



NEWS

Inaugural Ralph Slatyer medal presented

The Ralph Slatyer medal was presented for the first time this year to Mark Westoby, of Macquarie University, before an audience of around 200 people, including ANU Vice-Chancellor Brian Schmidt, CMBE Dean Kieran Kirk, Steven Holland, the medal designer, and three generations of the Slatyer family. (See main photo). A video has been produced of the event - it will be available in the next week or so.

Congratulations

Susanne von Caemmerer (PS) has won the American Society of Plant Biologists (ASPB) Charles Reid Barnes Life Membership Award for 2017. John Evans (PS) has been nominated as a Corresponding Member of the ASPB.

Science Meets Parliament

Chris Fulton (E&E), Ulrike Mathesius (PS) Denisse Leyton (BSB) and Florian Busch (PS) gained skills in the science-policy interface and met with several of our Parliamentarians during Science Meets Parliament this month, including the Minister for Science Senator Arthur Sinodinos and Shadow Minister for Science Senator Kim Carr, who discussed the release of Australia's National Science Statement. With over 200 scientists in Parliament over 2 days, we did our best to 'saturate' the House with science!

Ulrike and Chris met with The Hon Luke Hartsuyker MP (Assistant Minister to Barnaby Joyce) to discuss the role of Government-funded research in sustainable fisheries, soils and plant production.

Florian discussed the role of photosynthesis research in securing our food production for the future in a meeting with Craig Kelly MP (Member of the House of Representatives). Key quotes, speech transcripts and details of the SmP workshops can be found in the public Twitter stream for '#SmP2017'.

Ecology Field Trip to Kioloa

Forty-seven BIOL2131 Ecology students went on a field trip to Kioloa from March 17 - 19. During their stay, there was a period of about one hour when it didn't rain, which occurred during lunch on Saturday.



Mark Westoby, inaugural Ralph Slatyer medal winner, with June Slatyer, widow of Ralph, who presented the medal. Image Sharyn Wragg. (See: News Item)

Nevertheless, everybody remained in high spirits (if a bit smelly by Sunday afternoon!). Students collected large amounts of biological data from a transect running from the ocean inland through wet sclerophyll forest, which they will be analysing over the next few weeks.



Sam Jahromi (BTLC) and RSB visitor Matt Rockman, from New York University, cooking dinner for the Biol2131 field trip at Kioloa this month. Image Dave Rowell.

Lecturers in the course included Patrick Meir (PS) and Chris Fulton (E&E) (course conveners) and Adrienne Nicotra (E&E). Other students and staff involved were Josh van Leir (Fulton group, E&E), Meisha Holloway-Phillips (Farquhar group, PS), Meredith Cosgrove (Crisp group, E&E), Oliver Binks (Meir group, PS), Sonya Geange (Nicotra group, E&E), Ross Deans (Farquhar group, PS), Philippa Beale (Foley group, E&E), Dave Rowell (BTLC, E&E) and

Sam Jahromi (BTLC). Matt Rockman, who was visiting to give the Director's Seminar, got a welcome break from New York rain, to experience Australian rain. - Dave Rowell (BTLC, E&E).



Outreach News



First instar of grapevine scale on leaf where early instars feed. They appear to feed on the veins and form groups that run along the major veins of the leaf. Image Paul Cooper.

Kenneth Webster (Cooper group, E&E) and Paul Cooper (E&E) went to Langhorne Creek Wine region on 15-16 March to meet with managers and owners of various vineyards and to talk about scale insects and their role in sooty mould on leaves and grapes. Approximately 25 local people (including one person from the Australian

## Group leader profile: Kieran Kirk (BSB and Dean, CMBE)



My research group is run jointly with Adele Lehane, who is a DECRA Fellow and who takes the lead role in much of what we do. The focus of our group is on the molecular physiology of the malaria parasite and, in particular, the membrane proteins that move ions, nutrients, and metabolic byproducts into and out of the parasite. It is becoming increasingly clear that a high proportion of the antimalarial compounds that are now being identified in high throughput robotic screens of chemical libraries exert their parasite-killing effect by targeting these 'membrane transport proteins'. We have an ongoing dialogue with the primary antimalarial drug-development agency, using our physiological assays to screen candidate antimalarials. It has been interesting to see how a body of work in a fundamental area (in this case malaria parasite physiology) can have unforeseen translational applications.

