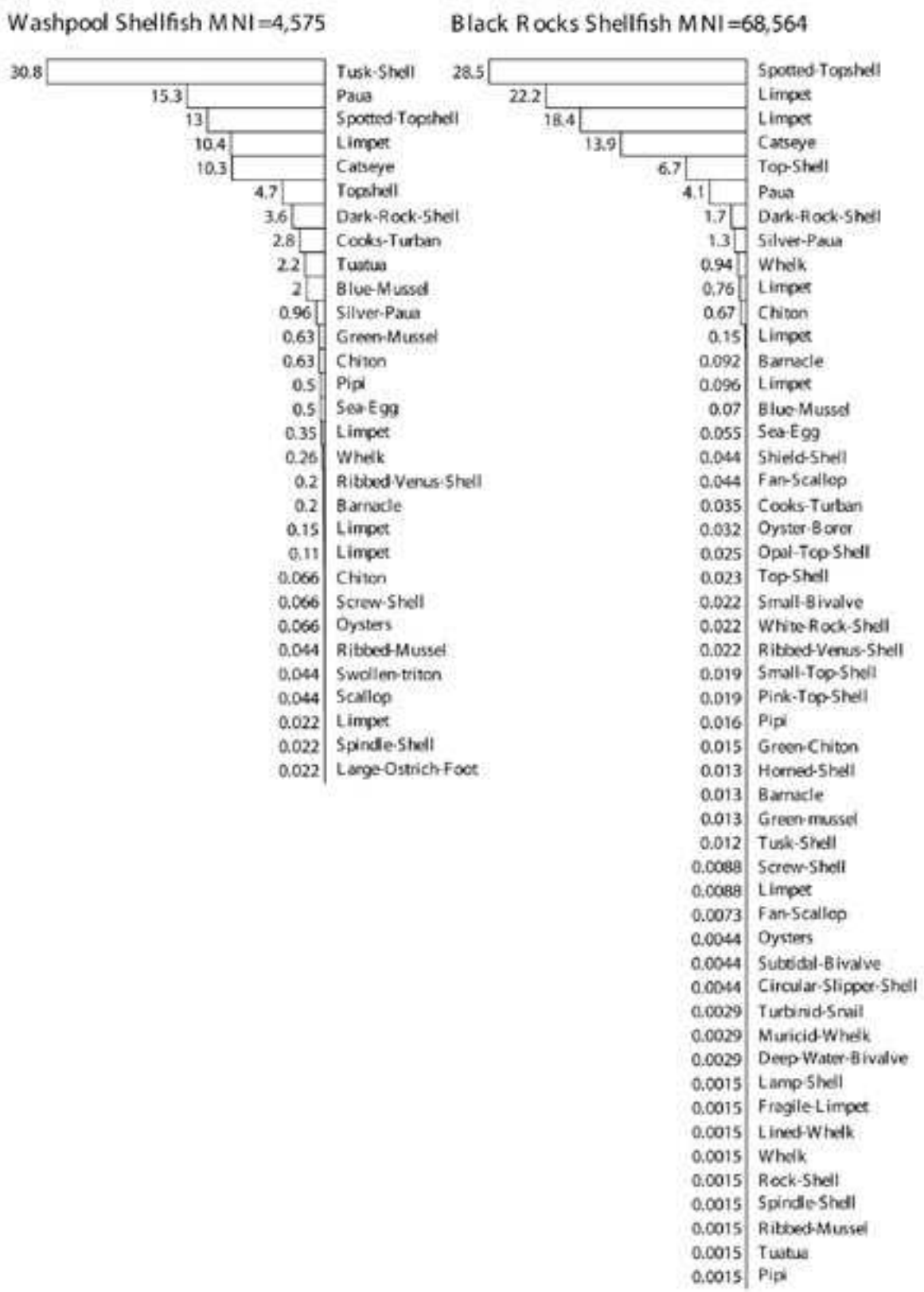

Figure 34: Relative abundance of shellfish species collected by pre-European Māori at the Washpool and Black Rocks in Palliser Bay.

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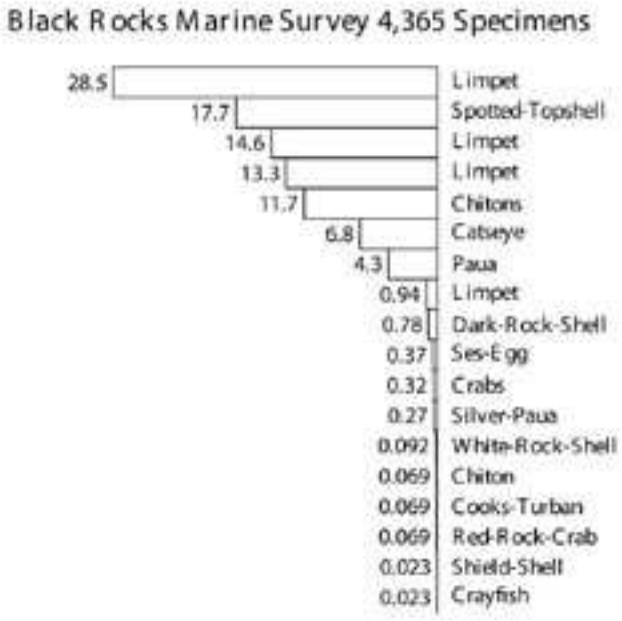

Figure 35: The relative abundance of different species of shellfish in the modern environment at Black Rocks (after Anderson 1973).

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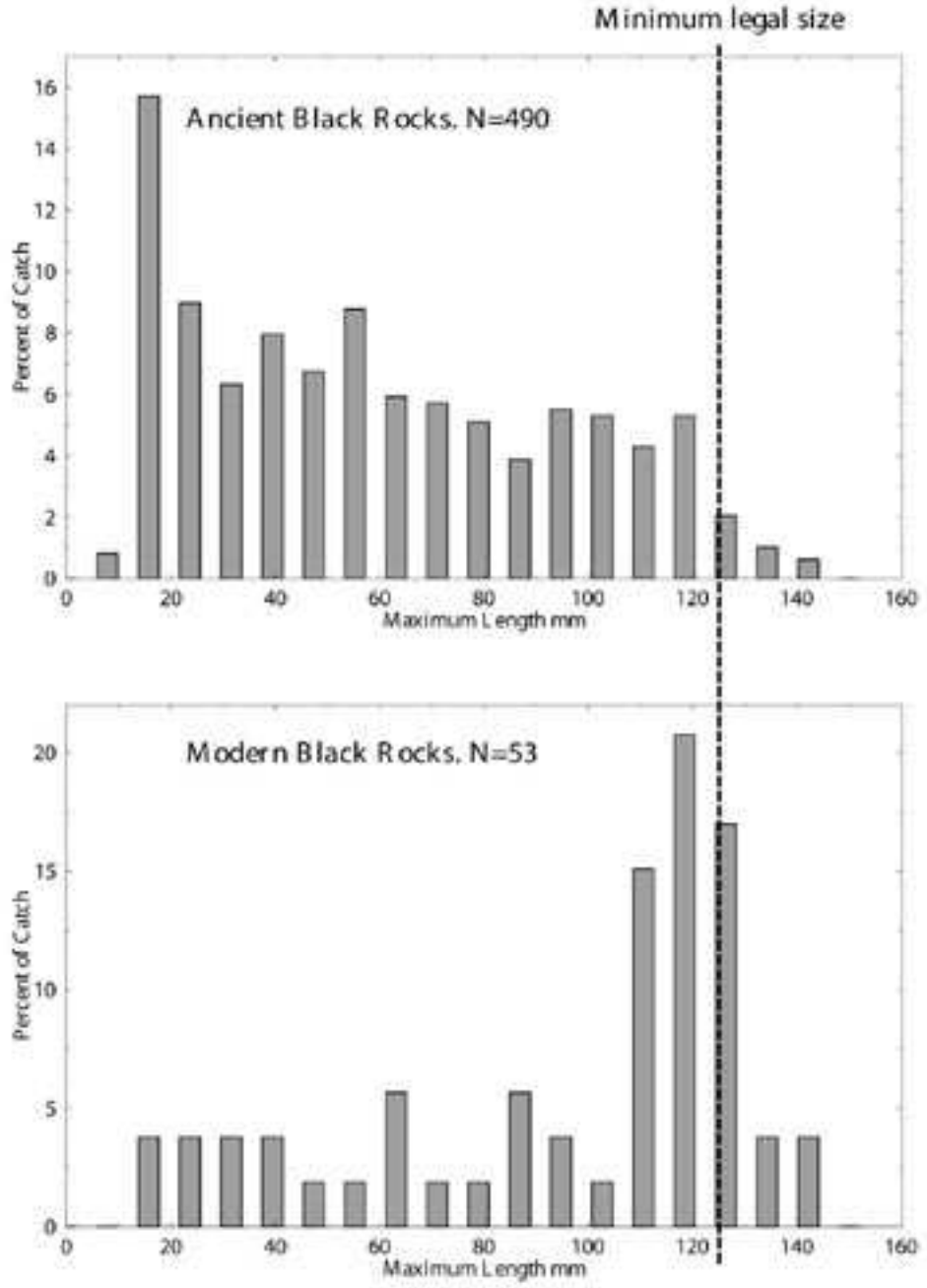

Figure 36: Size frequency diagram of paua being gathered by people living at Black Rocks compared with those found in the modern marine survey nearby.

3338

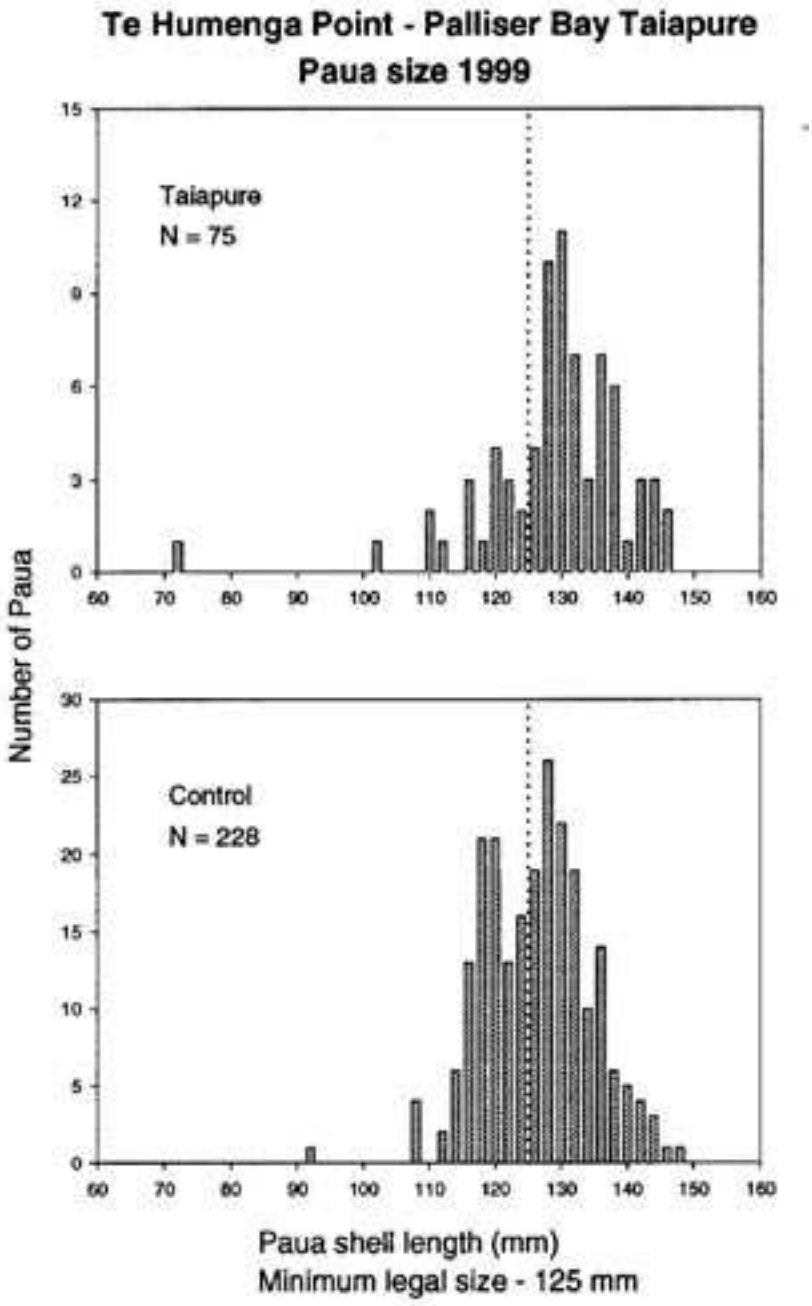

Figure 37: Size frequency diagram of paua surveyed at the Te Humenga Taiapure and the nearby control area (Stewart and MacDiarmid 2003).

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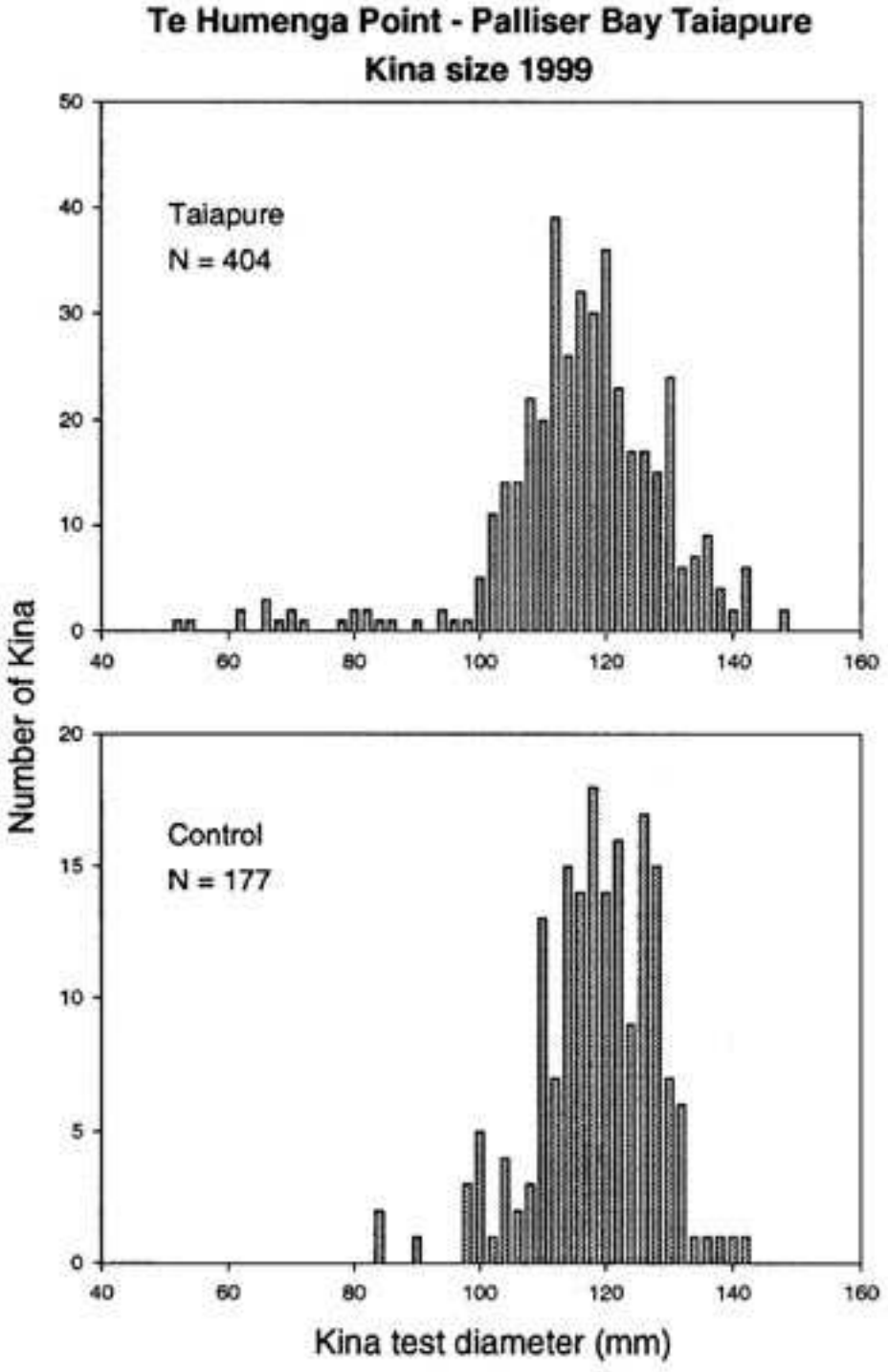

Figure 38: Size frequency diagram of kina surveyed at the Te Humenga Taiapure and the nearby control area (Stewart and MacDiarmid 2003).

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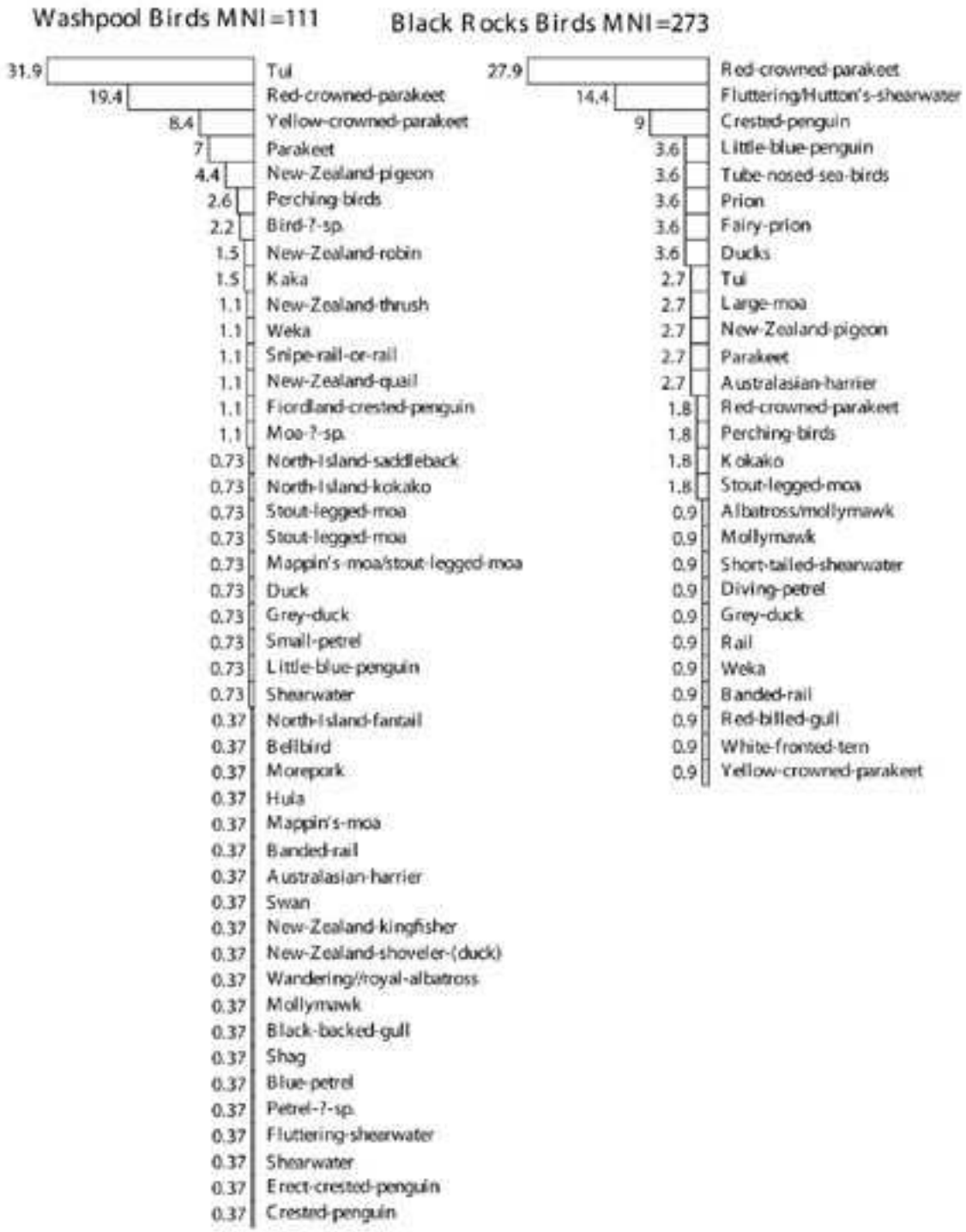

Figure 39: The relative abundance of different species of birds in the subsistence economy of pre-European people living at the Washpool and at Black Rocks.

It will be recalled that I earlier mentioned that human survival requires keeping within certain nutritional constraints, not always fully appreciated by scholars concerned with reconstructing past subsistence economies. To recap briefly, the key factors are:

1: While humans are able to synthesise most amino acids internally to build muscle and other tissues, there are 8 essential amino acids which they are unable to synthesise, and these must be obtained by eating some protein rich food which contains them. Eating too much protein will cause sickness and death. This is because there is an upper limit to the total amount of protein which can be consumed on a regular basis. This limit is reached when approximately 50% of total calories are derived from protein (Noli and Avery 1988: 396), but most peoples limit their intake of protein to around 10–15% of energy needs (Noli and Avery 1988: 396). The ingestion of levels of protein as low as 23% of energy intake, over 10 days, has been observed to cause azotaemia (excess nitrogen) and a rise in plasma ammonia concentration which can be lethal (Noli and Avery 1988: 397).

2: Fat is also required in human diet, because there are three essential fatty acids — arachidonic, linoleic, and linolenic — which must be taken in as food. These can be derived from fats and/or oils from various sources, such as animals, fish, and some plants (Leach *et al*. 2003) .

3: There is a common misconception that starchy carbohydrate foods are essential in human diet in large amounts, but this is not strictly so. This type of food is a particularly good one for providing energy, which is the main reason why it is so common in human diets. All other foods provide energy too, and fat (lipids) is a very good alternative source to carbohydrate foods (Leach *et al*. 2003).

So, humans firstly need some protein (essential amino acids), secondly a small amount of fat (essential fatty acids), and thirdly a large source of energy (which is not from protein sources) to make up at least 70–80% of their food energy requirements.

Thus it can be seen that humans cannot live on sea food alone, nor indeed from birds in the forest. The effective upper limit for consumption of protein rich foods is about 30% of energy requirements. This must be kept in mind when making statements about the ‘importance’ of the fishery to pre-European, traditional or historic communities living anywhere in the world. With some exceptions sea foods are mainly sources of protein.

The key then, to a successful subsistence economy, is not how to gain protein foods, such as fish and birds, but how to find that all-important 70–80% energy from something other than protein. There have been basically two quite different solutions to this quest which human communities have discovered. One is based on carbohydrate, such as starch-rich foods, and the other is based upon fat. Of these two solutions, a diet based upon fat is by far the older, and was typical of the ancestors of modern humans from at least 1 million years ago up to about 10,000 years. At around that date, the so-called ‘Neolithic revolution’ took place, when humans learned how to cultivate starchy foods in abundance, which formed the basis of most modern-day diets in industrialised societies. A few communities carried on the earlier form

of diet; Inuit Eskimo in the arctic, and closer to New Zealand, the prehistoric Moriori of the Chatham Islands (Leach *et al*. 1996, Davidson and Leach 2001) are examples of diets based upon fat consumption rather than carbohydrate as the main source of food energy.

In Palliser Bay, the archaeological research of H. Leach (1976, 1979a, 1979b) conclusively showed that the prehistoric communities there cultivated large areas of kūmara. This then would have been the main source of food energy for these people, augmented by fern-root and the fat from occasional sea mammals. Smith has shown that sea mammals together with their breeding colonies retreated much further south to get away from human communities quite rapidly following initial human colonisation of New Zealand by Polynesians (Smith 1985, 1989). Thus, although some sea mammals were found in the Palliser Bay archaeological sites they are unlikely to have been a reliable and significant source of energy-rich blubber, except in the very earliest phase of settlement in the area. The mainstay of diet was therefore starchy food.

It was earlier mentioned that we are now able to assess the contribution of the main components in human diet directly, by carrying out isotope analyses of ^{13}C, ^{15}N and ^{34}S in small archaeological samples of human tissue. Although this has not been done for Palliser Bay, we have results from numerous other groups throughout the Pacific and some from New Zealand. Results from four prehistoric New Zealand groups and one 19th century New Zealand European are presented in Table 2.

TABLE 2
Some results from bone isotope analysis

Daily intake of Protein g

	Plants		**Birds etc.**		**Shellfish**		**Fish**		**Seals**		
Group	**xb**	**sd**	**xb**	**sd**	**xb**	**sd**	**xb**	**sd**	**xb**	**sd**	**Total**
European	23	6	131	25	0	0	4	2	0	0	158
Rotoiti	26	9	61	39	11	8	0	0	0	0	98
Wairau	10	3	15	16	10	9	119	36	29	20	183
Lagoon	3	2	17	14	7	5	70	40	76	22	173
Chatham	4	1	7	6	5	4	74	27	80	20	170

Daily intake of Energy kCal

	Plants		**Birds etc.**		**Shellfish**		**Fish**		**Seals**		
Group	**xb**	**sd**	**xb**	**sd**	**xb**	**sd**	**xb**	**sd**	**xb**	**sd**	**Total**
European	1548	426	879	166	0	0	20	10	0	0	2447
Rotoiti	1737	571	406	265	56	41	0	0	0	0	2199
Wairau	666	176	103	109	55	49	603	184	550	366	1977
Lagoon	225	101	112	94	35	25	356	202	1413	408	2141
Chatham	233	47	50	38	27	20	377	138	1506	373	2193

It can be seen from the table that the three coastal groups (the people of Wairau Bar in Marlborough and Lagoon Flat in Canterbury, and the Moriori of the Chatham Islands) all obtained significant protein and food energy from marine resources, in marked contrast to the inland Māori of Rotoiti and the 19th century European. Indeed, marine foods contributed 87% of the food energy (an average of 1910 kCal of the daily intake of 2193 kCal) in the diet of

prehistoric Moriori (Davidson and Leach 2003). Only about 17% of their food energy came from fish. Their single most important source of food was sea mammals. Blubber was by far the most important part of their food energy. The people of Lagoon Flat had a very similar diet.

Wairau Bar, directly across Cook Strait from Palliser Bay, provides a better indication of the probable importance of marine foods in the diet of the pre-European people of Palliser Bay. The Wairau people obtained their food energy in the following proportions:

Plant foods	34%
Birds and land animals	5%
Shellfish	3%
Fish	31%
Seals	28%
Total	**101%**

Marine foods contributed 62% of the food energy at Wairau Bar, of which fish and shellfish contributed 34%. There would have been some differences between Wairau Bar and Palliser Bay (Palliser Bay people may have consumed more birds and shellfish and fewer seals), but of the five samples above, Wairau Bar undoubtedly provides the best comparison.

Until isotope analyses are available for Palliser Bay, it is not possible to answer exactly how 'important' marine foods, and particularly fish and shellfish, were in the subsistence economy of Palliser Bay. However, the limited evidence presented here shows that fish and shellfish were 'important' in the diets of other coastal dwelling Māori, and that these diets were completely different from that of a 19th century New Zealand European. The archaeological evidence reviewed above shows that the Palliser Bay people harvested a rich diversity of fish and shellfish. Together with the comparative evidence from Wairau Bar, this can leave us in no doubt of the importance of the fishery to Ngāti Hinewaka in pre-European times.

Conclusion 34

THE IMPORTANCE OF THE FISHERY TO NGĀTI HINEWAKA IN POST-EUROPEAN TIMES

INTRODUCTION

At the dawn of the European era, the Ngāti Hinewaka people had a settlement pattern which was coastal in focus. Their villages were based around coastal ecotones, that is at the confluence of several different ecosystems, notably the sea, the coastal flat land, a river valley, and the forested interior. This provided all the necessary resources for a successful subsistence economy based on fishing and shellfishing, kūmara cultivation, and birding. It was not possible to spend any length of time living in the main Wairarapa valley because kūmara cultivation in those areas was impossible. Regular heavy frosts in winter prohibited this. With the advent of Europeans, potato was introduced into New Zealand, and this had a rapid and profound effect on the settlement pattern of Māori, especially in more southern regions of New Zealand, because potato could be grown in inland areas, hitherto unsuited to cultivation. Moreover, Europeans moved into the Wairarapa valley and started to clear bush and establish farmland in the rich alluvial soils of the Ruamahanga and Tauherenikau flood plains, and this was an added attraction to Māori to move away from their traditional coastal lands.

In this changing economic climate, Ngāti Hinewaka came under intense pressure to sell land. Their first response to this was to lease land in order to retain tribal lands and gain income for their descendants in perpetuity. The Native Land Purchase Ordinance 1846 made this extremely difficult. Until Europeans came to this area, the carrying capacity of the land was strictly limited, given the type of subsistence economy which prevailed. It has been argued elsewhere that villages at the mouths of the main river valleys along the coast from Lake Ferry to Flat Point would have been only about 30–40 people each (H. Leach 1976: 214, Leach and Leach 1979: 266). All this changed with the advent of potato and Europeans, and the carrying capacity of the land greatly increased. In the new type of economy which was emerging, some parts of the land hitherto used for gathering forest products, were no longer as important. In selling land, Ngāti Hinewaka held on to the places most important to them for fishing and shellfishing, because it was simply inconceivable that life could be maintained without those resources. It might be possible to grow potato in place of kūmara and get far greater yields and in areas that suffered frosts, but life without *kaimoana* was unthinkable. The is one of the principal reasons why especially important places were set aside as Native Reserves. They were established in traditional village locations, which themselves were located to take greatest advantage of economic resources for the maintenance of life. They are also the places where there are strong spiritual connections going back centuries, and where ancestors are buried. Some of the Native Reserves which were established in the Wairarapa area are in inland locations, which are those places where Māori were able to establish settlements following the advent of Europeans and potato cultivations; however, most of them are located at the sites of traditional coastal villages where Ngāti Hinewaka could be assured they would have access to *kaimoana* forever.

NGĀTI HINEWAKA EXPECTED EXCLUSIVE FISHING RIGHTS ADJACENT TO NATIVE RESERVES

As explained in some detail elsewhere in this report, Ngāti Hinewaka would not have distinguished between the ownership of coastal land and the ownership of the adjacent inshore fishery. These domains, which might be considered separately by Europeans, were simply part of one integrated whole in Māori society. I believe that when Native Reserves were established, Ngāti Hinewaka would have though that they would continue forever to have '*full exclusive and undisturbed possession of their Lands and Estates Forests and Fisheries and other properties which they may collectively or individually possess so long as it is their wish and desire to retain the same in their possession*' (Article the Second, Treaty of Waitangi, English version).

Unfortunately, the Crown had a different view about title, which was founded in English Common Law, and for a time representatives of the Crown in New Zealand may not have been aware that customary title was different to English Common Law in this respect. Modern New Zealand history is replete with examples of this different world view between Māori and Pakeha concerning the fishery. The negotiated settlement between the Crown and Māori, following the Muriwhenua claim, is concerned with sharing profits from the commercial fishery, but does not impinge on rights relating to customary fishing. The Waitangi Tribunal has made its position clear on this point already:

> "We note that the Tribunal's jurisdiction in respect of commercial sea fisheries claims was removed as a result of the 1992 fisheries settlement, and we accordingly excluded all such fisheries from our consideration" (WAI-145: 455).
>
> "Regardless of the more general issues of Maori ownership of the foreshore under consideration in the *Marlborough Sounds* case, Maori undoubtedly had an interest in what happened to the foreshore adjoining the land which remained in their possession, particularly those places where they actually lived" (WAI-145: 460).

I now turn attention to the 20 specific places where Ngāti Hinewaka believe that the Crown should have ensured that they were afforded exclusive rights to the inshore fishery. These are the coastal areas adjacent to the blocks which were set aside as Native Reserves. The historical evidence relating to each of these has been carefully examined by Bruce Stirling and is presented in his report on Ngāti Hinewaka Lands 1840–2000 (Stirling 2003), and I will quote passages from his report relating to each Reserve. In some cases there is compelling documentary evidence of the importance of the fishery at particular reserves. Ngāti Hinewaka believe that this can be extended to each and every one of these Reserves; that is, that their ancestors would have expected exclusive rights to the inshore fishery in front of all Native Reserves. I will briefly describe each Reserve from the most northern Reserve, southwards.

