



## Congratulations

Congratulations to our Dean, **Kieran Kirk** (BSB), who was awarded an Order of Australia on Australia day for his significant service to science education and research, and to professional organisations.



Congratulates also to **Dr. Mareike Moeller** on her successful Marie Skłodowska Curie global outgoing fellowship application. Mareike won this prestigious European fellowship to work on fungal rust genome biology in a joint project between the ANU and the Global Rust Reference Centre at Aarhus University in Denmark. Mareike will be a great addition to RSB and we cannot wait to welcome her in person mid-2023.

Congratulations to the recipients of the Dean's Commendations for Excellence in Education in 2022. The citations speak for themselves in demonstrating the dedication to teaching and learning and support for the student experience in another challenging year.

- **Peter Solomon** (PS) was awarded **Excellence in Supervision**, Peter not only wants his students to finish their PhD, but he always wants his students to have many scientific experiences like presenting their research in conferences, attending workshops, and becoming lab demonstrators. Peter has continued to be actively involved in mentoring students across the whole of the Plant Sciences HDR program, including being a member of the PS HDR Board of Studies for the last 10 years.



- **Eloise Maher** (Mathesius Group, PS) was awarded **Outstanding Contribution to Student Learning**. Eloise was part of an experimental "writing skills initiative" and did an amazing job.



- **Ben Corry** (BSB) was awarded **Teaching Excellence**. Ben has been a wonderful lecturer with a depth of knowledge that gives me hope for my own future in science. His research compliments his lectures perfectly, and adds interest to the coursework.



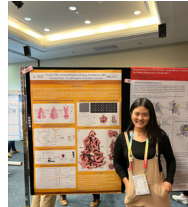
- **Eric Stone** (E&E) and **Daniel Noble** (E&E) were awarded **Teaching Excellence (Team)**. Eric and Dan have shown exceptional command of their subject matter for BIOL3207 the new Data Science for Biologists course. They showed complete passion for its delivery, all under exceptionally challenging circumstances and while juggling



their already busy teaching schedules. The pair have worked diligently and empathetically

to adapt the new course as it develops alongside the students and their ability.

Congratulations to **Alice Shin** (Brock Group, BSB) who was the first ANU Cryo-EM prize poster prize winner at the Lorne Protein 2023 conference. **Joe Brock** (BSB), **Emily Furlong** (BSB), **Spencer Whitney** (PS) and **Edan Habel** (RSC) helped her celebrate the fantastic achievement!



## PhD Awarded

**Jesse Wallace** (Zeil Group, E&E) *Unravelling the mystery of migratory behaviour in the Bogong moth *Agrotis infusa* using genomics and novel automated monitoring techniques.*

**Yuzhen Fan** (Atkin Group, PS) *From light to dark: linking the roles of mitochondria in C4 photosynthesis with dark respiration.*

## PhD Submitted

**Yun Hsiao** (Rowell Group, E&E) *Systematics and evolutionary biology of the Weevils associated with cycads in Australia.*

**Ayesha Akram** (Jones Group, PS) *Functional characterisation of the flax rust *AvrP* effector protein.*

**Holly Beckett** (Ball Group, PS) *The role of water relations in the maintenance of hydraulic function in mangroves.*

## PhD Commenced

**Jaylen (Jay) Nicholson** (Nicotra Group, E&E)  
**Ciara Wallis** (Corry Group, BSB)  
**Alexandra Williams** (Brock Group, BSB)  
**Sofia Bolcato** (Aplin Group, E&E)

## Welcome

**Emily Furlong** (BSB) has officially joined the School as a lecturer and Group Leader of the Bacterial Structural Defence laboratory. Her group will be using structural biology techniques (including cryo-EM) to study bacterial thiol redox proteins and virulence factors. Originally from Brisbane, Emily worked in Oxford (UK) and Sydney before moving to Canberra. Emily is located in the Linnaeus Building 134 and currently has a temporary office on Level 3 (N3.031), feel free to drop by and say hello.



Welcome to **Camila de Souza Barbosa** (PhD student at the University of Sao Paulo, Brazil) who is visiting the Lehane Group (BSB) for six months. Camila is aiming to discover the mechanism of action of some antiplasmodial compounds while she is here.

**Marty Leonard and Andy Horn** (Magrath Group, E&E) who are visiting on sabbatical during the first semester from Dalhousie University, Canada. They are behavioural ecologists who work largely on birds, and in recent years have focussed on parent-offspring communication, bird conservation, and the effect of anthropogenic noise on communication.

