



## NEWS

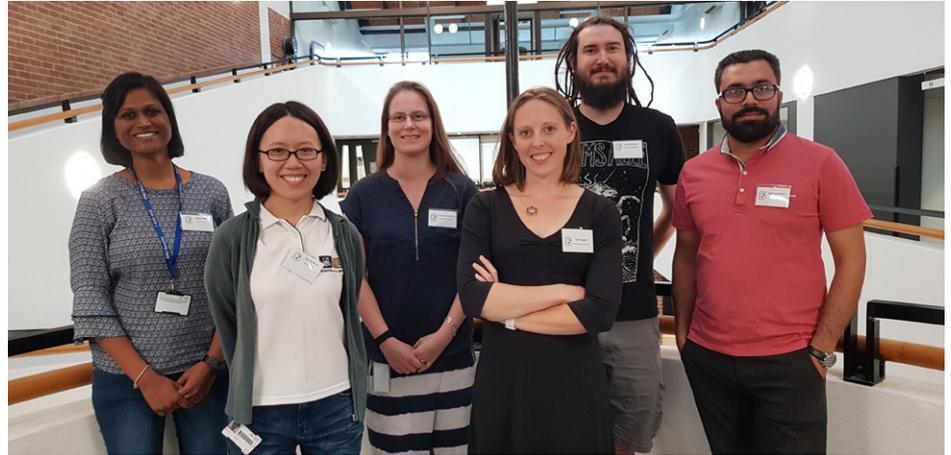
### EMCR conference

The annual RSB EMCR Future Conference held on 10th of April at the RN Robertson Lecture Theatre was a huge success, attended by 160 RSB members including lab leaders, post-docs, HDR students and professional staff. Post-doctoral researchers presented 19 talks and 6 posters across the three divisions (BSB, E&E and PS) during the conference. Discussion with panel members at mid-career stage across ANU - **Robert Lanfear** (E&E, RSB), Stephanie Goodhew (Research School of Psychology), Kim Huynh (College of Arts and Social Sciences) and **Megan Head** (E&E, RSB) - on 'How to be successful in Academia' was refreshing and highly appreciated. The organising committee - **Su Yin Phua** (Pogson group, PS), **Angela McGaughran** (Moritz group, E&E), **Erin Vaughn** (Adamska group, BSB), **Trevor Murray** (Zeil group, E&E), **Hammad Khan** (Evans group, PS), **Hannah Birke** (von Caemmerer group, PS) and **Neha Patel** (Djordjevic group, PS) - is thankful to all the internal (CoETP, PEB & RSB) and external sponsors (AGRF, Eppendorf, John Morris group & ThermoFisher Scientific) for their kind contribution to the event. The conference ended with an enjoyable and delicious Mexican dinner at the Robertson tea room. - Neha Patel.

EMCR conference prizes, decided by popular vote, were awarded at the April school morning tea. Best poster was won by **Christina Spry** (Saliba group, BSB), best talk went to **Neha Patel** (Djordjevic group, PS), and runner up was **Rebecca Fox** (Jennions group, E&E).

### 2018 HDR mentoring program under way

Now in its third year, the RSB HDR Mentoring Program is up and running, with 28 student mentees. This year the program is organised by EMCR **Florian Busch** (Farquhar group, PS) and HDR student **Christiana McDonald-Spicer** (Moritz group, E&E). The program pairs HDR students with EMCR mentors who will provide them with support and advice throughout their time at RSB. We'd like to thank **Helen Wong** (BTLC) for her support of the program as well as the HDR conveners **Adrienne Nicotra** (E&E), **Spencer Whitney** (PS) and **Naresh Verma** (BSB). - Christiana McDonald-Spicer.



2018 EMCR conference organisers Neha Patel, Su Yin Phua, Angela McGaughran, Erin Vaughn, Trevor Murray and Hammad Khan. Not pictured: Hannah Birke. (See: News Item).

### Giant Pumpkin competition



Weighing the pumpkins, with pumpkin wranglers, and Sam Jahromi at bottom left. Image Sharyn Wragg.

