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Inside this issue:

Fieldnotes from Timor and Palau

Sue O'Connor has an ARC Discovery Project with Andrew McWilliam (Anthropology): *Cultural and Environmental Shifts in Late Holocene East Timor: Evidence for Climate Change?* The focus of the project is an investigation of indigenous Timorese fortifications. These forts are recent in age, less than a thousand years old, and often characterized by massive stone walls. They are built in naturally fortified locations such as cliff edges or mountain tops, and often additionally defended with spiky plants like cactus. Some archaeologists argue that these forts were constructed as a result of conflict caused by competition for resources made unpredictable by the climatic variability of the "Little Ice Age". Sue and **Sally Brockwell** argue that the forts were built later and as a result of conflict induced by social drivers, namely slaving and the dual trade in sandalwood and fire arms. The fieldwork in May was meant to be a reconnaissance of inland sites in the mountains near Ainaro and Maliana with their colleagues, Sandra Pannell and Nuno Bianco. The party was thwarted by a very late wet season. They were reduced to surveying beside whatever roads were not washed out an approach that proved particularly fruitful. Two new fort sites on the coast and a huge rockshelter right next to one of the villages were located. Both the forts and the rockshelter have good excavation potential and they are looking at another field season next year, hopefully involving two of the Masters of Archaeological Science students.

One of the identified Fort sites on East Timor

In May/June **Geoff Clark** and **Christian Reepmeyer** travelled to Palau to support the State government of Koror in the preparation of the UNESCO World Heritage (WH) dossier for the Rock Islands/Southern Lagoon area. They were asked to give expert archaeological advice to select criteria of Outstanding Universal Value for the Rock Islands/Southern Lagoon site, as the Rock Islands are nominated in the tentative World Heritage list as a mixed cultural/natural site...

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In Other News ...

Jan Finn submitted her PhD Thesis, *Diatoms and Holocene Environments in Papua New Guinea*, on August 19th.

Judith Cameron presented two seminar papers this month:

- Textile tools as cultural markers in the Gulf of Tonkin at the Institute of Southeast Asian Studies, Sun-Yet Sen University, Guangdong 6 Sept.

- Yue 'Textile Technology and the Austronesian debate' at the Maritime Centre of Guangdong Academy of Science, Guangzhou 7 Sept.

Judith was also interviewed by Phoenix TV of Hong Kong about her opinion of the ancient textiles excavated that day from the King's tomb. The interview took place at the Nanyue King Museum in Guangzhou.

Fieldnotes from Northern Australia

Simon at the Mitchell River Billanbong.

"This $25,000 fellowship will support Daryl's work to document and conserve rock art in the Urrmarning (Red Lily Dreaming) Precinct near the township of Kunbarllanjnja in Arnhem Land with the help of traditional owners."
Rob Atkinson

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During two weeks of fieldwork **Geoff** and **Christian** visited six islands to survey current conditions of previous reported stonework village, rock art and burial cave sites. Oral histories recount the progressive movement of people from the Rock Islands to other parts of the archipelago. Many Palauans assert that they originate from these ancestral Rock Island settlements, and historical traditions refer to the Southern Lagoon's ancient burial caves and rock art sites, important site types not found in the remainder of Palau. The Rock Islands are described as an outstanding example of traditional human land- and sea-use which is representative of human interaction with the environment especially when it has become vulnerable under the impact of irreversible change. The abandonment of Rock Island villages in the 2nd millennium AD is an exceptional illustration of the intersection and consequences of climate change, population growth, and subsistence behaviour to a human society living in a marginal environment. Based on subsequent reviews of the available palaeo-environmental and archaeological data, including the strong oral traditions still alive in Palau, it was decided to nominate the Rock Islands under criteria III and V as outlined in the operational guidelines for the inscription of WH sites.

