



KĀ URI Ā PAPATŪĀNUKU

**An investigation of pre-contact resource management
in Te Wāi Pounamu**

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Dedicated to my poppa
William Guest



“A little hard work never hurt anybody.”

Abstract

Is the common perception that all indigenous peoples are innately harmonious a true depiction of reality? This research project aims to diffuse this theory. Its prime focus is to explore this notion of conservation in relation to southern Māori, and how, or if, such norms did indeed evolve within pre-contact southern Māori society.

Upon arrival into the less biddable environment of Te Wāi Pounamu life proved to be very difficult for these Polynesian voyagers. Te Wāi Pounamu, a land beyond the reaches of tropical Polynesia, gave a whole new meaning to adaptation. Initial settlement was by no means an easy task, however with persistence, cultural divergence transpired. What once were Polynesian voyagers, at home on the ocean, became a uniquely shaped people in accordance to the environmental circumstance of Te Wāi Pounamu. Cultural concepts derived from Polynesia were adapted to give explanation to the new phenomena of Te Wāi Pounamu. Through implementation of such belief systems into everyday life, southern Māori developed a balance between human and their environment.

The central aim of this dissertation is to explore the past in order to give meaning to the future. It examines how southern Māori may have adapted their physical, spiritual and cognitive development to suit the environment in which they dwelt, consequently suggesting that the land influenced humans more than humans may have influenced the land.

Preface and Acknowledgments

Rationale

Ko Aoraki te mauka

Ko Pukaki te roto

Te puna o te awa tapu o Waitakitaki

E rere ana ki te tai o Uruao, Takitumu me Arai Te Uru

Growing up on the edge of the Hokianga harbour, in the heart of Te Tai Tokerau I was somewhat isolated from my southern roots. My relationship with Papatūānuku formed beneath the mountains of Panguru and Papata. It was not until my family and I moved south that my curiosity about my ancestral land was really ignited. It is this curiosity that has led me to write such a dissertation, both for my people, and for myself.

Technicalities

It is always difficult to grasp the essence of a cultural concept or tradition through a different linguistic medium. This dissertation, although using English as the primary language, is aware of the issue of cross-cultural interpretation; therefore a Māori framework must be implemented in order to do justice both to the stories of our tūpuna and to the academic tradition. Thus this paper does not always follow conventional methods of academic writing, but draws on a style which will acknowledge the true spirit of my people's past, in close adherence to the frameworks of the late Rangiāhuta Ruka Broughton (Broughton, 1993). Broughton was one of the leading scholars in Māori academic writing. Therefore this research project aims to recognise him as a mentor for the development of Māori academic writing.

One of the major differentiations of this writing is that te reo is not treated as the 'other'. This is in line with current trends, especially of Māori academics, which draw on the Māori Language Act 1986: 'in New Zealand contexts, it is customary *not* to italicise Māori expressions' (Wallace & Hughes, 1995:80). This, however, poses some difficulties within the context of this dissertation. As a consequence, words that are common in form

to both written languages, such as ‘take’ be misinterpreted, especially throughout Chapter Three.

This dissertation does not accept the practice of implementing English plurals (for example Māoris) at the end of Māori words. Thus, for example, the word Māori acts as both singular and plural, much as the word ‘fish’ in English.

The indigenous dialect of southern Māori is also employed, where the northern ‘ng’ is substituted by ‘k’ (Ngāi Tahu / Kāi Tahu). This is for two reasons: Firstly, it pays recognition to the area-specific dialect of southern Māori (more so in southern areas), emphasising this point of divergence for southern Māori. Secondly, it acts to return the voice back to southern Māori, to embrace their story from an emic perspective rather than that of an etic. Similarly, southern Māori people will not be referred to as the subject of study, for example, ‘the southern Māori’. It must also be noted that all quotations correspond exactly with the original form, and are not altered in anyway to suit the discussion. Hence ‘ng’ and italicised words will appear within quotations, along with words that may require macrons. Although the name generally accepted for the South Island is Te Wai Pounamu (the greenstone waters), this dissertation recognises the variation of the South Island as Te Wāhi Pounamu (Te Wāi Pounamu), or the place of greenstone.

This project also refers to Māori of the south as ‘southern Māori’, rather than a specific iwi, hapū or whānau. It has been common practice to cite southern pre-European Māori as Kāi Tahu. Although this is correct there were many other inhabitants prior to the arrival of Kāi Tahu. Thus by using ‘southern Māori’ throughout this dissertation, it will embrace all those who dwelled within the shores of Te Wāi Pounamu, together with their diverse range of traditions and customs.

Kā mihi / Acknowledgments

Tuatahi, ki a Papatūānuku e takoto ana nei kōrua ko Rakinui ki runga rā tēna kōrua e kā mātua tūpuna. Ki kā tūpuna hei takoto te ara tika mō tātou te iwi o nāianeī, tēnei te mihi ki a koutou.

Ki kā mate, haere ki tua i Te Ārai; ki Hawaiki nui, Hawaiki roa, Hawaiki pāmamao.

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Ki kā kanohi ora, tēnā ra tātou katoa.

Ka huri āku mihi moemiti ki kā tākata hei akiaki i tāku whanaketaka. Kaore i arikarika kā tākata hei tautoko i ahau ki te whai mātauraka, ki te whai taumata. Tuatahi, ki ōku nei hoa pūmau, tēnā rā koutou. Ki te whānau o Puketeraki, kā kaupupuri o te ahi kā, tēnei te mihi nui ki a koutou katoa. Ki kā marae maha o te Whare Wananga o Otago; kā tauira, kā kaiako, kā kaiāwhina, he karakaraka maha ki a koutou.

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Now, I wish to turn to those who have supported me throughout my development.

Firstly my dear friends thank you for your ongoing support. To my family in Karitane who are keeping the fires burning, thank you all for your unconditional support in all facets of my life. To all the people I have met throughout my time at the University of Otago, thank you for the good times. My gratitude must also extend to the staff of Te Tumu and the Maori centre for always being willing to assist me and my studies.

Lastly, and most importantly, my many thanks turn to my family. Firstly to my parents, thank you both for pushing me and my siblings beyond our boundaries and implementing priceless skills and morals in us all. My father, David Clive Mules, for always having a comprehensive answer to every question that crossed my mind, for all those ‘bush bashing’ walks off the side of the road, and for teaching us about our history, our land and our people. My mother, Diana Ngaire Mules nee Guest, for the strength and stability in mine and my sibling’s lives, for keeping the fires warm throughout our upbringing and always extending our thoughts outside the square. And lastly to my dear poppa, William Guest. Your strength and innovation are admired by your grandchildren every day.

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Where possible, I have tried to complement the text with the use of figures. Some of the photographs I have taken myself, while others are sourced from elsewhere which I have acknowledged underneath each figure and in the bibliography. I have only one map which illustrates the significant places that are mentioned within the text.

Te Wāi Pounamu



Map. 0.1 Map of Te Wāi Pounamu indicating locations mentioned in the text including an insert of Otago. Rangimarie Mules September 2007.

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Introduction

Over time, a notion that indigenous peoples are innately harmonious with the environment has been generally accepted; but is this an accurate assumption? Are all indigenous peoples, in general, born with an environmental awareness? Or is this something embedded within their social structures, something which is ingrained from birth? It is important, therefore, that the common belief of indigenous people's innate sense of conservation must be further examined.

A fundamental characteristic of every collective group is the development of shared concepts and mutual norms. These norms can enable and/or constrain one's behaviour through enforcement of shared concepts. Such rules and norms are often defined in theoretical analysis as institutional arrangements (Smajgl & Larson, 2007:3). Institutions can take many forms within society; however this project is solely focused on examining the institutions of conservation within pre-contact Te Wāi Pounamu society. Conservation in this sense explores the institutional notion of a people's 'awareness that they can deplete or otherwise damage their natural resources, coupled with commitment to reduce or eliminate the problem (Johannes in Morrison (et al) 1994:85)'. This research paper, therefore, will draw on theoretical frameworks to help guide the direction of the research. Berkes (1999) provides a framework called *knowledge-practice-belief complex*, which draws on indigenous conservation norms by examining how system components are interdependently embedded within institutions, as demonstrated by Fig. 0.1:

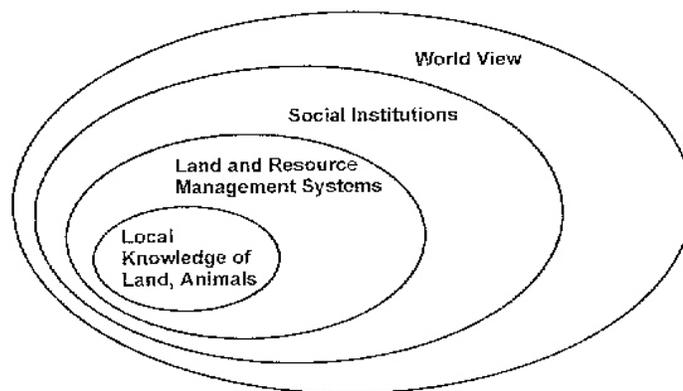


Fig. 0.1. Levels of analysis in traditional knowledge and management systems. See Berkes, 1999:13.

This framework encompasses four interrelated levels of traditional ecological knowledge. That is, firstly, the localised knowledge of animals, plants, soils, and landscape. This level also includes knowledge of specie identification, life histories, distribution and behaviour. The second level explores resource management systems which draw on local environmental knowledge and also includes appropriate practices, tools and techniques. Thirdly, the development of traditional systems of management requires appropriate social institutions; ‘for a group of interdependent hunters, fishers, or agriculturists to function effectively, there has to be a social organization for coordination, cooperation, and rule-making to provide social restraints and rule enforcement (Berkes, 1999:14)’. Lastly, the fourth level of analysis explores the worldview of the collective, which forms environmental awareness and provides meaning to observations of the environment. This encompasses both the direct perceptions and observations, along with the ways in which the universe is conceived. This level includes religion, ethics, and more generally belief systems ‘and rounds out the knowledge-practice-belief complex that describes traditional knowledge (Berkes, 1999:14)’.

A common downfall of contemporary environmental research is that it ‘often isolates the different layers of a system (Smajgl & Larson, 2007:15)’, approaching ecological, cultural and social institutions as fragmented or compartmentalised. Thus, a focus which is imperative for researchers in their efforts to determine and understand whether or not a conservation ethic exists, is to examine indigenous people’s perceptions and interpretations of their environment, and the cultural practices and circumstances pertaining to this. Consequently, it is no longer about a yes-or-no assumption, but rather it requires a comprehensive study of resource use; cognitive and cultural models; attitudes and ideas; necessary social structures, norms and circumstances, and similar notions. Such examination must be holistic, embracing all aspects of a society, in order to inform an accurate picture of an indigenous people’s reality.

A major issue of our times is the ways in which humans develop effective relationships with the environment that supports them. This research project will explore comprehensively the evolution of the conservation norms of southern Māori, stretching as far back as the journeys of the Lapita people in the dawn of Polynesian evolution. It will aim to affirm that conservation was not an intrinsic quality of southern Māori; rather it was, in fact, shaped as a consequence of necessity, developed over a long period of time, and deriving from a variety of experiences,

including exploitation. From the *knowledge-practice-belief complex* this research paper has set chapters out to encompass the differing layers of the framework.

The first chapter will explore the ecological histories of Polynesian voyagers, the environmental milieu in which they dwelt, and their cultural responses to such circumstances. These voyagers' environmental experiences throughout the Pacific were taken to a new level upon their discovery of Te Wāi Pounamu, a large island beyond the fringe of tropical Polynesia, with nothing to be discovered beyond. Consequently, society here took a huge turn; from living within the reassurance that they could always move on when economical, social and environmental pressures began to develop, to their more stable settlement within Te Wāi Pounamu with an associated imperative for sustainability. This prompts the question of what changes may have occurred within their physical, spiritual and cognitive development and experience for this more permanent settlement to have come about, and to have been sustained.

What were the social circumstances that allowed conservation norms to develop and flourish? The second chapter focuses on this question, investigating the dynamic response of these Polynesian voyagers to the unique biota of Te Wāi Pounamu and, consequently, the divergence from Polynesian-based cultural concepts to enable their adjustment into this new identification with the environment in which they now dwelt. By drawing on the notions of the fourth level of the *knowledge-practice-belief complex*, this chapter will investigate such concepts as whakapapa, kaitiakitaka, mana, tapu, noa and mauri, and how these institutional arrangements acted as underpinnings for the functioning of society.

Chapter three, in close reference to level three, explores how social and cultural norms were integrated into this environment to promote the evolution of a tightly-woven connection of people to the natural world. It will examine human connection to the environment through customary land tenure, cultural concepts, naming and language. By embracing a place with cultural meaning, did southern Māori initiatives extend beyond mere environmental propriety, and become fundamental linkages of people with the land?

The fourth and final chapter sets out to examine the well-developed and sophisticated institutional systems that evolved out of historical experiences. In relation to the *knowledge-practice-belief complex*, it was through the establishment of levels three and four that land and resource management (such as mahika kai, wakawaka and rauiri) systems had the capacity to evolve. This chapter demonstrates how the environment indeed shaped human culture more than

human culture shaped the environment, and how southern Māori learnt through the exploitations of the past to develop a finely-balanced, sustainable system of ecological knowledge and practice.

Chapter One: Arrival from afar

*He purapura i ruia mai i Rakiātea
E kore e karo¹*

The populating of the Pacific is a remarkable tale. The Pacific Ocean is the biggest and deepest ocean in the world, not to mention the largest single feature of the earth's surface. Most regional studies are dedicated to continents in which the water area is small and the land is the predominant feature; on contrary however, a study of the Pacific is essentially that of a massive area of water in which the land is a comparatively minor feature.

These scattered, and relatively limited, land areas meant not only did people evolve in intimate association with the ocean, but also that the careful management of the limited land resources was vital for their sustainable existence. Did Māori cultural ancestry in the islands of the Pacific therefore feature strict environmental management systems stemming from this deficit of land area? Or did their familiarity and sense of comfort with the omnipresent ocean lead to a proportionate neglect for the land?

It is certain that when Polynesian voyagers discovered the land teeming with resources that we now refer to as Te Wāi Pounamu, or the South Island of New Zealand, their dreams would have been realised beyond their wildest imagination. The shock of the abundance of resources within this new land indeed encouraged some environmentally destructive behaviour. What do we make of all this destructive exploitation? Was it simply human nature? This chapter will look at the succession of Polynesian movement through the Pacific, and eventually on to Aotearoa, and Te Wāi Pounamu. It will explore why these successive migrations occurred, focusing primarily on the environmental considerations. Upon their arrival in Te Wāi Pounamu, a land so distinctive in its biological and geological composition, did these voyagers react in a manner similar to those patterns their ancestors had developed in their previous island homeland migrations? Such questions will be explored throughout this chapter to help us understand how, and if, the notion of conservation may have evolved.

Where are these sacred homelands our ancestors referred to generically as Hawaiki or Papa nui o Aio (Oral Informant one)?² To me it seems to indicate that our ancestors were aware

¹ Alteration from Mead & Grove, 2001:113

² Also referred to as Te Patu-nui-o-aio. See Beattie, J.H. *Traditions and Legends: collected from the natives of Murihiku (Southland, New Zealand)* in *Journal of Polynesian Society*. Vol 27 (1918), pp 138.

that they had always come from elsewhere, from other lands over the ocean. These places, unable to be identified as one particular location, are crucial in the search for the origins of our antecedents. Hawaiki and Papa nui o Aio are best explained as being foreign lands, the places where the ancestors came from, the archetypal homeland. These places are the substance of myth, having no real relevance to factual detail, but providing an essential truth encrusted within metaphors; stories of the past pertaining to no one single physical location. There is, however, truth revealed within those metaphors, stories of the past recounted by the voices of our forebears. These places, although vague in detail, provide the foundation for modern to explore in more depth, striving to unravel the origins of these traditions. It is helpful, therefore, if we turn to the academic disciplines of archaeology, comparative linguistics, physical anthropology, ethnography and paleoenvironmental sciences in an attempt to put the remaining pieces into the puzzle that our ancestors left for us through their ongoing odyssey.

Near Oceania

Extensive field work performed throughout South East Asia and Oceania over many years has established that the migration, whose ultimate destination was to be what we now know as Aotearoa, started in the first ice-age, some 50,000 years ago (Davidson in Wilson, 1987:29). Due to the water level being low in the Pleistocene era only minor sea voyaging needed to be undertaken, as most movement could be accomplished on foot. In this way people relatively easily populated Australia, Papua New Guinea and eventually Tasmania. The relatively minor sea voyages that were required became the first developmental stage, setting the scene for the great voyages to come in later eras. Before the end of the last ice-age people began to populate the Bismarck Archipelago, New Britain and New Ireland (Davidson in Wilson, 1987:29). As these waves of voyagers moved they discovered that the islands were ‘largest and most complex toward the southwest (Melanesia), but rapidly become less diverse toward the east, northeast, and north (McKnight, 1995:173)’. This meant that, as they pushed the boundaries of Near Oceania into Remote Oceania, the islands they encountered became smaller in land mass, and increasingly isolated from one another. Around 1200BC these brave migrants set off on a journey through Remote Oceania that, ultimately, was not to conclude for another 2500 years (Young, 2004:38).