On Friday April 20th, a weigh-in and prize presentation was held for the first RSB Giant Pumpkin Competition. This event attracted competitors from RSB, Fenner, The Climate Change Institute, CSIRO and University of Canberra. In all, the 23 pumpkins entered in the weight competition weighed just over half a tonne, and another 37 pumpkins were entered for other categories. The heaviest pumpkin, weighing in at a massive 92.7kg, belonged to **Tim Rhodes** (Whitney group, PS). Second place went to Jacki Schirmer from UC (62.9kg) and third to **Alex Skeels** (Cardillo group, E&E) (33.9kg). The People's Pick prizes went to **Callum Bryant** and **Rosie Harris** (both Atkin group, PS) (the Most Beautiful Pumpkin), and Thea and Luke O'Loughlin (Fenner School) (the Pumpkin Looking Most Like a [specific] Prominent Politician). There was some pressure on the Plant Culture Facility to perform well - fortunately their "Wannabe Pumpkin" won the Director's Pick Prize, which was presented by the Director, **Allen Rodrigo**, and accompanied by a very long speech. Allen's speech touched on horticulture,

striving for perfection, watermelons, and quite a few other things. Assorted muscular PhD students did an excellent job of pumpkin-wrangling, and **Sam Jahromi** (BTLC) manned the Excel record sheet all evening. Thanks also to the E&E Happy Hour committee for providing refreshments. Many members of RSB spent the weekend experimenting with pumpkin recipes, with varying success. - **Dave Rowell**, organiser.

### Invertebrate Ecology Field Course



Invertebrate biologists head out to collect specimens at Kioloa, led by Dave Rowell

On the 16th - 18th of March, the BIOL3113 Invertebrate Zoology course had their annual field trip to Kioloa. This trip gave students the opportunity to see first hand the invertebrate groups that they have been studying in pracs and lectures, and to use the resources of Kioloa and expertise of researchers from CSIRO's Australian National Insect Collection to key out and preserve the specimens they collected. RSB participants were **Dave Rowell** (E&E), **Michaela Purcell**, **Xuankun Li**, **James Lumbers** (all Rowell group, E&E) and **Eldon Ball** (E&E). **James Davies** (Technical Services Team) did an excellent job of preparing equipment and supplies, and keeping everyone well fed. - Dave Rowell.

## Teaching faculty profile: Rachael Remington (BTLC)



### What is your research interest?

My research has primarily focused on freshwater

fishes: from investigating patterns of desert larval fish drift ecology to evolution of turbid-water traits in North American minnows. One highlight of my research has been working with amazing aquatic critters from desert spring systems in Ash Meadows (USA), Cuatro Ciénegas (Mexico) and Dalhousie Springs (Australia).

### What is your teaching focus?

I have taught a range of undergraduate subjects over the past 20 years and particularly enjoy Environmental Biology and Big Questions in Biology which involve critiquing paradigms in science. Here at ANU I have also been teaching Masters-level research courses and working on developing the Biology Masters of Science program. This program is growing rapidly, especially with the international community, so please contact me if you are interested in becoming involved or would like to provide insight on the needs of the Masters students.

### What do you enjoy most about teaching?

I love that I'm constantly being challenged to develop new teaching methods to meet the changing needs of student learning styles - from traditional to international to mature age students. I feel a responsibility to help empower students to become independent critical thinkers who understand what sources they are basing their scientific views on. For me, it is rewarding to observe the changes in student problem solving techniques as they apply these skills. Additionally, teaching others allows me to express my passion for biology and I find that this enthusiasm is contagious for students!

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

## Outreach News

For two Friday evenings this month members from Plant Energy Biology, Australian Plant Phenomics Facility and Translational Photosynthesis came together with Questacon to put on an Adults only, after dark Boutique Botanical outreach event. The first event was open to the public while the second was exclusively for teachers.

Thanks to (From the CoE PEB): **Kai Chan, Diep Ganguly, Jacinta Watkins, Su Yin Phua, Suyan Yee, Estee Tee, Hannah Wilkins, Andrew Bowerman, Derek Collinge, Naomi Hawley, Marten Moore** (all Pogson group, PS), **Yuzhen Fan, Julia Hammer** (both Atkin group, PS), and Karina Price from UWA, (From APPF): **Tim Brown, Richard Poiré, Gareth Dunstone, Aly Weirman** (all Borevitz group, PS), (from CoETP): **Natalia Bateman, Alisha Duncan** (both Furbank group, PS), **Britta Forster** (Price and Badger groups, PS) and **John Evans** (PS). - Derek Collinge.



RSB people at the Questacon Boutique Botanical event: Andrew Bowerman, Estee Tee, Diep Ganguly, Hannah Wilkins, Derek Collinge, Su Yin Phua, Kai Chan, Karina Price (PEB, UWA), Gareth Dunstone, Suyan Yee and Richard Poiré.

