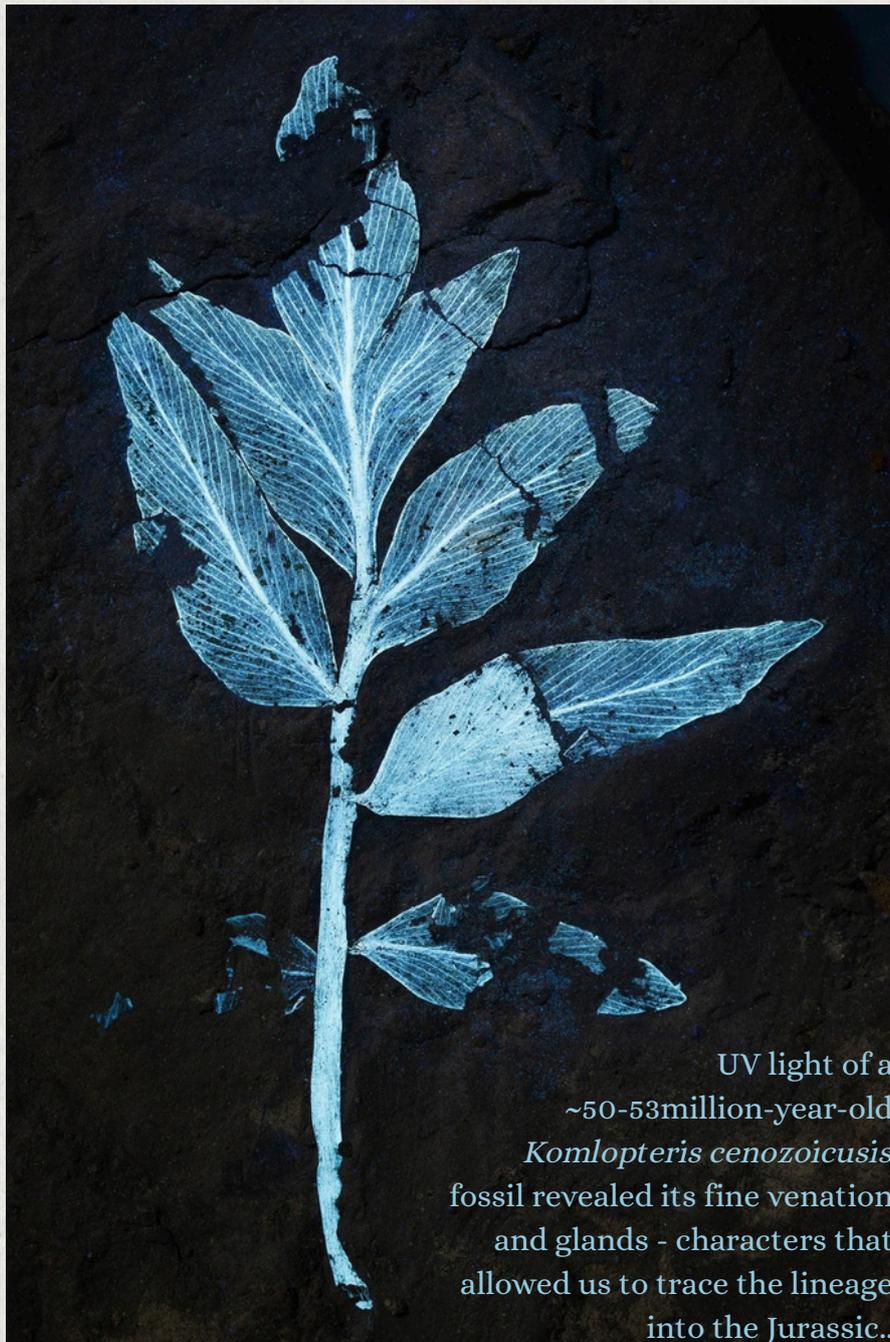


Phytobytes

Botany's newsletter, Trinity College Dublin



UV light of a
~50-53million-year-old
Komlopteris cenozoicus
fossil revealed its fine venation
and glands - characters that
allowed us to trace the lineage
into the Jurassic..

COVER BY
MIRIAM SŁODOWNIK

July - September 2025

People



We're thrilled to welcome all the new postgraduate students and staff members joining the Botany Department! Your fresh perspectives, enthusiasm, and passion for the natural world are invaluable additions to our community. Here's a quick introduction.

Ian Palk

Hi everyone! My name's Ian, and I'm a new PhD student working in Richard's lab. I recently completed my undergrad in America, graduating with a degree in Earth and Planetary Sciences and Integrative Biology, focusing mainly on ecology. My research at Trinity looks at soil respiration and will try to tease apart what factors are the dominant drivers of it — mainly looking at root growth and exudation — which means I've somehow convinced people that allowing me to dig in the dirt all day counts as research. Outside of the lab, I like to spend time hiking, convincing broken electronics to work again, and attempting to persuade my houseplants that Dublin gets enough sun (they remain skeptical). You all have already been so warm and welcoming, and I'm excited to meet everyone in the department!



