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ABSTRACTS FROM THESES AND DISSERTATIONS, UNIVERSITY OF OTAGO, 2013-2014

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Introduction

Abstracts from theses and dissertations on topics related to archaeology completed in 2013 and 2014 are presented below. These include three PhD and seven MA theses, along with 19 BA(Hons) dissertations. The dissertations are held in the Anthropology & Archaeology Department's library. The theses are held both there and in the University of Otago Central Library, with most also able to be accessed via the Otago University Research archive (www.otago.ourarchive.ac.nz). Requests to consult any of these items should be directed to the library concerned.

Alderson, Helen. 2013. *The Political Economy of Monumental Architecture at Nan Madol, Pohnpei, Federated States of Micronesia*. MA thesis, Archaeology, University of Otago.

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.

Allen, Francesca. 2013. Impacting vegetation communities. Accessing the anthropogenic effects of early Polynesian settlement at two East Otago archaeological sites. BA (Hons) dissertation, Archaeology, University of Otago.

The anthracological analysis of cultural charcoal from archaeological sites is a growing field of paleobotany within New Zealand. The stratified archaeological site of Purakaunui (I44/21) on the east coast of southern New Zealand provides an excellent opportunity to apply anthracological methods to assess change over time. Purakaunui represents one of the initial Polynesian settlements within the region. The site's paleobotanical record is investigated so as to identify how anthropogenic actions impacted the vegetative environment. The investigation of cultural charcoal from Purakaunui can inform on the scope of anthropogenic interactions with local vegetation. A comparison with the record of vegetation change at the environmentally similar Shag River Mouth archaeological site (J43/2) provides an assessment of wider regional impacts and the range of anthropogenic actions in the course of early East Otago Polynesian settlement.

Bell, Alexander. 2013. The Sweet Potato Factory. An Archaeological Investigation of the Pouerua Cultivation Landscape. MA thesis, Archaeology, University of Otago.

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 Māori 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 were used to investigate how the cultivation landscape at Pouerua related to the numerous pā and kāinga in the

area. 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 pā and kāinga within the same area.

Beynon, Nicholas. 2014. *Wairarapa Gardens and Pā: An Archaeological Study*. BA (Hons) dissertation, Archaeology, University of Otago.

This dissertation investigates the relationship between gardens and pā in the Wairarapa. Principally assisted by the New Zealand Archaeological Site Recording Scheme it focused on further understanding a region that has been neglected since the Wairarapa Research Programme over 40 years ago. It intended to better understand garden-related site types in the Wairarapa by classifying them into direct or indirect forms of horticulture. This is an important measure to understanding the distribution of these sites in the Wairarapa and whether there was a consistent pattern between them and pā. This relationship was analysed using a consistent method of distance measurements based on how they were recorded in the Site Recording Scheme. This data is presented in a series of graphs, maps and tables to provide a modern understanding to the sites, most of which were recorded in the 1960s and 1970s. Aerial photographs are also used in the investigation to provide a different perspective on site relationships and to assess the reliability of the Site Recording Scheme. The analysis indicated that there is no consistent relationship between pā and garden systems in the Wairarapa.

Clifford, Emma. 2014. “Taking Māori Tikanga into the Pākehā Paddock”: Understanding the Return of Kōiwi Tangata/Human Remains in New Zealand. MA thesis, Archaeology, University of Otago.

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 kōiwi tangata from Canterbury Museum to Rāngitane 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 Māori in the form of the Treaty of Waitangi, the precedent set by Treaty settlement claims and the adoption of these principles and aspects of Māori 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. MA thesis, Archaeology, University of Otago.

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.

Eising, Kate. 2014. Child's Play: an archaeological assessment of 19th century children's toys. BA (Hons) dissertation, Archaeology, University of Otago.

Excavations at the Victoria Retail Centre in Whanganui recovered a relatively sizeable assemblage of 19th century children's toys. This dissertation analyses these toys and attempts to determine what kinds of activities these artefacts represent and to what extent these activities are gender specific. A discussion is undertaken on the role these toys played in raising children and how they could be used to train children for the social and cultural expectations

that accompany adulthood. Furthermore this assemblage is compared to the historical record and other assemblages to reveal how representative the archaeological remains are of the full range of children's toys available in the 19th century.

