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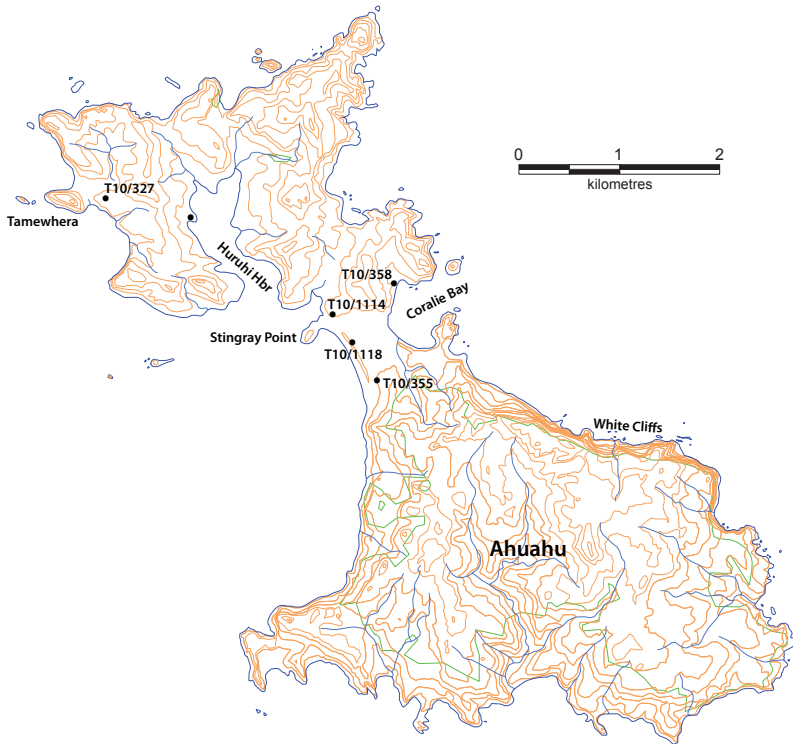


Figure 1. Excavated sites, Ahuahu Great Mercury Island.

located an EA identification number in the database. Artefacts, fire cracked rocks and samples are allocated unique numbers which are recorded in the Leica robotic theodolite as the position of each object or sample is shot in.

T10/1114 Stingray Ridge

This site was of interest because of the large amount of fire cracked rocks and lithic material on the eroded southern slope, which continues to erode. The distribution on the slope was quite extensive suggesting a significant occupation on the ridge, which is directly upslope from Stingray Point Pa (T10/169) excavated by Jack Golson (1955). The ridge is broad and slopes to the west towards the pa, and more gently to the southern side defined by a steep slope (Figure 2). The ridge overlooks the tombolo and White's Beach.

The main fieldwork season took place between February 10 and March 3 2013, although preliminary testing had occurred in November 2012.



Figure 2. Stingray Ridge T10/1114 from Stingray Point Pa, February 2013. The eroded face is visible to the right.



Figure 3. Plan of excavations, T10/1114, Stingray Ridge.

A total area of 104 m² was investigated (Figure 3). The position of each stone artefact (basalt, obsidian and chert) and fire cracked rock over 20 mm in maximum dimension was recorded with a total station.

Although limited features were uncovered, several occupations are represented. There was a large, shallow storage pit over 5 x 2.5 m with a buttress on the eastern side. The pit was only 30–40 cm deep and the floor sloped to the south, towards the drain which exited through the centre of the southern wall. There were two central postholes on the floor of the pit, and packing on the floor at the southern end where it is thought another post would have been placed (Figure 4). The drain was over 7 m long with the southern end wider and eroded, suggesting it had been very effective in removing water from the pit. The pit had been deliberately infilled and contained fire cracked rocks and stone artefacts. Later occupation over the pit fill included a posthole and a small circular hearth area on the eastern side which were associated with a large and deep posthole 1 m to the east.

A bell-shaped pit in EA26 (Figure 3) was also deliberately infilled and contained large flakes of obsidian within the fill layer. Excavations revealed quite a lot about the taphonomy of the site: EA13 on the edge of the southern slope was a deflated surface and, although having the remnants of a fire scoop



*Figure 4. Storage pit, T10/1114, looking south.
The drain exits in the central south wall.*

with numerous fire cracked rocks, it was not in situ. The stratigraphy in EA12, also on the edge of the southern slope, was deeper than elsewhere on the site but it was a disturbed deposit. Several postholes, intact firescoop features and an eroded possible small terrace were uncovered at different levels within this excavation area. Further work needs to be undertaken later in the year to look at the stratigraphy closer to the edge of the southern slope in order to interpret this area adequately: in the very dry summer conditions we were reluctant to modify the edge of the slope in any way which might cause later erosion in a storm event, and further investigations will require some forethought on how to prevent or minimize erosion.