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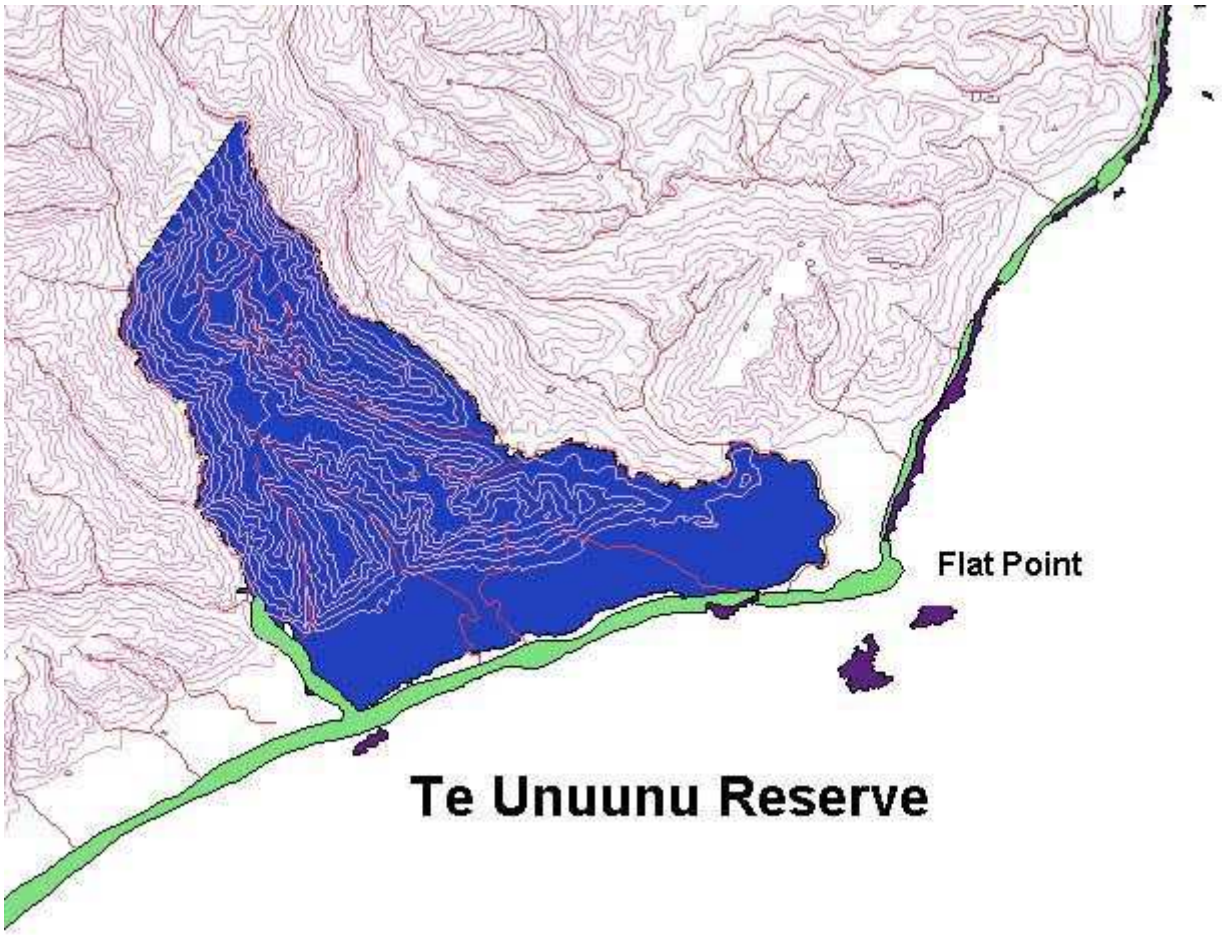

Figure 40: The Te Unuunu Reserve.

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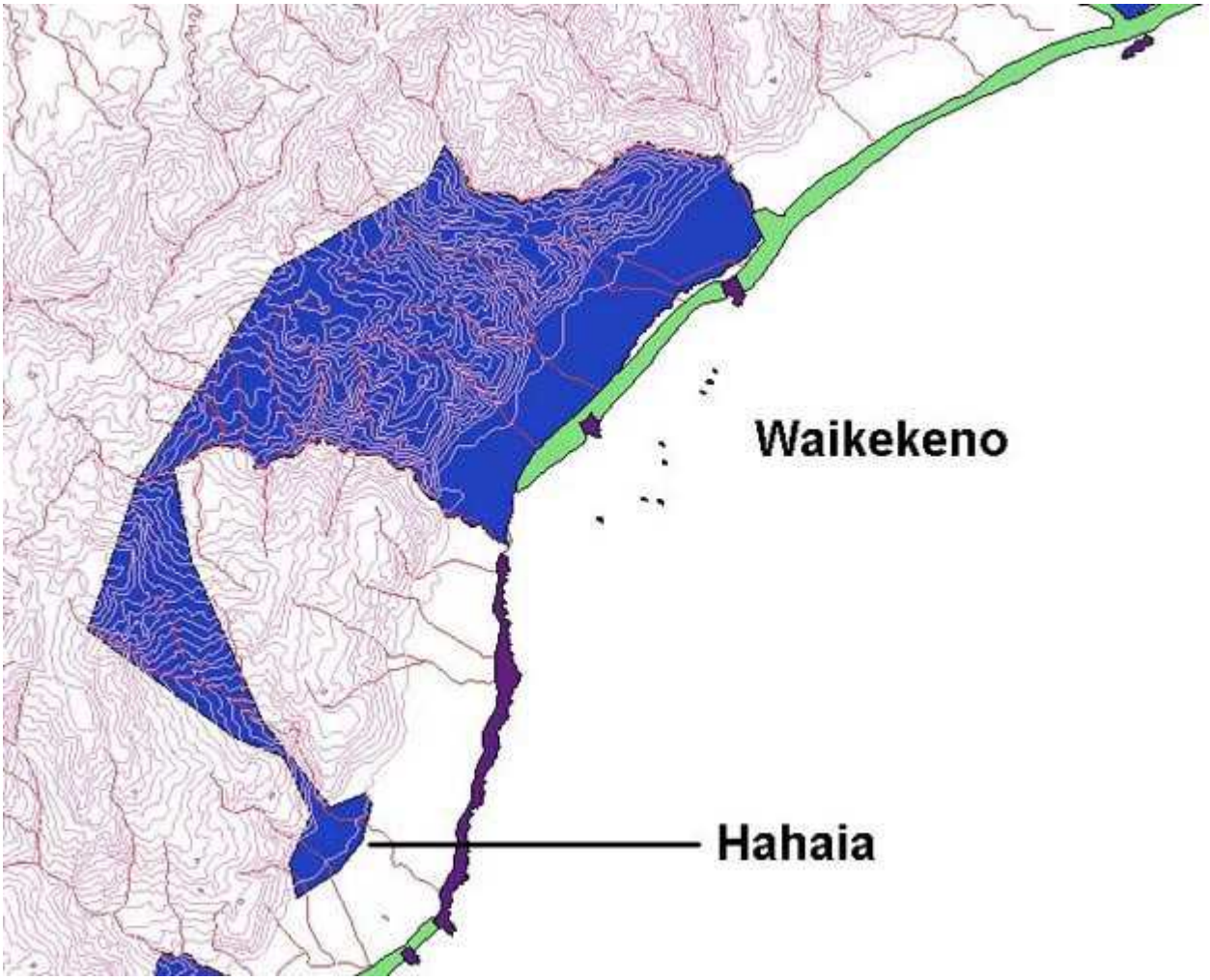

Figure 41: The Waikekeno and Hahaia Reserves.

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Figure 42: The Wharaurangi Reserve.

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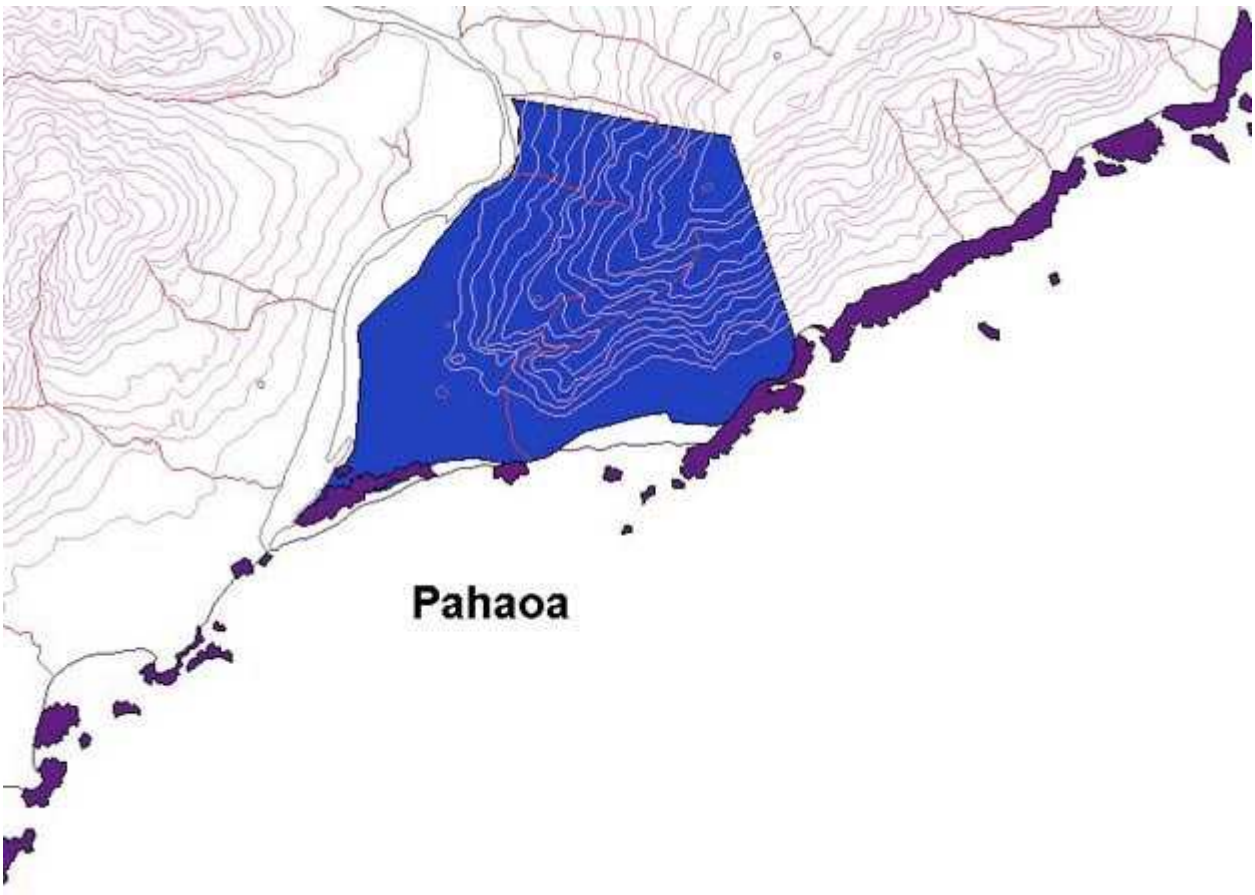

Figure 43: The Pahaoa Reserve.

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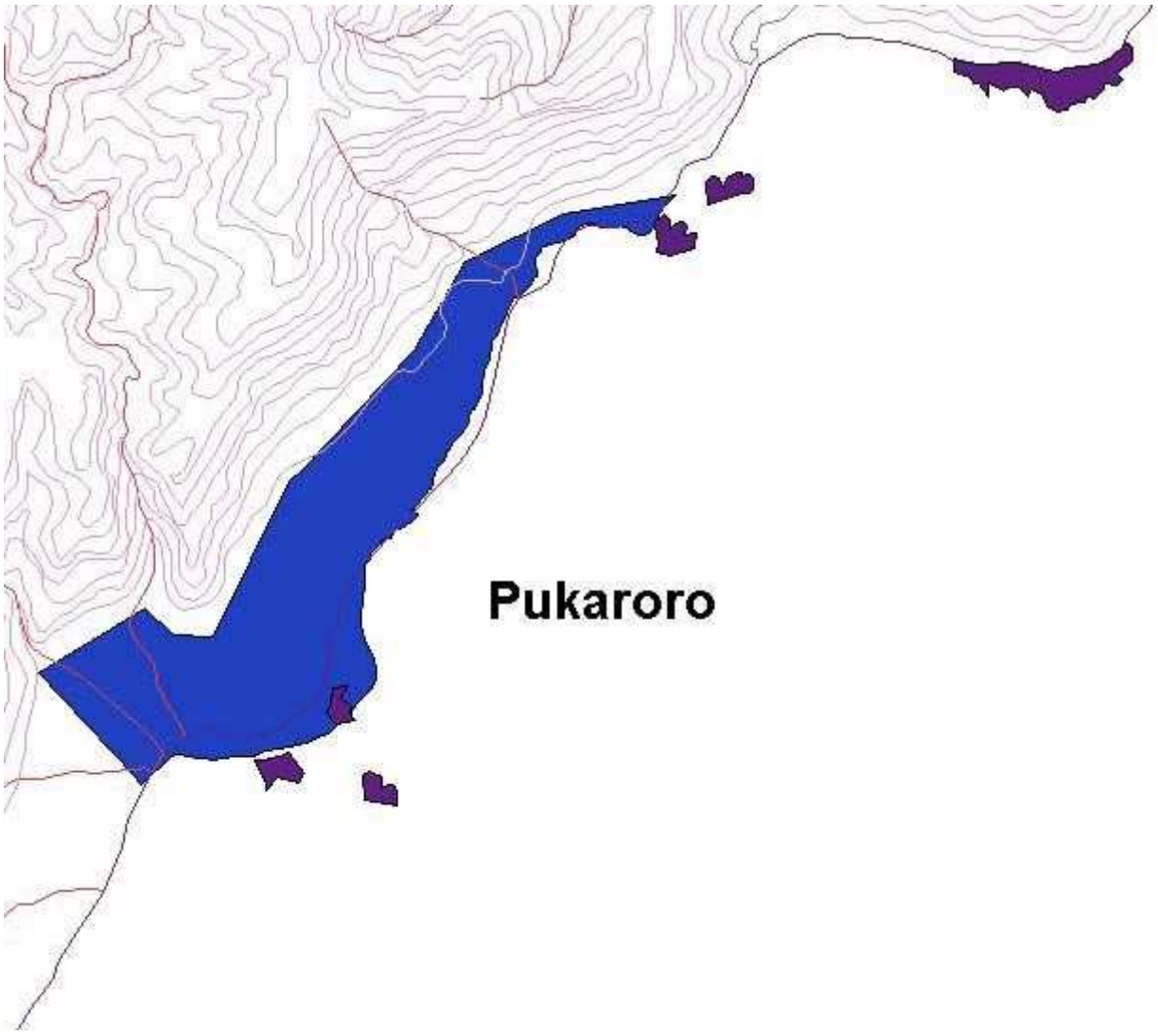

Figure 44: The Pukaroro Reserve.

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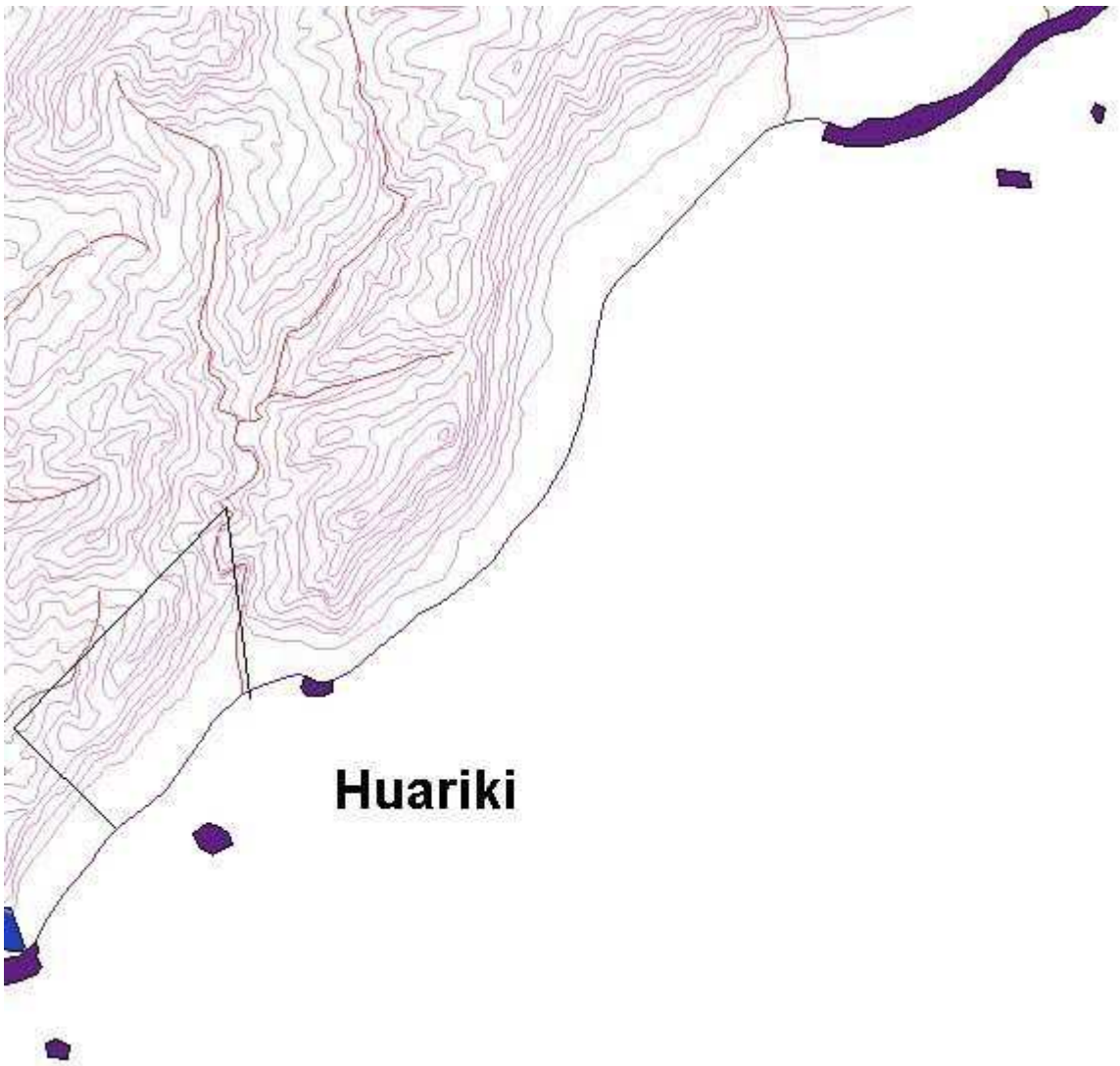

Figure 45: The Huariki Reserve.

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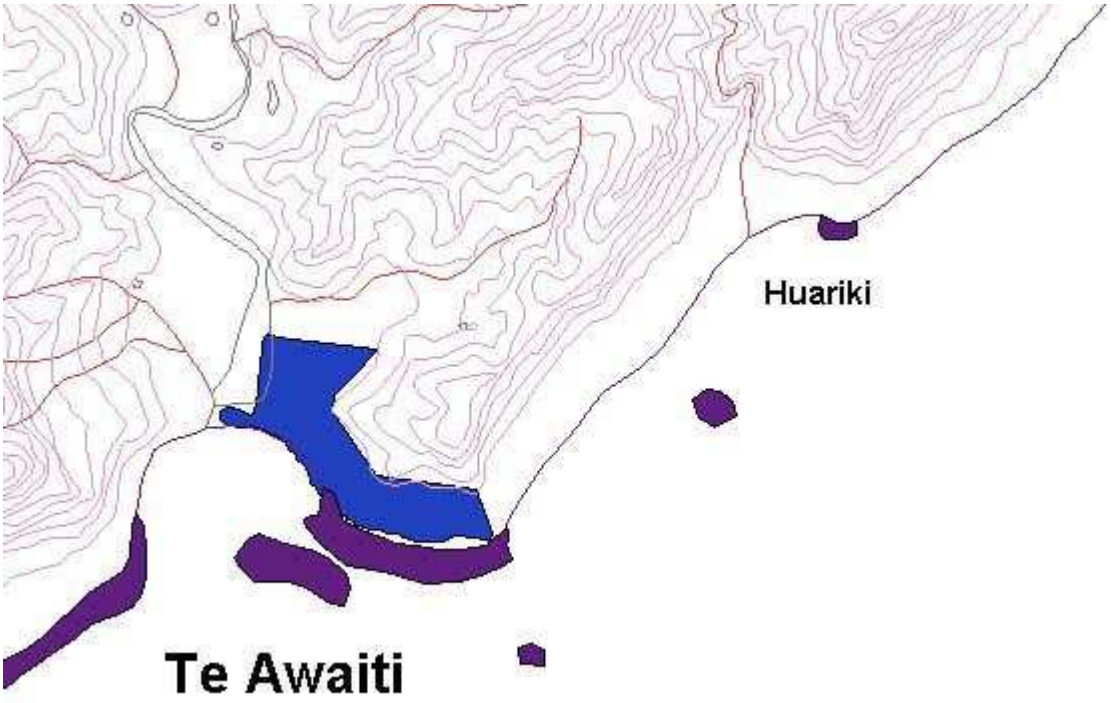

Figure 46: The Te Awaiti Reserve.

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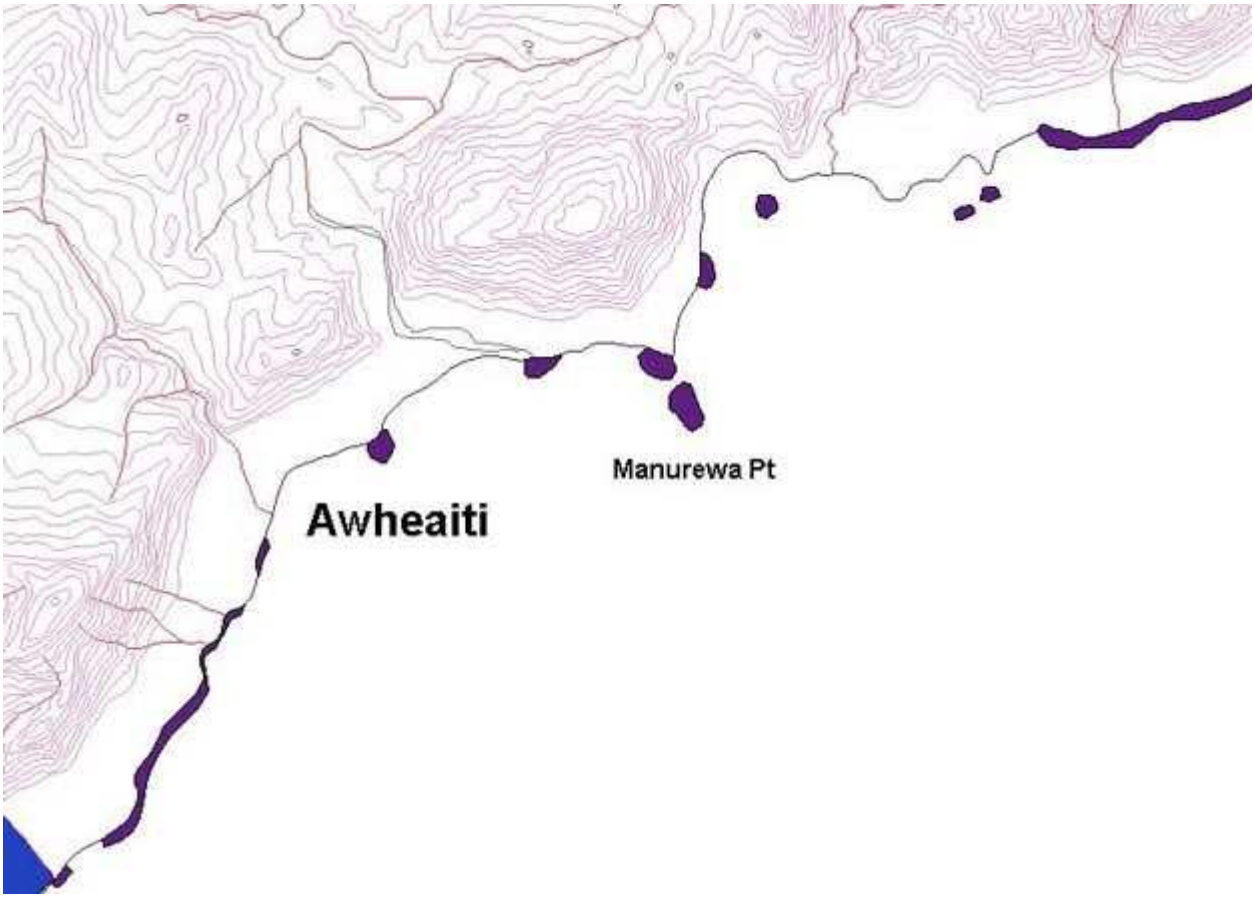

Figure 47: The Awheaiti Reserve.

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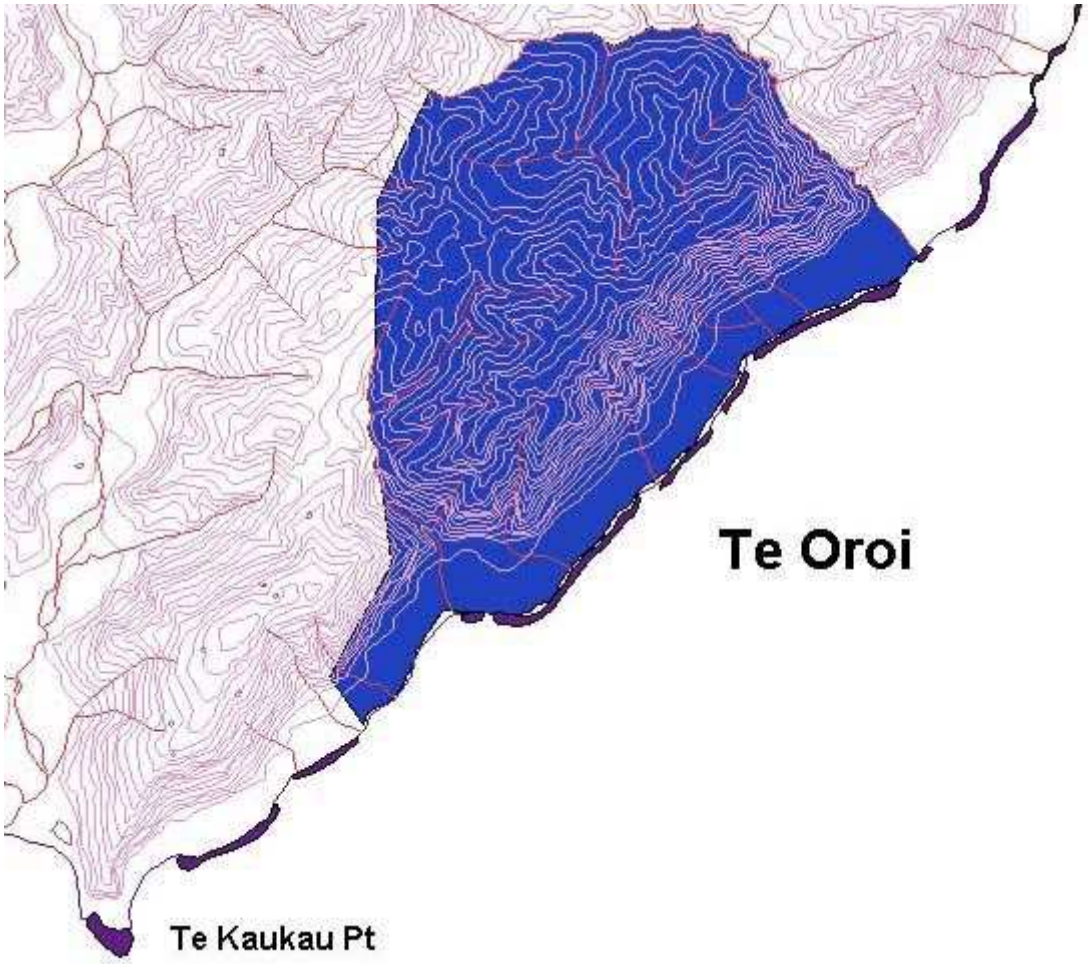

Figure 48: The Oroi Reserve.

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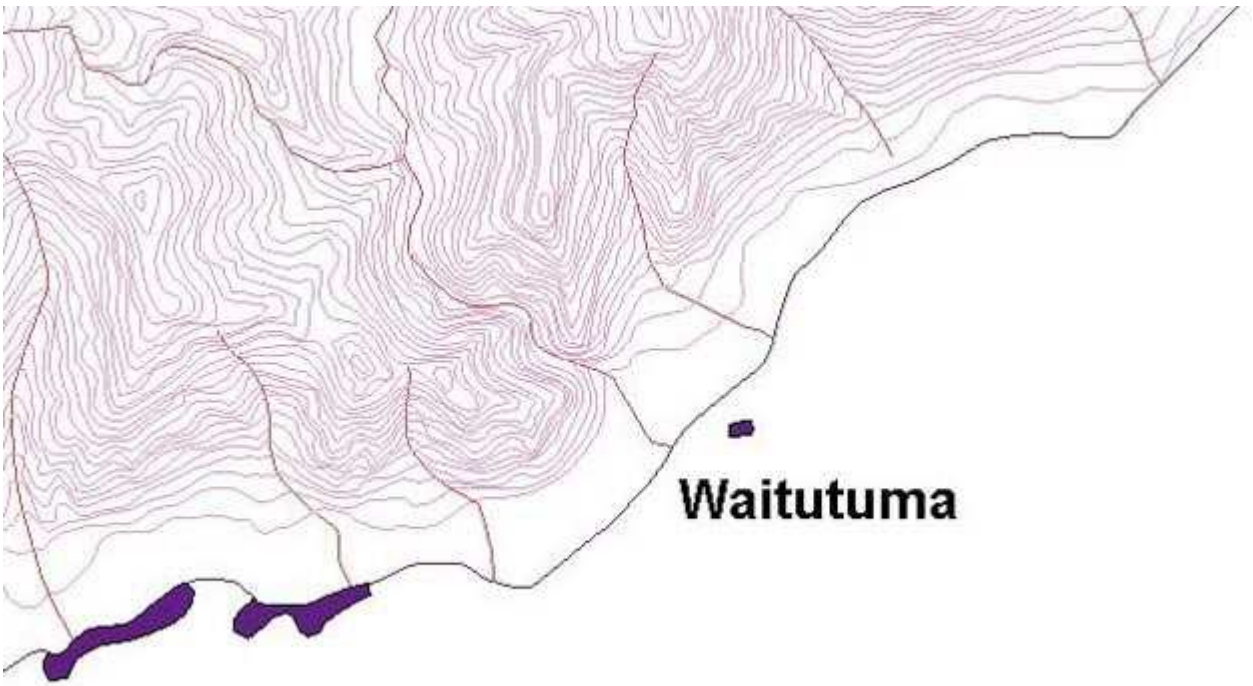

Figure 49: The Waitutuma Reserve.

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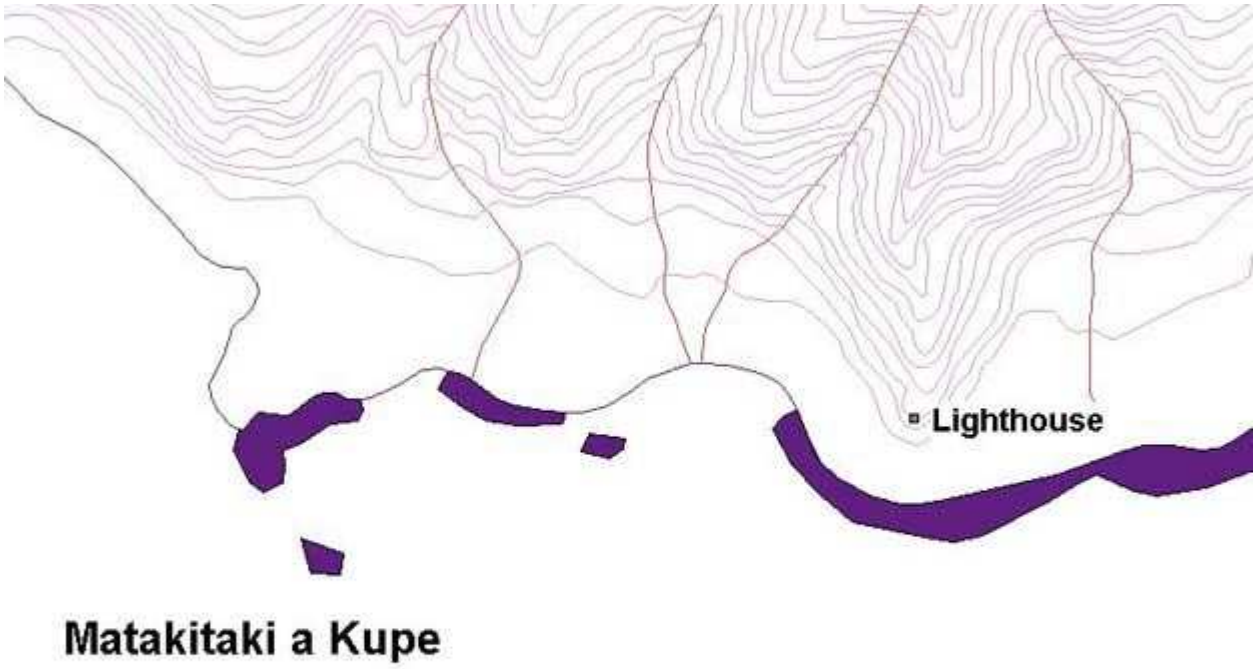

Figure 50: The Matakitaki Reserve.