Lapita

Examination of the cultural material remnants of this journey has allowed archaeologists to sequence the eastward succession of movement from Aitape³ (Summerhayes, 2003:138) to Samoa. The discovery of pottery between these two archipelagos has given a new dimension to our understanding of the populating of the Pacific. Lapita pottery, named after its first site of excavation in the Bismarck Archipelago, is a lot more complex than was initially thought. However, as time passed and more diverse records were accumulated, this material helped the realisation develop that the pottery was only one facet of an entire social system, a remnant of the early settlers of the Pacific. Dating techniques and analysis of this discovery allowed archaeologists to track the successive movements of early voyagers. It was found that these courageous seafarers explored a vast ocean, extending at least 4,500 kilometres, during the span of somewhere between 15 and 25 human generations (Kirch, 2000:96). The material culture, a residue of the Lapita extensions, has preserved the complex dentate markings as characterised in the pottery. It demonstrated that the pottery techniques and styles were indeed changing over time, despite being some hundreds of kilometres apart (Summerhayes, 2003:140-141). For many years archaeologists and historians alike could not understand how this phenomenon of change was possible, and concluded that it must be due to the pottery having a usually manufacturing site, that site commonly thought to have been in the Bismarck Archipelago. However, in more recent years, further sourcing analysis has produced an answer to this extraordinary phenomenon. It has been revealed that the manufacture of Lapita pottery was local, and that the existence of complex communication networks over many hundreds of kilometres was the reason for the parallel changes. This Lapita pottery led to the discovery of a whole culture of people who went on to populate the ‘oceanic outer space (Kirch, 2000:97)’ of Remote Oceania.



Fig. 1.1 Lapita pottery, material evidence of Lapita migrations. The University of Auckland Library 5957.

³ Located 126km ESE of Vanimo, 148km WNW of Wewak, on the north coast of Papua New Guinea, in the Sandaun province.

Voyaging techniques

Lapita people developed extensive knowledge of oceanic navigation, even being quoted as the most advanced in the world (Evans, 1998:15-16) for their era. This knowledge was vital for the maintenance of communication lines over hundreds of kilometres of ocean. These Lapita voyagers had comprehensive understanding of ocean currents, wind patterns, bird migration, and cosmology. These facets combined to guide them over the vast Pacific Ocean. This comprehensive familiarity with their natural environment was the key which allowed these seafarers to succeed in the challenging task of populating the Pacific.

By the mid-twentieth Western century scholars believed that they had unraveled the mystery of the Polynesian voyaging. Thor Heyerdahl was one of the foremost scholars that debated whether ‘the Polynesians had arrived in the islands primarily by chance, riding prevailing winds and currents (Kirch, 2000:238)’. However, these people did not voyage out into the unknown without an intricate strategy, since, ‘parties of fishermen accidentally blown off-course do not normally carry women, pigs, dogs and chickens, and a variety of cultivated plants (Davidson, 1984:26)’.



Fig. 1.2 Tongan sailing canoe, drawn by J. Webber on Captain Cook’s third voyage. Although not typical of Polynesian canoes, it gives an impression of the sort of craft Polynesian voyagers would have used. Wilson, 1987:35

Lapita people, or ‘Vikings of the sunrise’ as Sir Peter Buck (Buck, 1954) poetically described them, populated Remote Oceania by voyaging against the prevailing winds and currents of the south-easterly trade wind belt⁴. By sailing against prevailing winds they could sail with confidence, reassured that the return home would be easier. This strategy allowed Lapita people to locate island after island in the eastern Pacific with the knowledge that the return home would not be as demanding, if ultimately they were unsuccessful in finding land.

Remote Oceania environment

⁴ See Chapter Three of Kirch, 1997:43-78

The islands which were scattered throughout Remote Oceania had significant environmental restrictions in contrast to those of their former homelands. Most of the islands of Remote Oceania were atolls, which meant they were low-lying, fairly flat, narrow, sandy, and lacking abundant water supplies or luxuriant vegetation (McKnight, 1995:176, 181). The absence of durable stone and the limited range of timbers and fibres (McKnight, 1995:181) destined these environments to be difficult places to settle, let alone to sustain a population. Unlike their former homelands in Near Oceania, where resources were rich with an abundance of marsupials, reptiles, birds, wild plant foods, shellfish and inshore fish, Remote Oceania had little to offer, lacking many wild plants, edible seeds, fruit or tubers (Kirch, 2000:109). These pioneering inhabitants therefore had to adapt to such environments in order to survive, using natural materials and technologies to optimise their restricted resources. As these Lapita people dispersed throughout Remote Oceania they became more detached from their home land, diverging into distinct cultures in response to each new surrounding. The ‘peculiar climate of those regions, the great distances separating the various archipelagos and the attendant reduction in the frequency of contacts (Rapaport, 1999:123)’ contributed to further divergence of these cultures. With each new environment came a uniquely developed culture, adapted to best suit these circumstances; each group learned habitually to specialise their cultural practices according to the nature of the environment in which they dwelt.

Through the ongoing development of knowledge and technology these ancestors became more familiar with open-ocean voyaging and, as they developed into a people at ease with such voyaging, the discovery of pristine and plentiful habitats became a repeated event. As a consequence, the Polynesian mind-set was not based on sustaining the surrounding resources for generations to come, but rather on dwelling there until that habitat could no longer sustain human settlement. These island homes were not large in land mass, so ‘pressure on resources must have been felt quickly, leading to a continuous search for new islands (Denoon, 1997:64)’. With confidence in the fact that they could move on, their conservation perspective would have been minimal, using the succession of islands for sustenance rather than sustainability. David Young states that ‘they lived in the certainty that they could always move on, these islands were in the thrall of a people at ease with a wide ocean voyaging (Young, 2004:38)’. As a result, the island environments fell victim to human exploitation, some being destined never to recover fully.

Diet

Owing to these islands of Remote Oceania lacking any terrestrial mammal, and having depauperate terrestrial bird life, human diet was focused mainly around produce, the people gradually developing ‘a subsistence economy based on gardening and fishing (McKnight, 1995:180)’. The majority of natural foods for these islands were sourced from the ocean, with plentiful resources of fish, seafood, some bird species, and even turtles. However, they ‘did not simply adapt to changing conditions; they also manipulated their social and natural resources (Rapaport, 1999:130)’ by importing many of their dietary sources such as pigs, dogs, chickens, rats, kumara, taro, yam and gourd (McFadgen in Wilson, 1987:49). These animals, along with ‘all of the staple food crops of the region with one exception (the sweet-potato, a native of South America), were brought from South East Asia (McKnight, 1995:180)’. Ethnobotanist Edgar Anderson (1952) constructed the term ‘man’s transported landscapes’, signifying that such transfer of food served as a foundation for constant subsistence economies wherever explorers went. Thus a significant reason for the success of Lapita voyagers as colonisers resulted not only from their remarkable voyaging techniques and navigational aptitudes, but also their ability to generate subsistence economies (Kirch, 2000:109). The imported food sources served to encourage sustainable living on these islands. However those species, together with the deliberate or chance introductions of animals and plants such as geckos and skinks, certain species of garden snails (e.g. *Lamellaxis gracilis*), various weeds (e.g. *Ludwigia octovaluis*) and the notorious kiore (Polynesian rat or *Rattus exulans*), led to many negative interactions with indigenous species. It has been estimated that around 9000 species of birds inhabited the Pacific prior to human settlement. But, in the years subsequent to settlement, it is now thought that at least 1000 species of rail alone were extinguished (Young, 2004:38). While some of these impacts were due to direct human predation, introduced predators and destruction of habitat were also major factors in the driving of such indigenous species to extinction. As the natural sources of food were depleted by humans and imported predators alike, ‘some people were provoked to seek new resources, as an easier alternative to greater concentration on agriculture (Denoou, 1997:64)’. In time, however, as natural resources became depleted, and islands scarce, agriculture did begin to flourish as a practice to sustain the growing populations with sufficient food supply. The intensification of agriculture, however, also led to erosion and other landscape degradation, resulting in the desertification of many places for centuries to come. When ‘no more

‘new’ lands were available (Denoon, 1997:64)’ a greater effort toward soil conservation began to arise. Dodson elucidates that ‘the first settlers in all parts of the Pacific seem to have changed and impoverished on a large scale the new lands they encountered (Dodson, 1992:8)’. Polynesian voyagers lived their lives very much within a paradigm of trial-and-error with their new surroundings. By exploiting resources they became aware that life would therefore be hard to sustain; humans needed to live in harmony with the land in order for life to continue. This eventually developed into an ideology of conservation.

It is in Samoa and Tonga where Lapita pottery suddenly ceased being manufactured (Kirch, 2000:232). Once Lapita people arrived on these archipelagos eastward expansion stalled, with an a hiatus of at least a thousand years elapsing before the colonisation of the Eastern Pacific commenced (Denoon, 1997:61). This could simply have been because there was nowhere else to go other than across-wind to Hawaii or across- and down-wind beyond the border of the tropical Pacific to Aotearoa. This period was followed by a sudden burst of exploration and discovery, which saw these Polynesian voyagers settle virtually every remaining island or archipelago within a short time span of four centuries (Kirch, 2000:232). Evans writes that:

...in the years between the birth of Christ and AD1000, they discovered the Hawaiian Islands to the north, Rapanui (Easter Island) to the south-east, and Aotearoa (New Zealand) to the south-west (Evans, 1998:15),

thereby linking the three apices of the ‘Polynesian Triangle’. Using skills which were developed over generations, Polynesian voyagers discovered almost every island and atoll within this triangle, reinforcing Evan’s point that these voyagers were one of the most advanced of their era.

Aotearoa

Aotearoa was the last major land mass in the world to be settled. It is thought, through archaeological evidence, that Polynesian voyagers set their first foot on Aotearoa between AD500-1000 (Evans, 1998:15)⁵. Aotearoa lay well outside the tropical environments of the Pacific, at such a distance that it was not discovered until a significantly later stage. This

⁵ Also see Evans, 1998:27; Davidson, 1984:21-6; Belich, 1996: 27-28; Anderson, 1983:7.

discovery of Aotearoa would, however, bring consequences that would change the path of history for the generations to come.

Environment

Despite sharing similar waters, the physical environment of Aotearoa was, in truth, nothing like that of the rest of Polynesia. The land which was to become known as Aotearoa had been separated from the Gondwanaland continent for over 80 million years, allowing a terrestrial flora and fauna essentially unique to Aotearoa to mature (Stevens, 1988:110). This land, lying within temperate and sub-Antarctic waters, was a ‘much larger and colder archipelago, greatly varied in its landscapes, soils and climate (Orbell, 1995:7)’. Aotearoa was a land that had never had a human footprint imbedded in its soil, evolving in the absence of pressure from human predation and environmental change. It was a land plentiful in a rich variety of resources. The country was made up of two main islands, now known as Te Ika a Māui or the North Island and Te Wāi Pounamu or the South Island. Scattered around these islands also lay many smaller offshore islands:

Moa and other birds were very plentiful, seals and sea lions lay on the shore, whales beached themselves from time to time, the fishing was excellent, there were plenty of shellfish, the rivers and wetlands full of eels (Orbell, 1995:7).

As a result of life in Aotearoa having evolved without any indigenous land-based mammal species (except a couple of diminutive bats), the dense forest, which covered more than 79 percent (Goudie, 2006:25) of the surface of this land, was poor in large fruits and oil-rich seeds (Anderson, 2002:25). This deficiency was very similar to the milieu experienced by human generations living throughout Polynesia. Yet there were copious species of birds which had evolved for millions of years in a virtually predator-free environment; as a result many were either weak flyers or flightless.

The overall result of this prolonged endemism was that the terrestrial biota was very location-specific, and also very sensitive to changing environmental zones. The prehistory of the environment of Aotearoa had not, however, been static; many changes had occurred prior to

human settlement. Stevens elaborates on the idea of previous environmental change before human arrival:

Certainly, New Zealand had been subjected to environmental changes previously – some gradual, some cataclysmic. There had been episodes of marine transgression and mountain-building, volcanism and glaciation that had markedly reduced the availability of a wide range of ecological niches, but, even so, most of the native plants and animals survived and thrived – or adapted and evolved into new and different forms (Stevens, 1988:110).

The changes that were to come with the arrival of humans, however, were to be the most extraordinary and dramatic that this land and its biota had ever experienced. Man was to bring about extreme changes; and all within a mere instant relative to the evolutionary timeline of this environment.

The first people

It is still not clear as to who the first human inhabitants of Te Wāi Pounamu were. Oral traditions are one of the major sources of these stories of early settlement. However,

...because oral traditions incorporate both myth and history told by tohunga and story-tellers over generations, there is a problem of defining the boundaries between myth and history (Tau, 2003:18).

Owing to this, it is often a difficult task to establish a chronology of oral histories. It is also equally challenging to clarify which iwi (tribe) inhabited Te Wāi Pounamu at which time since, not only were there many hapū (sub-tribes), but also many cases of intermarriage and migration. What is certain is that Te Wāi Pounamu was settled long before Kāi Tahu (Ngāi Tahu) became firmly established; however, by whom, and at what time, is, and will continue to be, the source of much interesting debate.

Waka

Waka (canoes) are embedded throughout southern Māori legends. Waka traditions stretch back to creation. The transfer of generic Polynesian cultural legends, such as that of Māui, reiterates the connection Māori had to their former Pacific homelands. The legend of Māui is also incorporated into the tradition of southern Māori, where Te Wāi Pounamu was also acknowledged as Te Waka a Māui, Rakiura (Stewart Island) being Te Puka a Māui or the anchor, and Kaikoura the firm ground where Māui hauled his mighty catch, Te Ika a Māui. Another metaphor that refers to the origin of Te Wāi Pounamu is the story of Te Waka a Aoraki. It is said that after the separation of Papatāūnuku (earth) and Rakinui (sky) (to be discussed in the following chapter), four of Raki's sons, Aoraki, Rakiroa, Rakirua and Rarakiroa descended to earth in the canoe Te Waka a Aoraki. Due to a 'ritual misfortune (Anderson, 1998:13)', the four sons were not able to ascend back to their father Raki, their canoe falling to its fate half-submerged and slanted on its side. Today this canoe lies as the South Island of Aotearoa where the carved prow makes up Te Tau Ihu o Te Waka (Marlborough Sounds), the high side of the hull in the form of the Southern Alps where the crew lie imbedded as lofty mountains, Aoraki (Mt Cook) being the tallest of them all.

Two of the other waka of significance in the early exploration and settlement of southern regions are Takitimu in Southland and Arai Te Uru in Otago, and there are numerous others such as Uruao and Huruhurumanu.

Takitimu

Takitimu was led by Tamatea Pokai Whenua down the east coast, naming significant areas as it proceeded south. The voyage eventually came to an end when the waka was struck by a large wave called Ōkaka in Te Ara a Kiwa (Foveaux Strait). It now rests as the Takitimu Mountains in western Southland. Tamatea survived this tragedy and settled in Murihiku for some time, naming many of the surrounding landmarks (Anderson, 1998:15).



Fig. 1.3 Puketapu, Palmerston, Otago. Rangimarie Mules September 2007.

Arai Te Uru

Arai Te Uru is one of the more eminent waka of Te Wāi Pounamu history, and there are many legends in reference to its history. Anderson has recognised that this is the case, stating that these stories: ‘although fundamentally similar, have differences in detail (Anderson, 1998:15)’. This is a very special waka, particularly throughout Otago. Around the province many of the significant peaks give meaning to the shape of the land by being personified as tūpuna (ancestors) from this waka. Puketapu and Pokohiwitahi, both crew members of Arai Te Uru, still stand high above Palmerston in East Otago (Oral informant one).

Iwi

Southern traditions speak of some early inhabitants known as Patupaiarehe and Maeroero. These people have been explained as ‘kinds of people very long ago and are now turned into fairies and phantoms (Tikao, 1990:58)’. Similarly other early people known as Kāhui Tipua, Kaiti Raka and Kāhui Roko also appear in traditions as ghosts or giant people (Anderson, 1983:7). Traditions which reflect more direct historical settlement include those of Te Rapuwai, Hāwea, Waitaha, Kāti Mamoe and Kāi Tahu, amongst others.

This is only a very broad and generic outline of tribal migrations and occupation. Of course the subject of tribal settlement is much more complex than that outlined below, and involving many other hapū and whānau.

Te Rapuwai

Ngāpuhi te aitangaa terapuai (Anderson, 1998:18) or Te Rapuwai appear to have originated from Te Ika a Māui, and align with ancestors of other iwi such as Ngāti Tumatakokiri and Ngāti Wairangi. Te Rapuwai is generally accepted as being the first to ground on Te Wāi Pounamu.

Hāwea were also an early iwi. Some authorities, however, such as Teone Taare Tikao, contradict the primacy of Te Rapuwai and ‘consider that the Hāwea were the first tribe (Tikao, 1990:57)’. From whom these people descended is still debated. Tikao speaks of them as arriving on the canoe Kapakitua under Taiehu; however, others have referred to Hāwea as being descendants of Hāwea i te raki (Anderson, 1998:20).

Waitaha

There has been much written about the early Te Wāi Pounamu people referred to as ‘Waitaha’. Waitaha are said to have arrived in the South Island on the waka Uruao, captained by Rakaihautu. Waitaha has sometimes been extended to include all other earlier peoples under a combined name (Anderson, 1998:20-21).

Kāti Mamoe

Kāti Mamoe, descendants of Hotu Mamoe, migrated south in the sixteenth century from today’s Napier district on the east coast of the North Island. They are said to have been drawn down by the plentiful resources that Te Wāi Pounamu had to offer. By warfare, and eventually intermarriage, Kāti Mamoe slowly dominated Waitaha, gaining primacy in Te Wāi Pounamu (Oral Informant one)⁶.

Kāi Tahu

Kāi Tahu, a tribe which was made up of descendants from a common ancestor called Tahu Potiki, also came from the east coast of Te Ika a Māui. They are said to have arrived on the shore of Te Wāi Pounamu around the seventeenth century, slowly dominating as they moved south in a similar fashion to Kāti Mamoe (O’Regan, 2001:45-46).