The thing I enjoy most about research is interacting with early career scientists – students and postdocs – poring over new data together, formulating hypotheses, designing new experiments, as well as talking about careers in science and life in general. I have been extremely fortunate in having had very many highly talented people through the lab, and the successes that the lab has had are very much due to them.

Undergraduate teaching has also been one of the joys of my professional life. Despite the challenges that it presents for my Dean's diary, I lecture into both first year Molecular Biology and second year Cell Physiology. I enjoy the particular challenges of lecturing to a large first year class. Holding everyone's attention is a constant struggle, with some of the class having covered all of the material previously at school or elsewhere, some finding it new and difficult, and some finding it 'just right'. Keeping everyone engaged requires a range of strategies.

Having said all this, the reality of my life as Dean is that I spend almost all day every day in meetings, either with people from within the College, or people from around the broader university. The sort of satisfaction that comes from this is different from the pleasures that come from research or teaching, but it is, nonetheless, very real. This university is full of extraordinarily talented people and it's a privilege to have a job that involves spending time with them and learning about what they do.

This newsletter is archived at [biology.anu.edu.au/news-events/newsletter](http://biology.anu.edu.au/news-events/newsletter).  
Layout: Mel Norris  
Editing: Stefan Bröer & Mel Norris

Wine Research Institute) listened and questioned Paul regarding their concerns about the problems they were seeing in their vineyards this year. - Paul Cooper (E&E).

## IN THE MEDIA

A paper by **Loeske Kruuk** (E&E) and colleagues, on selection and heritability of relative brain size in a wild red deer population, was published in Royal Society Open Science in December, and was covered by articles in the New Scientist, Science, the Gates Foundation Cambridge and a Naked Scientists podcast.

Research by **Chris Fulton** (E&E) and colleagues on the migration of marine fish onto land to escape predation (see image below), recently published in the American Naturalist, has appeared in dozens of news outlets, including the Scientific American, New Scientist, Cosmos, and Daily Mail.



*Entomacrodus striatus* is one of several blennies found on Rarotonga that frequently emerges from water and is active on land. Image Chris Fulton.

An article about the Snowy Mountain 2 proposal, by Adrienne Nicotra, Susanna Venn and colleagues from Fenner appeared in The Conversation this month.

## NEW APPOINTMENTS

**Marcin Adamski**, RSB Bioinformatician, has begun working three days a week at JCSMR. He is still at RSB on Wednesdays and Fridays, and is available for RSB consultation on Wednesdays only.

Two new PhD students have joined the Linde group (E&E). **Marc Freestone** (left) is studying the relationships between mycorrhizal fungi and Leek Orchids (*Prasophyllum*) to improve the conservation



efforts for these orchids. Furthermore, he will improve our understanding of orchid-fungal relationships more broadly. **Arild Arifin** (left) is studying the evolution of orchid-mycorrhizal interactions, effects of orchid habitat on mycorrhizal associations, and their host specificity.



The Langmore group (E&E) welcomes two new PhD students: **Claire Taylor** (left) and **Fernanda Alves Amorim** (below left). Claire will be working on adaptations to a variable and changing climate in cuckoos



and their hosts, and is a former honours student. Fernanda will be working on



the conservation and management of the endangered forty-spotted pardalote in Tasmania.

The Bröer group (BSB) welcomes **Gregory Gauthier-Coles** as a PhD student. Greg joined the group as an honours student in 2016, and will continue to work on the role of amino acids as nutrients for cancer cells.



