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RADIOCARBON DATES FOR SOME SMALL ISLAND AND COASTAL PA AT MERCURY BAY, COROMANDEL PENINSULA

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When *H.M.S. Endeavour* visited Mercury Bay in November 1769 James Cook observed that several rocks and islets along the coast were fortified, and in some cases occupied. One which attracted his and Joseph Banks' attention in particular was Te Puta-o-Paretauhinu, a small, semi-detached arched rock (Fig. 1). Cook's and Solander's sketches of this "pa" show that the top was partially protected by palisades, and that there were at least some Maori present on it at the time (see Begg & Begg 1970, plate 44; Salmond 1991: 203). Further west, Cook also noticed two rocks situated just off the headland occupied by Wharetaewa pa, which were "both very small and more fit for birds to inhabit than men yet there are houses and places of defence on each of them" (Beaglehole 1955: 199; see Begg & Begg plate 49).

Before departing Cook landed on one of the islands (Poikeke) on the south side of Mercury Bay. This he described as being "very small" with a "little village...laid out in small oblong squares and each palisaded round. The island afforded no fresh water and was only accessible on one side, from this I concluded that it was not choose for any conveniency it could afford them but for its natural strength" (Beaglehole: 201). No mention was made of any pa (e.g. Te Mautohe) on the adjacent mainland.

Earlier, James Cook had written in his journal: "many works of this kind [small fortifications] we have seen upon small islands and rocks and ridges of hills on all parts of this coast. From this it should seem that this people must have long and frequent wars, and must have been long accustom'd to it otherwise they never would have invented such strong holds as these" (Beaglehole: 200).

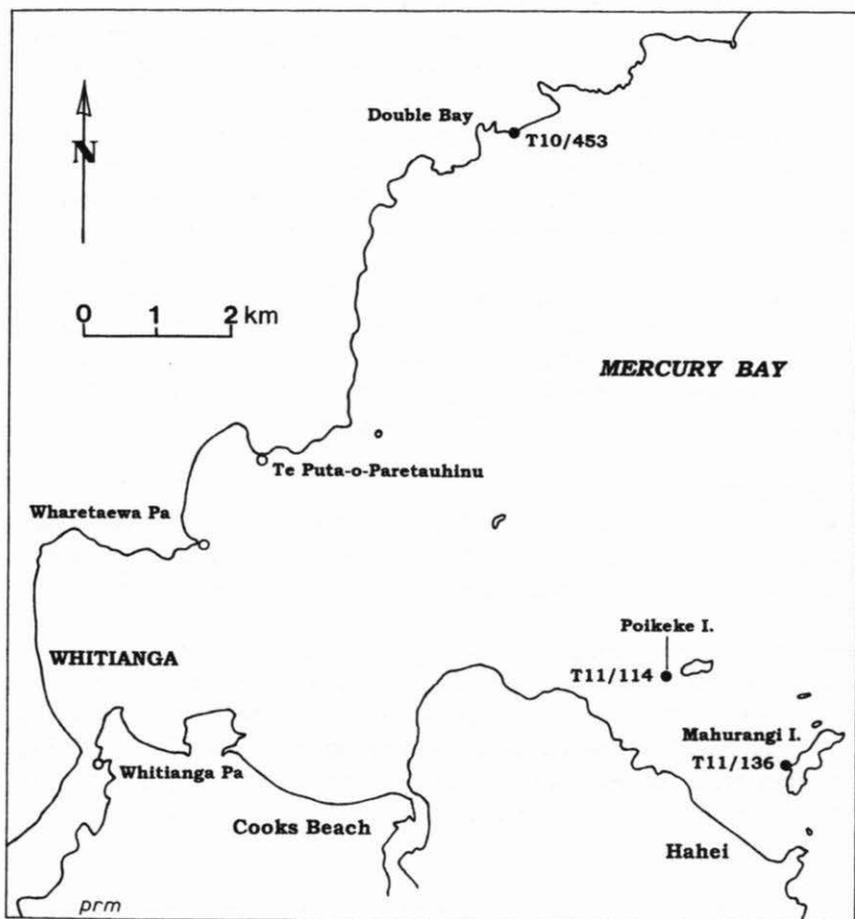


Figure 1. Map of Mercury Bay, showing the location of dated sites (black dots) and other places mentioned in the text.

These and other observations made by Cook, including the fact that Whitianga Pa had been destroyed (perhaps 15-20 years earlier, Salmond 1991: 202), indicate that the local population had been attacked in recent times, probably on more than one occasion. In fact, Cook's comments in his journal suggest they were under constant threat.

Radiocarbon dates

In 1977 samples of shell midden were collected for radiocarbon dating from two small island and one coastal pa in Mercury Bay. Samples were obtained from Poikeke Island (T11/114), a terraced islet on the SW side of Mahurangi Island (T11/136), and a small headland pa (T10/453) near Double Bay (Fig. 1). Unfortunately Te Puta-o-Paretauhinu had collapsed some time after 1855, and therefore could not be sampled. Dating was undertaken to establish whether T10/453 and T11/136 could have been occupied around the time of the *Endeavour's* visit; the sample from Poikeke Island was essentially intended as a "control". Details of the dates are provided in Table 1.

