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## ARCHAEOLOGY IN NEW ZEALAND



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# ABSTRACTS FROM THESES AND DISSERTATIONS ANTHROPOLOGY DEPARTMENT UNIVERSITY OF OTAGO 1999-2000

Ian Smith and Brooke Tucker  
Anthropology Department  
University of Otago

Abstracts of 3 PhD theses, 7 MA theses and 20 BA(Hons) dissertations completed in 1999 and 2000 are presented below. Copies of the theses are held in both the University of Otago Central Library and the Anthropology Department Library, while the dissertations are held only in the latter. Requests for copies of the higher degree theses should be directed to the Central Library, and for honours dissertations to the Anthropology Department.

Beckwith, Jacinta. 2000. **Inscriptions of Surya Varman the First**. BA (Hons) dissertation, Anthropology Department, University of Otago. 129 pp, 6 figures, 4 tables, 2 appendices.

Mystery and controversy envelop the nature of the accession of Suryavarman I to the ancient Khmer throne. Following the death of Jayavarman V at the beginning of the 11th century, there was a period of conflict at the royal capital of Angkor. Jayavarman's successor Udayadityavarman I is recorded to have ruled until 1002AD (Briggs, 1952:178; Mabbett, 1978:6; Jacques 1999:12). Inscriptions attest to a second king, Jayaviravarman, who had begun ruling from 1002AD (Coedès, 1953:188-190, 206-9) after having seized the throne from Udayadityavarman. At this time, a third contender for the throne, Suryavarman I, had already begun his campaign to seize sovereignty and was moving toward Angkor from the East. This is indicated by the appearance of inscriptions in eastern Cambodia recognising him as sovereign ruler from 1001AD. After several years of civil war he ousted Jayaviravarman from the Khmer throne and established himself supreme ruler (Coedès, 1963:135). In 1011AD he required

his officials to swear an oath of allegiance to him thus consolidating his power and authority (Coedès, 1942:205-1 1).

Common belief since the early studies of Coedès in the 1920s had been that Suryavarman was a foreign usurper of Malay peninsular origin who reached Angkor via central Thailand (Vickery, 1996:396). This notion has since been questioned (Mabbett, 1978:6), contested (Jacques, typescript cited in Vickery 1985:227), even rejected by scholars, particularly Vickery in his 1985 article "*The reign of Suryavarman I and Royal Factionalism at Angkor*".

This study examines epigraphical evidence for Suryavarman's credentials and the means by which he achieved accession and consolidated authority. It is contended that insight gained from an analysis of the inscriptions will clarify the foreign invasion hypothesis. A corpus of ancient Cambodian texts from the *Inscriptions du Cambodge* (Coedès, 1937-1: 966) was investigated for evidence of Suryavarman's rise to power. These inscriptions were initially engraved in Sanskrit and Old Khmer on stone stelae, piedroits and religious monuments. They feature eulogies to gods and kings, record land transactions, offerings of gifts, and the founding of shrines and temples. Forty-eight inscriptions relating to Suryavarman I and his rival Jayaviravarman are translated from Coedès French texts and examined. The findings that result from this examination are discussed in relation to theories generated by previous research of Suryavarman I. This discussion will conclude with an alternative hypothesis concerning the nature of Suryavarman's rise to royal power at Angkor.

Bignall, Alex. 1999. **The Archaeology of Ethnicity**. BA (Hons) dissertation, Anthropology Department, University of Otago. 83 pp.

This dissertation explores current archaeological thought pertaining to the study of ethnicity, considering this within the context of North American plantation sites. Past approaches taken within Plantation Archaeology are reviewed and critiqued in order to illustrate the absence of an adequate consideration of the formulation of cultural identity among slave populations. Past archaeological research has created a dichotomy between primordialist and instrumentalist views of ethnicity, or else not considered ethnicity at all. The concept of the *habitus* is introduced as a working theoretical framework within which to consider ethnic identity formation and maintenance, incorporating the essential social, political and economic forces inherent within the dynamics of the plantation superstructure.

Brooks, Emma. 1999. **A Time of Change – Totaranui 1770-1820**. BA (Hons) dissertation, Anthropology Department, University of Otago. 68 pp, 9 figures, 1 table, 1 appendix.

A number of journals from the seven visits by the Cook expeditions to Queen Charlotte Sound in the South Island of New Zealand between 1770 and 1777 are examined in order to infer local settlement patterns and subsistence practices. These practices are then placed beside the information from the journals of the Russian visit to the Sound in 1820. Change is noted in settlement patterns and for the first time cultivation is observed. The archaeological evidence is then examined for those sites that can be confidently associated with the European visits. They suggest that there is scope for archaeological investigation of early culture contact and aspects of late prehistoric life. This scope is enhanced by the dearth of previous archaeological research in this area. Areas for potential future research include possible evidence of gardening and midden analysis.

