

# Archaeology

## Completed MA Theses

2021

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**[Grainger, Arthur](#) (2021) *The Nature of Ceramic Production at Unai Bapot, House of Taga and Ritidian at 3,500 cal BP***

This thesis presents the results of a chemical analysis on pottery to investigate the nature of mobility and interaction from three Mariana Islands sites from 3,500 cal BP to 300 cal BP.

These sites were: House of Taga on Tinian, Unai Bapot on Saipan, and Ritidian on Guam. Pottery was an important part of the pre-contract period of Chamoru culture and one of the most common types of material culture found in these sites. The study of their pottery helps unravel the past on these peoples to understand the nature of their pottery production and in turn the state of mobility and interaction as a society. This archaeological signature is a technology which can be traced back to Austronesian ancestors and cultural routes somewhere in ISEA and connects them culturally with other island groups in Micronesia and the wider Pacific.

This study focused on the pottery production techniques of the potters for each of the three sites to discover how they sourced the materials to make their pots. To aid in this, methodologies developed through the study of Lapita pottery were employed to answer these questions. Summerhayes (2000a) models were applied to the chemical analysis results generated from the scanning electron microscope to understand the pottery production strategies of the potters, but also predict their level of mobility as a society. These factors were observed through their sourcing of clay and sand, and how these changed as a result of greater cultural trends such as the initial settlement of the islands, and the Latte Period.

This study was not the first of its kind in this region but was the first to employ the models by Summerhayes (2000a). Through this analysis, it is argued that the pottery production strategies and the state of mobility of each of these three sites in the Mariana Islands mirrored common trends observed in other parts of the Pacific. That with first colonisation of islands, they practiced an exploratory phase of material experimentation to make their pots drawing from many different areas for their clay and sands. This reflects a highly mobile society early on with shared cultural trends across sites. Overtime as the colonisation phase ends and populations grow this exploratory phase ends and the variation of clay and sand samples drops in numbers as potters use favoured local materials for their pots. This reflects a more sedentary society, which still had interaction ties between different islands through shared cultural traditions but becoming regionalised over time. All three sites show these trends with evidence of variation between them.

**Henderson, Robert Wesley Hayden (2021) *Subsistence in the Lapita***

***Homeland***

This thesis presents an analysis of vertebrate fauna remains from two Lapita sites in the Arawe Islands of the Bismarck Archipelago, Papua New Guinea. Studies of subsistence in Pacific contexts have focussed on how Lapita peoples and their descendants were able to successfully settle the islands of Remote Oceania. Exploitation of existing resources and elements of transported landscapes are prominent themes in such research. However, subsistence in Lapita contexts from Near Oceania has not received the same level of attention. This thesis addresses this imbalance in the current view of Oceanic subsistence by investigating an assemblage from the Bismarck Archipelago, where Lapita is argued to have emerged. The fauna from the sites Adwe and Apalo represent subsistence activities from the Early and Middle Lapita periods. Through zooarchaeological analysis, and interpretation drawing from various areas of research, the Arawe Islands assemblage provides an opportunity to address questions regarding the nature of subsistence during a foundational phase in Oceanic prehistory, as well as to address debates regarding the nature of introduced elements of Lapita subsistence

2020

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**Gillespie, India (2020) *The Archaeology of Porcellanite in New Zealand***

Porcellanite is a lithic material that was used by early Māori to manufacture flake tools in Murihiku. This thesis examines how porcellanite was procured during the early colonisation of Murihiku. How lithic sources were utilised is important for studying the colonisation of new landscapes, as lithic sources begin as unknown variables at the onset of colonisation. Known porcellanite source sites were surveyed and material was archaeologically and geologically characterised, since the quality, form and availability of raw material influences the lithic production process. Evidence regarding how material was procured was identified, as decisions made at lithic procurement sites impact all subsequent aspects of a subsistence system. Raw porcellanite samples were collected from surveyed source sites and were subject to hand-specimen characterisation and pXRF analysis. pXRF analysis of porcellanite was highly experimental, but the results showed confident separation between the known porcellanite sources. A small porcellanite flake assemblage from the Shag River Mouth site was also analysed by pXRF and the majority of artefacts were positively correlated with the known source samples. The research of this thesis assessed how archaeologically recorded porcellanite sources were utilised, and in turn, this helped to better understand landscape exploration, settlement patterns and resource use strategies.

**Lewis, Julia Annabelle (2020) *One Flake at a Time: a study of adze production at Wairau Bar through debitage analysis.***

This thesis explores the adze industry of the early period of Māori history. The research focuses on the production of adzes at the site of Wairau Bar which dates to the earliest phase of New Zealand settlement. It aims to establish the role of this site in a wider system of adze production through the analysis of a debitage assemblage excavated from the site in the 2009 field season. The debitage assemblage consists of the waste material produced through adze manufacture and the analysis is structured to target what stages of manufacture the material represents, thereby determining the production practices being undertaken at the site. The results of the analysis are then tested against a proposed model of the adze industry, from raw material procurement to distribution, and conclusions are drawn about both the structure of the industry and the role Wairau Bar and its people would have played

**Scahill, Alexander Gerard (2020) *Early Lapita Settlement in the Colonisation Process: The nature of an Early Lapita ceramic assemblage from Taumuarawai, Emirau Island, Papua New Guinea.***

Pottery has long been the artefact of choice for establishing migrations in the West Pacific, as demonstrated by the discovery in the 1940s that dentate-stamped pottery of the Lapita Cultural Complex had a distribution that spanned thousands of kilometres (Kirch 1997: 6-70). Traditionally the decorative attributes of pots were assessed to infer cultural connections and establish migration patterns (ibid: 12).

More recently archaeologists have turned to methods of physicochemical analysis to provide insight into these migrations with much greater resolution. Previous investigations of Early Lapita settlement all recognise a high degree of mobility (Anson 1983: 1986; Hennessey 2007; Hunt 1989; Summerhayes 2000a; Thomson and White 2000). There are however, two quite different interpretations of these mobility patterns. The first of these interpretations, "Specialised Regional Production" (Hogg 2012: 28), suggests that pottery production is being conducted by sedentary specialist potters belonging to a large regional exchange network (Hunt 1989; Kirch 2000; 2017). In this model significant movements of ceramics are occurring when exchanged between communities, with little in the way of local production occurring (Hogg 2012: 1; Hunt 1989). The second interpretation of these mobility patterns, "Mobile Specialised Production" (Hogg 2012: 28), suggests that most ceramics were produced locally by mobile specialist potters who moved around the landscape collecting resources with which to produce their ceramic assemblages (Anson 1983; 1986; Hennessey 2007; Summerhayes 2000a; Thomson and White 2000).

With these differences in mind, this research was undertaken with the aim of assessing these models of mobility through the physicochemical analysis of an Early Lapita assemblage from Tamuarawai (EQS), Emirau Island, Papua New Guinea. By analysing the patterns of pottery production at Tamuarawai we can assess the nature of mobility at the site

and provide further insight into the nature of Early Lapita settlement and mobility through comparison with existing settlement models.

Evidence demonstrated that a wide variety of resources were being utilised in the production of the Tamuarawai ceramic assemblage, with a high number of clay sources and a range of temper minerals employed in the production of the assemblage. With little in the way of discernible correlation between clays, tempers, and vessel form, the evidence suggests that potters were highly mobile, collecting resources for local production of pottery. There was limited evidence of the importation of complete vessels. These results suggest that ceramic production at Tamuarawai was being conducted through a process of “Mobile Specialised Production”.

**Wills, Nikole (2020) *Māori-plant interactions: Anthracological analysis of an archaeological site at Cooks Beach (Pukaki), Coromandel Peninsula.***

Charcoal is found throughout the archaeological record as a result of human activity. Anthracology, the analysis of charcoal, is a useful but often neglected branch of research that enables exploration of the dynamic relationship between humans and vegetation in the past. This study highlights the value of anthracological research in an investigation of anthropogenic vegetation change, and the differential selection and use of fuelwood at a stratified, well-dated Māori activity and horticultural site at Cooks Beach, Mercury Bay, on the east coast of the Coromandel Peninsula. A taxonomic and dendrological analysis was completed on 1413 charcoal fragments from nine features. The analysis considered the potential impacts of assemblage formation processes and sample reliability, applied charcoal identifications and evaluation to paleoenvironmental reconstruction, and tested the Principle of Least Effort. This study of taxonomy and dendrological features informs on vegetation change, use and management. The results were related to established models of anthropogenic vegetation change in New Zealand. These include a rapid landscape transformation model, in which drier lowland forests were largely cleared across New Zealand during an Initial Burn Period (IBP), and a Two-step model in which northern deforestation during the IBP was limited in effect and more profound later in the sequence. The interpretation of vegetation change from the Cooks Beach charcoal assemblage draws on elements of both models, where neither is sufficient alone to explain the evidence. This investigation illustrates the problems associated with the application of broad models of vegetation change to the diverse cultural-environmental landscape of New Zealand.

## 2019

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**Dahl, Jenny (2019) *A high-resolution chronology of human arrival and environmental impact in Northland, New Zealand.***

Our understanding of when Polynesian colonists first arrived in New Zealand, how the landscape was altered, and the pace of anthropogenic

modification has been primarily sourced from archaeological evidence and environmental histories collected from the South Island. Research from the South Island suggests that once humans arrived in New Zealand around 1300 AD they quickly and dramatically impacted the environment. Though more research has been undertaken on the North Island recently, the north remains under-researched compared to the south regarding these issues. The variety of subsistence practices available in this sub-tropical microclimate and the wetter, less combustible forests may have led to different land use practices and pace of landscape alteration compared to the drier, cooler climate of the South Island.

For this project two lacustrine systems proximal to archaeological sites in Northland, New Zealand were cored, and a multi-proxy approach was undertaken to create a high-resolution chronology of anthropogenic environmental change. The age-model was used to identify the timing of human arrival and develop a catchment specific environmental history to determine the speed and duration of land use in this area to compare to records from the south. Thorough testing was performed to identify reliable radiocarbon targets to provide confidence in the precision for the chronology. Elemental and isotopic carbon and nitrogen measurement, C:N ratios and X-ray fluorescence (XRF) measurements were performed on the lake sediments to create catchment specific proxy data. These data, supported by the age-depth model and pollen and charcoal records, were used to determine the pace and intensity of local land use through time. The results of the research indicate that pollen concentrated from post-human impact sediment produced unreliably old  $^{14}\text{C}$  ages and could not be used to develop the lake chronologies through those time-depths. However, terrestrial macrofossils appear to have returned accurate ages for deposition and can be used in cultural landscapes to build chronologies. The age-depth model projects human arrival for the Far North District between 1164-1277 cal AD, suggesting that this area was colonized early in New Zealand's settlement history. The isotopic and elemental data for both lakes show evidence of human modification of the environment but raise the possibility that different processes were occurring in each lake. The pace of human modification of the landscape appears to be longer in duration compared to environmental records from the south but indicate that shortly after Polynesian arrival the study area was completely altered by anthropogenic modification.

**Kelly, Alana (2019) *Mechanising Fibre Production: The New Zealand Flax Mill Project.***

Flax has a long history of use in New Zealand. It was a crucial source of fibre in traditional Māori society, and later sparked the interest of shipborne Europeans, always on the lookout for fibre to make rope. Characteristics of New Zealand flax (*Phormium tenax*) made it difficult to process by methods used in the northern hemisphere and it was not until the invention of specialist machinery and adaptation of powered mills in the mid-19th century that it became possible to sustain commercial levels of production. This thesis provides the first attempt to document the

archaeological footprint of this industrial phase of production, which endured through multiple highs and lows, largely in correspondence with global periods of war, from 1860 when the first mill was established, to the 1970s when the last mills closed.

## 2018

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**[Adam, Rebecca](#) (2018) *Curves in all the Right Places: An Analysis of Shape and Decoration in Mycenaean Pottery from Late Bronze Age Cyprus.***

Mycenaean ceramics have been found in sites across the Eastern Mediterranean, however an impressive amount of this pottery has been found on the island of Cyprus, which once lay in the midst of important Mycenaean trading routes. Due to the large number of Cypriot excavations by different international and local schools, Mycenaean pottery from Cyprus can now be found in numerous locations around the world. It is therefore a struggle to perform any kind of systematic analysis or sourcing study, although many pots have been recorded and analysed by museums and are available to view photographically. This thesis uses an approach that draws on that photographic record. It uses both shape and decoration to expand the pool of resources that can be used to further divide and analyse groups of pottery. Sixty-seven pots were divided into groups of the same motif choice, which were then further subdivided by running each group's shape data through a hierarchical clustering analysis. The analysis showed that pots in each motif group clustered into distinct shapes. Further analysis revealed that some shape groups shared a close relationship with pots from other motif groups. Two distinct group combinations were identified from the dataset, and these were interpreted as representing the output of at least two individuals or workshops.

**[Bowers, Laura](#) (2018) *Change over time on Mana Island.***

This thesis is centred around an analysis of faunal material from a 1990 excavation at site R26/141 on Mana Island, Wellington. This material was used to infer patterns of change over time in the uses of Mana Island; from a temporary fishing encampment in the early fifteenth century to a more permanent occupation by Ngāti Toa in the early nineteenth century. Faunal material from three culturally deposited layers was sorted, identified, and quantified. The five major classes contributing to this analysis were shellfish, fish, mammals, birds, and reptiles. Several of these classes of faunal material from Mana had been partially or wholly identified and quantified in the past, but only one in detail enough for publication.

Minimum numbers of individuals (MNI) were calculated for each taxon, and the MNI values used along with existing published data to develop meat and energy yield data for each class. This combined data was used to analyse change over time in catch rates, habitat exploitation, dietary components, and activity patterns in relation to faunal exploitation.



Shellfish were not a large contributor to the diet of the occupants of Mana Island during either occupation period. What shellfish was present was mainly locally gathered, with a few exceptions. Those few exceptions varied between time periods, likely as a result of differing mainland resource patches. Fish were by far the largest contributor to diet. Fishing methods appeared to have changed over time to a heavier reliance upon netting in the later occupation. A decline in snapper catch rates was also noted. The mammal bone mostly reflected the known presence/absence of species on and around Mana, and no major trends were noted. Avian species were a relatively steady dietary contributor over time. Moa bone was present only in the early occupation as expected. Forest and coastal birds were the most commonly exploited avian taxa, and the later period occupation demonstrated a decrease in catch rates of forest species in favour of a larger variety of coastal species. Reptilian contributions to diet were almost non-existent in the early period occupation, but boomed in the later occupation. This was suggested to be consistent with Te Rauparaha's penchant for ngārara hunts.

All evidence supplied in the analysis led to the conclusion that the early period occupation represented by Layers 3 and Black were the remains of a temporary fishing encampment, populated by a small family or hunting group. The late period occupation was known via oral tradition and historical documentation to be that associated with Te Rangihaeata and Te Rauparaha. All evidence found supports the presence of a permanent village with residents of much higher status than the early period occupation.

Comparison of these two occupation periods has revealed some stark differences in the way Mana Island has been used and occupied over the course of New Zealand history. These observations were compared to the wider Porirua and Cook Strait regions.

**Hearfield, Jamie-Lee (2018) *Buildings archaeology and elite housing in 19th century Christchurch.***

The field of buildings archaeology in New Zealand is understudied and has resulted in the provision of architectural history rather than an archaeological investigation into what the design of the buildings tells us about the owners executing those architectural choices. This thesis set out to construct a comprehensive description of the archaeological record of buildings from one component of society in Christchurch, that could be compared in the future with similar studies of other social sectors to answer broader questions about how social status is reflected in the archaeological record. The focus of this research was on the elite end of society in Christchurch and the twelve case studies that fitted into my selection criteria were compared against each other to understand what features they shared. These features were grouped into four categories; architectural style, building size, exterior features and interior features to narrow down the comparisons between the buildings. This study found many overlapping elements between the elite buildings and the findings show that there are several features that can be used to identify elite buildings. There is also evidence that there are markers of a person's

status in the building they have built for themselves and their family. In the terms of this research it has shown that they used their buildings to display their wealth and social standing within the Canterbury society. In particular, with the size and architectural style of the buildings as well as the added decorated features both on the exterior and interior.

**Hil, Greg (2018) *Better management through measurement: Assessing the conditions of coastal archaeological sites using spatial technologies—applied to Blueskin Bay, New Zealand.***

The world's coastlines are becoming increasingly volatile for archaeological sites. This instability can be primarily attributed to climate change and its associated influence on oceanic processes, which are aggravating already unfavourable conditions for the endurance of coastal sites. Alongside these adverse developments have been rapid improvements in the abilities of scientists to observe, measure, and model the effects of those impacts. For archaeologists, advances in computers and spatial technologies offer the capability of quickly and accurately recording real-world positions of archaeological features across large coastal landscapes. This digitised site information can be incorporated into monitoring projects and spatial analysis, ultimately providing opportunities for improved site management strategies. Although these capabilities have been available for some time, many coastal nations, including New Zealand, have failed to fully implement them widely into site surveys or site management. As such, this thesis presents a three-step approach for assessing the conditions of coastal archaeological sites through a synthesis of documentary research, an in-person site survey, and computer-based spatial analysis. This methodological approach is then applied to Blueskin Bay, a New Zealand-based case study area. Together, the three phases divulged a significant amount of information about the estuary including its past and present site conditions, as well as the trajectories of shoreline change (erosion and progradation), and the possible future impact of rising sea levels across site areas. In addition to the presentation and application of the assessment approach are discussions regarding site management in New Zealand, coastal archaeological site impacts, spatial technologies, and the efficacy and limitations of the presented approach.

