NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER

SITE RECORDING AT POUERUA, BAY OF ISLANDS

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In January this year three survey teams worked in the inland Bay of Islands - in and around the Taiamai Plain. The plain itself is composed of a number of scoria cones with their surrounding lava flows, the most prominent of which is Pouerua.

Pouerua stands 90m above the surrounding landscape (269m above sea level). It is horse-shoe shaped, with a breached crater, similar in appearance to Mt Wellington in the Auckland volcanic area. Around the cone are encircling lava flows from successive eruptions. Those nearest the cone form short, steep-sided ridges, while those further away tend to be smaller, and rounded in shape. Beyond these are rock-strewn flats. The red-brown loams that cover the hills are highly fertile, but for the most part are rocky and shallow which, however, does result in excellent drainage. The Pouerua lava field covers approximately 400 ha. It is bordered by streams to the east and west, Lake Owhareiti to the south and State Highway 1 to the north (see Fig.1).

This article is divided into three sections, each describing a different aspect of the Pouerua survey. One section is about the site distribution with respect to varying landforms, another focusses on the agricultural sites, while the last is a brief description of pa site N15/224.

Site distribution

An attempt was made to correlate sites located with the different landforms noted. This is only a preliminary exercise as not all the area was surveyed, and the landform types were based on impressions gained during the fieldwork, therefore they do not take into account changes that might have occurred since occupation due to weathering, agriculture, etc. The seven landforms were distinguished by elevation, steepness and frequency of surface rocks. They are listed below and shown in Figures 2 and 3.

1. The central focus is the volcanic cone of Pouerua, with its 45°-50° slopes. Terraced in the manner of Mt Wellington, it is defended by steep scarps as well as ditches and banks (see Plate 1). It was recorded by Best (1975:303-308) in his book, The Pa Maori.

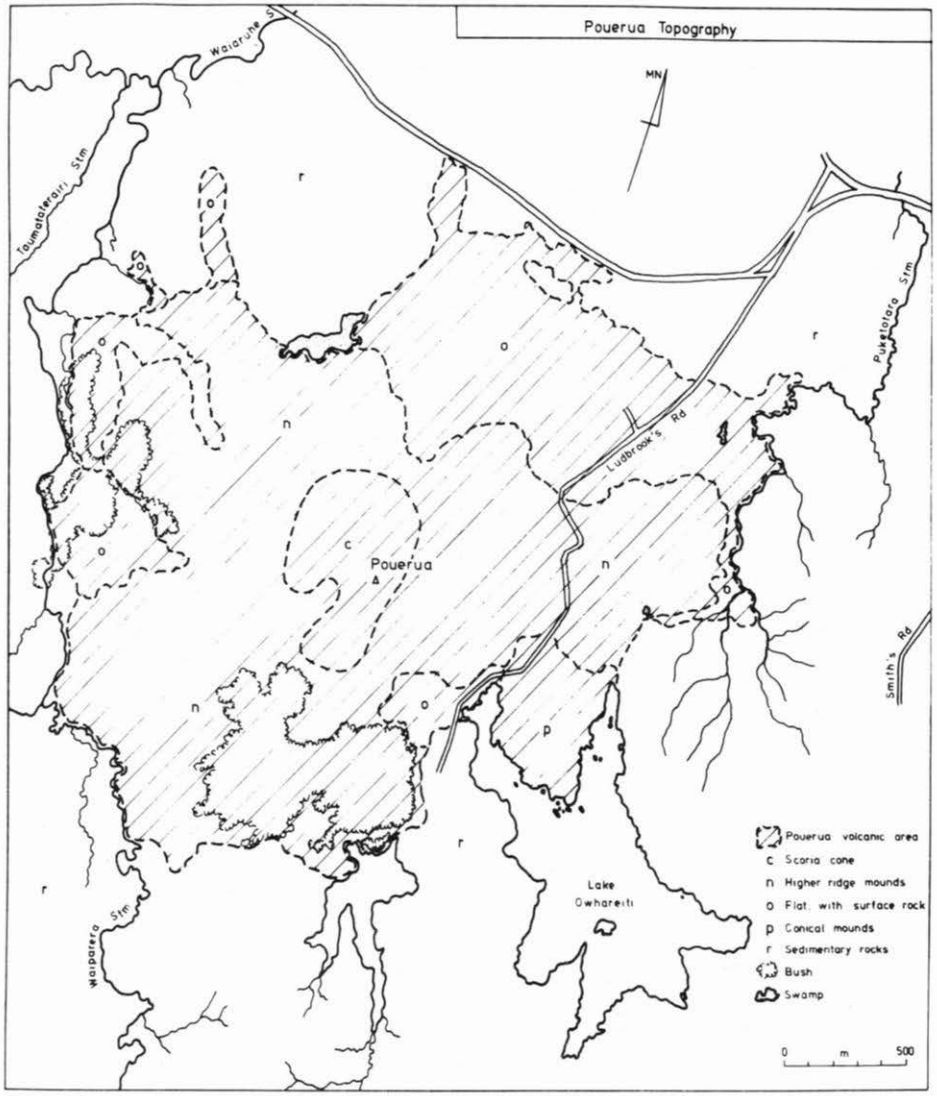


FIGURE 1. Pouerua topography.