Adaptation

The discovery of this new and lush land mass stretched the capacities for environmental adaptability of the first settlers. Yet this was not an uncommon situation for these Polynesian descendants, as their ancestors had been pushing the boundaries of adaptability throughout their multiple Pacific environments for centuries, moving from island to island, and making changes in accordance with each new environment. As in their previous island homeland-hopping, these Polynesian voyagers brought with them their ‘transported landscapes’. Although they may have tried, and failed, to introduce to Te Wāi Pounamu such prevalent and important foods as coconut, banana, breadfruit, pandanus, pig and chickens to Te Wāi Pounamu, they did succeed with other

⁶ Also see Anderson, 1998:22-23; O’Regan, 2001:45

foods such as kumara⁷, taro, yam, gourd, tropical cordyline, paper mulberry, rat and dog (Anderson, 2002:26). For the new settlers these foods, just as in their past locales, served to ensure that a subsistence economy could be maintained. Apart from these familiar foods there was not much else that they could relate to in this pristine setting. The most challenging factor of all was, arguably the regional climatic variation. Te Wāi Pounamu proved to be a testing land for settlement. It had extreme variations, from the semi-arid basins of Uruuru Whenua (Central Otago) to the wet mountains and lowlands of Te Tai Poutini (West Coast). The less compatible climate and landscape of southern Te Wāi Pounamu held many obstacles for settlement, with the inability to cultivate kumara below Karamea on the west coast and Wairau on the east coast (Evison, 2006:17), being one of the major tests for these horticulturalists. As a consequence, in the south the development of a hunter-gatherer economy appears to have been the response, the only means of subsistence for a people who for hundreds, even thousands, of years had been reliant primarily upon horticulture. Yet this fundamental change was made easier by the fact that Te Wāi Pounamu had the richest opportunities for hunting that Polynesia had to offer (Anderson, 1983:46). The early inhabitants settled initially in coastal river mouths and harbour areas so as to exploit more easily the marine resources to sustain their settlement, ‘while experimenting with and adapting their technologies to the new climate, soils, flora and fauna (O’Regan, 2001:43)’. They were to find that much of their tropical Polynesian suite of technologies could be transferred into the exploitation of this new environment of Te Wāi Pounamu. As time passed, these people began to diverge into distinct cultures, being shaped by the new circumstances in which they found themselves, later to be classified as uniquely southern Māori. This trend indeed demonstrates that the land shaped the people more, perhaps, than the people shaped the land. It is important to note that, due to communication and trading relationships between the two islands, later migrants from Te Ika a Māui such as Kāti Mamoe or Kāti Tahu would have been more acclimatised to the conditions of Te Wāi Pounamu than migrants directly from the Pacific⁸.

Environmental impact

Along with the human settlers, the imported domestic animals, the kiore and dog, represented a great threat to the native fauna. By the time of European arrival about 800 years

⁷ Although only in the upper half of Te Wāi Pounamu.

⁸See ‘*Communications*’ in Davidson, 195:194-200

later extinction had claimed more than 40 species of bird, a bat, several species of frog, and an uncertain number of lizard taxa (Anderson, 2002:29). The potential environmental impact was ameliorated by the fact that the human population density was very low. In 1844 there was approximately one person per 50km² (Anderson, 1998:111).

Initially the most readily available sources of food were the plentiful populations of marine mammals and birds, and the numerous species of moa.

Moa



Fig. 1.4 Skeleton of moa. Alexandra Turnbull Library A-018-004.

When people first settled Te Wāi Pounamu they discovered ‘birds in form not unlike the tropical house-fowls they called *moa* but here materialised in the size of dreams (Anderson, 1983:8)’. These birds therefore were quickly given the adopted name of moa, after the house-fowls of the tropics. Moa occupied the lands of Te Wāi Pounamu long before any sign of human. At the time Aotearoa was still part of the super-continent Gondwanaland, there lived the flightless birds known as ratites. These birds populated much of Gondwanaland, so when the tectonic plates began to drift apart members of the ratite family dispersed on each significant land mass. Aotearoa ratites evolved into various species of moa as well as kiwi. Other ratites can be found today as emus and cassowaries in Australia and New Guinea, ostriches in Africa, elephant birds (which are now extinct) in Madagascar and rheas in South America. Unlike the other continents that used to make up Gondwanaland, Aotearoa became isolated very early on, acquiring no other large terrestrial animals or mammals. The moa therefore, like many other native birds, evolved without mammalian predators and diverged into a variety of different forms and sizes. Eight species are thought to have existed in southern Aotearoa. They have been classified as three different groups in accordance with body mass. The smallest of the species weighed approximately 15 kilograms, while the largest of them all weighed a massive 230 kilograms (Anderson, 1983:8)⁹. It is still uncertain how many moa actually populated Te Wāi Pounamu at the time of Polynesian arrival; however, the moa population of southern Aotearoa is thought to have never exceeded more than

⁹ See Anderson, 1983:8 for classifications

some tens of thousands (Anderson, 1983:27). Contrary to earlier European beliefs, moa were predominantly forest and shrub-land dwelling animals. Through the examination of preserved moa gizzards it has been found that they contained forest foods such as twigs and leaves from shrubs growing along the forest margins (Anderson, 1983:9).

For hundreds of years these birds were a prominent feature in the staple diet for southern Māori. They also provided southern Māori with large eggs¹⁰ used for food and for liquid containers, skin and feathers for clothing and mats, and plenty of bone which was used for the manufacture of hunting weapons along with fish hooks and even ornaments (Stevens, 1988:117).

In the centuries following first human settlement moa populations could not be sustained owing to a number of imposed changes. These included rat and dog predation of chicks and eggs, disturbance of nesting, competition for food, habitat destruction by deforestation due to fire, and direct human predation. Another factor contributing towards moa extinction was the fact that they, along with many other species of indigenous fauna in Aotearoa, seemed to have had very long reproductive cycles and, even then, perhaps only laying one, or even two, eggs per clutch¹¹. This low reproduction rate is a common characteristic of predator-free environments. Oral informants speak of this gradual decline of moa populations:

These gigantic birds were common in Rapuwai times, much less common in Waitaha times, and rare in Kati-Mamoe times, whilst the Kai-Tahu, they mostly say, never saw the bird living (Beattie, 2004:27-8).

Exactly when moa became extinct cannot be precisely dated. Traditional evidence intimates that in coastal Canterbury and Otago moa did not live past AD 1700; however, accounts in Southland suggest hunting continued for another 100 years after that, extending moa extinction in Southland until the 1800s (Anderson, 1983:24). We have seen that over-exploitation was a factor in the demise of moa but, contrary to popular belief, it was by no means the sole cause of this irreversible loss.

¹⁰some of the largest species' eggs were up to 240 millimeters long, see Stevens, 1988:114.

¹¹ this being compared to 5-20 for emus and even as many as 60 for ostriches. See Stevens 1988:114; Anderson, 1983:8-9.

Results of moa extinction

As a result of moa extinction southern Māori had to transfer their attention toward other sources of sustenance. Increasingly concentration focused on the bountiful sea. One of the richest and most accessible food sources was the fur seal which weighed up to 200 kilograms; however, predation also focused on the massive elephant seal and the sea lion. Although these animals had already been a major food source throughout the moa era, once moa numbers dwindled, concentration was focused more sharply upon them. The result of this increased dietary attention, however, was a pattern of decline similar to that of the moa. Southern Māori soon became aware that their primary food sources, such as moa and seal, were not as readily available as they had been previously.

Another casualty of the demise of the moa was the giant eagle, *Harpagornis moorei*, which was destitute without the moa. Moa were the mainstay of the giant eagle's diet, where it would use its robust claws to prey on moa from the air. Just as the effects of deforestation contributed to the demise of the moa, so also was the effect of the extinction of moa by the giant eagle; as its primary food source dwindled and vanished, the eagle's very existence became untenable.

Forest destruction

Forest carpeted the majority of the land of Te Wāi Pounamu lying below 1000-1200 metres (Anderson, 1983:25). Deforestation by fire, beginning almost immediately upon Polynesian settlement, and continued so that ultimately almost half of the forest cover was burnt off. Some forest forms were virtually burnt right out of existence, such as the kōwhai forests in eastern Te Wāi Pounamu (Dodson, 1992). Nevertheless, not all fires were instigated by humans. In fact, 'New Zealand has a history of fire extending back over millions of years (Dodson, 1992:217)'. There were naturally occurring fires, such as those prompted by lightning strikes; however the majority, and the wide range of forest degradation, can be confidently associated with human activities.

There were a number of reasons for fires. Some fires were almost certainly accidental or deliberate burning that got out of control. The environment of Te Wāi Pounamu was much more susceptible to fire than that of Te Ika a Māui. With a lower annual rainfall, blustery winds and a drier climate, along with the lack environmental experience of Polynesians, this environment was

a tinder box waiting for a spark. This was particularly the case in Otago and Canterbury, where fires were easily fanned by the ‘hot, dry, blustery nor’westers blowing down the mountain flanks and out over the plains (Stevens, 1988:119)’.

As a consequence of their incapacity to produce staple cultivated crops in these latitudes, southern Māori turned to tī (*Cordyline australis*) and aruhe (bracken fern) root as their main source of carbohydrate. In many regions of Te Wāi Pounamu aruhe was the first plant to colonise after a forest fire and, with repeated burning, its growth was preserved against intruding forest (McFadgen in Wilson, 1987:53). Consequently, as populations increased, southern Māori were encouraged to burn forests to maintain existing areas of aruhe and to promote its growth. The burning of forests is also thought to have facilitated cross-country travel, something which was essential for east coast Māori in acquiring resources such as pounamu (greenstone), which was mainly found towards the west coast. These factors however, do not account for the sheer enormity of the forest area which was destroyed by fires. It is plausible to conclude that, although these fires were more often than not deliberately lit, they easily and quickly got out of control, destroying a significantly greater area of forest than initially intended.

Results of forest destruction

These fires not only threatened the existence of indigenous forest but also much of its bird life. As a result of the fires the habitats of birds were lost, resulting in devastation for native bird populations. Indeed, deforestation is strongly implicated in the eventual extinction of moa. With loss of habitat came loss of food sources; this proved to be one of the most potent factors in a species’ decline and, for some, eventual demise.

Deforestation also induced soil erosion, as had also been the case in the Pacific homelands. This led to the conclusion that ‘firing of the forest in the inland South Island basins was followed by soil instability (Dodson, 1992:221)’. If continued, this led to poor fertility in sub-soils, consequently affecting the production of efficient root structures in food plants such as aruhe and tī (Dodson, 1992:221).

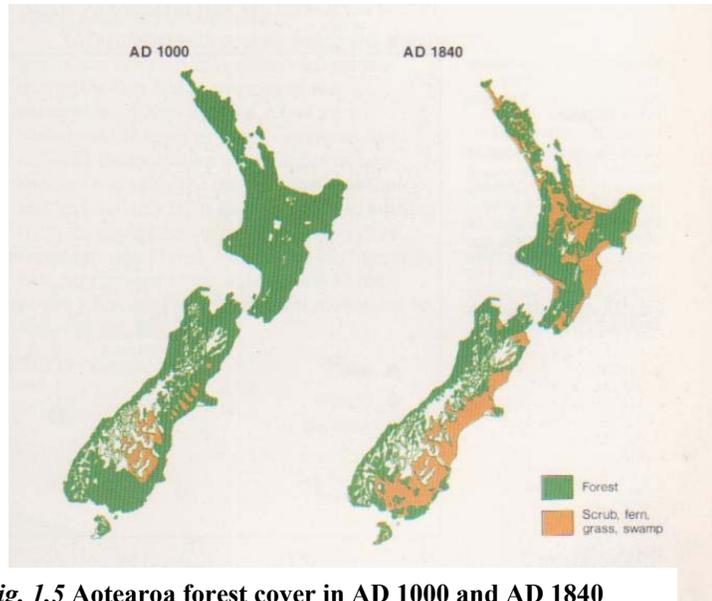


Fig. 1.5 Aotearoa forest cover in AD 1000 and AD 1840
See Trotter & McGulloch, 1989:51

Conclusion

The central question is this: is such environmental degradation a natural process? It leads to the essentially philosophical question of what is the role of humans within nature. For, if we humans are indeed part of nature, then this environmental degradation is simply an intrinsic natural process. The fact is that such environmental impoverishment can be seen all around the world; and that upon entry into naive environments every human culture has reacted in very similar ways to those displayed by South East Asian, Polynesian and, eventually, southern Māori. Such behaviours, Anderson explains, ‘are characteristic at the entry of people into previously uninhabited and fragile environments (Anderson, 2002:34)’ and can also be witnessed in the environmental histories of Australia and the Americas. The image of native conservationists thus becomes a hard concept to adopt. Conservation must therefore be something constructed within the norms of a society. It must go beyond an action and into the depths of social structures. Is it true that humans do not appreciate what they have got until it has gone?

This chapter has focused on the initial reaction of the first peoples toward the environment, and has not yet delved into the complexities of subsequent evolved environmental belief structures. It has set the backdrop for Chapter Two, which will deal with the divergence of southern Māori cultural concepts in relation to their environmental circumstances, and the foundation that these concepts created to enable later conservation ethics to evolve.

Chapter Two: The calming of the waters

*Ko ō tātou tumanako kia whakatuwhera
Te tatau o te mātauraka, o kā whakaaro
Hei here ai i ā tātou iwi, i ā tātou mana
Kia marino ai te wai o te whakaaro kotahi*¹²

With the passage of time these first people were Polynesian voyagers no longer. They had settled into ongoing life within the Te Wāi Pounamu environment. However, this did not mean that their Polynesian legacy was forgotten; it was simply adjusted to specifically suit the surroundings within which they now dwelt. Similarly, through the examination of linguistics, explorer Captain James Cook also recognised the shared cultural and spiritual base which extended over the vast Pacific Ocean, each island representing a variation in detail¹³. Southern Māori of Te Wāi Pounamu were in a dynamic state of re-interpretation and development, in forming a society which could sustain itself. Just like their forbears, they had changed, and impoverished, a new land to a huge degree; they, however, developed ‘an ideology of conservation and did take some steps to revitalise the protein sources they had diminished (Dodson, 1992:8)’. This chapter explores the circumstances under which such conservation norms evolved. It looks at conservation as something that goes beyond an action in itself; for an effective conservationist norm to develop it must first have incentives imbedded within the society’s social systems; only then will sustainable action ensure.

In congruence with the events of their Pacific ancestry, southern Māori created social systems and narratives that embraced the realities of their existence within Te Wāi Pounamu. With a common cultural basis came common spiritual ideals, and thus southern Māori evolved systems and explanations for their society in accordance with their environmental circumstances; building upon concepts derived from Polynesia, specifically moulded to suit the conditions encountered in Te Wāi Pounamu. These systems were based upon an awakening imperative for southern Māori: to act in harmony with the land. At which point these people actually felt they had become *tākata whenua*, or people of the land, is hard to say. It may have been when their

¹² Alteration from Goodall (et al), 1990:iii-iv

¹³ See Beaglehole, 1968

first deceased were buried, and thus returned to the land, who knows? A notable fact, however, is that this concept of tākata whenua certainly was present, as can be amply illustrated throughout southern Māori social systems. These social systems served to provide moral guidance, and to instruct society's social values, through the use of myths and philosophies. They served as a foundation upon which southern Māori attitudes toward the land could form.

Whakapapa

Whakapapa, or genealogy, was the fundamental imperative which gave understanding and meaning to the relationship between humans and their universe. It established, and maintained, the environmental ethos of southern Māori; it was from whakapapa that everything else sprang. Everything within existence had whakapapa, with relationships stretching back to a common source of shared origins and blood kinship.

Barlow offers a framework which demonstrates the layers of whakapapa by exploring the genealogy of the cosmic, the gods (kā atua) and mortal/primal man (Barlow, 1994:61).

I te pō uriuri, i te pō takotako: cosmic genealogy

Cosmic genealogy gave meaning to the basis of the creation of the universe. This was the beginning of all things, including whakapapa itself. Tiramōrehu, an eminent southern kaumātua explains that southern cosmic genealogy originates with Te Pō (Darkness), continuing on through various stages of Te Ao (Worlds) to the state of Te Kore (Nothing), to finish with Te Kore-matua (Parentless) which then went on to generate Te Mākū (Damp) (Tiramōrehu, 1987:23). It is through these fundamental initial stages of development that conditions evolved which would ultimately allow life to flourish.

Ki te whai ao, ki te ao mārama: genealogy of the gods

From the cosmic genealogy Kā Atua (Gods) evolved. The pre-eminent story of Papatūānuku and Rakinui is a perfect example of the ways by which southern Māori explained their circumstances through a spiritual phenomenon. While creation narrative of southern Māori differs slightly from that of the northern tribes, it draws upon similar holistic themes of genealogy. From Te Mākū's union with Mahoranuiātea, Raki was created. From Raki's first union with Pokoharuatēpō many offspring were produced.

I whakahau tonu tana aitanga mātāmua, ko te putanga mai ki tēnei ao ko Taputapuatea rāua ko Maheretūkiteraki (Tiramōrehu, 1987:2)

His first progeny sheltered still, Taputapuatea and Maheretūkiteraki emerged to this world. They are the first “Lords” from Raki (:24).

Raki then went on to marry Papatūānuku. This union produced their eldest son Rehua, and daughter Hākina, followed by numerous other atua such as Tāne, Paia, Tū, Roko, Uenuku, Ruatapu and finally Paikea.

