Recent publications in the school


This is a first publication for Beth Jose (PhD candidate), Jasper Perry, Zoe Smeele and Jack Aitken (MSc candidates). Congratulations to all!


Recent PhD oral exam completed

Pictured: Jason Tylianakis (Oral Organiser), Kim Baronian (Supervisor), Jonathan and Richard Weld (Supervisor)
Jonathan Williams, had his oral exam on Wednesday 31st May. The title of his thesis is 'An investigation into the use of the yeast Arxula adeninivorans as the catalyst for a microbial fuel cell'. The Oral Examiner, Dr. Frédéric Barrière, University of Rennes was present via video link. Congratulations Jonathan!

Nicole McRae, had her oral exam on Wednesday 31st May via video link. The title of her thesis is 'Mechanisms of trace metal and diclofenac toxicity in Inanga (Galaxius maculatus): contextualising responses of a non-model native New Zealand species to standard fish models'. Chris Glover was her primary supervisor and her other supervisor was Sally Gaw from the Department of Chemistry, who were both present. Nicole had glowing reports from her examiners and the Australasian examiner, Prof Anu Kumar, who was present for the oral exam. Islay Marsden chaired the oral which went really well. [no photo available]. Congratulations Nicole!

Marta Gallart Diumenge, successfully got through her PhD oral on Monday 12th June and the degree is awarded subject to some revisions. Well done Marta! The title of her PhD is 'Genetic and environmental influences on tree nutrition in Pinus radiata (D. Don)'.

The oral was unusual these days in having everyone there in person rather than on video link.

(L to R): Senior supervisor Matthew Turnbull, NZ examiner Ian Dickie (was at Lincoln Univ when he examined it, has now moved to UC), Marta, Associate supervisor Peter Clinton (SCION). Absent: Associate supervisor Paula Jameson.

It has been a pleasure to have your style and Catalonia flair about the School. Congratulations Marta!

In the spotlight

Teaching award - Pieter Pelser
On Tuesday 6th June Dr Pieter Pelser was finally awarded his Teaching Award. Teaching awards recognise significant teaching-related achievements in both undergraduate and graduate programmes (including thesis supervision). Teaching Innovation awards recognise a substantial contribution in a particular new area.

Pieter believes that “teaching is most effective when learning takes place in an environment in which students feel supported and receive the personal attention and encouragement that they need to excel.”

His nominators confirm: “Pieter has developed ways of instilling in students a higher personal commitment to engagement, not through cajoling or pressure, but through targeted feedback that results in improved learning
outcomes. He brings a warm and personal approach to students, starting by getting to know each student by name.” One of his students says: “Pieter is one of the best teachers I have had. He genuinely cares about students learning, the way he answers questions shows that he doesn’t just want me to do well in assessments, but to actually understand the concepts he is teaching.”

Pieter has worked with Student Care and the Māori Development Team to organise four extra-curricular Positive Learning Workshops targeted to meet the needs of ‘at risk’ students. He is currently working on ‘5-minute Secrets to Success’ in his first year lectures to improve student well-being, academic skills and the transition from high school to university. He has also shown a strong commitment to course design and in particular to incorporating the UC graduate profile attributes.

Professor Jack Heinemann (Nominee), Dr Pieter Pelser (Awardee) and Professor Matthew Turnbull (Nominee)
Winners of the best poster in BIOL383

Aaron Wolfe and Andrew Brown for their poster, "How do slaters build their armour?"
Congratulations. They received 13 votes and $$. 

Second place went to Fleur van Eyndhoven and Jenny Edwards (6 votes) for their poster, "Off the beaten track". An excellent poster as well. The display of posters was particularly of high quality this year, and it was also great to see a large turn-out staff and students outside the course. The poster presentation was worth 20% for the course.

Post antibiotic era is business as usual

Jack Heinemann and Brigitta Kurenbach wrote an article for the Alliance for the Prudent Use of Antibiotics (APUA) newsletter

The post-antibiotic era is more than the loss of existing antibiotics; it is the entrenchment of systems that threaten the effectiveness of new antibiotics and transition to a post postantibiotic era. These systems include unprecedented reliance on manufactured chemical substances, where most of the ~8 million in commerce have neither been
adequately evaluated for effects on human health nor for effects on microbes. Another is a social priority to use profit-generating inventions to direct both public and private sector research and development.

Check out the full article/newsletter here.

**What Goes On In The Minds Of Spiders?**
There are some very cool projects going on in spider science these days.

In one study, jumping spiders are induced to climb small viewing towers to contemplate experimentally manipulated images of prey. In another, wolf spiders are invited to assess visual and vibratory signals, digitally altered in various ways, that represent qualities of their potential mating partners.

