

# Archaeology and Natural History

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## Wandering about Tasmania

**Jay Chin, Simon Haberle and Janelle Stevenson** were on field-work to Mt Roland-Gog Range, Tasmania, from 3 to 9 December, accompanied by Peter Shimeld, Lucy Gayler, Graham Haberle and Raymond Haberle. They collected six cores from small lakes, pools and a tree copse around the region and collected surface samples from other small-sized pools and hollows. 16 pollen traps were installed to collect modern pollen data. Pollen and charcoal analyses of the cores are being carried out by **Jay**. These will be used to study vegetation changes and fire events in lowland regions of northern Tasmania during the Holocene.



View in Mt. Field National Park.

In February, **Jay Chin** and **Feli Hopf** attended the Field Botany Course run by the School of Plant Science, University of Tasmania. A five-day field course took place at Mt Field National Park and southwest Tasmania, and involved intensive training on plant identification and vegetation surveys.

All aspects of the Tasmanian flora were covered, from angiosperms to bryophytes, through visits to key vegetation communities such as wet and sclerophyll forests, moorlands, rainforests, alpine microshrubbery and many more. The course was an opportunity to network with field botanists and gain insight into themes like fire disturbance, ecological succession and altitudinal variation from an applied ecological perspective.



Field botany students hiking.

## In Other News

Omitted from the previous edition: **Daryl Wesley** won the Best Student Presentation Prize at AAA in December.

**Daryl Wesley, Ella Ussher, and Katherine Seikel** are coordinating the Undergraduate Laboratory Workshops this semester. Elle

Grono and Jasmine Robertson are assisting with the workshops as part of their individual research projects.

“... A number of people recounted memories of Peter’s early career that began in the early 1970’s at the ANU ...”

## Lab Notes with Mike Macphail

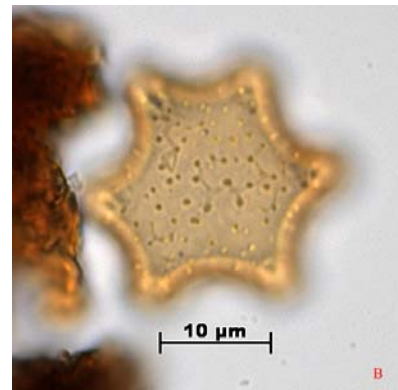
Mike Macphail is currently:

- Revising the 27 year old provisional palynostratigraphic age for the origin of the Lake George basin, using the 1982 *Bureau of Mineral Resources* (now *Goscience Australia*) drill-core previously analysed by former Biogeography & Geomorphology (RSPAS) colleagues Gurdip Singh and Elizabeth Geissler.

- Pollen-analysing a stacked sequence lacustrine facies exposed in the walls of a sand quarry on the eastern side of present-day Lake George as part of a joint project with Geoff Hope, Brad Pillans and Eva Papp (RSES) and Keith Fifield (RSPE). Unlike the earlier BMR core samples from holes drilled close to the western (fault-escarpment) side of the lake, these actually preserve abundant/diverse fossil pollen and spore assemblages, which in turn provide evidence for vegetation and environments on the eastern (braidplain) side of the lake some 40-50 kyr ago.



A: *Podosporites microsaccatus* - a gymnosperm pollen type produced by an extinct relative of the creeping pine *Microcachrys tetragona*, now restricted to the alpine zone in South-West Tasmania.



B. *Nothofagidites falcatus* - an angiosperm pollen type produced by a subgenus of the Southern or Antarctic Beech family Nothofagaceae, which is now extinct in Australia but survives in montane rainforest in

## Terra Australis Book Launch



Peter Kershaw, Simon Haberle and Geoff Hope at TA 34 launch.

On Friday the 3rd February, foyer of the Hedley Bull Building, a book launch was held for the newly published *Terra Australis* Volume 34, *Peopled Landscapes: Archaeological and Biogeographic Approaches to Landscapes*. The volume was produced in honour of the career of Peter Kershaw, who has made an outstanding contribution to Quaternary research in Australia. There are many papers written

by leaders in their fields that will be of interest to archaeologists, palaeoecologists and biogeographers. Over 50 people attended the launch and a number of people recounted memories of Peter’s early career that began in the early 1970’s at the ANU in the then fledgling Department of Biogeography and Geomorphology, under the leadership of Donald Walker.

