



NEW ZEALAND  
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**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER**



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ONGARI POINT - Second Season

F. W. Shawcross

This is a report on the second season (1964-65) of excavations on this large fortified site on the Kauri Point Peninsula (Shawcross 1964:79). The reasons for carrying out large scale excavations at this site were advanced in the above paper but will be recapitulated here. The excavations at the Kauri Point Pa and swamp site had established a sequence of occupations and an associated assemblage of artefacts. There was, however, in the absence of any available method of determining age, no way of anchoring this "floating sequence". Furthermore, it seemed desirable to attempt to discover the relationships, such as they might be, between various sites in the limited space of the locality. In other words, this was an attempt to test, by means of archaeological excavation, the theoretical framework for Archaeology, developed by Willey & Phillips in their Method and Theory in American Archaeology, and adapted by Jack Golson to New Zealand in his Culture Change in Prehistoric New Zealand.

The present site was selected in 1963 because there was documentary evidence (Shortland Journal 1842-3 and Letter Books) for the occupation of Ongari by Christian Maoris in 1842, at which time they were attacked by the Thames Chief Taraia (who had not signed the Treaty of Waitangi). The settlement was subsequently abandoned and turned into a potato garden (See Shawcross 1964). From the experience of the Kauri Point Pa excavation it seemed probable that an occupational sequence would be discovered which would culminate in the 1842 settlement, and would therefore probably correlate at some point with the Kauri Point sequence. It was hoped that the correlation might be effected through the discovery of distinctive forms of groupings of pits, whose value for this purpose had been suggested by H. Parker. (Parker 1962: 222).

In a similar manner it was hoped that these excavations might provide the basis out of which a fuller understanding of the cluster of sites of various types -- fortifications - pit groups - middens - flaking floors, etc., might be obtained, especially in the form of an attempt to reconstruct the nature of the settlement of the area throughout its occupation, and to identify if sites were occupied contemporaneously and whether by members of related social groups, and whether or not there were seasonal or longer cyclic shifts of settlement. This research was seen, however, as a long term project and not necessarily within the means of one researcher and within a limited span of time.

The Site:

The fortified area consists of three rectangular enclosures which are here called Eastern, Central and Western respectively. In the first season excavations were carried out in the eastern and Central areas, the main effort being concentrated in the Eastern, which will be seen to have been the most strongly fortified, and which was found, in the area excavated, to have

been the most densely occupied part. However, these excavations supplied no evidence for the looked-for historic settlement, and the second season's work was concentrated in the Western area, where the apparent unfinished nature of the earthworks encouraged the hope that it might be the hastily constructed defences of the last settlement.

In addition, it was decided to make a more ambitious attempt to expose a large area of the settlement. This was inspired by the criticism expressed by L. M. Groube (Groube 1964: 44) that excavations in New Zealand, up to that time, had concentrated too much on attempts to expose sequences of deposits through cutting deep sections (where such suitable deposits existed), and had consequently either neglected or had been unable to devote equal energy to exposing the general pattern of settlement at any single period of occupation - an equally, if not more important aim, in view of the scarcity of information available on settlements. It was therefore intended that the second season's work at Ongari should provide a reasonably complete plan of the interior of a pa, especially in the form of house structures, and to test the possible existence of the larger structure, the Meeting House, which has been supposed to be a distinctive feature of the Maori pa, and whose prehistoric existence had been queried by Groube (Groube 1964: 35).

#### The Excavation:

A grid system of squares separated by baulks was adopted, as in the first season's excavation, but two alterations were made. The metric system was employed for this season's work and the grid was altered to squares of five metres. The original datum line of the first season was retained and extended, but necessarily the two grid systems do not coincide and it was impossible to continue the first season's square numbering. As in the first season, a false datum point is assumed to exist beyond the North East corner of the site.

The squares were excavated in four stages: the first consisting of a narrow trench 1 x 4 metres along one side of the square, leaving a 0.5 metre baulk between the adjacent squares, which was then extended into an "L": the third stage involved expanding the trenches to a full 4 metre square, leaving a 0.5 metre baulk all round: the fourth stage consists of excavating away the baulk. This was normally the procedure employed throughout the excavation.

As the area of the enclosure was over 1,500 square metres it was clearly beyond the resources of the available manpower and techniques to carry out a total excavation. For this reason, the first step was to excavate trial lines of first stage test squares running from end to end and side to side of the site, crosswise. It was hoped that this would locate the most likely area of structural evidence, and, as a result, the Eastern end of the site was selected for further examination.

The method of excavation was the same as during the first season, with the root zone of the soil dug out by spade and the underlying deposits trowelled and then scarped. With the experience of the previous season, when it was found that rain disclosed differences in the soil due to human disturbance which were normally obscured by rapid drying, a garden spray was used to damp the surfaces.

The archaeological deposits are very shallow in this area and consequently the squares were not deep. However, it was concluded that the five metre squares are inconveniently large. They present too large an area to be photographed from ground level and are also too large for one or two people to excavate. It would appear that three metre squares, corresponding to the 10 foot squares of the previous excavation, are more convenient. Lastly, as it was decided to concentrate efforts on surface features most of the pits were not emptied of their infilling, which, while having some drawbacks, was a considerable saving in labour.

