Australian National University

Research School of Biology Newsletter

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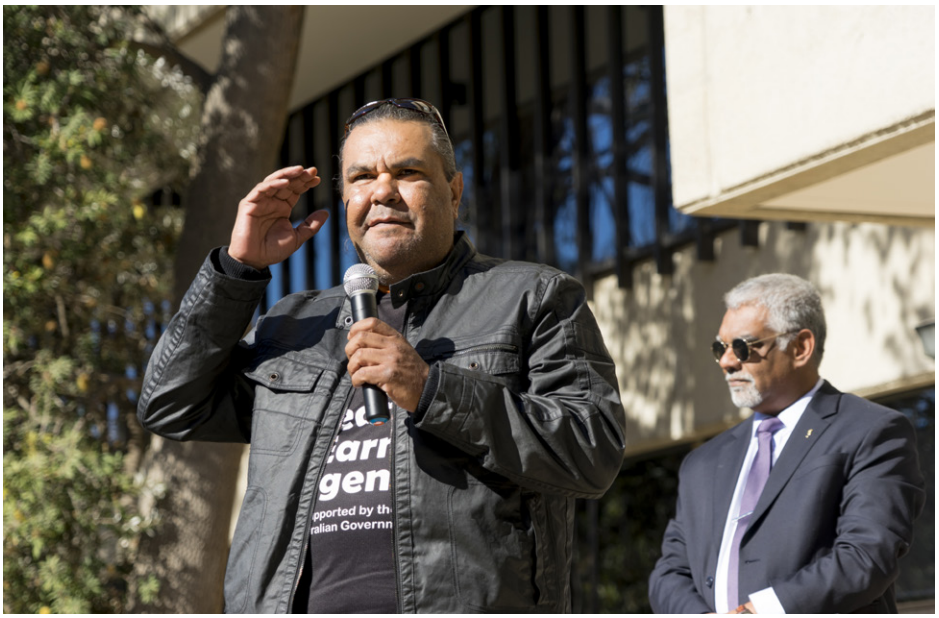
ANU COLLEGE OF SCIENCE

NEWS

Official Opening of RN Robertson building and Aboriginal Resource Garden

College of Science Dean Kiaran Kirk and ANU Provost Mike Calford cut the ribbon, officially opening the refurbished RN Robertson building. Image: Sharyn Wragg.

RSB and Fenner came together on a sunny and mild winter day this month to celebrate the opening of our Aboriginal Resource Garden and the refurbished RN Robertson building. ANU Provost **Mike Calford** opened the ceremony and spoke about the history of the building, and his time as a student there. Other speakers from ANU were College of Science Dean **Kiaran Kirk** (BSB), RSB Director **Allen Rodrigo** (CBBU) and Fenner School Director **Saul Cunningham**. Elders and representatives of three local Aboriginal groups were present, and **Matilda House**, Ngambri Elder, **Wally Bell**, Ngunawal Elder, and **Tina Brown**, Ngunnawal woman standing in for her father, Ngunnawal Elder Carl Brown, spoke to the crowd about the development and significance of the garden. Ngunnawal man **Adrian Brown**,who designed and created the bench seat, also spoke (see main image). The ceremony ended with the Provost and the Dean cutting the ribbon across the entrance of the building, and a catered lunch featuring Indigenous treats including emu burgers, kangaroo sausages and crocodile meat. Special thanks to **Terri Richardson** (RSB Director's EA) for organising the event. Thanks also to **Tim Butler** (RSB Operations), **Lou Gaffey** (RSB Technical Services), **Mel Norris** (RSB IT and communications), **Steve O'Connor** (RSB School Manager), **Jules Rucska** (RSB Operations) and **Shannon van Sebille** (RSB Operations), **Sharyn Wragg** (RSB IT and communications) and to **Piers Bairstow, Michelle Dlima, Samantha Fischetti** and **Rose Stevens** from Fenner.



Ngunnawal man Adrian Brown speaks at the opening of the Aboriginal Resource Garden and RN Robertson Building, with RSB Director Allen Rodrigo (right). image Sharyn Wragg.

ANU Provost Mike Calford addresses the crowd at the RN Robertson and Aboriginal Garden opening. Image: Sharyn Wragg.

