

## The Trinity College Dublin Botany Department Newsletter

### Accomplishments

Congratulations to **Hannah Hamilton** for her fantastic achievements. Her MSc (Research) thesis on "Making biodiversity their business: A mixed methods analysis of stakeholder perceptions on the business drivers, benefits and barriers of a corporate biodiversity certification scheme", with **Jane Stout** as supervisor, has been passed by the examiners, with minor corrections!



**Hannah** self-funded and worked part-time on her research masters since 2014, simultaneously working as Executive Coordinator of the Irish Forum on Natural Capital, as a biodiversity consultant for Business in the Community Ireland, and building her own successful business (Eirewild), advising companies how to improve biodiversity on their sites. She finished the thesis last summer whilst working as Business Development, Communications and Partnerships Manager for Coillte. She has now started a new job working for the government as Special Advisor to Minister Malcolm Noonan, Minister of State for Heritage.

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Other very well deserved congratulations to **Sarah Gabel**, also supervised by **Jane Stout**, who passed her PhD viva with minor corrections this month as well!

**Sarah** bravely came to Ireland from her home town in Washington State in 2016, never having been to Trinity or met **Jane**, or her co-supervisor **Blanaid White** in DCU, and embarked on an ambitious project to study hoverflies in Irish farmland. She surveyed plants and insects in the field, learned analytical chemistry to measure pesticide residues, and carried out toxicity assays in the lab.

She's now back home in the States, and aiming to submit 3 papers from her thesis "Influential factors of cereal crop landscapes on aphidophagous syrphid communities".



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Botany welcomes **Diego Dylan Bianchi**, a new PhD student working with **Trevor Hodkinson** and **Brian Murphy** on a DAFM funded project called **BioCrop**. It is a project investigating biostimulants and biopesticides for crop production.

**Diego** was born and raised in Genoa, a seaside town in Liguria surrounded by the Nordic mountain range of the Alpes-Maritimes. He graduated in Turin and Milan as an agricultural biotechnologist with a close interest in special products such as biostimulants and biopesticides. His previous works were indeed oriented to the concepts of bioeconomy, regarding the application of *arbuscular mycorrhizae* and microalgae on crops or vegetables. He is now waiting for his first article, on the role of microalgae extracts as potential antifungal products, to be published.

His passion for the world of plants stems from a family background which has been careful and aware of the preciousness of local and organic products, as well as from the medical care received since his young age with the phytotherapeutic products sold at his mother's herbalist shop. The mix of nature and urbanisation that characterises his native city makes it possible to explore, at fingertips, wild paths and abandoned fortifications. There is a great biodiversity of spontaneous and edible plant species: he has learned where to find some herbs and fruits with which he also prepares teas, spirits and jams, such as *Thymus vulgaris*, *Thymus citriodorus*, *Myrtus communis*, *Arbutus unedo*, *Mespilus germanica* and *Castanea sativa*. This year he hopes to be back in time to find the elderberry.

## Publications

**Agriculture, Ecosystems & Environment:** **Jordan Chetcuti** has co-authored a paper titled "[A regional-scale study of associations between farmland birds and linear woody networks of hedgerows and trees](#)". The paper uses a novel habitat association measure to look farmland bird species hedge habitat associations.

**British & Irish Botany:** **Marcus Collier** co-author a paper with **Lindsay Hollingsworth** entitled "[Ground flora of field boundary dry stone walls in the Burren, Ireland](#)".

## Projects and Funding

We are delighted to announce that Prof. **Marcus Collier** was recently awarded an ERC Consolidator Grant for his proposal '**NovelEco**'. This is a citizen science project that will examine the impact of researching wild nature (or novel ecosystems) in cities on citizens and communities. This is a highly prestigious €2m award, and the project will run for five years in case study cities in Ireland, the UK, the US, and Australia. NovelEco will bring three new postdocs, two PhDs, and a research manager into Botany. This is one of four ERC Consolidator Awards that TCD has received this year.



