

Research School of Biology Newsletter

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ANU COLLEGE OF MEDICINE, BIOLOGY AND ENVIRONMENT

NEWS

Awards

Congratulations to **Ronald Yu** (Pogson Group, PS) who won the CMBE 3 Minute Thesis (3MT) on 18 August. Ronald won a \$1000 research support grant and will compete in the ANU 3MT final which will be held at Llewellyn Hall on Wednesday 16 September.

Shujuan (Olivia) Zhang, former student in the Atkin Group (PS), has been selected for the prestigious German 'Green Talents' award.

Barry Pogson (PS) has been selected as an American Society of Plant Biology Top Author, after an analysis of the "most highly cited papers between 2009 and 2013" published in *The Plant Cell* and *Cell Biology*. Barry is a member of the editorial board, serving as Deputy and now Associate Editor of *Science Advances. Science Advances* is the offspring of *Science*, created by AAAS as their first open access journal.

Virginia Abernathy (Langmore Group, EEG) won the student presentation prize for her talk at the American Ornithologists Union Conference in Oklahoma.

Regina Vega-Trejo (Jennions Group, EEG) won \$799 in the Thinkable Inspire Australia Research Competition for her video titled 'Fiddler crabs: Their mystery behaviour'.

Sara Chica Latorre (Ball Group, PS) has been awarded the Deputy Dean of Science Education Commendation for outstanding achievement in her Honours studies.

Elena Martin Avila (Whitney Group, PS) Hannah Osborn (von Caemmerer Group, PS), and John Rivers (Pogson Group, PS) have been awarded Crawford Conference Scholarships. The Crawford Fund supports young Australian agricultural students and scientists.

Grants

Megan Head (Jennions Group, EEG) was awarded 4,760GBP from the Fisheries Society of the British Isles for a grant titled 'Identifying sexually transmitted microbiota in a livebearing fish'.

Women in Science: challenges and solutions

Gender balance in science was examined in a forum chaired by Professor Brian Schmidt and



Attenborough's flat lizard (*Platysaurus attenboroughi*), a new species described by Scott Keogh, Mitzy Pepper and colleagues. Photo: Martin Whiting (see: In the media)

the Hon. Karen Andrews MP, at the CSIRO Discovery Centre on 19 August. The wellattended public discussion was organised by **Anne-Sophie Dielen** and **Britta Forster**, and featured panellists working in different STEM fields sharing their vision of what it means to be a woman in science in 2015.

Science in ACTion

RSB Students, scientists and staff were out in force for the Science in ACTion event held at the Old Bus Depot in Kingston. Centres of Excellence Plant Energy Biology, and Translational Photosynthesis joined forces to present a popular exhibit that included a huge, bouncy plant cell, DNA extraction, and other activities and displays. The BLTC mounted a display that included live spiders and stick insects, and the League of Remarkable Women in Australian Science also presented a display.



Jessica Ward-Jones, Stephen Fairweather and student ambassadors Samantha De Silva and Ruiyu Su at Science in ACTion

IN THE MEDIA

A new species of African lizard, described by **Scott Keogh, Mitzy Pepper** (EEG) and colleagues, has been featured on the BBC Earth website. Attenborough's flat lizard (*Platysaurus attenboroughi*) (pictured above), found in South Africa and Namibia, is named after naturalist Sir David Attenborough, who featured flat lizards in his 2008 TV series 'Life in Cold Blood'. The new species is described in *Zootaxa*.

Alexander Mikheyev, Visiting Fellow in the Jennions Group (EEG), has published a paper in *Nature*. The study reveals rapid evolution in wild honey bees that have been exposed to a new parasite, and suggests that genetically diverse populations can recover from introduced diseases by evolving rapid tolerance, while maintaining much of the standard genetic variation.

PHDS SUBMITTED

Anna Harts (Kokko Group, EEG) 'The role of demography in the evolution of breeding strategies'.

Nadia Mohd Raszman (Djordjevic Group, PS) 'MtCEP1 peptides regulate lateral organ development in the model legume, *Medicago truncatula*'.

Trevor Murray (Magrath Group, EEG) 'Non-vocal acoustic alarm communication'.

Tiffany Russell (Tscharke Group, BSB) 'HSV-1 lytic viral gene expression and latency'.

PHDS AWARDED

Liam Cassidy (Solomon Group, PS) 'Proteome mapping of the model fungal plant pathogen *Stagonospora nodorum* using LC-LC-MS/MS'.

Group Leader profile: Craig Moritz (EEG)

Group research focus



We study the evolution of diversity of terrestrial vertebrates in relation to environmental history and with a focus on tropical Australia and its connections with New Guinea. We develop and apply new methods across population- and phylogenomics and spatial modeling of diversity with evidence on phenotypic variation to understand how evolutionary responses to past environmental change - adaptation, range shifting and speciation have shaped the diversity that we see now, with applications to conservation planning and practice.

Teaching and research achievements

I enjoy inspiring and mentoring students at all levels, typically learning more from them than vice versa. Among various awards, the one I'm proudest of is the Distinguished Faculty Mentor Award given by the UC Berkeley Graduate Student Assembly. The successes of my former students give me a lot of satisfaction.

What do you enjoy most about teaching?