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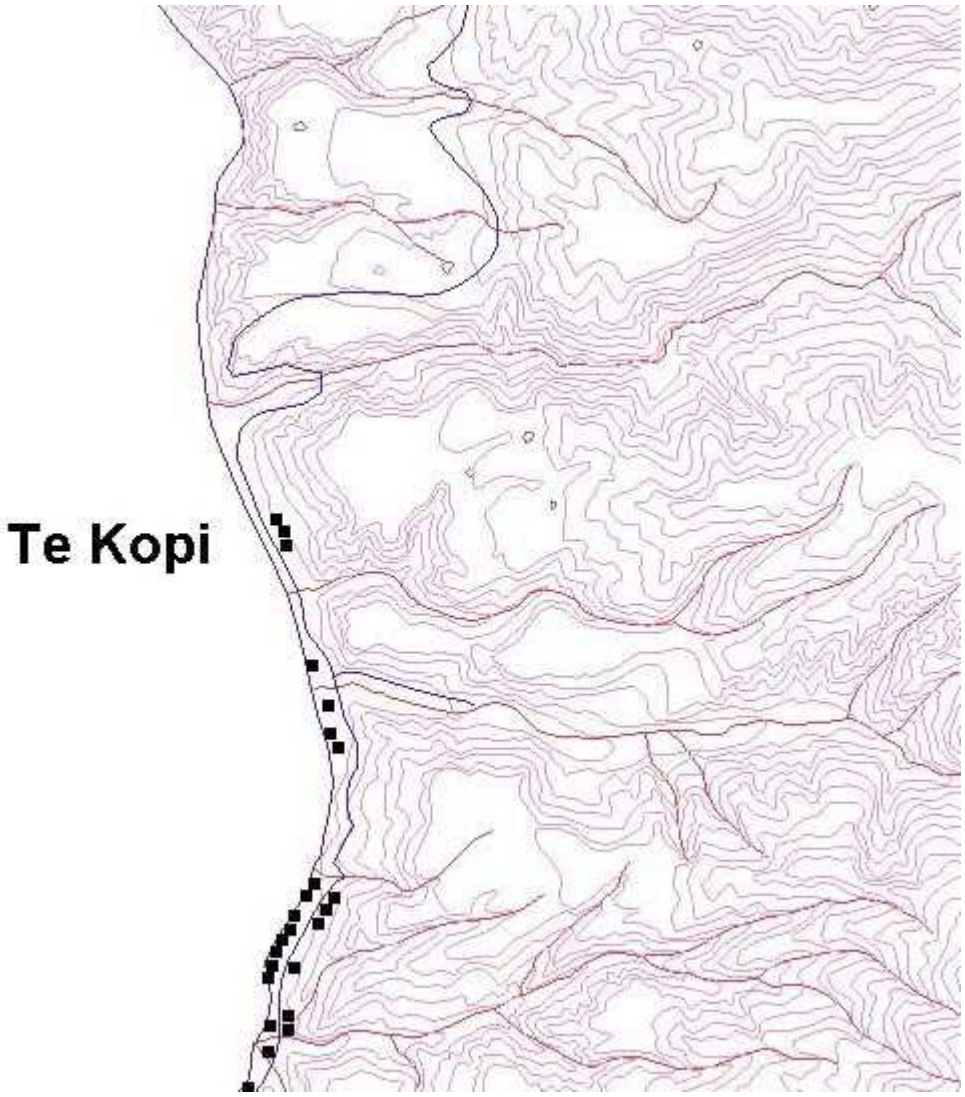

Figure 51: The Te Kopi Reserve.

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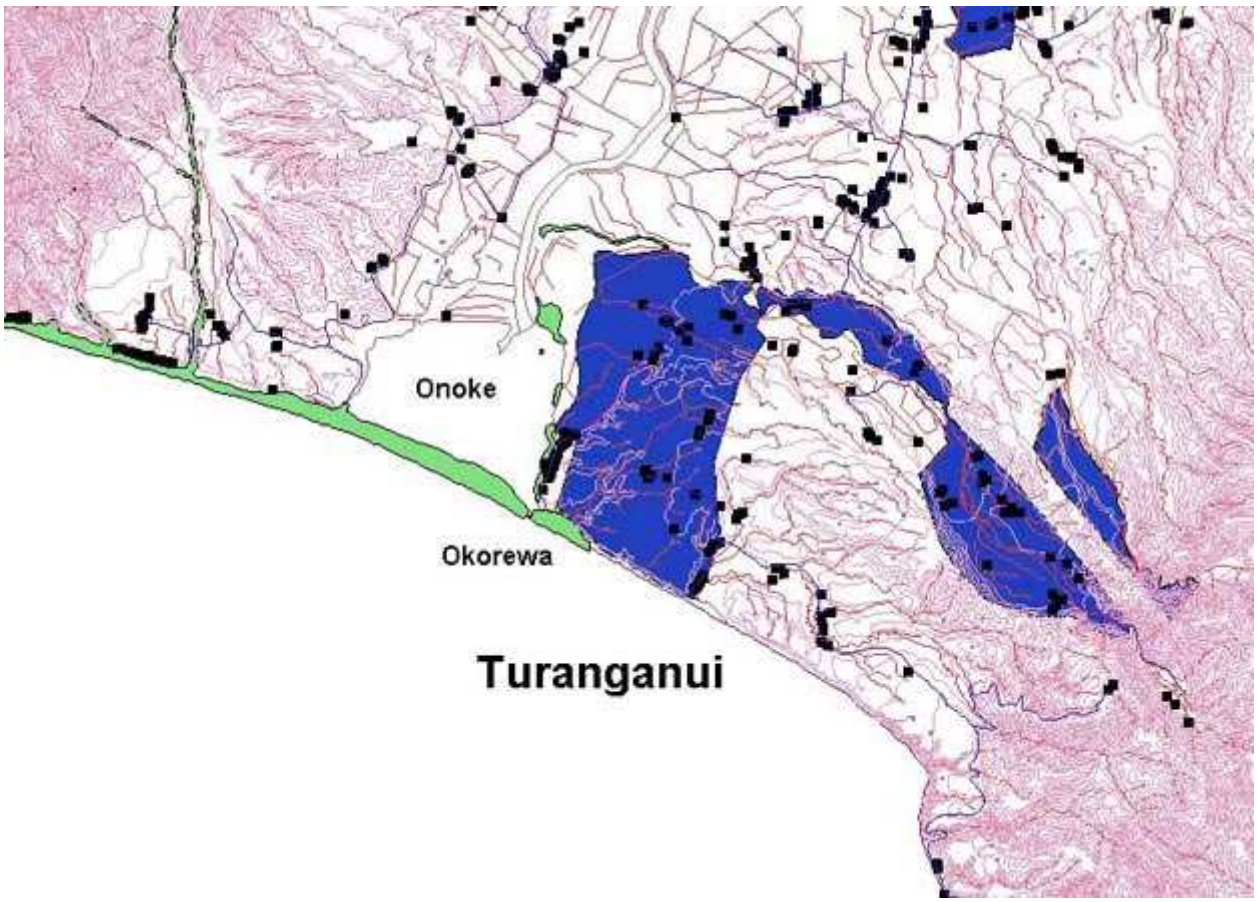

Figure 52: The Turanganui Reserve.

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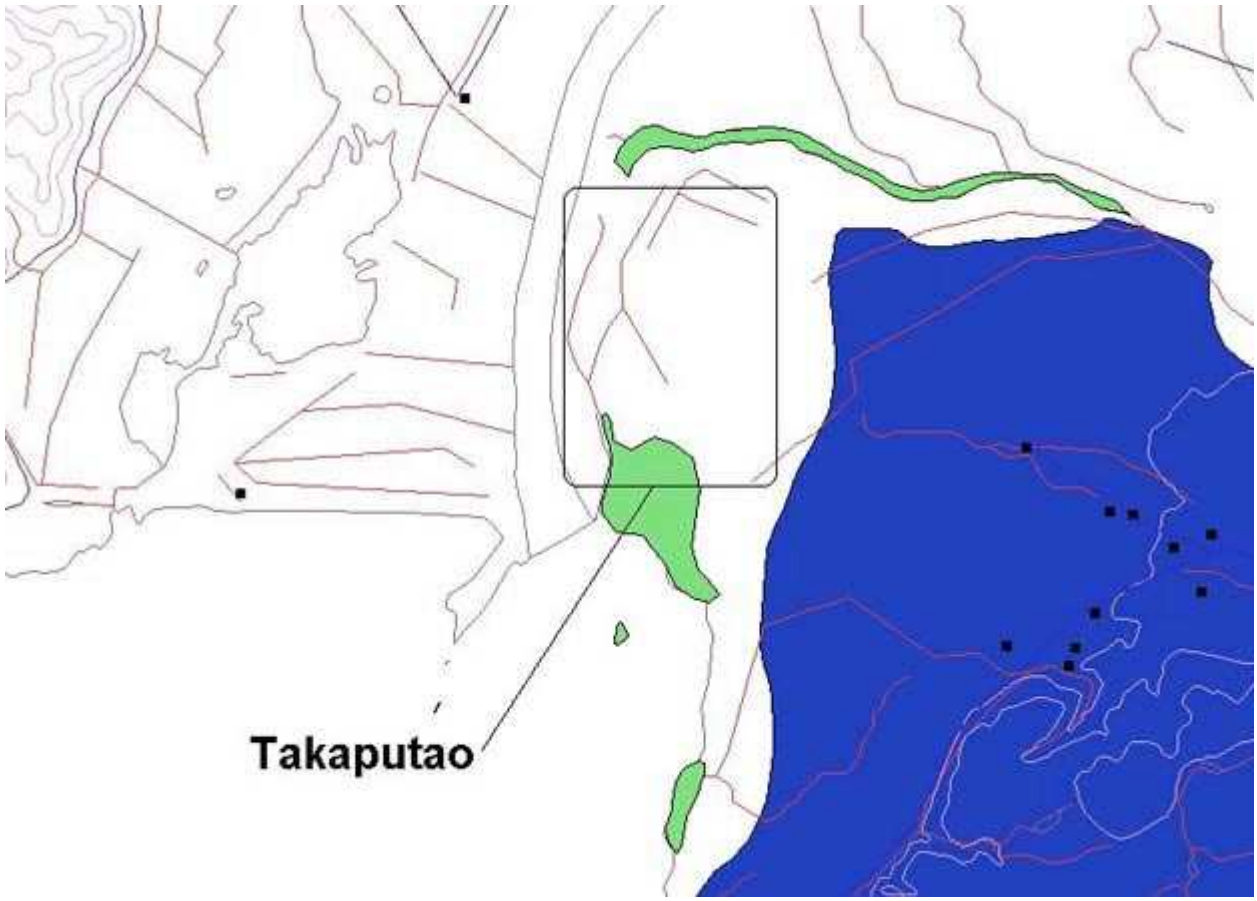

Figure 53: The Takaputao Reserve.

1: Native Reserve — Te Unuunu

This reserve is immediately to the south of Flat Point (760.856 hectare, E2,756,209 and N5,991,086[21], See Figures 11 and 40).

> "The Pahaoa reserves were reduced to those loosely described in the 1853 deed, and slightly better defined in the deed subsequently drawn up to acknowledge receipt of the supposedly final payment of January 1855: ... Te Unuunu, no acreage estimate given, from mouth of Arawhatanui up to Pirau-o-Hinetawai 'thence running in the Eastward in the creek Pirau-o-Hinetawai, thence ascending to Ngarara thence descending the cliff to Patutahi, thence discharging itself at Unuunu, following its course till it reaches the sea.' ... However, the reserves still did not appear to have been surveyed, even more than a year after the deed signing. They were, with the exception of Waipuna, later surveyed with the following acreages: ... Te Unuunu, 1,775 acres" (Stirling 2003: 107–108).

2: Native Reserve — Waikekeno

This reserve is located between Glenburn Station and Flat Point (691.908 hectare, E2,751,024 N5,987,861, See Figures 13 and 41).

> …from Waikekeno, 'thence running near to the sea to Huatokitoki, thence running along in Huatokitoki to the first range to Puongapupu, running along that range to Whatipu Waitohiariki Para o te Moroki Waikekeno running in that stream until it reaches the sea' " (Stirling 2003: 107).

3: Native Reserve — Hahaia

This reserve is located immediately south of the Waikekeno Reserve and is inland with no frontage on the shoreline (158.021 hectare, E2,749,023 N5,984,232, See Figure 41)

> "Kokokaiata (or Hahaia) about 100 acres, 'to the long forest named Hahaea, on the plain, thence inland to the piece of bush, thence along to the break of the range. We wish to have this as a plantation' " (Stirling 2003: 107).

4: Native Reserve — Wharaurangi

This reserve is located immediately to the south of the Glenburn Station buildings, in the vicinity of Horewai Point (85.127 hectare, E2,748,179 N5,982,651, See Figures 13, 42).

> "the southern boundary is the stream which runs through the forest, thence inland to the white land slip on the hill, another line commences at the large stone on the beach named Awhata, thence running inland to the top of the hill Whakaumu thence turning to the white landslip named Koao" (Stirling 2003: 107).

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[21] The grid references given for these Reserves are a point on the beach adjacent to the Reserve in each case, and approximately in the centre of the area of land.

5: Native Reserve — Pahaoa North

This reserve is located on the north bank of the Pahaoa River in the vicinity of the Glendhu Rocks (196.206 hectare, E2,738,752 N5,975,773, See Figures 12 and 43).

> "from the mouth of the river 'up which it runs until it reaches the boundary marked off for us by the surveyor' " (Stirling 2003: 107).

6: Pahaoa Pa Reserve

This small piece of land is on the south side of the Pahaoa River at its mouth (few acres, E2,737,400 N5,975,400).

> "Our pa and the land occupied by us at Pahaoa" (Stirling 2003: 112).

> "To this day, Ngati Hinewaka believe that there is papatupu land (customary Maori land) at the Pahaoa river-mouth that has remained papatupu land because it is the site of a pa that should have been reserved for them. Another possibility is that the land, if not sold to any settlers, would be ungranted Crown land. That is, it was not included in the early sale of surrounding land because it had been reserved for Maori, but it was never actually granted to Maori as a reserve" (Stirling 2003: 17).

7: Pahaoa South Main Reserve

An area of 500 acres on the south side of the Pahaoa River which, if granted, would have included the small pa reserve at the river mouth itself (500 acres = 1235.50 hectare, E2,736,800 N5,975,000). It lay between the river and the coast, notably a point called Kairingaringa and a bay called Paramihonga (Stirling 2003: 115, 17).

> "...and it is agreed that if we require more land for cultivating (500) five hundred acres shall be returned to us by the Land Commissioner" (Stirling 2003: 122).

In fact, when Māori asked for this land to be returned it had already been sold to the Camerons (Stirling 2003: 14).

8: Native Reserve — Pukaroro

This reserve is located about halfway between the Okoropunga Stream and the Rerewhakaaitu River (45.511 hectare, E2,732,695 N5,972,365, See Figure 44).

Described by Stirling (2003: 118–124) together with Te Awaiti and Huariki.

9: Native Reserve — Huariki

This is a small reserve on the south bank of the Huariki Stream (E2,726,447 N5,966,378 See Figure 45).

> "With respect to the other reserves, Mackay found that the following had occurred: Keepa's settlement at Huariki; 13 acres reserved at Huariki... Even this final report did not reflect the evidence that had earlier been submitted to Heaphy. For instance, in 1881 he had heard evidence from the Te Awaiti people that the surveyor, Mein Smith, had actually surveyed 60 acres for Huariki reserve, but only 13 were granted to them. The missing land was never granted to them" (Stirling 2003: 216).

10: Native Reserve — Te Awaiti

This reserve is at Te Awaiti, on the east side of the mouth of the Oterei River. It extends from about two thirds of the way up the lagoon down to the shore and eastwards to the point where the coast turns sharply to the northeast (16.72 hectare, E2,725,350 N5,965,821, see Figure 46).

11: Native Reserve — Awheaiti (at Tora)

A reserve was asked for but not created at the mouth of the Awheaiti Stream, a short distance southwest of the Awhea River mouth (E2,719,269 N5,962,993, see Figure 47).

> "Helen McCracken has identified an undertaking on Kemp's part to set aside a fishing reserve from the Awhea Block" (Stirling 2003: 83).

12: Native Reserve — Oroi

This reserve extended from the Pukemuri Stream to a point about 1 km southwest of the Oroi Stream (955.158 hectare, E22,716,366 N5,959,650, see Figure 48).

It was the largest of the reserves on the east coast south of Flat Point and is discussed by Stirling (2003: 85–89).

13: Opouawe Reserve

A rectangular block of 10 acres lying on the sand and gravel accumulated on the western bank of the Opouawe River, near the mouth (Stirling 2003: 76). The site of a kainga (10 acres = 24.71 hectare, E2,712,000, N5,957,300).

14: Native Reserve — Waitutuma

This reserve was never set aside. It would have been located on the east coast between the Waitutuma and Mataoperu Streams, but possibly extending further north to Raukauwhakamataku Point (E2,704,065 N5,953,318, see Figures 14, 49).

> "The existence of a 95-acre fishing reserve on the coast in the south-eastern corner of the block, and a 5-acre urupa, was noted by land purchase officials in May 1910, presumably with a view to excluding these from sale. Such exclusion did not occur and the reserves were never set aside" (Stirling 2003: 286).

> "A further rahui hei waahi hiinga ika was identified during the alienation of the Waitutuma blocks, being described as an area of about 95 acres in the south-eastern corner of the block, which would place it to the north-east of the Waitutuma Stream. A block of this size stretched along the coast would probably have extended beyond Waitutuma to take in the area around Te Raukauwhakamataku Point, just inside the Mataoperu deed boundary. A small area around the point was in fact set aside as a public landing reserve, probably long before the Waitutuma Native Land Court claim was heard. The land to the south-west of this public reserve remained Crown land (today being part of the Haurangi Forest Park), and was perhaps perceived by Ngāti Hinewaka as available for disposal to them for a reserve. A five-acre urupa was also identified in Waitutuma but its location was not noted" (Stirling 2003: 305).

> "The minutes of the 1895 Native Land Court hearing for Waitutuma further refer to a waahi hiinga ika known as Te Ruaara Roa, as well as a toka hapuku (groper rock), "off the coast about opposite Tuhirangi" (a maunga in the area, and also the name of the wharepuni at Kohunui). Despite being identified as areas that needed to be excluded from the alienation of the Waitutuma Blocks, neither were ever made and the bulk of the land was acquired by the Crown" (Stirling 2003: 305).

15: Crown Grant — Matakitaki

This reserve is discussed in detail below (4,910 acres = 1,987.05 hectare — see Roll Plan 3075, E2,699,486 N5,952,447, see Figures 14 and 50).

In passing, reference might be made here to a passage in the Wairarapa Native Land Court minutes of 13 June 1895.

> "Aporo Hare. I Live in Greytown. My hapu is Ngaitukoko. I will first refer to case of Ngai Tuohongia. I object to their boundary going further west than Te Tawhiti. It commenced at that place followed a range to Kaitao thence to Tuhirangi and down the Mataoperu to the sea. This is the true boundary of the Ngai Tuohongia claim" {270–271}.

The place referred to as Te Tawhiti here is now known as Rocky Point, and is the place where the Cape Palliser lighthouse is situated. The boundary for the Te Kopi-Waitutuma block runs along the Mataoperu Stream, exactly as Aporo Hare described here, and up to what is now known as Mt Barton. It therefore appears likely that Tuhirangi is the original name for Mt Barton.

16: Crown Grant — Kawakawa
(17,790 acres = 7,199.51 hectare — see Roll Plan WD3075, E2,695,210 N5,959,406). Further details can be found in Stirling (2003: 219 ff.).

17: Crown Grant — Whatarangi
(1,510 acres = 611.09 hectare E2,694,305 N5,967380). Further details can be found in Stirling (2003: 219 ff.).

18: Crown Grants — Te Kopi Blocks

There were three blocks set aside in this area (E2,695,355 N5,971,147, see Figure 51): Te Kopi–Waitutuma (4,800 acres), Te Kopi-Waitutuma No. 1 (18,000 acres), and Te Kopi No. 2 (2,600 acres). Further details can be found in Stirling (2003: 219 ff.).

> "In addition, 100 acres of coastal land was excepted from the 1872 lease [to Pharazyn] of Te Kopi No.2, but the 1889 renewal of the lease does not appear to have maintained this exception" (Stirling 2003: 304–305).

19: Native Reserve — Turanganui (Raniera's reserve)
Ngāti Hinewaka believe that there should have been a fishing reserve at Okorewa, at the mouth of Lake Onoke (1,157.101 hectares, E2,690,427 N5,975,906, see Figure 52).

Stirling lists eight reserves identified in the Turanganui Deed (Stirling 2003: 343). The only one possibly relevant to fishing is Raniera's reserve:

> "A large area extending from the Turanganui ferry, to the road to Te Kopi, to the sea (with 80 acres at the ferry reserved to the Queen, 'that the ferry may be conducted under the laws and regulations of the Government' ")(Stirling 2003: 343).

This reserve was granted to a single person — Raniera, a young chief who had favourably impressed Grey. Raniera eventually sold most of the land and only 102 acres remained at his death in 1884 (Stirling 2003: 375–376). Stirling describes the partitioning and further subdivision of 'Turanganui 65' and subsequent sale of some of it (Stirling 2003: 376–379). Stirling's research has found no reference to Okorewa.

20: Native Reserve — Takaputao
Two hundred acres at Turanganui, which were not included in the boundaries of the Turanganui Deed or in the eight reserves excluded from the sale (200 acres = 80.94 hectare, E2,689,502 N5,980,320, see Figure 53). Stirling has described the sad saga of the land in detail, concluding:

> "The 200 acres of land at Takaputao — land that included pa, urupa, and cultivations — was lost to Turanganui Maori from the 1870s, when Russell was permitted to block off access to the untitled bock. Twentieth century efforts to secure the untitled land were frustrated by officials who sought instead to secure the land for the Crown.

> Maori efforts to recover the land, and to protect its wahi tapu from desecration by the South Wairarapa River Board, were frustrated and ultimately rejected as a result of poor consultation, personal denigration of Maori leaders, and the cynical manipulation of Native Land Court processes and land titles systems" (Stirling 2003: 371).

Stirling mentions a claim regarding an eel fishing reserve in this area:

> "Heaphy's later notes for his abortive commission of inquiry into the dozens of disputed Wairarapa reserves include a reference to a letter of 14 September 1872, from Piripi Te Maari and Wi Mahupuku, concerning an eel-fishing reserve called Takaputao that was supposed to have been reserved to Maori, beside Lake Onoke, and linked to the Turanganui deed. The swamp on which Takaputao relied for its tuna resource was dried up by the 1855 earthquake" (Stirling 2003: 353).

Stirling discusses this in some detail, suggesting that accounts of it fit very well with the location of the disputed 200 acres (Stirling 2003: 353–354).

NGĀTI HINEWAKA PROTESTED TO THE CROWN ABOUT THE DESTRUCTION OF THEIR INSHORE FISHERY

The First Attempt — The Fishing Reserve at Matakitaki

The area of land known as Matakitaki a Kupe is of paramount importance to the Ngāti Hinewaka people. It is steeped in legends of Kupe, and there are many places in the area with specific names commemorating the great explorer Kupe. The area is registered by the New Zealand Historic Places Trust as an 'Historic Area' and is considered by Ngāti Hinewaka to be a Wāhi tapu area. Stirling describes the original block of land thus:

> "The lands around Te Matakitaki-a-Kupe (Cape Palliser) represented the largest area of land remaining to Ngāti Hinewaka in the wake of the Crown land deeds of the 1850s, comprising the Kawakawa, Matakitaki, Whatarangi, Te Kopi, and Te Kopi-Waitutuma blocks. This area of just under 50,000 acres lies on the eastern shore of Palliser Bay, running inland to the main ridge of the Aorangi range, although Matakitaki block extends just beyond Cape Palliser at the south-eastern corner of the island" (Stirling 203: 215).

It can be seen that the original Native Reserve covers a very large area, but the area most talked about in modern history is the promontory, marked on many maps as 'Cape Palliser'. This smaller area first started to obtain a separate identity on 17 May 1870. At that time a lease including the whole of the Matakitaki-a-Kupe area was entered into with C. Pharazyn for 21 years. The lease reserved 250 acres at a place called Matakitaki for grazing horses whilst the people were engaged in fishing. A copy of the original deed is attached {675–678}, together with a transcript {672–674} (See also Haami Te Whaiti's letter to Māori Land Court dated 23 March 1992 {667–668}). The relevant passage of the Deed reads:

> "Reserving nevertheless to the Lessors their heirs and assigns the right to depasture on Two hundred and fifty acres of the land hereby leased adjoining the point marked

> R on the plan drawn on this deed such horses as they shall require (whilst engaged in fishing) at the place called Matakitaki so that such horses be depastured only on the said Two hundred and fifty acres of land" {672}

This lease was renewed 3 December 1889 for a further 21 years, with the same provision for setting aside the 250 acres for Ngāti Hinewaka to keep their horses in while fishing at Matakitaki {679–683, 684–690}.

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Before turning to the detailed historical account of what happened to the Fishing Reserve at Matakitaki, it is worth reflecting for a moment about exactly what Ngāti Hinewaka would have had in mind when they requested that the Government help them to establish Fishing Reserves. It may seem odd that we need to address a question which should have an obvious answer, but unfortunately it is important to be clear on exactly what this might mean. For example could a fishing reserve be a piece of land ? Well, possibly, one might have thought, so long as there was some sea attached to it as well. Could it be that when Ngāti Hinewaka asked for Fishing Reserves to be established they were asking for some land to be set aside without some special accompanying rights to the adjacent sea ? That would be absurd. In trying to establish fishing reserves, Ngāti Hinewaka were seeking to preserve their customary fishery, and to ensure the continuation of all the rights they had previously exerted in relation to it. Their focus was primarily on the inshore region of rocky habitats, where most of the foraging for shellfish is done, but included some specially named places further out to sea. This conclusion is reached in this report in the section on property rights.

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Unfortunately, as we will see in what follows, in the case of Matakitaki a Kupe, such a simple outcome was unachievable. The chronology of events leading up to the absurd situation which prevails today is described below[22].

10 July 1871.

> Crown Grant of 4,910 acres known as Matakitaki made in favour of Piripi Te Maari and 9 others {242}.

4 June 1890.

> Piripi Te Maari produced a suggested apportionment of the 4,910 acres that included 'Fishing reserve 50 acres' {243, 257}. This was recognised in a report by Judge Marumaru of the Maori Land Court 15 June 1994 {243}.

9 June 1890. Piripi Te Maari gave evidence at the Maori Land Court as follows:

> "Matakitaki in my time was a fishing place of repute. *Kahurangi* and *Te Hauria* were the names of the important fishing places on the rocks.

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[22]In this and two subsequent chronologies of petitions, actual quotations are indented with quotation marks. Precis, or summaries of documents, are indented without quotation marks.

Te Mawe was a *tauranga waka* (safe canoe anchorage); also *Te Kirikiri*, *Te Karetu* and *Hinerua*. These were the chief landing places on that part of the coast.

I was the person who used to go fishing more frequently than others in former days. Leave that kind of work now for the young people" {243, 262}.

12 June 1890. A further scheme of apportionment was produced that included the narration:

"Piripi Te Maari to hold in trust as a fishing place[23] for all the members of Ngatihinewaka who are entitled to the land: 50-0-0" {243, 264}.

25 July 1890.
Matakitaki No. 3 of 50 acres partitioned and vested in Piripi Te Maari {242, 250}.

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26 August 1895. Piripi Te Maari died {242}.

24 January 1896.
Successors appointed to Piripi Te Maari for other blocks he had interest in {244}, but when it came to Matakitaki No. 3, the family lawyer Mr Tate said:

"This is a fishing reserve. Ask for adjournment until people interested agree to whom it should be awarded in trust for the people" {245}.

8 July 1905.
Arapata Te Maari applied to the Native Land Court that a trustee be appointed in place of Piripi {245}.

8 December 1908.
Partition of Matakitaki No. 3 validated {244}.

1915. Kohea Tahana wrote to the Native Land Court judge in Wellington asking to be appointed a trustee of the block of 50 acres that had been "set aside as a general fishing rights" {245}.

1 February 1924.
Charging order of £4.14.5 for survey of Matakitaki No. 3 {249–250}, and accompanying map {251}.

[23] Is it necessary to point out that it is not possible to engage in fishing at a 'fishing place' unless that place is actually somewhere in the water ? A 'fishing place' could not by any stretch of the imagination be on the land.

12 July 1932.

Arapata Te Maari, Nikorima Te Maari, Te Whanautane Te Maari, and Ngarangi Te Maari appointed trustees {240}.

1934.

4 acres, 1 rood, 14 perches taken under the Public Works Act 1928 for road purposes {304}.

9 May 1940.

Successors appointed for Arapata Te Maari {234–238}.

3 September 1940.

Successors appointed for Te Whanautane Te Maari {239}.

19 September 1940.

O & R Beere 'on behalf of Natives concerned' lodged an application under Section 5 of the Native Purposes Act 1937 that the land be declared a Native Fishing Reserve {253}.

7 November 1940.

Order of the Native Land Court recommended that:

"Matakitaki No. 3... be set apart and reserved under Section 5 of the Native Purposes Act 1937, as a landing place and fishing ground for the common use of the native Owners of Te Kopi, Kawakawa and Matakitaki Blocks" {230–233}.

By this time there was a large number of recorded owners {227–229, 234–238, 242}.

13 March 1941.

The reserve was gazetted {225}.

18 June 1941.

The reserve was vested in the Native Trustee {226}. In the Native Land Court on that date the Chief Judge recorded the following:

"50 acres more or less was set apart and reserved as a Native Reservation for the common use of the owners of Te Kopi, Kawakawa and Matakitaki Blocks as a landing-place and a fishing-ground" {226, 230}

It is important to note that this area was set aside for two purposes, not one. It was set aside as a landing place; that pertains to the land. It means there were landing rights from the sea for sea craft. The second purposes is a fishing ground; that pertains to the sea. It means that there are rights to fish in the nearby sea. Nothing could have been made clearer to Ngāti Hinewaka than this statement, that they had special rights at Matakitaki a Kupe to both the land and the sea.

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September 1951. Joe Paku and George Te Whaiti made a verbal enquiry to the Department of Maori Affairs about the *Fishing Rock* at Matakitaki[24]. Unfortunately, there is no record of exactly what they were inquiring about, but it is safe to assume that they wanted clarification, once again, about its legal status and rights. This enquiry generated an internal memo dated 18 September 1951 from the Registrar to Head Office, giving legal description and other details {109}. The Registrar spelled out all aspects of the legal description, including the following:

> "this block was set apart and reserved under section 5 of the Maori Purposes Act, 1937, as a Maori Reservation for the common use of the owners of Te Kopi, Kawakawa and Matakitaki Blocks as a landing place and a fishing ground... upon trust to hold and administer the said land for the benefit of the persons for whom the reservation was constituted and for the purposes for which it was reserved" {109}.

The purpose, clearly stated, is a landing place and fishing ground. The next part of the letter is not so clearly stated. It reads:

> "The title to the reserve will presumably [my underlining] extend to the mean high water mark, and as the fishing rock is presumably [my underlining] above the mean high water mark it will be in the title. The area between mean high water mark and the mean low water mark is known as the foreshore and this prime facie belongs to the Crown. The authority of the Maori Trustee as Trustee of the Fishing Reserve appears to be limited to what is done on the land itself. The Maori Trustee could possibly arrange with the Marine Department for special regulations to be issued under Sections 5 and 46 of the Fisheries Act 1908, to regulate or prohibit fishing in this locality" {109}.

Armed with this information, the Under-Secretary then wrote to both Joe Paku {108} and George Te Whaiti {107} dated 12 October 1951, with some of the details earlier provided to him, and had this to say:

> "The title to the land apparently [my underlining] extends to mean high water mark. This means that if the rock is above mean high water mark, it will be in the title and unauthorised persons using the rock would be trespassers. As regards taking fish or crayfish from the sea near the rock, however, the Maori Trustee has no authority at all to prevent this, nor could he prevent any one from passing along the edge of the sea below mean high water mark. I understand that if a Maori community makes frequent use of an area for obtaining food supplies, as opposed to mere sport or recreation, the Marine Department will consider reserving a fishing area. If you would give me some idea of the number of Maori people who are accustomed to take koura at this place, and the frequency of their visits, I would be pleased to take this matter up with the Marine Department" {107, 108}.

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[24]This term 'Fishing Rock' could mean a number of things. It could refer to the Matakitaki rocky headland as a whole, which is an obvious feature on the landscape; or it could refer to the large rocky outcrop off the headland about 150 metres out to sea.