**Kurmann, Samantha Leigh (2018) *Colonising Aotearoa: A 'Familiar Landscape' approach.***

Aotearoa New Zealand was settled fast and efficiently by East Polynesians around 800 years ago. In Hawai'iiki, (the Homeland), Eastern Polynesians actively chose to establish village sites on the coastal flat, adjacent to the reef passage. This zone facilitated mobility and connectivity, which were key colonising strategies. Although the landscape in Aotearoa is different, the spit-bound estuary holds similar physical attributes to those of the preferred location in the homeland. Previous studies suggest that upon arrival to Aotearoa, people may have entrenched some facets of existing lifeways from the homeland into the new landscape by opting to settle spit-bound estuaries for reasons of familiarity. This research



studies the use of cultural continuity of key colonising strategies through the selection of place. This thesis adds to the debate concerning the initial phases of colonisation of Aotearoa by investigating fourteen archaeological case studies. These case studies are in locations that mirror the preferred location from the Hawai'iki Zone. To facilitate data collection, this thesis utilises Geographical Information Systems (GIS) alongside a descriptive analysis of the archaeological evidence (including site location and material culture). In doing so, this thesis demonstrates that the selection and utilisation of familiar landscapes does in fact show that people continued to practice similar colonisation practices. The persistence of some aspects of culture from tropical Polynesia are projected on the archaeological landscape of Aotearoa. These tell a story of balance between adaptation and continuity.

**Lane, Jennifer (2018) *A Marker to Remember: Transformations in Plot Attributes from 1870s - 1930s in Dunedin's Historic Northern Cemetery.***

Dunedin's Historic Northern Cemetery (DHNC) is a non-denominational cemetery that contains over 18,000 burials from 1873 to 1937 when the last plot was sold, although cremated family members are still permitted in family plots. Unlike contemporary cemeteries that were separated into denominational or ethnic divisions, DHNC was divided into four classes of blocks based on the sizing of these plots and the height of their memorial structures. In this study only Extra-First, First, and Second class plots are investigated due to a lack of memorialisation of Third class burials.

This research identified the transformations in 23 attributes of 1407 markers and plots: morphology; iconography; inscriptional elements (such as the memorial inscription, lettering, language, and epitaph); marker materials; height; condition; class; date and decade; footstones and materials; fences and materials; concrete coverings; masons markings; and geographic affiliations.

Transformations in the commemoration of individuals and attitudes towards death are inferred through marker attributes, which are influenced by the agency, identity, and ideology of the community (Edgar 1995, Higgins 1998, Hurley 1998). Identifying the stylistic and functional attributes of types of markers and memorials is important for understanding the transforming value of the deathscape to Dunedin's communities.

This study analyses the functional and stylistic transformations in markers and memorials in decades surrounding the First World War (1914-1918), specifically the transformations between pre-War and post-War decades. The study also identifies the implications of these changing attitudes towards death and commemoration in Dunedin society.

**Platts, Maeve (2018) *It's Your Shout! A New Way of Measuring Use Wear on Glass Bottles.***

It was not until 1922 that glass manufacturing was available in New Zealand and prior to this, glass bottles were considered valuable and useful objects. This lack of glass encouraged reuse. Reuse has implications

for consumption analyses and the interpretation of bottle glass assemblages but to date there has been no systematic method of documenting this. The following research examines if it is possible to quantify evidence of wear on glass bottles in a way that can be applied to archaeological specimens.

With the presumption that continued use of a bottle will leave physical evidence, a scale was produced for measuring the use wear on glass bottles. The scale was then employed on five different sites located in Christchurch. These sites consisted of a warehouse/brewery, a pub/inn, a bottle exchange and two domestic sites. The aim was to discover if it was possible to measure use wear on glass bottles and to see if there was any variation in the extent of use wear and, therefore reuse, within these sites and among different bottle types. This enabled the results to be used to contribute to a broader interpretation of the social life of Victorian Christchurch with an emphasis on the drinking culture of the time.

**Smith, Baylee (2018) *Fantastic Pa and Where to Find Them: A Spatial Analysis of the pre-European Pa of Aotearoa.***

This thesis presents a spatial analysis of pre-European Pa sites across New Zealand with a focus on the North Island. Few spatial analyses of Pa have utilised sophisticated statistical methods or been carried out at a large scale. Those that have largely do not account for potential confounders or investigate the implications of their results in terms of social organisation. These past studies therefore motivate our three research questions: What is the density distribution and clustering pattern of Pa sites in New Zealand? What are the dominant variables governing the density and clustering of Pa sites across New Zealand? What are the implications of the identified patterns in terms of social organisation?

Kernel density estimates are calculated for the Pa of the North and South Island. These estimates support previous statements by researchers about the distribution of Pa: Pa are most dense in the north of the North Island, decreasing southwards. The density of Pa is then compared to the density of non-Pa via the relative risk function in order to curb the confounding effects of population and bias introduced by unsystematic surveying. This shows that Pa density is relatively high through the central North Island and relatively low through Auckland and Northland. Clustering is explored using the pair-correlation function (PCF). This reveals that Pa show strong evidence of large clusters in the absence of deterministic heterogeneity. Heterogeneity in the Pa point pattern from sources such as geography and the human population distribution is then accounted for by utilising the inhomogeneous PCF. This suggests that Pa in the North Island form clusters that then repel each other. The central and northern regions identified by the relative risk are compared: the central North Island shows the same pattern as the North Island in general but the northern region demonstrates a second level of clustering at larger distances indicating clusters of clusters."

The spatial relative risk of Pa is modelled against temperature, solar radiation, land wetness, distance from the coast, soil drainage class, and

slope. In all the models fitted only the distance to coast parameter is significant. The parameter estimate indicates that the relative risk of observing a Pa increases as the distance from the coast increases. The spatial patterns identified are interpreted as indicating that society and by extension Pa were centred around the hapu, which were largely independent of their respective iwi, except in the northern North Island where there was more political centralisation. This resulted in a proportionately small number of large Pa in the north and large number of small Pa through the central North Island. More neighbours through the central region may have also promoted more Pa building. We conclude that Pa are driven more by social factors than environmental ones.

**Watson, Clara (2018) *Archaeology and Temperance: Measuring a Century of Household Alcohol Consumption in New Zealand.***

The temperance movement was a social reform movement which sought to limit alcohol consumption, and ultimately prohibit its sale. The high levels of alcohol consumption which existed in early nineteenth century New Zealand were responsible for many social issues, leading to concerns surrounding its sale and calls for reforms. These calls for reform came from temperance societies, with the first societies opening in New Zealand during the 1830s. As the movement grew in popularity, the debate over alcohol became mainstream with New Zealanders split in their views. From 1894 to 1987 New Zealanders voted in triennial licensing polls on whether they wanted the sale of alcohol to be prohibited. Whilst there has been research done on the historical aspects of the temperance movement, little study has been undertaken regarding the archaeological evidence for the movement. Material culture relating to both alcohol consumption and the temperance movement existed, meaning the movement should be present in the archaeological record. This thesis aims to examine the archaeological evidence for the temperance movement at the household level. It measures levels of alcohol bottles from two sites, the VRC site in Whanganui and the Gordon Road site in Mosgiel, from 1850 through to 1950. Both sites were large developments, covering multiple town sections, and their excavation resulted in the recovery of a high number of artefacts from deposits pertaining to several households. Alcohol bottles are used as a proxy for temperate behaviour, with the initial hypothesis being that alcohol bottle levels would have decreased during periods of temperance activity, and that given the scale of the movement, this decrease should be seen in a random sample of household assemblages. The results from this thesis are used to assess the success of the temperance movement and the impact it had at the household level.

**[Gaffney, Dylan](#) (2017) *Materialising Ancestral Madang: Aspects of pre-colonial production and exchange on the northeast coast of New Guinea.***

This thesis examines the nature of changing pottery production and exchange on the northeast coast of New Guinea in the pre-colonial past. Models in Melanesian archaeology suggest that the recent past, leading up to ethnographic contact, was a dynamic period of changing mobility, social interaction, and technology, and is crucial to our understanding of culture in the region today. Here, this important time of social and technological flux is investigated by examining the emergence of the extensive Madang (Bilbil/Bilibili) exchange network. This network was based around the specialised production and distribution of 'Madang-style' ceramics—a distinctive red-slipped, applied/incised tradition that has previously been found from Karkar Island in the north, to the New Guinea Highlands in the south, and the Bismarck Archipelago to the east. The major contributions of this thesis describe the recent survey, excavations, and analyses of Madang-style ceramic assemblages from the Madang coast: at Tilu, Malmal Village, and at Nunguri, on Bilbil Island. This analysis takes a technological approach to ceramics, following the chaîne opératoire, which can systematically examine the nature of production and exchange, and delineate past production groups working within broader communities of practice. In this way, the complete production and distribution sequence of the Madang-style is examined through a variety of traditional and geochemical techniques. Consideration is then given to the implications of these results to processes of production and exchange along the northeast coast generally, and to important, unanswered questions in Madang's culture history.

**[Health, Helen Rosemarie](#) (2017) *Phimai is the New Black: Assessing the Standardisation of Kiln Fired Phimai Black Ceramics from the Iron Age Site of Non Ban Jak, Northeast Thailand.***

This thesis set out to ascertain the nature of the Phimai Black ceramic tradition at the site of Non Ban Jak, Northeast Thailand. The research was undertaken to assess the degree of visual standardisation through a form-plus-fabric analysis of ceramics over time and through multiple contexts across the site. This in turn led to an investigation into the nature of social organisation surrounding pottery production at Non Ban Jak. Excavations at Non Ban Jak have revealed extensive residential quarter, burial chambers, and ceramic kilns. Along with a large ceramic assemblage, accurately dated context, and the evidence of production onsite, models concerning sourcing, cultural transmission, the nature of production, and previous models pertaining to Phimai Black could be assessed.

In one exploratory model, it was hypothesised that the ceramic tradition

originated as an elite good that was widely exchanged, resulting in local imitation and standardisation in production and form across multiple sites. Through this research it can be seen that Phimai Black moved from elite ware to common ware, its production carried out by independent specialists who lived with, and catered for, the community.

Burial offerings in terms of the Phimai Black tradition were concluded to be highly standardised at Non Ban Jak. Regardless of status and wealth, it was the social norm to use certain ceramics for burial, this is seen in the sets of ceramics reserved for different age groups. Individual grief and status associated with the deceased was not necessarily expressed in ceramic offerings, but mainly in offerings such as gold, carnelian and bronze ornaments. Social significance surrounding infant interment was prominent on site, these people would have put much social value on infant passing, as the most elaborate vessels were chosen.

The purpose of the Phimai Black ceramic tradition was to symbolise a community-wide goal to associate the deceased with the identity that reflected Iron Age communities across the Mun Valley. Phimai Black through time is seen to be made with a specific clay, showing that originally there was a set of ideals associated with these ceramics, linking to the emulation/imitation hypothesis. While vessel forms gradually transcended clay borders throughout the Iron Age, the standardisation of form highlights an effort to hold onto past beliefs, and to the identity of the wider community.

**Hurford, Jessie (2017) *Houses, Shrines and the Social Landscape: a study of architecture on Tetepare, Solomon Islands.***

By the late pre-contact period a distinctive cultural tradition involving skull shrine architecture, headhunting raids, and shell valuable exchange had emerged in the New Georgia archipelago of the Solomon Islands. This thesis addresses the architecture of Tetepare, an abandoned island located on the periphery of the New Georgia group. Using surveying data collected by Thomas (2008) 143 sites are subjected to two primary forms of analysis: classificatory and spatial. First, the morphology and materials of individual structures are examined to establish what types of architecture are present on the island. Second, two kinds of spatial analysis are employed to investigate different spatial patterns. To begin, architecture is quantitatively analysed at three scales of analysis: micro, semi-macro, and macro. Following this, quantitative and network analyses are employed to investigate the regional distribution of architectural forms identified on Tetepare. Certain differences in shrine architecture are seen to be localised expressions of practices more widely adopted, suggesting the exchange of ritual knowledge began to break down as Tetepare communities slowly dropped out of wider social networks. To some extent, the distribution of settlements to the east of Tetepare reinforces this narrative, as the most geographically distanced sites are the most heavily fortified.

**Kerby, Georgia (2017) *Redcliffs Archaeological History and Material Culture.***

Over 140 years of excavation events at the Redcliffs site complex on the edge of Ihutai, Canterbury, has resulted in a unique material culture collection in Canterbury Museum. The site complex's physical setting is located with easy access to a large range of resources, inland access routes, and shelter on Canterbury's east coast. However, it lay directly on the shores of a highly dynamic microtidal estuary, which was an open bay upon first Māori arrival to the area and has likely influenced past patterns of settlement and the preservation of the local archaeological record. This thesis has achieved two outcomes. The first was the organisation and synthesis of the archaeological history of the Redcliffs site complex, from 1865-2003, in order to recognise the state and availability of Redcliffs archaeological information for future studies. The second was the production of an artefact inventory and description of the Redcliffs site complex material culture collection based on records in Canterbury Museum.

This work supports that Redcliffs was the host of several temporary camps during winter spanning the mid to late 14th century AD to the early 16th century AD. Rather than Redcliffs being simply a 'Moa Hunter' camp, as it is often described, it was the locus of broad scale and opportunistic hunter gatherer practices, with a focus on fishing, shellfish collection, and fowling. Moncks Cave's material culture showed some distinctions to that of the rest of the site complex which, with what is previously known about its faunal record, reveals that large scale cultural changes were taking place between AD1400 to AD1500 in relation to the decline of moa and seal and likely local geomorphological fluctuations. While many more aspects of Redcliffs life need further investigation, particularly the site complex's chronology, the Redcliffs site complex's material culture and especially its organic artefacts have revealed a more detailed and realistic image of Māori everyday life during the earliest periods of settlement than previously seen in Aotearoa.

**Lilley, Kate (2017) *Kahukura: Faunal Exploitation in a Southern New Zealand Context.***

Kahukura lies near the cusp of two distinct but connected regions - Foveaux Strait and the Catlins. The following research examines Kahukura's site function and faunal exploitation. It explores how Kahukura relates to and compares with other sites in the Catlins and Foveaux Strait, its role in the broader settlement network and how environmental factors have influenced the region's archaeology. This study uses information from excavations and previous studies at Kahukura. A dense, stratified midden was analysed to establish the faunal resources that were utilised, the practices employed during exploitation and possible chronological changes.

Shellfish, particularly hard shore taxa, was the most abundant faunal class and was probably a relatively accessible and stable resource. Fishing was probably the main activity; coastal, demersal fish, commonly caught using baited hooks, were the most abundant, followed by fish commonly caught



using lures. Dog, whale and fur seal were exploited, although pinnipeds were less abundant than in earlier Catlin's sites. Of birds colonial nesting birds were most commonly caught, while coastal and forest taxa were found in low numbers. Some coastal birds may have been preserved and then consumed elsewhere. Taxa present at Kahukura tended to be most abundant during the warmer months. Few chronological changes were noted.

Kahukura's faunal assemblage was comparable to that at nearby Tokanui, which was occupied during a similar period. Rigorous analyses of other large middens in Foveaux Strait and Catlins are scarce. While fish taxa were generally similar to many middens in Foveaux Strait, shallow water taxa were less abundant.

Findings from Kahukura are consistent with current theories of settlement and chronology in southern New Zealand. Kahukura's main occupation phase was relatively brief - sometime during the fifteenth and sixteenth centuries. Like many other sites in the region, it is interpreted as a temporary camp associated with larger sites further north.

Occupation was focused on the exploitation of local resources - in this case, coastal fauna. Population depression of valuable taxa eventually forced the abandonment of the region.

## 2016

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### [Allen, Francesca Lesley](#) (2016) *Retrospective Anthracological Analysis of Two Early Coastal East Otago Polynesian Settlements.*

Curated archaeological charcoal assemblages are a significant palaeobotanical resource capable of providing insight into the human-plant interactions of the past. This thesis tests the appropriateness of two early Polynesian coastal east Otago charcoal assemblages, Shag River Mouth and Purakaunui, for retrospective anthracological analysis. The ability to inform on past fuel collection strategies and vegetative impacts is investigated through the taxonomic identification of specimens from within the two assemblages. The environmental impacts are investigated within the context of a modelled Initial Burning Period. Shag River Mouth is largely presented through single fire pit samples and was able to provide evidence of intensive resource depletion synonymous with the Initial Burning Period. Purakaunui provides a contrasting image of more sustainable resource management, distancing it from the trends predicted for early Polynesian vegetation management by the Initial Burning Period model. This research has shown that all curated archaeological assemblages can be revisited, although due consideration should be made as to research aims of such investigations.

### [Russell, Tristan Christopher](#) (2016) *Diet and Subsistence at the Hohi Mission Station: An historical archaeozoological analysis.*

Archaeological investigations at early New Zealand mission sites provide a unique opportunity to explore a period during which much culture

contact occurred between Maori and Europeans. The Hohi Mission Station, for example, was the first permanently occupied European settlement established on mainland New Zealand. Under the protection of Ruatara and the Rangihoua Pā, the settlement was the locus of ongoing exchanges that influenced the development of New Zealand as a nation. While some work has been conducted into mission archaeology in New Zealand, the field is still in its infancy and aspects of it, such as faunal analysis, remain largely underdeveloped. This thesis aims to address this knowledge gap by exploring the diets and subsistence strategies of the European missionaries at Hohi by utilising two methods of enquiry; the archaeozoological analysis of the faunal remains recovered during the 2013 field season and the analysis of the historical documentary record relating to missionaries. Using multiple lines of research allows for the most complete picture of missionary diet and subsistence strategies to be obtained. The historical record suggests that food resources were in limited supply, and much of it came from trade with local Maori. The archaeozoological analysis confirmed this notion, with a limited faunal assemblage providing few individual animals. The primary species mentioned in the documentary record was pig and this agrees with the results of the faunal analysis.

**Sutton, Nicholas Peter (2016) *Pots on the Move? The Nature of an Early Papuan Pottery Assemblage from Oposisi, Yule Island, Papua New Guinea.***

The central concern of the present study is identifying the nature of interaction between the 2nd millennium BP communities along the Papuan South Coast that produced and used the pottery type known as Early Papuan Pottery (EPP). Until recently, EPP was the earliest known in-situ evidence of ceramics on the mainland of New Guinea, occurring between c. 2000-1200 cal BP. This was thought to reflect a post-Lapita colonisation event. Recently reported discoveries along the Papuan South Coast of Lapita sites (c. 2900 cal BP; McNiven et al. 2011) mean a re-evaluation of the nature of South Papuan colonisation and interaction is now required.

