

RECENT ADVANCES
IN THE
ARCHAEOLOGY
OF THE
FIJI/WEST-POLYNESIA REGION

Editors

David J. Addison

Christophe Sand

University of Otago Studies in Prehistoric Anthropology · No. 21

Dunedin · 2008

SERIES EDITORS:

Glenn R. Summerhayes

Richard Walter

Les O'Neill

Department of Anthropology, Gender and Sociology

University of Otago

Dunedin

New Zealand

ISBN: 978-0-473-14586-6

Designed & Typeset by:

Les O'Neill

CONTENTS

| | |
|--|----|
| <i>Preface</i> | v |
| <i>Introduction:</i> | |
| Archaeology in the Polynesian Homeland: The State of Play at the Beginning of the 21st Century | 1 |
| <i>Christophe Sand & David J. Addison</i> | |
| The Archaeology of the Polynesian Homeland: A Retrospective View of the Early Years | 7 |
| <i>Janet Davidson</i> | |
| Natural and Cultural Deposits in Tatuba Cave, Fiji Islands: 1972 and 2002 Investigations | 33 |
| <i>Julie S. Field</i> | |
| An Early First Millenium AD Burial from the Naselala Site, Cikobia-i-Ra Island (North-East Fiji) | 45 |
| <i>Frédérique Valentin, Christophe Sand, Isabelle Le Goff, & Hervé Bocherens</i> | |
| Tools of the Ancestors? Evidence for Culturally Modified Human Bone from Tongan Skeletal Assemblages | 57 |
| <i>Alice A. Storey</i> | |
| Who Built the Fort at Uliamoa? Conjectures on Indigenous Technology Transfer in Early Historic Sāmoa | 71 |
| <i>Shawn S. Barnes & Roger C. Green</i> | |
| Radiocarbon Dating Marine Shell in Samoa – A Review | 79 |
| <i>Fiona Petchey & David J. Addison</i> | |
| How Dark Are They? The Sāmoan Dark Ages, ~1500–1000 BP | 87 |
| <i>Timothy Rieth & David J. Addison</i> | |
| Samoan Plain Ware Ceramics of Tutuila Island, American Sāmoa: Some thoughts on their Spatial and Chronological Distribution | 97 |
| <i>David J. Addison, Jeffery Toloa, Tuipuavai Tago, & Siaki Vaueli</i> | |

ARCHAEOLOGY IN THE POLYNESIAN HOMELAND: THE STATE OF PLAY AT THE BEGINNING OF THE 21ST CENTURY

Christophe Sand* and David J. Addison†

INTRODUCTION

The region of Fiji-Tonga-Samoa, as well as the neighbouring islands of Futuna and 'Uvea (Wallis), have been identified as the area where unique proto-Polynesian traditions emerged after first human settlement about 3000 years ago (Kirch and Green 2001). This region, geographically isolated by significant water gaps from Island Melanesia

to the west and the islands of East Polynesia, has over the millennia developed along a specific path, leading to the unique cultural traditions we see today. Between the 27th and the 30th of November 2006, some 35 archaeologists from around the globe met on Tutuila (American Samoa) to participate in a working conference on the 'Archaeology of the Polynesian Homeland' (Fig. 1). The meeting brought together researchers currently working in Fiji/West-Polynesia and those with an interest in the prehistory of the region, to discuss their work and share ideas about specific topics drawn from archaeological work carried out over the last 50 years. The intention was to allow a multifaceted synthesis of the region's prehistory, highlighting agree-

