



NEW ZEALAND  
ARCHAEOLOGICAL  
ASSOCIATION

**NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION NEWSLETTER**



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EDITORIAL

At the Annual General Meeting the following officers and members of Council were elected:

President: Dr R. Duff, Canterbury Museum.

Vice-Presidents: Dr C. F. W. Higham, Otago University.  
Mr F. W. Shawcross, Auckland University.

Secretary: Miss Janet Davidson, Auckland Museum.

Treasurer: Mr G. Moonen, Auckland.

Council: M. M. Trotter, P. Bellwood, D. Simmons,  
I. W. Keyes, B. McFadgen, and J. McKinley.

The Editor and Central Filekeeper were re-appointed.

Jim McKinley, ex Auckland, has been appointed archaeologist to the N.Z. Historic Places Trust.

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CONFERENCE: May 17th to 23rd, 1969.

During the six days of sessions, 26 papers and two illustrated talks were presented at the Otago Museum. A full day's field trip to South Otago sites was led by Les Lockerbie. The quality of the papers was of a high academic standard, and the organisation of the programme enabled the timetable to pass without too serious delays. There is still a tendency for papers to be presented in too great detail and without regard to the time allotted, however. The most fruitful argument on a paper takes place outside the Conference Hall, and the most thoughtful criticism from a study of the published text: a lesson all too few are willing to learn. It is not impossible to prepare a paper which will convey the substance of an idea within the allotted time.

A brief summary of papers presented is given below, but it is planned to publish as many as possible, as well as a review of the Conference.

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David Simmons, Auckland, "Towards a General Theory of Economic Change in Pre-historic New Zealand", proposed the division of Polynesian occupation of the whole of New Zealand into phases of settlement. Early, the arrival of Eastern Polynesian Culture; Middle, in which broad regional differences appeared; Intermediate, containing local regional differences; Late, which saw the spread of Classic Maori culture and basic kumera agriculture from Northland; and finally Contact, which was influenced by European arrival. About the 14th Century there was a change in forestry in the South Island from basically podocarp to grassland, and in the North Island from podocarp to broadleaf.

John McNab, Wellington, "Sweet Potatoes and Maori Agricultural Terraces in Wellington", described a complex of artificial terraces on a slope at Porirua and gave his interpretation of their purpose and how they fitted the pattern of settlement in the area. He also gave information on the growing and storing of sweet potatoes in other countries.

Peter Bellwood, Auckland, "Man and Environment in South Auckland", gave a general outline of recent work with particular reference to the swamp pa at Lake Mangakaware. In a later paper he outlined briefly work undertaken in Rarotonga and Aitutaki where, together with Miss Allo, prehistoric valley settlements were surveyed. The traditional late 13th Century settlement appears credible with contact between the Marquesas and Tahiti. The early coastal settlements were difficult, if not impossible, to investigate because of recurring hurricane damage and farming activities, but the valley settlements were preserved by heavy bush growth. The inhabitants were living in the valleys when Williams arrived in 1823 and they shifted to the coast shortly after this. Two settlements were surveyed, consisting of basalt paved structures, half of which were marae and the rest paepae of "T" and "E" shapes. In the steep Rutaki Valley, twelve structures were found along 600 metres of stream; it was considered that this was a marginal area of settlement, too steep for cultivation. It was possible that these valley settlements were occupied only in times of danger, the population living permanently on the coastal plains.

The Aitutaki Island survey revealed similar paepae but two types of marae differing from those at Rarotonga: blocks of standing stones marking lines rather than structures, and large stone structures similar to those in the Marquesas. The differing shapes and sizes of both paepae and marae imply differing social functions or strata, but no excavations were able to be undertaken to elucidate further.

Angela Stapleton, Wellington, reviewed theories on the evolution of the Maori cloak. It appeared that the first Polynesian settlers may have brought tapa cloth and certainly attempted to produce it here. Complete skins of larger animals would have been used as garments and later techniques were developed for making clothing from numbers of small (bird) skins sewn edge to edge. The Lake Hauroko burial cloak was cited as an example of an early stage in the development of the flax-fibre twining which eventually produced the fine classic cloaks of proto-historic and early historic times. Difficulties in the processing of bird skins were detailed.

Helen Leach, Dunedin, "Man and Environment in Prehistoric Westland", drew largely on early historic accounts of the bush and available food supplies. She gave us a picture of the environment and the utilization of it.

Michael Trotter, Christchurch, "Man and Environment in Prehistoric South Canterbury and North Otago", used archaeological evidence rather than botanical or historical data. There appeared to be a peak in human activity in the area about the 12th or 15th Century A.D. (depending on the dating methods used), and he hypothesised that the population at this time was largely nomadic. Although there was widespread utilization of the interior, there was no evidence that this was based from coastal settlements.

Les Lockerbie, Dunedin, gave an illustrated talk on South Otago sites in preparation for the field trip. We were shown sites at Kaka Point, Pounaweia and Paptowai, the last two in particular being important in his investigations into cultural and economic change in the area. In a later illustrated talk, sites at Stewart Island, Hawkesburn Valley, Sutherland Sound, Galloway quartzite quarry, Castle Rock, Waikekinu, Murdering Beach, and a jasperoid rock source were discussed.

Peter Coutts, Dunedin, spoke of his recent research in Fiordland where he investigated cave, rock shelter and other sites which were occupied in late prehistoric or protohistoric periods. He obtained about three tons of occupational material. He also gave a short review on his work in growth rates and possible dating methods for cockle shells.

Foss Leach, "Man and Environment in Central Otago", described his work, particularly at an orthoquartzite or "silicrete" quarry. Reconstruction of cores from flakes found there provided valuable data on some basic principles of chonchoidal flaking. He made use of the

the Mahalanobis D2 method of statistical analysis for comparing assemblages of flakes from different sites. The paper was based on his thesis which is available from the Otago Anthropological Department.

