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HAUTURU/LITTLE BARRIER ARCHAEOLOGICAL LANDSCAPE

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Introduction

Hauturu/Little Barrier is a 2817 ha island reserve administered as a Nature Reserve by the Department of Conservation (Figure 1). It comprises a dissected mid-Pleistocene andesite volcano with seven prominent peaks clustering at the centre, the highest of which is 720 m above sea level. Its location is roughly midway between Cape Rodney and Aotea/Great Barrier, and along with the latter, it forms the northern extent of the Hauraki Gulf.

The island has a history that incorporates elements of early Maori settlement and continuous occupation up to the end of the 19th century, and it is also significant in 20th century conservation history. Although the more accessible parts of the island were subject to logging immediately prior to its acquisition for a bird sanctuary by the Crown in 1894, it contains one of the few remnants of undisturbed bush in the Auckland region.

The Nature Reserve classification means that access is restricted and by permit only. Much of the island's coastline comprises boulder beaches exposed to Pacific swells and sheer cliffs, and is not conducive to boat landings. The restricted access and limited grazing has resulted in atypically good preservation of some earthwork features.

The island also provides an excellent example of correlation between geographical features and the cultural landscape. Despite its considerable size there is remarkably little land suitable for settlement on Hauturu. The interior is characterised by narrow ridges and deeply incised gullies, and the exposed summit of the island harbours a mist forest micro-climate. Habitable parts

of the island are largely limited to Te Maraeroa, river gullies and the lower planeze slopes.

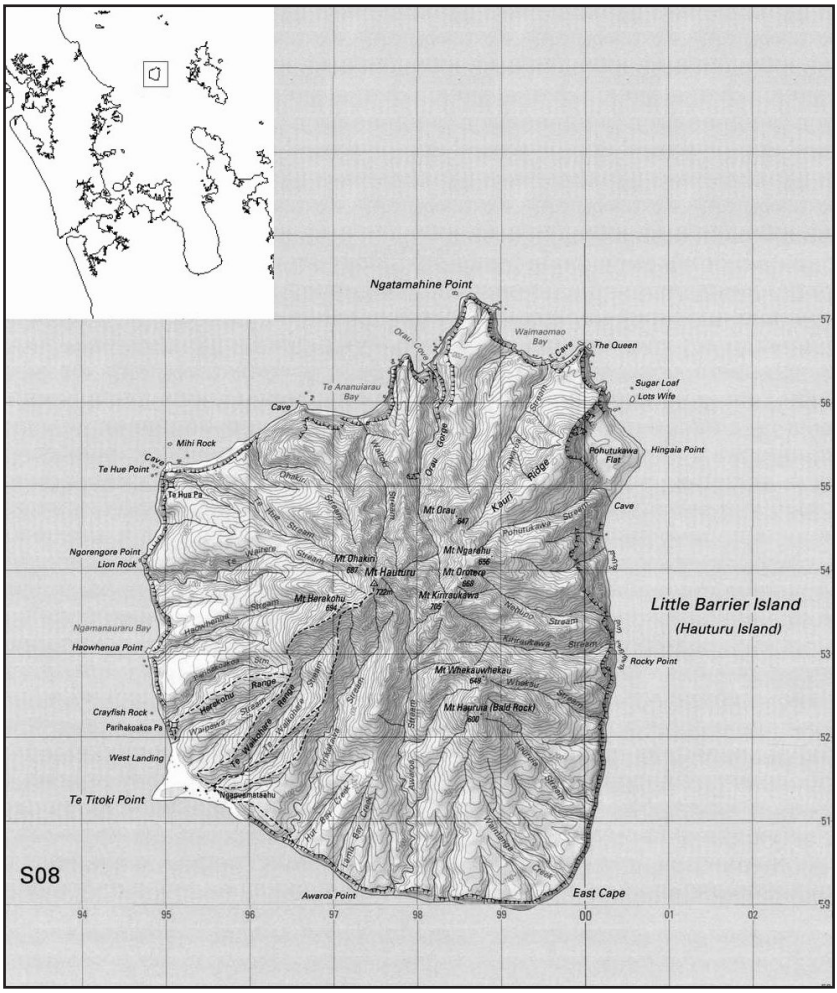

Figure 1. Location and topographical map (NZMS260).