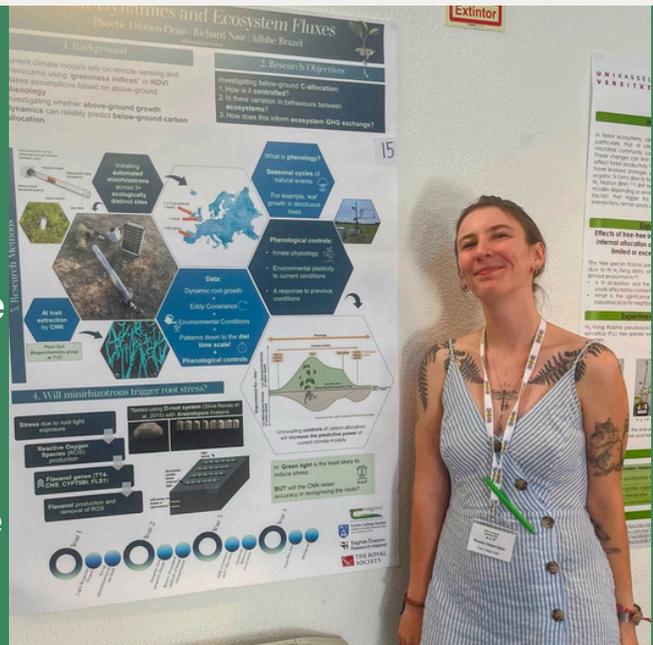
Phoebe Dibben-Dean

Hi everyone, I'm Phoebe and most of you know me, as I started in March this year! I just want to say a quick thank you to everyone for welcoming me into the Botany department, I feel privileged to be part of such a lovely community.

Many years ago, on an island not far away... I did my undergraduate and masters in genetics at the University of Leeds. Currently, I'm doing my PhD in Richard Nair's lab on root dynamics and ecosystem fluxes. As above-ground measurements are easier and faster to collect than below ground data and therefore, assumptions are commonly made about root dynamics and phenology in both field observations and models. My project will be focused on generating datasets on root growth dynamics using automated minirhizotrons and investigating connections to above-ground growth and environmental conditions (i.e. Eddy Covariance), water fluxes and biodiversity. The aim is to improve our understanding of soil greenhouse gas fluxes and ecosystem function.

I've also just returned from a week in Portugal at the Plant Ecophysiology Group workshop (PEPG) where I had the chance to play around with lots of equipment from companies such as Li-Cor, Meter and Walz, and meet plenty of very knowledgeable plant nerds from across Europe. At poster presentation session I presented my plan for the next 4 years and won best poster!

When I'm not at Uni, you'll find me at the pub or running about in the mountains and pretending I'm not competitive.



News

- Fern was invited to speak at the 1^a Conferencia da Mulher – 2025 (1st Women's Conference – 2025) hosted in Dublin by the Grupo Mulheres do Brasil - Núcleo Irlanda (Women of Brazil Group - Ireland Nucleus), which took place August 30th. The conference celebrated the 50 years of cooperation between Brazil and Ireland, and the many Brazilian women who are (re)building their careers here in Ireland. It was attended by at least 100 people, among them the ambassador of Brazil, Flávio Macieira and his wife, Josiane Macieira. The guest list also included the founders of the event's organising group Mulheres do Brasil (Women of Brazil), as well as its president, the businesswoman Luiza Helena Trajano.

Mulheres do Brasil was founded in 2013 to engage civil society in improving the country by fighting for equal rights, employment, security, education, and quality healthcare for all. Currently, the group has more than 100,000 participants across Brazil and nine other countries (and counting!).

Fern spoke for the sustainability committee — Ireland branch, and represented the women of academia, particularly STEM (a field that is predominantly male in Brazil). She spoke about her journey in academia, the research she is developing for her PhD, introduced the All-Ireland Pollinator Plan and encouraged participants to take on more pollinator-friendly actions.



- On the 10th of June, Camille Abadie presented a poster on her PhD work at the Mary Anning Conference on Novel Constraints on the Coupling Between the Water and Carbon Cycles at the National Research Institute for Agriculture, Food and Environment (INRAE), in Bordeaux, France.

- Gayathri Girish Nair partook in the 8th Training Course (Hybrid Virtual + in Person) on New Advances in Land Carbon Cycle Modelling in June, hosted by Dr. Yiqi Luo and Dr. Lifen Jiang from Cornell University. The event was attended by around 87 individuals from around the world comprising professors, graduate students, post-docs and young scientists, all looking to share and grow expertise on mathematical modelling of natural processes, like the carbon cycle.

