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## ARCHAEOLOGY IN NEW ZEALAND



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# ABSTRACTS FROM THESES DEPARTMENT OF ANTHROPOLOGY UNIVERSITY OF OTAGO

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**Culture Change in Northern Te Wai Pounamu**  
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## Abstract

In the northern South Island, the area northern Te Wai Pounamu (NTWP) is defined appropriate to a regional investigation of pre-European culture change. It is argued that the Maori sequence of this region is relevant to a range of interpretative problems in New Zealand's archaeological past.

Preparatory to this investigation, the international and New Zealand literature on culture change is reviewed. Two primary investigative foci of change are identified in NTWP; subsistence economy and stone tool manufacturing technology. A chronological scheme of Early, Middle and Late Periods based on firmly dated ecological events and/or independent radiocarbon ages is defined so as to order the archaeological data without recourse to unproven scenarios of cultural change and association.

The Early Period subsistence economy is assessed in some detail. An Early Period settlement focus is documented along the eastern Tasman Bay coast in proximity to meta-argillite sources. Early Period midden remains suggest that several genera of seal and moa were exploited, and that people were fishing in eastern Tasman Bay during the warmer months of the year. From the Early Period fishhook assemblages of Tasman Bay, manufacturing change is inferred related to the increasing scarcity of moa bone over time. It is argued that lower Early Period settlement of the larger northern South Island was focused on the north-eastern coast to Rangitoto (D'Urville Island), while NTWP was characterized by smaller stone working communities operating in summer.

In contrast, moa-free middens in Awaroa Inlet and Bark Bay of the western Tasman Bay granite coast present a physical dominance of *Paphies australis*, and finfish species suggesting, along with the dearth of *Austrovenus*

*stutchburyi*, occupation outside of the warmer summer months. These middens also present an absence of seal and a paucity of bird bone, while sharing a robust 15th-16th centuries AD radiocarbon chronology. With the dearth of all bird species from granite coast middens in general, and evidence that the less preferred kokako (*Callaeas c. cinerea*) was caught during the occupation of Awaroa Inlet N26/214, it is suggested that cultural regulations beyond immediate subsistence needs were also operating at this time.

From southern Tasman Bay, the archaeological investigation of the important Appleby site N27/118 suggests that the people associated with the extensive horticultural soils of Waimea West otherwise consumed finfish and estuarine shellfish in (non-summer) season, kiore (*Rattus exulans*), dog or kuri (*Canis familiaris*), and several small bird species. Moa and seal are completely absent from N27/118. The evidence of Maori tradition, archaeological charcoal, and the approximately 16th century radiocarbon chronology for N27/118 and the associated Appleby gravel borrow pit N27/122 places the advent of extensive Waimea horticulture within the post-moa, lower Middle Period Maori economy. The Haulashore Island archaeological assemblage of south-eastern Tasman Bay with a similar material culture to Appleby is also bereft of seal and any diagnostic moa bone.

This Middle Period evidence is considered in a larger comparative perspective, where the absence of seal from 15th-16th centuries Tasman Bay middens is interpreted as a factor of human predation. A secure radiocarbon chronology suggests the convergence of this loss with the diminishment and loss of selected avifauna, and the subsequent advent of large horticultural complexes in the northern South Island. It is argued that transitional to lower Middle Period, communities of the northern South Island compensated for the loss of faunal calories in a seasonally regulated economy and a managed ecology.