In June **Simon Haberle** and Cassandra Rowe (Monash University) joined the Mitchell Plateau archaeological expedition led by June Ross and Mike Morwood at the end of June 2010. They were lucky enough to use helicopters to rapidly survey wetlands in the lower Mitchell River region for palaeoecological potential. A total of 4 sites were cored to a maximum depth of 1.5. They hope to use pollen and charcoal records to determine the role of the monsoon and human influence on past fire regimes. Archaeobotanical investigations of the excavated material from Reindeer Cave and several other deep rock-shelter deposits directly associated with the regionally significant "Bradshaw rockart" will also be a focus of their research.

Sally Brockwell and **Janelle Stevenson** along with several researchers have an ARC Linkage proposal under review: *Enhancing cultural heritage management for mining operations: a multi-disciplinary approach*. It is hoped that the project will provide a better basis for negotiation between traditional owners and mine operators regarding management of cultural heritage in the Weipa area. The area is archaeologically known for shell mounds and several studies have explored the chronology, foraging and settlement strategies associated with the mounds. In mid August they visited Weipa. Alongside many of the impressive shell mounds are the more subtle earth mounds. The mounds represent the exploitation of two very different environments and **Sal** will be testing what role the earth mounds played in the local settlement system. They appear to postdate the shell mounds and are associated with freshwater swamps. Willum swamp and other swamps north of the Mitchell River will be cored, providing a vegetation and fire history for the region. If successful, the grant will have three PhD stipends. One allocated to ANH for a researcher interested in the ethnorachaeology of the region.

Grants and Awards

Daryl Wesley in the field.

Daryl Wesley was awarded the George Chaloupka Research Fellowship for 2010. The Fellowship supports research and conservation of Aboriginal rock art in the Arnhem Land Plateau area of the Northern Territory.

Simon Haberle is a partner in the recently successful NSF grant WildFIRE PIRE. This is a partnership of scientists that seeks to advance research and education on the extent to which human activities, vegetation change, and climate change interact to alter fire regimes, ecosystem dynamics and ecosystem services. more details see http://www.wildfirepire.org/

Judith Cameron was awarded the ISL-HCA International Research Fellowship from the Australian Academy of Humanities and an Internal Research Grant from CAP.

Mark Burrows was awarded the 2010 Rhys Jones Fieldwork Scholarship.

Revisiting Mount Wilhelm, PNG

Examining summit ridge.

Geoff Hope spent 2 weeks in New Guinea in July-August with Tim Barrows, Stephanie Mills (Exeter), Brad Pillans (RSES) and Victoria Kili (UPNG). After giving two lectures to Earth Sciences and Anthropology in Port Moresby as a "voice from the past" they made their way to the upper Chimbu. There they inspected outwash aprons and noticed spectacular ash layers in new road cuttings. The next day they ascended to camp at Kombuglomambuno for three nights, where terminal moraine complexes were mapped and sampled for cosmogenic dating. Two Chimbu became adepts at chiseling into the tough granidiorite for rock samples.

They collected exposure dating samples up valley to the glacial lakes at Pindaunde staying in the ANU field station. The whole party went to the summit ridge of Mt Wilhelm in very good weather and Geoff continued to the summit. Over the next two days Geoff clambered down to Brass Tarn and sampled a 550cm core. The party returned to Komanimambuno a day after this, collecting more samples as they descended, and all gave a talk at Kegsugl high school to about 150 students.

Masters Fieldschool: Arnhem Land

During July 2010, ANH PhD candidate **Daryl Wesley** and staff members **Sue O'Connor** and **Jack Fenner** led a field school in northern Arnhem Land for the Masters of Archaeological Science program. The field school investigated pre-European contacts between local Aboriginal people and Macassan trepang fishers. Students learned archaeological excavation, mapping, and ground-penetrating radar use at the Macassan trepang processing site of Anuru Bay A, and rock art recording at rockshelters in the surrounding region. Students and staff camped in a remote area of Arnhem Land rarely visited by outsiders, and viewed traditional rock art usually off-limits to all but the local Indigenous community. The samples and other data gathered during the field school will be analysed over the coming months but promise to improve our understanding of early encounters between Macassans and Australians.

