

Research School of Biology Newsletter

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ANU COLLEGE OF MEDICINE, BIOLOGY AND ENVIRONMENT

NEWS

New labs in RSB

Craig Moritz (EEG) and Sarah Pryke (EEG) have taken up their positions as lab leaders in the School. Craig is a Laureate Fellow who joins the School from Berkeley. Craig holds a joint position with CSIRO Ecosystem Sciences and is in the process of establishing the joint ANU-CSIRO Centre for Biodiversity Analysis. Sarah, who was recently awarded a Future Fellowship, joins the School from Macquarie University. Her research is in the area of bird behavior, ecology and evolution.

Grants and fellowships

Alex Maier (BSB) has been awarded an Alexander von Humboldt Research Fellowship.

Craig Moritz (EEG) and Scott Keogh (EEG), along with colleagues in South Australia and Western Australia, have been awarded an ARC Linkage Grant totalling \$570K for their project "Phylogenomic assessment of conservation priorities in two biodiversity hotspots: The Pilbara and the Kimberley"

Kiaran Kirk (BSB) has been awarded a grant of US\$50K from the Medicines for Malaria Venture (MMV) for the project 'Testing the MMV Malaria Box on malaria parasite ion regulation'.

The ReFuGe (Reef Future Genomics) project, of which **Sylvain Foret** (EEG), **Eldon Ball** (EEG), **Shunichi Takahashi** (PS) are members, has received funding of \$500K from BioPlatforms Australia.

Dominique Roche (Jennions lab, EEG) and **Sandra Binning** (Backwell/ Keogh labs, EEG) each received funding (US\$1800) from the International Society for Behavioural Ecology to attend the 14th International Behavioural Ecology Congress in Lund, Sweden.

Amanda Edworthy (Langmore lab, EEG) has been awarded the 2012 Professor Allen Keast Research Award (\$4922) and the Jill Landsberg Trust Fund Scholarship (\$6000) from the Ecological Society of Australia for her work on forty-spotted pardalotes.

Iliana Medina (Langmore Lab, EEG) has been awarded \$2400 from the Canberra Birds Conservation Fund.

Veronica Briceño (Nicotra lab, EEG) received a travel grant from the National Climate Change Adaptation Research Facility to visit Innsbruck University in Austria.

Bianca Dobson (Tscharke lab, BSB) was awarded a bursary covering accommodation costs to attend the XIX International Poxvirus, Asfavirus and Iridovirus Conference in Salamanca, Spain.

Uyen Nguyen (Maier lab, BSB) has been awarded an OzEMalAR Travel scholarship to visit the Institut Pasteur in Paris for 3 months.

VC awards

Isabelle Ferru (T&L) has been awarded a Citation for Outstanding Contribution to Student Learning "For a sustained commitment to engaging and inspiring students in parasitology and the medical sciences, through innovative curricula, authentic learning, thought-provoking resources, and challenging assessments."

Krisztina Valter-Kosci (recently moved from RSB to JCSMR) received a Special Commendation Citation for Outstanding Contribution to Student Learning "For inspiring teaching through development of curricula and resources in the field of Medical Sciences."

Images of the Wolfgang Buttress artwork for the new science precinct







Jan's party. L- R: Jan Anderson, Stephanie McCaffery, Cornelia Osmond and Barry Osmond.

Happy Birthday Jan

Jan Anderson (PS) recently celebrated her 80th birthday. In honour of this milestone, Jim Barber (Imperial College) and Peter Horton (Sheffield University) organized an international meeting on "Structure and dynamics of the thylakoid membrane" at the Kavli Royal Society International Centre in May. Barry Osmond (PS), Tom Faunce (Law & Medical School), Fred Chow (PS) and Stephanie McCaffery (PS) also attended the meeting. The proceedings will be published in *Philosophical Transactions of the Royal Society B.*

New artwork

The ANU Public Art Committee has commissioned a sculpture for the new science precinct by Wolfgang Buttress, a UK-based artist. Wolfgang will create a mirror-polished steel sphere perforated with holes that map out a constellation. The mirror surface of the sphere will reflect the buildings and trees that surround it. Inside the sphere, visible through the holes, is a second, dark metal sphere also perforated in the pattern of a constellation.

Linnaeus Building awards

The Linnaeus Building was announced as the 'Project of the Year' for 2012, as well as winning five other awards at the ACT Master Builders Association's awards. The building was complemented on its facade, interior finish, sustainable design features and project management.

CONGRATULATIONS

Marlene Reichel has been awarded the JG Crawford Prize for her Master of Biotechnology thesis "investigating abundance and target site structure in plant microRNA - mediated gene silencing". Marlene is only the third

Lab Leader Profile Ben Corry, BSB



Lab Members: Michael Thomas, postdoc Natalie Smith, PhD student, still at UWA

Lab researching: "The mechanisms of transport in ion channel proteins

and other porous materials and how this is controlled by structural changes of the pores."

Greatest achievement: "Showing how the principles of selective transport in biology can be utilised to create synthetic materials for the more efficient desalination of sea water and treatment of contaminated water: as well as linking experiment directly with simulation to monitor the structural changes taking place in mechanosensitive proteins."

Next big thing: "Computer power is rapidly advancing and we are starting to be able to simulate the timescales at which interesting biological events occur. Hopefully this means we can finally get a grip on the dynamic nature of proteins and how they achieve their function."

Science hero: "Richard Feynman - not only was he a genius, he was interested in a wide range of fields, did not follow the latest trends and had an interesting life outside of science."

science student to win in the Masters category since the prize's inception in 1973.

Honours students, Jonathan Milne Henshaw (Jennions & Kokko labs, EEG) and Erick Tanujaya Tjhin (Saliba lab, BSB) have each been awarded a University Medal in Biology.

