



NEW ZEALAND
ARCHAEOLOGICAL
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NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION MONOGRAPH 4:
J.R.S. Daniels, *New Zealand Archaeology: A Site Recording Handbook*



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NEW ZEALAND ARCHAEOLOGY

A SITE RECORDING HANDBOOK

by J.R.S. Daniels



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(with a section by B.G. McFadgen)

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PREFACE

This Handbook replaces the New Zealand Archaeological Association's Handbook No. 1, "A Handbook to Field Recording in New Zealand", by J. Golson and R.C. Green, which has been out of print for some years. The authors of that Handbook stated that it was designed to help everyone participating in the Site Recording Scheme, and so is this one. The approach used in the first Handbook has, however, been completely revised in the light of later experience in site recording. This Handbook also contains much new material, including a chapter on surveying by B.G. McFadgen. It will, I hope, be particularly helpful to recorders who feel the need of some guidance and assistance in their work, and beginners who have done no recording before.

I make no apology for the fact that some parts of this Handbook are detailed and require careful reading. I believe this to be justified. One of the original aims of the Site Recording Scheme was to make it easy for casual observers such as farmers and others working on the land to report sites. This aim has never been fully realised, and even in those cases in which it has, the records produced have required further checking to be of real use. The people who have made the Site Recording Scheme their own are the enthusiastic, experienced individual workers and small local groups who specialise in recording. I know that I need make no apology to them for a Handbook which demands care and high standards in recording.

The standards set out here are those of the New Zealand Archaeological Association. They are not unreasonably high, but there is room for improvement on much of the recording done already. The Association's aim in producing this Handbook is both to set standards and in so doing to raise existing standards. The systematic recording of sites is vital to many aspects of prehistoric research and investigation, and recorders have the satisfaction of knowing that their work forms a vital tool of future research.

Many people have given me advice and assistance in producing this handbook, and I wish to thank them most gratefully. In particular I thank Dr A.G. Buist, the Association's Editor, for his guidance and assistance, and the staff of Messrs A.H. and A.W. Reed for their advice on the production of this handbook. I also willingly acknowledge my debt to the authors of the 1958 "Handbook to Field Recording". I wish to thank Mr B.G. McFadgen for contributing the section on Surveying.

I am also grateful to all those who helped with illustrations. The line figures were ably drawn by Mr K.M. Peters of the Anthropology Department of the University of Auckland, and Mr C. Schollum of that Department printed the photographs contributed from its files. Special thanks are due to Mr P. Van Asch

of New Zealand Aerial Mapping Ltd for waiving the Company's copyright on the photographs from the Buchanan collection, and for the trouble so willingly taken to print portions of the photographs to the required size.

I would like to record my thanks to Mr F.W. Shawcross for his cover design; a description appears below.

John Daniels
Central Filekeeper
N.Z.Archaeological Association.

Cover design by Wilfred Shawcross, Department of Anthropology, Auckland University. The scene is an imaginary one with a double bank and ditch pa in the right foreground and a group of terraces on the left. The bank and ditch fortification is found in North Auckland, the Bay of Plenty and Taranaki in large numbers. Terraces are found throughout the Country, as far South as Otago and are either independent or combined with banks and ditches. The middle and background is based on a view of the Otago Peninsula, and the site of Little Papanui, but where the main site would have been on the lower left another site, Galatea Bay on Ponui Island in the Hauraki Gulf has been substituted. This latter is an example of a widely represented form of site consisting of a coastal shell-midden located by a source of fresh water. The style of the drawing, based on the lino-cut technique has been made deliberately formal, in order to emphasize the fact that field archaeology relies on maps and cartographic techniques.

PART I - INTRODUCTION

1. The Object of Site Recording

Archaeology is basically a means of studying man. It involves the location, recovery, and interpretation of survivals of human activity in their actual setting. Recording the location and surface evidence of these survivals, which is the function of site recording, is therefore an essential step in the study of man's past.

The basic recording unit of all archaeological study is the site. At the commencement of the Site Recording Scheme the New Zealand Archaeological Association adopted the following definition of the term "site":

"Any specific locality for which there is physical (as opposed to traditional) evidence for its occupation by the pre-European peoples of New Zealand, even though the occupation has been transient".

Sites may be grouped for study in a variety of ways. For instance, a division may be made between sites of day-to-day activities and specialised activities (or different combinations of both). Another possible division is between structural sites, where the evidence takes the form of a deliberately constructed feature, and residual sites - residues or wastes deposited more or less fortuitously as a product of human activity. The most valuable sites for archaeological study are, of course, those where evidence of human activity is recoverable, although naturally the recorder cannot always tell to what extent it is recoverable.

Another method of grouping is by a descriptive classification of various types of site. This is how sites are dealt with for the purposes of the Site Recording Scheme. Some classification is essential in order to record any large number of sites, and the Association has adopted one based on the different types of site as they are visible on the surface in the field. It is therefore a purely descriptive classification, and makes no attempt to assign features to categories based on function. (This point is expanded in Part II).

With this classification as a basis, the aim of the Scheme is to record adequately by written description and appropriate illustrative material as many as possible of the individual archaeological sites throughout the country.

Recording should always be looked on as an integral part of the archaeological process. It is the means by which a vital research tool is formed, for without knowledge of the existence, surface features, and distribution of sites over a given area, any archaeological investigation

is seriously hampered. The Site Recording Scheme cannot hope - indeed, it would be wasteful to try - to record sites with such accuracy and detail that investigation on the ground of actual surface features is unnecessary, although some recording has reached a standard almost high enough to make this so. The real aim is to provide the researcher with:

- (a) The place in the classification within which a site falls; and
- (b) Sufficient information to enable him to judge whether it contains, or could throw light on, particular features which may be relevant to his interest.

Depending on the case in point, the researcher may either be satisfied with the information on the form or may wish to visit the site. In either case, the record has fulfilled its function.

At their best, archaeological site records consist of a virtual archaeological archive for an area. They provide not only an index for future research but a documentation of the visible prehistory of the area, so that the knowledge of this is never lost, no matter what happens to the sites themselves.

It must, therefore, never be forgotten that the Site Recording Scheme is an aid to archaeological research. Standards of accuracy and description must be set, and kept, high. The individual recorder should have no difficulty in meeting them if recording is done with the research worker of the future in mind.

2. The Site Recording Scheme

HISTORICAL

The Site Recording Scheme was inaugurated by the Association in 1958. Before that time various exercises in recording, usually field surveys intended for publication (e.g. Best 1927), had been carried out. However, the development of systematic recording began comparatively recently, and owes much to the late Mr. J.D.H. Buchanan. In 1951, the Historical Section of the Hawkes Bay Branch of the Royal Society was given a financial grant by the Society for an investigation into a suitable scheme for recording Maori sites. Mr. Buchanan, as convener of a committee set up for this investigation, devised a detailed plan for a scheme along the lines of that developed for recording fossil collections. This plan contained the essentials of the plan in operation today.

It soon became clear that the forms adopted for the Scheme when it commenced operation were inadequate to cope with the very varied information being recorded for particular types of site. There was a general demand for more flexible recording forms, and the forms at present in use were adopted in 1960. (See Mumford, Daniels and Smart 1960. Not all of the changes suggested in that article were subsequently acted on.)

A total of 4645 sites have been recorded for the Scheme in its twelve years of operation. Very good progress has been made towards a comprehensive site survey in some areas, but very little work has been done in several parts of New Zealand rich in field evidence.

ORGANISATION

The basis of the Scheme is the recording and registration of sites in regional areas, with duplicates of all records deposited in a central file.

Filing districts.

The country is divided into 12 filing districts, the boundaries of which are based upon N.Z.M.S. 1 (inch to mile series) maps. The areas covered by each, the location of the file, and the filekeeper as at the date of publication are given in Section 10.

Local files.

Each district has a local file containing the site records from that district. These are filed according to the N.Z.M.S. 1 maps on which the sites are situated, sites on each map being numbered in order of receipt.

Local filekeepers.

Each local file is in the custody of a local filekeeper appointed by the Council of the Association. The local filekeeper is in many ways a key figure in the Site Recording Scheme. He is the immediate contact with the recorder, he has the often considerable task of transferring the recorded information to the forms, and is responsible for processing the records and deciding on the rejection of unsatisfactory material. The local filekeeper also keeps a set of index inch to mile maps on which is marked the location of each site recorded.

Access to local files.

Wherever possible, the Association tries to have local files housed in a public institution, but in smaller towns and in rural areas there is sometimes no alternative to keeping them in private homes. However, local filekeepers may allow their files to be seen by

- (a) financial members of the Association;
- (b) other persons at their discretion.

The central file.

A duplicate of each record is deposited in the Central File, which is kept at the Dominion Museum in Wellington. As in local files, records are filed under N.Z.M.S. 1 map numbers. This file is maintained by the central filekeeper, who is also appointed by Council, of which he is an ex-officio member. Besides depositing a copy of each record in the file, the Central Filekeeper is responsible for the national administration of the Scheme, maintaining close touch with local filekeepers, and advising Council on matters connected with the scheme. The Central Filekeeper also purchases maps and aerial photographs for Association members at the Association's concessional rate. (See page 6).

Access to Central File.

Access to this file is restricted to financial members of the Association, except for overseas students, who may be granted permission at the discretion of the Central Filekeeper.

An Association member who wishes to consult the file is required to apply to the Central Filekeeper in writing, stating what files he wishes to consult, when he wishes to consult them, and his willingness to abide by Association policy in their use. This statement is to be signed by the applicant's local filekeeper.

Right of appeal against refusal of permission to consult files.

Under the above rules access to central and local files may be denied to financial members of the Association. The responsibility in all cases rests with the local filekeeper, who might refuse permission to consult his files, or withhold his signature from an application to consult central files. The Association realises that in this situation the rights of members need protection.

Every financial member of the Association therefore has the right of appeal to Council in the case of his being refused access to either central or local files. Filekeepers must immediately report to Council their reasons for refusing permission either to consult files or to refuse to sign applications by financial members of the Association to consult central files. Such information is to be regarded as strictly confidential.

Secret files.

There is provision for deposit in the central file of records of sites the existence of which the recorder or his informant may for some reason wish to keep secret.

These records are kept sealed, and may be consulted only with the permission of the recorder.

Procedures.

Records are submitted direct to the local filekeeper. The procedure then is as follows.

1. The filekeeper checks to see that all the necessary information on each site has been submitted, and that no record is a duplicate of one already held.
2. A site number is allotted. This consists of the number of the N.Z.M.S. 1 sheet on which the site falls, and a serial number, each new site being numbered consecutively in order of receipt. (For example, N 160/1, N 160/2, and so on.) Site numbers therefore bear no relationship to geography.
3. The site number is plotted on the relevant N.Z.M.S. 1 local file index map.
4. The filekeeper signs the Site Reference Forms.

5. He places one copy of all the record material for each site in the file in a manila envelope, with the site number and site type on the outside.
6. One copy of the record is returned to the recorder if requested.
7. The remaining copy, with copies of all maps, photographs, etc., is sent to the Central Filekeeper.

Forms.

These are available from local or central filekeepers on request. Completion of the various forms is covered in detail in Section 9.

Maps and photographs.

These are essential to recording, and through the generosity of the Department of Lands and Survey members of the Association are able to obtain them (apart from aerial mosaic maps) at 33 1/3 per cent discount from the Department. Members wishing to obtain the discount must do so through the Central Filekeeper, supplying full details and the correct remittance, allowing for postage. Sample prices are:

N.Z.M.S. 1 (inch to mile)	47c.
" 2 (four inches to mile)	40c.
Aerial photographs (contacts) 9x9	\$1.47
7x7	\$1.34

References.

Best, E., 1927. The Pa Maori.

Mumford, W., Daniels, J.R.S., & Smart, C.D., 1960. Revision of the Site Recording Scheme, N.Z.A.A. Newsletter (4) : 33-5.

3. The Uses of Recording

This chapter will attempt to answer the commonly-asked question: What is the use of recording signs of prehistoric occupation?

Recording is not just an academic exercise, the compiling of information for its own sake. For many recorders the location and recording of sites is an absorbing interest, and perhaps the enthusiastic, and very capable, amassing of records by such people will continue for many years. However, most recorders operate in the expectation that their work is serving a purpose, or will do so in the future. The rest of this chapter describes some of the purposes which recording has served.

Settlement pattern studies and excavation programmes.

It is a truism that before any serious work can be done on the pattern of occupation in an area, the sites there must be known. This knowledge, to be used effectively, must be recorded.

"A discovery dates only from the time of the record of it, and not from the time of its being found in the soil" (Pitt Rivers)

The character and distribution of surface field remains can often tell the prehistorian a great deal about an area, but it is unlikely that any conclusions he reaches will be fully reliable without excavation of some of the sites. Only excavation can determine the exact form and function of some features (e.g. pits) and the chronology of occupation. However, once a certain feature has been investigated and checked by excavation, some of the resultant information may be assumed for identical features found elsewhere. In this way, once adequate excavation has been done on some types of field monuments, it should be possible to draw certain conclusions about identical features in other areas without further excavation.

Thus work on settlement patterns depends on the inter-relation of the information on site distribution provided by field recording, and the more intensive work of excavation. Field recording provides the distributional information of the site types whose form and function is defined by excavation.

Field recording is also an essential aid to excavation. The excavator is not able to select sites to investigate unless he has access to information on the whole range of sites in the area concerned. As one of the founders of the Site Recording Scheme has remarked:

"Each site discovered is obviously a potential site for excavation, and the choice of the ideal site for an excavation designed to answer specific problems can be the work of field archaeology on the highest level." (Golson 1957, p. 64).

The excavator is greatly dependent on the work of the field recorder, and both must work closely together on planning archaeological research.

Salvage of threatened sites.

Recording is employed in several ways where sites are threatened with destruction:

1. It shows immediately what sites there are in any area.
2. It enables a check to be made of the possible value of individual sites in relation to others in the area.

A thorough recording programme will, when completed, give the means of showing the authorities responsible for destruction exactly what sites are involved, and what should be safeguarded. If this is not possible, it will at least give an immediate indication of what will be involved in salvage.

The supply of information to authorities responsible for public works is an important aspect of site protection.

In Wellington, by way of example, the Wellington Archaeological Society has marked, on transparent overlays to the N.Z.M.S. 1 sheets, all the known sites in the area and has supplied the overlays to the District Office of the Ministry of Works, and to all local authorities in the area. The Ministry in turn distributed the overlays to all resident engineers in the area. In this way all the public agencies responsible for works which might endanger sites are aware of the location of those sites before any planning begins, and it has in fact been possible in Wellington to make plans taking account of this knowledge.

Other ways in which site records can be used are:

1. Supplying lists of important sites to local authorities when town and country planning schemes are due for review (this is advertised), and urging protection of important sites in their schemes.
2. Supplying information on sites where new reserve areas are being considered, either by Government or local authorities.

Public and official awareness of prehistory has not yet reached the stage where archaeologists are often approached to supply information on sites. It is therefore necessary to seize opportunities such as those mentioned above and take the initiative.

The same applies to developments of all kinds which may endanger sites. There are a number of ways in which some prior knowledge can be found, including -

1. Publication of local authority planning schemes in which changes of zoning (e.g. rural to residential) would endanger sites.
2. Announcements of new public works, e.g. roads, reservoirs.
3. Advertisements of subdivisions.

In all these cases, the site records will immediately reveal what is in the area. Decisions on whether salvage excavation is to be

undertaken may have to be made, and the site records provide a basis of assessment of the relative value of each site.

If no recording has been done in the threatened area, then an immediate survey is called for. Few areas in New Zealand are completely recorded. In filling the gaps, intelligent anticipation of likely threats to sites, using the indicators suggested above, should play an important part in moulding the future recording programme. Areas where the threats seem greatest should obviously be recorded first.

Publicity and public education.

The results of site recording form the most easily available body of material for this purpose. Excavation, on the other hand, takes time, and there is inevitably delay in the processing and interpretation of the results to the stage where they are readily comprehensible by non-archaeologists.

The results of site recording can, however, be presented in effective ways. People are usually very interested to learn of the Maori sites in an area they know. Distribution maps and aerial photographs, as well as photographs and slides of individual sites, can be used with advantage in talking to interested groups, or with official agencies.

Photographs, slides, and plans can also be used to illustrate features of individual sites in such talks and meetings. The aim of this is to complete the first stage of public education in archaeology, i.e. what the range of prehistoric field evidence is in New Zealand, what the sites are like, and where they occur. It will be found that many groups are interested in this. Local historical societies, scout groups, university and training college groups, and tramping clubs are a few examples.

It should not be forgotten in recording that private landowners are often interested in securing better protection for their sites. Not many, of course, would wish to give up land to become reserves, but there is provision in the Reserves and Domains Act for the creation of Private Historic Reserves on private land. If an owner appears interested in this, it can be discussed with the local office of the Department of Lands and Survey, which will initiate the necessary action if it is decided to proceed.

Reference.

- Golson, J., 1957. "Field Archaeology in New Zealand." J. Polynesian Soc. 66 (1) : 64 - 109.
- Pitt Rivers, quoted in Wheeler, M. 1956, Archaeology from the Earth: 209

PART II - THE DESCRIPTION OF SITES

4. General

Some basic types of information are important in recording sites of all kinds. These are:

1. The direction in which a site faces. Position towards or away from the sun is often of crucial importance.
2. The particular position it occupies, whether on hill or ridge top, on slopes steep or gentle, or on flat ground. The surrounding topography is also important. Linked with these are questions of:
 - 1) altitude. This can sometimes be estimated from map contours, once the position of the site is fixed;
 - 2) outlook. How much country is visible from the site and in what directions.
3. The distance from water.
4. Food resources in the area.
5. Evidence of flax, karaka, etc. on or near the site.

Where surface features are not so obvious, such as with middens or working floors, a written description is very important and cannot be adequately replaced by any other means.

With bone or stone material, it is sometimes worthwhile taking a small collection, carefully labelled, for later identification. Sketches of artifactual remains and flakes, etc. made in the field sometimes prove useful later.

One of the most important points to watch for in all recording is stratigraphy (i.e. layering of occupation). This is usually evident only if the site has been exposed in section by erosion or other means. Field recorders are not, however, expected or encouraged to take it upon themselves to expose sections of sites where nature or man has failed to do so, however interesting the stratigraphy may seem! This is the job of systematic excavation.

Where there are various layers, describe each one in detail.

Erosion and other forces may have exposed structural features, such as pits or postholes, not visible on the ground. These may be recorded as for the relevant site type, with full details of the dimensions and contents of the site exposed. This is usually a rare opportunity to see a site in depth, so that it is worth taking some time in recording.