The evidence of stone tool use is also reviewed in some detail for NTWP, following the definition of an adze typology appropriate to the classification of meta-argillite tools. It is clear that meta-argillite is the dominant material of adze and (non-adze) flake tool manufacture throughout the Maori sequence of NTWP, while granite coast quartz remains generally subdominant. Beyond the apparent loss of the laterally-hafted adze, the evidence of adze change is generally reflected in shifting typological proportions, and in new manufacturing technologies and dressing techniques. Functional change may be inferred in the loss over time of large meta-argillite points and blade tools associated respectively with the manufacture of one-piece moa bone fishhooks and moa and seal butchery. The exclusive identification of hammer-dressed adzes with hump backs and steep bevels in Middle Period assemblages is related to the advent of horticultural intensification. More generally, adzes of the upper Early and Middle Periods are increasingly characterized by round sections, while hammer-dressing is employed more

frequently and extensively on individual adzes. Middle Period adzes are also more frequently reduced from riverine meta-argillite and recycled blanks. Collectively, these changes reflect a developing emphasis on economy and opportunistic exploitation. From this interpretation, and evidence that meta-argillite adze length and the size of high quality Ohana source flakes diminish over time, it is suggested that accessible, high quality and appropriately shaped meta-argillite rock became increasingly scarce through intensive quarry manufacture.

In conclusion, the coincidence of diminishing rock and faunal resources over time is related in a speculative anthropological model of culture change. It is proposed that the 14th-16th centuries Maori economy of NTWP, and by implication and inference, many other regions of New Zealand, was characterized by a resource crisis which either precipitated or reinforced a broader trajectory of culture change. It is suggested that influential leaders perceived a linkage in the loss of high quality rock and important subsistence fauna at this time, and that distinctive technologies, institutions and ideologies of Middle Period Maori society were influenced by, and/or developed from, this perception. Finally, it is recommended that the data of an archaeological Maori culture sequence be ordered and tested within a radiocarbon based chronological scheme, rather than the still generally used model of 'Archaic' and 'Classic' cultural periods. It is also suggested that New Zealand archaeologists should look beyond the functional-ecological imperative to consider more holistic anthropological explanations of change in the pre-European Maori past, with a focus on integrated regional sequences.

### **The Nong Nor Mortuary Ceramics** **Joss Debreceeny, M.A.**

#### **Abstract**

This work considers the mortuary ceramic assemblage from the Bronze Age site of Nong Nor, in Central Thailand, in order to illuminate questions of social organisation. In contrast to earlier sites such as Khok Phanom Di, where ranking was achieved, a few centuries after the occupation of Nong Nor, complex and hierarchical societies are found in Central Thailand. Whether the elements of this social change and increasing complexity were present in the society of Nong Nor is examined through the analysis of the ceramics.

The site is placed in its environmental and social contexts. Approaches to mortuary analysis and questions of ceramic typology are considered, and a scheme for classification of the vessel forms is presented. The assemblage

consists of 255 complete vessels, classified into 20 forms. The shapes and decoration of the ceramics is predominantly simple, with open plates and dishes being the most common form, and cord marking and red slipping being the most common methods of surface treatment.

The spatial arrangement of the cemetery is considered to assist with the identification of stratigraphy and groups of burials. On average, male and older burials were interred with a greater number of vessels and vessel forms than female and younger burials. While there are differences in the number of vessels found with burials, and grave wealth in general, these are not great. It is likely that ranking was achieved, rather than being ascribed. Nevertheless, some change in the society appears to occur over time in the cemetery, and new vessel forms are introduced.

### **The Role of Landsnails in Pacific Archaeology; A Pilot Study from the Southern Cook Islands**

**Jacqueline Craig, M.A.**

#### **Abstract**

This thesis is a pilot study designed to test the feasibility of using land snail analysis to investigate palaeoenvironmental issues in Pacific archaeology. A methodology is developed which is based on the assemblage as the basic unit of analysis as an alternative to previous studies which have concentrated on using the presence or absence of individual snail species.

The research is based in the Cook Islands on Rarotonga and Mitiaro, and addresses two issues. The first of these is to determine whether the land snail populations from different micro-environmental areas show statistically significant differences in species composition. The results indicate that such differences do exist, and can be detected on a broad scale both between micro-environments, and between islands. Finer definitions may be possible if a better understanding of the relationships between snail population structure and the environment can be obtained.

