



NEWS

Inaugural ANU-NTU Jan Anderson HDR Supplementary Scholarship awarded

ANU Vice-Chancellor Brian Schmidt announced the establishment of a new award this month, at a function at University House. The ANU-NTU Jan Anderson HDR Supplementary Scholarship provides financial support for students currently enrolled in an RSB HDR program to travel to Nanyang Technical University (NTU) in Singapore to undertake joint research and help them develop their scientific and professional skills. It is named for Jan Anderson, who was one Australia's most internationally recognised plant scientists, and who worked first at CSIRO and then at ANU, until she passed away in 2015. The award also recognises the close personal ties between Jan and Bertil Andersson, now the President of NTU. They worked together on the intracellular architecture of photosynthetic systems and while their hypotheses about the distribution of these systems within cells was initially greeted with skepticism, it was later shown to be true. The first recipient of the award is Sally Buck (Whitney group, PS). (See main photo).



Sally Buck won the Inaugural ANU-NTU Jan Anderson HDR Supplementary Scholarship. At the presentation at University House, from left: Spencer Whitney (PS), Allen Rodrigo (Director, RSB), Brian Schmidt (ANU Vice-Chancellor), Sally Buck (Whitney group, PS), Bertil Andersson (President, Nanyang Technical University, Singapore), Susana Geifman Shochat (NTU), and Peter Preiser (Chair, School of Biological Sciences, NTU) (Image Graham Hicks). (See: News Item).

Celebrating 50 Years of Biology at ANU



The exhibition of panels and objects was set up in newly renovated Catcheside Court. (Image Sharyn Wragg)

RSB celebrated its 50th anniversary this month. Botany and Zoology began as part of Canberra College in 1959, but by 1967 ANU had the full breadth of biology research and teaching, comprising the Depts of Botany and Zoology, the Dept of Biochemistry and the Research School of Biological Sciences. "Biologists are used to dealing with complex origins, and the ANU Research School of Biology had many beginnings," said Professor Allen Rodrigo, Director of the ANU Research School of Biology. "We

celebrate the 50th anniversary of one of those beginnings, as way of celebrating all our beginnings."

Stefan Bröer (BSB, and RSB Deputy Director), Mel Norris (RSB Communications and Outreach officer), Sharyn Wragg (RSB IT), CPAS interns Laura Kent, Zoë Tulip and Holly Beckett and others worked throughout the year to put together a web page, exhibition and celebration event for alumni, staff, students and friends on December 4. The event provided an opportunity to share stories and reflect on our first 50 years, to reconnect with colleagues and collaborators, and hear about current research in the School. A highlight of the day was hearing John Shine, Jenny Graves, Susanne von Caemmerer and Adrian Horridge talk about their work and their time here at ANU.



Speakers at the evening session - John Shine, Graham Farquhar (Chair), Susanne von Caemmerer, Jenny Graves and Adrian Horridge (seated). (Image Sharyn Wragg).



Ross Deans, Meisha Holloway-Phillips and Florian Busch (all Farquhar group, PS) at the evening reception. (Image Sharyn Wragg).



Bob Hawke or Barney John? One of the photos on the History of Biology at ANU exhibition panels provoked much good-natured discussion. Allen Rodrigo, Jenny Graves, Graham Farquhar and Brian Gunning weigh in. (Spoiler - despite the likeness, it was Barney John, RSBS Director 1979-1984.) (Image Sharyn Wragg).

Congratulations Graduates

Congratulations to the following RSB PhD graduates: Alaa Alzahrani (Arkeff group, E&E), Amanda Edworthy (Langmore group, E&E), Stephen Fairweather (Bröer group, BSB), Duncan Fitzpatrick (Price group, PS), Jonathan Henshaw (Jennions group, E&E), Ashley Jones (Millar group, PS), Hong Kiat Lim (O'Neill group, BSB), Shao-Yu Lin (Solomon group, PS), Daniela Perez (Backwell group, E&E), Eli Thynne (Solomon group, PS), Catherine Young (Backwell group, E&E). Congratulations also to Ojas

Dixit (Gordon group, E&E) who graduated with an M.Phil.

National Science and Engineering summer school for Indigenous Students



Susan Howitt (blue lab coat) at the RSB workshop for Indigenous students. (Image Yiming Li).

RSB participated in the National Science and Engineering Summer School for Indigenous Students on 14th Dec. The theme of the summer school was Global Changes and the RSB workshop addressed "Improving plants to feed the world". The activity was sponsored by the ARC Centre for Translational Photosynthesis and organized by **Alisha Duncan** (Furbank group, PS) and **Susan Howitt** (BSB).