The project has received widespread attention, including ABC Stateline NT news coverage filmed during our field school (http://www.abc.net.au/news/video/2010/07/16/2956281.htm).

"Students and staff camped in a remote area of Arnhem Land rarely visited by outsiders…"

Fieldnotes from Asia and the Seychelles

Judith Cameron spent August 5-9th at the Narryna Heritage Museum at Battery Point in Hobart. The museum houses a little-known collection of historical costumes dated from the 17th century which are in urgent need of conservation. The purpose of the visit was to ascertain the authenticity and historical significance of the textiles in the collection and discuss conservation strategies and funding sources.

In August a survey of palaeoecological sites in the granite islands of the Seychelles was conducted by **Simon Haberle**. A total of 7 freshwater and mangrove wetlands were cored to a maximum depth of 2.6m. Indications of past human impact on the vegetation will be investigated through pollen and charcoal analysis. This will contribute to our understanding of the timing and nature of human migration across the Indian Ocean.

September 5-12 **Judith** conducted fieldwork in Guangxi for the Tonkin Gulf Project. The aim was to investigate new evidence for craft from a site in Hepu (the first port in the Maritime Silk Route) which is thought to be the Customs Office, dated to the Han dynasty. She collaborated with Tana Li. The archaeological evidence for textile production on the island of Hainan was also investigated for a proposed ARC Grant.

Coastal swamp in the Seychelles

Fieldnotes from Around the World

Well known Christmas Island fauna.

Judith is spending September 12-29 at Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters, Eberhard Karls Universität Tübingen, Schloss Hohentübingen, Tübingen. She is collaborating with Professor Ernst Pernecka on lead in Roman spindle whorls.

In September **Wal Ambrose** is planning to join a group of archaeologists on Lizard Island, North Queensland, led by Matthew Felgate, University of Auckland. The group will be investigating the presence of pottery found on Lizard Island with a composition identified by Bill Dickinson, University of Arizona, as very similar to 2800 year old pottery that Felgate excavated in the Solomon Islands. Dickinson refers to a sand temper that is likely to have originated in a granite island off the North Queensland coast, such as Lizard Island. The age of the Solomon Island pottery places it within the range of the the important Lapita settlements spanning the region from the Bismarck archipelago to Samoa. A further extension of this range has been shown by the discovery of Lapita pottery near Port Moresby.

Judith will be spending October at the Danish National Research Foundation's Centre for Textile Research, University of Copenhagen, Copenhagen, Denmark. She will be working on the First Textiles Project in collaboration with Marie-Louise Nosch.

Juliette Harrington is about to start ground penetrating radar (GPR) training at Denver University with Dr. Lawrence Conyers. She is flying to Cocos/Keeling Island with Simon on November 5 for two weeks field work - pollen, sand dunes and island geomorphology. **Juliette** then has a week on Christmas Island before attending a conference on Coastal Change at the Hong Kong University.

Bogong Moths and Palaeoclimate

"We report here another novel 'faunal' deposit … recently discovered by Ben Keaney…"

Rough tree-fern spore (*Cyathea* sp.)

The following is the text of a note accepted for publication in the British journal *Geology Today* regarding **Ben Keaney's** research.