A phenomenon which was the cause of some understandable confusion was the presence of a number of large apparent "post holes" filled with a distinctive, dark humic soil. One group, especially, coincided with the line of squares on the long axis of the excavation, and caused some speculation as they regularly appeared along the full length of the excavation, two or three to a square. The confusion was increased by the discovery in one hole of a shark tooth ornament and in all the holes successively of three or so sets of immature tail vertebrae of a mammal. These vertebrae were later identified by Mr R. J. Scarlett as belonging to sheep. While there is no exact record of how the tails of some 90 immature sheep found their way into a row of 30 shallow pits on a pa site, the mundane explanation that these are lamb dockings buried as a fertilizer for some vegetable, such as pumpkins, seems to be preferable to any more romantic explanation. Owing to the shallowness of the deposits it was not possible to tell whether these pits had been dug before or after the last ploughing of the site - though prior to the last ploughing seems likely. One point of archaeological significance may be derived from this discovery -- all of these pits, belonging to the European period of agricultural disturbance of the site, have a very distinctive dark, highly humified filling corresponding closely to the modern topsoil, and very distinct from the fill of the Maori pits and postholes.

#### The Deposits:

These are similar to those discovered in the first season's excavations - that is to say, over the greater part of the area the humic topsoil is separated by a sharp contact from the underlying "natural" of probably highly weathered volcanic ash (Schofield 1961:30).

The colouring of the topsoil has been estimated to be 10 YR 4/1 according to the Munsell soil colour scale, whereas the subsoil, which varies over the site, is 10 YR 4/4 in the Eastern end and 10 YR 5/6 towards the West.

The sharpness of the contrast between top and subsoils is due to ploughing which, it has been learnt, was carried out before the second World War. It was, in fact, possible to trace the parallel furrows left by the lower edge of the plough in the surface of the subsoil. The depth of this topsoil is variable, but generally about 10 centimetres: its significance is, of course, that the original ground-surface of the pa will have been destroyed, and indeed undercut, by about 10 cm. over most of the site, unless it has been preserved under the spill of the defensive banks. Therefore, it is unlikely that floor plans of the latest settlement would survive -- what, if anything, will survive are the truncated remains of the settlement at about 10 cms. depth. It should be added that even had there been no ploughing the effects of possible post abandonment potato cultivation and 120 years of soil growth must have effectively obscured the original ground-surfaces.

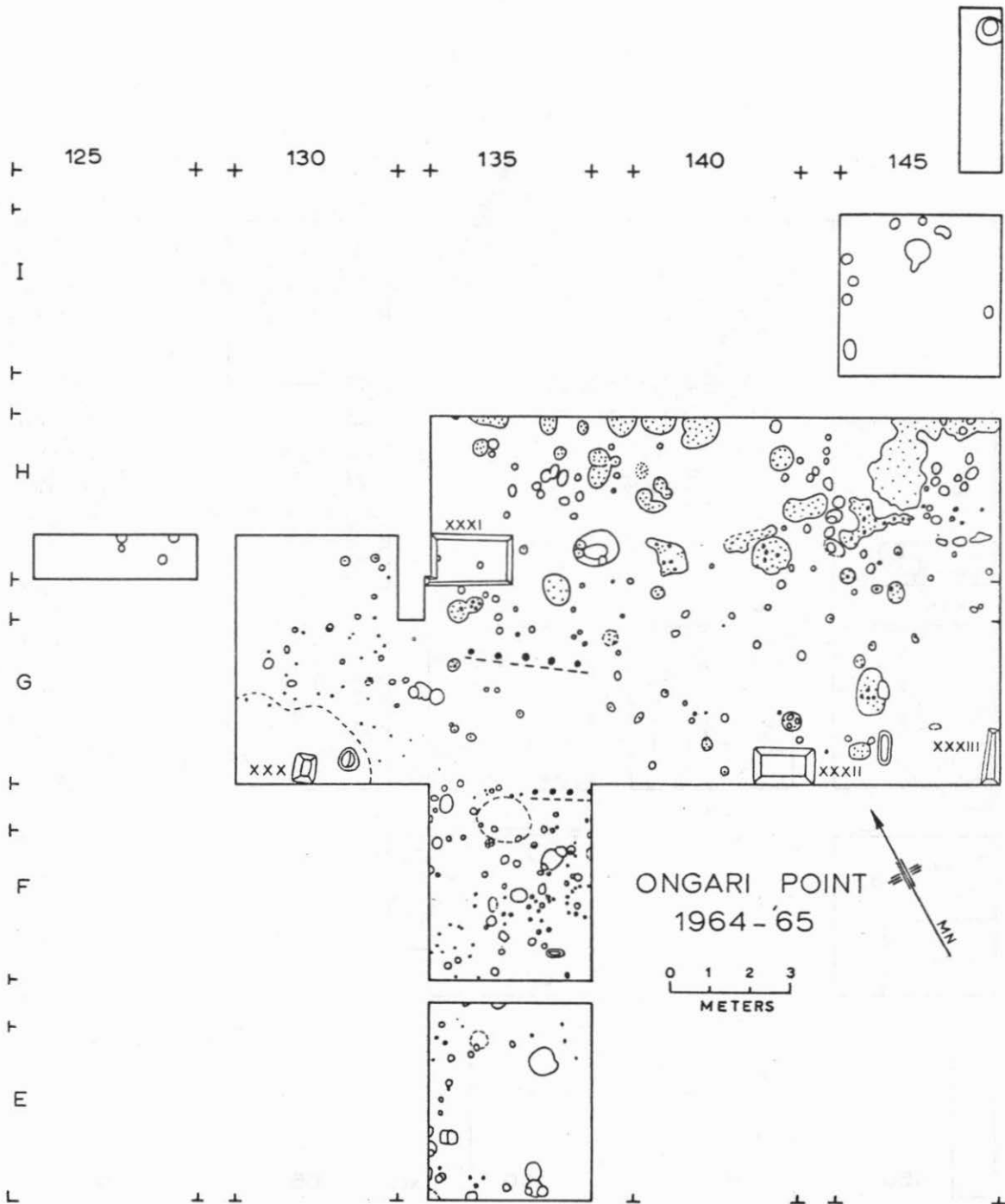
In the first season's excavations some of the original surfaces had been preserved under the slip from the banks (See Shawcross 1964. Fig. 7a), however similar evidence was not encountered in the second season. Instead, underlying the bank was a deposit which can only satisfactorily be explained as a Maori agricultural soil. The contact between it and the base of bank is sharp, whereas its own base is less distinct. The ancient gardening soil is clearly derived from the subsoil but has been altered in texture, being much more friable, as well as being changed in colour to 10YR 3/2 (Munsell Scale) and having small fragments of shell and charcoal distributed throughout it.