Molecular Plant Microbe Interactions retreat, Kioloa 2017



This year's annual MPMI retreat was a huge success down at the ANU's Kioloa Coastal Campus. The Solomon, Rathjen, Jones and Mathesius labs all attended from RSB, as well as a large group from CSIRO Plant Industry and Bostjan Kobe's group from the University of Queensland. Over the course of two days the group explored the many ways that pathogens invade plants, the discovery of new plant immune genes, the structural biology of these interactions and the evolution of root nodule symbiosis. Highlights of the retreat were the interactive white-board sessions, where presenters shed their power-point slides and went off script on their current projects and of course the annual back-yard cricket match. The retreat this year was organised by **Simon Williams** (Solomon group, PS), **Diana Ramirez-Garcés** (Rathjen group, PS) and **Jason**

Ng (Mathesius group, PS). Many thanks to these three ECRs for all their efforts on a very enjoyable retreat. - **Megan McDonald** (Solomon group, PS).

Congratulations

Mike Crisp (E&E) won a Highly Commended award at the ANU Media and Outreach Awards this month.

Awards

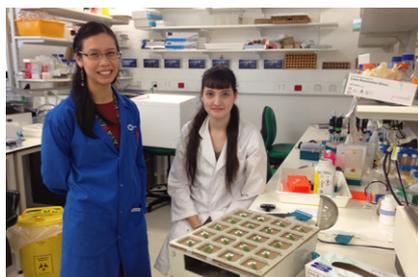
Tobias Hayashi (Peakall group, E&E) won two grants this month: \$22,500 over 3.5 years from the Australian Orchid Foundation, for 'The pollination ecology of Australian *Pterostylis* (Orchidaceae)'; and \$5994 for the next year from the Holsworth Wildlife Research Endowment for 'Towards an understanding of the pollination ecology of *Pterostylis* (Orchidaceae).

Christina Spry (Saliba group, BSB) won first prize (\$2000 in research funds) at the poster session held as part of "Collaboration across boundaries" - an event aimed at facilitating collaborations across disciplines, run by the Joint Colleges of Science and NECTAR. The event was held at the National Film and Sound Archives on 7 December. The poster title was: "Striving toward malaria eradication: Development of a single drug to kill malaria parasites and the mosquitoes that transmit them."

Hee-Jin Noh (Langmore group, E&E) has won a Holsworth Wildlife Research Endowment, worth \$5,625, for her project entitled 'Exploring coevolutionary diversification in Australian cuckoos'.

MSc student **Lauren Harrison** (Head group, E&E) won Second Prize for Best Student talk at the Australasian Evolution Society Conference.

IN THE MEDIA



PhD student **Estee Tee** (Pogson group, PS) supervised an ACE science student from Melrose HS this year (pictured above). The year 9 student, Sarah Robinson, completed a project titled 'Relationship Between Nucleoside Diphosphate Kinases and PAP

(3'phosphoadenosine 5'phosphate) in Plant Stress' in the Pogson lab (PS) under the supervision of Estee, a former participant of the Science Mentors program. **Kai Chan** (Pogson group, PS) was a guest speaker at the Science Mentors' awards event on Nov 24th. The Canberra Times and Channel 9 reported on the program.

Jennie Mallela (Jennions group, E&E) and Sophie Lewis (Fenner) published an article in The Conversation, entitled 'It's official: 2016's Great Barrier Reef bleaching was unlike anything that went before.' The article outlines their research using the ANU super computer to analyse the 2016 coral bleaching event, which demonstrated that the event was due to anthropogenic CO₂ emissions.

FAREWELL



David Hayward, Sue Lyons, Rosemary Birch and Prue Kell listen to a speech at their farewell morning tea in Catcheside Court. (Image Sharyn Wragg).

RSB farewelled four long-serving and well-respected professional staff members this month - **Rosemary Birch** (Whitney group, PS), **David Hayward** (Eldon Ball group, E&E), **Prue Kell** (Badger group, PS) and **Sue Lyons** (CEF co-ordinator, Plant Services). A celebration of their careers was held in Catcheside Court, where each of their supervisors - **Spencer Whitney** (PS), **Eldon Ball** (E&E), **Murray Badger** (PS), and **Steve Dempsey** (Plant Services team leader) talked about their contribution to the school. We will miss you, and wish you all well in your future endeavours.



Murray Badger (far right) spoke about Prue Kell at the school morning tea.

Haroon Asif, a valued member of RSB IT Client services, has left RSB to take up a position at the Canberra Apple Store. Haroon started with RSB in 2014, and provided exceptional service across the broad scope of work that is RSB IT

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client support. Some of his achievements include overhauling IT purchasing procedures at RSB, and across ANU. The Apple purchasing portal he initiated is now used across ANU. Fortunately, the Canberra Apple store is not far, and we hope to catch up with him on occasion, and wish him well in his new career with Apple. - **Sharyn Wragg** (RSB IT).

Hugo Alonso-Cantabrana (von Caemmerer group, PS) leaves ANU to take a position at the Grain Research and Development Corporation (GRDC). Hugo joined ANU in 2013 to work on the Gates Foundation funded C4 rice project, and has been with the ARC CoE for Translational Photosynthesis since 2014.