The final general point is that, within reason, the more measurements taken the better. On features such as pits and terraces measurements down to six inches - or whole feet on the larger ones -

are sufficient. On smaller features, such as midden layers, more accuracy is desirable.

Site Description.

Enough will have been said by now to make it quite clear that the scheme is based upon purely descriptive recording. The recorder must be as objective as possible about the site he is faced with; in other words, he must record what is there, not what he thinks might have been there or what the site was used for.

It is, in fact, much more important to make an accurate record of the remains of a site than to make inferences as to its former use, although this too can be done. The exact function of many very common features such as pits is unclear and still a subject of continuing research and debate. In other cases, such as pa, the significance, if any, of the various types is also unknown.

For these reasons it is impossible to base site types on the supposed function of field features, or on vague terms which can cover a variety of features. For instance, the two following terms which are not permissible have been used by recorders.

Kainga:

This has been used to describe undefended occupation sites of varying sizes, particularly such assemblages as pits, terraces, and middens.

It may well be that these features all originated from the same settlement, but this does not justify use of the term kainga. This term is in fact a somewhat controversial one whose meaning is far from clear. It means basically a place where a fire was made; in other words, any place where people have lived. Its usual meaning is an undefended settlement. This, however, may include many different types of site, from the casual campsite to the long-established settlement containing many people, and the term would therefore cover many different combinations of site types. Terms like this are therefore insufficiently precise for the recorder, who must make clear exactly what it is that the site contains. Is it just a midden? Or does it have pits and terraced areas? There may in fact be basic differences between sites, all of which could be classed as undefended settlements under the term kainga. Apart from these differences, all the components of a site which appear to fit together may not have been contemporary at all, but may date from different periods of occupation. While they may be treated as one site for recording, they must be treated objectively and not given a typing which infers what can only be proved by excavation, i.e. that they formed a single occupation site.

The danger with general terms such as kainga is that gradually they become accepted as substitutes for description, and sites are given the same typing although they may actually be very different. A false picture of uniformity is built up because common features are emphasised at the expense of differences. Here again, we must record with the

research worker of the future in mind. His concern will be with the details of each site. The general term, whose exact meaning may have been fairly clear to the recorder, could well turn out to be an undecipherable symbol to the researcher of the future.

Occupation:

All sites represent, of course, occupation of some sort. Nevertheless, this term has been used quite widely to describe the miscellaneous debris of everyday living. Sites described in this way usually contain such things as blackened earth or sand, middens, oven stones, flakes, artifacts or all or any of these in combination. Here again the use of a general term may obscure important differences. The sites must be typed according to the standard classification to be described, and it will be found that practically all will fall within these categories. Artifacts/Middens, Artifacts/Oven or Artifacts/Midden/Oven describe many of them. The presence of burnt earth or sand does not merit a separate mention in the site type, as without the other items it would be too uncertain of origin to be worth recording. It will, of course, be mentioned in the description of the site.

What is a site?

There are a number of difficulties in recording, particularly in describing and typing sites. All of these reduce to the question: What is a site? How does the definition "any specific locality for which there is physical (as opposed to traditional) evidence for its occupation by the pre-European peoples of New Zealand", quoted in Section 1, fit into the more complex situations encountered in the field? Some of these are now discussed.

Combinations of site types.

Many sites will be of a single type, but combinations often occur (for example, Pits/Terraces). It is sometimes hard to decide whether a group of features should be recorded as one site. As he is restricted to investigating surface features, the site recorder must, in deciding whether to record them as one site, rely on the proximity of features to one another in relation to the landscape. Usually the "lie of the land" and the way the features are arranged will enable a sound judgment to be made. If they are definitely separated physically, they should be recorded separately, but if there is no clear spatial differentiation, and all the features appear to be roughly of equal importance, they should be recorded as one site with a multiple typing such as that described above.

Another common case is that of the small site near a much larger one, apparently related to it in some way but clearly less important.

Examples are:

Pa with occupation evidence outside the defences.

Large groups of pits with small midden areas.

In such cases it is usually better to record them separately to

avoid giving the impression that the small feature is as important as the large. The fact that this is not so may actually mean that the small site was not connected with the large, but originated at a different time. However, if there are overwhelming suggestions that the features are linked, they may be recorded together.

If they are recorded separately, cross-reference the site records to make the association plain to anyone using the files.

Large areas of occupation.

These are the greatest problem for recorders at present, and it is likely that this has deterred many people from recording such areas.

Typical of these are the large areas of beach middens and ovens in many places, sometimes partly covered with sand or vegetation. Experience to date has shown that it is better to record these as one site rather than to try to distinguish individual middens and ovens. Splitting them into different sites often seems to be an artificial exercise, as in some beach areas the presence of occupation debris in every eroded place suggests that the whole area of beach is one unbroken site.

For recording purposes the best way to handle this large amount of material is to survey the whole area of the "site" and give a full description related to points marked on the survey plan. The plan may be marked, broken up into squares, etc., in any way that suits the recorder. Site numbers must, however, on no account be subdivided (e.g. into A,B,C, etc.). If it seems desirable to subdivide in this manner separate site numbers should be given. The recording of such large areas as one site should not deter the recorder from looking for variations in the site. This is particularly important with middens, where variations in the content may mark stages of occupation and be of great significance.

Sites described elsewhere.

Where sites are described in published records, full descriptions may be left out of the Site Recording Scheme, unless field observations show additional features to those already published, in which case some description is obviously justified.

Partly destroyed sites.

With these it is best to be objective, recording the visible evidence only and giving the site type accordingly. For instance, if there is midden on what you think was the site of a pa, but no evidence of the pa itself, record it as "midden" (mentioning, of course, the fact that it is possibly the site of a pa and citing the evidence). But if there is some trace of the pa remaining, the word "pa" would be justified. It is quite possible, however, that if the midden is all that remains it could be quite unconnected with the pa that you think was there.

For this reason traditional and historical evidence should be used sparingly for identifying sites. The Site Recording Scheme is concerned principally with that which is observable, the field evidence.

Destroyed sites.

Records of these may be submitted if the recorder wishes. Such sites are usually learned about from information already published elsewhere, but information may come to light which is not generally available (e.g. verbal information or unpublished manuscript).

Indexes.

Some recorders have found it useful to make indexes of sites referred to in publications or recorded tradition, to be added as supplements to the site records.

5. Types of Site

Pa

A pa is a fortified position, and in almost all cases those defences whose remains are visible will be earthworks. These will be explained in more detail below.

Pa are the most striking form of field evidence in New Zealand. Their often massive earthworks, in many cases very well preserved, have attracted much attention since early European settlement, and more has been written about the pa than any other type of site. It is impossible here to describe the many variants of the pa and recorders are referred to the works cited on page 20 for a more thorough background.

Classification.

The question does arise, however, as to whether recorders should adopt any of the various classifications of pa types which have been put forward. It must be stressed before discussing this subject that a classification is merely a convenient way, based on obvious observable differences between groups of sites, of ordering or "sorting" a mass of material. Whether a classification reflects any important differences between the various classes is another matter altogether. In the case of pa it is practically certain that none of the originators of classifications would claim that his reflects functional, cultural or environmental differences between pa types. These are matters largely outside the scope of a classification, and which ultimately only intensive study of individual sites, mainly through excavation, will determine.

Nonetheless, classifications of pa do offer a useful way of sorting a mass of material, and of giving a convenient "shorthand" reference to the salient features of a particular site. Instead of mentioning these individually, the recorder is able to indicate which ones it possesses simply by giving its place in the classification.

Until recently classifications of pa were all based on the topographical position of the site. The earliest classification was that put forward by Best (Best 1927). This was a simple topographical classification of six classes. Golson (Golson 1957) put forward an enlarged and more detailed version of Best's classification, and this in turn appeared in a slightly altered form in the predecessor to this Handbook (Golson and Green 1958). A further variant of the topographical classification was offered by Fomison (Fomison 1959).

Since then, however, two radically new classifications have been suggested.

Groube suggested (Groube 1964) that pa be grouped according to the

disposition of supplementary and complementary defences around their perimeter, assuming that all pa can be seen as rectangular sites. This classification has the advantage of covering every type of pa site and leaving no doubt as to the placing of some types which remained uncertain in previous classifications.

The latest scheme put forward is that of Buist (Buist 1965). This is based on a differentiation of pa according to the number of internal "units" possessed by sites. This system also makes the placing of any site in its class a relatively easy matter once the internal units are recognised and separated.

There is no objection to any of these classifications being used for recording, as long as it is made quite clear whose classification is being used in cases where there could be doubt. (This can be done quite simply by stating the name of the author before or after the site class.) No particular classification is preferred by the Association, and recorders should not feel obliged to use any of them. It is important to describe a site in unambiguous terms, and this can be done quite satisfactorily without assigning it to any class. If a classification is being attempted, but a site does not seem to fall satisfactorily into any class, then it should be described fully with no attempt at classification.

Aspects of defence : recording.

Artificial defences provided to supplement the natural defences are ditch, bank, and scarp. The terms ditch and bank are self-explanatory and should be used instead of the Victorian terms fosse and rampart.

A scarp is an artificially steepened slope varying from perpendicular to forty-five degrees.

The ditches, banks and scarps may form various combinations and relative positions in the defence system. (See Fig. 1).

The disposition of these artificial defences in relation to the natural features of the site and to each other is the next essential. This will naturally vary according to the topography of the site. In some cases the site will be almost entirely surrounded by them; in others there may be a lesser portion of the circumference which it is necessary to fortify. Thus features such as scarps and terraces may be found either continuously aligned or irregularly arranged.

On some types of site, particularly those on headlands, spurs or ridges, it is useful to distinguish between transverse and lateral defences, transverse defences being those running at right angles to, or across, the topographical feature on which the pa is situated, and lateral defences those parallel with the length of the feature.

ERRATUM

The diagrams below have inadvertently been printed upside down, and should be reversed when reading.

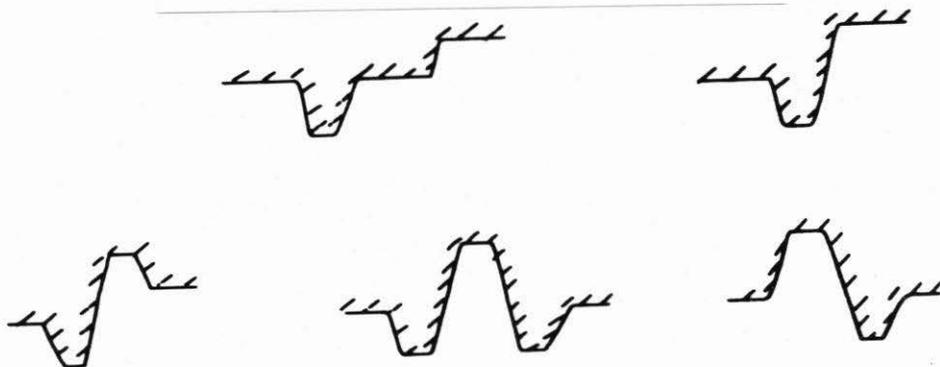


Figure 1
Defensive Earthworks
Some combinations of ditches, banks, and scarps

Most of the defensive features shown above occur, either singly or in various combinations, as either transverse or lateral defences. They may be arranged either singly, or in dual, treble, etc. series, with the same or different elements. If they are in series, state whether they are:

1. Contiguous, with no interval between them;
2. Spaced, with some interval between;
3. Staggered, i.e. so arranged that the site is divided into separately defended areas;
4. Combinations of the above.

Often the inner defence lines of a spaced or staggered series are much more massive than the outer ones, and if so this should be made clear in the site description.

The junction of transverse and lateral defences should be noted. These may take various forms.

1. Transverse ditches and banks may be extended in a straight line in such a way that the lateral features abut at right angles against them.
2. Transverse ditches and scarps may meet the lateral features at right angles.

3. Transverse ditches may turn through a right angle to become lateral ditches for a short distance, giving on to a terrace or terrace with bank.
4. Combinations of these elements may be present on the same site. Other practices may be discovered.

On some pa, particularly those on flat land, the defences commonly consist of a ditch, usually with inner bank and very occasionally with an outer one spanning the undefended area between the naturally defended perimeter. These defences may be contiguous, spaced or staggered as described above.

On other types of pa, particularly those on islands either natural or artificial (Bellwood 1969, Pick 1968, Shawcross 1968, Taylor 1873), artificial defences of the types described may not have been used and recognition of the site as a pa may depend upon the preservation of palisade timbers or be suggested by traditional evidence, in association with definite signs of habitation. If traditional evidence is used to suggest the status of a site as a pa rather than an undefended site, this should be specified. If there is the least doubt, however, about whether the site is a pa, only the visible field evidence should be described and the site typed accordingly.

Entrance and access.

The following features have been noted in the field, but may not exhaust the possibilities:

- undug causeways across ditches;
- gaps in banks, sometimes opposite undug causeways;
- gaps in the outer rim of ditches, particularly at angles, and sometimes covered by a flanking bank;
- sunken pathways through scarps;
- graded causeways over low scarps;
- slanting pathways up high scarps.

Defensive elements may also have been used for access purposes, viz: sloping terraces; ditches, especially transverse ditches turning through a right angle at one or both ends and giving access on the lateral terraces.

Areas of habitation.

Signs of habitation on pa should be carefully noted and described. The place of the pa in the prehistoric settlement pattern is by no means clear, and its degree of permanence of settlement is crucial to deciding its place in the settlement pattern. Pa may be seen, for instance, either as settlements which were defended, or as fortifications which were lived on.

Information on the degree of habitation of pa is therefore of vital importance, and, although the question can finally be answered only by excavation, careful field recording of habitation evidence can be of great value.

Habitation took place within the pa proper and sometimes outside. Where the perimeter is uncertain, it is obviously impossible to decide whether certain areas are outside the defences or not. On most flat land and for some upland pa sufficient level ground was available for habitation and associated purposes. On the majority of upland pa, however, level ground was severely limited and had to be provided by artificially levelling hilltops and slopes.

The levelling of hills or ridges created platforms or terraces.

A platform is an area, usually flat, surrounded in whole or in part by scarps, ditches, or banks, and not rising by way of a scarp to any feature, natural or artificial (see also page 26).

Generally these are so disposed that they contribute to the defence system, i.e. not only are they areas of habitation, but also units of defence, separated from their neighbour either

by scarps, or

by ditches, with or without banks, generally part of a staggered system of transverse ditches.

A terrace is an area rising by way of a scarp to another feature, natural or artificial. It may or may not have ditches and banks on one or more sides (see also page 26). The abutment by a scarp rising to a higher level distinguishes a terrace from a platform.

Terraces on pa vary considerably in size and form. They may be: long and continuous, sometimes with irregularities of level and width;

shorter and discontinuous, making a broken, irregular arrangement on the hillside;

short and discrete, not noticeably part of any arrangement, regular or irregular.

Signs of habitation consist of readily visible features, such as pits, and occupational features such as hearths, ovens, and shell middens.

Pits, more fully discussed on pages 23 and 24 below, are of three main types:

Surface or open pits are common on all types of living area, inside and sometimes outside the pa;

Subterranean pits are found -

on the naturally level or artificially levelled tops of pa;

on levelled terraces, particularly at the foot of the scarp at the back of the terrace;

at the base of the inner scarp of ditches.

Circular pits are occasionally found on pa, usually singly.

With a feature as common as the pit, it is important to record the non-occurrence as well as the occurrence of pits for whole sites, sections of sites, or particular areas on a site - e.g. the number of platforms or terraces without pits as against the number with pits, and the position of such platforms or terraces.

Hearths will be only occasionally visible as the top of a rectangular slab stone setting. Their position should be clearly noted, in relationship, for example, to pits.

Ovens (see pages 30-31) will be visible generally only through erosion. Their positions should be clearly noted.

Shell middens (see pages 29-30) are most likely to occur on the slopes between habitation areas. They are liable to be visible only through natural or animal erosion.

General.

In recording pa sites, details of the natural context and environment are important. Information should be recorded about:

- the direction in which the site faces or trends;
- the position it occupies, on hill or ridge top, on slopes steep or gentle, on flat ground, and the immediate topography;
- altitude (this can often be determined from map contours);
- outlook - how much country is visible from the site and in what directions;
- distance from water;
- the natural strength of the site - this information helps to explain the choice of the site and the disposition of the artificial defences.

The presence of areas of level land, elevated or low-lying, and their extent, in the immediate vicinity of the pa should be mentioned to illustrate possibilities for alternative settlement, cultivation and the like.

References.

- Best, E., 1927. The Pa Maori.
- Bellwood, P., 1969. "Pa excavations at Otakanini, South Kaipara and Lake Mangakaware, Waikato," N.Z.A.A. Newsletter, 12 (1) : 38 - 49.
- Buist, A.G., 1965. "A suggested typology of Pa," N.Z.A.A. Newsletter, 8 (2) : 75 - 78.
- Fomison, A., 1959. "Site Survey of the Kaikoura Peninsula," N.Z.A.A. Newsletter, 3 (1) : 4 - 15.
- Golson, J., 1957. "Field Archaeology in New Zealand," J. Polynesian Soc. 66 (1) : 64 - 109.
- Golson, J. and Green R.C., 1958. A Handbook to Field Recording in New Zealand.
- Groube, L.M., 1964. Settlement Pattern in Prehistoric New Zealand, University of Auckland. (Unpublished thesis.)
- Pick, D., 1968. "Waikato swamp and island pa," N.Z.A.A. Newsletter, 11 (1) : 30 - 35.

- Shawcross, F.W., 1968. "The Ngaroto Site," N.Z.A.A. Newsletter,
11 (1) : 2 - 29.
- Taylor, R., 1873. "On New Zealand Lake Pas," Trans. N.Z. Inst., 5 :
101 - 2.

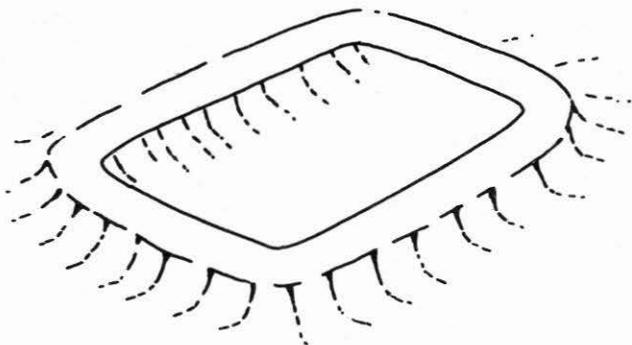


Figure 2
Open pit with raised rims

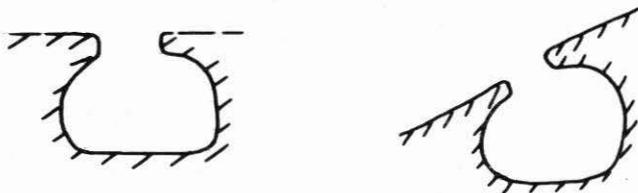


Figure 3
Subterranean pits - Bell type

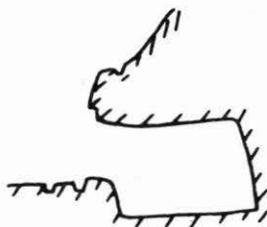


Figure 4
Subterranean pit - Cave type

Pits.