Chapman, Patrick. 1999. **An Examination of East Polynesian Population History**. PhD thesis, Anthropology Department, University of Otago. 252 pp, 63 figures, 49 tables, 1 appendix.

Previous osteological studies of East Polynesian populations have primarily focused on the identification of ancestral homelands and have ignored issues relating to regional and local populations. This thesis examines East Polynesian population history and addresses questions concerning East Polynesian prehistory from a bioanthropological perspective. The results are considered in conjunction with previous studies drawing from archaeology, linguistics and biological anthropology. Of specific interest is bioanthropological support for models of prehistoric East Polynesian colonisation and interaction networks, as well as regional and local population variation.

Multivariate analysis of cranial nonmetric data from 984 Individuals demonstrates a high degree of gene flow between central East Polynesian populations, including the Southern Cook, Society and Tuamotu islands. The results provide support for the existence of a central East Polynesian [CEP] interaction sphere in prehistory. The Marquesas Islands were peripheral to the major areas of gene flow and were not part of the main CEP interaction network. Although geographically marginal, Hawaii likely received gene flow from both the Marquesas Islands and the CEP interaction sphere. I suggest that Mangareva was influential in southeast Polynesia, possibly serving as a

crossroads between the Tuamotus and the smaller islands to the east. The ancestral homeland of the Rapa Nui people remains uncertain, although either Mangareva or a location in the Tuamotus remains the most likely option. New Zealand Maori origins are probably from the CEP interaction sphere, while the Chatham Islands were likely settled from New Zealand.

Analysis of local populations suggests patterned variation within the Marquesas Islands and the North Island of New Zealand but not for Rapa Nui. In addition, I find no evidence for prehistoric gene flow between South America and Rapa Nui. The results highlight the potential value of bioanthropological studies of local East Polynesian populations.

I also raise a number of relevant methodological issues. In particular, I demonstrate that the inclusion of samples of varying size within the Mean Measure of Divergence analysis significantly alters the results of the statistic. In addition, I argue that group homogeneity should be established *a priori* to analysis and that constructing samples based on other criteria should be avoided.

Finally, this thesis demonstrates the important role biological anthropology can play in the study of East Polynesian prehistory. The lack of relevant bioanthropological studies of local East Polynesian populations and an almost singular bioanthropological focus on ancestral homelands have helped restrict a holistic approach to East Polynesian prehistory. It is my intention that this study will help fill the previous bioanthropological void in East Polynesian studies.

Cross, Julia. 1999. **The Palaeopathology of Prehistoric Polynesia**. BA (Hons) dissertation, Anthropology Department, University of Otago. 125 pp, 2 figures, 7 tables.

A detailed illustration of Polynesia prior to European contact is provided via a literature review of the palaeopathology observed within the region. The diseases and pathologies I have chosen to focus my investigation on are: yaws, cribra orbitalia, porotic hyperostosis, enamel hypoplasia and osteoarthritis. Although additional pathologies are exhibited within certain prehistoric remains, the chosen ones occurred most frequently. Each of the five pathologies are clinically reviewed. Underlying causative factors are outlined, as well as prominent epidemiological features of the diseases. Prehistoric Polynesian remains exhibiting the pathologies are reviewed.

Geographic and environmental correlations that can be made from certain disease frequencies are outlined. Each Polynesian island has its own inherent environmental characteristics which influence the diseases and pathologies found there. The social conditions that prevailed in Polynesia before the arrival of Europeans are explored. Social situations which encouraged or even induced diseases will be directly inferred from the type of diseases and pathologies evident within the skeletal assemblages. In summary, through the reported occurrence of yaws, cribra orbitalia, porotic hyperostosis, enamel hypoplasia, and osteoarthritis on prehistoric skeletal remains, I intend to illustrate a social picture of Polynesia during prehistory, as well as infer various environmental parameters active in the distribution of disease.

Dickenson, Brooke. 1999. **The Past in the Pages of the *National Geographic*: An Examination of the Popular Representation of Archaeology.** BA (Hons) dissertation, Anthropology Department, University of Otago. 108 pp, 23 figures, 2 tables, 4 appendices.

The scientific content of archaeological articles published in the *National Geographic* was examined for the period between 1950-1998. Factors affecting article content were also discussed for their influence upon the popular representation of archaeology in the magazine. The modernisation of the *National Geographic* was considered in reference to articles published within the sample period, which was also a critical phase in the development of the discipline of archaeology. Specifically, archaeological articles were analysed for their relationship to research and practice within professional archaeology. In total, 226 articles about archaeology were published during this period. An examination of each of these articles has shown that the magazine both creates and reflects popular perceptions of archaeology. While the *National Geographic* does depict archaeology in a popular manner that appeals to members of the public, it reflects academic developments to a greater extent than originally predicted by this study, and makes a valuable contribution to public perceptions of archaeology.

Dickson, Hamish. 1999. **A Functional Analysis of Coral Tools from Late Prehistoric Moloka'i Island, Hawaii.** BA (Hons) dissertation, Anthropology Department, University of Otago. 108 pp, 20 figures, 3 tables, 4 appendices.

