

Climate Change and Archaeology in the Pacific

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All but one of the papers on this topic published in this and the next issue of *Archaeology in Oceania* were first presented in the Indo-Pacific Prehistory Association conference in Manila in March 2006. The session was organized by Julie Field and I and titled 'Climate Change in the Indo Pacific: Human Responses from the Late Pleistocene to the Little Ice Age'. Six of the original eleven presenters, plus one additional presenter from another IPPA session, are represented here.

The inspiration for that conference session and its publication is the dramatic increase in the availability of palaeoenvironmental records in the Indo-Pacific region in the past ten years, many of which are relevant to the time period of human occupation in that region. Archaeologists have been quick to use, and sometimes abuse, these new sources of data. Our session was meant to be a way to bring together diverse perspectives on applying this data to archaeological contexts from a variety of geographical locales, cultural contexts and time periods. We also invited palaeoclimatologist Robert Dewar and archaeologist Ian Lilley to comment on our use of this data; Lilley's paper, revised, will be published with the second group of papers.

Two major issues are raised by these papers. First, the palaeoclimate data currently available are by no means straightforward to apply to archaeological situations. In many cases there are contradictory data from the same time and region. As Robert Dewar commented at IPPA, archaeologists have to be very careful to read palaeoenvironmental data with an educated and critical eye; as data collection and analysis methods become more complex, it is becoming increasingly difficult for archaeologists to be sophisticated consumers of the data. As with most kinds of archaeological data, palaeoenvironmental data is derived from proxy records. The complex environmental and biological systems that create those proxy records are often outside of areas of knowledge with which archaeologists are comfortable. I believe that more cooperative research that includes both archaeologists and palaeoenvironmental specialists is the way to deal with this challenge, which will only become more acute as more work

is done. The benefits for archaeologists in this cooperation include being able to access targeted palaeoenvironmental data relevant to their archaeological study area and temporal resolution. Palaeoenvironmental specialists could also benefit by providing more relevant data for their biggest data consumers, but might also learn something from the ways archaeologists deal with chronologies and site formation processes.

The second set of issues, which are taken on by most of the papers in this group, has to do with creating new models that link changing climate and environment to cultural change. The papers propose a variety of new ways of looking at these links. I believe that they show a clear movement away from the simple deterministic frameworks that characterized some past environmental archaeology. But we are also still struggling to create models that incorporate both the complexity of ecosystem change and the complexities of human social responses to those changes. Even with better models, the data are still much too patchy and coarse to allow for the detailed testing we need. Nonetheless, I believe we have made significant progress over the past decade in data collection and analytical methodologies, and in amplifying the richness of the available data and the sophistication of the models, especially in the Indo-Pacific region. I hope this trajectory continues for the next decades.

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