Innovative methods are being used to ask the question, "What goes on in the mind of spiders?" The results suggest that the answer is "quite a lot."

**Fiona Cross** and **Robert Jackson** at the University of Canterbury in New Zealand discovered that jumping spiders of the species *Portia africana* display a sort of numerical competence. Read the full article at the National Public Radio, United States.

**UC joins the Bio-Protection Research Centre**
The Bio-Protection Research Centre (BPRC) is focused on novel research to develop sustainable solutions for controlling plant pests, weeds and diseases in New Zealand. UC will extend the BPRC’s capability in ecology, genomics, biological control and computational biology.

University of Canterbury **Professor Matthew Turnbull**, Head of the School of Biological Sciences, says UC officially became a partner following a formal invitation from the BPRC in April. Read the full article at UC Communications.

**Jumping spiders can count 1, 2, and many**
Portia’s capacity to represent exact numbers of prey has now featured in a new article in the Royal Society’s journal Interface Focus by **Fiona Cross** and **Robert Jackson** from the University of Canterbury and the International Centre of Insect Physiology and Ecology. Experiments were based on showing Portia a specific number of prey (ranging between 1–6) that could only be accessed by walking along a detour path that first went directly away from the prey. Read the full article at the Royal Society of New Zealand.

**Funding success**
**Mitja Remus-Emsermann**, has secured 4 years of research funding to support a PhD project hosted by ESR entitled “Studying Legionella mobility and persistence in plumbing systems using micro-mimics”. The value of the funding is $82,500 (June 2017 – May 2020).

**Ian Dickie**, has secured 5 years of research funding within a Landcare-based MBIE contract “Winning against the wildings”. The value of the funding is $1,250,000 (June 2017 – Sept 2021).

**David Schiel**, has secured a 5-yr extension (Oct 2016 – Sept 2021) to a continuing NIWA subcontract “Maintenance & Rehabilitation of Aquatic Ecosystems”. The value of the extension is $1,216,000. This is contract that has been running since 2010, so it is great to see the relationship continue well into the future.

**PhD student Phoebe Argylle**, who with supervisor Islay Marsden has secured $3,800 from the Ministry of Foreign Affairs and Trade through the “New Zealand Aid Programme Awards for Postgraduate Field Research”. Her project is “The ecology and toxin production of Gambierdiscus species from the Kingdom of Tonga”.

**Elissa Cameron**, has secured $120,000 from Woolnorth Wind Farm Holdings and $25,000 from TasNetworks as industry partners for her project “Conservation ecology and response to disturbance of the Tasmanian Wedge Tailed Eagle”.

The funding is to support the expansion of the project, based at the University of Tasmania, which has previously been supported by other industry partners (Forestry Tasmania, Norske Skog and the Holsworth Foundation). The project is a
collaboration between Elissa and the Tasmanian Forest Practices Authority, the Department of Primary Industries, Parks, Water & Environment, and the USGS in Boise, Idaho.

**David Schiel**, for securing a NSC Sustainable Seas contract: Project 4.1.1: Ecosystem connectivity: Tracking biochemical fluxes to inform Ecosystem Based Management. $52,766 (October 2016 to June 2019).

**David Schiel, Islay Marsden** and **John Pirker**, have secured a Ministry for Primary Industries grant. To quantify the impact of the Kaikōura earthquake on rocky reef infauna and monitor recovery. $528,936 (May 2017 to July 2018).

### Name that song?

The words of the prophets are written on the subway walls.

402: Saunière closed his eyes, his thoughts a swirling tempest of fear and regret. The click of an empty chamber echoed through the corridor.

Answer: The Da Vinci Code

Guessed by: Juanita Miln

### and now for something completely different...

**Remembering the original Batman: Adam West**

Those of a certain age will remember this character with glee, sitting in front of the TV after school to watch another ripping yarn of our favourite caped crusader.

- [Batman: Shark Attack - 1966](#)
- [Batman: Fight scenes - POW!](#)
- [The very best scenes as Mayor West - Family Guy](#)

- [Real Life Trick Shots | Dude Perfect](#)
- [Cat Puts Herself to Sleep in Tiny Human Bed](#)
- [Copy Cat - Simon’s Cat](#)
- [Ariana Grande and Miley Cyrus - Hey Now (Don't Dream It's Over)](#)
- [The voice of Wallace has died... and the character of Clegg](#)

### Thought for the week

True black is rare; almost everything that looks black is actually some shade of gray. When everything seems dark, remember that however complicated, there is always a lighter shade to your difficulties.