To begin meeting this challenge, a combined stylistic and physicochemical analysis was undertaken on a sample of ceramics spanning the full local EPP sequence that were excavated at the Oposisi site on Yule Island. The use of physicochemical methods to study pottery production and how this changes over time can provide insights into the nature of interaction within a society. When physicochemical analysis is combined with stylistic approaches to analysing ceramics, a more nuanced picture of interaction can emerge than could be obtained with either of these approaches alone.

The results of the present study suggest that, similar to a model of Lapita colonisation and interaction in the Bismarck Archipelago (Summerhayes 2000a), EPP society in the first 200 years was highly interactive and mobile, as determined from the use of a wide range of raw materials in pot production. As expected, this mobility appears to have then decreased over the next 300-400 years. An unexpected finding was a late increase in

EPP mobility, as indicated by an increase in the number of clays being used by potters. Interestingly, the two highest periods of mobility during the EPP phase corresponded with the occurrence of the most striking types of decoration (shell impression and etching). Extending the argument of Summerhayes and Allen (2007), it is suggested that the elaboration of late EPP decoration might be attributable to intensified social ties between settlements in the Yule Island/Port Moresby regions, facilitating access to additional resources during a period of hardship brought about by the impact of increased El Niño-Southern Oscillation (ENSO) band variance. The previously published analysis of obsidian and chert artefacts from Oposisi (Allen et al. 2011) are interpreted here as being consistent with this model.

Consideration is also given to the relationship between EPP and the recently discovered Papuan South Coast Lapita. While it is no longer tenable to claim that EPP represents the first ceramic settlement of the Papuan coast, suggestions that EPP should no longer be considered a useful marker of a distinct period of social interaction along the Papuan coast (David et al. 2012) may go a step too far. The results of the present study are consistent with a continued argument that the beginning of the EPP phase marks a separate post-Lapita colonisation event.

**Tremlett, Luke Thomas (2016) *Medical Buildings and Medical Theory: An Archaeological Investigation of Ashburton Hospital, New Zealand.***

This research examines the extent to which hospital buildings reflect changing approaches to medical treatment in the nineteenth and early twentieth centuries. It uses Ashburton hospital as a case study, covering its initial construction in 1880, through subsequent periods of additions and remodelling up until the present day. The focus here is on four of the oldest buildings, and both historical information and buildings archaeology recording are used to define a room-by-room sequence of construction and modification events. Each event is analysed for attributes that reflect change over time at the hospital. The findings produced here are paired against evolving medical understanding and wider concepts of hospital building change to place Ashburton hospital within a global framework.

## 2015

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**Trilford, Danielle (2015) *Shell Microband Analysis as a Tool in New Zealand Archaeology.***

Recent improvements in animal biology and microscopy now allow for finer-grained analyses of microstructures in archaeofaunal specimens than previously possible. Novel new applications of microscopy methods applied to in the intertidal New Zealand cockle (*Austrovenus stutchburyi*) species demonstrate a strong link between microbands and tidal and lunar cycles. The application of the technique has significant implications for high-precision seasonal and absolute dating in New Zealand

archaeology. Applying the technique to a short-lived archaeological midden deposit from Wairau Bar demonstrates the time-of-death in archaeological samples can be calculated with much higher-precision than tools which are currently available in the temporal-dating suite. The method holds significant potential for sclerochronological, Bayesian applications in radiocarbon dating, and palaeoclimate analyses.

**Wadsworth, Tristan (2015) *The spatial distribution of pā in Tōtaranui/Queen Charlotte Sound, New Zealand.***

The distribution of pā sites in the central New Zealand region of Tōtaranui/Queen Charlotte Sound is investigated to determine the relationship between pā and other Māori archaeological sites, and the influence of maritime and introduced terrestrial resources. Particular aims of research are to investigate the role of visibility as a measure of defensibility in the distribution of Tōtaranui pā, and whether this distribution is influenced by the distribution of garden sites and karaka stands, two important introduced resources often considered to influence pā distribution at national levels. Additionally, evidence for gardening activity is ambiguous in Tōtaranui, for which there is a number of archaeologically recorded garden sites but a noted absence of gardening activity in the earliest historical records.

Investigation into the distribution of pā is done by comparing proximity and intervisibility of pā sites to a range of Māori archaeological site types (garden sites, karaka stands, midden sites, oven sites, other pā sites, pit sites, and terrace sites). Proximity of pā to other archaeological sites is quantitatively measured by way of cost distance analysis, and intervisibility of sites measured by way of viewshed analysis within Geographical Information Systems (GIS). Cost distances and frequency of intervisibility of pā to other archaeological sites is recorded and compared against a dataset of random points.

Based on the methodology used in the analysis, neither maritime nor introduced terrestrial resources had a significant influence on the distribution of Tōtaranui pā. A desire for high levels of visibility as a measure of defence was not found among these pā, as they did not have significantly larger viewsheds than random points. Pā were however, found to occupy spatially and visually central positions in Tōtaranui settlement systems, as cost distances from pā to other archaeological site types were significantly lower than cost distances from random points, and the frequency of intervisibility with other archaeological sites was higher among pā than among random points. Cost distance and viewshed analysis are shown to produce meaningful results in New Zealand archaeological contexts, and concerns are raised regarding the application of models based on distribution at national scales to individual regions, particularly those in areas considered marginal.

# 2014

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**Clifford, Emma (2014) *“Taking Maori Tikanga into the Pakeha Paddock”:  
Understanding the Return of Koiwi Tangata/Human Remains in New Zealand.***

The debate surrounding the return of human remains to indigenous communities has morphed from a contentious and hotly debated issue to an acknowledged part of many museums and institutions policies. The acceptance of an onus to return indigenous human remains to their descent communities has led to the opening of a dialogue worldwide. This dialogue, although varied in its success, is an important dialogue for the archaeological community to both understand and participate in, particularly as they become increasingly involved. The aim of this thesis is to understand this dialogue in a New Zealand setting. This is done through an analysis of a case study of the process of return of koiwi tangata from Canterbury Museum to Rangitane o Wairau. This case study focused on the use of key participant interviews to highlight the dialogues within the process as well as the implications of that process. Ultimately, the case study highlighted the importance of partnership and communication in this dialogue as well as the practical nature of these discussions. The discussion of the case studies key themes in relation to wider New Zealand social, political and cultural traits as well as international case studies demonstrates a universally similar dialogue based on establishing cultural affiliation and the practicalities of reburial. However, the relationship between the crown and Maori in the form of the treaty of Waitangi, the precedent set by treaty settlement claims and the adoption of these principles and aspects of Maori tikanga by museums has resulted in a unique method of establishing descent as well as how the New Zealand dialogue functions.

**Codlin, Maria (2014) *Household Architecture and Religious Proscription in Pre-Contact Hawai'i.***

In ancient Hawai'i, elites employed ideology as a way of acquiring and stabilising political and economic power. Material evidence of this is found in the numerous temples throughout the islands and in the formalised rules for constructing elite households. Ethnohistoric literature describes Hawaiian households as a collection of buildings with specific functional purposes. By segregating these activity areas, people were seen to observe kapu, a Polynesian ideological concept which, in Hawai'i, includes restrictions around gender and eating practices. This adherence was particularly vital to the elite as failure to observe kapu could pollute mana, the divine source of authority and power. However, it is unclear how kapu shaped the daily lives of non-elite Hawaiian society. This thesis addresses this problem by employing a high-detail GPS survey and assessment of pre-contact households in a coastal section of Manuka, Ka'u district, Hawai'i Island. A number of attributes were identified from ethnohistoric

accounts which would reflect the practice of religious orthodoxy in the home. The results suggest that kapu, and Hawaiian religion more generally, was practiced in remarkably similar ways across the social ranks. Future research in this area will have important implications for how archaeologists view the kapu system, and will provide an avenue for research which has cultural significance for Hawaiian communities today.

**Cunliffe, Emily A. (2014) *Whales and Whale Bone Technology in New Zealand Prehistory.***

This thesis explores the use of whales as a material resource, and the role that these animals played in the Māori lifeway during New Zealand prehistory. The research examines the methods used in procuring and processing whale bone, and discusses the sorts of items that prehistoric Māori manufactured from whale bone.

Two approaches to the analysis of the role of whales as a resource are taken in this thesis: the first is a distributional study which compares the relationship between whale stranding hot-spots and the geographical distribution of archaeological sites at which whale bone has been reported. It was hypothesised that a strong correlation between these two datasets would indicate that people were locating their settlements near to whale stranding hot-spots to take advantage of the high rate of whale strandings. Secondly, a taphonomical analysis of an industrially worked whale bone assemblage from Kahukura, Murihiku, was undertaken to identify the methods used in processing the bone and to determine the tools being used and the artefacts that were being manufactured.

Industrially worked whale bone occurring in New Zealand archaeological sites was processed using tools which were not intended for the specific use of processing whales. Adzes were the most commonly applied tools, although the use of anvil stones to provide a solid platform for bone working is unique to this resource.

Whale bone in archaeological sites does not correlate strongly with the geographic distribution of whale stranding hot-spots, showing that although Māori were taking advantage of whale strandings whenever they were encountered, they were not a resource which was relied on or factored into their subsistence strategy. The overall finding of this thesis is that Māori utilisation of whale strandings was opportunistic.

Communities were not locating their settlements to be close to whale stranding hot-spots, nor is there evidence for a specialist whale bone working tool-kit. However, Māori clearly had a good understanding of whale strandings and the physical properties of whale bone, and were efficiently processing and utilising this resource whenever it was encountered.



**Lawrence, Megan Sarah (2014) *Backyard Historical Archaeology: Unravelling past lives through analyses of the archaeological remains from 26 St. David Street, Dunedin.***

This research focused on the archaeological remains from the 26 St. David Street site (144/548) in Dunedin, New Zealand. Although just one site, analyses illustrated that the archaeological remains represent multiple households and businesses from the second half of the nineteenth century into the early twentieth century. The examination of deposits, artefacts and historical records identified depositional processes and chronological timeframes, narrowing down potential contributors to the assemblage. Further analysis of specific artefact types and functions highlighted domestic and commercial activities that occurred at the site, as well as various relationships that formed and occurred within, between and beyond these residential and business spheres of the local neighbourhood. In these relationships and activities, such themes as sanitation and cleanliness, leisure and entertainment, and consumerism were explored. Moreover these investigations, alongside a brief analysis of artefact quality, elucidated how activities, interactions and individual expressions within a low middle- to working-class environment are positioned in regards to underlying roles, ideals and values associated with aspects of individual, household and community identities. The many private and public social interactions were highlighted as being of great importance for this growing and changing North Dunedin community. Furthermore, while natural and cultural formation processes effect what is represented archaeologically, the deposits and their contents provided a look into the regional, national and international processes and frameworks of an industrial world that have shaped the complex webs of past interactions, consumer choices, and daily practices reflected in the 26 St. David Street assemblage.

**Potts, Kirsty N. (2014) *Murihiku Pa: An Investigation of Pa Sites in the Southern Areas of New Zealand.***

This Master's Thesis examines why there are fewer recorded pa (fortification) sites in Murihiku, the southern-most region of New Zealand. Previous research on pa sites has primarily focused on areas with high distributions of recorded pa, such as the Northland, Auckland and Waikato regions. This thesis examines the idea of the enclosure, using pa sites as a means through which to view variation in the form and function of enclosed sites. A testable methodology was formulated to establish a data set of archaeologically visible pa sites within Murihiku. Data was compiled from a range of sources, drawing upon archaeological, traditional, environmental and historical sources to produce a list of locations that has been identified, in some form, as pa sites. The resulting 31 sites were critically examined through field visits and the identifying attributes used to categorize these sites as pa. Subsequently, four archaeologically visible pa were confirmed; two prehistoric sites, Mapoutahi and Pa a Te Wera, and two historic sites, Te Waiateruati and Te Kiri o Tunoho. The nature of pa and their role in the late prehistoric period in Murihiku was investigated in order to evaluate the theories on

why there are so few pa recorded. Pa sites are part of a dynamic and fluid continuum of site types that range from open to fully enclosed sites. The positions of these sites reflect the locations of socio-economic events, particularly the focus in the late prehistoric period on the east Otago coast. The historic pa appear to have developed in response to more external events, occurring to the north and south of Murihiku. Pa were important occupation sites within the settlement pattern, however, a lower population, varying motivations for warfare and their location south of the horticultural line should be considered as reasons for the fewer number of recorded pa sites in the region. This research project offers a new perspective on settlement in the late prehistoric period in Murihiku. Furthermore, it illustrates the value of understanding enclosed settlements in the occupational history of Murihiku, even though features such as pa are not as common or widely distributed as their northern counterparts. This study supports recent interpretations of Maori pa as multifunctional, multifaceted and complex sites that changed through time.

## 2013

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**[Alderson, Helen Alycia \(2013\) \*The Political Economy of Monumental Architecture at Nan Madol, Pohnpei, Federated States of Micronesia.\*](#)**

Nan Madol is a monumental 2,000-year-old mortuary and administrative site. It was the seat of the island's rulers, the Saudeleur, between A.D. 1200-1300 and A.D. 1500-1600. Nan Madol consists of 90+ artificial islets, stretching over 60 ha in the lagoon of Pohnpei, in the Federated States of Micronesia. Each islet was built from columnar basalt, boulders, and coral. Indigenous traditions link a dynamic political narrative strongly with the building of Nan Madol that involves the rise and fall of the Saudeleur. Monumental architecture built under the direction of the elite is a form of materialised ideology and can be interpreted to provide an understanding of past political development. As such this thesis asks: how does the investment in building monumental architecture, as tracked by columnar basalt used at Nan Madol, compare with Pohnpeian indigenous political history? Investment expended in building Nan Madol is examined in two ways. Firstly, 222 basalt stones are geochemically identified to source using a portable PXRf machine. Secondly, labour estimates are performed on 207 basalt columns. The resulting data is reviewed through a chronology that uses indigenous history, the results of previous archaeology, and a new architectural seriation for the islet Nan Dawas. The source and labour data illustrate a pattern of island-wide involvement in building Nan Madol, resource depletion of a specific source, and what appears to be a peak in labour around the 13th century before a decline. When compared with indigenous traditions, the data adds another layer to our understanding of Pohnpeian political history.

**Bell, Alexander Campbell (2013) *The Sweet Potato Factory - An Archaeological Investigation of the Pouerua Cultivation Landscape.***

Pouerua is a volcanic cone at the centre of a large archaeological landscape in the inland Bay of Islands, Northland, New Zealand. The volcanic cone has been extensively modified by Maori in the past, and the surrounding landscape shows similar levels of widespread modification. The results of the field surveys and the investigation of the horticultural features indicated that the horticultural landscape at Pouerua was not one large development but rather a series of smaller constructions that overlapped and abutted one another. The interpretations of the horticultural data were used to investigate whether temporal and spatial change could be identified in the surviving horticultural systems. The results of the investigation of both the individual horticultural features and the horticultural systems was used to investigate how the cultivation landscape at Pouerua related to the numerous pa and kainga in the area. This section examined whether the horticultural features could be used to The results of this study suggest that the horticultural aspect of the Pouerua landscape underwent a series of changes in a similar vein to the pa and kainga within the same area.

**Chen, Yi-Lin (2013) *Time of Transition: Patterns of Obsidian Exchange and Utilisation during the Lapita and Post-Lapita Periods on Watom Island, Papua New Guinea.***

The aim of this research is to investigate the nature of the social and economic transition occurring between the Lapita to post-Lapita periods on the island of Watom, East New Britain Province, Papua New Guinea. Archaeological obsidian from the localities of SAC, SAB, SDI and SDI6 is studied via provenance analysis (PIXEPIGME and PXRF) and technology analysis, in order to examine the spatial and temporal differences in obsidian source selection and usage. Results from the analysis undertaken revealed continuities and discontinuities in obsidian use between the Lapita and the later transitional periods. Continuity is demonstrated by the consistent use of expedient technology the complete absence of resource maximization during the two periods. Finally, the dominant use of obsidian originating from West New Britain (mainly the sub-sources of Kutau/Bao and Mopir) and the use of Admiralty obsidian (mainly the sub-source of Umrei) as a secondary supply of obsidian were constant over time. Discontinuity between the phases was demonstrated by an increase in the quantity of obsidian transported into the island and the rising dominance of West New Britain obsidian (especially the Mopir sub-source) in the transitional phase. From the results summarized above, it was argued that changes in social distance and/or exchange relationships occurred over time. That is, while the communities on Watom Island maintained exchange relationships with groups in the direction of the Admiralty Islands during the later periods, they had closer social ties with those in the West New Britain source region. Furthermore, the presence of a highly concentrated distribution network of Mopir obsidian within the localized region of Watom and the Duke of Yorks during the transitional phase was proposed. The existence of this localized network

raises the possibility of regionalization taking place, and also suggests a close social relationship between communities from the two locales.

**Garland, Jessie (2013) *Medicating Miners: The Historical Archaeology of the St Bathans Cottage Hospital.***

The following research examines the nature of health care provision in Central Otago during the late nineteenth and early twentieth century through an archaeological and historical investigation of the St Bathans cottage hospital. Material excavated from a cesspit on at the hospital site has provided the basis for a detailed investigation of the practice and provision of medical care in the settlement and surrounding district from the early 1890s until the 1920s. The information derived from analysis of the archaeological assemblage has been combined with documentary sources to provide a comprehensive illustration of medical and domestic life at the cottage hospital, with an emphasis on the relationship between the dual function of the building as both a domestic residence and medical institution. This has, in turn, been used to explore the way in which the cottage hospital interacted with its wider social and geographical context on a local, national and international scale, including how that context influenced and was adapted to the day to day operation of a small health care institution in rural New Zealand.

**Geary Nichol, Rose Caroline (2013) *'Wrought into being': An archaeological examination of colonial ideology in Wellington, 1840-1865.***

The archaeology of urban environments in New Zealand is typically relegated to cultural heritage management investigation. This type of investigation is restricted by the limitations of the cultural heritage management framework, and urban archaeological investigation is often compelled by heritage regulation rather than academic inquiry. This has contributed to a limited archaeological understanding of an important period in New Zealand's history – that of early colonial urbanism. Colonial urbanism is not often examined as a phenomenon in and of itself in New Zealand's archaeological discipline, nor is archaeological theory applied to this context at a sustained and meaningful level. This thesis compiles existing archaeological and cartographic evidence from this period in a geographic information system project and examines its relationship with the ideologies that influenced New Zealand's colonial settlers.