Key topics discussed included fundamentals of carbon cycle modelling, matrix representation of carbon balance equations, carbon cycle diagnostics for uncertainty analysis, traceability analysis, benchmark analysis, data assimilation, and application of machine learning to carbon cycle research. Being information packed and fast paced, the experience — complete with opportunities for hands-on experimentation using the CarboTrain software — was reportedly very fulfilling. Gayathri particularly enjoyed discussions and insights exchanged at regular real-time global online meetups each day. The guest lectures were delivered by those among the most impactful in the field, such as Pete Smith from Aberdeen University (UK), Melinda Smith from Colorado State University (USA), Cesar Teller from MIT (USA), Bettina Gier from University of Bremen (Germany), Shushi Peng from Peking University (China) to name a few of the most impactful.

- In June 2025, ERC-TERRAFORM Postdoctoral Research Fellow William J. Matthaeus, alongside his NSF-FIXER coinvestigators Jonathan P. Wilson (Haverford College), Wray Jones, Joseph D. White (Baylor University), and Principal Investigator Daniel J. Peppe (Baylor University), successfully organized and taught the inaugural Cells to Ecosystems Paleoecology Summer Training Course at Haverford College in Pennsylvania, USA. The event welcomed ten graduate students from the US, EU, and UK for an intensive ten-day course focused on trait-based paleoecology



- Morad Mitzei received recognition from the Irish Centre for Research in Applied Geosciences (iCRAG). Read more from Morad below: “I am delighted to share that I was among the recipients of the 2025 iCRAG Awards at the Annual Summit. I am grateful to iCRAG for this recognition and would like to sincerely thank my supervisor, Dr. Matthew Saunders, for his excellent supervision and constant support.



- In September we celebrated Sate Ahmad’s farewell to TCD as he embarks into his new journey as assistant professor in UCD. It wouldn’t have been Sate’s celebration without a big party, loads of food, and much music! All the best to Sate! One day we will forgive you for leaving us. [EDITOR’S NOTE: The UCD alum of the Botany department certainly do!]



Upcoming

Keep up with all the regular and planned events in the Botany department.

Botany seminar series

Every alternate Tuesday (roughly), we hold a department seminar at 1pm in the Botany Lecture Theatre. The aim of the seminar is to showcase all of the exciting research going on in Botany at TCD. The seminar is open to all and it's a great way to see what other people are working on, get inspiration, find new collaborations, or just discover something new. Attendance is very much encouraged -it's very friendly! It's also brown bag style, so you can eat your lunch in the BLT (or Lloyd Building). If you would like to give a seminar in the future, please get in touch with Richard Nair (richard.nair@tcd.ie).

Tuesday 14 Oct, 25	Botany Lecture Theatre	Anna Tiley
Tuesday 28 Oct, 25	Botany Lecture Theatre	Christos Chondrogiannis
Tuesday 11 Nov, 25	Lloyd Building, SL LB08	Phoebe Dibben-Dean / Siddiq Mohammed
Tuesday 25 Nov, 25	Lloyd Building, SL LB08	Natalie Rodriguez Castenada
Tuesday 09 Dec, 25	TBC	Will Mattheus

Quantitative Botany Journal Club

The quantitative botany journal club is a monthly meetup where we discuss papers related to plants that have some sort of big data or modelling component. It's very informal and you don't need to sign up or anything, just turn up. You don't need to be an expert on the topic, in fact we frequently spend a long time complaining about how we didn't understand the paper and trying to puzzle it out together. It is also a very good way for early career scientists to learn about reviewing papers.

When: Wednesday 10th of September 3pm

Where: Botany library and [online](#)

You can also join our Teams group [here](#). You can also suggest paper you want to discuss, the criteria are: focused on plants or ecosystem science, quantitative (large meta-analysis, machine learning, process based models) and recent (ideally last 6 months, no older than 2 years)

Ecology, Evolution and Environment Seminar Series

The Ecology, Evolution and Environment seminar series hosts presentations from invited speakers from other institutions on a variety of topics - from microbiology to global change research - and providing opportunities for our research teams to interact with colleagues, collaborators and future collaborators. It is held on Thursday at 13:00, in the Lloyd Building 08