Permanent occupation and settlement of the island has left a range of archaeological site types and features which include areas for living, gardening, food preparation and storage, and defensive fortifications. Following a description of the historic and archaeological survey background, site distribution will

be discussed in relation to geographical parameters including geology and soils, vegetation patterns, and access to the interior of the island.

Historic background

According to traditional history, Maori settlement on Hauturu was established following its discovery by Toi te Huatahi. From the 14th century the island was cohabited by the ancestors of the Ngāti Wai who joined Toi's people both on Aotea and Hauturu. In the 17th century the Ngāti Wai were subject Kawerau raids under the command of Maki, and later his brother Matāhu. Matāhu succeeded in landing his canoes on the boulder beach, and fighting ensued along the southern coast of the island. The dead were buried at Te Maraeroa at a place that was henceforth known as Ngapuamatāhu. While the Ngāti Wai were at times driven into the interior of the island, they were never forced to abandon the island and marriages eventually concluded the peace between the Kawerau and Ngāti Wai (Hamilton 1961: 18-27).

Despite long standing animosity between Ngāpuhi and Kawerau, Hauturu was a stop over for Hongi Hika's musket raids during the 1820s and 1830s, and the occupants of Hauturu were presumably left unmolested on account of their partial Ngāti Wai ancestry (Johnson 1999: 13). Historical descriptions of the Maori settlement on Hauturu are fairly limited, concentrating on the whare and cultivations on Te Maraeroa. Pā incorporating boulder revetting and carved posts in their construction were located on the low ridges immediately above the flat at Parihakoakoa, with cultivation in the stream gullies and the fertile alluvial soils on the flat itself (Gordon 1948: 13). Photographs from the turn of the century show several wooden whare with plantations nearby reported to contain kūmara, maize, melons, peaches, figs, taro and tobacco. Wild cattle, sheep, pigs and chickens were also kept for fresh meat and dairy produce.

Negotiation for the Crown purchase of the island was underway from 1881, with the view to eventually establishing a bird sanctuary (*NZ Gazette* 28/07/1881). The purchase was initially delayed by 10 years of Land Court disputes, and while an agreement between the government and Maori owners was eventually reached in 1891, it appears to have been sabotaged and aborted on account of conflicting agendas among government officials (Johnson 1999: 43). Unwilling to sell to the government at their stipulated price, yet unable to sell the island to a third party, Tenetahi, one of the Maori owners, arranged to have the kauri felled for sale instead. Alarmed that this would render the island unsuitable for a bird sanctuary, the government issued an injunction against the felling and a trespass order against the timber merchant and his workers (Johnson 1999: 48-9). Contrary to the 1891 agreement, the government then

sought to purchase shares off individual Maori owners, and posted a ranger to enforce the injunction.

Ultimately, all but Rahui Te Kiri and her daughter Ngapeka signed the new purchase agreement, although Tenetahi's signature had been transferred from the 1891 agreement despite his now evident opposition to the sale. When Tenetahi himself continued the felling in 1894, the government passed the Little Barrier Purchase Act, forcing the sale of the remaining shares at the formerly agreed price £3000. The remaining Ngāti Wai occupants were then evicted.

The first caretaker appointed by the Auckland Institute, R. H. Shakespear, was stationed at Te Marareroa that year and there has been a permanent ranger presence ever since. In addition to his role as caretaker, it seems Shakespear was an avid boat builder, building at least eight small craft at Te Maraeroa between 1899 and 1909. Since the formation of the reserve, Little Barrier has played an important role in conservation history, and Te Maraeroa has been the main operations base for its caretakers and rangers. It was among New Zealand's earliest reserves specifically for the protection of native flora and fauna (others include Resolution Island in 1891, Secretary Island in 1893, and Kapiti Island in 1897). Hauturu has been a focus for species conservation in the Auckland region, and many notable early species introductions have been carried out including North Island brown kiwi pre-1903 and 1919, kākāpō in 1903, great spotted kiwi in 1915, and saddlebacks in 1925 (Hamilton 1961: 134-76). While the island is presently administered by the Department of Conservation, recognised mana whenua is that of Ngāti Manuhiri.

