

**SCIENCE & RESEARCH INTERNAL REPORT NO.112**

**REPORT OF  
ARCHAEOLOGICAL SERVICES  
PROVIDED BY THE  
SCIENCE & RESEARCH DIVISION  
1990-91**

by

Brian Sheppard

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Published by  
Head Office,  
Department of Conservation,  
P O Box 10-420,  
Wellington  
New Zealand

ISSN 0114-2798  
ISBN 0-478-01333-7

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**Keywords:** Archaeology, investigations, publications, progress reports.

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**ABSTRACT**

This is a report of the archaeological services provided by the Department of Conservation's Science and Research (S&R) Division during the financial year July 1990 - June 1991. It describes the services under a set of predefined corporate output headings, which were applied to all of the Department's activities.

It should be noted that many of the services that are described contributed directly to more than one of the recognised outputs but are reported under only one.

Brian Sheppard (Senior Archaeologist)  
16 October 1991

**1 THE ROLE OF S&R ARCHAEOLOGY**

The S&R Division is established to provide research and advice nationally and within any combination or parts of regional conservancies.

Its role with respect to archaeology is to provide archaeological research and advice for the Department and the New Zealand Historic Places Trust (NZHPT), through substantially centrally located functions. The research is that which is required for management and interpretation of the archaeological resource.

Its responsibilities relate to national issues, and to services provided for Conservation managers and specialists from other parts of the Department and in the Trust. Its archaeological service supports the activities of

- the Historic Resources Division for policy development;
- conservancies for estate management and local advocacy programmes; and the
- NZHPT for advocacy and statutory protection of archaeological sites.

The archaeology section links with archaeological (historic) resource management staff where they exist in conservancies, to provide archaeological studies, advice and additional capacity as required. Although administratively separate from historic resources staff, the section maintains professional contact and provides support for those staff as opportunities and needs arise. The section also has particular responsibilities for conservancies without archaeological staff and for the NZHFT. Its archaeological service is therefore required to meet different needs across the country.

The Division's archaeology section comprises five archaeologists based in Wellington and one in Auckland who works closely with the Conservancy's archaeology unit. The archaeologists provide a routine archaeological service, including commissioned archaeological investigations and surveys, assessments and archaeological advice. This work is normally undertaken in response to specific requests that may be made at any time.

In addition to their principal activity of addressing the Department's and Trust's immediate management needs, S&R archaeologists have a leading role in the development of public archaeology inside and outside of the Department. The archaeologists contribute to formulation of departmental policy and procedures as well as to the development of new archaeological methodologies and to the maintenance of collections of nationally significant archaeological records. Outside the Department, they are notable contributors to the work of the New Zealand Archaeological Association and other specialist committees.

There is no simple, exclusive, division between the provision of scientific advice and that of research as most requests for advice or assessment require a component of research. The Division's capability for providing credible advice and assessment depends on the currency of its research skills and knowledge. It therefore requires a balance of investment in strategic and fundamental research with that required to service the Department's immediate operational demands.

## **2 ACTIVITY REPORT**

### **2.1 Implementation of Legal Protection:**

#### **Historic Resources Inventory (Output 2.31)**

OUTPUT DESCRIPTOR: Historic Resources Inventory describes activities that contribute to the gathering and analysis of archaeological information that is not necessarily confined to the Conservation Estate. These activities are relevant to the management or better understanding of historic (archaeological) resources on the Conservation Estate.

##### **2.1.1 Archaeological Site Records.**

Maintenance of the Central File of archaeological site records included adding 1000 new records, to bring the size of the file and its *Computer Index of New Zealand*

*Archaeological Sites* (CINZAS) to almost 45 000 records. The largest single task in file maintenance during the year involved recording of all records to identify redefined territorial local authorities. This process was undertaken by computer, comparing the recorded metric grid reference of each site with the position of the territories' redefined boundaries, as digitised at a scale of 1 : 250 000. The scale of the digitised data limits the confidence of identification, to 500 m either side of a boundary. The method developed for this process is applicable to other geographical databases where site locations have to be matched with digitised boundary areas, such as those of reserves or ecological districts.