Secondly, the methodology developed in the first part of the thesis is tested to determine whether it is accurate enough to retrieve palaeoenvironmental information from archaeological samples. Two archaeological sites from the Cook Islands are used in this study, Paraoa and Mitiaro. The results show that despite differential shell destruction, land snail samples from archaeological samples show general affiliations with modern environments, and thus palaeoenvironmental determinations are possible.

The major findings of this thesis are that land snail analysis has the potential

to be an extremely useful technique for the archaeologist in the Pacific if the entire sample from a micro-environment is used, and the appropriate statistics are applied. A great deal of fine grained work on Pacific land snail ecology is also necessary to increase the accuracy of the information that is potentially available.

**H.D. Skinner as Teacher: Defining the Paradigms in His Teaching at the University of Otago 1919-1952**

Linda Kivimaki Price, M.A.

**Abstract**

The paradigm model introduced by Kuhn (1962) has received much attention from analysts of the history of science but this approach may not be as appropriate for the social sciences. Alternative approaches, such as Collingwood's (1939) question-oriented schools may be more relevant to the historical analysis of Anthropology.

The suitability of these competing models is considered here, using as a test case the elementary Anthropology course which was taught by H.D. Skinner at Otago University for thirty years from 1919. This length of time gives the case study the potential to evaluate not only the paradigmatic or school influences on him and the kind of anthropology he was teaching, but also to reveal something about the nature of paradigm change.

It is concluded that although some comparative language used by H.D. Skinner may have originated within the cultural evolutionary paradigm, the focus of both his teaching and his own research was undoubtedly the diffusionist paradigm. His sources initially were his mentors and associates at Cambridge University where he studied in 1917-18, and he was also influenced by anthropologists working in America.

The case study did not achieve its aim of revealing the nature of paradigm change at Otago because it became apparent that H.D. Skinner's teaching and research remained within the diffusionist paradigm for thirty years. The reasons for this and its particular relevance to New Zealand's prehistory are discussed. However some conclusions are drawn about the general nature of paradigm change within Anthropology. The suggestion is made that each change of paradigm emphasises either science or history because a new generation of anthropologists criticises their elders for the neglect of either one or the other. The changing historical focus of question and answer (after Collingwood) is considered to be a much better description of paradigm change in Anthropology than the Kuhnian crisis.

**An Archaeological Analysis of the Initial Occupation Phase at Nong Nor, Thailand**  
Dougald O'Reilly, M.A.

**Abstract**

This thesis undertakes the analysis of all aspects of the material culture as well as the faunal remains of the first of two occupation episodes at Nong Nor, Thailand. The results of the analysis are utilised to determine the duration of occupation and whether it was seasonal/intermittent or permanent. The range of subsistence activities and the internal use of space are examined and the site is considered in a broad regional context as well as in relation to a propinquent archaeological site, Khok Phanom Di. This site was settled c. 500 years after the abandonment of Nong Nor and is pertinent due to the presence of rice in its basal layers, a substance not encountered at phase one Nong Nor. The relationship between these two sites is explored and the possibility that Nong Nor was ancestral to Khok Phanom Di is assessed. The results of the comparative analysis are considered with respect to current theories of linguistic expansion and the origins of agriculture in Southeast Asia.

During the first occupation phase, Nong Nor was located near a marine embayment. It was probably occupied only once, during the dry season. The archaeological evidence indicates that the inhabitants exploited both the marine and terrestrial environment. The artefactual assemblages from Nong Nor and Khok Phanom Di demonstrate similarities which indicate a cultural continuity in the region. The implications of this are far reaching, in that the large scale exploitation of rice appears to have local origins and was not introduced by intrusive Austroasiatic speaking populations directly.