The identification of such soils is clearly of some importance because of the alterations to the site and because of its potential value to archaeology as evidence for cultivation, and as a source of palaeoethnobotanical evidence, and also because of the light it throws on the re-use of their settlement sites by the Maoris.

The explanation that this soil is agricultural in origin seems to best fit the evidence. It has been mechanically broken up, to depths of between six and twelve cms. It is now distributed in patches over the site -- being well preserved in the South and East bank sections and in parts of the Eastern end of the area where the topsoil is somewhat deeper, in consequence of its lying at the base of the bank as well as being some metres lower than the Western end. Other points which indicate the cultivated nature of the soil are the distribution of small fragments of shell and charcoal throughout the deposit; this would be consistent with the disturbance of a former occupation surface with its hearths and food debris. The even distribution of the shell and charcoal would not be due to worm action, which in fact tends to sort these material and will, in time, raise a horizon of pure soil over a concentrated horizon of shell and other fragments. (See Schofield 1961: 31). This has not occurred in the deposits under discussion and may indeed be taken as evidence for the construction of the earth embankments shortly after formation of the garden soil.

#### The Structure and Occupation Sequence: (See Figs. 1 and 2)

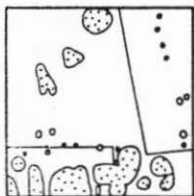
In the first season seven classes of structures were identified (Shawcross



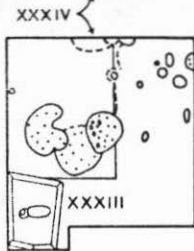
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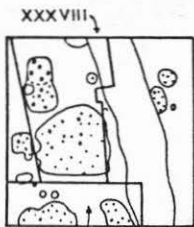
# ONGARI POINT 1964-'65



XXXVII

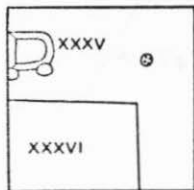


XXXIV



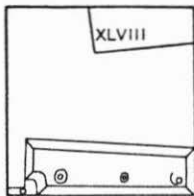
XXXVIII

XXXIX



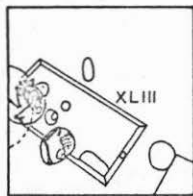
XXXV

XXXVI



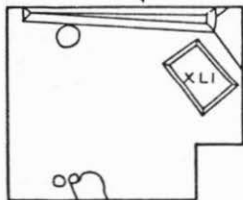
XLVIII

XL



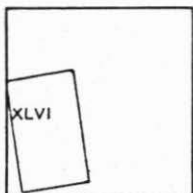
XLIII

XLIV



XLII

XLI



XLVI



XLV



150

155

160



XLVII

165

170

I  
H  
G  
F  
E

1964:85). These were: 1. ditches, 2. banks, 3. palisade post sockets, 4. fire-pits, 5. postholes, 6. rectangular pits, 7. oval, underground pits. Strictly speaking, the palisade post sockets and postholes could all be classified together, but they may be conveniently distinguished and show marked disparity in size. Those found at Ongari correspond closely in size to those found at Kauri Point (Ambrose 1962:60). The excavations of the second season at Ongari only approached the defences at two restricted points but one of these sections (Sq. J. 145) encountered a palisade post socket. This hole was approximately 70 cms. in diameter at its mouth and 50 cms. at the deepest point reached in its excavation, which would have been some 160 cms. below the original ground surface. The stratigraphic position of this posthole will be discussed below, but it is worth noting here that the post for which this socket had been dug would have itself been some 50 cms. in diameter and had been removed instead of being allowed to decay in its socket. The evidence for this is that its clearly defined mould had been filled in with gardening soil.

#### Pits:

The second season exposed a further eighteen pits of various forms, bringing the total for both seasons to 48, and these are all identified by Roman numerals following the first season's numbering consecutively. For reasons of economy only 12 pits were wholly or partially excavated, but this has limited the value of an exact typological identification in these cases.

The largest class appears to consist of plain rectangular pits of various sizes. These include pits nos XXXI, XXXII, XXXIII, XLIII and XLVI, and probably nos. XXXIV, XXXVI, XXXVII, XXXIX, XLIV, XLV and XLVIII. There are, however, some four additional classes which may now be added to the first season's two classes of pit. There is at least one "Buttressed Pit", no. XL, and possibly XXXVIII. This latter was not excavated and the reasons for its odd shape are not clear; possibly the deeper inseting of part of the wall may arise from a similar cause, as in the case of Pit I, first season, where the wall appears to have been inset and strengthened by a row of posts. This buttressed type of pit appears to have been first identified by Mr H. Parker at his Skipper's Ridge site at Opito (Parker, 1962: 223). A second class of pit, previously found elsewhere and now identified at Ongari are the "Bin-like" pits, observed by Mr J. Golson at his Sarah's Gully site, also at Opito. (Golson 1959: 45). As at Sarah's Gully, these pits, nos. XL1 and ZLII, appear to form a pair and correspond fairly closely in size. (Opito 60 x 75 cms. as against Ongari 90 x 125 cms.)