This last suggestion resulted in the George Te Whaiti Petition, described in another section of this report. It refers to provisions under the *Maori Social and Economic Advancement Act 1945* which contained conditions for such a reserve with exclusive fishing rights. This is further discussed below.

Concerning Matakitaki in particular, this round of correspondence is important because this is the first time that the issue of the extent of rights at the Fishing Reserve was clearly explained to Ngāti Hinewaka. As can be seen, what was presumed by the Registrar, became apparent in the letter to Ngāti Hinewaka. Although the Registrar was clear about the legal description of the bock of land he does not seem to have been quite so certain about what the original intention was about rights; after all if the purpose was "a landing place and a fishing ground" {109} it would seem perfectly reasonable that there would be fishing rights too. Perhaps that is the reason why he used the word presumably, because he was not certain one way or the other. However, without any direct evidence of fishing rights, the letter from the Under-Secretary effectively froze this issue.

Unfortunately, all the people involved in 1951 have since passed away so we have no record now of what they thought when this bombshell was dropped on them. There is no disputing that Ngāti Hinewaka had exclusive fishing rights at Matakitaki a Kupe for hundreds of years before the Fishing Reserve was set aside in 1890. That did not merely mean rights to sit on the land, but exclusive rights to the *kaimoana* at Matakitaki a Kupe. They had made every effort to ensure that all members of Ngāti Hinewaka would enjoy these fishing rights forever by partitioning the area away from individual ownership. This letter from the Department of Maori Affairs must have been devastating.

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22 May 1957.

> Trustees Te Awhitu Tahana, William Karaitiana, and Kahu Ahipene appointed in place of the Maori Trustee {224}.

24 June 1957.

> Draft letter to Wm Tahana, W.P. Karaitiana, R.M. Ahipene, please advise where to send rent money and whether tenancy is to continue {102}.

5 January 1966.

> Memo from Secretary of Maori Affairs to District Officer Palmerston North. Approached by E. Mercer about deplorable state of the fishing reserve (trustees not doing their job) and asking for details {104}.

There are undated handwritten notes about the same {103}.

17 January 1966.

> Reply from Palmerston North to above, confirming Mercer's report and suggesting appointment of new trustees — Ben Couch probably the best person to get something organised {101}.

20 January 1966.
Secretary Maori Affairs to E.H. Mercer, relaying contents of above {100}.

2 May 1966.
Mita Carter and Norman Martin appointed in place of William Karaitiana and Kahu Ahipene {219}.

14 October 1966.
Mita Carter to Secretary Marine Department enquiring about the status of the road — wanting to improve the Reserve {306}.

9 May 1967.
Blathwayt (solicitor) to County Clerk, Featherston seeking Council assistance to instal cattle stops. Questions the legality of the road — land taken from the reserve by Proclamation under the Public Works Act but apparently no application to MLC to assess compensation and therefore the taking was illegal[25] {304–305}.

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6 November 1967.
Lighthouse Keeper at Cape Palliser to District Admin Officer, Marine Dept. complaining about road works. Modification at Kupe's sail not in PW11 explanatory letter of March 23 and rubble dumped in the same spot where he was to be prosecuted for a like offence some time ago {303}.

26. October 1967.
Memo from Palmerston North to Head Office Maori Affairs. New trustees appointed (Mita Carter, Norman Martin, Te Awhitu Tahana) who have engaged a solicitor and want to fence the block and instal cattle stops, ultimately develop a camping ground. Is there any possibility of a grant from the Civil List ? The place "does have some historical significance" and an approach has been made to the National Historic Places Trust for recognition and suitable signs to identify the block. Two handwritten annotations — Civil List grant not appropriate {99}.

31 October 1967.
Memo from MacRae for Maori Trustee to Palmerston North. Head Office does not consider Civil List moneys should be used to assist with fencing a Maori Block {98}.

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[25]South Wairarapa District Council have been asked for a copy of the response to Blathwayt's letter, but this has not been able to be located. However, they found Featherston County Minutes which discussed the issue. The County Solicitors advised Council that in their view the road was legal. Blathwayt then further inquired on the reason for this opinion and was informed that "if a road Proclamation is valid, the subsequent Order-in-Council of 1941 creating the reserve, could not 'unmake' the road" {670–671}.

12 September 1969.

Norman Martin to Secretary to the Minister of Marine. Confusion as to whether surplus money from Marine Dept grant to County Council for maintenance of Cape Palliser Road is available to use for cattle stops {301, 302}.

12 May 1970.

Solicitor (Blathwayt & Blathwayt) to Jack Williams MP seeking assistance for cattle stops. Agreement had been reached for grant from Marine Dept to Featherston CC but has fallen through {97}.

20 May 1970.

Williams to McCready (Minister of Marine) copy to MacIntyre (Minister of Maori Affairs) about same {96}.

20 May 1970.

Cover letter from Williams to MacIntyre with handwritten annotations to and by staff {95}.

29 May 1970.

District Officer Palmerston North to Head Office (Maori Affairs) with draft reply for the Minister to Williams {93, 94}.

11 June 1970.

Draft letter to Williams sent to Minister from Secretary for approval and signing. No money available from any official source as the trustees cannot put up any security as there is no power to mortgage. Only possibility to subdivide some of the reserve or change to ordinary Maori freehold land. Maori Trustee might not want to lend as he is at present administering a large subdivision two miles away [at Ngawi] and it would not be in the interests of his beneficiaries there to finance any Matakitaki scheme in competition {91}.

Copy of MacIntyre to Williams sent to Minister for Marine {92}.

17 June 1970.

Copy of letter from Minister of Marine to Williams. No record that the previous Minister agreed to make a grant. He did twice recommend to the Minister of Finance a grant of $500 and was turned down both times. Trustees should go back to Featherston CC as the road is a public one they administer {90}. Memo with numerous handwritten annotations about price of cattle stops, etc., some illegible, attached to this correspondence {89}.

29 August 1972.

Norman Martin to Duncan MacIntyre (Minister Maori Affairs), thanking for seeing himself and Mita Carter about the Fishing Reserve. Didn't think to raise the important Kupe associations or the archaeological merit — in fact over the last few years Otago students and graduates have been conducting a series of 'digs' in the area, but not on the Reserve itself as the Trustees considered that no excavations should take place on

the sacred area. Would be delighted to show you round any time {87–88}. Also informal covering note from Martin to MacIntyre {86}.

4 September 1972.

Formal reply from MacIntyre to Martin, thanking for letter and also for invitation to visit the Reserve 'which as you say is a fascinating and historical area' {85}.

15 August 1974.

Telegram from Martin to Williams asking him to arrange a meeting for the Trustees with Ministers of Maori Affairs and Marine {84}.

15 June 1988.

W.R. Mikaera appointed to replace Norman Martin, deceased {220–221}.

15 June 1994.

Hearing of application by Arapata Tokoarangi Te Maari II for the cancellation of the Order of 7 November 1940 setting apart Matakitaki No. 3 as a Maori Reservation. The Application was dismissed and the succession orders of 12 July 1932, 9 May 1940 and 3 September 1940 were cancelled {222, 234–240, 248}.

This marks the current state of official correspondence relating to Matakitaki a Kupe as a Fishing Reserve, but is not like to be the end of it. It must be obvious that Ngāti Hinewaka have been vigorously fighting for what they believe to be their legitimate legal rights to exclusive fishing at this for at least 130 years. The *Maori Social and Economic Advancement Act 1945* was mentioned above, and it is useful to consider the provisions of this Act relating to Maori fishing rights and reserves. The relevant part is Section 33:

> (1) The Governor-General may, on the recommendation of the Minister of Marine and subject to such conditions (whether as to compliance with all or any of the provisions of the Fisheries Act 1908, or otherwise) as he thinks fit, by Order in Council, reserve any pipi-ground, mussel-bed, other shellfish area, or fishing-ground or any edible seaweed area for the exclusive use of Maoris or of any tribe or section of a tribe of Maoris.
>
> (2) The Governor-General may by the same or any subsequent Order in Council vest in any Tribal Executive or Tribal Committee the control of any pipi-ground, mussel bed, fishing ground, or other area as aforesaid so reserved for the exclusive use of Maoris.
>
> (3) The Tribal Executive or Tribal Committee in which is vested the control of any pipi-ground, mussel-bed, fishing ground, or other area as aforesaid may take such steps as may appear to it to be necessary or desirable for the protection of the shellfish or other fish and to prevent their extermination, and for the protection of edible seaweed.
>
> (4) Any Tribal Executive may make such by-laws as it thinks fit for the control, regulation and management of pipi-grounds, mussel-beds, fishing grounds and other areas as aforesaid the control whereof is vested in it or in any Tribal Committee appointed in respect of any areas within its district.

(5) [simple machinery clauses]

(6) [simple machinery clauses]

(7) Notwithstanding anything to the contrary in section ten of the Fisheries Amendment Act 1923, the control of an oyster-fishery defined under that section may be vested in a Tribal Executive or Tribal Committee.

This piece of legislation in 1945, advanced for its time, gave due recognition to the important place which *kaimoana* has for Māori, and provided a much needed vehicle for fishing reserves with real meaning to be set aside for Maori use. In an internal memo entitled **Maori Fishing Rights** from within the Department of Maori Affairs dated 22 January 1960 and addressed to Mr Hercus, it states:

> "I have examined the previous papers on this subject and I have been unable to find any record of a reserve created in terms of Sec. 33 of the M.S and E/A. Act 1945. In fact from the time legislation was passed the Marine Department has been consistent with its policy of not recommending to its Minister applications from Maori groups and individuals for reservations under this section of the Act... Over the years it has become quite obvious to me that the Marine Department has no intention of recommending to its Minister that reserves be created under the 1945 Act in spite of the fact that numerous petitions have been placed before Parliament. The Department puts forward a strong argument in support of the attitude they appear to be adopting — they say this: 'The practical implication that would follow the making of such a reserve would be an unfortunate and undesirable distinction and a segregation of races that have lived and intermarried happily together' " {208}.

This resulted in a formal letter from the Secretary of the Department of Maori Affairs to the Minister of Maori Affairs with the same findings. This whole discussion was generated by a letter dated 15 January 1960 to the Minister of Maori Affairs (Walter Nash) from Mr H.P. Hynes, Secretary of the Ikaroa District Council in Fielding {209} asking for Section 33 to be implemented. Nash replied to him 8 February 1960, with similar wording (without the detail) to that contained in the formal letter and memo {207}.

Conclusion 41

Mita Carter, discussing the Matakitaki Fishing Reserve in 1982, had this to say:

> "Situated at Cape Palliser, District of Wairarapa, known by the name of Matakitaki. Signed B.F. Bowen, tenth day of July, 1871. As the whole area was held under common ownership of the Ngāti-Tukoko and Rakairangi[26] of which Piripi Te Maari

[26]The hapū noted here are not mentioned in any Maori Land Court Minutes that have come to light relating to the Matakitaki block. These were hapū of Piripi Te Maari, and are from the valley area around Kohunui and Pirinoa, not Matakitaki. Piripi Te Maari stated that his interests in Matakitaki are derived from Ngati Hinewaka and Ngai Tuhoungia.

> was the leading chief, a partition order was made, vesting the whole area in the tribes which then became the domain and fishing grounds of his hapus or sub-tribe" (Carter 1982: 10).

Clearly, in the mind of Mita Carter, it was not just the land which was vested in the *hapū* of Piripi Te Maarae, but the fishing ground as well. One might well ask how could it be otherwise if it had the name of Fishing Reserve, and therein lies the reason why so many years later a Maori elder writing in 1982 could make such a mistake. It seems perfectly right and proper to any reasonable person that a Fishing Reserve is exactly what is says it is, a place where the rights to fishing are now reserved.

Conclusion 42

The history of the Fishing Reserve at Matakitaki a Kupe is nothing short of a catastrophe. Ngāti Hinewaka have been vigorously fighting for what they believe to be their legitimate legal rights to exclusive fishing at this special place for 130 years so far. They believed that they had settled the matter 17 May 1870, then again 4 June 1890, then again 18 June 1941. To have been told 12 October 1951 that they had no fishing rights at the Fishing Reserve must have been devastating. However, such is the fortitude of Ngāti Hinewaka, that they will never give up this struggle. The blow from Walter Nash in 1951 simply set into motion yet another round of the endless battle with the Crown for rights protected under the Treaty of Waitangi.

The Second Attempt — The George Te Whaiti Petition

The origin of this petition is intimately connected with the long struggle of Ngāti Hinewaka to have their customary fishing rights at Matakitaki a Kupe recognised by the Crown. It gained momentum when the Crown began to issue commercial licences to take fish, including crayfish, from Palliser Bay. The long term implications of this for customary fishing rights of Ngāti Hinewaka were obvious — commercial fishing would have a number of adverse effects on the inshore fishery.

The historical lead up to this threat was as follows:

25 May 1948.

> Internal Memo from Rangi Royal, Controller Maori Social and Economic Advancement to the Under-Secretary, Maori Affairs: commenting on reservation of fishing grounds for the exclusive use of Maoris and their vesting in tribal committees. Seen as very important. Lists several petitions proposed or received {122–125}.

A handwritten note on the back of the first page of this memo {123} is transcribed as follows:

> "The Ch. Welfare Officer
>
> There should be the closest co-operation between this Dept and Marine Dept in the matter of reserving areas of our Coast Line for the Maoris for fishing. The Act requires

> the recommendation of the Minister of Marine for the reservation of any fishing grounds and it is very essential that all requests made for recommendations are of a reasonable nature and do not unduly curtail any public right. It would appear that there is a likelihood of a great many requests being made for reservations --- you should arrange to meet the Fisheries Officer of the Marine Dept to discuss the questions from a policy point of view so that some procedure may be [instituted or implemented] to deal with applications and requests as they arise in the interests alike of the Maori community and the general public.
>
> I see no reason why the provisions of Section 33 should be repealed and re-enacted as an amendment to the Fisheries Act as I feel certain any differences between the Maori and Marine Depts can be reconciled by a free discussion. GP (?) 14/6/48" {123}.

This memorandum also points out:

> "The complaint has been that there were all kinds of limitations imposed by the Marine Department upon their liberties to take shell fish, but despite these and Government Inspectors, their kai moana is fast disappearing. The Maoris observed the rights and customs in regard to their fishing grounds more rigidly that do even the Marine Department, and the shell fish have been known to disappear from their old grounds not because of the quantities taken but because of the ignorance of the Pakeha who desecrate the grounds" {122}.

This memorandum also makes another good point:

> "It was not generally known among the people that the power to reserve fishing grounds, oyster, mussel, and pipi beds <u>for the exclusive use of Maoris</u> [emphasis in the original], was vested in the Governor-General upon the recommendation of the Maori Council, by Section 4 of the Maori Councils Amendment Act, 1903... Section 33 of the Maori Social and Economic Advancement Act, 1945, therefore merely re-enacts a provision which has been in existence for over 40 years until repealed by Section 50(1) of the above Act" {124–125}.

9 November 1949.

> Hand written note from D to Mr Bennett (Native Affairs Wellington): advise Pirinoa Tribal Committee that an Italian has applied for a license to take fish, including crayfish, between Lake Ferry (Onoke) and Palliser Point. They should object immediately and indicate areas they want excluded. Crayfish tails to be exported, paua to be used for bait, both will be depleted and bodies and shells likely to be dumped on beach, causing fish to go elsewhere {121}.

15 November 1949.

> Rangi Royal to Pirinoa tribal committee conveying this message {120}.

22 November 1949.

> Jack Carter, Hon. Sec. Pirinoa Tribal Committee to Royal, thanking for letter, matter will be discussed at meeting this evening, strong exception will be taken unless certain areas are excepted {119}.

23 November 1949. Typed transcript of Jack Carter to Minister for Marine:

> "We submit:—
> (1) That is a licence is granted it would mean the depletion of paua beds as this sea food would be used for baiting purposes.
> (2) That if a licence is granted the extensive operations that would eventuate would deprive the Maoris (and pakehas) the opportunity of obtaining fish and other sea edibles for their own consumption.
> (3) That if a licence is granted which we assume is for that area within the three mile limit from Onoke to Palliser Point (Cape Palliser) then we respectfully ask that the area set out in the sketch herewith attached be excepted.
> (4) That the points named on the sketch herewith are the localities where principally fish and other sea edibles are obtained" (118).

Handwritten version of above letter including sketch {116} and with coversheet to Rangi Royal {113–116}.

The sketch (See Figure 54) marks the following places from the northwestern area to the southeastern area:

> "Northern or western bdy [boundary] of Te Kopi Blk [Block] - Hurupi, Te Kopi, Whatarangi, Haumenga Pt, Kawa Kawa Bay, Punaruku, Ngawi Pt, Matakitaki N.R. [Native Reserve] Fishing Rock, Cape Palliser Lighthouse, Northern Bdy [boundary] Matakitaki Blk [Block]" {116}.

Now let us be crystal clear about the intention expressed in this letter. Jack Carter was requesting that each and every one of these specific named places should be excluded from any commercial fishing licenses being issued on the grounds that they were the main places where Ngāti Hinewaka "obtain fish and other edibles for their own consumption" {118}, and that commercial fishing will deplete fish and paua. This is a request that the Crown respect the existing customary fishing rights of Ngāti Hinewaka.

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12 December 1949.

> Copy to Maori Affairs of letter from Minister of Marine to Jack Carter. One license already issued under specific conditions. Representations of Tribal Committee will be taken into consideration when any further applications for licenses in your district are being dealt with {117}.

22 December 1949.

> Reply paid telegram from H McCalister, Hinemoa House Te Aroha to Bennett, Native Affairs Wellington - "Did you find any foundation to the Maori claim on the rights of reserve for fishing in Palliser Bay part known as Black Rock" Reply - "No reference located here stop suggest procure proof from individual concerned" {112}.

4430

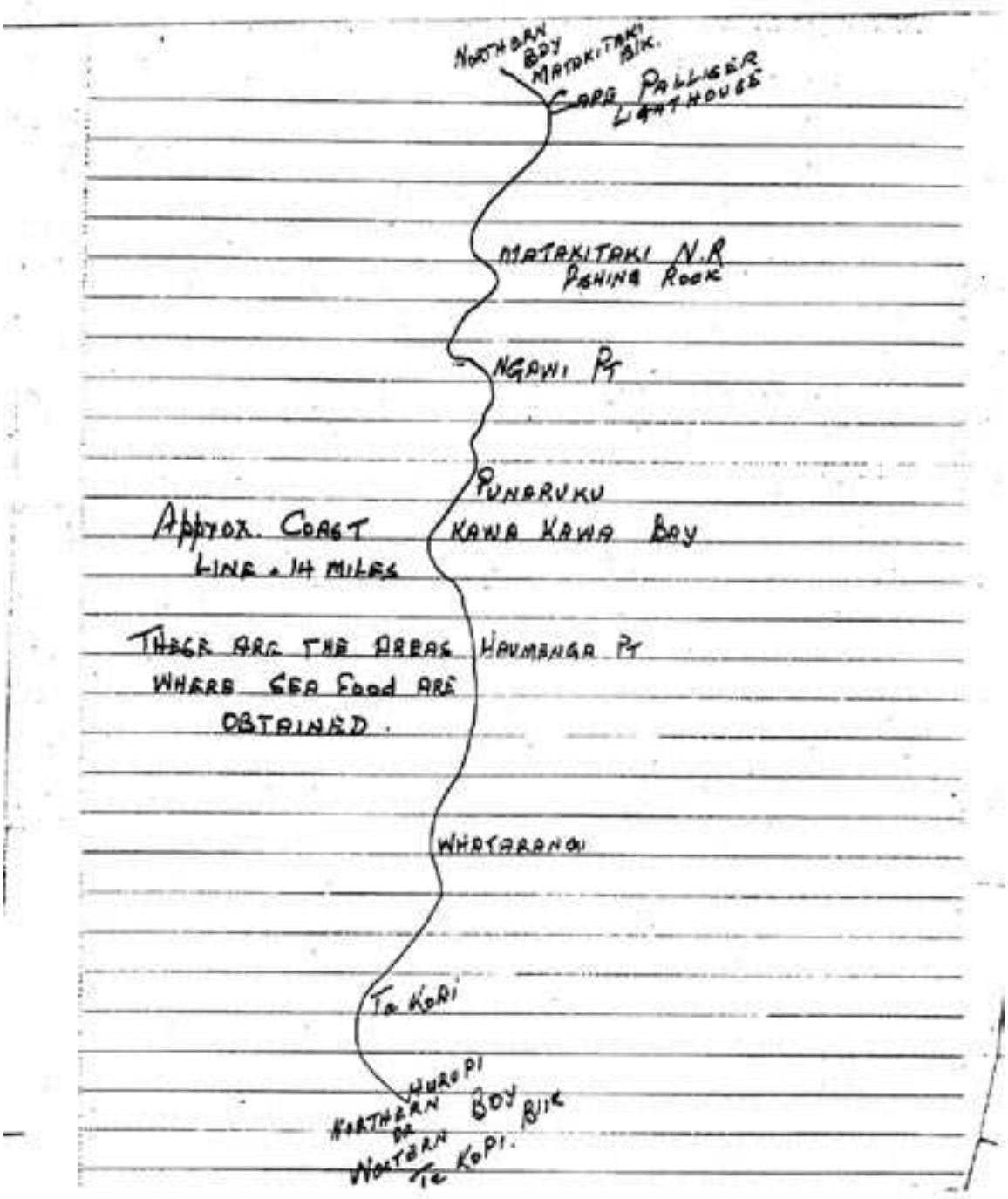

Figure 54: Sketch map accompanying letter from Jack Carter to Minister of Marine, 23 November 1949, showing the areas of importance for *kaimoana*.

How Black Rocks came to be involved in this dispute is a small mystery. Black Rocks is the rocky headland to the northwest of Matakitaki a Kupe.

18 October 1950.

> Typed transcript of Jack Carter to Controller Maori Affairs Wellington. Has written again to Minister of Marine, objecting to the granting of licenses for the taking of crayfish, etc. Since then parties have been operating here for some months, presumably on licenses granted by the Department. A petition is being prepared and will embody the signatures of Maori but also the Europeans, who are wholeheartedly in sympathy with the prayer of the petition. Has written to Minister, Inspector of Fisheries, and Mr Cooksley M.P. Forwarded to Secretary Marine Dept with request for comment by Under-Secretary Maori Affairs 30 October 1950 and endorsed by squiggle 10 January 1951 {111}.

16 January 1951.

> Secretary of Marine to Under-Secretary Maori Affairs. Your minute of 30 November 1950 to hand. No additional licenses have been granted. The case was discussed at a meeting between local MP, Mr Carter and another Maori, Mr Tirikatene MP and Chief Inspector of Fisheries. Boiled down to the protection of a sacred rock or fishing place. Pirinoa Tribal Committee is to prepare a history when the question of further protection will be examined. No mention of petition {148}.

Something had been going on behind the scenes here which is difficult to unravel. Jack Carter had clearly asked for a number of areas from Te Kopi to Matakitaki to be excluded from any commercial licenses. This internal memo suggesting that it "Boiled down to the protection of a sacred rock or fishing place" (presumably Matakitaki a Kupe) was not correct, but because that area had an official designation as a Fishing Reserve, it is perhaps understandable how it might be focused upon by Crown agents.

18 September 1951.

> Memo from Registrar Wellington to Head Office, Maori Affairs, in reply to verbal enquiry about the fishing reserve at Matakitaki. Gives brief history 1890 and 1941. Title presumably extends to high water mark and as the fishing rock is presumably above high tide it will be in the title. Area between MHW and MLW is known as the foreshore and prima facie belongs to the Crown. Authority of Maori Trustee is limited to what is done on the land itself. Could possibly arrange with the Marine Department for special regulations to be issued under Sections 5 and 46 of the Fisheries Act 1908, to regulate or prohibit fishing in this locality. Best discussed at Head Office level. Some interested Maoris have recently asked to spend up to 85 pounds on a bach to be occupied by an appointee to keep watch over the fishing rock {109}.

12 October 1951.

> Under-Secretary Maori Affairs to Joe Paku and George Te Whaiti (separate letters), re enquiries by them about the fishing rock. If the rock is above high water it will be in the title. However, the Maori Trustee has no authority at all to prevent the taking of fish or crayfish from the sea nearby or passing along the shore below the high water mark. If a Maori community makes frequent use of an area for obtaining food supplies, the Marine Dept will consider reserving a fishing area {107, 108}.

15 April 1953. Petition of Te Hioirangi Te Whaiti and 81 others received at Parliament {134-143}. The petition states:

> "1. That your petitioners are descendants of the Ngātikahungunu Tribe and that we are entitled to fishing rights and reserves along the coast from Palliser Bay to the mouth of the Aohanga River [now known as the Owahanga River between Mataikona and Akitio].
>
> 2. That our fishing reserves are being misused and interfered with by the intrusion of fishing craft and boats which come right in to the shore. According to the Marine Department we have no power to stop these craft coming into our grounds so long as the boats are afloat. This creates a condition of hardship to us, as the frequent visits of fishermen are depleting our grounds of the usual abundance of fish and crayfish, and year by year the supply is becoming scarcer and scarcer.
>
> 3. That the Wairarapa Tribal Executive representing the Tribal Committees of the Wairarapa have carefully considered this matter and fully support the prayer of your petitioners.
>
> 4. Your petitioners therefore humbly pray that our rights may be protected, that landmarks be erected on the shore to define the boundaries, and that no fishing craft whatsoever, [unless owned by Maoris themselves is crossed out twice[27]] be allowed to trawl, fish or cast a net within two or even three miles from the shore" {135}.

A number of things should be carefully noted about this petition. Firstly, the petition asks for existing rights to be recognised, not new rights to be established. In the statement "that we are entitled to fishing rights and reserves along the coast", it does not ask for them, it affirms that these rights already exist. The length of coastline over which these rights are claimed are those covered by the traditional *rohe* of Ngāti Hinewaka and Ngai Tumapuhia, two *hapū* which are closely related. The boundary between these overlaps but is approximately Te Unuunu (Flat Point). It does not ask that the entire coastline be reserved for Māori use, but that they have rights along this coast which should be recognised. As pointed out elsewhere in this report, ownership of the inshore fishery was considered an integral part of customary title, embodied in the expression *manawhenua-manamoana*. The petition was seeking to have this system affirmed under New Zealand law.

Secondly, the expression "fishing rights and reserves" is potentially ambiguous, and probably caused some confusion later. I feel certain that the petitioners meant 'fishing rights and fishing reserves', but some could interpret this as 'fishing rights and land reserves', and it is easy to see how equivocating between these two senses could create confusion. It will be seen shortly that the organisers of the petition were soon asked to provide details of these claimed reserves, and this effectively diverted attention away from the essence of the petition, which is concerned with 'existing fishing rights', notably what we now refer to as 'customary fishing rights'.

---

[27] Other copies of the petition omitted this clause altogether {106}.

Thirdly, the petition makes the valid point that commercial fishing is adversely affecting the fishery by depleting it and thereby creating hardship. The inference can be drawn from this that commercial fishing and customary fishing are mutually incompatible. This point obviously concerned the Maori Affairs Committee, which as we will see below, referred the petition to the Government to consider the conservation of the fish stock.

Finally, the petitioners ask that the Crown protect the customary fishery by instituting effective measures to prohibit commercial fishing in those areas.

In correspondence leading up to the petition, Jack Carter drew the attention of the Crown to culturally offensive practices on the part of commercial fishermen in those areas so special to Ngāti Hinewaka. He believed that these practices would have a detrimental effect on the fishery.

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16 April 1953.

> Petition forwarded to Under-Secretary, Maori Affairs. Annotated 1/5 send to Secretary Marine {161}.

18 May 1953.

> Secretary Marine to Under-Secretary Maori Affairs. Petition refers to reserves. These should be detailed and the boundaries defined. Maori Affairs annotation - ask Mr Te Whaiti for details of the reserves {160}.

7 August 1953.

> Carter to Secretary of Maori Affairs. Sorry has been unable to reply to the letter to Te Whaiti. May be able to obtain particulars of other reserves after meeting on the 16th. My people particularly concerned with Matakitaki no 3. Hitherto no access by land except horseback. Road to lighthouse formed about 5 years ago. Since then we have had considerable trouble protecting our fishing reserve, moreso from fishing launches from Wellington. Crayfish fishing has greatly deteriorated. We are asking for measures or regulations to prevent commercial fishers and others from encroaching on these reserves from the sea. Are indebted to landowners who will not allow commercial fishermen from landing on their properties {156–158}.

11 August 1953.

> Under-Secretary Maori Affairs to George Te Whaiti. I wrote to you 27.05. asking for details of the various reserves. Please provide at earliest convenience {159}.

George Te Whaiti and Jack Carter were obviously being asked to provided details of the status of other reserves in the Palliser Bay area, which they felt obliged to supply if they could. It is easy to see how the original request for protection of customary fishing rights was being railroaded here by diverting attention away from customary fishing rights guaranteed by the Treaty and into the status of existing Reserves. In his original plea for help, Jack Carter did not claim that the named areas on the sketch map were in front of Reserves (although they may well have been), he was making a general plea that the inshore fishery

in those areas be excluded from commercial licences because they were important for customary fishing activities of Ngāti Hinewaka. It was now turning into a mission of finding detailed evidence of Reserves. There had originally been a number of Native Reserves along the Palliser Bay coastline: Turanganui, Te Kopi, Whatarangi, Kawakawa, Matakitaki) in the area designated on Jack Carter's sketch map, and parts of these still remain today (Te Kopi, Kawakawa, and Matakitaki).

The formal petition also used the term 'Reserve' in it, and this was probably a tactical error on the part of the organisers. If they had kept to the term 'Fishing Rights' it might have been better.

13 August 1953.

Petition again forwarded to Maori Affairs from House of Representatives {154–155}.

27 August 1953.

Memo from Secretary [Maori Affairs] to Secretary Marine Dept enclosing copy of petition and seeking comment. Petition is concerned with all of the coastal reserves from Palliser Bay to Aohanga. One of the principal ones, Matakitaki 3, vested in Maori Trustee as a fishing camp site. Has always been one of the principal sources of crayfishing for these people. Crayfish supplies now heavily depleted by commercial fishing. Deepwater channel runs right into Kupe's rock, situated on the reserve and this enables boats to go right into the rock and take crayfish from the channel which is the main source of supply from the land {105, 106}.

10 September 1953.

Memo from Secretary Maori Affairs to Clerk, Maori Affairs Committee. Two petitions identical. Matter referred to Marine Department for comment — Dept prepared to look into the matter but cannot do so on the information supplied in the petitions {130}.

14 September 1953.

Handwritten letter and typed transcription from Jack Carter to Secretary Maori Affairs Committee, saying that Te Whaiti, Tamihana and himself will attend on Wednesday. He and Te Whaiti will give evidence about Matakitaki, nothing seems to have been done about particulars of other reserves, and this is regretted {131–133}.

Again we can see here how easily attention was diverted away from customary fishing rights, on to the legal status of any land reserves in the area.

23 September 1953.

Heavily annotated page, apparently the cover of a copy of the petition. Attached is a typewritten note headed by hand "Report - 23 Sep 1953":

> "I am directed to report that in the opinion of the Committee this petition should be referred to the Government for inquiry with a further recommendation that the fishing industry in New Zealand be investigated with a view to the conservation of fish supplies".

Also attached a small press clipping reporting the Committee's deliberations {128}.

The above printed in English and Maori in AJHR {126}.

5 October 1953.

Memo Secretary Maori Affairs to Secretary Marine. Officially advised that the report of the Maori Affairs Committee is to be referred to the Government for enquiry {152}.

13 October 1953.

Secretary of Marine to Secretary Maori Affairs in reply to latter's letter of 27/08/1953. Department did not have the means to enquire into the matter as fully as the Committee had recommended, but suggested that the issues be referred to the Maori Land Court in order to clear up a number of related questions.

The letter was basically asking for detailed documentation of everything relating to history and use of claimed fishing reserves.

Hand written annotations 19/11:

Refer to C.J. [Chief Judge MLC] for consideration under section 542/1931 if appropriate; See no reason for Court enquiry. All that is necessary is for petitioners to supply necessary information to the Marine Department {151}.

26 November 1953.

Secretary Maori Affairs to Chief Judge MLC referring petition for action if he deems it appropriate {150}.

11 March 1954.

Chief Judge MLC to Secretary Maori Affairs enclosing statement of case: "The Chief Judge doth hereby refer to the Court for enquiry and report the allegations set out in paragraphs one, two and three of each of the said petitions". Goes on to set terms of enquiry more or less as in Marine Department demands in their letter of 13.10.1953, plus an additional question about the extent of misuse by fishing craft and the effect of this upon the fish supplies {176–178}.

30 March 1954.

Maori Affairs to Marine Department — whole subject referred to the Maori Land Court, with terms of reference similar to those suggested by Marine Department [original document not located] {144}.

