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**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER**



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TIROMOANA PA, TE AWANGA, HAWKES BAY

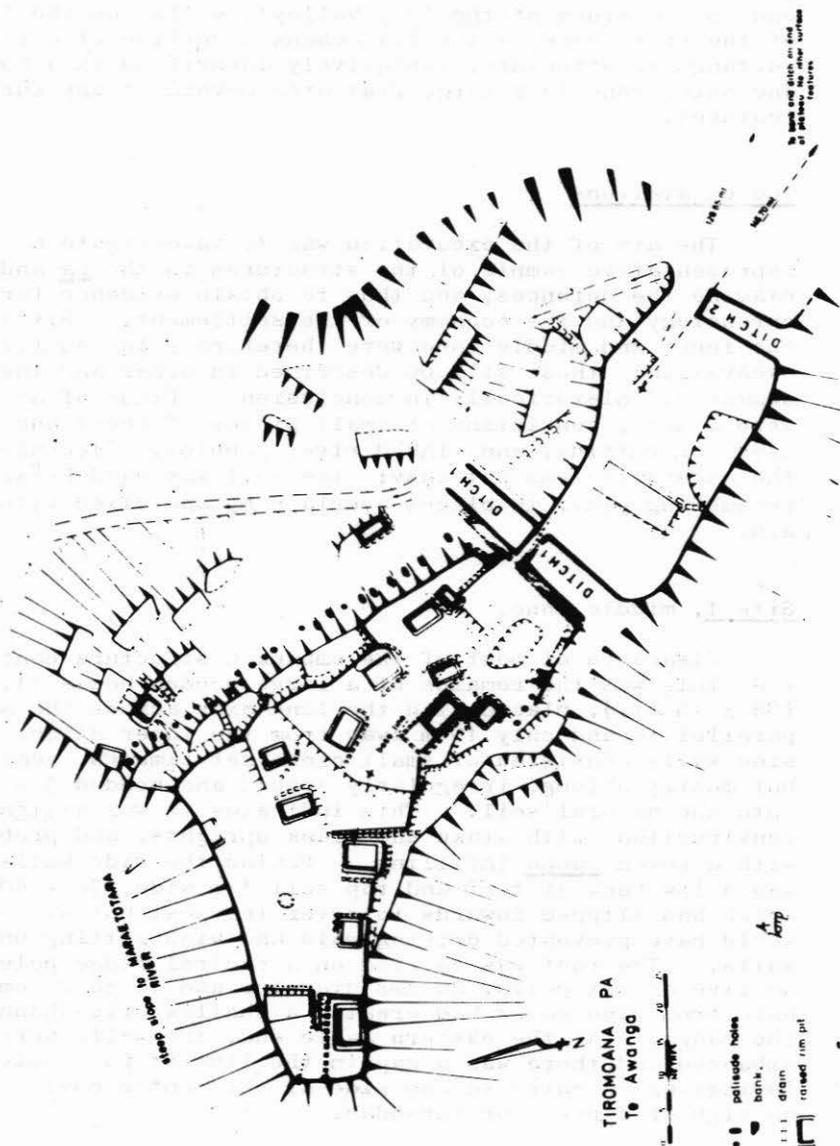
INTERIM REPORT

Aileen Fox

Excavations on behalf of the Anthropology Department, Auckland University, took place in January 1974 at Tiromoana pa, Te Awanga, Hawkes Bay, with the ready co-operation of the owner, Mr Wm. Shaw. The work was directed by Lady (Aileen) Fox, visiting lecturer, assisted by Karel Peters, Senior Technical Officer, and John Cossor, and was carried out by twelve students from the Department, two from Otago University, and four members of the New Zealand Archaeological Association. Accommodation was kindly provided in the Tiromoana Shearers' Quarters, where Miss Caroline McGrath acted as caterer. The excavations, which lasted for four weeks, were financed by the Kiwi Lottery fund for scientific research.

The site (N 135/1:399.202)

The pa is situated at the end of a 200 ft. high spur overlooking the Maraetotara river, about half a mile from the mouth: the river flows into Hawkes Bay at Te Awanga, some seven miles west of Cape Kidnappers. The plan (fig. 1), which was made in October 1973 before the grass had grown, shows the remarkable state of preservation of the site. The pa has three separate lines of defence, consisting of three ditches and two banks, each barring the easy but narrow line of approach down the spur. Steep scarps provide good natural defences on the flanks, with the exception of the north-east side, where there are gradual slopes to a little valley, now dry, leading down to the river. Here, a row of 22 depressions spaced 2 - 4 m apart along the hillside, and at first thought to be the remains of collapsed ruas (circular storage pits), proved to have held the main uprights of a palisade. The interior falls into three divisions: the inner zone contains 13 - 14 rectangular storage pits with raised rims and external drainage channels, together with several levelled platforms and terraces suitable for occupation.



In the middle zone there are similar structures at the head and on the sides of the 'dry valley', whilst on the level top of the spur there is the low embanked outline of a long rectangular structure, tentatively identified as a house. The outer zone is a large flat area devoid of any surface features.

