

# Research School of Biology Newsletter

Issue 104 | December 2018

### ANU COLLEGE OF SCIENCE

#### **NEWS**

RSB congratulates our newest PhDs

RSB congratulates our latest PhD graduates, who were awarded their degrees in the graduation ceremony on Thursday 13
December (see main image). The new Doctors are: Jessie Au (Foley group, E&E), Meredith Cosgrove (Crisp group, E&E), Adelaide Dennis (Kirk group, BSB), Marcin Falkowski (Zeil group, E&E), Bonnie Flohr (Evans group, PS), Diep Ganguly (Pogson group, PS), Sara Milward (Whitney group, PS), John Rivers (Pogson group, PS), Robyn Shaw (Peakall group, E&E), Jared Streich (Borevitz group, E&E), Chun Wai Yu (Pogson group, PS), Zihui Zheng (Millar group, PS).

#### **Awards**

RSB honours student Suyan Yee



(Pogson group, PS) was awarded a University Medal at the December graduation ceremony. The University Medal recognises students

who have obtained First Class Honours and demonstrated exceptional academic excellence across their studies.

The RSB Outstanding Thesis award for



2018 was awarded to **Jono Henshaw** (formerly Jennions group, E&E), for his thesis entitled 'Models of mating system evolution: gamete

competition, hermaphroditism and sexual selection'. His examiners unanimously agreed that his thesis was 'Excellent' in every category and five of the six chapters have been published in top evolutionary biology journals, such as American Naturalist, Evolution, and the Proceedings of the Royal Society.

**Jennie Mallela** (Jennions group, E&E) has been selected to participate in the 2019/2020 Superstars of STEM program.



Superstars of STEM program.
Superstars of STEM is an initiative from Science & Technology Australia, that aims to increase the visibility of women in STEM and to

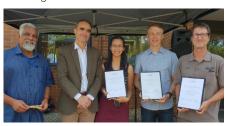
challenge society's gender assumptions about science. During the two-year program, the participants will focus on professional



Three new RSB PhDs and their families and supporters. Back row: Sara Milward holding her son Hikaru, Diep Ganguly, Jared Streich. Middle row: RSB Director Allen Rodrigo, Spencer Whitney (Sara's supervisor), Shun Takahashi (Sara's partner), Barry Pogson (Diep's supervisor), Justin Borevitz (Jared's supervisor), RSB Plant Sciences head Owen Atkin. Front row: Xin Hou and Helen Wong (BTLC), Rani Gupta (RSP), Sam Jahromi and Panit Thamsongsana (BTLC) Image Sharyn Wragg

development through a series of five workshops, and then in the second year will practice their new skills through media and speaking opportunities in schools and on high profile stages. You can watch a video of Jennie talking about her hopes for increasing all types of diversity in science here.

Several RSB people were recognised at the 2018 Joint Colleges of Science awards this month. The Ecology and Evolution divisional professional staff team - Audra Johnstone (Divisional Administrator), Wes Keys (Divisional Technical Officer) and Jack Egerton (Field Co-ordinator and Divisional Senior Technical Officer) - was awarded the 2018 Outstanding Team Award, and Derek Collinge (Pogson group, PS) won the Award for Outstanding Individual Performance at the professional staff awards. Barry Pogson (PS) received the award for Outstanding HDR Supervision and Denise Higgins (Howitt group, BSB) won the Award for Teaching Innovation.



RSB Director Allen Rodrigo, College of Science Dean Kiaran Kirk, Estee Tee (representing Barry Pogson), Derek Collinge and Jack Egerton, at the 2018 JCoS prizegiving this month. Image Sharyn Wragg.

Amanda Buyan (Corry group, BSB), has



Amanda Buyan, left, with Australian Society for Biophysics President

been awarded the Young Biophysicist Award 2018 by the Australian Society for Biophysics.

Sonya Geange (Nicotra group, E&E) won the Australian Flora Foundation Young Scientist prize for an oral presentation at the Ecological Society of Australia Conference in Brisbane this month.

Caitlin Byrt (PS) won the award for best pitch at the Collaboration Across Boundaries conference held this month. The conference



encourages researchers from all disciplines to explore the opportunities that collaboration can create for their research. Caitlin's winning pitch was a collaborative idea for research into aquaporin structure and function, entitled 'Keeping plants

and astronauts hydrated'. Her prize was a research grant worth \$3000.