* Department of Archaeology of New Caledonia, Noumea, New Caledonia

† Samoan Studies Institute, American Samoa Community College, American Samoa

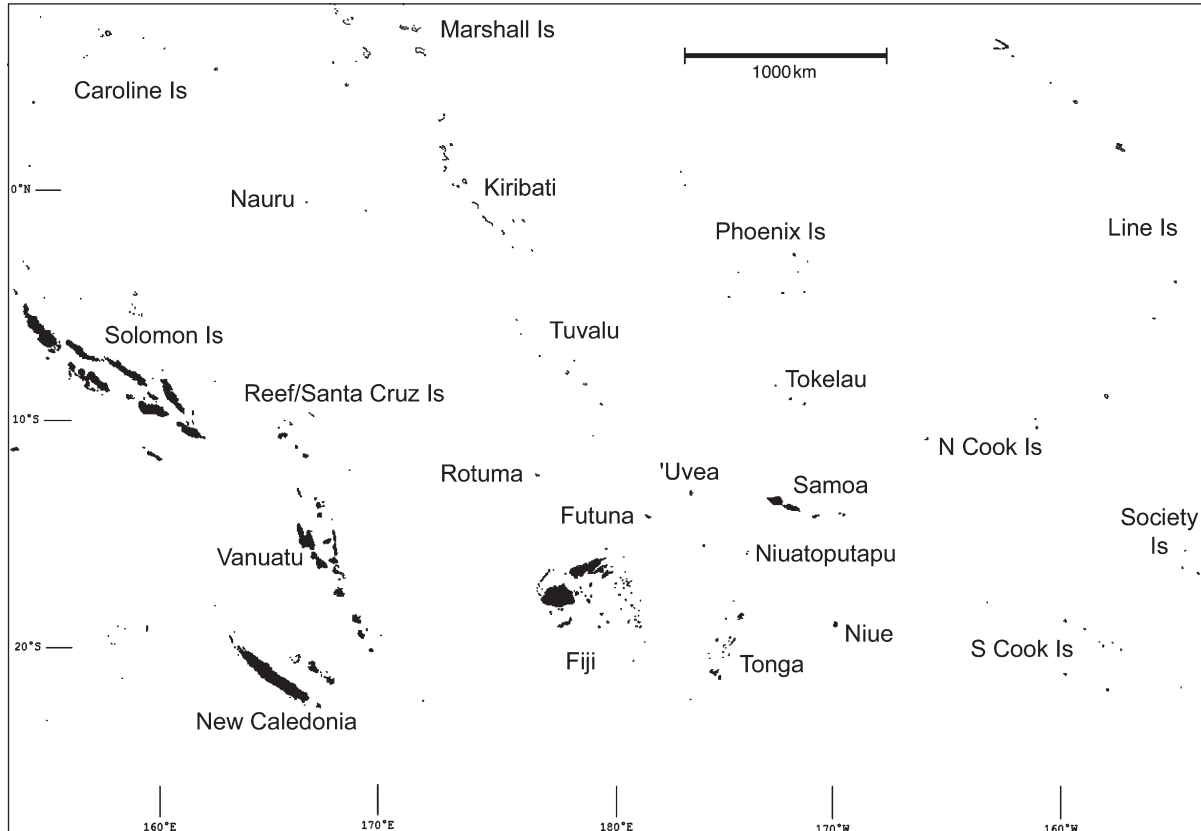


Figure 1: Location of the 'Polynesian Homeland' in the central Pacific.
Base map courtesy of Peter Minton (<http://www.evs-islands.blogspot.com>).

ments and disagreements between researchers, to pinpoint the meaning of the Melanesian/Polynesian 'frontier', and to identify future issues that are likely to define the next decade of archaeological research in the Polynesian Homeland. At the conclusion of the workshop, a number of the participants proposed to submit individual papers as part of a volume on the region, presenting their latest results. This volume is the outcome of this collective effort to bring to the forefront this new research. It also gives the conference organisers, an opportunity to review several of the major issues discussed during the meeting.

A SNAPSHOT OF THE POLYNESIAN HOMELAND WORKING CONFERENCE THEMES

During the organisation period, we pinpointed twelve major topics/themes that were chosen as a framework for the conference discussions to be held over three days. The topics were structured in chronological order and were circulated beforehand so that each participant could prepare for the two hours of discussion reserved for each topic. The results of the discussions are summarized below in two chronological periods (the first covering the period from about 3000–1000 years ago and the other dealing with the last 1000 years).

