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ABSTRACTS FROM THESES AND RESEARCH ESSAYS
DEPARTMENT OF ANTHROPOLOGY, UNIVERSITY OF AUCKLAND 1992-94

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Abstracts from one M.A. thesis and six M.A. research essays in archaeology completed during the period late 1992 to early 1994 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.

THESIS

Kim TATTON. **Aotea - Nga unahi me nga taratara o Te Ika roa a Maui - The Scales and Spines of Maui's Fish.** The Settlement Archaeology of Aotea. M.A. thesis. 1994. Anthropology Department, University of Auckland. 1 page abstract, (vi) 156 pp., 6 plates, 16 figures, 17 maps, appendix.

There has been debate and much theory concerning the nature and methods of selection of settlement locations in precontact New Zealand. Therefore in an attempt to gain an insight into how, why and where, this thesis focuses on perhaps one of the earliest settlement areas in New Zealand - Aotea (Great Barrier Island).

By combining and comparing traditional histories from Aotea and ethnographic accounts by the early explorers, and by collating all known archaeological data on this island onto a Geographical Information Systems (GIS), this thesis draws conclusions concerning settlement patterns in early New Zealand precontact history, particularly on Aotea. This thesis also lays a foundation for further study to be undertaken on Aotea using the computer database which has been compiled.

RESEARCH ESSAYS

Matthew W. FELGATE. **Geochemical Characteristics of the Tahanga Archaeological Quarry Complex.** M.A. research essay. 1993. Anthropology Department, University of Auckland. Abstract, (iv) 79 pp., 8 figures, 3 tables, 2 appendices.

ABSTRACTS FROM THESES

The Tahanga pre-European basalt quarry complex on the Kuaotunu Peninsula, New Zealand, is thought by archaeologists to be the geological source of raw material for many of the fine-grained basalt artefacts found in North Island archaeological deposits. The aim of this study was to characterise the Tahanga basalts in terms of chemical composition, as an aid to future artefact provenancing studies. X-Ray Fluorescence analysis of Tahanga samples and samples of other similar basalts enabled distinctive chemical characteristics of the Tahanga complex as a whole to be identified; in addition, distinctive chemical characteristics of sub-areas of the Tahanga complex were identified. Five artefacts from the Houhora collection of the Auckland Institute and Museum were included in the analysis, and all were found to closely match the composition of one of two sub-areas of the Tahanga complex. This finding served to reinforce previous work on the distribution of Tahanga basalt in archaeological sites, and to demonstrate the effectiveness of these analytical methods for North Island basalt provenance studies.

Sheena McLACHLAN. **Culture Contact in New Zealand: A Demographic Analysis.** M.A. research essay. 1994. Anthropology Department, University of Auckland. Abstract, 46 pp., 4 figures.

Historical accounts from the eighteenth and nineteenth centuries are heavily relied upon by theorists in their attempts to reconstruct the size of the Maori population in 1769. This paper reviews the way in which archaeologists have uncritically used historical sources to provide information regarding indigenous population size in New Zealand in 1769. An alternative hypothesis is generated to suggest that the indigenous population in 1769 may have been larger than is currently accepted. Archaeological research design of a regional nature, incorporating settlement pattern studies is proposed as an alternative to current methods which have included ethnographic or historical components.

Robert L. PALMER. **A Comparative Analysis Between the Kauri Point Pa and Swamp Site Obsidian Collections.** M.A. research essay. 1994. Anthropology Department, University of Auckland. Abstract, (iv) 42 pp., 1 map, 31 figures.

The Kauri Point Swamp site was excavated by F.W. Shawcross during the summer of 1962 and 1963. It yielded a wealth of portable artefacts, and the results of these excavation were coupled with an ethnographic interpretation of the site. The interpretation asserts that the site is a sacred (*wahi tapu*) haircutting station, and that the swamp where the site is located is sacred as well (*wai tapu*). Most of the artefacts recovered from within the site have been interpreted as being associated with a hair-cutting ritual. Over 14,000 obsidian flakes were recovered during the excavation. Adjacent to and concurrent with the excavation of the swamp site, Jack Golson and Wal Ambrose excavated Kauri

Point *pa*. 1847 obsidian pieces were recovered from this excavation.

In this paper, the 1847 obsidian pieces recovered from the *pa* and 1,008 of the 14,000 obsidian artefacts from the swamp site are analysed to determine whether or not the obsidian provides any evidence for the swamp site's *wai tapu* hypothesis. A number of morphological types and patterns are identified, as are the number of complete flakes, partial flakes, cores, core fragments and tools. The analysis of the observed obsidian artefact attributes tended to support the *wai tapu* hypothesis, but also suggested that the current, largely uni-purpose interpretation of the swamp site is too simplistic.

