

The Official Newsletter of Botanical University Challenge

BUC2025 in February; What teams thought; The Semifinalists; Team names; More Chairs; Third Student Botany Festival; Updates on LinkedIn, iNaturalist & TikTok!; Little Blue Bulbs; Botanical books; Moonwort; More botanical tattoos; Botanical roadtrip.

SPRING HAS SPRUNG!



BUC is the student Botanical event of the year! BUC is a friendly and fun competition between teams of UG and PG university students in which all the questions are about plants and botany in its broadest sense - plant identification, plant science, plant pathology, plants in history and culture, amongst other themes. The BUC 2025 online rounds took place on 12, 17 and 26 February. The four top scoring teams were University of Reading, University of Aberdeen, Eden Project University Centre and University of Plymouth. These four will compete in the Grand Finals in Cambridge on 20 August and the BUC 2025 champion will be revealed! As with all the BUC rounds, the finals will be live streamed on our YouTube channel and the recording will available to view for posterity! Following the BUC 2025 finals will be the 3rd Student Botany Festival between 20-22 August and all BUC 2025 participants have already been invited to attend.

BUC 2025 in February: What happened?

Thirty-one teams from across UK and Ireland took part in BUC 2025, the largest number ever! The first three rounds were held on-line on three Wednesday afternoons in February. Each round included 50 questions across an incredible range of botanical topics, from plant ID, genetics, biochemistry, anatomy, reproduction and disease to world food, culture, videogames and important botanists. Some fungi, insects and other creatures that perform vital interactions with plants also featured. All the questions were multiple choice and teams had to select the right answer from five options with 30 seconds to respond in the first 3 rounds, reducing to just 20 seconds in the final two rounds, no easy feat!

Dates

- 20 August: Semi-final and final, starting at 14:00
- 20 - 22 August: Third Student Botany Festival, University of Cambridge Botanic Garden

Read more about BUC on our website!
<https://botanicaluniversitychallenge.co.uk/>

Follow us on Social media: X @BUCBotany
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 TikTok @buc.botany
 Bluesky @bucbotany.bsky.social

BUC 2025 Leaderboard Quarter Final			
Last update: 1 minute ago			
1		Reading (The Fun-guys)	37
2		Aberdeen (Taxon, Taxoff)	35
3		Eden Project Uni Centre (CotyL-Edens)	32
4		Plymouth (Botanists of the Barbican)	30
5		Oxford (Oxford RADwords)	29
6		Galway (Claddagh Clovers)	28
6		RBG Kew (Plantastic 4)	28
7		Queen Mary London (Tree-mendous Team)	26

Continued: In Round 1 **Dr Chris Dixon** (Senior Curator, British & Irish Herbarium, NHM, London) asked the questions. Between rounds, teams came on screen to chat about on the questions and how much they were enjoying the quiz.

At the end of round 1, the 22 teams with the highest scores went through to Round 2. Top of the Round 1 leader board was was **Taxon**, **Taxoff** from University of Aberdeen with an amazing 40 out of a possible 50 points. Next were **Botanists of the Barbican** from University of Plymouth (36 points). Then five teams each with 34 points, **Cotyl-Edens** (Eden Project University Centre), **Royal Holly-Ways** (Royal Holloway University of London), **Plantastic Five** (University College Dublin), **Fun-Guys** (University of Reading) and **Oxford RADworts** (University of Oxford).

These 22 teams competed in Round 2 the following week when **Professor Maarja Öpik**, Professor of Molecular Ecology & Director of the Institute of Ecology and Earth Sciences, University of Tartu, Estonia asked a further 50 questions. The 8 teams with the highest scores went through to the quarter-finals.