During the course of archaeological fieldwork conducted late in 1978, 425 artifacts relating to fishhook manufacture were recovered from site 38 on Moloka'i Island in the Hawaiian chain. Fishhook manufacturing artifacts

include *Porities* sp coral and echinoid urchin spine abraders, basalt flakes, bone fishhook blanks and bone fishhook debitage.

Artifacts deemed coral abraders were studied from this site and will be the focus of this dissertation. It is generally believed that coral abraders were used to manufacture fishhooks.

This dissertation has two main aims: 1) To form a classification system (non-classificatory arrangement; after Dannel, 1971) for the purpose of ascertaining a functional to coral tools in relation to fishhook manufacture and 2) To devise a standardised system for the measurement of attributes on coral abraders that may aid future functional studies.

A definition and basic description of coral tools will be provided along with a review of the literature regarding coral artifacts, classification systems and typologies. A justification will be given as to why the chosen classification system was used. Methods used in measuring attributes are described and discussed, followed with a detailed description of each artifact class. Each class description is accompanied with possible functions. Finally, suggestions for future research are presented.

George, Amanda .1999. **Degenerative Joint Disease**. BA (Hons) dissertation, Anthropology Department, University of Otago. 165 pp, 19 figures, 12 tables, 2 appendices.

Degenerative joint disease of the spine includes both osteoarthritis of the articular facets of adjacent vertebrae and osteophytosis of the vertebral bodies and both may be initiated by abnormal amounts of stress induced by activity. The Maori in prehistory led extremely physically active lifestyles that were structured, as their society, in terms of sex, age and rank. In order to examine the link between activity and pathology and its variation between sex and age groups, a sample of 79 prehistoric and early historic Maori from sites dispersed around New Zealand were examined for evidence of osteoarthritis and osteophytosis. The incidence, distribution, localisation and severity of both conditions were compared between males and females, between young and old adults and between young and old males and females. No difference by sex was found to exist for osteoarthritis and its manifestation occurred irrespective of age. In contrast, osteophytosis appeared to be an age related phenomena which varied significantly between the sexes. The differences between all sex and age groups for both conditions are attributed to differences in activity.

Gollop, Yvonne. 2000. **Racial Ranking Theories and Polynesian Prehistory.** MA thesis, Anthropology Department, University of Otago. 161 pp, 9 figures.

From the first exploration of the Pacific by Europeans, its indigenous peoples were subject to comparison which culminated in classification and hierarchical ranking, particularly in the later nineteenth century and early twentieth century. The notion of 'race' acquired a validity due to the perceived static nature of human types. At the same time the identification of such traits as nose shape and hair form with particular 'races' allowed the recognition of mixed race individuals. This thesis argues that such racial ranking and fixity notions underpinned and influenced much archaeological research involving the Polynesian peoples. They exerted a constraining effect on debates such as those surrounding Maori origins and migrations, and Easter Island monumental relics. Their influence, applied through terminology and systems of classification, should alert contemporary researchers to the power of underlying models.

Green, Amanda. 1999. **Iron Deficiency.** BA (Hons) dissertation, Anthropology Department, University of Otago. 155 pp, 9 figures, 23 tables, 4 appendices.

Porotic hyperostosis and cribra orbitalia are two pathological conditions believed to be the osteological representation of iron deficiency anaemia. The study of these has been neglected in nearly all prehistoric Polynesian populations. The present investigation assesses the presence and severity of porotic hyperostosis and cribra orbitalia in a sample of 418 prehistoric New Zealand Maori and Chatham Island Moriori crania. The purpose of this research is: 1) to ascertain the frequency of porotic hyperostosis and cribra orbitalia among prehistoric New Zealand populations; 2) to identify significant differences in the incidence of lesions between the prehistoric populations of the North, South and Chatham Islands; and 3) to identify significant differences in the frequency of the pathologies between age groups and the sexes. This investigation establishes that the overall frequencies of porotic hyperostosis and cribra orbitalia are 1.4% and 19.1%, respectively, indicating that iron deficiency anaemia was reasonably common among the prehistoric New Zealanders. It also establishes that the Moriori exhibit the highest incidence of cribra orbitalia. Prolonged breast-feeding, a high incidence of weaning diarrhoea and infection, and a difference in food taboos might explain this occurrence. The North Island Maori display a low incidence of iron deficiency anaemia relative to the other populations. This factor may be relevant to the explanation of the demographic success of this population. The South Island Maori demonstrate the poorest recovery rate from iron deficiency anaemia. This impaired ability to recover

might be a consequence of a high incidence of parasitic infestation and infection. This investigation also ascertains that the prehistoric New Zealanders conform to the prevailing pattern that juveniles exhibit a higher incidence of lesions than adults. This is due to physiological factors, which dictate that the pathologies may only develop in childhood, and the vulnerability of children to the development of iron deficiency anaemia. Thus, the premise that porotic hyperostosis and cribra orbitalia represent an anaemia acquired in early childhood is supported. Overall, the frequency of cribra orbitalia between males and females is similar. Only the Moriori females appear to have been significantly more affected by iron deficiency anaemia than their male counterparts. This is probably due to the elevated iron requirements of women and the possible existence of food taboos. Given these findings, the author recommends that further research into the incidence and aetiological factors of porotic hyperostosis and cribra orbitalia in prehistoric New Zealand and other Polynesian populations be undertaken.

