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PROPOSED ARCHAEOLOGICAL RESEARCH IN THE
INLAND BAY OF ISLANDS

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Since returning to New Zealand in March, I have spent a lot of time considering what sort of archaeology to do here and where to do it. I am convinced of the value of project archaeology, in which people with different research interests share an opportunity to work together on the past of a specific area. Although this approach has not been commonly used in northern New Zealand it has important advantages. Amongst these is the fact that the graduate students, staff and others can share an expressed sense of contribution and responsibility which is much more productive than the situation in which one person defines all the research goals and oversees the implementation of all research procedures.

In the three months which have elapsed since my return I have considered several areas as potential locations for a project and have decided to begin archaeological and historical research in the inland Bay of Islands. I intend to concentrate on a roughly rectangular block of country north of the Otiria watershed, east of the Punakitere Hills and Lake Omapere and south of the Waitangi River and its hinterland around Waimate North (Fig. 1). The bulk of this area comprises an inland basin, known as the Taiamai Plains, which includes some areas of highly fertile soils. These are the Ohaeawai silt loams which derive from volcanic activity principally on 8 scoria cones which form an arc through the centre of the study area. There are outlying areas of volcanic soils at Moerewa, Kawiti, south of Kaikohe and at Puketona. Briefly, soils surrounding the volcanics range from the infertile and unstable steepland Aponga clays to the south and east, to the undulating-steep but preferable silt loams to the west and to the good quality clay loams in the north around Waimate. Most of the soils on the steplands are presumed to be unsuitable for intensive pre-European horticulture, although extensive systems of food production may have been used there. The clays on flatter areas hold water and tend to be heavier and colder than the lava-based friable loams.

My initial objective is to define settlement patterns and subsistence strategies on the lava-based soils surrounding the Pouerua cone. The fortifications on the cone itself (N.Z.A.A. site number N15/5) include many terraces, I estimate that there are between 400 and 500, and two major fortified areas on the crater rim. These were protected by one double ditch and presum-