Wellington was the first urban settlement established by the New Zealand Company in New Zealand in 1840. The Company and its settlers espoused an ideology strongly influenced by 19th century capitalism and British imperialism. This ideology was reified by colonial theorist Edward Gibbon Wakefield and emphasised a perception of land as material. In view of this emphasis, archaeology offers a particularly appropriate approach to an examination of the relationship between this ideology and the urban form created by the settlers.

Using the settlement of Wellington as a case study, this thesis examines colonial urbanism through a unique theoretical framework constructed using archaeological, historical and urban planning perspectives. This framework facilitates an alternative understanding of the colonial urban

environment by reinterpreting the city as a material artefact. The data compiled in this research displays how this artefact – the city – is a product of its colonial creators, and, in particular, the ideology that influenced these colonists. It identifies a causal relationship between the motivating ideology of the colonists and the form of the city artefact, highlighting the impact of ideology on the process of urban development.

**Hauman, Cathleen (2013) *What's Cooking? An Archaeological Residue Analysis of Ceramics from Thailand.***

Residue analysis is a relatively new method of investigating the past, and an analysis of ceramic residues has never been undertaken in Southeast Asia. The purpose of this study was to determine whether this type of analysis could successfully be carried out in the Southeast Asian context. Following this, the aim was to, as accurately as possible, identify the sources of the ceramic residues. Sherds were collected from four sites in Thailand, Ban Non Wat, Ban Salao, Khok Phanom Di and Nong Nor. Residues were extracted from these sherds using a solvent in a Soxhlet apparatus. The extracted fatty acids were analysed using gas chromatography mass spectrometry in the Departments of Chemistry and Human Nutrition at the University of Otago. Carbon isotopic signatures were also obtained using gas chromatography isotope ratio mass spectrometry in the Department of Chemistry. The fatty acid results suggested an organic source for the residues from all the pots. The most likely food sources were plant, fish or mammal, or a combination of these. The  $^{13}\text{C}$  isotopic results showed that the most likely source was a C3 plant, or an animal feeding on these plants. The faunal data from the archaeological sites support these conclusions. In conclusion this study showed that residue analysis is a viable avenue of archaeological enquiry in Southeast Asia.

**Woods, Naomi (2013) *Artefacts and Community Transformations. The Material Culture of Nineteenth Century North Dunedin.***

Large quantities of artefacts have been recovered from development-based archaeological investigations in North Dunedin during the last decade. There has been no attempt, however, to draw this material together and develop a picture of the neighbourhood as a whole. This area, as with the rest of Dunedin, experienced major economic and social transformations during the second half of the nineteenth century as a result of colonisation, the gold rush of the 1860s, economic depression once this boom was over and the process of industrialisation in the 1880s and 1890s. The aim of this thesis was to discover whether these transformations are visible in the material culture record and if the artefacts can add to our understanding of these processes and how they affected the people living in North Dunedin at this time. This analysis of the nineteenth century North Dunedin community was conducted without the highly contextual household information that usually forms the basis of community studies, instead using the evidence gathered from the material culture itself. The artefacts from one primary study site (234-242 George Street) were analysed directly while the material from the

rest of the study area sites was evaluated through data presented in excavation reports. Evidence relating to the massive influx of wealth and people that came with the gold rush, the hardship faced by many businesses after this gold ran out and the social and economic effect of industrialisation were all able to be identified in the material culture, as was the development of a distinct North Dunedin identity. Comparisons were then made between the North Dunedin findings and other colonial communities that have been studied in a similar way, which revealed that parallel processes were affecting many British colonial cities at the end of the nineteenth century, but the ways in which they were handled was often unique and contributed to each city's character. These results not only demonstrate the possibilities of less context driven community studies but also highlight the potential of development-based archaeological investigations and reports as invaluable academic resources.

## 2012

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### **Carter, Matthew John (2012) *People, Place and Space: The Maritime Cultural Landscape of Otago Harbour.***

The relationship between human culture and the environment is an area of fundamental importance to modern archaeological enquiry. The investigation of this relationship led researchers to develop what has become known as the landscape approach, which focuses on the archaeological and environmental evidence of the interactions between people and the environment. Over the last two decades this approach has been utilised to investigate maritime cultural landscapes, with considerable success – albeit internationally. In New Zealand, landscape archaeology has been practised since the late 1970s. However, the investigation of maritime cultural landscapes has yet to be explored; resulting in considerable gaps in our understanding of the past.

This study applied the maritime cultural landscape approach to Otago Harbour in order to investigate the relationships between the harbour's inhabitants and the marine environment. Evidence of this interaction was investigated through archaeological records of sites with maritime associations, targeted site survey of areas of foreshore and historical research.

The evidence of these interactions were discussed in relation to the themes of marine resource exploitation, navigation and landing places, hulks and abandoned watercraft, shipbuilding and repair, shipwrecks, harbour warfare and defence, and anthropogenic change to the harbour. The application of the maritime cultural landscape approach to Otago Harbour revealed a great deal of information about the ways in which the inhabitants of Otago Harbour have interacted with the marine environment over time. This study also showed the considerable strength of this framework as a tool for heritage management and the need to



investigate the maritime cultural landscapes of the other major harbours of New Zealand.

**Hogg, Nicholas William Stanton (2012) *Specialised Production of Early-Lapita Pottery: A Skill Analysis of Pottery from the Island of Emirau.***

This thesis presents the results of a skill analysis augmented by a decorative analysis and temper analysis, conducted upon Lapita pottery from the Early period site of Tamuarawai (EQS), Emirau Island, Papua New Guinea.

Lapita pottery is an essential component of the Lapita Cultural Complex and an important source of information through which the lives of the Lapita peoples can be better understood. Research into the production of pottery during the Early-Lapita period (3300-3000/2900 B.P) initially argued for such pottery to be the result of a “specialised production strategy;” of which two “types” were defined “Specialised Regional Production” by Kirch (1988, 1990, 1997) and Hunt (1988, 1989) and “Mobile Specialised Production” by Summerhayes (2000a, 2000c, 2001, 2010). However, later research challenged this interpretation, arguing instead that specialised production was not occurring.

This research utilises a skill analysis, a technique which studies the level of skill invested into pottery production, in combination with a decorative analysis and temper analysis, to identify whether a specialised production strategy was employed to produce the Early-Lapita pottery assemblage of EQS and if so, what “type” of specialised production was occurring.

It is argued that the results of these analyses indicate that the EQS assemblage was produced via a specialised production strategy and that this indicates that specialised pottery production was occurring during the Early-Lapita period. The “type” of specialised production employed is argued to be similar to that of “Specialised Regional Production”, whereby whole vessels or potting materials were being moved to the Island of Emirau. It is further argued that the “type” of specialised production employed to produce the EQS assemblage was specifically designed to function in an island environment with minimal resources for pottery production.

Finally, the technique of skill analysis has never been employed upon a Lapita assemblage before and therefore can be considered experimental in nature. Due to this a thorough review and critique was completed in regards to the techniques effectiveness for the identification of specialised production. It is argued that the technique was successful in identifying specialised production and “types” of specialised production but that it also had a few limitations.

**Mitchell, Peter John (2012) *Tracks and Traces. An Archaeological Survey of Railway Construction Related Sites on the Otago Central Railway.***

The focus of this thesis is the archaeology of workers' camps associated with the Otago central Railway. The railway was begun in 1880 and completed in 1920. Using the historical record in conjunction with remote sensing and site survey, this thesis separates site related to the construction of the Otago Central Railway from those involved with the

everyday operation and maintenance of the line. Eight sites are investigated using a two site type model to determine whether a site was a Public Works Department site or that of a private contractor. The research has shown that Public Works Department camps were situated in the most favourable locations while those of the private contractors' were located as near to the work at hand as possible.

**Teele, Benjamin Whittemore (2012) *Style Vs. Substance: Understanding Prehistoric Samoan Pottery Production on the Island of 'Upolu using Stylistic and Chemical Techniques.***

This study focused on prehistoric pottery production patterns in the Lapita and plainware periods from the islands of 'Upolu and Manono, Samoa. Incorporating a holistic approach to excavated pottery assemblages, stylistic, temper and clay analysis was undertaken to identify whether initial production technology matched a larger regional signature and to test how production strategies changed through the plainware phase. Ceramics were sampled from Auckland War Memorial museum collections of five previously excavated sites. This encompassed the only known Lapita site of Mulifanua, as well as a range of temporally and geographically distinct plainware sites located along the north coast of Manono and 'Upolu. A combination of stylistic and physico-chemical techniques were undertaken to determine the full range of production variation present in Samoan ceramics. Stylistic analysis is a common method on Lapita assemblages, providing insight into distinctive cultural markers and regional cultural suites. This technique is, however, limited on plainware assemblages due to restricted vessel forms and an almost complete absence of decoration. Therefore, chemical analysis was undertaken using an electron microprobe on the temper and clay components of 149 sherds to produce data on production patterns associated with the plainware and Lapita phases. The results of the stylistic analysis confirm a lack of distinctive features on plainware pottery, and argue against the thin/thick ware division established for pottery assemblages in the archipelago. Two of the plainware sites, Falemoa and Jane's Camp show strong similarities in forms of decoration to the only known Samoan Lapita site of Mulifanua. A red decorative slip is recorded from these three sites, matching similar descriptions from assemblages on other islands within the archipelago and further afield. The presence of a carinated vessel from Jane's Camp suggests continuity in vessel forms between Lapita and early plainware sites. Early or transitional plainware sites might therefore be characterised by more diverse vessel forms than is currently established. The results of the chemical analysis indicate that almost all pottery was produced locally, with the number of resource procurement zones declining over time and a change in production techniques. Initial production utilised a variety of sources, most centred on the coast. Through the plainware period the focus shifts towards inland sources, with pottery produced at the end of the sequence from Sasoa'a showing a marked change to local trachytic tempers. The homogeneous nature of 'Upolu makes differentiating clay sources difficult, but they appear to match a pattern of local production.

This research shows how production patterns for initial 'Upolu settlement were established, including the plainware period, an area currently understudied in Pacific archaeology. Initial colonisation by a Lapita people at Mulifanua was shown to be reflective of a larger regional colonising strategy, utilising the same production technologies and stylistic elements. There appears to be strong continuity in pottery production between the Lapita colonisers and the subsequent plainware settlements. Pottery production is local, with vessels becoming thicker and more heavily tempered over time, suggesting either changes to resource access or the exhaustion of quality clays. Overall production patterns for the two islands match previous work undertaken from other islands in the archipelago. This research provided a key quantifiable dataset and offers the opportunity to further expand prehistoric ceramic studies from Samoa. This thesis has shown continuity in pottery production between Lapita and plainware phases, and suggests the Samoan identity is descendant from the first people to colonise its islands.

## 2011

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**[Bowron-Muth, Sreymony Phal \(2010\) \*Buller and Heaphy: A social interpretation of two Archaic West Coast Settlements.\*](#)**

This thesis investigates the material culture assemblage and spatial patterning of two Archaic sites on the West Coast of the South Island – Buller River Mouth (K29/8) and Heaphy River Mouth (L26/1). Two key themes are explored in this thesis. The first theme argues that New Zealand archaeology can benefit from ideas and discussions from social anthropology. The second theme investigates the concept of space in both archaeology and social anthropology, and uses this as a medium to explore how links can be made between the two sub-disciplines. The analysis of material culture showed that Buller and Heaphy are both artefactually representative of the Archaic Phase of New Zealand prehistory. Both have a large and varied artefact assemblage containing adzes, flakes, blades, hammer stones, minnow lures, drill points and other artefact types.

The intra-site spatial analysis demonstrated areas of concentrated fire features, cooking areas, pavement areas, possible domestic buildings, stone working activity areas, adze caches, areas of oven rake out, specialized stone material manufacturing floors. With three exceptions, both Buller and Heaphy share features and activity areas that were common with each other.

This thesis argues that New Zealand archaeology can benefit by using ideas from social anthropology, and demonstrates how this can be done by interpreting the artefactual and spatial results in light of some ideas from social anthropology. The interpretation focused on three key ideas: 1) The social construction of space, 2) Ian Hodder's concept of *Domus*, *Agrios* and *Foris* and 3) Lévi-Strauss notions of *sociétés à maison* or house societies. The resulting discussion illustrates how a rich series of

overlaying contextual interpretations can be an effective approach to understanding and interpreting New Zealand archaeology.

**Brown, Andrew Alexander (2011) *Material Culture Traditions of Prehistoric Murihiku.***

In the last two decades advances in archaeological understanding of radiocarbon dating have led to the re-establishment of settlement of New Zealand at around 1300 A.D., a shortening of the prehistoric sequence by up to 500 years. These developments have overturned pre-existing models of regional culture change throughout New Zealand. While much information regarding change in Murihiku or southern New Zealand exists, little of it has been conceived within the 'short chronology'. This thesis aims to re-develop an understanding of change in the region through the use of material culture studies. Two material culture traditions, adzes and fishhooks, from Murihiku were analysed in this research. Artefacts were subjected to paradigmatic classification and the frequency of resulting types used in the seriation of sites and cladistics analysis. Seriation also provided a means of plotting the development of individual character traits through time. The results of analysis showed a high degree of continuity across all sites in regards to the occurrence of artefacts, however, based on the frequency of forms seriation proved to accurately order the sites chronologically. Diachronic analysis of characters within the adze and fishhook traditions also provided interesting information. The adze tradition appeared to exhibit a constriction in the range of characteristics and the rise of simplistic and ubiquitous forms. Conversely fishhooks showed an increase in elaboration over time. The results of this analysis suggest that, relative to other regions, the change in Murihiku is conservative. This pattern may be the result of continuity in many economic activities, for which material culture traditions had been adapted, throughout the prehistoric period due to the absence of horticulture in the region.

**Findlater, Amy Margaret (2011) *Recontextualising Material Culture: An investigation of the minnow lure shanks from Kawatiri River Mouth and Wairau Bar, Southern New Zealand.***

This research examines the problem of the concept of context for New Zealand archaeology and material culture studies. It is argued that it is not a lack of context associated with material culture but the perception of context that is problematic for archaeological interpretation. Although central to material culture studies, traditional archaeological perceptions of context have treated the concept as something to be mitigated against in archaeological practice. This has resulted in the underdevelopment of material culture studies and a focus on morphological, chronological and functional or utilitarian interpretations through the categorisation of material culture.

A case study investigating the lives of minnow lure shanks is developed in line with international perceptions of the concept to show instead how material culture shifts through contexts. A laboratory study of minnow lure shanks from Wairau Bar and Kawatiri River Mouth is juxtaposed with

ethnographic accounts, museum collections, exhibitions, artist inventions and mātauranga Māori which provide alternative sources of data and analogy. A life history approach is used to focus on the interconnectedness between social and technological processes in the past and present to show how lures have come to be through multiple biographies and transformations.

The outcome was a recontextualisation of lures with implications for the future of all New Zealand material culture studies. I argue that the shift from pearl shell to stone in New Zealand prehistory and its later abandonment was a lot more complex than a simple raw material switch involving the use of existing and transported social and technological strategies. The methodology adopted uncovered the variation in lures, reflecting broad strategies, and compared processes, choices and intentions. Minnow lures are bodies, connected to bodies and found with bodies with natural and aesthetic properties connected to the ritual and mundane - tapu and noa. Lures are part of a living tradition as one point of interaction and attraction between people, ancestors, the land, sea and taonga. This study urges archaeologists to consider their roles as kaitiaki taonga and kaitiaki maumahara to ensure material culture remains an enduring centre of enquiry.

**Glover, Jenepher (2011) *St Clair (Koterakeatea) and the Early Prehistoric Period Economy.***

Abstract unavailable

**Kirk, Fiona Margaret (2011) *Beyond reasonable doubt? Testing the cultural origin of bird bone recovered from archaeological contexts.***

It is often assumed that all avifaunal remains recovered from archaeological contexts have been deposited as a result of cultural activity. Increasingly, however, it is recognized that bird bones can accumulate within archaeological deposits as a result of natural (i.e. non-cultural) events and processes.

The problem of determining the origin of avifaunal remains has long been recognized by New Zealand archaeologists, but not systematically addressed. If cultural interpretations are based on excavated avifaunal assemblages, however, we must be reasonably confident of the cultural origin of the remains recovered, or our conclusions may be based on false assumptions.

This thesis proposes, tests and assesses a model designated "SPIT=O", which was constructed as a tool to distinguish between the cultural or natural origins of avifaunal remains recovered during archaeological excavation in New Zealand. Following SPIT=O, the physical nature of a site (S) and the palaeoecological details of New Zealand's predators (P) are considered, to establish all the potential agents and processes of deposition for avian remains at that site. The species identified in the recovered avian assemblage (I) and the taphonomic features and patterns exhibited by the specimens (T), are compared to taphonomic traces considered typical of potential predators and other taphonomic processes, to draw conclusions regarding their most likely origin (=O).

To test SPIT=0, the model is applied to an assemblage of small-bird remains (i.e. birds other than moa, Dinornithiformes) recovered during an archaeological excavation at Watsons Beach, South Otago (New Zealand Archaeological Association (NZAA) site number H45/10). Following the model, it is determined that the sample of avifaunal remains to which SPIT=0 is applied are, for the most part, cultural in origin.

Although developed to address the question of origin for avifaunal remains in New Zealand archaeological deposits, the methods applied in SPIT=0 could be applied in the analysis of any avifaunal deposit, palaeontological or archaeological, within New Zealand or elsewhere.

## 2010

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### **Harsveldt, Patrick (2010) *The Architecture of Isolation'. Defining the New Zealand Backcountry Hut.***

Over 950 backcountry huts managed by the Department of Conservation exist on public land in New Zealand. Whilst huts feature regularly in New Zealand outdoor literature and have also been addressed in academic publications, the term 'hut' itself is ill-defined, frequently appearing in the literature as an alternative to words such as shack, cabin, and more general terms such as shelter and dwelling. This study was done in order to identify the components of a typical New Zealand backcountry hut and thus to provide a definition.

