

## Welcome to the latest edition of the BEES Newsletter

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Dear Colleagues,

Welcome to the (3<sup>rd</sup> ed.) of the BEES Newsletter! Below are some of the great news stories you've told us about in recent months. Keep them coming! Email [Veronica](#) with your grant announcements, publication news, and other items.

In this edition of the newsletter you can catch up on a number of news stories. We celebrated with our graduates on their conferring day, which is one of the most significant milestones in their lives, as they now embark on their future careers. This edition highlights achievements across the School, development of new programmes in the School, new appointments and the retirement of some esteemed colleagues.

The content of the newsletter demonstrates the continuing dedication and effort by our staff and students who embrace new challenges with tremendous energy and enthusiasm. As Head of School, it gives me great pleasure to lead such a dedicated team and I wish to acknowledge the work and achievements of all staff and students in BEES.

Thanks to everyone who sent in news items for this issue!

**Professor Sarah Culloty**  
**Head of School of Biological, Earth and Environmental**  
**Sciences**



*Dr. Barbara Doyle Prestwich, Lord Mayor of Cork Cllr. Tony Fitzgerald, President of UCC Prof. Patrick O'Shea, Dr. Eoin Lettice.*

UCC recently hosted the launch of The International Association for Plant Biotechnology (IAPB) Congress. The event will take place at the Dublin Convention centre from 19<sup>th</sup> to 24<sup>th</sup> August 2018.

Dr. Barbara Doyle-Prestwich, president of the IAPB, and Dr. Eoin Lettice are involved in organising the conference, which will attract over 1000 experts and stakeholders in the field of plant biotechnology from around the world.

Further information about the conference can be found at <http://www.iapb2018.com/>.



## SFI INVESTIGATOR AWARDS

Congratulations to Professor Marcel Jansen and Professor Andy Wheeler on receiving SFI Investigator Awards. They were two of only three scientists in UCC that won the prestigious research grants this year.

Prof. Jansen's work will examine how UV light can improve crop production using novel UV-emitting LEDs.

Prof. Wheeler will use advanced robotic technology and novel 3D visualisation tools to define seabed processes that dictate where cold-water corals occur, and to study their sensitivity to climate change and fisheries/oil industry impact.



*Prof Mark Ferguson (SFI), Prof Rosemary O'Connor (UCC), Minister John Halligan TD, Prof Andrew Wheeler (UCC), Prof Marcel Jansen (UCC).*

## NEW RESEARCH FACILITIES AT BEES

A new aviary supporting ornithological research in BEES is nearing completion. The state of the art facility will be used by Prof. John Quinn's research group to study the cognitive abilities and behaviour of great tits. Watch this space for exciting developments!



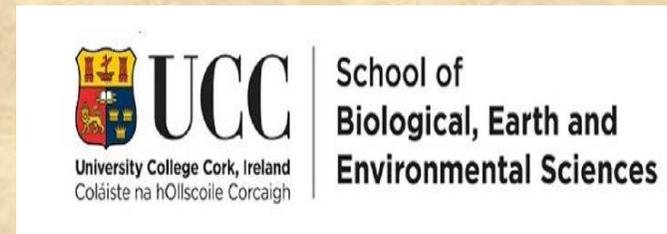
## ENGAGEMENT WITH INDUSTRY

Dr. Barbara Doyle-Prestwich has been awarded two €5,000 Innovation Vouchers from Enterprise Ireland to foster collaborations with industry in the field of plant biotechnology. Barbara will be working with two companies based in Cork; PlantEdit and International Manson Manufacturing.



## ATHENA SWAN 2017

UCC earned its bronze Athena Swan award in 2016 for its commitment to improving gender equality. The School of BEES is applying for a departmental bronze Athena Swan Award and an application will be submitted in November 2017.





## INFRASTRUCTURE GRANTS



Congratulations to Dr. Maria McNamara and Dr. Pat Meere who have both been awarded SFI Infrastructure Grants to procure microscopes to support geoscience research at the School of BEES. Pat's application was for a new Confocal Raman Microscope, while Maria will acquire a new PE Spotlight micro-FTIR system. Both will be added to the new school microscopy suite and have potential applications across research disciplines.