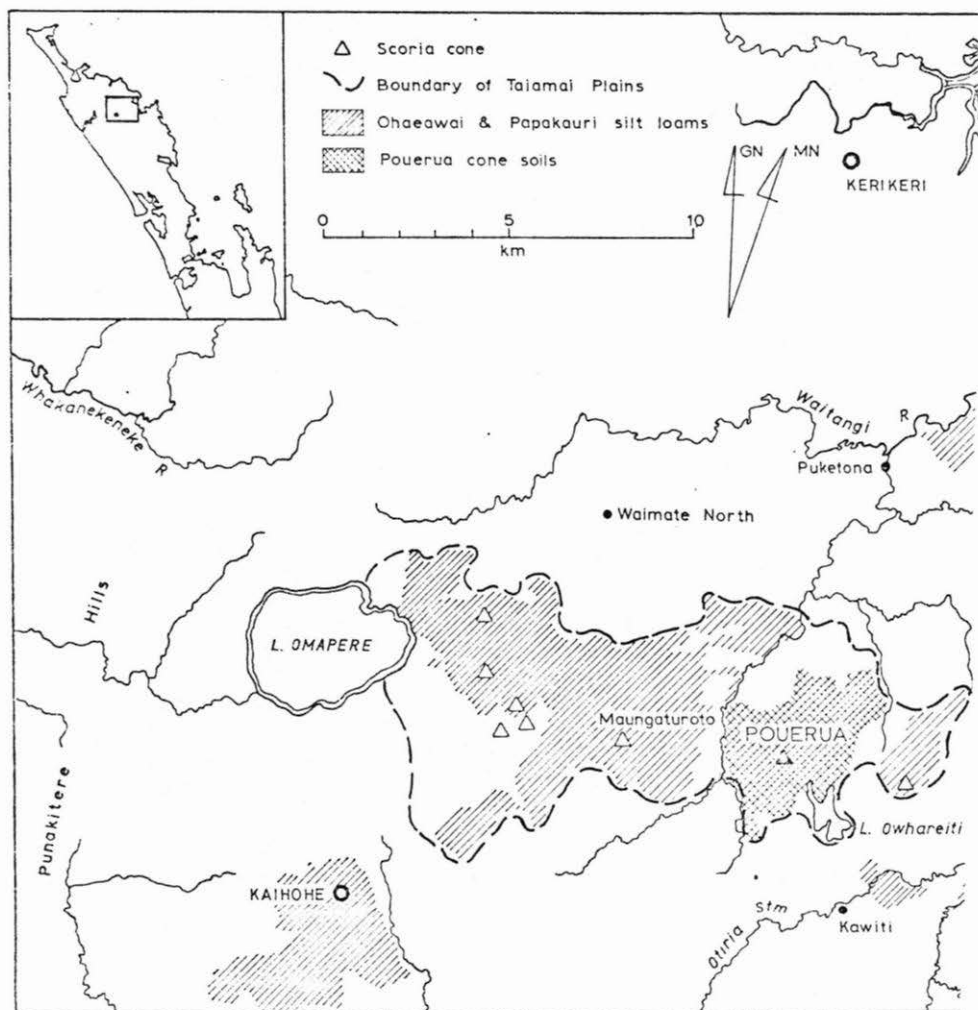
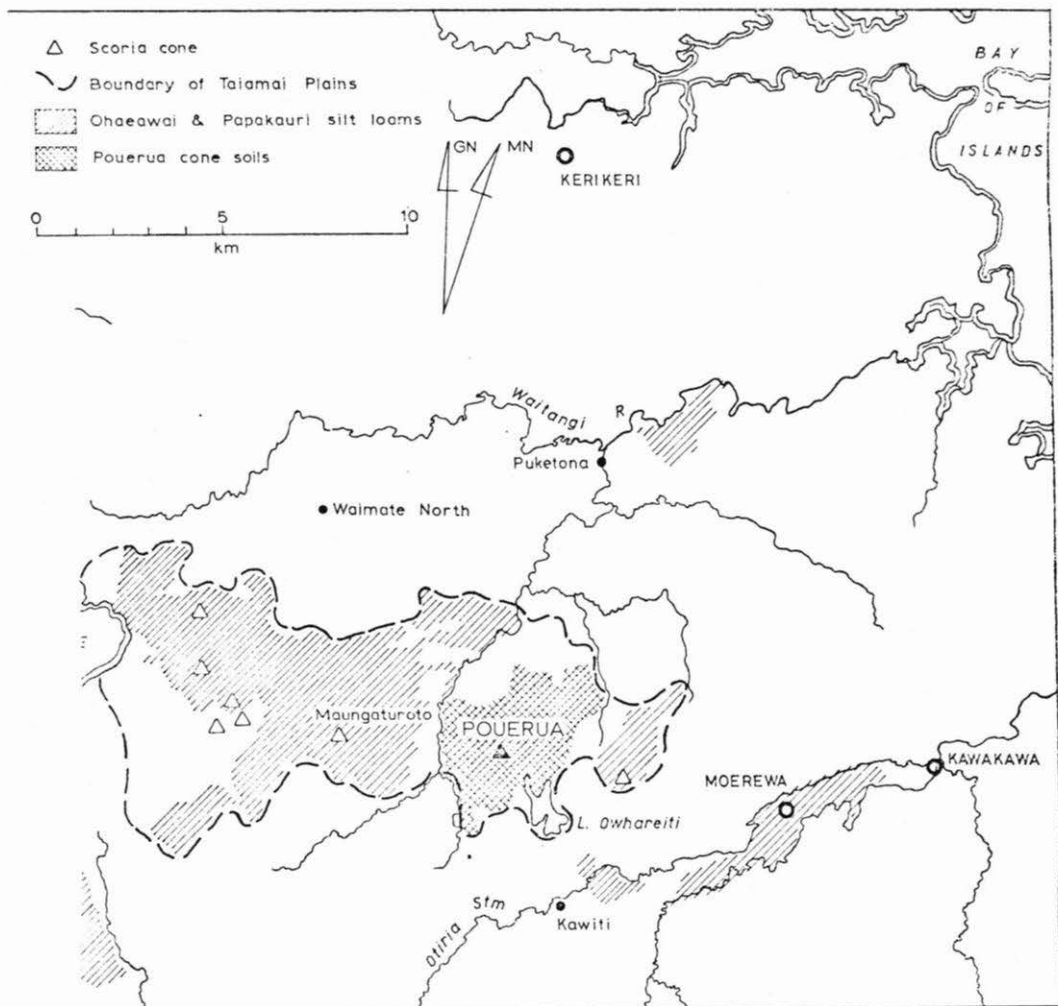