Unlike their northern kin, southern Māori did not speak of Takaroa as a son of Papatūānuku, but rather her husband. It is said that Takaroa left his wife to carry away the placenta of their child, however,

...hoki rawa mai a Takaroa, kua noho noa ake a Papatuanuku i a Raki, kua puta noa ake a Rehua, a Tāne, me te katoa hoki o ngā tamariki a Raki rāua ko Papatuanuku. Heoti, ka tae mai a Takaroa, te tangata nāhana te wahine, ka tukutuku ma tātahi a Takaroa rāua ko Raki, nga tū a Raki i a Takaroa, e rua ngā papa o Raki, puta rawa te huata ki tua (Tiramōrehu, 1987:3).

...when Takaroa returned, Papatuanuku had been with Raki for some time, and Rehua, Tāne and all the other children of Raki and Papatuanuku had been born. So, Takaroa, whose wife she was, arrived, and he and Raki went down to the beach. Raki was wounded by Takaroa, whose spear pierced both of Raki’s buttocks (:25).

Due to the wounds inflicted by Takaroa, Raki is said to have fathered sickly children, such as Tānemimiwhare, Tānehūpeke, Tānetūtaka and others, who all reflected his poor state of health. After Raki began to recover he fathered more children, these ones being strong and upright (Tremewan, 2002:29), including Tānenuiaraki and Paia.

Te ira takata: genealogy of mortal man

Papatūānuku and Raki’s children had been born but Papatūānuku and Raki were so close together that neither the rays of Tamanuiterā (Sun) or beams from Marama (Moon) could

penetrate between them. The children were living in darkness, so Raki said to Tāne and his younger brothers that they should kill him in sacrifice to enable the growth of human life on earth. After a failed solo attempt by Tāne to raise his father, Paia recited karakia (incantations), followed by:

Tīkaweā a Raki, whakawaha a Papa, whakatikatika tuara nui o Paia, mamae Te Kawaihūarau (Tiramōrehu, 1987:4).

Bear up Raki on your back, carry Papa on your back, straighten great back of Paia, feel pain Te Kawaihūarau (:26).

As Raki rose up, departing from the firm embrace of his wife, he spoke of his love for her:

“E papa e, hei konei ra koe. Tēnei taku aroha ki akoe. Kei te waru ka tangi au ki a koe.” Koia hoki te haukū, he roimata no Raki e tangi ana ki Papa. Ka mea hoki a Raki ki tōna wahine, ki a Papatuanuku, “E kui, hei konei ra noho ai. Kei te makariri hoki ahau te hiahia iho ai ki a koe.” Koia hoki te kōpaka. Nga poroporoaki a Papatuanuku ki a Raki, ka mea ia ki a Raki, “E koro, haere ra, e Raki. Kei te raumati ahau te mihi atu ai ki a koe.” Koia te tuturoroa, ko tō Papatuanuku aroha ia ki a Raki (Tiramōrehu, 1987:4).

“Old woman, remain there! This is my love to you. In the eighth month I shall weep for you.” This is the dew, the tears of Raki weeping for Papa. Then Raki said to his wife, to Papatuanuku, “Old woman, live there. In the winter also I shall miss you.” This is the ice. And Papatuanuku farewelled Raki, and said to Raki, “Old man, go, Raki. In the summer I shall greet you.” This is the mist, the love of Papatuanuku to Raki (:26).

Once Paia had finished his karakia, and Raki and Papatūānuku became separated, it was, however, Tāne who firmly settled Raki in the heavens. It was also Tāne who wished to adorn his parents. Upon his return from the heavens to his mother Tāne felt an overwhelming sense of loneliness back upon the earth. There are two differing descriptions for Tāne’s creation of woman, the first being that Raki sent down the wairua (soul) of Tāne’s daughter from the heavens, Hinetitama, to keep Tāne company. However, upon arrival from the heavens, this wairua alone was not fit to dwell upon the earth, so Tāne formed the earth into a human figure in

which the wairua would take form as Hinetitama. The second description speaks of Tāne working the earth to form a womanly figure; however, upon creation, it was lifeless. His father Raki came to his son's aid and sent Tāne's daughter down to earth in the form of a wairua to give breath to the lifeless form (Tikao 1990:32). It is from the earths of his mother that Tāne created the first being. This spiritually-imbedded environmental family embodied explanations for southern Māori to describe the circumstances of their lives in Te Wāi Pounamu since, of course, ice and snow were very foreign phenomena to a people from the tropics. The dew, the ice and the mist, along with many other environmental phenomena, thus all had an explanation within the creation narrative.

This innate sense of connection meant that, because of common descent, everything within their universe was of one kin. Southern Māori perspectives toward the mountains, the sea, and the life supported within, was therefore one of homogeneity. Kawharu elaborates on this notion:

...whakapapa is the process by which space and time transcend layers of potential and expansion in ordered sequences (or states of being) so that layers of gods and demi-gods are followed by layers of human and animal strands. Human, environmental and animal life all find common origin by being connected to divine forms (Kawharu 1998:16).

The nature of this homogeneity within whakapapa thus predisposed Māori to become kaitiaki (stewards or guardians) of nature, rather than to view their role as one of ownership. It was this notion of whakapapa that connected southern Māori so intimately to the land. Because this society was non-literate, it was through highly-developed oral media that the details of whakapapa were passed down through the generations. Knowledge of whakapapa not only equipped the younger generations with an explanation of their reason for being, but also it ensured that genealogical rights and responsibilities to the land were upheld.

Kaitiakitaka

Kaitiakitaka is best described as stewardship or guardianship. Traditionally, a kaitiaki was a physical expression of an atua who cared for a certain resource or place. Williams describes kaitiaki as:

the physical manifestation of ancestors who continue to guide and protect. Accordingly, such atua are to be respected at all times as there is belief in metaphysical forces through which some ancestors can influence daily life (Williams 2004:77).

These manifestations of ancestors can still be seen today within the south. One example is Maukaatua on the Taieri Plains. What might be seen as simply a mountain by some is, to southern Māori, a physical manifestation of an atua or kaitiaki. This kaitiaki is acknowledged in *whaikōrero* (oration) and *karakia* as having a real and potent influence over human activity within that environment.

Other kaitiaki which existed in metaphorical form were *taniwha*. *Taniwha*, in recent times, have fallen victim to being defined according to the Western equivalent of ‘water monster (Ryan, 1989:55)’. This holds a somewhat fearsome connotation; however, more accurately, *taniwha* take form beyond that of being merely monsters:

Taniwha are being dismissed as being like elves and fairies, goblins or ghosts, which are thought of as images of fantasy. Mythical creatures on the other hand, like *taniwha*, live in places that convey moments of serious sacred disclosure or memories of life and death issues for human life (Graeme Ferguson in *New Zealand Herald*, 21 November 2002:A17).

Taniwha were physical manifestations of kaitiaki. They also exercised kaitiakitaka. Such a *taniwha*, *Makamaka* by name, still rests just south of Dunedin on Saddle Hill, and is believed by some to still exercise kaitiakitaka over the eastern portion of the Taieri Plains. The story of *Makamaka* has been retold by Bray:

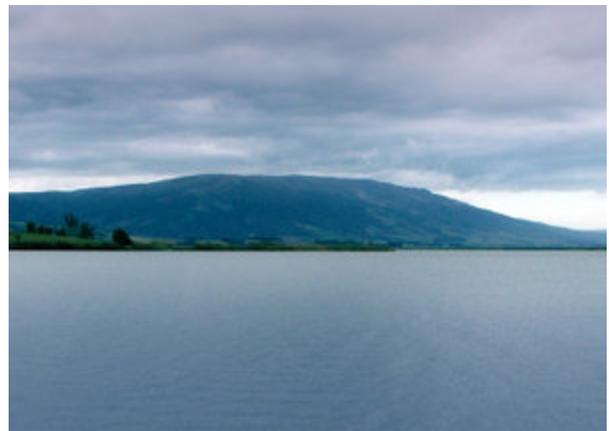


Fig. 2.1 Maukaatua, looking north over Lake Waihola. Wikipedia January 2006.

Taniwha or water monster, familiar spirit or guardian of Te Rakaiaounere [*Te Rakitaunke*] a famous chief and warrior, lost his chief somewhere about the Dunedin hills and proceeded to roam about the countryside trying to find him. In the course of his search he slithered down Whaka-Ehu (The Silverstream); then lay down the Taieri; hence the tortuous course below Allanton known to the Maori as Te Rua Taniwha. The Taniwha finally died, his last resting place being along the hills on the eastern side of Taieri Plain including Saddle Hill (Bray (et al), 1998:15).

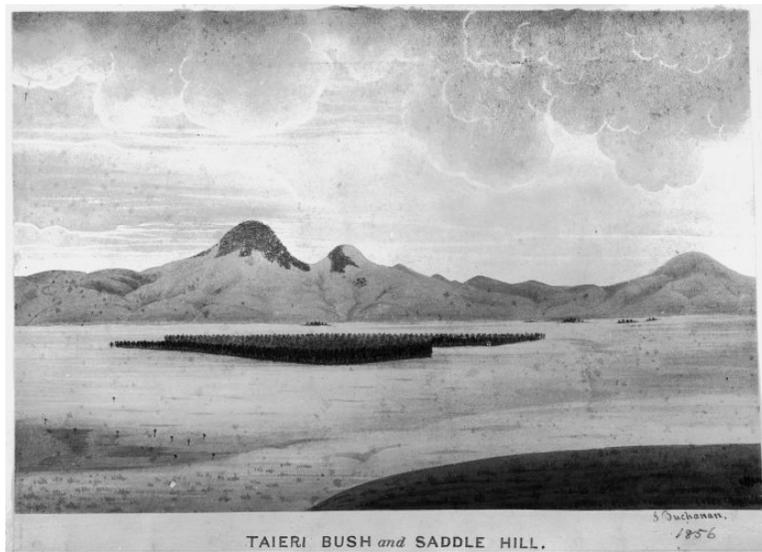


Fig. 2.2 Makamaka rests as Saddle Hill, Taieri, Otago. *Alexandra Turnbull Library E-207-q-032.*

Similarly, the term kaitiakitaka can also be applied to humans as guardians or stewards of the land. The dynamics of whakapapa meant that southern Māori viewed themselves as descendants of atua and, therefore, inevitably as inheritors of kaitiakitaka. Kaitiakitaka therefore stretched as far back as the creation narratives. Williams proposes an hierarchical structure to illustrate the pattern in which southern Māori attitudes toward the land were sculpted.

Tūmataueka	Tāwhirimātea
Takaroa	Tānemāhuta
Rokomātāne	Haumiatiketike

Rongo representing cultivated crops and Haumiatiketike the uncultivated foods (aruhe, harakeke, nīkau, tī, tussockland) are weakest and need the protection of forest (Tāne) which, along with the sea (Tangaroa), is subject to the vicissitudes of the elements (Tāwhirimātea) and humankind (Tūmatauenga) (Williams 2004:76).

The sibling dynamics can be further explored in the realms of the marae (gathering place) where Tūmataueka occupies the marae ātea (area in front of the whareniui, or meeting house) while Rokomātāne's realm is within the whareniui itself. All new manuhiri (visitors) to the marae must enter the realm of Tūmataueka before entering that of Rokomātāne. This ensures that if the manuhiri come with bad intent, then conflict will not extend beyond Tūmataueka's realm; a protection for the vulnerability of Rokomātāne.

It was whakapapa that determined the southern Māori position in society and, more importantly, their attitude toward the land. This did not entitle them to ownership because of their status within the social hierarchy, but rather, to be managers or caretakers of the land, as Walker affirms:

Although the methodology of the Maori established the primacy of man over nature and validated his right to use the natural resources of the Earth-mother, myths, spiritual beliefs and customary usages indicated that man was not above nature. He was perceived as an integral part of nature and expected to relate to it in a responsible and meaningful way (Walker in Shirley, 1982:69).

Consequently, southern Māori saw the land not as a commodity, but rather as a resource which, if cared for, would in turn care for them. By accepting that every whakapapa traced back to a common ancestry, southern Māori also accepted the 'responsibility to care for the physical, ecological and spiritual well-being of a place or resource (Ecological Service, 2003)', thus accepting the role of kaitiaki.

Mana

Mana is a term which has been adopted into popular use in the modern era, being commonly interpreted as 'authority; influence; power; prestige (Calman & Sinclair, 1999:31)'; however, the essence of mana is better captured by Barlow as the 'enduring, indestructible power

of the gods (Barlow, 1994:61)'. Mana, along with the majority of southern Māori cultural concepts from which it was inseparable, was inherited through whakapapa.

Mana atua

'This is the very sacred power of the gods known as the ahi kōmau which is given to those persons who conform to sacred ritual and principles (Barlow, 1994:61)'. Mana atua was commonly associated with tohuka, select people who were skilled in consulting, and influencing, the spirit world. Mana in this form was passed through these interactions, imposed on those who performed such rituals. It was tohuka who, along with raketira (chiefs), would usually mediate cultural norms between the atua and the iwi, hapū or whānau. The power of mana atua also extended to resources which had direct genealogical connections to atua, and therefore held an additional concentration of tapu; this will be explored later in this chapter. As a result these resources were treated with a special degree of respect by human behaviour.

Mana tupuna

This was the power or authority which was passed down through a chiefly lineage. As with mana atua, this mana also extended over both humans and the environment. Successors from a chiefly line would inherit the mana of a certain highly-ranked antecedent. Similarly a resource would also have a whakapapa, and the mana it would acquire would depend upon the line through which it descended.

It was not until resources became increasingly depleted that southern Māori began to re-establish the primacy of cultural models that would serve to encourage the sustenance of life. Mana was one of these concepts which, although originating in a different land and in different circumstances, could be implemented to meet the changing needs of life in Te Wāi Pounamu.

Tapu

In a similar way, tapu was a concept which also originated from kā atua. It embraced all the powers and influences of atua, and it was through such inheritance through whakapapa that tapu was imposed upon everything that existed within the universe. Tapu, although in the more contemporary era commonly being misunderstood as 'sacred', is better explained by Ka'ai and Higgins as 'a term describing the influence of atua within the universe and over all things

animate (people, insects, animals) and inanimate (mountains, rivers, waka) (Ka'ai & Higgins in Ka'ai (et al), 2004:18)'. Tapu was, therefore, inseparable from the influence of atua and, because everything within the universe was affected in some way by this influence, everything consequently held some form of tapu (intrinsic tapu). Similarly to mana, tapu was genetically acquired, the extent of tapu being reliant on social status. 'The tapu of man is intrinsic to man, linked to his existence, his being, with that he is, with the particular existence he has received, rather than with what he is (Shirres, 1979:55)'. Although intrinsic tapu was present in all things within the universe, intensities of tapu were dictated through certain extensions; thus tapu did not have any significant effects until karakia or contact with the tapu of man inflicted such extensions. These extensions of tapu were applied when something was increasingly under the influence of the atua. 'Man is tapu when he comes into being, while other things, special days, the gardens, man's hands etc. are not tapu in themselves, but receive their tapu from man (Shirres, 1979:55)'. All persons or objects that were inflicted with extensions of tapu were detached from ordinary functions of society. For instance, when a tohuka was in a ritual condition of tapu they could not touch anything which was the antithesis to the extensions of tapu, or noa, such as food or water (Taylor, 1974:93).

The concept of tapu also encompassed the idea of prohibition or restrictive norms. This cultural norm formed a foundation from which restrictive institutions could evolve:

It also relates to a system of protective prohibitions or restrictions which control relationships between entities (people, land, environment) and their respective expressions of tapu (Ka'ai & Higgins in Ka'ai (et al), 2004:18).

These laws of tapu were practical tools by which society could be maintained. They 'were as much practical in their application as they were customary appeasements (Kawharu, 1998:45)'. Tapu was used by southern Māori not only as a tool for regulation but also as a cultural explanation for social and practical phenomena.

You could take food in these canoes except the aruhe which was tapu because it was 'top food' of Maori and also because the fish would flee from the fernroot and the trip would be resultless (Beattie, 1994:377).

It was upheld by general consensus that bad consequences would transpire if abuse of tapu took place. Breach of tapu, or hara, would result in punishment from the spiritual world: ‘illness was believed to be punishment from the spirit-world for some breach of tapu, or other religious offence (Evison, 1993:11)’. Thus tapu was, in effect, a tool of socialisation, helping to keep society functioning while keeping any law-breakers under control.

Noa

Noa was the freeing from the restrictions of tapu; however, ‘it is not useful to think of noa as being the opposite of tapu or as the absence of tapu (Mead, 2003:32)’. Noa did, however, work in tight unison with tapu when extensions were in place. Rather than implying the absence of tapu, noa was the freeing of an entity from the restraints of tapu. Noa has been described as being analogous with tapu (Shirres, 1979:81), with noa affecting only the extensions of tapu rather than intrinsic tapu. Whakanoa was the process of releasing the extensions of tapu from an entity, which would in turn enable something to return to its natural state of tapu (intrinsic state), removing any enforced extensions. When southern rakatira and tohuka attended wharekura, or institutes of learning, they were under the influence of the extensions of tapu. The process of whakanoa within wharekura was called whakahorohoro, as Tikao reiterates:

The Wharekura was held for so many months each year, and the instruction was given in the night time. No one left the building during the four hours it lasted each night of the season. If any went out they would be killed by the mana (dread influence) of the place, and some had died thus. The pupils would chew toetoe and other plants to avert evils of tapu, not to strengthen the memory as is sometimes said. Every pupil was tapu (consecrated) during the course of instruction. They were made noa (or common) again by the ceremony of whaka-horohoro. The tohuka (priest) would say the required karakia and then perform the horohoro (touch the lips with food) (Tikao, 1990:70-1).

By exploring the concept of noa the dynamics and complex nature of tapu can be further understood, shedding light on how all these cultural concepts were intricately fused.

Mauri

Mauri is a term which encompassed the ‘life force or life principle and ethos of all objects both animate and inanimate within the universe (Ka’ai & Higgins in Ka’ai (et al), 2004:18)’. Mauri was the power of atua which enabled everything from people to rivers, animals to forests, to live within the bounds of their existence.