18 August 1954.

Secretary Maori Affairs to Secretary Internal Affairs. Petitions referred to MLC {175}.

11 August 1955.

Internal Affairs to Secretary Maori Affairs. Any progress? {174}.

19 September 1955.

Secretary Maori Affairs to District Officer Wellington. Any progress? {173}.

3 October 1955.

Deputy Registrar MLC to Head Office. Petition has been advertised without anyone appearing. Will try again {172}.

7 October 1955.

Secretary Maori Affairs to Secretary Internal Affairs. Not yet considered by MLC {171}.

10 November 1955.

Deputy Registrar MLC to Secretary Marine, copies to Secretary of Internal Affairs and Head Office Maori Affairs. A representative gathering of Maoris including Hoani Te Whaiti, Jack Carter, Dave Thompson and Mrs Heke Boyd present at MLC sitting in Masterton 20.10. No minutes taken. Subsequent long discussion resolved into one of a keen desire to expedite and pursue the petition. Trustees to be elected, to engage counsel and to prepare information. Extent of discussion was such that MLC may set aside a special sitting and notify Department of Internal Affairs, Department of Marine, and owners of fishing craft {170}.

5 July 1957. Secretary for Marine to Director Maori Affairs:

> “ **PAUA**
>
> Thank you for your memorandum of 24th June in reply to mine of 14th May on the above subject.
>
> I agree in general, with the submission you make, and have no deliberate intention of granting licences to take this shellfish in any area where a valid objection could be lodged by so-doing. At the same time there are many areas in both North and South Islands where supplies exist which are rarely, if ever, touched by anyone, Maori or pakeha. Provided such supplies are harvested wisely, the catch is offered for New Zealand consumption and not for export out of the country, and the area concerned is not polluted, I can have little option about granting a licence.
>
> To refer all applications to take shellfish generally, including kina, to your District Officers, would be unwieldy and time consuming. At the same time it has always been my policy to not grant such licences at or near centres where a Maori population relies partly or seasonally on shellfish as an article of diet. This is why I sought from you information concerning areas which should be definitely excluded from any commercial exploitation. Your statement, that the whole of the coastline of the North Island could be excluded from exploitation, seems far too sweeping” {169}

This is a very important letter, outlining as it does, several policy matters to avoid adverse effects on Māori customary fishing rights. These are:

> Policy 1: Fishing licenses for paua are not granted for exporting catch
>
> Policy 2: Fishing licenses are not granted for areas where Māori rely on shellfish as an article of diet (customary rights)

It would be interesting to know why the first policy was instituted. The reasons for this seem very clear in 2003, but may not have been so clear in 1957. There appears to be an insatiable demand from abroad for paua, and the price it commands is so high that our inshore fishery could be completely destroyed unless tightly controlled. Did the Secretary for the Marine Department anticipate that exporting paua would be detrimental to continued customary rights of Māori ?

Conclusion 46

27 August 1957.

Typed transcript of Carter to Tirikatene. Reliably informed that representation being made to Marine Department for license(s) to take paua from Kawa Kawa, presumably for commercial purposes. Manager of Kawa Kawa Station approached for access. "My Committee strongly protest against the issue of such a license. We have had our kouras pretty well cleaned up and now our pauas is the next to be cleaned up if licenses are granted. Kinas will be next" {168}.

5 September 1957.

Maori Affairs handwritten file note. Discussed Pirinoa objection with Mr Sorrenson of Marine department. They had already received telegram sent 27.08.1957 and replied that enquiries have been made about taking paua commercially in Palliser Bay but no licenses have been issued and it is rather unlikely that any will be. "Mr Sorrenson knows the people and the Kawa Kawa area very well and he is of the opinion that commercial fishing of paua will be detrimental to existing stocks" {167}.

Conclusion 47

Undated

Typed copy of letter from Minister of Maori Affairs to Jack Carter. Department has looked into the matter. Enquiries have been made but no licences have been issued. "In fact, with present knowledge of the area it is most unlikely that any licence to take paua along the Palliser Bay coast generally will be granted..." {166}.

1955-1957.

Series of exchanges between the two Departments [Maori Affairs and Marine] as to when the Maori Land Court would consider the matter of the petition and to settle uncertainty as to what kind of information the Marine Department would be expected to provide {144–145} [original documents not located].

27 February 1958.

Chief Judge MLC (per Deputy Registrar) to Secretary Maori Affairs Committee. Considers that the enquiry has been abandoned by the petitioners - they have not prosecuted the enquiry since it was referred to MLC in October 1954 and at a hearing in Masterton in October 1957, one of them acknowledged that no-one appeared to be interested and it could be discontinued.

We may never know why interest in this petition appeared to lapse on the part of Ngāti Hinewaka. There are no documents which inform us exactly what was in the mind of the

petitioners and they have passed away. However, after five years in which they were expected to go to considerable trouble and expense to provide documentation about land reserves with no interest at all being shown in the conservation of the inshore fishery, which after all was the main reason for the petition in the first place, the petitioners may simply have been forced to turn their attention to the new and more pressing threat of commercial paua fishing in their *rohe*.

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15 January 1960.

Secretary, Ikaroa District Council to Minister Maori Affairs. Inaugural meeting of Ikaroa Council discussed Fishing Reserves - felt that fishing grounds as such were presenting an increasing problem. Writing to ask that section 33 be implemented {209}.

22 January 1960.

Internal Maori Affairs memo to Mr Hercus. No record of any reserve being created under Section 33 of 1945 Act. Marine Department practice is to introduce specific regulations in specific localities — usually to restrict commercial exploitation. It is obvious that the Marine Department has no intention of recommending any reserves under the Act despite numerous petitions to parliament. They say "The practical implication that would follow the making of such a reserve would be an unfortunate and undesirable distinction and a segregation of races that have lived and intermarried happily together." Etc (memo dated 24 January 1950). This is government policy. However, Maori people just as determined to press their claims for fishing reserves — Section 33 in their eyes is recognition of Article 2 of the Treaty. Discusses repeal — Minister has asked it not be proceeded with in 1959. Answer may lie in stepping up policing and increasing Marine Dept staff {208}.

3 February 1960.

Assistant Secretary Maori Affairs to Minister (Nash). Fuller report similar to above. Notes that it would be better to defer any action to alter the law till the outcome of the Ninety-Mile Beach case before the Supreme Court is known. Hand written annotation dated 21.6.60 says Ninety-Mile Beach case going to appeal. Includes draft interim letter for approval and signature to Secretary of Ikaroa District Council. This conveys gist of Marine Dept view, but says he will talk to Minister Marine before making a decision {205–206, 207}.

19 February 1960.

Minister of Marine to Minister of Maori Affairs (Nash). Restates objection to fishing reserves for Maori. In an endeavour to protect certain areas still extensively utilised by Maori, regulations have been gazetted whereby shellfish, and in some cases crayfish, may not be taken commercially. Regulations apply equally to Maori and European. Department has further refused to grant commercial licences for areas adjacent to centres of Maori population. Has consistently refused to grant export permits for "certain sea-foods" when it is known that such form a substantial part of Maori diet. Where such shellfish are taken commercially, every effort is made to direct the sales

internally[28]. Would like to repeal Section 33 and also s.76 of Fisheries Act 1908. However, should await outcome of 90-Mile Beach case. Referred by Nash to his Department for drafting a further reply to Secretary Ikaroa District Council {203–204}.

Conclusion 49

The history of the George Te Whaiti petition was yet another setback for Ngāti Hinewaka about their customary fishing rights. They started with high hopes that their voice would be heard, being encouraged to take up cudgels yet again when Rangi Royal wrote to the Pirinoa tribal committee 15 November 1949 advising them that someone had applied for a license to take fish, including crayfish, between Lake Ferry (Onoke) and Palliser Point. They felt they were on strong grounds protesting about this because it would have a direct impact on their customary fishing rights and the Crown had a responsibility to protect these rights.

However, this petition was doomed almost from the start — what started as a clear exposition on customary fishing rights, turned into an issue about where Māori possessed reserves and their history, and in particular land reserves. The Crown was on another track altogether, and failed to listen to the perfectly legitimate grievance that if licenses for commercial fishing were issued they would adversely affect Māori customary rights. The depletion of the inshore fishery has been described above.

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Conclusion 53

The Third Attempt — The Mita Carter Petition

The failure of the George Te Whaiti petition to make significant headway in the struggle by Ngāti Hinewaka to have their customary fishing rights recognised by the Crown was a devastating blow. It was 28 years before they tried again. This time it was the son of Jack Carter, co-organiser of the George Te Whaiti petition, who took the initiative. Mita Carter started work in earnest in 1988 and between March and August, he obtained five personal testimonies which documented the devastation of the inshore fishery and gave supporting evidence of the need for something to be done about it. These were included as Appendix 3 with his formal proposal for a Taiapure in 1992 {572–577}.

I have not been able to discover whether Mita Carter knew that there was legislation in the wind for giving greater protection to Māori interests in the inshore fishery when he began collecting evidence of the appalling impact of commercial fishing in Palliser Bay. However,

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[28]If it was the policy of the Marine Department (5 July 1957), and reaffirmed by the Minister of Fisheries 19 February 1960 not to grant licences at or near centres where a Maori population relies partly or seasonally on shellfish as an article of diet, and not to grant fishing licenses for exporting catch, these policies do not apply today. I have not been able to ascertain how well these policies were carried out, or for how long.

he obviously began his quest at least a year before the Maori Fisheries Act 1989. It is later recorded {559} that Mita Carter first learned about Section 54A (this is paragraph 54A in Part IIIA of section 74, and is concerned with the establishment of Taiapure) of the Māori Fisheries Act 1989 {694–697} from Judges in the Māori Land Court. This alone suggests that when he first started on his crusade he did not know about this legal proposal for Taiapure. Whatever the original details were in his mind, we will see below that when he started to formalise his ideas into concrete proposals to fit into the legal provisions for Taiapure he had a grand scheme which would have achieved great things in the long run. However, such were the forces of opposition on all sides that the final achievement was a pale reflection of his wonderful concept.

The Mita Carter Petition therefore begins with the five personal testimonies, referred to above; these serve to set the scene of what Mita Carter tried to achieve for the customary fishery of Ngāti Hinewaka. The first reads as follows {573}:

Martinborough.

To whom it may concern.

I came to the Wairarapa in 1952, married here and have an adult family of six. I am employed in a management position with the Wairarapa Electric Power Board. I was brought up in Kaitaia (Northland) and reca[ll] vividly our holiday excursions to the beach at Ahipara, where with my parents the family and relations would camp among the lupins for two to three weeks. Ahipara abounded with all types of kaimoana and each day, under strict instructions, would gather toheroa, paua and other sea foods which were then dried for later use. I caught many a snapper off the beach using a handline. Some type of fish were caught seasonally because of its migratory habits and spawning. If crayfish with eggs were caught in a specific area, then that area became a rahui or prohibited area. When the kina was milky this also came under rahui. I have always been interested to know how my people of the north determined the maturit[y] of the paua as it was not the size as in the Wairarapa but indications known to them.

When rearing my family in the Wairarapa, I taught them the rules governing kaimoana as given me by my parents, the gifts of Tane and Tangaroa, a heritage from time immemorial. I took them to Ngawi on the Palliser Bay coast, where we pitched our tents among the tauhinu and practically lived off the ocean. Those days kaimoana was plentiful and all within easy reach. Crayfish would be crawling over the seaweeds at low tide. The local Maoris would be drying pauas and crayfish tails and referred to as "winter bacon." At Pahaua, on the eastern coast of the Wairarapa, I caught groper in about sixteen feet of water. At Te Kopi, snapper was caught in abundance. At sea, I fished areas where many types of fish were caught and I am sure that these places were known and named by our ancestor[s.] I fished an area known as the Okoro-punga (moon in its fifth day.) now referred t[o] as the Okra-pong. I observed here that the waters were very clear, probably due to some tidal action. A coastal settler tells that he remembers his parents saying that this stretch of beach was known as Wai-ora (pure or living waters.) and that a vast area and that a --- was set aside by the Maoris as a rahui or breeding grounds.

Today, as a Maori, I am ashamed to talk about out kai-moana, our fisheries, our waahi

tapus. We have let our tipunas down in this respect and now our coasts and fisheries have been raped, plundered and totally mis-managed, all for the "fast buck." The indiscriminate issuing of licences without adequate policing. I am sincerely of the opinion that a management plan is to late, but to impose a total rahui, in accordance with Maori custom and usage is the only sane approa[ch.] We must observe the spiritual values of our tipunas from Tane Mahuta to Tangaroa.
Whaiariki. Kia ora tatou katoa.

Signature [John Clarke]
Address 69 Dublin Street
[Additional lines not photocopied]

The second personal statement follows {574}:

March 19th., 1988.
To whom it may concern,

I, the undersign, do attest.

"I recall that over fifty years ago, my friend and I went for a days fishing on the Black Rocks, Palliser Bay. Fishing was plentiful and our bag that day consisted of six one hundred pound groper, a sack of blue cod and two sacks of crayfish. each crayfish weighing between three to four pounds. On my retirement five years ago, I fished the same rock all day and caught nothing. This area, in my view, is totally fished out. The crayfish was a food for the groper, when in November the crayfish would be shelling and this brought the groper in close. In my opinion, we will never see the past abundance of fish again. The inshore fishing has been raped and plundered, all for the sake of the quick dollar"

Signature J.W.Sinclair
Address Lake Ferry RD2 Featherston
Witness RHowe JP
Address Main Road Pirinoa
Date 30/3/88

The third personal statement follows {575}:

Martinborough.
To whom it may concern.

I came to the Wairarapa from Mohaka in 1957 and am now a permanent resident with a grownup family. I am now involved with the local management of the Access programme and the establishment of the Hau-ariki Marae in Martinborough. I feel it my duty to participate in any submissions in respec[t] of our fisheries. When, as a youth in Mohaka and Mahia, my parents together wit[h] my hapu (sub tribe) tutored us in the behaviour and tikangas when on the beach and when gathering our kaimoana. On reflection, what our kaumatuas said could of been immense value to us today. When I came to the Wairarapa, I worked on the East coast stations at Tora (Orui) and

Te Awa-iti. I saw rocks left dry at low tide, the undersides literally covered with paua. Isolated pools containing kina crayfish and inshore species of fish. Because of the permitted access and the abundance of our kaimoana, we took only enough to sustain our needs.

Today the scenario has changed dramatically, commercialisation is the key word. Where once we had access to our known kaimoana areas, we find that the land owners are reluctant to grant access and it could only be assumed that these land owners are actively participating in the commercialisation and exploitation of our fisheries. If this could be sustained, then it is indeed sad for when our ancestors sold the land ample fishing reserves were set aside, but now the settlers hold riparian and blue water titles and this has denied our people access to traditional "waahis" places of fisheries. I join with my fellow submitters to say unhesitatingly, that our kaimoana have been "raped and plundered" without due consideration for our nation's future. The M.A.F. should be replaced with a more responsible and efficient department, but I must concede and ashamed to acknowledge, that the predators of our kai-moana have been my own people working for consortiums that set them up with the necessary fishing equipment.

If we are to enter into a partnership with our fisheries then the Second Article of the Treaty should be intact ... inviolate and secured to our people and our tikangas written into any legislation, first and foremost, I was taught to obey these rules.

1 Never clean your kaimoana on the beach.
2. If you turn over a rock, replace it as you found it.
3 No shell fish should be cooked and eaten on the shore.
4 If crayfish with eggs were caught in the area, then fishing must cease in this area. This also applied to the kina.
5 Women were not permitted to gather kaimoana during certain periods.
6 Only food baskets made for the gathering of kaimoana, must be used.
7. To pollute an area was to drive the kaimoana away.

To summarise, the Treaty is the only means by which we could salvage our fisheries. Kia ora tatau

Name G. HawkinsWitnessed by [illegible]
Address 46 Weld St.Address 33 Kitchener St
[remaining line[s] not photocopied

The fourth personal statement follows {576}:

To whom it may concern.

When as a young man about forty years ago, I stayed with an uncle of mine at a place called Te Kohai, situated on the banks of the Ruamahanga River where it empties into the Wairarapa Lake. My cousin and me would set our net from a 30ft dugout canoe and would catch about 100 fish comprising of mullet, flounder, perch and trout. Any fish that was still alive we were told to return to the water as the drowned fish would

be sufficient for our family needs. As there was no means of communicating with other members of the family who lived some distance away, my uncle would communicate by smoke. Incidently my uncle spent some years in Canada. Family members would arrive in their spring-carts to collect fish. Fish would only be caught as the need requires. Today, this stretch of river is stagnant because the upper reaches has been diverted. There is no fish, the kakahi beds (fresh water mussell) are gone and the water weeds are slowly dying. My uncle tells me that in his early days, there were fishing pahs in this area and each hapu had their allocated fishing areas. When the diversion was put in, control gates should of been put in and this would of kept this wonderful and historic stretch of water alive.

Kia Ora Tatau
[Bill Mikaera]
Wittness [illegible]
Date 24th May 1988

A Crayfish Charm.

Ngau mai, ngau mai,
E ngau ki taku matira nei taratara,
Ka hika ra, kei te hara,
E Tangaroa kia u.

Deep Water Fishing.

Tenei hoki te maunu, e Waro
He maunu hi koura, e Waro
He maunu hi kokopu, e Waro
Kaikai kinikini, e Waro
Kaikai torouka, e Waro
E waro, waro uri, waro tea,
Waro kakakina, utu ra te mahanga
No Rua te tupua, no Rua te tawhito
No Wiwi, no Wawa, no haere tu te [R]angi.

Finally, the fifth personal statement follows {577}:

To whom it may concern.

As a young man I accompanied my parents and other members of our huge whanau to our coastal waahis to gather kaimoana. We went at certain times of the year before or after the moulting of the crayfish and the breeding season of the kina. Sometimes our calculations would be wrong and we often found crayfish with eggs and the kina milky. When we found female crayfish, the area would be rahui as it was said of our people, that during the egg laying of the crayfish, females would congregate in one place and the kina would move out to deeper waters.

I recall my parents picking up female crayfish from under the rocks and examining the

berries as the pakeha call it today, then they would go to a deep isolated pool and with the tail held in one hand and head in the other would swish the crayfish around under the water and all the eggs would come off then they would release the crayfish. This was always done when female crayfish was inadvertently caught and when the eggs were ready to be released. The taking of the female crayfish was highly tapu and if caught you were banished from the area and be subjected to much criticism by the hapu. Kina, paua, pupu and limpet were prized kaimoana of the Wairarapa people as there was no pipi and mussels on our immediate coasts. All our fishing kaingas were built close to known deep water fisheries or waahi hohonu, where the moeone, whakapuku, kapua, species of the hapuku and other fish were caught. Some species of fish were taken for medicinal purposes only. Seaweed was used as a guard against throat infection. If I was more attentive to what our kaumatuas said and done, I would of been in a better position to assist. I support what is being done.

Kia kaha. Kia ora tatou.

Wm Te Kani
Address 38 Dublin St M'Boro
Wittnessed G Hawkins
Address 46 Weld St Martinborough
Date 15-8-88.

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Mita Carter was winding himself up to do something about the deplorable state of the fishery in Palliser Bay and also in the lower lake areas of Wairarapa, about which he cared passionately. Exactly what he was initially planning to do may never be known, but something happened in 1989 to give direction and substance to his mission. That was the passage of the Māori Fisheries Act in 1989, amending Fisheries Act 1983 and providing for the establishment of Taiapure.

It appears that the first Mita Carter know of the all important provisions in this act for giving Māori some say in the future management of the inshore fishery was when one or more Judges in the Māori Land Court drew his attention {559} to Section 54A of the Act, which is concerned with the establishment of Taiapure.

In undated documents, but dating to between 1989 (containing reference to Maori Fisheries Act) and mid 1991 (proposal discussed with MAF), a number of petition forms were signed, supporting the establishment of non-commercial Taiapure in Palliser Bay. Most of these mention areas other than Te Kopi and Te Humenga (the two Taiapure which were eventually established). Several refer to areas shown on maps. The longest one makes special mention of the whole of Lake Onoke. Included as Appendix 2 of Mita Carter's formal proposal in 1992 {561–571}.

The headings of each of these signed petitions are transcribed below. The first one reads {562,563}:

The Taiapure or Non-commercial area.

I, the undersigned, owner of the land bordering the proposal and designated on the map as Section 3, the Reservoirs to the mouth of the Kawa Kawa river, do support the non-commercial area and that the distance out to sea be three hundred (300) metres from mean high water mark.

We, the users of this area for many years, do support the Taiapure concept as set out above and join with Mr Priest in affixing our signatures.

Two pages, neither signed by owner of Kawakawa Station, with 7 and 22 signatures.

The second one reads {564,565,567,568}:

Taiapure or Local Non-Commercial Fisheries.

We the undersigned, kaumatuas of Ngati-Kahuungunu ki Wairarapa, do agree and support the proposal that a Taiapure as set out under the Maori Fisheries Act, 1989 Section 54C, be set aside and established in these areas as identified on the accompanying maps. We further agree and support the proposal that the whole of the area identified as Lake Oneke or known to our ancestors as Te Tonga be set aside as a Taiapure or Wai-Maori-apure. This moana, was from time immemorial the fishing preserves of our ancestros [sic] and is of very deep spiritual and emotional significance. O tatau ripeka.

Four pages, 77 signatures

The third one reads {566}:

Taiapure or Local Non-commercial Fisheries {566}.

We, the Whanau ki Wairarapa do support the Taiapure concept and proposal as set out under The Maori Fisheries Act, 1959, Section 54C. We support our Kaumatuas in identifying and presenting these areas as suitable Taiapures.

One page, 23 signatures

The fourth one reads {569}:

Taiapure or Local Non-commercial Fisheries, Palliser Bay

We the undersigned, Trustees of the Maori Freehold lands known as Matakitaki, 1-2, 101 and No.2 and appointed under Section 439 of the Maori Affairs Act, do hereby agree and propose that the Taiapure or local non-commercial fisheries as set out under

Section 54C, Maori Fisheries Act, 1989, be set aside and established adjacent to Maori freehold lands as shown on the accompanying maps.

We are,

4 signatures

The fifth one reads {670}

Taiapure or Local Non-commercial Fisheries, Palliser Bay.

We the undersigned, Trustees to the Maori Freehold lands known as Te Kopi No.2 and appointed under Section 439 of the Maori Affairs Act, do hereby agree and propose that the Taiapure or local non-commercial fisheries as set out under Section 54C, Maori Fisheries Act, 1989, be set aside and established adjacent to Maori freehold lands as shown on the accompanying maps.

We are,

2 signatures

The sixth one reads {571}

Taiapure or Local non-commercial Fisheries, Palliser Bay

We the undersigned, Trustees of the Maori Freehold lands known as Kawa Kawa 1&2 and appointed under Section 439 of the Maori Affairs Act, do hereby agree and propose that the Taiapure or local non-commercial fisheries as set out under Section 54C, Maori Fisheries Act, 1989, be set aside and established adjacent to Maori freehold lands as shown on the accompanying maps.

We are,

7 signatures

It can be seen from these documents that people signing the petition were asking for areas to be set aside for local use and that commercial fishing would be prohibited from them. The petitions are signed by Europeans as well as Māori, and European organisations gave their support to the final proposal when presented in the Māori Land Court 28 September 1994 {592-653}.

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The first version of the proposal for Taiapure is marked on topo maps with archaeological sites and/or Mita Carter's historical notes shown. Here the proposed Taiapure are:

from the Matapero Stream to the west edge of the Lighthouse Reserve;
from the east of the Mangatoetoe Stream to south edge of Ngawi;
from north edge of Ngawi to the Kawakawa;
from south-east of the Pararaki to the Washpool and possibly to Whatarangi;

from the southern edge of Te Kopi no 2 to well beyond the Pinnacles scenic reserve {520-524}

The second version is marked on a cadastral map as follows:
from the Matapero Stream to the west edge of the lighthouse reserve;
from the Mangatoetoe Stream to the south edge of Ngawi;
from the north edge of Ngawi to the Kawakawa;
from Te Humenga Point to the Washpool;
Te Kopi as before {527}.

The third version is also marked on a cadastral map and the original was colour coded to show the status of adjoining land. Highlighted areas are now:

from the Matapero Stream to the Waitutuma Stream;
from North of Ngawi to the Kawakawa;
from Te Humenga to the Washpool;
a slightly shortened area at Te Kopi {526}.

The final version, formally lodged in 1992, is:

Te Humenga to the Washpool;
and Twin Creeks to the Hurupi at Te Kopi {528}.

"The proposal for both these areas is to prohibit all commercial fishing except for area two (Te Humenga). Here two local commercial fishers will continue to operate, along with hand gathering of drift seaweed [agar]" {352}.

"After consultation with MAF Fisheries, Department of Conservation and Federation of Commercial Fishermen, the size of the area proposed for Taiapure was reduced to that which we are now presenting. The remaining areas including Matakitaki will be addressed later" {354}.

The proposed part of the sea designated as Taiapure was 800 metres from the mean high water mark in the case of Te Kopi, and 300 metres for Te Humenga {581}.

The fishing reserve at Matakitaki was never in any of the various proposals which were drawn up by Mita Carter. It is presumed that he considered that its status as a Fishing Reserve could not be improved. The areas he was most concerned about have been copied on to a single illustration for convenience, and presented in Figure 55.

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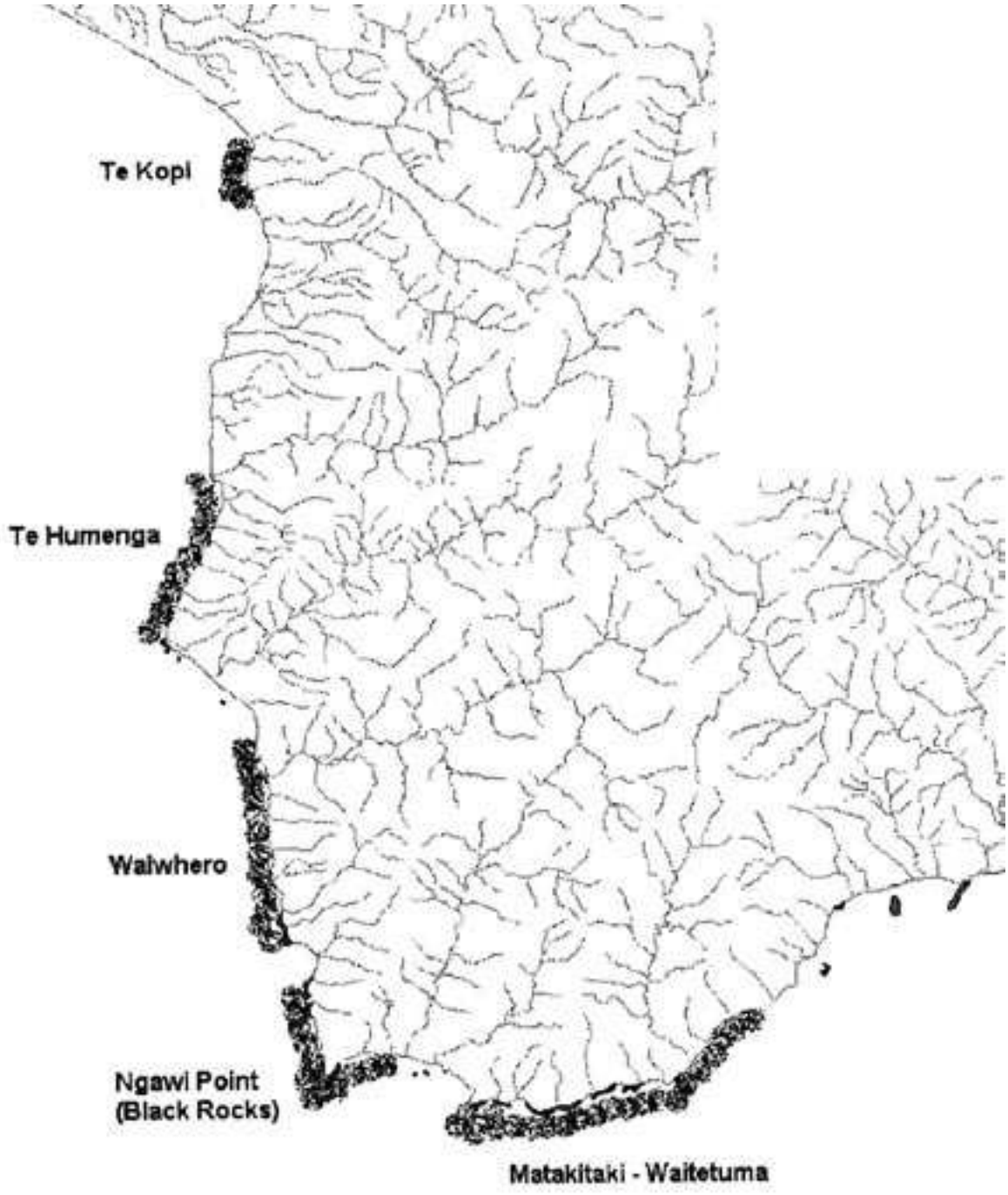

Figure 55: Sketch map of Palliser Bay showing the main areas which appear in the Mita Carter Petition.

The following documents the progress and decline of the Taipure proposal.

19 December 1990.

Michael Fromont (MLC Registrar, Hastings) to Mita Carter and others about Taiapure legislation and appointment of assessors {333–334, 412–413}.

27 February 1991.

Mita still soliciting views on Taiapure {414}.

10 May 1991.

P.H. McGregor, Programme Manager, Iwi Transition Agency, to Regional Manager, MAF, Nelson. Invitation to a meeting in Masterton to discuss Taiapure proposal which "has now been formulated by a Kaumatua to create a taiapure over certain parts of the sea along the Wairarapa coastline" {335}.

14 May 1991.

Reply from MAF — Ruth Marsh and Craig Petherick will attend {336}.

17 June 1991 (filed).

Memo — Notes on Taiapure meeting Masterton 7 June 1991 (apparently by Ruth Marsh). Present Mita Carter and Bill Mikaera (kaumatua), Tom Gemmel (ITA), Ruth Marsh (MAF) and four DOC staff. At this stage the proposal included Lake Onoke (because of breeding of flounder above the bridge). Mita pointed out that the proposed sites border on to Maori land or reserve. Tom Gemmel explained that the philosophy was to restore the observation of customary practices, to restrict or eliminate commercial practices, to restore the coastline and help stocks rebuild {337–339}.

Conclusion 57

12 July 1991.

File note from Regional Manager MAF central. Met Mita Carter and Ben Couch, plus 2 DOC staff and Maori liaison officer from Federation of Commercial Fishermen. Inspected the five areas plus the lake — all very amicable. It was agreed:

* DoC would discuss future management of the lake with Maori people.

* Te Kopi site suitable for Taiapure with protection for blue mussels, paua and kina.

* Humenga also suitable, with protection for paua and kina — would not exclude commercial crayfishing.

* Other areas a possibility for the future. Enforcement would be extremely difficult in some of the other sites, plus there is an extremely active cray fishing area there {340}.

Conclusion 58

22 October 1991.

Ruth Marsh to Mita (copy to others) — she has now completed the application and covering letter, please sign {341–342}.

22 October 1991.

Mita Carter to D-G MAF and signed copy of the application {343}. MAF version of proposal, with Mita's papers as Appendix 1 {327–374}; clear transcript of Mita's paper {425–433}; additional material by Mita about Taiapure {434–436}.

28 October 1991.

Mita Carter to Ruth Marsh, thanking for her help and saying that the coast from Ngawi to Waitetuma stream which borders Maori freehold land must be included now or at a later date {344}.

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30 October 1991.

Ruth Marsh to Mita Carter, thanking for prompt return of papers — "With respect to the coast from Ngawihi to Waitetuma, I suggest that we begin working on that as we receive feedback on the Palliser Bay application" {345}.

21 November 1991.

Formal acknowledgement from MAF of receipt of application {346}.

1991.

Mita and others engaged in extensive consultation with 'user groups', mainly with commercial interests, some at least facilitated by MLC Hastings. The only documentation we have for this is the acknowledgement in the final recommendation {314} and at the Hearing {531} that it had taken place.

27 March 1992.

MAF notifies MLC Hastings that the proposal for a taiapure has been approved in principle by the Minister of Fisheries and published by Gazette notice and in metropolitan and local newspapers. Memo by Fromont about same. Copies of notices {580–588}.

10 April 1992.

McHugh (Deputy Chief Judge MLC) to Fromont (Hastings Registrar MLC) thanking for proposal. "We had understood that the pilot scheme from MAF was to be in respect of the Manukau Harbour but I am grateful that a smaller proposal will be before the court so we can work through it properly" {513–517. unfortunately this document has been mislaid}.

27 April 1992.

Fromont to Chief Registrar MLC sending copy of proposal — no objections to date {512}.

April–June 1992.

Various submissions received including an objection from Rangitane who had not been consulted {488–511}.

? 9 June 92.