### The excavations

The aim of the excavation was to investigate a representative sample of the structures in the pa and to examine the defences, and thus to obtain evidence for the chronology and the economy of the settlement. Six areas in the inner and middle zone were therefore selected for total excavation: these will be described in order and the results summarised historically in conclusion. Finds of artefacts were meagre, consisting of small pieces of chert and obsidian used for cutting, and flaked river pebbles. Technically, the excavation was not easy: the soil was hard Lo<sup>ss</sup>, resembling clay, in places overlaid by and mixed with volcanic ash.

### Site I, middle zone.

Clearance of most of the embanked structure confirmed that this was the remains of a large wooden house 11.80 x 4 m (38 x 13 ft.), placed with the long axis across the spur, parallel to and only 10 m away from the inner ditch. The side walls consisted of small close set timbers, some round but mostly oblong, irregularly spaced and bedded 5 - 10 cms into the natural soil. This indicates it was a light construction, with stake and plank uprights, and probably with a woven raupo infilling. Behind the side walls there was a low bank of turf and top soil 1 m wide, 30 - 40 cms high, which had slipped inwards to cover the post holes. The bank would have prevented driving rain and wind getting under the walls. The roof was carried on a central ridge pole, supported on five or six posts, 20 cms diameter and 12 to 25 cms deep. Rain from wide eaves had created a shallow drip-channel outside the banks. At the eastern gable end, the walls were not embanked and there was a gap in the line of post holes, indicating an entry to one side of the centre post. There was no sign of a porch or verandah.

The floor was of fine dark soil, overlying the natural pale ashy Lo<sup>ess</sup> deposits. No hearth was found but charcoal was present throughout the occupation layers.

The south bank of the house had been erected over a line of 15 substantial posts 1 m apart, up to 35 cms deep and 30 - 60 cms diam. These were aligned as a defensive barrier across the spur, extending beyond the house in both directions, and represent an earlier palisade which had been demolished before the house was built.

Site II, inner zone.

At the tip of the spur there was a well defined dwelling unit consisting of a large raised-rim pit (II A), and two level platforms (II B and II C) shut off by a low bank and scarp from the remainder of the pa: excavation showed that these had been used as a cooking place, storage place and probable sleeping house. Initially, the cooking place had been a storage pit 4 by 2.50 m and 60 cms deep, and with a pitched roof supported on three central posts, one of which had been replaced. After it was disused and the sides had collapsed on to the accumulated soil on the pit floor, a series of scoop hearths had been dug into the filling and much ash and food refuse, including fish and bird bones and paua shells, had been scattered around. At least three levels could be distinguished in the filling, which had accumulated until it was level with the surface. The second storage pit measured 4.20 x 3 m and 1.5 m deep: the raised rim consisted of fine grey surface soil, with an external drain on the top upper sides. The pit had been dug into a hard bank of Lo<sup>ess</sup> 'clay', making its investigation difficult: rectangular depressions on the floor indicated possible bins at the sides. The pitched roof was supported by two or three central posts and there was an entrance at the northern gable end, shown by a step (buttress) and post holes. Part of the wooden door slab was found, exceptionally well preserved. The pit had been left open and had weathered naturally after it was disused. Several lines of small post holes in the remaining area adjoining the cooking place indicated a third construction, probably a small sleeping house: it had a well trodden floor but no fireplace was found.

Sites III - IV: the inner defences.

A three metre wide section was cut through the inner rampart in the centre of the spur (Site IV): it showed the successive horizontal construction layers of dark surface soil and yellow Loëss 'clay' dug from the ditch. The rampart was 2.2 m wide and 1 m high. The positions of palisade posts were detected in the rampart front. Three exceptionally large and deep post-holes were found at the back of the rampart; in two of them the well preserved butts of wooden posts were found at the depth of 1½ m. These three posts would have supported a lofty wooden fighting stage above the rampart, measuring 5.50 m long and 2.25 m wide and secured to the front palisade posts. Evidence for two fighting stages of similar size was found at Otakanini pa, S. Kaipara, by Peter Bellwood. It is possible that the Tiromoana stage was a two-tier construction, because there was a row of three more post-holes, 60 - 70 cms deep, 2.5 m behind the rampart. These could have carried a raised platform providing easier and more rapid access to the higher stage than a ladder and for a greater number of warriors. Alternatively, the posts could be the remains of a previous palisade before the rampart and stage were built.

A cutting at the inner side of the middle ditch (Site III) produced no evidence for palisade post-holes or remains of a bank. The short length of ditch was apparently dug to channel an attack towards the main inner defences. The outer rampart and ditch were not investigated.

Site V, inner zone.

This was a 9 x 5 m terrace levelled into the east side of the hill at the beginning of the slope down to the 'dry' valley. The edge of the terrace was a hard-trodden path with a patch of pebbling; behind this a row of 5 post-holes 30 - 40 cms diam., 20 cms deep, indicating the front of a structure 7 m long, presumably a shed with a lean-to roof resting on the scarps. There was a shallow gutter at the back draining the foot of the scarp.

