

fragile and ephemeral archaeological signatures of such activities is remarkable.

Walls' chapter on botanical evidence of human occupation, documents and summarises a surprising array of examples from the last 200 years, including evidence of clearing for farming and pastoral purposes, and timber-getting for fuel and structures. The mixture of inadvertent and deliberate introductions of exotic plant species is also documented.

The final paper by Jones and Dingwall attempts to draw together much of the preceding discussion, although the overall historical narrative would have been equally useful at the introduction of the book. This section also mentions an 1842–56 occupation of the islands by a group of Maori and Moriori from the Chatham Islands. This group is mentioned in passing by various other authors in the volume, but is never adequately discussed by any of them. Prickett in Chapter 3 notes that New Zealand flax in Tandy Inlet may relate to their occupation. Dingwall and Jones in Chapter 4 report they were already resident at Port Ross when the Enderby Settlement was established, with some of the Maori men then employed by the whalers. Walls in Chapter 9 tantalisingly refers to them as a 'fugitive group', although similarly, says nothing more of their history and activities – such as why they came and why they left. This appears to be the only major omission in the volume which otherwise attempts to understand the full sweep of human occupation and impact.

As noted, volumes which report on collaborative ventures such as this are surprisingly rare. My own experience of such endeavours is that a goodly proportion of the participants vanish afterwards and completely fail to complete their contribution, meaning the rest can't be published either. For ensuring that the 2003 Auckland Islands expedition has been published in this way the editors deserve congratulations. The contents tend towards the descriptive, but this volume is both an interesting read and a valuable resource, inspiring anyone who has the time and inclination towards more detailed investigations in this fascinating part of the world.

THE EARLY PREHISTORY OF FIJI

Clark, G. and Anderson A., 2009.

Terra Australis 31, ANU E Press, Canberra,

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For many students Fiji is a mystery. Is it part of Island Melanesia or West Polynesia, or a bit of both and if so, how did this come about? If it is part of Island Melanesia then why is the linguistic picture apparently so simple compared to its neighbours to the west? If it is part of West Polynesia why do some people look more 'Melanesian' and why did they continue to make pottery long after it disappeared to the east? Most explanations proposed over the last 200 years have looked to the two 'race' solution with Fiji either being a boundary mixing zone, or with early 'Polynesian' occupation replaced by a later migration of more 'Melanesian' people coming from the west. Examining this hypothesis is a challenge for archaeology for how do we translate biology and linguistics into archaeological categories? When is enough change in the record a sign of migration or cultural replacement? This volume, and the major project on which it reports, seeks to make a substantial contribution to these and other issues by creating a baseline database and carefully examining the early prehistory of the Fijian Archipelago.

At first glance, this large edited volume of 16 chapters and 11 authors is rather daunting and threatens to be a series of dry descriptive reports. But persevere, there is something thought provoking for everyone! The first and last chapters serve to contextualise the reports and pull them together under a series of research questions. These include: when and from where was Fiji settled?; what was the pattern and timing of regional Lapita settlement after initial colonisation?; to what extent might we characterise early Lapita subsistence as food producing or food collecting as seen in the 'strandlooper' debate?; what evidence do we have for contacts to the west, and what evidence do we have for a significant break or transformation in the post-Lapita archaeological record? Chapters Two to Four provide data on the palaeofauna from non-cultural sites, and vegetation change. These investigate the impact of human settlement on the Fijian environment. The remarkable large herpetofauna, which includes crocodile, tortoise, iguana and frog, is described along with the giant megapodes and flightless pigeon. As elsewhere in the Pacific, such megafauna and ground-dwelling birds are now extinct, however, there has yet to be found a significant archaeological deposit of extinct fauna raising the question of whether we have yet found first contact sites in Fiji. In contrast, the pollen record, which includes more than 20 records for Fiji, is notable for its variability, showing clear evidence of fire prior to 3000 BP and, it would seem,

sustained human impact only after 2700 BP. The authors also see no evidence for a marked environmental change associated with the Little Ice Age.

Chapters Five and Six describe the fieldwork on Southern and Northern Fiji, and Beqa and Mago Islands. This includes much new excavation as well as re-visiting older sites to try and resolve problems or improve samples. The Sigatoka Dune is re-visited to try and set it within the context of environmental change in the Sigatoka Basin and to evaluate models of site formation and the possibility of earlier occupation in the dunes. The models of Dickinson (1998) and de Brian (2001) are supported. In Northern Fiji, Natunuku is re-visited to see if any Lapita deposits remain. As with Sigatoka it was difficult to re-establish old excavation grids. Despite all the discussion and plans provided I cannot help but wonder if archaeologists will have similar problems in 25 years' time. Perhaps we need detailed real-world co-ordinates provided for some datum points. Navatu 17A, excavated by Gifford and used by Green to establish a Fijian culture history, is also re-visited and reassessed. The collection of all these site descriptions and evaluations in one place will be a great boon to future workers.