"In the article (*Geology Today* 26: 132-133) discussing the palaeoclimatic significance of bat guano from NW Romania, the author rightly stresses the need to find alternative proxy indicators in areas that lack the 'more traditionally used archives of climate change. This is particularly apposite for Australia, the driest, flattest inhabited continent on the planet. We report here another novel 'faunal' deposit that archives palaeoclimatic (and related) information – moth aestivation sites recently discovered by **Ben Keaney**, a PhD. Student at the Australian National University. These deposits are the accumulated remains of countless thousands of Bogong Moths (*Agrostis infusa*), which migrate upslope during summer to aestivate within granite summit tors on the South East Highlands (Figs. 1-2). Some deposits now are up to a metre thick and potentially provide a record extending back thousands of years. Preliminary analyses have confirmed fossils in the aestivation deposits include bird feathers and the hairs of small marsupials occupying the same rock crevice' niche (Figs. 3-4) as well as fossil pollen and spores derived from the summit vegetation. Not surprisingly, one of Keaney's aims is to search for evidence of endangered, extirpated, even extinct marsupials. Examples are the Pygmy Possum (*Burramys parvus*), Tasmanian Devil (*Sarcophilus harrisii*) and Tasmanian Tiger (*Thylacinus cynocephalus*), respectively. Bogong Moths have been an important protein and fat-rich food resource for Indigenous Australians and the deposits provide an important record of their seasonal occupation of subalpine zone during the Holocene, if not earlier. To emphasize the rarity of 'non-traditional' Late Quaternary site in Australia, the only comparable organic deposit archiving botanical, faunal and Indigenous cultural information found in the last three decades are detached mud-wasp nests, preserved at the mouths of caves in the Kimberly region over 3000 km to the northwest (Roberts *et al*. 1997: *Nature* **387**: 696-699)."

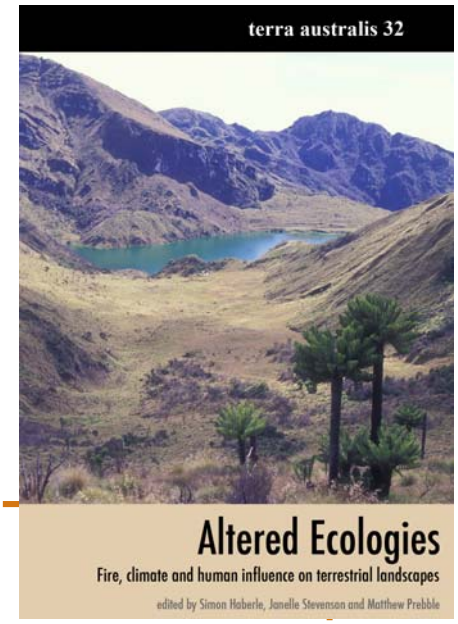
Recent Publications

Cameron, J. 2010. The Archaeological textiles from Ban Don Ta Phet in broader perspective. In Bérénice Bellina, Elisabeth A. Bacus, Thomas Oliver Pryce, Thomas Oliver Pryce and Jan Wisseman Christie (eds.), *Fifty Years of Archaeology in Southeast Asia: Essays in Honour of Ian Glover*. Bangkok: River Books, pp.140-151.

Cameron, J. (in press) The Textile Crafts in the Gulf of Tonkin: The Intersection between Archaeology and History. In N. Cooke, Tana Li and J. Anderson (eds.), *The Tongking Gulf through History: Soundings in Time and Space*. Pennsylvania: University of Pennsylvania Press (due Spring 2010).

Haberle, S.G., S. Rule, P. Roberts, H. Heijnis, G. Jacobsen, C. Turney, R. Cosgrove, A. Ferrier, P. Moss, S. Mooney and P. Kershaw. 2010. Paleofire in the wet tropics of northeast Queensland, Australia, In *PAGES News* 18(2):78-80. (see http://www.pages-igbp.org/products/newsletters/)

Haberle, Simon G., Janelle Stevenson & Matthew Prebble (editors) 2010. *Altered Ecologies: Fire, Climate and Human Influence on Terrestrial Landscapes*, Terra Australis 32. Canberra: ANU E-Press.



Kennedy, Jean. 2010. Rev. of *Fair Bananas! Farmers, Workers, and Consumers Strive to Change an Industry* by Henry J. Frundt. In *Economic Botany*, 64(2): 181

Conferences

The Australian Archaeological Association Annual Conference is being jointly hosted by ANH, the School of Archaeology and Anthropology, and the Centre for Archaeological Research. To be held at the Coachhouse Marina Resort in Batemans Bay from December 10 to 13, this will be the premier archaeology conference in Australia during 2010.