FIGURE 1. Bay of Islands location map.



ably by substantial transverse palisading. A recent survey by Richard Cassels of the area of lava-based soil surrounding Pouerua resulted in the identification of 62 new sites including two pa (Phillips and Hilton, 1980). This brought the total number of smaller pa known to occur on or at the edge of the lava around Pouerua to five or six. Most of the rest of the recorded sites may be termed open settlement sites. They were found within approximately 1800 acres of horticultural field systems which include drains or land boundaries, boulder heaps or mounds, alignments, enclosures and footpaths. Shallow trenches marking boundaries between separate garden plots are most concentrated and plots are smallest where soils are most fertile, deepest, and where runoff water is available. These conditions occur together most commonly in basins or gully bottoms near the base of the cone. Garden boundaries are conspicuous in the areas of undulating scoria-ashy soil to the north and south-east of the cone (see N.Z.M.S. 290 sheet P04/05). This soil type, known as the Papakauri silt loam, is the best horticultural soil in the Taiamai Plains and has a very limited distribution. It occurs at Remuera Road near Kaiokohe (personal communication from John Bryant, Farm Advisory Officer, Ministry of Agriculture and Fisheries, Kaiokohe) and in a rocky and steeper form on most of the scoria cones in the inland Bay of Islands. It is in these areas that evidence of pre-European gardening and fortification is concentrated.

The 400 to 500 acres of shallower and stonier soils to the north-east of the Pouerua cone and in the adjacent farm to the west has been partially cleared by the construction of hundreds of stone mounds or heaps. These are up to 2 m in height. In the Ludbrook property they are most regular near the cone where the soil is deeper. They decline in size and regularity as one proceeds to the north-east away from the base of the cone and towards the steep edge of the lava flow. Some mounds appear to be stone-edged mini-gardens and some of the hollows in the lava surface have small clear areas in them, usually facing to the north, which suggests specialised gardening of a wind-sensitive cultigen, perhaps gourd.

The area of Ohaeawai and Papakauri silt loam on the north side of the cone and to the west of the stonier area contains long, straight and parallel lines which run almost due north from the cone. These look very like plough marks left at regular intervals by a horse-drawn plough, except that they go straight over knolls and hillocks which are too steep for the plough and Peter Ludbrook says that the paddock they are in has never been ploughed. They are unlike any field evidence of pre-European horticulture seen in New Zealand by the author and obviously warrant detailed investigation.

I propose to define settlement patterns and food production strategies within the area of lava-related soils around Pouerua. The interests to be considered during this research include:

1. The antiquity of occupation of this area. The identification of the first horticulture or earliest occupation of the area will not be easy.
2. Methods of land modification and patch improvement used in food production.
3. The definition of the different types of settlement units present within this archaeological landscape.
4. The relationship between changes in methods of food production, the size and forms of settlement types and the overall settlement patterns in use. This will include the construction and use of earthwork fortifications.

Pouerua and its related field systems have several advantages over the other cones in the area as the focus of a research project. First, the evidence of Pouerua has been only slightly modified since 1829 when the area was bought by Archdeacon Williams. Puketona, Maungatoroto and some of the Kaikohe sites, including the Remuera Road location, have been damaged due to quarrying and/or land clearance (see aerial photograph survey number 209 run number 549/56 flown on 29/1/1957 for the effects of European land clearance on evidence of field systems at Maungatoroto).

Second, Pouerua is the only one of the cones on the Taiamai Plains which is surrounded by a large area of high quality horticultural soil. This alone makes it an area of exceptional importance and a most desirable resource within the inland Bay of Islands. Its horticultural potential may have been recognised by these earlier settlers of the region, certainly its importance in the early historic period is clear from the fact that Henry Williams claimed to have seen 1400 people living on the north and east of the cone (Best, 1927:222).

Third, there is considerable documentary evidence available from Pouerua and the surrounding area from Williams, his descendants who have farmed the property since its purchase, and several other sources. These records will provide a very valuable reconstruction of early historic Maori land use as well as socio-political organisation and material culture.

Fieldwork strategies

A reconnaissance of the Taiamai Plains and the surrounding region was undertaken in the week following 15 May 1982. On the basis of this glance at the region and relevant site record forms

(N.Z.A.A. Nos. N15/33,200-261) a three stage programme of archaeological fieldwork at Pouerua is proposed.

