The archaeology of Otago

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Cover: Stone ruins of cottages at the ill-fated Pactolus Claim in the upper Nevis. The pond in the foreground was probably made by a hydraulic elevator.

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Foreword

by Professor Atholl Anderson

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Consideration of regionality in New Zealand's prehistoric archaeology goes back to H.D. Skinner's research in the 1920s, when he set out to topple the prevailing traditionalist paradigm of pre-Polynesian settlement. Later archaeological studies have emphasised the local and regional adaptations of prehistoric subsistence activities, demography, settlement patterns and material culture to New Zealand's environmental variety. Some of this work has been published, in summary, for a broad readership. Nigel Prickett's *The first thousand years* (Dunmore Press 1982) and *Historic Taranaki: an archaeological guide*, (GP Books 1990), Atholl Anderson's *When all the moa ovens grew cold* (Otago Heritage Books 1983), and Aidan Challis' *Motueka* (Longman Paul 1978) are examples. However, detailed studies of regional evidence, covering both Maori and European archaeological remains, have until recently been lacking. It is this critical gap in the availability of data and their synthesis that the Department of Conservation' series now fills so admirably (see also Aidan Challis' *The archaeology of Canterbury in Maori times* (Department of Conservation 1995), and Tony Walton's *Archaeology of the Taranaki–Wanganui region*, Department of Conservation 2000).

Dr Jill Hamel is the ideal choice of author for the Otago volume. Through an active career that now extends for some 35 years, Jill has established herself in a line of distinguished field archaeologists of southern New Zealand which goes back through Leslie Lockerbie and David Teviotdale, under the general direction of H.D. Skinner, all the way to Walter Mantell. It was his excavations at the Awamoa moa-hunting site in north Otago, during the summer of 1852/53, that first brought the rich archaeology of the province to the attention of scholars. Jill also worked on sites of moa and moa-hunting, especially in the Catlins, and she was a pioneer in the application of ecological approaches to the elucidation of archaeological evidence in New Zealand. More recently, she has been instrumental through her work on the Protected Natural Areas and Pastoral Tenure Programmes, in bringing the recording and study of European historical remains up to essential standards of survey and description.

The archaeology of Otago draws substantially on this work. It focuses on the field evidence, as a good regional prehistory should do, but it also seeks to draw out the threads of the provincial pattern. Nicely balanced between Maori and European archaeological evidence, it is thoughtfully written in a narrative style which helps to keep the material in historical context. At the same time, Jill is concerned to open the contextual discussion to many facets of social and economic behaviour which can be inferred from the data. She also addresses some of the underlying issues of culture process, including coincidences of pattern before and after the advent of Europeans: people went for megafauna

and minerals in events separated by hundreds of years, but in a common manner that demonstrates the fundamental indivisibility of human motivation.

The book catalogues and illustrates the wonderful variety and abundance of historical remains strewn across the province of Otago—surely the richest archaeological landscape in New Zealand—and, implicitly, the commensurately heavy responsibility of their preservation and management. Issuing *The archaeology of Otago* in a new and handsome format is a just tribute to its author and a clear signal to its readership of the significance of archaeological studies to understanding New Zealand's historical development. I hope that in due course the whole regional series, including those already issued in rather stark departmental style, will appear similarly. A series of authoritative, well-written and attractively presented volumes, exemplified here by *The archaeology of Otago*, will be worth every bit of effort that goes into promoting the historical and heritage programmes of the Department of Conservation.

Preface

This book has grown out of a need recognised by the Department of Conservation. The Department has to identify and actively conserve archaeological sites of high significance on the lands which it administers. The critical words are 'high significance', a trait which can be judged only if the nature of a site is understood. Some years ago the Department decided to commission reports for each conservancy 'describing the prehistory, history and the changing ways of life experienced by its people' (Sheppard 1989). This, along with descriptions of the full range of sites in the Conservancy, would provide a basis on which to judge the importance of those under departmental control. The first two reports prepared for the South Island were reviews of the archaeology of the Maori sites of Marlborough/Nelson and of Canterbury (Challis 1991, 1995). These had established a pattern which I was asked to follow in preparing a similar review for the Otago Conservancy.

It turned out that Otago was different from the other conservancies. For one thing, of the approximately 4,600 sites recorded in the Otago Conservancy, about 1,140 are Maori sites, but about 3,460 are European sites. Also a strong Dunedin tradition of archaeological research over the past 70 years means that Otago's sites have been particularly under the academic spotlight. The in-house Science & Research Series was not an appropriate vehicle for the massive amount of material that had to be reviewed in Otago, and the Department decided to produce the work as a stand-alone publication. It covers the archaeology of the Otago conservancy from the arrival of Polynesians in New Zealand in about the 12th century to the development of European settlements, roads, farms and gold mining in the 19th century. *The boundaries of the Otago Conservancy approximate to the old provincial boundaries, but do not include the upper Waitaki basin.*

The work is in two sections, the first dealing with Polynesian archaeology through to the protohistoric period, following a pattern similar to that of Challis (1995) for Canterbury; the second deals with the sites of early pastoral farming and the goldfields of Otago. The Challis pattern posed some problems, in that it was appropriate for the information about early sites, which comes mostly from scientifically excavated and analysed sites, but it was not so satisfactory for considering the information from the later sites. Our archaeological knowledge about recent Maori sites has been mostly derived from artefacts collected by 'curio' hunters and deposited—often poorly provenanced—in museums, and from accounts of the first European settlers. Detailed excavations of these sites have been relatively few and minor. For these, a site by site description proved more appropriate.

