



NEWS

Vale

Adjunct Professor Jan Anderson FAA FRS:

12 May 1932 - 28 August 2015



Born in New Zealand Joan (Jan) Mary Anderson was an internationally acclaimed plant biologist renowned for her discoveries on the organization of the intricate membrane structures that carry

out solar energy conversion in cells of green plants. Jan's experiments and insights changed the way we think about the light reactions of photosynthesis. Her research career spanned some 55 years, mostly at the Division of Plant Industry CSIRO Canberra (1961-97) and then in the Research School of Biological Sciences at the ANU.

Jan was a passionate and creative female scientist who was well ahead of her time. She was an inspiration to young researchers, for whom her enthusiasm and curiosity were infectious. Her life and achievements will continue to be an inspiration towards which the rest of us aspire. On a personal level, she was kind-hearted towards, and keenly interested in, her friends, colleagues and their families.

A memorial celebration will be held from 2.30pm, Tuesday 6 October, at The Margaret Whitlam Pavilion in the National Arboretum, for family, friends and colleagues to reflect on the life and work of Jan. All are welcome.

- Barry Osmond, Fred Chow and John Evans

You can read more about Jan here.

Open Day 2015

Around 8,500 potential students and their families visited the ANU campus on 29 August. While much of the action centred in the Sports Hall (see main photo), an estimated 400-500 people visited the Biology Drop-in Centre, where there were displays highlighting areas of the RSB including plant science, computational biology, and zoology, including a popular live funnel web spider. **Dave Rowell** and **John Evans** gave well-attended talks.



Panit Thamsongsana, Tamara Browne and Julley Beckman, all from Biology Teaching and Learning, ready to advise students at the RSB stand at the ANU Open Day (see News)

Postdoctoral Fellowship website launch

Looking for a postdoctoral fellowship?

Thomas Merkling (Keogh Group, EEG) has launched a website containing a worldwide list of postdoctoral fellowships at www.biologypostdocs.weebly.com It is also listed on the RSB postdocs page and will eventually contain information on grants as well.

Ecogenomics and Bioinformatics Laboratory

Work has begun on the new Ecogenomics and Bioinformatics laboratory (EBL), on the ground floor of Building 46 (RN Robertson Building). The EBL is part of a collaboration with the CSIRO, and will provide space for computational biology research and training. The project is expected to be completed by the end of the year.

IN THE MEDIA

PhD student **Amanda Edworthy** (Langmore Group, EEG) spoke on ABC Radio National about her work with the 40-spotted pardalote, an endangered Tasmanian songbird (pictured). She discovered that a parasitic fly was causing



40-spotted pardalote. Photo: Angi Kim

extensive mortality of nestlings, but when nests were sprayed with insecticide, 90% of the chicks survived, as opposed to 15% with no insecticide.

She is now trialling an idea that has been used successfully in the Galapagos, where cotton balls are soaked in insecticide

and left in the bush for the birds to find and use for nesting material.

The discovery of a potentially new species of funnel web spider by **Thomas Wallenius** (Rowell Group, EEG), was reported in a number of media outlets, including the ABC and Business Insider.



The 5cm long funnel web spider, found in a rotting log in Booderee National Park, by Thomas Wallenius. Photo: Stuart Hay (see In the Media)

Susan Howitt, Deputy Head of the Biology Teaching and Learning Centre, was interviewed for an article entitled 'Effective Teaching: to be an effective educator, get active' for Science magazine.

PHDs AWARDED

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

Samira Hassan (Mathesius Group, PS) 'The role of flavonoids in plant microbe interactions.'

Andrew Kahn (Jennions Group, EEG) 'Let's talk about sex: sexual selection, sex allocation and parental care in animals.'

MPHIL AWARDED

Chloe Raderschall (Narendra Group, EEG) 'Vision and navigation in ants active in dim light.'

Group Leader profile:

Naresh Verma (BSB)



Group research focus

My research is focused on elucidating the molecular mechanism of the O-antigen modification in *Shigella flexneri*, studying the molecular biology of serotype-converting bacteriophages and developing strategies for vaccine design against shigellosis.

Teaching and research achievements

My group discovered the genetic basis of serotype diversity in *S. flexneri* by identifying bacteriophage-encoded serotype-converting factors (O-antigen modifying acetyl and glucosyltransferases) from different serotypes of *S. flexneri*. These findings opened avenues for future research aiming to develop *Shigella* vaccines with potential to offer protection against multiple serotypes.

What do you enjoy about teaching?

I enjoy sharing my enthusiasm and passion for microbiology with students. It gives me a sense of accomplishment when I see them develop knowledge and skills in microbiology.

Who is your science hero?