From First Settlement to the End of the 'Dark Ages' (circa 1000 BC–AD 1000)

The Eastern Lapita Province

Participants agreed that the picture of the first settlement phase of the Eastern Lapita Province has profoundly changed in the last fifteen or so years, due to continuing efforts throughout the region. A number of major advances have been made in the study of prehistoric landscapes and the palaeoecological conditions encountered by the first Austronesian settlers, as well as the refinement of first settlement dating, with a major shortening of the sequence. Early hypotheses that placed the first Lapita settlement as far back as 1500 BC have now been replaced by a consensus that the first discovery of Western Fiji took place a few decades before 1000 BC, of Tongatapu just after 1000 BC, with a progressive settlement of the other islands of the region over the next 150 years. Consequently, new discussions have emerged on the pattern of prehistoric settlement in this remote Lapita region. Refinement in the study of first settlement cultural remains and the development of a whole new set of excavations of Eastern Lapita sites have facilitated better control of the material culture sequence, leading to a clearer understanding of the mechanisms of transformation that produced a specific regional cultural complex. Questions of the genetic ancestry of the first generation of settlers have also received renewed attention, with the discovery of a series of Lapita-aged burials at several locations.

All these data shed new light on the dynamics of Lapita times in the region (e.g. Burley and Dickinson 2001). In

the discussion, the main point about the Lapita phase, was a proposal to identify two specific dynamics in the Eastern Lapita Province, one around Western Fiji, and one encompassing the Lau Islands and West Polynesia. Due to a lack of data, the position of Vanua Levu remains unknown at present. Discussions highlighted that the concepts of 'Early' and 'Late' Eastern Lapita need to be defined in more detail, some participants arguing that there is just an 'Eastern Lapita' with open dentate motifs in the Lau-West Polynesian area.

Proto-Polynesian Developments

The post-Lapita regional evolutions between ca. 2600 and 1800 BP, and the emergence of Proto-Polynesian cultural traits were the focus of the second theme. Questions such as 'how similar do archaeological remains need to be to show cultural relationship between distant islands?' were debated, as one of the issues in Fiji/West-Polynesia during its first millennium of settlement is the apparent homogeneity of the material cultural changes across most of the region, especially when one compares the regional picture with the diversity at play in Island Melanesia over the same time period. Nonetheless, localised studies have shown that the apparent regional similarities are undermined by local variation (e.g. Clark 1999).

There was much discussion on whether this period can still be viewed as having developed a set of common cultural traits over the entire region or if we are witnessing a more diverse situation, with marked cultural differences already developing between archipelagos. The plainware chronology in particular appears to undergo progressive diversification in West Polynesia, with specific vessel forms and perhaps even specific pot uses between archipelagos emerging early in the ca. 1000-year plainware period. Participants agreed that even after 50 years of research, much remains to be done to pinpoint the end of ceramics in each sub-region of West Polynesia and to define with more certainty if ceramic manufacture terminated everywhere at the same time.

The question of post-Lapita evolutions is not a mere typological and chronological obsession; it is central to the debate on the emergence of the Proto-Polynesian culture and its archaeological signature. The last decade has seen the confrontation of two opinions about the development of specific Proto-Polynesian cultural traits during the prehistoric chronology of the Fiji/West-Polynesia region. One favours an immediate post-Lapita chronology before 2000 BP (e.g. Kirch and Green 2001), the other suggests a lack of such data until a later period during the first millennium AD (Smith 2002).