# Self Perspectives: New Student Bios



My name's **Billy Ó Foghlú**, I am of Ireland reared and I've recently completed a Bachelor of Science [Honours] in Applied Archaeology at the Institute of Technology, Sligo. I have made my way to the Australian National University to undertake a PhD in Archaeology that seeks to discern the relationship between earth mounds

**Billy Ó Foghlú.** and shell mounds in north Australia. With luck, I'll discover a lot and hopefully not get too sunburnt in the process.

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I (**Fenja Theden-Ringl**) will undertake an archaeological and palaeo-environmental investigation into prehistoric human occupation in the southeast highlands of Australia. I hope to combine excavation of occupation deposits with examination of charcoal from cores extracted from adjacent valley fills, in order to build a picture of human occupation against a backdrop of changing environments and fire regimes.



**Fenja Theden-Ringl.**

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My (**Josue Gomez**) research interests lie in inter-disciplinary archaeological science and the use of scientific approaches to reconstruct local histories over long time spans. I consider archaeology to be a very important



**Josue Gomez.**

tool in the recovery of the history of human (primarily indigenous) groups.

As part of my doctoral research I will work in the Kimberley region investigating the distribution of open archaeological sites and the activities carried out in these. This research will apply GIS methods for elucidating settlement patterns and landscape use throughout the region. It will integrate archaeological data with traditional knowledge of the landscape and the environment, as well as historic and modern patterns of resource acquisition to provide a view of long-term interactions of human populations in the landscape.

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My (**Helen Cooke**) research topic is one part of a multi-disciplinary ARC Linkage project which aims to improve cultural heritage management outcomes following the extraction of bauxite by partner organisation Rio Tinto Alcan (Weipa) Pty Ltd (RTA). RTA has developed protocols for engaging Traditional Owner groups in decision-making regarding the management of their cultural heritage and accumulated an extensive database of Indigenous sites. However the focus on compliance has left gaps in understanding the archaeological and environmental contexts of these sites and no coordinated discovery and reporting of sites on areas that fall outside the mining zone.



**Helen Cooke.**

The team will investigate local changes in climate and the responses of local populations to these shifts to develop a detailed understanding of Aboriginal interaction with the environment in the Weipa area, particularly the human response to the unpredictability of sea level fluctuations and environmental change.

My role is to work with the Traditional Owners to try to record what is important to them in their country, physical and intangible. This will involve some cultural mapping and a lot of going along with the people to see how they relate to the landscape. I will also look at what relevance archaeological studies have to these people and consider ways to improve place conservation and the exchange of information.

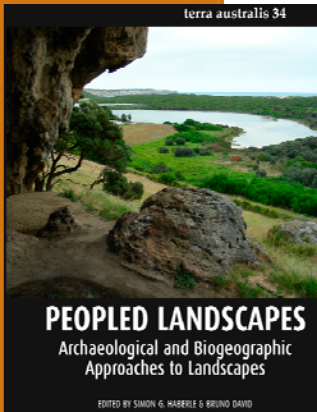
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Mound survey in context:

**'Working' at Red Beach, Weipa (Anadara mound in background).**



## Recent Publications



Cover of *Terra Australis* 34.

**Ambrose, W.** 2012. Oceanic Tattooing and the Implied Lapita Ceramic Connection. *Journal of Pacific Archaeology* 3(1): 1-21.

**Gomez, J., D. Kennett, H. Neff, M. Glascock and B. Voorhies.** 2011. Early formative Pottery Production, Mobility, and Exchange on the Pacific Coast of Southern Mexico. *Journal of Island and Coastal Archaeology* 6 (3): 333-350.

**Haberle, S.G.** and B. David (eds) 2012. *Peopled Landscapes: Archaeological and Biogeographic*

*Approaches to Landscapes.* Terra Australis 34. Canberra: ANU E-Press.

Holz, A., **S.G. Haberle**, T.T. Veblen, R. De Pol-Holz and J. Southon 2012. Fire history in western Patagonia from paired tree-ring fire-scar and charcoal records. *Climate of the Past* DOI:10.5194/cpd-7-1-2011

**Kennedy, J.** 2012. Agricultural systems in the tropical forest: a critique framed by tree crops of Papua New Guinea. *Quaternary International* 249: 140-150.