The sample from Poikeke Island was obtained from a small lens of concentrated shell (mostly *Paphies australis*), which appeared to form part of the main cultural layer (Moore 1977). The sample from T11/136 came from a patch of midden on the SW side of the islet, and that from T10/456 was obtained from a concentrated shell midden below the pa.

Interpretation

Two things are immediately obvious from the data: (1) the remarkable coincidence in the ages, and (2) that (at 1 sigma) occupation of the sites appears to pre-date the *Endeavour's* visit by perhaps 50-60 years.

Excluding the possibility of laboratory contamination (extremely unlikely given that NZ4486 was dated later than the others), or calibration error, then the dates indicate all three sites were occupied some time between 1660 and 1800, and most likely during the period from about 1680 to 1720 A.D. (Fig. 2). They were not necessarily occupied at the same time, and occupation could have spanned a few weeks (site T11/136) to several years (T11/114, T10/453).

It was expected that the date for Poikeke pa would confirm it was occupied around the time of Cook's visit. Although it may do so (at 2 sigma, Fig. 2), the date could also indicate the island was occupied much earlier.

A small test pit excavated in 1977 near where the radiocarbon sample was collected revealed only a single occupation layer, which consisted largely of reworked material (reworked either during later occupation, or by burrowing birds and natural erosion) (Moore 1977). This layer contained scattered *Turbo smaragdus* shells and broken stones, with some charcoal at the base. In

contrast, the sampled midden consisted mainly of *Paphies australis*, some with their valves still articulated and therefore probably not reworked.

At the time, this pipi midden was considered to be contemporaneous with the main "Turbo layer", but since no definite stratigraphic relationships were established, it could be slightly younger or older.

Years A.D.

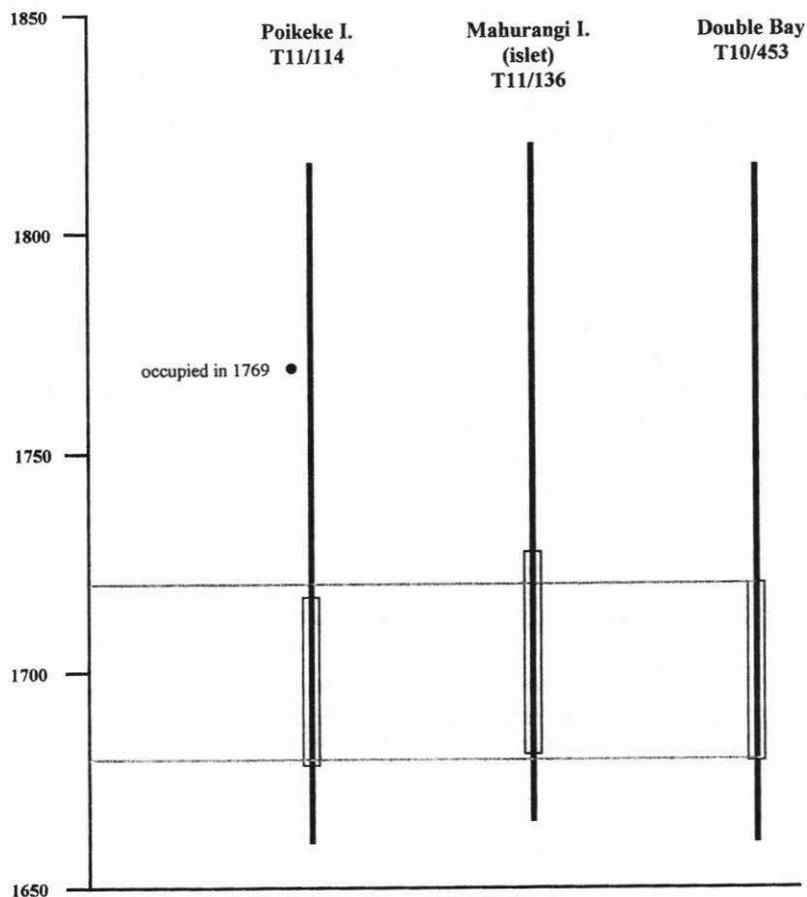


Figure 2. Calendar age ranges for radiocarbon dated sites, at 1 sigma (double bars) and 2 sigma (single bars).

Conclusions

The three radiocarbon dates indicate that some small islands, stacks, and headlands around Mercury Bay were probably occupied (maybe for the first time) between about 1680 and 1720 A.D. This suggests there was a significant invasion, or period of warfare, perhaps 50-60 years before *H.M.S. Endeavour's* visit, which resulted in the destruction of large mainland pa (possibly including Whitianga Pa), and forced surviving groups to seek temporary refuge on waterless, natural strongholds. One such site - Poikeke Island - appears to have been occupied on at least two separate occasions.

Acknowledgements

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References

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Table 1. Details of radiocarbon dates, Mercury Bay.

	Poikeke I. T11/114	Mahurangi I. T11/136	Double Bay T10/453
Number	NZ4354	NZ4353	NZ4486
δ13C	+1.6	+1.2	+2
Conventional age	569 ± 32	561 ± 32	567 ± 32
Calibrated age*:			
1 sigma	272-233	269-223	271-230
2 sigma	290-135	286-129	289-133
Material	Paphies australis	Paphies subtriangulata	Paphies subtriangulata

* years B.P.