Two abnormal pits have been classified separately: the first is no. XXX, and possibly XLVII: the former is a carefully dug rectangular shaft, some 70 x 50 cms. and reaching a depth of just under 170 cms. below the present ground surface. No explanation can be offered for its function -- as will be seen, it lies quite a distance within the defensive area. Its carefully formed rectangular shape could suggest that if it was a post socket it must have been for a dressed timber. At the same time it seems unlikely that this shaft would have been suitable for storage purposes. On the other hand a dressed rectangular timber of these dimensions seems unlikely on a Maori site, because the only flat-faced timber which could have been made before



the introduction of the pit saw would have been split by wedge, and four flat faces could not have been produced by this method. It would seem equally unlikely that a piece of timber this size would be adzed, especially for burial into the ground.

The last aberrant class is no. XXXV, which, while it is four-sided, is not as regular as the normal rectangular pit. It has, in addition, slightly undercut sides, giving it a roughly bell shape, and has also two shallow posthole-like extensions recessed into one of the walls. Here again, no explanation for the function can be offered.

There were numerous fire pits, as in the first season's excavation: however, their location appears to be different in relation to the site, and because of the truncation of the deposits by agriculture their forms have been badly damaged. The majority appear to have been shallow, bowl-shaped in form, probably about a metre in maximum diameter, while a few, now more amorphous in shape, may have been larger, though equally shallow.

By far the most numerous class of structural evidence is the posthole of which it is estimated there are about 400 in the excavated area. The smallest size identified is about 2 cms in diameter and they are very frequent, but there are intermediate size groups up to 30 cms. in diameter. It had been anticipated that more postholes would appear in recognizable ground plans, reflecting timber-framed structures, but the majority are in as confusing an array as has been observed by previous excavators. (See Golson 1961: 27 and Parker and Buist 1961:13). In fact, only three or four patterns of wooden structures can be identified. Two of these are lines between 2.5 and 3 metres long formed by single rows of postholes. These rows are located in squares F and G 135 respectively, and that in the latter appears to have been built out of heavier timbers. The other pattern of wooden structure is represented by one definite semi-circle of stakeholes, and a less definite group of similar holes, both about a metre in diameter and located in square F 135. Two features will be observed about the distribution of postholes:

- (a) they are concentrated in the Western end of the enclosure;
- (b) their frequency is inversely proportionate to the distribution of pits.

#### Earth Works:

During the second season no sections were taken through the defences and it is therefore not possible to identify a long sequence of structural alterations as was possible in the first season. Sections cut into the South and West banks showed that they were built upon, and in part out of, the garden soil previously described. There is also evidence that a system of defence incorporating heavy palisade posts existed, at least along the Southern face of the pa, and this was later than or contemporary with the formation of the garden soil.

### Portable Artefacts:

This area of the site was even more barren of artefacts than the Western and central areas. The presence of a shark's tooth in a recent pit has already been noted. Even obsidian flakes were relatively uncommon, in spite of the fact that Mayor Island, the major source of obsidian, lies in sight of Ongari. However, one interesting observation was made concerning obsidian. Its greatest frequency coincided with the burial area where, indeed, a cache was also found. So it seems reasonable to suppose that while obsidian was no doubt employed in small quantities for technological purposes it may also have served an important function, such as scarification, in funerary rites.

### Hangi Stones:

There is no immediately available local source of stone suitable for the Polynesian earth oven, and consequently all stone on the site has been brought there by man. The stone found in the excavation was collected and weighed according to its square, and may be compared with the collections made in the first season by means of expressing the weight in the form of kilogrammes per square metre. The highest density of stone (about  $7 \text{ k/m}^2$ ) is found, as in the first season, in the fill of the banks. Elsewhere the density falls to an average of  $0.9 \text{ k/m}^2$ .

There is a marked contrast between the density of stone in the Western area with that in the Central and Eastern areas, where the density in the banks rises to over  $30 \text{ kilo/m}^2$  and the corresponding density in the unbuilt-up areas is  $3.7 \text{ kilo/m}^2$ ; thus density of stone in the Central and Eastern areas is some four times greater than that in the Western area and must indirectly show the relative density of occupation.

### Fauna:

While no study has yet been made of the prehistoric fauna associated with the site, it is still possible to make some general observations. Vertebrate animals appear to form a relatively insignificant proportion of the food debris on this site, and, in particular, mammals are scarcely represented. At most, one or two dogs are represented throughout the deposits in the Western area, while about a similar number of rats have also been found. There was one rat in the fill of the rectangular shaft pit, no. XXX, where it had been apparently incorporated in an articulated state with the garden soil fill. Rather more fish were represented, the majority probably being snapper, as well as a few elasmobranchs, though they were nowhere very frequent.

By far the most common animals represented on the site were shell fish and a preliminary identification of the species present, kindly made by Mr R. J. Scarlett, is listed below, with an indication of their frequency:

<u>Amphidesma</u> ( <u>Paphies</u> ) <u>Australe</u>	Most common
<u>Chione</u> ( <u>Austrovenus</u> ) <u>Stutchburyi</u>	Next most common

<u>Struthiolaria vermis</u>	)	A considerable number
<u>Austrofusius glans</u>	)	
<u>Cominella purpurata</u>	)	<u>Zethalia Zelandica</u> )
<u>Lunella smaragda</u>	)	) present.
<u>Baryspira mucronata</u>	)	<u>Maoriculpus roseus</u> )
<u>Amphidesma forsterianum</u>	)	

With the exception of a few strays, these shellfish are characteristic of the species which may now be found in the mud and sand banks of the Tauranga Harbour.