Maori traditional knowledge is not examined here as a body of work. Only where traditional material has been used by archaeologists in the past to elucidate archaeological or ethnographic patterns will that material be incorporated into the review. Traditional knowledge, as such, has been briefly summarised in the Natural Resource Management Plan (Ngai Tahu ki Otakou n.d.) and in the Otago Conservation Management Strategy, and is considered in

more detail in Dacker (1994), Evison (1993) and Anderson (1980b, 1988, 1998). Archaeological and ethnographic material on the one hand and traditional evidence on the other belong to two wholly different intellectual systems, the comparison of which requires a different approach from the descriptive/ comparative one adopted in this review. Anderson (1980b) has shown the value to archaeology of exploring ethnographic and traditional evidence, and has produced a detailed ethnohistory of the Ngai Tahu (1998). His discussion, for instance, of Maori traditions about moa extinction show up the real problems of interpreting traditional material (Anderson 1989: 176). Much remains to be explored in the traditions of southern New Zealand, in order to relate archaeological sites to the spiritual and cultural world of the Ngai Tahu. Maori burial sites are not described, and the presence of human bone in sites is mentioned only where this is an integral part of past research on a large site.

The terms Archaic and Classic have had wide use and a complex history. When used for New Zealand Maori culture as a whole, with all its regional variations, their meanings become quite subtle, and do *not* refer to the same span of time throughout the country. Both terms are most satisfactorily used as describing an assemblage of adzes, fish hooks, and a life style, characteristic of a *phase* in a process of cultural change. Archaic has been used in the popular literature rather loosely and sometimes to mean less-advanced and undeveloped. (Considering just the complexity of Archaic adzes, this connotation is ridiculous.) Since this is a review of New Zealand archaeological work and literature, it would be false representation to drop entirely the concepts of Archaic and Classic Phases because of their unsatisfactory nature or even because of the value connotations in popular literature. The terms have been useful in the development of archaeological thought in New Zealand, and are used in this report in a limited sense, mostly derived from Golson's original definition (Golson 1959). The terms early and late refer to periods of time and are used throughout in that sense.

The second part of this volume deals with the archaeology of the second great wave of settlement in New Zealand, mostly by Europeans, but including substantial numbers of Chinese. Some of the 'Europeans' had lived and even been born in Australia and America, where cultures distinctly different from those of Europe had developed. The great majority of European archaeological sites in Otago were formed by goldminers, followed by a smaller, but interesting group comprising early farmsteads and early urban sites.

Recording European sites raises an argument about the definition of an archaeological site. The point that is difficult to interpret in the statutory definition[1] is the nature of archaeological methods. Several professional archaeologists have argued that these are not confined to digging in the ground, especially where European sites are involved. The description and analysis of standing structures are valid archaeological methods in most countries, but that has not been the case in most of New Zealand. In Otago this distinction has

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[1] The definition of an archaeological site in the Historic Places Act 1993 says that it is '… any place in New Zealand that (a) either: (i) was associated with human activity that occurred before 1900; or (ii) is the site of the wreck of any vessel where that wreck occurred before 1900; *and* (b) is or may be able through investigation *by archaeological methods* to provide evidence relating to the history of New Zealand' (author's italics).

been important because of our high proportion of European sites which are ruined buildings and structures, compared to the Maori sites which are mostly deposits and shapes in the ground. This in part is the explanation for the lack of archaeological interest in some of the industrial archaeology of Otago—its flour mills, freezing works and the old industrial buildings of the coastal towns—whereas the goldfields with their obvious archaeology have been a different matter. Recently the New Zealand Historic Places Trust has considered adopting the stance that a pre-1900 building or structure that has been abandoned and has little prospect of economic use shall be considered an archaeological site (Janet Stephenson pers. comm.).

Goldfields archaeology in Otago is founded on the largest and longest running archaeology project in New Zealand—the Clutha Valley Project—funded by the Ministry of Works on behalf of the New Zealand Electricity Department, as a mitigation for the loss of sites from the construction of the Clyde Dam (Ritchie 1990). Directed throughout by Neville Ritchie, it ran for 10 years (1977–1987), added 2000 sites to the Site Record file, and resulted in over 30 papers and a doctoral thesis by Ritchie and 17 papers by other authors. Surveys and excavations were carried out well beyond the confines of the area to be flooded, as far north as Lake Ruataniwha on the upper Waitaki power scheme and west to the Dart Bridge. There was a strong focus on investigation of Chinese sites, and many important Maori and natural sub-fossil bone sites were also reported.