### **2.1.2 CINZAS Reports.**

Reports of archaeological sites recorded within a local government district area, were prepared for the NZHPT as a basis for Historic Places Inventories. The first four of a new, A3 landscape format, series were prepared during 1990-91, covering the districts of Taranaki. The archaeology sections of the reports show the locations of sites recorded on each metric (1 : 50 000 scale) map sheet, reduced in scale to 1 : 125 000 to portray a complete map on a single page. Each map is accompanied by a list of the sites shown. The overall distribution in the district is also described.

A companion to the inventory series has been developed during the year, to provide an overview of the archaeological information on Infomap 262 (1 : 250 000 scale topographical) maps. A pilot for this series, of annotated full size maps, has been successfully evaluated by the Department's Te Anau Field Centre following its request for this type of information. Production of the complete series of 18 maps to begin in 1991-1992.

As some conservancies have direct access to CINZAS, and records are not normally kept of oral requests to this Division for information from the Central File, it is not possible to report the total use made of this resource during the year. Written requests, show a substantial use by, or for the consideration of, the Waitangi Tribunal as well as for the Department's conservancy and Head Office, and NZHPT, staff. Requests have frequently required computer plotted distributions of the sites to accompany the lists of sites found in the area of interest. The Division's archaeologists also contributed their experience to the Department's Database Workshop, held at Otaki and, with the Head Office Draughting Unit, to the planning of its Geographical Information System.

### **2.1.3 Chatham Island Archaeological Studies.**

A report has been written on the results and analysis of recent seasons' archaeological fieldwork on Chatham Island. This work had responded to extensive coastal erosion and consequent loss of many of the Chatham Island's archaeological sites. While totally removing some sites, the storm damage provided extensive exposure of the stratigraphic context of the late Holocene dunes on which they had been formed. As well as providing natural sections in which to study the archaeological sites, it also allowed geomorphological and stratigraphic analyses of the dunes.

The fieldwork provided essential data for historic resource management and valuable information on coastal processes to assist in the understanding and management of

coastal ecosystems. The report, which is currently being refereed for publication, has four broad conclusions:

- a) the sequence of dune building and soil formation correlates with those on the New Zealand mainland;
- b) the episodes are explained by the random occurrence of extremely strong storms, human influence being negligible;
- c) the first human settlement of Island was probably between 450 and 400 years ago; and
- d) Hooker's sea lion became locally extinct on Chatham Island after Moriori settlement.

#### **2.1.4 Maori Settlement of Auckland's Volcanic Landscape.**

The results of many years' archaeological fieldwork and research on the settlement, horticultural practices and fortification of Auckland's volcanic landscape have provided the basis for a programme of study, synthesis and publication. Good progress has been made on this work during 1990-1991. In addition to the normal publications, this work has provided resource material for the interpretation of Te Maunga o Mangere (Mangere Mountain). The Mangere project is described more fully under output 4.30, Manage Historic Resources.

#### **2.1.5 Aerial Views of Archaeological Sites.**

Following a Lottery Science grant, a book on aerial photographs of historical sites is being compiled. It will present and discuss features of the New Zealand landscape that have been altered by human occupation. Particular reference is made to gardening, erosion, forest burning and defensive fortifications.

#### **2.1.6 Atlas of New Zealand History.**

Advice has been given, and subject plates are being prepared, for the pre-European contact and historical period archaeology components of the proposed *Atlas of New Zealand History*.

#### **2.1.7 Archaeological Investigations at Butlers Point, Mangonui Harbour (Northland).**

A study has been undertaken at Mangonui Harbour, with Northland Conservancy staff, to understand and interpret the area's Maori and early European history. Recent work has focused on a pa and its associated settlement at Butlers Point. This is the first pa, north of the Bay of Islands, to be archaeologically excavated. The research has revealed extensive habitation evidence outside of the pa, including large cooking and living areas and more than 100 sq m of shell paving. Little of this extensive evidence was discernable before excavation.