The Dominion reports that the Fishing Industry Board is seeking a declaratory judgement from the High Court as to the meaning of 'Taiapure — local fisheries' under the Maori fisheries Act {487}.

18 August 1992.

Fromont to McHugh and others complaining nothing yet received from the High court {486}.

20 August 1992.

Faxed copy of the application to the High Court (dated 23.6.1992). Since the Act came into effect at least 7 proposals have been lodged and 2 gazetted (one of which was Mita's, the other presumably the Tainui claim for the whole of the Manukau).

21 August 1992.

Mita to the chief judge of MLC. Delays causing concern, paua hauls continuing, soon there will be nothing to protect {478}.

Conclusion 60

1 September 1992.

Application to the High Court (Clearer copy of Faxed letter above 20 August 1992) posted to MLC Registrars by Justice Department {480-485}.

30 September 1992.

Response to Mita from McHugh {479} with copies to Fromont {477}.

4 November 1992.

Hingston (MLC judge Rotorua) to Fromont — hui to be held 4.12.12 with Rangitane and Kahungunu {476}.

November/December 1992.

Correspondence about arrangements for hui {469–475}.

23 February 1993.

McHugh to Fromont - putting pressure on High court about delays, please try to explain to applicants {468}.

24 February 1993.

Crown Law Office to Fromont — Justice Department was forced to pay costs of NZ Recreational Fishing Council to obtain views of their members for the High Court Hearing — hoping for progress soon {467}.

26 February 1993.
Fromont to Mita updating him {466}.

26 February 1993.
Fromont to Rimene and others — do they want to continue with their objection? {464–466}.

11 March 1993.
Fromont to Rimene with copy of Taiapure proposals {463}.

3 July 1993.
Mita Carter to Fromont, with copy of letter dated 30.6.93 from MAF fisheries to Mita. Still no progress with High Court. MAF wants to progress the application anyway. Mita pleased; he had been on the verge of abandoning the whole thing because of lack of progress and onslaught of commercial paua divers in the proposed taiapure areas {461–462}.

The letter from Mita Carter is filled with sadness {462}.

Conclusion 61

12 July 1993.
Fromont to Mita. "Like you I have just about given up on the Taiapure proposals for Palliser Bay." However it seems there is light at the end of the tunnel {460}.

Conclusion 62

25 July 1994.
Kidd (Minister of Fisheries) to Smith (now Deputy Chief Judge MLC). Fishing industry and Huakina Trust have reached agreement about the Manukau, case adjourned sine die. Three more proposals about to be gazetted — OK to proceed with Palliser Bay {456–458}.

27 July 1994.
Smith to Registrars in three districts enclosing above {455}.

9 August 1994
Fromont to Hingston. Can we proceed with case when High court proceedings are only adjourned? Matters between Rangitane and Kahungunu not resolved and will have to be heard {454}.

22 August 1994.
Fromont to Hingston. Hui held at Greytown — Rangitane have withdrawn their objection. Hearing set down for 28-30/9 {452–453}.

15 September 1994.
Fromont to Chief Registrar, MLC. Rangitane have now formally withdrawn their objection {445–446}.

28 September 1994.

MLC hearing of taiapure application in Masterton. NB This was the first formal hearing of a Taiapure application under the Maori Fisheries Act. Transcript of hearing in document bank {529–551}. List of those present {590–591}. Copy of evidence read out by Mita Carter and Ann Carter {552–560}, plus Appendix 2 and Appendix 3, presumably not read out {561–579}. Copy of all submissions, supporting statements and objections and associated correspondence {592–653}.

21 October 1994.

MLC Judge's (Hingston) report and recommendation to Minister of Fisheries {308–313}.

7 December 1994.

Letter from Kidd to MLC Hastings thanking for info — will advise decision {441}.

21 March 1995.

Decision paper[29] from PR Todd, Regional Manager, Fisheries Advisory and Research Services, to Hon DL Kidd, Ministry of Fisheries, recommends that the Minister accept the primary recommendation of the report from the Tribunal [That is, Judge Hingston's report] and recommend that the Governor General declare a taiapure for the two areas described as Te Kopi and Te Kumenga [sic]. The report also gives "correct coordinates" for the two areas {314–323}.

17 January 2000, 2 February 2000, 1 August 2000, 12 October 2000.

Correspondence about appointing a management committee, finally approved by the Minister (Pete Hodgson) on 18.10.2000 {324–332}.

Mita Carter's quest to protect the inshore fishery of Palliser Bay and Lake Onoke from the ravages of commercial fishing so that stocks of kina, paua, crayfish, pupu, limpet and fishes would rejuvenate to their former abundance understandably met fierce opposition from parties whose interests are entirely pecuniary. However, there was a great deal of support from Europeans and Māori to try to do something about the deplorable state of stocks of fish and shellfish in inshore areas. If one statement sums up what people wanted to achieve, it is what Tom Gemmel said 17 June 1991 when he "explained that the philosophy was to restore the observation of customary practices, to restrict or eliminate commercial practices, to restore the coastline and help stocks rebuild" {337–339}. In the end the tide of support was so strong that the Crown was obliged to give a positive response, and two Taiapure were established — one at Te Kopi and the other on the northern side of Te Humenga Point. Commercial crayfishing is permitted in the Taiapure at Te Humenga. What was achieved is a pale reflection of the original grand scheme, and with Mita Carter now deceased, his mantle must be carried in future by someone else if further progress is to be achieved.

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[29] Note: This copy of the paper does not have the Minister's acceptance on it, and is liberally stamped "RELEASED UNDER THE OFFICIAL INFORMATION ACT". A copy of Hingston's report, also stamped, is attached to it as Appendix II.

What of the two Taiapure which have been established ? Te Kopi is one of the most important traditional coastal homelands of the Ngāti Hinewaka people. A thriving village was at Te Kopi in the early 19th century, and William Colenso regularly visited it on his way from Hastings to Wellington. However, since that time the sea has dramatically encroached upon the land and taken away all vestiges of the original land where the village was located. South Wairarapa District Council are only too aware of the constant march of the sea inland and have tried everything to prevent it from taking away the roadway — in vain. The last surviving part of the original Māori settlement at Te Kopi is the Urupa, which is in an upland location on the east of the roadway. As the sea marches inland, the roadway has been aligned several times and cut into this Urupa area. As a consequence of this ongoing encroachment of the sea, the waters at Te Kopi are constantly turbid, and therefore do not support a high population of fish and shellfish suitable for customary gathering. Moreover, the Te Kopi foreshore is well known as a highly dangerous place because of strong undertow and unstable beach. It is not the kind of place where Māori and Pakeha families consisting of children and adults of all ages can safely get into the water and forage for kaimoana. To be sure, further out in the sea off shore, crayfish pots can be set, but customary fishing is mainly about foraging in waters close inshore for food. One must conclude that the Te Kopi area is very unsatisfactory for customary food gathering.

Why then did Mita Carter include it in his application for protection ? In my view he included it because it was an important historic settlement of Ngāti Hinewaka and an area that included *wāhi tapu*. The sea is now where the village once was, and as can be seen from the wealth of information which Mita Carter collated in support of his dream, archaeological sites and traditional *wāhi tapu* were important reasons for his selection of places to be protected. In view of this, it will, perhaps, be better understood now why he was so vehement that the area between Ngawi and the Waitetuma Stream should not be forgotten, and must be protected at a later date. This actually is the prime area where customary fishing is possible in Palliser Bay. His application for those areas was railroaded out of his application, despite the fact that these areas are backed by Native Reserves.

Conclusion 63

What about the Taiapure on the north side of Te Humenga Point ? This area has a more stable boulder beach. When I was working there between 1969 and 1972 one could get paua and other shellfish close inshore, but that was before the massive rise in commercial paua activities. A survey has been carried out of kina, paua and crayfish in this area by NIWA staff, and size frequency diagrams and density data are provided in Figures 31, AE, AJ, AK, BX, BY, BZ). These show that these three very important species to Ngāti Hinewaka are at least still present in the area. Unfortunately, the sampling methodology was not aimed at describing population structures because all juveniles are missing in the size frequency diagrams. As earlier pointed out this is attributable to the survey method used for the Taiapure which did not involve lifting boulders where juveniles are normally found (Stewart and MacDiarmid 2003, {210-212}). Strictly speaking therefore these size frequency diagrams are not population structures, but represent individuals which are not hidden from view. Such information may be relevant for divers with face masks seeking specimens above minimum legal size, but this survey method has little other value. The quadrat method employed by Glassey (2001) in the ecological survey of East Coast Wairarapa to Black Rocks does produce size-frequency diagrams which are unbiassed estimates of population structures.

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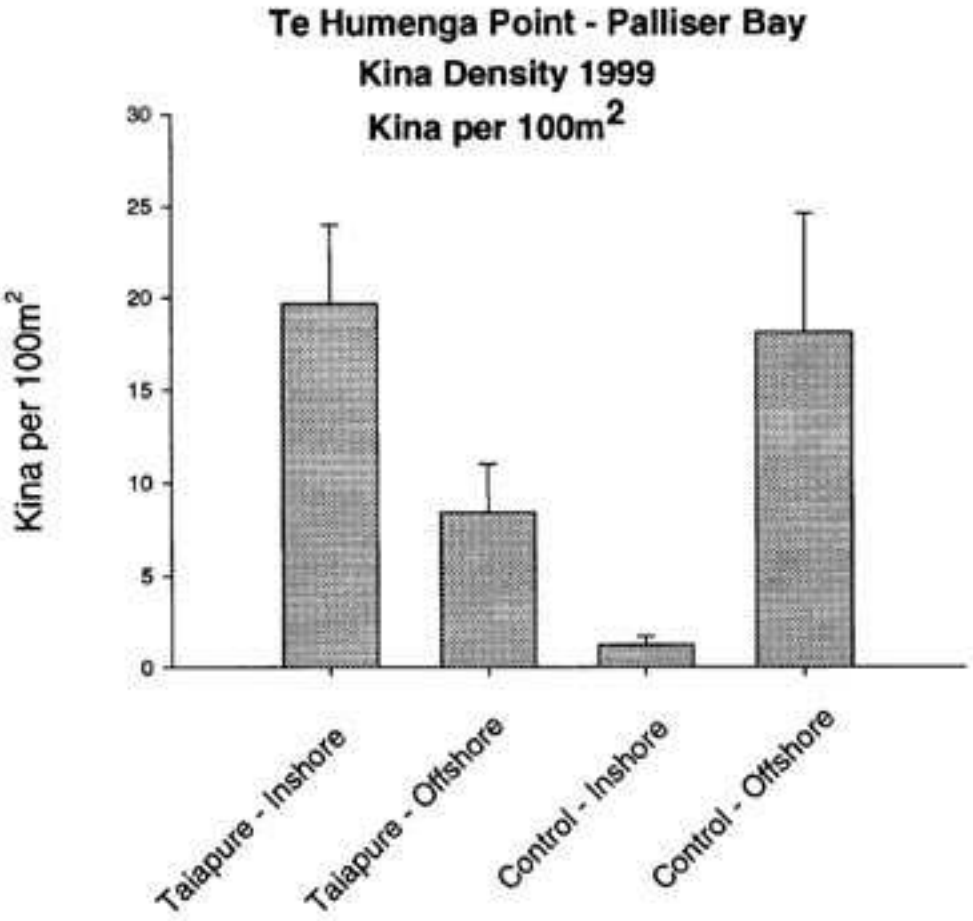

Figure 56: Density of kina at the Te Humenga Taiapure and the control samples nearby (Stewart and MacDiarmid 2003).

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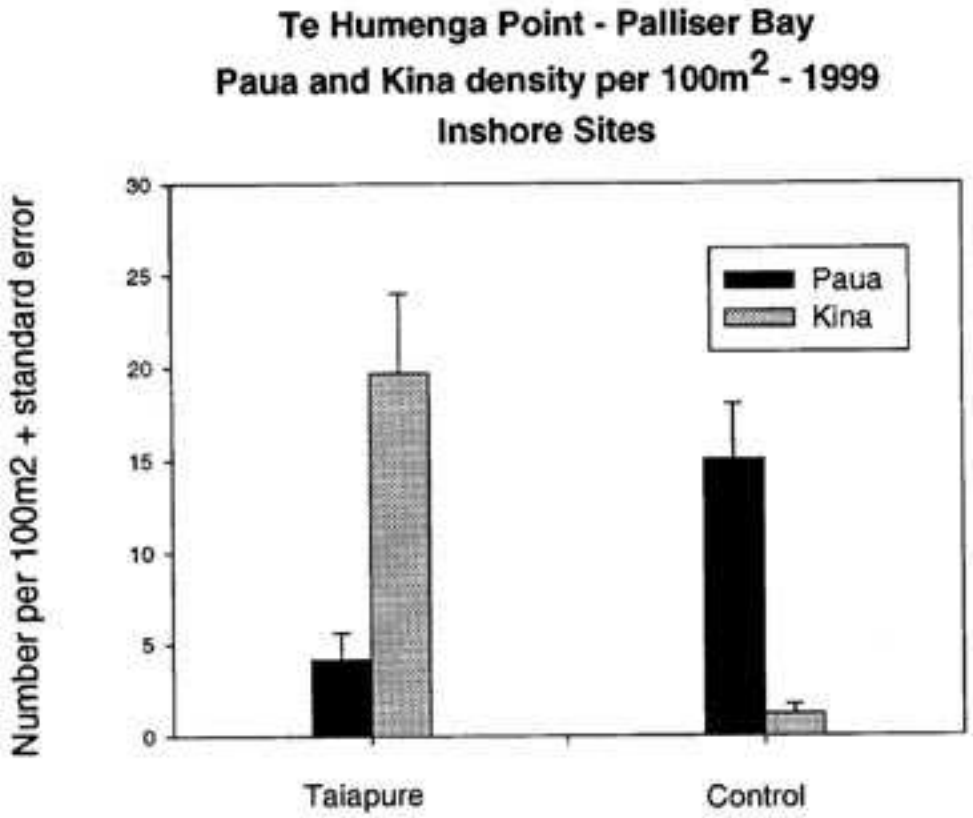

Figure 57: Density of paua and kina at the Te Humenga Taiapure and the control samples nearby (Stewart and MacDiarmid 2003).

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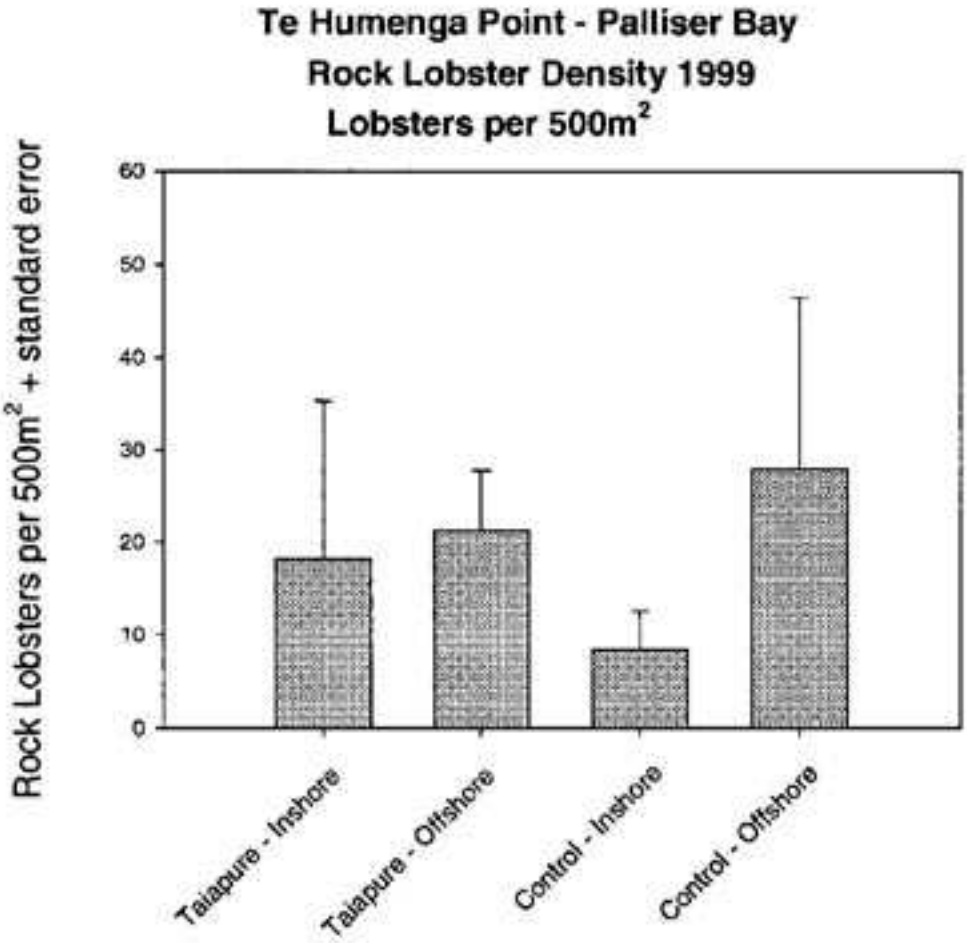

Figure 58: Density of crayfish at the Te Humenga Taiapure and the control samples nearby (Stewart and MacDiarmid 2003).

At the Te Humenga Taiapure the density of paua (4 per 100 m^2) is somewhat lower than the control areas (15 per 100 m^2), but kina show the opposite pattern, being 20 per 100 m^2 in the Taiapure and 2 per 100 m^2 in the control. As noted elsewhere in this report the density of kina and paua have been found before to be inversely correlated. Crayfish density is about 18 per 500 m^2 and a little higher offshore. The overall density is similar to the control area.

Unfortunately, these figures in isolation do not really tell us very much about the ecological health of the shellfish and fish population of this Taiapure. The type of surveys carried out by Glassey (2001) and Froude (2001) would be most useful at some stage in the near future, especially because they have a large database from similar surveys along the Eastern Wairarapa coast. However, the Taiapure at Te Humenga will certainly be of benefit for inshore food gathering, especially if stocks are allowed to rejuvenate by policing the area effectively. This is not an easy task. It would be so easy for a diver to come and clean out the area of paua and kina, and given the extraordinary high prices which these bring on the black market, this is a real worry.

Conclusion 64

Although the Crown did establish two taiapure in Palliser Bay, it must be concluded that this was another unhappy and largely unsuccessful episode in Ngāti Hinewaka's ongoing struggle for recognition of their customary fishery and their right to protect the inshore zone for customary food gathering. The issue of the area between Ngawi and Waitutuma Stream which Mita Carter regarded as so important remains unresolved.

Conclusion 65

CONCLUSION

For the first 600 years of occupation of the coastal lands of Palliser Bay and East Coast Wairarapa, the Ngāti Hinewaka people maintained a close relationship with the resources of both land and sea. Forest birds were obtained from the interior, kūmara was successfully cultivated and stored on the coastal flats, and the sea provided a bountiful supply of protein foods. By far the bulk of the marine foods which were gathered by the Ngāti Hinewaka in pre-European times were obtained in waters close inshore. This is the area where children learned to swim and forage in amongst boulders and channels for kina, paua, and crayfish. The humble kelpie frequents these areas and is in abundance along this coastline. It is not surprising then that remains of these foods feature in the pre-European midden sites in abundance. In those times other fish, including groper and many other species, could easily be taken by fishing from the rocks, and these feature in the middens they left behind too. Of course, people went further out to sea in canoes as well. Special fishing holes and rock pinnacles offshore had specific names and were owned as part of the customary title to the land and inshore fishery.

When Europeans started coming to New Zealand and land was sold to the Crown, Ngāti Hinewaka made sure that adequate areas were set aside for the maintenance of important

aspects of their traditional way of life. In large part this meant, for them, ownership and exclusive access to their kaimoana areas forever. This simply represented a continuation of patterns of ownership and rights to use resources which were deeply entrenched in Māori culture, and indeed throughout Polynesia. Unfortunately, this concept is not part of English Common Law, and the Crown did not accept this unification of property rights in land and sea. In practical terms, this disjunction between the attitude of Ngāti Hinewaka and the Crown did not make much difference to anyone while the New Zealand population was low, Palliser Bay and the East Coast Wairarapa was an isolated area that few people visited, and most important of all, there was no threat from commercial fishing enterprises in the inshore area. However, all that changed when the Crown started issuing licenses for fishermen to take crayfish and then paua and now kina from these areas. Ngāti Hinewaka could see immediately that this represented a real and immediate threat to something which they had been able to take for granted. Somehow under their noses, what they believed to have been an ancient and undisputed right to the inshore fishery was being challenged, eroded, and taken away.

George Te Whaiti must have thought he was on the strongest possible grounds to reverse this threatening new development. After all, the Maori Social and Economic Advancement Act 1945 had clear provisions for setting aside and protecting areas of special importance to Māori; but a bombshell was dropped on him when in September 1951 upon inquiring about the details of rights which Ngāti Hinewaka had in the sea off the Matakitaki Fishing Reserve, he was told 'none whatsoever'. Whatever exclusive rights Ngāti Hinewaka thought they may have had in the inshore fishery in front of their reserves were clearly not being recognised. Provisions in the Maori Social and Economic Advancement Act 1945 must have seemed to George Te Whaiti a godsend — here at last was an opportunity to have their customary fishing rights legally recognised. His petition to this effect was received 15 April 1953. How was he to know that despite legal provisions to respect Māori rights to customary fishing in this Act, the Marine Department had steadfastly refused to recommend any exclusive fishing reserves under this Act, and had a policy not to do so. After five years wrangling, on 27 February 1958 the Chief Judge of the Māori Land Court concluded that the George Te Whaiti Petition had been abandoned by the petitioners.

Mita Carter took up the struggle again in 1988 when he started getting together personal testimonies which documented the devastation of the inshore fishery in the *rohe* of Ngāti Hinewaka. In the climate of yet another promising Act, the Maori Fisheries Act 1989 amending the Fisheries Act 1983, which had provisions for establishing Taiapure, he set to and put together a wonderful proposal for rejuvenating and protecting the inshore fishery in Palliser Bay. By this time, however, commercial fishing interests were so strong in New Zealand, especially with respect to those inshore resources so important to Māori (kina, paua, crayfish), that this proposal was doomed to failure. Two Taiapure have been established, after a great deal of heartache and opposition. One is very unsatisfactory for customary fishing. The remaining one at Te Humenga will rejuvenate over time if it can be successfully policed against black market profiteering. However, permitting commercial crayfishing in this Taiapure appears to be inconsistent with recognition of customary rights and goes completely against the intentions of those who originally petitioned in support of the establishment of Taiapure in Palliser Bay. While Ngāti Hinewaka accept that some small progress has been made, they are dismayed that the really important inshore areas further south in Palliser Bay, and all along the coast of Eastern Wairarapa, continue to be plundered. Before Mita Carter died, he made a final plea to the Ministry of Fisheries that the coast from Ngawi to

Waitutuma stream which borders Maori freehold land must be included in a Taiapure now or at a later date.

It must be evident from the personal testimonies of elderly people who supported the Mita Carter petition that Ngāti Hinewaka feel a strong sense of moral obligation as custodians of the inshore fishery, and are deeply hurt by the plundering of kina, paua and crayfish in their *rohe*, which has been undertaken not for food, but for personal profit by exporting these precious gifts from Tangaroa to other countries. It is not right that people in other countries can enjoy the *kaimoana* that belongs to them and they cannot, because Ngāti Hinewaka certainly cannot afford to pay $250 for a kilo of paua, and they feel that soon they will not be able to gather them for themselves because there will be none left. So strong is this sense of loss to Ngāti Hinewaka that some feel personal shame that they have let down their ancestors in not being able to look after their customary fishery properly.

Conclusion 66

SUMMARY AND CONCLUSIONS

When Europeans first came to New Zealand the rocky coastal environment of Palliser Bay and East Coast Wairarapa would have been amongst the richest marine habitats in New Zealand, with *kaimoana* in super-abundance.

This source of food was an essential part of the economic system for Ngāti Hinewaka who lived along this coastline. *Kaimoana* continued to be relied upon during the enormous cultural, social and economic upheavals following the movement of European settlers into Wairarapa. Life without *kaimoana* is inconceivable to most modern Māori today, not necessarily for survival, although in some cases this may be so. The strength of this bond with *kaimoana* is hardly surprising considering that the ancestors of Ngāti Hinewaka lived along coastal Palliser Bay and East Coast Wairarapa for 600 years before Europeans came to New Zealand.

During the sojourn of Ngāti Hinewaka in Nukutaurua in Hawkes Bay in the middle of the 19th century, the Treaty of Waitangi was signed in that district. They would have felt secure in the knowledge that the Crown guaranteed them the full exclusive and undisturbed possession of their fisheries in Article 2 of that Treaty.

However, since the signing of the Treaty, the Crown has permitted the inshore *kaimoana* resource to be eroded to the point where it is barely viable for customary fishing. Ngāti Hinewaka have consistently complained to the Crown for many years that commercial fishing has encroached on their reserves, and that the inshore resource has been, and continues to be, drastically depleted. Their voice is not being adequately heard.

From 1853 onwards Ngāti Hinewaka believed that their coastal reserves carried with them exclusive rights to the adjacent marine resources for customary fishing. It was not until 12 October 1951 that they learned for the first time that the Crown held a different view.

Customary fishing is all about food for *whānau* and *hapū* consumption. It is mainly about the rocky habitats close to the shore line. It is not just for young fit men and women, it is also about old people and children foraging in the inshore shallow waters for the fruits of Tangaroa. It is not normally about expensive equipment and boats obtaining food in dangerous areas offshore. There is little point in setting up areas for customary fishing in places like Te Kopi, which is dangerous for foraging, and has very few shellfish close inshore.

In managing the customary fishery, it is important to have a clear idea of what has been lost in New Zealand before trying to rejuvenate stocks and set up good management practices for the future. This means taking a great deal more notice of earlier historical and anecdotal information about the inshore fishery so that we have a clear idea of what it was like before it was devastated to the level it is now. This will help avoid the ‘moving baseline phenomenon’ described in this report. As Pauly and Watson pointed out recently “The extent of these depletions was not recognized until recently because biologists did not consult historians or collaborate with archaeologists, who study evidence of fish consumption in middens (ancient trash dumps)” (Pauly and Watson 2003: 38).

Modern marine management systems are based on the idea of setting a total allowable catch each year so that the underlying biomass remains self-sustaining. Unfortunately, we cannot put an accurate figure on the extent of depletion of the inshore fishery of Palliser Bay and East Coast Wairarapa, but it could be as little as 10% of what it was when Captain Cook arrived here. It stands to reason that if the underlying biomass was allowed to rejuvenate to 10 times its present value, a greater amount could be taken from it each year, without adversely affecting the fishery. It seems sensible to conclude that it would therefore be better if the inshore fishery was allowed to rejuvenate to some level in the historical past. The big question is — how far back ?

This shows up a fundamental problem in modern fisheries management — the mindset is focused on the very recent history of the fishery. The allowable catch rates are set at levels which permit the biomass to be sustainable at today's values, or at best at a level which will allow rejuvenation to something similar to the not too distant past. For example, the period 1985–1987 figures prominently in the scientific review presented above. Ngāti Hinewaka want areas to be set aside for customary fishing which are allowed to rejuvenate not to biomass levels of twenty years ago, but to those of a hundred years ago, with a management system in place which will sustain the fishery at that level — a level of plenty, not a level of poverty.

Listed below are the specific running conclusions which have been reached in this report.

Conclusion 1: The ancestral system of land ownership throughout Polynesia was such that customary title to a parcel of land included the adjacent inshore region of the sea as far as the reef edge. . . . . . Page 33

Conclusion 2: Ngāti Hinewaka in the 19th century had a land tenure system such that customary title to a parcel of land included the adjacent inshore fishery, and that rights to the resources of both the land and adjacent sea were exclusive to that hapū. . . . . . Page 37

Conclusion 3: The system of property rights in ancestral Māori society was imported from Polynesia. Customary title would have extended from the interior of the land out to sea. This encompassed all the necessary economic zones for survival in a subsistence economy. This system appears not to have been fully understood by European settlers and the Crown. . . . . . Page 48

Conclusion 4: When Europeans first arrived in New Zealand fish and shellfish were super-abundant compared to today both in variety and quantity, despite at least 600 years of pre-European Māori fishing. . . . . . Page 50

Conclusion 5: Oral and anecdotal evidence clearly shows that there has been massive depletion of the inshore marine fishery in the rohe of Ngāti Hinewaka of Palliser Bay and east coast Wairarapa. . . . . . Page 64

Conclusion 6: The unit value per kg of paua and crayfish has risen rapidly since about 1985 to the point where few New Zealanders can afford them. This rise is attributable to greatly increased demand from abroad as export items, and has had the effect of placing intense pressure on this inshore resource. . . . . . Page 66

Conclusion 7: There is no legal size limit for kina. . . . . . Page 71

Conclusion 8: There have been no assessments of sustainable yield for kina. . Page 71

Conclusion 9: There are no estimates of biomass for kina. . . . . . Page 71

Conclusion 10: There are no estimates of any trends in relative abundance for any kina fishstock. . . . . . Page 71

Conclusion 11: There are no estimates of MCY (Maximum Constant Yield) for any kina fishstock. . . . . . Page 71

Conclusion 12: For all kina fishstocks it is not known if current catch levels of proposed TACCs (Total Allowable Commercial Catches) are sustainable. . . . . . Page 71

Conclusion 13: For all kina fishstocks is it is not known if proposed TACCs (Total Allowable Commercial Catches) are at levels which will allow the stocks to move towards a size that will support sustainable yields. . . . . . Page 71

Conclusion 14: The scientific evidence shows that at this point in time the Crown has no idea whether there are going to be any kina for customary gathering in 5 years' time, let alone in 50 years' time. . . . . . Page 71

Conclusion 15: Although there is a management system in place to protect commercial interests in the kina fishery (TACC, Total Allowable Commercial Catch), there are no signs that the Crown has any management system in place, based upon sound scientific knowledge, which is specifically aimed to protect a suitable biomass of kina in the inshore area for Māori customary gathering. . . . . . Page 71

Conclusion 16: The Ministry of Fisheries Fishery Assessment Working Group has a statistical model which allows posterior assessment of the spawning and recruited biomass levels of paua. For three fishstocks studied in detail this shows that present day recruited biomass is about 19–22% of 1973 levels, and spawning biomass is about 30–40% of 1973 levels. This represents a massive depletion of the inshore fishery. . . . . . Page 80

Conclusion 17: The MCY (Maximum Constant Yield) has not been estimated for the area of vital concern to Ngāti Hinewaka (PAU2). . . . . . Page 80

Conclusion 18: There has been no estimate of the biomass of paua for the area of vital concern to Ngāti Hinewaka (PAU2). . . . . . Page 80

Conclusion 19: There is no evidence that the current MLS (Minimum Legal Size) and TACC (Total Allowable Commercial Catch) has any scientific basis to support a viable long term paua fishery in the area of vital concern to Ngāti Hinewaka (PAU2). . . . . . Page 80

Conclusion 20: In fishstocks where paua has been subjected to stock assessment modelling, the evidence suggests that current exploitation rates produce spawning and recruited biomass levels which are below the 1985–1987 reference period used in the modelling. . . . . . Page 80

Conclusion 21: The choice of 1985–1987 as a suitable reference period against which to assess the projected biomass indicators which might prevail with the present regime of MLS (Minimum Legal Size) and TACC (Total Allowable Commercial Catch) is based upon a false premise — that the paua fishery was in "good shape" during this period. It was not in "good shape"; it had been devastated by 17 years of massive commercial export-based profiteering. The QMS (Quota Management System) was introduced in an effort to put a halt to this devastation. . . . . . Page 80

Conclusion 22: The scientific evidence is equivocal as to what the status of the paua biomass will be in 5 year's time, let alone in 50 year's time. Management procedures in place at best support an extremely slow return to biomass levels prevailing at about 1985–1987, which is close to the lowest biomass the fishery has experienced in the past 150 years. . . . . . Page 80

Conclusion 23: Although there are management systems in place to protect commercial interests in the paua fishery, there are no signs that the Crown has any management system in place, based upon sound scientific knowledge, which is specifically aimed to protect a suitable biomass of paua in the inshore area for Māori customary gathering. . . . . . Page 80

Conclusion 24: Current estimates of Catch Per Unit Effort (CPUE) show this to be rising since the introduction of the Quota Management System (QMS), but this gives false sense of security because it is comparing the CPUE with historical values which prevailed after a long period of massive overfishing of crayfish. . . . . . Page 81

Conclusion 25: In those fishstocks where it can be determined, the current vulnerable biomass of crayfish is less than 20% of what it was in 1945. . . . . . Page 86

Conclusion 26: In those fishstocks where it can be determined with reasonable accuracy, at the current levels of catch, the median expectation is that the crayfish biomass will remain at current levels over the next five years, but with considerable uncertainty. . . . . . Page 86

Conclusion 27: In the case of fishstock CRA4, the area of most concern to Ngāti Hinewaka, if the level of catch for the next five years stays the same as the current rate, and with recruitment varying about its estimated average, the stock is likely to decline. . . . . . Page 86