Dr. Tom Reed and Dr. Phil McGinnity have been awarded two SFI Infrastructure Grants to purchase new DNA sequencers. The first award, worth €154K will be used to procure a Sanger Sequencer, while €98K was also awarded to procure a Desktop Next Gen-Sequencing Machine. Both will be used to support Tom's research here in BEES but have the potential to be used by researchers across the school.



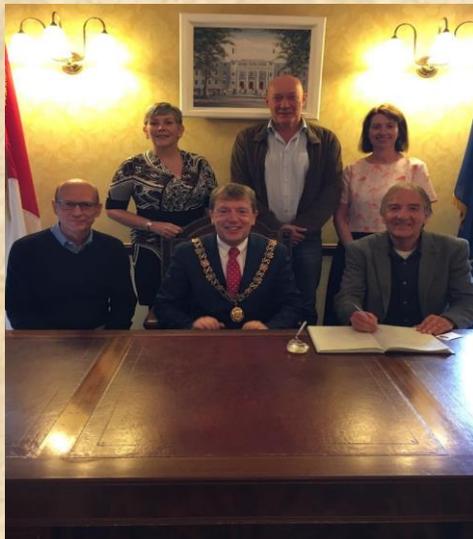
A multi-disciplinary team in the school has been awarded a €195K marine infrastructure grant, to develop a novel underwater environmental monitoring device. The seabed lander platform can be reconfigured to collect data for various research projects opening the opportunity for exciting collaborations across the School. The project is led by Prof. Andy Wheeler, with Dr. Tim Sullivan, Prof. Emer Rogan, Dr. Aaron Lim, Dr. Ruth Ramsey, Dr. Rob McAllen, Dr. Zsuzsanna Tóth, Dr. Patricia Breen, Siobhan Burke, and Maria Gkaragkouni.





## EU AQUACULTURE CONFERENCE 2020

The Lord Mayor of Cork, Cllr. Tony Fitzgerald has agreed to support Prof. Gavin Burnell's bid to bring the European Aquaculture Conference to Cork in 2020. The bid was supported by a delegation from the European Aquaculture Society, of which Prof. Burnell is President Elect.



## BEE-KEEPING CO-OP IN THE GAELTACHT

Dr Pádraig Whelan has been involved in setting up a bee keeping co-operative in Baile Bhúirne. Cumann Bheachairí Mhúscaí has 22 active members. Information about the co-op can be found on the group's facebook page @CumannBM



## NEW COURSES ON OFFER IN BEES

The school enrolled students in its two new Level 7 Diplomas in Biological Sciences and in Environmental and Geological Sciences. The Diplomas offer international students the opportunity to spend a year studying in UCC and to tailor programmes of study to their individual needs and degree subject at their home institution.

Furthermore, the new MSc in Applied environmental Geology has recruited 11 students in 2017. The multidisciplinary degree has been designed with the current needs of industry taken on board. Emphasis on real world, industry based examples is prevalent throughout.

## POSTGRADUATE DIPLOMA IN FRESHWATER QUALITY MONITORING AND ASSESSMENT



School of Biological, Earth and Environmental Sciences

A new Postgraduate Diploma in Freshwater Quality Monitoring and Assessment has recruited 20 students from 12 countries. The online course is organised by the UN Environment GEMS/Water Capacity Development Centre and headed by Dr Debbie Chapman. The Diploma aims to empower students to improve national efforts to monitor freshwater quality in low-income countries.

## MARINE SCIENCE ART PROJECT

A marine science art project created by primary school children from Galway in collaboration with Dr Andy Wheeler was short listed for an Allianz Business to Arts Award.

The collaborative project used the arts to enable students, teachers and artists to engage with and understand the essential principles and fundamental concepts of ocean science.

Scientists from the Marine institute visited classrooms in Cregmore Primary School, while students were also given an opportunity to visit the RV Celtic Explorer.

The installation, which is a re-enactment of the 2011 discovery of the Moytirra deep-sea hydrothermal vent field along the Mid-Atlantic Ridge, was displayed at SeaFest 2017 in Galway in July.