## Melrose High School visit.

Thirty year 10 students from Melrose High visited RSB this month. They spent the morning learning about research with **Regina Vega** (Jennions group, E&E), **Tom Rowell** (Magrath group, E&E), **Ian Brennan** (Keogh group, E&E), **Xin Hou** (BTLC), **Clarissa Alves Negrini** (Atkins group, PS), **Suyan Yee** (Pogson group, PS), **Estee Tee** (Pogson group, PS), **Tim Brown** (Borevitz group, PS) and **Derek Collinge** (Pogson group, PS). In the afternoon they did a practical class with **Dave Rowell** (E&E) and **Melanie Trinick** (BTLC).

## Grants

**Stefan Bröer** (BSB) and **Stephen Fairweather** (Bröer group, BSB) have been awarded a Medical Advances Without Animals (MAWA) grant, to develop a cell-free membrane protein expression system to replace the use of the African clawed frog (*Xenopus laevis*) in novel drug development.

## Awards

**Keaghan Yaxley**, Honours student in the Bromham group (E&E), has been awarded a highly competitive Gates Scholarship to

do a PhD on human evolution at Cambridge University in the UK.

**Jono Henshaw** (Jennions group, E&E) has been awarded the 2017 Robert May Early Career Researcher prize from the British Ecological Society. The prize is named for Robert May, who was a former Chief Science Advisor in the UK, and an Australian.

**Tory Clarke** (Evans group, PS) received a Theo Murphy grant and carer's grant from the Australian Academy of Sciences EMCR Forum to attend Science Pathways 2018: Diversify your Thinking, in Brisbane.

## IN THE MEDIA

**Dave Rowell** (E&E, BTLC) was interviewed for a piece about scorpions in Canberra by ABC Radio Canberra, talking about habitat and distribution, and reassuring listeners that local scorpions are relatively harmless and in fact, environmentally useful and beneficial.

## WELCOME

The Lanfear group (E&E) welcomes research fellow **Minh Bui**, who was a postdoc at the



Max F Perutz Laboratories, University of Vienna, Austria. His research interests are on developing models and methods for phylogenetics.

**Merryn Fraser** has joined the Maier group (BSB) as a PhD student, after having already been a lab member as an Honours student. Merryn joins the lab as part of the



international graduate school with the Humboldt-University in Berlin and will spend one year of her PhD in Berlin. The topic of Merryn's PhD is the

*Plasmodium falciparum* lipid metabolism as a target for malaria intervention strategies.

Correction: The photos for the two new PhD students in the Jones group (PS) were switched around in the newsletter last month. **Sharmin Rima** is below left, and **Ayesha Akram** is below right.



## NEW APPOINTMENTS

**Susan Howitt** (BSB, BTLC) will take up the role of Head, Biology Teaching and Learning, and Associate Director, Science Education (ADSE) for RSB, when **Dave**

**Rowell** (E&E, BTLC) steps down at the end of June. Susan will take up the position in mid-July after she returns from leave. **Juliey Beckman** (BTLC) will be Acting ADSE for the first two weeks of July.

## FAREWELL

**Nick Matzke** (ANU DECRA Fellow from 2015-2018 in the Moritz Lab, E&E) has begun a position as a Senior Lecturer in the School of Biological Sciences at the University of Auckland. His new email is n.matzke@auckland.ac.nz.

**Kai Chan** and **Su Yin Phua** will be leaving RSB on May 7th to take up positions at Ghent University in Belgium. Kai has been awarded a Belgium FWO postdoctoral fellowship and will be working in Prof. Frank Van Breusegem's lab. Kai and Su Yin started honours in the Pogson lab in 2010 and quickly became highly valued member of RSB as they continued their studies undertaking and completing PhD's and then moving into Postdoc positions. While we are happy to see Kai and Su Yin progressing to new heights in their career, the Pogson lab will be sad to see them leave. Best of luck to them both. - Derek Collinge.

**John Evans** (PS) and **Susanne von Caemmerer** (PS) are very sad that **Hannah Birke** has left their team this month to take



up a position at NECTAR (Network of Early Career Teachers, Academics and Researchers

at the ANU). NECTAR organises career development mentoring courses and Hannah's postdoctoral and administrative skills are highly sought after. Hannah has been our organiser for lab meetings and we thank her for the effort she put into getting us organised for Monday morning meetings. She developed and enthusiastically delivered lectures on photosynthesis and metabolism to the new second year course, Comparative Physiology, run for the first time in 2017. One technique she introduced was to ask students at the end of each lecture what they found difficult (with an anonymous poll) so that she could go back over the concepts. - Susanne von Caemmerer.

