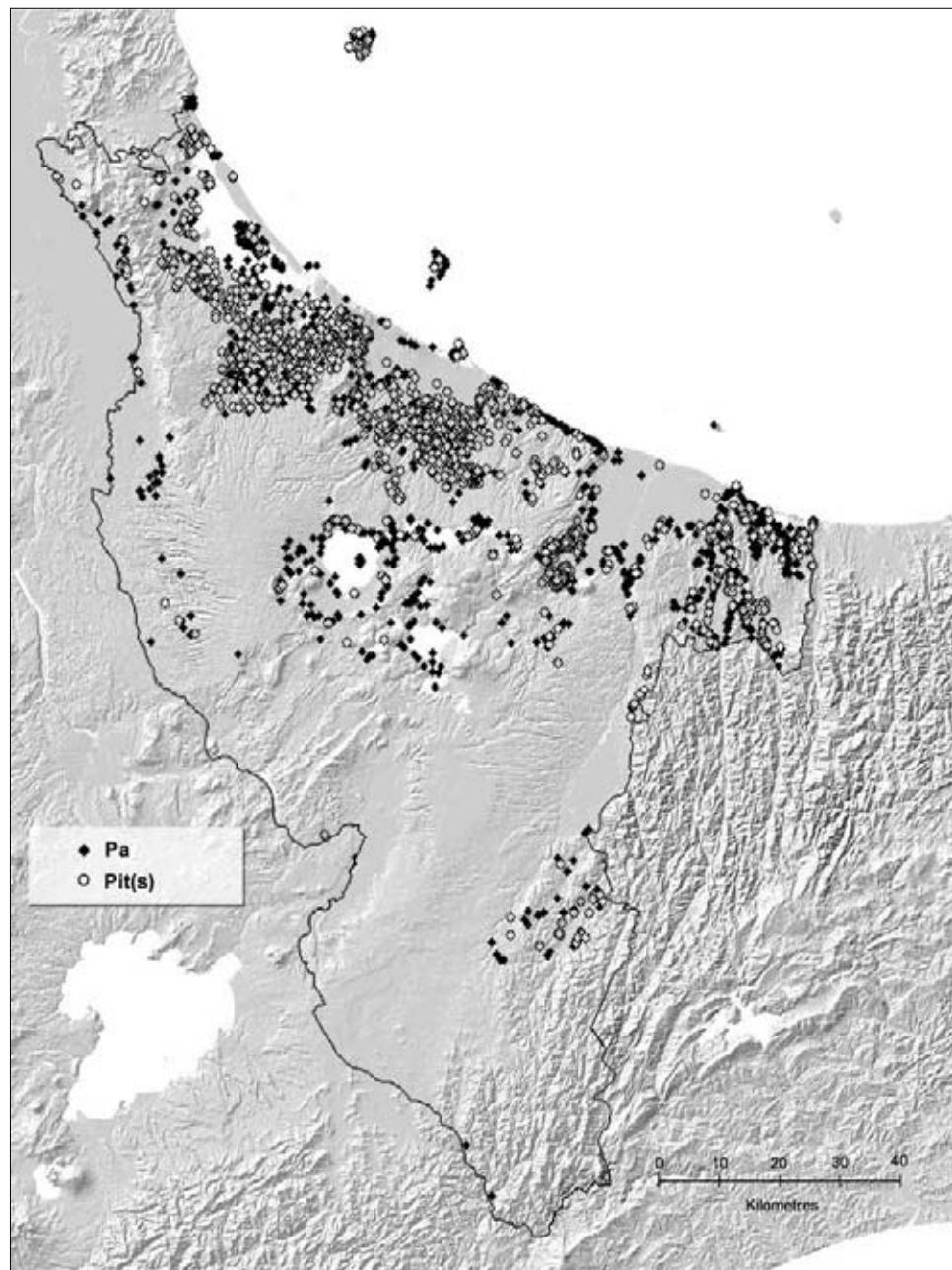


Figure 5. Distribution of pa and pit sites in the Bay of Plenty region.



### 9.2.1 Organised groups and settlement during the main period of prehistoric Maori occupation

The broad pattern of Maori occupation on mainland Bay of Plenty shows a preference for coastal sites, particularly at places with harbours or estuaries. The Rotorua Lakes were also a favoured place to live. The distribution of defended sites is similar to that for undefended sites, which indicates that stress between groups was widespread. The resources that made particular areas favoured for occupation are evident, and are discussed further in the relevant sections of this report. The archaeological evidence indicates that the collection of birds for consumption was less important than the grown, fished and gathered food resources.