Archaeological background

Due to the nature of the terrain, archaeological survey on Hauturu has been mostly ad hoc and sporadic (see Figure 2 for survey routes). The first attempt at site recording was Christine Hurley and Pam Swadling's survey in 1968, which recorded four sites on Te Maraeroa flat and three on nearby ridge spurs (Hurley and Swadling 1969). They identified two pā (Tirikawa and Parihakoakoa), as well as stone formations on Te Maraeroa flat and a pit and terrace site. Bates and Bartlett's survey in 1980 was conducted over a period of 10 days and recorded an additional 28 sites (Bartlett 1980). Their survey concentrated on the ridge spurs immediately behind Te Maraeroa flat, and extended up the western coastline along the weeder's tracks up to Te Hue point and across the lower reaches of the northwestern ridge spurs to Te Ananuiarau Bay.

Bruce Hayward's survey, conducted over seven days in 1981, has been the most systematic and comprehensive to date. Hayward concentrated on the lower reaches of the ridge spurs on the southern part of the island and included several sites in the vicinity of Pōhutukawa Flat and Te Hue Point on the northern

Figure 2. Archaeological survey cover, after Hayward 1982.

part of the island (Hayward 1982). The 1981 survey mostly followed the then open weeder's tracks to various parts of the island, but due to time constraints

less attention was paid to the northern and eastern coastlines and ridge spurs (Bruce Hayward, pers. comm.). Hayward recorded an additional 30 sites during his initial visit, and a further 10 sites were subsequently recorded on the basis of earlier maps from Bates and Bartlett's survey. His subsequent paper, published in Tane, was also the first to consider the relationship between the geographical and archaeological landscapes, noting strong correlation between site location and vegetation patterns and accessibility.

Further archaeological site recording was undertaken by Robert Brassey and Dave Veart in October 1997, during which time many of the historic sites on and around Te Maraeroa Flat were recorded and several previously recorded site records were updated and revised (Figures 3 and 4).

Figure 3. Te Maraeroa flat from Parihakoakoa pā.

A recent archaeological survey by the authors concentrated on upgrading information on already recorded archaeological sites as part of the New Zealand Archaeological Association (NZAA) Site Recording Scheme Upgrade project, and took place over three visits in 2004, 2006 and 2008 (Table 1). Of the original 82 sites recorded on Hauturu, 35 were able to be relocated and information upgraded during the 2004 survey, and one additional site was recorded.

