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REVIEWS

David Horton. *The Pure State of Nature: Sacred cows, destructive myths and the environment.* Allen & Unwin. 2000. ISBN 1 86508 107 8.
Recommended retail price: \$Aust. 21.95.

This short, passionate book wrestles with the interpretation of prehistory in relation to current landuse practices in Australia. The thesis is simple: archaeological and anthropological reassessments of aborigine landuse and their environmental impacts are now serving to justify current unsustainable and damaging practices. David Horton - scientist, archaeologist and farmer - doesn't pull his punches. As he puts it, his aim is to:

"..show the way in which past and present and future combine with history and prehistory in forming current politics and philosophy. Once an esoteric subject, archaeology is a powerful tool when used or misused to promote the political agenda of various groups."

Prehistorians are compared to the propagandists of Nazi Germany, and he wishes that settlers could be tried retrospectively in an Environmental War Crimes Tribunal. In particular he targets the "triumvirate" of Norman Tindale, Sylvia Hallam and Rhys Jones, and their arch-populariser - Tim Flannery. More than a hint there of a trinity and its chosen prophet.

However, it would be a mistake to catagorize this work as just another polemic from the environmental lobby. David Horton has excellent credentials in archaeology and anthropology and, being a farmer, knows at first hand the conflicts of which he speaks. A *soi-disant* arch-sceptic, he presents the cases for and against the various views, and annotates thoroughly. As a New Zealander, at one remove from the arguments, I found it a helpful guide to the

controversies and, more importantly, an explanation as to why they are controversies.

As Horton tells it, Norman Tindale in 1959 began the reversal of the previous "terra nullius" view of prehistory which claimed that the aborigines had been living in a state of primaevial innocence gaining their living via an almost parasitical relationship with the environment. Because the Aborigines appeared to have made only minimal changes in their environment, and did not cultivate crops, white settlers had argued they could not be said to own the land in any real sense of the word, and hence legally justified their seizure of most of Australia. Tindale showed that Aboriginal environmental impacts had been large and that they, via systematic burning to increase productivity in terms of game and plant food resources, could be said to have undertaken the equivalent of farming. Furthermore, when it became clear that the extinction of large mammals, the "megafauna", had occurred in the recent past, this was attributed to Aboriginal over-hunting. Via the eloquence of Rhys Jones and his facility for a well-turned phrase, "fire-stick" farming and megafaunal extinction through hunting became, if not orthodoxy, at least a highly persuasive version of prehistory. One might have expected the argument to have continued on as a reasonably well-mannered debate between the ascendant Fire-Stickers and the rearguard Dreamtime Edenists if it was not for the unexpected superstar phenomenon of Tim Flannery. Prodigiously talented, hard-working, and productive, and intellectually challenging, but also with a flair for the creative promotion of his ideas and a field-work background in remote and difficult terrain sufficient to satisfy Indiana Jones cravings in the media, Flannery has been a publicist's delight. With *Future Eaters* (1994) a runaway success, there is no doubt that many in the field who held different ideas felt uncomfortably cramped. There is more than a hint of desperation in Horton's response: what can you do in a debate when your scientific opponent has control of the PA system?

At the heart of *The Pure State of Nature* is a discussion of the fate of the megafauna. Did they die out through climatic causes, or were they hunted to extinction? Horton has long believed that the megafauna was already under severe stress in the late Pleistocene, teetering back and forth on the edge of extinction due to their fatal need for free water in a dry continent. The coup de grace was climate change in the form of the onset, 25 000 years ago, of the most intense drought climate ever. This was the final nudge that tipped them over to extinction, and as humans had reached Australia around about 50 000 years ago they would appear to be ruled out as a proximate cause. In favour of this

explanation are some sites with megafaunal bones dating to around 25 000 years ago, and undoubted evidence for the onset of extreme aridity at that time. However, this version of events depends on a mere handful of sites and was, I believe, only tenable as long as the dating of human and megafaunal sites remained so poor.