*Dr. Andy Wheeler, Louise Manifold (Artist), Joanna McGlynn (Tulca), Cushla Dromgool-Regan (Marine Institute) and Denise McDonagh at the launch of "Build your own Unknown" at SeaFest 2017*



## DARREN REIDY WINS SCIENCE FOR ALL

BEES PhD Student Darren Reidy has won the 13<sup>th</sup> annual Science for All competition. This competition challenges postgraduate scientists to share their research with the general public in an easily understandable manner.



*Dr. Fergus McAuliffe, John Nolan, Darren Reidy, Liz Dooley and Donna O'Driscoll at the Science for All Competition.*

Darren's talk "Swimming with the Enemy; Getting to Know the Aliens in Our Rivers & Lakes", is based on his research in BEES where he studies the ecology and ecophysiology of aquatic invasive plant species with the aim of developing potential management strategies for combatting alien species invasions.

## OPEN DAY 2017

The school hosted an extremely successful stand at the annual UCC open day this past October.



*The School of BEES stand manned by staff members on Open Day.*

Staff and postgraduates were on hand to discuss their research interests and the courses on offer in the school with prospective undergraduate students.

Over 100 students enrolled in first year Biological Earth and Environmental Science (CK404) in 2017, which is the CAO course on offer from the school.



*Some of the specimens on show at the School of BEES stand*

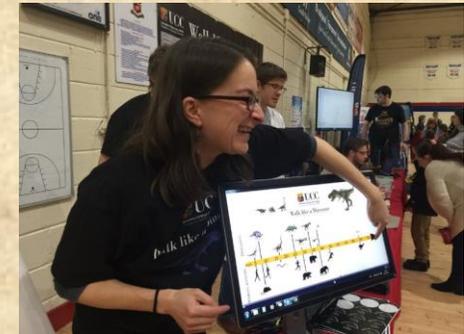


## SCIENCE WEEK 2017



The Cork Science Festival took place recently as part of Science Week Ireland. The event, which is in its 12<sup>th</sup> year aims to increase awareness of science amongst members of the public, particularly kids.

Researchers from the School of BEES took part in several events around the city. In Neptune Stadium, Maria McNamara ran an interactive exhibit “Walk like a Dinosaur”, which shows how palaeontologists figure out how dinosaurs moved.



*The “Walk like a Dinosaur” exhibit at the Cork Science Festival*

BEES postgraduate researchers Cian Luck and Ashley Bennison were guests on a recording of the science podcast “Level up Human”, alongside comedian Neil Delamare. Listen to the episode here:

<https://soundcloud.com/leveluphuman/human42>

## BEES STUDENT PRIZEGIVING 2017

The annual BEES prize giving ceremony took place in October. Prof Sarah Culloty, Head of School awarded prize's to students across the range of all disciplines for academic achievement. To view the full list of prize winners for 2017 [click here](#).

**Well done to all!**



*Isabel O'Mahoney won the Lord Mayor's Perpetual Trophy for the best Environmental Science Graduate. Pictured here are Dr. Debbie Chapman, Isabel's mother who accepted the award on her behalf, Deputy Lord Mayor Cllr. Fergal Dennehy and Prof. Sarah Culloty.*



*Prize winners at the recent awards ceremony at the School of BEES.*



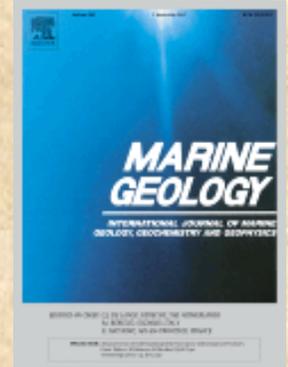
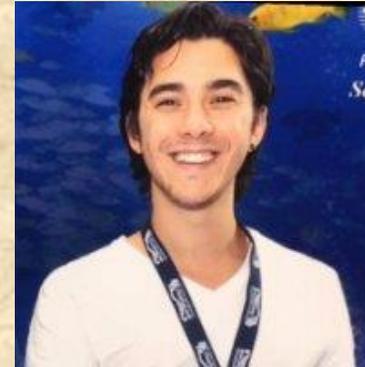
*Prof. Astrid Wingler, Sharon Crowley, Melanie Smith and Prof. Sarah Culloty. Sharon and Melanie were awarded the Butler Prize for the best plant science graduates.*