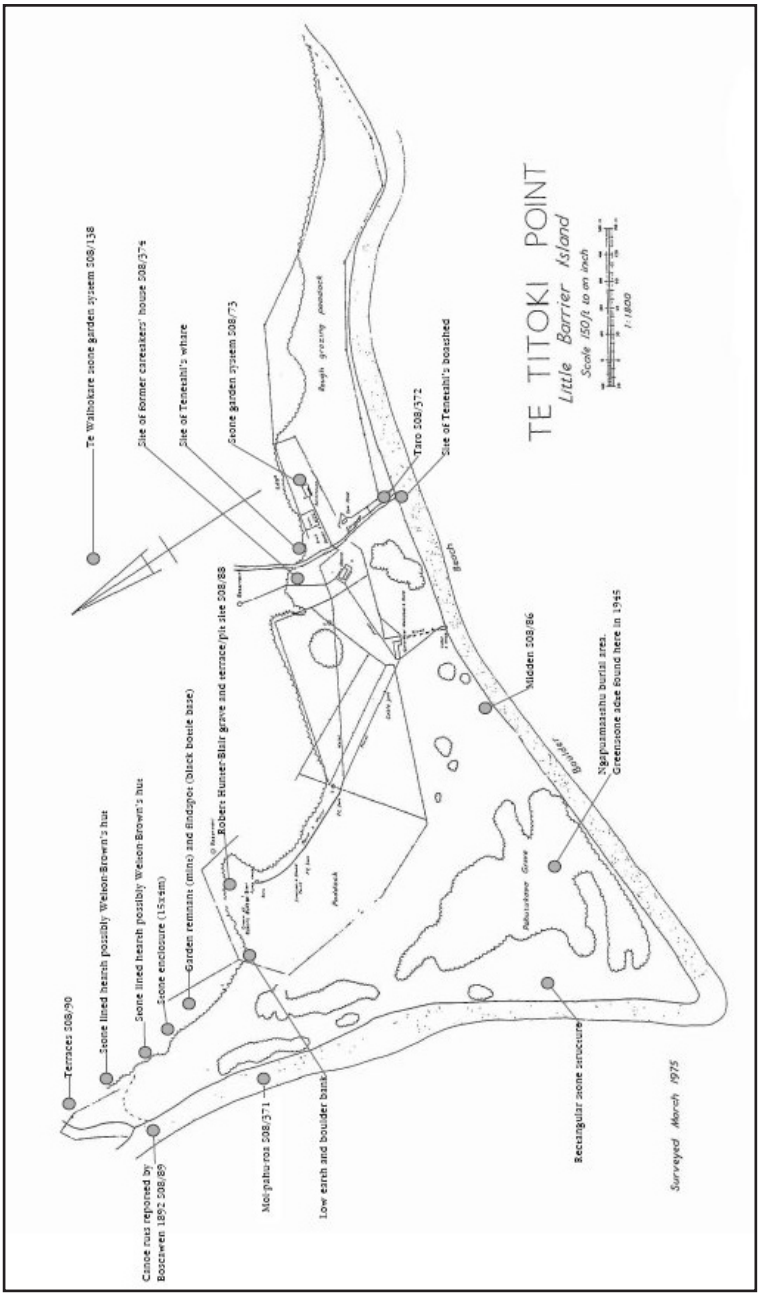

Figure 4. 1975 survey plan of Te Maraeroa flat showing locations of archaeological sites.

The 2006 survey updated 18 records, and recorded eight new sites. During the 2006 visit detailed site plans were drawn of Maori gardening remnants in the Tirikakawa Stream and Pōhutukawa Flat. In 2008 an additional two sites were recorded. Of the remaining sites, two were excluded as burials, and the records for four sites have been revised as natural features.

Prehistoric settlement pattern

As an island, it is tempting to consider Hauturu as a single geographical unit with clearly defined boundaries. The eastern and northern coasts of Hauturu are exposed to the full force of Pacific swells, and in times of rough weather the island was effectively isolated from the mainland which, at its closest point, is 24 km away. However, New Zealand's offshore islands are likely to have been considered differently in prehistory, and compared to contemporary times are likely to have been perceived as much less remote. The first settlers who inhabited them were descendants of, or were themselves, oceanic voyages and island dwelling people, and the predominance of water craft as a principal means of transport for Māori well into the 19th century, made islands more accessible than much of the mainland interior. The exposed boulder coast and steep cliffs of Hauturu on occasion provided an effective barrier for repelling attacks, but in times of calm weather the opposite held true. Pā such as Parihakoakoa were easily accessible to Te Maraeroa and tended to be occupied only in times of rough weather, when the occupants were less prone to attack (Hamilton 1961: 19-20).

The archaeological record on Hauturu suggests the island sustained a small self-sufficient population, and that locally available resources were supplemented with resources from further afield. The occupants of Hauturu shared kinship links with Ngāti Wai, who occupied the mainland and offshore islands from Great Barrier to Whangārei, and in later times maintained links with Kawerau. They were therefore well positioned for the trade and exchange of goods. The island was an important stopover point for northern tauā heading south and like the Mokohinau Islands, Hauturu attracted regular visits by muttonbirders from the mainland. Obsidian, frequently found in the boulder banks on Te Maraeroa, appears to have been procured from Northland and/or Great Barrier sources, and the presence of greywacke cobbles on Te Maraeroa flat has been tentatively interpreted as imported oven stones, in preference to the local andesitic rock which has the tendency to explode when heated (Hamilton 1961: 35). Other exotic material includes a greenstone adze found at Ngapuamataehu in 1945 and deposited with the Auckland Museum (Hamilton 1961: 19).

Pre-contact site types	**N**
Pā	10
Pit/Terrace/Midden	3
Pit/Terrace	12
Terrace/Midden	2
Pit	20
Terrace	9
Midden	8
Stone garden system	6
Stone revetting	6
Rockshelter	2
Botanical	1
Traditional	1
Burial	2
Historic site types	
Haul line	2
Domestic	3
Tree carving	1
Feature	
Defensive ditch	10
Stone revetting	6
Stone mounds/stone rows	6
Terrace	40
Pit	38
Midden	16
Botanical	1
Traditional	1
Burial	4
Domestic	3
Haul line	3
Tree carving	1

Table 1. Archaeological site types (N=82).