Farewell to **Hoa Nguyen** (Marilyn Ball group, PS) who has returned to Vietnam to continue her position as a lecturer in the Department of Botany, Faculty of Agronomy, Vietnam National University of Agriculture, Ha Noi, Vietnam. We wish Hoa well in her

new endeavors as we also look forward to continuing our collaborations with her on the ecophysiological mechanisms underpinning responses of mangroves to their extraordinary environments in a changing world. - Marilyn Ball.

## PHDS AWARDED

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

## PAPERS ACCEPTED

Alves R, Minh BQ, Ulrich T, von Haeseler A, Schleper C, Unifying the global phylogeny and environmental distribution of ammonia-oxidising archaea based on amoA genes, *Nature Communications*.

Collett TS, Zeil J, Insect learning flights and walks, *Current Biology*.

Flohr BM, Hunt JR, Kirkegaard JA, Evans JR, Lilley JM, Genotype x management strategies to stabilise the flowering time of wheat in the south-eastern Australian wheat belt, *Field Crops Research*.

Greenhill SJ, Hua X, Welsh CF, Schneemann H, Bromham L, Population size and the rate of language evolution: a test across Indo-European, Austronesian and Bantu languages, *Frontiers in Psychology*.

Hadjuk G, Cockburn A, Margraf N, Osmond H, Walling C, Kruuk L, Inbreeding, inbreeding depression and infidelity in a cooperatively-breeding bird, *Evolution*.

Harrison LM, Jennions MD, Head ML, Does the winner-loser effect determine male mating success? *Biology Letters*.

Houadria MYI, Klimes P, Fayle TM, Gullan PJ, Host-plant dissections reveal contrasting distributions of *Crematogaster* ants and their symbionts in two myrmecophytic *Macaranga* species, *Ecological Entomology*.

Hua X, Bromham L, 'Fitness' in B. Fath (ed), *Encyclopedia of Ecology, 2nd Edition*, Elsevier.

Iglesias-Carrasco M, Bilgin G, Jennions MD, Head ML, The fitness cost to females of exposure to males does not depend on water availability in seed beetles, *Animal Behaviour*.

Iglesias-Carrasco M, Head ML, Cabido C, Effect of an immune challenge on the anti-predator response of the green Iberian frog (*Pelophylax perezi*): The influence of urban habitats, *Biological Journal of the Linnean Society*.

Li X, Yeates DK, Morphological phylogeny of the Australian genera of the bee fly subfamily Bombyliinae (Diptera:Bombyliidae) with description of four new genera, *Invertebrate Systematics*.

Lin S-Y, Chooi Y-H, Solomon P, The global regulator of pathogenesis PnCon7 positively regulates Tox3 effector gene expression through direct interaction in the wheat pathogen *Parastagonospora nodorum*, *Molecular Microbiology*.

Maier AG, "Now I feel like a true parasitologist" - Concept-based training for Early Career Scientists, *Veterinary Parasitology*.

Martins F, Kruuk L, Llewellyn J, Phillips B, Moritz C, Heritability of climate-relevant traits in a rainforest skink, *Heredity*.

Oliveira IS, Ruhberg H, Rowell DM, Mayer G, Revision of Tasmanian viviparous velvet worms (Onychophora: Peripatopsidae) with the description of two new species, *Invertebrate Systematics*.

Purcell MF, Thornhill AH, Wallenius TC, Yeates DK, Rowell DM, Plant host relationships of three lineages of the gall-inducing fly *Fergusonina* Malloch (Diptera: Fergusoninidae) on Eucalyptus L'Heit, *Arthropod-Plant Interactions*.

Ranjard L, Wong TKF, Rodrigo AG, Reassembling haplotypes in a mixture of pooled amplicons when the relative concentrations are known: A proof-of-concept study on the efficient design of next-generation sequencing strategies, *PLOS ONE*.

Supple MA, Bragg JG, Broadhurst LM, Nicotra AB, Byrne M, Andrew RL, Widdup A, Aitken NC, Borevitz J, Landscape genomic prediction for restoration of a *Eucalyptus* foundation species under climate change, *ELife*.

Ribi W, Zeil J, Diversity and common themes in the organization of ocelli in Hymenoptera, Odonata and Diptera, *Journal of Comparative Physiology A*.

Zahedi MS, Zeil J, Fractal dimension and the navigational information provided by natural scenes, *PLoS ONE*.

Zeil J, Orientation, Navigation, and Searching, in Pethybridge H (ed), *The Encyclopedia of Ecology*, Second Edition, Elsevier.

Zeil J, Hemmi JM, Crabs and Their Visual World, in *Encyclopedia of Animal Behavior*, Second Edition, Elsevier.