Hughes, Anita 1999 **Looking Back: A Study of Female Figures on Angkor Wat**. BA (Hons) dissertation, Anthropology Department, University of Otago. 64 pp, 22 figures, 1 appendix.

This study concentrates on how the images of females changed as they moved from India to Southeast Asia, focusing on the temple of Angkor Wat (1113-50). To begin to understand the images of females carved upon the walls of Angkor Wat, it is first necessary to go back and be aware of the cultural origins from which these images developed. Angkor Wat was obviously heavily influenced by neighbouring India both in the religion, style, and architecture, therefore it is important to know from where Indian culture, religion and art developed. Indian portrayals of femininity and beauty are discussed and compared with the images of women at Angkor Wat to help in the interpretation of the images that later evolved in conjunction with local cultural beliefs and practices. The images at Angkor Wat are also interpreted as an indication of how women were seen and related to in the contemporary Khmer society

James-Lee, Tiffany. 2000. **Gender and its Role in Melanesian Exchange Systems**. BA (Hons) dissertation, Anthropology Department, University of Otago. 41 pp.

This dissertation argues that archaeology can make a substantial contribution to the study of exchange in Melanesia. It is proposed that the most effective way archaeology can do this is through an holistic approach which combines both

social anthropology and archaeology. The social anthropology of exchange is discussed: first exchange is defined; second, the development of the study of exchange is discussed, with emphasis on such important scholars as Malinowski and Mauss; third, the work and themes apparent in the study of exchange in Melanesian social anthropology are discussed. Then the archaeology of exchange is dealt with: the changing approaches to the archaeology of exchange are discussed; basic contributions to the archaeology of exchange in Melanesia are examined; and the strengths of the archaeological approach are looked at. The conclusion ties together the disciplines of anthropology and archaeology in a holistic approach. The holistic approach eliminates the weaknesses inherent in both the archaeology and anthropology of exchange in Melanesia. A methodology for the holistic approach to the study of exchange in Melanesia is outlined. Thus this dissertation shows that the archaeology of exchange can make a substantial contribution to the study of exchange in Melanesia.

Knowles, Jodie. 2000. **Analysis of Shag Point Debitage**. BA (Hons) dissertation, Anthropology Department, University of Otago. 52 pp, 6 figures, 4 tables.

This dissertation examines a lithicdebitage assemblage from Shag Point (J43/1), North Otago New Zealand. The site was excavated during 1998, 1999 and 2000 and the lithic assemblage collected from 96msq excavated during these three field seasons.

Previous studies of lithic material from New Zealand sites are discussed to indicated the range of information that can be gained from lithic analysis. The North Otago region is also examined to place Shag Point into its regional context.

This dissertation had three main areas of investigation. The first involved a descriptive and technological analysis of thedebitage. Secondly, spatial analysis was used to determine if thedebitage could be used to infer intra-site activity areas. The third area of investigation was to determine if trade and exchange was present at the site, through the analysis of lithic material.

Koirala, Nicholas. 2000. **Analysis of the Canterbury Museum Archaeological Seal and Moa Assemblages from Anapai**. BA (Hons) dissertation. Anthropology Department, University of Otago. 36 pp, 5 figures, 4 tables.

The archaeological site at Anapai is the only reported western Tasman Bay site to contain moa and seal remains. While the site has long since been eroded away, much of the analysis of the material from the site is still to be carried out. This dissertation examines the seal remains excavated from the site in 1962 and stored, largely unprocessed, in the Canterbury Museum.

The analysis of these seal remains is reported. This work identifies elements of New Zealand fur seals (*Arctocephalus forsteri*), New Zealand sea lions (*Phocarctus hookeri*), and a single femur from a leopard seal (*Hydrurga leptonyx*). The age and sex composition of the seal populations represented in the site is determined where possible, showing the presence of females and juveniles. These results are consistent with exploitation of a breeding colony, although there is no such colony near Anapai today. The representation of elements was identified and graphed, showing that fur seals were brought to the site relatively complete. This suggests that hunting most likely occurred in close proximity to the site.

Records of other Tasman Bay sites containing seal remains are compared with the Anapai results in order to investigate regional patterns of seal exploitation. Though these other Tasman Bay sites are all located in eastern Tasman Bay, an argument can be made that seal meat was an important means of subsistence for the earliest Polynesian settlers at specialist stone working or extraction sites around the northern South Island.