Several RSB staff received 25-year long service awards at a recent function hosted by ANU VC **Brian Schmidt**. **David Gordon** 

# Service team profile: Building services



Team responsibilities-With four major buildings (soon to be five) and 17 minor buildings,

covering 12% of the occupiable floor space across the whole of ANU, RSB Building Services is responsible for the day to day management and maintenance of these structures. This includes a very wide variety of tasks such as daily plant checks, liaising with ANU Facilities and Services to ensure building infrastructure runs smoothly and repairs are done, organising contractors not only for building related issues but equipment as well, we also manage BMS, equipment alarms, on call, RSB building access and even event assistance to name just a few things.

Team members- Shannon Van Sebille – did you know she is a fully qualified veterinary nurse who specialised in emergency treatment and large animals?, Louana Gaffey – an ANU alumnus who majored in Biology when getting her Bachelor of Science who has also worked at JCSMR, RSES and CAP, Julius Rucska – with a trade certificate in carpentry who after many years at RSB has a wealth of knowledge that many within the school tap into on a daily basis.

What does a typical day look like? There is no such thing as a typical day, the variety of the job is a part of what makes it challenging but also enjoyable. But on a daily basis we carry out general building inspections, plant room inspections, and deal with building issues, those that we can't fix ourselves are logged via the Maximo system for F&S to arrange repairs - currently tracking at 320 jobs that have been logged for the three of us to organise and chase up - and that's only just since July! As part of the On Call team, when a CTR, Freezer Room, lab fridge or freezer decides to chuck a hissy fit, we are the ones often coming in to fix the problem from 5:00pm through to 9:00am. What else would you like RSB to know about your team? Each member of our team works hard and with a strong sense of pride in regards to the RSB Buildings. We feel a sense of ownership that comes from being very involved in the RN Robertson refurb, and strive to provide the best support that we can to other staff and to students, while having to work within ANU guidelines and strictures. We have formed strong working relationships with many of the F&S staff, staff from other Schools and contractors, not only those within RSB, providing many an opportunity to

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develop a knowledge base that those within RSB

have the opportunity to access when speaking

Editing: Scott Keogh & Mel Norris

with us

(E&E), Peter Minogue (RSB IT), Steve O'Connor (RSB School Manager), Rod Peakall (E&E) and Naresh Verma (BSB) received the award. "On behalf of the University I thank each of you for giving ANU so much over the years, to make sure that this place becomes one of the great universities of the world," Professor Schmidt said.



Peter Minogue (3rd from left) and Steve O'Connor (right rear) were among those who received 25 year service awards this month. Image Simon Jenkins.

Rowell group (E&E) PhD student **Xuankun Li** (shown below with his poster) won second prize in the Best Student Poster Award at the 9th International Congressof Dipterology held in Windhoek, Namibia, last month.



#### Grants

Adele Lehane (BSB) has been awarded a grant from the NHMRC, of \$321,180, for the project 'Understanding high-level resistance to antimalarial PfATP4 inhibitors'.

Adrienne Nicotra (E&E) has won a grant of \$199,000 from the NSW Office of Environment and Heritage for 'Assessing adaptive capacity of species in threatened ecological communities by mapping thermal tolerance thresholds'.

Sasha Mikheyev (E&E) received \$20,000 from Zoos Victoria for conservation genetics of the Lord Howe Island stick insect.

Sam Periyannan (Rathjen group, PS) has been awarded two grants from the Australian Academy of Science. He won a Thomas Davies research grant of \$17,000 for 'Protecting Australia's Eucalypt landscape from myrtle rust invasion by rapid identification of natural resistance', and an Australia-India Strategic Research Fund Early- and Mid-Career Research Fellowship worth \$12,300, which he will use to visit Punjab Agricultural University for two months in 2019.

Congratulations Honours students!

Congratulations on your successful completion of Honours. It's a lot of work,

as you will have discovered, but I hope immensely rewarding. The Honours Committee and I wish you all the best for your futures, wherever they take you. The program relies on the good will and hard work of a surprisingly large number of people, including supervisors, examiners and workshop presenters. Joy McDermid (BTLC) has also been invaluable in keeping us in line with efficiency and good humour. We are grateful to you all! - Rob Magrath (E&E), Honours convener.