*Researching the implications of wild nature connectedness is for all ages!*



The Department of Botany is participating in a new Horizon 2020 project, **GoGreen Routes**, which was officially launched this month. This is a five year, €11m project looking at scaling out Nature-based Solutions in cities for improving health and well-being. It is a collaboration between three Schools in TCD, with the overall project being led by Maynooth University.

We welcome Ms **Hazel Reddington** to the Department. Hazel is our new research assistant and will be coordinating the TCD work under the supervision of Prof. **Marcus Collier** who is the co-author of the project.



**More success for Trinity in sustainable crop production research**

A European Research consortium involving Trinity College and University of Limerick, and headed by the Catholic University of Portugal, has been successful in obtaining over 7 million Euros of funding to promote underutilised crops in Europe. The H2020 framework project, **RADIANT (ReAlising Dynamic vALue chaiNs for underuTilised crops)**, envisages a future where a widespread, informed adoption of agrobiodiversity promotes the wider use of underutilised crops. The project will aim to showcase a network of agrobiodiversity farms across Europe, where best practices in land management and smart marketing are embedded to promote improved agronomy and breeding that capitalises on native biodiversity.

Trinity's role in the project builds on previous success in EU funding by Prof. **Mike Williams** from Department of Botany for sustainable crop production research, and will focus on quantifying multifunctional traits for underutilised crops within a Life Cycle Assessment framework, to benchmark these crops and their dynamic value chains against industrialised crops.



Further information: Mike Williams ([willism@tcd.ie](mailto:willism@tcd.ie))

## Events and Activities



PhD student **Marine Valmier**, under the supervision of **Matt Saunders**, has started the monitoring and rewetting process of peat soil cores placed in lysimeters at the Johnstown Castle Teagasc research facilities. The set-up allows the control of the water table level inside each core, and aims to evaluate its influence on greenhouse gas emissions and productivity of Irish peat soil under grassland management.



Photo: Sukid Rueangrua

This month's TCD alumni e-zine has a spread on 'Five Trees of TCD' (see [here](#), page 10) thanks to the contribution of **Daniel Kelly**.

This feature photo of the Double Wild Cherry in College Park was taken by **Sukid** – and his wife Jude gives the scale!

## Meetings and Conferences

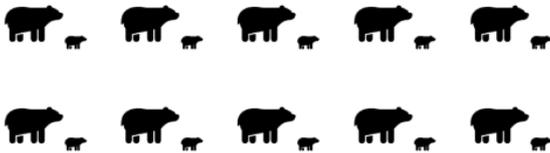
**Jane Stout** chaired a **Natural Capital Ireland Business, Biodiversity and Finance webinar** – available via [YouTube](#).



The **Irish Pollinator Research Network annual symposium** was organised by postdocs **Stephanie Maher** and **Jordan Chetcuti**. Presentations covered a range of topics, listed in [this blog post](#) with Jane Stout's own personal take-home note.

## EcoEvo Blog Posts

Want to learn more? Check out the [EcoEvo Blog](#), where Trinity's Botany and Zoology departments discuss their work and reflections in research. The latest posts include...



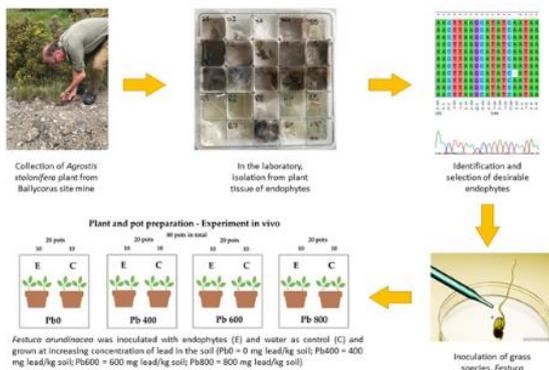
[The Opti-Mum condition: How brown bears use humans to prolong maternal care](#)

by Sabrina Teo



[How Being Obvious Can Make You Discrete](#)

by Isabel Walsh



[Endophytes for Heavy Metal Bioremediation](#)

by Erika Soldi



[Secondary Metabolites of Fungi: Friend and Foe](#)

by Carla J. Harper

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