Lawson, Kathleen. 1999. **Sourcing Prehistoric Pacific Pottery**. BA (Hons) dissertation, Anthropology Department, University of Otago. 76 pp, 15 figures.

A great deal remains unanswered and uncertain in Pacific prehistory, despite the amount of research that has been conducted in this region. Of particular interest to archaeologists working in the Pacific has been the understanding of the colonisation of the Pacific, the origins of settling populations, and subsequent interaction between island societies. Pottery provides a way of eliminating ambiguities often presented in other forms of study. A piece of pottery can be matched to the area where it was most likely manufactured, by identifying the mineral and/or chemical composition of the raw materials used in the piece, along with the composition found in the suspected sources. The aim of this work is to show how and why pottery characterization techniques work, and then to review past sourcing studies conducted in the Pacific, to demonstrate how this form of research can aid in unveiling aspects of Pacific prehistory. I explain why characterization studies provide more precise evidence of

human body's water regulating mechanisms are reviewed, along with the ways the body gets water and the problems of finding freshwater at sea. Two case studies (high island and atoll) are used to evaluate the water content of the traditional Polynesian diet and alternative Polynesian beverages are considered. Polynesian methods of collecting and storing freshwater are surveyed, along with bathing practices and spiritual attitudes towards water Polynesia's 'mystery islands' are used as case studies to investigate the possible effects of a lack of water on islands already in a marginal situation.

Murdoch, Kyle. 1999. **Ethnohistoric Study of Voyaging in Central East Polynesia**. MA thesis, Anthropology Department, University of Otago. 210 pp, 36 figures, 3 tables, 2 appendices.

This thesis provides an ethnohistorical account of why and where people voyaged in protohistoric central East Polynesia. An ethnohistorical approach relies on the examination of historical documents produced by literate observers on aspects of an illiterate society in the protohistoric period. The protohistoric time frame is one that predates major cross-cultural change. This Ethnohistoric study of voyaging is an important study which complements prehistoric voyaging hypotheses and recorded ethnographic observations to provide accounts of immediate post-contact voyaging.

This study examines the voyaging strategies of three island groups: The Marquesas Islands, the Society Islands and the southern Cook Islands. The results of this ethnohistorical approach have found that voyaging in central East Polynesia was an intra-archipelago activity, although there was a strong tradition of long distance inter-archipelago voyaging. The study also found that although the motivations for voyaging were varied, every voyage was an expression of the intrinsic web of relationships in central East Polynesia. These findings concur with archaeological interpretations of this area and indicate that an ethnohistorical approach can complement and extend existing theories of voyaging strategies.

O'Reilly, Dougal. 1999. **An Examination of the Moated Site Non Muang Kao in Northeast Thailand**. PhD thesis, Anthropology Department, University of Otago. 314 pp, 48 figures, 4 tables, 2 appendices.

This thesis examines the development of social complexity in Northeast Thailand with reference to two sites, Ban Lum Khao and Non Muang Kao. These sites, occupied during the Bronze and Iron Ages respectively, were

excavated in the hope that they would provide some insight into the hitherto uninvestigated area of prehistoric social development in the Mun River basin.

Using the mortuary remains from Ban Lum Khao it has been possible to draw inferences regarding the socio-political environment during the Bronze Age. The evidence from Non Muang Kao, while not as plentiful, indicates that dramatic social changes took place in the region from c. 1000-500 BC.

A significant portion of the thesis is dedicated to anthropological and archaeological theory, pertaining to social organisation. An overview of the present state of archaeological research in the Mun River valley is followed by a description of the excavations at Ban Lum Khao and Non Muang Kao. Succeeding chapters are dedicated to the analysis of the archaeological remains, including the presentation of a ceramic categorisation. The data from Ban Lum Khao are subjected to statistical analysis in an attempt to identify possible differences in mortuary practice which may be indicative of the social structure. The evidence from Ban Lum Khao seems to indicate that no entrenched hierarchical system existed during the time the cemetery was in use. The material from Non Muang Kao and other contemporaneous Iron Age sites, however, suggests that such systems developed in subsequent periods. The thesis concludes with an overview of traditional models of social organisation as they pertain to the evidence from Northeast Thailand with a recommendation that the heterarchical model be embraced. It is felt that this paradigm best explains the available data.

Palmer, Rachel. 2000. **The Landscape Archaeology of the Lower Clutha district**. PhD thesis, Anthropology Department, University of Otago. 416 pp, 63 figures, 57 tables, 2 appendices.

Over the last decade the landscape approach to archaeology has become increasingly popular; however field archaeologists continue to be criticised for not recognising its potential, despite significant contributions by British archaeologists and American historical archaeologists as they define an ever broadening discipline.

This thesis uses the landscape approach to illustrate the multi-period past landscape of the Lower Clutha District, South Otago, New Zealand. Based on a sample of 555 sites recorded in the district it describes the landscape from prehistory to 1950 in broad themes centred on: prehistory; contact period;

agriculture; primary and secondary industries; townscapes; landscapes of remembrance; and transport and communication networks.

