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**ABSTRACTS FROM THESES AND RESEARCH ESSAYS
DEPARTMENT OF ANTHROPOLOGY,
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Abstracts from five M.A. theses and one research essay in archaeology completed during the period late 1993 to early 1995 are given below. Copies are held in the Department of Anthropology, University of Auckland, where they may be consulted in the Piddington Room. Xerox or microfiche copies may be made available through the General Library, Auckland University, at cost, plus GST and postage. These are subject to the usual restrictions applying to theses and research essays, namely the understanding that their use is for private research and not publication.

THESES

Nicola VAN DIJK. M.A. thesis. 1993. **The Evolution of the Polynesian Phenotype: An Analysis of Skeletal Remains from Tongatapu, Tonga.** Anthropology Department, University of Auckland. 1 page abstract, (xi) 241 pp., 9 plates, 9 figures, 44 tables, 4 appendices.

The large size and robusticity of the Polynesian people has been the subject of much interest in recent years, and a number of theories have been developed to account for this. The present study examines the skeletal remains of 49 individuals from site To-At-36 on Tongatapu, Tonga. Infracranial metric analyses of these individuals are then compared to skeletal remains from sites To-At-1 and To-At-2, also on Tongatapu, and populations from other Polynesian islands: New Zealand, the Marquesas, Hawai'i, and Easter Island. A hypothesis which may account for evolution of the large phenotype of the Polynesians and the size differences seen within the Polynesian islands is then proposed.

V.Keay BURRIDGE. M.A. thesis. 1995. **Landscape Approaches to Settlement Pattern Analysis: The Maori Occupation of Tirau.** Anthropology Department, University of Auckland. 1 page abstract, (x) 116 pp., 40 figures, 16 tables, appendix.

The investigation of pre-contact Maori occupation in Tirau, South Waikato, adopted a landscape approach to settlement pattern analysis, treating the entire landscape as a potential area for human activity. A siteless approach was generated for the methodology and data collection of archaeological features, and analysed using a Geographic Information System. The archaeological data is examined in terms of the internal composition and complexity of the features,

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from which a brief functional interpretation of the settlements is drawn. The relationship between archaeological features and environmental variables is considered in order to establish any influence the geology, soils, elevation, and relief had on the distribution of the archaeological evidence.

The results indicate that *pa* are not differentiated by total area, internal complexity or feature composition from undefended complexes. The investigation of the environmental and archaeological variables demonstrated that several physical characteristics of the environmental factors were preferred as area of pre-contact Maori settlement in Tirau.

Trudy E. DOELMAN. M.A. thesis. 1995. **Te Awa a Korako: The Archaeology and Ethnohistory of Te Kiri Kiri.** Anthropology Department, University of Auckland. 1 page abstract, (xv) 280 pp., 15 plates, 60 figures, 94 tables, 7 appendices, glossary.

This thesis explores the archaeology and ethnohistory of Te Kiri Kiri (Hauraki Plains). It combines the results of excavation, surveying, historical accounts and tribal histories with evidence from the Maori Land Court in an attempt to determine the settlement chronology from first occupation to the early post-contact period, and function (residential, defensive and/or agricultural) of the Te Kiri Kiri sites. Previous studies in the Hauraki Plains have concentrated on the lowland or "swamp" *pa*. In contrast, this thesis has expanded the research area to include sites located on the hill (ridge-end *pa*) and inland valley (middens and storage pits), enabling a wider interpretation of the settlement. Using archival material an attempt is also made to integrate the sites with social groupings (*whanau*, *hapu* and *iwi*), and the political forces to construct a chronology of socio-political events within Te Kiri Kiri.

The results of the analysis define a settlement model for the Te Kiri Kiri, which may reflect the occupation of the Hauraki Plains. These results indicate a changing occupation with shifts in function and focus of settlement. Initial and continuous occupation of the lowland is recorded followed by a move to the hill. This shift was motivated by external conflict and the differentiation of the *hapu* sub-groupings. The main focus of the residential settlement continued to emphasise the importance of the waterways, linked with the occupation of the lowland sites. In comparison, the hill *pa* were primarily defensive in function, while the inland valley supported a relatively small occupation with only dispersed middens and pits, suggesting an agricultural function.

An underlying theme is the role of archaeology in the 1990s. Here the influence of *tangata whenua*, developers and archaeologists is discussed in terms of the past site preservation, current excavation methodology and the governing legislation. These factors are related to the Te Kiri Kiri sites and the

wider Hauraki.

Lastly this thesis highlights the importance of combining ethnohistorical and archaeological approaches in determining the settlement history of an area.

Claire E. ORBELL. M.A. thesis. 1995. **An Analysis of Monumental Mounds from Tonga and the Island of 'Uvea.** Anthropology Department, University of Auckland. 1 page abstract, (viii) 136 pp., 34 figures, 32 tables.

This thesis investigates monumental mounds found throughout the Tongan archipelago, and focuses especially on the outlying island of 'Uvea. These sites are discussed in terms of their architectural structure, function, and utility for identifying associated internal and external socio-political systems. Components of archaeology, ethnohistory, and cultural reconstruction are combined to address these research objectives.