The graduating students are: Jessie Andrikis (Callaghan group, BSB), Holly Beckett (Ball group, PS), Thomas Bruer (Fahrer group, BSB), Michelle Cao (Pogson group, PS), Alexandra Catling (Nicotra group, E&E), Caitlin Cherryh (Lanfear group, E&E), Ming-Dao Chia (Borevitz group, PS), Morgan Clark (van Dooren group, BSB), Matthew Coates (Corry group, BSB), Jaclyn Coppen (Gordon group, E&E), Hannah Drieberg Wilkins (Pogson group, PS), Timothy Green (Solomon group, PS), Alex Joule (Martin group, BSB), Thimithi Kulatunga (Corry group, BSB), Amy Mackenzie (Rathjen group, PS), Ayla Mainwaring (Adamska group, BSB), Leuwin Ovington (Ball group, PS), Anjuni Peiris (Rathjen group, PS), Holly Sargent (Moritz group, E&E), Alan Vincent (Jennions group, E&E), Brian Wang (Solomon group, PS), Suyan Yee (Pogson group, PS), Hannah Zurcher (Rowell group, E&E).

#### IN THE MEDIA

Rob Lanfear (E&E) and Michael Jennions (E&E) published a short correspondence letter in Nature on the impact that Plan S and compulsory Open Access publishing may have on academic societies. Read the published version here, and the original letter here

#### WELCOME

Welcome to **Alicia Grealy**, who has joined the Langmore group (E&E) as a post-doc.



She did her PhD at Curtin University in WA, on 'New approaches to ancient DNA', and at RSB will be working on coevolution and speciation in

Australian bronze cuckoos.

Welcome to the 2018/2019 cohort of summer scholars and interns! They are: Elroy Au (Head group, E&E), Josiah Bones (Corry group, BSB), Stephanie Chen (Mikheyev group, E&E), Tavish Eenjes (Schwessinger group, PS), Leo Featherstone (supervisor Angela McGaughran, Moritz group, E&E),

Bridget Fellows (Whitney group, PS), Ella Forward-Yang (Saliba group, BSB), Thomas Hassall (Huttley group, E&E, CBBU), Mahalia Kingsley (supervisor Kara Youngentob, Foley group, E&E), Pamudika Kiridena (Kruuk and Nicotra groups, E&E), Wenjun Liu (Borevitz group, PS), Carl McCombe (Williams group, PS), Ruth Purcell (Martin group, BSB), Michael Skirrow (Jennions group, E&E), Hanh Minh Vo (von Caemmerer group, PS), Aisha Ward (Furbank group, PS), Emily Watson (Furbank group, PS), Sathya Wedithanthrige (Saliba group, BSB), Salome Wilson (Schwessinger group, PS), and Peiyu Yuan (Mikheyev group, E&E).

Sayaka Imano, a Masters student from the Graduate School of Bioagricultural Sciences, Nagoya University, visited the Jones group (PS) in November as an



Australasian Plant Pathology Society - Phytopathological Society of Japan exchange student. During her visit, Yuri worked with PhD students in

the Jones Laboratory and presented a lab seminar about her use of virus-induced gene silencing to investigate the interaction between Nicotiana benthamiana and Phytophthora infestans.

## NEW **APPOINTMENTS**

After many years of service, E&E HDR convener Adrienne Nicotra and Honours convener Rob Magrath are stepping down. Rob Lanfear will take over as HDR convener and Marcel Cardillo will be the new Honours convener

### PHDS SUBMITTED

Joshua van Lier (Fulton group, E&E) 'Right place, right height: habitat connectivity and condition underpin fish community structure across coastal seascapes'.

Eleanor Stalenberg (Foley group, E&E) 'Biophysical ecology of the white-footed sportive lemur (Lepilemur leucopus) in southern Madagascar'

#### PHDS AWARDED

Jessie Au (Foley group, E&E) 'Studying the relationship between forage quality with the distribution of koalas'.

#### PAPERS ACCEPTED

Arnold PA, Kruuk LEB, Nicotra AB, How to analyse plant phenotypic plasticity in response to a changing climate, New Phytologist.