The organisation of the landscape is explored to reveal the dynamics of the human environment relationship. These include the natural and cultural reasons behind settlement and the changing concentrations of population over time. It looks at the utilisation of resources from extraction and processing to transportation and worker's housing. The landscape was manipulated to define social relations and yet the environment has always shown its potential for influencing human land uses. The most outstanding example was the flood of 1878, which destroyed existing transport networks and significantly altered future land uses.

From the small cottages of the coal miners to the gravestones of the dead, the Lower Clutha District provides multiple layers of evidence of the active relationship between people and the natural environment.

Payne, Barbara. 1999. **Ten Hotels You Say! The Number and Location of Hotels in 19<sup>th</sup> Century Kingston.** BA (Hons) Anthropology Department, University of Otago. 66 pp, 39 figures, 1 table, 7 appendices.

The township of Kingston on the southern shore of Lake Wakatipu was the main transfer point for the transportation of goods from Invercargill and Dunedin to Queenstown from late in 1862. Gold had been found in the area and settlements were quickly created. This essay researches the number of hotels, their locations, and any physical evidence that remains in Kingston of these nineteenth century hotels. Oral history mentions ten or twelve hotels.

The sources used were the primary records of Lake County, Deed Registers, maps and plans, and secondary sources of newspapers and books, as well as photographs. I spoke to past and present residents who provided additional information to the written sources.

I found that prior to the railway opening in 1878 at least 5 and up to 8 hotels were known to be trading at Kingston from 1863, although some were very short-lived. Two later hotels opened in 1878 by the railway station at the west-end of Kingston. Excavation reports of hotels operating in the 1860s near Kingston provided information without the expense of excavation.

Only one building, the 'Ship Inn', which was a hotel from about 1869 to 1876, remains today as visible evidence of any hotel structure of this period. The sections along the waterfront on Cornwall Street, where the hotels were located, have been completely cleared and/or built on. An empty section with patches of concrete and asphalt remains as evidence of the later hotels built from 1878, which burnt down. Bottles and ceramics have been collected from these sections. In 1999 the remaining tavern is situated beside the railway station.

Except for the period in 1863 and 1864 Kingston has remained a settlement of few people and buildings. This research has shown that the demise of the hotels from 1864 is reflected in the settlement's prosperity. Kingston was an important transport hub and the hotels catered for the associated people. The railway and the lack of a road until 1936 to Queenstown ensured that Kingston survived into the twentieth century.

Purdue, Carla. 2000. **Adaptations to the Cold at Murihiki**. BA (Hons) dissertation, Anthropology Department, University of Otago. 161 pp, 11 figures, 20 tables, 2 appendices.

Upon arrival in the southern South Island (Murihiku), the initial Polynesian settlers were faced with many challenges. These included unfamiliar subsistence resources, landscapes and rather significantly, a climate that was considerably cooler than what they were accustomed to. Adaptations would have had to have been made in order to survive in this environment where rain and cold temperatures occurred frequently. This study focuses not only on the climatic conditions facing the southern Maori, but also considers the necessary internal and external adaptations involved. These include an analysis of food and energy requirements, subsistence resources available to the Maori, clothing style and housing form. Through an investigation of each of these areas and considering the possible detrimental effects that living in a cold climate may have upon quality of life, it is clear that the southern Maori people needed to develop effective ways of negating the effects of the cold. They achieved this through the careful utilization of seasonally available and high energy resources, the development of preservation techniques and utilitarian housing forms.

Smith, Teresa. 1999. **A Study of the Archaeological Fish Remains from Su'ena, Uki**. MA thesis, Anthropology Department, University of Otago. 236 pp, 13 figures, 10 tables, 6 appendices.

The intention of this research is to yield information concerning the prehistory of Su'ena. This site, located on the island of Uki in the Southeast Solomon Islands, was excavated in 1972 under the auspices of R. C. Green. Radiocarbon dates have placed the site at circa 1450 AD. Detail of the excavation will be provided in conjunction with information regarding the stratigraphy and chronology. The site will also be placed in a temporal perspective within the prehistory of island Melanesia.

The focus of the analysis will be on a component of the archaeological faunal assemblage, the fishbone. A laboratory analysis of this material will help to give an insight into the subsistence systems and contribute to an understanding of prehistoric Su'ena fishing practices.

The place of the site in a regional perspective will also be carefully examined through a comparison of material recovered from nearby islands with that found on Uki. All of the above factors will be compiled to create the best possible scenario for the occupation history of Su'ena.

Van Wijk, Rachael. 1999. **Feasts and Fasts**. BA (Hons) dissertation, Anthropology Department, University of Otago. 91 pp, 1 appendix.

A 1997 article by Cooper and McLaren demonstrated that the dietary patterns of the nineteenth century explorers' diets underwent three stages of development. Initially they relied heavily on bought provisions, but as bush skills improved more native food was exploited. As mounted expeditions became a viable option, the explorers once again returned to a diet relying on European provisions.