Owing to the various agricultural disturbances of the surface of the site these identifications are based on the scattered shells found mainly in the garden soil. The only concentrated deposits on the occupation area are the truncated fire pits and, in one instance, a dump of food debris in pit no. XXXII. It may be observed that the shellfish were probably being cooked among the ashes and heated stones of these fire pits, where they are quite frequently found in a calcined state. It seems likely that the preparation of these shellfish was being carried out on an intensive scale at this site, as witnessed by the immense midden, now being quarried for chicken grit, spilling down the Northern face of the pa. From a discussion with Mr R. Mossop the former owner of the shell-grinding plant, it has been possible to conservatively estimate that a good 1000 tons of shell existed in this midden. Such quantities of shell combined with the technique of preparing the meat, which would have led to an initial and partial dehydration, suggests that the shellfish were being dried for storage.

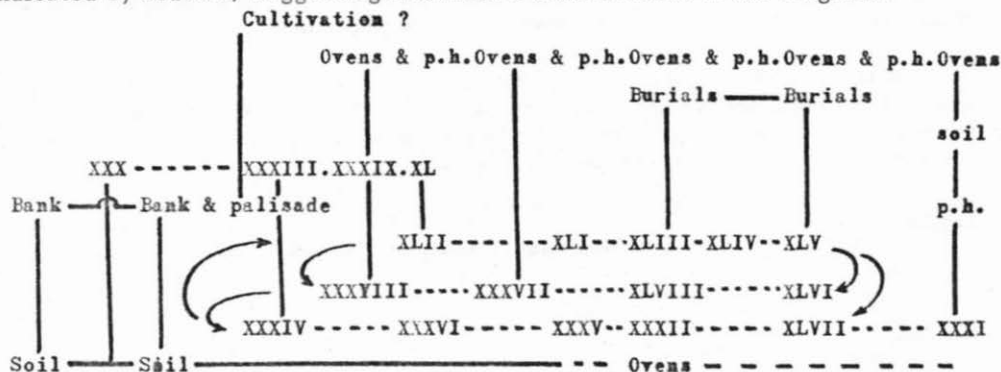
#### The Stratigraphic Sequence

It will have been apparent from the preceding paragraphs that there was not a simple, single-phase occupation of the Western area, but that there had been successive occupations. Owing to the fact that the excavations were not extended to cut through the defences, as in the previous season, it is not possible to develop a sequence on successive re-fortifications of the sites, which is clearly likely to provide the most convincing definition of periods of occupation. The sequence proposed for this area is based on a combination of features found distributed over the entire area. As previously, use has been made of the stratigraphic evidence supplied by superimposed groups of pits. The pits were first sorted out into their stratigraphic order, which exists in only three cases.

<u>XXXIII</u>	<u>XXXIX</u>	<u>XL</u>
XXXIV	XXXVIII	XLII

They were then grouped according to their alignments, which may be defined by the long axes of the pits lying approximately parallel or at right angles.

(Shawcross 1964:89). These sortings resulted in four pit groups being identified (See diagram 1 below), and of these, one group is securely shown to be the latest, but owing to the absence of stratigraphic links between the other three groups it is not possible to definitely indicate their respective order. This has been indicated by arrows, suggesting alternative combinations in the diagram.



In addition to the pits, the garden soil, postholes, burials, ovens and defences must also be taken into account in constructing the stratigraphic sequence, and clearly one of the most important stratigraphic relationships is that between the defences and the underlying garden soil. This shows that gardening was carried prior to the construction of the last defences and there are two reasons for supposing that cultivation was the earliest identifiable disturbance of the ground in this area of the site: 1. all of the pits are filled with this soil: 2. if, as will be discussed below, the pits were used for food storage, it is likely that there would have been cultivation, for food crops, prior to the digging of storage pits. For these reasons, the soil is placed at the earliest point of the sequence. It seems probable that the area was subsequently re-cultivated on a number of occasions, but owing to the disturbance of the surface during recent times there is only evidence from pit XXXI for digging of the surface of the pit-fill, followed by cooking activity.

At a point in the sequence, certainly later than the construction of one group of pits, the Western area of the site was employed as a burial ground where some four burials have been found, without grave goods, and made in shallows, oval, scooped pits. It seems highly unlikely that these burials would have coincided with gardening on the site or the presence of a living community, so the cemetery has been given a separate phase.

Finally, however, there is extensive evidence for occupation over the site in the form of ovens containing shell debris, and postholes. These are generally found to be late, but there is sufficient evidence to show that they do not all belong to a single phase, because stratified in several positions on the site is evidence for earlier shellfish cooking (notably the fill of pit XXXII), and in the sequence on pit XXXI there are postholes preceding the formation of agricultural soil, which itself precedes the construction of ovens. Even so, the latest occupation of the site is characterized by the very extensive area of ovens.

The defensive earthworks have been correlated with this latest phase, which in fact shows the most signs of living occupation. But the banks could have been thrown up at any time after the earliest cultivation of the site -- though it does seem likely that the palisade posts were taken out of their sockets, rather than being allowed to decay, and that these holes were then filled with agricultural soil, indicating that the site was last used as a garden.

It is possible to stretch this sequence out to nine successive phases, if not more, but, while this might in fact be quite close to the reality of successive occupations of one sort or another, it is felt to be more reasonable to concentrate the sequence into some seven phases, as follows:

First:

Cultivation of new ground, associated perhaps with some living activities, e.g. ovens.

Second:

Construction of a group of pits, which, it is suggested, are: nos. XXXI, XXXII, XXXIV, XXXV, XXXVI and XLVII.

Third:

Pits XXXVII, XXXVIII, XLVI and XLVIII.

Fourth:

Pits XLI, XLII, XLIII, XLIV and XLV.

Fifth:

A firmly stratified late group of pits: XXX, XXXIII, XXXIX and XL; with any or all of these previous phases there were most likely associated timber-framed structures, whose evidence survives in the form of postholes, as well as cultivation and food preparation.

Sixth:

The function of the site changes temporarily to that of a cemetery, for which there is evidence of burials and scattered obsidian. The area must have been tapu at this time and would necessarily have been abandoned for occupation for some length of time.