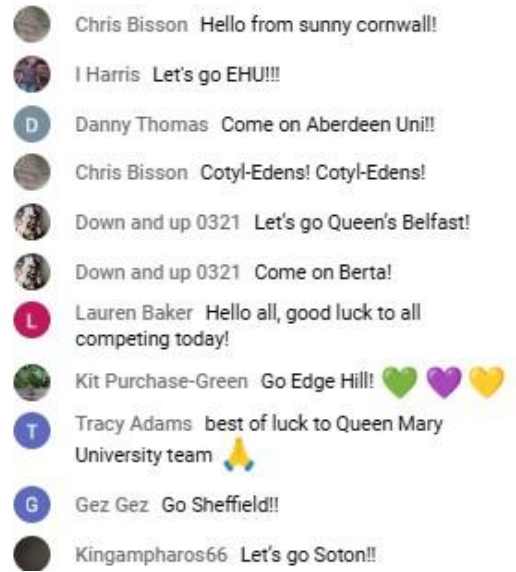
Aberdeen again led from the start, with Plymouth, Reading and RBG Kew close behind while the other four were from the Eden Project University Centre, University of Oxford, University of Galway (**Claddagh Clovers**) and Queen Mary University of London (**Tremendous Team**). Single points separated the scores of these and other teams. All who watched this exciting competition agreed that the knowledge of all these teams across a wide range of plant-related topics was incredible!



Teams and some behind-the-scenes BUC staff at the start of Round 1 of BUC 2025

Finally, the afternoon of the quarterfinals arrived on 26th February. **Professor Jennifer McElwain**, the 1711 Chair of Botany at Trinity College, Dublin and Director of the Trinity College Botanic Garden quizzed the eight remaining teams.

Between rounds while waiting for the scores, she and Professor John Warren, one of the original founders of BUC gave their insight into the questions. Quite often those questions they considered difficult were answered effortlessly by the teams, again showing the impressive knowledge of the young botanists!



Some of the chat from the world-wide audience of BUC 2025

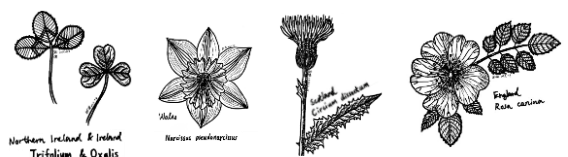
Finally, after all 50 questions, the BUC 2025 semi final teams were revealed: the **Fun-guys** from University of Reading, **Taxon**, **Taxoff** from University of Aberdeen, the **Cotyl-Edens** from the Eden Project University Centre and **Botanists of the Barbican** from University of Plymouth.

Now we can't wait for the exciting semi-final and final on 20th August in Cambridge. There will be a live audience of BUC students but it will also be live streamed and recorded.

Re-visit the excitement of the February BUC 2025 rounds by visiting our YouTube Channel <https://www.youtube.com/@BotanicalUniversityChallenge/streams>




The four semi finalist teams, with Professor McElwain, Professor Warren and Dr Mitchley at the end of an amazing afternoon's competition



The Four Semi-finalists

Welcome to the BUC 2025 semi-finalists: from University of Aberdeen, University of Reading, University of Plymouth and the Eden Project University Centre.



Taxon, Taxoff

Credits

Amy Beach	2 nd Year Plant and Soil Science BSc (Hons)
Santiago Castaño Siroso	1 st Year Botany PhD
Max Fontaine	1 st Year Botany PhD
Taran Murphy	2 nd Year Plant and Soil Science BSc (Hons)
Justin Saddler	3 rd Year Plant and Soil Science BSc (Hons)

a.beach1.23@abdn.ac.uk
s.castanosiroso.24@abdn.ac.uk
m.fontaine.24@abdn.ac.uk
t.murphy.23@abdn.ac.uk
j.saddler.22@abdn.ac.uk

University of Aberdeen



The Fun-Guys

Be a good spore-t and give us some more support!