Conclusion 28: Although there is a management system in place to protect commercial interests in the crayfish fishery (TACC, Total Allowable Commercial Catch), there are no signs that the Crown has any management system in place, based upon sound

scientific knowledge, which is specifically aimed to protect a suitable biomass of crayfish in the inshore area for Māori customary gathering. . . . . . Page 86

Conclusion 29: Very little basic information is available about groper stocks which could form the basis for establishing a fisheries management system with reliable outcomes. . . . . . Page 89

Conclusion 30: High residency of groper means that they are sensitive to over-fishing. Much of the inshore fishery has probably already been destroyed; recovery will be very difficult, and may take many years. . . . . . Page 89

Conclusion 31: Although there is a management system in place to protect commercial interests in the groper fishery (TACC, Total Allowable Commercial Catch), there are no signs that the Crown has any management system in place, based upon sound scientific knowledge, which is specifically aimed at protecting a suitable biomass of groper in the inshore area for Māori customary gathering. . . . . . Page 89

Conclusion 32: Oral, anecdotal, and scientific evidence shows that there has been massive depletion of the inshore fishery in the rohe of Ngāti Hinewaka of Palliser Bay and east coast Wairarapa since Europeans arrived in New Zealand. . . . . . Page 90

Conclusion 33: There has been massive depletion of the inshore marine fishery in the rohe of Ngāti Hinewaka of Palliser Bay and east coast Wairarapa since Europeans arrived in New Zealand. This is preventing Ngāti Hinewaka from fully exercising their customary rights. . . . . . Page 90

Conclusion 34. The ancestors of Ngāti Hinewaka were reliant on marine resources for much of their protein and obtained a significant amount of their food energy from this source. They harvested an exceptionally wide range of fish and shellfish, including crayfish, from the once rich inshore marine environment. . . . Page 114

Conclusion 35: The place known as 'Matakitaki a Kupe' or the 'Fishing Rock' began its separate identify in New Zealand law as a special place for fishing by Ngāti Hinewaka 17 May 1870. At that time enough nearby land was set aside for grazing horses associated with fishing parties, viz 250 acres . . . . . Page 137

Conclusion 36: Ngāti Hinewaka believed that a Fishing Reserve was a place where they would have exclusive rights to harvest fish and shellfish in the inshore area, and at any additional special named places such as groper holes and fishing rocks offshore. . . . . . Page 137

Conclusion 37: An area of 50 acres at the place known as 'Matakitaki a Kupe' or the 'Fishing Rock' was partitioned from the larger Matakitaki block 25 July 1890 as a fishing place for all the members of Ngāti Hinewaka who were entitled to the land. . . . . . Page 138

Conclusion 38: On 18 June 1941 it was re-affirmed in law that Ngāti Hinewaka had special rights in the Fishing Reserve at the original 50 acres at the place known as 'Matakitaki a Kupe' or the 'Fishing Rock'. The wording of the judgement in the Maori Land Court gave Ngāti Hinewaka no room to doubt that their rights pertained to both the land and nearby fishing grounds . . . . . Page 139

Conclusion 39: Ngāti Hinewaka were first informed that the Matakitaki Fishing Reserve was only a land reserve, and did not carry with it any special rights to fish in that area 12 October 1951. The Crown had numerous opportunities from the time the Fishing Reserve was first established in 1890 to make this clear to Ngāti Hinewaka. . . . . . Page 141

Conclusion 40: No compensation was paid for land taken for a road under the Public Works Act at the Matakitaki fishing reserve. . . . . . Page 142

Conclusion 41: Provisions under The Maori Social and Economic Advancement Act 1945 could have been used to assist Māori to have fishing areas set aside for their exclusive use for customary fishing, but the Marine Department consistently refused to permit this to happen, and the Minister of Maori Affairs in 1960 took the view that 'The practical implication that would follow the making of such a reserve would be an unfortunate and undesirable distinction and a segregation of races that have lived and intermarried happily together'. . . . . . Page 145

Conclusion 42: In the year 2003, Ngāti Hinewaka still believe that their fishing ground at Matakitaki a Kupe was reserved for their full exclusive and undisturbed possession to gather kaimoana so long as it is their wish and desire to retain the same in their possession. . . . . . Page 146

Conclusion 43: On the 23rd of November 1949 Ngāti Hinewaka asked the Crown to respect their customary fishing rights by not allowing commercial fishing licenses to be issued for several named inshore areas in Palliser Bay which were important to Ngāti Hinewaka as the source of fish and other sea edibles for their own consumption. . . . . . Page 148

Conclusion 44: The George Te Whaiti Petition was received 15 April 1953, and asked for existing fishing rights to be recognised, not new rights to be established. These rights refer to customary fishing. . . . . . Page 152

Conclusion 45: The George Te Whaiti Petition asked that commercial fishing be excluded from all places along the coastline from Palliser Bay to the mouth of the Aohanga [Owahanga] River where Māori have customary fishing rights. . . . . . Page 152

Conclusion 46: It was the policy of the Marine Department in 1957 not to issue fishing licenses for paua if the applicant wished to export the product abroad. It also had a policy of not issuing licenses for any shellfish in areas where Māori rely on shellfish as an item of diet. . . . . . Page 156

Conclusion 47: In 1957 the Marine Department advised the Department of Māori Affairs that it was very unlikely that any commercial licenses would be issued for paua in Palliser Bay because they believed that commercial catches would be detrimental to existing stocks. . . . . . Page 156

Conclusion 48: In 27 February 1958 the Chief Judge of the Māori Land Court concluded that the George Te Whaiti Petition had been abandoned by the petitioners, and that since no-one appeared interested any longer, it could be discontinued. Page 157

Conclusion 49: The Minister of Marine in 1960 reaffirmed that it was his policy not to issue commercial licenses for areas adjacent to centres of Māori population. He stated that he has consistently refused to grant export permits for "certain sea-foods" when it is known that these form a substantial part of Maori diet. Where such shellfish are taken commercially, every effort is made to direct the sales internally. . . . . . Page 158

Conclusion 50: The George Te Whaiti petition, which sought recognition of the customary fishing rights of Ngāti Hinewaka, failed because the Crown focused on the land reserves adjacent to the fisheries, and not the fisheries themselves. . . . Page 158

Conclusion 51: The Crown failed to follow its policy of not issuing fishing licenses in areas where Māori rely on shellfish as an item of diet. . . . . . Page 158

Conclusion 52: The Crown failed to follow its policy of not issuing export permits for "certain sea-foods" when it was known that these form a substantial part of Māori diet. . . . . . Page 158

Conclusion 53: The Crown failed to follow its policy that where shellfish are taken commercially, every effort would be made to direct the sales internally. Page 158

Conclusion 54: Five personal testimonies in support of the Mita Carter Petition convey a powerful message about the way that the inshore fishery in the rohe of Ngāti Hinewaka has been depleted beyond recognition from when these people were children. They blame commercialisation of the inshore fishery and the loss of respect in managing kaimoana at a very personal level. Some feel ashamed that they have let down their ancestors in seeing this happen in their own lifetime. . . Page 163

Conclusion 55: Europeans as well as Māori supported the Mita Carter petition to call a halt to commercial fishing in substantial parts of Palliser Bay so that all local people could enjoy the fruits of Tangaroa. . . . . . Page 165

Conclusion 56: Between 1989 and 1992 the five areas in Palliser Bay and Lake Onoke, designated by Mita Carter for recognition and protection as Taiapure, were slowly whittled down from his original plan to two. . . . . . Page 166

Conclusion 57: At a meeting on 7 June 1991, attended by staff from MAF and DOC, Mita Carter and other Kaumatua, Ngāti Hinewaka explained that their purpose was restore the observation of customary practices, to restrict or eliminate commercial practices, to restore the coastline and help stocks rebuild. . . . . . Page 168

Conclusion 58: Ministry of Fisheries deferred considering any proposal for Lake Onoke. They would consider Te Kopi and Humenga for possible status as Taiapure, but other areas would be extremely difficult because of the active nature of commercial fishing in these areas. . . . . . Page 169

Conclusion 59: Mita Carter informed staff of the Ministry of Agriculture and Fishery that the area from Ngawi to the Waitetuma Stream must not be forgotten, and must be protected now or at a later date. . . . . . Page 169

Conclusion 60: Mita Carter complained to the Chief Judge of the Māori Land Court about delays and that soon there would be no paua left to protect. . . . Page 170

Conclusion 61: Mita Carter came close to abandoning the application for Taiapure because of the lack of progress and the onslaught of commercial paua divers in the proposed areas. . . . . . Page 171

Conclusion 62: The Registrar of the Maori Land Court had almost given up on the application for Taiapure also, but thought that there is light at the end of the tunnel. . . . . . Page 171

Conclusion 63: The Taiapure at Te Kopi is very unsatisfactory for customary food gathering in the inshore area. It is a highly dangerous no-swimming beach with undertow, and the turbid waters and unstable foreshore prohibit a healthy population of shellfish from living there. . . . . . Page 173

Conclusion 64: The inshore area of the Taiapure at Te Humenga is a boulder beach environment with significant populations of kina, paua and crayfish. Although population densities are probably fairly low, as they now are along all this coastline because of commercial diving and fishing, if this area is effectively policed against black market operations, it should rejuvenate over a period of years to a useful area for customary food gathering. Commercial crayfishing is permitted in this Taiapure. . . . . . Page 177

Conclusion 65: The Mita Carter Petition made some progress in getting the Crown to accept that Ngāti Hinewaka do have customary fishing rights in their rohe; however, this progress has been relatively minor so far. Having customary fishing rights recognised from Ngawi to the Waitutuma Stream, and other areas along the East Coast is the next challenge. . . . . . Page 177

Conclusion 66: Ngāti Hinewaka believe that their customary fishing rights in front of their Reserves have never been fully recognised. They would like steps to be taken to ensure that what remains of their customary fishery in these places be allowed to

rejuvenate. They seek to be fully empowered to manage these resources in future for whānau and hapū consumption, and to exclude commercial fishing. . . Page 179

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REFERENCES CITED

Anderson, A.J. 1973. Archaeology and Behaviour. Unpublished MA thesis, Anthropology Department, University of Otago.

Anderson, A.J. 1979. Prehistoric exploitation of marine resources at Black Rocks Point, Palliser Bay. pp. 49–65 *In* Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

Anderson, A.J. 1998. *The welcome of strangers: An ethnohistory of southern Maori A.D. 1650–1850*. University of Otago Press, Dunedin.

Annala, J.H., Sullivan, K.J., O'Brien, C.J., Smith, N.W.McL., and Varian, S.J.A. 2002a. *Report from the fishery assessment plenary, May 2002: stock assessments and yield estimates.*

Part 1: Albacore to Ling. Ministry of Fisheries.

Annala, J.H., Sullivan, K.J., O'Brien, C.J., Smith, N.W.McL., and Varian, S.J.A. 2002b. *Report from the fishery assessment plenary, May 2002: stock assessments and yield estimates. Part 2: Orange Roughy to Yellow-Eyed Mullet*. Ministry of Fisheries.

Ayling, T. and Cox, G.J. 1987. *Collins guide to the sea fishes of New Zealand*. Collins, Auckland.

Bagnall, A.G. and Petersen, G.C. 1948. *William Colenso: Printer Missionary Botanist Explorer Politician His life and journeys*. A.H. and A.W. Reed, Wellington.

Banks, J. 1963. *The Endeavour Journal of Joseph Banks 1768–1771*. Beaglehole, J.C. (ed.), Angus and Robertson, Sydney.

Barratt, G. 1979. *Bellingshausen a visit to New Zealand: 1820*. Dunmore Press, Palmerston North.

Beaglehole, J.C. (ed.) 1969. *The Journals of Captain James Cook. The Voyage of the* Resolution *and* Adventure, *1772–1775*. Cambridge University Press for the Hakluyt Society. 2nd edn.

Belich, J. 1996. *Making Peoples. A History of the New Zealanders from Polynesian Settlement until the End of the Nineteenth Century*. Allen Lane, Auckland.

Best, E. 1977. *Fishing methods and devices of the Maori*. Government Printer, Wellington (Facsimile edition of Dominion Museum Bulletin 12, 1929).

Best, S. 1980. Oruarangi Pa: past and present investigations. *New Zealand Journal of Archaeology* 2: 65–91.

Boast, R. 1993. In Re Ninety Mile Beach Revisited: The Native Land Court and the foreshore in New Zealand legal history. *Victoria University of Wellington Law Review* 23: 145–170.

Buck, P.H. (Te Rangi Hiroa) 1934. *Mangaian society*. Bernice P. Bishop Museum Bulletin 122.

Buck, P.H. (Te Rangi Hiroa) 1938. *The ethnology of Mangareva*. Bernice P. Bishop Museum Bulletin 157.

Burrows, E.G. 1936. *Ethnology of Futuna*. Bernice P. Bishop Museum Bulletin 138.

Burtenshaw, M., Harris, G., Davidson, J. and Leach, B.F. 2003. Experimental Growing of Pre-European Cultivars of Kūmara (Sweet Potato, *Ipomoea batatas* [L.] Lam.) at the Southern Margins of Māori Horticulture. *New Zealand Journal of Archaeology* 23 (2001): 161–188.

Carter, M. 1982. *Early Palliser Bay*. Featherston Publishing Committee.

Colenso, W. 1868. On the Maori races of New Zealand. *Transactions of the New Zealand Institute* 1: 339–424.

Cook, J. 1963. *The Journals of Captain James Cook on his voyage of discovery. The Voyage of the Endeavour 1768–1771*. Beaglehole, J.C. (ed.). Cambridge University Press for the Hakluyt Society.

Crocombe, R.G. 1964. *Land tenure in the Cook Islands*. Oxford University Press, Melbourne.

Crocombe, R. 1987a. Overview. The pattern of change in Pacific land tenures. pp. 1–24 *In* Crocombe, R. (ed.) *Land Tenure in the Pacific*. University of the South Pacific, Fiji. 3rd edition.

Crocombe, R. 1987b. Land reform. Prospects for prosperity. pp. 368–398 *In* Crocombe, R. (ed.) *Land Tenure in the Pacific*. University of the South Pacific, Fiji. 3rd edition.

Crosby, R.D. 1999. *The musket wars: A history of inter-iwi conflict 1806–45*. Reed, Auckland.

Davidson, J.M. and Leach, B.F. 2001. The strandlooper concept and economic naivete. pp 115–123 *In* Clark, G., Anderson, A.J. and Sorovi-Vunidilo, T. (eds) *The Archaeology of Lapita Dispersal in Oceania. Papers from the Fourth Lapita Conference, June 2000, Canberra, Australia*. Pandanus Books, Australian National University, Canberra.

Evans-Prichard, E.E. 1940. *The Nuer*. Clarendon Press, Oxford.

Firth, R. 1957. *We the Tikopia*. Allen and Unwin, London.

Firth, R. 1959. *Economics of the New Zealand Maori*. Government Printer, Wellington.

Froude, V. 2001. *Preliminary survey of subtidal marine habitats at eight Wairarapa localities*. Pacific-Eco-Logic Ltd. Porirua, New Zealand.

Glassey, N. 2001. *The Wairarapa rocky shore: Results of a preliminary intertidal survey*. Institute of Natural Resources, Massey University, Palmerston North, New Zealand.

Graham, D.H. 1956. *A treasury of New Zealand fishes*. A.H. and A.W. Reed, Wellington.

Hargreaves, R.P. 1963. Changing Maori agriculture in pre-Waitangi New Zealand. *Journal of the Polynesian Society* 72(2): 101–117.

Harris, G.F. 2000. Nga Riwai Maori — Maori Potatoes. Unpublished M Phil, Massey University.

Houghton, P. 1980. *The first New Zealanders*. Hodder and Stoughton, Auckland.

Kawharu, I.H. 1977. *Maori Land Tenure. Studies of a Changing Institution*. Clarendon Press, Oxford.

Kawharu, I.H. 1987. New Zealand. Salvaging the remnant. pp. 143–163 *In* Crocombe, R. (ed.) *Land Tenure in the Pacific*. University of the South Pacific, Fiji. 3rd edition.

Kirch, P.V. 1984. *The evolution of the Polynesian chiefdoms*. Cambridge University Press, Cambridge.

Kirch, P.V. 1985. *Feathered gods and fishhooks*. An introduction to Hawaiian archaeology and prehistory. University of Hawaii Press, Honolulu.

Lambert, B. 1987. Kiribati. Micro-individualism. pp. 164–189 *In* Crocombe, R. (ed.) *Land Tenure in the Pacific*. University of the South Pacific, Fiji. 3rd edition.

Leach, B.F. 1976. Prehistoric communities in Palliser Bay, New Zealand. Unpublished PhD Thesis, Anthropology, University of Otago.

Leach, B.F. 1979a. Fish and crayfish from the Washpool midden site, New Zealand: their use in determining season of occupation and prehistoric catching methods. *Journal of Archaeological Science* 6(2): 109–126.

Leach, B.F. 1979b. Maximizing minimum numbers: avian remains from the Washpool Midden site. pp. 103–121 *In* Anderson A.J. (ed.) *Birds of a Feather*. British Archaeological Reports S.62.

Leach, B.F. 1979c. Excavations in the Washpool Valley, Palliser Bay. pp. 67–136 *In* Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

Leach, B.F., Quinn, C.J. and Lyon, G.L. 1996. A stochastic approach to the reconstruction of prehistoric human diet in the Pacific from bone isotope signatures. *Tuhinga, Records of the Museum of New Zealand* 8: 1–54.

Leach, F., Quinn, C., Morrison, J. and Lyon, G. 2003. The use of multiple isotope signatures in reconstructing prehistoric human diet from archaeological bone. *New Zealand Journal of Archaeology* 23 (2001): 31–98.

Leach, B.F. and Anderson, A.J. 1979. Prehistoric exploitation of crayfish in New Zealand. pp. 141–164 *In* Anderson, A.J. (ed.) *Birds of a Feather*. British Archaeological Reports S62.

Leach, B.F. and Davidson, J.M. 1988. The quest for the rainbow runner: prehistoric fishing on Kapingamarangi and Nukuoro atolls, Micronesia. *Micronesica* 21 (1,2): 1–22.

Leach, B.F. and Leach, H.M. (eds) 1979 *Prehistoric Man in Palliser Bay*. National Museum of New Zealand Bulletin 21.

Leach, B.F. and Leach, H.M. 1979. Prehistoric communities in Palliser Bay. pp. 251–272 *In* Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

Leach, H.M. 1976. Prehistoric horticulture in New Zealand. An investigation of the function of the stone walls in Palliser Bay. Unpublished PhD thesis, Anthropology, University of Otago.

Leach, H.M. 1979a. Evidence of prehistoric gardens in eastern Palliser Bay. pp. 137–161 *In* Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

Leach, H.M. 1979b. The significance of early horticulture in Palliser Bay for New Zealand prehistory. pp. 241–249 *In* Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

Leach, H. 1984. *1,000 Years of gardening in New Zealand*. Reed, Wellington.

Leys, T.W. (ed.) 1890. *Early history of New Zealand*. Brett, Auckland.

MacIntyre, F., Estep, K.W., and Noji, T.T. 1995. *NAGA (The ICLARM Quarterly)* 18(3): 7–8.

Mair, G. 1979. Maori occupation in the Wairarapa during the protohistoric period. pp 11–28 *In* Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

Meller, N. and Horwitz, R.H. 1987. Hawaii. Themes in land monopoly. pp. 25–44 *In* Crocombe, R. (ed.) *Land Tenure in the Pacific*. University of the South Pacific, Fiji. 3rd edition.

Metge, J. 1967. *The Maoris of New Zealand*. Routledge and Kegan Paul, London.

MLC1 1895. Wairarapa Native Land Court Minute Book Number 22, 14 June 1895 at Greytown North. Reel 252 Alexander Turnbull Library.

Nyers, R.A. and Worm, B. 2003. Rapid worldwide depletion of predatory fish communities. *Nature* 423: 280–283.

Nelson, J.S. 1994. *Fishes of the world*. John Wiley, New York.

Nicholas, J.L. 1817. *Narrative of a Voyage to New Zealand*. James Black and Son, London. Facsimile reprint, Wilson and Horton, Auckland, 1971.

Noli, D. and Avery, G. 1988. Protein poisoning and coastal subsistence. *Journal of Archaeological Science* 15: 395–401.

Nordhoff, C. Notes on the off-shore fishing of the Society islands. *Journal of the Polynesian Society* 39: 137–173, 221–262.

NZOY, *New Zealand Official Yearbook*, Department of Statistics, Wellington.

Oliver, D.L. 1974. *Ancient Tahitian society*. University of Hawaii Press, Honolulu.

Ollivier, I. 1985. *Extracts from Journals relating to the visit to New Zealand in May–July 1772 of the French ships* Mascarin *and* Marquis de Castries *under the command of M.-J. Marion du Fresne*. Alexander Turnbull Library Endowment Trust with Indosuez New Zealand Ltd, Wellington.

Ollivier, I. and Hingley, C. 1982. *Extracts from Journals relating to the visit to New Zealand of the French ship* St Jean Baptiste *in December 1769 under the Command of J.F.M. de Surville*. Alexander Turnbull Library Endowment Trust in association with the National Library of New Zealand.

Parkinson, S. 1972. *Journal of a voyage to the south seas in the Endeavour 1768–1771*. Australiana Facsimile Editions No. A34. Libraries Board of South Australia, Adelaide.

Paul, L. 1986. *New Zealand fishes, an identification guide*. Reed Methuen, Auckland.

Pauly, D. 1995. Anecdotes and the shifting baseline syndrome of fisheries. *Trends in Ecology and Evolution* 10: 430.

Pauly, D. and Watson, R. 2003. Counting the last fish. *Scientific American* July 2003: 35–39.

Pitcher, T.J. and Pauly, D. 1998. Rebuilding ecosystems, not sustainability, as the proper goal of fishery management. pp 311-325 *In* Pitcher, T.J., Pauly, D. and Hart, P. (eds) *Reinventing Fisheries Management*. Chapman and Hall Fish and Fisheries Series. Kluwer Press.

Pitcher, T.J. 2001. Fisheries managed to rebuild ecosystems ? Reconstructing the past to salvage the future. *Ecological Applications* 11(2): 601–617

Pool, I. 1991. Te Iwi Maori: *A New Zealand Population Past, Present & Projected*. Auckland University Press.

Roughley, T.C. 1951. *Fish and fisheries of Australia*. Angus and Robertson, Sydney.

Salmond, A. 1991. *Two Worlds. First meetings between Maori and Europeans 1642–1772*. Viking, Auckland.

Salmond, A. 1997. *Between Worlds. Early exchanges between Maori and Europeans 1773–1815*. Viking, Auckland.

Savage. J. 1807. *Some Account of New Zealand; particularly the Bay of Islands, and surrounding country;...* J. Murray, London.

Scholefield, G.H. (ed.) 1940. *A dictionary of New Zealand biography*. Department of Internal Affairs, Wellington.

Shortland, E. 1868. A short sketch of the Maori races. *Transactions of the New Zealand*

Institute 1: 329–338.

Smith, I.W.G. 1979. Prehistoric sea mammal hunting in Palliser Bay. pp 215–224 *In* Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

Smith, I.W.G. 1985. Sea mammal hunting and prehistoric subsistence in New Zealand. Unpublished PhD thesis, Anthropology, University of Otago.

Smith, I.W.G. 1989. Maori impact on the marine megafauna: pre-European distributions of New Zealand sea mammals. pp 76–108 *In* Sutton, D.G. (ed.) *Saying So Doesn't Make it So: Papers in Honour of B.Foss Leach*. New Zealand Archaeological Association Monograph 17.

Smith, N. 1960. *Maori Land Law*. AH and AW Reed, Wellington.

Stewart, R. and MacDiarmid, A. 2003. (NIWA, National Institute of Water and Atmospheric Research) Unpublished Data.

Stirling, B. 2003. *Ngāti Hinewaka Lands: 1840–2000*. A report commissioned by the Crown Forestry Rental Trust.

Sullivan, K.J. and O'Brien, C.J. 2002. *Report from the mid-year fishery assessment plenary, November 2002: stock assessments and yield estimates*. Ministry of Fisheries.

Tetiarahi, G. 1987. The Society Islands. Squeezing out the Polynesians. pp. 45–58 *In* Crocombe, R. (ed.) *Land Tenure in the Pacific*. University of the South Pacific, Fiji. 3rd edition.

Van Tilburg J. 1994. *Easter Island. Archaeology, Ecology and Culture*. British Museum Press, London.

WAI-145, 2003. Waitangi Tribunal Report WAI-145. *Report on the Wellington District*.

Williamson, J. 1848. Letter from Mr. James Williamson, a land-owner in Otago to Mr M., Princess-street, Edinburgh, his brother-in-law. *The New Zealand Journal* 236, H.H. Chambers, London. Alexander Turnbull Library Reel 2 (131–257).

Williamson, R.W. 1924. *The Social and Political Systems of Central Polynesia. 3 Volumes*. Cambridge University Press.

Williamson, R.W. 1937. *Religion and social organization in central Polynesia*. Cambridge University Press.

Wright, O. [1950]. *New Zealand 1826–1827 from the French of Dumont D'Urville*. Printed by the Wingfield Press for Olive Wright.

APPENDICES

APPENDIX 1: CURRICULUM VITAE OF FOSS LEACH

CURRICULUM VITAE
Bryan Foss Leach

(February 2003)

Date of Birth: February 16, 1942

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Academic Training:

1956-60	Palmerston North Boys High School
1966	B.A. Otago University
1969	M.A. (Hons.) Otago University
1976	PhD. Anthropology, Otago University

Professional Appointments:

1970	Lecturer in Anthropology (Otago University)
1976	Visiting Fellow, Australian National University
1978	Senior Lecturer in Anthropology (Otago University)
1983	Royal Society (Great Britain) Anglo-Australasian Visiting Fellow
1983	Senior Visiting Fellow, Oxford University
1986	Associate Professor, Otago University
1988	Honorary Curator Archaeological Fauna, Museum of New Zealand Te Papa Tongarewa
1988	Honorary Research Fellow, Institute of Nuclear Sciences
1988	Private Research Consultant
2000	Honorary Research Fellow, The Open Polytechnic of New Zealand

Research Consultancies:

1989	*New Zealand Crown Law Office*: The archaeology of Maori marine food harvesting. Archaeological time trends in South Island Maori fishing. The archaeology of marine food exploitation in Muriwhenua
1990	*New Zealand Crown Law Office*: The Waipoua and Waimamaku claims, Waitangi Tribunal
1992-3	*National Museum of New Zealand*: Principal Investigator, FRST contract,

Prehistoric Marine Harvesting

1994 *Ngāti Kahungūnu ki Wairarapa*: Research for Claim to Waitangi Tribunal

1994-8 *Museum of New Zealand*: Principal Investigator, FRST contract, Pre-European Maori and Moriori Fishing

1995 *Ngāti Hinewaka (Ngāti Kahungūnu)*: Research for return of surplus lands taken under Public Works Act: Cape Palliser Lighthouse lands

1996 *Ngāti Hinewaka (Ngāti Kahungūnu)*: Research for Māori Land Court on Te Awa-iti Māori Reserve land

1998-2002 *Museum of New Zealand*: Principal Investigator, FRST contract, Bridge & Barrier: 800 Years of Māori culture in Cook Strait New Zealand

2003- Reviewer for University of British Colombia's project: "Back to the Future: Reconstructing Canada's Marine Ecosystems and Fisheries"

Distinctions:

1978 Percy Smith Medal for Research in Anthropology

1986 Honorary Life Member Otago Anthropological Society

1989 Festschrift Volume — Sutton, D.G. (ed.) *Saying So Doesn't Make it So: Papers in Honour of B.Foss Leach*. New Zealand Archaeological Association Monograph 17.

2000 Honorary Life Member New Zealand Archaeological Association

Advisory Appointments and Professional activities:

1975-77 Council of NZ Archaeological Association

1975-78 Archaeology Committee, NZ Historic Places Trust

1975-87 Radiocarbon Committee, NZ Institute of Nuclear Sciences

1978- Member Editorial Board, *New Zealand Journal of Archaeology*.

1979 Convenor of symposium on Lithic Resources in the Pacific at XIV Pacific Science Congress, (Khabarovsk, Russia)

1979-83 Council of Otago Branch of the Royal Society NZ

1980 Convenor of Archaeometry conference (Christchurch)

1981-87 Royal Society of NZ Committee Member Skinner Fund for Anthropological Research

1981- Consular of Board of the Society for Archaeological Sciences, USA

1981-84 National Scientific Committee for Problems of the Environment (SCOPE)

1983 Convenor of Social Sciences section of XV Pacific Science Congress (Dunedin)

1983 Senior co-organiser symposium on Archaeological Science in the Pacific Region, XV Pacific Science Congress (Dunedin)

1985 International Advisory Committee for the International Symposium on Electron Spin Resonance Dating (Yamaguchi, Japan)

1985- Research Associate Micronesian Area Research Centre, University of Guam

1986-87 Co-convenor of Symposium on The Initial Settlement of Micronesia (Guam)

1987-92 Chairman Standing Committee of International Computer Networks and Information Sharing, Society for Archaeological Sciences

1987 National Committee for Pacific Science Association

1989- Member International Editorial Board, *Advances in Archaeometry and*

Archaeological Science

1990 Co-convenor Symposium on Man/Animal Relationships in Closed and Marginal Ecological Systems, ICAZ (International Council for Archaeozoology) Conference, Washington DC

1992-97 Vice-President, Society for Archaeological Sciences

1996- Member International Editorial Board *Archaeofauna*.

1998 Co-convenor Symposium on The Archaeozoology of Oceanic Islands. Panel Discussant on Issues of Recovery, Identification, Quantification, and Interpretation of Vertebrate Faunal Remains. ICAZ (International Council for Archaeozoology) Conference, Victoria, Canada.

1999 Keynote Speaker, Conference on Fauna and Flora as Prehistoric Human Resources, Nara National Cultural Properties Research Institute, Japan

2001 Convenor, Conference of the Fish Remains Working Group of ICAZ (International Council for Archaeozoology), Paihia, New Zealand.

Professional Affiliations:

Honorary Life Member New Zealand Archaeological Association
Indo-Pacific Prehistory Association
Life Member Society for Archaeological Sciences
Senior Member Linacre College, Oxford

PUBLICATIONS

Books and Monographs

1969 Leach, B.F. *The Concept of Similarity in Prehistoric Studies*. Studies in Prehistoric Anthropology No.1. 301 pp. Anthropology Department, University of Otago.

1981 Leach, B.F. and Ward, G.K. *Archaeology on Kapingamarangi Atoll: a Polynesian outlier in the Eastern Caroline Islands*. 150 pp. Privately published by B.F. Leach.

1985 Intoh, M. and Leach, B.F. *Archaeological investigations in the Yap Islands*. British Archaeological Reports S277. 200 pp.

1993 Leach, B.F. and Boocock, A. *Prehistoric Fish Catches in New Zealand*. British Archaeological Reports, International Series 584. 303 pp.

1997 Leach, B.F. *A guide to the identification of fish remains from New Zealand archaeological sites.* New Zealand Journal of Archaeology Special Publication. 129 pp.

in press Leach, B.F. *Fishing in Pre-European New Zealand*. New Zealand Journal of Archaeology Special Publication. 197 pp.

Papers in Refereed Journals

1971 Higham, C.F.W. and Leach, B.F. An early centre of bovine domestication in South East Asia. *Science* 172: 54-56.

1972 Leach, B.F. Review Article of Green, R.C. and J.M. Davidson (eds):

Archaeology in Western Samoa, Vol.1. *Journal of the Polynesian Society* 81(1): 109-119.

1974 Leach, B.F. and Anderson, A.J. The transformation from an estuarine to a lacustrine environment in the Lower Wairarapa. *Journal of the Royal Society of New Zealand* 4(3): 267-275.

1975 Houghton, P., Leach, B.F. and Sutton, D.G. The estimation of stature of prehistoric Polynesians in New Zealand. *Journal of the Polynesian Society* 84(3): 325-336.

1977 Leach, B.F. New perspectives on dating obsidian artefacts from New Zealand. *New Zealand Journal of Science* 20: 123-138.

1977 Leach, B.F. Dentalium shell in New Zealand archaeological sites. *Journal of the Royal Society of New Zealand* 7(4): 473-483.

1978 Leach, B.F., Warren, S.E. and Fankhauser, B. Obsidian from the Far North of New Zealand: a method of sourcing based on natural radioactive emissions. *New Zealand Journal of Science* 21: 123-128.

1978 Leach, B.F. and Anderson, A.J. The prehistoric sources of Palliser Bay obsidian. *Journal of Archaeological Science* 5: 301-307.

1978 Leach, B.F. Four centuries of community interaction and trade in Cook Strait, New Zealand. In: Specht, J. and White, J.P. (eds) "Trade and Exchange in Oceania and Australia". *Mankind* 11 (3): 391-405.