*The inaugural Delap prize was awarded recently for the best postgraduate publications. The prize is named after Maude Delap, an Irish marine biologist who was the first person to observe and describe the full life cycle of jellyfish.*

The gold award was won by Dr Aaron Lim for his paper

*“High-resolution facies zonation within a cold-water coral mound: the case of the Piddington Mound, Porcupine Seabight, NE Atlantic”, published in the journal Marine Geology.*”

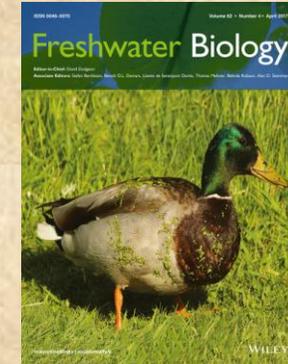
Aaron’s paper describes the first attempt at video mosaicking a cold water coral mound which he used to describe the structure of the Paddington Mound off the south-west coast of Ireland. This work provides insights into how reefs develop and sustain in Irish waters in strong currents and erosive settings.



The silver award was won by Neil Coughlan for his paper

*“Up, up and away: bird-mediated ectozoochorous dispersal between aquatic environments”, published in the journal Freshwater Biology.*”

Neil’s paper identifies the role of birds in the movement of biological material between aquatic environments. This under-researched area has important implications for the spread of disease and invasive organisms in freshwater habitat, as well in the context of gene flow between otherwise isolated populations.



The bronze award was won by Dr Mary Catherine Gallagher for her paper

*“Room for one more? Coexistence of native and non-indigenous barnacle species”, published in the journal Biological Invasions.*”

Mary Catherine’s paper examines the colonisation of space by a native, and an alien invasive barnacle species. This study has important implications for our understanding of the colonisation of novel structures in marine environments, which are frequently associated with high abundances of alien species, and are becoming more common with coastal development.

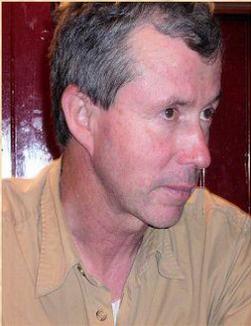


## RETIREMENTS

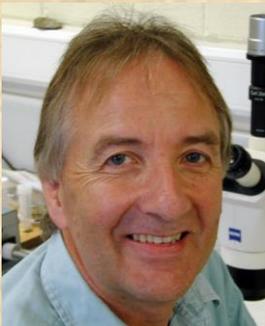
The following academic staff members retired over the past few months. On behalf of all their colleagues and friends in the School of BEES we wish them a long and satisfying retirement and the very best of luck with in the future!



Prof Peter Jones joined the department of Botany in UCC in 1980. His research interests involved stress tolerance and chemical communication in plants, novel approaches to waste management and crop genomics and proteomics. He was acting Head of Plant Science in BEES from 2005 to 2014 during which time he won the SEFS Outstanding Lecturer award in 2011.



Dr Pádraig Whelan joined the department of ZEPS in 1995 after spending several years as the Chief Scientist at the Charles Darwin Research Station in the Galapagos. His main research interests involve the management of alien species and biodiversity conservation. Much of his work in Ireland has been carried out in protected areas such as Killarney National Park, Glengarriff nature reserve and the Burren.



Prof Gavin Burnell joined the department of ZEPS in 1985. The central theme of his research relates to molluscan aquaculture and fisheries. Over his career he has built extensive links with research institutions internationally and has also participated in numerous EU research projects. He is the current head of the Aquaculture Research Group of the Aquaculture and Fisheries Development Centre and Acting Head of Discipline of Zoology and Ecology in the School of BEES.

## ACADEMIC STAFF APPOINTMENTS



Congratulations to Dr John Weatherill who was newly appointed as Lecturer in Hydrogeology. He completed his PhD in contaminant hydrogeology (funded by the UK Environment Agency) at the University of Keele in 2014. Prior to joining the School of BEES, John was an industry hydrogeologist specialising in contaminated land, risk assessment and groundwater remediation throughout Ireland and the UK. John's research interests involve understanding the coupling of flow and reactive transport at different scales in groundwater systems. He is interested in pollutant transformation at the groundwater-surface water interface (hyporheic zone) and novel approaches for developing conceptual models at this critical transition zone.