Bruce McFadgen, Wellington, discussed the Application of Stereophotogrammetric Recording in some detail. The method and theory is based on that used in the preparation of topographic maps from aerial survey photographs. The advantages of using controlled stereoscopic photographs of excavations were threefold: speed in the recording in the field, accurate recording, and permanent recording even of features which may have been missed by conventional tape and plumbline recording.

Garry Law, Auckland, "Bracken-fern and Kumera in Maori Settlement", critically reviewed the earlier assumptions of the limitations of kumera cultivation, pointing out that it was possible not only to overwinter kumera in the ground in certain localities, but also, on present-day temperature gradients, to grow it as far south as mid-Canterbury. Bracken probably had a universal use throughout Polynesia. It had a wide distribution on coastal areas in New Zealand in pre-European times and extended down the east coast of the South Island and inland to the Lakes. Bracken growth followed bush-burning, which may have been deliberate for that purpose. He concluded that settlement patterns were related to kumera/bracken resources, that warfare was not related to resources of cleared land because there was plenty for the population in all areas, nor was settlement related to temperature changes in prehistory as there is no necessity to postulate a temperature change to explain the patterns. There is also no evidence that agriculture changed in character or method throughout prehistory.

Jean Kennedy, Dunedin, "Subsistence and Settlement in the Far North of New Zealand", outlined the substance of a thesis monograph to be published by the Otago University Anthropology Department, in which she traces similar research to that of Kath Shawcross, but incorporating archaeological research. She was critical of some of the conclusions reached by others. It is hoped that this clear and precise paper will be published in the near future.

Stuart Park, Otago Museum, gave an illustrated talk on the work at Tiwai Point, to be published in the Newsletter.

Mrs Gillian Hamel, Dunedin, discussed the Ecological Inferences of the Prehistoric Occupation at Tiwai Point. The two problems of available cockles and other shells, and the nearest possible source of birds, were explored in the field. The primary energy transfer

between man and food and the secondary transfer between foods and environment were the framework of a carefully researched paper on the site.

Murray Bathgate, late of Dunedin and now Auckland, continued Mrs Hamel's line of discussion with a paper on Ecological Environments and Ecosystems. The features of settlement appeared to be the seasonality of food resources, which accounted for the integration of settlement patterns and the differing types of settlement. The transfer and exchange of foods must also have been a feature of early settlements. The Murihiku environment was discussed in detail on the basis of 1840 records and inferences were drawn about the variations in reports at early contact, these variations being explained by the differing seasons in which the reports were made for any locality, e.g., Dusky Sound. The movement of man from one "eco-system" to another, occupying for varying periods the villages lying on the periphery of a nucleated settlement was clearly expounded. Finally, the great changes confronting man both in vertical time span and seasonal change were discussed.

Wayne Orchiston, Sydney, "Man and Environment in Mid-Canterbury", introduced the suggestion that an understanding of prehistory of any area required a multi-discipline approach, and that archaeologists are forced to rely on published data from other disciplines which may be out of phase with current requirements in our research programmes: because of this, all fieldwork should be geared to travel at the same speed in order to prevent false inferences arising in any one discipline.

The geographical and geophysical history of mid-Canterbury was reviewed, and on this basis the archaeological findings of von Haast were discussed. The changes in the littoral profiles of the podocarp forests were proposed as the cause of the variations in early prehistoric sites in which were used all the available biomes. Meat weights were discussed and these, together with the concept of large, stable settlements, received some surprisingly lively criticism from Otago discussants.

Mrs Beverley McCulloch, Christchurch, "The Place of South Island Rock Shelters in the Prehistoric Sequence", considered shelters in three aspects: drawings, situation and midden analysis. She concluded that the drawings gave no clue of date, except for the obviously contact period examples. The situation pattern was random in that all possible shelters in an area close to water had been used, with no evidence that they lay along assumed trade routes. All

midden examined consisted of stratified bird bone, moa, fresh-water shells, marine shells, obsidian, charcoal, chalcedony, and other stones exploited by archaic man.

Barry Mitcalfe, Wellington, "Wairarapa Survey", gave a lucid and rapid account of field survey of the east coast of the Wairarapa, North Island. Part of the survey is in preparation for publication shortly.

Bruce McFadgen supplemented the Wairarapa Survey with the results of investigations at Orongorongo on the southern tip of the North Island, where middens, walls, and house floors were investigated.

Papers by Ken Geeson, Dunedin, on field work in North Otago, Bob Jolly on a review of beach midden excavations in the Auckland area, and Ham Parker on Thailand, concluded the field reports.

Murray Grozier, Dunedin, "Geomorphic Processes and their Significance in Site Interpretation", discussed the soil as an environmental indicator of destruction, addition, or alteration of balance. New profiles will develop with change in environment, and archaeological specimens must be interpreted with regard to these profiles. Dynamic processes, such as sedimentation and mass movement, may indicate an environmental change. Sediment may be wind-blown, but is not necessarily wind-blown, a study of the grain size indicating the mode of sealing of sites. Mass movement due to change in bush cover may bury or shift sites dramatically; slides illustrating deep burial of recent soils impressed this fact. Stone lines, carpets or pavements may also be naturally formed from wind or sand erosion. The paper gave a clear indication of the possibilities of help from the geomorphologists.

It was perhaps fitting that Ron Scarlett had almost the last word at the Conference in his paper, "Avifauna and Man", in which he detailed the species of birds he had identified from excavations all over New Zealand. It was clear that man had utilised all known birds and moa throughout the prehistoric period.