



NEWS

Susanne von Caemmerer wins top ANU Award

Susanne von Caemmerer (PS) was awarded the Peter Baume Award at the graduation ceremony this month. This award is the university's most prestigious award, which recognises eminent achievement and merit of the highest order. Read more here.

December 2016 graduation

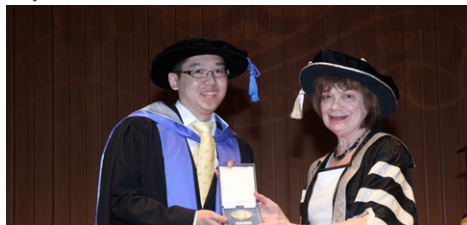


New PhD students, and our JG Crawford prize winner, supporters and families. Image Sharyn Wragg.

Congratulations to our new PhD graduates:

Marta Vidal Garcia (Keogh group, E&E), **Mariano (Jordi) Muria Gonzalez** (Solomon group, PS), **Deborah Veliz Vallejos** (Mathesius group, PS), **Marlene Reichel** (Millar group, PS) and **Choon Yang (Kevin) Tee** (Jones group, PS).

Kai Xun Chan (Pogson group, PS) was awarded the JG Crawford prize for his 2015 PhD thesis (see photo below). The Crawford prize is the premier award for graduate research excellence at ANU. Congratulations to you all!



New HOD for Plant Sciences

Owen Atkin has been appointed the new Head of Plant Sciences Division, taking over from **John Evans**. Owen did his BSc (Hons) at ANU, and after a career in Canada, the Netherlands, and the UK (including a 3 year postdoc at ANU), he returned to ANU in 2008. He held an ARC Future Fellowship from 2009-2013, and from 2014, he has been part of the ARC Centre of Excellence in Plant Energy Biology. His group also collaborates in an International Wheat Yield Partnership grant.



Pro-chancellor Robin Hughes, 2016 Peter Baume Award winner Susanne von Caemmerer, and Vice Chancellor Brian Schmidt, after the graduation ceremony (see news story). Image Allen Rodrigo.

On behalf of the School, I want to thank **John Evans** for his three years of service as the Head of Plant Sciences. John has been a steadfast advocate for the Division, and a great citizen of the School. I look forward to seeing John more relaxed and ebullient in the new year, even as I try to convince him to take up other committee roles! - **Allen Rodrigo**

BTLC Head of Division

Dave Rowell (E&E) has been re-appointed to continue as Head of Biology Teaching and Learning.



Promotions

Uli Mathesius (PS) was promoted to professor this month. **Megan Head**



(Jennions group, E&E), **Xia Hua** (Bromham group, E&E), **Benjamin Schwessinger** (Rathjen group, PS) and **Simon Williams** (Solomon group, PS) were promoted to academic level B.

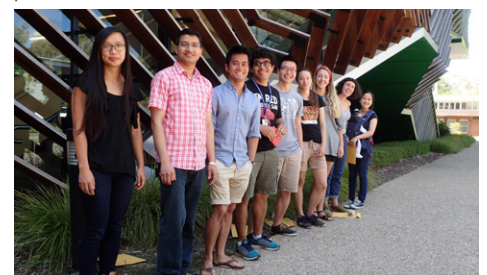
New NHMRC Grant success

It's been a long wait, but we are finally able to release the results of the NHMRC grant round. RSB did well this round, with **Rowena Martin** (BSB) and **Kevin Saliba** (BSB) both successful in their grant applications. **Stefan Broer** (BSB) is a CI on a successful grant led by Chris Nolan at JCSMR, and **Maja Adamska** (BSB) is a CI on an award to Ruth Arkell, also at JCSMR. Congratulations to all our awardees!

HDR Conference 2016

Nearly 100 RSB graduate students gave talks about their research, and more presented their work as posters, at the 2016 annual RSB HDR Conference this month.

Prizes were given for the best presentations in each division, and for the best poster presentation. These were announced a few days later at the school morning tea. Winners are: **Flor Danilia** (von Caemmerer group, PS), **Pip Beale** (Foley group, E&E), and **Erick Tjhin** (Saliba group, BSB). Runners up are: **Ross Deans** (Farquhar group, PS), **Robyn Shaw** (Peakall group, E&E), and **Adelaide Dennis** (Kirk group, BSB). Adelaide also won the poster prize. More information here.