Few midden deposits have been recorded on the island, and those that have occur in close proximity to the shore, and are largely limited to locally available rocky shore species such as nerita, pāua and whelk. It is possible that if shellfish were consumed in any quantity it was brought to the island as dried meat with the shells already removed.

Geology and soils

The interior of the island, including the peaks, comprises mid Pleistocene Haowhenua formation andesites. Breccias form the remainder of the lower planeze slopes of the volcanic cone, with a zone of mixed andesites and breccias north and west of Mt Hauturu (Figure 5). Pōhutukawa Flat is at the northeast point of the island and comprises the debris from the Hingaia rockslide, and much of the eastern coast has been truncated by coastal erosion (Hamilton 1961: 43-77).

Soils are predominantly brown granular clays. In the uplands these are moderately podsolised steepland clays with peaty areas, and those on lower slopes are strongly leached and very acidic. Holocene deposits with alluvial soils suitable for gardening are largely limited to Te Maraeroa flat, which has formed by the accumulation of alluvial sediments behind two conjoined boulder spits, isolated pockets of alluvium and peat on Pōhutukawa Flat, and alluvial soils within the Te Waikohare, Tirikakawa and Awaroa river gullies on the southern coast and Te Wairere river gully on the west coast. Together the alluvial soils make up around only 1% of the island's total land area, and Te Maraeroa accounts for most of this area.

It is therefore not surprising that the gardening sites are limited to these areas. Mound and row garden systems have been recorded in Te Waikohare (S08/138) and Tirikakawa stream gullies (S08/116, Figures 5 and 6), and on the Te Maraeroa flat in the vicinity of the bunkhouse (S08/72). Terracing at Waipawa may also be associated with gardening. Remains of Maori dwellings during Tenetahi's time include a stone hearth, and possible house platforms, as well as numerous plant survivals. Evidence of gardening has also been recorded in the pockets of alluvial soil at Pōhutukawa Flat (S08/260). Stone walls and revetting are present on sites at Te Hue Point (S08/131-133), but its association with gardening has yet to be confirmed.

Vegetation

Vegetation above 700 m is characterised by moss forest with low scrub on exposed summit peaks. This is surrounded by tawhero forest above 450 m, and rātā/tawa forest interspersed with kauri and miro stands extending to the coastal cliffs on the northern and eastern sides, in stream gullies, and to around

350 m on the planeze slopes, where regenerating coastal mānuka/kānuka forest predominates (Figure 8).