Pits are generally of three kinds - rectangular to square surface or open pits; subterranean, which may be either the bell type with entrance at the top, or the cave type with entrance at the side; and circular. (See Figs. 2-4).

Surface or Open Pits. (Fig. 2)

There is a basic distinction here between pits with a raised rim, presumably from earth dug out of the pit, and those without. This should always be noted. Where the pit is dug on a slope, however, the uphill side may lack the rim. Pits vary in size. The main groups seem to be:

- large pits up to and sometimes exceeding 40ft in longest dimension, often squarish in shape. These seldom have raised rims;
 - medium pits, generally with length about twice the breadth, in the 16 - 20ft long, 8 - 10ft wide range, with depths (only approximate because of silting), from 2 - 6ft;
 - small pits, 5 - 6ft long, usually flat-bottomed and very shallow.
- Pits have already been mentioned in connection with pa.

They also occur in various situations, such as:

- flat ground;
- ridge tops;
- natural platforms on spurs;
- artificial terraces unconnected with defence;
- single pits on hills or ridges with extensive views.

Pits occur in all sorts of arrangements, singly in clusters, end to end in a line, or side by side with undug baulks in between.

Subterranean pits.

These are possibly more common than the recorded instances of their occurrence would suggest. Since they are a danger to stock, they have often been filled in by farmers, while the nature of their construction renders them liable to collapse.

There are two varieties:

Bell type. (Fig. 3) The domed chamber of the pit has its narrow circular or square entrance at the top. The type is usually found on the level areas of pa, sometimes in rows with connections from one to the other underground.

Cave type. (Fig. 4) The domed chamber has its entrance to the side and is thus adapted for the base of scarps or ditches, where it is commonly found with underground communications. The entrance is sometimes elaborated into a doorway, with recesses for the fitting of a wooden door.

Circular pits.

These vary in size, the largest recorded being 25ft in diameter. Most are saucer-shaped in section. Some smaller circular pits have raised rims with openings.

Subterranean pits which have collapsed leave saucer-shaped depressions. It must be recognised that some features recorded as circular pits will be collapsed subterranean pits, as there is no certain way, other than excavation, of distinguishing between the two.

The activities of stock, and fallen trees, for instance, will also leave circular depressions. Exactly what can be recorded as a circular pit can only be left to the recorder's discretion, and the only general advice that can be given here is to exercise caution.

Recording.

Describe, and give detailed measurements for the following features:

Type of pit;

Particulars of features, e.g. shape of entrance, presence of rims;

Length, breadth, and depth of pit. These measurements are best taken at the corners where less destruction through stock etc.

is likely to have occurred; for a raised rim pit, measurements should be taken at the level of the bottom of the rim/top of the pit;

Breadth and height of rim of raised rim pit;

Form and size of entrance to subterranean pits;

Diameter and depth of circular pits.

Describe in general terms the position the pits occupy in relation to the surrounding topography, what outlook they have, and what the drainage appears to be. This information is of crucial importance to any study of pits, and will contribute valuable information to studies of their function.

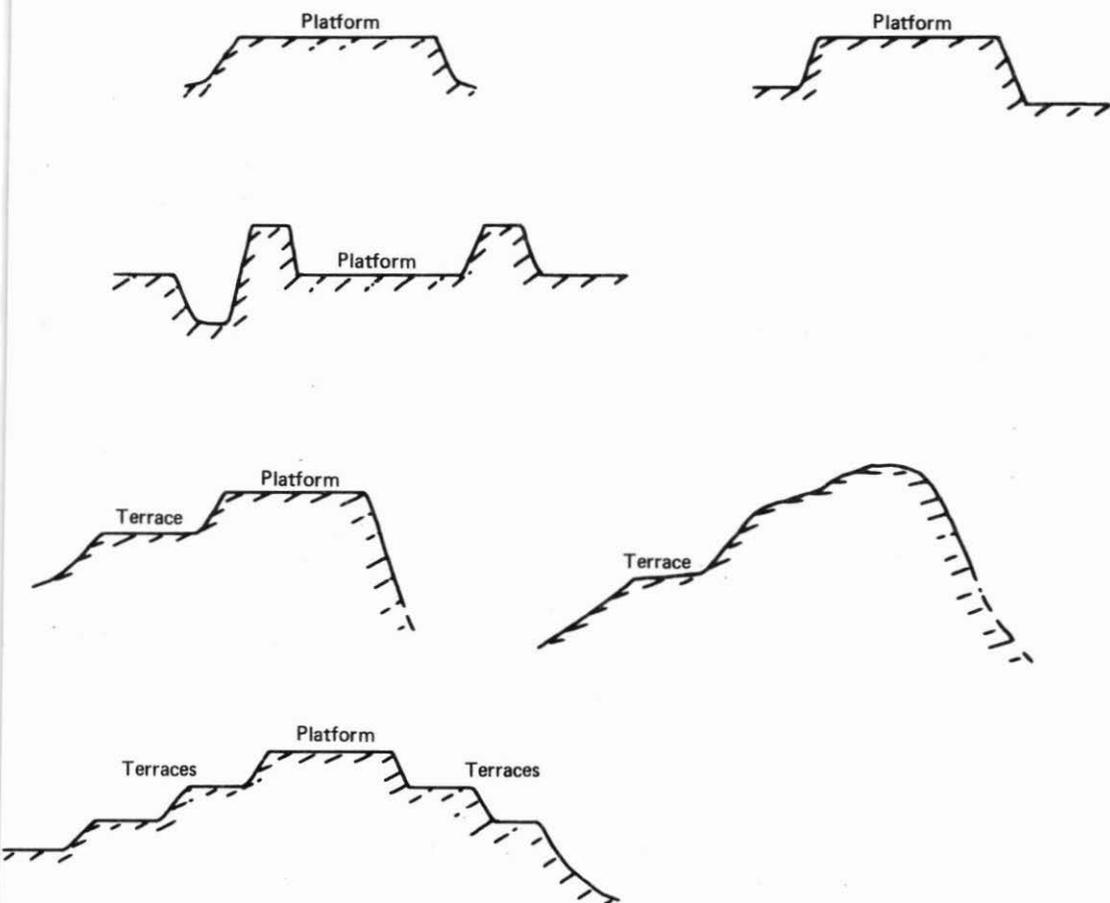


Figure 5
Platforms and Terraces

Terraces.

A terrace is an area rising by way of a scarp to another feature, natural or artificial. It may or may not have ditches and banks on one or more sides. The abutment by a scarp distinguishes a terrace from a platform. (See Fig. 5) Terraces may appear singly, in small sets, or in large flights.

Terraces have been noted covered with a gravel spread, with occupational features such as pits or middens, or with no obvious features at all.

These features should be noted, together with the number of terraces, their disposition, size, and approximate area. General information on topographical position, direction of outlook, and distance from water should also be given.

Reference.

- Keyes, I.W., 1960. "Cultural succession and ethnographic features of D'Urville Island," J. Polynesian Soc. 69 (3), 239 - 265.

Platforms.

A platform is an area, usually flat, surrounded in whole or in part by scarps, ditches, or banks, and not rising by way of a scarp to any feature, natural or artificial. (See Fig 5) Platforms may occur either on hilly situations or as areas on generally flat or uneven ground which appear to have been artificially levelled, possibly for house floors.

Details should be given of the size of the area(s); their relation to one another if more than one; whether they are on sloping or flat ground; and the presence of any occupational debris, such as midden refuse or artifacts. If this material is obtrusive enough the site should be given a composite typing, e.g. Platform/Midden or Platform/Working floor, etc.

Stone Structures.

These interesting structures should be recorded with particular care as very little is known about them, and all information is valuable. Some of the structures occur in agricultural areas, and are probably connected with clearing ground for agriculture.

Stone structures may be divided into the following classes:

Stone walls: These are fairly solidly built, standing free from any support from earthworks, and have more or less perpendicular parallel sides. In recording them, give:

height, width and construction of the walls;
 their alignment, i.e. are they straight, or crooked, do they run
 in regular or haphazard directions?
 their arrangement - do they enclose areas?
 the area covered by the features;
 if enclosures are formed, their number and size;
 the presence and relationship of other stone structures;
 the nature of the ground over which the walls are built:
 is it normally stony or not? Steep or flat?
 possible source of stones.

Stone rows: These are really elongated heaps of stones. The arrangement of the stones is haphazard and the rows are not laid in regular courses for a true wall, although they often follow a straight line. The same information should be recorded for stone rows as for walls.

Stone heaps: These are piles of stones of various sizes. Examples with a border on some or all sides of carefully placed larger stones have been noted, no doubt to keep the heap contained. In recording stone heaps give:

number of heaps;
 size and shape of heaps;
 their arrangement - aligned or haphazard, closely clustered or scattered;
 presence and relationship of other stone structures;
 the area covered, and any pattern of distribution of the heaps over the area which may be apparent;
 the nature of the ground.

Stone retaining walls: These are solidly built stone walls acting as retaining walls for terraces or natural slopes. In some cases they may have been built at least in part as free-standing structures, and the earth of the terrace has been filled in behind them at a later date. Record them in the same manner as for walls.

Stone faced scarps: In these stones have apparently been pushed into the face of the scarp. These occur mostly on pa.

Stone alignments: These are lines of single stones (Best 1924, p.171). Few examples of this site type have been recorded, and all features, measurements, and associations of the site should be given.

Stone structures, particularly retaining walls and stone-faced scarps, may occur commonly on other sites, particularly pa, where their existence should be particularly noted.

Other Structures: Other rare stone structures which have been noted are stone fish weirs, stone-lined baths, and stone pavements (Palmer 1961).

References.

- Best, E., 1924 Maori Religion and Mythology.
 Best, E., 1925 Maori Agriculture.
 Best, E., 1927 The Pa Maori.

- Leahy, A. & Nicholls, E.M., 1964. "The Poor Knights Islands".
N.Z.A.A. Newsletter, 7(2) : 99 - 109.
- Palmer, J.B. 1961, "Some Aspects of New Zealand Field Archaeology".
J. Polynesian Soc. 70 (4) : 466-470.
- Wilkes, O.R. & Scarlett, R.J. 1967. "Excavation of a Moa-Hunter Site
 at the Mouth of the Heaphy River".
Rec. Canterbury Mus. 8 (2) 181 - 212, pls 1-3.

Ditches and "Canals"

Occasionally ditches are found which are unassociated with defensive features. Little has been recorded about them, but on present knowledge they fall into three broad groups.

Simple ditches of fairly small size, sometimes but not always associated with stone structures. This combination probably represents an agricultural field system.

Large ditches which have been described as "drains" or "canals".

Some of these may have been "eel tanks", others for trapping ducks, etc. (See Adams 1903, Adkin 1948, and Skinner 1912).

Ditches associated with banks in open country. These are less likely to be defensive features than remains of fences, probably mostly of European origin (See Smart 1966). In these cases the site type is "ditch/bank".

These features are so variable that only general recording rules can be given. Recording must be circumspect, as the origin of some of the features is quite uncertain. Measurements of depth, width, and length are obvious requirements. If there is more than one ditch, their layout, the course of the individual ditches, and the area covered by them should be given. Any information on the topography and soil of the area concerned will be valuable for future research into these features.

References.

- Adams, C.W., 1903. "Maori Canals in Marlborough", in Report of the Department of Lands and Survey for the year 1902 (Appendices to Journals of the House of Representatives 1903, C-1, Appendix VIII, p.161)
- Adkin, G.L., 1948. Horowhenua.
- Skinner, H.D., 1912. "Ancient Maori Canals, Marlborough, N.Z."
J. Polynesian Soc. 21 : 105 - 108.
- Smart, C.D. 1966. "The Ditch-and-Bank Fence". N.Z.A.A. Newsletter, 9 (1) : 19 - 28.

Banks

It is unlikely that banks will be found unassociated with ditches. Generally the same recording requirements apply as for ditches.

Reference.

Smart, C.D., 1966. "The Ditch-and-Bank Fence". N.Z.A.A. Newsletter, 9 (1) : 19-28.

Mounds

Artificially constructed mounds are found occasionally, both within pa and in other locations. Little is as yet known of these features.

Mounds have been noted with a surrounding ditch and low bank (Golson & Green 1958, p.75; Palmer 1961; and Daniels 1961). Here the site type would be ditch/bank/mound, or, if there is no recognisable inner mound, ditch and bank.

Squared mounds on hilltops are believed to have been burials.

Record mounds as for stone heaps.

References

Golson, J. and Green, R.C. 1958. A Handbook to Field Recording in New Zealand.

Daniels, J.R.S., 1961. "Whitireia Peninsula, Porirua". N.Z.A.A. Newsletter, 4 (4) : 25 - 29.

Palmer, J.B., 1961. "Some aspects of New Zealand Field Archaeology". J. Polynesian Soc. 70 (4) : 466 - 470.

Middens

This category covers refuse from occupation in the form of shells, bones, and stone (usually broken) and charcoal.

Middens are exposed by erosion or disturbance on sites, at spots where no other surface indications are present to lead one to suspect an archaeological site, especially on coastal sandhills.

Location can be important. The following is a guide to the important things to describe:

If found on sandhills -
whether associated with
foredunes or inner dune series;

if latter -
how many dune ridges from the beach and what distance?

relationship to the dune series -
on top; on lee slope, or at foot of lee slope;

the potentialities of the immediate environment in respect of fish; shellfish; fresh water; swamps, or rock outcrops or boulder banks for stoneworking.

If found elsewhere -

- topographical conditions, proximity of water;
- if seashells are present, proximity of the coast;
- availability of stone for stoneworking, or for oven stones.

The full description of contents will rely on excavation, which should not be undertaken unless full preparations are made. Give the general composition of the middens, e.g. much shell, mainly cockle, but with mussel, paua; little fishbone; rare birdbone; large quantities of oven stones.

N.B. If you are unsure of shell or bone identifications, it is better to make no identification, rather than a false one.

Also record:

- state of midden, whether packed or loose, shells broken or unbroken;
- area of midden, and depth of midden visible;
- stratification of deposits;
- details of stratification:
 - composition of layers;
 - state of layers;
 - depth of layers.

If possible, amplify the above and include proper identification of bone and shells. If expert help can be called in for identification, so much the better.

References.

Davidson, Janet M., 1967. "Midden Analysis and the Economic Approach in New Zealand Archaeology". Records of the Auckland Institute and Museum, 6 (3) : 203 - 228. (See also list of references therein.)

Ovens

The remains of cooking activity often appear as an area or depression showing signs of blackening or burning, accompanied by broken stones, if these were used in the cooking process. Ovens are often found preserved in section, exposed by erosion or road cutting.

They should be recorded as for middens, although there may be no contents. Ovens may be stratified, but only controlled excavation will elucidate this.

It has been established that at least some ovens (umu-ti) which were used for cooking the root of the ti (cordyline sp.) occur in the field as simple circular pits. These are to be recorded as ovens only if it is clear that they were umu-ti. Otherwise they should be recorded simply as pits.

Reference.

Knight, H., 1966. "Umu-ti." J. Polynesian Soc. 75 (3) : 332 - 347.

Working Areas

Generally, these are defined areas where materials, usually stone, have been worked to produce either implements or the rough-outs for them. Such areas sometimes occur close to midden or oven areas, and are therefore extremely important to an understanding of the economy or culture of an area.

The locality should be recorded, but further detailed description will depend on excavation. A surface collection only should be described as follows:

General composition of area:

- proportion of stone working to working in, for example, bone; amongst stonework:
- amount of waste flakes;
- amount of worked flakes, if any;
- number and character of unfinished and broken tools, if any;
- variety and proportions of stone present, including obsidian, chert, etc.
- character of bonework;
- type of bone worked;
- area covered..

N.B. No identification of material should be attempted, unless there is complete certainty.

Again, if material can be properly identified, this will be useful.

Source Sites

This type covers places where material was obtained from the ground. The main types are:

Quarries: for rock, gravel, sand, etc., where extraction operations involve substantial disturbance of the ground surface. Gravel and sand for kumara cultivation were sometimes won by sinking pits into the ground. These are referred to as quarry pits. They are irregular, varying greatly in size and are sometimes of considerable extent. Quarries for rock, closely resembling European quarries, have been recorded in out-crops. They may be distinguished from their European counterparts, however, because in most European quarries some provision has usually been made for vehicle access.

For quarry pits, record

- the number of pits;
- the area covered by them;
- the presence or absence of contiguous areas of "made" soil;

the soil type of the area where they are dug;
 with estimates if possible of:
 the quantity of overburden removed;
 the quantity of gravel quarried.

For other quarries, record
 the type of rock being quarried;
 the byproducts of quarrying, i.e. lumps and flakes, the area they cover and the depth they attain;
 evidence for quarrying methods and tools like large hammerstones;
 evidence for stone tool manufacture, on the spot rough-outs and broken artifacts.

Reference.

Duff, R.S., 1946. "Native quarries of baked argillite." Rec. Canterbury Mus. 5 (2) : 115 - 124.

Places where material was won without quarrying, usually rock outcrops where material was collected for working on the site or elsewhere. These source sites are usually recognised by stone flakes, cores, and waste chips near the outcrop. They should be recorded as for quarries.

Reference.

Trotter, M.M., 1961. "A 'quartzite' source site at Nenthorn, Central Otago." N.Z.A.A. Newsletter 4 (3) : 29 - 32.

"Made" soils

These are formed for cultivation purposes, often for kumara. The gravel or sand won from quarry pits is sometimes laid in the immediate vicinity, a feature occasionally apparent following ploughing or discing, or discoverable by probing.

Other areas of "made" soils may be discovered as a result of ploughing or erosion, or by the exposure of a section through ditch-digging, etc. These may be unconnected with quarry pits, and the sand or gravel may be from a beach.

Non-defensive terraces, covered by a thin spread of gravel, have been noted.

In recording, describe:

- the topography of the areas of "made" soils, e.g. flat, sloping gently, steep;
- the direction the areas face;
- the nature of the sands and gravels exploited, e.g. river gravels at a certain depth, extensive or limited in area, or beach gravels found at a certain distance from the site;
- the nature of the soil which has had to be treated in this particular way;
- the location of made soils in respect of possible sources of

supply, viz. quarry pits, beaches;
 their positions, e.g. on river or coastal flats, or on terraces
 levelled into hillsides;
 the type of soil over which they are spread;
 the size and area of distribution of the patches, if this is
 possible to obtain from field evidence.