He manawa ka whātikia, he mauri ka mau te hono. Ko te hunga mate kua wehe koutou i te hono, kōkiri wairua ki te tihi o mauri atua aituā.

Ka tāreparepa mai te mauri ora ki te ao; ka tāreparepa atu te mauri mate ki te tua o te ārai.

The heart provides the breath of life, but the mauri has the power to bind or join. Those who die have been released from this bond and the spirit ascends the pinnacle of death.

The mauri enters and leaves at the veil which separates the human world from the spirit realm (Barlow, 1994:82-3).

In common with other cultural norms, mauri had an intimate relationship with atua and the spiritual world. Mauri connected the physical and spiritual realms, bestowing a harmony to the physical and spiritual domains of all things within the ambit of the universe. In a southern context, the mauri of Aoraki was believed to bind ‘together the physical and spiritual worlds, linking the people of today with their ancestors in the world of the gods (Graham, 2002:8)’; similarly by returning the afterbirth to Papatūānuku, southern Māori would preserve the mauri of the child: ‘the afterbirth (whenua) was carefully committed to the whenua (ground) and the mauri and mana of that child was thus preserved (Beattie, 1994:267)’. This act of preservation meant that the tightly-woven unity that the child had within its universe was protected within the warmth of Papatūānuku. This practice also demonstrates the profound sense of connection that southern Māori held with the environment, on a physical as well as a spiritual level.

Conclusion

Today’s society tends to think of conservation as being separate from the social realm. The quantitative and analytical character of society has led to a ‘professionalising’ of the environment, having different sciences to explain different environmental phenomena. In

contrast to theories stemming from the Age of Enlightenment, such as, users of resources cannot be the managers at the same time, southern Māori developed a holistic society that allowed them to both use and to manage their resources efficiently. The holistic nature of southern Māori society maintained that concepts such as whakapapa, mana, tapu, noa and mauri could be applied to all elements of life, whether it be toward land and resource management, or toward the hierarchical systems of society¹⁴.

The interconnectedness of southern Māori society embodied every aspect within the sphere of the universe. This holistic stance toward the environment has also helped shape conventional methods of Western-based environmental science. Researchers are now discovering, as stated by Berry (1988), ‘a universe that is dynamically alive: a whole system fluid and interconnected...Science in discovering a new version of the ‘enchanted’ world that was part of the natural mind for most of human history (Berry in Berkes 1999:8)’ Southern Māori cultural concepts, although competing with the Western notion of ‘truth’¹⁵, were all efficient and functional management tools whether environmentally, socially or spiritually, as Tau elaborates:

All of these characters and events have a function purpose within the Ngāi Tahu world, whether that purpose be to explain natural phenomena, a code of conduct suitable within the tribe, or to act as a blueprint for particular rituals unique to the community. There is not, to the writer’s knowledge, any Ngāi Tahu myth that gives moral instruction that does not have a functional purpose (Tau, 2003:18).

All cultural models played a role in regulating southern Māori society, functioning not only as practical social tools but also as very efficient mechanisms for environmental management. Shared common ancestry gave southern Māori a basis upon which to set their moral understandings of the environment in concordance with human life. Whakapapa was the cultural binding of southern Māori society; it was essentially whakapapa which kept society intact, and gave reason to human existence here on earth.

¹⁴ See Ka’ai & Higgins in Ka’ai (et al), 2004:13-25; Marsden in King, 1992:118-138

¹⁵ A theory stemming from the Age of Enlightenment in 17th and 18th century Western Europe. It promoted a rejection of emotion, superstition and belief, resulting in an objectification and detachment of human from nature. Also a theory that promoted the growth of Western science. Refer to Descartes.

It is by understanding these cultural models that the foundation for their application can also be better understood. These fundamentals set the connection to place and were the means of sustenance for southern Māori existence; these concepts were the soil which nourished and encouraged life.

Chapter Three: The people will live on

Toitū te marae o Tāne

Toitū te marae o Takaroa

Toitū te iwi

The land, and the resources contained within it, determined the survival of the collective, whether iwi, hapū or whānau. ‘It was a simple reality that those with resources flourished and those without perished, therefore the management and maintenance of resources was the foremost concern (Goodall (et al), 1990:3-3)’. It was the concern of the collective that land was managed effectively because, without it, human survival would no longer be viable. The welfare of southern Māori was inextricably linked with that of their natural environment, the health of the people depending upon the health of the land. The previous chapter explored the application of cultural concepts to establish a meaning for place, which in turn allowed an environmental ethos to evolve. This chapter will look at the social mechanisms that evolved within these social circumstances. It will examine how southern Māori developed complex practices in relation to cognitive and spiritual constructs that sustained their relationship with their physical environment, in particular, with the land.

As time passed the population of Te Wāi Pounamu expanded to settle the far reaches of this diverse land mass. Native resources in their ancestral homelands, whether in Te Ika a Māui or further north in tropical Polynesia, could not compare with the variety of choice that Te Wāi Pounamu had to offer. Naive to human predation, this vast new land enticed these explorers to uncover the ecological mysteries that lay at their doorstep. The cultural imperative to explore beyond known boundaries led to the discovery of a diverse range of new resources: plants, animals and rocks. It was discoveries such as these that changed the nature and function of society. Although much of the Polynesian technology, specific to tropical environments, was able to be transferred into the exploitation of the Aotearoa environment, regionally-based technologies and practices had to extend these to suit the range of new resources and conditions encountered in Te Wāi Pounamu. As was demonstrated by the demise of the moa, exploitation in the early stages of settlement occurred as these Polynesian voyagers familiarised themselves with the new environmental surroundings and the life contained within it. This lack of appropriate management, however, along with time, brought an incremental depletion in resources. This led

to the value of the land, and the resources within it, becoming increasingly precious, and these changes, in turn, altered settlement patterns and consumption models. Onewhenua (Shag River mouth area), situated in eastern Otago, is an excellent example of how the depletion of resources such as moa led to a change in the staple diet, and induced changes to settlement patterns:

Our investigations have shown that the Shag Mouth village was founded on, and sustained by, an abundance of local big game. As far as we can tell, neither long distance movement of food supplies nor preservation of seasonally abundant resources played a significant role in subsistence. Once local supplies of big game diminished, the site was evidently abandoned (Anderson (et al), 1996:298).

It must be noted that there has been a tendency to overlook the unique nature of southern Māori society. Some assume it was similar to that of northern tribes, and that there was a homogenous Aotearoa-wide evolutionary path for Māori. For example, the misconception that all Māori had highly-developed martial prowess (due to societal competition for resources) has often been repeated by lay observers when describing Māori society in general:

From his early years every Māori was trained in the use of the spear, the *taiaha*, the *patu*, and later the gun of the white man, the wonderful *pu*, that darted its bullets with a voice of thunder and a tongue of fire (Cowan, 1901:223).

In contrast to their northern counterparts, competition and martial prowess were not such imperatives for southern Māori, because at no point did over population push the environmental boundaries of sustainability of life itself. The greater seasonality of Te Wāi Pounamu meant that southern Māori were more dispersed, mobile and less numerous than iwi further north, where cultivation of land for horticulture – especially kumara – enabled a denser, and less mobile, population. The very nature of this southern hunter-gatherer society destined land tenure to be considered as applying to rights to particular food gathering regions and their resources – mahika kai – rather than to an actual block of land. That is, the resources in Te Wāi Pounamu defined the area, and its boundaries.

Manawhenua

Manawhenua was the ‘political and occupational authority over a particular area, usually defined by natural boundaries (Goodall (et al), 1990:3-10)’. Manawhenua was the concept of mana deriving from the land. It played an integral role in the social dynamic of land claims or take, and also, in association with kaitiakitaka, gave southern Māori responsibility for influence over the land, but not ownership. Manawhenua was the authority that arose as a result of legitimate land tenure processes within mahika kai (food gathering sites) or wakawaka (divisions of land). These will be explored in more depth in the following chapter.

Tūrakawaewae, tākata whenua

Tūrakawaewae literally translates as a place where one can stand. It is a term which was used to indicate that a certain place was linked to personal identity, a place of belonging. It is further defined as ‘a term used to locate the very source and origins of a person’s whakapapa, sometimes referred to as one’s ‘roots’ or place of belonging (Ka’ai & Higgins in Ka’ai (et al) 2004:18)’. Tūrakawaewae, therefore, was the place where one belonged, through a customary right to stand.

Tākata whenua was a very similar concept: tākata meaning people, while whenua means land. This was clearly a phrase to portray ‘people of the land’. Tākata whenua were the people for whom a certain area was tūrakawaewae. Tākata whenua and tūrakawaewae both indicated a deep-seated sense of belonging to the land, and stress the cultural impossibility of separating humanity from the environment. Southern Māori were tākata whenua throughout the rohe (district), but only those whānau with take (land tenure rights) held manawhenua at that particular place. Tākata whenua therefore extended throughout the iwi district, but manawhenua only encompassed areas that whānau or hapū would have had legitimate land tenure rights such as mahika kai or wakawaka.

Take

Take is associated with such definitions as ‘root, stump’, ‘long-established, ancient, original’, ‘well founded, firm, lasting’, ‘certain, on good authority’, and ‘own’ (Williams, 1992:370). It is thus only fitting that southern Māori employed a term such as take to describe their customary land tenure. Land tenure practices ensured that certain iwi, hapū or whānau had

rights to hold influence over specific areas of the physical environment and, through this allocation, these rights provided incentives for these groups to care for the land with which they had association. These customary rights played a central role within southern Māori society in the upholding of traditions, and the strengthening of the relationships of people with their land. These customs ensured that land was taken care of, used sustainably, and passed down to succeeding generations in a healthy state. The shared understanding of land tenure ‘was important, as customary title to every block of Māori land involved claims by right of descent and occupation (Sinclair in King, 1992:67)’. Customary land tenure encompassed both primary and secondary rights, as identified by Anderson (Anderson 1996:635). Primary rights followed the guidelines of ‘i a rātou te turuturu o te kāika’ – by virtue of a fixed or permanent association with the place in question, while secondary rights were concerned with ‘ngā piringa’ – those who stick to others by claiming a connection.

Taunaha / Whenua kite hou / Tapatapa

This was the right to land claimed through discovery or naming. This right was, of course, the primary take in the earlier stages of migration to Te Wāi Pounamu. It rested on the premise that, if there was no prior occupation of the land, then it was therefore open to claim. This notion of primary discovery meant that the initial discoverers, whoever they may have been, could exercise their manawhenua as long as continuous occupation ensued. The land acquired through this right was subsequently known as taunaha whenua. It would have been in this phase of settlement that the first suite of ikoa wāhi (place names) were established and the kōrero (stories) pertaining to the land developed.

Umutākata / Take raupatu

Umutākata literally translates as umu – oven, tākata – people, leaving little to the imagination. Thus this land right was obtained through warfare, which legitimised permanent title only if it was followed by three generations of undisturbed occupation (Evison, 1997:23). This allowed competition for land and resources to flourish, and for a periodic turn-over of occupation to take place. It was because of the existence of such rights that other iwi, such as the later Kāi Tahu, were able to migrate from elsewhere and ultimately dominate land occupation in Te Wāi Pounamu. The requirement of subsequent ahi kā (sustained occupation) through rika

kaha (physical enforcement (Russell, 2000:224)) was also required as ‘conquest without successful occupation did not give the conqueror a right to those lands (Asher & Naulls 1987:6)’. Take through raupatu (conquest) could also guarantee access to an unbroken line of manawhenua if followed by subsequent inter-marriage. Without doubt there would have been an insuperable sense of alienation in respect of new lands on the part of invaders, relative to the durable line of connection between this whenua or takiwā and the particular tākata whenua. However, if inter-marriage were to follow, this alienation would be temporary, lasting only for the generation of the invader, with the manawhenua eventually being reinstated for his children through their maternal whakapapa. Gender roles were integrally connected with the dynamics of take raupatu. The invaders were predominantly male so, following conquest, they took wives from amongst the surviving females with manawhenua. The loss of his land, along with his wife, has been captured as man’s destroying passions in this whakatauki:

Ma te wahine ka tipu ai te hanga nei, te tangata;
Ma te whenua ka whai oranga ai.
Whai hoki, ki te tangohia to wahine e te tangata ke,
Ka ngau te pouri ki roto i a koe.
Na, ki te tangohia te whenua e te tangata ke,
Ka tapu to pouri ano.
Ko nga putake enei o te whawhai.
Koia i kiia ai,
He wahine, he oneone, i ngaro ai te tangata.

Woman alone gives birth to mankind,
Land alone gives man his substance.
No man will lightly accept the loss of
His beloved wife, nor that of his sacred land.
It is said truly that man’s destroying passions
Are the love of his wife and love of his land
(Sinclair in King, 1992:64).

This process of take raupatu and associated inter-marriage can be seen throughout the history of land occupation within Te Wāi Pounamu. It occurred in Kāti Mamoe’s relationship

with Waitaha, a pattern to be subsequently repeated with Kāi Tahu's invasion, and even in a way, with the later settlement of tākata bola (European settlers). It could be argued that, to a certain extent, raupatu was subsumed into this continuity of manawhenua, with the line never actually being extinguished.

Take tuku

Take tuku was a right to land through gift or exchange; such land, therefore, might be held by people who would not normally have rights to such land. Utu or reciprocity was central to this take. Although chiefs mediated these transactions, it was very rarely done on the basis of an individual acting alone; the collective voice and consensus of the tribe usually had the determining voice on such issues:

All tribal members lived on, worked and defended the land from which they derived their economic, social and political sustenance. In return they all had some say on the marae in how that land was used or disposed of (Asher & Naulls 1987:6).

Trade or exchange was a fundamental practice in southern Māori society. It created and maintained relationships. Land, and its resources, was always a commodity that could be exchanged by the group, and through this take strong alliances could be cemented. Because of the intimacy that southern Māori shared with the land, the gifting of land rights was one of the most significant transactions that could be entered into. Such transactions were, therefore, undertaken only after careful consideration.

Take tūpuna / Take ōhākī

Take tūpuna is directly translated as death-bed speech or inheritance (Williams, 2004:53). This concept was derived from inheritance, where land was passed down through whakapapa. 'Succession to customary land was based on being able to prove unbroken descent from an ancestor whose right was recognised (Asher & Naulls 1987:6)', and this was done through the recital of lineage tracing back to that ancestor.

Ahi kā

As with most concepts in the holistic nature of southern Māori society, there was an inter-relationship amongst the various land tenure principles. Therefore, taunaha could not be given effect without the principles of ahi kā being maintained. Ahi kā translates as burning fires, a metaphor for sustained occupation. Fire, like sustained occupation, needed to be sufficiently nourished and maintained in order for it to survive. Since ahi kā had the power to over-ride any other land right, it was therefore essential for a continual occupation of the land to be maintained by the group to sustain their manawhenua. Ahi kā enabled the occupants of a specific area of land to assert their manawhenua, and the longer the land remained in undisturbed possession, the stronger the claim (Sinclair on King, 1992:68). The recital of whakapapa was the strongest way to demonstrate this ancestral occupational link between generations, ‘between those dead, those living and those yet to come – in a society without written records (Asher & Naulls 1987:3)’. This durable occupation was dubbed ahi kā roa, which Mead describes as the,

...occupation of an area of land by a group generally over a long time. This group is able, through the use of whakapapa, to trace back to primary ancestors who lived on the land (Mead, 1997:228).

As a consequence of ahi kā, the group held the right to have influence over the land; however, as Asher and Naulls state, ahi kā was more complex than mere occupation:

It confirmed and was a co-requirement of all other rights to land. But while occupation was often cited as a necessary means of maintaining ownership over land, this could also be done by cultivating the land or by collecting food and other resources from it (Asher & Naulls 1987:6).

A people’s affiliation to land relied upon their ability to keep the fires of occupation burning, while living sustainably from it. If these fires ceased for three generations or more, for whatever reason, then that area would turn to ahi mataotao, or cold fire. Ahi mataotao meant that, in time, the occupation could be taken up by others, as Kawharu emphasises:

‘I ka tonu taku ahi, i runga i toku whenua’ – my fire has always been kept alight upon my (people’s) land. If the land was abandoned, the fire allowed to die out, in time the validity of a claim (take) faded (Kawharu 1977:41).

It was, however, possible to rekindle ahi kā. Ahi tere meant that the fires became unstable or wandering; this could be caused by circumstances such as a woman leaving her fireside to marry outside the tribe. By the return either of her or her children, the claim through ahi kā could be rekindled (Sinclair in King, 1992:68).

Within the hunter-gatherer society of southern Te Wāi Pounamu ahi kā could refer to the rights in a particular resource or mahika kai rather than to a specific block of land. This aspect of ahi kā is extant in the contemporary customs of tītī harvesting on the offshore islands (south of Murihiku). As with other customary mahika kai, the gathering of tītī is surrounded by a highly developed set of tikaka (customs). While the manawhenua of each island was held by particular whānau or hapū, the requirement to uphold ahi kā pertained only to certain phases of the year (Oral informant two). This was owing to the seasonality of tītī harvesting, being restricted to the autumn months – in fact access to the islands was prohibited during part of the year, to protect the breeding birds from disturbance. Ahi kā in Te Wāi Pounamu, therefore, did not always pertain to constant occupation, but rather to the maintenance of a seasonal cycle of occupation and harvest on an annual basis. Due to the breeding cycles of tītī, regulations on occupation of tītī islands were developed by southern Māori, and such patterns still remain valid today:

The rules are that you can never go to the islands before the 15th of March, so they're well and truly quite mature by that time. But the harvesting doesn't start until April (Oral informant two).