Seventh:

Extensive re-occupation of the site by a living population, probably engaged in large-scale preparation of shellfish food. This occupation must surely have been so much later that the position of the burials had been forgotten or the tapu ignored.

Discussion:

I. Age of Site: Historical Evidence:

It will have been apparent that there is no evidence whatsoever for this site having been occupied in 1842, and it seems likely that it is not the location of the ill-fated Te Whanake's Christian settlement. It is impossible to believe that a community which had been in contact with Europeans to the extent of having signed the Treaty of Waitangi, and having become Christians, and who had been in contact with missionaries since 1820 and with a European trader in the area since 1830 could have been so destitute of European goods, especially when accounts show that they possessed such a range of European objects as prayer books, firearms and pipes. (See Shortland)

It seems likely, therefore that the historical Ongari was located elsewhere, probably on the flat area below and to the West of the site under investigation. It is on this area that the former timber-mill, mentioned in the first season's report, was built. There is clear evidence, in spite of extensive bulldozing, for Maori settlement on this spot, and local residents remember that there were earthworks here before the construction of that mill. (I am indebted to Mr A. M. Honeyfield for this information).

The visible earthworks of the pa therefore seem to have been constructed prior to extensive European contact with this area and, indeed, on the evidence of a very thorough investigation of Historical documents still in progress, appears to have been entirely abandoned for a number of years, prior to the founding of Te Whanake's settlement. Thus, for the present, the hope of locating a historical point in the occupation sequence of the Kauri Point area must be dropped.

II. Pit Classification:

In 1962 Mr R. H. Parker outlined a classification of pits (Parker 1962:224), derived from excavations at Opito (Coromandel) and Kumara Kaiamo (N. Taranaki). He identified two different assemblages of pits from the Opito area, both of which could be associated with early settlements, identified by their artefact assemblages. He also found similar assemblages, though this time inverted, at the beginning of the Kumara Kaiamo sequence, which were known to end in Historic times, and on this evidence he proposed his Archaic A and B pit assemblages. Clearly, the validity of these assemblages could only be proved by further excavations, but also, as they were inverted at one or the other site they could at best be interpreted as Cultural distinctions and not in a Chronological sequence. However, some confusion seems to have arisen at the time, for at the conclusion of his 1962 paper, Mr Parker notes a "correlation of these stages which seems surprisingly close, even embarrassingly close" between his scheme and that of Dr R. C. Green. "Surprising" is appropriate, because if Dr Green's

subsequent interpretations are correctly understood he has employed the Archaic A and Archaic B pit assemblages as chronological indicators for his Developmental and Experimental Stages respectively (Green 1963: 51 & 56).

There would be no point in labouring these inconsistencies were it not for the fact that these assemblages and their chronological interpretations might be capable of giving an age to the Ongari site.

The stratigraphically latest group of pits at Ongari correspond quite well to the Archaic B at Opito, consisting of plain rectangular pits and shallow "bin pits". On the other hand, the Ongari "Buttressed" pit appears to be associated only with rectangular pits and not, as at Opito, with underground pits entered by means of a shaft to one side. Likewise, the first season at Ongari brought to light one of those underground pits, but it was associated only with rectangular pits and not, as at Opito, with underground pits entered by means of a shaft to one side. Likewise, the first season at Ongari brought to light one of those underground pits, but it was associated with plain rectangular pits. Lastly, at the Kauri Point excavation "buttressed pits" are associated with "bin pits" (Golson 1961:22).

However, it seems that the term "Buttressed" has become expanded to cover at least three distinct forms. This is particularly clear in comparing the first published plan of the Opito excavations (Groube 1965:17) with drawings from the Kauri Point excavations (Ambrose 1962:58), and the Ongari "Buttressed pit". The Opito pits have massive buttresses on one of the side walls, whereas the Kauri Point and Ongari pits have their buttresses at the ends. For this reason, it seems reasonable to expand Parker's classification before re-examining the combinations of pit-types found on different excavations. The following scheme neither takes into account posthole patterns nor, except in the case of the "bin pits", any variation in size, nor the presence or absence of such features as raised earthen rims, found in some pits, nor whether features like buttresses are single or multiple.



- |       |                                  |
|-------|----------------------------------|
| A     | Mt Roskill, Ongari               |
| A. B. | --                               |
| A. C. | Ongari, Taniwha (Green, 1963:77) |
| A. D. | Mt Roskill, Opito                |

A. E.	Opito, Kumara Kaiamo, Ongari
A. F.	Ongari, Kauri Pt. 53-54/6
B.	Mt Roskill ?
B. C.	-
B. D.	-
B. E.	-
B. F.	-
C.	Kotare ? (Pos 1964:112)
C. D.	-
C. E.	Kauri Point
C. E. F.	Tarata ?
C. F.	-
D.	-
D. E.	-
D. F.	Opito, Kumara Kaiamo.
E.	-
F.	-

It will be seen that there are already some ten distinct combinations of pit forms alone and these are found in nine sites • furthermore, the positions of any of these seems at present to be most variable in the available sequences: it would therefore be necessary to postpone this method of determining the relative ages of sites until the subject of pit forms is on a securer basis.