References.

- Rigg, T. and Bruce, J.A. 1923. "The Maori Gravel Soil of Waimea West,
 Nelson". J. Polynesian Soc. 32 : 85 - 93.
 Fleming, C.A., 1953. The Geology of the Wanganui Subdivision.

Caves and rock shelters

These may have visible evidence of any or all of the following,
 which should be described fully. Recording should, however, be of
 surface evidence only. Excavation should not be attempted unless properly
 organised and undertaken.

Habitation. The evidence of habitation should be specified:

midden;
 ovens;
 hearths;
 burnt patches;
 working floors.

Burial. The circumstances of burial should be noted without inter-
 ference with the remains:

remains articulated or disarticulated;
 presence of mainly long bones, skulls, etc.;
 placement of remains.

However, see section on Burials (page 34)

Artistic activity.

drawings;
 carvings;
 drawings and carvings.

Attention should also be given to:

The nature of the parent rock.
 Origin of cave, e.g.
 sea-worn;
 river-worn;
 water-eroded.

Details of topographical position.

Direction in which the entrance faces.

Availability of light in respect of:

different parts of the cave or shelter;
 different times of the day.

Whether sheltered or unsheltered.

Water supply - usually close.

References.

- Fomison, A. 1962. "An exploratory survey of Maori rock shelter art." N.Z.A.A. Newsletter 5 (2)
- Peterson, G. 1962. "Rock Shelter art in the Duntroon Area". N.Z.A.A. Newsletter 5 (3)
- Schoon, T. 1962. "An early exploration of New Zealand rock shelter drawings". N.Z.A.A. Newsletter 5 (2)
- Trotter, M. & McCulloch, B. 1969. "Recent rock shelter investigations in Nth Otago". N.Z.A.A. Newsletter 12 (3)

Burial Sites

These will normally be recorded in the secret files. On no account should they be disturbed unless a proper excavation has been planned with due permission and authority.

Great circumspection is necessary in any case where burial sites are found, and it is illegal to disturb them. Even ancient sites may relate to the present Maori community, and interference of any kind may prejudice archaeological work in the area.

The Association values the goodwill of the Maori people and does not sanction any disturbance of burial sites without the consent of the local Maori community.

Generally they should be recorded as for burials in caves, etc. (see above).

Rock drawings or paintings

These are normally executed in red or black pigment, and designs or naturalistic motifs are found on the walls of dry caves or shelters. Sometimes the drawings are associated with other occupation, particularly if they are in a cave or rock shelter; in other cases they exist by themselves.

Generally speaking, detailed copying of these features is not the aim of the Site Recording Scheme. It is sufficient to record the location, surroundings, and general character of the artistic features, with copies of the drawings on a blank form if desired. Photography can be particularly valuable.

However, it is expected that the scope of the recording can safely be left to the predilections of the individual recorder.

Rock carvings

These take the form of incised designs or outline engravings in the surfaces of rocks or walls of rock shelters. These occur less frequently than drawings or paintings.

Rock drawings, paintings and carvings : References.

- Ambrose, W. and Davis, F., 1958. "Interim Report on the Recording of Maori Rock Shelter Art at Benmore." N.Z. Historic Places Trust Annual Rept. pp. 11 - 23.
- Downes, T.W., 1925. "Notes on Incised Designs seen in a cave near Waverley." J. Polynesian Soc. 34 : 252 - 8.
- Hamilton, A., 1897. "On Rock Pictographs in South Canterbury." Trans. N.Z. Inst. 30 : 24 - 29.
- Knight, H., 1967. "The Photography of Petroglyphs and Pictographs." N.Z.A.A. Newsletter. 10 (2), 62 - 64.
- McCulloch, B., 1968. "Interim report on an archaeological survey of the Weka Pass area." N.Z.A.A. Newsletter 11 (2), 76 - 85.

Tree carvings

The widespread carvings in the Chatham Islands form a unique group. Genuine prehistoric tree carvings are rare on the mainland. Previous remarks on the recording of rock drawings apply here also, particularly those concerning the value of photography.

References.

- Batley, R.A.L., 1957. "A dendroglyph from Inland Patea (Upper Rangitikei)", J. Polynesian Soc. 66 (2) : 210
- Jefferson, C., 1955. "The dendroglyphs of the Chatham Islands" J. Polynesian Soc. 64 (4) : 367 - 441.
- Keyes, I.W., 1968. "Dendroglyphs from Lake Kohanga - Piripiri, Eastern Wellington", N.Z.A.A. Newsletter 11(3), 103 - 110
- Simmons, D., 1965. "Preliminary report on an Associated Group of Dendroglyphs in the Chatham Islands". N.Z.A.A. Newsletter, 8(2), 39 - 42.

Tracks and trails

These are an important part of the settlement pattern in any area, and deserve more attention from recorders than they have received. The difficulty, of course, has been to locate these features, as traces of them disappear quickly after use ceases. On rare occasions, however, it may be possible to pick up definite traces in the field, but before tracks are recorded as being of Maori origin there should be direct evidence, or very strong circumstantial evidence, that this is so.

The location of old tracks or trails is more likely to be learnt from indirect information. The most reliable way is from old survey plans, as the tracks were a vital part of the economy of early European settlement in some areas. Many roads formed in the early days followed Maori tracks, and this information can be found in contemporary sources, local histories, memoirs and the like.

In giving a grid reference for such a feature it is best to give two references, one for each terminal point. This will give only the beginning and the end, and there should always be a locality plan of the route, preferably traced from a topographical map so that it can be related to the present landscape. However, in the case of a track which followed an existing road it is sufficient to identify the road.

Describe traces of the track.

Find spots

These are places where artifacts have been found, there being no other traces of occupation. In other words, if artifacts are found with other traces, the site is recorded according to the occupation (e.g. terraces, middens), although naturally the presence of artifacts will be an important point in the site record. If desired, "artifacts" can become part of the site type, e.g. "terraces/artifacts", "midden/artifacts".

If, however, artifacts are found completely alone, the spot where they were picked up is recorded as a "find spot". In some areas the existence of these is very important because no other signs of occupation may have been found, or the particular type of artifact found may throw important light on the nature of the occupation in the area.

The finds themselves should be recorded on the Artifact Record Form, with sketches and measurements to provide detail.

Botanical evidence

Flax.

The occurrence of flax should be recorded only if there is a reasonable probability that it was planted and cultivated. Often there are fairly obvious plantations near other signs of occupation.

Record the general situation, area covered, relation to other sites, and height of plants.

Taro.

In some areas, particularly North Auckland, taro is sometimes found growing on or nearby old Maori sites. This is worth recording.

Karakas.

These were frequently planted by the Maori for food. In some cases the appearance of groves suggests strongly that they have been either planted, or artificially fostered; in other cases it is likely that groves, or larger areas of trees, have grown naturally from artificial plantings. For this reason it is unnecessary to go into great detail in recording karaka groves, and if there are several groves close together they may be recorded as one site. The important fact is that the trees were used for food. They may also offer an indication of a possible

adjacent settlement.

Record general details of:

- Area covered by trees;
- Relation to other sites nearby (if any),
- Height and girth of trees;
- Condition of trees;
- Presence of any carvings (on these or any other trees) which should be described if there is a possibility of Maori origin. (See also Tree carvings.)

Areas of cleared bush may be sometimes recognised as islands of secondary vegetation. (McKelvey 1958).

Mutilated trees. Examples have been reported of trees partially stripped in antiquity of bark to make containers and the like. The stripped portion dies and decay affects the heart of the tree, but the unstripped portion continues to grow and a characteristic scar is left. Totara and Karaka were commonly stripped in this way.

Record details of the dimensions and area of the stripping and the amount of growth since stripping.

Trees. Sometimes individual trees or groups of trees which occur on or near sites give the appearance of having been planted for some purpose. For instance, fruit trees still flourish on some sites occupied after European settlement. Single trees rare to a locality may also be noted. These are worth recording.

The type and size of the trees and relation to other sites, should be recorded. Other details will depend on the circumstances of the site.

References.

- Batley, R.A.L., 1956. "Some practical aspects of dendrochronology in New Zealand". J. Polynesian Soc. 65 (3) : 232-244.
- McKelvey, P.J., 1958. "Forest history and New Zealand prehistory". N.Z. Science Review, 16(3 - 4): 29 - 32.

Other types

It is certain that field remains other than those described here will turn up from time to time. If you are quite satisfied that one does not fit into any category here, assign the site name which seems best to you. With new site types it would be best to send a note to the N.Z.A.A. Newsletter or the Journal of the Polynesian Society about the site as soon as possible, as unusual sites are of interest to many people and a published note may bring information on others to light and so help define their character.

Sites of the European period

The New Zealand Archaeological Association accepts in the Site Recording Scheme records of European sites, provided they are capable of being described, discovered, and examined only by standard archaeological techniques.

The stress here must be on the word "only". We cannot accept records of sites or objects which can be described, discovered and examined by other means. For example, all buildings and other structures visible on the surface of the ground may be investigated by visual examination and various architectural techniques, and cannot be accepted by the Site Recording Scheme.

The recording of sites of this period needs to be attended by a certain amount of circumspection. In many cases it is not possible to give an accurate period of occupation for the sites, and a classification cannot be built on this. All recorders will therefore be required to give site types on a purely descriptive basis as is done with Maori sites.

In fact, many European field remains fall within the same categories as those just described, with the obvious exception of the pa, although even here redoubts are sometimes not essentially different.

Some examples of European site types follow. This list is not complete, and is intended only as a guide at this stage.

- Redoubts.
- Campsites.
- Gardens.
- Middens.
- Building sites (e.g. fireplaces).
- Jetties, wharves, etc.
- Saw pits.
- Tracks.
- Roads.
- Mill sites.
- Food stores (e.g. potato holes).
- Rifle pits.
- Old fencelines.
- Industrial sites (e.g. potteries, brickworks, ironworks).
- Drainage systems.
- Mining remains.
- Quarries.

PART III – METHODS AND PROCEDURE

6. Planning and Organisation of Recording

Introduction

This chapter is not a set of binding instructions for recorders. It is a general discussion of the subject, containing a few ideas and conclusions which may or may not be applicable in all local conditions. It may at least help beginners to work in a way which will be most satisfying to themselves and at the same time return maximum results for the Site Recording Scheme. These two aims are quite compatible. It is important that recorders should neither attempt too much, nor, faced with an apparently overwhelming number of sites to record, think the task beyond them.

However, the experienced individual or team probably has little to learn from this section. Its purpose is to introduce site recording to the beginner and to help him to develop techniques which will ensure the best results from his efforts. The rest of this section will deal with some of the preparations for and organisation of recording, which are just as important as accurate site description. They are, in fact, an essential part of recording, and most of this chapter applies equally to individuals as to groups.

Four Possible Types of Survey and Their Limitations

Type 1: The type of survey carried out by :

1. interested persons working alone and with no access to equipment;
2. interested but untrained persons only sporadically involved;
3. enthusiasts to whose attention sites present themselves in the midst of other activities or concerns.

Equipment: map only, possibly camera and tape.

Possibilities

1. general site location by inspection;
2. completion of forms;
 - 1) in bare essentials if time is very short;
 - 2) in a general fashion if time is limited;
 - 3) fully, with diagrams and perhaps photographs if time is available.

Limitations

1. In most instances, recording insufficiently detailed to complete Description Form;
2. lack of drawn plans;
3. a return visit with more equipment and possibly time, may be necessary.

Type 2: The sort of survey carried out by an interested individual in an area which he knows very well.

Equipment: map and compass, small supplies necessary for compass work, tape, camera.

Possibilities.

1. Excellent site location both by inspection and by compass;
2. satisfactory completion of forms, with diagrams and photographs;
3. completion of Site Description Form dependent upon the amount of time and interest which can be devoted by the individual concerned to a site.

Limitations.

1. A long time required to cover an extensive area or a complex site;
2. likely deficiency in drawn plans.

Type 3: The sort of survey to be aimed at by:

1. the enthusiastic individual;
2. the small group; both willing to devote a little time and money to the task.

Equipment: map, compass, aerial photographs and small supplies necessary for compass and aerial photographic work, tape, camera.

Possibilities.

1. Excellent site location by inspection, compass, and interpretation of aerial photographs;
2. excellent completion of forms with diagrams, photographs.

Given sufficient preparation before and time in the survey, adequate base plans can be drawn up.

Limitations.

1. Unless the number of participants is large, a long time is needed to cover an area with a number of sites;
2. site plans are liable to be only fair, with amplification by compass and tape possible.

Type 4: Well organised groups or institutions such as universities or museums with full equipment (see Sections 7 and 8) and a large group of people.

Possibilities.

1. Excellent surveys of individual sites over small periods and;
2. fullscale coverage of entire regions over more extended field trips possible because of the time that can be spent on preparation and technical training.

Limitations.

These are inherent in the problems of supervision of a large group.

These comparisons do not imply that one type of recording always produces better results than another. This is only true in that work is done more quickly with more equipment and experienced people, and that the individual in the first two categories is not likely to produce such accurate plans as the other two. The real gain in having full equipment and an experienced team is in time.

Choosing the area of operations

Nearly everybody interested in archaeology follows his or her first awareness of the fascination of the subject by trying to see as many sites as possible. In some ways this early stage of exploration and growing awareness of the range of field remains is the most exciting and satisfying for the archaeologist. But it is not the way to record sites.

Sporadic, unplanned forays into the field will get sites recorded, of course, but they are extremely inefficient. Lack of preparation usually means that the wrong equipment is taken. Time is usually wasted by starting at the wrong place, then realising that by not reconnoitring properly, sites have been missed. This may mean either another trip to the area, or needless retracing of tracks.

Anyone seriously interested in recording the sites in a region must therefore decide how to tackle the project. The first thing to do is to decide on an area to begin work in, to concentrate efforts in that area until completed, and then to do the same in the next, and so on. Some recorders prefer to move around between areas, but it is still necessary to have an order in which sites in each area will be tackled.

Preliminary surveying

This is in effect the first reconnaissance of an area to find out what sites there are, where they are, what size they are, and how difficult recording will be. Resist the temptation to make records at this stage; the aim is to see the territory as a whole and what field evidence there is.

Try to get an idea of the total environment of the area, and how the sites would have related to it in prehistory.

It may be useful to take notes of the type of sites found, and it is a good idea to take an inch to mile sheet into the field and mark each site on it. After doing this you will be able to think about a programme of work in the area.

Maps and aerial photographs

Thorough examination of these will help to give the "lie of the land" generally, and with practice may suggest likely site locations. Some Lands and Survey maps are even more directly valuable as they have sites marked on them.

Aerial photographs may be viewed at Head Office, and any District Office of the Department of Lands and Survey, and may be purchased through the Central Filekeeper at one third discount, for members of the NZ Archaeological Association. (See p. 6)

Landowners and local contacts

On signing their membership forms, members of the Archaeological Association pledge to obtain the landowner's permission when any archaeological work is intended. This is essential. One cannot expect co-operation from a landowner if one has gone on his land without obtaining permission.

Contact with landowners has a positive aspect too. Often they can provide valuable information about sites or the Maori history of the area, and may have collections of artifacts discovered on their properties. For those with no particular interest in archaeology, it is a good opportunity to tell them what you are doing and why, perhaps thereby enlisting interest or support in the process.

Locating owners is not usually difficult, but in areas which are unfamiliar it sometimes saves time to search land titles. This is not as formidable as it sounds. The documents are kept in District Land Registry Offices, which are usually in main or provincial centres. The procedure is first to locate the piece of land you are interested in on the cadastral map of the area. This type of map shows land block names and numbers and section numbers, and is a standard series published by the Department of Lands and Survey. Land is subdivided for ownership purposes in several different ways. The main types are:

1. (a) Survey districts divided into blocks and sections - expressed as "Section 4, Block X, Belmont Survey District."
 - (b) Land Registration Districts divided into sections - expressed as "Section 2, Porirua District".
 - (c) "Maori Blocks", which are in fact several blocks having a common name, e.g. "Haukaretu, Block 2". These blocks are land originally in Maori ownership, but which may have been sold subsequently to Europeans.
2. Land subdivided after the systems in 1. came into force. The numbering here is based on the number given to the plan of the subdivision, and the number of each "lot" in the subdivision. Plan numbers are divided in several series, the main ones being "A", "B" and "D.P." (Deposited Plan).

The sections under each are expressed as follows:

A 237, Lot 1
 B 136, Lot 2
 D.P. 1522, Lot 37

The subdivisions which these plans represent occurred after the divisions described in 1. were made, and in these cases it is not necessary to cite the reference to the division in 1. which applies to the piece of land. In areas where land is closely settled, all the original divisions in 1. may have been further subdivided, and the cadastral map will bear references only to subdivisions in category 2. More usually there is a mixture of 1. and 2. The aim of finding the number of the section is to find the title number to that section. Sometimes this is also noted on the plan, in which case all that is needed to find the name of the owner is to examine the title.

Usually, however, a further step is necessary before the title is traced. Having found the reference to the land on the cadastral plan, the next step is to go to the Land Registry Office and consult one of the various indexes there. There is one for each of the types of land division referred to above. In each index the title reference is noted next to the section, block, or lot number. With this known, all that is needed is to obtain the title and examine it.

Title references are usually in two parts (e.g. 427/154).

Older titles are bound in volumes, the first part of the number denoting the volume number. Later titles are filed singly in vertical files. The bound volumes are usually available without assistance from the Land Registry Office staff, but those in files must be requested.

This is necessarily no more than a brief outline of the procedure, but it should enable the ownership of most land to be traced. If difficulty is experienced, the Land Registry Office staff are usually very willing to help.

Landowners may be good contacts, but there may also be many others who are able to provide valuable information on sites in an area. Farmers, local historians and old identities can often be helpful in providing locations and other information, and many people may know of discoveries of sites or artifacts in the area. It may even be found that there is someone in the area of whom you had been unaware, who has archaeological interests and knows its sites well. This can result in the time needed for preliminary surveying being considerably reduced.

Documentary research

General.

Although in general the site recorder is dealing with sites occupied before the days of written records in New Zealand, there are many written sources which can assist him. Two words of caution are, however, necessary.

First, most of the written material, apart from records of traditions, relates to sites of the European period. These, of course, are important to record, but it must always be borne in mind that the

knowledge of sites found from literature may be only a part of the evidence to be seen in the field. Older sites do not as a rule figure in early European documentary evidence.

Second, some less critical local histories are not reliable as regards the pre-European period. Some of these books contain either garbled versions of already published tradition (often unacknowledged) or unreliable and fanciful accounts of Maori history. Such works need, therefore, to be treated with reserve, particularly if the sources of the information in them are not made clear.