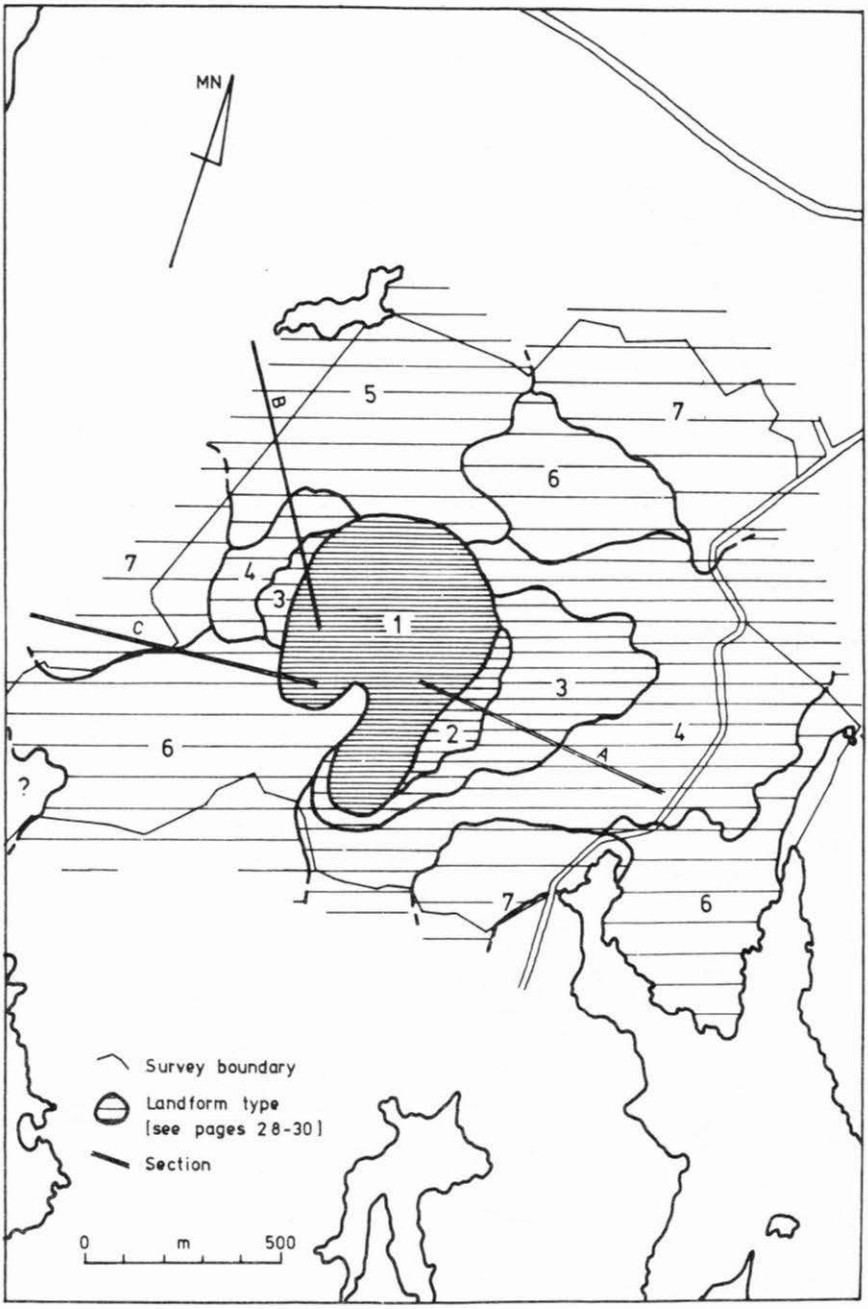


FIGURE 2. Pouerua landforms.

2. On the eastern flank, steep-sided ridges lead off Pouerua eastwards. This land is marginally less steep than Pouerua itself. On the top of the ridges and spurs are terrace/pit sites.

3. Located mainly on the eastern flank are steep ridges and hills descending and radiating out from the cone. These also contain terrace/pit sites, the valleys between have dendritic drainage patterns (see below).

4. Rolling hills located below 3; they too descend and radiate out from the cone. Generally well-grassed, which is probably due to good ash cover resulting in better soil and fewer surface rocks. Hilltops, ridges and knolls contain terrace/pit sites, the valleys between have dendritic drainage patterns.

5. On mainly flat land there are low hills and ridges rising 5-15m at an angle of 20°-30°. These are located on the north side of the cone and are generally well-grassed with few surface rocks. Features here are terrace/pit sites on the high spots with extensive checkerboard drainage patterns - some lines being over 300m in length and crossing over the lower hills.