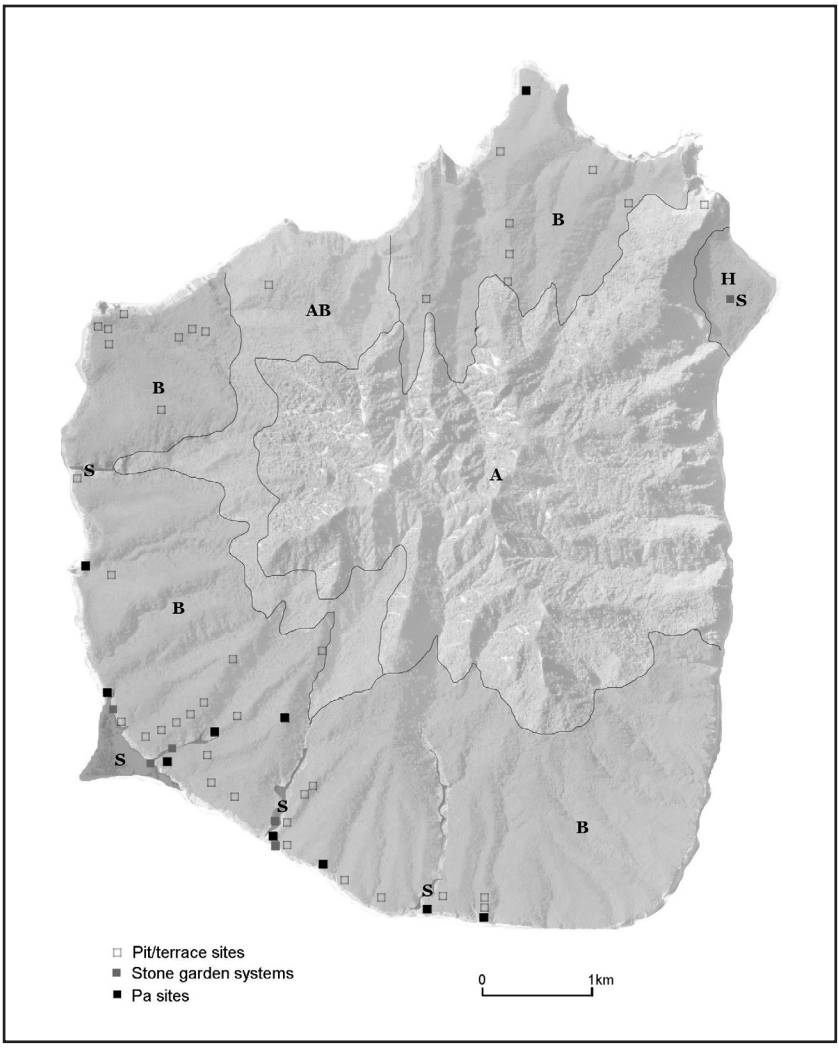

Figure 5. Simplified geological map showing positions of pā and gardening sites, after Symonds in Hamilton 1961. A = Hauturu andesite; B = breccia; H = Hingaia fall debris; S = alluvial soils.

Figure 6. Stone walls Tirikawakawa Stream (James Robinson).

Figure 7. Stone walls Tirikawakawa Stream (James Robinson).

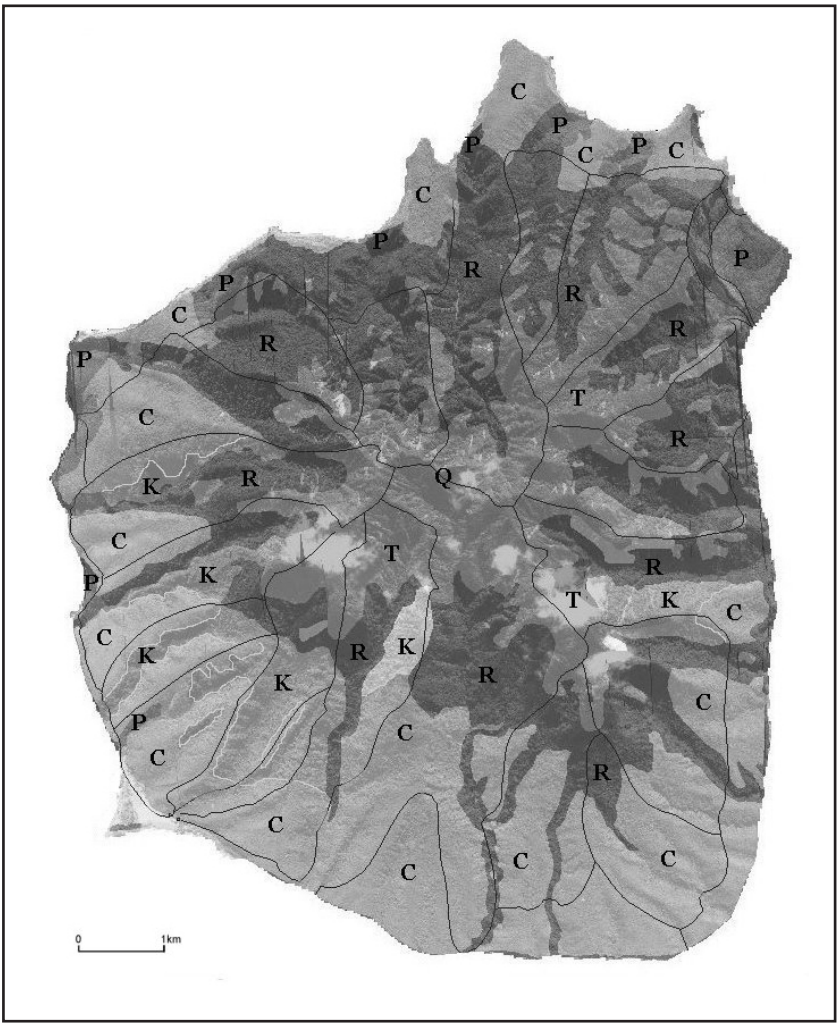

Figure 8. Simplified vegetation map based on DOC GIS data. C = regenerating coastal kānuka/mānuka; K = predominantly kauri; P = predominantly pōhutukawa; R = predominantly rātā/tawa; T = predominantly tawhero/tawa; Q = Quintina/Ixerba spp.