A sample of 88 huts from within the Southland Conservancy was separated into historic function groups. This was then developed into a typology based on form. Major variables of the hut typology included plan shape, roof form, and threshold, whilst minor variables covered all other features of form, location, age and floor area. Key major and minor variables from this sample, namely typology, altitude, floor area, build date and number of beds, were then compared to huts found within three other regions in New Zealand. The results showed that whilst variations in hut form exist, a predominance of one particular hut type is found within the Southland Conservancy, as well as in three other regions. This form, termed a Type I hut, comprises a rectangular floor plan, gable roof along the building's length and a direct-entry threshold. The results show that this predominant hut type follows the form of late nineteenth and early twentieth century huts, suggesting that the mythology surrounding pioneer-era huts is in fact reality and that the traditions are linked through built features and materials used.

The findings have provided a clearer insight into what physical components comprise a typical New Zealand backcountry hut and allow for its definition thus: *"The backcountry hut is a 'back-to-basics' place of sanctuary from the elements with few creature comforts except for a hearth, sleeping surface/s and cooking preparation table surface. It typically comprises a rectangular floor plan with gable roof along its length and with direct entry threshold, regardless of size.*



*The hut is associated with physical work, no matter the purpose or build date." It is hoped that this hut typology may be tested in the future against further New Zealand or international examples.*

**Thompson, Adam (2010) *Land Snail and Soil Analysis in Atoll Archaeology: with Special Reference to Atafu Atoll, Tokelau Islands.***

In 2008 and 2009, the author spent a month on the island of Atafu as part of the Tokelau Science, Education, and Research program co-directed by David Addison and John Kalolo. During this time he assisted in archaeological excavation, collected land snails and soil samples, made a film, and became a part of an atoll village that welcomed him kindly into all facets of their community.

Atolls are commonly seen as marginal environments on the edge of sustainability. In many ways this is true: their soils are poor, their small land areas are susceptible to inundation by large storms, and most are still only reached by long boat trips removing them from contact with the modern world. But these same characteristics have been positives. Their small land areas mean that everyone lives in one tight-knit community. Their remoteness has preserved their culture. Their poor soils mean that only those determined may settle. And once settled these soils gain from the successive gardening activities that build the island up and add organic material and vitality to its base. From a low sandy, salty lump of coral in the middle of the ocean, these islands have become fertile oases through the many generations that have tended them. They are gardens; nothing exists on them that has not been modified by those that have lived on them.

This study looks deeply at the atoll, beginning with its young geology, its specific biogeography, its early archaeology, and its ecology. From these different sciences assumptions can be made about its land snail fauna. Natural colonizers had to be highly salt-resistant and able to arrive quickly, but most would be introduced by gardening activities. By careful sampling from the surface of the village islet, from the outer islets, and from column samples throughout its stratigraphy one can distinguish which species are natural, which inhabit the gardens in the poor soil, and which inhabit the gardens in the good soil. One can use these inferences to make statements about the environment of the past. And, in small ways, one can see how the land transformed from a low marginal island into a vital oasis full of splendid people.

## 2009

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**Butcher, Maria (2009) *Fish and Shellfish in the Colonial New Zealand Food System.***

Colonial New Zealand society can be accessed through historical archaeology. However, the full potential of the discipline in this country has yet to be realised. To date, historical archaeology in New Zealand has suffered from a lack of overviews, syntheses, or even of arguments. This

thesis is about a particular class of food – fish, shellfish and crustaceans – in the Colonial New Zealand food system. Eating is understood as part of a process, that begins when the food item is planted, gathered, bred or caught, and ends when the leftovers are thrown away. Evidence is drawn from a range of sources, to trace the process by which a living animal is transformed into a commodity, to food, to waste, and finally, to a representation of itself in an archaeological report. A re-analysis of published and un-published faunal data from relevant archaeological sites was undertaken, to determine what the archaeological evidence reveals about eating fish and shellfish in nineteenth century New Zealand. The remains of sheep, pigs and cows very much dominated the assemblages that were considered. However, these assemblages cannot be considered directly reflective of the diet. Based upon historical evidence, fish and shellfish remains are underrepresented in historic period assemblages. Historical research focussed upon three areas: supply, distribution and consumption. The historical evidence shows that fish and oysters were available to the pakeha colonists, from Maori suppliers in the early days, and later via the burgeoning colonial fishing industry. Cookery writing of the time shows that the readers of recipe books and newspaper cooking columns wanted to eat New Zealand fish, oysters and crustaceans.

**Mann, Sarah Rose (2009) *How to Catch a Leatherjacket: Prehistoric Fishing Strategies at Arthur Black's Midden, Opito Bay, New Zealand.***

This thesis is aimed at exploring the continuity between the fishing methods used in tropical East Polynesia and those in New Zealand. In order to investigate this fishbone from Arthur Black's Midden (ABM), Opito Bay will be analysed using an in-depth methodology where twelve elements (articular, ceratohyal/epihyal, cleithrum, dentary, dorsal spine, hyomandibular, inferior and superior pharyngeal plate, maxilla, opercle, premaxilla, quadrate, and scapula) were identified to fish taxonomy. This data will be used in-conjunction with information generated on the diet, habitat, and behaviour of the species of fish identified within the assemblage. This form of analysis has only been done once in New Zealand (Coutts 1979), and was carried out in order to establish which fishing methods may have been used to capture each taxa of fish. Initial qualitative results show that leatherjacket (*Parika scaber*) was the most abundant taxa caught at Opito Bay. This does not fit the regional fish catch outlined by Leach and Boocock (1993) or Anderson (1997), where snapper (*Pargus auratus*) is the highest ranked taxa. Based on the abundance levels of fish within the later levels of occupation for ABM and the information presented on each taxon, it can be implied that some form of either netting or trapping was employed at Opito Bay. There is also evidence that implies that the occupation of Opito Bay was a permanent settlement, not a temporary seasonal fishing camp. The methodology used in this analysis has showed the benefits of increasing the number of elements used in the analysis of fishbone from archaeological sites in New Zealand.

**Jennings, Christopher G (2009) *The Use of Southland Argillite in New Zealand prehistory: distribution, chronology and form.***

This thesis explores the use of six major sources of Southland argillite in New Zealand prehistory. The research investigated the use of the stone in terms of both extraction and manufacture technologies, but also its geographic distribution and the time periods it was in use. The sources were visited to describe their physical setting and the characteristics of the stone. Adzes from museum collections were investigated to identify Southland argillite adzes, determine their find locations and record morphological data. Chronological information was obtained using adze typologies and investigating Southland argillite associations with moa-hunting and radiocarbon dates.

The sources have differing physical characteristics and occurred in a variety of forms which required different methods of extraction. These forms had a direct bearing on the form of adzes and manufacture methods that were required depending on the limitations or advantages of the different stones.

Southland argillite was used in the first centuries after New Zealand colonisation, until declining a few centuries later. The distribution of the stone was mainly concentrated around Southland and East Otago, although also extending into Fiordland, Central Otago and Canterbury. Transient villages were the main form of settlement in southern New Zealand during this period of time, a system which procured resources through a larger territory of exploitation. Southland argillite was obtained, worked and deposited within this territory as part of this system. As this form of settlement declined due in southern New Zealand, Foveaux Strait was no longer heavily exploited and Southland argillite dropped out of use.

**McPherson, Sheryl Chawner (2009) *Bone Awls in Prehistoric New Zealand.***

Bone awls are a class of worked bone points that are poorly understood in New Zealand prehistory. With the exception of a dissertation on bone awls from the Chatham Island (Cave 1976), there has been no specialist study into bone awls from mainland New Zealand. The aim of this thesis is to compile the published literature available on bone awls from prehistoric New Zealand sites and produce a standardised methodology to analyse these implements. This research also examines what is published in the literature, and how this relates to what is present in museum collections.

Bone points from Little Papanui (J44/1) are selected to test the awl typology developed by Cave and to clearly define these artefacts based on morphological characteristics. Furthermore, this research determines if her typology is applicable for use on another awl sample and how the results from both sites compare.

The result of this exercise was the development of a new method for awl analysis that incorporates the strengths of Cave's typology and the research that has been conducted in the last 30 years. Additionally, this thesis identifies the issues that are faced when studying a difficult and poorly understood artefact class.

**Beu, Katerina (2008) *Towards explaining the long pause in the prehistoric colonisation of Polynesia.***

The Lapita people, the ancestors of the Polynesians, first appeared in the Bismarck Archipelago north of New Guinea in about 3300 BP (years Before Present). They migrated east and colonised the islands of the Solomons, Reef and Santa Cruz, Vanuatu, New Caledonia, Fiji, Tonga and Samoa. This migration occurred relatively rapidly, but upon reaching West Polynesia in about 2900 BP their eastward migration ceased. This cessation in migration is known as the long pause, and it lasted until the Polynesians, the descendents of the Lapita people, reached East Polynesia in c. 1200-1000 BP.

There are several theories that attempt to explain the reasons for the long pause. This thesis proposes that a combination of constraining factors, including markedly decreased island accessibility east of the Andesite Line (Di Piazza et al., 2006), an undeveloped sailing technology (Anderson, 2000), climatic constraints imposed by the need to wait for El Niño periods and their concomitant westerly winds in order to sail eastwards (Anderson et al., 2006), and social factors, provides an adequate explanation for the Polynesian pause.

This thesis is based on a review of the literature, and critically analyses the various models of Polynesian prehistory by comparing them against the established archaeology.

**Edwards, William Glyn (Bill) (2008): *Techological Change at Hayes Engineering Works, Oturehua, New Zealand.***

How does innovation in material culture occur? In this thesis, I critically examine the role of the individual in this process and contrast it against a wider background of political, economic and technological change.

The case study selected is Hayes Engineering Works, Oturehua, Central Otago, New Zealand. Hayes Engineering manufactured durable products for the agricultural industry. The period selected for this thesis is 1895 to 1926, which coincides with the founders Ernest and Hannah Hayes' active involvement in the business.

The theoretical position of this thesis is that change in material culture is not the result of individuals, but builds upon the efforts of many. I examine and demonstrate the connections between the artefacts at Hayes Engineering Works and the wider world.

This is in contrast to a widely held myth that material culture especially associated with agriculture in New Zealand, developed because of isolation. I argue the opposite, and conclude that this material culture developed because of a myriad of connections; personal, professional and technological. An economic and political framework, combined with the skills of the individual, led to changes in material culture.

**Sarjeant, Carmen (2008): *Form-Plus-Fabric: Northeast Thailand Ceramic Technology from the Bronze to Iron Ages.***

This study traced changes in the form and fabric of ceramics vessels from the Bronze to Iron Age at Ban Non Wat, Khorat Plateau, Northeast Thailand. A complementary ethnoarchaeological component assessed modern ceramic fabrics and manufacturing techniques from the nearby potting village, Ban Thakok, in order to infer behaviours of prehistoric potters.

Mortuary ceramics were sampled from the cultural phases, Bronze Age 1 to 4 and Iron Age 1 to 2, for form-plus-fabric analysis. 'Form-plus-fabric' brings together stylistic studies (form) and scientific research strategies (fabric or paste). The aim was to characterise vessel form and fabric changes through time. The notable difference between Bronze and Iron Age pot forms was the foundation for an investigation of whether there was a sudden or gradual change in ceramic technology as these forms modified. Both cultural (form) and technological (fabric) attribute analyses were required to place ceramic traditions within the changing socio-political environment into the Iron Age.

Ceramic vessels were stylistically analysed by recording form, size and surface treatment in the field and from photographs. Eighteen vessel form groups were identified. Ceramic fabric analysis utilised the electron microprobe Energy Dispersive Spectrometer and microscopic imaging to identify temper choices, natural non-plastic inclusions of the potting clay and the clay matrix composition, followed by a Principal Component Analysis. Untempered and quartz sand, rice husk, grog and shell tempered wares made from chemically similar local clays were identified. The local clays were subdivided into ten groups. Analysis of upper and lower portions of the same vessel revealed that some comprised multiple fabrics, inclusive of different tempering methods. This discovery justifies the collection and recording of multiple diagnostic sherds from a single vessel.

Local raw clay sources were sampled and comparisons between clay matrix compositions within prehistoric ceramics and clay sources revealed they were chemically similar. Observations at Ban Thakok revealed that rice chaff tempers and local clays were applied in both prehistoric and modern potting fabrics. Greater processing of the temper was evident in modern ceramic manufacture. These similar practices for clay and temper selection suggest continuity in ceramic technology from the past to the present.

A ceramic technology sequence based on form and fabric findings was established for the Bronze and Iron ages at Ban Non Wat. Rice temper introductions mark the earliest change in ceramic technology at the advent of Bronze Age 3, around 790 BC. This is the earliest postulated date for rice tempering on the Khorat Plateau and was simultaneous with fewer exotic goods and a shift in mortuary treatments. Vessel forms associated with the Iron Age were present from Bronze Age 4. Clay selection was local throughout the sequence, however some diversification in sourcing from Iron Age 1 suggests there was a greater demand for clay in craft industries from this time. Mortuary practices

continued to change from Bronze Age 4. The results demonstrated that there was a gradual transition from Bronze to Iron Age ceramic traditions, and certain prehistoric traditions persist to the present in Northeast Thailand.

**Turner, Rachel (2008) *Cultural Heritage and Identity of Two South Island Iwi Groups: An Archaeological Ethnography.***

Scholarly debate and anthropological research involving the resurgence of indigenous political power and cultural heritage in New Zealand tends to focus on the relationship of Māori to places of significance from the past. Few studies have considered the unique political strategies that individual tribes employ to regain control of their cultural heritage in modern and post-modern times. This thesis presents new ethnographic data derived from the case studies of two separate South Island iwi authorities: Ngāti Kuri of Kaikōura and Manawhenua ki Mōhua in Golden and Tasman Bays. Additionally, a reflexive archaeological literature review of archaeological practices and management in New Zealand is presented in historical context. The interface of the data gathered from these two disciplines constitutes a hybrid anthropological approach that reveals significant differences between the two iwi groups in regard to their political and cultural heritage efforts and their relationship to archaeology. Ngāti Kuri, by taking full advantage of existing legislation, have settled their Treaty claims. The data suggest that the choice of political strategy employed significantly affects the outcomes of heritage protection. One iwi authority finds that it is advantageous to utilise Crown legislation while the other considers this a compromise of their cultural identity and maintains a sceptical approach. Though strategies vary, the data identify the relationship between important places and taonga of the past, and the contemporary cultural identity and well-being of both iwi groups.

**Williams, Erin Frances (2008) *Fire Use and Fire Risk in Pre-European New Zealand.***

Excepting those from wet and heavily forested areas of the western districts, nearly every pollen diagram in New Zealand indicates a substantial transformation in vegetation composition at around 750-550 BP. Southern New Zealand, in particular, has been subject to especially dramatic vegetation changes. So, how and why was so much of the southern landscape burnt at around the time of early Maori settlement? This research used a multidisciplinary approach to offer an explanation for the complicated sequence of events which led to that end result. An examination of Polynesian fire practices established the perceptions and uses of fire that Maori may have brought with them to New Zealand. A full examination of Maori fire practices, using traditional, historical and archaeological information, built an understanding of how pre-European Maori used fire in New Zealand, and disclosed many similarities with Polynesian fire uses.

A review of major climate and vegetation changes in southern New Zealand, the study area, has revealed an infrequent and patchy natural



fire regime with virtually no natural fire in wetter regions. Case studies from four areas of southern New Zealand demonstrated the influence of Maori and their fires in varying climate and vegetation conditions. Maori settled in New Zealand during a period of increased El Niño Southern Oscillation activity, which increased fire risk in central and eastern areas of the South Island. During early settlement, southern Maori maintained a fairly settled lifestyle close to resource clusters of moa and seal. With big game numbers dwindling, and due to the impossibility of reliably growing traditional Polynesian cultigens in areas south of Banks Peninsula, southern Maori adopted a subsistence strategy based around the exploitation of seasonally abundant indigenous resources. It is proposed that this subsistence strategy favoured the opening up of closed forest through fire use to create a more diverse set of ecological communities, resulting in a richer and more varied set of subsistence resources. Regular movement of southern Maori into the dry interior to fire bracken (*Pteridium esculentum*) stands further exacerbated the fire risk. Anthropogenic pre-European fire had a profound effect on dry areas of southern New Zealand, while damper areas such as Fiordland and the Catlins remained largely forested.

## 2007

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**Barribeau, Tim (2007) *The Bronze Age Funerary Ceramics of Ban Non Wat.***

This thesis analyses the evidence for the beginnings of social differentiation in the Bronze Age of Northeast Thailand. It does so through the analysis of Bronze Age burials at the site of Ban Non Wat in the Mun River Valley of Thailand, and the artefacts associated with those interments, with special focus being paid to ceramic vessels.

Vessel form, decoration, location and associated artefacts were all used as data for the analyses undertaken. Statistical, numerical, spatial and comparative analyses were performed to gain a fuller understanding of the social basis and implications for the manner in which the dead were interred at Ban Non Wat. A seriation chronology was developed based on vessel form and count in these burials in order to interpret the temporal implications of the interments.

The results showed that there were distinct changes in the mortuary practices across the Bronze Age, with early burials being spread around the site and having a large number and wide variety of artefacts, which then slowly developed into a tradition of burials with fewer artefacts in more localised areas. Over this time period, the occurrences of bronze artefacts decreased, there was a change in the forms of associated pottery found. There also appear to have been specific forms of pots that are associated with burials that had a large numbers of interred artefacts, or with bronze goods.

This suggests a period of social change and development, where there were major alterations in material goods used for interment, and a corresponding development of social differentiation. These conclusions

may be tested further in the near future with the addition of radiocarbon analyses from individual burials. Until such time, the evidence presented in this thesis seems to suggest strongly that there was early social differentiation in the Bronze Age of the Mun River Valley of Thailand.