Understanding the form of the current landscape and the effect of erosion on the cultural material is one of the research aims of the Great Mercury Island Archaeological Project. Fire-cracked rocks and stone artefacts on the eroding southern slope were piece-provenanced with a total station and collected for analysis. This material will be compared to the in situ material recovered through archaeological investigation. Two small test squares placed at the base of the slope suggest that the site has been eroding for some time.

A 40 x 20 m geophysical survey was undertaken on the lower eastern slope of T10/1114 using a Geonics FM256 fluxgate gradiometer. The survey revealed a number of magnetic anomalies, two of which were in situ fire features which were sampled by Dr Gillian Turner, a physicist from Victoria University of Wellington. Dr Turner is conducting Marsden-funded research into palaeo-magnetism and changes in direction of the magnetic pole over time (Professor Peter Sheppard of the University of Auckland is an assistant investigator on the project).

T10/358 Te Matakū

One of the earliest known sites on Great Mercury Island is T10/358, Te Matakū, on the north side of Coralie Bay on the east coast within the Tombolo Zone (Figure 1). Material collected from this site in about 1973 by Pat Mizen, previous owner of the island, is in Auckland War Memorial Museum. The site was eroding in the 1970s, but there was between 1–2 m of sand over the cultural layer. Bones of coastal birds, moa and fish were recovered as well as stone flakes and some formal artefacts. The sand overburden present in the 1970s has disappeared along with that part of the site surface collected in 1973.

A visit to the site in 2012 revealed fire cracked rocks and stone artefacts in loose sand at the interface of the grassed ridge and sand, but no visible occupation layer. During 2013 the farm manager reported a black deposit had been exposed in the banks of the stream which borders the site. Storm events



Figure 5. T10/358 looking northwest. The stream is to the right, and sea to the left. The site is at the base of a ridge, where sand abuts weathered clay.

periodically wash over the area, as shown by the presence of driftwood and seaweed, with high risk to any surviving intact material (Figure 5).

The sand deposits at the boundary of the grassed area and eroded dune were tested in June 2013 to investigate how much intact material survived. The black layer exposed by the stream was interpreted as oven rake-out and contained copious fire-cracked rocks, charcoal and some stone artefacts. Test excavations dug north–south across the northern side of the sand spit revealed no intact cultural material. Our focus, therefore, was concentrated on the southern side of the spit, closest to the sea. In addition, a 1 m² excavation unit placed on the grassed area found a thick dark cultural layer, mainly oven rake-out, under about 1 m of sand overburden.

It was apparent that water had washed through the excavation area, with clear definition in the stratigraphic section between disturbed and undisturbed deposits. Intact deposits included rake-out from higher on the slope, and a large firescoop was uncovered in EA51. Water had washed through the feature but the charcoal and stones were sufficiently compacted that the deposit had not been washed away.

Further excavations in November 2013 fully exposed the large firescoop in EA51, and a further 9 m² was excavated around the previous excav-

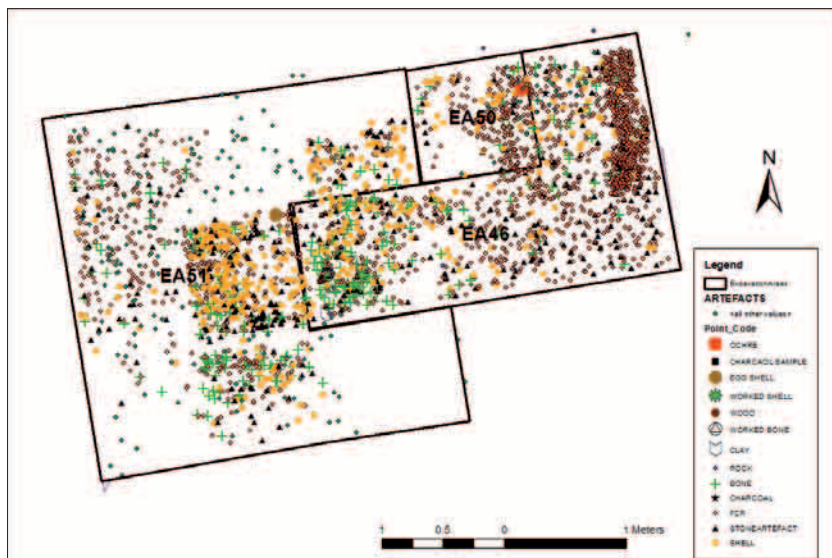


Figure 6. Area excavated, Te Matakū.