'Uvean mounds are analysed in the context of their relationship to Tongan influence. Considerable attention is given to re-evaluating an ORSTOM typology of 'Uvean mounds through the creation and statistical analysis of a data base. The results are then compared with information on the island of Niuatoputapu which may have held an analogous position in the Tongan Maritime chiefdom. In both cases mounds are shown to reflect the high level of Tongan assimilation attested to in oral traditions, historic accounts, and the general archaeological record. Thus it is proposed that studies of this nature can make significant contributions to the research on social and political organisation.

Finally these mound sites and other monumental forms from West Polynesia are incorporated into a correlation of monumental architecture throughout Polynesia as a whole. Recognition is made of the significant divergence in the range of structures present from East and West Polynesia. It is concluded that a combination of causal factors is likely to have been responsible for the pattern observed in each cultural region.

Fiona J. PETCHEY. M.A. thesis. 1995. **The Archaeology of Kudon. Archaeological Analysis of Lapita Ceramics from Mulifanua, Samoa and Sigatoka, Fiji.** Anthropology Department, University of Auckland. 2 page abstract, (xii) 192 pp., 14 plates, 46 figures, 52 tables.

This thesis deals with ceramic assemblages from two Eastern Lapita sites: Sigatoka Sand Dunes [Fiji] and Mulifanua Ferry Berth [Samoa]. A number of techniques are employed in the description of this material, including analysis of form, decoration, and technological variation, petrographic identification of temper inclusions, and clay characterisation. These techniques have until recently

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been employed separately, but when combined give technological and decorative descriptions in addition to material resource patterns for the pots. This allows assessment of variation between sites and construction of detailed ceramic chronologies. A combination of such analyses enables discussion on issues such as ceramic exchange and restrictions on ceramic production, all ultimately tied to the development of Polynesian culture.

Two Lapita ceramic assemblages have been identified at Sigatoka. Techniques of manufacture and use of local resources are fairly uniform within both assemblages. However, slight differences in temper and clay, which parallel variation in vessel form and decoration are suggestive of chronological separation between the two collections despite similar radiocarbon dates. Foreign tempers and clays also indicate that inter-island trade occurred.

These Lapita pots are closely followed by 'Late Level I' ceramics which are distinct from the earlier Lapita ceramics of Sigatoka, both in their method of manufacture and design. This assemblage is not easily explained within the present model of Lapita dispersal and development.

Analysis of ceramics from the Mulifanua Ferry Berth indicate the presence of a locally produced and generally well made ceramic assemblage. Reconstructed decoration and vessel form suggests connection with mid to late Lapita ceramics from Fiji, a connection which is upheld by the presence of a foreign sherd identified as Fijian. The site is considered to be independent of later Samoan Plain Ware sites.

This research has enabled comparison of form and decoration with the wider Eastern Lapita assemblages and has highlighted complications as to placement of Sigatoka Sand Dunes and Mulifanua Ferry Berth within the established ceramic chronology.

The underlying theme of this thesis has been to highlight the importance of combining archaeology and geology in the interpretation of ceramics from the Pacific. The combination of these two disciplines is shown to be important when exploring the relationship between ceramic assemblages.

RESEARCH ESSAY

Liza M. KELSALL. M.A. Research Essay. 1994. **The Extraction and Amplification of Mitochondrial DNA from Archaeological Bone.** Anthropology Department, University of Auckland. 1 page abstract, (v) 40 pp., 10 figures, 1 table, 2 appendices.

The term 'ancient DNA' generally refers to the DNA recovered from

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museum, palaeontological or archaeological organic remains, ranging from between a few decades to many millions of years in age. Ancient DNA was extracted from the skeletal remains of the New Zealand kiore (*Rattus exulans*). The effects of bone age, size, condition, and category upon nucleic acid extraction yields were examined. Bone condition, in particular, was found to be essential to successful extraction and amplification of DNA from New Zealand samples. Electrophoresis size fractionation of extracted products suggested similar degrees of nucleic acid degradation were present in samples, regardless of age. In addition, a relationship was detected between target sequence length and success with the polymerase chain reaction.

The following thesis in anthropology may also be of interest. Conditions for use and copying are those cited above.

Brett D. JONES. M.A. thesis. 1994. **Saving Our Cultural Heritage. Historic Buildings: A Critical Interpretation of New Zealand Legislation, its Usage, and Policy Recommendations for the Future.** Anthropology Department, University of Auckland. 1 page abstract, (vi) 167 pp., 15 figures, 11 appendices.

Over the past nine years there have been extensive reforms to New Zealand legislation concerning the protection of heritage resources. This thesis examines the legislation and the key parties responsible for the protection of historic buildings that are part of our cultural heritage. It interprets past and present legislation, raises issues over its usage, and provides recommendations on how policies for the protection of buildings can be improved.

Chapter One of the thesis describes the researcher's interest in cultural heritage, the evolving of the research topic, and the research method.

Chapters Two and Three trace the development of legislation, its usage and issues concerning its use by the Historic Places Trust, central and local government, and the general public.

The fourth chapter places the material of previous chapters in context, by exploring the processes that have been involved in the protection of the 1930s buildings in Napier City. Integral to the protection processes of the buildings has been their promotion as tourist attractions. This is discussed from the perspective of the Art Deco Trust.

Chapter Five summarises the issues concerning the protection of historic buildings which were raised in earlier chapters.

The sixth chapter provides possible solutions to the issues discussed and

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presents the final conclusion. The solutions attempt to resolve some of the problems over the use of existing legislation by the parties indicated above, and to suggest a stronger policy framework for the protection of historic buildings.