Foster, Danielle. 2013. Culture History to Ethnicity. A Review of the Archaeology of Ethnicity as a Global Theory and its Reflection in New Zealand's Archaeological Practices. BA (Hons) dissertation, Archaeology, University of Otago.

This dissertation examines the changing nature of the archaeology of ethnicity in the form a review of this topic. One aspect of this work is looking at the global acknowledgement of ethnicity throughout the history of the study of archaeology as a discipline, and how over time the representations and conclusions drawn may have changed. The second aspect is looking at how new theories have had an influence on how ethnicity is being determined. Based on this idea that new theories are having an effect on the determination of ethnicity, this dissertation attempts to examine if these international movements are having an effect on the work carried out in New Zealand that is related to the study of ethnicity. Examples are drawn from different ethnic groups in New Zealand as well as a spread across the timeline of which international changes can be seen from culture history to ethnicity.

Gaffney, Dylan. 2013. Crossing the Transition: Mobility and Subsistence change in the Central New Guinea Highlands at the Terminal Pleistocene-Mid Holocene. BA (Hons) dissertation, Archaeology, University of Otago.

Studies on the prehistory of the Papua New Guinea Highlands have emphasised environmental change, contemporaneous with the independent innovation of agriculture at the Pleistocene-Holocene transition through to the mid-Holocene. An analysis of a lithic assemblage from Kiowa rockshelter, in the Central Highlands, was used to investigate changes in people's mobility and subsistence at this important time. This study shows that human activity at Highlands' rockshelters at the Pleistocene-Holocene transition was not intensive, but in the early and mid-Holocene, occupation increased simultaneous with the intensification of agriculture and the increase of Highlands' population size. People at this time used mobile toolkits of small flakable stone to enable longer distance mobility for hunting while primarily reliant on abundant local stone for more local mobility. In the mid-late Holocene, occupation of rockshelters diminished, probably corresponding to gardens being used at these higher altitudes.

Harris, Terena. 2014. Fish vertebrae as diagnostic elements in New Zealand archaeology. BA (Hons) dissertation, Archaeology, University of Otago.

In this research dissertation a methodology has been constructed that allows fish vertebrae to be identified to species level. This was accomplished through the use of morphological characteristics and a comprehensive reference collection. In order to test the validity of the methodology, the method was applied to a case study. In this application 93% of the assemblage could be identified to species level. Using the vertebrae, eleven species were identified at the site, two of which were not identified using the mouthparts and special bones. At present, most New Zealand archaeologists analysing fish bone assemblages restrict themselves to using only the five-paired mouthparts and special bones to aid their taxonomic identifications. This results in a large portion of excavated material being disregarded. Vertebrae are often the most abundant element found in fish bone assemblages, and ignoring them in analysis is producing biases in the data.

Heath, Helen. 2013. Enter the Ceramic Matrix: Identifying the Nature of Early Austronesian settlement and Subsequent Change through Time in the Cagayan Valley, Philippines. BA (Hons) dissertation, Archaeology, University of Otago.

The research presented in this dissertation involved the physico-chemical analysis of a ceramic assemblage from the site of Nagsabaran located in Lal-lo, Cagayan Valley, Northern Luzon, Philippines. The aim of this research was to answer two questions. The first was to identify the nature of the early Austronesian settlement through pottery production in Nagsabaran. The second question was to assess a change through time from pottery production in the Neolithic to the Iron Age. These questions were to be addressed through two methods. The first was to undertake the first physico-chemical analysis on ceramics from the site to study the mobility patterns of the early Austronesian settlement in the Philippines. The second method involved assessing mobility and sedentism through the use of models proposed by Summerhayes (2000). These models theorise that pottery can identify the nature of settlement, whether it be mobile or sedentary. To answer these questions a physico-chemical analysis was used to examine the clay matrix and mineral inclusions of the ceramic assemblage from Nagsabaran. The organisation of this data through the use of multivariate statistical techniques enabled the creation of groups based on chemical similarity. The research carried out through the physico-chemical analysis identifies a mobile society during the Neolithic in the Cagayan Valley changing through time to a sedentary society in the Iron Age. The research in turn validates the models proposed by Summerhayes (2000).