Janet R. ROMANES. **Island in the Sun. GIS, and a Model of the Prehistoric Agricultural Potential of Ponui Island, New Zealand.** M.A. research essay. 1993. Anthropology Department, University of Auckland. Abstract, (vi) 59 pp., 14 figures, 1 table.

Geographic Information Systems are computer-based research tools which have been utilised in archaeological studies during the last decade, principally in cultural resource management and in conjunction with landscape archaeology. The technology has enabled more sophisticated research on both modern and prehistoric agriculture in New Zealand and overseas, than was formerly possible.

A model of the prehistoric agricultural potential for growing *kumara* on Ponui Island, Hauraki Gulf, New Zealand, is based upon a productivity index derived from the variables of slope, aspect, and soil type. Ethnohistorical records, advice to commercial *kumara* growers, and experimental data on soil and climate provide evidence to suggest that these variables combined with that of climate, were most important to the survival of introduced prehistoric cultigens such as *kumara*. Aspect was critical and not subject to the various adaptive innovations used by the Maori to enhance their horticultural success. The model shows a varied distribution of areas of agricultural potential across the island. The analysis of a sample area of "Ponui pits" indicates that their location is predominantly on southern slopes and does not generally correspond with the areas of optimal potential.

Matthew SCHMIDT. **"Few Have Been Tested By the Spade....". Pa Excavation and Radiocarbon Dating in New Zealand Archaeology.** M.A. research essay. 1993. Anthropology Department, University of Auckland. Abstract, (viii) 110 pp., 25 figures, 7 tables, 2 appendices.

This research paper reviews *pa* excavations and related literature in New Zealand archaeology. It also attempts to date the commencement of *pa* building in New Zealand prehistory using published radiocarbon dating.

ABSTRACTS FROM THESES

Pa excavation began in 1900, with investigations prior to 1955 being primarily conducted by fossickers and museum archaeologists. Post 1955 research saw many influential investigators and events direct the course of *pa* research. This in turn affected the amount of *pa* excavation undertaken and literature produced through the decades.

The analysis of *pa* radiocarbon dates suggests *pa* building began circa 1500 AD. It was found that *pa* did not evolve from a basic (Class I) to more complex form (Class III), as suggested by Groube. Different sample types were found to produce similar radiocarbon ages in relation to finding a time for the beginning of *pa* building, and strategies for dating *pa* are suggested. Implications of *pa* construction beginning in 1500 AD on current theories in New Zealand are discussed.

Anne M. STANFORD. **Bog Corpses of Iron Age Northern Europe.** M.A. research essay. 1992. Anthropology Department, University of Auckland. Abstract, (i) 80 pp., 25 figures, 4 tables, appendix.

The aim of this dissertation is to examine the bog corpse finds of Iron Age Northern Europe in relation to available scientific and data recovery techniques, as well as looking at the relevant historical and cultural material. This is to redefine, in some cases, existing death scenarios, and in others to define a valid hypothesis where none (or only unsubstantiated ones) had previously existed. Too often the human aspect of archaeological study is neglected or forgotten.

Bog corpse finds provide an obviously people-orientated avenue of research, which considers the scientific areas of their study, examines the historical and cultural aspects of these people, and maintains a "people" focus while considering the intangibles of the human condition. We know the "how", it is time to consider the "why?"

The following M.A. research essay is available for consultation in the Pidington Room only. There is no provision for copying.

Phillip W. SIMPSON. **Resource Management of Prehistoric Archaeological Sites in West Auckland, New Zealand.** M.A. research essay. 1992. Anthropology Department, University of Auckland. Abstract, (v) 100 (xii), 100 pp., 8 plates [appendix], 11 maps, 29 figures, 10 tables.

The area of West Auckland, New Zealand is rich in cultural resources. One of these resources is the prehistoric archaeological sites. There are some 549 prehistoric sites listed in the NZAA (New Zealand Archaeological Association)

records. Most of these have not been surveyed for 15 to 20 years. Approximately 124 of these prehistoric sites, a 25% sample, were chosen to be surveyed during the course of this research in order to discover the damage to sites over time and its cause. It was found that sites on public land are in worse condition than those on private land. Midden (rubbish heaps) sites are the most likely to be destroyed or modified over time.

Predictively, sites in urban areas (predominantly the east coast of West Auckland) are more likely to be damaged by humans, and those on the west coast to be altered by natural causes. It is predicted, according to these results, that approximately 100 archaeological sites in the West Auckland area will be destroyed every 15 to 20 years. In 80 years there may not be any sites remaining.

This project has also demonstrated the use of GIS (Geographic Information Systems) for more effective management of cultural resources.