



NEWS

Awards

Jochen Zeil (EEG) has been selected by the *Proceedings of the Royal Society B: Biological Sciences* as one of the 2014 Top Referees.

Susan Breen (Solomon Group, PS) won a Postdoctoral poster prize from the Genetics Society of America at the Fungal Genetics Meeting.

Grants

Ulrike Mathesius (PS) is a CI on an ARC Industrial Transformation Hub ('Legumes for Sustainable Agriculture'), led through Sydney University and funded for the next five years with \$3.9M.

Xia Hua, Lindell Bromham, Marcel Cardillo (EEG) and CSIRO collaborators received an Ignition Grant from Centre for Biodiversity Analysis for the project 'Developing new methods for using distribution data to identify taxa that can tolerate extreme conditions', funded for one year, with \$9.5K.

Xia Hua, Lindell Bromham, (EEG) and linguistic collaborators received a New Initiative & Transdisciplinary Grant from the ARC Centre of Excellence of the Dynamics of Language for the project 'Investigating the link between micro-level linguistic changes to macro-level processes in language diversification'; funded for one year with \$10K.

Workshop

On 2 June 2015 the Centre for Biodiversity Analysis will host a short Workshop 'Genomic and Phenomics tools to identify the genetic basis underlying natural variation and adaptation'. This workshop is free, but you need to register by 27 May 2015 as places are limited.

IN THE MEDIA

New target to treat type 2 diabetes

A paper published in *Molecular Metabolism* by **Stefan Bröer, Yang Jiang, Angelika Bröer** (Bröer Group, BSB) and colleagues and has been featured in online media and on WIN news. Lead researcher Stefan said the findings show that mice with a reduced capacity to digest and absorb protein are highly efficient at removing glucose from blood after a meal - what individuals with diabetes fail to do. The research has significant potential for the design of new drugs to treat type 2 diabetes.



Damien Esquerre, PhD Student (Keogh Group, EEG) and Steven Holland, Visiting RSB artist. Photo: S. Wragg See under WELCOME.)

Discussion on PLoS paper

Megan Head (Jennions Group, EEG) participated in the PLoS/Reddit Ask me Anything series on 20 May, to discuss the paper by **Megan Head, Luke Holman, Rob Lanfear, Andrew Kahn and Michael Jennions**, entitled 'The extent and consequences of P-hacking in Science' and recently published in *PLoS Biology*.

Sexist peer review causes storm online

Megan Head has been in the news after she and her colleague Fiona Ingleby received an inappropriate, sexist review of a manuscript they submitted to *PLoS ONE*. (For the record, their study surveyed male-female differences in success at obtaining post-doctoral funding/fellowships.) After an unsatisfactory review process, and having lodged an appeal and giving the journal a reasonable chance to attend to the matter, Drs Head and Ingleby posted portions of the review on Twitter. There was an eruption of online responses and articles in major print media, including the *Times Higher Education*, *Washington Post*, and *Science*. Megan's experience is a timely reminder of the need to be proactive in countering sexism in science.

Orchid study discovers novel pollinator

A paper by **Ryan Phillips, Bjorn Bohman, Rod Peakall** (Peakall Group, EEG) and colleagues and published in the *Journal of*

Evolutionary Biology has been featured in online media. The study investigated populations of a rare orchid, *Drakaea concolor*, and discovered that one population attracted a novel, common species of wasp pollinator in addition to a known rare wasp species.

Outreach activities

RSB is assisting ACT Waterwatch to freeze dry and process the corpses of platypus and water rats. These are used in demonstrations to their volunteers and school visits.

RSB assisted ANU Graduate House and Nepali students in a BBQ fund-raising event for Nepal's earthquake victims, by contributing a BBQ, gas, and tables. The event was held on Saturday 9 May at Dickson Woolworths, and raised \$4.44K. Rice and tents are being distributed to villagers in Rasuwa, Nepal.

PHDs SUBMITTED

Jiahui Du (Price Group, PS), 'Functional characterisation of cyanobacterial bicarbonate transporters in *E. coli*'.

Melita Milner (Baum) (Crisp Group, EEG), 'Phylogeography of wild and domesticated populations of coconut (*Cocos nucifera*)'.

PHDs AWARDED

Andrew Bowerman (Pogson Group, PS), 'Investigating sugar signalling in wheat'.

Group Leader profile: Martijn van de Pol (EEG)

Group research focus



We are interested in how organisms respond to environmental variability and what the population

consequences are. For example, we focus on the natural resilience of individuals to extreme climatic events, and on understanding which species are most sensitive to climate change, primarily using long-term datasets on birds.

Research achievements

This is something others can better judge. However, I most enjoyed working with evolutionary and behavioural biologist on several papers in which we link phenotypic change and variation in individual behaviour to population processes and vice versa, as it shows that integrating theory from different fields and applying it to field data can be a really insightful way to study eco-evolutionary processes in the wild.

What do you enjoy most about teaching?

The contagious enthusiasm and energy of students. And also their fresh view on scientific problems, meaning they have the ability to question any underlying assumption and ask very fundamental questions.

What do you see as challenges for your field of research?

The popularity of data archiving and open access is currently transforming our field, because big datasets on demography and population dynamics of large number of species are now becoming available in databases to work with. This opens unique opportunities to do comparative analyses and answer new questions, which will give unprecedented insights into for example the question why some species are more sensitive to climate change than others.