Hurford, Jessie. 2013. *Moriiori tree carving on Rēkohu. A stylistic analysis of rākau momori.* BA (Hons) dissertation, Archaeology, University of Otago.

In this research, a stylistic analysis is conducted on the novel, archaeological Moriiori tree carvings of Rēkohu (Chatham Island). The tree carving data sets are sourced from historic records, including sketches and photographs, and more recent University of Otago survey work, including digital photographs and 3-D scans. The analysis that follows includes two primary components. Firstly, the frequency and distribution of carving attributes are identified from defined localities on Rēkohu. Secondly, the frequencies of attributes are examined between localities to test for the distinctive carving styles argued by Simmons (1980). Cladistical and hierarchical clustering models are employed to assess the degree to which cultural transmission occurs between defined localities of rākau momori (lit. “memorial tree”). This research contributes to our understanding of pre-contact Moriiori social organization and distribution on Rēkohu.

Jackson, Moira. 2014. *Settlements Patterns and Indigenous Agency in Te Tau Ihu, 1770-1860.* PhD thesis, Archaeology, University of Otago.

Dynamic post-contact Māori settlement patterns in Te Tau Ihu o te Waka a Māui (the northern South Island) are used to investigate agency and the role of emergent 19th century European population on Māori landscape use. The study has shown that the settlement pattern changes observed in the 1770 to 1830 period were mainly due to agency and internal cultural drivers of change rather than by forces external to Aotearoa New Zealand. The conceptual framework is informed by social archaeological theory drawn from international culture contact studies. A geographic information system (GIS) was used to aid the analysis of temporal and spatial data derived from historical maps and charts augmented with archaeological, historical and ethnographical information.

Lane, Jennifer. 2013. *Cemetery Studies: International Trends and Local Case Studies.* BA (Hons) dissertation, Archaeology, University of Otago.

This research investigates the ways in which cemeteries have been studied internationally and within New Zealand, and from these studies, a set of eight research questions was developed and tested in a pilot study carried out in the Northern Cemetery of Dunedin. The Northern Cemetery is a Category 1 site on the Historic Places Trust’s list, as it is one of the earliest cemeteries in New Zealand that interred the public in a nondenominational layout. This pilot study was based on Phillip Edgar’s (1995) Master’s project in the Southern Cemetery’s Presbyterian section, and adopted many of his classification forms,

but also recorded several attributes from other national studies. This investigation consisted of 52 randomly selected plots from within the 200 blocks of the cemetery, spanning the whole period of occupation from 1873 to the current year. The eight research questions investigated the relationships between the historical context (particularly class, society, and ideology) and the physical remains of the plots (through the plot dimensions, location, material, morphology, inscriptions, and iconography). The study identified a set of four classes within the cemetery that were dependent on the physical dimensions and location of the plot, and also discovered that several of the physical attributes varied depending on the class. These attributes were also investigated in terms of their changes over time and compared to the ideological and social contexts to identify if there was a relationship between them. While the sample was not large enough for an accurate study of the social and ideological changes during the period of occupation, the pilot study investigated many physical attributes of the plots in details that suggested patterns that would become clearer in a larger study.

Lawrence, M. 2014. Backyard Historical Archaeology: Unravelling past lives through analyses of the archaeological remains from 26 St. David Street, Dunedin. MA thesis, Archaeology, University of Otago.

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 19th century into the early 20th 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 affect 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.

Lewis, Julia. 2013. Feasting at Wairau Bar. A taphonomic study of pre-depositional modification to a faunal assemblage. BA (Hons) dissertation, Archaeology, University of Otago.

This dissertation focuses on an assemblage of moa and mammal remains from a Wairau Bar midden. The material dates from the earliest phase of New Zealand settlement and is the result of the disposal of the waste after a single feast event that occurred at the site. A taphonomic analysis of the remains was undertaken with a specific interest in the pre-depositional modifications. The various modifications caused by both human and animal taphonomic agents are used to develop interpretations and hypotheses about early Māori practices around food procurement, preparation, and disposal. Aspects of the relationship between Māori and the Polynesian dog are also discussed.