Hongyan (Yeshi) Xie (Nicotra lab, EEG) submitted her PhD thesis "Ecology, phylogeny and evolution of breeding system in Tibetan poppies (Meconopsis Vig.) from Eastern Tibetan region" at the end of May.

Benjamin Rae (Price lab, PS) has had his PhD on the evolution of the CO_o concentrating mechanism of cyanobacteria accepted. Ben continues to work in the Price lab.

WELCOME

Lisa Schwanz has joined the Keogh lab (EEG) as a postdoc.

This monthly newsletter is archived at biology.anu.edu.au/newsletter

Content: Casey Hamilton. Editing: Kiaran Kirk & Casey Hamilton.

Contact Casey Hamilton to submit content or to be added to the newlsletter distribution list. Meisha-Marika Holloway-Phillips has joined the Nicotra lab (EEG) as a postdoc.

Nguyen Thi Hoa will join Marilyn Ball's lab (PS) from Vietnam to begin a PhD on mangroves.

FAREWELL

Morgane Merlin (Ball lab, PS) has returned to the Ecole Normale Supérieure (Ulm Paris, France) to defend her Master's thesis on interactive effects of temperature and water status on photosynthetic activity in Antarctic mosses.

Yuanvuan Hu has completed her second six-month visit to RSB and will return to Xinjiang, China, after working on leaves and non-leaf photosynthetic organs of cotton in the Chow (PS) and von Caemmerer (PS) labs.

MEDIA

Howard Bradbury's (EEG) work on konzo, a profile on Hanna Kokko (EEG) and Gabriel James' (Djordjevic lab, PS) work on algal biofuels were all featured in the winter edition of ANU Reporter.

Lyanne Brouwer's (Cockburn lab, EEG) work on birds benefiting from a helping hand while raising chicks was featured in an article on PhysOrg.

Anastasia Dalziell's (Magrath lab, EEG) press release on lyrebird mimicry was featured widely on radio and in print, including The Australian and the Daily Telegraph.

PAPERS ACCEPTED

Callander, S., Bolton, J., Jennions, M.D. & Backwell, P.R.Y. A farewell to arms: males with regenerated claws fight harder over resources. Animal Behaviour.

Deakin, J.E., Graves, J.A., & Rens, W. Evolution of marsupial and monotreme chromosomes. Cytogenetic and Genome Research.

Dewar, R.C., Tarvainen, L., Parker, K.*, Wallin, G. & McMurtrie, R.E. Why does leaf nitrogen decline within tree canopies less rapidly than light? An explanation from optimization subject to a lower bound on leaf mass per area. Tree Physiology.

*Kathryn Parker is a PhB student whose contribution to this work was done as part of an Advanced Studies Course.

Drayton, J.M., Hall, M.D., Hunt, J., & Jennions, M.D. Sexual signalling and immune function in the black field cricket, Teleogryllus commodus. PLoS ONE.

Drayton, J.M., Boeke, J., & Jennions, M.D. Immune challenge and pre- and post-copulatory choice in the cricket,

Teleogryllus commodus. Journal of Insect Behaviour.

Edwards, D.L., Keogh, J.S. & Knowles, L.L. Effects of vicariant barriers, habitat stability, population isolation and environmental features on species divergence in the south-western Australian coastal reptile community. Molecular Ecology.

Flesch, I.E.A., Hollett, N.A., Wong, Y. & Tscharke, D.C., Linear Fidelity in Quantification of Anti-Viral CD8+ T Cells. PLoS One.

Franklin, O., Johansson, J., Dewar, R.C., Dieckmann, U., McMurtrie, R.E., Brännström, Å. & Dybzinski, R. Modelling carbon allocation in trees: a search for principles. Tree Physiology.

Jennions, M.D., Kahn, A.T., Kelly, C.D. & Kokko, H. Meta-analysis and sexual selection: past studies and future possibilities. Evolutionary Ecology.

Kay, G. & Keogh, J.S. Molecular phylogeny and morphological revision of the Ctenotus labillardieri (Reptilia: Squamata: Scincidae) species group and a new species of immediate conservation concern in the southwestern Australian biodiversity hotspot. Zootaxa.

Keogh, J.S., Noble, D.W.A., Wilson, E.E. & Whiting, M.J. Activity predicts male reproductive success in a polygynous lizard. Plos One.

Knight, A.K., Johnson, N.M. & Behm. C.A. VHA-19 is essential in Caenorhabditis elegans oocytes for embryogenesis and is involved in trafficking in oocytes. PLos ONE.

Kou, J., Oguchi, R., Fan, D-Y & Chow, W. S. The time course of photoinactivation of Photosystem II in leaves revisited. Photosynthesis Research.

McMurtrie, R.E., Iversen, C.M., Dewar, R.C., Medlyn, B.E., Näsholm, T., Pepper, D.A. & Norby, R.J. Plant root distributions and nitrogen uptake predicted by a hypothesis of optimal root foraging. Ecology & Evolution.

Ménard, A., Turgeon, K., Roche, D.G., Binning, S.A., & Kramer, D.L. Shelters and their use by fishes on fringing coral reefs. PLoS One.

Osborne, K., Umbers, K.D.L., Backwell, P.R.Y., & Keogh, J.S. Male tawny dragons use gular colour patterns in rival recognition. Biology Letters.

Oliver R.P., Friesen T.L., Faris J.D. & Solomon P.S. Stagonospora nodorum: From Pathology to Genomics and Host Resistance. Annual Review of Phytopathology.

Sevanto, S., Holbrook, N.M. & Ball, M.C. Freeze/thaw-induced embolism: probability of critical bubble formation depends on speed of ice formation. Frontiers in Plant Science.