The size of fortifications varies in the region. Large sites occur away from the immediate coast at Whakatane and at Papamoa. The fortifications at these

sites did not have to be large, as locations for smaller fortifications were available. This suggests that there was a particular reason for the large size—probably that at some time in the past large social groups aggregated for defence. Until more is known about the timing of occupation of these areas, little more can be said on the duration of such aggregations.

The archaeological evidence to date shows some variability over the Bay of Plenty region, such as the more eastern distribution of *rua* and the dominance of *pa* over other site types in the Rotorua area. However, such patterns may be artefacts of recording or survival. To date, no case can be made for larger social groups existing at a scale of organisation above a site on the basis of the archaeological record.

Kevin Jones (DOC, pers. comm.) believes that occupation of the Waimana and Opouriao valleys in the east of the Bay of Plenty region commenced in the 14th century, with the onset of *pa* building in the mid-16th century and the *pa* continuing to be used until the early 19th century. There are two types of *pa* in these valleys: ridge *pa* with transverse ditches; and *pa* with lateral and transverse ditches encircling the defended area, which are often continuous with naturally steep slopes that do not require further fortification. According to Jones, the size of *pa* and the density of their distribution on river-cut high terrace lands and at gorge entrances are also of note. Although all the *pa* need not have been occupied at the same time, Jones has suggested that their size and density does indicate considerable populations cultivating river terraces and the Urewera foothills. He has also noted (in respect of the large *pa* in this area) that identifying a *pa* as a neat unit of fortified land is difficult in some places and that Hui te Rangiora (W16/85), and the ridge on which Te Koau (W16/93), Rimuhongi (W16/198) and Te Puehu (W16/236) were constructed may be better seen as defended complexes of *pa* in which leading ridges were scarped and trenched as the need was seen.

Jones (pers. comm.) has described the sites of pre-European origin (i.e. *pa*/obsidian *find spots* in association with pits) as being predominantly in the northern parts of the low-altitude dissected terraces, near Te Whaiti, but not on the valley floor. He states that pre-European settlement also spread up rivers (such as the Managawiri) west of the main valley and that this pattern was overlain by the pattern of 19th-century settlement. This later settlement occurred not only on the same sites as the pre-European settlement, but also extended out to the margins of the habitable area of the southern hill country in a much more extensive fashion than the prehistoric settlement.

There is evidence of active clearance of the forest in the early 19th century. Jones (1983b) made a case for the growth in 19th-century occupation being initiated by the ability to grow the introduced potato in the area. The sparse occurrence of archaeological sites in the Rangitaiki Valley to the west of Whirinaki is very notable. Differences in survey effort may explain some of this, but it is consistent with a low Maori occupation in the early 19th century and needs further explanation.

Edson (1973) made a strong case for Motiti being the most favoured site of the offshore islands in terms of its assets for human use. This is borne out by the density of sites on the island (Walton & McFadgen 1990). Clearly, it was a favoured place for residence for a long period. Its traditional and more recent history has frequent reference to dispute over its possession.

Kahotea (1983) reviewed the settlement patterns of Ngaiterangi and their allies around Tauranga Harbour through the period of the Musket and New Zealand Wars from 1820 to the 1860s. There was some contraction at the coastal territorial margins as a result of assault from outside, but the general pattern of larger permanent fortified settlements on the harbour margin, with some dispersed gardens up to the bush-line, was stable for much of the period. It was only following British military intervention in 1863 that there was a radical increase in inland settlements. These lasted only a short time before most occupation retreated back to the harbour edge, quickly followed by undefended settlements in that location. The review of hapu land claims provided by Kahotea (1983: 83) shows an interesting pattern of settlement areas radiating out from the harbour and along the navigable Wairoa River, illustrating the importance of both harbour and inland resources.