Books and articles.

These fall into four main classes - accounts of the traditions of an area, early European accounts, histories, and published archaeological surveys.

The first category needs no particular comment here.

The second can be very valuable to the recorder. Although sometimes rather unreliable on Maori tribal history and life, they are an excellent source of information on the location and character of sites visited by the authors. Some of these works are little known and hard to come by, and for anybody going deeply into the Maori occupation of an area a check through the holdings of one of the larger libraries specialising in New Zealand history, particularly the Hocken or Alexander Turnbull Libraries, would be well worthwhile.

The third cover a wide range, and it is not possible to generalise on them. Good local histories are often very valuable, and smaller works, such as school jubilee booklets and guidebooks often turn out to be unexpectedly rewarding.

The fourth is still rare in New Zealand, but there are some excellent examples (e.g. Adkin 1948, Buist 1964).

Unpublished material.

The recorder may find occasionally that he is able to consult valuable unpublished manuscript material. This material may, for instance, be reminiscences of a pioneer settler, or old records of some sort. Journals of early missionaries, travellers, and explorers are particularly valuable. The best collection of such material in New Zealand is in the Alexander Turnbull Library.

One particular class of material which deserves special mention is the Maori Land Court minute books. These records of the Court's proceedings are a goldmine of information on Maori history and traditions. There is also a great deal of information on individual sites. These minute books have, however, to be treated with some reserve. It must be borne in mind that often there were two parties whose claims were in conflict, each trying to establish a case. The evidence of one of the opposing parties has to be balanced against that of the other, and contradictory statements of fact must be treated with suspicion. The

judgements of the Court are usually (but not always) helpful in arriving at the truth.

The recorder will, however, usually be interested in evidence on the location of sites. This is usually reliable, as witnesses would have been unlikely to make false statements on matters on which opposing parties would also be well informed.

A microfilm copy of all minute books is held in the Alexander Turnbull Library.

Early maps.

Early survey maps and plans held in district offices of the Department of Lands and Survey go back to the earliest days of European government. Some of these mark Maori place-names, occupied sites, cultivation grounds and tracks. These too can be very valuable, except that place-names are not always spelt correctly. These early maps have the advantage of reliability and accuracy, and searching the ground for traces of the sites recorded on the maps can be one of the most fascinating aspects of site recording.

These maps can be traced easily by consulting index maps in Lands and Survey District Offices, on which all maps relating to particular areas are listed. Old Roll Plans (whose numbers are prefixed by the letters "R.P.") are particularly valuable. In addition, the field books of the surveyor drawing the plan often contain information not on the plans, and well repay perusal. The field book number is often noted on the plan.

Organised groups

Much recording is still done by individual enthusiasts, but in several cases organised groups under the auspices of archaeological societies are working.

Most people, or groups, engaged in recording pursue some sort of programme regarding the way their area is covered. In areas where sites are threatened these may be recorded first. The advantage of group recording is that the objective of the programme can be achieved more quickly. The best size for a recording group is probably around half a dozen. Above this number, individual contact with the work cannot be kept up and interest tends to weaken. Site recording is not a mass activity. If numbers grow, it may therefore be a good idea to divide the group into two or more, detaching some experienced recorders to lead each group. In this way recording can be done much more quickly.

It may also be possible for the group to diversify their activities. Some may wish to concentrate on a particular area, or particular types of sites. If several groups can be organised, this is the best way of keeping a programme flexible and allowing more scope for individual tastes.

Long-term revision

Not all site records filed so far meet by any means the standards suggested in this handbook. In some cases only sparsely-completed Site Record Forms have been filed for important sites. There is therefore considerable scope for upgrading and improvement of existing records, and it is to be hoped that all individuals and groups engaged in recording will look on this as an integral part of their recording programme, and aim to provide adequate descriptions, plans and photographs for all sites. Groups which have grown large enough to diversify their activities should deploy a group on this aspect of recording straight away.

Indexing site records

All sites recorded are plotted by the filekeeper on the maps held by him (see page 5). However, as numbers increase other indexes become desirable. The simplest is to list all grid references, providing a quick check against duplication. A more detailed index is described by Hitchings (1963). The categories in this type of index lend themselves well to punched card indexing, which has the advantage of requiring only one card per site.

These suggestions for indexing may be useful to recorders as well as filekeepers. There are many other types of index which can be made.

Detailed index maps, for instance in the N.Z.M.S. 2 series, are a great aid to studies of site distribution.

Keeping up with recording

Lastly, please realise that sitting down and getting information ready for the filekeeper is just as important as work in the field. This side of recording takes longer than is sometimes realised. It involves checking, drawing plans, etc., and if left can pile up most distressingly. This is particularly true if you are recording a lot of sites. Keep up with your recording, and if necessary, stop and spend a day at the typewriter and drawing board. Recording which remains only in the field book is of value only to yourself.

As an example of what can happen, the original survey on which the scheme was first tested was held in 1958. In an article on the survey, site numbers were quoted which have not, eleven years later, been submitted for filing.

References.

- Adkin, G.L., 1948. Horowhenua.
 Buist, A.G., 1964. Archaeology in North Taranaki, New Zealand.
 Hitchings, M.G., 1963. "Indexing Site Record Files". N.Z.A.A. Newsletter, 6 (3) : 143 - 5.

7. Work in the Field

Introduction

Part II tells the recorder the character of the sites he will record, and what information he is expected to record.

The object of this section is to give a guide to the recording of this information in the field so that it can be transferred to the forms later. We shall leave aside for the moment the detailed surveying of sites, the surveying equipment needed, and the organisation of recording in various different circumstances.

This section assumes that either an individual or a group is ready to go into the field and record information on the sites they expect to find there.

Equipment

The equipment (other than equipment for surveying) necessary for this is now described.

1. Field books. In the early days of the Site Recording Scheme it was planned that information recorded in the field would be plotted directly on to rough copies of the various forms. It quickly became apparent, however, that this was unnecessary, as field books of various kinds were much more convenient to use.

In its simplest form a field book may be just an ordinary notebook. A number of other types of field book, for surveying and similar types of work, are available, most of them useful. These usually have a water-proof cover, an elastic band to hold the book closed or open at a particular position, and a pouch for a pencil. The commonest types have pages which are either ruled or gridded, the former, of course, being useful for site descriptions and the latter for small plans of sites or features. Books with alternate ruled and gridded pages are ideal but very hard to come by.

Separate sheets of either drawing paper or gridded paper may be useful for drawing plans. If they are used, some sort of stiff drawing board such as a piece of hardboard is essential.

2. Pencils should be of a hard type, between 2 and 4 H. Softer types tend to smudge, and records kept in ball point or fountain pen are subject to water damage.

3. Erasers - the need is obvious.

4. Maps. As explained earlier, recording is based on the N.Z.M.S. 1 inch to mile maps. Grid references are to be given from these maps according to the instructions on them, so that they should always be taken into the field. The most up-to-date edition available should be used, as the National Yard Grid was shifted some years ago. However, it is important to state in the site record which edition you are using, as in some cases editions with the old provisional grid are still in use.

Other maps, particularly the N.Z.M.S. 2 series, are more useful than N.Z.M.S. 1 maps in the field, and it is a good idea to find out from the Lands and Survey Map catalogue what maps are available for your area. References in records must, however, be to N.Z.M.S. 1 maps. If none is published in the area, the grid reference will have to come from another type of map.

5. Tapes. A steel or linen reinforced tape will be almost essential for taking measurements of features, even if no surveying is attempted.

6. Cameras. Not essential, but very useful. See below.

Diagrams

These are drawings which lay claim to no great accuracy of measurement, but serve to illustrate particular points. They should not be confused with surveys (see next section), but both have a place. They can be used to good effect:

to indicate the layout of a site for which no plans have or can be prepared;

to illustrate certain features of a site, e.g. a stratigraphic sequence, the relationship of a ditch and a terrace, as a supplement not only to verbal descriptions, but also drawn plans.

The following points should be noted:

symbols used should be clearly explained;

dimensions should be indicated by measurements written on the diagram;

most important, there should be adequate cross references from the diagram to the feature in either the verbal description or the drawn plan that it is designed to elucidate.

Photographs

It is obvious that you cannot take too many photographs as a record of a site. They can be used to illustrate:

the layout of a site;
selected features;
general setting.

The following points should be noted:

Photographs unintelligently taken tell nothing. Use must be made of light and shadow to bring out the features you want to illustrate.

Always include a scale of some sort, from a trowel to a human being, depending on the size of subject in photographs.

A notebook should be kept to record the pictures taken: the frames of the film are numbered consecutively 1-12, 1-20, 1-36, depending on the type of film. As soon as a shot is taken, a description of the subject should be written against the appropriate frame number in the notebook.

The reels should be numbered as they are completed and the appropriate number written in the notebook.

Description of the subject should always include a note concerning the direction from which the shot was taken.

There should be cross references both between photographic subjects and the written description, and in plans and diagrams.

The month and year the photograph was taken should be written on its back and on the Photograph Form.

Recording information for the site record form.

Besides recording an adequate description of the site, notes must be made of the details required for the Site Record Form. Section 9 explains in detail what is required. It is essential that recorders be thoroughly familiar with this section and with the forms before going into the field, or else some aspect of the information required may be missed. If this happens another trip to the site will have to be made, or the record will remain incomplete.

8. Surveying for Site Recording

by B.G. McFadgen

Introduction

The methods described in this chapter are for recording archaeological field remains on a site record form, the essential details being the size, shape and relative position of the features of a site. These notes are not intended to describe how to survey pa sites, which due to their usual size and complexities are often better handled with different equipment. Instead they are intended for the small site likely to be encountered on a field trip. The aim is to produce a plan at a suitable scale to accompany the site record form.

Instruments

To survey, the means should be available for three measurements: distance, bearing, and slope.

For distance, a cloth tape is suitable. It is immaterial whether feet, links, or meters are used as a unit of measurement, but which are used must be clearly stated in the field notes.

For finding the bearing or direction of a line, use a prismatic compass, but if only a north point is required, use any compass. To use a prismatic compass, look through the prism and line up the object sighted, the line scribed on the glass cover, and the relevant graduation mark seen through the prism (see fig. 1a). The value of the graduation is the magnetic bearing of the line (see fig. 1b). A prismatic compass can be read to the nearest half degree, and this is accurate enough for most recording.

On slopes the horizontal distance between two points is less than the measured slope distance. To find the horizontal distance from the slope distance the angle of slope must be measured. To do this use an Abney level.

The Abney level is a hollow tube attached to a semi-circle graduated in degrees and fractions of a degree (see fig. 2a). There is also a bubble level with a pointer attached to the semi-circle and these are free to rotate, the pointer moving around the graduated semi-circle.

To use the Abney level, look through the eyepiece at the end of the tube, and sight towards the object, the slope to which is required. Inside the tube is a mirror with a scribed line, which reflects an image of the bubble. The object sighted must be cut by the hair-line in the tube, and the bubble level rotated until the scribed line on the mirror bisects the bubble (see fig. 2b). The angle of slope (elevation or

depression) is then read off the graduated circle.

The slope is easily obtained if two poles marked at equal height, approximately that of eye level, are used. The Abney is held against one and sighted to the other. This observed line is the one measured (see fig. 2c).

Methods of recording detail.

Offset method. If the features in a small area are to be mapped, two points of a baseline A - B are marked on the ground, and the distance between them is measured. Other points, such as the corners of a pit, or the edges of a terrace, are measured and recorded as being a number of feet along the base line and so many feet at right angles to the baseline (see fig. 6).

In fig. 6 the corner c of the pit is 20 ft from point A and 15 ft at right angles to the baseline A - B. The corner d is 35 ft from A and 10 feet from the baseline. All four corners of the pit are mapped in this way and the sides of the pit are measured as a check. The second pit on the other side of the baseline is recorded similarly.

If a site is mapped by this method from one single baseline, the bearing of the line is not essential, and north need only be shown approximately.

Bearing and Distance method. From a single point, features can be mapped by measuring the distance to them, and observing the magnetic bearing from point to feature with a prismatic compass (see fig. 7). Read the compass to the nearest half-degree. Half a degree error in 200 ft will result in a lateral error of about 2 ft.

The compass traverse.

A compass traverse is a series of baselines forming a closed circuit between different parts of a site, and acts as a skeleton for mapping. It must therefore end at the point from which it began. Each line is measured with a tape, and the slope is taken with an Abney level from each end. The mean of the two readings is used to reduce the line to the horizontal distance. This is found by drawing the measured line to scale (the final plotting scale), and dropping a perpendicular to another line at an angle to it equal to the angle of slope (see fig. 3).

A forward and a back bearing of each line is taken with a prismatic compass. The forward bearing is taken along the line in the direction of the traverse, and back bearing is taken in the reverse direction from the forward point. One hundred and eighty degrees is added to the back bearing, and the bearing used to plot the line is the mean of this and the forward bearing (see fig. 4). Where the back bearing plus 180 degrees is more than 360 degrees, subtract 360 degrees.

When all lines are reduced, the traverse is plotted to scale using a protractor, scale or rule, and pencil. Normally the plotted traverse

will not end on the same point from which it started and if the difference is great, it must be adjusted. The adjustment is made as follows: (see fig. 5).

1. The length of the traverse is plotted to scale as a straight line.
2. The closing error is drawn at right angles to the end of the line and the third side of the triangle is drawn in.
3. At distances along the straight line equal to the length of each side a perpendicular is drawn. The length of the perpendicular at each point is the correction to each traverse point.
4. The correction is applied to each point of the traverse plot parallel to the original closing error. The adjusted traverse is between the new points: A B' C' D' E' A.

Accuracy.

The site record form is approximately 8 in by 10 in. For a site 160 ft by 200 ft, one inch is equivalent to about 20 ft, and plotting accuracy would be to the nearest six inches (1/40th of an in). However, on most archaeological sites, features such as the tee of a scarp, the edge of a terrace, or the edge of a shell midden are often indistinct due to the effects of erosion, so that measurements to the nearest foot, or even 2 or 3 ft in some instances are sufficiently accurate when mapping such features.

Offset distances should be kept as short as possible (about 100 ft maximum) to reduce errors due to slope and due to the estimated right angle not being truly perpendicular to the baseline.

Slope becomes significant when the difference between the slope distance and the horizontal distance is greater than 2 ft; i.e. in a 60 ft line when the slope is greater than 15 degrees, in a 40 ft line when the slope is greater than 18 degrees, or in a 20 ft line when the slope is greater than 25 degrees.

The recorder must decide at what scale he will plot his map, whether he will limit himself to one site record form, or, if the site warrants it, plot his map at a large scale, and survey accordingly.

Field notes.

A small school notebook is suitable for recording field data, the only other requirements being a pencil, rubber, ruler, or straight edge, (a semi-circular protractor is useful).

A sketch is made of the area to be mapped, showing the location of the compass traverse, baselines or other surveyed points. All measurements made are shown on the diagrams, or if points are clearly labelled,

measurements can be tabulated. Other data to be recorded with the survey should include a written description or explanation in note form, the site grid reference and the map used.

Fig. 8 is an example of a small site survey.

Plotting.

To transfer the data from the field book to the Site Record Form, the reduced baseline or compass traverse is drawn in pencil. The surveyed features are then plotted from these known lines. When the survey is inked in on the Site Record Form, only the archaeological features need be shown. However, the final map must include a scale and a north point. The scale on the finished drawing is shown as "... feet (metres) to an inch". The grid reference of the site is shown on the face of the form in the title block.

Cross-sections.

A cross-section or profile is normally surveyed along one or more straight lines which should be marked on the plan. The cross-section should show each significant change in the ground slope.

To survey a cross-section, use two poles marked at eye-height, an Abney level, and a tape. The Abney level is held against one pole at eye-height and sighted to the same height on the other pole. The angle of slope is read, and the slope distance taped. The direction of the cross-section and any changes in direction are observed with a prismatic compass.

Where points are far apart, (70 - 100 feet), each line is observed in both directions and measured. The rear man then moves to the forward station. In this way, each line is part of the profile. For points which are close together, take several sightings from one station before moving forward, and read the Abney level fore and back only when changing station. In this case the actual profile is not observed, only points along it. (see fig. 9).

This method is suitable for making a cross-section of a small site with only 5 or 6 stations or change-points. On sites where more change-points are required, the levels should be carried back to the point from which they began. When the profile is plotted, the level at the start and finish should be the same. If it is not, the plot can be adjusted in the same way described for the compass traverse.

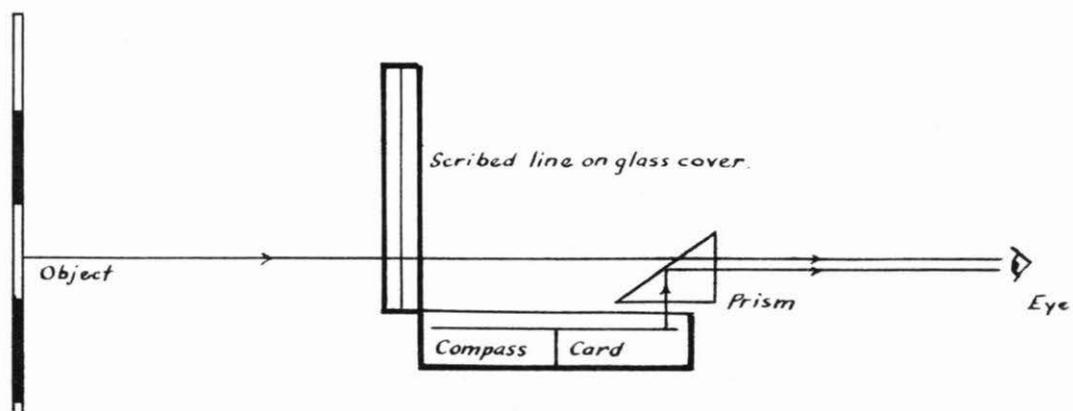
Plotting cross-sections.

When the cross-section is plotted, the heights of the poles can be ignored if all measurements have been taken to and from a constant height. The slope and slope distance are laid off with a protractor

and scale, and the resulting points joined up.

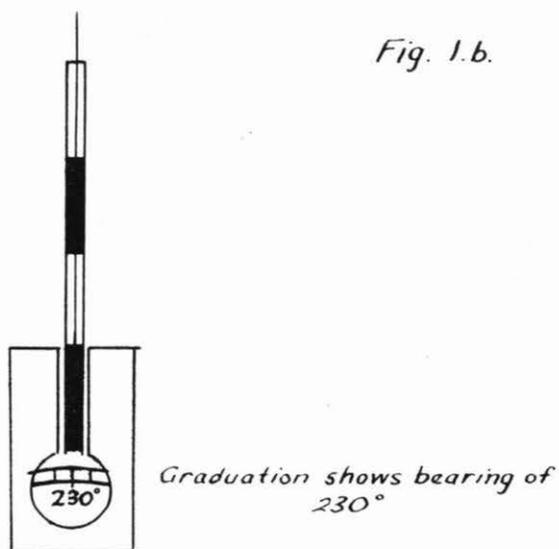
On diagrams of cross-sections show a horizontal and vertical scale.