The planeze slopes on the southern and western sides of the island and above Ngatamahine Point were largely deforested in the later 19th century for grazing (Hamilton 1961: 90). By the 1890s there were an estimated 1000 sheep

and 30 cattle on the island, and grazing continued under Crown ownership to provide produce for the caretakers and their families. Extraction of kauri timber in the 1890s further contributed to the modification of the vegetation and haul line scars are still clearly visible on the slopes north and east of Te Maraeroa flat.

As with the soil distribution the vegetation patterns appear to provide a useful indicator for predicting archaeological sites. The only recorded sites outside the area of vegetation modified by human activity are burial sites in the vicinity of Mt Whekauwhekau and Bald Rock (S08/259 and S08/317), and isolated pit clusters on the ridges either side of the Orau gorge (S08/136, S08/253, S08/258, S08/479), northeast of the Okakari stream (S08/97), and on the ridge south of the Mt Hauturu summit (S08/464). In the case of the Mt Hauturu summit it seems that these may have been deliberately sited emergency food stores.

Access

Access to the interior of the island is via Te Maraeroa (literally 'the long courtyard') and the stream gullies around the remainder of the perimeter (Figures 9 and 10). As a result of weathering and erosion a number of streams on the east coast egress via high waterfalls, making them unsuitable as access routes. The spurs above these streams are therefore both strategically important in controlling access and protecting food producing areas.

Heavily fortified pā, flanked by steep cliffs are positioned immediately above Tirikakawa stream (S08/3), Lamb Bay creek (S08/303), Awaroa stream (S08/121), and an unnamed stream to the east (S08/126). These pā are notable for their formidable defenses. The Awaroa pā incorporates a double defensive ditch, with the outer ditch up to 7 m deep and 50 m in length. The pā recorded as S08/126 has two defensive ditches up to 6 m deep, and the Tirikakawa pā four defensive ditches. Smaller scale defensive works were also constructed on the lower reaches of the spurs immediately above Te Maraeroa at Parihakoakoa (S08/4) and Te Waikohare (S08/05, 74-75), which is recorded as three separate sites but seems more likely to represent separate components of continuous occupation of the same spur. Te Hue and Haowhenua are referred to as pā in historical accounts, but lack clearly defined earthworks. A pā is also recorded at Ngatamahine Point (S08/254), although information on the site record is slight and was not able to be verified during recent visits.

The leeward southern coast where the most heavily fortified pā are located is also typically calmer than the remainder of the island, making it more vulnerable to attack. The east, west and north coasts are all subject to heavy ocean swells which make landing difficult. There is no access to the interior via the streams on the east coast and access via streams on the north

coast is difficult. It therefore seems logical that more effort would be expended in protecting the southern coast where the food producing areas were located and access could be mostly easily gained into the interior of the island.

Figure 9: Ngamanaurau Bay from Te Wairere demonstrating typical coastal edge.

Conclusions

This paper expands on the work of Hayward (1982), incorporating additional detail from a recent archaeological survey and historical research in an attempt to further understand the nature of pre-contact Maori settlement on Hauturu. Factors influencing selection of location for settlement on the island appear to be strongly influenced by topography and ease of access, but also by the proximity to fertile alluvial soils for gardening. Vegetation patterns are a useful indicator as a reflection of bush clearance both in the 19th century and pre-contact period, but will also be strongly influenced by the altitude, topography and underlying geology and soils. It is suggested that the larger pā located along the southern coast were strategically sited to guard access to the island's interior, but also to offer protection against raids on isolated garden sites. Also

considered relevant to the understanding of settlement on the island is the role of exchange. It is likely that resources not available on the island such as obsidian and ovenstones would have been obtained in exchange for island resources, such as muttonbirds, but also hospitality for passing groups. However, without targeted excavation it is only possible to draw tentative conclusions.

Figure 10: Pinnacles Stream, one of a small number of access points around the island perimeter.

Acknowledgments

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