6. Similar to the former, but the short hills and ridges are steeper sided (up to 45°), higher (5-30m), more frequent and tend to have many more surface rocks. Located to the west of the cone: features include terracing - often stone-faced - and other stone features, but probably no drains. Another area to the east beside the lake has pits, terraces, stone features and housesites marked by fireplaces; the latter are especially notable near the lake shore.

7. Flat to rolling land, no hills. Located on the north and west sides of Pouerua and extending out for a wide distance (not shown on Fig.2). It contains some drains, mainly asteroid, directed into the centre of small basins. It is primarily notable for the mass of stone features - mounds, rows, alignments, terraces, enclosures, etc.

The list of landforms and associated sites gives some idea of the richness and variety of sites around Pouerua, incorporating, as it does, fortified sites (including Pouerua itself), living and storage sites and agricultural sites, all of which are virtually untouched. The rocky soil has meant that there has been little disturbance of the features (see Plate 2).

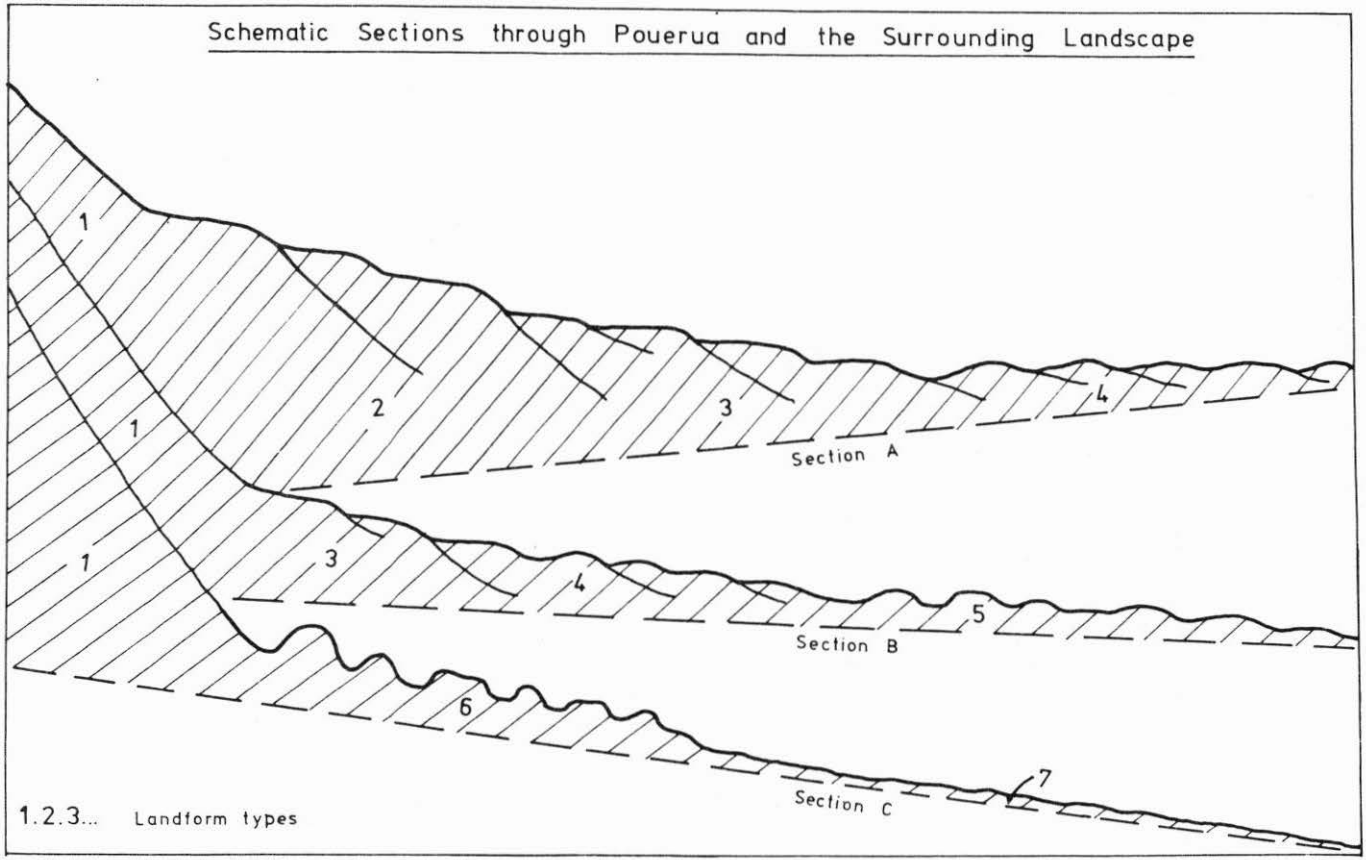


FIGURE 3. Schematic sections through Pouerua and surrounding landscape illustrating landform types.

This survey, which recorded sixty-two sites, mostly just to the north and east of the cone, only scratches the surface of the material present in this region. Much more needs to be done not only surveying but formulating and testing theories on location, spacing, site interrelationships, etc., which can rarely be done effectively, except in a 'complete landscape' such as this.