In addition, **Jack Fenner** is convening a workshop on ground-penetrating radar use in archaeology to be held at the Coachhouse Marina Resort over three days prior to the conference. The workshop will be taught by University of Denver GPR expert Lawrence Conyers, and is available for credit for Masters of Archaeological Science students. See the conference web page (http://arts.anu.edu.au/AandA/archaeology/aaaconference/) or contact **Jack** for more information.

- Sept. 30 Photo competition submissions deadline.

- Oct. 1 Submission deadline for abstracts.

Judith Cameron will be presenting 'Cloth and iron in the Indian Ocean littoral' at the13th International Conference of Southeast Asian Archaeologists in Berlin, 27 Sept-1 Oct.

Registration for the 2011 Society for American Archaeology Meetings in Sacramento opens in December.

Conference sessions will be posted on the 2011 INQUA Conference website this month. The last day to submit abstracts is 30 November.

Teaching in ANH

Palaeo-Environmental Reconstruction (ENVS3029/ENVS6529)
The course, co-ordinated by **Simon Haberle** and **Janelle Stevenson**, is running this semester. It introduces the changing environments of the past 50,000 years in the Australian region. In reviewing these changes techniques commonly used to provide a reconstruction of the past ecology, climate, and surface processes are introduced. Biological techniques to be studied include analyses of pollen, charcoal, seeds, insects, stable isotopes and biogenic silica. The contribution of these techniques to particular prehistoric problems such as detecting the role of human activity in environmental change is also covered.

Introduction to Environmental Archaeology (ARCH2041)

Human communities are dependant on and shaped by the environments in which they live, but are also a major factor in environmental change. Environmental archaeology provides a way of tracing the long-term history and prehistory of human-environment interactions. Case studies are drawn from Europe, the Americas, Asia, Australia and the Indo-Pacific region, focusing on the evidence for humans as agents of broad ecological change, especially extinctions, and the effects of environments and environmental change on the course of culture change. The increasingly important and controversial role of these studies in the contemporary world are also discussed. This course is taught by **Matt Prebble**.

Labnotes from Mike MacPhail

Mike MacPhail has dedicated the past nine months to examining microfossils from Nepal, establishing complicated chronologies, and discovered evidence of sewage pollution in 19th century deposits from The Rocks in Sydney.

Mike has also has been involved in the assessment phase of a resource management scheme to drought-proof Broken Hill, which aims to develop a hydrogeologic framework for the area. A number of pollen-based 'surprises', including finding mangrove pollen in a c. 2.5 to 5 Ma sediment. The nearest species of the same mangrove family (Rhizophoraceae) now grow 1000 km to the east, not in sight of the Barrier Range.

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Research in Archaeology and Natural History at the ANU School of Culture, History and Language aims to understand prehistoric human societies, the environments in which they developed and the environmental consequences of human presence. Departmental research ranges from southeast Asia and the Pacific, through the tropical forests of New Guinea and the savannahs of Australia, to the islands of Oceania.

Field research in ANH is supported by well-equipped laboratories that were fully updated and refurbished during 2009. Our laboratories support research into prehistoric textiles, archaeobotanical remains, rock art, prehistoric environments, zoological material and ceramics. ANH houses the largest pollen reference collection in Australia, as well as plant, bone, shell and ceramic collections. We also have access to world-class ANU facilities for archaeological dating, stable isotope analysis, and electron microscopy.

Upcoming Events ...

Morning Teas

5 October: ANH morning tea provided by Simon at 10:30 am.

Conferences

10-13 December: AAA annual meeting at Bateman's Bay.

<http://arts.anu.edu.au/AandA/archaeology/aaaconference/>

30 March-3 April 2011: SAA annual meeting in Sacramento, CA.

<http://www.saa.org/AbouttheSociety/AnnualMeeting/tabid/138/Default.aspx>

20-27 July 2011: INQUA Conference, Bern, Switzerland.

<http://www.inqua2011.ch/?a=next>