1978 Leach, B.F. and Fankhauser, B. The characterization of New Zealand obsidian sources using thermoluminescence. *Journal of the Royal Society of New Zealand* 8(4): 331-342.

1979 Leach, B.F. and de Souza, P. The changing proportions of Mayor Island obsidian in New Zealand prehistory. *New Zealand Journal of Archaeology* 1: 29-51.

1979 Leach, B.F., Davidson, J.M., McCallum, G., Partridge, B., Smith, I.W.G. and Whitehead, N. The identification of dugong ivory reel artefacts from Strontium content and microstructure. *New Zealand Journal of Archaeology* 1: 115-121.

1979 Leach, B.F. and Anderson, A.J. The role of labrid fish in prehistoric economics in New Zealand. *Journal of Archaeological Science* 6(1): 1-15.

1979 Duerden, P., Cohen, D.D., Clayton, E., Bird, J.R. and Leach, B.F. Elemental analysis of thick obsidian samples by proton induced X-ray emission spectrometry. *Analytical Chemistry* 51(14): 2350-2354.

1979 Leach, B.F. Some applications of natural radioactive emissions in glasses. *Journal of Glass Studies* 21: 115-118.

1979 Leach, B.F. Fish and crayfish from the Washpool midden site, New Zealand: their use in determining season of occupation and prehistoric catching methods. *Journal of Archaeological Science* 6(2): 109-126.

1980 Leach, H.M. and Leach, B.F. The Riverton site: an Archaic adze manufactory in western Southland, New Zealand. *New Zealand Journal of Archaeology* 2: 99-140.

1981 Leach, B.F. The prehistory of the Southern Wairarapa. *Journal of the Royal Society of New Zealand* 11(1): 11-33.

1981 Leach, B.F. and Naylor, H. Dating New Zealand obsidians by resonant nuclear reactions. *New Zealand Journal of Archaeology* 3: 33-49.

1981 Leach, B.F., Naeser, C.W. and Ward, G.K. The ages of Pacific obsidians from

fission track analysis. *New Zealand Journal of Archaeology* 3: 71-82.

1982 Leach, B.F. and Manly, B. Minimum Mahalanobis distance functions and lithic source characterization by multi-element analysis. *New Zealand Journal of Archaeology* 4: 77-109.

1984 Leach, B.F. The terminal age for the lower Wairarapa estuarine environment. *Journal of the Royal Society of New Zealand* 14(2): 207-208.

1984 Leach, B.F. and Hamel, G.E. The influence of archaeological soil temperatures on obsidian dating in New Zealand. *New Zealand Journal of Science* 27: 399-408.

1984 Duerden, P., Bird, J.R., Clayton, E., Cohen, D.D. and Leach, B.F. Provenance studies of New Zealand obsidian artefacts. *Nuclear Instruments and Methods in Physics Research* 231 (B1-3): 419-423.

1984 Leach, B.F., Intoh, M. and Chazine, J. An archaeological fishbone assemblage from the Vitaria site, Rurutu, Austral Islands. *Journal de la Société des Océanistes* 40(78): 75-77.

1984 Leach, B.F., Intoh, M. and Smith, I.W.G. Fishing, turtle hunting, and mammal exploitation at Fa'ahia, Huahine, French Polynesia. *Journal de la Société des Océanistes* 40(79): 183-197.

1985 Leach, B.F. The sources of prehistoric obsidian artefacts from the Polynesian outlier of Taumako in the Solomon Islands. *New Zealand Journal of Archaeology* 7: 117-123.

1986 Leach, B.F. A method for analysis of Pacific island fishbone assemblages and an associated data base management system. *Journal of Archaeological Science* 13(2): 147-159.

1986 Leach, B.F., Anderson, A.J., Sutton, D.G., Bird, J.R., Duerden, P. and Clayton, E. The origin of prehistoric obsidian artefacts from the Chatham and Kermadec islands. *New Zealand Journal of Archaeology* 8: 143-170.

1986 Buranarugsa, M. and Leach, B.F. The three-dimensional analysis of the Polynesian skull. *Man and Culture in Oceania* 2: 81-100.

1986 Leach, B.F. Un cas de chasseurs marins sur une île du Pacifique? L'analyse osteologique des restes du kjokkenmoedding à Fa'ahia. *Bulletin de la Société des Études Océaniennes* 19(12): 49-53.

1986 Whitehead, N.E., Devine, S.D., Leach, B.F. Electron spin resonance dating of human teeth from the Namu burial ground, Taumako, Solomon Islands. *New Zealand Journal of Geology and Geophysics* 29: 359-361.

1988 Leach, B.F., Fleming, M., Davidson, J.M., Ward, G.K. and Craib, J. Prehistoric fishing at Mochong, Rota, Mariana Islands. *Man and Culture in Oceania* 4: 31-62.

1988 Leach, B.F. and Davidson, J.M. The quest for the rainbow runner: prehistoric fishing on Kapingamarangi and Nukuoro atolls, Micronesia. *Micronesica* 21 (1,2): 1-22.

1990 Davidson, J.M., Hinds, E., Holdaway, S. and Leach, B.F. The Lapita site of Natunuku, Fiji. *New Zealand Journal of Archaeology* 12: 121-155.

1993 Buranarugsa, M. and Leach, B.F. Coordinate geometry of Moriori crania and comparisons with Māori. *Man and Culture in Oceania* 9: 1-43.

1993 Davidson, J.M. and Leach, B.F. The chronology of the Natunuku site, Fiji. *New Zealand Journal of Archaeology* 15: 99-105.

6585 1994 Leach, B.F. and Boocock, A. The impact of pre-European Māori fishermen on
6586 the New Zealand snapper, *Pagrus auratus*, in the vicinity of Rotokura, Tasman
6587 Bay. *New Zealand Journal of Archaeology* 16: 69-84
6588 1995 Leach, B.F. and Boocock, A. The estimation of live fish catches from
6589 archaeological bone fragments of the New Zealand snapper *Pagrus auratus.*
6590 *Tuhinga: Records of the Museum of New Zealand* 3: 1-28.
6591 1996 Leach, B.F., Davidson, J.M., Horwood, L.M. and Anderson, A.J. The estimation
6592 of live fish size from archaeological cranial bones of the New Zealand
6593 barracouta *Thyrsites atun*. *Tuhinga, Records of the Museum of New Zealand* 6:
6594 1–25.
6595 1996 Leach, B.F. New Zealand and Oceanic Obsidians: An Archaeological
6596 Perspective using Neutron Activation Analysis. *Journal of the Royal Society*
6597 26(1): 79–105.
6598 1996 Leach, B.F., Davidson, J.M., Horwood, L.M. and Mallon, S. The estimation of
6599 live fish size from archaeological cranial bones of the New Zealand kahawai
6600 *Arripis trutta*. *Tuhinga, Records of the Museum of New Zealand* 7: 1–20.
6601 1996 Leach, B.F., Quinn, C.J. and Lyon, G.L. A stochastic approach to the
6602 reconstruction of prehistoric human diet in the Pacific from bone isotope
6603 signatures. *Tuhinga, Records of the Museum of New Zealand* 8: 1–54.
6604 1997 Anderson, A.J., Ambrose, W., Leach, B.F. and Weisler, M. Material sources of
6605 basalt and obsidian artefacts from a prehistoric settlement site on Norfolk
6606 Island, South Pacific. *Archaeology in Oceania* 32: 39-46.
6607 1997 Leach, B.F., Davidson, J.M., Horwood, L.M. and Boocock, A. Prehistoric Māori
6608 Fishermen of Te Ika a Maru Bay, Cook Strait, New Zealand. *New Zealand*
6609 *Journal of Archaeology* 17: 57–75.
6610 1997 Leach, B.F., Davidson, J.M. and Horwood, L.M. The estimation of live fish size
6611 from archaeological cranial bones of the New Zealand blue cod *Parapercis*
6612 *colias*. *International Journal of Osteoarchaeology* 7: 484–496.
6613 1997 Leach, B.F., Davidson, J.M., Samson, J. and Burnside, G. The estimation of live
6614 fish size from archaeological cranial bones of New Zealand Labridae.
6615 *Archaeofauna* 6: 41–58.
6616 1997 Leach, B.F., Davidson, J.M. and Horwood, L.M. Prehistoric Māori Fishermen
6617 at Kokohuia, Hokianga Harbour, Northland, New Zealand. *Man and Culture in*
6618 *Oceania* 13: 99–116.
6619 1997 Leach, B.F., Davidson, J.M., Horwood, M. and Ottino, P. The Fishermen of
6620 Anapua Rock Shelter, Ua Pou, Marquesas Islands. *Asian Perspectives* 36(1):
6621 51–66.
6622 1998 Pietrusewsky, M., Galipaud, J-C. and Leach, B.F. A Skeleton from the Lapita
6623 Site at Koné, Foué Peninsula, New Caledonia. *New Zealand Journal of*
6624 *Archaeology* 18 (1996): 25–74.
6625 1998 Horwood, L.M., Leach, B.F. and Davidson, J.M. Prehistoric and historic Māori
6626 fishermen of Mana Island, Cook Strait, New Zealand. *New Zealand Journal of*
6627 *Archaeology* 18 (1996): 5–24.
6628 1998 Davidson, J.M., Leach, B.F., Fraser, K. and Burnside, G. Prehistoric Fishing at
6629 Fa'ahia, Huahine, Society Islands, French Polynesia. *Journal de la Société des*
6630 *Océanistes* 107: 145–157.
6631 1999 Leach, B.F., Davidson, J.M. and Fraser, K. Pre-European catches of labrid fish

in the Chatham Islands and Cook Strait, New Zealand. *Man and Culture in Oceania* 15: 113–144.

1999 Leach, B.F., Davidson, J.M., Fraser, K. and Anderson, A.J. Pre-European catches of barracouta, *Thyrsites atun*, at Long Beach and Shag River, Otago, New Zealand. *Archaeofauna* 8: 11–30.

2000 Leach, B.F., Quinn, C.J., Lyon, G.L., Haystead, A. and Myers, D.B. Evidence of prehistoric Lapita diet at Watom Island, Papua New Guinea, using stable isotopes. *New Zealand Journal of Archaeology* 20 (1998): 149–159.

2000 Leach, B.F., Davidson, J.M. and Fraser, K. Pre-European Catches of Blue Cod (*Parapercis colias*) in the Chatham Islands and Cook Strait, New Zealand. *New Zealand Journal of Archaeology* 21 (1999): 119–138.

2000 Davidson, J.M., Fraser, K., Leach, B.F. and Sinoto, Y.H. Prehistoric Fishing at Hane, Ua Huka, Marquesas Islands, French Polynesia. *New Zealand Journal of Archaeology* 21 (1999): 5–28.

2000 Leach, B.F., Davidson, J.M. and Wallace, R. The Form and Construction of the Makotukutuku House, a 16th Century Dwelling in Palliser Bay, New Zealand. *New Zealand Journal of Archaeology* 21 (1999): 87–117.

2000 Leach, B.F. and Davidson, J.M. Pre-European Catches of Snapper (*Pagrus auratus*) in Northern New Zealand. *Journal of Archaeological Science* 27: 509–522.

2001 Leach, B.F. and Davidson, J.M. The use of size-frequency diagrams to characterize prehistoric fish catches and to assess human impact on inshore fisheries. *International Journal of Osteoarchaeology* 11(1-2): 150–162.

2001 Leach, B.F., Davidson, J.M., Robertshawe, M. and Leach, P.C. Identification, nutritional yield, and economic role of tuatua shellfish, *Paphies* spp., in New Zealand archaeological sites. *People and Culture in Oceania* 17: 1-26.

in press Burtenshaw, M., Harris, G., Davidson, J. and Leach, F. Experimental cultivation of pre-European cultivars of kumara (sweet potato, Ipomoea batatas L. Lam.) at the southern margins of Maori horticulture. *New Zealand Journal of Archaeology* 23.

in press Leach, F., Quinn, C., Morrison, J. and Lyon, G. The use of multiple isotope signatures in reconstructing prehistoric human diet from archaeological bone. *New Zealand Journal of Archaeology* 23.

Papers in Books and Monographs

1979 Leach, B.F. and Anderson, A.J. Prehistoric exploitation of crayfish in New Zealand. pp. 141-164 In: Anderson, A.J. (ed.) *Birds of a Feather*. British Archaeological Reports S62.

1979 Leach, B.F. Maximizing minimum numbers: avian remains from the Washpool Midden site. pp. 103-121 In: Anderson A.J. (ed.) *Birds of a Feather*. British Archaeological Reports S.62.

1979 Leach, B.F. and Leach, H.M. The Wairarapa Archaeological Research Programme. pp. 1-10 In: Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

1979 Leach, B.F. Excavations in the Washpool Valley, Palliser Bay. pp. 67-136 In: Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

1979 Leach, B.F. and Leach, H.M. Burial positions and orientations in Palliser Bay. pp. 205-213. In: Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

1979 Leach, H.M. and Leach, B.F. Environmental Change in Palliser Bay. pp. 229-240 In: Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

1979 Leach, B.F. and Leach, H.M. Prehistoric communities in Palliser Bay. pp. 251-272 In: Leach, B.F. and Leach, H.M. (eds) *Prehistoric Man in Palliser Bay*. National Museum of New Zealand, Bulletin 21.

1981 Bird, J.R., Duerden, P., Ambrose, W.R. and Leach, B.F. Pacific obsidian catalogue. pp. 31-43 In: Leach, B.F. and J.M. Davidson (eds) *Archaeological Studies of Pacific Stone Resources*. British Archaeological Reports S104.

1981 Leach, B.F. and Warren, S.E. Neutron activation analysis of New Zealand and Oceanic obsidians: towards a simple screening technique. pp. 151-166 In: Leach, B.F. and J.M. Davidson (eds) *Archaeological Studies of Pacific Stone Resources*. British Archaeological Reports S104.

1981 Leach, B.F. and Davidson, J.M. The analysis of fish bone from Kapingamarangi. pp. 114-122, Appendix 3 In: Leach, B.F. and Ward, G.K. 1981. *Archaeology on Kapingamarangi Atoll*. Privately Published by B.F.Leach.

1981 Intoh, M. and Leach, B.F. Physical analysis of Kapingamarangi pottery. pp. 136-137 In: Leach, B.F. and Ward, G.K. *Archaeology on Kapingamarangi Atoll*. Privately Published by B.F.Leach.

1985 Dennison, K.J., Houghton, P., Leach, B.F., and Peake, B.M. Sample preparation and instrumental aspects of EPR dating of New Zealand human bone. pp. 341-352 In: Ikeya, M. and Miki, T. (eds) *ESR dating and dosimetery*. Ionics, Tokyo.

1987 Duerden, P., Clayton, E., Bird, J.R., Ambrose, W. and Leach, B.F. Obsidian composition catalogue. pp. 232-238 In: Ambrose, W.R. and Mummery, J.M.J. (eds) *Archaeometry: Further Australasian studies*. Department of Prehistory, Australian National University.

1988 Davidson, J.M., and Leach, B.F. Chapter 15: Fishing. pp. 335-356 In: Butler, B.M. (ed.) *Archaeological investigations on the north coast of Rota, Mariana Islands*. Micronesian Archaeological Survey Report No. 23. Southern Illinois University at Carbondale, Center for Archeological Investigations, Occasional Paper 8.

1991 Davidson, J.M. and Leach, B.F. Bird-man amulets and Tridacna shell discs from Taumako, Solomon Islands. pp. 478-483 In: Pawley, A. (ed.) *Man and a Half: Essays in Pacific Anthropology and Ethnobiology in Honour of Ralph Bulmer*. The Polynesian Society, Auckland. Memoir 48.

1991 Leach, B.F. Contributor to "Fish remains" pp. 489-495 In: Cordy, R., Tainter, J., Renger, R. and Hitchcock, R. *An Ahupua'a study: The 1971 archaeological work at Kaloko Ahupua'a North Kona, Hawaii*. National Parks Service, U.S. Department of the Interior. Western Archeological and Conservation Centre, Publications in Anthropology No. 58.

1994 Leach, B.F. Prehistoric fishing in Oceania. *The Illustrated Encyclopedia of Humankind*. Weldon Owen and Bra Böcker. pp. 148-149.

1996 Leach, B.F., Davidson, J.M. and Athens, J.S. Mass harvesting of fish in the waterways of Nan Madol. pp. 319–341 In: Davidson, J.M., Irwin, G., Leach, B.F., Pawley, A. and Brown, D. (eds) *Oceanic Culture History: Essays in Honour of Roger Green.* New Zealand Journal of Archaeology Special Publication.

1996 Davidson, J.M. and Leach, B.F. Fishing on Nukuoro Atoll: Ethnographic and archaeological viewpoints. pp. 184–202 In: Julien, M., Orliac, M. and Orliac, C. (eds) *Mémoire de Pierre, Mémoire D'Homme: Tradition et Archéologie en Océanie. Hommage à José Garanger*. Publication de la Sorbonne, Paris.

1996 Leach, B.F. Arts of the Chatham Islands. In: Turner, J. (ed.) *The Dictionary of Art*, vol.6, pp. 513–514. MacMillan, London.

1997 Leach, B.F. 1997. Stone resources—their discovery and use. Plate 14: *Historical Atlas of New Zealand*. Department of Internal Affairs.

2000 Leach, B.F. New Zealand oyobi Taiheiyoo-Chiiki ni okeru Senshi-Gyoroo to Kaiyoo-Kankyoo ni taisuru Jin-iteki Eikyou. In: Akira Matsui (ed.) *Kino Bunka Honeno Bunka*. Nabunken (Nara National Cultural Properties Rsearch Institute (In Japanese). 11 pp.

2000 Leach, B.F. and Davidson, J.M. Fishing: A neglected aspect of Oceanic Economy. pp 412–426 In: Anderson, A.J. and Murray, T. (eds) *Australian archaeologist: papers on world prehistory in honour of Jim Allen*. Coombs Academic Publishing, Australian National University, Canberra.

2001 Davidson, J.M. and Leach, B.F. The strandlooper concept and economic naievte. pp 115-123 In: Clark, G., Anderson, A.J. and Sorovi-Vunidilo, T. (eds) *The Archaeology of Lapita Dispersal in Oceania. Papers from the Fourth Lapita Conference, June 2000, Canberra, Australia*. Pandanus Books, Australian National University, Canberra.

2002 Davidson, J.M. and Leach, B.F. Bridge or Barrier? Maori occupation on the shores of Cook Strait, New Zealand. pp. 255-273 In: Ladefoged, T. and Graves, M. (eds) *Pacific Landscapes: Archaeological perspectives*. The Easter Island Foundation and Bearsville Press, Los Osos, California.

2002 Davidson, J.M., Leach, B.F. and Sand, C. Three thousand years of fishing in New Caledonia and the Loyalty Islands. pp.153-164 In: Bedford, S., Sand, C. and Burley, D. (eds) *Fifty Years in the Field. Essays in honour and celebration of Richard Shutler Jr's archaeological career.* New Zealand Archaeological Association Monograph 25, Auckland.

Papers in Non-refereed Journals - 17 Papers

Technical Reports - 36 Reports

Academic Reports to Various Organisations - 9 Reports

Popular Works - 5 Articles

Editorial Works - Editor 5 volumes

APPENDIX 2: FAUNAL REMAINS FROM ARCHAEOLOGICAL SITES IN PALLISER BAY:

TABLE 3:
Washpool Shellfish, Barnacles and Sea Eggs (kina) MNI
From Leach 1979c: 88

Tusk Shell	Dentalium nanum	1407
Paua	Haliotis iris	702
Spotted Topshell	Melagraphia aethiops	596
Limpet	Cellana radians	476
Catseye	Lunella smaragda	470
Topshell	Zediloma spp.	213
Dark Rock Shell	Haustrum haustorium	165
Cooks Turban	Cookia sulcata	130
Tuatua	Paphies subtriangulata	102
Blue Mussel	Mytilus edulis	90
Silver Paua	Haliotis australis	44
Green Mussel	Perna canaliculus	29
Chiton	Chiton ? sp.	29
Pipi	Paphies australis	23
Sea Egg (kina)	Evichinus chloroticus	23
Limpet	Benhamina obliquata	16
Whelk	Cominella ? sp.	12
Ribbed Venus Shell	Protothaca crassicosta	9
Barnacle	Chamaesipho ? columna	9
Limpet	Siphonaria zelandica	7
Limpet	Cellana denticulata	5
Chiton	Eudoxochiton ? nobilis	3
Screw Shell	Maoricolpus roseus roseus	3
Oysters	Ostrea spp.	3
Ribbed Mussel	Aulacomya maoriana	2
Swollen triton	Argobuccinum tumidum	2
Scallop	Pecten novaezelandiae novaezelandiae	2
Limpet	Patelloidea cortica corallina	1
Spindle Shell	Penion sulcatus	1
Large Ostrich Foot	Struthiolaria ? sp.	1
TOTAL	-	4575

TABLE 4:
Black Rocks shellfish, barnacles and sea eggs (kina) MNI
From Anderson 1979: 52

Spotted Topshell	Melagraphia aethiops	19546
Limpet	Cellana radians	15224
Limpet	Cellana denticulata	12605
Catseye	Lunella smaragda	9563
Top Shell	Zediloma atrovirens	4563
Paua	Haliotis iris	2785
Dark Rock Shell	Haustrum haustorium	1136
Silver Paua	Haliotis australis	901
Whelk	Cominella maculosa	642
Limpet	Siphonaria zelandica	519
Chiton	Eudoxochiton nobilis	458
Limpet	Cellana ornata	100
Barnacle	Balinus ?sp.	63
Limpet	Benhamina obliquata	66
Blue Mussel	Mytilus edulis	48
Sea Egg (kina)	Evechinus chloroticus	38
Shield Shell	Scutus breviculus	30
Fan Scallop	Chlamys ?sp.	30
Cooks Turban	Cookia sulcata	24
Oyster Borer	Lepsiella scobina	22
Opal Top Shell	Cantharidus opalus	17
Top Shell	Zediloma arida	16
Small Bivalve	Cardita aoteana	15
White Rock Shell	Neothais scalaris	15
Ribbed Venus Shell	Protothaca crassicosta	15
Small Top Shell	Anisodiloma lugubris lenior	13
Pink Top Shell	Cantharidus purpureus	13
Pipi	Paphies ?sp.	11
Green Chiton	Amaurochiton glaucus	10
Horned Shell	Zeacumanthus subcarinatus	9
Barnacle	Chamaesipho ?sp.	9
Green mussel	Perna canaliculus	9
Tusk Shell	Dentalium nanum	8
Screw Shell	Maoricolpus roseus	6
Limpet	Patelloida corticata	6
Fan Scallop	Pallium convexum	5
Oysters	Ostrea ?sp.	3
Subtidal Bivalve	Zearcopagia disculus	3
Circular Slipper Shell	Sigapatella novaezelandiae	3
Turbinid Snail	Modelia granosa	2
Muricid Whelk	Zeatrophon ambiguus	2
Deep Water Bivalve	Scalpomactra scalpellum	2
Lamp Shell	Terebratella inconspicua	1
Fragile Limpet	Atalacmea fragilis	1

Lined Whelk	Buccinulum ?sp.	1
Whelk	Cominella ?sp.	1
Rock Shell	Lepsithais lacunosus	1
Spindle Shell	Penion sulcatus	1
Ribbed Mussel	Aulacomya maoriana	1
Tuatua	Paphies subtriangulata	1
Pipi	Paphies australis	1
TOTAL	-	68564

TABLE 5:
Washpool Fish and Crayfish MNI
From Leach 1979c: 87

Wrasses	Pseudolabrus spp.	74
Tarakihi	Cheilodactylus macropterus	71
Crayfish	Jasus edwardsii	69
Red cod	Physiculus bacchus	45
Kahawai	Arripis trutta	31
Freshwater eels	Anguilla sp.	27
Barracouta	Thyrsites atun	21
Snapper	Pagrus auratus	11
Blue cod	Parapercis colias	11
Common Mackerel	Scomber japonicus	11
Blue moki	Latridopsis ciliaris	9
Red Gurnard	Chelidonichthys kumu	9
Dogfish	Squalus sp. cf. acanthias	7
School shark	Galeorhinus cf. australis	7
Elephant fish	Callorynchus millii	7
Groper/hapuka	Polyprion oxygeneios	6
Greenbone/butterfish	Coridodax pullus	5
Conger eel	Conger verreauxi	3
Warehou	Seriolella brama	3
Trevally	Caranx lutescens	2
Leather jacket	Navodon convexirostris	1
Sea perch	Helicolenus papillosus	1
Ling	Genypterus blacodes	1
Marblefish	Aplodactylus meandratus	1
Horse Mackerel	Trachurus novaezelandiae	1
TOTAL	-	434

TABLE 6
Black Rocks fish and crustaceans MNI
From Anderson 1979: 53,54

Crayfish	Jasus edwardsii	1529
Wrasses	Pseudolabrus ?sp.	387
Greenbone/butterfish	Coridodax pullus	89
Barracouta	Thyrsites atun	39
Tarakihi	Cheilodactylus macropterus	35
Blue cod	Parapercis colias	28
Red Rock Crab	Plagusia capensis	28
Sea perch	Helicolenus percoides	26
Red Cod	Physiculus bacchus	23
Blue moki	Latridopsis ciliaris	20
Kahawai	Arripis trutta	15
Groper/hapuka	Polyprion oxygeneios	10
Conger eel	Conger verreauxi	9
Snapper	Pagrus auratus	8
Upper Shore Crabs	Grapsidae ?sp.	8
Sharks and Rays	? genus	7
Marble fish	Aplodactylus meandratus	5
Ling	Genypterus blacodes	2
TOTAL	-	2268

TABLE 7

Washpool Birds MNI. From Leach 1979c: 91

Tui	Prosthemadera novaeseelandiae	87
Red-crowned parakeet	Cyanoramphus novaezelandiae	53
Yellow-crowned parakeet	Cyanoramphus auriceps	23
Parakeet	Cyanoramphus ? sp.	19
New Zealand pigeon	Hemiphaga novaeseelandiae	12
Perching birds	Passeriformes ? sp.	7
Bird ? sp.	? genus	6
New Zealand robin	Petroica australis longipes	4
Kaka	Nestor meridionalis septentrionalis	4
New Zealand thrush	Turnagra capensis tanagra	3
Weka	Gallirallus australis greyi	3
Snipe-rail or rail	Capellirallus/Rallus ? sp.	3
New Zealand quail	Coturnix novaezealandiae novaezealandiae	3
Fiordland crested penguin	Eudyptes pachyrhynchus pachyrhynchus	3
Moa ? sp.	Moa ? genus	3
North Island saddleback	Philesturnus carunculatus rufusater	2
North Island kokako	Callaeas cinerea wilsoni	2
Stout-legged moa	Euryapteryx geranoides	2
Stout-legged moa	Euryapteryx gravis	2
Mappin moa/stout-legged moa	Pachyornis mappini/Euryapteryx geranoides	2
Duck	Anas ? sp.	2
Grey duck	Anas superciliosa superciliosa	2
Small petrel	? sp.	2
Little blue penguin	Eudyptula minor	2
Shearwater	Puffinus ? gavia/huttoni	2
North Island fantail	Rhipidura fuliginosa placabilis	1
Bellbird	Anthornis melanura melanura	1
Morepork	Ninox novaeseelandiae novaeseelandiae	1
Huia	Heteralocha acutirostris	1
Mappin's moa	Pachyornis mappini	1
Banded rail	Rallus philippensis assimilis	1
Australasian harrier	Circus approximans gouldi	1
Swan	Cygnus sumnerensis	1
New Zealand kingfisher	Halcyon sancta vagans	1
New Zealand shoveler (duck)	Anas rhynchotis variegata	1
Wandering//royal albatross	Diomedea exulans/epomophora	1
Mollymawk	Diomedea cauta	1
Black-backed gull	Larus dominicanus	1
Shag	Phalacrocorax ? sp.	1
Blue petrel	Halobaena caerulea	1
Petrel ? sp.	? sp.	1
Fluttering shearwater	Puffinus gavia	1
Shearwater	Puffinus ? sp.	1
Erect-crested penguin	Eudyptes pachyrhynchus sclateri	1
Crested penguin	Eudyptes ? sp.	1
TOTAL	-	273

TABLE 8
Black Rocks bird remains MNI
From Anderson 1979: 55

Red-crowned parakeet	Cyanoramphus n. novaezelandiae	31
Fluttering/Hutton's shearwater	Puffinus gavia/huttoni	16
Crested penguin	Eudyptes pachyrhynchus ? subsp.	10
Little blue penguin	Eudyptula minor ? subsp.	4
Tube-nosed sea birds	Procellariformes ? genus	4
Prion	Pachyptila ? sp.	4
Fairy prion	Pachyptila turtur	4
Ducks	Anatinae ? genus	4
Tui	Prosthemadera n. novaeseelandiae	3
Large moa	Dinornithiformes ? genus	3
New Zealand pigeon	Hemiphaga n. novaeseelandiae	3
Parakeet	Cyanoramphus ? sp.	3
Australasian harrier	Circus approximans	3
Red-crowned parakeet	Cyanoramphus n. novaezelandiae	2
Perching birds	Passeriformes ? genus	2
Kokako	Callaeas cinerea	2
Stout-legged moa	Euryapteryx gravis/Dinornis ? sp.	2
Albatross/mollymawk	Diomedea ? sp.	1
Mollymawk	Diomedea cauta cauta	1
Short-tailed shearwater	Puffinus griseus/tenuirostris	1
Diving petrel	Pelecanoides u. urinatrix	1
Grey duck	Anas s. superciliosa	1
Rail	Rallidae ? genus	1
Weka	Gallirallus australis	1
Banded rail	Rallus philippensis assimilis	1
Red-billed gull	Larus novaehollandiae scopulinus/bulleri	1
White-fronted tern	Sterna striata	1
Yellow-crowned parakeet	Cyanoramphus auriceps	1
TOTAL	-	111

TABLE 9
Washpool mammal remains MNI
(From Leach 1976: 469 and Smith 1979: 217)

Pacific rat	Rattus exulans	113
Dog	Canis familiaris	22
Southern fur seal	Arctocephalus forsteri	2
Dolphin	Lagenorhynchus or Delphinus sp.	1
Sea Lion	Phocarctus hookeri	2
Elephant seal	Mirounga leonina	2
Pilot whale	Globicephala malaena	2
Baleen whale	Order Mysteceti	1
TOTAL	-	44

TABLE 10
Black Rocks mammal remains MNI
From Anderson 1979: 55

Rabbit	Oryctolagus cuniculus	1
Pacific rat	Rattus exulans	17
Dog	Canis familiaris	19
Southern fur seal	Arctocephalus forsteri	5
Dolphin or Porpoise	? genus	2
TOTAL	-	44

APPENDIX 3: MARINE SURVEY AT BLACK ROCKS, FAUNA AND FLORA

TABLE 11
Black Rocks Intertidal survey of fauna
From Anderson 1973: Appendix C

Limpet	Cellana ornata	1246
Spotted Topshell	Melagraphia aethiops	771
Limpet	Cellana denticulata	639
Limpet	Cellana radians	581
Chitons	Chitons	511
Catseye	Lunella smaragda	296
Paua	Haliotis iris	189
Limpet	Siphonaria zelandica	41
Dark Rock Shell	Haustrum haustorium	34
Sea Egg (kina)	Evechinus chloroticus	16
Crabs	Upper shore crabs	14
Silver Paua	Haliotis australis	12
White Rock Shell	Neothais scalaris	4
Chiton	Eudoxochiton nobilis	3
Cooks Turban	Cookia sulcata	3
Red Rock Crab	Plagusia capensis	3
Shield Shell	Scutus breviculus	1
Crayfish	Jasus edwardsii	1
TOTAL	-	4365

TABLE 12
Black Rocks Seaweeds Survey
From Anderson 1973: Appendix B

1-10 m from M.H.W.N.
Adenocystis utricularis
Corallina officinalis
Hormosira banksii
Splachnidium rugosum

11-30 m from M.H.W.N.
Carpophyllum maschalocarpum
Caulerpa brownii
Cheilosporum sp.
Cystophora congesta
Cystophoroa torulosa
Gigartina sp.
Glossophora kunthii
Halopteris spicigera
Phacelocarpus labillardieri
Plocamium sp.
Pterocladia lucida
Pterocladia pinnata
Sargassum sp.
Xiphophora chondrophylla
Zonaria augustata

Sub-littoral
Ecklonia radiata
Lessonia variegata
Macrocystis pyrifera
Marginariella sp.

Reef
D'Urvillea antarctica

TABLE 13
Black Rocks Fish Survey
From Anderson 1973: Appendix D

Transect survey was carried between 16 to 23 February 1972. Data adapted from Anderson (1973: Appendix D). Visibility was 5 to 15 feet.

Marblefish	23
Banded parrotfish	20
Greenbone/Butterfish	11
Spotties	8
Moki	6
Kingfish	3
Kahawai	1

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