### 9.2.2 Fortifications

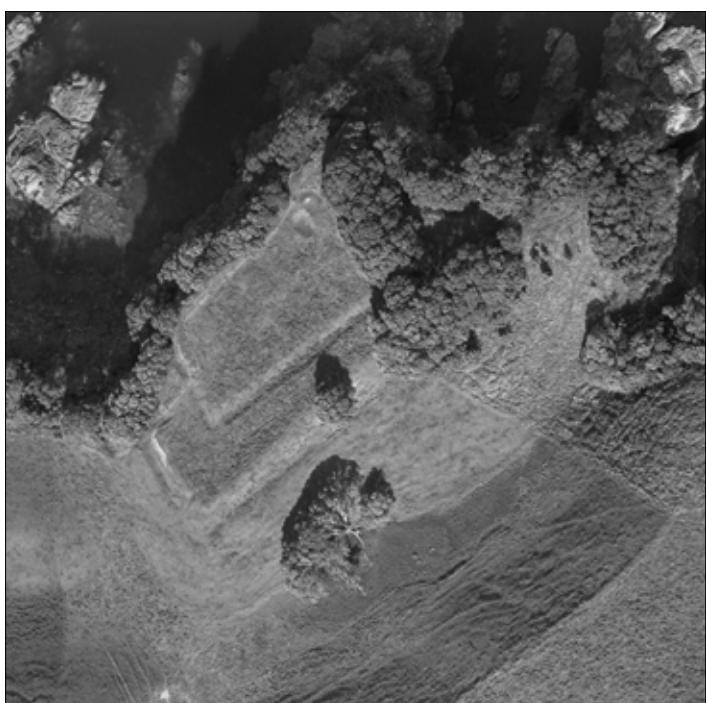


Figure 6. Pa on Motiti Island, oblique aerial photo.  
Photo: K. Jones, DOC.

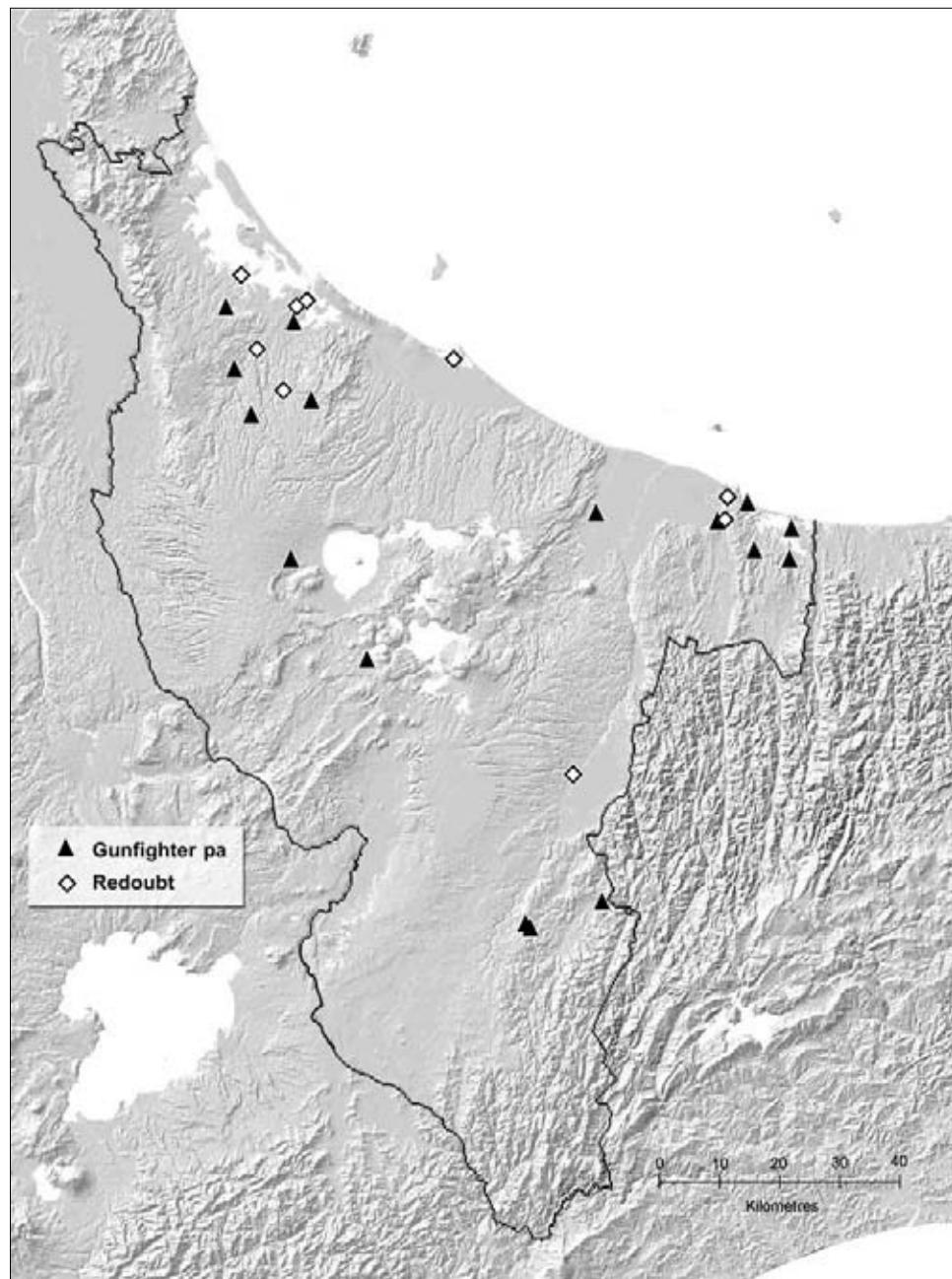
Pa sites are common in the Bay of Plenty region (Fig. 5); many have been accurately mapped and a number archaeologically investigated. A typical pa is shown in Fig. 6. The overall pattern of distribution is similar to other areas with substantial Maori settlement, as pa constitute a sizeable proportion of the total number of recorded Maori archaeological sites. The distribution is primarily coastal, with some additional sites along the western side of the Kaimai Ranges, and some inland sites around the Rotorua Lakes and on the western margins of the Urewera ranges. Pa sites are infrequent, or unrecorded, in the inland Rangitaiki Valley. Pa with features showing they were adapted for gun fighting are quite common in the region (Fig. 7).