Agricultural sites

Two of the most obvious features seen in the area were the surface rocks, which had been formed into a wide range of stone features, and field drains. While many stone features also occurred on the sites (in the form of stone retaining walls, stone-faced terraces, stone-lined hearths, stone heaps and others not identified), the majority, together with the drains, were situated in valley bottoms, basins between ridges and hills and the flat land around the volcanic cone, the area that in fact surrounds all the other sites located in the survey and extends beyond them (see Plate 3).

These features broadly classified as stone features and drains are grouped here under the heading of agricultural sites for convenience only (since they may not all be related to agriculture), likewise they are listed as one site, N15/220.

Stone features. More or less every described stone feature and others as yet unnamed were seen in this area. They included, in approximate order of frequency: heaps, mounds, rows, enclosures, platforms, alignments and terraces.

Stone heaps ranged from a small irregular pile of rocks about 2m in diameter and 0.5m high, to some 5m in diameter and 1.5m high. They were spaced from 3m apart (see Fig. 4a). Mounds were similar in size and spacing but appeared to be more regularly constructed, with a ring of larger stones forming the base, and smaller stones piled on top (see Fig. 4b). (Note that in Site Record Forms and all other descriptions no distinction is made between heaps and mounds).

Rows were often no more than long heaps, though they sometimes extended to over 10m long. In one paddock the aerial photograph showed that these occurred in lines, though this could not be confirmed on the ground (see Fig. 4c).

Enclosures ranged from very simple L-shapes, composed of rows 3-6m long with a short extension, to more elaborate rectangles, either composed of heaped-up stones 0.5m high or a single stone alignment. There were also a few enclosures situated on and surrounding the top of a

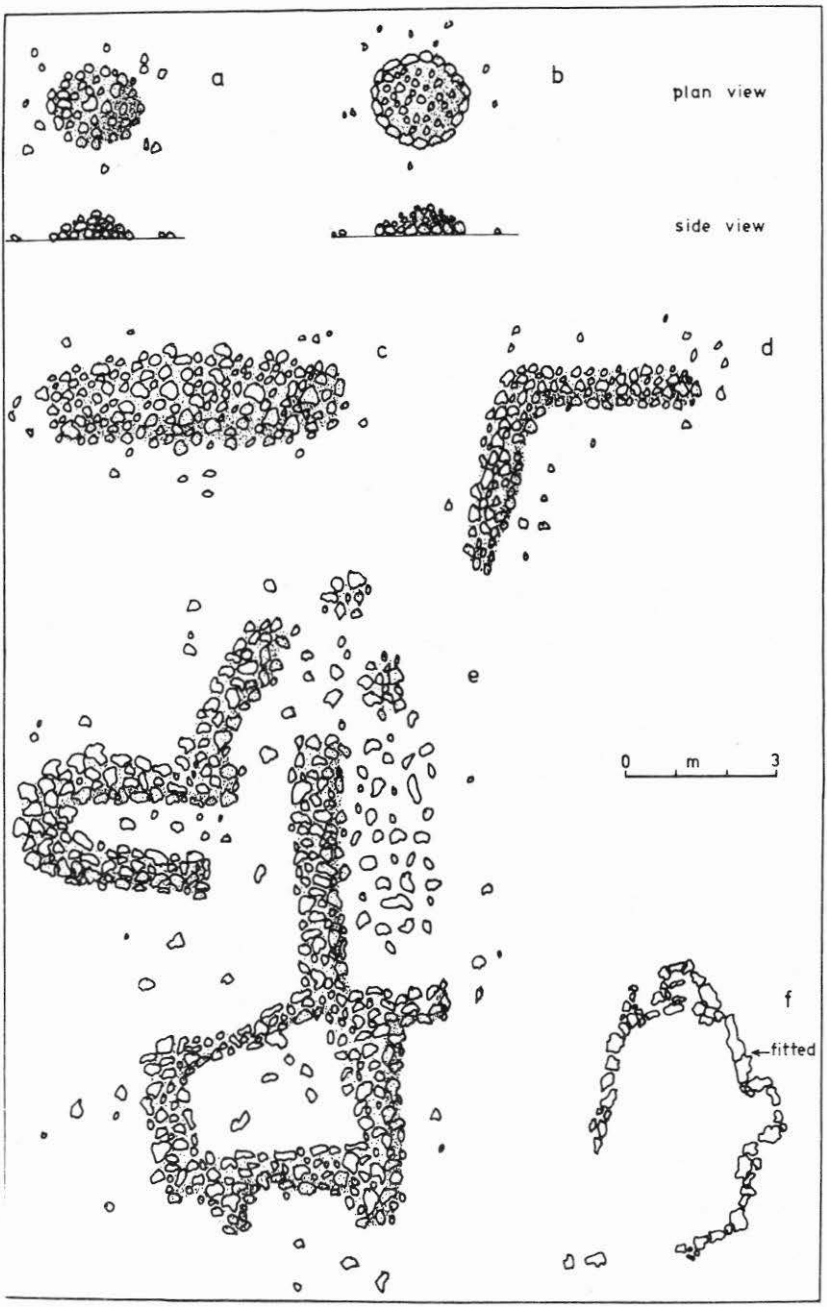


FIGURE 4. Stone features.