Organising committee and prizewinners from the 2016 HDR conference: Jessie Au, Pawan Parajuli, Joshua Penalba, Emmanuel Young, Erick Tjhin, Adelaide Dennis, Robyn Shaw, Pip Beale, and Flor Danilia. Image Alex Maier.

Robertson refurbishment photo gallery

RSB webmaster **Sharyn Wragg** is recording the progress of the Robertson building refurbishment, with photos taken every month at the same locations. You can see the gallery on the RSB intranet page, and she will continue to update it every month or so until completion. Photo galleries are also available for the 2016 Christmas Party, and the December PhD graduands (both intranet links).

Teaching faculty profile: Andras Keszei



What is your research interest?

I completed masters in both the diterpene chemistry of spurge and homeotic genes of *Medicago truncatula* after which I ended

up applying for a PhD in chemical ecology -- a field where I could make both interests count. I am still mostly interested in the chemical ecology of plants -- preferably the less studied the better -- but I also have a thing for terrestrial invertebrates. In practice, this means that I get to go bushwalking, play with fancy machines, and cut and paste sequences.

What is your teaching focus?

In my research, I have been a bit of a jack-of-all-trades, which is well suited to teaching the large first year classes ranging in topics from evolution and ecology through to biochemistry and molecular biology. In convening BIOL1003 and BIOL1004 I have had a chance to lecture, run tutorials and labs in all of these topics, and having taught high-school biology for three years before starting my PhD has been tremendously helpful.

What do you enjoy most about teaching?

Compared to being stuck in the swamp for days, or labwork, where maximum concentration is necessary, teaching is a highly social activity. Unlike research where you often wait weeks for your results, in teaching you can get immediate feedback. I never cease to be amazed at the variety of thinking strategies I encounter in how students tackle problems, and by following those paths of reasoning I can still often gain a new perspective on a subject.

What do you see as challenges for your field?

Tertiary education is moving quickly in the direction of e-learning, and along the way a lot of the genuine, human interaction is easily sacrificed. Making use of the technology available is crucial in achieving learning outcomes that are relevant to the professional environment in academia and beyond. In undergraduate teaching we need to be able to do this without losing the engagement between academics and students, and between the students themselves.

This newsletter is archived at biology.anu.edu.au/news-events/newsletter.
Layout: Mel Norris
Editing: Stefan Bröer & Mel Norris

New plant growth cabinets



Technical Officer Prue Kell and engineer Greg Skupien take delivery of the new conviron cabinets. Image Mel Norris.

Three new Conviron cabinets were installed in the NCRIS area of Linnaeus this month, bringing the total number to 24, which is the maximum capacity of the room. They were purchased with funds from the CoE for Translational Photosynthesis and the BMGF RIPE project.

In the field



Staff and students of BIOL 2303/3303 (pictured above) headed up to Charlotte Pass in the Kosciuszko National Park this month, for the Functional Ecology Field Trip, led by **Adrienne Nicotra** (E&E).

Joint networking symposium for health and medical researchers

Naresh Verma (BSB) was invited to attend a joint networking symposium in Hanoi, Vietnam, organised by the National Foundation for Science and Technology Development (NAFOSTED – the funding body of the Ministry of Science and Technology of Vietnam) and NHMRC. The symposium provided a platform for scientists from both countries to discuss and foster strong linkages for future collaborative projects on a number of health-related themes.

Melrose HS ACE Science program 2016

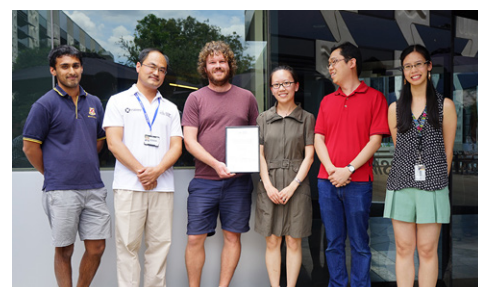
Melrose High School ACE Science Mentors is a programme that pairs a high school student with a researcher or expert in a science or engineering discipline, who will mentor the student through an evidence-based project. Year 9 student Emily Bryce completed a project titled 'The Effect of ABA and PAP on Stomatal Closure in *slac1 Arabidopsis thaliana* mutants' in the Pogson lab under the supervision of PhD student **Estee Tee** (Pogson group, PS), a former student of the program.