For southern Māori, ahi kā is practised through annual occupation in accordance with the seasonality of Te Wāi Pounamu. Ahi kā is also vital for the re-establishment of the right to harvest tītī and in turn the responsibility to care for the resources on the islands:

Mutton birders probably know more about ahi kā than any, probably, that lives on the mainland alone, because that's about having the right to take those birds, but it's also addressing the fact that along with that right goes the responsibility of caring for and looking after that resource, making sure that is healthy (Oral informant two).

Taoka

Southern Māori cultural belief upheld the principle that all natural resources were taoka (precious). These taoka may be either tangible or intangible treasures, affiliated with certain kin groups. This concept of taoka is further discussed below:

Taonga embraces the concept of a resource – an anthropocentric term which, by definition, contains an aspect of utility. It incorporates the already familiar notion of the wise use of resources and the maintenance of the health of a resource. Sustainability and the need to preserve options for future generations is also recognised in the term. Taonga demands a respect for the past – aspects of the environment which merit preservation for their historical value (Goodall, 1992:21).

These cultural concepts demonstrate the complexities of land rights that existed in southern Māori society. All of these concepts illustrate a harmony or kinship with the land. The cultural legitimacy of this attitude derived from the primal template of the creation narrative, through whakapapa. The use of the word taoka (‘property, or anything highly prized’ (Williams, 1992:381)) in relation to the land demonstrates the immense respect and esteem that southern Māori held for the land and its resources. At no point did southern Māori, or any northern iwi, hapū or whānau, exhibit an ownership or possession of the land.

Wāhi tapu

Just as the cultural principle of mana was applied to the land through manawhenua, so was the concept of tapu applied to certain classifications of land. In relation to land, the principle of tapu, which was discussed previously, was manifested as wāhi tapu. Tapu varied in its intensity in differing locations – some landmarks were seen as being more tapu, and therefore demanding a higher standard of respect, than others. A wāhi tapu was an area that retained the influence of tapu. Tapu therefore acted as a mechanism placing restriction upon human activities, such as harvesting of food, within that area. Typical grounds for the establishment of wāhi tapu were the associations of particular areas with atua. The holistic nature of Southern Māori society inevitably meant all areas held some degree of tapu; however, the more influence a particular atua had, the more intense the tapu. A prominent example of wāhi tapu in Te Wāi Pounamu was

Aoraki (Mount Cook). As early immigrants explored the wide extent of Te Wāi Pounamu, in time they came to discover a peak which extended beyond anything they had ever seen. Throughout their travels they had been discovering and internalising new social and physical phenomena; however, the vast physical dimensions and soaring presence of this mountain demanded a name of extraordinary significance. Southern Māori therefore personified this tallest mountain



Fig.3.1 Aoraki, standing at 3754 m, is the highest mountain in Australasia. Wikipedia March 2005

in Australasia as one of the sons of Rakinui and Pokohāmatepō. The antiquity of this site implied by the direct link to the tapu of these primal atua and Papatūānuku gave immense intensity to the tapu of this mountain, and therefore rendered it worthy of the utmost respect. Such wāhi tapu were taoka to southern Māori, and still are to their descendants today through their customary rights to the land. ‘Wahi tapu and other sites of historical significance to Māori are taonga over which our rangatiratanga is protected under customary title (Te Puni Kōkiri, 1996:4)’.

Ikoa wāhi

As the peoples of the successive waves of migration explored and settled Te Wāi Pounamu, places were given names – ikoa wāhi. Southern Māori chose their names for these new places for a variety of reasons. Some names were given to serve as a memorial to former homelands, to Hawaiki. Others were for navigational reasons. Some names were to commemorate tūpuna and their deeds, and others to mark significant events. Some were merely a physical or spiritual description. By giving a place a particular name, the stories behind that name would be remembered; therefore, whenever that name was recited the entire history would unravel, and strike a chord in the mind of the collective. Not only did this help southern Māori to relate to and respect certain areas, but it also meant ‘that the history was always present, always available (New Zealand Geography Board, 1990:xiii)’. As was explained in the preceding chapter, crew members of Arai Te Uru were personified as mountains scattered around east Otago. This personification of the land also carried with it the tapu and the mana of these tūpuna. Thus these places, depending upon the degree of tapu associated with the eponymous ancestor,

would be endowed with corresponding degrees of respect. Personification such as this also denoted a genealogical connection through whakapapa. Naming the land not only served to establish a genealogical link to it, but also created a medium for retaining and passing on knowledge about the environs in which the tākata whenua dwelt. It was through such knowledge of their surroundings that Te Warekorari was able to provide Mantell with such an accurate depiction of the Waitaki River:

In 1848, Mantell has his guide Te Warekorari sketch for him the Waitaki River and all its tributaries and its source lakes. This remarkable memory map locates the streams coming in from both sides of the Waitaki, caves, ancient settlements and camping places (Brailsford, 1996:36).

It was this intricate knowledge of the land which allowed southern Māori to successfully and thoroughly repeatedly traverse Te Wāi Pounamu from one end to the other, and to communicate the travelling directions for important locations to others.

This intricate naming of the land established a critical sense of belonging for whānau, hapū and iwi as they settled within their new surroundings. The land became a metaphor for their stories, and a constant reminder of their tūpuna and their legacy. When new lands were acquired by an invading people through conquest, or rika kaha, it was problematic for them to extinguish the manawhenua of the tākata whenua, because the landscape was redolent with the ikoa wāhi pertaining to the ancestors of the resident iwi. This brought with it an implicit sense of alienation and lack of belonging for the invaders. There were two cultural remedies for this – either to depart after the battle and return to more familiar surroundings, or to stay and marry into the remnants of the tākata whenua, thus ensuring that future descendants would inherit manawhenua through the mother’s line. This latter strategy was played out on numerous occasions during the ebb and flow of peoples in southern Te Wāi Pounamu. The place we now refer to as Kaikoura is a prime example of how succeeding groups of people could bring their



Fig. 3.2 South Bay, Kaikoura. Alexandra Turnbull Library 1/2-021862-G.

own particular ikoa wāhi to an area, to symbolise its importance and relevance to them. Kaikoura, which was conferred by Tamateapokaiwhenua, was just one of many ikoa for that particular region. The oldest traditions go back to the time when Te Ika a Māui was fished up from Kaikoura, thus acquiring the name Te-matau-a-Māui or ‘fishhook of Māui’. The next influx of people coming with Rakihautā in Uruao identified the limestone cliffs as Te whata-kai-o-Rangihoua. After a time, Rongo-i-tua, who came in Arai Te Uru, conferred this same area with the name Tupuae-nuku (Elvy, 1996:67-9). This process was replicated on the arrival of European explorers, with Aotearoa becoming New Zealand; named for the area of Zeeland back in Abel Tasman’s homeland of Holland (Oral informant three).

Te Reo

The intimacy that southern Māori shared with the environment can also be demonstrated through the dynamics of their language – te reo. Language is one of the unique defining features of each collective cultural grouping throughout the world. Each language is a symbol which assists the collective to understand itself in relation to others. Like other peoples, southern Māori identified into groupings depending upon the common symbolic interaction of language. George Herbert Mead’s theory of ‘symbolic interactionism’ provides an insight into the importance of environmental symbolism within southern Māori language. ‘Symbolic interactionism’ is defined as a,

...universal quality for the social groups in which they are meaningful; symbols are a common currency through which individuals forge a sense of self and interact with other people (Elliot, 2001:25).

It was through such symbolic interaction of language that southern Māori developed a sense of symbolic collectiveness, binding them to the environment and thus to their identity. Te reo therefore not only served as a signifier of an entity, but also as a way of seeing the world, a way of interpreting the universe.

Southern Māori, as did Māori throughout Aotearoa, had a huge ‘dependence on memory and the careful transmission of history from generation to generation (New Zealand Geography Board, 1990:xiii)’. Because Māori society was non-literate, oral language played a fundamental

role in the passing down of knowledge from one generation to the next. The extensive knowledge that southern Māori developed about their surroundings was reflected in a language that was ‘certainly perfectly suited to the world of its speakers (Moorfield & Johnston in Ka’ai (et al), 2004:39)’.

Everyday language further exemplifies the inter-connectedness of the southern Māori world view. Many words in the Māori language possess dual meanings, stressing in a subtle way the depth of the relationships between people, identity, whakapapa and the environment. O’Regan (2001:52) also encapsulates this point:

<u>Term</u>	<u>1st use</u>	<u>2nd use</u>
Iwi	Bones	Tribe
Hapū	Pregnant	Sub-tribe
Whānau	Birth	Family
Whenua	Afterbirth	Land

It is through the use of such words that the importance of tūrakawaewae and the status of tākata whenua to southern Māori are reiterated.

Pepeha

A pepeha was an environmental statement which emphasised collective genealogy. It was an oral representation of significant geographic features such as mountains, rivers and coasts, together with a dominant ancestor, from which the iwi or hapū derived their shared identity. Examples of such shared tūpuna are Huirapa from whom Kāti Huirapa descends, and Ruahikihiki who is the common ancestor of Kāi Te Ruahikihiki, both now prominent hapū in Otago. An example of pepeha is as follows:

Ko Aoraki te mauka	Aoraki is the mountain
Ko Waitaki te awa	Waitaki is the river
Ko Tahupōtiki te tupuna	Tahupōtiki is the ancestor
Ko Kāi Tahu te iwi	Kāi Tahu is the tribe

By integrating a personal figure into the physical environment southern Māori were implicitly asserting their capacity to make moral judgments about its management, because it was in their collective personal interest; it was part of them. Putting a genealogical value on the environment meant that it was imperative for it to be protected if the existence both of human, and ecological life, was to be sustained. It was through pepeha that ‘symbols were incorporated into tribal aphorisms which affirmed man’s connection to the land as tangata whenua (Walker in Shirley, 1982:70)’. This was yet another compelling reason for southern Māori to respect and care for their environmental surroundings.

Conclusion

The less biddable environment of Te Wāi Pounamu meant indeed that land shaped the people far more than the people shaped the land. A hunter-gatherer economy was ideally suited to the seasonal cycles of Te Wāi Pounamu and was clearly the only means of subsistence. The initial impact of arrival in Te Wāi Pounamu, with all its diversity, however, took some time to acclimatise to, at the cost of several species, such as the moa. It was by reason of such experiences, however, that southern Māori began to take a more proactive role in conserving their resources: ‘we managed the land and water resources having learned from the disasters of our tūpuna and the loss of the moa (Russell, 2000:230)’.

It is not in the nature of conservation, however, for it to just happen without reason. There has to be sufficient motivation for a practice of sustainability to evolve in an effective manner. The motivation for southern Māori was their innate sense of attachment to the land and its resources, which in time evolved into a seamless equilibrium between their society and its environment. This attachment was not only physical, but it also incorporated spiritual and emotional ties. It was through the establishment of this cultural imperative that a compelling incentive was bestowed within the collective to sustainably manage the resources of Te Wāi Pounamu. By amalgamating cultural concepts into the environment, southern Māori could not separate a cultural custom from an environmental one. The essential unity of all realms, whether spiritual, emotional or physical, meant that the health of the people was mirrored in the health of the environment. It was such beliefs that produced motivation for southern Māori to care for every aspect of society, including the environment, the sustaining physical and symbolic matrix in which they dwelt.

Their cultural circumstances, as explained in the previous chapter, allowed southern Māori to develop complex land tenure patterns, genealogical connections through atua, and stories and names that were tightly woven into the landscape. All these aspects acted to establish a deep sense of self, in accord with the environment. This, in turn, gave southern Māori strong motivation to take care of and cherish their environmental surroundings.

Chapter Four: Bonds with the land

*Ko ō tātou whakaaro
Ki te whenua, kā roto, kā awa, te moana
Hei here i a tātou*

*O kā tuputuputaka o Te Aka o Tū Whenua
Hei whakapuāwai i kā mahika kai a te iwi...*¹⁶

When Polynesians first set foot on Te Wāi Pounamu their knowledge-base was rooted in the ecology of tropical Polynesia; their comprehension of the biota of Te Wāi Pounamu was minimal. Along with this tropical knowledge-base they also brought their philosophies and lifestyles that derived from island Polynesia, some being readily transferable to their new environment, while others were not. The exigencies of Te Wāi Pounamu's environment took their toll on these exotic practices. In turn it appears that effective and sustainable resource management, and the ethos that sponsored it, were largely superseded by an initial pattern of exploitation. For Polynesians, Te Wāi Pounamu was the largest land mass to be settled since their departure from South East Asia; their former hunter-gatherer techniques had lain dormant in ancestral memory for many generations. It was not until their arrival in Te Wāi Pounamu that these practices once again became relevant. It is in this respect that acclimatisation further differentiated southern Māori from the more sedentary horticultural economy of their northern kin, forcing them to expand their knowledge-base to match this new environment, in starker contrast to that of island Polynesia. Survival thus 'required organisation and discipline, with proper regard for nature's forces and the gods who ruled them (Evison, 1997:18)'. Based on the elaborate notions set by cultural models, southern Māori society's evolving environmental discipline began to flourish, developing practices such as mahika kai, wakawaka and rauiri which were suited specifically to the environment in which they now dwelt. These practices will be elaborated upon later in this chapter.

In a modern parallel, a representative of a Tongan community conservation group in Auckland recently described in a presentation how he and his whānau, upon first arriving in Aotearoa and experiencing the rupture of the integrity of the network of social and environmental controls which had pertained to their home village and lagoon in Tonga, began to plunder the coastal food resources, with scarcely a thought for their sustainability. He said that

¹⁶ Extract (altered) from Goodall (et al), 1990:iii-iv

this pattern of behaviour was typical for many recent migrants to Aotearoa from Polynesia (Oral informant three). This modern example exemplifies the human reaction toward plentiful environments, not only in Te Wāi Pounamu but all around the world. This mirrors clearly the reaction of manifested by the first tropical Polynesians upon their arrival to Aotearoa, with its environment rich in unfamiliar resources.

Mahika kai

Southern Māori used the general term mahika kai to refer to ‘places at which food (and other commodities) were extracted or produced (Anderson, 1998:111)’. Unlike many of the southern Māori concepts, which paralleled similar cultural adaptations by northern iwi, mahika kai was unique to southern Māori. The concept of mahika kai evolved out of a combination of the vast land mass of Te Wāi Pounamu, its marked seasonality, and the relative inability to cultivate staple crops. The radically different climate they experienced in Te Wāi Pounamu meant that, upon their arrival, the practices of southern Māori had to be adapted to the environment in which they dwelt. Their former horticultural economy was abandoned and that of hunting-gathering adopted, thus reverting to former techniques which had not been used by their tūpuna for thousands of years. The environment in which mahika kai were developed contained immense and diverse food sources, widely dispersed throughout. Some resources only occurred in a handful of specific regions or locations, while others were more general in their distribution:

Each district had its specialties – such as the titi of the islands off Rakiura; the kanakana of Murihiku; the blue and pink tuangi of Otakou; the ti-kauru of Arowhenua; the kereru, paua and kina of Horomaka; the patiki, eels and putangitangi of Waihora and Kaparatehau; the weka, kumara and taiwhatiwhati of Kaiapoi; the kakapo, karaka and koura of Kaikoura; and the many varieties of fish in the sea (Evison, 1997:19).

Thus mahika kai were spread throughout Te Wāi Pounamu, 1400 sites alone being recorded between the Waimakariri and Matāu Rivers (Evison, 1997:18), demonstrating the vast number of such places, and their extent throughout the land.

Mahika kai, being the major cultural pattern of land use, also embraced a unique notion of land tenure. Because mahika kai were widely dispersed, so too were associated land rights:

One reason for the constant visiting and travelling in Maori society, particularly in Te Wāi Pounamu where land rights were often widely dispersed, was to keep such rights alive (Evison, 1993:8).

Mahika kai not only involved a rich variety of resources, but also predicated intricate systems of environmental philosophies and customs, which included practices of efficient resource use. Spiritual aspects were also present within the mahika kai system, where tūahu, or altars, were set aside in places close to food sources where tohuka would undertake ceremonies to promote auspicious outcomes, such as a productive growing season, favorable weather and a promising harvest (Russell, 2000:237). Anderson has proposed that mahika kai were managed in accordance with four definable fundamentals: regulated access, seasonal mobility, long-term preservation and resource transport and exchange (Anderson, 1998:111). Analysis of these four components gives a clear, detailed insight into the dynamics of mahika kai practices.

Regulated access

Regulated access has been recognised as one of the most complex, and thus one of the least understood, of these features. The regulation of access allowed stocks of resources to be replenished so that human life could be sustained. Regulated access was founded upon the notion of rāhui or prohibition.

Rāhui, that is, restriction or control, was one of the more pan-tribal management systems with relevance for southern Māori. By drawing upon notions of tapu and mana, rāhui prohibited human activities within a certain area, or in relation to a certain resource, in an attempt to encourage stock replenishment. Rāhui was an enforced tapu which was used to regulate human behaviour for a specific purpose. The establishment of tūahu meant that extensions of tapu would extend over the mahika kai site until a tohuka lifted the bounds of tapu, allowing work to commence. Once the harvest was completed, however, the rāhui would then be restored to prevent depletion of resources and encourage the regeneration of stock. When ‘a rahui (prohibition) was placed on a forest or fishing ground it was backed by the power of tapu (Walker in Shirley, 1982:71)’.

The use of tapu meant that rāhui acted under the laws of tapu. This can be further exemplified by the use of ‘tapu manu’ (Oral informant two) by southern Māori birders gathering tītī. Again, the dual meanings within te reo are seen in this instance, where the meaning of manu for southern birders extends beyond ‘bird’ itself, and also refers to the area where tītī are harvested. For southern Māori birders tapu was, and still is, used functionally to regulate human activity in order to sustain tītī populations. Tapu manu are the bird burrows that are not stabilised by the strength of tree roots, thus being too fragile to sustain human weight and consequently at risk of collapse, thereby destroying the habitat for nesting birds. In this way southern Māori birders utilise the functions of tapu as a rāhui in order to retain populations for annual harvesting (Oral informant two).