Fig. 1a.



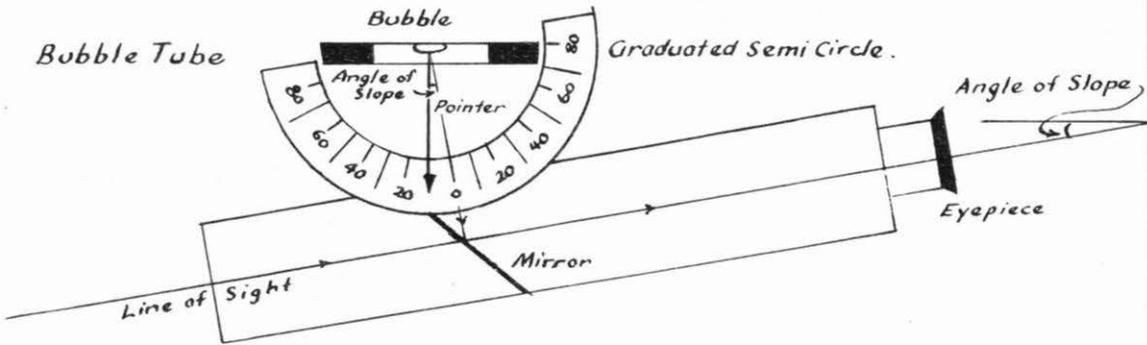
Use of the Prismatic Compass

Fig. 1.b.



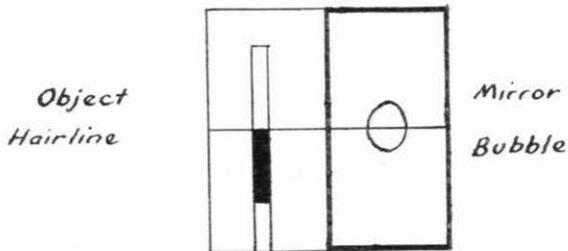
View through Prism.

Fig. 2a.



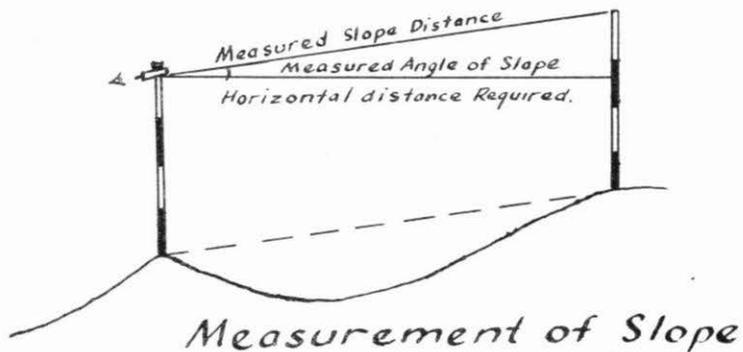
The Abney Level.

Fig. 2b.



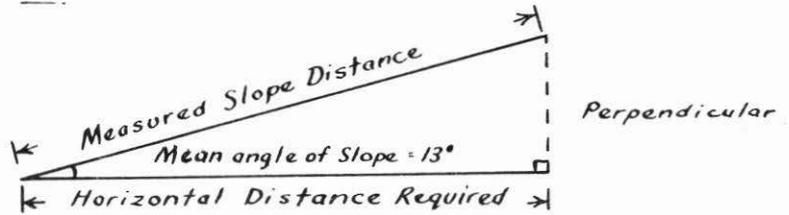
View through Eyepiece.

Fig. 2c.



$$\begin{aligned} \text{Forward Slope} &= 13\frac{1}{2}^\circ \\ \text{Backward Slope} &= 12\frac{1}{2}^\circ \\ \text{Mean Angle of Slope} &= \underline{13^\circ} \end{aligned}$$

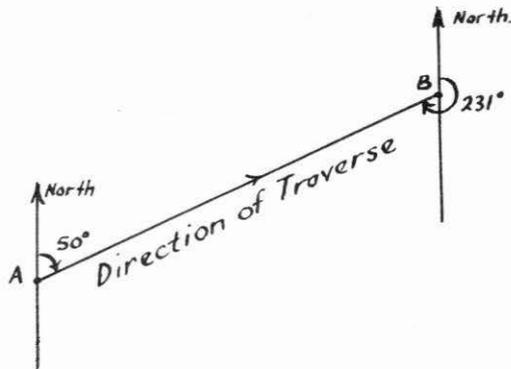
Fig. 3.



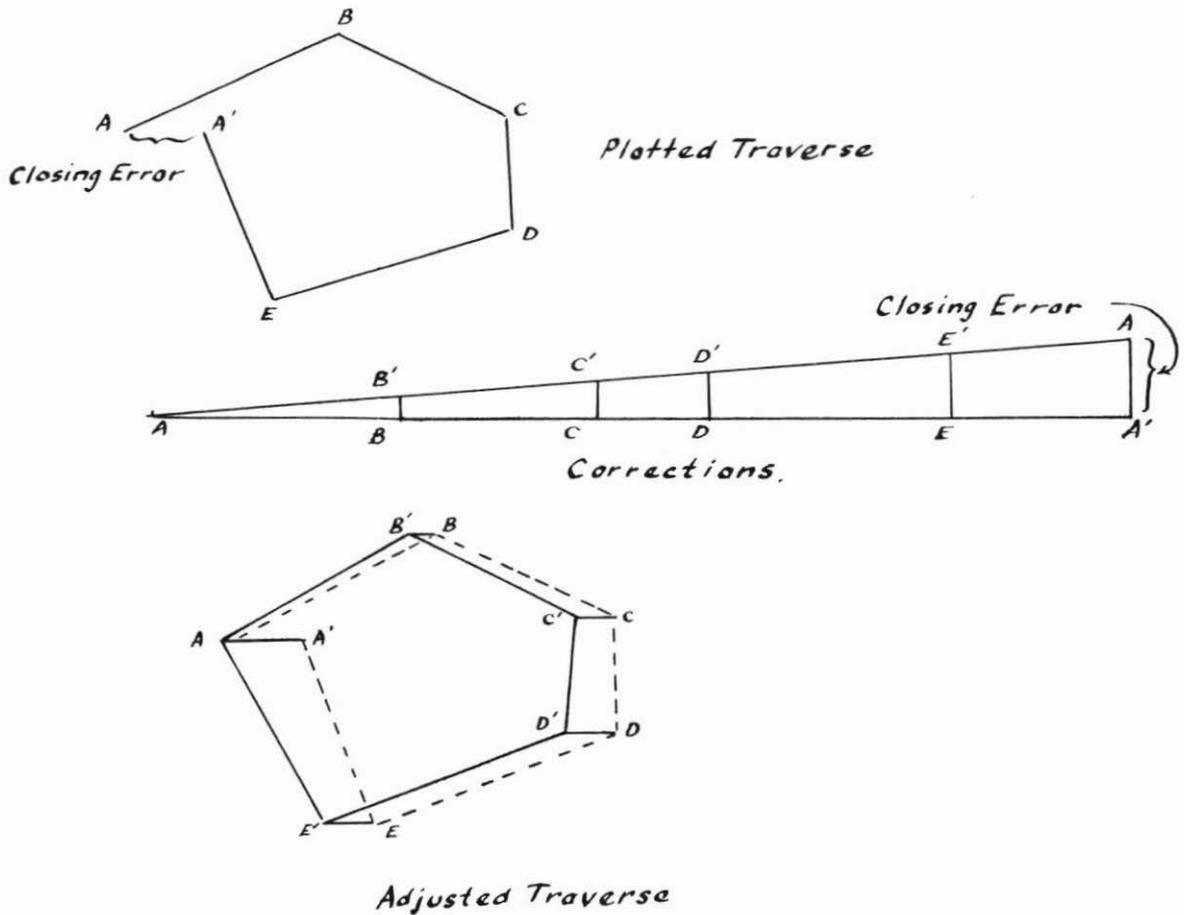
Reduction to Horizontal.

$$\begin{aligned} \text{Backbearing} &= 231^\circ \\ &+ 180^\circ \\ &\hline &411^\circ \\ &- 360^\circ \\ &\hline &51^\circ \\ \text{Forward Bearing} &= 50^\circ \\ \text{Mean} &= \underline{50\frac{1}{2}^\circ} \end{aligned}$$

Fig. 4.

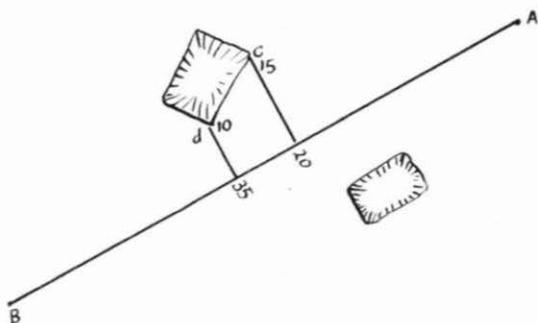


The Bearing of a Line.



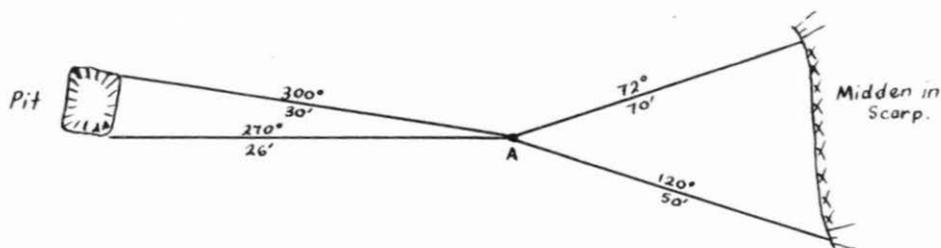
Adjustment of a Compass Traverse.

Fig. 6.



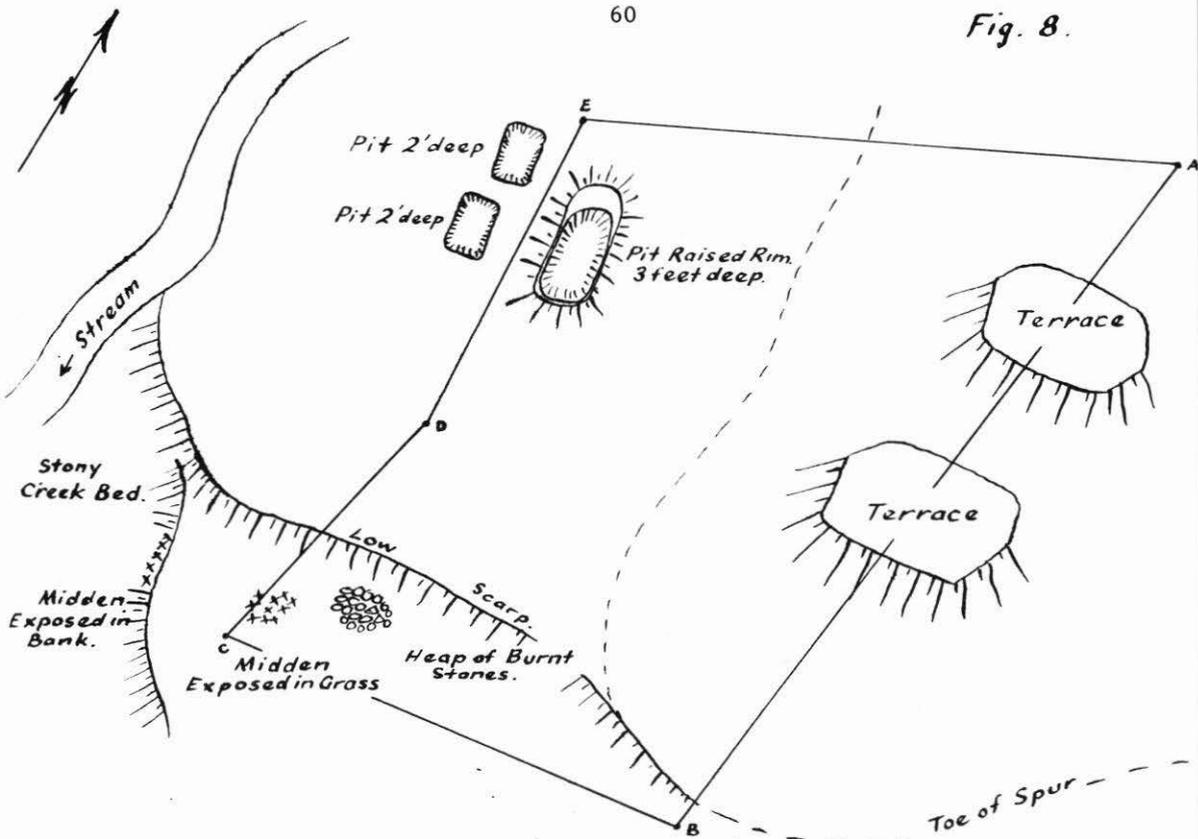
Offsetting.

Fig. 7.



Bearing and Distance.

Plotting of Detail.



Sketch of Site and Compass Traverse Sample Field Notes.

Pg. 1.

Point	Bearing		Abney		Dist. feet
	Fore	Back	Fore	Back	
A					
B	195°	15°	-15°	+15°	135'
C	270°	90½°	0°	0°	77'
D	20°	19½°	+10°	-10°	47'
E	3½°	3°	+1°	-1°	53'
A	72°	73°	+20°	-20°	100'

Grid Reference: 283976
 Map: N. 170 Wellington.
 Notes on Site: faces S.W.
 Exposed to Sth wind.
 About ½ mile from Coast
 up a stony stream bed.
 Site in grass. Subject to
 Stock erosion

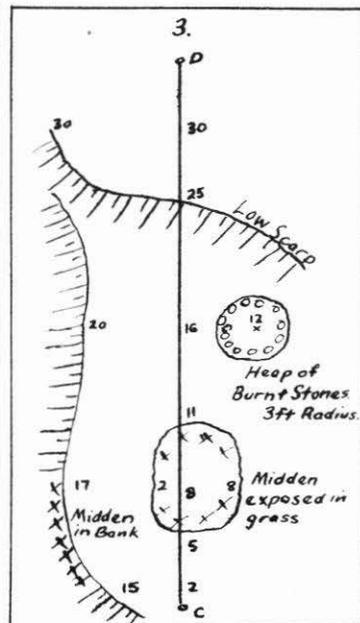
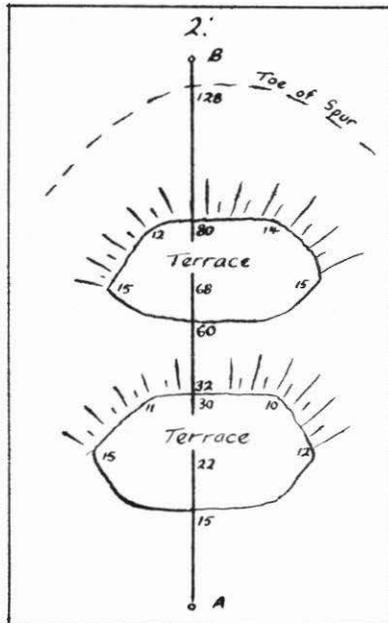
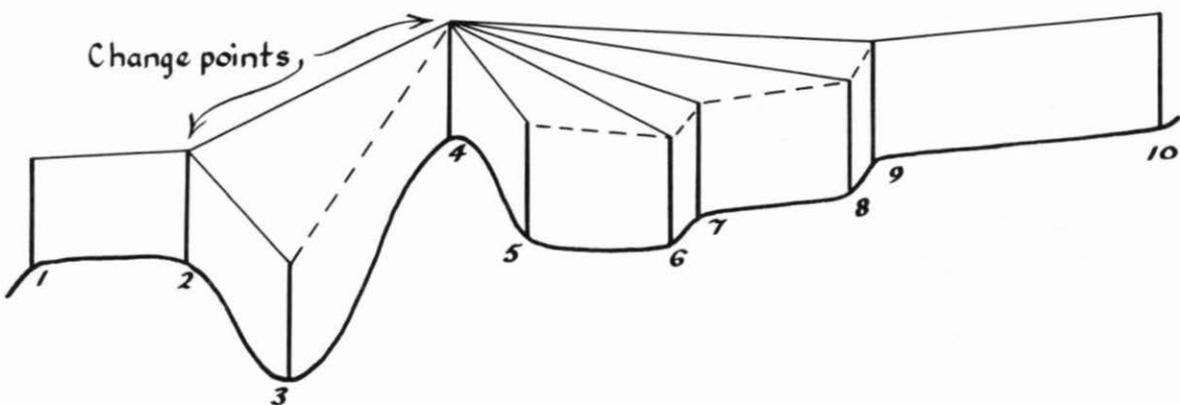


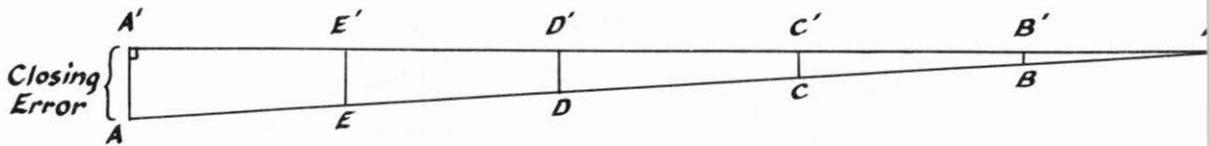
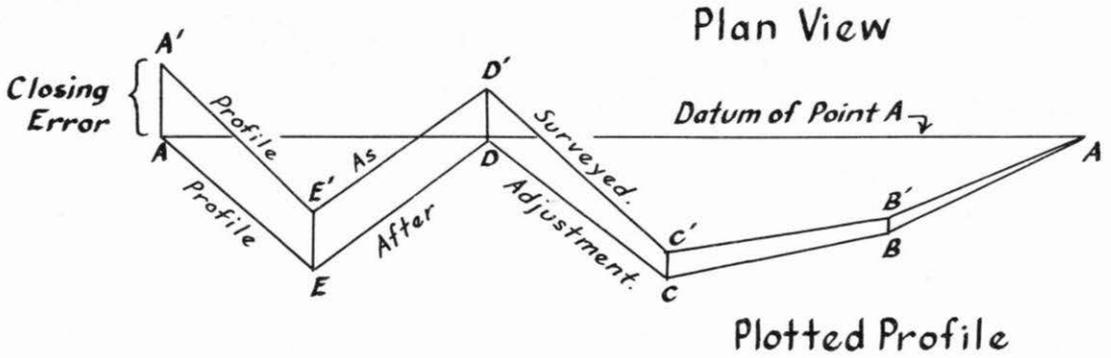
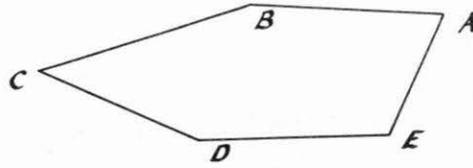
Figure 9



Booking Layout

At Point		To Point		Abney Reading	Distance (feet)
1	Top Scarp	2	Edge Ditch	+2°	20'
2	Edge Ditch	1	Top Scarp	-2°	
		3	Bottom Ditch	-50°	8'
		4	Top Bank	+10°	16'
4	Top Bank	2	Edge Ditch	-10°	
		5	Foot Bank	-52°	6'
		6	Foot 1st Tce	-12°	15'

Surveying Cross-sections



Adjustment of Profiles.

