PREHISTORIC ARCHAEOLOGICAL SITES ON LITTLE BARRIER ISLAND, NEW ZEALAND

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SUMMARY

Sixty-one archaeological sites have been recorded on Little Barrier Island. These include 7 pa, 33 pit and/or terrace sites and 14 sites with stonework. Notable features include the large size of some of the earthwork defences of the pa (7 m deep ditches), narrow raised baulks ('walkways) down the middle of several pa, the number of large pits (greater than 4 x 3 x 1 m), several pits dug on steep slopes, and stonework around cultivation areas.

The sites are concentrated along the more accessible and gentler sloping western and southern sides of the island and especially the sheltered landing spots on either side of the flat boulder spit of Te Titoki Point. The distribution of storage pits and stonework (where rocky ground has been cleared for gardens) indicates that cultivation areas were not confined to the coastal flats around Te Titoki but also were present in some of the larger, deeply incised, stream valleys and on the gently sloping ridges along the south coast and in the north-east and north-west.

The distribution of sites corresponds remarkably well with those areas that were mostly clear of bush in the late nineteenth century and are now in regenerating kanuka and kauri ricker forest. This suggests that these areas (about one third of the island) were first cleared of forests in prehistoric times.

INTRODUCTION

Little Barrier is a large island (2 817 hectares) lying at the entrance to the Hauraki Gulf, midway between Great Barrier Island and Northland. Cape Rodney, 24 km to the west, is the closest Northland coastline.

Little Barrier Island is a partly eroded, extinct andesite volcano. It is nearly circular in outline and rises to a group of central peaks, the highest of which (Hauturu) is 722 m A.S.L. It has a radial drainage pattern with numerous, often deeply incised small streams flowing outwards in all directions to the coast.

The island is almost completely surrounded by sheer cliffs that make access difficult except along the south and south-west coast. Around the north and north-east coasts the cliffs average 200 m in height and
access up them is restricted to a very few places, mainly around a gigantic rockfall at Hingaia (Pohutukawa Flat). The cliffs along the south and east coasts average 50 m and 100 m in height respectively and inland access is usually possible here from the stream mouths.

In the south-west a boulder spit has built out a large, flat, triangular area at Te Titoki Point which provides the best landing location on the island and easiest inland access. Boulder beaches are common along the foot of the cliffs, especially in the south and east where a virtually uninterrupted strip allows walking access all the way around the coast at mid tide or lower from Te Titoki Point to Hingaia.
On the southern and western sides of the island below 200-300 m, the ridges retain much of the original form of the volcano, having broad, gently sloping crests. The central part of the island is steeper and more deeply eroded. This central area is clothed in thick, virgin forest, but the gentler, lower slopes are presently covered in regenerating kanuka-kauri ricker forest (about 75-100 years old) after being cleared or burnt.

An account of the traditional Maori history of the island and of its post-European contact history is given by Hamilton (1961, p. 18-28).

Site surveys

Apart from the early observations of Boscawen (1895), Best (1925) and later Hamilton (1961), there have been to date three surveys of the prehistoric archaeological sites on Little Barrier (Fig. 1). The first by Hurley and Swadling (1969) recorded some of the stone structures on the boulder flat of Te Titoki Point and three pa and several pit clusters on nearby ridges (sites N30-1/20-23). The second survey, by Bartlett, Bates and White (Bartlett 1980), included many of the ridges on the western side of the island, adding a further 28 sites to the four previously recorded (sites N30-1/213-240). The third survey was carried out by the author during the Auckland University Field Club scientific trip to Little Barrier in August 1981. All the coastal ridges along the south side of the island were explored, as well as further areas in the west and north (sites N30-1/340-368).

The last two surveys were greatly assisted by a network of tracks that were cut in the late 1970s for a feral cat eradication project, but are now obsolete and becoming overgrown.

Further work

Most of the more easily accessible and flatter land on the island (in the south, west and north-east) has had reconnaissance surveys. Further work in the east, and especially north, should locate additional sites. More obscure sites, such as hidden rock shelters, undoubtedly remain unrecorded in the south and west.

Condition of sites

The state of preservation of prehistoric archaeological sites on Little Barrier varies greatly. A few sites have crisp, well-preserved surface features and the side of one pit cut into fairly solid, weathered rock still retains marks of the adzes used to dig it.

The majority of sites, however, are moderately to poorly preserved. Most of these were probably damaged by trampling stock during the latter part of the nineteenth century when nearly 1 000 sheep and 30 cattle roamed free over the lower southern, western and northern slopes. Other nineteenth century activities (prior to the island’s purchase for a
nature reserve in 1894), which probably contributed to the damage of some sites, included the extensive felling of teatree for firewood, minor gumdigging and the logging of kauris in Waipawa and Awaroa valleys in the 1890s.

In the twentieth century damage by trampling stock has been restricted to sites on the flats around Te Titoki Point, which are farmed by the resident ranger. Sites on the routes of the main tracks to the summit have also been damaged by human trampling over the past 80 years.