Swamp pa have been found at Papamoa and on the Rangitaiki Plain. One of these has been the subject of a major investigation

(Irwin 2004). Swamp pa had defences that were greatly reinforced by their location in a swamp; palisades were usual, and the living areas may have been deliberately built up or constructed on remnants of dunes that rose above the wet areas.

Groube (1970) classified pa into three classes. All three of his classes are present in the Bay of Plenty region, but the region is particularly notable for the frequency of his class 3a and 3b pa—ring ditch and ring ditch with associated terraces—which (except for Taranaki) are rare elsewhere in New Zealand. O'Keeffe (1991) and Phillips (1996), in their respective studies of the western and eastern parts of the Bay of Plenty region, attempted to determine whether the class 3 pa were of more significance at one particular time, and looked for other associations—but with negative results. It seems that if pa defensive features are to be of broadly typological value (in terms of determining period or cultural affiliation), the Groube scheme will need

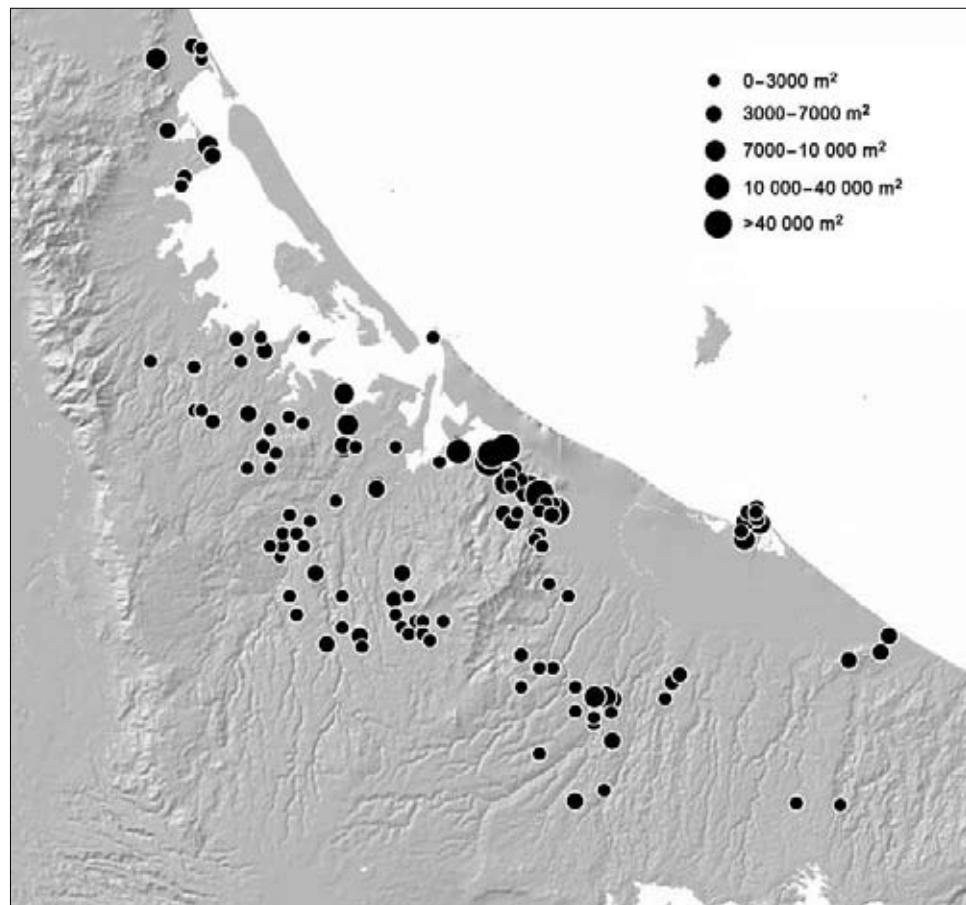
Figure 7. Distribution of gunfighter pa and redoubts in the Bay of Plenty region.