Joshua Lederberg (1925-2008) – a bacterial geneticist. He was able to show for the first time that bacteria can exchange DNA by a process called mating or conjugation. He was awarded the Nobel Prize in physiology/medicine for his pioneering work in bacterial genetics when he was only 33 years old.

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

NEW APPOINTMENTS

Louis Ranjard has taken up the role of Lab Manager for the Rodrigo Group, which is part of the Computational Biology and Bioinformatics Unit (CBBU). Louis was at the University of Auckland for 10 years, and is a computational biologist, with research interests in bio-acoustics, and phylogeography.



The RSB Compliance team has a new member.



Tim Butler did honours at RSB in the Pogson lab (PS), and is a former molecular/cell biology lab manager at the Queensland Brain Institute and the JCSMR, with work health and safety experience in both places.

WELCOME

PhD students **Yuantong Ding** and **Qinglong Zeng** joined the Rodrigo Group (CBBU) this month. They will be here for 9 months before returning to Duke University in the USA. Yuantong is studying the evolution of cancer, and Qinglong works on the evolution of microbiomes.

Dominique Potvin will be joining the Magrath Group (EEG) as a post-doc on an ARC project on alarm calls and eavesdropping in birds. She did her PhD at the University of Melbourne, followed by post-doctoral research at the University of Western Ontario, Canada, and the University of Helsinki, Finland.

FAREWELL

Do Thi Thu Huong (Jones Group, PS) has returned home to Vietnam to complete her MPhil thesis.

PAPERS ACCEPTED

Beckmann EA, Estavillo GM, Mathesius U, Djordjevic MA, Nicotra AN, The Plant Detectives: innovative undergraduate teaching to inspire the next generation of plant biologists, *Frontiers in Plant Science*.

Blackman, LB, Cullerne, D, Torrena, P, Taylor J, Hardham, AR, RNA-Seq analysis of expression of cell wall degrading enzymes during infection of lupin (*Lupinus angustifolius*) by *Phytophthora parasitica*, *PLoS One*.

Cinner, JE, Pratchett, MS, Graham, NAJ, Mallela, J, *et al*, A framework for understanding climate change impacts on coral reef social-ecological systems, *Regional Environmental Change*.

Clark, HL, & Backwell, PRY, Temporal spatial variation in female mating preferences in a fiddler crab, *Behavioral Ecology and Sociobiology*.

Fox R, Belwood DJ, Jennions MD, Why pair? Evidence of aggregative mating in a social monogamous marine fish (*Signatus doliatus*, Siganidae), *Royal Society Open Science*.

Gardner, JL, Amano, T, Sutherland, WJ, Clayton, M, Peters, A, Individual and demographic consequences of reduced body condition following repeated exposure to high temperatures, *Ecology*.

González-Cendales, Y, Catanzariti, A-M, Baker, B, McGrath, DJ & Jones, DA, Identification of I-7 expands the repertoire of genes for resistance to Fusarium wilt in tomato to three resistance gene classes, *Molecular Plant Pathology*.

Kainer, D, Lanfear, R, Foley, WJ, Külheim, C, Genomic approaches to selection in outcrossing perennials: focus on essential oil crops, *Theoretical & Applied Genetics*.

Kou J, Takahashi S, Fan D-Y, Badger MR and Chow WS, Partially dissecting the steady-state electron fluxes in Photosystem I in wild-type and *pgr5* and *ndh* mutants of *Arabidopsis*, *Frontiers in Plant Science*.

Mallela, J, Hetzinger, S, Halfar, J, Thermal stress markers in *Colpophyllia natans* provide an archive of site-specific bleaching event, *Coral Reefs*.

Medina, I, Troscianko, J, Stevens, M, Langmore, NE, Brood parasitism is linked to egg pattern diversity within and among species of Australian passerines, *American Naturalist*.

Rae CD, Bröer S, Creatine as a booster for human brain function. How might it work? *Neurochemistry International*.

Roche, DG, Kruuk, LEB, Lanfear, R, Binning, SA, Public data archiving in ecology and evolution: how well are we doing? *PLOS Biology*.[www](http://www.plosbiology.org)

Wilson PB, Streich JC, Borevitz JO, Genomic Diversity and Climate Adaptation in *Brachypodium*. Chapter in: Genetics and Genomics of *Brachypodium*. Ed: John Vogel, Springer International.

Voolstra, CR and 25 others including Foret S, Ying H, Takahashi S, & Ball E, The ReFuGe 2020 consortium, Using 'omics' approaches to explore the adaptability and resilience of coral holobionts to environmental change, *Frontiers in Marine Science*.

Wright, D, Brouwer, L, Mannarelli, M-E, Burke, T, Komdeur, J, Richardson, D, Social pairing of Seychelles warblers under reduced constraints: MHC, neutral heterozygosity and age, *Behavioral Ecology*.