

[Newsletter of the Botany Department at Trinity College Dublin](#)

New People

Welcome to new PhD students **Irene Bottero** and **Elena Zioga**, both supervised by **Jane Stout**. Irene will join the EU H2020 PoshBee team and is working on parameterising bee health models with data from Ireland and Italy; whilst Elena will join the DAFM Protects project and is working on characterising pesticide residues in nectar and pollen in Irish farmland. Both will be based in the Ecology Lab in the Watts Building.

Publications

Microbes and Environment: **Brian Murphy** has just published a paper as a co-author in *Microbes and Environment*. The paper, titled '[G3 Phylochip Analysis Confirms the Promise of Plant-Based Culture Media for Unlocking the Composition and Diversity of the Maize Root Microbiome and for Recovering Unculturable Candidate Divisions/Phyla](#)', is co-authored with colleagues in Egypt and Germany and describes a novel cultivation technique that enables recovery and culture of previously unculturable microorganisms (bacterial and archaeal) from the endo and ecto-rhizosphere of maize (*Zea mays*).

Proceedings of the 27th General Meeting of the European Grassland Federation: TCD Botany postgraduate **Niamh Curran**, **Trevor Hodkinson** and Teagasc collaborators developed and published '[GenoGrass: a low cost, high throughput genotyping platform for perennial ryegrass](#)', in the *Proceedings of the 27th General Meeting of the European Grassland Federation*.

Food Chemistry: Congratulations to **Saorla Kavanagh**, Botany graduate, and PhD student at DCU with **Blanaid White**, co-supervised by **Jane Stout**, who has published her first [paper on the chemistry of Irish honey](#) in the journal *Food Chemistry*, which has received considerable [media attention](#).



Accomplishments



Congratulations to **Brian Murphy** on receiving his masters level Special Purpose Certificate in Academic Practice at last week's Commencement Ceremony in TCD.

The Science Council has awarded a high commendation to **Brian Murphy** as a Registered Scientist in their annual CPD Awards for 2018; he was the only winner chosen from the full membership of the Royal Society of Biology. This award is designed to celebrate the continuing professional development (CPD) efforts and achievements of registrants. Now in its fourth year, the awards offer them recognition for their broad and diverse range of professional activities. To be a winner or to be awarded a commendation for the CPD Awards demonstrates an individual's commitment to undertaking work-based learning and self-directed learning at a high, exemplary standard in order to benefit the quality of their practice and to benefit colleagues, patients, clients or any other users of the service they provide. Brian will travel to a special ceremony in London this October to receive his award.



Trevor Hodkinson and **Brian Murphy**, project managers of e-Seed -- an agri-tech company established by Trinity and UCD researchers -- [have won the 'Best New Technology Emerging From Third Level' award](#), having featured among 50 exhibitors displaying new tech at the National Ploughing Championships. **Erika Soldi** contributed to the project as Research Assistant. e-Seed uses microorganisms called endophytes that live within plant tissue, and which enable farmers to reduce synthetic chemical inputs while still maintaining full crop yields. This ground-breaking new technology reduces the economic and environmental costs associated with traditional agricultural practices.

Projects and Funding

Matt Saunders in collaboration with Teagasc and the University of Limerick has been awarded a DAFM grant that will evaluate the impacts of land-use and management on soil organic carbon stocks in Irish agricultural systems.



Jane Stout and post-doc **Simon Hodge** attended the EU H2020 PoshBee project kick-off in Paris along with more than 30 other partners from around Europe. The 5-year project will investigate stressors on managed and wild bees across Europe and develop tools to improve bee health, and involves researchers, farmers, beekeepers and industry participants.