It was hoped that through complementary analyses from different practitioners working in the field, and by questioning the position of Fiji as an 'Archipelago in Between' Melanesia and Polynesia, that a more balanced understanding of this key issue would be reached in panel dis-

discussion. But significantly, no consensus emerged around the concept of 'Ancestral Polynesia'. The overall discussion focussed on what can be defined in archaeological terms as Proto-Polynesian, and where we stand today in the debate over the chronology of its emergence. Not surprisingly, Kirch and Green's book 'Hawaiki' was at the core of the discussion, as was the link between the Fiji/West-Polynesia region during the first millennium AD and the first settlement of East Polynesia. A series of provocative proposals were made at the end of the session, such as the possible arrival of new groups of people in Fiji and/or West Polynesia during this time period. Overall, the discussion ended without consensus about the spatial and chronological patterns of artifact traits or their meaning. Clearly, this is an issue that requires further research.

Subsistence Strategies

One topic discussed as a general theme overlapping the chronological divides of the conference was an overview of subsistence strategies in the Fiji/West-Polynesian region. Excavation of first settlement sites has demonstrated the significant impact of human settlement on the endemic fauna, with the extirpation and extinction of numerous land-birds, such as megapodes and reptiles (e.g., Steadman 2006), and a drastic reduction in the size of turtle populations, as well as the average size of some shell fish. The development of horticulture had varied effects on different islands (the replacement of forests by grasslands, massive erosion in some islands, or in some instances apparently little effect) and pathways of intensification were multifaceted, some participants noting that no evident sign of this process could be identified on some islands.

It appears that the topic of 'strandloopers', first proposed by Les Groube over 35 years ago (Groube 1971), is back on the table. Conference participants were open to the idea that there may have been an initial heavy reliance on wild resources with minimal horticulture in at least part of the region until later periods. Conference participants were surprised when discussion of faunal data from the different islands showed a much greater variety of situations than the simple 'blitzkrieg' scenario often presented as a consequence of first human arrival. This was also the case with horticulture, and a series of case studies showed clear differences in the development and effects of horticulture on different islands. There was discussion around the topic of landscape transformation, leading to the questioning of the definition of the concept of 'intensification' in the region, and the need for a more supple understanding of individualized local scenarios.

The Dark Ages

This central part of the prehistoric chronology of the region, covering broadly the first millennium AD, and especially the period after the disappearance of pottery in West Polynesia, remains poorly known. This period has been conveniently referred to as the 'Dark ages' (David-

son 1979), although the literature shows the existence of archaeological data from this pivotal millennium. The conference, which gathered many of the archaeologists working in the region, was a good opportunity to obtain a fuller understanding of this period, be it from archaeology, but also from linguistics, and to identify what the newly acquired data reveal about the cultural dynamics of the first millennium AD. A reasonable number of ^{14}C dates are from this period, although discussions highlighted how most of them are just 'dates' without real usable context to define the cultural processes at play. A set of discussions focussed on recent work showing that this period was also a time of major landscape transformation, leading to questions about how these changes influenced long-term cultural development, and the connections between demography, environmental conditions, and the possible arrival of new people. The main consensus was that we are still dealing with Dark or at least 'Gray' Ages.

The 'Traditional' Past: the Last 1000 years

The Emergence of the Traditional Chiefdoms

The second part of the working conference focussed on the last 1000 years of the prehistoric chronology, by discussing first, from a regional perspective, the emergence of what can be termed the 'traditional chiefdoms' (AD 1000–1500), relying on myths, oral traditions and archaeology. All the islands of the Fiji/West-Polynesia region have complex myths and traditions relating to the appearance of their ancestral chiefdoms, marking the foundation of the political systems witnessed by the first Europeans in the 18th century. Archaeology, for its part, has identified the development of new landscape uses and new cultural signatures after AD 1000, testimony to new cultural dynamics (e.g., Burley and Clark 2003). The conference discussions tried to better understand the relations between traditions of wide-scale development of new political systems and the archaeological record, in terms of internal developments, outside influences, environmental change etc., with a nice balance between pure archaeology and debates on the accuracy and appropriate use of oral traditions. Even if the fundamental conditions leading to the rise of traditional chiefdoms about or just after AD 1000 remained controversial, most participants agreed that there was a unique political and cultural dynamic during the period.