For a long time the timing of first settlement, and therefore its relation to the demise of the megafauna, was problematical because of the uncertainty inherent in radiocarbon ages older than 25 000 to 30 000 years. Recently published work (Miller et al. 1999; Roberts et al. 2001) using other forms of dating, including amino-acid racemisation and optical dating, point to extinct megafauna vanishing at around 50 000 years ago - a time close to the first appearance of humans, and during a climatically benign period. Younger dates are claimed to be a result of unsatisfactory site preservation and reworking of old bone. While dates for colonisation and extinction are not accurate enough to establish with absolutely certainty a cause and effect relationship, it would be perverse to not at least provisionally admit that humans are likely to have been responsible for extinction in one way or another.

Either way, although I am interested in the question of megafaunal extinction, I am at a loss to know why it should have such political or polemical resonance today. What possibly could be the present day implications of megafaunal extinction being human-caused 50 000 years ago or climatically-caused 25 000 years ago? Large, slowly reproducing organisms are notoriously difficult to manage; scattered bands of humans acting in isolation and taking relatively few prey can effect extinction rapidly according to simulation models (Holdaway & Jacomb 2000; Alroy 2001). It happened; it had to happen; get over it. The real question is ecological: What does this lack of megafauna mean for current ecosystems? It was this point that was taken up in *The Future Eaters*, and the debate is continued in Horton's book.

Flannery suggested that more frequent fire was an inevitable response to a post-megafaunal landscape that rapidly began to rewood. Once the giant herbivores had gone, the enormous amount of forage that had once been quickly and efficiently recycled through their digestive systems accumulated in the vegetation biomass. As a result, under the dry Australian climate, fuel accumulated, promoting devastating fire that dislocated ecosystems and wastefully stripped the soil of nutrients. Intense hot fire dramatically reduced the range of fire-sensitive species and encouraged the spread of fire-promoting vegetation. Poor soils, sparse, less diverse vegetation and a drier climate was

the consequence, according to Flannery. The Aboriginal response was to light smaller, cooler and more frequent fires. Trees and shrubs lock up nutrients that are only released slowly through turnover and deny moisture and light to productive herbs and grasses. Small, limited cool fire pulses the system, releasing nutrients, clearing the more vulnerable shrubs and trees and providing space for seed and tuber-bearing plants and an abundance of game. The triumvirate argued that firing was a necessary part of living in the Australian landscape and that over the millennia the Aborigine people had fine-tuned the system to maximise sustainable production.

Horton takes exception to this. He argues that systematic firing would have been disastrous, and suggests that Aboriginal burning was occasional or accidental, and they for the most part lived with the natural fire regime. They maintained a wooded landscape with the highest possible diversity, and what burning they did had no long-term environmental consequences. He makes the excellent point that, now that the dogma of fire-stick farming is triumphant, every change seen in the record is seen as further evidence. He goes on to forcefully make the following point:

"Theories that humans caused the extinction of the megafauna are in large part a reaction against the idea of hunter-gathers being in harmony with Nature. The firestick farming hypothesis is a result of the same cause; as Rhys Jones said, both are 'striking examples of the power of hunting and gathering man to alter his environment'. The general approach seems to be that people of ill will believe that hunter-gatherers are second-class citizens in comparison to farmers, and people of good-will should therefore see them as being more like farmers." (p 98).

The difference Horton says is between "interferers" and "observers", in that farmers and their like actively interfere with ecosystems to establish unstable systems relying on foreign plants and animals and need to constantly intervene, while hunter-gathers observe the natural system to take advantage of opportunities to utilise surpluses.

While my instincts are to side with the triumvirate, I have to accept that it is difficult to prove the case either way. As Aborigines were present throughout most of a glacial-interglacial climate cycle, it is hard to tease apart the effects of climate, megafaunal and cultural change. Horton is particularly critical of the use of pollen and microscopic charcoal records in this regard, and I have to

agree that rather sweeping claims have been made on the basis of somewhat equivocal evidence.