This dissertation demonstrates that explorers in New Zealand did not undergo the same stages of development, despite developing similar culinary traditions that drew on their common British heritage. The discrepancy is due to differences between the two colonies in terms of environment and landscape, and the degree of cross-cultural interaction between the colonists and the indigenous people. The diets differed most in their exploitation of native foods. Differences in diets seen throughout New Zealand may be attributable to a number of causes. Environmental differences, the density of the Maori population and the state of relations between them and the local Pakeha, the reason for the journey and its financial backing, the length of the trip, and finally their mode of travel, are all contributing factors.

Walsh, Rebeca. 2000. **Moa Hunting at Anapai**. BA (Hons) dissertation, Anthropology Department, University of Otago. 42 pp, 2 figures, 3 tables, 4 appendices.

Anapai is the only moa-bearing midden in northwest Tasman Bay. The aim of this dissertation is to investigate whether the moa remains at Anapai are likely to have derived from localised hunting, and whether the palaeoenvironment of the site is likely to have supported moa populations.

The Anapai moa remains (Canterbury Museum assemblage) with the exception of six unidentifiable fragments, are all from the leg region of the moa. This suggests the possible importation of the haunches only. The species *Anomalopteryx didiformis* was positively identified by Worthy at the site, while two other individuals were indistinguishable between *Anomalopteryx didiformis*, *Megalapteryx didinus*, and *Emeus crassus* respectively.

Reconstruction of the surrounding environment suggests that *Anomalopteryx didiformis* could have been supported by the vegetation of the area. It is proposed that this region was not "teeming" with moa, but in fact had very little. This is evidenced by Anapai (MNI 3) and numbers of individuals identified in other Tasman Bay contexts (eastern Tasman Bay sites). Research by Anderson on the windward and leeward provinces in New Zealand provides some background to an understanding of moa species distribution. Tasman Bay is located in the windward province where big game populations were small. This suggests that the moa remains from Anapai were most likely to have derived from opportunistic hunting. The remains suggest that only the lower leg body parts were brought to the site, with the kill probably occurring in a localised context.

Watson, Katharine. 2000. **Land of Plenty: Butchery Patterns and Meat Supply in Nineteenth Century New Zealand**. MA thesis, Anthropology Department, University of Otago. 179 pp, 50 figures, 59 tables.

Historical archaeology in New Zealand, while yielding much faunal material, has done little with these remains beyond assess what was being consumed at a particular site. The methodology used to do this varies between site reports and is invariably not discussed in detail in the report. This focus on consumption ignores the potential uses to which faunal remains can be put, as demonstrated by work undertaken in the United States and Britain. Key foci in these countries include status, ethnicity, changes in the economy, agriculture

and colonial adaptation. Using eight assemblages from sites throughout New Zealand, analysis was undertaken using a standardised methodology in an endeavour to reveal something about patterns of meat consumption in nineteenth century New Zealand. The comparative approach used showed that the date a site was occupied and its location were the most important factors underlying the composition of the assemblage. There was some variation associated with site type, but not to the same extent. Documentary sources from Central Otago were analysed in detail to elucidate information on the network(s) of meat supply operating in nineteenth century New Zealand. The evidence gathered in the course of this work indicates that the meat component of the British settlers' diet changed with settlement in New Zealand, albeit not to the same extent as the diet of the British who settled in the United States in earlier centuries. The extent and nature of the changes experienced related to the class of the settler and when they settled.

Wheadon, Christopher. 1999. **New Zealand Zooarchaeology: a Review of Current Methods**. BA (Hons) dissertation, Anthropology Department, University of Otago. 96 pp.

Zooarchaeology is an important area of archaeological research. The extinct flightless moa was found in stratigraphic association with stone tool in 1843. The work of Lyell and Lubbock meant that such finds were rigorously studied. Zooarchaeology followed developments elsewhere. From the 1960s New Zealand zooarchaeology was providing input into zooarchaeological theory (e.g. Davidson 1964a, 1964b; Ambrose 1963). By the late 1980s this active participation had decreased markedly. At this point New Zealand zooarchaeology began to fall behind. Thus changes now need to be made to our zooarchaeological methods: there needs to be standardisation in the analysis of zooarchaeological methods; smaller screen sizes need to be used; analysis of skeletal frequencies must be improved; taphonomic analysis must be used. This dissertation addresses these issues.

Wilkinson, Aaron. 1999. **Networks, Sourcing, and Social Organisation: an Assessment of Bronze Age Thai Trade and Exchange**. BA (Hons) dissertation, Anthropology Department, University of Otago. 67pp.

This paper assesses Bronze Age Thai trade and exchange and also the role of trade and exchange in the rise of Thai social complexity. The Bronze Age in Thailand is period around 1000 years in length, with initial casting beginning

in the vicinity of 1500 BC. This period is followed by major social changes following the introduction of iron metallurgy.