Interaction, Exchange and Monumental Architecture

The conference discussed data on the development of new production centres and the emergence of local and regional exchange networks during the second millennium AD, as well as their role in the appearance of new political strategies. Geochemical studies have allowed over the past decades the identification of exotic manufactured goods like stone adzes found over unexpected distances. Such archaeological data reinforces the ethnographic accounts on the existence of local specialised production centres, the presence of multiple island connections, and structured

networks between the archipelagos of the region during the second millennium AD. This period also saw the settlement of different parts of the Melanesian chain by people from West Polynesia, leading sometimes to a major cultural influence on some islands. The panel discussed the technical processes used today to identify the movement of transported artefacts, but also the cultural outcomes of interaction at different scales. The discussion in the end highlighted how little we still know about most of the region, pointing to the need for more research programs focussed on geochemical provenience studies. It appeared that we may not have at present enough data to differentiate 'exchange networks' from 'occasional movement of objects'. The need for better technological analysis on the production process of adzes was also raised, to allow differences between expedient production and specialized tufuga-related manufacture of objects to be identified.

Another clear archaeological signature of change during the second millennium AD is the appearance of monumental architecture. The region is renowned for its monumental structures, ranking from large fortified complexes to massive artificial platforms, cut slabs on burial mounds and different types of specialized building (Kirch 2000). Marked inter-archipelago differences, as well as a series of basic similarities can be observed, that do not yet allow us to disentangle local developments from regional influences. Discussions were focused on bringing together different perspectives on the regional monumental architecture, as well as a series of localised studies, in order to disentangle the when, the where, the how and the why on this topic. This exercise has highlighted how little we know from direct archaeological data, and how much most of the ¹⁴C dating concentrates in the last 500–600 years.

The Tongan Maritime Chieftdom

A conference on the Polynesian Homeland wouldn't be complete without a discussion specifically dealing with the topic of the 'Tongan maritime chieftdom', its spread across the region and its wide socio-political influence. The Tu'i Tonga chieftdom on Tongatapu has clearly been the single most influential political centre in the region over the last 500 years (Burley 1998), with the sudden development across the Fiji/West-Polynesia region of multiple monumental constructions that can be studied through archaeology. The regional data from oral traditions allow a nearly *historical* understanding of some of the key events surrounding the influence of the Tongan maritime 'empire' on other archipelagos and islands in terms of politics, land tenure, and exchange of goods.

This late influence of Tongatapu may have overshadowed former connections not centred on Tonga, obscuring our understanding of the region's dynamics in former times. The session led to a series of discussions about the term 'empire', and what had happened before. The role of the Samoan influence in the region prior to the 15th century was debated, as were the types of political and social relations

between Samoa and Tonga. Questions of chronology were also raised with a suggestion of a unification process of the Tongatapu polity around the 15th century. If this scenario is correct, it was only after that time that the Tu'i Tonga chieftdom could start expanding outside southern Tonga.

Early European Contact

One of the unexpected consequences of the rich corpus of oral traditions focussing on local politics has been to prevent the development in Fiji/West-Polynesia of a proper study of the consequences of the first two centuries of European intrusions into the region. Surprisingly little has been done in terms of the archaeology of the contact period (but see Davidson 1969), although first encounters with Westerners started as early as the 17th century. Elsewhere in the Pacific, more detailed understanding of the consequences of these first relations, especially with the introduction of new goods but also of new diseases, leading to population collapse and population movement, as well as the weakening of some traditional pre-contact centralized political systems, has raised a whole new set of questions on the indirect influences of European contact on islanders and island societies. The participants agreed that it is time to discuss those questions in detail for the Fiji/West-Polynesia region. Debates on first contact and on the early colonial period focussed on two major components. The first was on the archaeological remains of these early contacts, the second was on demography. Roger Green's paper on Samoa (Green 2007) is an up-to-date starting point to questions about demography in the region. There was no consensus on the final outcomes of first contact, but participants highlighted the need to test the models at hand, especially through settlement pattern studies.