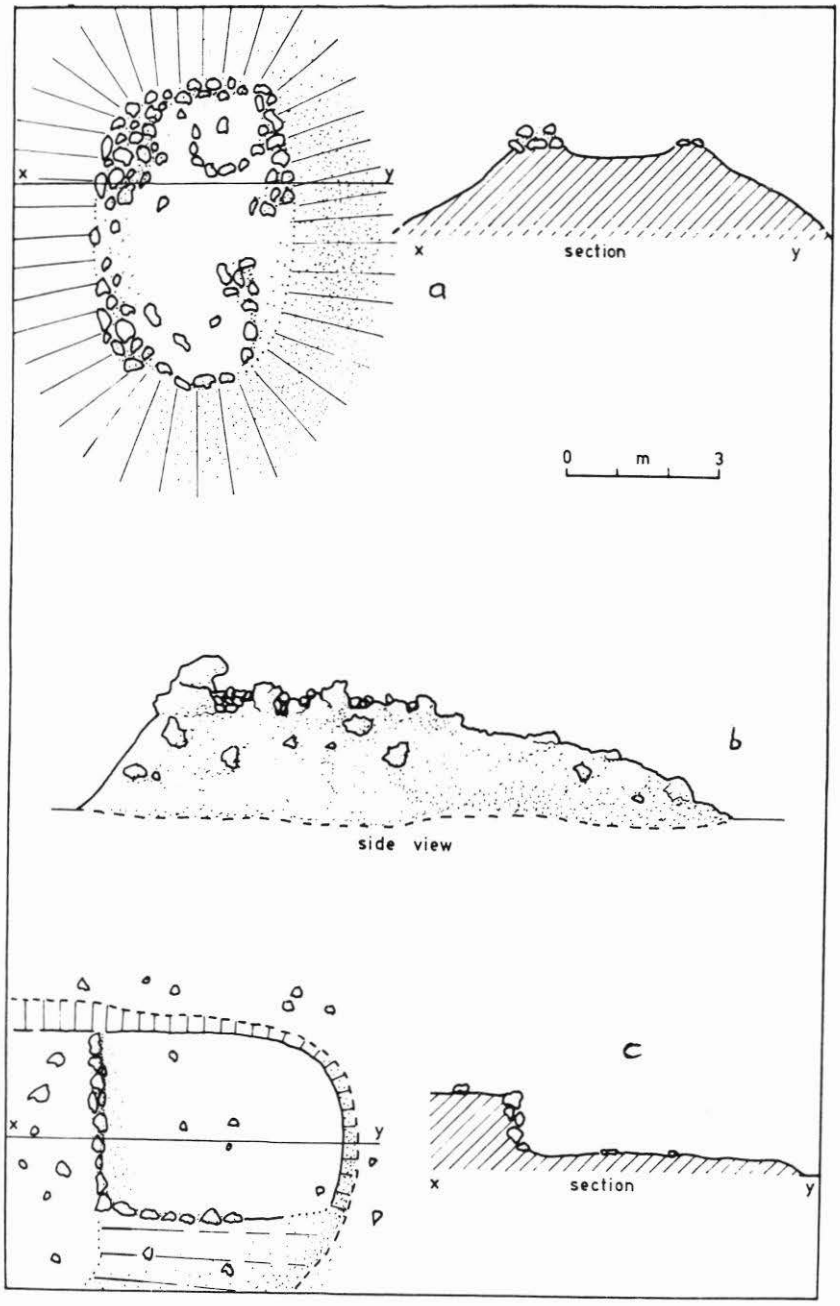


FIGURE 5. Pouerua stone features.