Fig. 2. Distribution of the recorded prehistoric archaeological sites on Little Barrier.
SITE TYPES

The location of sites so far recorded on Little Barrier are shown on Fig. 2. Details of their location, features and preservation can be found on the N.Z. Archaeological Association's Site Record File, sheet N30-1.

Pa (Fig. 3)

Seven pa sites, each characterised by the presence of defensive ditches, have been recorded on Little Barrier Island. All occur on the south-western side and each is sited in a naturally defended position on the crest of a steep-sided ridge. Two of the pa (21,232) are located on the seaward end of ridges and have vertical sea cliffs forming the defensive barrier along one side. Three others (20,351,356) are located close to the seaward ends of the ridges but have not utilised the seacliffs for defence.

The two pa sites located further inland (22, 215), on the Summit Track, have greater concentrations of pits than the others and are possibly more akin to defended food stores than defended occupation sites. Indeed the pa (22) located 250 m A.S.L. is the least well-defended of all the pa. It has 18 pits and a single, small ditch across the ridge crest at the seaward end. The second inland pa (215) has 11 pits, several terraces and a shallow ditch across the ridge crest at either end.

The five coastal pa are all notable for the large size and depth of many of their defensive ditches, that have been dug across the ridge crest and continued some distance down the slopes on either side. The inland ditch in site 351 is 8 m wide at the top, 7 m deep and extends 50 m down one slope before fading out. Site 356 is defended at each end by ditches, each 6 m deep and 7-8 m wide. Each coastal pa has two ditches except Tirikawa (20) which has four.

A further distinctive feature of four of these coastal pa (21, 232, 251, 256) is the banks (up to 1.5 m high and 1-3 m wide) that have been built up for defence on the inner side of many of the large ditches. Perhaps the most unusual feature is the narrow baulk (c. 1 m wide, 1-1.5 m high) that extends down the middle of three of the coastal pa (21, 232, 356) and represents the former crest of the ridge that has been left intact when terraces and pits have been excavated out on either side of it. This baulk may have been left as an unimpeded path through the middle of the site, but it is a feature seldom seen in pa elsewhere.

The two coastal pa near Te Titoki flat (20,21) have 7 and 13 pits each within their defences, but only 2 pits were recognised within the defences of the remaining three coastal pa.

Two further sites (217, 229) were recorded as pa by Bartlett (1980) but in my re-examination I was unconvinced that either had ever had earthwork defences (nor probably pallisades) and I reclassified both as pit and terrace clusters, the sites of undefended food stores.
Two pa (Te Hue and Ngatamahine) referred to by Boscawen (1895) have not been located despite my extensive searching on both sides of the mouth of Te Hue Stream and on Ngatamahine Point. I must conclude that neither was a defended position but both were probably undefended occupation sites (e.g. 363, 364) referred to by the Maoris with whom Boscawen spoke.

Fig. 3. Plans of the seven pa recorded on Little Barrier Island.
Pits/terraces

As can be seen from the map (Fig. 2), the majority of the 33 pit and/or terrace sites occur along the south-west and west coasts of Little Barrier Island.

Four sites are man-made terraces with no associated pits. Three of these are coastal, situated on low slopes within 50 m of the boulder beach and adjacent to stream mouths.

All the sites with pits occur on ridge or spur crests. Only rectangular pits were found, ranging in size from 1.5 x 1 x 0.1 m up to 5 x 5 x 2 m. The number of unusually large pits (greater than 4 x 3 x 1 m) is a feature not previously noted on other offshore islands of northern New Zealand.

In two sites, several elongate pits were located 2 or 3 m below the narrow crest of the ridge on the sloping side and the resulting pits had one side wall much higher (2.5 - 3.5 m) than the other (1-1.5 m). This is an unusual design which probably allowed the pits to be covered with a single lean-to roof without the need for a gable.

Stonework

Fourteen sites with Maori stonework have been recorded on Little Barrier Island. The majority occur on the coastal flats around Te Titoki Point, where the boulder bank behind the beach and stranded beach cusps have been modified to produce numerous cultivation enclosures (approx. rectangular 5 x 3 m areas - Fig. 4) and sometimes stone heaps and free standing stone walls. In two places, one on the north side and one on the south side of Te Titoki Point, the boulder beach ridge has man-made cuttings through it. Boscawen (1895) described these as canoe ruts or accessways for hauling up canoes. On the coastal flat around the mouth of Te Waikohare Stream, there are numerous stone rows, up to 60 m long, 2 m wide and 0.5 m high, and several stone heaps (1-2 m across).

Stonework also occurs on the narrow, flat floors of Te Waikohare and Tirikawa Streams, 200-500 m up from their mouths. Here, on flat terraces on the inside of stream bends, are numerous stone rows and stone heaps, the largest of which is 2 m high and 4 m across.