Adrienne Nicotra (E&E), Tina Brown, Pawan Parajuli (Verma group, BSB) and Panit Thamsongsana (BTLC) admire the new bench in the Aboriginal Resource garden. Image: Sharyn Wragg.

Congratulations to our newest PhDs

RSB congratulates our latest PhD graduates, who were awarded their degrees in the mid-year graduation ceremony on 11 July. The new Doctors are:
Kristen Barratt (Arkell group, E&E), **Fiorella Esquivel** (Zeil group, E&E), **Xin Hou** (Pogson group, PS), **Ji-Fan (Sarah) Hsieh** (Foley group, E&E), **Hannah Osborn** (von Caemmerer group, PS), **Joshua Penalba** (Moritz group, E&E), **Daniela Perez** (Backwell group, E&E), **Michaela Purcell** (Rowell group, E&E), **Annisa Satyanti** (Nicotra group, E&E), **Regina Vega Trejo** (Jennions group, E&E) and **Belinda Vangchhia** (Gordon group, E&E),

PhD graduates Daniela Perez (Backwell group, E&E), Annisa Satyanti (Nicotra group, E&E), Josh Penalba (Moritz group, E&E), Regina Vega Trejo (Jennions group, E&E) and Ji-Fan (Sarah) Hsieh (Foley group, E&E) celebrate their graduation with family and friends at a morning tea organised by BTLC. Image Graham Hlcks

Lee Constable was the guest alumna speaker at the Sciences graduation ceremony. Lee did her Honours with **Marilyn Ball** (PS), and she stopped by for a reunion chat and photo with Marilyn and **Jack Egerton** (E&E) after the graduation ceremony (see photo below). Marilyn is wearing the shirt Lee gave her when she finished her Honours - it's the official shirt of

Group leader profile: Sasha Mikheyev (E&E)

Research focus
My lab uses technological advances, largely in sequencing, to understand how organisms respond to biotic changes in their environments. To do this we often use historical or biogeographic collections to study microevolutionary changes, combining field work, laboratory experiments and bioinformatics. We frequently use social insects, especially honey bees as models, and have a big project looking at coevolution between honey bees and their parasites and diseases. In addition, we have a side gig on the molecular evolution of venoms.

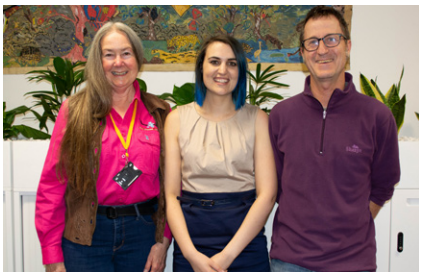
Teaching and research achievements
Working with historical material, you need to know who has it, what it is, and what stories it can tell. As a result, I talk to many other researchers who work on particular species, know them well and have samples. Often their stories are irresistible, and as a result I worked with a veritable zoo of organisms, ranging from birds, to stick insects, to Medieval steppe nomads.

What do you enjoy about teaching?
I love coming up with new ways to teach. This requires thinking about the same material in different ways, which keeps it exciting. The range of tools available in the classroom has also exploded. I enjoy tinkering with them in an effort to create more engaging and informative content, for example, in a laboratory exercise combining experimental evolution, next-generation sequencing and bioinformatics.

What do you enjoy about research?
My favorite part of research is going to the field to learn about some animal's amazing natural history. I can then apply modern molecular approaches to delve deeper. DNA and algorithms reveal its past, its secret relationships, and broader insights it can provide into our understanding of biology.

This newsletter is archived at biology.anu.edu.au/news-events/newsletter.
Layout: Mel Norris
Editing: Scott Keogh & Mel Norris

Lee's parents' Texas Longhorn cattle farm.



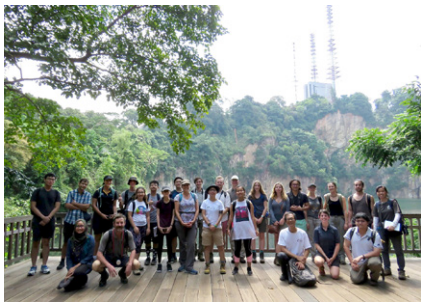
New academic appointments

The final two faculty appointees have been announced. They are **Adele Lehane**, above left, who joins as Senior Lecturer, effective 2 July 2018, and **Joseph Brock**, above right, who joins as Lecturer, effective 7 January 2019. Both Adele and Joseph will be in BSB.

