NEWS

Hiroto Naora visit
Professor Hiroto Naora, one of the founding faculty members of RSBs, visited the refurbished RN Robertson building on December 28 last year. Allen Rodrigo (RSB Director), Spencer Whitney (PS) and Mel Norris (RSB Coms) showed him over the new building, and student winners of the Hiroto Naora award, Ariel Ivanovici (Djordjevic group, PS), Tom Rowell (Magrath group, E&E), Flor Danalia (von Caemmerer group, PS) and Holly Yuan (Leyton group, BSB) presented him with a certificate listing the names of all the award winners. (See main photo).

Outreach news
Once again RSB hosted the Australian Biology Olympiad Summer School, an intensive two weeks of non-stop biology, including a visit to Kioloa campus. Thanks to Julicy Beckman (BTLC), Deputy Director of the Biology Olympiad program, and the teaching lab team, especially Melanie Trinick (BTLC) and Peta Moisiss (BTLC), who volunteered their time as chief cooks and bottle washers for the weekend trip to Kioloa, as well as providing tech support for the two weeks. Thanks also to guest presenters Chris Fulton (E&E) and Stefan Bröer (BSB), Alisha Duncan (Furbank group, PS), Spencer Whitney (PS) and the staff of the CSIRO Australian National Insect Collection for making the program such a success.

Andras Keszel (BTLC) and the BTLC teaching lab team ran two DNA profiling sessions for the National Youth Science Forum in January, and RSB provided space for two other sessions run by the Canberra Nature Lab on scientific drawing. Damien Esquerre (Keogh group, E&E) ran two sessions for the NYSF students, where researchers and PhD students from E&E talked about their research, science, and what they love about what they do, to inspire the students. Speakers were Jessie Au (Foley group), Damien Esquerre (Keogh group), Jessica Fener (Moritz group), Tom Rowell (Magrath group), Carlos Pavon (Keogh group), Anna MacDonald (Moritz group), Alex Skeels (Cardillo group), Constanza Leon from Fenner, and Peter Kenny, a visiting PhD student from University College London.

Alisha Duncan (Furbank group, PS) ran a workshop for 70 science teachers at the the STEM X Academy, entitled ‘Measuring Photosynthesis: thinking outside the pot’. Thanks to volunteer demonstrators Soumi Bala (Evans and von Caemmerer groups, PS), Spencer Whitney (PS), Julius Sagun (Chow group, PS), Wil Hee (Price group, PS) and Victoria Allen (Farquhar group, PS), along with teaching lab expert technicians Tammy Gomersall, Yiming Li and Peta Moisiss.

Awards
Kalya Subasinghe (Gardner group, E&E) has been awarded a CSIRO top-up scholarship for her PhD project on avian morphology and climate change.

Linden Muellner-Wong (van Dooren group, BSB) was awarded the 2017 RSB Director’s Prize in Honours In January (see image above). She will be working as an RA at Monash this year, but hopes to return to RSB in 2019 to begin a PhD.

IN THE MEDIA
Research that investigated how a species of eucalyptus survived extreme heatwaves, published by Owen Atkin (PS) and colleagues at Western Sydney University, was reported in The Guardian, The Australian (paywall, no link), The South China morning news and other outlets, including the blog JoNova.

Graham Farquhar (PS) was interviewed on ABC Radio Canberra this month, about his work, climate change, and being recognised during this years Australian of the Year awards.

WELCOME
Welcome to Juan Jose Nogueira Perez (Juanjo) a postdoc who is joining the school from the University of Vienna. He will be working in the Corry group (BSB), conducting computational simulations of membrane transport proteins.

The Jennions and Head groups (E&E) welcome Milan Vrtilek, who joins RSB as an Endeavour post-doc, from the Czech Academy of Science.

Upama Aich, formerly of the University of Dhaka, Bangladesh, began her PhD at RSB in January, supervised by Michael Jennions and Megan Head (E&E).
Current Research Interests

I am fascinated by the incredibly uneven spatial distribution of biological diversity, at all levels, particularly centres of phylogenetic endemism. This leads to two questions. First, how can phylogenetic information contribute to better conservation decisions? We recently published a conservation assessment for lizards of the Kimberley which identifies priority areas for conservation directly from evolutionary units, bypassing the uncertain and rapidly changing taxonomy. I want to help make phylogenetic approaches to conservation accessible, practical and well-used by on-ground conservation managers. The more fundamental question is why centres of endemism are found where they are? Especially, how do particular types of landscape patterns and causes of lizard diversity and endemism in Australia’s monsoonal tropics. In mid 2016 I started my DECRA project.

What do you enjoy most about research?