#### The function of pits:

Mr L. M. Groube has recently discussed the function of the kinds of pits found in recent archaeological excavations (Groube 1965:30). He presents the arguments for interpreting these structures as houses and showed the poor historical basis for the observation of "pit houses" by the earlier explorers. He then goes on to point out that pits correspond geographically with areas of kumara cultivation and not with the increasing rigours of more Southerly climate. He further argues that pits show none of the usual debris associated with occupation, that the majority are unsuited to occupation whereas they are ideally suited for maintaining an even temperature and humidity, both of which are vital for the storage of the sweet potato, a notoriously delicate plant. He further argues that the reason for the frequency of such pits is due to the likelihood of their useful life being, at most, only a few seasons, owing to the risks of bacterial infection, and that certain variations in size are likely to be connected with the separate functions of food and seed storage. He finally points out that a weakness of New Zealand archaeology has been that, owing to the limited areas excavated, it has appeared from a number of sites as if pit structures stratigraphically precede above surface posthole structures. This pattern was in fact observed in the first season at Ongari, where a relatively small area was opened. (Shawcross 1964:96)

It is therefore interesting to examine the results of the second season's work at Ongari in the light of Groube's arguments.



In the first season two pits were found with shallow scoops of burnt ash, but none were found in the second season, when, however, a much smaller number of pits was fully excavated. No other debris indicating occupation has been found in any of the Ongari pits. The large "buttressed pit" XL has a highly compressed, discoloured floor, but this appeared to have been due to water-deposited silt which could have been formed by a single rainstorm occurring when the pit was uncovered.

As already noted, all of the pits are filled with cultivation soil, suggesting that gardening was being practised close by and implying a functional connection. Lastly, returning to the stricture about the small areas excavated by archaeologists, the very large area opened up in the 1964-65 season shows that in this relatively more thinly occupied part of the site the pits are concentrated in the West end, whereas the postholes appear most frequently to the East, which, while stratigraphically difficult to demonstrate, may be interpreted as showing that the pits and postholes were mutually exclusive but probably contemporary, serving separate functions. The most satisfactory explanation is that the pits are, as Groube suggests, for storage, and the postholes represent the light-framed houses of the settlement.

#### The Cultivation of the Site:

At the conclusion of the first season's report the observation was made on the possibility that the Maori may frequently have cultivated their former settlements. This was based on documentary evidence related to the 1842 settlement, but there is evidence for it now having been more general, both from the second season's work and from the first season's excavation at Paeroa Pa in the Bay of Islands, where it appears that part of the 1772 occupation was cultivated after the sacking of the settlement by the French (Personal communication by Mr Groube). A third example from the Bay of Plenty is historically documented for the Te Tumu Pa, North of Maketu, which was being cultivated by the Arawa people in 1838, after the Ngaiterangi had been driven out. (A.N. Brown, Journals, typescript, Vol. 1, Auckland Institute). In the previous report an explanation was proposed that cultivation might have been more successful on an old site due to the human occupation introducing plant nourishing substances into the soil. This has received some support from the work of S. F. Cook and R. F. Heizer and others in America, and calculations were made on the amount of nitrogenous matter transmitted through the human body. (Cook and Meizer, 1965:4) This cannot have been high on a Maori site if account is taken of the importance in the community of the latrine (turuma) (Buck 1958: 140). For that matter, waste remains of all sorts do not appear to be dense on pa sites, but probably the shells and cooking waste would, with the presence of a certain amount of human and other animal waste, materially improve the rather poor soils (so far as subsistence gardening is concerned) which are general in New Zealand.

#### Comparisons within Ongari and with other sites:

It has been observed above that defensive systems are likely to be the most suitable means of subdividing occupation sequences and they should be equally useful

in linking different parts of a site. However, not enough sections have been cut to test the connection between the Western and Central and Eastern areas in this manner. In the absence of any artefactual assemblages there is therefore no adequate way of linking the areas (See Terrell, 1965:127). However, a possible, but by no means certain link may exist in the alignments of the pits. In each area four phases of pit-digging have been identified, and their alignments correspond approximately, though the validity of this method is unproven and would mean a combination of dissimilar pit groups. If this correlation is correct it would be likely that the defences in the Western area are earlier than the final double bank and ditch system of the Eastern area. But, as Mr W. Ambrose has pointed out some time ago, the difficulties of stratigraphically linking groups of small earthwork features separated by any distance are very great. (Ambrose, 1962:65)

This difficulty becomes excessive when attempting to relate the Ongari and Kauri Point sites, which are a little over two kilometres apart. Clearly, in a general sense they are related sites with many points in common, but for a useful understanding of New Zealand prehistory it is desirable to have a greater precision than relating sites to a broad time bracket of several hundred years. If the Kauri Point sites had all been occupied continuously over a length of several hundred years they would represent a large, stable population and an intensive exploitation of resources. If the occupations are discontinuous, then to what degree were they so and what was the relationship of the various occupations? To answer such questions it is clearly desirable to search for connections between sites.

As there are no artefactual assemblages to link the Kauri and Ongari Point sites, recourse must be taken to the earthworks. But, as has already been shown, the assemblages of different pit forms appear too variable to provide a basis for correlation. Likewise, it would be out of place to employ orientations, though it may be observed that the Kauri Point pits fall into the same general grouping of NE/SW with a sub-group at right angles. The sequence described by Mr Ambrose (Ambrose 1962:56) is more securely based on defensive earthworks than that at Ongari, but the description indicates that the pits do not so readily fall into a series of phased groups. One feature in the Kauri Point sequence which seems to correspond to one at Ongari is the deposit of burnt shell and oven debris (Period 3) (Ambrose 1962:61), which probably reflects a similar use of the site to the ovens and burnt shell of phase seven at Ongari. However, this is a functional similarity and has no direct stratigraphic and chronological connection, but indicates that both sites were occupied at some point in their histories for extensive shellfish exploitation. But there is a possibility that this shellfishing would coincide with the development of a particularly dense shellfish population, for shellfish are known to increase and fall sharply in numbers. Thus, by these very indirect means, which await much more research, it may be possible to correlate part of the occupations of the two sites.