The most extensive area of stonework on the island is in the north-west, on the gently sloping, broad crest and west and north-west slopes of the ridge south of Te Hue Stream (363). Here stonework is spread over an area of several hectares and includes numerous terraces, some stone-faced and some with stone retaining walls (up to 2 m high), many stone heaps (often 1 m high and 2 m across), stone rows and several free standing stone walls (up to 1 m high.)

Further stone heaps, stone-faced terraces and stone retaining walls occur on a north-sloping hillside in the north-east corner of the island (364). In contrast to the freshness of the rocks in all the other stonework
Fig. 4. View north-east over some of the stonework cultivation enclosures (site 239) formed by modification of the boulder bank behind the beaches of Te Titoki Point. The rugged central part of Little Barrier and Mt Hauturu can be seen beyond.

Fig. 5. This stone hearth, located in the middle of a ridge-crest terrace (site 354), is indicative of a whare site.
sites, these features are considerably weathered, partly buried by rotted forest litter and soil, and appear to be older.

An 0.5 m square hearth made with six stream-rounded stones (Fig. 5) was recorded in the middle of a ridge crest terrace in a site high above Tirikawa Stream. It is typical of hearths located within whares and indicates the former location of such.

Midden

Shell midden has been recorded at eight sites where no other evidence of man's activities was obvious, as well as from many other places in association with terraces, pits, stonework or pa.

Middens along the west coast north of Te Titoki Point have abundant paua (Haliotis iris) and cat's eye (Turbo smaragdus) and less abundant whelk (Cominella virgata) and limpet (Cellana radians). All these shellfish live in profusion today on the stable intertidal and shallow subtidal beach boulders and rocky reefs of this coastal strip.

East of Te Titoki Point and at Hingaia Point the middens have abundant black nerita (Nerita melanotragus) with occasional topshell (Haustrium haustorium) and very little else. These, especially Nerita, are the dominant larger molluscs of the more mobile cobble beaches that form a ribbon around this part of the island's coast. Thus the majority of shellfish consumed appear to have been collected locally from the Little Barrier shore.

Also present in some middens, however, are shells of tuatua (Mesodesma subtriangulatum) and cockle (Australvenus stutchburyi) which don't live around Little Barrier and would have been brought over from Northland or Great Barrier beaches. Several rock oysters (Crassostrea glomerata) in one midden still had rock attached to the lower shell. The rock is a pebbly grit not found on Little Barrier, but common on the Northland coast around Leigh and this is thought the most probable source area.

DISCUSSION

The distribution of archaeological sites (Fig. 2) corresponds remarkably well with the areas of kanuka - kauri ricker forest on Little Barrier (Fig. 6). These areas are regenerating after being cleared or burnt in prehistoric or early European times by the Maoris.

Most of the sites are to be found on the south-western side of the island, with the greatest concentration around the boulder flat of Te Tikoki Point. Like today, the sheltered landings (depending on wind direction) on either side of the point, were of immense importance in determining the focus for habitation. Equally apparent from the distribution of sites is the part played by the island's physiography in
determining areas utilised, for away from Te Titoki Point, sites are almost entirely confined to places where access inland is readily achieved, either up stream valleys (along the south and west coasts) or up breaks in the otherwise vertical cliffs (north-east corner).

No archaeological sites occur in the steep, heavily dissected central part of the island which was obviously not utilised for habitation, cultivation or defence, but presumably was of value for its forest
The prehistoric Maori inhabitants undoubtedly relied heavily on food resources from the sea and forest, but the large number of pits (mostly used for the storage of food crops, such as kumara) and the areas of stonework (where rocky ground had been cleared of stones for cultivation) also indicate considerable horticultural activity. Stonework features suggest that Te Titoki flat was a favoured cultivation area, but gardening was also pursued on the narrow floors of some of the larger stream valleys and on the gentle slopes of some of the coastal ridges such as at Te Hue and above Hingaia. The presence of storage pits on ridges around Awaroa Stream, 2-3 km east of Te Titoki Point suggests that the flat-topped coastal ridges along much of the southern coastline were also cultivated. Some of these ridges may have been cultivated only once, soon after they were first cleared of forest, whereas other more favourable and fertile localities, such as Te Titoki flat, were undoubtedly cultivated for many seasons.

Most of the pa on Little Barrier (except for the inland site, 22) were large enough and close enough to the coast and cultivation areas to have been defended occupation sites rather than small defensive strongholds into which the inhabitants retreated when hostilities threatened.

The number and density of archaeological sites indicate considerable use of the island by a sizeable population in prehistoric or early European times. Since it is improbable that all sites date from one period, the number of permanent inhabitants may never have exceeded 200 and was quite likely considerably less for much of the time. Similarly it cannot be ascertained whether the island was permanently inhabited for one long period (of possibly several centuries), or whether it saw a number of shorter periods of occupation. Only detailed excavations could begin to answer such questions.

Undoubtedly its large size and rich natural resources (forest, coastal, cultivation areas, nesting sea-birds) and its strategically important location at the entrance to the Hauraki Gulf made Little Barrier Island a much valued piece of tribal land to the Ngati Wai owners.

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