I really like the mix of collaboration and focussed solo work in science. It can be incredibly entrepreneurial – building teams and working together to promote an idea, attract funding, research and write. But this is balanced by the quiet time reading, writing, coding.
individually and as time series, which we are exploring in virtual reality. This also involves spatial analysis and exploration of tree identification algorithms. - Aly Weirman, APPF Manager.

FAREWELL

Pip Wilson has been part of the Pogson and Borevitz groups (PS) as a postdoc since 2014 and was associated with RSB/Bambir since her time as an undergraduate student. She has taken up a job with the GRDC and we wish her the best. - Derek Collinge (Pogson group, PS).

Elena Martin Avila (Whitney group, PS) has left RSB to take up a position doing GM regulations at the Office of the Gene Technology Regulator.

Brani Igic (Magrath group, E&E) has taken up a position of Trainee Biostatistician in the Centre for Epidemiology and Evidence in Sydney, with the NSW Ministry of Health. The job entails undertaking biostatistics research projects and completing a Master of Biostatistics at the University of Sydney.

PHDS SUBMITTED

Kristen Barratt (Arkell group, E&E) ‘New aspects of Zic2-associated Holoprosencephaly’.

Adelaide Dennis (Kirk and Lehan group, BSB) ‘PfATP4 and the biochemical signature of PfATP4-associated compounds’.

Diep Ganguly (Pogson group, PS) ‘Training memory: investigating the interaction between plant stress signalling and DNA methylation’.

Ji-Fan (Sarah) Hsieh (Foley group, E&E) ‘Molecular and chemical mechanisms of defence in Australian Myrtaceae against myrtle rust’.

Xin Hou (Posgon group, PS) ‘Hunting for carotenoid-derived retrograde signals that regulate plastid development’.

Huw Ogilvie (Moritz group, E&E) ‘Evaluating, accelerating and extending the multispecies coalescent model of evolution’.

Annisa Satyati (Nicotra group, E&E) ‘A multi-scale exploration of the drivers and implications of germination strategy in Australian alpine plants’.

PHDS AWARDED

Sharon Every (Fulton group, E&E), ‘Trophic ecology of riverine sharks in tropical northern Australia’.

Regina Vega Trejo (Jennions group, E&E) ‘Inbreeding depression and a poor start in life’.

Lingling Zhu (Atkin group, PS) ‘Thermal plasticity of leaf energy metabolism:

ecological, physiological and biochemical linkages’.

PAPERS ACCEPTED


Bahar NHA, Hayes L, Scafaro A, Atkin OK, Evans J, R, Mesophyll conductance does not contribute to greater photosynthetic rate per unit nitrogen in temperate compared to tropical evergreen wet-forest tree leaves, New Phytologist.


Buyan A, Sun D, Corry B, Protonation state of inhibitors determines interaction sites within voltage-gated sodium channels, Proceedings of the National Academy of Sciences of the USA.

Corry B, Physical basis of specificity and delayed binding of a subtype selective sodium channel inhibitor, Scientific Reports.


Drake JE, Tjoelker MG, Varhammar A, ... Nicotra AB, Atkin OK, et al, Trees tolerate an extreme heatwave via sustained transpirational cooling and increased leaf thermal tolerance, Global Change Biology.


Hall ML, Langmore NE (Eds), Fitness Costs and Benefits of Female Song, Frontiers Media SA.


Keighley MV, Heinsohn R, Langmore NE, Murphy SA, Penalba JV, Genomic population structure supports vocal dialect boundaries in palm cockatoos (Probosciger aterrimus) and a refugial late-Quaternary distribution model, Emu.

Kuty AM, Wong WH, Musemann K, Meier R, Cranston PS, A phylogenomic analysis of Culicinomorpha (Diptera) resolves the relationships among the eight constituent families, Systematic Entomology.

McDonald MC, Solomon PS, Just the surface: Advances in the discovery and characterization of necrotrophic wheat effectors, Current Opinion in Microbiology.


Nottingham AT, Hicks LC, Ccahuana AJO, Salinas N, Baeth E, Meir P, Nutrient limitations to bacterial and fungal growth during cellulose decomposition in tropical forest soils, Biology and Fertility of Soils.

Ranjard L, Wong TKF, Kühlheim C, Rodrigo AG, Ragg NLC, Patel S, Dunphy BJ, Complete mitochondrial genome of the green-lipped mussel, Perna canaliculus (Mollusca:Mytiloidea), from long nanopore sequencing reads, Mitochondrial DNA Part B: Resources.


Tijn ET, Spry C, Sewell AL, ... Howieson VM, Maier AG, ... Saliba KJ, et al, Mutations in the pantothenate kinase of P. falciparum confer diverse sensitivity profiles to antiplasmoidal pantothenate analogues, PLOS Pathogens.