Attenborough RMF, Hayward DC,

Wiedemann U, Forêt S, Miller DJ, Ball EE, Expression of the neuropeptides RFamide and LWamide during development of the coral Acropora millepora in relation to settlement and metamorphosis, Developmental Biology.

Gauthier-Coles C, White R, Mathesius U, Nodulating legumes are distinguished by a sensitivity to cytokinin in the root cortex leading to pseudonodule development, Frontiers in Plant Science.

Hardy NB, Beardsley JW, Gullan PJA, revision of Lachnodius Maskell (Hemiptera: Coccomorpha: Eriococcidae), ZooKeys.

Lugli F, Andersen KM et al. incl Meir P, Hartley I, Multiple phosphorus acquisition strategies adopted by fine roots in lowfertility soils in Central Amazonia, Plant and Soil.

McDonald MC, Renkin M, Spackman M, .., Solomon PS, et al., Rapid parallel evolution of azole fungicide resistance in Australian populations of the wheat pathogen Zymoseptoria tritici, Applied and Environmental Microbiology.

Morris GP, Clark IA, Vissel B, Questions concerning the role of amyloid-ß in the definition, aetiology and diagnosis of Alzheimer's disease, Acta Neuropathologica.

Newman T, Lee J, Williams S, ... Solomon PS, et al., Autoimmunity and effector recognition in Arabidopsis thaliana can be uncoupled by mutations in the RRS1-R immune receptor, New Phytologist.

Taylor C, Hall M, Cain K, Langmore N, A superb solo, or a deviant duet? Overlapping songs in superb fairy-wrens, Behavioral Ecology.

Wong G, Alonso-Peral M, Li B, Li J, Millar AA, MicroRNA MIMIC binding sites: minor flanking nucleotide alterations can strongly impact MIMIC silencing efficacy in Arabidopsis, Plant Direct.

Yu K-P, Lo Y-Y, Huang W-C, Hsiao Y, Ding T-S, Redescription of a wall crab spider species from Taiwan: Siamspinops formosensis (Kayashima, 1943) comb. nov.. with the first description of males and taxonomic notes (Araneae: Selenopidae). Zootaxa.

#### RSB/Fenner End-of-Year party

RSB and Fenner joined forces again this year to celebrate the end of another great year. Tom Rowell (Magrath group, E&E) and his bluegrass band Scroggin entertained the crowd. Dean of Science

Kiaran Kirk and JCoS Executive Officer Nancy Richardson came over to judge the Christmas ornament competition, which was won by the Teaching and Learning lab team, with three runners-up - RSB IT, the Langmore group (E&E) and the Adamska group (BSB). RSB Director Allen Rodrigo gave out prizes on the theme of 'transformation' to Scott Keogh (E&E) and Megan Head (E&E) for making the RN Robertson social spaces feel like home, to Annamaria de Rosa (Evans group, PS) for transforming the RSB Happy Hour into something that the whole school now enjoys, and to the Centre for Entrepreneurial Agri-Technology team. Allen also awarded the RSB Outstanding Thesis certificate to Jono Henshaw, represented by Michael Jennions (E&E). Thanks to event maestro Terri Richardson (RSB Director's EA), Graham Hicks (BSB DA), who coordinated the barbecue, Tim Butler (Compliance Officer), who organised the music and many other helpers from both schools. More photos from the party are available here.



Happy biologists at the RSB/FSES End-of-year party. From left, Rocco Notarnicola (Nicotra group, E&E), Jessica Fenker Moritz group, E&E), Ian Brennan (Keogh group, E&E), Christiana McDonald-Spicer (Moritz group, E&E), Yi-Yang Chen (Fulton group, E&E), Craig Moritz (E&E), Alex Ske (Cardillo group, E&E), Damien Esquerre (Keogh group, E&E), Connie Leon (Head group, E&E, FSES). Image Sharyn Wragg.



Rachel Rathjen (FSES), Ming-Dao Chia (Borevitz group, PS), Ram Nagar (Rathjen group, PS), Erin Vaughn (Adamska group, BSB), Cuneyt Caglar (Adamska group, BSB), Ayla Manwaring (Adamska group, BSB), Bruna Contro de Godoy (Adamska group, BSB), Alex Sloan (Rathjen group, PS), Sam Periyannan (Rathjen group, PS). Image Sharyn Wragg.



A section of the winning Christmas ornament, featuring tiny practical course manuals and other items representing