## News

In July 2022 **Jenny Rath** from the Plant Services Team assisted Anna Murphy (Senior Threatened Species Officer) from the Department of Planning and Environment as part of the coordinating team organising Australia's largest orchid translocation, the team was caught short when autoclaves they had arranged, failed shortly before they were needed.

Jenny came to the rescue by autoclaving the many bags of leaf litter which were then used as a mulch by a team of 75 people involved in planting out 6,000 orchids. These orchids are under threat of extinction.

It was wonderful that Plant Services Team was able to help out with this huge conservation effort. Well done Jenny.

Sand-hill Spider orchid, Crimson Spider orchid and Oaklands Diuris



### Science over Summer

Whilst campus took a summer break, the ANU had a look at some of the science which never stops – and the people who keep it running, every day of the year. Read [here](#).

## In the Media

**Ryszard Maleszka** (BSB) was featured in Nature about his work on control of behaviour in bees and leading to research on Bogong moths. Read the article [here](#).

**Ryan O'Donnell** (Linde Group, E&E) was an invited speaker for this year's 500 Queer Scientists event held at the Royal Botanic Gardens Sydney as part of this year's WorldPride. Details of the event can be found [here](#).

Ryan was also interviewed by ABC Radio National as part of the event and the broadcast is available [here](#).



**Caitlin Byrt** (PS) generated good coverage for her research that uses plants to extract valuable resources from wastewater. Caitlin's work has generated 125 media items across radio, print and online. Media highlights include coverage on 2GB, 3AW, 2CC, AAP, Phuket Times, The Canberra Times and more.



**Damien Farine** (E&E) received a lot of news coverage on his dolphin-fisher paper including [ABC News](#) and here is a cool [video](#) about the system and findings. Damien's work has generated 483 media items across radio, print and online.



## PhD spotlight – Kate O'Hara

*Lost sex in the outback: genomic perspectives from the Australian gecko Heteronotia binoei*

Why do most animals have sex? The answer to this seemingly simple question has perplexed evolutionary biologists for decades, particularly as species that can reproduce clonally should outcompete sexual ones in terms of population growth. The leading explanation is that sex generates essential genetic diversity, which underpins adaptation to different environmental conditions. However, some species are able to survive – and thrive – without ever having sex, including the Australian gecko *Heteronotia binoei*. How do these animals manage to do this? What are the consequences of abandoning sex? How does it shape their genome? Using the latest sequencing technologies, I will investigate the genetic diversity and genomic characteristics of these remarkable geckos. Ultimately, I aim to improve our understanding of the impact of transitioning from sexual to asexual reproduction and why so few species are able to adopt a clonal existence.



Kate O'Hara is co-supervised by Craig Moritz (ANU), Clare Holleley, Erin Hahn (both CSIRO), and Emily Roycroft (ANU). Her research is supported by the Hermon Slade Foundation, the CSIRO Environomics FSP, and an ARC Discovery Project grant.

## Grants Awarded

Congratulations to RSB Group Leader, **Gavin Huttley** (E&E), who was recently awarded a US\$335k Open Science Grant from the Chan Zuckerberg Initiative (CZI). The two-year project aims to connect software used for metagenomic data analysis with the primary targets (e.g. IQtree, GraphBin). The tools developed during the project will be python controllable and available in Jupyter notebooks. It will simplify data analysis using multi-processor hardware and improve the ability to handle millions of sequences. A plugin framework will enable other tools to connect with the tools developed during the project.

Since 2015 CZI has awarded over \$4.8 billion in grants across Science and Education areas. In addition to Gavin Huttley, past ANU recipients include Rob Lanfear, Minh Bui, and Giuseppe Barca. Contact Gavin Huttley for more information on the current project.



Do you have a project or idea that addresses the focus of a foundation/initiative like the CZI, contact Charlie Morgan to discuss next steps.

**Karine Auclair** (McGill University) and **Kevin Saliba** (BSB) have been awarded a grant valued at \$810,900 over a period of five years from the Canadian Institute of Health Research. The goal of the project is to develop promising small molecules targeting coenzyme A biosynthesis and utilisation in the malaria parasite as new antimalarial drug candidates. The grant application was supported by RSB Seed Funding.



**Damien Farine** (E&E) was awarded a small grant of €10,000 by the Centre for the Advanced Study of Collective Behaviour to do a study on the physiological predictors of fisher performance in the same system.

## Papers

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