Congratulations to Dr Tim Sullivan on his permanent appointment as Lecturer in Environmental Science. Tim completed his PhD within the Marine and Environmental Sensing Technology Hub at Dublin City University in 2012. He held postdoctoral positions at DCU and Eindhoven University of Technology before joining the School of BEES. Tim's research interests involve novel bio-inspired (and biomimetic) materials, climate change and the marine environment, and the use of sensors in environmental monitoring.



Congratulations to Dr Tom Reed on his appointment as Senior Lecturer in Ecology. Tom is an evolutionary ecologist interested in how organisms adapt and respond to environments that are highly variable across space and time, and heavily influenced by humans. His work applies a range of approaches (field and lab-based experiments, statistical analysis of longitudinal data, quantitative and molecular genetics, simulation modelling) to understand how ecological and evolutionary processes interactively shape life histories and the dynamics of genes, phenotypes and individuals. He works mainly with fish (Atlantic salmon, Pacific salmon and trout) and birds (woodland songbirds and seabirds) in Ireland and abroad.

## NEW ADJUNCT STAFF



Dr Ryan Carnegie has joined the School of BEES as an Adjunct Professor. He is based at the Virginia Institute of Marine Science and his main research interests lie in shellfish pathology.



Dr Martin Collins OBE has joined the School of BEES as an Adjunct Professor. He is currently a Senior Fisheries Scientist at the Centre for Environment, Fisheries and Aquaculture Sciences (Cefas) in Lowestoft, UK.

## RESEARCH STAFF APPOINTMENTS

The School of BEES welcomes newly appointed research staff and wish you the very best of luck well in your roles!

### Postdoctoral Research Staff

#### Geology

Sean Johnson

Luke McDonald

#### Zoology and Ecology

Anthony Caravaggi

James Jepson

Karl Phillips

### Research Support Officer

#### Zoology and Ecology

Kathryn Simmons

### Research Assistant

#### Zoology and Ecology

Sam Bayley

Samuel Crofts

Peter Deegan

Linda Doran

Fintan Egan

Ronan Grealis

Giliane Odin

Catherine Waters

## NEW POSTGRADUATE RESEARCH STUDENTS

The school is delighted to welcome new postgraduate students who have recently commenced their studies.

- ❑ Gary Kett is undertaking an MRes under the supervision of Prof Sarah Culloty and Dr Sharon Lynch.
- ❑ Ronan O’Sullivan has commenced a PhD with Dr Tom Reed and Dr Phil McGinnity.
- ❑ Tiffany Slater has commenced a PhD supervised by Dr Maria McNamara.
- ❑ Alan McCarthy has commenced a PhD supervised by Prof John O’Halloran.
- ❑ Floraine Leseur, Sarah Ryan and Patrick Schaal have all begun PhD’s and will be based in the Marine Institute, Newport. Floriane and Sarah will be supervised by Dr. Phil McGinnity, while Patrick will be supervised by Dr. Martin Llewellyn.
- ❑ Caitlin Looney has begun a PhD based in Teagasc Moorepark.

## CONFERRINGS



Congratulations to newly conferred Dr Greg Beechinor and Dr Ross O'Neill, pictured with Prof Sarah Culloty and Dr Debbie Chapman on the day of conferrings.

Congratulations to all of our new graduates who received their degrees in the Autumn Conferrings. We hope you enjoyed your time in the School and wish you all the best in your future careers!



*BEES student pictured at the recent Autumn Conferrings.*



The School of BEES Postgraduate and Staff Christmas party will take place upstairs in SOHO Bar on the 14<sup>th</sup> December.

Each ticket will include entry, food, a free drink and mulled wine.

Purchase your ticket before 1<sup>st</sup> December to receive a free raffle ticket.

Tickets are available to purchase from Alicia Mateos ([alicia.mateoscardenas@ucc.ie](mailto:alicia.mateoscardenas@ucc.ie)) in the Enterprise Centre and Ronan O'Sullivan ([113499328@umail.ucc.ie](mailto:113499328@umail.ucc.ie)) in the Cooperage.