Future Directions in the Archaeology of the Polynesian Homeland

The workshop ended with a general discussion about the archaeological projects urgently needed in Fiji and West Polynesia to foster a better understanding of the 'longue durée' in the region. After over 50 years of archaeological research looking mainly for the origins of the old Polynesian Homeland, a great number of islands, big (like Vanua Levu) and small, have still received no real attention by archaeologists. Any strategy to develop a global understanding of the region's history should take into account the numerous gaps in our knowledge, gaps that we ultimately need to fill. At the same time, a whole set of cutting edge analyses are emerging from the efforts of different research teams, and these need to be thoroughly developed and integrated in future research programs. Finally, Pacific Islanders are increasingly aware of the tools of archaeology, and are expressing a strong desire for the sharing of information and some sort of control on the research topics developed on their land.

With this background and new understanding, the concluding discussion aimed at identifying the major research

trends emerging, in order to set the scene for the prospects of future archaeology in the Fiji/West-Polynesia region. To get a better understanding of Lapita and its aftermath in Fiji appears as a central question if we want to define more precisely the start of the regional cultural chronology. But discussions revolved also around other considerations, like the need to get the governments of the region aware that archaeological sites are getting destroyed at a fast rate because of resort constructions and other economic development activities. Some participants proposed to fulfil a series of geochemical analysis on Fijian and West Polynesian collections in their laboratories, in order to start building a specific data-base for adzes, for example. The last point discussed was the possibility of putting together a project on the model of the 'Lapita Homeland Project', perhaps focusing on Vanua Levu – still an archaeological *terra incognita*. This last prospect is a good illustration of how much still remains to be done in this core cultural region of the central Pacific, but also the significant rise of the number of archaeologists, especially young practitioners, eager to work specifically on the past of the Fiji/West-Polynesia region.

THE PAPERS

The papers collected here were not presented at the conference. As noted earlier, the conference format was an open forum on focussed topics. The present volume is the result of conference participants expressing a desire to formally present some of their recent work. As with the archaeologists working in the region, the papers are diverse. Aside from a regional focus, there is little to unify the papers, which range through methodological and technical topics to data-rich papers on specific sites and sub-regional summaries. We have arranged these diverse papers by archipelagos from West to East; thus Fiji, Tonga, then Samoa.

Perhaps appropriately for a discipline interested in time, we begin the volume with Janet Davidson's historical review of developments in the archaeology of the region. Davidson draws on her career of some four decades in Pacific archaeology to give us some perspective on what came before. This is not a review of early research data from the region, but rather traces the intellectual context of early work in the region – including the concept of a 'Polynesian homeland'.

Julie Field also touches an earlier generation of work in the region in her paper on the 2000-year sequence at Tatuba Cave in Fiji. First excavated in 1972, Field returned to the site thirty years later and here gives us a synthesis of the combined results as well as the first publication of much of the earlier data.

Frédérique Valentin, Christophe Sand, Isabelle Le Goff, and Hervé Bocherens examine a skeleton from the very north-eastern margin of Fiji at Cikobia-i-Ra Island. Through their chemical and macroscopic data, they offer a bioanthropological understanding of the life-history of

the individual as well as placing it in regional context.

Alice Storey's paper continues with human bones as subject matter, but in Tonga and with a different focus. Storey's analysis of modified human bone from four islands in Ha'apai seeks to distinguish evidence of cannibalism from evidence of tool manufacture.

Shawn Barnes and Roger Green lead off our series of four papers on Samoa. They tackle a period often neglected in the region – the time after Europeans showed up. Their paper points to the rich arena awaiting archaeologists willing to tackle what was a highly dynamic period in the region.

Fiona Petchey and David Addison review technical issues relating to marine-reservoir effect and marine-shell dating in Samoa. They offer a new local marine reservoir correction (ΔR) – one that suggests marine shell in Samoa is very near the average worldwide reservoir.

Timothy Rieth and David Addison discuss the concept of a 'Samoa Dark Ages' and recent data covering that period (~1500–1000 BP). Their review of this and previous data suggest both continuity with earlier deposits and diversity across the archipelago.