Choi Hua Goh (Mathesius Group, PS), 'Phenotypic responses to nitrate availability in *Medicago truncatula* under a range of nodulation conditions'.

Piyankarie Jayatilaka (Zeil Group, PS), 'Individual foraging careers in the Australian ant *Myrmecia croslandi*'.

Robert Wilson (Whitney Group, PS), 'Directed evolution of Rubisco'.

WELCOME

Steven Holland is an artist visiting the RSB from the College of Arts and Social Sciences, School of Art. After just finishing his PhD on bronze serpents, he is working in EEG under the ANU Vice-Chancellors College Artist Fellowship Scheme. This innovative, five year scheme which is supported by funding from the Vice-Chancellor is the first of its kind in any Australian university. It will allow Steven to engage in collaborative research with the RSB to create a series of bronze and aluminium sculptures that explore human perceptions of reptiles and amphibians. Steven is very keen to meet people from RSB so please drop by his 'studio' in the bottom floor of Banks, Room R116. Steven will give a seminar at the School on December 10, and exhibit his works in February (see photo on Page 1).

Yeannie Yap has joined the Solomon Group (PS) as an visiting Endeavour Research Fellow.

FAREWELL

Ajay Narendra (Zeil Group, EEG) is leaving to take up his Future fellowship at Macquarie University, but will continue to visit RSB to collaborate on an ARC funded project on insect navigation. An informal farewell is planned at 3pm, Thursday 4 June in the Little Pickle cafe.

PAPERS ACCEPTED

Blyton M, Banks, SC, & Peakall, R, The effect of sex-biased dispersal on opposite-sexed spatial genetic structure and inbreeding risk, *Molecular Ecology*

Chooi, YH, Muria-Gonzalez, JM, Mead, OL, & Solomon, PS, SnPKS19 encodes the polyketide synthase for alternariol mycotoxin biosynthesis in the wheat pathogen *Parastagonospora nodorum*, *Applied and Environmental Microbiology*

Hess, L, Meir, P, & Bingham, IJ, Comparative assessment of the sensitivity of oil seed rape and wheat to limited water supply, *Annals of Applied Biology*

Hua, X, Cowman, P, Warren, D, & Bromham, L, Longevity is linked to mitochondrial mutation rates in rockfish: a test using Poisson regression of substitution rates, *Molecular Biology and Evolution*

Igic, B, McLachlan, Lehtinen, I, & Magrath, RD, Crying wolf to a predator: Deceptive vocal mimicry

by a bird protecting young, *Proceedings of the Royal Society B*

Lin, P, Foret, F, Wilson, S, & Burden, CJ, Estimation of the methylation pattern distribution from deep sequencing data, *BMC Bioinformatics*

Lockett, GA, Huoman, J, & Holloway, JW, Does allergy begin in utero? *Pediatric Allergy and Immunology*

Milner, R, Starrs, D, Hayes, G, & Evans, M, Distribution and habitat preference of the Broad-toothed rat (*Mastacomys fuscus*) in the Australian Capital Territory, Australia, *Australian Mammalogy*

Nottingham, AT, Turner, BL, Whitaker, J, Meir, P, *et al.*, Soil microbial nutrient constraints along a tropical forest elevation gradient: a belowground test of a biogeochemical paradigm, *Biogeosciences Discuss*

Nottingham, AT, Whitaker, J, Turner, BL, Meir P, *et al.*, Climate warming and soil carbon in tropical forests: insights from an elevation gradient in the Peruvian Andes, *Bioscience*

Ogawa, Y, Falkowski, M, Narendra, A, Zeil, J, & Hemmi, JM, Three spectrally distinct photoreceptors in diurnal and nocturnal Australian ants, *Proceedings of the Royal Society*

Rowland R, Harper A, Christoffersen BO, Meir, P, *et al.*, Modelling climate change responses in tropical forests: similar productivity estimates across five models, but different mechanisms and responses, *Geoscientific model development*

Schultheiss, P, Raderschall, CA, & Narendra, A, Follower ants in a tandem pair are not always naïve, *Scientific Reports*

Smouse, P, Whitehead, M, & Peakall, R, An informational diversity framework, illustrated with sexually deceptive orchids in early stages of speciation, *Molecular Ecology Resources*

Troncoso-Palacios, J, Díaz, HA, Esquerré, D, Urra, FA, Two new species of the *Liolaemus elongatus-kriegi* complex (Iguania, Liolaemidae) from Andean highlands of southern Chile, *ZooKeys*

Troncoso-Palacios, J, & Esquerré, D, A new *Liolaemus* species of the *L. elongatus* clade (Iguania: Liolaemidae) from Southern Chile, *Zootaxa*

Turner, C, Waters, J, Jackson, J, Arkell, RM, & Cowin, AJ, Fibroblast specific up-regulation of Flightless I impairs wound healing, *Experimental Dermatology*

Wilson, A, Howitt, S & Higgins, D, A fundamental misalignment: intended learning and assessment practices in undergraduate science research projects, In: *Assessment and Evaluation in Higher Education*

Wilson, A, Howitt, S, & Higgins, D, Assessing the unassessable: making learning visible in undergraduates' experiences of scientific research, In: *Assessment and Evaluation in Higher Education*.