It was restrictions such as rāhui which allowed breeding animals, or severely depleted stocks, to replenish themselves without the added pressure of human predation. Although Polynesian societies also embraced structures of rāhui, Te Wāi Pounamu-specific rāhui practices have been recognised by some as demonstrating an increased divergence of southern Māori from their Polynesian origins:

To ensure the continuation of the resource, strictly observed rahui (restrictions, controls) were used to protect breeding stock. It was this conservation ethic that distinguished the Maori from the Polynesian people (Goodall, 1992:33).

The term rāhui could also refer to the pouwhenua or marker post which was a physical manifestation of the restriction placed upon a particular division or mahika kai, which served to reinforce the orally transmitted notice of prohibition on the area (Oral informant three).

The duration of rāhui could vary from long- to short-term restrictions. A prime example of this variation in duration was the rāhui on tōtara compared with the rāhui on tītī. Tōtara trees were highly respected for their fine grain, and were primarily sought after for waka or whakairo (carving). For tōtara, a particular tree would be chosen at a young age and protected by rāhui for the duration of its life until it became big enough to fell; this could be for a period of up to several hundred years. In contrast, rāhui for tītī was on a seasonal basis, only being implemented over a certain phase of the year’s breeding cycle. Permanent rāhui, however, extended only over adult birds, their value being as breeding stock.

The collective understanding of the laws of tapu would habitually regulate human behaviour; however, on the off-chance that someone might break these laws, there were punishments prescribed to ensure that regulations were upheld. A kairāmua, or person who breeched rāhui¹⁷, consequently would be ‘severely chastised (Oral informant two)’, socially ostracised or inflicted with mākutu (spell, incantation); such punishments could even result in death. Social ostracism and mākutu were tools of punishment which acted to punish the offender from within rather than using physical retribution. The laws of tapu were a highly powerful tool in the regulation of behaviour within society. It was the self-reflective punishment of tapu that kept structures of prohibition securely in place and society regulated within a set of self-regulated constructs.

Seasonal mobility

Seasonal mobility was fundamental to the mahika kai system. Its sheer size, along with the extreme nature of its seasons, meant that Te Wāi Pounamu had a diverse range of climates, landscapes, altitudes, and geographical features such as rivers and lakes. As a consequence, it featured a proportionally vast range of resources. These resources were, however, scattered throughout the land and, in order for southern Māori to obtain them, they had to become increasingly mobile, as Evison explains:

...some of these were 100km or more from home, among the rivers, plains and lakes of the lovely interior...Probably the longest expedition to any mahinga kai was that undertaken each autumn by Ngati Kuri from Kaikoura, to take their share of the titi from their allotted titi island off Rakiura – a voyage of 800km each way (Evison, 1993:6).

However, it was primarily because of Te Wāi Pounamu’s marked seasonality that mahika kai originally came to fruition. The relatively extreme seasons of Te Wāi Pounamu meant that certain resources could only be harvested at certain times of the year, necessitating travel to particular areas to harvest specific resources. Seasonal timetables, maramataka, became an essential mechanism to maintain effective mobility in order to optimise harvesting periods:

¹⁷ See Milroy in Moorfield, 2004: 226

Highly organised seasonal time-tables were followed to best utilise the resources available, and were unique to each hapu depending on the resources coming under their manawhenua (Goodall (et al), 1990:4-22).

Although resources were often available throughout the year, seasonal variation in the condition of resources meant that the harvesting had to be regulated to utilise recognised periods in which products could optimally be taken.

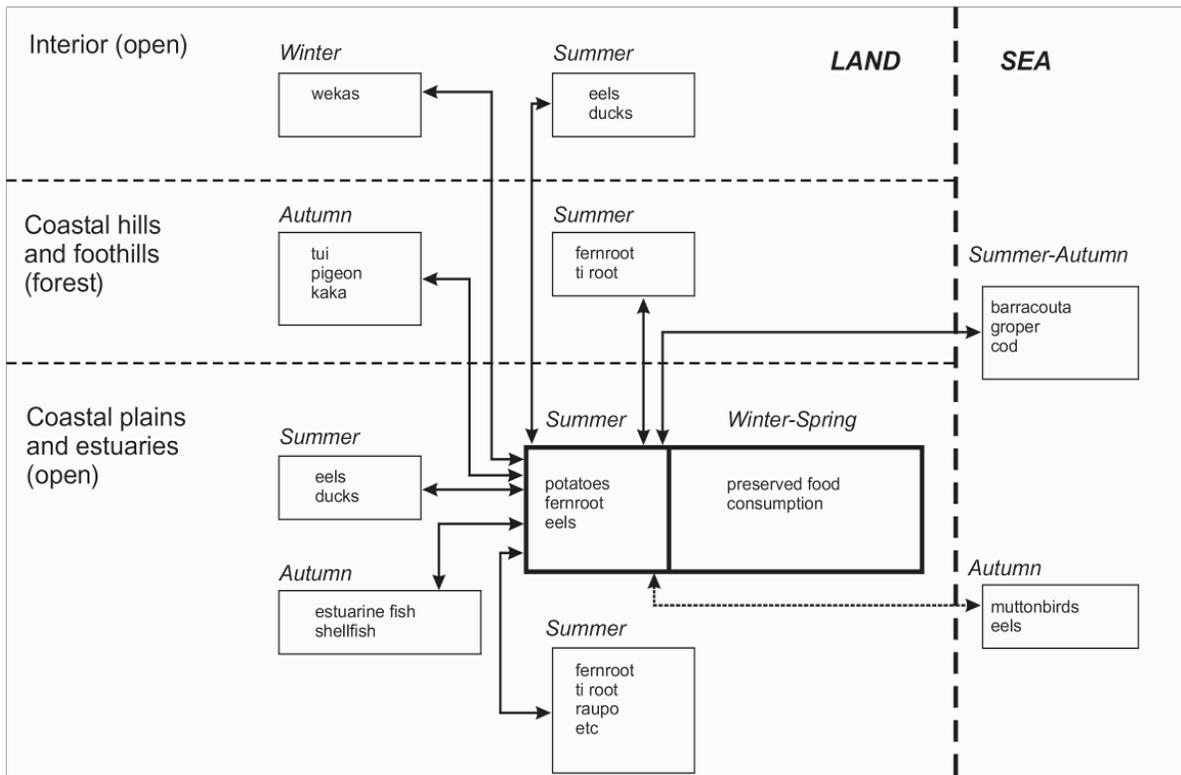
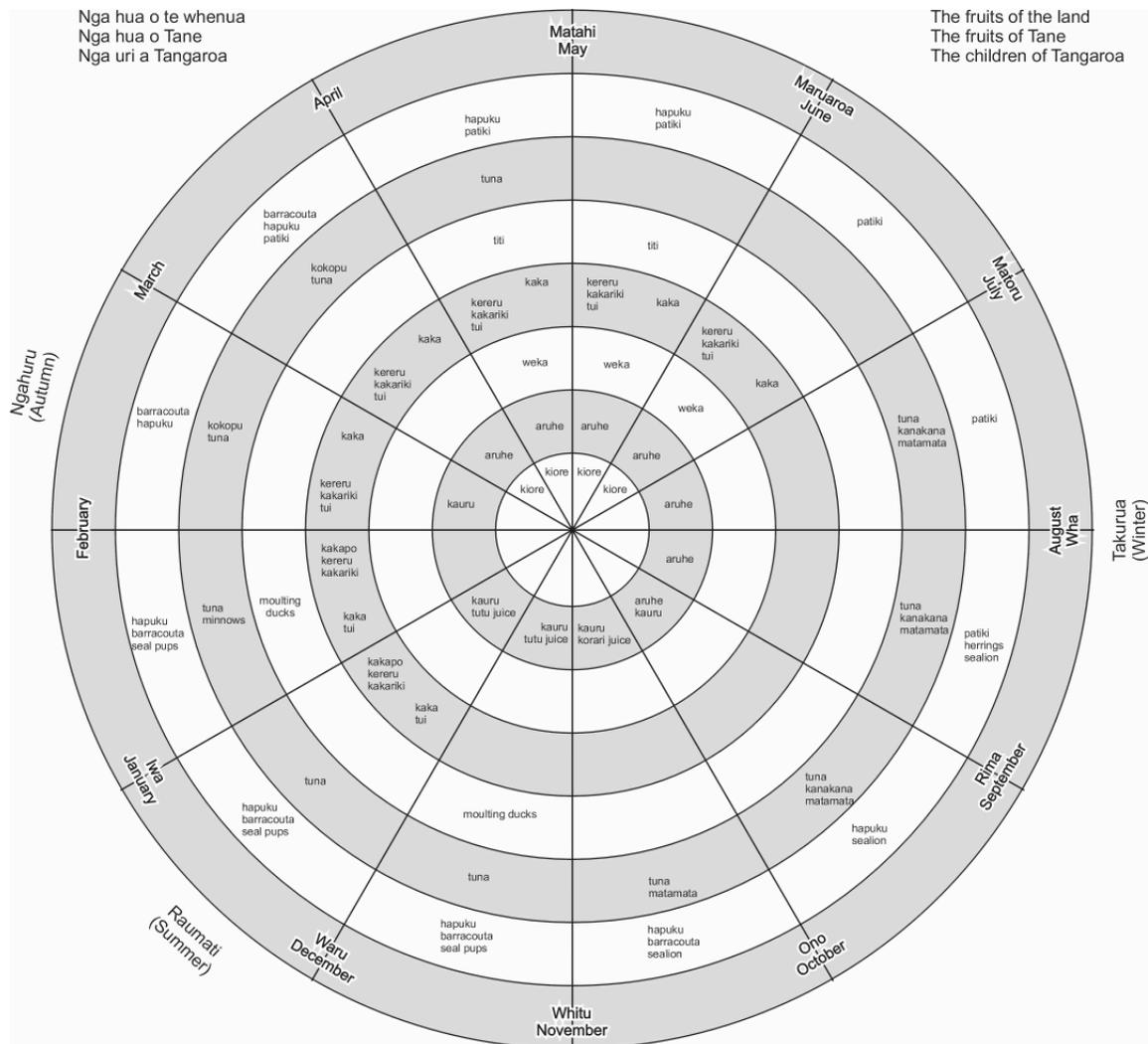


Fig. 4.1 Seasonality chart A: seasonal harvesting patterns by nineteenth century southern Māori, see Anderson, 1983:43.



Seasonal settlements or kāika nohoaka allowed southern Māori to harvest at mahika kai sites for an extended period of time, essentially providing a ‘home away from home’ on these seasonal migrations. Seasonal settlements, as well as allowing a substantial harvest, also gave elders the opportunity to impart valuable knowledge to succeeding generations. This, in turn, served to strengthen whānau or hapū bonds with particular mahika kai whilst preserving essential traditions and techniques. The management of mahika kai required ‘expert knowledge gained from experience, and skill in harvesting and preparing the foods and other produce for future use (Evison, 2006:19)’. Thus the survival of mahika kai practices relied on the transference of knowledge to succeeding generations. There was only one way for the intricacy of the mahika kai procedures to be passed down, and that was by growing up with, by living, as a southern kaumātua explains:

If they haven't been brought up as children doing that sort of thing...because there were so many things that you were taught over years and years and you can't sort of fit that kind of thing in the time frame of a season or two seasons (Oral informant two).

It was through this applied learning that the subsequent generations inherited the dynamics of mahika kai practices that could not be learnt vicariously:

There's only one way that you can tell if they [tītī] are young or old and that is with the end wing feather. You're taught how to grasp, twist the feather around your fingers and pull it, and if its a young bird it will come out and there'll be blood in the quill...If it's an adult that feather won't come out, it'll just slip through your fingers because it's a strong mature bird and that feather is set (Oral informant 2).

As with techniques, so too were social systems learnt. The organisation of work, as well as ensuring that tasks were completed effectively, also acted to maintain social divisions according to rank, with rakatira doing only jobs that would not demean their status. Gender roles also maintained the social systems within mahika kai, ensuring that roles would complement each other to enhance the function of mahika kai:

Work called for division of labour. Men did the hunting, fishing, bird-snaring, tool- and weapon-making, cultivation, tree-felling, canoe-making, carving, religious observances, and fighting. Women did the food gathering, preparation and dyeing of fibre, weaving and basket-making, cooking, and most of the carrying (Evison, 1993:6).

As well as the techniques learned for harvesting, in the course of the trek to mahika kai younger generations would learn to orientate themselves with their surroundings, whilst learning stories, histories and names of the land. Consequently a people's pride, respect and admiration for the environment would be transferred on to the next generation, thus ensuring that a harmonious relationship between human and environment would continue.

Long-term preservation

Seasonal movement was not solely driven by the need to acquire remote resources, it was ‘more importantly an opportunity to take advantage of differential abundance by food preservation, so that permanent settlement could be sustained elsewhere (Anderson, 1998:118)’. Long-term preservation ensured that foods only available seasonally were able to be made accessible throughout the off-season as well. Preservation of food was therefore imperative for ensuring that permanent settlements could be sustained. It was essential, therefore, for southern Māori to develop effective techniques to store food, because it would be the preserved food that would nourish life through the harsh winters when fresh resources were very scarce. Food was preserved either by drying or by preserving in fat. Drying was often used for fish, however,

...fernroot, raw and cooked ti kouka root, karaka berries, steamed shellfish threaded on flax and industrial resources such as dog skin and bird skin and feathers were also preserved by drying (Shortland, 1851:228).

With smaller fish, such as whitebait, it was simply a task of exposing them to the sun, however, bigger fish required a much more complex process for drying. Makā (barracouta) was one of the only fish caught with the use of rods in pre-European Te Wāi Pounamu. One of the renowned southern Māori recipes for makā was called pawhera (Beattie, 1994: 131-133). Pawhera involved a fairly long preparation process in order for preservation. After the fish were caught they were hung on a whata, or drying stage. They were then cleaned and again hung to dry. After a day of drying they were split on a papaki patiti (tussock mat) and once more hung to dry with the split side to the sun. Once they had been drying for roughly a fortnight they were then stored in storehouses, and could last for up to a year (Beattie, 1994:132).

Alternatively a more complex technique for long-term preservation employed the use of complex fat. This technique required more preparation for preservation than drying because proper containers had to be manufactured in advance. These containers took form by folding and sewing pieces of tōtara bark or by way of bull-kelp bags (Anderson, 1998:121). The use of these pōhā is an excellent example of long-term preservation in southern Te Wāi Pounamu, where bull-kelp was harvested in certain places, inflated and

then dried. Tīī were preserved in their own oil within a kelp bag, protected by tōtara bark, and carried in a woven kete harakeke (flax basket) (Oral informant two).

The making of pōhā involved tightly-bound customs that helped to sustain the materials that were used. Detailed knowledge, right down to the acquisition of tōtara bark for pōhā, still exists among southern Māori birders:

The spiders start to live in between it and its starting to come off, sometimes it's beaten you and it's lying on the ground and if it's laying there for too long it's spoilt. It'll last a year or more after it's come off the ground and you can still split it and prepare it and use it (Oral informant two).

Because material greed never crossed their minds, southern Māori lived in accordance with such philosophies as 'you only take what the tree is giving you (Oral Informant two)'. This ethos drew on the cultural models stemming from whakapapa, that the tree has mana, tapu and mauri, demanding respect and value as a child of Tāne.



Fig. 4.1 Mrs S Burke, in the early twentieth century, placing bark around pōhā/flax bags of salted mutton birds, Solomon Island. Alexandra Turnbull Library PAColl-6001-58.

Resource transport and exchange

Mahika kai sites were often situated away from settlements, not only increasing demands for mobility, but also posing the task of transporting the harvested resources back to the permanent base settlements, usually situated on the coast. Te Wāi Pounamu was traversed frequently, by way of many trails, some clearly being very long and strenuous:

One major trail ran from Kaiapoi to Taumutu and then down the east coast to Otakou, extending thereafter through the Taieri and Tokomairiro Plains to cross the Clutha and strike west to the Maitai and Foveaux Strait (Anderson, 1998:122).

The southern rivers of Te Wāi Pounamu, such as the Waitaki, were utilised with the assistance of mokihi as a means to transport loads of resources that had been harvested from mahika kai. Māori from the east coast would travel inland to Uruuru Whenua and even over the Southern Alps to Te Tai Poutini. Mokihi were

a sort of raft made of *raupo* reeds and light wood such as *korari* (flax sticks) as it was only for temporary use on the rivers and was seldom used again...They were made large and broad as a raft, but were boat-shaped and they were of a size to carry from ten to twenty people as required (Tikao, 1990:108).

Mokihi, with support from porters, provided a vehicle for southern Māori and their resources back to their coastal based settlements, and were also used for crossing lakes and major waterways such as the Waitaki. Another form of water craft, which consisted of either a single or double hull waka, was used for ocean voyaging. Taking full advantage of the larger trees, copious selections of resources, and the increased land-based living, such canoes evolved from the complex structures which assisted initial human arrival to the shores of Te Wāi Pounamu to forms better suited to the southern lifestyle. Boulton describes their form:

Some of the canoes were 80 feet long... have no outriggers... and are pulled with oars & steered with an oar. The sails are of flax matted together... With a fair wind they sail well, but when the wind is abeam they lower the sail & pull (Boulton in Anderson, 1998:124).

These forms of water transportation gave increasing mobility to southern Māori throughout Te Wāi Pounamu, making it increasingly possible for southern Māori to maintain seasonal migration to mahika kai.