Awards

Colleges of Science Awards

Members of the Pogson group (PS) were recognised for their achievements in teaching

and education at the College of Science awards, announced at the College Christmas party this month. **Estee Tee** (Pogson group, PS) won the Excellence in Tutoring or Demonstrating award, and **Estee Tee, Kai Xun Chan, Su Yin Phua, Peter Crisp, Xin Hou, and Diep Ganguly** (all Pogson group, PS) won the Award for Programs that Enhance Learning, for their unique program named Inspiring and Training Research Intensive Educators (I-TRIEd). **Matthew Brookhouse** (Farquhar group, PS) won the award for outstanding contribution to student learning, for work done at the Fenner School, and **Erin Walsh** (Keogh group, E&E) won the award for outstanding contribution to student learning by early career academic - team award, for work done at the Research School of Population Health.



Diep Ganguly, Xin Hou, Peter Crisp, Su Yin Phua, Kai Chan and Estee Tee, with their College of Science award (see story below) Image Sharyn Wragg.

Adrienne Nicotra (E&E) won the Member Services Award at the 2016 Ecological Society of Australia conference in Fremantle this month. For many years Adrienne has coordinated and run the one-day Postgraduate Course that is part of every ESA conference, and these are always very well regarded. **Amelia Stevens, Nicotra** group (E&E) honours student in 2016, won the Marilyn Fox Inaugural Talk Prize for a first time presenter and **Craig Moritz** (E&E) gave the plenary address at the conference.

Benjamin Schwessinger (Rathjen group, PS) was a runner-up for the New Phytologist Tansley Medal for Excellence in Plant Science.

Congratulations to **Jesse Wallace** (honours student, E&E) for receiving the Director's Honours Prize. Jesse did his Honours under the supervision of **Sylvain Foret** (E&E) and **Ryszard Maleszka** (BSB), with a thesis entitled 'Insights into the division of labour in honey bees (*Apis mellifera*) from automated monitoring of brood care behaviour.'

Grants

Ben Corry (BSB) and colleagues at UWA have been awarded a grant of \$100,000 from the Cancer Council of Western Australia, to study a novel strategy to kill triple negative breast cancers.

IN THE MEDIA

Rob Sharwood (Badger group, PS) was interviewed on ABC Radio Canberra, National

Rural News, and ABC Newcastle, about a recent Nature paper authored with **Spencer Whitney** (PS) and colleagues. The research was also reported in *Phys Org*, and industry sites such as *Food & Drink International* and *SeedQuest*.

Naomi Langmore (EE) was interviewed on ABC Radio Drive program and ABC News Radio about a paper co-authored with **Liam Bailey** (Langmore and van de Pol groups, EE) and colleagues. The work, which showed that superb fairy wrens can modify their egg size in relation to climate variation, was also reported in *Australian Geographic*.

WELCOME

Hoa Nguyen has begun a postdoctoral appointment on an ARC funded project led by Marilyn Ball (PS) on 'Top-Down Rehydration: the role of multiple water sources in maintaining mangrove productivity along gradients in salinity and aridity'.

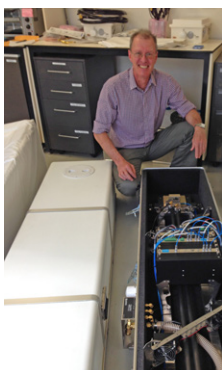
FAREWELL

John Evans (PS) steps down as Head of the Plant Sciences Division this month. We asked him for his thoughts on his time in the position:

Reflection on 3 years in the clouds.

In 2014, I took over as Head of the Division of Plant Sciences from **Murray Badger** who had successfully established the Division following the formation of RSB in late 2009. 2014 saw the establishment of two ARC Centres of Excellence and the challenge was to spread the benefits flowing from those with large grant funds to others in the Division.

We have all been busy responding to the RSB organisational review, curriculum review and Robertson building renovation.



John Evans is looking forward to using the new tuneable diode laser, shown here on delivery in October 2015.