New honours/masters students

Welcome to our mid-year cohort of ten Honours students, and six Masters students who are beginning the research year of their program.

Singapore/Malaysia Field trip

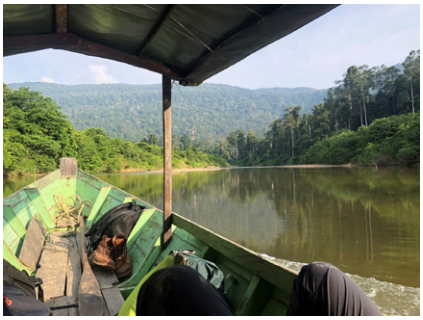


Students and staff on the Advanced Field Studies in Functional Ecology trip at the Bukit Timah forest reserve in central Singapore. Image Ali Catling.

Fifteen RSB students spent two weeks in Singapore and Malaysia this month, doing research projects for the Biol3303 Advanced Field Studies in Functional Ecology course. They were joined by three students from Nanyang Technological University (NTU), and staff from both RSB and NTU (School of Biological Sciences and Asian School of the Environment). A shout-out to **Wes Keys** (DTO, E&E), **Ali Catling** (Nicotra group, E&E), **Yuzhen Fan** (Atkin group, PS), **Nur Bahar** (Atkin group, PS), **Owen Atkin** (PS), **Patrick Meir** (PS).
Our study sites were:
The island of Pulau Ubin off the north coast of Singapore, home to Singapore's last fishing village and an interesting combination of vegetation types with different land use histories.
The Bukit Timah forest reserve in central Singapore where we explored the primary and secondary rainforests of the reserves and explored respiration, light responses, and functional traits of primary and secondary forest species.
The spectacular Endau Rompin National Park, Malaysia, (a block of rainforest about the same size as the island of Singapore) where we brought our functional ecology skills to a research project on Syzygium species that was led by our colleagues at NTU (Victor Albert) and Singapore Botanic Garden (Low Yee Wen).
We ended the course on a high note with the students presenting flash talks on 9 of our projects to staff from the two NTU schools and special visitor Ms Fiona Lampard from the Australian High Commission in Singapore. Once we've finished unpacking and caught up on our sleep we'll start discussions with our NTU partners about what the next steps in developing this program will be. They are keen to start planning the next iteration. - **Adrienne Nicotra** (E&E), course convener.

Patrick Meir (PS) (right front) leads a group of students on Palau Ubin, Singapore. Image Ali Catling.

Adrienne Nicotra (E&E), Wes Keys (E&E) and Nur Bahar (PS) with students and staff on the Advanced Field Studies in Functional Ecology trip, in the forest at Endau Rompin, Malaysia. Image Ali Catling.



Spectacular views from the boat ride into Endau Rompin, Malaysia. Image Ali Catling.

Owen Atkin (PS) gave the students a crash course in using Li-Cor meters to measure photosynthesis, at Bukit Timah, Singapore. Image Ali Catling.

Outreach News

A number of school groups visited the RSB teaching labs this month, including the year 12 Human Biology class from Narrabundah College, a National Youth Science Forum group, and a large group of year 9 and 10 students from Ulladulla and Batemans Bay High Schools. Many thanks to all who helped out: **Dave Rowell** (E&E), **Andras Keszei** (BTLC), **Juliey Beckman** (BTLC), **Alisha Duncan** (Furbank group, PS), **Lily Chen** (Furbank group, PS), **Hilary Stuart-Williams** (Farquhar group, PS), **Hammad Khan** (Evans group, PS), **Ross Deans** (Farquhar group, PS), **Holly Beckett** (Marilyn Ball group, PS), the Biology Teaching lab team and **Alex Maier** (BSB) who gave a talk on parasitology to the Narrabundah group.

Congratulations

Congratulations to **Juliey Beckman**

(BTLC) who has been appointed as Associate Dean (Teaching and Learning) for the Joint Colleges of Science. She will support Anna Cowan in a range of issues such as policy, curriculum and student matters. The position is two days a week, so Juliey will continue to do much of her current role in RSB for the remaining three. - **Susan Howitt** (BTLC, BSB).

Emeritus Professor **Jenny Graves** has been awarded a Doctor of Science *honoris causa* by ANU.