Put simply, teaching keeps me alive intellectually. It broadens thinking and I just love seeing the lights go on when a new concept or experimental result hits home.

What do you enjoy most about research?

Discovery. I'm a discovery junkie. A new result or insight makes all the background effort totally worthwhile. As something of a biogeographer, I also get to travel all over Australia for fieldwork, meeting fascinating and diverse people and soaking in the extraordinary landscapes and biota of Australia.

This newsletter is archived at biology.anu.edu.au/ news-events/newsletter. Layout: Mel Norris & Sharyn Wragg Editing: Stefan Bröer, Sharyn Wragg & Mel Norris. **Kai Chan** (Pogson Group, PS) 'Structural and functional characterisation of chloroplast signalling'.

Jason Ng (Mathesius Group, PS) 'Local auxin transport regulation in the nascent nodule - an overview in nodulating plants and an investigation onto the cytokinin receptor, CRE1-mediated control of auxin transport in *Medicago truncatula*'.

Isabel Saur (Rathjen Group, PS) 'Identification and regulation of receptors involved in plant immunity'.

Hamish Web (Foley Group, EEG) 'The genetics of essential oil yield in *Melaleuca alternifolia* and *Eucalyptus loxophleba*'.

NEW APPOINTMENTS

Postdoctoral Scientist **Russell Dinnage** has joined the Cardillo Group (EEG).

WELCOME

Vivian Phang has joined the BTLC team, as an HDR Admin Assistant. As this position is shared between RSB/RSP, Vivian will be working in RSB on Monday morning, and all day Tuesday and Thursday. She will be located in Psychology at other times.

Micrometeorologist Dr **Margi Bohm** joins the Ball Group (PS) as a Visiting Fellow. She will work on the Macquarie Island project to develop a model of energy and water balance of sub-Antarctic cushion plants in relation to their responses to climate change, and on another project linking micrometeorology with stem and leaf hydraulics in mangroves. Margi will be located in Rm 84 of Building 46.

PAPERS ACCEPTED

Bromham, L, Testing hypotheses in macroevolution, *Studies in History and Philosophy of Science*.

Bromham, L, Hua, X & Cardillo, M, Detecting macroevolutionary self-destruction from phylogenies, *Systematic Biology.*

Fairweather, SJ, Bröer, A, Subramanian, N, Tumer, E, Cheng, Q, Schmoll, D, O' Mara, ML, & Bröer, S, Molecular basis for the interaction of the mammalian amino acid transporters B0AT1 and B0AT3 with their ancillary protein collectrin, *Journal of Biological Chemistry*

Fan, D-Y, Ye, Z-P, Wang, S-C & Chow, WS, Multiple roles of oxygen in the photoinactivation and dynamic repair of Photosystem II in spinach leaves, *Photosynthesis Research.*

Han, S, Zhang, H, Lockett, GA, Mukherjee, N, Holloway, JW & Karmaus, W, Identifying heterogenous transgenerational DNA methylation sites via clustering in beta regression, *The Annals of Applied Statistics.*

Harts, AMF, Jaatinen, K, & Kokko H, Evolution of natal and breeding dispersal: when is a territory an asset worth protecting? *Behavioral Ecology*.

Johns, S & Shaw, A, Theoretical insight into three disease-related benefits of migration, *Population Ecology.*

Merkling, T, Hamilton, DG, Cser, B, Svedin, N, & Pryke, SR, Mechanisms of colour variation in the frillneck lizard: geographic differences in pigment contents of an ornament, *Biological Journal of the Linnean Society.*

Ng, JLP, Perrine-Walker, FM, Wasson, AP, & Mathesius, U, The control of auxin transport in parasitic and symbiotic root–microbe interactions, *Plants.*

Parker, DJ, Cunningham, CB, Walling, CA, Stamper, CE, Head, ML, Roy-Zokan, EM, McKinney, EC, Ritchie, MG, & Moore, AJ, Transcriptomes of parents help identify parenting strategies and sexual conflict in a subsocial beetle, *Nature Communications*.

Ribi W, & Zeil J, The visual system of the Australian 'Redeye' Cicada (*Psaltoda moerens*), *Arthropod Structure & Development.*

Young, CM, Cain, KE, Svedin, NS, Backwell, PRY, & Pryke, SR, Nesting success in crimson finches: Chance or choice? *Ethology*.

Young, CM, Cain, KE, Svedin, NS, Backwell, PRY & Pryke, SR, The role of pigment based plumage in resolving contests, *Journal of Avian Biology*.

Zavafer, A, Chow, WS, & Cheah, MH, The action spectrum of Photosystem II photoinactivation in visible light, *Journal of Photochemistry and Photobiology B: Biology.*

NOTICES

WHS - Winter Hazard

As the outside temperatures drop, some RSB members have been bringing their own heaters into their offices. Unfortunately, there are a number of issues with this.

Bar radiators and fan heaters should not be used, as they represent a significant fire hazard, and they use a large amount of electricity. Further, in areas such as Linnaeus, that use modern building air conditioning controls, a localised 'warm' area often results in the heating system providing less heat for the other users in the area.

If you are feeling cold, please ensure you lodge a workbook request with RSB Operations/ Building Infrastructure, who will try and fine tune the system, before you explore other options. - Dr Jeremy Weinman