Events

Carbon Connections Workshop: From the 10th to the 14th September, **Ana López Ballesteros** together with **Johannes Beck** ([SASSCAL](#)) attended the Carbon Connections Workshop as the representatives of the [SEACRIFOG project](#). The workshop took place at Cathedral Peak, a SAEON's ([South African Environmental Observation Network](#)) long-term ecological research site in the highlands of the Drakensberg Mountains in KwaZulu Natal, South Africa. It was hosted by the SAEON and the Department of Science and Technology of the Republic of South Africa. During the workshop, relevant researchers from the ecological and climate monitoring communities in South Africa deliberated about the design and scope of the future Expanded Freshwater and Terrestrial Environmental Observation Network (EFTEON). The main key scientific questions that need to be answered were pointed out, for both the short- and long-terms, as well as the main challenges and enablers for the EFTEON RI development. The workshop attendants represented the core of the South African environmental research community as well as some international researchers such as the SEACRIFOG representatives and scientists from the University of Burgundy (France). This workshop constituted a very fruitful and enriching interaction between the SEACRIFOG project and one of our country partners towards the joined effort of enhancing the African infrastructural capacity for environmental monitoring.



Junior Sophister field trip: We were delighted to welcome a bumper class on to our Junior Sophister field trip in early September (17 botanists and 25 environmental scientists). We overfilled the hostel in Enniskerry and so 11 hardy souls had to camp. We enjoyed excellent weather as we explored peatland habitats in the Wicklow hills (some of which were burnt this summer), native and commercial forests in Glendalough (we shared the valley with 700 primary school kids but still managed to find some quiet spots) and sand dune ecosystems on Bull Island. Everyone stayed dry, learned a lot and want to know how to get on to the Grand Canaria trip next February.



Clandeboyne Estate Reading Party: Jane Stout gave a talk on bees at the Clandeboyne Estate. It was part of a cross-disciplinary Reading Party, organised by Director of the Trinity Long Room Hub, Prof. Jane Ohlmeyer. Jane's talk was followed by Sean Borodale, Clandeboyne poet in residence, who read from his prize-winning "Bee Journal" inspired by beekeeping, and a visit to Clandeboyne's magnificent 19th century bee house.



The 19th century bee house at Clandeboyne Estate.

Meetings and Conferences



Jane Stout and Laura Russo presented at the Neobiota 2018 conference on "Biogeographical comparison of invaded insect-flower interaction networks" and "The impact of the timing/duration and intensity of disturbance on network structure" respectively.

Kamila Kwasniewska and **Amanda Porter** participated in the annual UK Controlled Environment Users' Group (CEUG) meeting, that was held in the University of Bristol on the 11th and 12th of September. They presented the interactive poster on 'Biosensor to detect *chamber effect* in controlled environments'. The participants were given a tour of the glasshouse facilities – The GroDome that is built on the Life Science roof top, and the growth cabinets facility with an amazing collection of plant growth chambers and insect chambers. The scientific talks were given by **Prof. Keith Edwards** on the impact of temperature on meiosis and fertility in wheat and also **Kerry Franklin**, who spoke about the plant development in various temperature and light conditions. **Nicholas Wray**, the Head of Bristol Botanic Garden gave an interactive tour through the garden and **Dermot O'Regan** presented his new vertical farm company – Grow Bristol. The meeting was accompanied by the commercial stands of the world leading growth chamber and glasshouses producers.



On Friday, August 31st **Prof. Jim Skea**, Co-Chair of the [Intergovernmental Panel on Climate Change \(IPCC\) Working Group III \(WGIII\) at Imperial College London](#), presented a talk in the Botany Lecture Theatre entitled 'Introduction to the IPCC and the Sixth Assessment Cycle'. His talk provided a unique opportunity to gain insights into the IPCC and its reporting processes. Prof. Skea was in Dublin ahead of a week-long meeting of IPCC lead authors, which was hosted by the EPA, for the IPCC Special Report on Climate Change and Land.

PHYTOBYTES needs your input! Whether you are student or staff, please send any news you have, big or small, to Sarah (gabels@tcd.ie) with the subject heading "Phytobytes". Let's share the latest news and always be aware of what is happening at Botany!