#### **2.1.8 Radiocarbon Dating.**

The chronology of events in New Zealand's prehistory is important for understanding the significance of the country's resource of archaeological sites. Radiocarbon dating is generally regarded as the best available, but still imperfect, key to understanding this chronology. Its imperfection is a particular problem in New Zealand where there is a relatively short period of human settlement in comparison to the size of errors inherent



in radiocarbon dating. The technique has been extensively applied to archaeological sites but often with a poor understanding of the relationship of a reported radiocarbon age to the date of the archaeological feature from which the sample was retrieved. The Division's role in combatting this problem during 1990-91 has resulted in two important projects:

- (i) A collaborative venture with the Nuclear Sciences Group of DSIR has resulted in a paper on calibrating New Zealand radiocarbon dates for marine shells. Marine shells are a frequently used medium for dating archaeological sites. This work followed another collaborative project to produce a handbook for users of a radiocarbon dating service, providing a better understanding of the meaning of radiocarbon dates, limitations of their results and methods of ensuring the most reliable results from the dating process.
- (ii) The second piece of research within the S&R Division has been the innovation of a novel method of studying sets of radiocarbon dates. Although the technique is still at an early stage of development, it is indicating good potential for
  - a) reducing the magnitude of the error margin that has to be applied to individual samples; and
  - b) identifying the date of initial settlement and the rate of settlement growth in a study area.

A research project on the C<sup>14</sup> dating of Coromandel moa-hunting occupation was earlier devised to test the recent hypothesis by Graeme Caughley, of the date and pattern of first settlement of New Zealand. This has since been subsumed in a more comprehensive reanalysis, using the technique described above, of available radiocarbon dates from New Zealand's archaeological sites.

#### **2.1.9 Development of an Electronic Field Book.**

Programming development has been completed for the use of a Psion hand held computer as an electronic field book for archaeological mapping. The program can be used for topographical mapping and for recording features during archaeological excavations.

#### **2.2 Conservation Advocacy: Coastal Resource Inventory (Output 3.09).**

OUTPUT DESCRIPTOR: The Department's Coastal Resource Inventory describes and evaluates natural, historical and cultural resources associated with New Zealand's coast. The S&R Division provides archaeological data, assessment and advice for this project.

The very high proportion of archaeological sites around New Zealand's coast has required close co-operation between archaeologists and others contributing to the Department's Coastal Resources Inventory. The principal and, as yet unresolved, difficulty has been an inability of archaeologists to comply with a requirement to rank the significance of individual archaeological sites. This stems from a contradiction with

the underlying principle of the Historic Places Act, to offer the same initial protection to any archaeological site, and from the absence of any agreed methodology of significance ranking. The Act provides equal protection for all archaeological sites by making it an offence for anyone to damage a site without the prior written authority of the NZHPT. This problem, and a mechanism for its resolution are described under the heading 2.3.1 below.

Contributions have been made to the first order (1 : 250 000 scale) survey, by providing descriptions of the locations and types of sites recorded in the inventory areas. A pilot survey, to explore possibilities for archaeological field assessment, has been undertaken in the Nelson-Marlborough Conservancy for the second order (1 : 50 000 scale) inventory. The analysis of those results is currently in progress.

Archaeological advice was provided for the East Coast Conservancy for a hearing on a proposed water order for the Mohaka River.

### **2.3 Management Services - Conservation Estate: Manage Historic Resources. (Output 4.30)**

OUTPUT DESCRIPTOR: Manage Historic Resources is the heading under which archaeological research and advice is provided for the management, including better understanding and interpretation, of historic (archaeological) resources on the Conservation Estate. It usually arises from direct requests for assistance from conservancy staff.

#### **2.3.1 Archaeological Research and Management Strategies.**

The S&R Division is working with conservancy staff towards the production of a pilot series of Conservancy-based archaeological research and management strategies. Their function, described in detail in the S&R Report 18 *Strategies for New Zealand Archaeology*, is to provide guidance for identifying research and management needs for the archaeological resource within a conservancy. Their results will be offered to conservancies for incorporation in Conservation Management Strategies; to the Historic Places Trust for guidance in its statutory processes, such as deciding permit and authority applications or compiling its Register of Archaeological Sites; and to research agencies, including this Division, for planning future archaeological research. Their first component is a compilation and analysis of the archaeological implications of published and unpublished literature, including Site Record Forms, pertinent to the Conservancy area.

The first of these strategy reports, for the Nelson-Marlborough Conservancy has been written to draft form and is currently being refereed prior to publication. The initial publication will be in two parts: a summary of the present archaeological knowledge and a statement for research and management planning. The second strategy report, for the Wellington Conservancy, is well under way. Progress to date has focused on the study of a considerable quantity of unpublished research and on the evaluation of early

survey maps and plans as a source of archival information about the sites that were part of the early European contact period.