**Sophie Johns** joins the Jennions group (E&E) this month, as a PhD student. She will be working on theoretical models of the spread and evolution of diseases, with special emphasis on sexually and socially transmitted diseases.



PhD student **Carlos Joaquín Pavón Vázquez** has joined the Keogh group (E&E). He will be working on the evolutionary biology of reptiles.



Welcome to **Helena Wei**, who joins the Solomon group (PS) as a PhD student.



**Shukhrat Shokirov** is a new PhD student in the Foley group (E&E). He will be jointly supervised by Kara Youngentob, and will be working on remote sensing wildlife and ecosystem responses to landscape change.



## FAREWELL

**Emma Sherratt**, a postdoctoral researcher in Scott Keogh's group (E&E), is leaving RSB on April 3rd to start a DVCR early-career research fellowship at the University of Adelaide.

## PHDS SUBMITTED

**Elisha Thynne** (Solomon Group, PS) 'Assessing the biology of wheat-infecting

*Botryopshaeria* spp'.

**Jonathan Henshaw** (Jennions Group, E&E) 'Models of mating system evolution: gamete competition, hermaphroditism and sexual selection'.

## MPHIL SUBMITTED

**Ojas Dixit** (Gordon Group, E&E) 'Within-host evolution and immigration of *Escherichia coli* in the human gastrointestinal tract'.

## PAPERS ACCEPTED

Bailey L, Ens B, Both C, Heg D, Oosterbeek K, van de Pol M, Phenotypic plasticity in nest-site selection as a response to extreme flooding events, *Philosophical Transactions of the Royal Society B*.

Bryson Jr RW, Linkem CW, Pavón-Vázquez, CJ, Nieto-Montes de Oca A, Klicka J, McCormack JE, A phylogenomic perspective on the biogeography of skinks in the *Plestiodon brevirostris* group inferred from target enrichment of ultraconserved elements, *Journal of Biogeography*.

Chooi Y-H, Zhang G, Hu J, Muria-Gonzalez MJ, Tran P, Pettitt A, Maier A, Barrow RA, Solomon PS, Functional genomics-guided discovery of a light-activated phytotoxin in the wheat pathogen *Parastagonospora nodorum* via pathway activation, *Environmental Microbiology*.

Crous KC, O'Sullivan OS, Zaragoza-Castells J, Bloomfield KJ, Alves Negrini AC, Meir P, Turnbull MH, Griffin KL, and Atkin OK, Nitrogen and phosphorus availability interact to modulate leaf trait scaling relationships across six plant functional types in a controlled-environment study, *New Phytologist*.

Fyllas NM, Bentley LP, Shenkin A, Asner GP, Atkin OK, Diaz S, Enquist B, Farfan-Rios W, Gloor E, Guerrieri R, Huaraca Huasco W, Ishida Y, Martin RE, Meir P, Phillips O, Salinas N, Silman M, Weerasinghe LK, Zaragoza-Castells J, Malhi Y, Solar radiation and functional traits are both necessary and sufficient to explain the decline of forest primary productivity along a tropical elevation gradient, *Ecology Letters*.

Gardner J, Russell E, de Rebeira P, de Rebeira A, Brouwer, L, Effects of extreme weather on two sympatric Australian passerine bird species, *Philosophical Transactions of the Royal Society B*.

Hammers M, Brouwer L, Rescue behaviour in a social bird: removal of sticky 'bird-catcher tree' seeds by group members, *Behaviour*.

Iglesias-Carrasco M, Head ML, Jennions MD, Martin J, Cabido CC, Leaf extracts from an exotic tree affect responses to chemical cues in the palmat newt (*Lissotriton helveticus*), *Animal Behaviour*.

Kainer D, Bush D, Foley WJ, Kulheim C, Assessment of a non-destructive method to predict oil yield in *Eucalyptus polybractea* (blue mallee), *Industrial Crops and Products*.