Lord, James. 2014. Modelling Mobility and Landscape Use. A preliminary examination of mobility theories and landscape use in the Strath-Taieri region of Inland Otago. BA (Hons) dissertation, Archaeology, University of Otago.

The current model used to describe mobility patterns in early New Zealand was proposed by Anderson and Smith (1996). The transient village displays all the main indicators of sedentism while also operating within a system that involved mobility. These villages were based around large bodied prey such as seals and moa and therefore primarily located in coastal areas (Anderson and Smith 1996; Nagaoka 2002; Walter *et al.* 2006). While these coastal sites have been the focus of much archaeological research, many inland sites have largely been ignored. This study reviews the available data for the Strath-Taieri region of inland Otago and examines how theories of mobility may be applied. From the available data I show that it is likely that early Polynesian settlers in New Zealand practised a logistically organised form of mobility. The transient village on the coast remained the hub of permanent settlement where everyday activities take place. Logistically organised task groups of foragers would set out from these villages in order to procure food and raw materials. These resources would then be transported back to the residential base to be used by the community. This study illustrates that theories

of mobility may be used in order to explain the distribution of archaeological sites and landscape use in the Strath-Taieri region.

Petchey, Peter. 2013. *The Archaeology of the New Zealand Stamp Mill.* PhD thesis, Archaeology, University of Otago.

This thesis is an archaeological study of the stamp mill, often referred to as a 'stamper battery,' that is one of the iconic features of New Zealand's historic goldfields. After the Otago gold rushes started in earnest in 1861 thousands of men flocked to the alluvial diggings, and they were soon searching for the quartz reefs that they were sure were the source of the river and stream gold. Hard-rock mining started in 1862 in Otago and Coromandel, and machines were erected to crush the rock and release the gold that it (hopefully) contained. These machines were stamp mills, a mechanically simple hammer mill that raised and dropped heavy weights onto the quartz in order to reduce it to the consistency of sand. The first few mills were improvised locally from materials at hand, and these were soon followed by a number of 'engineered' stamp mills imported from foundries in Melbourne. A local manufacturing industry quickly grew up, and other mills were imported from Britain and America. Today many examples of these mills survive in the old goldfields in varying states of preservation. They constitute archaeological evidence of two important aspects of the goldfields: technology, and a place of work. Much Industrial Archaeology has traditionally focused on technological details, and this is the starting point for this research. Contemporary industry literature is used to describe and understand the engineering of the stamp mill, and this understanding is then applied to the archaeological record. The results of a wide-scale survey that covered sites from Fiordland in the south to the Coromandel in the north are considered in terms of technological adoption, adaption and innovation in order to determine how and why gold milling technology came to New Zealand. The results indicate that the majority of the technology was imported, with Australia acting as a source of conventional technology, and Britain and America as sources of more innovative designs. However, far from being completely technologically dependent on these places, it is argued that New Zealand was a technological participant in the international mining industry. There is ample archaeological evidence for local agency in New Zealand, whereby technology was chosen and adapted to suit local requirements, with some local designs then being re-exported. New Zealand was admittedly never more than small player in this international field, but it was nevertheless an active one. The thesis then turns to the second issue: the stamp mill as a workplace. Since the 1970s commentators have pointed out that Industrial Archaeology should take note of social issues in the industrial

world, but much subsequent work has been criticised because of its focus on technology and structures. By taking the same engineering analysis of the archaeological evidence of the New Zealand stamp mills as used in the discussion of technology, the mill as a place where people worked is considered. Evidence of wear, repair, modification and pragmatic adaptation is discussed to identify the work that was actually carried out by the mill workers, and detailed volumetric analysis of various mill parts is used to quantify some of the tasks in relation to contemporary records of workmen's abilities. Finally, the workplace environment is also considered, including hazards such as noise, dust and poisons. The results of this, unsurprisingly, find that the battery house was by modern standards a very dangerous place. However, it is also observed that in a world without social welfare, the battery house represented employment and income that was vital for the working man and his family. In conclusion, the stamp mill is part of an archaeological landscape that has both international links and individual social meaning. Modern New Zealand society evolved in the melting pot of the 19th century, and the gold mining industry played an important role in that development. The combination of evidence of international influence and local agency in mining technology, and the role and experiences of the mill workers, provides a small insight into the emergence of the complex modern world.