We end the volume with a paper by David Addison, Jeffery Toloa, Tuipuavai Tago, and Siaki Vaueli reviewing the current state of knowledge of Samoan Plain Ware ceramics in American Samoa. They argue that the discovery of a large number of ceramic sites on Tutuila over the last decade must lead to a new understanding of their spatial and temporal distribution with broader implications for settlement pattern, subsistence, etc.

CONCLUSION

As this set of papers shows, it is a thrilling time to be working in the Fiji/West-Polynesian region; the Polynesian homeland. After decades of research that has allowed the erection of a regional framework, it appears that archaeologists of the region are poised to begin filling in important areas as well as posing new and innovative questions. It is pleasing to see the continuing interest in the region by a new generation of archaeologists. Particularly satisfying is the emergence of a small but growing cadre of indigenous archaeologists – we hope this trend continues and that the established archaeologists in the region continue to undertake community outreach and education. The coming decade will be an exciting time for the archaeology of the region and we eagerly anticipate the results to come.

ACKNOWLEDGEMENTS

This short review of the archaeological knowledge about the Polynesian homeland region would not have been possible without the dynamic participation of all our colleagues to the conference. The input of each participant in the new ideas that emerged from the discussions will

be acknowledged in the final proceedings of the sessions, something that was beyond reach for this paper. It was also decided, after some hesitation, to keep the reference list to a minimum in order to avoid uncomfortable lecture. Thanks are due the outside reviewer for comments on this paper.

REFERENCES

Burley, D. 1998. Tongan Archaeology and the Tongan Past, 2850–150 B.P. *Journal of World Prehistory* 12(3): 337–392.

Burley, D., and J. Clark, 2003. The archaeology of Fiji/Western Polynesia in the post-Lapita era. In *Pacific Archaeology: assessments and prospects: Proceedings of the International Conference for the 50th anniversary of the first Lapita excavation. Koné-Nouméa 2002*. C. Sand, (ed.) pp. 235–254. Les Cahiers de l'Archéologie en Nouvelle-Calédonie 15. Nouméa, New Caledonia: Département Archéologie, Service des Musées et du Patrimoine de Nouvelle-Calédonie.

Burley, D., and W. Dickinson, 2001. Origins and significance of a founding settlement in Polynesia. *Proceedings of National Academy of Sciences* 98: 11829–11831.

Clark, G. 1999. Post-Lapita Fiji: Cultural Transformation in the Mid-sequence. Unpublished PhD thesis, Australian National University.

Davidson, J.M. 1969. Settlement patterns in Samoa before 1840. *Journal of the Polynesian Society* 78: 44–82.

Davidson, J.M. 1979. Samoa and Tonga. In J. Jennings (ed.), *The Prehistory of Polynesia*, pp. 82–109. ANU Press, Canberra.

Green, R.C. 2007. Protohistoric Samoan Population. P.V. Kirch et J.L. Rallu (eds), *The Growth, Regulation, and Collapse of Island Societies: Archaeological and Demographic Perspectives from the Pacific*, pp. 203–231. Honolulu: University of Hawaii Press.

Groube, L. 1971. Tonga, Lapita pottery, and Polynesian origins. *Journal of the Polynesian Society* 80: 278–316.

Kirch, P.V. 2000. *On the Road of the Winds: An Archaeological History of the Pacific Islands before European Contact*. Berkeley and Los Angeles: University of California Press.

Kirch, P., and R. Green, 2001. *Hawaiki, ancestral Polynesia: an essay in historical anthropology*. Cambridge; New York: Cambridge University Press.

Smith, A. 2002. *An Archaeology of West Polynesian Prehistory*. Terra Australis 18. Canberra: Pandanus Books. Research School of Pacific and Asian Studies, Australian National University.

Steadman, D., 2006. *Extinction & Biogeography of Tropical Pacific Birds*. Chicago: University of Chicago Press.