### **2.3.2 Te Mana o te Maunga o Mangere**

The Division has worked closely with the Auckland Conservancy, Tamaki Ki Raro Trust (on behalf of the Tainui Trust Board) and the Manukau City Council, on the public interpretation of one of Auckland's great pa sites: Te Maunga o Mangere (Mangere Mountain). Source material for the interpretation is provided from the results of many archaeological investigations that have been undertaken on Auckland's volcanic landscape. This project is providing a focus for the reporting, synthesis and publication of the major investigations. Contributions, based on this research, have been made to the reserve's management plan; to the development of a pilot resource kit for teachers; a pilot handbook for the historic walkway; and for teaching displays at a temporary education centre on the Mountain. This year's work has included the compilation of draft maps of the Mountain's archaeological features, transcribed from oblique aerial photographs. The maps are regarded as of draft quality until their interpreted detail has been checked by archaeological observations on the ground. This exercise has been undertaken as an evaluation of a new, and comparatively low cost, computer mapping technique.

### **2.3.3 Pa Sites of the Western Bay of Plenty.**

A booklet was prepared and published, for the Bay of Plenty Conservancy, describing for the public some pa sites of the Western Bay of Plenty and identifying those on public land that can be visited.

### **2.3.4 Tauwhare Pa.**

Tauwhare Pa, above Ohiwa Harbour, Whakatane, was opened to public visiting in time for the summer season. The site was interpreted and partially restored by the Department's Whakatane Field Centre, with the assistance of S&R and Bay of Plenty archaeologists.

### **2.3.5 Otatara Pa.**

Advice was given to the Hawkes Bay Conservancy on the maintenance and interpretation of the Otatara Pa reserve at Taradale, near Napier.

### **2.3.6 Conservation Advice: Kaingaroa Rock Shelter.**

Reference sets of archive and current photographs of the Maori rock carvings at the Kaingaroa rock shelter have been compiled and provided to the Rotorua Conservancy Office, and the NZHPT. They were accompanied by maps showing locations of the areas photographed and reports relating to conservation of the rock carvings. The work resulted from an S&R research contract established in the previous financial year.

### **2.3.7 Waitangi Tribunal Claims.**

A considerable amount of archaeological advice and assessment was provided for the Department, the Crown Law Office and the Waitangi Tribunal for a claim by Te Roroa relating to the Waipoua Forest near Dargaville. Archaeological reports were also provided for the Ngai Tahu claim.

### **2.3.8 Old Government Buildings and House.**

Two projects on the conservation of important historical buildings were undertaken for the Wellington Conservancy. One required a photographic survey and a report of recommendations for conservation of the Old Government Buildings and the other a preliminary inspection of Turnbull House, Wellington.

### **2.3.9 Coastal Erosion - Pitt Island.**

A field inspection was undertaken for the Canterbury Conservancy of a coastal archaeological site on DOC land on Pitt Island. The site, which by its artefact assemblage is considered to be from an early phase of settlement of the Islands, is subject to substantial coastal erosion. The inspection has resulted in a research proposal, framed with Conservancy staff, to identify the most appropriate action for the continued conservation of the archaeological sites in the immediate vicinity.

### **2.3.10 Management Advice: Auckland Volcanic Cone Pa.**

Statements of evidence to the Planning Tribunal were prepared for the Auckland Conservancy:

- a) on behalf of the DOC, concerning the listing of the Otuataua and Matukuria historic stone fields in the District Scheme;
- b) and on behalf of Auckland City Council, concerning the zoning of Mount Eden.

Policy guidelines were prepared to assist the Conservancy to advocate that Mangere Mountain should be declared an historic reserve under the Reserves Act, rather than the Manukau City Council's present designation of recreational reserve.

## **2.4 Servicing of Crown Agencies : Historic Places Trust Servicing (Output 9.32)**

OUTPUT DESCRIPTOR: The S&R Division provides archaeological research, advice and assessment as required by the New Zealand Historic Places Trust. This includes provision of a service, through the Senior Archaeologist, of co-ordination and evaluation of any archaeological research, advice and assessment required by the Trust.

### **2.4.1 Authority and Permit Advice.**

The S&R Division provided advice to the Historic Places Trust on applications for authorities to modify and permits to investigate archaeological sites. During 1990-91, applications for 69 authorities and 34 permits were processed.