#### Conclusions:

The entire absence of any evidence for European contact on the site suggests strongly that the site of the excavations was not that of the historically recorded

occupation of 1842. This, in turn, means that even if there is any validity in the proposed correlation between the Kauri and Ongari Point sites, it has not been possible to make a direct link with a known historical event. However, though these primarily historical aims have not been achieved, a considerable body of prehistoric information has been obtained: that is to say, information concerning the recurrent phenomena which are characteristic of these sites, as opposed to the unique state of a particular event at one point in time. The results include: (i) An overall history of occupation which corresponds to that of the Kauri Point site: (ii) Evidence for the agricultural re-use, which seems to have been regularly made, of these sites: (iii) The corresponding fact that such sites were not the locations of permanent, village settlements: (iv) Evidence for the use of these sites, on occasion, for an intensive, shellfish food preparation industry: (v) Information on the relatively exclusive distribution of timber-framed structures and semi-subterranean pits, which adds to the already convincing body of evidence that the primary function of these pits was that of food storage: (vi) On the negative side, strong grounds for entirely revising an earlier classification of forms of pits and their use at this stage as chronological indicators: (vii) Finally, this work is fundamental to any archaeological investigation of groups of sites within an area, as opposed to the excavation of single sites in isolation.

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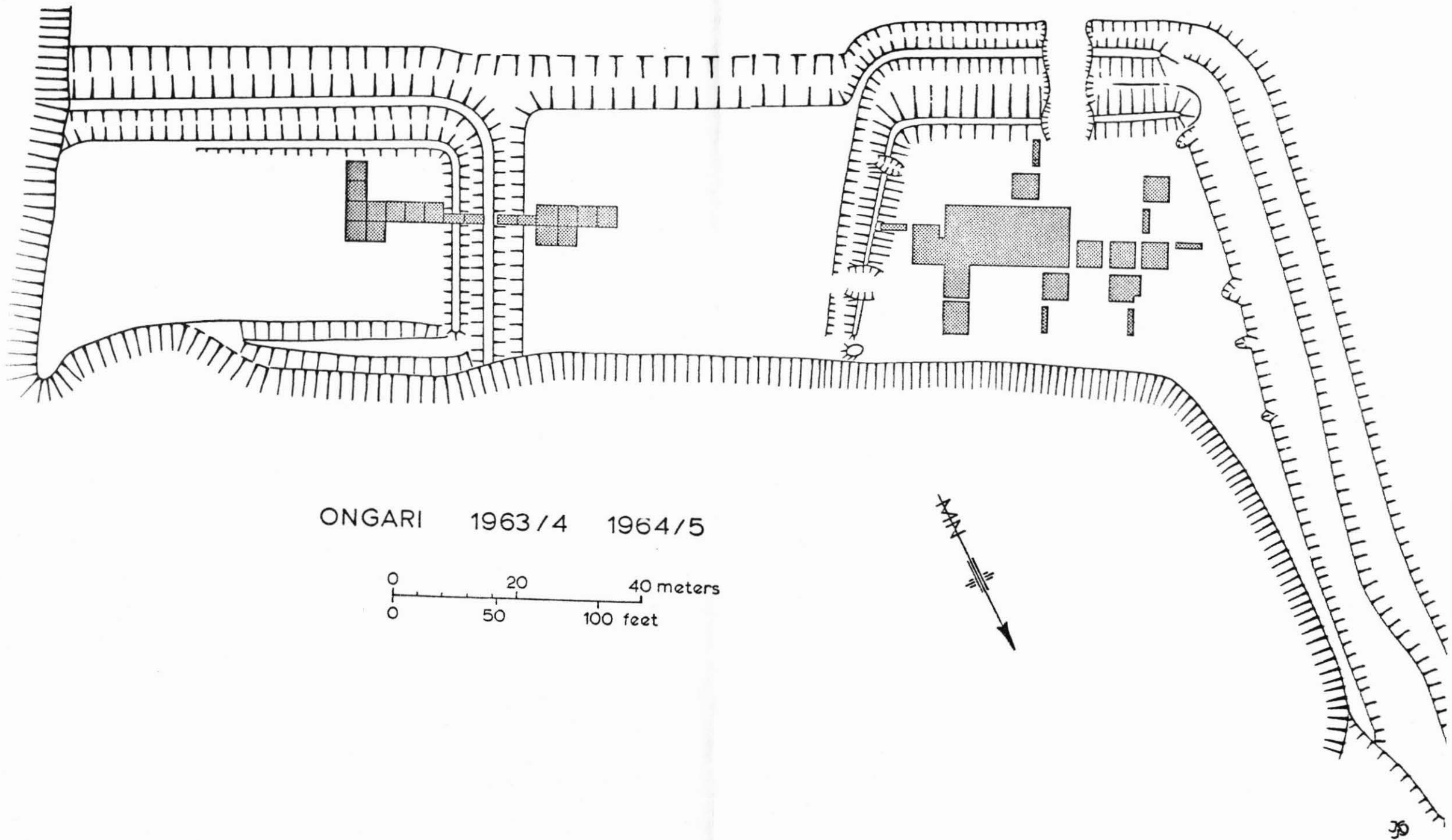
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#### A LIMITER OF NEW ZEALAND ARCHAEOLOGY

W. Ambrose, A. N. U.

Terrell (1965:125) has recently cast doubt on the usefulness of the regional "aspect" as the basic operational unit in New Zealand archaeology and proposes in its stead a counsel of despair, by suggesting that correlations between even proximate areas will be difficult, if not impossible, because of the paucity of what he calls "diagnostic artefactual complexes". His remarks are directed mainly at the use of complex habitation and defence works common in New Zealand archaeology. It is difficult to discuss Terrell's view that New Zealand's archaeological remains are bereft of a wide range of artefact types since this is a relative question and he cites no examples for comparison. We can agree however in noting "a paucity of those kinds



ONGARI 1963/4 1964/5

0 20 40 meters  
0 50 100 feet