to be improved. A statistical investigation that extracts multiple characters from detailed pa surveys may provide a way of classifying pa. A study along these lines is needed.

Because pa have been well surveyed in the Bay of Plenty region, the way in which large and small pa are distributed is now known for some parts of the area. O'Keeffe (1991) and Phillips (1996) have mapped areas showing pa sizes. In the western Bay of Plenty, there is a remarkable concentration of large sites on the Papamoa hills and just east of Tauranga Harbour (Fig. 8). Around the Ohiwa Harbour to the east there are no similar concentrations and distribution is more general (Fig. 9), with a small concentration on the Hiwarau ridge east of the Nukuhou River. Detailed mapping of sites near the Whakatane River, from the Whakatane Headland south to the vicinity of Ruatoki/Waikirikiri, has revealed a series of large sites, none of which were

Figure 8. Pa sites in the western Bay of Plenty (after O'Keeffe 1991). There is a wide spread in site sizes. The larger pa cluster strongly around the Papamoa hills and Maketu has notable concentrations. Note: pa on the Tauranga Harbour islands, offshore islands and in the Rotorua Lakes catchments are not shown.



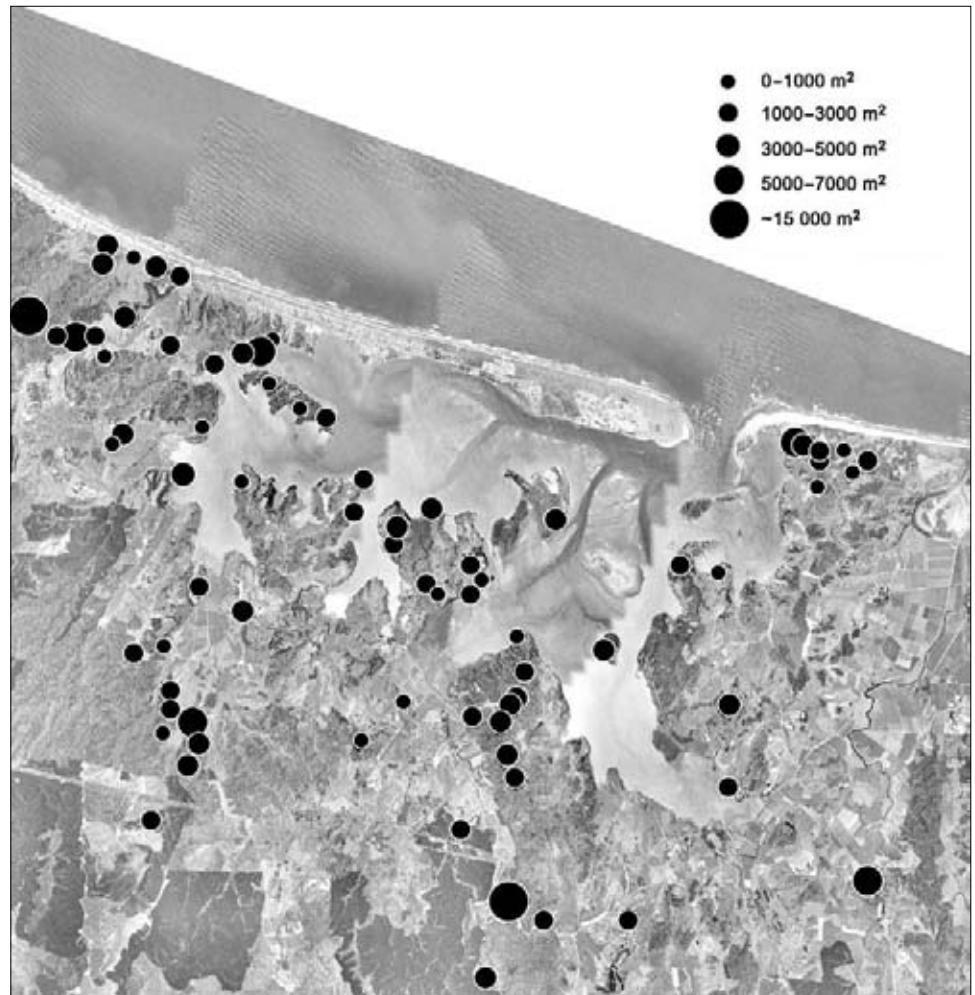
occupied during the *contact period* (e.g. Fig. 10). This pattern has also been identified on the Auckland Isthmus. Walton (2006) has analysed the size distribution of a number of samples of pa from throughout New Zealand. The western Bay of Plenty pa stood out as having a high proportion of large pa (over 5000 m<sup>2</sup>). Using this measure, the Phillips sample from the eastern Bay of Plenty was not distinguished from pa elsewhere.

A remarkable series of sites (V17/12, 34, 75, V18 /13, 38 and 39) in the Whirinaki River valley in the southeast of the region had standing palisade posts at the time they were first recorded. Some of these also had recently fallen posts. They would appear to be relatively recent in age, and were perhaps in use as late as the 1870s.

Major pa excavations are addressed in section 10 of this report. Two noteworthy excavations at Rotorua and Whakatane, which are not discussed in section 10, are covered here.