One authority application, which required a more substantial involvement than normal by S&R archaeologists, related to an application to modify archaeological sites at Barrytown Flats, south of Westport. The application, which arose from a proposal to mine from an extensive coastal strip, gave rise to a preliminary archaeological surface evaluation co-ordinated by staff of the West Coast Conservancy. Its results suggested that the area may have been of sufficient archaeological significance to recommend that the Historic Places Trust (NZHPT) decline the necessary authority to damage

archaeological sites in one area. The area affected was also the location of the highest yield of ilmenite and therefore crucial to the viability of the mining operation. The archaeological significance related to sites which appeared to hold evidence of horticulture, which would be unexpected in this region.

The S&R Division's role was to assess the surface investigation and to test, by excavation, features that were suspected to be a food storage pit and terraces. The excavation failed to reveal evidence to support their origin as being cultural. Although the 'high yield' area does contain other archaeological sites, their presence was not seen to be a cause for conflict with the mining operation. Most were poorly preserved middens. Those that remained intact were either too poorly preserved to warrant further protection, or their investigation could be accommodated by normal mitigation procedures within the mining programme.

#### **2.4.2 Archaeological Resource Management Advice.**

A field evaluation was made at the Trust's request, on the state of preservation of the dendroglyphs (tree carvings) of Chatham and Pitt Islands. Archival information about the dendroglyphs was studied and copied for the Trust and for the Department's Canterbury Conservancy. This included photographs and field books recorded from work undertaken in the 1960s.

#### **2.4.3 Advocacy Support**

Development, and provision of Historic Places Inventories, described under the Historic Resources Inventory section of this report, is also a service that has been provided for the Trust. The S&R Division's role has been to prepare the archaeological site sections of the reports and to compile these, with other sections supplied by the Trust, into a report that the Trust publishes and distributes. In 1990-91, four of these reports, for the local government districts of Taranaki, were produced.

In September 1990, the Division was represented, as facilitator, at the Trust's workshop on urban archaeology in Auckland. The workshop was held in association with Australian Society for Historical Archaeology's conference, which was also hosted by the Trust in Auckland.

#### **2.4.4 Statutory Planning Advice.**

Advice was given to the Trust, and to the Historic Resources Division, on aspects of revision of the Historic Places Act and on plans for restructuring the Department's staffing of the Historic Places Trust within its own Head Office organisation.

Assistance was given to the Trust's submissions on a claim before the Waitangi Tribunal relating to archaeological site management in the Waipoua Forest, near Dargaville.

### 3 S&R ARCHAEOLOGY PUBLICATIONS AND MAJOR REPORTS: 1990-91

The following section identifies publications and major archaeological reports of archaeology staff and of other archaeologists who have published their work through the Division during 1990-1991.

#### 3.1 Publications and Reports by S&R Staff:

Susan Bulmer (Human Ecology, Auckland):

Bulmer, S.E. (1990). Statement of Evidence to the Planning Tribunal, on behalf of the DoC, concerning the listing of the Otuaataua and Matukurua historic stone fields in the District Scheme. 19 July 1990.

- (1990). Statement of Evidence to the Planning Tribunal, on Behalf of Auckland City Council, concerning the Zoning of Mount Eden. 19 November 1990.
- (1990). Oceanic Foodlands: a review of the archaeological evidence for Polynesian Agriculture. Paper presented to the 2nd World Archaeology Conference, Venezuela. September 1990.
- (1991). Archaeology and Indigenous Rights: The World Archaeology Congress' Code of Ethics from an Archaeologist's Point of View. *Archaeology in New Zealand* 34(1): 54-58.
- (1991). Statement of Evidence, Wai 38, by Susan Bulmer (to Waipoua claim before the Waitangi Tribunal). May 1991
- (1991). Forest and Fallow at Matukurua. Paper presented to NZAA Conference in Invercargill. May 1991.
- (1991). Pre-European Maaori Garden Landscapes in the volcanic fields of Auckland. Paper presented to the NZ Inst of Horticulture. 18 May 1991.
- (in press) Nga Tiimatanga: the Beginnings. A model of the colonisation of Aotearoa. In D.S. Sutton (ed.) *The Origins* Univ. of Auckland Press.
- (in press) Variation and change in stone tools in Prehistoric Pua New Guinea. The Witness of Wanalek. In A. Pawley (ed.) *Man and a Half*. Auckland Polynesian Soc.