Kaihaukai

The vastness of Te Wāi Pounamu meant that mahika kai were predominantly centered on one resource, resulting in certain whānau or hapū predominantly obtaining surplus quantities of a certain resource. In order to distribute these resources around Te Wāi Pounamu southern Māori society developed an exchange system in relation to mahika kai. Kaihaukai was the ‘exchanging of specialty foods from one area with those of another (Russell, 2000:241)’. Kaihaukai formed the basis of the traditional economy, ensuring a widespread distribution of specialty foods throughout the land:

Kāuru, made from the tī-kōuka (cabbage tree) in large ovens known as umu-tī, was produced in quantity in Canterbury and also on the Otago plains and low-lying hill country. Tītī (muttonbirds) were caught in many coastal areas, but most were taken from the islands around Rakiura (Stewart Island). Thus tītī from the south were traded for kāuru (Dacker, 1994:6).

Platforms or stages were erected to hold and exhibit food, each platform holding different types of food. One platform was called kaihaukai, while the other was called paremata. Tikao elaborates on their form: ‘the latter was taller or bigger than the former, and they were built close together, and the food would be heaped on both at the same time (Tikao, 1990:130)’. It is thought that kaihaukai were erected by the visitors, whereas the paremata were prepared as complement to the kaihaukai by the hosting party.

The exchange of foods not only guaranteed that each whānau or hapū had a variation in their diet but it also acted as a system to build and reinforce alliances and relationships, while also re-establishing social order and status. Often kaihaukai was centered on a tuakana/teina (elder/younger)¹⁸ basis, promoting exchange between dominant and subservient hapū. Kaihaukai took place at particular times of the year, in close co-ordination with seasons of harvesting. ‘The people would send word of a proposed kaihaukai some weeks before (Tikao, 1990:130)’ to give

¹⁸ Tuakana/Teina: derived from sibling dynamics, this system of learning and sharing incorporates both the elder and younger. In this context learning and sharing is based on hapū and status interactions.

time for the traveling party to prepare the items that they were to trade. This inter-tribal trade and exchange system, which stemmed from mahika kai, increasingly promoted the movement of exotic resources and pan-tribal social interactions.

Wakawaka

In addition to mahika kai, southern Māori also incorporated a resource management system called wakawaka. This referred to ‘a share or division of land (called rauri in some places) which often included adjacent lake or sea (Anderson, 1998:111)’.

Wakawaka functioned within the iwi, allocating certain partitions of land to different hapū or whānau. However, unlike mahika kai, wakawaka were increasingly based on a spatial restriction. Boundaries for wakawaka were often indicated by marked natural features (for example, a ridge or a stream) or even by an erected marker of rocks or posts (Goodall (et al), 1990:3-12). Tohuka or raketira had a very active role in the maintenance of this system, and oversaw the allocation to specific family groups. Wakawaka, in a similar fashion to mahika kai, were established to encourage relationships of exchange between whānau and hapū, involving specialists in different kinds of food-gathering or craftsmanship. This system ‘was deliberately organised and closely controlled by the tribal leaders who had set it up as a means of facilitating a trade between whānau and hapū (Anderson, 1998:633)’.

Within the division of wakawaka could also be the division into rauri. Rauri entailed a more exclusive right than wakawaka:

Usually, rauri refers to isolated food preserves to which one particular descent group has sole rights; wakawaka is the more usual term where a large resource is apportioned into discrete areas for each of several different descent groups (Williams, 2001:140).

Rauri or ‘hanging leaves’ would also take the form of a protection technique by an individual or collective. The hanging of leaves would be used as an indicator to others that a restriction was in place for a particular resource within a particular region.

These assigned specialisations were kept in the possession of the whānau or hapū for generations and generations. Handing down the rights to work such divisions of land resulted in specific whānau or hapū having extensive knowledge on particular resources and the working of

them. This particular management gave an incentive to whānau or hapū groups to take care of their allocated land areas.

Anderson explores the notion of boundary division, coining two concepts to encapsulate this complex notion: the mahika kai and the wakawaka model (Anderson in Davidson (et al) 1996:633-636; Anderson, 1998:112).

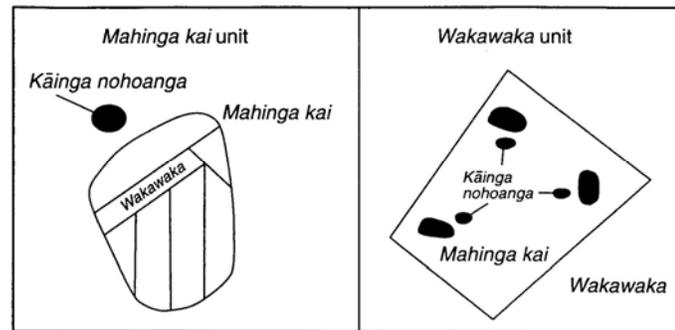


Fig.4.4 The mahika kai model (left) has a wakawaka, while the wakawaka model (right) has a wakawaka conceived as a large block of land assigned to a particular hapū, within which various mahika kai were located. See Anderson in Davidson (et al) 1996:633.

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example of a mahika kai model is in southern Te Wāi Pounamu where a mahika kai would be divided into segments allocated to specific family units. In the southern Māori birder dialect this was, and still is called, ‘manu’. On a particular island, or mahika kai, manu would be allocated to a number of family units. This meant that within that specific mahika kai, many different kin groups would hold a right to harvest, consequently allowing strong alliances to form over the harvesting season. Whereas the ‘wakawaka model’ focuses more directly on the northern districts¹⁹ and explains larger divisions of land or wakawaka, each of which would hold several mahika kai. This was primarily a result of the higher density of mahika kai in northern districts.

Conclusion

The climatic diversity, along with the seasonal fluctuations of resource availability, the vast range of geographical features, and the sheer size of Te Wāi Pounamu, left the Polynesian settlers with no other option but to acclimatise. As a consequence, cultural complexities such as mahika kai evolved, functioning at a practical, spiritual and cognitive level. By interweaving

¹⁹ ultimately focused upon Kaiapoi Pā

cultural models into the foundations of such ecological practices, area-specific systems were developed, functioning to sustain life in the relatively harsh surroundings of Te Wāi Pounamu. Systems such as mahika kai indicate a relationship comprising both a careful resource stewardship and a notion of respect for the environment. Southern Māori indeed learnt from the exploitations of their past and, in turn, adopted critical lifestyle changes that promoted a healthy environment for succeeding generations. This holistic approach to the environment allowed new generations to inherit both a healthy environment and the cultural knowledge which allowed for effective resource management for sustainability. In today's era a commonly-held paradigm is that humans shape the environment a lot more than the environment shapes humans. Yet, let the experiences of southern Māori demonstrate that, although humans are able to physically manipulate the environment, the power of the environment to shape our lives is, in fact, much more potent. In our current era of global climate change, this will be an important truth for all humans to recognise once again.

Conclusion

Since Aotearoa was the last significant landmass in the world to be settled, its biota had evolved without any major mammalian predator; it was a pristine environment until relevantly recent times. The arrival of humans brought about drastic changes to the ecological equilibrium of this naive land, inducing irreversible changes, such as the demise of the moa and the deforestation of vast tracts of vulnerable native forests. An initial absence of a conservation ethic, however, should not lead us to condemn these early Polynesian voyagers who were, ultimately, to become southern Māori. Given their environmental and cultural history, there was no imperative for prior conservationist behaviour to have evolved, since such conservation would have been maladaptive; the absence of conservation merely suggests an absence of necessity. ‘If the resource is not depletable it is perfectly logical (and, one may argue, ecologically adaptive) to kill excess numbers in hunts that are sporadic in space and time (Berkes, 1999:96)’.

Examination of southern Māori society has reminded us that whether or not such a people lived with awareness and care for their environment is a fundamental question that must be asked; that it must not be assumed to be an intrinsic quality of indigenous peoples in general. Environmental degradation has been the experience of many, if not all, indigenous peoples upon their first arrival into naive and fragile environments. Evidence of such initial non-sustainable behaviour can be seen throughout the Pacific, Australia and in the Americas (Anderson, 2002:34). Thus, claims without validity, or without foundation in reason, have been shown to distort the veracity of indigenous people’s reality.

A growing sense of the knowledge that Te Wāi Pounamu was the last stop, on what must once have seemed to be an endless chain of bountiful islands, served as an imperative for these Polynesian voyagers to settle permanently in Te Wāi Pounamu. Voyaging from one island to the next created a disposition towards adaptive behaviour that, as well as enhancing the skill of Polynesians to exploit natural resources, also enabled the capacity for cultural adaptation in response to the environmental dilemmas resulting from their settlement. Through the evolution of world views and social institutions derived from their Polynesian past, such as whakapapa, mana, tapu, noa and mauri, southern Māori developed a value system which included an intimate

sense of caring for the sustainability of their surroundings. This respect for the environment was based upon a collective identity affiliated to unified cultural and social institutions, along with a shared understanding of their functions.

The shape and direction of society is as much a function of people's attitudes, behaviour and values as it is a function of the economy, the laws, and institutions (Frieder, 1997:11).

These cultural concepts flourished and evolved over time in a dynamic relationship with the surroundings, manifesting a sense of harmony between the growth of thought and technique. Practical and cognitive approaches to the natural world became specific to the environment in which they dwelt. In the initial stages of settlement, an imbalance between human activities and the environment resulted in destructive exploitation. Over time, however, the development of a better sense of balance between reason and practice served to encourage a more proportionate relationship, which is, as Berkes states, what today's age is missing:

One of the troubles with our age is that habits of thought cannot change as quickly as techniques, with the result that as skill increases, wisdom fades (Berkes, 1999:xi).

It is this quote which brings us back to the very essence of this research project, encapsulated in the whakatauki 'he kapiti hono, he tatai hono', that which is joined together becomes an unbroken line. That is, the present and future are continuously joined by the guidance of the past. This project is based on the cultural viewpoint that we can always look to the past, to our tūpuna, for guidance into the future; that present and future circumstances are made sense of by maintaining an intimate reference to the past, and all that is associated with it, whether atua, tūpuna or spiritual beliefs. Unfortunately, it is too easy to become caught up in the frenetic pace of today's world, too readily losing sight of where we are heading. The environment can help answer many of our unanswered questions. Although material objects can sustain us in the short term, ultimately we must return to the axiom that the well-being of the environment is one and the same as the well-being of the people. In the end, it is our environment which determines the shape of our lives. The environment is not necessarily limited to the 'natural world'; it is simply the surroundings within which we live. It is through stories such as these of southern Māori that a clear light will be shone on how we, as modern people,

can help ensure that Papatūānuku, Rakinui and the natural realms of their children are left in a better state for the generations to come. How can we better our relationship with the environment by harnessing fundamental incentives to help make this happen? Southern Māori have demonstrated the power of the mind in this regard, demonstrating that the practical must be reinforced by well-established, rationally-based and commonly-held considerations.

Although the ancestors of southern Māori may have driven half of Te Wāi Pounamu's bird species into extinction, their descendants developed systems of ecological knowledge and practice, and sophisticated environmental ethics, to achieve a more harmonious balance, demonstrating clearly that southern Māori did indeed learn from the experiences of the past.

So we move on from here, walking backwards into the future, allowing the voices and the deeds of our tūpuna to keep us grounded as we advance into the unknown.

And so we pause to consider Papatūānuku and Rakinui, and ask ourselves this: do we care for them as we would our own parents? Because, just as our parents, they are the bearers of life, and, just as our parents, they have continued to nurture our growth.

And we ask for strength to build stable foundations that will allow warmth to prevail through the wintry months when Rakinui pines for Papatūānuku, and for courage to endure when Papatūānuku's love ascends to the heavens in search of Rakinui.

“Mō a muri, mō a nehe”

Glossary

Ahi kā continued occupation.

Ahi mataotao ceased occupation.

Atua gods or divine ancestors.

Hapū clan or sub-tribe, varying in size and affiliated to one or more tribe.

Ikoa wāhi (ingoa wāhi) place name.

Iwi tribe, nation of people descended from a common ancestor.

Kaihaukai exchange system of seasonal harvest.

Kaitiaki guardian or steward.

Karakia incantations.

Kaumātua elder.

Mahika kai (mahinga kai) places where food was extracted or produced.

Mākutu sorcery, spell, incantation.

Manuhiri visitors.

Mana enduring power of the gods.

Manawhenua political and occupational authority of land.

Māori a generic name for the indigenous people of New Zealand.

Marae meeting house, or gathering place.

Marae ātea the open area in front of the meeting house.

Mauri life force.

Mokihi temporary raft used in seasonal migrations.

Noa freeing from the restrictions of tapu.

Paremata platform, stage.

Pepeha environmental statement of identity.

Pounamu greenstone.

Rakatira (rangatira) leader.

Rāhui prohibition, restriction.

Rauiri division of land.

Rika kaha (ringa kaha) physical enforcement.

Tākata bola (tāngata pora) European settlers (bola – boat).

Tākata whenua (tāngata whenua) people of the land.

Take customary land rights.

Take tuku right to land through gift or exchange.

Take tūpuna, Take ōhākī right to land through inheritance.

Taniwha guardian deities that dwelled in water²⁰.

Taoka (taonga) highly prized possession.

Tapu spiritual influence or restriction.

Tapu manu mutton birding term for restricted areas.

Taunaha, Whenua kite hou, Tapatapa right to land through initial discovery.

Te reo the Māori language, tribally variable.

Tohuka (tohunga) skilled person.

Tūahu altar.

Tūpuna ancestor.

Tūrakawaewae (tūrangawaewae) a place where genealogy originates, ancestral place.

Umutākata, Take raupatu right to land through warfare.

Wāhi place, area.

Waka canoe.

Wakawaka well-defined areas of either land or sea.

Whakanoa, whakahorohoro process of release from the extensions of tapu.

Whakapapa genealogy.

Whānau extended family.

Wharekura institutes of learning.

Whareniui meeting house.

²⁰ Evison, *Te Wai Pounamu*, p.xvii

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Maps

Map 1

Map of Te Wāi Pounamu indicating locations mentioned in the text including an insert of Otago. *Rangimarie Mules* September 2007.

Figures

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Hikaroroa, Karitane, Otago. *Rangimarie Mules*, September 2007.

Fig. 0.1

Levels of analysis in traditional knowledge and management systems. Source: Berkes, F. 1999. *Sacred ecology: traditional ecological knowledge and resource management*. Philadelphia, America: Taylor & Francis. pp. 13.

Fig. 1.1

Material evidence of Lapita migrations. *The University of Auckland Library in Alexandra Turnbull Library*. Rereference number: 5957. Part of: Anthropology Photograph Archive

Fig. 1.2

Tongan sailing canoe, drawn by J. Webber on Captain Cook's third voyage. Source: Davidson in Wilson (ed.) 1987. *From the beginning: the archaeology of the Maori*. Auckland, New Zealand: Penguin Books in association with the New Zealand Historic Places Trust, pp. 35

Fig. 1.3

Puketapu, Palmerston, Otago. Source: *Rangimarie Mules*, September 2007.

Fig. 1.4

Skeleton of moa. Source: *Alexandra Turnbull Library*. Reference number: A-018-004. Part of: Drawings and Prints Collection. A-018-004.

Fig. 1.5

Aotearoa forest cover in AD 1000 and AD 1840. Source: Trotter & McGulloch, 1989. *Unearthing New Zealand*. Wellington, New Zealand: Government Printing Office/Publishing, pp. 51

Fig. 2.1

Maukatua, looking north over Lake Waihola. Source: *Wikipedia, the free encyclopedia*. Photographer: unknown. Image: Maungatua2.jpg.
<http://en.wikipedia.org/wiki/Image:Maungatua2.jpg>

Fig. 2.2

Taieri Bush and Saddle Hill. Source: *Alexandra Turnbull Library*. Reference number: E-207-q-032. Part of: Buchanan, John: Scrapbook (1856-ca 1890), (E-207-g)

Fig. 3.1

Aoraki, Mount Cook. Source: *Wikipedia, the free encyclopedia*. Photographer: Miguel A. Monjas. Image: Aoraki-Mount Cook from Hooker Valley.jpg.
http://en.wikipedia.org/wiki/Image:Aoraki-Mount_Cook_from_Hooker_Valley.jpg

Fig. 3.2

South Bay, Kaikoura. Source: *Alexandra Turnbull Library*. Reference number: 1/2-021862-G. Part of: Weidner, Negatives of Kaikoura and district (PAColl-3067)

Fig. 4.1

Seasonality chart A. Source: Anderson, A. J. 1983. *When all the moa ovens grew cold: nine centuries of changing fortune for the southern Maori*. Dunedin, New Zealand: Otago Heritage Books, pp 43.

Fig. 4.2

Seasonality chart B. Source: Dacker, B. 1994. *The pain and the love, Te mamae me te aroha: a history of Kai Tahu whanui in Otago, 1844-1994*. Dunedin, New Zealand: University of Otago Press in association with the Dunedin City Council, pp 7.

Fig. 4.3

Mrs S Burke, in the early twentieth century, placing bark around pōhā/flax bags of salted mutton birds, Solomon Island. Source: *Alexandra Turnbull Library*. Reference number: PAColl-6001-58. Part of: original photographic prints and postcards from file print collection, Box 7.

Fig. 4.4

Wakawaka and Mahika kai models. Source: Anderson, A.J. “Wakawaka and mahinga kai: models of traditional land management in southern New Zealand”, in Davidson, J. Irwin, G. Leach, F. Pawley, A. Brown, D (ed). 1996. *Oceanic culture history: essays in honour of Roger Green*. New Zealand Journal of archaeology Special Publication, pp 633.

Oral informants

Due to Category B regulations of the University of Otago, the anonymity of informants must be protected. Discussions were held with three oral informants during the research for this research project.