These large questions about humans and landscapes are much more loaded with environmental implications in Australia than here. Unlike in New Zealand, it is difficult to argue in Australia for the existence of some "landscape without humans" ideal to aim for in environmental matters. Furthermore, far more than in New Zealand, the productive landscape is intimately woven in with elements of the indigenous biota. We really do not have the equivalent here of the flocks of parrots, herds of kangaroos, or the ubiquitous stands of eucalypts that so enliven the Australian landscape. With us, the conservation battleline has withdrawn for the most part to the wet, cool mountains, often leaving the productive exotic landscape virtually free of any significant indigenous presence. When we build houses in the bush the fear of fire does not hang over us. Logging and firing in our wet climate has not yielded the rising watertables and corrosive salinisation that affects huge areas of Australia. How Maori treated the environment is therefore not as pressing an issue. But it is for Australians. Decisions have to be made about the long-term fate of the indigenous biota and the Aboriginal experience is relevant: how much did they burn, and what were the results of that burning? How much forest was on the landscape, and how much has to be restored to repair damaged ecosystems? Horton believes that the current policy on burning is sustained by the belief that it is merely continuing the management practices of the Aborigines. He, on the other hand, argues that it is unprecedented, and environmentally damaging. Without a sustained campaign to restore trees to the pre-1788 level, Australia is doomed to continued environmental degradation.

At a deeper level the question of the treatment of the indigenous people haunts this book. The evolution of colonised-coloniser relationships in our otherwise closely similar societies has been so different, that our ways of thinking and talking about the experience also differ radically. Pakeha New Zealanders find it difficult to romanticise Maori. They see them, for good or ill, as active figures on the landscape: fishing, cultivating, building, trading, making war and peace. The rhetoric from across the Tasman about Dreamtime, a people outside of history, and a pre-settlement edenic life, seems a touch other-worldly. We suspect that white Australians are attempting to balance the enormity of the colonial crime with the environmental and moral purity of the victims.

In the meantime, read this book. It is so refreshing to read a work that, while presenting all sides of the arguments, isn't afraid to make it clear where its heart

lies. I found it provided fascinating insights into a diverse range of other issues than those I have discussed here - for instance the Tasmanian tool kit, food taboos, and lack of indigenous cultivated food plants. Light is cast on tangled Australian prehistorical and environmental controversies at every turn.

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Patrick Kirch (ed). *Lapita and its Transformations in Near Oceania. V. 1. Introduction, Excavations and Chronology.* With contributions by N. Araho, C. Catterall, P. Kirch and M. Weisler. Contribution No. 59 Archaeological Research Facility, University of California, Berkeley. 2001. 246 pp. \$NZ 82 (incl. postage).*

This is the long awaited first of three volumes on the Mussau archaeological sites, excavated in 1985/86 and 1988. Of these the large and spectacular site of Talepakemalai, with its lagoon swamp component, is of particular interest.

This first volume introduces the sites, describes the excavations, and discusses the chronology.

The first of the 10 chapters describes the Lapita Homeland Project itself, and the role of the Mussau investigations within this. The big questions in Lapita archaeology are outlined - basically where did they come from, what did they do when they arrived, and where did they go.

Chapter 2 tells us about the Mussau Islands themselves: the natural environment, such as geology, climate, soils and floral and faunal resources, and the ethnography: language, settlements, material culture etc.

Chapter 3 sets out in detail the archaeological strategies and methods employed in the Mussau project. These cover the basis on which the choice of sites for excavation were made, the methods of excavation and recovery, and the recording schemes and databases. This is an unusually thorough treatment of the subject, which lies at the heart of any well-conceived and executed archaeological project.

Chapters 4 through to 9 describe the 13 excavations which were carried out. These featured three open Lapita sites, five 'Lapita' rockshelters, and five other post-Lapita open sites. Some 26 additional sites located during surveys are also briefly described.

The last chapter takes a detailed look at the radiocarbon chronology, based on 51 samples from 10 sites, with 30 of these from Talepakemalai.

Talepakemalai rates 64 pages of site description, and no wonder. This is the largest Lapita site, the most Western of any significance, and possibly the earliest. It appears to have horizontal as well as vertical stratigraphy, with the settlement, consisting of stilt houses, moving further into the lagoon as the beach progrades. Artifacts, including organics, discarded from the stilt houses, have been preserved in the mud, some *in situ*. Occupation also occurred on the paleobeach above the lagoon. The broad progression of the ceramics is from fine dentate with vessel forms including pedestal and cut-out stands, through coarse dentate with fewer such vessels, finally to incised vessels in even more restricted shapes.