- (in press) Prehistoric Pottery in Papua New Guinea. A Review. In *Bulletin of the Indo-Pacific Prehistory Association*.
- Aidan Challis (Human Ecology, Wellington):
- Challis,AJ. (1990). Book review: Ranginui Walker (1990) *Ka Whawhai tonu Matou. Struggle Without End. Archaeology in New Zealand* 33(4): 220-222.
- (1990). The Location of Heke's Pa, Te Kahika, Okaihau, New Zealand: a field analysis. *NZ Journal of Archaeology* 12: 5-27.
- Kevin Jones (Science Policy, Wellington):
- Jones,KL. (1990). Settlement chronology on river terrace landforms: A New Zealand case study. *Geoarchaeology* 5(3): 225-273.
- (1991) Manutuke settlement. *Historic Places* 32: 44-48.
- Bruce McFadgen (Human Ecology, Wellington):
- Anderson,AJ & McFadgen,BG (1990). Prehistoric two-way voyaging between New Zealand and East Polynesia: Mayor Island obsidian on Raoul Island, and possible Raoul Island obsidian in New Zealand - A research report. *Archaeology in Oceania* 25: 37-42.
- McFadgen,BG & Manning,MR. (1990). Calibrating New Zealand Radiocarbon Dates of Marine Shells. *Radiocarbon* 32(2): 229-232.
- McFadgen,BG & Williams,AM. (1991). *Pa sites of western Bay of Plenty*. The Past for People 1. DoC, Wellington.
- Mary O'Keeffe (Human Ecology, contract, Wellington):
- O'Keeffe,M. (1990) An Archival Study of Wellington Maps: 1840-1860.  
 Part 1: Department of Survey and Land Information  
 Part 2: Other local sources  
 - Internal unpublished report to the S&R Divn.
- Brian Sheppard (Human Ecology, Wellington):
- Sheppard,B. (1990). Lessons from an archaeological site computer file. *New Zealand Geographer* 46(1): 40-42.
- (1990). Identifying New Local Body District Boundaries. *Science Fiction Faction* 17.

- (1991). Locational discrepancies between NZMS 1 and 260 maps. *Archaeology in New Zealand* 34(2): 112-114.
- (1991). Data Dangers. *New Zealand Science Monthly* 2(3): 15-16.
- (1991). 'S&R Archaeology Service: Future direction'. Internal planning document (June 1991).

Tony Walton (Human Ecology, Wellington):

- Walton,T. (1990). Wellington's defences: A reconnaissance survey of the fortifications of 1884-1945. *Archaeology in New Zealand* 33(2): 87-99.
- (1991). Excavation of terraces at Titahi Bay, Porirua. *Archaeology in New Zealand* 34(2): 105-111.
  - (1991). Traditional animosities and the battle of Moutoa Island. *Archaeology in New Zealand* 34(1): 47-53.

Ann Williams (Human Ecology, Wellington):

- Williams,AM (in press). *Historic Places Inventory: New Plymouth District*. New Zealand Historic Places Trust.
- (in press). *Historic Places Inventory: South Taranaki District*. New Zealand Historic Places Trust.
  - (in press). *Historic Places Inventory: Stratford District*. New Zealand Historic Places Trust.
  - (in press). *Historic Places Inventory: Ruapehu District*. New Zealand Historic Places Trust.

### 3.2 S&R Archaeological Publications by Conservancy Staff:

- Brassey,RJN. (1990). *The history and archaeology of the Brown's Mill site, 15-17 Durham Lane, Auckland*. Science and Research Internal Report 77. DoC, Wellington.
- Coates,J. (1990). *Bluestone and bureaucracy: A project on the presentation of an archaeological site, Albert Barracks*. Science and Research Internal Report 65. DoC, Wellington.
- (1990). *Soil phosphate analysis as an indicator of archaeological deposits*. Science and Research Internal Report 69. DoC, Wellington.



