

## The Trinity College Dublin Botany Department Newsletter

### Accomplishments

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Welcome to **Kate Harrington** – a new PhD student working with **Jane Stout** and **Fraser Mitchell**. Kate will be working on the **E3 Kinsella project FOREST**, alongside PhD students in Business, Geography, Statistics and Engineering.

“I am a graduate of the **Zoology Dept** in Trinity, where I completed my undergrad and a master in **freshwater and marine ecology**. I worked as an Ecologist in the research, voluntary, private and public sectors in **Ireland, Australia, US**, and I have spent the latest **6 years with Irish Water** advising on all ecological matters.

**My love for Botany** came through upskilling needed to work as an Ecologist, though as it has been mostly self-taught, and I still have a mental block with a lot of *Latin names*!

I credit the **NBDC, DNFC** and **BSBI**, and their **excellent fieldtrips** and **training courses**, for anything I do know. I have a particular interest in how we value nature. I look forward to contributing to research in this area and immersing myself in the FOREST project and botany.

### Publications

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- **Thibault Durieux** published his first first-author research article in **American Journal of Botany**. *Congratulations!* See here: [A new phylogeny of the cladoxylopsid plexus: contribution of an early cladoxylopsid from the Lower Devonian \(Emsian\) of Quebec](#).
- **Jane Stout** and **Elena Zioga** co-authored a letter published in **Nature Ecology and Evolution** calling for better pesticide use data in the EU. See here: [Improving pesticide-use data for the EU](#).

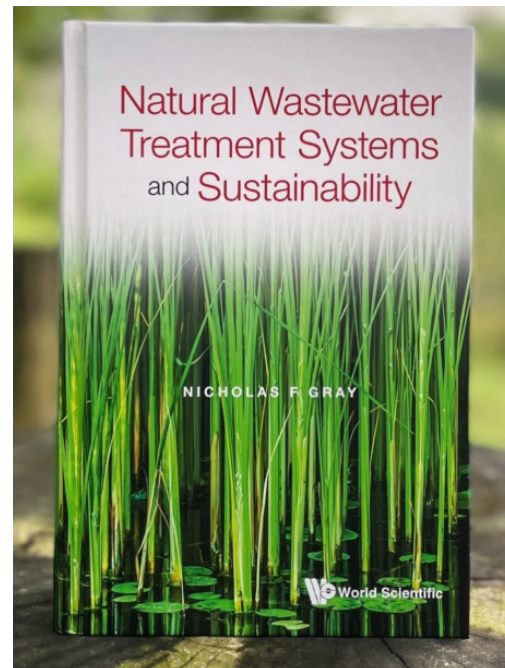
- **Nicholas Gray** is about to release his new book entitled [\*Natural Wastewater Treatment Systems and Sustainability\*](#) (World Scientific Publishing, November 2021)

This book deals with our need to find **alternative treatment solutions**, especially for **small to medium sized wastewater treatment plants**. The number of treatment plants reporting failures, resulting in raw or partially treated sewage being discharged to surface waters, has never been so high.

**Conventional** energy-demanding **treatment systems** are constantly being modified and retrofitted to treat ever increasing loads to prevent pollution. This, and meeting higher effluent quality standards, results in significant increases in **C emissions** from treatment systems. So, conventional treatment is at a crossroads where **new sustainable solutions are required to protect our rivers, estuaries, and seas.**

**Natural wastewater treatment systems**, which use plants and micro-organisms, are more nature-based solutions and offer **sustainable** and **low-emissions options** for wastewater problems, **protecting surface waters** and **creating new habitats** to enhance **wildlife biodiversity**.

In terms of circularity, natural treatment systems also have the **potential to produce a staggering array of valuable by-products**, including pharmaceutical compounds. **Microalgae and cyanobacteria** are at the forefront of this revolution.



### Entertainment

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**Marine Valmier**, together with other members of the Irish Peatland Postgraduate Group (IPPGG), including **Elena Aitova (NUIG)**, **Kate Flood (NUIG)**, **Hannah Mealy (UCC)** and **Jamie Rohu (TCD)**,

created a podcast about bogs - **Bogcast!**



The first episode is now available on [Anchor](#) and [Spotify](#)!

Follow us also on Twitter ([@bogcast\\_ireland](#))

The “**Bog Books Gathering**” is a special episode made for the [Peatland Gathering 2021](#). Tune in to hear about a wide range of boggy book recommendations from an array of people involved with Irish peatlands.



## Meetings and Conferences

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### Cian White

Presented his work on the **FarmZeroC project** as part of the **Teagasc Signpost series** – catch up on [here](#)



### Chatherin Farrel

The [Peatlands Gathering 2021](#) was held online Oct 7 and 8th with **field trips** organised **across nine counties** between Oct 9th and 18th. The event was a resounding success with **500 registered participants** and input from **55 presenters, chairs and panellists**. Final report can be downloaded [here](#).

The event organisation was led by **Dr. Chatherin Farrel**, with great support from **Matt Saunders** and TCD colleagues including **Laurence Gill, Paul Johnson** and **John Connolly**. **Key messages** will be delivered at a side event in the online [UNEP Global Peatlands Initiative Peatlands Pavilion](#) at **COP26 on Nov 10th**. **Contact Catherine for more details**. Event support for the meeting was provided by the wonderful [Natural Capital Ireland](#) team.



### Dr Ursula King & Jane Stout

Their report from the **Biodiversity Audit** was launched, outlining **10 recommendations for putting biodiversity at the heart of Trinity's** governance, operations, research and teaching.

- see press release [here](#)
- download the full report [here](#)



### Thibault Durieux

Presented his research conducted prior to join our Botany Dept. at [Agora Paleobotanica 2021](#) (21st-23rd October, Liège, Belgium), an association that brings together researchers and amateurs in paleobotany and palynology.

“[My work](#) focused on a new plant of the Early Devonian (Emsian 407-393 Ma), namely *Adelocladoxis praecox*. Our phylogenetic analysis shows aspects of tempo and mode of evolution in the *Cladoxylopsid* plexus”.

**Winner among the best student presentations!**

## EcoEvo Blog Posts

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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 ...

By Andrew McManus - [Myodes glareolus, a model system for studying pathogens during a biological invasion](#)

By Aoife Cahill - [Biodiversity in brownfields](#)



### PHYTOBYTES

**needs your input!**

Whether you are student or staff, please send any news you have, big or small, to Diego D. Bianchi ([dbianchi@tcd.ie](mailto:dbianchi@tcd.ie)) with the subject heading “Phytobytes”.

Let’s share the latest news and always be aware of what is happening at Botany!