The suggestion is made that the ceramics recovered from the paleobeach, mostly plainware jars, some red slipped, together with the rare dentate sherd, may actually represent a stage in the genesis of Lapita, prior to the development of the specialised and highly decorated vessel assemblages which are standard for most such sites. If this is so then the hunt for the Homeland, if not over, at least has a narrower focus.

However, the paleobeach occupation has been variously described by Kirch as the latest on the site (Kirch 1987: 167), contemporary with that in the lagoon (Kirch 1997: 147, 172) and now the earliest. While the first scenario was put

forward prior to any radiocarbon dates from the site, Kirch does not explain the difference between his two latest options. While the paleobeach ceramics resemble both those of approximately the same date in the Halmaheras but also immediate post-Lapita assemblages in the Pacific, it should be possible to differentiate between the two alternative explanations through analysis of the technological aspects. At any rate, we are promised that all will be revealed in Vol. 3.

There are a few minor inconsistencies in the report. The date for site ECB, a much smaller settlement which during Lapita times faced Talepakemalai across a 1 km stretch of shallow reef, is given or shown as both 1520-1300 BC (pp 139, 220, 214) and also 1000-8000 BC (p 143).

The excavation report for Epakapaka rockshelter contains some ambiguities. The bottom four layers (a total depth of almost a metre, and representing beach-building episodes) is described as both 'sterile' and 'generally devoid of cultural material' (p 156). The 'stratigraphic distribution of decorated ceramics' for this site is shown in 10 cm levels (Figs. 5.12, 5.13), however the latter are not indicated on the stratigraphic profile itself. If it wasn't for Kirch's ringing declaration that 'levels never cross stratigraphic boundaries' then one might suspect that the shelter had been dug in good-ol-boy horizontal levels and the stratigraphy tacked on from the unit face. Some levels must *contain* parts of more than one stratigraphic layer (e.g. Fig. 6.7 for a unit at the EKE site, however there the distribution of artifacts *is* tied to stratigraphy).

The above has relevance for the interpretation of the ceramic distribution at the Epakapaka site. Although both excavated units are described as having 'relatively more dentate-stamped sherds in the lower portion of the deposit, decreasing towards the top', the figures (5.12, 5.13) show a 40-50 cm depth of deposit at about the mid-point where only incised sherds are present. This appears to correspond to Layer IV, which is the only one containing dense hearths (p 156). Although massive disturbance off-stage, with the lower layers redeposited over the area excavated, might account for the distribution, this seems unlikely given that the units are some three metres apart, and that about a metre depth of fill would have been involved. A functional explanation for the incised ware in this case seems possible.

The end notes for each chapter make interesting reading, on such matters as the difficulty (and sometimes failure) of getting excavation reports out of colleagues, and of the consequences on the local societies of exposure to the

tackier side of European culture - such as alcohol and pornography (and archaeologists?).

It should be mentioned that while there are few line drawings of artifacts in this volume, those that have been executed by the same artist, Margaret Davidson, who illustrated Kirch's *Lapita Peoples* book, and who will be more fully employed, one would imagine, in the next two volumes. Kirch refers to her work as 'superb', and judging by the detail contained in the ceramic illustrations in that work one can only agree.

I only saw one typo (p 219 para 2) and a grammatical error in the preface, which somehow slipped "passed" (sic) the proof reader.

The archaeological project itself was a formidable achievement, and sampled one of the most significant Lapita sites yet found. If this volume is an indication, then the data recovered and its analysis will be presented in great detail. Just as the Reef-Santa Cruz project influenced subsequent Lapita archaeology, so will this one, with the added advantage here that all the pertinent information will be contained in one site report, a huge advantage for future researchers.

So could Talepakemalai actually be the Mother of all Lapita sites (or one of them)? Its just possible, and thus Kirch may be able to shed light not only on the transitions of Lapita but on its origins too. The next two volumes (hopefully not at 13 year intervals) may provide an answer.

Simon Best

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*** The Lapita Volume cost is US\$29.95. 4 weeks to 2 months to ship unless by Fed Ex. Mailing cost is \$9.05 (for up to two months), \$24.81 for airmail, that takes 4-7 days. It must be paid in US dollars and we don't accept credit cards. Ordering address is:**

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