**Panau, Periodisation, and Northeast South Island Prehistory**  
Chris Jacomb, M.A.

**Abstract**

A large and varied collection of artifacts from Panau, a little-known prehistoric site on Banks Peninsula with the potential to provide new information towards the documentation of the late period material culture for this part of the country, is examined. An illustrated catalogue and a classification and description of the range of material found during many decades of collecting at the site is presented. The available records of amateur excavation carried out over a nine-year period are summarised, along with all available provenance details for the artifacts found during this period.

The results of a small excavation carried out to obtain radiocarbon dates and details of stratigraphy are included.

In an attempt to further place the collection in a relative chronological context, with respect to the material culture of the northeast South Island, a process of seriation is carried out. To produce a statistically significant, geographically representative and typologically comprehensive result, this required analysis and classification of complete artifact assemblages from all Canterbury and Marlborough sites with both an apparently short time span and a sizeable and varied collection of artifacts.

The resulting sequence allows the material from Panau to be presented in an apparent chronological series in relation to the material culture of the study area as a whole. The Panau material, combined with typologically related material from other sites on the basis of the seriation results, allows a definition of the material culture of the post-moa-hunting period for the northeast South Island to be offered.

Analysis of the range and distribution of the artifacts and features within the site allows an interpretation of the place of Panau to be made in terms of chronology and function.

**Palaeoseasonality Investigations at the Mouth of the Pleasant River (J43/1)  
Jim Samson, M.A.**

**Abstract**

Excavations at the mouth of the Pleasant River (J43/1) between 1991 and 1993 produced faunal and artefactual assemblages from at least three periods of activity. The earliest of these activity periods, dated to the fourteenth century, is contemporary with occupation at the nearby Shag Mouth site. Later occupations occurred during the fifteenth and sixteenth centuries.

This project considers the seasonality of prehistoric occupation on the 1.9 hectare dune site through an analysis of seasonally scheduled stress structures within the exoskeleton of New Zealand's common estuarine cockle, *Austrovenus stutchburyi* (Wood 1828). A modern control collection enabled the calibration of seasonal growth phenomena with calendrical time. Large population samples were necessary to model the considerable variation in seasonal growth rates evident within shellfish beds. Assemblages of *Austrovenus stutchburyi* from archaeological contexts were related to the modern analogue to obtain season of death estimates to within three months accuracy.

Six phases of prehistoric activity from four excavated areas on the dune were seasonally dated. Four of these occupations derive from what is described as a lower site component. This early period of activity on the dune occurred during the fourteenth century while the remaining two seasonally dated occupation phases were of fifteenth or sixteenth century origin. The results indicate that the earliest occupations on the dune occurred in all seasons. During this time subsistence was geared around the exploitation of big-game species (moa and sea mammals). One of these earliest occupations appears to have spanned at least one year. Later phases of activity were more seasonally restricted and evidenced considerably reduced exploitation of big-game species. It is argued that changing seasonal patterns of occupation on the dune reflect changing strategies of economic adaptation necessitated by dwindling supplies of preferred big-game species.

**Archaeology and Ethnicity of Remote Otago Goldfields**  
**Peter Bristow, M.A.**

**Abstract**

Thousands of Chinese and European miners occupied the goldfields of Central Otago during the late nineteenth century. Popular belief and previous work has suggested that identifiable differences exist in the dwellings and gold workings of the two groups. No research has been carried out into settlement patterns on the goldfields.

Data on dwellings and workings were recorded during site surveys of three high altitude valleys in the Old Man and Carrick Ranges. Analysis of this data demonstrates that no significant differences could be found between the dwellings and workings of the Chinese and European miners. Limited research on settlement pattern indicates that the major influence on site location was exposure to sunshine.

The excavation of a hut site in the Old Man Range showed that hut construction was minimal. The presence of low walls indicates that the roof and walls may have largely been of canvas or sacking. Analysis of charcoal from the fireplace revealed a reliance on small shrubs for fuel, reflecting the poverty of woody plants in high altitude areas.