Potts, Kirsty. 2014. Murihiku Pā: An Investigation of Pā Sites in the Southern Areas of New Zealand. MA thesis, Archaeology, University of Otago.

This Master's thesis examines why there are fewer recorded pā (fortification) sites in Murihiku, the southern-most region of New Zealand. Previous research on pā sites has primarily focused on areas with high distributions of recorded pā, such as the Northland, Auckland and Waikato regions. This thesis examines the idea of the enclosure, using pā 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 pā 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 pā sites. The resulting 31 sites were critically examined through field visits and the identifying attributes used to categorize these sites as pā. Subsequently, four archaeologically visible pā were confirmed; two prehistoric sites, Mapoutahi and Pā a Te Wera, and two historic sites, Te Waiateruati and Te Kiri o Tunoho. The nature of pā and their role in the late prehistoric period in Murihiku was investigated in order to evaluate the theories on why there are so few pā

recorded. Pā 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 pā appear to have developed in response to more external events, occurring to the north and south of Murihiku. Pā 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 pā 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 pā are not as common or widely distributed as their northern counterparts. This study supports recent interpretations of Māori pā as multifunctional, multifaceted and complex sites that changed through time.

Pulman, Natasha. 2013. Small Change. A Study of Gambling at the Lawrence Chinese Camp. BA (Hons) dissertation, Archaeology, University of Otago.

The Chinese had a major role in early New Zealand and even now their presence and influence is still great especially in the Otago and Southland regions. Their initial purpose was to mine and ‘get rich quick’ in order to return to China with greater wealth, this is described as the ‘sojourner experience’ (Ng, 1993). Although not all Chinese returned home, some by choice and others unable to, for much of their time in New Zealand the sojourner attitude prevailed. This attitude led to indulgence in the so-called ‘vices’ of opium and gambling which created the notorious and sensationalised image of Chinese in New Zealand. Lawrence Chinese Camp contains a wealth of gambling artefacts including: Chinese coins, European coins and glass gaming pieces (Wegars, 2006). Each of these classes of artefact offer information, including: the mints from which the Chinese coins (wen) originate, the denominations of the European coins, and the numbers of black and white glass gaming pieces. The Lawrence Chinese Camp and its gambling assemblage are placed into the historic context of the gold rush era New Zealand, explaining all the prejudices and sensationalism in the historic record that arose with the arrival of the Chinese miners and the habits they brought with them.

Robertson, Fin. 2013. Landscape Archaeology of Historical Rural Industries of Sandymount. BA (Hons) dissertation, Archaeology, University of Otago.

This dissertation takes a landscape approach to examining the physical manifestations of historical rural industry in the Sandymount region on the Otago Peninsula. The study area contains examples of several of the important industries undertaken during the 19th century in New Zealand. Surveys of several house sites were carried out, and numerous other landscape features were recorded, in order to create a picture of the activities that occurred. Historical research was carried out to see how these activities fitted in with Dunedin and New Zealand as a whole, and why these activities changed over time. Dairy farming was the most common industry in the area, which was superseded by sheep farming in the 20th century. There were also minor forays into lime production, and flax milling.

Ross, Victoria. 2014. The European Greenstone Industry in Otago: Archaeological and Historical Evidence. BA (Hons) dissertation, Archaeology, University of Otago.

This research dissertation provides a comprehensive history and understanding of the European greenstone industry in Otago during the late 19th and early 20th centuries. Using the chaine operatoire method of lithic reconstruction, this work attempted to reconstruct the manufacturing methods of the lapidary at this time using archaeological material. followed by the introduction of documentary evidence to fill in the gaps. It was found that while the archaeological evidence could show some of the process, there were gaps in the knowledge, and so documentary evidence was essential in some areas. To date no work has been published looking at this industry from an archaeological point of view, all work has been from a historical view. In some cases the archaeological material gave evidence contrary to that in the documentation, clearly showing the need for more archaeological investigation in the area. As most sites relating to the period are in urban areas this will most likely only happen through CRM (Cultural Resource Management) work, and as such will occur only as rescue excavations which can miss some of the information. In saying this, any new information that can be added to this part of the country's history is valuable.