The Rotorua excavation was a mitigation excavation of a promontory pa (Kahotea 1988; U15/35). Few sites have been investigated in the Rotorua area. The site had rectangular pits, kakahi (freshwater mussel) midden and a palisade along the defensive bank. Five radiocarbon dates on unidentified charcoal were taken from the site (see Appendix 3) (the exact locations have not been published). Three gave modern dates and the other two were not helpful, giving a time between the 15th and the 18th centuries, possibly also affected by inbuilt age.

Figure 9. Pa sites at Ohiwa (after Phillips 1996). The spread in site sizes is still wide, but the large sites are smaller than at Tauranga. While there is clustering, the two largest sites stand apart from it.



The second example was another mitigation excavation on a hill that proved to be a scarp-defended pa (W15/9) (McGovern-Wilson 1995b), one of many along the eastern escarpment of the Rangitaiki Plain near Whakatane (Moore 1973, 1974; K. Jones, pers. comm.). Three rua were found in the limited area exposed, one of which contained a burial, the skeleton's disarticulation being consistent with its being the result of cannibalism rather than a secondary burial (i.e. a complete skeleton that had become disarticulated and then re-buried). Associated with it were the remains of at least three dogs. A skeleton of a puppy was found in another rua. Kaka bones were found in the burial rua fill, along with shell midden. Radiocarbon dating of shell from the shell midden supports the backfilling of the rua between the mid-16th and mid-17th centuries. This also dates the burial, so the site provides important evidence of the antiquity of cannibalism. The relationship of the rua to the use of the site as a pa is not known. At the base of the rua with the burial, beneath the human remains, there was a thin layer of white sand, overlying some earlier midden and earth fill. The sand may relate to a prior storage use of the rua (see section 9.2.4). The animal species identified from this site are listed in Appendix 4.

Schmidt (1996) explored the history of construction of fortification in New Zealand. He concluded that pa construction commenced at about AD 1500. The evidence he reviewed included that for the Whakatane and wider Bay