Alex Skeels (Cardillo group, E&E) was selected to present the student plenary address at the British Ecological society conference in St Andrews, Scotland, on 10-11 July.

Claire Taylor (Langmore group, E&E) won the runner-up best poster prize at the Australasian Society for the Study of Animal Behaviour Conference this month.

Grants

Arun Yadav (Pogson group, PS) and **Barry Pogson** (PS) have received $100K grant extension from the Grains Research and Development Corporation (GRDC) to "Evaluate drought tolerance potential of SAL1 wheat lines in the multisite field environments across Australia".

Claire Taylor (Langmore group, E&E) has won a grant from Canberra Ornithologists Group of $4400.

WELCOME

Welcome to Dr **Lynda Sharpe** and Dr **Belinda Cale** who have joined the Gardner group (E&E) to work on the responses of arid zone birds to climate change at Calperum Station in South Australia. Lynda recently returned from Africa where she was working on the social behaviour of dwarf mongoose while Belinda has been studying breeding biology of redthroats and white-winged fairy-wrens at Calperum Station.

Matthew Hahn and **Leonie Moyle** are visiting fellows from Indiana University. They will be spending a year in Craig

Moritz's group (E&E) (Hahn) and Justin Borevitz's group (E&E, PS) (Moyle). Both are professors of Biology in Indiana, with Hahn working primarily on population genomics and phylogenetics, and Moyle working primarily on speciation genetics and sexual selection."

FAREWELL

After 10 years at ANU, **Carsten Kulheim** (Foley group, E&E) has left to take up the position of Associate Professor at the School of Forest Resources and Environmental Science at Michigan Technical University.

PAPERS ACCEPTED

Ashman LG, Bragg JG, Doughty P, Hutchinson MN, Bank S, Matzke NJ, Oliver P, Moritz C, Diversification across biomes in a continental lizard radiation, *Evolution*.

Bröer A, Javed K, Bröer S, Disruption of amino acid homeostasis by novel ASCT2 inhibitors involves multiple targets, *Frontiers in Pharmacology*.

Busch FA, 'Photosynthetic Gas Exchange in Land Plants at the Leaf Level', in: S Covshoff (ed), *Photosynthesis: Methods and Protocols*, Springer.

Cain KE, Hall ML, Medina I, Leitao AV, Delhey K, Brouwer L, Peters A, Pruett-Jones S, Webster MS, Langmore NE, Mulder RA, Conspicuous plumage does not increase predation risk: A continent-wide test using 3D printed model songbirds, *American Naturalist*.

Corry B, The naked truth about K+ selectivity, *Nature Chemistry*.

Cranston PS, *Paraskusella* gen. nov., a new Afro-Australian genus in the tribe Chironomini (Diptera: Chironomidae). *Austral Entomology.*

Ebner B, Donaldson J, Starrs D, Coal grunters shift benthic objects to access macroinvertebrates in a headwater stream, *Pacific Conservation Biology*.

Edworthy AB, Langmore NE, Heinsohn R, Native fly parasites are the principal cause of nestling mortality in endangered Tasmanian pardalotes, *Animal Conservation.*

Henshaw JM, Jennions MD, Kruuk L, How to quantify (the response to) sexual selection on traits, *Evolution*.

Medina I, Langmore NE, Nest illumination and the evolution of egg rejection in hosts of brood parasites, *The Auk.*

Parsons DM, Cook DG, Thompson A, Ranjard L, Zarate E, Dunphy BJ, Discrimination of juvenile snapper (*Chrysophrys auratus*) growth and nutrition via metabolomic GC-MS methods, *Journal of Experimental Marine Biology and Ecology*.

Walker BJ, Busch FA, Driever SM, Kromdijk J, Lawson T, 'Survey Tools for Measuring In Vivo Photosynthesis', in S Covshoff (ed) *Photosynthesis: Methods and Protocols*, Springer.

NOTICES

PARSA has established a Queer Advocacy Committee to advocate for LGBTQI+ postgraduate students. We advocate and organise social events for students with diverse genders and sexualities, and we are opening our events up to ECMRs and academics. If you are queer* or questioning and would like to know more about our events or the committee contact Christiana or Tess. - **Christiana McDonald-Spicer** (Moritz group, E&E).