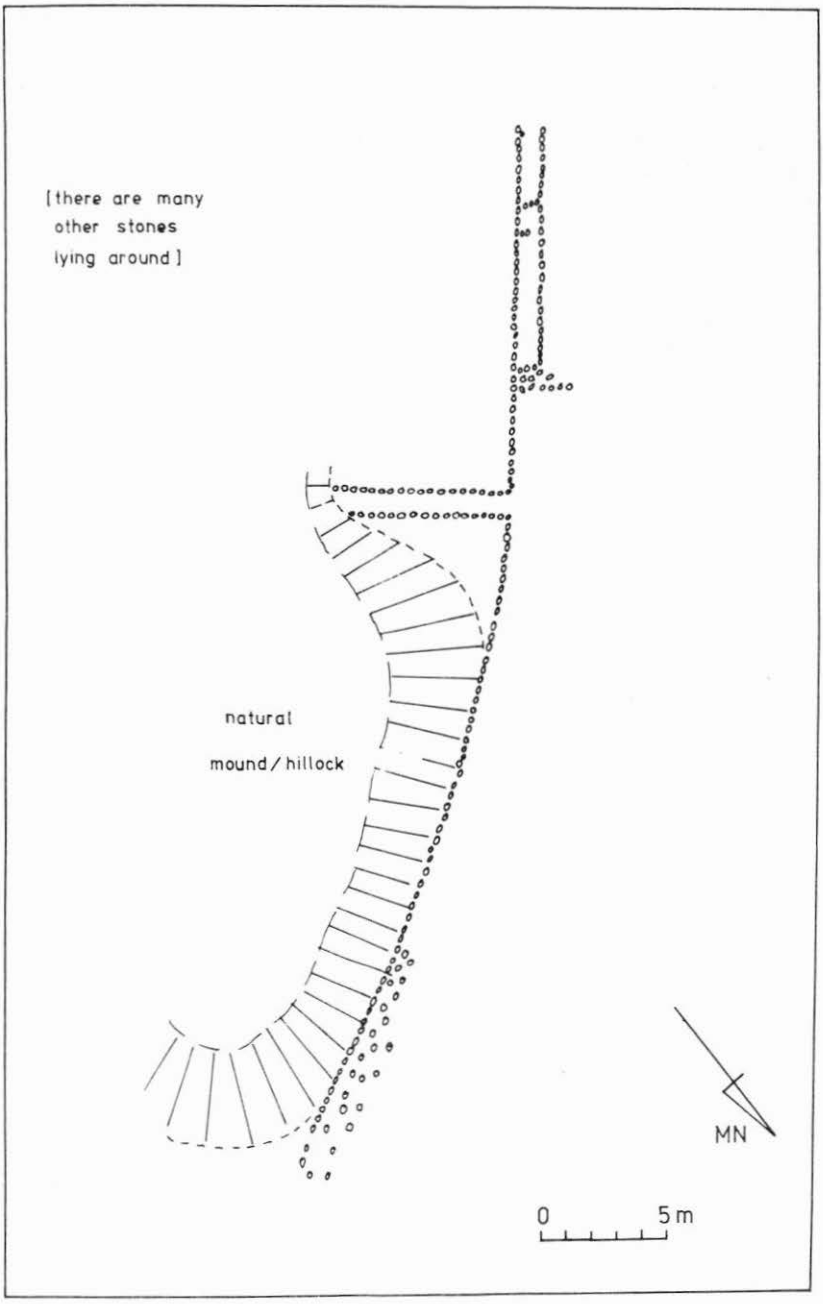


FIGURE 6. Pouerua single and double boulder alignments.