1. Mapping. One cannot begin to handle an archaeological landscape like the one at Pouerua without detailed topographical maps and those I have seen to date are not adequate. I am therefore investigating the cost of making new topographical maps using aerial photogrammetry with newly surveyed ground control. Some of the field evidence is conspicuous enough to be identified from the photographs taken for this purpose the rest will require low-level aerial photographs taken when the sunlight is strong and oblique. Infra-red photography is also being considered. The objective of this work is to produce maps of this landscape which take into account slope, aspect, soil depth and composition.

2. Site surveying. An intensive sample site survey focusing on the definition of site types on the basis of their form, size and composition of components within separate sites is proposed. Spatial organisation of archaeological evidence will be studied.

3. Subsurface archaeology. Horticultural field systems will be investigated first. This work was begun in May 1982. It involves detailed mapping of horticultural evidence in separate sample areas. Each of these areas have different slope aspect and water regimes. Five areas of horticultural evidence present themselves as likely candidates for excavation. The first of these is a small valley west of Pouerua which contains a regular pattern of shallow linear depressions which were illustrated by Phillips (1980:Fig.7) and test pitted by Day and Sutton (ms). The second is the system of long straight lines mentioned above which is present in Phillips' (1980) paddocks 7 and 8. The third area is a low protected basin of deep soil approximately 600 m north of the cone on the boundary area between those two paddocks. Although this area is somewhat damaged by the collection of rock for use in stone walling it shows every sign of having been intensively used for Maori horticulture. Fourth, detailed mapping and excavation of horticultural field systems will be undertaken in the stony ground to the north-east of the cone. Fifth, excavations will be undertaken at water-edge open settlements and adjacent garden areas near the lake south of the Pouerua cone.

The second phase of the excavation programme will focus on settlement sites and fortifications. The presence at Pouerua of an almost intact pre-1829 archaeological landscape means that it is possible to excavate a representative sample of settlement sites there. An initial analysis of site record forms submitted by Caroline Phillips and Michael Hilton suggests that the sites they recorded can be divided into three broad categories. These

are open settlement sites, smaller pa and the central fortification on the Pouerua cone itself. The open settlement sites usually contain one to three terraces, a similarly small number of pits (there are commonly two pits per terrace). In several cases the terraces have stone-lined hearths. The variety of open settlements present at Pouerua means that it should be possible to select sites for excavation which would meaningfully represent the range of variability present in this group. As was mentioned earlier there are now five or six smaller auxiliary pa sites present on or at the edge of the Pouerua lava-based soils. An attempt will be made to establish the chronology of construction and use of these fortified areas. Particular attention will be paid to the chronology of terraced and ring ditched pa sites, although testing the suggestions made on this topic by Groube (1970) is not a primary research objective in this project.

Excavation of the Pouerua cone is a daunting undertaking. The purpose of the work proposed is to establish the chronology of the occupation and fortification. Careful attention will have to be given to the development of an appropriate excavation strategy. At present it is proposed to excavate one or more of the terraces on the northern slope of the cone by turfing the area chosen completely and then proceeding with excavations. Further I propose to excavate one of the principal terraces on the crater rim. Fortification of the rim may be a late development, even so, an excavation there will provide a house plan and an assemblage of durable material culture from a high status residence which could be usefully compared to assemblages from the more common open settlement sites. I also propose to section the double transverse ditch system which has been built below the second of the two major fortified groups of terraces on the crater rim.

Conclusion

The purpose of this paper is to present a statement of intention. The inland Bay of Islands has clearly been too little studied although it is a most impressive archaeological landscape. The size and number of pa there suggests that most of the people who lived, at least in the late prehistoric period, within the broad area from Lake Omapere to the eastern Bay of Islands lived inland rather than on the coast. This suggests that the concentration on coastal archaeology in Northland has been unduly selective. I want to focus on comparative settlement pattern archaeology, where settlement patterns are understood in terms of

their composition, operation or use, the chronology of their development, and, where special attention is given to causal relationships, between certain processes of economic intensification and the development of centralisation of population and political authority. This requires a substantial commitment of time and resources. The area I have described most certainly justifies that commitment. It is after all "the heartland of the Ngapuhi".

Acknowledgements

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