Roughan, Stacey. 2013. Analysing fragmented glass artefacts using the Lawrence Chinese Camp as a case study. BA (Hons) dissertation, Archaeology, University of Otago.

Glass artefacts that are highly fragmented are difficult to analyse. It is important to have a systematic approach and an effective method of analysis. This dissertation presents a possible new method that uses a combination of hierarchical categorisation and multinomial logistic regression to predict which of the vessels the glass pieces originated from. This approach was applied to a selection of the glass assemblage from the Lawrence Chinese Camp as a case study. The regression only used a selection of the best data generated from the assemblage to create the best possible results. It correctly predicted the categories 80% of the time but was deemed too inefficient to be applied further. With further research the method could become a valuable tool for archaeologists in the future.

Sanders, Jane. 2014. Creating Communities: Heritage Management in the Clutha District. BA (Hons) dissertation, Archaeology, University of Otago.

Heritage management is a discipline by which the heritage landscapes of communities are created, protected and preserved for the future. The processes that underpin heritage management legislation directly influence heritage outcomes and are influenced themselves by the way heritage is viewed from a national, regional and local perspective. This research explores the ways in which New Zealand's heritage legislation - specifically the Resource Management Act 1991 and the Historic Places Act 1993 (now Heritage New Zealand Pouhere Taonga Act 2014) - has worked in conjunction with local authority planning documents to create heritage landscapes. It specifically examines heritage management processes in the Clutha District of New Zealand to determine firstly how heritage has been identified, evaluated, managed and protected in the Clutha District and secondly how the heritage landscape is viewed, understood and used by the local community. This research examines definitions of heritage, local and national mechanisms of heritage identification and protection and through case studies, examines how two Clutha communities view, understand and value the heritage landscapes of their towns. The protection of heritage in local communities is often seen as essential to ensuring that people are able to connect with the past, live in the present and plan for the future. This research considers the validity of this principle through case studies of Lawrence and Balclutha and examines the effectiveness of the current approaches to heritage management to determine if the landscapes being created contribute positively to the communities in which they stand.

Scahill, Alexander. 2013. *Defending Dunedin: The Archaeology of Dunedin's Coastal Fortifications 1885-1945*. BA (Hons) dissertation, Archaeology, University of Otago.

This dissertation is an archaeological analysis of Dunedin's coastal military fortifications in the period from the 1880s, when the country was threatened with Russian invasion, through until the end of the Second World War. This investigation examines the nature and extent of these fortifications, and was conducted through both field survey and mapping, and historical research. With very little previous work conducted on these types of site, this research provides valuable insight into fortification construction methods and temporal change throughout this period. This investigation also examines the mindset of a young nation, and their reaction when facing for the first time a serious external threat to their way of life.

Simmons, Alexandra. 2013. *Soldiers' Foodways: Historical Archaeology of Military Comestibles on the Waikato Campaign of the New Zealand Wars*. PhD thesis, Archaeology, University of Otago.

Food is an essential part of human existence and directly linked to the cultural behaviour of individuals, groups, and institutions. In their commentary on food studies, Mintz and Du Bois (2002, p. 8) noted that war has been relatively neglected as a research focus. This thesis investigates British and colonial soldiers' comestibles during the Waikato campaign of the New Zealand Wars, a regional conflict that commenced in 1863. It is the first major investigation that has been carried out on this subject in New Zealand and one of the few investigations worldwide on soldiers' comestibles during a war. The thesis addressed three questions: what did soldiers eat and drink during the campaign; how was food security ensured; and what foodways practices indicated status. The questions address themes that are at the core of foodways research (Dery 1997, Bray 2003, Cool 2006, Andersen and Moltzen 2007, Peres 2008, and Eichelberger 2010). Food security was of specific interest because the Waikato campaign followed the disastrous Crimean War and took place during a time of British military supply system reform. Cognitive archaeology and middle-range theory guided the research process. A middle-range methodological approach was used to address the research questions in three distinct data sources—the official records, eyewitness accounts, and the archaeological record. Each source was compiled as an independent record of comestibles using the same criteria; a middle-range technique used by Binford (1987), Leonie and Crosby (1987), Leonie and Potter (1988) and Smith (1996). The criteria were based on underlying food culture rule sets (Leach 2008, 2010).