A significant portion of this paper deals with theoretical discussion of trade and social models, with the aim to provide a base for Thai related discussion. Also included is an outline of Thai prehistoric excavations, beginning with the inland cave sites up until the Bronze Age period.

This paper outlines what we know of Bronze Age Thai trade and exchange. Due to a limited number of major excavations, and a lack of provenance studies on exotic materials, discussion on Bronze Age Thai trade and exchange remains restricted. Knowledge of trade and exchange is restricted to a recognition rather than any absolute understanding of artefact movements or site relationships. There is a need for large scale excavation and artefact provenance studies before any further assessment can be made.

Wilson, Amanda. 1999. **Stone Tool Production at Cat's Eye Point**. MA thesis, Anthropology Department, University of Otago. 180 pp, 44 figures, 27 tables, 3 appendices.

This thesis examines a lithic assemblage from Cats Eye Point (J42/4), Kakanui, North Otago, New Zealand. This Archaic site was excavated during 1996 and 1997 and the lithic assemblage was collected from 4m<sup>2</sup> excavated during these two seasons. Previous studies of lithic material from New Zealand and the Pacific are reviewed to indicate the range of information that can be gained from lithic analysis. Themes of research in the North Otago region are also examined to place Cat's Eye Point into its regional context.

This thesis had three main areas of investigation. The first involved a descriptive and technological analysis of the debitage using mass flake analysis (MEA) and individual flake analysis (IFA). Formal artefacts, such as hammerstones, blanks, and preforms, were also examined. Secondly, spatial analysis was used to determine if the lithic assemblage could be used to infer intra-site activity areas. This was conducted by analysing macro- (flakes larger than 3mm) and micro debitage (flakes less than 3mm) by examining the range of material types. The third area of investigation examined debitage recovered from 6.4mm (1/4 inch) and 3.2mm (1/8 inch) sieves to determine if any significant technological information was gained by debitage from the 3.2mm sieve.

The conclusions of this study indicate that there were two methods of basalt cobble reduction at Cat's Eye Point for adze production. Adze production at Cats Eye Point was opportunistic and the non-local material curated. The results of the debitage analysis indicate that the entire sequence of adze manufacture did not occur in the excavated area of Cat's Eye Point and initial cobble reduction probably occurred on the adjacent beach where the cobbles are found today. Consequently, coastal rock outcrops, even without evidence of associated debitage, must be viewed as potential sources of rock for stone tool manufacture unless determined otherwise. The spatial analysis detected two activity areas and a disposal area at Cats Eye Point. The analysis of the 6.4mm and 3.2mm debitage found that no significant technological information was gained by examining the smaller flakes.

Wylie, Simon. 1999. **Reconstructing Prehistoric Fishing Strategies: Test Case from Moloka'i, Hawaii**. BA (Hons) dissertation, Anthropology Department, University of Otago. 105 pp, 14 figures, 23 tables, 1 appendix.

The ecological approach to studying prehistoric fishing integrates ecological, ethnographic/ethnohistoric, archaeozoological and material culture data to reconstruct fishing strategies. This approach was employed to determine the late prehistoric fishing practices used along a stretch of coastline near Hinanalua, north-west Molokai, Hawaiian Islands. The basic data set for this reconstruction was an assemblage of 6.4mm identified fish bone recovered from several sites in the area as part of the Hinanalua Project.

The first major objective of this dissertation was to use this assemblage to illustrate the application and relevance of the ecological approach. The second principal aim was to use the assemblage to assess the significance of a selection of methodological issues that can potentially distort the accuracy of fishing strategy reconstructions produced by the ecological approach. These issues included: the existence of different methods for calculating the Minimum Number of Individuals (MNI); general quantification biases of differential preservation and the use of different numbers of elements for identification; and the problem of the taxonomic level of identification. Finally, the assemblage was used to test whether variation, in terms of taxonomic abundance, range and size, existed in the fish bone recovered from sites with different functions, namely between residential and religious sites, and if so, what effect it may have on fishing strategy reconstruction.

With regards to the first objective, it was found that the holistic nature of the

ecological approach makes it a thorough and effective method for reconstructing prehistoric fishing strategies. Secondly, it was determined that the different methods of calculating MNIs and the use of different numbers of elements for identification may have no significant effect on rank order taxonomic abundance, which has important implications for inter-study comparisons of fish bone assemblages and fishing strategy reconstructions. However it was concluded that differential preservation might be an important bias in quantification and that the taxonomic level of identification has a profound influence upon the accuracy of fishing strategy reconstructions: further attention to and testing of these issues is required. Thirdly, it was demonstrated that differences do exist between fish bone assemblages from sites of different function, but it was cautioned that these might be just as much a factor of the methodological issues investigated above as of functional variation.

However the most salient finding of this dissertation was that all of the aspects of fishing strategy reconstruction tested above interact and so each of these issues should be thoroughly investigated and tested before making firm conclusions about prehistoric fishing practices.