### Site VI.

This was one of the row of 22 depressions on the same side of the hill and immediately below Site V, which was thought to be a collapsed rua, or circular storage pit. It proved to be the remains of a trench 1.50 m long, 1 m wide, dug into the hillside, at the end of which there was a post-hole. The original post, 40 x 24 cms, had been set in a post-pit 75 cms diam., packed with lumps of clay: the packing had been cut through, the post removed and its socket filled with soil. The position of this and the other similar holes aligned along the hillside at 2 to 4 m intervals was suitable for a palisade to defend the relatively easy slopes of the 'dry' valley, linking with the end of the inner rampart.

### SUMMARY

The pa at Tiromoana is a defensive work of two or three periods. Initially, it was a small pa of 450 sq. metres at the tip of the spur, strongly defended by a rampart fronted by a palisade and a ditch across the spur (Site IV), with a 5 m long fighting stage of two tiers on the highest point. A strong palisade of 22 main uprights linked to the end of the rampart defended the weaker eastern side (Site VI). A second ditch (Site III) 40 m higher up the spur, was dug to control the line of approach. It is possible that a second palisade (found beneath the long house on Site I) was part of the defensive scheme, and was erected to check an attacking party within convenient missile range from the fighting stage. Alternatively, this second palisade could belong to an earlier and temporary defence as it was a slighter work.

In the later period when the third rampart was built 150 m farther up the spur, the pa was expanded to 1.5 hectares, and now included a large flat area which was probably only occupied as a refuge in times of crisis, or as a marae for ceremonial gatherings. At some time the second palisade was taken down and replaced by the long house (Site I), built in a position that would have blocked the view from the inner defences, rendering them ineffectual. The area of occupation appears to have expanded on to the terraces at the head and flanks of the 'dry' valley.

Changes in the limited area examined in the interior (Site II) included a storage pit converted to a cooking place, and the construction of a new raised-rim pit of greater capacity. Finally, when the pa was abandoned the massive posts of the lateral palisade (Site VI) were dug out, presumably for re-use elsewhere. The archaeological findings thus indicate a long period of occupation and a prehistoric date. The only object of European manufacture was a 19th century glass bottle found at the top of one of the stage post-pits, indicating that it had completely filled up by that time.

### DATING

Eight samples of wood and charcoals were submitted to the Institute of Nuclear Sciences, D.S.I.R. (Director Dr T. Rafter), with the following results. The figures in the fourth column have been calculated with respect to the new Half Life of  $5730 \pm 40$  years, and applying a secular correction, as given in the Proc. 8th International Conference on Radiocarbon Dating, 1972.

| <u>Lab. Number</u> | <u>Site</u>                    | <u>Old Half Life</u><br><u>BP</u> | <u>Corrected</u>             |
|--------------------|--------------------------------|-----------------------------------|------------------------------|
| 4774/1             | IV Stage post K                | 340 BP $\pm$ 60<br>(AD 1610)      | 430 $\pm$ 60 BP<br>(AD 1520) |
| 4774/2             | I House post F                 | 130 $\pm$ 90<br>(AD 1820)         | 140 $\pm$ 90<br>(AD 1810)    |
| 4774/3             | II A Pit, door slab            | 3530 $\pm$ 90<br>(1580 BC)        | 3910 $\pm$ 90<br>(1960 BC)   |
| 4774/4             | II B Early pit, post 4         | 1050 $\pm$ 90<br>(AD 900)         | 1020 $\pm$ 120<br>(AD 930)   |
| 4774/5             | II B Cooking place<br>Hearth 8 | 420 $\pm$ 70<br>(AD 1530)         | 450 $\pm$ 70<br>(AD 1500)    |
| 4774/6             | I Charcoal in<br>house floor   | 490 $\pm$ 70<br>(AD 1460)         | 520 $\pm$ 70<br>(AD 1430)    |
| 4774/7             | II Pit, post 4                 | 760 $\pm$ 80<br>(AD 1210)         | 750 $\pm$ 80<br>(AD 1200)    |
| 4774/8             | IV Stage post L                | 550 $\pm$ 60<br>(AD 1400)         | 570 $\pm$ 60<br>(AD 1380)    |

Comments:

With the exception of sample 3, which can be disregarded, the dates are in accordance with the sequence established by archaeological means during the excavation, and must be accepted as a whole.

The earliest occupation was at the end of the spur (Site II B, sample 3), where after making allowances for the age of the timber, it appears that pit storage for agricultural produce existed before A.D. 1050. The main defences were erected about A.D. 1500, or slightly earlier, on the evidence from the two stage posts (samples 1 and 8); contemporary occupation is attested from samples 5 and 6. The date of the large house was 18th or early 19th century (sample 2). Thus there was Maori occupation on the ridge for some 800 years: it would need more extensive excavations to demonstrate whether the site was occupied intermittently or continuously.

Description

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