Date	Speaker and Title (research area)	Host
October 9th	Prof James Sharpe, Head of European Molecular Biology Laboratories, Barcelona Research area: Systems biology and computational modelling of complex systems	Paula Murphy
Oct 16 th	Dr Ailbhe Brazel, School of Natural Sciences (Botany), Trinity College Dublin Title: <i>How do plants sense and respond to low oxygen?"</i>	Marcus Collier
Oct 23 rd	Vance Culbert, International Institute for Sustainable Development, Geneva Title: <i>Connecting Research and Policy: The Case of Fossil and Environmentally Harmful Subsidies</i>	Jay Piggott
Nov 6 th	<i>TBD</i>	Marcus Collier
Nov 13 th	Prof Bradley Case, Auckland University of Technology, New Zealand Research area: Geospatial and Ecological sciences	Yvonne Buckley
Nov 20 th	Dr Ben Delory, Utrecht University Research area: plant-plant and plant-soil interactions in natural and managed ecosystems	Richard Nair
Nov 27th	Prof David Ferrier, St Andrews University, Scotland Title: <i>Does an increase in diversity of certain developmental transcription factor isoforms help explain the evolution of vertebrates?</i>	Paula Murphy
Dec 4 th	Dr Rosie Mangan, School of Natural Sciences (Botany), Trinity College Dublin Title: <i>Sustainable pest control in a changing world: Integrating ecology, evolution, and engagement</i>	Marcus Collier

Date	Speaker and Title (research area)	Host
Jan 22 nd	Dr Mark Watson, Edinburgh Botanic Gardens <i>Research area: Taxonomy and Macroecology</i>	Peter Moonlight
Jan 29 th	Dr Christina Tadiri, University College Galway <i>Research area: host-parasite interactions and dynamics</i>	Pepijn Luijckx
Feb 5 th	TBD	Botany hosting
Feb 12 th	Dr Kirsty MacLeod, Bangor University <i>Research area: Behavioural ecology, primarily in reptiles</i>	Jim Barnett
Feb 19 th	TBD	Botany hosting
Feb 26 th	Dr Nuno Queiroz, CIBIO, University of Porto, Portugal <i>Research area: Shark movements</i>	Nick Payne
March 12 th	Dr Christopher Reymond (TBC), University of Helsinki <i>Research area: Human-nature transformations</i>	Marcus Collier
March 19 th	Yet to be confirmed	Zoology speaker TBC- Paula Murphy

Botany Bake Off

For the uninitiated, the Botany Bake Off takes place every Friday at 11:00 in the Botany library where postgrads present their research in the form of baked goods. Each participant presents a short 5 minute talk explaining the basis of their research and how it is related to their cake. The entries are voted on equally across four categories:

- Relevance to Research
- Scientific Content
- Taste
- Appearance

The winners of each of these categories in addition to the overall winner will be announced at the Botany Christmas Party.

At every issue we will share photos of the cakes entry. The one to start is Luke, showcasing a trap culture-the traditional method of capturing arbuscular mycorrhizal fungi.



Publications

Mirzaei, M., Murphy, R., Richards, K., and Saunders, M. 2025. Modulating Nitrous Oxide Emissions Through Grassland Sward Composition: A Comparative Study of Perennial Ryegrass and Multispecies Swards VII EUROSIL 2025, Seville, Spain 2025 · Sep 12, 2025. <http://hdl.handle.net/10261/398890>.

Knetge, A. B., Barbosa, C., Matthaeus, W. J., Barclay, R. S., Glasspool, I. J., Gomez, B., Hesselbo, S. P., Popa, M. E., Ruhl, M., Sunderlin, D., Finn Surlyk, & McElwain, J. C. (2025). Census collection of two fossil plant localities in Jameson Land, East Greenland supports regional ecological turnover and diversity loss at the end-Triassic mass extinction. *Palaeogeography Palaeoclimatology Palaeoecology*, 113266–113266. <https://doi.org/10.1016/j.palaeo.2025.113266>

Khalid, H., & Collier, M. J. (2025). Leveraging machine learning techniques for image classification and revealing social media insights into human engagement with urban wild spaces. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-06731-1>

Phytoart

The Bird Cherry Studio was established in 2020 in Newcastle County Wicklow. Bird cherry is the common name for *Prunus padus*, an unusual native Irish cherry which produces heavily scented white flowers and dark bitter fruits.

The Studio seeks to highlight the delicate beauty and essentialness of Ireland's native plant biodiversity through layering prints of people, buildings and plants. Their artworks explore the themes of plant blindness, including a series of prints dedicated to plants that have gone extinct in Ireland. Drawing a connection between the natural world and Irish built heritage, they say "we simply do not see plants or value their universal importance. Ireland's built heritage conjures similar feelings. We are drawn to forgotten, ancient and unloved buildings that are slowly being taken back by nature or being erased by development from rural towns and villages."

Find more of their art at <https://birdcherrystudio.ie>



Thanks for reading!

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Jie Huang
Design editor
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Call for cover art

We are looking for different art (preferably related to botany) for the cover every issue. Please do not hesitate to send us a photo of your drawing/arts! There is no deadline for this. Email us anytime!