9. Completing the Forms

Site Record Form

Map number.

Map name.

Map edition.

These refer to the N.Z.M.S. 1 (one inch to one mile) series of maps. The number is on the top right hand corner of each map, the name in the top middle margin, e.g.

Map Number	N. 38
Map name	Silverdale

The edition should also be given (see page 48). This is usually on the right margin of the map.

Grid Reference.

Detailed instructions are on each map, on the bottom right hand side. Briefly, each side of a grid square represents 1,000 yards. Sites may be pinpointed to within 100 yards in the square. First, take the west edge of the square in which the site lies, and read the grid number on the top or bottom margin of the map. Then divide the square into tenths (100 yards) and measure the tenths eastward - e.g.

West edge of square is grid: 37

Tenths east from edge: 6 = grid reference 376.

Do the same taking the south edge of the square; determine this grid number, and measure tenths northwards.

South edge of square is grid: 72

Tenths north from this edge: 1 = grid reference 721

These six figures are combined to give the completed reference 376721.

In the case of a very extensive site it is a good idea to give the grid references at each end, e.g. "376721 to 380724".

Grid references may be omitted only if the N.Z.M.S. 1 map is unpublished and there is no other map for the area with a grid. (N.Z.M.S. 177 series can provide a grid reference.) Otherwise a grid reference is essential.

Site Number.

Leave this clear - it will be filled in by the local file-keeper. All sites receive a serial number based on the number of the map, e.g. N 160/1, 2, 3 etc.

The sites are numbered consecutively, as they are given to the filekeeper, and therefore bear no significant relationship to geography

or anything else other than the relative order of receipt.

In the course of recording you will probably find it essential to give site numbers for purposes of identification. These numbers will be purely provisional, since the permanent numbers will be allotted by the local filekeeper.

Name: Maori, i.e. the genuine Maori name of the site, if known with certainty.

Other names. This might include the European name of the site or locality, or a name assigned purely for archaeological purposes, e.g. "Trig. K midden", or "Sumner Cave midden". If a local Maori name is used in this way, be careful not to confuse it with the genuine Maori name of the site.

Site Type.

This must be one of the site types described in Part II, unless it is a previously unknown one (see page 37).

The site may merit a combination of site types. An obvious example is the ditch and bank, which would be recorded as "ditch/bank", but there are many other possibilities, such as "midden/pits", "karakas/midden/terraces", etc. If possible, try to keep the types in alphabetical order, but this need not be done in the case of established combinations like "ditch and bank", or when one feature of the site is more prominent than the other. (e.g. if there is a large group of pits with a small scatter of midden, "pits/midden" is permissible).

Don't describe a site as, for example, "Pits, associated with midden" in the Site Type panel. It is your job to decide whether, or not, in this case, the midden is part of the same site as the pits. (see page 12). If it is, record it as "midden/pits"; if not, a separate site record is needed, with cross references if you like.

Don't put miscellaneous information, such as "Ovens, 7 small", or types of pa, in this panel. This type of information belongs in the site description.

Aids to relocation.

This entry should enable someone unfamiliar with the area to find the site without too much trouble. It must be completed, because a grid reference is not always sufficient to locate a site, particularly small ones or those in confusing surroundings.

The map will usually help greatly here.

Try to describe the location in terms of permanent features, and if names of roads or places are used, they should be names which are on the map. Trig stations are ideal features.

Names of owners of farms or houses can be useful, but these can change.

If many sites are being recorded in a small area it is a good idea to draw a locality plan and plot the site numbers on it. This saves much written description, as you can simply refer to the plan, and will avoid confusion among later investigators. The plan should be traced from a map (preferably a larger scale one than the inch to mile series) but may be drawn freehand if none is published for the area. The plan should be filed with the first site recorded on it, and subsequent site records should have, under "Aids to relocation" - "See locality plan filed with (site number)".

State of Site: Possibility of Damage or Destruction.

Record whether the site is in grass, bush, etc., the general state of preservation, and whether it appears to have been disturbed by fossicking, ploughing, or cultivation, etc.

"Possibility of damage or destruction" covers possible effects of:

erosion by sea, stream, wind, slips;
trampling by stock;
ploughing or discing;
major engineering works, e.g. roading, drainage (name of authority responsible);
subdivision for housing or industry;
reversion to scrub or other vegetation;
fossicking.

It is usually worthwhile to make some discreet inquiries to see whether the property owner intends to subdivide the land or carry out any works on it himself.

Description of Site.

This is to be filled in only if no Site Description Form is to be filed.

This panel on the form is to be used only if no time is available for a proper investigation of the site, or if there is not much that can be said about it. Normally a Site Description Form will be filled out.

No site records will be accepted unless a Site Description Form or this section of the Site Record Form has been completed.

Part II applies, of course, to all such descriptions.

Owner: Address.

Permission must be obtained before going on to private land, and this is a good opportunity to find out name, address, etc., as well as seeing whether the owner has found any artifacts or knows anything of the site or its history.

Give a sufficiently clear address to enable the owner to be relocated. In the countryside the name of the road and the district

is usually sufficient. If you know the title reference to the property, or the name of the land block, put these in too. A grid reference to the owner's house is useful.

Attitude.

Express briefly your impressions. Try to assess what his attitude would be to further work, particularly excavation.

If the land is owned by the Government, enter "Crown", and if used by a Government Department, put its name in brackets. In the case of farms, etc., enter the name of the manager in the appropriate panel.

If the land is a reserve, say so, and enter the name of the controlling authority (usually the Crown or a local authority) in brackets.

Some sites are on foreshore land, which is controlled either by the Crown through the Marine Department, or by local authorities. Enter "Foreshore (Name of controlling authority)". Permission to enter foreshore is not normally necessary.

If the site is on the side of a road, enter "road" and try to find out whether it is controlled by the Crown or a local authority.

Tenant or Manager.

If the land is not occupied by the owner, find out discreetly whether the occupier is a tenant (e.g. lessee) or a manager, and cross out whichever does not apply.

Address: Attitude.

Same remarks apply as for owner.

Methods and equipment used.

Date recorded.

Set out briefly relevant information on the number of people engaged, whether site examined, measured or surveyed, and equipment used.

Aerial photograph or mosaic number.

(See pp. 48 - 49 for uses of these).

This is a handwritten number on the top of the photograph.

Site shows, etc.

Cross out whichever is not applicable after you have looked for the site on the photo.

Reported by.

Your name, full address, and date.

Filekeeper.

The filekeeper signs the form here after processing it.

Site Description.

This is a blank form.

Site description is outlined in Part II, and no further comment is needed here, except that the description may be as long as desired.

Traditional Information.Publication References

These again are the blank forms, and are filled in if necessary at the recorder's discretion.

Other uses of blank forms may be for small plans, or for amplification of any other categories of the Site Record Form.

Photograph Form

This is largely self-explanatory. Give the month and year the photograph was taken, both on the back of the photograph and on the form. Say exactly what the photograph is of, and in what direction it is taken. Photographs are kept in the file with the other material, and please remember to forward two prints of each, as one set must go to the Central File.

Artifact Record Form

May be filled in for any artifacts found on the site. For further details of the Artifact Recording Scheme see: Daniels, J.R.S., "The Artifact Recording Scheme," and Oliver, M.J., "Artifact Recording for Local Groups." N.Z.A.A. Newsletter, 6 (3), 146 - 151.

Preparation

If possible, please type the forms out in duplicate yourself. If you want a copy for yourself then take a second copy. Filekeepers will not type records from rough notes. The value of the record will depend on the quality of its preparation.

Secret files

There may be sites whose existence the recorder, for various reasons such as local Maori feeling, does not wish to make widely known. These can be placed in a secret category, in which the records are kept sealed in the files and can only be consulted by permission of the recorder. This is a very useful safeguard, but sites will only be placed in this category if there are good reasons for doing so.

Forms are obtainable from local and central filekeepers.

Sample site records

The following pages show three imaginary but typical completed site records.

N170/1 is a small site requiring only a short description.

N170/2 is a more complex undefended site.

N170/3 is a pa.

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

SITE RECORD FORM

SITE NUMBER N170/1

Map number N170
 Map name WELLINGTON
 Map edition 2nd
 Grid Reference 123456

SITE NAME: MAORI Not known
 OTHER Hill Rd. site

SITE TYPE Midden / Pits

1. Aids to relocation of site

At end of spur above first bend on Hill Rd.

2. State of site; possibility of damage or destruction

Good; in grass. Stock damage only likely.

3. Description of site (NOTE: This section is to be completed ONLY if no separate Site Description Form is to be prepared.)

Pits : Two rectangular open pits with raised rims. Inside measurements 16 ft. 6 ins. x 9 ft., with rims 2 ft. wide. Pits are about two ft. deep.

Midden: Scattered midden in grass close to pits, in the patch of bush shown on the map. The roots of some of the large trees are growing out of the small intact layer visible. Contains pipi shell only.

Site is about 200 ft. above sea level, on a small natural shelf on the hillside. Has a good view of coast below. Water supply in small stream in gully south of site, 100 yds. distant.

4. Owner W. Smith
 Address Hill Rd.
 Kakariki

Tenant/Manager None
 Address

Attitude Co-operative

Attitude

5. Methods and equipment used Two people examined and measured site.

Photographs taken: ~~Yes~~/No (Describe on Photograph Record Form)

Date recorded 1.1.70

6. Aerial photograph or mosaic No. 1234/5

Site shows:

~~Clearly/badly/not at all~~

7. Reported by R. Jones
 Address 1 Main St.,
 WELLINGTON.

Filekeeper G. Robinson
 2 Main St.,
 WELLINGTON.

Date 2.1.70

Date 3.1.70

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

SITE RECORD FORM

Map number N170
 Map name WELLINGTON
 Map edition 2nd
 Grid Reference 231564

SITE NUMBER N 170/2

SITE NAME: MAORI Pirihiira
 OTHER --

SITE TYPE Midden/Pits/Terraces

1. Aids to relocation of site

On east bank of Wainui Stream, about a mile above the mouth.
 Farm track enters stream bed just south of site.

2. State of site; possibility of damage or destruction

Part of site has eroded away on south side through stream action.
 Erosion could occur again at any time.

3. Description of site *(NOTE: This section is to be completed ONLY if no separate Site Description Form is to be prepared.)*

4. Owner R. Jones
 Address 1 Main St.,
 WELLINGTON.

~~Tenant~~/Manager T. Smith
 Address Coast Road
 WAINUI.

Attitude Co-operative

Attitude Unco-operative

5. Methods and equipment used Three people took pace and compass measurements

Photographs taken ~~Yes~~/No (Describe on Photograph Record Form)

Date recorded 1.1.70

6. Aerial photograph or mosaic No. 1235/4

Site shows:

Clearly/~~badly/not at all~~

7. Reported by W. Smith
 Address 3 Main Street,
 WELLINGTON.

Filekeeper G. Robinson
 2 Main Street,
 WELLINGTON.

Date 2.1.70

Date 3.1.70

SITE DESCRIPTION		SITE NUMBER N170/2
Map number	N170	SITE TYPE Midden/Pits/Terraces
Map name	WELLINGTON	
Grid reference	231564	

The site consists of eight terraces descending a gentle slope, beginning about 50 ft. above the stream bed.

Terraces: Each is about 100 ft. long and 20 ft. wide.

Pits: Three intact pits are found in a line on the north side of the lowest terrace. A fourth partly eroded pit is still visible. There are indistinct traces of pits on the third terrace up from the stream.

The pits, from north to south, measure:

- Pit 1 : 10 ft. x 8 ft.
- Pit 2 : 6 ft. x 5 ft.
- Pit 3 : 6 ft. x 5 ft.
- Pit 4 : Partly eroded but appears to have been about 5 ft. x 5 ft.

All have raised rims about 2 ft. wide and 8 ins. high. Pits are about a foot deep.

In centre of a small river terrace just north of the terraces, is a single pit, 6 ft. x 6 ft. with raised rims 2 ft. wide.

Midden : On the south side of the site is an eroding midden. This has one layer about 1 ft. below ground level and 10 ins. thick.

Contents : *Haliotis iris*
Lunella smaragda
Cellana denticulata

Groper bones

Pieces of rusted wire and clay pipe stems.

Site is in an open sunny position, facing west, and is close to sea and stream. Flat fertile river terraces in vicinity would have provided cultivation areas.

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

SITE RECORD FORM

Map number N170
 Map name WELLINGTON
 Map edition 2nd
 Grid Reference 132465

SITE NUMBER N170/3

SITE NAME: MAORI Not known
 OTHER -----

SITE TYPE PA

1. Aids to relocation of site

At end of spur above second bend on Hill Road.

2. State of site; possibility of damage or destruction

Good; in grass. Some trees on east side. Stock damage only likely.

3. Description of site (NOTE: This section is to be completed ONLY if no separate Site Description Form is to be prepared.)

4. Owner W. Smith
Address Hill Rd.,
 KAKARIKI.

Tenant/Manager
Address

Attitude Co-operative

Attitude

5. Methods and equipment used Two people measured and examined site

Photographs taken: ~~Yes~~/No (Describe on Photograph Record Form)
 Date recorded 1.1.70

6. Aerial photograph or mosaic No. 1234/5

Site shows:
 Clearly/badly/not at all

7. Reported by R. Jones
Address 1 Main Street,
 WELLINGTON.

Filekeeper G. Robinson
 2 Main Street,
 WELLINGTON.

Date 2.1.70

Date 3.1.70

SITE DESCRIPTION		SITE NUMBER N170/3	
Map number	N170	SITE TYPE PA	
Map name	WELLINGTON		
Grid reference	132465		

The site is a headland pa with strong natural defences on three sides.

Defences Natural: Steep bluffs falling away to gullies.
Artificial: Bank on north-east side. Internal to this is a ditch with a further internal bank.

Measurements :

Bank : 11 ft. wide dropping 14 ft. to the
Ditch : 30-40 ft. wide and 227 ft. long.
Bank : 8 ft. high 10 ft. wide. Runs full length of ditch.

All these defences run to the natural slope laterally and extend a short distance down them.

Entrance and Access: These are clearly defined and well preserved. Entrance leads through the defences directly onto the platform.

Habitation

Platform : Greatest width : 150 ft.
Narrowest width : 30 ft.
Length : 110 ft.

A low scarp runs transversely 40 ft. from the inner bank, from the north side to within 30 ft of the southern side. This separates off a slightly raised part of the platform.

Terrace : Continuous on three sides of the platform, from which it is separated by a scarp 10 - 20 ft. high. The terrace is nearly uniformly 30 ft. wide. It is bounded laterally by the steep natural slopes and transversely by the inner bank.

Pits : Two collapsed subterranean pits on south side of the terrace. Appear to have been about 3 ft. across entrance.

Ten open raised rim pits on platform at north-west corner. These are all 10 ft. x 6 ft., with rims 1 ft. wide. They are about 1 ft. - 18 ins. deep.