ations to recover intact information considered at risk from storm events. We found further occupation evidence, associated primarily with cooking and stone working (Figure 6). To the western end of the trench another intact firescoop was uncovered, and this time an interesting array of bone material was also excavated from a pit-like feature, including a moa leg bone (tarso tibiotarsus) and a one-piece moa bone fishhook. Dog, seal, fish and cetacean bones were also present, and a large amount of shell and fish bone. Charcoal and shell samples have been sent for radiocarbon dating. Some of the thermally-altered stones from the firescoops have been sampled for the paleo-magnetism project.

T10/329 Tamewhera field system

The site recorded as T10/329 consists of several hectares of stone rows, stone enclosures and terraces with stone-faced front and back scarps. The site forms part of a large horticultural field system (Figure 7). The topography of the entire site is varied: gentle gradient slopes to the south of a prominent flat-topped ridge that runs east–west for some 200 m; considerably steeper northern slopes; and a swampy valley that exits to the sea at the base of Tamewhera Pa. Stone alignments, enclosures and terraces are present on the southern slopes. The northern slopes are characterised by stone faced terraces near



Figure 7. T10/327 from the west, showing areas excavated.

the top, with large stone rows approximately 1 m wide, 0.5 m high and up to 100 m long, which run from beneath the stone faced terraces down the slope and into the swamp. The excavations undertaken in this area were designed to evaluate the interpretation of the terraces on different aspects of the ridge, and to assess whether all terraces in this area were horticultural in function, or whether some might have been for residential occupation.

Several terraces were trenched in November 2012 to determine function, and one of those terraces (EA103) fully excavated in November 2013. Further investigations on the site in January–February 2014, during the two-week field school, focused on excavation of four terraces on the north-facing slope which were part of the group containing EA103.

A GPS survey was also carried out of the Tamewhera field system in February 2014, producing a map showing boulder alignments, stone faced terracing, stone faced back scarps and stone rows. This map forms a comprehensive record of the surface features of this site, enabling interpretation on periods of wall construction and expansion.

EA100-EA101

The EA100 trench crossed a small terrace retained by three to four courses of stone at its front edge, and clear of stones across its surface. The stra-

tigraphy strongly suggested a horticultural function for this terrace. A trench (EA101) over a second south facing terrace enclosed by low stone alignments had no evidence of deep garden soil but a firescoop was present. However, no artefacts were recovered and the function of the terrace is unclear.

EA102

A north facing terrace high on the ridge had a stone faced rear scarp which formed part of the retaining wall of the terrace above. The front of the terrace was also stone retained, and in total the terrace itself measured approximately 6 x 3 m. A stone-lined hearth and numerous obsidian and chert flakes were found on the terrace during test excavations in November 2012.

This terrace was fully excavated in January-February 2014. Despite the presence of the stone-lined hearth, a partial drain, numerous stone artefacts and a small shell midden on the eastern side of the terrace, there were no well-formed postholes similar to those on EA103 and EA106. The terrace is interpreted as having a small pole and thatch house, facing east, which left no structural remains apart from the fireplace.

EA103

A 6 x 4 m terrace immediately below and to the west of EA102 also had stone retaining. Like EA102, a test trench in November 2012 uncovered stone artefacts and a stone-lined hearth. In November 2013 the terrace was fully excavated.

In addition to the hearth feature, 21 postholes and two drains were uncovered, together with 406 flake stone artefacts of basalt, chert and obsidian, and a large water rolled boulder interpreted as an anvil stone in the porch (Figures 8 and 9). The terrace contained what was interpreted as a small, well-built wharepuni or sleeping house measuring 4 x 3 m with a porch area at the eastern end included in the length. The house conforms to a pre-European layout, and the orientation and shape of the postholes, together with the discovery of remnant pieces of kauri in the base of two of the postholes, suggest it was constructed using dressed kauri planks for the frame. The location of the hearth, tucked in the south-eastern corner of the wharepuni adjacent to the door, is similar to excavated house examples at Ruahihi Pa in the Bay of Plenty (McFadgen and Sheppard 1984: 19). The house was aligned north-south, with a doorway on the eastern wall that would have opened out on to the small porch area.

house structure. Three fire features were uncovered together with concentrations of shell and fish bone material. A considerable number of stone flake artefacts were recovered (206 in total), including a small complete basalt adze, and a complete fishing lure shank made of petrified wood. These artefacts were concentrated at the western end of the terrace. The lack of an identifiable formal house structure, together with different artefact density patterns from EA102 and EA103, and the presence of fire features and midden material suggest this may have been a large domestic terrace used for cooking, processing of food and artefact manufacture.