We say farewell to **Giel van Noorden** from the Mathesius group (PS), who has been working at RSB for the last six years as a post doctoral fellow. Giel has a long association with RSB, first visiting as an undergraduate student from The Netherlands in 2000, followed by his PhD in RSBS. We will miss him and wish him all the best for his future career.

WELCOME



Pierre Chuard, formerly of McGill University in Montreal, Canada, has begun an Endeavour Fellowship in the Head and Jennions groups.

PHDS SUBMITTED

Meredith Cosgrove (Crisp group, E&E) 'A wide Brownian land: drought adaptation and niche diversification in an Australian conifer.'

Michaela Purcell (Rowell group, E&E) 'Phylogeny and host relationships of the Australian gall-inducing fly *Fergusonina malloch* (Diptera: Fergusoninidae).'

John Rivers (Pogson group, PS) 'Apocarotenoid biosynthesis and carotenoid catabolism in *Arabidopsis thaliana*.'

PHD AWARDED

Julian Greenwood (Evans group, PS) 'Wheat Inflorescence Architecture'.

PAPERS ACCEPTED

Baron JS, Specht A, Garnier E, Bishop P, Campbell CA, Davis FW, Fady B, Field D, Gross LJ, Guru SM, Halpern BS, Hampton SE, Leavitt PR, Meagher TR, Ometto J, Parker JN, Price R, Rawson CH, Rodrigo

A, Sheble LA, Winter M, Synthesis Centers as critical research infrastructure, *BioScience*.

Butler EE, Flores-Moreno H, .. Atkin OK, ..Meir P, et al., Mapping local and global variability in plant trait distributions, *Proceedings of the National Academy of Sciences of the United States of America*.

Grossiord C, Sevanto S, Limousin J-M, Meir P *et al.*, Manipulative experiments demonstrate how long-term soil moisture change alter controls of plant water use, *Environmental and Experimental Botany*.

Howitt SM, Wilson AN, Reflecting on the use and abuse of scientific data facilitates students' ethical and epistemological development, *Science Education*.

Lewis SC, Mallela J, A multifactor risk analysis of the record 2016 Great Barrier Reef bleaching, [in "Explaining Extreme Events of 2016 from a Climate Perspective"], *Bulletin of the American Meteorological Society*.

McDowell N, Allen C, Anderson-Teixera K, Brando P, Meir P *et al.*, Drivers and mechanisms of tree mortality in moist tropical forests, *New Phytologist*.

McKenney EA, Maslanka M, Rodrigo A, Yoder AD, Bamboo specialists from two mammalian orders (Primates, Carnivora) share a high number of low-abundance gut microbes, *Microbial Ecology*.

McKenney EA, O'Connell TM, Rodrigo A, Yoder AD, Feeding strategy shapes gut microbial diversity and functional specialization in captive lemurs, *Gut Microbes*.

Mowles S, Jennions MD, Backwell PRY, Robotic crabs reveal that female fiddler crabs are sensitive to changes in male display rate, *Biology Letters*.

Potter S, Xue AT, Bragg JG, Rosauer DF, Roycroft EJ, Moritz C, Pleistocene climatic changes drive diversification across a tropical savanna, *Molecular Ecology*.

Rodrigo AG, Rogers M, Bohlig B, The evolutionary value of helpful microbes, *Trends in Ecology and Evolution*.



West R, Potter S, Taggart D, Eldridge MDB, Looking back to go forward: genetics informs future management of captive and reintroduced populations of the black-footed rock-wallaby *Petrogale lateralis*, *Conservation Genetics*.

Wong DCJ, Pichersky E, Peakall R, The biosynthesis of unusual floral volatiles and blends involved in orchid pollination by deception: Current progress and future prospects, *Frontiers in Plant Science*.

Zeng Q, Sukumaran J, Wu SH, Rodrigo AG, Models of microbiome evolution incorporating host and microbial selection, *Microbiome*.

Zhang X-H, Zheng X-T, Sun B-Y, Peng C-L, Chow WS, Over-expression of the CHS gene enhances resistance of Arabidopsis leaves to high light, *Environmental and Experimental Botany*.

RSB/Fenner Christmas party

The RSB Christmas party was held jointly with the Fenner school this year. Indigenous performers Wirradjuri Echoes performed for us again this year, and Fenner Director Saul Cunningham judged the RSB Christmas Tree ornament competition, won by the Keogh group (E&E).



RSB represented in the 'Men's Dance', led by the Wirradjuri Echoes. (Image Sharyn Wragg).



Fenner Director Saul Cunningham awards the prize for best Christmas tree ornament to Mitzy Pepper (Keogh group, E&E), who made a phylogenetic tree out of a twig and other artifacts (Image Sharyn Wragg).

Left: 'I feel like chicken tonight, like chicken tonight ..'. We all knew what was coming but we did the chicken dance anyway, with the Wirradjuri Echoes. (Image Sharyn Wragg).