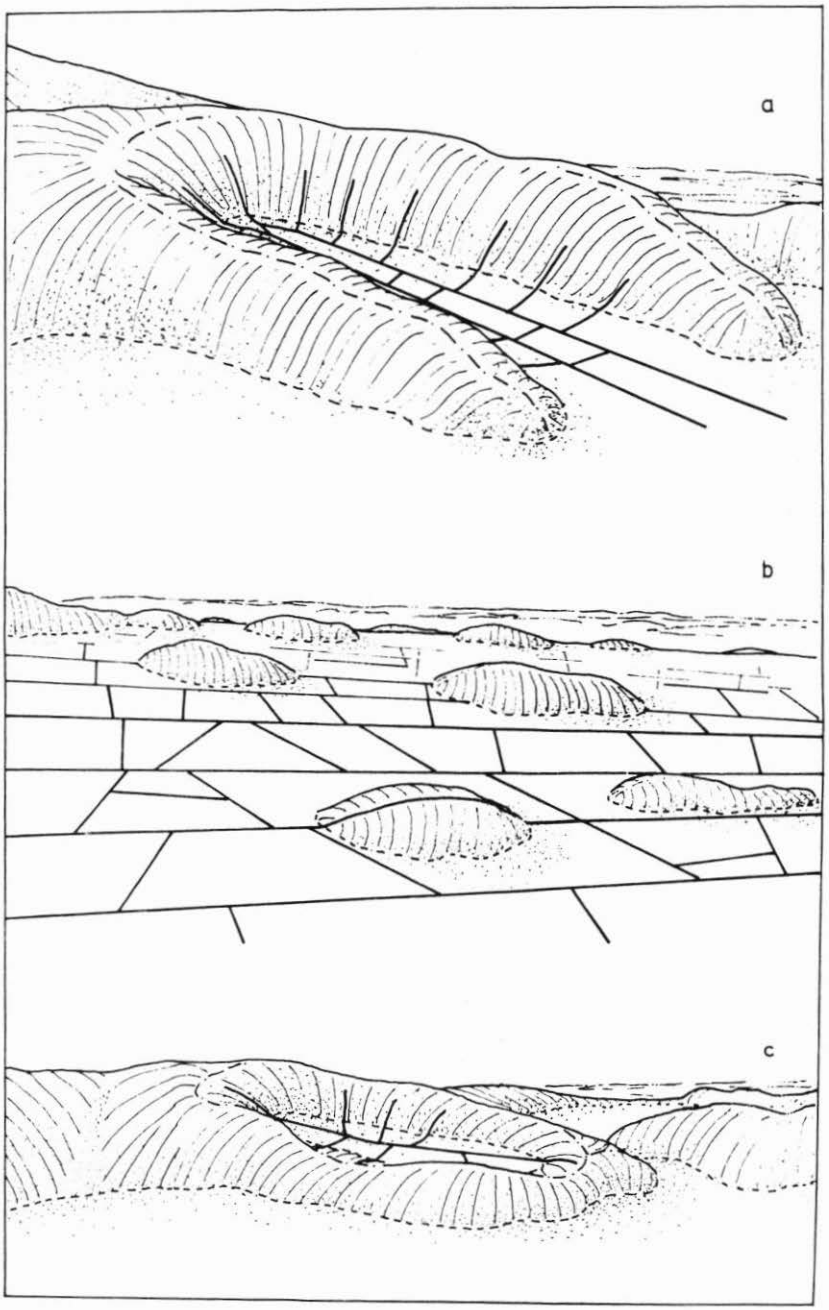


FIGURE 7. Pouerua drainage patterns.

natural mound. In some paddocks the simple L-shaped enclosures appeared quite frequently (see Figs. 4d,e,f and 5a).

Platforms were basically rocky, steep-sided, short hills, that rose 5m out of the surrounding flat land, on which stones had been added, often filling in cracks between the natural crags (see Fig. 5b). Platform is possibly a misnomer as it indicates something level which these were not. Alignments occurred both as double and single varieties. Often a single stone alignment would lead off a double one. At least two were seen over 40m long (see Fig. 6). Terraces were either stone-faced or supported stone-retaining walls. They occurred generally on natural rocky mounds (see Fig. 5c).

Drains. At least three types were observed.

1. Dendritic in the valley bottoms, combined the branching effect from the joining of slope drains to longer ones in the base of the valley itself (see Fig. 7a).

2. Checkered in flat, rolling, gently hilly areas. Often long parallel drains extending over 300m crossing over low hills, are intersected by shorter drains. Sometimes parallel, the transverse lines only abut the longer lateral ones (see Fig. 7b).

3. Asteroid in shallow basins; mainly the joining of slope drains often with no outlet (see Fig. 7c).

Clearly few of the 'drains' fulfilled the function of draining water away, which anyway would hardly be necessary in the porous, volcanic soil, neither does it appear that they were for concentrating the water for the same reason. It is more likely that they represent land boundaries.

Pa site N15/224

This pa was so unlike any other defended site I have seen that I thought it worthwhile describing separately. I would welcome any comment readers may have.

The site is on a promontory, 100 x 45m, naturally defended by steep scarps on three sides (Fig . 8). It is on the edge of a major lava flow, west of Pouerua (landform 6 - see above) and is covered in scoria boulders and rocks. The area has recently been burnt and regrowth consists mainly of gorse, also thistle, weeds and some grass, with blackened manuka sticks still standing. The vegetation is especially dense on the summit.