T10/1118

In February 2014, 8 m² of the midden and the adjacent area on the crest of the dune was excavated (EA36)(Figure 11 and Figure 12). This midden is on the western side of the tombolo overlooking White's Beach (Figure 1). Very little faunal material has so far been found on the island, and as one of the project aims is to recover information on resource use over time, a large quantity of the midden was collected. The deposit consists of a concentrated shell midden about 20–30 cm deep. It is notable for the quantity of whole shells and large number of rocky shore shellfish species amongst the otherwise predominantly tuatua midden. There was also a large quantity of fish bone, as well as crayfish mouth parts, which are rarely recorded from analysed midden. The shell was excavated in 50 cm quadrants and 10 cm spits, giving good control over deposit composition and variability. All sieved shells and fish bone were retained for analysis. On the dune crest, immediately above the shell, were eroded firescoops although probing suggests intact material survives. Few stone artefacts were recovered but those that were found were large in size relative to other sites investigated. All fire cracked rocks were plotted using the total station and collected for analysis.

Conclusion

When combined with the excavations in early 2012, the work reported here indicates the potential the Ahuahu archaeological record provides for understanding the history of Maori occupation on the island. A wide range of sites spanning the length of human occupation on the island are concentrated in the two regions investigated. Unfortunately, despite sensitive contemporary land management practices, archaeological sites continue to be subject to erosion. Although particular incidences of erosion are often limited to individual sites, for instance the wave action at Te Mataku, erosion in general is likely a consequence of the whole history of human interaction with the environment on the island. As an island, Ahuahu is a discrete landscape so it is possible to



Figure 11. T10/1118 on the crest of the dune. Stingray Pa is in the background, and T11/1114 visible behind the total station.

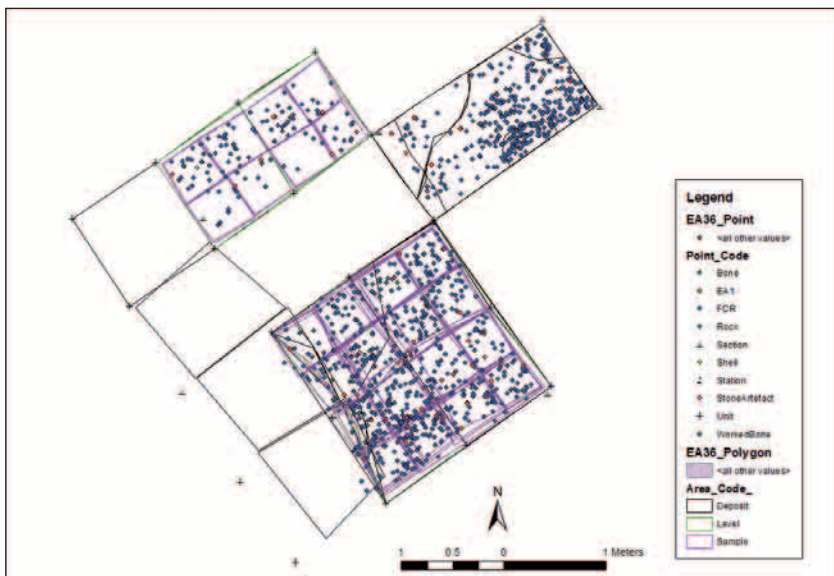


Figure 12. Excavated area T10/1118 (EA36).

understand the inter-relationships between people, environmental change and the consequences of their actions in ways that are more apparent than on the mainland. Much of the erosion seen today on the island needs to be considered from this perspective.

In future work we need to research the past environmental history of the island and begin to integrate the findings from this research with our archaeological investigations to better understand the reasons why Maori made the particular decisions to occupy Ahuahu in the ways that they did. Although the historical sequence of occupation on Ahuahu will be in many ways unique to the island, it is likely that the principles on which occupation decisions were made in the past will parallel those made on the mainland Coromandel as well as other parts of the North Island. The archaeological investigations, therefore, have value in understanding the history of the island but also have a wider significance for the upper North Island in general.

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