**Coote, Logan (2007) *101 Years: D'Urville Island and the Development of the Archaeological Record in New Zealand.***

The interest in archaeological sites on D'Urville Island began about a century ago. My recent survey of the south eastern corner shows that site recording has not been comprehensive. This thesis examines the possible reasons for this. It also identifies factors crucial toward understanding the development of the archaeological record on south eastern D'Urville Island and addresses the larger practical and theoretical issues involved in New Zealand site recording. Other islands and the mainland will be used as a comparison to D'Urville Island to see if the factors defined operate in a wider context. Together, these examples identify other factors which can also affect the development of the archaeological record. They lead to a deeper theoretical and practical understanding of what affects site recording and how the archaeological record is developed from an island perspective. Understanding these factors, within the New Zealand archaeological record, should increase the effectiveness of future surveys and the assessment of the existing archaeological record.

**James-Lee, Tiffany Mahalia (2007) *Indigenous and Exotic: Archaeozoology of the Te Hoe Shore Whaling Station, New Zealand.***

Faunal analysis has long been a strength in the archaeology of prehistoric New Zealand, though its use in the interpretations of historic sites has been relatively recent. This thesis presents the results and interpretations of faunal analyses conducted on three early-mid, late prehistoric, and historic faunal assemblages from Te Hoe, the site of a nineteenth century shore whaling station on the North Island East Coast. Historic sources from the mid-nineteenth century are used to describe the shore whaling industry and lifestyle of whaling communities. Taxa utilized, habitats exploited, indigenous/exotic species focus and butchery unit analysis are used to provide a picture of resource use and dietary consumption at Te Hoe. These results are then compared between the three assemblages to examine temporal changes in the diet of the occupants at Te Hoe during these three periods. The historic faunal assemblage from Te Hoe is then compared with faunal assemblages from four other nineteenth century whaling station sites in New Zealand and Australia. This intersite comparison places the results from Te Hoe in temporal and spatial contexts. Finally, with the aid of historic resources, the emergence of the unique cultural identity of New Zealanders of European ancestry – Pakeha – is evidenced in the period of nineteenth century shore whalers, such as those that live at Te Hoe.

**Marsh, Rebecca Anne (2007) *Research into the efficacy of the New Zealand Archaeological Association Site Recording Scheme and the integration of archaeologists' knowledge into planning processes - with reference to the Kaikoura District and the typological debate.***

This research project has examined three aspects of archaeological resource management in New Zealand. The New Zealand Archaeological Association Site Recording Scheme is the national database for archaeological site information, and is often utilised by planning officers in the creation of district plans. Using a selection of sites from the Kaikoura District, an archaeological field survey and assessment was conducted in June 2005. The resulting data was used to facilitate an analysis of the accuracy of the data contained within the site record files. The Kaikoura District was chosen for analysis due to the convenience of a wide range of sites within a contained area, and due to a request on part of the local iwi, District Council officers for assistance in the upgrading of their provisions for the protection of archaeological sites.

An analysis was done on the Kaikoura District Plan, currently still in the proposal stage. Global Positioning Systems (GPS) and Geographic Information Systems (GIS) are enjoying more prominence in archaeology as the technology becomes easier to use. To aid in the analysis of the Site Recording Scheme, each site was mapped with GPS and the information imported into a GIS program. This information was also incorporated into a discussion on the issue of typology, and the question of 'what is a site?' These issues are relevant to both the Site Recording Scheme and the use of archaeologists' knowledge in planning processes.

The findings of this research showed that the Kaikoura District Plan is strong on paper, but the fact that the archaeological information has been badly incorporated into the provisions means that protection will be lacking. Two problems arise with the Site Recording Scheme, the first is that many of the sites have only been recorded once, and this often in the 1960s when the scheme was first begun. The second problem relates to that of typology; because of the nature of archaeological sites, many require more than one type to fully describe what the site is. This poses problems for the integration of archaeologists' knowledge into the planning process, as planning officers and other stakeholders require more definite identification. Having two or more site types, combined with grid references that only indicate the presence of an archaeological site may lead to confusion which will make the protection of these features more difficult.

It was suggested that in the future, a set procedure should be put in place to ensure continuity in the way in which grid references are created. Clearly, the Kaikoura District Plan would benefit most from a clearer understanding of the archaeological knowledge it employs, as well as an appreciation of the values of these archaeological sites. The question of typology will continue to be a problem, it will be most important for archaeologists and planners alike to make it clear what sort of typology they are following, and to outline their reasons for its use.

**Cable, Nicholas Matthew (2006) *Greenstone Distribution Networks in Southern New Zealand.***

This thesis examines the prehistoric distribution networks of pounamu (greenstone) in the South Island of New Zealand. It is based upon analyses of physical and location data recorded from collections of greenstone artefacts in major museums across New Zealand. Previous studies on the role of stone tools within exchange systems have focused on the key areas of raw material procurement and technological attributes. Recent studies, particularly on obsidian, have begun to merge the results of source characterisation studies with assemblage based distribution analyses.

Although museum collections cannot be viewed as artefact assemblages for accurate distribution analysis, they are well suited for provided regional information on intrinsic qualities such as technological attributes and raw material availability. Comparison of independent museum samples in this study found significant consistent patterns in the regional proportional data between the samples and significant variation in source proportions between the regions.

Analysis of the regional source patterns indicated that two separate distributions networks operated in the South Island, distinguished by the transportation of source material along the west and east coastlines of the South Island. In the case of the eastern coastline, this source material was transported overland from remote inland locations before being redistributed from coastal centres. The results also indicate that the two coastal networks operated independently of each other, possibly due to socio-political divisions between the east and west.

**Latham, Phillip (2006): *Investigating Change Over Time in the Prehistoric Fish Catch at Purakaunui.***

This thesis looks at a number of issues related to the archaeological fish bone recovered from Purakaunui during the 2001-2003 ANTH 405 field schools. In particular, this work examines stratified samples of fish bone from the site and investigates the relative abundances of species in the prehistoric fish catch through time. An earlier preliminary study by Latham (2002) identified a predominance of red cod (*Pseudophycis bachus*) from a small area of the site complex in upper deposits and cut features, with barracouta (*Thyrsites atun*) dominating the lower deposits. Subsequent archaeological work has been undertaken to test this result further over larger areas of the site complex. A rigorous field sampling strategy targeted to primary stratigraphic units was employed to distinguish fish bone samples between early and later contexts from two discrete locations.

The results of this recent work confirm and extend the findings of the previous study. A number of possibilities as to why this in-site change may have occurred between layers are raised and reviewed in this thesis.

Another component of this work involves the examination of past fish bone studies at Purakaunui and elsewhere in Otago to assess changes in the fish catch over time and space. The results of this older research are considered against the present study in relation to site- and period-specific issues and the problem of recovery techniques. Having reviewed the evidence this research also proposes a testable hypothesis suggesting there was a growth in the prehistoric red cod industry over time in the Purakaunui locale, and possibly further afield in North Otago. Furthermore, it places existing evidence from earlier period contexts at the archaeological sites of Shag Mouth and Pleasant River, suggestive of an initial period of opportunistic fishing before the emergence of a more dedicated barracouta industry, into the proposed new model of marine exploitation patterns in this region.

**Petersen, Kiri G. P. (2006) *The Place of Omimi in North Otago Prehistory*.**

This thesis examines the place of Omimi within the economic and settlement sequence of prehistoric coastal North Otago. This was achieved through analysis of the faunal assemblage obtained during the 2004-2005 excavation, then examination of the subsequent faunal data plus evidence of settlement patterns in context with other coastal North Otago sites. The site of Omimi (S155/31) is located around 3 km north of Warrington, situated on coastal farmland at an elevation of about 20 to 30 m above a hard-shore marine environment. Analysis of the Omimi faunal assemblage showed a dominance of marine resources over terrestrial. Fish were the dominant economic contributor, with shellfish, small bird, moa, kuri (Polynesian dog) and kiore (Polynesian rat) also identified. The absence of sea mammal remains is unusual considering its close proximity to a hard shore habitat – the preferred habitat of the most widely utilised sea mammal in prehistoric New Zealand, the fur seal. The nature of the moa remains suggest that they were of more significance to the Omimi people as a source of artefact manufacturing material than as a source of food. Both the absence of sea remains and the minimal moa numbers suggest a late Archaic, or transitional date for Omimi, further supported by the style of the material culture recovered and a radiocarbon date obtained, placing the site to the latter part of the fifteenth century. When compared with other early prehistoric coastal North Otago sites, the Omimi fauna is fairly typical. However when examining settlement aspects, Omimi differs in several key points. Firstly the location of the site at a high altitude and in close proximity to a hard-shore environment is in contrast to the usual early coastal settlement choice of low altitude and soft-shore environs. In addition, while the typical definition of a late Archaic settlement is characterised by lack of social complexity, the Omimi excavations have uncovered evidence of a wealth of complexity, with spatial differentiation of features and a wide array of activities represented by the identified material culture. Omimi therefore challenges the accepted view of a late Archaic site, thereby increasing our awareness about this period of substantial economic and social transition in coastal North Otago prehistory.

**Gilmore, Helen (2005): *"A Goodly Heritage" Queen's Gardens, Dunedin 1800-1927: An Urban Landscape Biography. (Shared with History Dept.)***

This work is a landscape study of the Queen's Gardens Public Reserve in Dunedin from the early nineteenth century to the end of the First World War. Originally the 'gateway' to Dunedin, this historic precinct is a good example of urban cultural landscape, containing a historic and commemorative record of community and individual activities. The Queen's Gardens area has played a key role in the history and development of the city of Dunedin, and contains many excellent examples of built heritage, much of which remains intact and currently in use.

Urban landscapes are generally on a smaller scale than rural and regional-scale landscapes. However, their design and histories also constitute a record of active and dynamic interaction between people and place. Whether representative of economic, industrial or political activities, domesticity, leisure, or the arts, the material culture of urban landscapes conveys information concerning, community cultural values, civic infrastructure, significant events and activities, which can be traced through their various stylistic changes, modifications and successional uses, and interpreted within their historical social context.

The aim of this study has been to interpret the landscape of Queen's Gardens as a record of the establishment and evolution of cultural ideas, values, and notions of group identity, and to use this process to discover the heritage values that it has acquired, and the ways in which these are recognised. I built up a picture of the landscape in four chronological stages, looking at the relationships between material objects in these spaces, and the ideas and values that they represented. I trace the development of the Reserve and the creation of its cultural heritage through successive phases from the pre-land, pre-European period, early settlement, and land reclamation process, and the changing layouts and uses of space between the early nineteenth century and the end of the 1920s. By separating and examining each layer of landscape in chronological sequence, I uncover the cultural history of the landscape, and identify the traditions and aspirations of the people and groups who formed, manipulated and used it. The progressive series of significant and dynamic changes in form, function and ideology that this area underwent throughout its formative years contributed greatly to the growth and development of Dunedin, and reflected many of the social values and perspectives of colonial culture.

This work is an exercise in reading a cultural heritage landscape, not only through its material culture, documentary history, and progressions of form, but also its established traditions, and the variety of personalities, contrasting perspectives and stories that contributed to these. By synthesising the resulting data, interweaving the different strands of approach and materials of evidence into a holistic picture, I have shown



how heritage meaning was progressively deposited and embedded in this urban landscape as it developed.

This study demonstrates that the landscape interpretive approach can be applied to an urban context with a shorter and more specific cultural sequence, and that a New Zealand urban landscape can provide a valuable insight to the social and cultural attitudes of the colonial past.

**Harris, Jaden (2005) *The Material Culture of the Oashore Whalers.***

This thesis presents an analysis of the material culture of the Oashore whalers as represented by the excavated artefact assemblage. Shore whaling stations represent some of the earliest European communities in New Zealand. Previously very little archaeological work has been done on these sites and so we know almost nothing about their material culture. Historical sources can give us glimpses of domestic activity at shore whaling stations but generally detailed information on day to day life is lacking. The results of this work show that life at Oashore was fairly simple, with the station likely only being provisioned with basic supplies and the gear necessary to carry out whaling. This way of life is reflected in a comparison of the material culture of the Oashore whalers with that from other excavated shore whaling station sites in New Zealand and Australia. The range of material culture is also little different to that evidenced from other contemporary historical sites in New Zealand.

**Hurren, Kathryn (2005) *Archaeology of Benhar: A Material Culture and Landscape Study of a New Zealand Industrial Site.***

This thesis focuses on the pottery and landscape of a small Otago factory. Benhar was a pipe works and pottery factory south of Dunedin that operated from the 1860s through to the 1990s. Benhar was founded by John Nelson in 1863 and sold to Peter McSkimming in 1894. The main emphasis of this thesis is the period of domestic pottery production from the 1890s to the 1980s. The main production of wares occurred during WWI and WWII with smaller production periods occurring in the 1890s and 1970-1980s. Utilitarian wares with the occasional decorative piece comprised the majority of wares produced for the domestic market. The pottery produced at the Benhar factory as well as its landscape has undergone many changes over the last 112 years. This thesis combines historic, archaeological, landscape studies and anthropological approaches. Due to the different approaches taken in this thesis there is no one theory but a multitude of underlying theories. The outline of the thesis is as follows; Chapter One of the thesis introduces and discusses the themes, theories and ideas held within the thesis. Chapter Two is a historical review of Benhar. Chapter Three studies Benhar's material culture and its chronology of change. Chapter Four looks at Benhar's landscape and places it within a theoretical context. Chapter Five reports on recent excavations at Benhar, while the final chapter concludes the thesis.

**Vogel, Yolanda Jacqueline (2005) *Ika***

This thesis examines methodological issues in the analysis of fishbone assemblages from the Pacific. A review of the literature on Pacific fishing raises questions about methodology in Pacific fishbone analysis. Recent work in Pacific fishbone analysis at the Otago Archaeology Laboratory and other international laboratories has shown that different identification and quantification methods have significant influence on measures of relative abundance. This can affect the type of interpretations that result from midden analysis. A common method employed in New Zealand and the Pacific involves the identification of five paired mouth bones plus various special bones, and the use of MNI for quantification. A large fishbone assemblage from Rapa in French Polynesia is used as a case study to evaluate alternative analytical approaches. Tropical Pacific fish bone assemblages tend to have a relatively high species diversity compared to temperate New Zealand assemblages. Many reef fish also have small mouths in comparison to temperate fish species. It is concluded that in tropical Pacific assemblages the number of elements identified to taxa can have a significant effect on possible interpretations of past behaviours.

This thesis also presents the first archaeological interpretation of the prehistoric fishing on Rapa. Due to its subtropical location Rapa presents an opportunity to study human adaptation to resource poor environments. While it is found that the fishing industry shows some general similarities to those of other islands in East Polynesia, the environmental constraints have resulted in some interesting variations in terms of target taxa.

The analysis of the Rapan assemblages confirms that, at least in some cases, the use of a wider suite of elements for identification will have a significant impact on the number of taxa identified in an assemblage, and resulting interpretations of fishing behaviours.

## 2004

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**Molloy, Nicola Terese (2004) *The Material Culture of Ban Bon Noen***

This thesis examines the material culture from the six occupational layers at Ban Bon Noen, Central Thailand. Through the analysis of the ceramic, lithic and metallurgical assemblages, the range of subsistence activities at Ban Bon Noen are determined and the site is placed in a broad regional context.

Ban Bon Noen reveals two major phases of occupation. The first phase may date from as early as 1500 BC. In the later stage, Ban Bon Noen is incorporated into the Dvaravati polity, becoming one of several rural hinterland sites providing support to elites at the ceremonial centre of Muang Phra Rot. The archaeological evidence indicates that the residents of Ban Bon Noen exploited a range of terrestrial and marine resources. The site is furthermore seen to conform to a broad regional pattern, both in the location of the site as well as the technology of the inhabitants.

Comparative analysis of a number of Southeast Asian sites, including Khok Phanom Di, Nong Nor, Chansen and Oc Eo, indicate cultural continuity in the region, underscored by a well-developed network of exchange.

**Taylor, Adrian (2004) *Managing Environmental and Visitor Impacts on Archaeological Sites along the Abel Tasman National Park Coastline.***

For over fifty years a large expanse of the Abel Tasman Coast has been afforded national protection subsequent to the establishment of the ATNP. This area of protected coastline has a long history of both Maori and European settlement, which has resulted in a wealth of archaeological and heritage sites. These sites represent a unique resource, of which many of the individual sites are arguably of both regional and national importance. These important coastal sites are however under ongoing threat from natural environmental and visitor impacts.

This thesis draws together past and new research to determine whether current ATNP management strategies are appropriate for the long-term protection of the archaeological information inherent in these coastal sites. The legislation that protects these sites and those bordering the Park is presented to assess past and current management strategies that have been carried out to protect the Park's coastal sites. The nature and extent of the loss of archaeological information from the ATNP's coastal sites is then examined. This is achieved with the investigation of three primary case study sites. These are Awaroa Inlet, Totaranui, and Anapai. Smaller secondary case study sites are considered for comparative purposes.

The extent of past, current and ongoing threats to the three primary case study sites are then ranked for impact. Ranking allows for the assessment of the degree of effect of concurrent visitor and environmental impacts affecting the coastal case study sites over time. The ranking of impacts to the case study sites shows how management strategies must be implemented for these sites that are appropriate to the changing nature and usage of their coastal locations.

**Wylie, Joanna (2004) *Negotiating the Landscape: A Comparative Investigation of Wayfinding, Mapmaking and Territoriality in Selected Hunter-Gatherer Societies.***

As human beings we are continually interacting with the landscape, and have been doing so throughout the entire course of our evolution. This thesis specifically investigates the way in which hunter-gatherers negotiate and interact with their landscapes, focusing on three patterns of behaviour: wayfinding, mapmaking and territoriality. An examination of the relevant international literature reveals that globally, hunter-gatherer groups both past and present share a number of similarities with regard to their wayfinding and mapmaking techniques, and territorial behaviour. A case study of Maori interaction with the landscape of prehistoric and protohistoric Te Wai Pounamu [the South Island] provides further support for the central argument that hunter-gatherers collectively negotiate and interact with the landscape in distinctive ways. This

contrasted with the interaction of European explorers and travellers with the 19th century landscape of Te Wai Pounamu in Chapter 5. It is determined that hunter-gatherers use detailed cognitive or 'mental' maps to navigate their way through a range of landscapes from dense forests to barren plains. These maps often consist of sequences of place names that represent trails. These cognitive maps are most commonly developed through direct interaction with the landscape, but can also be formed vicariously through ephemeral maps drawn with the purpose of communicating geographical knowledge. Prior to European contact, little importance seems to have been given to artefactual or 'permanent' maps within hunter-gatherer societies as the process of mapmaking was generally regarded as more significant than the actual product. Although the literature on hunter-gatherer territoriality is complex and in some cases conflicting, it is contended that among a number of hunter-gatherer groups, including prehistoric and protohistoric Maori in Te Wai Pounamu, interaction and negotiation with the landscape was/is not restricted to exclusive territories marked by rigidly defined boundaries. Among these groups, a specific method of territoriality known as 'social boundary defence' was/is employed. This involves controlling access to the social group inhabiting an area rather than access to the area itself, as with groups utilising the territorial method of 'perimeter defence'.