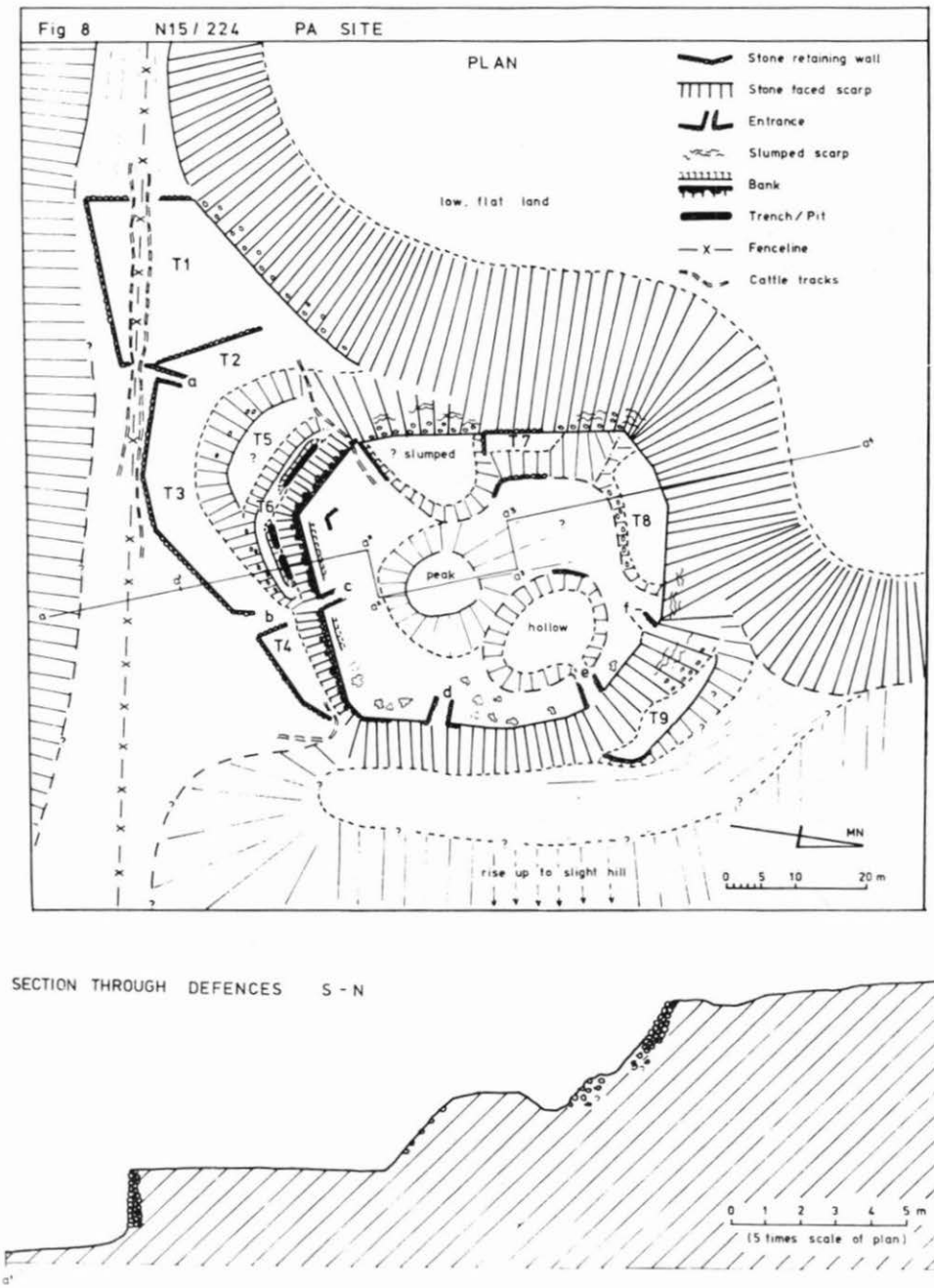


FIGURE 8. Plan and section of N15/224, Pouerua.

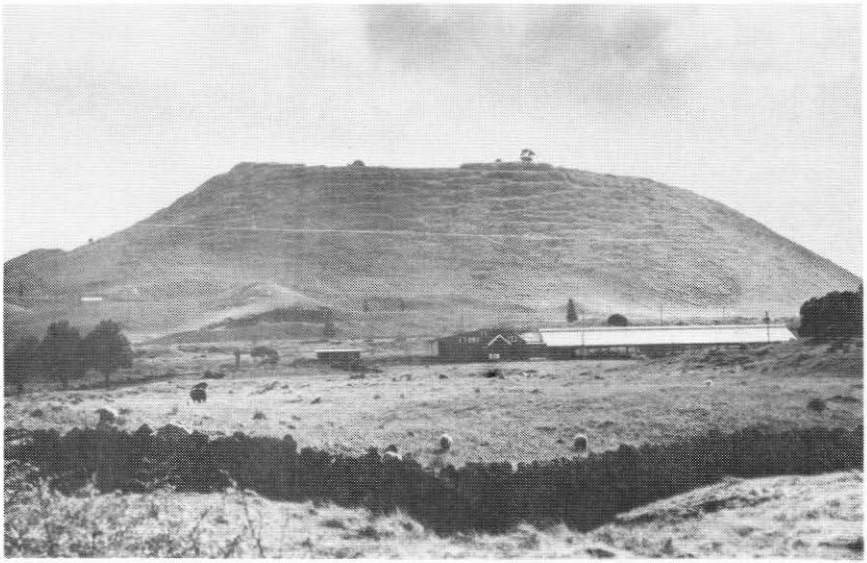
There are four defensive terraces (T1-4), which are supported by vertical stone retaining walls. They vary in height from about 1m (T1) to 1.7m (T3) (the latter is shown in Plate 4). These are all located on the south and west sides. The summit itself is defended by sloping and vertical stone-retaining walls on the southern face and stone-faced scarps elsewhere. Access to the site is gained by six stone-revetted entrances on to the terraces and four onto the summit.

The summit itself is mainly a flattish, basically rectangular area, 50 x 42m, rising 3m above T3, about 4.5m above T4 and about 6m above T9.

References

Best, E. 1975 The Pa Maori. 2nd edition, Government Printer, Wellington.

Phillips, C. and M. Hilton 1980 Site recording around Pouerua volcanic cone, Ohaeawai. Unpublished report to N.Z.H.P.T.



POUERUA SURVEY Plate 1.
N15/5 Pouerua.

POUERUA SURVEY Plate 2.
Stone walls mounds and retaining walls in landform 6.

POUERUA SURVEY Plate 3.
From left: Caroline Phillips, Margaret Pidgeon, Stan Bartlett, Richard Cassels and Aileen Fox, with stone mounds and terraces.

POUERUA SURVEY Plate 4.
N15/224, stone retaining wall of terrace (T3).