The rule sets were modified and used to construct a food culture research framework that addressed the range of data available in the sources. The framework structured the investigation. Among the findings was evidence that the War Office supply and transportation system reforms had little impact on food systems during the campaign in New Zealand. More unusual findings included the link between food security and luxury foods (a finding not identified in the military food research of Dery 1997, Cool 2006, or Eichelberger 2010). The research also indicated a variety of food practices were used to indicate status. Many of the foodways were embodied in the mess system—a system of hierarchical separation. For example, the mess building or tent was a daily visual reminder of the military hierarchy, e.g. commissioned officers' messes, sergeants' messes, enlisted men's messes. Military hierarchy is directly linked to military control and discipline. The ideas and hypotheses presented are pertinent to future archaeological investigations at military sites in New Zealand and overseas. The research methodology and the foodways research framework also have applications for comestible research at other sites such as railway camps, abandoned towns, mining camps, as well as for regional analysis of foodways at contemporary prehistoric sites.

Tennant, Karl. 2014. Sieving Strategies in New Zealand archaeofaunal analysis. A methodological assessment. BA (Hons) dissertation, Archaeology, University of Otago.

This dissertation focuses on the influence that the use of 6.4mm, 3.2mm, and 2mm screen sizes has on the retrieval of data from faunal assemblages recovered from three separate prehistoric archaeological assemblages in New Zealand. Bulk midden samples recovered from archaeological sites at Kahukura, Tokanui and Cooks Cove were used as test samples to determine how relative taxonomic abundance is influenced by the degree of rigour used in the recovery of archaeofaunal remains. Rigorous identification procedures were employed to determine how the recovery of various elements of fauna is influenced by screen size. Issues surrounding optimal retrieval of data and potential for fine screen sieving for improving outcomes in faunal analysis research are addressed and the viability of fine screening for broadening understandings of interregional variation in economic behaviour in New Zealand prehistory is assessed.

Vilgalys, Gabrielius. 2013. Do Hiccups Echo? Mobility Patterns During EPP in the Port Moresby Region, Papua New Guinea. BA (Hons) dissertation, Archaeology, University of Otago.

The research presented here involved physicochemical analysis of ceramics from two EPP sites, Eriama [ACV] and Taurama [AJA], located in the Port Moresby region on the central south coast of Papua New Guinea. This research was driven by three main goals. Firstly, to undertake physicochemical analysis on ceramics produced during EPP and post-EPP to provide insight into ceramic production and mobility during the Ceramic Hiccup that follows the end of EPP. Secondly, to test the hypothesis put forth by Bulmer (1978) suggesting a continued occupation at Taurama [AJA] from 2000BP to 300BP. Lastly, this study was undertaken with the hope of providing comparative data surrounding ceramic production during and after EPP. To achieve these goals physicochemical analysis was undertaken with foci on the clay matrices and non-plastic mineral inclusions used in ceramic manufacture. Through multivariate analysis this data was grouped into chemically related groups. Through the use of physicochemical analysis this research suggests that there was a great deal of mobility during EPP, with highly interactive groups, and that this trend declines over time and settlements become sedentary following the Ceramic Hiccup. At Eriama [ACV] there was a highly mobile group occupying the site only intermittently. At Taurama [AJA], Bulmer's (1978) hypothesis cannot be sustained as the data reveals a great deal of mobility at Taurama [AJA] during EPP and the Ceramic Hiccup with a sedentary settlement only arising after.

Woods, Naomi. 2013. Artefacts and Community Transformations. The Material Culture of Nineteenth Century North Dunedin. MA thesis, Archaeology, University of Otago.

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 19th 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

19th 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 19th century, but the ways in which they were handled were 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.