I have managed to keep research ticking along and am looking forward to using our second generation tuneable diode laser that Susanne and I won with a Major Equipment Grant (see picture). During the last three years, it has been pleasing to see members from

the Division getting promoted, winning grants and increasing our contribution to undergraduate teaching. These reflect the talents of the great lab leaders in the

Division. What I can claim some credit for are the successful nominations of **Graham Farquhar** for the PMs Science prize (2015) and both **Marilyn Ball** (2015) and **Susanne von Caemmerer** (2016) for the Peter Baume Award (the University's most prestigious award, recognising eminent achievement and merit of the highest order). - John Evans.

Vale Howard Bradbury

Late last month, **Howard Bradbury**



(E&E) passed away. After retiring from ANU Chemistry in 1988, Howard spent 28 years as a visiting fellow in biology, focusing on cyanide in cassava. Cassava is the staple food for many people in developing countries such as Mozambique and the Democratic Republic of Congo (DRC), but the cyanide present in the roots causes a disease called konzo. People with konzo, mainly children and young women, suffer irreversible paralysis of the legs, or even death. Howard developed a simple and inexpensive method to remove the poisonous cyanide compound from the cassava flour, and \$85,000 was raised to continue his work to prevent new konzo cases in the DRC during the annual ANU Giving Day this year.

Howard touched the lives of many people. Click [here](#) to read some personal tributes on the RSB website, [here](#) to read his biography, and [here](#) to read about konzo and the ANU giving campaign.

Vale Sylvain Forêt

Sylvain Forêt (E&E) died in his sleep on 17 December, while on a trip in Spain. His wife, Toop, was travelling with him. Their two young daughters were staying with Sylvain's parents in France. "Sylvain had worked previously in the ANU



Mathematical Sciences Institute and he interacted with a significant number of people in multiple Schools across the two Science Colleges", said CMBE Dean Kieran Kirk. "Sylvain was an extraordinary talent. With his background in maths, computing and biology, he represented the future of biology, and he was in the process of building a research group working at the interface of these areas. At a personal level, Sylvain was gregarious, generous and unfailingly cheerful. He will be very greatly missed."

Sylvain's colleagues in E&E have set up a [crowdfunding](#) site to help Sylvain's family deal with the situation in the short term.

PHDS AWARDED

David Duchene (Cardillo Group, E&E) 'The impact and importance of phylogenetic model assessment for macroevolutionary inferences'.

Hoa Nguyen (Ball Group, PS) 'Influence of salinity on leaf structure and water relations in the mangrove, *Avicennia marina* (Forssk.) Vierh.'

Alan Severini (Evans Group, PS) 'The capture of deep water and its relationship with root length density in wheat.'

PAPERS ACCEPTED

Bailey LD, van de Pol M, climwin: An R Toolbox for Climate Window Analysis, *PLoS One*.

Catanzariti A-M, Do HTT, Bru P, de Sain M, Thatcher LF, Rep M, Jones DA, The tomato I gene for Fusarium wilt resistance encodes an atypical leucine-rich repeat receptor-like protein whose function is nevertheless dependent on SOBIR1 and SERK3/BAK1, *The Plant Journal*.

Corry B, 'Computer Simulation of Ion Channels', in C. Domene (ed), *Computational Biophysics of Membrane Proteins*, Royal Society of Chemistry.

Every SL, Pethybridge HR, Fulton CJ, Kyne PM, Crook DA, Niche metrics suggest euryhaline and coastal elasmobranchs provide trophic connections among marine and freshwater biomes in northern Australia, *Marine Ecology Progress Series*.

Niinemets Ü, Berry JA, von Caemmerer S, Ort DR, Parry MAJ, Poorter H, Photosynthesis: ancient, essential, complex, diverse and in need of improvement in a changing world, The 17th International Congress on Photosynthesis Research - Photosynthesis in a Changing World, 7-12 August, 2016, Maastricht, The Netherlands, *New Phytologist*.

Ord TJ, Summers TC, Noble MM, Fulton CJ, Ecological release from aquatic predation is associated with the emergence of marine blenny fishes onto land, *American Naturalist*.

Schwarz S, Mangan M, Zeil J, Webb B, Wystrach A, How ants use vision when homing backward, *Current Biology*.

Vega-Trejo R, Head ML, Keogh JDS, Jennions MD, Experimental evidence for sexual selection against inbred males, *Journal of Animal Ecology*.

Vega-Trejo R, Jennions MD, Head ML, Are sexually selected traits affected by a poor environment early in life? *BMC Evolutionary Biology*.