## 2003

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**Stowe, C.J. (2003): *The Ecology and Ethnobotany of Karaka (*Corynocarpus laevigatus*). (Shared with Botany Dept.)***

Historically there has been considerable debate over the origin of karaka (*Corynocarpus laevigatus* J.R. et G. Forst.) in New Zealand. In contrast, the extent and importance of prehistoric arboriculture in New Zealand has received little attention in the literature. This study reviews the ecology and ethnobotany of karaka and investigates its cultural and natural biogeography.

Maori migration traditions frequently state that karaka was introduced to New Zealand. However, molecular evidence and finds of fossil seeds of late Oligocene age show that karaka is endemic to New Zealand. Therefore, Maori traditions probably relate to the translocation and cultivation of karaka within the New Zealand region, for which there is abundant anecdotal evidence. Karaka fruits were a valuable addition to the Maori diet and were likely to have functioned as a replacement for traditional Polynesian tree crops. The preparation of karaka seeds also had Polynesian precedents and entailed a rigorous regime of steaming and soaking to rid the kernal of its toxic elements. There is data to suggest selection for fruit size and/or nutritional value in cultivated karaka populations.

A database of karaka distribution was compiled and populations classified as 'cultural' or 'unknown' on the basis of spatial association with archaeological sites. Groves classed as cultural were assumed to be

cultivated or translocated by prehistoric Maori. Lack of effective seed dispersal by birds and the longevity of the trees, mean that the contemporary distribution of karaka provides a reasonable template for the extent of its prehistoric translocation and cultivation within New Zealand.

Karaka has a distinct cultural and natural biogeography. The greatest overlap between cultural and unknown trees occurred in the northern North Island while the majority of trees in the lower North Island, and all trees in the South Island were classed as cultural. Prior to the arrival of Polynesians in New Zealand, karaka was probably restricted in distribution to the Northland/Auckland region. Its natural range was then extended by human translocation and cultivation to the lower North Island, South Island, Kermadec Islands, Chatham Islands and many other in-shore islands off New Zealand.

Climate variables were fitted to the distribution data and discriminant analysis used to further test the classification of karaka into cultural and unknown populations. Significant differences were found in climatic parameters between groups. Cultural karaka were found in environments with greater solar radiation seasonality, higher evaporative demands and greater soil moisture deficits than unknown karaka. The climate profile of karaka was closer to that of other tree species currently restricted to the northern North Island than with more widely distributed species.

Furthermore, the climate profile and location of cultural karaka is biased towards the same environmental correlates of pa and pit site locations, further indicating that karaka was a cultivated tree crop.

The extensive translocation of karaka by Maori means that it has the potential, with the application of molecular methods, to serve as a marker for prehistoric settlement and mobility. Preliminary work has begun on this aspect and a predictive model is presented of the possible relationships within and between populations of karaka.

It is concluded that the importance and extent of karaka arboriculture, and probably that of other endemic tree species, has previously been overlooked. This has implications for our view of certain plant communities as unmodified by humans, and provides an impetus to protect surface vegetation as an integral part of some prehistoric archaeological sites.

**Tucker, Brooke (2003): *The Problem with Culture: Models of Change in New Zealand Archaeology.***

This thesis addresses the study of social difference (both spatial and temporal) and the debate over theoretical mechanisms that explain the structuring of this difference. The culture concept is identified as the primary means by which anthropologists and archaeologists have modelled change through time and the conceptual foundations of this approach are investigated. The growth of the culture concept and its application as an archaeological tool is charted in comparison to subsequent developments in anthropological theory and points of divergence are identified. Strengths and constraints of models of culture are evaluated with particular reference to the study of change in New

Zealand archaeology. When compared to Europe and the Americas, temporal and geographic differences in scale within New Zealand highlight problems associated with archaeological models of culture. In the past, these differences contributed to early recognition of the distinction between archaeological and anthropological 'cultures' in New Zealand and they provide a valuable focus for a critique of the culture model in studies of change.

The anthropological critique of culture emerging from contemporary studies of society has led to the development of different ways of modelling change that have exciting implications for archaeology in New Zealand. If other models of interaction in anthropology can replace culture, archaeologists in this country may be able to apply these to better reflect the types and processes of change they are studying. The archaeological tradition is presented as a viable alternative to culture, and its origin and subsequent revision and application is examined. Informed by contemporary anthropological and archaeological theory, the tradition can provide an explanatory framework for the study of stability and change. For archaeologists, models of tradition can address many of the problems inherent in the application of archaeological cultures, drawing archaeology and anthropology closer together to provide a more powerful explanatory model of change.

## 2002

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### **Beckwith, Jacinta (2002) *Pre-Angkor Cambodia: The Transition from Prehistory to History*.**

This study documents the archaeological data, epigraphical evidence and Chinese historical records for the development of the early states of Cambodia. Prior to the first century AD, significant information about Cambodia and Northeast Thailand is based upon inferences from archaeology. Most archaeological work has been undertaken in central and Northeast Thailand, central and southern Vietnam, while very little work has been done within Cambodia itself (Vickery 1998:18).

Observations recorded by the Chinese appear from the first century, where visiting embassies and reports from Southeast Asia to the Chinese court were incorporated into official histories of succeeding Chinese dynasties. Chinese travelers visiting Cambodia in the third century also made accounts of their stay (Yung, 2000). Cambodian kings and dignitaries began to set up inscriptions to record their religious foundations towards the end of the 5th century AD (Higham, 2000:32). The inscriptions were written in Sanskrit, and in Old Khmer from 611 AD, and were for the most part engraved on monuments, door frames and walls associated with religious foundations. These records provide us with insight into the nature of kingship, political organization and socio-economic life of the Khmer in pre-Angkor times.



**Brooks, Emma (2002) *Selectivity Versus Availability. Patterns of Prehistoric Fish and Shellfish Exploitation at Triangle Flat, Western Golden Bay.***

This thesis sets out to examine issues of selectivity and availability in fishing and shellfish gathering by pre-European Maori at Triangle Flat in western Golden Bay. Faunal remains from four archaeological sites have revealed new and valuable information about economic subsistence practices in this region.

It is proposed that exploitation of these important coastal resources was based on factors other than the availability of, or proximity to resource patches. Evidence from the Triangle Flat sites is compared to that from Tasman Bay and the southern North Island to gain a regional perspective on fishing and shellfish gathering strategies.

The most definitive evidence for selective targeting is provided by tuatua, an open beach species that has been found to dominate in sites based adjacent to tidal mud and sand flats. Also of interest is the dominance of mud snail in a site that is adjacent to large cockle and pipi beds. When regional sites were examined it was found that this pattern was also recorded for the site of Appleby in Tasman Bay.

Selectivity in fishing strategies is also apparent with red cod and barracouta dominating the Triangle Flat assemblages. This pattern conforms to evidence from both eastern Golden Bay and Tasman Bay but does not reflect evidence from the southern North Island. Of particular interest is the apparent dearth of snapper in the sites of Triangle Flat, since snapper abounds in the area today. An explanation based on climatic change is considered to be the most feasible. This indicates that environmental availability was at least in part responsible for the archaeological evidence of fishing. The consistency of the catch of red cod and barracouta in Golden Bay, and the pattern of shell fishing preferentially for tuatua suggests that cultural choice was also a significant selective factor.

**Purdue, Carla (2002) *What is a Fern-Root Beater? The correlation of museum artifacts and ethno-historical descriptions.***

The rhizome of the bracken fern was an important part of the subsistence base of the pre-contact Maori of Aotearoa. It provided an essential source of starch - especially to the Southern Maori, who relied mainly upon wild resources for the vegetable component of their diet. The preparation of the rhizome (or fern-root) for consumption necessitated the beating of the cooked root upon a smooth stone anvil. The implement that was used to beat the fern-root is an important Maori tool which, until now, has had little detailed attention paid to it. Therefore, the aim of this research was to characterize the form of the fern-root beater using morphological attributes. Through the combination of a comprehensive literature review of ethnographic-historical accounts and more contemporary documentary research, along with a nationwide survey of implements labeled as "fern-root beaters" in museum collections, this thesis identifies a number of critical and common attributes that are inherent in a beating implement. It was found that wooden and stone beaters/pounders were dissimilar in size and proportions, with the majority of wooden

implements of appropriate form to have been used for beating fern-root. The stone implements displayed larger circumference dimensions, were shorter and considerably heavier, thus casting some doubt on their practicality as a beating implement. Four distinct morphological forms were identified for both the wooden and stone items surveyed, and it was found that metric variables were more significant in suggesting function than non-metric. Regional distribution analysis of the survey implements highlighted a northern North Island predominance, particularly in the Northland, Auckland, Taranaki and Waikato regions. A tenuous comparison with Simpson's distribution of prehistoric dental attrition known as the "fern-root plane" showed a loose regional correlation, however; the actual cause of this tooth wear is still a hotly contested issue.

**Tanner, Vanessa (2002): *An Analysis of Local Authority Implementation of Legislative Provisions for the Management and Protection of Archaeological Sites.***

Local authorities are identified as playing a significant role in historic heritage management at the local level. The aim of this thesis was to determine whether local authorities are in a position to be given greater responsibility for historic heritage and particularly archaeological resource management. This thesis presents a discussion of the historical development of legislative provisions for the management and protection of historic heritage. Archaeological information is considered imperative for appropriate local authority management of archaeological resources; this thesis assesses the current state of archaeological information available to local authorities. In order to determine the role local authorities currently play, a questionnaire survey was designed to procure an understanding of what planners perceived their councils responsibility was and how they were actively managing historic heritage. To acquire an appreciation of the actual practice of historic heritage management two case studies were conducted. Case studies involved interviewing planners, members of the two communities and individuals who had first hand experience of the archaeological authority process.

**Wheadon, C. J. D (2002) *A Systemic Approach to Understanding Prehistoric Shell-Bearing Deposits in New Zealand: A Case Study from Shag Point, North Otago.***

This thesis describes a systemic approach to the study of shell remains, using material from the site of Shag Point (J43 / 11), in North Otago. This approach analyses the relationship between sampling, identification, quantification, and site formation processes. An historical and methodological framework is used to assess the analysis of shell-bearing deposits in New Zealand, and provide innovative solutions to bias. Historical research outlines the common research methods in New Zealand, which are relevant to Shag Point. Methodological research outlines the range of potential research methods used in the study of shell-bearing deposits. Reviewing the data from Shag Point, sampling,

identification, quantification, and site formation processes are used to assess the quality of data from the site. Data from coastal sites are commonly used to generate regional level syntheses. These syntheses do not deal with all of the possible sources of bias in shell-bearing deposits. Cumulative sampling is used to assess representativeness. The data from Shag Point are indicative of a representative sample. The site is compared to three other coastal southern South Island assemblages: the nearby Shag River Mouth, Pleasant River, and Pounaweia. The data from Shag River Mouth may be representative; the same cannot be said for the Pleasant River and Pounaweia archaeological assemblages, thus hampering regional-level syntheses.

## 2001

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**Bilton, Matthew (2001) *Taphonomic Bias in Pacific Ichthyoarchaeological Assemblages: A Marshall Islands Example.***

This thesis examines the influence of taphonomy on archaeological fish bone from the Pacific islands. Taphonomic studies investigate the effects of various agencies that can alter faunal remains from the point of an animals capture and death, dismemberment, cooking and disposal, to the subsequent post-depositional alterations, to archaeological analysis, and how these agencies and conditions influence the information used to make inferences of prehistoric human behaviour. Taphonomic research is well developed in the analysis of archaeological mammalian faunas, but not ichthyofaunas, particularly those related to the Pacific islands regions. As the inclusion of taphonomy in archaeological faunal analysis is critical to the integrity of interpretations made about prehistoric human behaviour, it is consequently vital to apply these principals to the interpretation of archaeological ichthyofauna.

The literature regarding ichthyofaunal taphonomy is reviewed and examples of taphonomic analysis are gleaned from the Pacific islands archaeological literature. A systematic methodology of breakage pattern analysis is devised that tests and evaluates the effects of taphonomic bias. This methodology is then applied to archaeological assemblages from Ebon Atoll, Marshall Islands, that contain in excess of 26,000 fish bones, of which approximately 3500 were identified to family. The specimens in this sample are well preserved, and due to the large diversity of taxa (47), are seen as being broadly representative of many Pacific islands ichthyofaunal assemblages. As such, it is proposed that taphonomic implication made about this sample will hold true for other Pacific islands assemblages.

The analysis of the Ebon assemblage confirmed that it is highly desirable to ascertain the extent of taphonomic loss from an ichthyofaunal assemblage prior to making any interpretations about prehistoric fishing, diet, or economy. The reliance on a small number of elements for identification to family limits the number of taxa identified and influences

the relative abundance of taxa. With this in mind it is suggested that a number of elements that are not traditionally used to identify Pacific islands ichthyofauna be utilised. Those elements that cause abundance misrepresentation are identified, and the extent of this bias is assessed. It is determined that element shape is integral to subfamilial identification of the 'five-paired mouthparts', particularly the non-dentigerous elements. The bias of differential preservation is illustrated by the greater occurrence of durable than fragile elements, and it is proposed that the absence of certain taxa is not sufficient evidence of their nonexistence.

**Chetwin, James Nicholas (2001) *War Before Angkor: The Evidential and Theoretical Context of Warfare in Prehistoric Thailand.***

The role of warfare in prehistoric Thai life ways has been a topic of debate, although no studies have specifically sought to investigate and explain prehistoric warfare in Thailand. Recent advocacy of the heterarchic paradigm has sought to de-emphasise the role of warfare in sociopolitical change. This thesis seeks to develop a regional understanding of structured violence in Thai prehistory by developing a specific preliminary model for military behaviour in a heterarchic milieu. An overview of definitions and anthropological theory on war is offered, as these issues are crucial to the debate over warfare in prehistoric Thailand. A methodology of military archaeology is developed and utilised to assess the evidence for warfare in the Thai Bronze and Iron Ages. Direct evidence for warfare in the Bronze Age is lacking, while the transition to the Iron Age is concomitant with a variety of changes in military technology and behaviour. There is evidence that warfare was a factor in the social environment of prehistoric Thailand, though comparative data show that it was not as intense or specialised as that practised by the Dian and Dong Son cultures of northern Southeast Asia. A nonlinear model is proposed to account for the role of warfare in regionally specific historical hypotheses. The model is designed specifically to allow the construction of testable hypotheses in a heterarchic paradigm.

**Dodd, Andy (2001) *Processes and Strategies for 'Urban Historical' Archaeological Resource Management in New Zealand.***

Urban archaeological sites, and especially those of non-Maori origin, are constantly under threat of being destroyed or damaged as development pressures continue to increase in New Zealand. Previous reviews of the present system of ARM in New Zealand have found it to be ineffective and significant numbers of archaeological sites continue to be destroyed. New Zealand already has the legislative capacity for a comprehensive and effective system of archaeological resource management, but it is a general lack of public awareness, and often the reluctance of Local Authorities to apply available mechanisms, that let that system down. Five case studies have been selected from the Otago region that illustrate the issues involved in urban historic ARM on privately owned land. Under the current political climate the central government is increasingly devolving its responsibilities onto Local Governments, and recent reviews

have suggested this may be appropriate for New Zealand's ARM. The legislative systems in place in Australia and the United Kingdom can provide an indication of the effects of such a course of decentralization on archaeological site protection processes, as well as some useful insights into how New Zealand's system might be made more effective.

## 2000

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### **Gollop, Yvonne (2000) *Racial Ranking Theories and Polynesian Prehistory.***

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.

### **McCaw, Morag (2000) *Iron Age Subsistence: The Faunal Remains from Noen U-Loke.***

Noen U-Loke is a late Bronze and Iron Age settlement (c. 700/800 BC — 400 AD) in the Upper Mun River Valley, Northeast Thailand. Excavations in 1996-98 uncovered over 1000m<sup>3</sup> of cultural material, representing the largest exposure of any such site in Southeast Asia. This dissertation will seek to identify the Iron Age environment and subsistence economy as revealed by faunal and molluscan remains. An evaluation of this leads to questions of procurement, processing techniques, mortuary rituals, characteristics of faunal populations, and regional continuity. Of particular interest were exploitation strategies and whether these changed through time. Identification of any temporal change in the relative abundance of species is important, especially if it correlates with other aspects of behaviour. The possible intensification of agricultural activities during the Iron Age will be investigated. Expansion in this area has a profound effect on the local environment; forest clearance and the creation of rice fields would have altered the local environment and water regime. Such a situation can be considered through the reconstruction of the palaeoenvironment.

Although the Noen U-Loke subsistence economy involved the exploitation of various wild species, including deer, cattle and water buffalo, domestic animals made up the largest proportion of the spectrum. The Bovid

population was aged, which has led to questions of whether the animal's value was measured in terms of status, tractive power, consumption, or ritual use. Mortuary offerings were dominated by *Sus scrofa*. Regional continuity has been identified in a number of other areas, including the characteristics of faunal populations and the species hunted and maintained. The specialised habitats of *Pita ampullacea* and *Filupaludina* allowed a partial reconstruction of the palaeoenvironment and identified a change during Layers 3 and 4 towards an environment suitable for rice cultivation. This correlates with the apparent gradual richness of the site, indicated by wealthy graves and an apparent intensification of agricultural activities seen in sickles in graves.