Kruuk, LEB, A new explanation for unexpected evolution in body size, *PLOS Biology*.

Mowles S, Jennions MD, Backwell PRY, Multimodal communication in courting fiddler crabs reveals male performance capacities, *Royal Society Open Science*.

Onoda Y, Wright IJ, Evans JR, Hikosaka K, Kitajima Kaoru, Niinemets U, Poorter H, Tosens T, Westoby M, Physiological and structural tradeoffs underlying the leaf economics spectrum, *New Phytologist*.

Ramirez-Esquivel F, Fischer N, Zeil J, Narendra A, The sensory arrays of the ant, *Temnothorax rugatulus*, *Arthropod Structure & Development*.

Rivers J, Smith A, Higgins D, Mills R, Maier A, Howitt S, Asking and answering questions: partners, peer learning and participation, *International Journal for Students as Partners*.

Ruuskanen S, Morosinotto C, Thomson RL, Ratnayake CP, Korpimäki E, Food supplementation, but not predation risk, alters female antioxidant status during breeding, *Behavioral Ecology and Sociobiology*.

Scafaro AP, Negrini ACA, O'Leary B, Millar AH, Ahmed Rashid FA, Hayes L, Fan Y, Zhang Y, Chochois V, Badger MR, Atkin OK, The combination of gas-phase fluorophore technology and automation to enable high-throughput analysis of plant respiration, *Plant Methods*.

Siepielski AM, Morrissey MB, Buoro M, Carlson SM, Caruso CM, Clegg SM, Coulson T, DiBattista JD, Gotanda KM, Francis CD, Hereford J, Kingsolver JG, Augustine KE, Kruuk LEB, Martin RA, Sheldon BC, Sletvold N, Svensson EI, Wade MJ, MacColl ADC, Precipitation drives global variation in natural selection, *Science*.

Silva-Pérez V, Furbank RT, Condon AG, Evans JR, Biochemical model of C3 photosynthesis applied to wheat at different temperatures, *Plant Cell and Environment*.

Simonsen AK, Dinnage R, Barrett LG, Prober SM, Thrall PH, Symbiosis limits establishment of legumes outside their native range at a global scale, *Nature Communications*.

van de Pol M, Jenouvrier S, Cornelissen H, Visser M, Behavioural, ecological and evolutionary response to extreme climatic events: Challenges & directions, *Philosophical Transactions of the Royal Society B*.

Wilson SK, Depczynski M, Holmes TH, Radford B, Tinkler P, Fulton CJ, Climatic conditions and nursery habitat quality provide indicators of reef fish recruitment strength, *Limnology & Oceanography*.

## NOTICES

### Equity and diversity in RSB

Diversity captures the variety of personal experiences, values and worldviews. It arises from differences of culture and circumstance. A colourful and academically excellent school is inclusive of differences in race, ethnicity, gender, age, religion, language, abilities/disabilities, sexual orientation, gender identity, socioeconomic status, geographic region and more. Diversity can deepen our scholarly experience and educational environment. Being able to fully embrace our diversity at RSB prepares our staff and students to participate in and shape our increasingly complex and pluralistic society. Thus diversity is an integral part of academic excellence as it is the only way to effectively use the talents and abilities of all to foster innovation and train future leadership.

If you feel that diversity is not valued or are experiencing discrimination, bullying or harassment, there are a number of options open to you. These behaviours will not be tolerated under any circumstances, and the ANU will take action against any staff member, agent or student who is found to have breached ANU policy. You can talk to any member of the RSB Equity Committee for advice (committee members are listed [here](#)) or you can follow any of the procedures listed in [this document](#) produced by the ANU Diversity Consultant. Please join us in striving for full inclusiveness and scientific excellence at RSB. - **Susan Howitt**, Chair, RSB Equity Committee.