The Department of Conservation had begun the Protected Natural Areas Programme in the early 1980s, focussing mostly on defining areas of high natural values on high country pastoral leases. At first the programme gave little attention to historic values, but as the implementation phases were reached in Otago and Southland, recreational, historic and landscape values were drawn in. Beginning in 1988, reports on the historic and archaeological values for those ecological districts with numerous pastoral leases were compiled. The process was overtaken by land tenure review of individual pastoral leases, and both programmes provided good opportunities to describe a wide range of historic sites, particularly those of early pastoralism and gold mining from early gold rush sites to the Depression mining of the 1930s. Copies of these reports, mostly by Hamel and, since 1995, by Bristow, are lodged in the Otago Conservancy and Head Office libraries of the department and in the library of the Historic Places Trust. Their public availability is similar to that of another important archive, the New Zealand Archaeological Association Site Record files, with some restrictions where negotiations with individual landowners are still in progress. (A number, such as S123/123, indicates a site record form.) These files and reports, as well as reports commissioned for the Otago Goldfields Park by the Department of Lands and Survey, and those of the Clutha Valley project provided most of the information on European sites.

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by Jill Hamel

A B S T R A C T

The first Polynesian settlers of Otago, who probably arrived in the 12th century, settled at many places around the New Zealand coast and quickly colonised the whole of the Otago province. In the south, permanent villages were established close to rich patches of food resources such as seals and moa, especially along the Catlins Coast. Inland sites, for hunting moa or acquiring important stone resources such as nephrite and silcrete, were probably visited on a seasonal basis, as were specialised coastal sites for fishing or simple moa processing. Removal of the open inland forests by fire accelerated their natural reduction which had begun 2000 years ago, and contributed to the extinction of about eight species of moa and eleven species of small birds. The forests of the Otago coastline were reduced to those around the Dunedin hills and the Catlins coast. Hunting is likely to have been a factor in avian extinctions and the reduction of seal colonies along the coast. Material culture and fowling and fishing strategies show a strong continuity during a period of change in major subsistence activities to intensive fishing, especially for barracouta, preservation of birds and the production of kauru from cabbage tree roots and stems. This intermediate period in the 16th and 17th centuries is characterised by smaller seasonal camps and highly mobile groups. After about AD 1750, carefully planned gathering and processing of foods enabled the growth of coastal villages, which became places for permanent houses, the storage of preserved foods and a material culture linked to the development of chiefly status. Fortified pa sites became economically and culturally useful. With the arrival of Europeans, settlement patterns changed to take advantage of the trading opportunities presented by the new arrivals and to allow the rapid incorporation of the European potato and other vegetables into the traditional economic pattern. For the first 70 years though (1770–1850), the social pattern was basically Maori, and it was not until the growth of Dunedin and other coastal townships during the 1850s that the European way of life became dominant.

The first Europeans to be truly resident in Otago were whalers living at shore stations between 1831 and 1848. They were also the first storekeepers and farmers. Organised settlement began in 1848 with the Free Church of Scotland settlement at Dunedin and an influx of runholders, mostly from Australia. Runholders had built up flocks and begun to establish roads to their runs when the gold rushes of 1861 overtook them. Their large 19th century farmsteads are minor archaeological features compared to the massive changes made to the landscape by the alluvial miners. Otago is one of three major alluvial mining provinces in New Zealand and, because of its open landscape, its mining sites are the best preserved and most visible. Early gold rush sites with amorphous pothole tailings are scarce, but the next stage of long races, reservoirs and

ground-sluiced sites are well represented at Naseby and in the upper Clutha valley. Hydraulic sluicing and elevating by use of water under pressure in iron pipes was steadily developed from 1870 onwards, with major elevator systems built around the 1890–1910 period at Gabriels Gully and St Bathans. The most impressive sluiced site is at Bannockburn. Dredging of river beds and then adjacent flats was a major source of gold from 1890 up to the 1950s, with several important inventions developed on Otago dredges. Hard-rock mining was less important than alluvial in Otago, but the Bullendale mine was the site of the first industrial use of hydroelectricity (1886) in New Zealand. Chinese miners made an important contribution to gold mining as an industry, and the archaeology of their workings has added to our understanding of their culture as New Zealand Chinese. Miners left behind a legacy of mud and stone buildings which add a domestic dimension to the superimposed historic landscapes of Otago.

Keywords: Otago, New Zealand, Maori, archaeology, environmental changes, chronology, subsistence, rock resources, settlements, moa hunters, classic, protohistoric, continuity, European, Chinese, colonisation, whaling, farmsteads, gold mining, alluvial mining, hard-rock mining, sluicing, hydraulic elevating, dredging, hydroelectricity