**Miller, Kate (2000) *Wai: Polynesian Responses to Lack of Drinking Water.***

Without freshwater, human life would be impossible. Throughout human history, obtaining freshwater has structured human settlements and societies. Freshwater is a precious substance on the islands of Polynesia, but it has been neglected by scholars in favour of food; water has no caloric value. When water is discussed it is usually in relation to irrigation and food production. This dissertation puts freshwater at the centre of the enquiry into several aspects of Polynesian life. The climate of Polynesia and the geological characteristics of islands as they relate to the amount of freshwater available are discussed. The 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 (2000) *A ethnohistoric Study of Voyaging in Central East Polynesia.***

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.

**Smith, Teresa M (2000) *A Study of the Archaeological Fish Remains from Su'ena, Uki.***

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.

**Watson, Katharine (2000) *Land of Plenty: Butchery Patterns and Meat Supply in Nineteenth Century New Zealand.***

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.

**Wilson, Amanda Jane (2000): *Stone Tool Production at Cat's Eye Point, Kākanui, North Otago, New Zealand.***

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 3.2mmsieve.

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.

## 1998

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**Fraser, Karen (1998) *Fishing for Tuna in Pacific Prehistory.***

The archaeological evidence from faunal analyses in the Pacific suggests an emphasis on inshore fish and fishing strategies. In contrast, the faunal evidence for offshore fish such as tuna is slight. Several sites in East Polynesia with high proportions of tuna are unusual in this regard. Yet ethnographic accounts of fishing in the Pacific region often contain detailed descriptions of offshore fishing expeditions to catch pelagic fish, including tuna. These fish continue to occupy a significant place in the cultural life of many Pacific island communities.

The uneven representation of tuna in archaeological sites is not thought to derive from any known taphonomic process, but fairly represents the relative abundance of tuna in catches throughout the Pacific. Discontinuities in catch frequency do not follow any known variations in natural abundance, and the preferred explanation is cultural choice. Moreover, in sites where tuna were a major component of the catch, there appears to be a small but consistent decline in their relative abundance, once again believed to reflect culture-historical rather than natural processes. The ethnographic and archaeological evidence is reviewed for several areas in the Pacific where tuna were more commonly caught. The evidence from faunal analyses is considered for four archaeological sites, Hane and Te Anapua in the Marquesas Islands, Fa'ahia in the Society Islands and Motupore in Papua New Guinea, where tuna were caught in relatively high abundance. Techniques are described for reconstructing size-frequency information from archaeological bones from these sites. It is argued that the social importance as well as economic aspects of tuna fishing need to be incorporated in explanations for the presence of tuna in archaeological sites.

**Somerville-Ryan, Graeme (1998) *The Taphonomy of a Marshall Islands' Shell Midden.***

Shellfish dominates the faunal material recovered from Pacific archaeological middens, yet little work has been conducted regarding the reasons for shell being present on a site. This has led to problems in separating natural and culturally-deposited shell from archaeological assemblages, especially from areas where coral gravel has traditionally been used to pave habitation areas.

Unless the depositional history of a site is known, some archaeological inferences can be erroneous. The goal of this thesis is to study the taphonomy of archaeological shell as well as shell from modern beach and village environments to identify the characteristics of natural and cultural material.

This research has shown that it is possible to use the taphonomic features of burning, water-rounding, the rebreakage of water-rounded shell, butchering, fragmentation, and the presence of whole shells to identify natural shell in a cultural assemblage. It is significant that some species, such as Turbinellidae and Cerithiidae, are almost always the product of cultural deposition and are ideal taxa for radiocarbon dating. Inferences regarding subsistence practices from these species provide a more accurate representation of prehistoric cultural activity. Future research should recognise that the quality of data differs between shellfish species and archaeologists should be mindful of this when undertaking subsistence studies and selecting shells for radiocarbon dating.

# 1997

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**Brooks, Amanda (1997) *An Ethnoarchaeological Investigation of Mitiaro, Cook Islands.***

The aim of the archaeologist is to investigate a culture's material remains and from this data attempt to understand numerous social, political, economic and cultural aspects of that society. Often assumptions about social organisation, population size and political structure are deduced from rigorous mapping and analysis of material remains and their spatial patterning. However there is always that element of uncertainty involved when making these assumptions. One particular uncertainty is whether social and political systems are reflected in the material culture of a society to the extent which is required to give the archaeologist a basis for their assumptions, and if so whether that information can be successfully retrieved using archaeological methods. Therefore when given the opportunity to analyse a living society which is in a relatively isolated setting and still has evident bonds with its traditional background, I felt that this could be an important step in, ascertaining the extent to which socio-political structure could be understood from material remains. Utilising the method of ethnoarchaeology I was able to analyse the living society of Mitiaro in the Cook Islands using the archaeological techniques which would also be used on the archaeological remains on the island. My particular focus was the spatial organisation of this one community which is made up of three tribal groups. The people of Mitiaro maintain a strong link to the traditional values and ideas of their ancestors. The society is based on a hierarchical socio-political system with its grounding in genealogy and the traditional land tenure system. There is also a more modern political system based on that of New Zealand and the way these two systems interact together enhances the power of tradition in this society.

My results proved interesting for both the archaeologist and the ethnoarchaeologist, however the one predominant factor which did come across is the wealth of information available through this approach and the necessity for further investigations of living communities within the Pacific region.

**Dickson, Joanna (1997) *The Visual Representation of the Maori in the School Journal 1907-95.***

This thesis concerns the visual representation of the Maori in illustrations featured in the School Journal, Bulletins, Maori Language Readers, and Remedial Readers published by the New Zealand Department of Education from 1907-96. The main focus is to examine how the prehistory of Aotearoa has been presented to the public. For this reason School Journals were chosen as they have been a resource available to all school children for almost a century, and reflect changing theories on prehistory from colonisation to subsistence strategies. I consider that these theories can be incorporated into illustrations which can be just as

significant, or even more powerful, than text in transmitting information (and sometimes culture-bound values) to the public about past Maori lifeways.

I examined specific areas such as the representation of Maori physiognomy, representation of gender and ethnicity, material culture, and activities in illustrations and photographs to create an overview of how the Maori have been depicted and question how closely these representations adhere to reality.

**Grogan, Dean J. (1997) *The Analysis of Glassware from New Zealand Historic Sites.***

Currently there are a wide variety of methodologies in use for the analysis of glassware from New Zealand historic sites. Different methodological approaches and ways of presenting results mean that material from different sites cannot be accurately compared at any but the most basic level. The object of this thesis is to develop a standardised, thorough, and repeatable methodology for the quantification of glassware, particularly glass bottles, from New Zealand's historic assemblages in order that more detailed comparisons may be undertaken.

Development of this methodology entailed a review of previous glass analyses and the selection and the testing of many of these procedures on the glassware assemblage from the 1860's goldmining site of German Hill in Central Otago, New Zealand. The outcome of the analysis showed that it was possible to arrive at a range of results when using different quantification methods on the same assemblage, which has serious implications for any detailed comparisons between sites.

The German Hill material was compared using statistical testing methods to assemblages from six other sites from around New Zealand. Despite differences between methodologies and presentation of data, these comparisons showed the potential for information that may be gained from detailed comparisons of this type, which so far have not been undertaken to any real extent in New Zealand historic archaeology. It is thought that a standardised methodology could act to encourage more comparisons of this type, which would allow the more accurate study of the differences in social and economic conditions between historical sites.

**Martin, David R. (1997) *The Maori Whare After Contact.***

This study explores post-contact changes to the ordinary Maori whare. The main physical characteristics of the ordinary whare at contact are identified by accessing archaeological and written 18th century ethnographic data. Changes in the ordinary whare in the period from contact to 1940 are discussed. Evidence from historical archaeology, written 19th century ethnographic accounts and from previous academic research is considered. In addition, changes in the ordinary whare are highlighted, based on evidence from an empirical survey of whare depicted in sketches, paintings, engravings and photographs. Rigorous statistical analysis was beyond the scope of a Master's thesis, however trends in the data are presented. A range of these are reproduced illustrating the text. After changing gradually for 130 years, the ordinary

Maori whare appears to have been widely replaced by European-style houses in the early decades of the 20th century. In Aotearoa/New Zealand in the 1990s, it is apparent that Maori culture has survived the 220 or so years since contact. These years entailed increasing contact between Maori and European. In mid 20th century academic studies of Maori communities, European-style houses were found to have been used in line with continuing Maori conceptions. This evidence indicates that traditional ideas were transferred to European-style houses. The gradual changes in the whare prior to the 20th century indicate that it as a conservative social construction of space conforming to expectations about vernacular architecture generally. But the process by which Maori culture was maintained and reproduced was complicated by the widespread change to houses of European style. It is concluded that further study of Maori conceptions of space within the home is required.

**Palmer, Rachel S. (1997) *Archaeology and Ethnicity of Settlement in Nineteenth Century South Otago.***

This thesis looks at the expression of ethnicity in the archaeological record, through an analysis of domestic architecture in South Otago, an area settled predominantly by Scottish immigrants. At one level this study is concerned with broad anthropological questions about the nature of ethnicity and the extent to which it can be recognized through the archaeological record. At another it is concerned with details of the history of a specific region of New Zealand, as part of the increasing interest in material evidence for European colonization.

Based on a sample of 269 dwellings and 43 other buildings collected from historical sources and field surveys throughout South Otago, it compares the differences between Scottish and non-Scottish dwellings. It shows that over the period from 1840 to the end of the 1920s immigrants built and lived in the same types of dwellings, and used the same construction materials, despite their nationality. If immigrants carried mental constructs about how a house should be built, they were not able to translate it into the physical product. Local factors were a stronger selection pressure than cultural background, as ethnicity was suppressed in the domestic architecture of South Otago. Nevertheless a strong Scottish local flavour developed in most other areas of daily life, through their relationship to the land, religion, education, literature, music and recreation. The pattern of domestic architecture in South Otago instead mirrored development throughout the colony, to form part of the vernacular architecture of New Zealand.

**Thomas, Tim (1997) *The Practice of Colonization in East Polynesia.***

This thesis takes a critical look at recent archaeological conceptions of colonization of East Polynesia. Firstly, the main conceptual models of colonization that are prominent in the literature today, are examined. The models themselves are critically discussed, followed by an investigation into their theoretical underpinnings. Problems with these approaches lead to the suggestion of a different strategy towards developing an understanding of the way in which prehistoric Polynesians situated

themselves spatially through the process of colonization. This involves viewing colonization as a practice that is situated in a historical and material context - it is seen to be bound up in structures of power and ideology, and is a reflection and a result of a society's desires, cares, and perceptions. Central to the thesis is an exploration of the role of the landscape in the colonization of Polynesia. The rather ambiguous term 'landscape' is understood here to refer to a social construction of space, involving a collection of practices, meanings, attitudes and values. As such it is the basis for a humanistic understanding of the environment and its role in the spatial distribution of people. The above approach is worked through in practice in the interpretation of various archaeological, ethnographic, and statistical data relevant to Polynesian colonization. These interpretations lead to the conclusion that the colonization of East Polynesia is a making of place, a process by which the landscape is imbued with meaning and significance. Throughout the process of colonization social identity was bound to and associated with specific locations at an increasingly local level - it represents a 'settling down', a domestication. This was achieved through the interplay of various and conflicting ideological arguments. In the tensions created through the struggles for control over mobility, access and land we see these ideologies play out.

**Widdicombe, Helen (1997) *The Cutting Edge: A Technological Study of Adzes from Ebon, Maloelap and Ujae Atolls, Marshall Islands.***

The purpose of this thesis is to form a typology for a collection of Marshallese adzes and compare the differences between the collections from Ebon and Maloelap atolls.

The raw materials used fall into five groups: Adzes made out of the interior of the giant clam, *Tridacna gigas*, abbreviated TRI-INT, adzes made from the exterior of the elongate giant clam, *Tridacna maxima* (TRI-EXT), adzes made from the lip of the helmet shells (cassidae), adzes made from the body whorl of cassidae, conches (*Lambis* species) and cone shells (*Conus* species) and adzes made from the auger or turret shells (*Terebra maculata* or *Mitra mitt-a*). A series of metric and discrete attributes were recorded for each adze, and these were used to form the typology. Cross section, orientation of the bevel, and shape of the bevel are the most useful features for defining types. Types can include more than one kind of raw material but the majority of types are made from one main raw material group.

There is no significant difference between the proportion of each adze type recovered from Ebon and Maloelap atolls, except that TRI-INT types are more common on Ebon. The only two *Terebra* adzes are also from Ebon and adzes made from the lip of the homed helmet shell, *Cassis cornuta*, are more common on Maloelap. There were too few adzes from Ujae to include this atoll in the regional comparison.

As the largest *Tridacna* species is not known from Maloelap it is not surprising that adzes made from *Tridacna gigas* are rare there. According to the species range of the bulls mouth helmet (*Cypraecassis rufa*) this species should not be found in the Marshall Islands, but it is so



widespread that it must have been more common in the past than the modern geographic range indicates.

In conclusion, my typology presented in this thesis adequately classifies Marshallese adzes and there are no significant differences between the assemblages from Ebon and Maloelap Atolls. My classification of Marshallese shell adzes should have utility for other assemblages throughout the Pacific where shell adzes are found.

## 1996

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### **Hood, David (1996) *A Social History of Archaeology in New Zealand.***

Consideration of the degree to which social factors have influenced the development of archaeology has become a recent focus of interest among archaeologists; however little work has been done on determining the relationship of social factors to archaeology in New Zealand. The aim of this thesis is to consider whether archaeologists were influenced by the surrounding New Zealand society between the years 1840 and 1954 and if so, in what manner were they influenced. In particular, consideration is given to how the social background of New Zealand archaeology compared with the social influences of British archaeology of the time. For the purposes of the study the term archaeologist applies to all those who investigated or recovered *in situ* archaeological material. Lists of archaeologists of the day were compiled from journals, newspaper articles, and unpublished sources. From these lists the social background of those engaging in archaeology was reconstructed.

Developments in archaeological theory and methodology were also examined, not only to determine the manner in which they effected the practise of archaeology, but also to determine the source of those developments, and the reasons for their adoption.

The wider social context was also examined to determine the degree to which archaeology reflected certain factors in New Zealand society, not simply in the manner in which archaeology was carried out, but also in the reasons for which research was conducted.

This study demonstrates that though the discipline, and in particular the power, was concentrated among urban professionals, the social spread of those engaging in archaeology was wide. This was particularly the case between the turn of the century and the Second World War, when archaeologists with a tertiary background were in a minority.

Archaeologists were influenced both from inside and outside the field, the degree of influence being determined by individual factors.

As archaeologists were a part of society, so too was society part of archaeological practice. In the manner in which archaeology was conducted the influence of societal attitudes towards women and Maori can be seen.

**Petchey, Peter G. (1996) *Otago Water Wheels. The Industrial Archaeology of Water Wheels in Otago.***

This thesis is an investigation into the industrial archaeology of water power, specifically water wheels, in Otago, New Zealand. An archaeological site survey of some thirty-seven nineteenth and early twentieth century water-powered industrial sites is used as the basis of an investigation of the technology adopted in Otago, the origins of that technology and the mechanisms by which it came to be found here. What at first appears to be a British technology directly transplanted to Colonial New Zealand, on closer examination proves to be the product of local and international influences and developments on a technology that can be traced directly back to the Hellenistic world of the first century BC. While the British influence was strong, what appears in Otago is a unique adaptation of an international technology to a new environment.

## 1995

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**Clark, Geoffrey R. (1995) *The Kuri in Prehistory: a Skeletal Analysis of the Extinct Maori Dog.***

Skeletal remains of the prehistoric New Zealand dog, the kuri, are frequently recovered from archaeological sites. Despite their relative ubiquity only one major study, and the last for twenty five years, has been conducted. That work provided limited anatomical and osteometric information and concluded that the kuri population was homogenous through space and across time.

This study set out to provide a more detailed skeletal description and to investigate the question of population homogeneity by examining kuri skeletal material from five museums and two university anthropology departments. Metric and non-metric data was collected from a total of thirty seven archaeological sites from throughout New Zealand.

Variation within the population was established by comparing coefficients of variation across a number of variables. A program of univariate and multivariate analysis was carried out to examine spatial and temporal variation.

Results showed that the appendicular skeleton of the kuri has the highest levels of variation. Smaller limb shaft dimensions of late prehistoric kuri are thought to be due to a reliance on insufficient quantities of marine foods. Tooth wear analysis of late prehistoric dogs showed that they had severe tooth wear compared to 'Archaic' dogs.

**Edgar, Philip G. (1995) *Ideological Choice in the Gravestones of Dunedin's Southern Cemetery.***

Gravestones occupying the Presbyterian portion of Dunedin's Southern cemetery were interpreted within their archaeological context as the outcome of the influence of both social relations between the living and relations between the living and the dead in Dunedin's history. Two hundred and nine gravestones erected between 1858 and 1959 were

recorded, their attributes analysed and associations between these attributes and value of family burial plots offered. The cemetery is seen as partaking in the ideology of Social Darwinism in the late 19th century while the visual reduction in social stratification which takes place in the cemetery in the early 20th century reinforced the egalitarian ethos espoused by the Liberal government and the community at this time.

**Mitchell, Janet (1995) *Changing Food Habits of New Zealanders of European Descent 1870-1970: an Anthropological Examination of the Mechanisms of Cultural Change.***

Between 1870 and 1970 both the culture and food habits of New Zealand European society underwent change. In the past food habits have been examined using either an historical approach or consumption and nutritional data. These approaches however have not explained how change has occurred. Anthropologists working in other countries have approached this problem in several different ways. A structural approach to meals and the meal system gives answers to why food habits are slow to change. But this approach does not address change. A sociological approach which takes account of changes in the society explains how the interplay of societal factors can cause change but it does not account for the stability of food habits over long periods. This study combines these approaches to give an answer to the phenomenon of stability and change which characterised European New Zealanders' food habits from 1870-1970.

Evidence of change in food habits and in the culture was linked to changing social conditions, ideas about food and changes in technology. Material on the topic was collected from written sources - in particular recipe books were found to be a valuable tool.

In this study the evidence established that while all of the factors mentioned above played a role in the transformation of food habits in European New Zealand society, substantive change at any one time was linked to the social conditions that influenced women's role in the household.