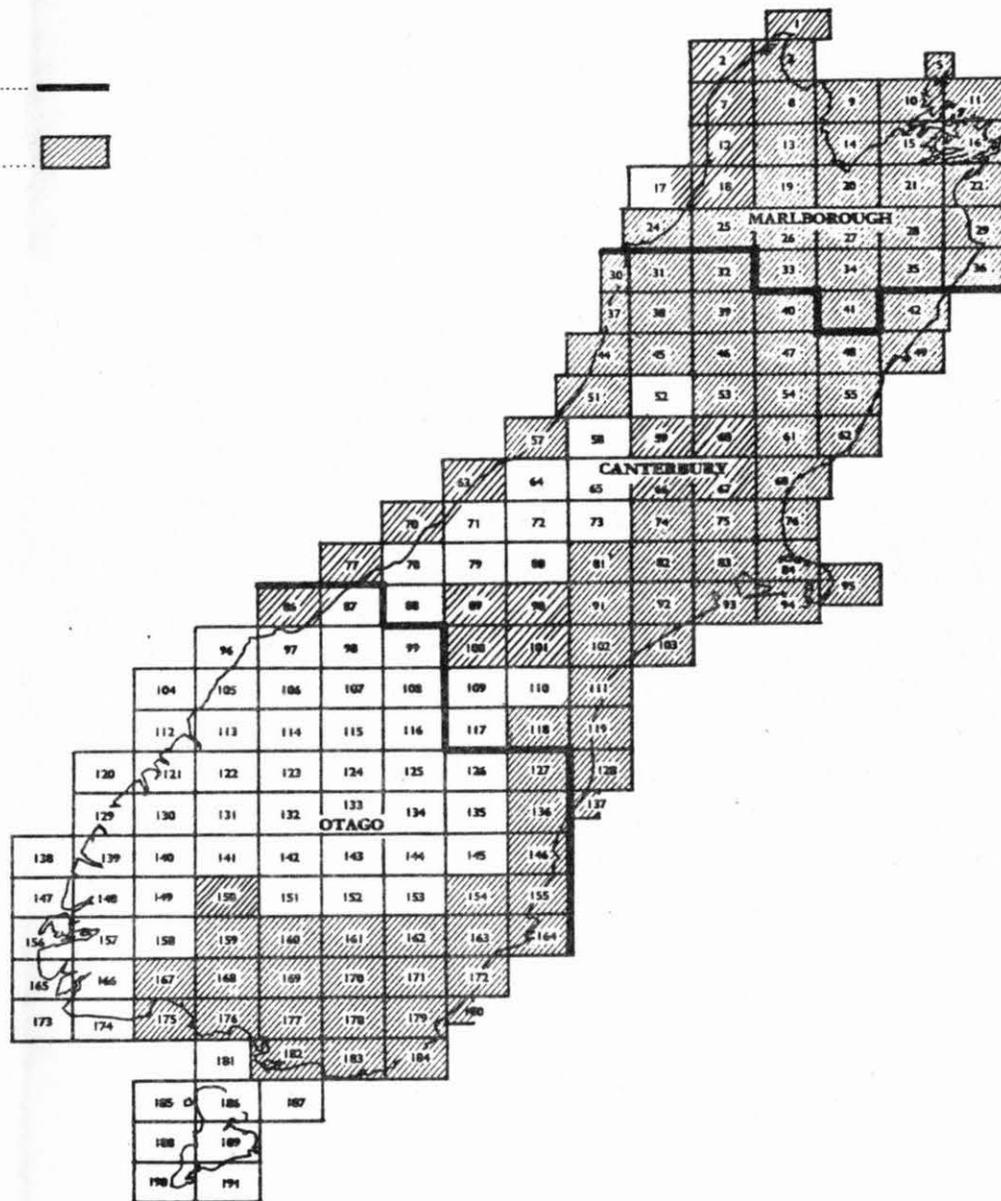
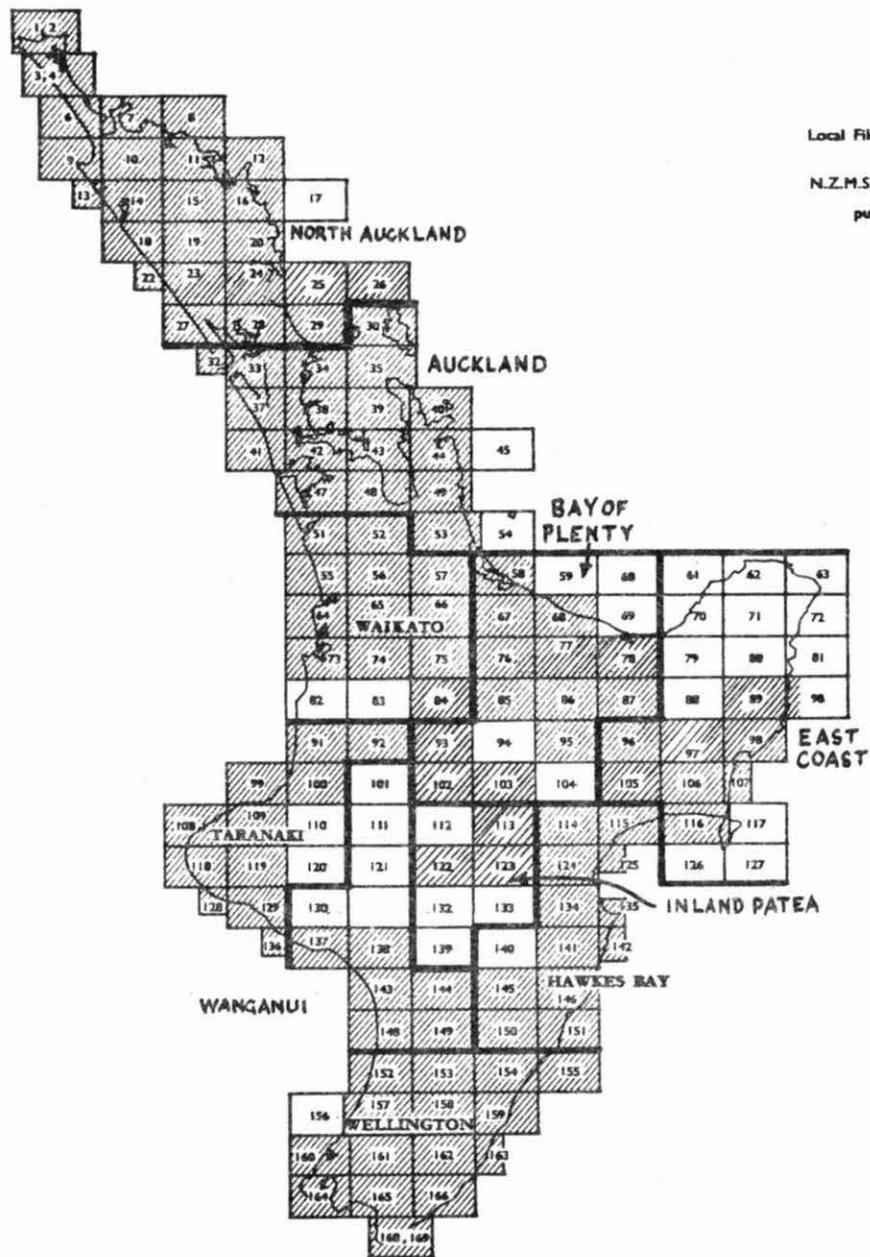
Midden : Along south side of the terrace and spilling over the side of the pa. Contains : Amphidesma subtriangulatum) Large quantities
Dositia anus)
Paphies novaezealandiae A little
Fish bone - unidentified.

Site faces northwest - southeast, and is surrounded by ridges of similar height. No other pa in the area, but small undefended site (N170/1) is 1 mile away.

Stream in gully to north is water supply. Some karaka trees on slopes to south of site.

10. Filing Areas, Filekeepers, Location of Files and Numbers of Sites Recorded.

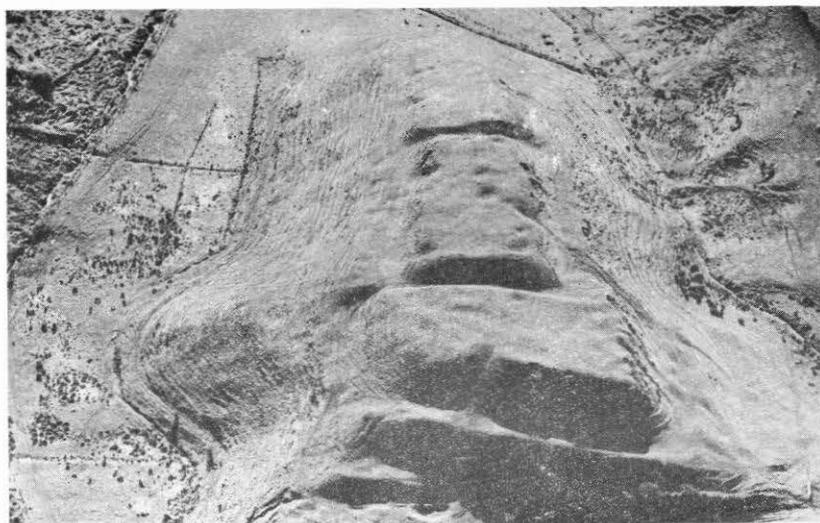
- North Auckland:** N.Z.M.S. 1 maps N1 to 29.
Filekeeper - Mr S. Bartlett,
50 Cairnfield Rd., WHANGAREI File at same address.
No. recorded: 505
- Auckland:** N30 - 49, 53 & 54
Filekeeper - Miss J.M. Davidson,
Auckland Institute & Museum
Private Bag, AUCKLAND. File at Museum
No. recorded: 910
- Waikato:** N51, 52, 55 - 57, 64 - 66, 73 -75, 82 - 84.
Filekeeper - Miss F. James
12 Radnor St., HAMILTON File at same address
No. recorded: 165
- Bay of Plenty - East Coast:** N58 - 63, 67 - 72, 76 - 81, 85 - 90, 93 - 98,
102 - 107, 116, 117, 126, 127.
Filekeeper - Mr K.W. Moore
13 McKenzie St., KAWERAU File at same address.
No. recorded: 595
- Taranaki:** N91, 92, 99, 100, 108 - 110, 118 - 120, 128, 129, 136
Filekeeper - Dr A.G. Buist,
Box 147, HAWERA. File at filekeeper's residence.
No. recorded: 505
- Wanganui:** N101, 111, 121, 130, 131, 137, 138, 143, 144, 148, 149
Filekeeper - Mr A.J. Bannister
32 Selwyn Cres., WANGANUI File at Wanganui Museum
No. recorded: 98
- Inland Patea:** N112, 113, 122, 123, 132, 133 & 139
Filekeeper - Mr R.A.L. Batley,
"Aomarama"
Moawhango, via TAIHAPE File at same address
No. recorded: 15
- Hawkes Bay:** N114, 115, 124, 125, 134, 135, 140 - 142, 145, 146, 150, 151
Filekeeper - Mr J.S.B. Munro,
Box 429, NAPIER. File at Napier Museum
No. recorded: 59
- Wellington:** N152 - 169
Filekeeper - Mr I.W. Keyes,
12 Parnell St., LOWER HUTI File at Turnbull Library
No. recorded: 347
- Marlborough - Nelson:** S1 - 29, 33 - 36, 41
Filekeeper - Mr M. Trotter,
Canterbury Museum, CHRISTCHURCH File at Museum
No. recorded: 223
- Canterbury:** S30 - 32, 37 - 40, 42 - 85, 88 - 95, 100 - 3, 109 - 111, 117 - 9, 128, 137
Filekeeper - Mr M. Trotter
Canterbury Museum, CHRISTCHURCH File at Museum.
No. recorded: 724
- Otago:** S86, 87, 96 - 99, 104 - 108, 112 - 116, 120, 127, 129 - 136, 138 - 191
Filekeeper - Mr S. Park,
Otago Museum, DUNEDIN File at same address.
No. recorded: 500
- Central Filekeeper:**
Mr. J.R.S. Daniels,
P.O. Box 3382, WELLINGTON





Hill Pa

Pakipaki, Hawkes Bay

N.Z. Aerial Mapping Ltd. — Photo (J.D.H. Buchanan Coll.)

Ridge Pa

Taranaki

A.G. Buist - photo

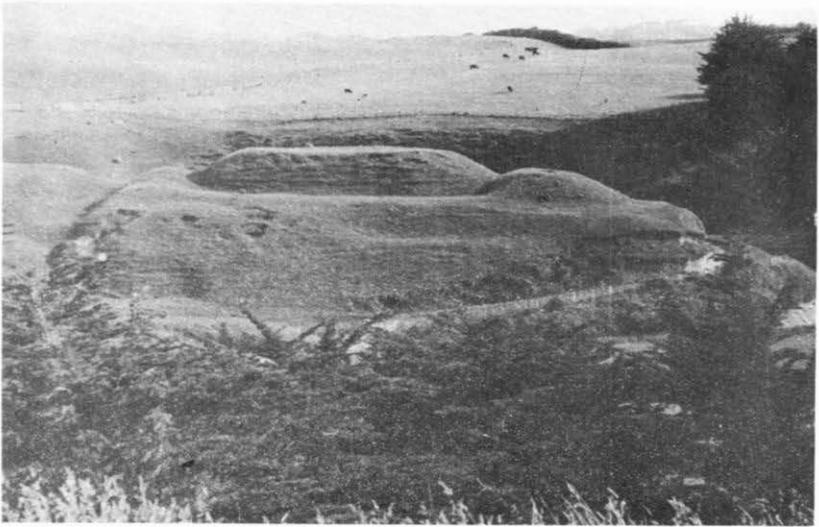


Flatland Pa (Gunfighters' Type) Pakipaki, Hawkes Bay
N.Z. Aerial Mapping Ltd. — Photo (J.D.H. Buchanan Coll)



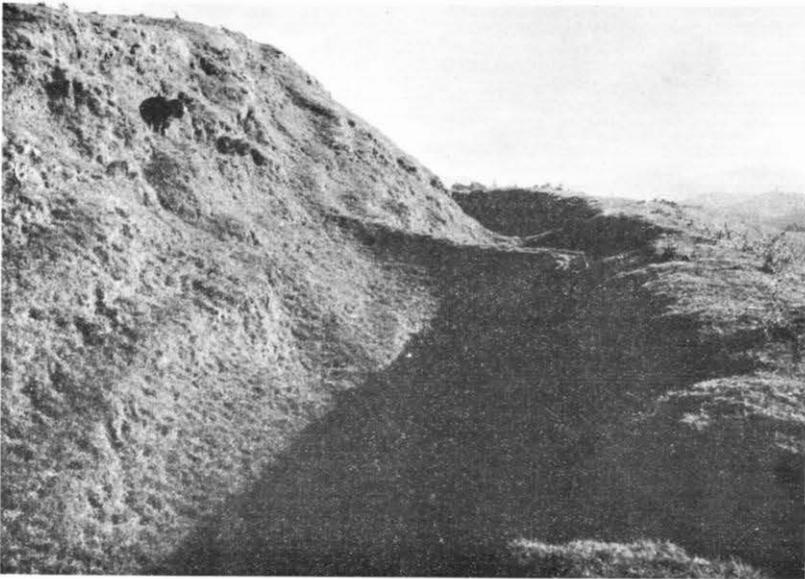
Ring-ditch Pa
A.G. Buist - photo.

Taranaki



Headland Pa
A.G. Buist - photo

Taranaki



Ditch and Bank Defence with scarp Papamoa, Bay of Plenty
Anthropology Dept. University of Auckland - photo



Pits - Open Type
A.G. Buist - Photo

Taranaki



Pit - Open type with raised rim.
J.R.S. Daniels - Photo.

Paekakariki, Wellington.



Pits - open type with raised rims
J.R.S. Daniels - photo

Paekakariki, Wellington



Terraces, volcanic cone

Elletts Mountain, Auckland

Anthropology Dept., University of Auckland - photo



Terraces

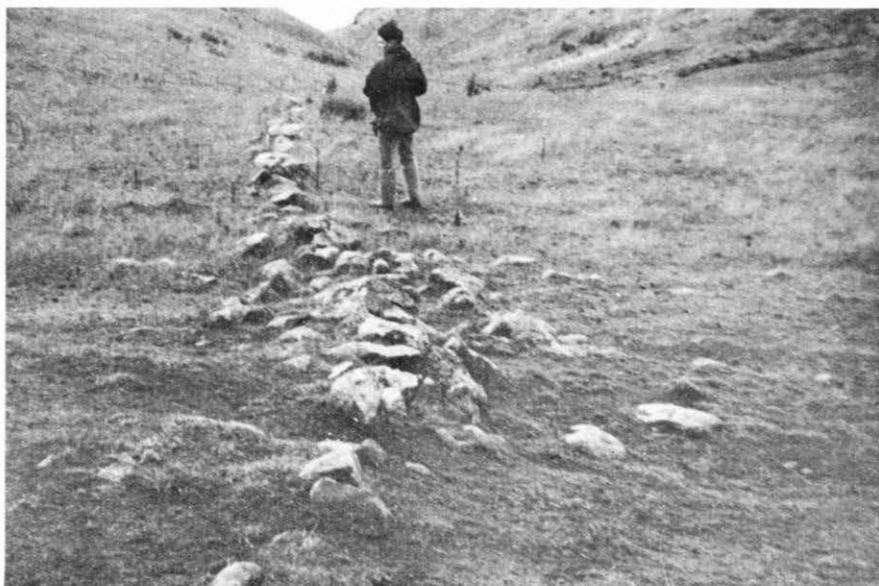
Papamoa, Bay of Plenty

Anthropology Dept., University of Auckland - photo

Stone Wall

Poor Knights Islands

Anthropology Dept., University of Auckland - photo



Stone Row
Canterbury Museum - photo

Banks Peninsula, Canterbury



Upright Stone Formation

Coromandel Peninsula

Anthropology Dept., University of Auckland - photo



Midden, eroding. Note intact midden in bank at top. Mercury Island
Anthropology Dept. University of Auckland - photo



Middens, eroding. Houhora, Northland
Anthropology Dept., University of Auckland - photo



Stone Hearth

I.W. Keyes - photo

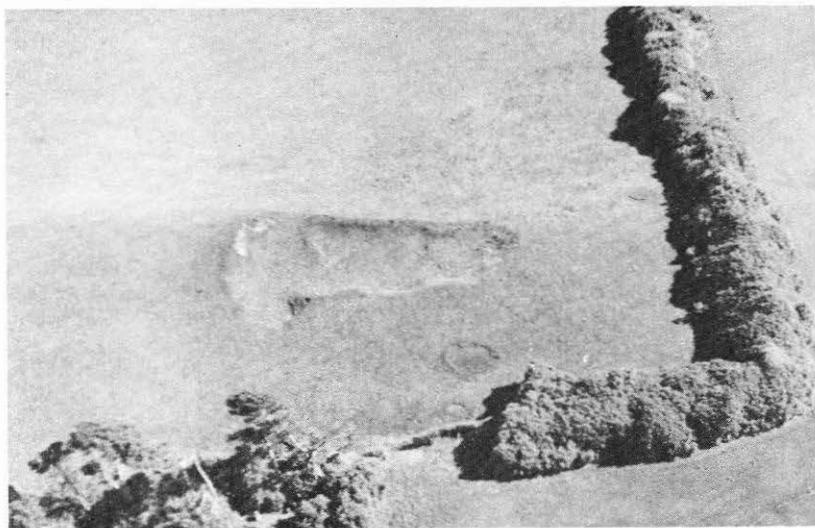
D'urville Island



Working area, with stone flakes and chips

I.W. Keyes - photo

D'urville Island



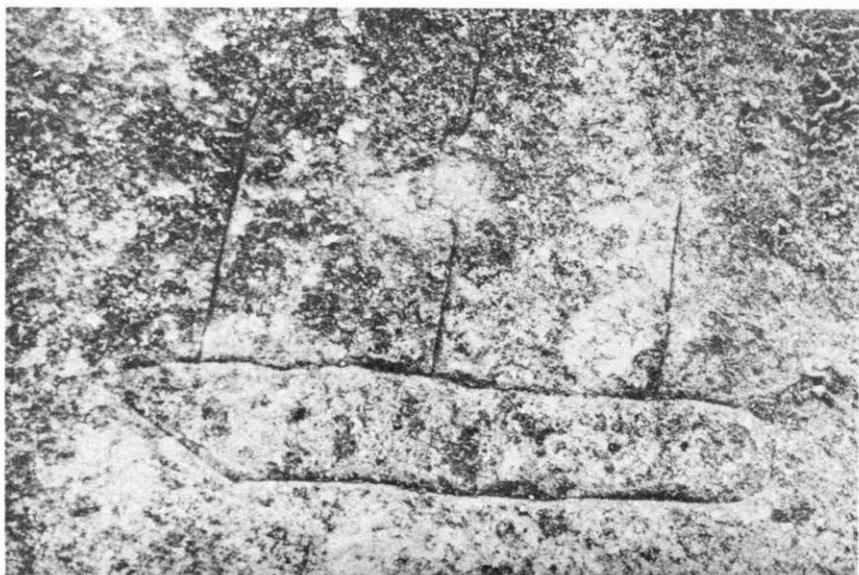
Source site, quarry in sand dune
A.G. Buist - photo

Taranaki



Rock carving
M.M. Trotter - photo

Ngapara, Otago



Rock carving
M.M. Trotter - photo

Prydes Gully, Otago



Tree carving
R.A. Batley - photo

Inland Patea