- Fredericksen,CFK. (1990). *An archaeological investigation of a food storage and habitation site (06/307-308) at Motutoa, South Hokianga, Northland.* Science and Research Internal Report 78. DoC, Wellington.
- Fredericksen,CFK & Visser,Edward P. (1990). *Archaeological investigations at site R11/1519, Cryers Road, East Tamaki, Auckland, New Zealand.* Science and Research Series 21. DoC, Auckland.
- Johnson,L. (1990). *Archaeological site survey of compartments 237, 228, 227, 72, 71, 65, 63, 50, 1001 and 1002 Aupouri Forest.* Science and Research Internal Report 71. DoC, Wellington.
- (1990). *Archaeological site survey of the Shepherd residential subdivision, Whangaroa.* Science and Research Internal Report 70. DoC, Wellington.
- (1990). *Waitangi Treaty House: the home of New Zealand's first British Resident. A preliminary report on the stage one archaeological investigation of site P05/579.* Science and Research Internal Report 68. DoC, Wellington.
- Macready,S & Goodwyn,J. (1990). *Slums and self-improvement. The history and archaeology of the Mechanics Institute, Auckland, and its Chancery Street neighbourhood (Vol 2).* Science and Research Internal Report 92. DoC, Wellington.
- Macready,S & Robinson,J. (1990). *Slums and self-improvement. The history and archaeology of the Mechanics Institute, Auckland, and its Chancery Street neighbourhood (Vol 1).* Science and Research Internal Report 91. DoC, Wellington.
- McLean,M. (1990). *The Garden of New Zealand. A history of the Waitangi Treaty House and Grounds from pre-European times to the present.* Science and Research Internal Report 76. DoC, Wellington.
- Ritchie,NA. (1990). *Archaeological techniques and technology on Ross Island, Antarctica. Polar Record 26(159): 257-264.*
- Veart,DG. (1990). *North Head: The development of a fort.* Science and Research Internal Report 79. DoC, Wellington.

## **APPENDIX: ARCHAEOLOGY PLAN FOR 1990-91**

The Department's outputs for 1990-91 were described under 9 general headings (Conservation Outputs) each of which contained groupings described as Key Outputs. The Division's archaeological resources were allocated for an archaeological service for 1990-91 as described in the Division's business plan (September 1990). Relevant excerpts from that plan follow:

### **IMPLEMENTATION OF LEGAL PROTECTION: Historic Resource Inventory (Output 2.31)**

#### **Comment:**

Division manages the national database of archaeological sites on behalf of the Archaeological Association and provides interpreted information for government departments and local government, and the NZ Historic Places Trust, on request (see also key outputs 4.30 and 9.32).

Research will be carried out to develop understanding of regional archaeologies as a basis for site interpretation and site advice services. Information will be provided to help conservancies interpret important sites in their region.

#### **Specific outputs:**

- 1) Publications on Mokoia, Maungawhau and Maungakiekie archaeology and on surface studies of 35 volcanic cone pa; preliminary report on at Mangonui Harbour; publications on Katherine Mansfield birthplace and on investigations near Waverley, S. Taranaki. By June 1991 (S&R).
- 2) Identification and dating of prehistoric horticultural soils; C<sup>14</sup> dating of moa-hunting occupation; publication of late holocene coastal dune stratigraphy; Chatham Island, all by June 1991 (S&R)
- 3) Interpreted information for clients on request from NZAA national site records. Maintenance of Central File (45 000 records) and computerised data inventory; newly formatted regional inventories for all regions south of Lake Taupo by April 1991 (S&R).

## **CONSERVATION ADVOCACY: Coastal Resource Inventory**

**(Output 3.09)**

### **Specific outputs:**

Provide advice to CRI Task Force on distribution and status of archaeological and historical sites around the coastline

## **MANAGEMENT SERVICES - CONSERVATION ESTATE: Manage Historic Resources**

**(Output 4.30)**

### **Comment:**

S&R Division will provide advice and information to assist the management of historic resources (see also key outputs 2.31 and 9.32)

### **Specific outputs:**

- 1) Archaeological advice and services to conservancies and Waitangi Tribunal, as requested (S&R)
  
- 2) Development of archaeological research and management strategies for Wellington and Nelson Conservancies (as examples) by June 1991. (S&R).

## **SERVICING OF CROWN AGENCIES: Historic Places Trust Servicing**

**(Output 9.33)**

### **Comment:**

S&R Division provides archaeological advice and services to NZHPT, including advice on permits and authorities to destroy archaeological sites, and conducts investigations when sites are to be destroyed (see also outputs 4.30 and 2.31).

### **Specific outputs:**

- (1) Advice as required to the NZ Historic Places Trust, including guidance to HPT over Waitangi Tribunal.