**Proske, U. and Haberle, S.G.** In Press. Island ecosystem and biodiversity dynamics in north-eastern Australia during the Holocene: Unraveling short-term impacts and long-term drivers. In *The Holocene*.

Sniderman, J.M.K. and **S.G. Haberle** 2012. Fire and vegetation change during the Early Pleistocene in southeastern Australia. *Journal of Quaternary Science* DOI: 10.1002/jqs.1547

## A Lesson in Lithics



Peter Hiscock showing students how to manufacture stone artefacts.

The sound of stone knapping resonated across campus as ANU lithics week participants experimented with fracture mechanics and tried their hands at creating stone tools as part of the Masters of Archaeological Science Masterclass – Lithic Artefact Identification and Analysis (ARCH8037) held during February.

Participants progressed from the basic skills of artefact identification to more complex discussions about analysis and management of lithic assemblages through the contributions of a cross-collegiate team including **Daryl Wesley, Christian Reepmeyer** and **Tim Maloney** and led by Peter Hiscock, Oliver Macgregor and Tony Barham from the School of Archaeology & Anthropology. For the first time, the fully-booked lithics Masterclass was offered to external participants, resulting in a stimulating mix of ANU Masters students and professionals with consulting and

statutory backgrounds. Further contributions by archaeologists Julie Dibden, Kelvin Officer and Johan Kamminga led to thought provoking debates about the balance between academic research approaches and 'real-world' consulting possibilities. Capped off by an excursion with Tom Knight to several sites in Namadgi National Park, the annual lithics course has established itself as a core part of the ANU Master of Archaeological Science Masterclass series.

Masterclass courses in Archaeological Science run in a three month session with a week of intensive teaching facilitating access for interstate students. About 40% of the 40 students in MArchSci program are completing the degree by a flexible combination of on-campus intensive teaching and distance

learning. In the October – December session, a Masterclass focused on Shell Midden Analysis (ARCH8037) will be offered by ANH, led by **Sally Brokwell** and Tony Barham, with teaching occurring both on-campus and at the ANU field station at Kioloa. Further information about the masterclass series is available at: <http://archaeology.anu.edu.au/archaeologicalscience/short-courses>



Tim Maloney demonstrating how to examine stone artefacts using a 3D scanner.

## More Teaching with ANH

Shinya Sugita from the Institute of Ecology, Tallin University in Estonia, visited in February as part of a collaborative research project with Simon Haberle dealing with land cover modeling over millennial timescales. He is internationally acknowledged among palaeoecologists, mainly as the creator of the model of the airborne transfer of pollen. Using models created by Shinya, it is possible to reconstruct the vegetation of the lakes investigated at regional and local

level, and at the same time to create future projections as to how the eventual change of climate or some other factor can effect vegetation in the future. We hope to apply this approach to landscapes in northern Australia and Tasmania.

Shinya ran a one day Masterclass at ANH on the 3rd February called "The Theory of Pollen Analysis and Its Applications." The course was well attended by graduate students and staff from ANU, Monash University, AN-

STO, University of Sydney and University of Canberra.

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Since mid-January Ulli Proske has been co-convening and teaching in the Master of Natural Hazards and Disasters, a joint program between RMAP and RSES. Further information can be found here: <http://naturalhazards.anu.edu.au/master>



Canberra Archaeological Society had a successful welcome barbecue in February with many ANH students and faculty renewing membership (Coombs in background).



A Gog Bog in Tasmania ("We didn't actually take a core from there but the picture was nicer..." Jay Chin ).

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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

6th March - Hosted by Stuart Bedford and Stuart Hawkins, 10:30 am

10th April - Hosted by Jay Chin and Katherine Seikel, 10:30 am

### Lunchtime Talks

22nd March: Sally Brockwell, Janelle Stevenson, Jack Fenner and Ulli

Proske on Weipa Fieldwork at 12:30 pm.

Please sign up for empty time slots with Janelle.

### Conferences

18-22 April 2012: SAA Conference, Memphis, Tennessee

8-13 July 2012: Easter Island and

Pacific Conference, Santa Rosa, California

23-30 August 2012: 13th International Palynological Congress and 9th International Organization of Palaeobotany Conference, Tokyo, Japan