Chapter Seven provides the dating results from the project as well as an inventory of all (300+) Fijian archaeological dates. Again this is a real treasure of carefully presented and evaluated primary data. Radiocarbon calibration was made using the Southern Hemisphere curve. Although it has become popular lately to use the Northern Hemisphere curve citing the effects of the southern movement of the ITCZ, it should be remembered that this annually moves north as well as south of the geographic equator. Perhaps folks north of the equator should use the Southern Hemisphere curve. Until an appropriate model is proposed, it might in my opinion – on a day when the wind is howling from the south and satellite imagery shows a whirling mass of cloud from the Solomons to Antarctica – be best to stick with our own geographic hemisphere. The short chronology for Lapita settlement has been revised once again, and occupation of Fiji appears to be shortly after that in the Reef/Santa Cruz in the 2950–3080 cal. BP range, with Bourewa the earliest site. Some time lag is proposed for Lapita appearance in the Lau Group. Consideration of mid-sequence dating confirms rapid change in ceramics at 1440–1300 cal. BP, but also shows other rapid changes around the same time such as population expansion and the appearance of cannibalism and fortifications.

Chapters Eight to Ten report on the archaeological fauna. The molluscan and fish remains present a pattern of broad spectrum exploitation of species from a variety of niches. Contrary to common expectations, there is no evidence of selective collection in the Lapita period. Discussion of the faunal remains concludes with a useful discussion of commensals and impact on indigenous fauna. Chickens remain rare in the Fiji sequence and the

evidence for pig and dog in the Lapita period is still unconfirmed – it is concluded that they must have played a minor role. The limited amount of turtle and sea birds is curious.

Chapters 11 to 13 deal with the ceramic record. Chapter 11 describes the ceramic assemblages with a series of very useful diagrams, photos and tables, while Chapter 12 tackles the issue of Post-Lapita ceramic change. I am very sympathetic to a model of local development rather than migration and intrusion, but as the authors note, migration did occur in the Pacific and it is probable that in some cases population replacement or swamping, such as in the Polynesian Outliers, did occur. To propose it for a set of large islands with a well established population seems, from first principles, to be unwise, especially if the source regions are more than 800 km downwind and share the same population growth start date. Clark reviews the sharp change seen by Burley within a few hundred years at Sigatoka and argues that the Fijian Plainware and the subsequent Navatu ceramics actually share high percentages of vessel forms and decorative techniques. Review of Cochrane's use of cladistics, which indicates transmission between Vanuatu and Fiji, suggests problems with the identification of homologies not resulting from similar ancestral traditions. Clark analyses whole vessels from Fiji and Vanuatu, and concludes there is little support for mid-sequence intrusion from Vanuatu. This paper left me wondering if analysis of other regional sequences might not see similar rates of change in situations where we have never argued for intrusion. More first hand comparative research on collections is needed. Reepmeyer has clearly shown that the 'Vanuatu' obsidian in Fiji is not from Vanuatu, but where it comes from is still a mystery; an unknown Fiji source seems improbable.

Chapter 13, which deals with ceramic compositional analysis, is a model study and I have recommended it to students as good example of combining petrographic, megascopic and geochemical analysis. Questions arise about post-depositional alteration of sherd chemistry contributing to differences. My students have found that sherds from inter-tidal sites have elevated values of some elements clearly related to their immersion. The use of discriminant analysis to test cohesiveness of site based groups is a useful trick, but of course unknown sources will not show and all ceramics will be assigned to one of the 'known' sources. Examining probabilities of assignment might be useful for identifying cases forced into a group. I like the concluding discussion of the difference between 'interaction' and 'community mobility', something useful to think about when comparing early and late patterns of compositional variability.

Chapters 14 and 15 cover stone tool manufacture and sourcing. The chapter on manufacture provides a useful set of questions for investigating Pacific collections, but as with the study of shellfish, we might find it hard to get more useful information beyond counts and weights. The

work on the distribution of stone sources is a good start to that study. The contribution to the study of adze rock is a useful compilation of information and provision of some new analyses. I was impressed with the fact that only one sample seemed to be basalt based on geochemistry. Some petrographic analysis or basic rock type description based on major elements would be useful. The attempts to characterise chert are a brave attempt at an intractable problem. Again I think petrography would be useful and I wonder if some of the distinctions based on colour and the separation of jasper from other materials may be problematic. The coralline chert from Vanuabalavu can vary in a single hand specimen from translucent brown to red.

I leave the readers to consider the authors' concluding chapter, which makes good reading for any student of Fijian prehistory. In sum this is an encyclopaedic work which should be on the shelf of all Pacific archaeologists; the theoretical and methodological approaches used can serve as a starting point for many graduate theses.