University of Reading

André C. Parise
Captain: Becky Dillingham
Johana Simonova
Julija Fedajevaitė
Catherine Martinez

University of Reading

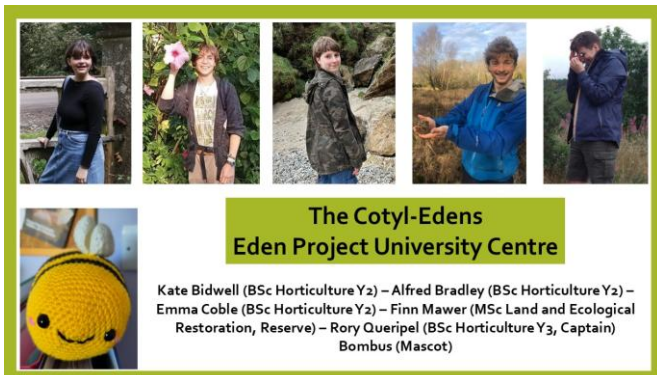


BOTANISTS & BARBICAN

University of Plymouth

Jess Duffy
Simona Corbiog
Lyd Taylor
Rilly Fullwood
Dariusz Hunt

University of Plymouth



The Cotyl-Edens Eden Project University Centre

Kate Bidwell (BSc Horticulture Y2) – Alfred Bradley (BSc Horticulture Y2) – Emma Coble (BSc Horticulture Y2) – Finn Mawer (MSc Land and Ecological Restoration, Reserve) – Rory Queripel (BSc Horticulture Y3, Captain) – Bombus (Mascot)

Eden Project University Centre

Words from from our BUC 2025 Teams



Oxford Radworts – University of Oxford

By Young Jun Lee



Oxford RADworts

University of Oxford, BUC 2025

M Biol students:

Will 3rd yr Luce 3rd yr Jessie 3rd yr Weina 4th yr JUN 4th yr

Team mascot: Oxford ragwort (Senecio squellosus L.) (Asteraceae)

*Images: <https://thebaria.plants.ox.ac.uk/hol/plants/400/profile/517/Seneciosquelloidus>

Hello! We're the Oxford Radworts 🌻 from the University of Oxford. We're a team of five biologists this year with two of us (Weina and Jun) in 4th year and the other three (Luce, Jessie and Will) in 3rd year. Only Will had previously competed in Botanical University Challenge, but some of us had heard of it through friends. Despite all being generally excited about plants, we each have different reasons for falling in love with them - from ethnobotany and history of botany to plant conservation and ecology!

Forming the team and going through the rounds was fun precisely because we each had these different perspectives to offer (i.e. jumping and shouting out answers very loudly whenever a question on someone's niche interest came up). In hindsight, the breadth of topics that the questions covered was a nice reminder for just how much there is to talk and learn about plants. Seeing all the plant enthusiasts from across the Isles was lovely as well.

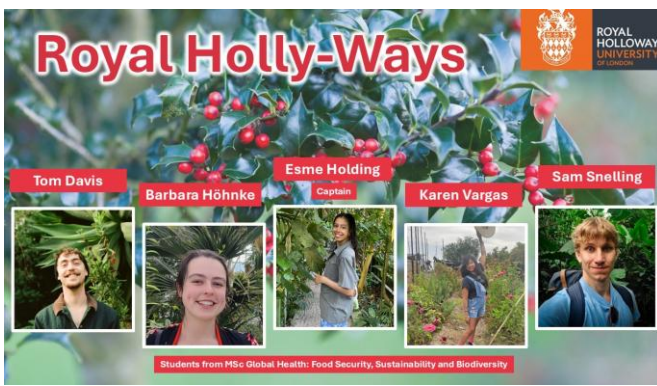
One of the things that excites us the most about the Festival is getting to make that connection. I think that most botanists would agree that learning first-hand about the wonderful world of plants from other knowledgeable and passionate botanists was an important kickstart in their journey. The Festival sounds like a fantastic way to do just this. The BUC was a fun and low-pressure way to geek out about plants, and we would definitely recommend anyone interested to give it a go!

Royal Holly-ways – Royal Holloway University of London

By Esme Holding



Our team heard about BUC through communications at Kew Gardens (the partner university for our MSc course) – advertised by a previous Kew participant. One of our members also competed the previous year during their BSc, so knew of the challenge.



We decided to enter after hearing about previous experiences competing and watching past BUC clips on YouTube - it looked like so much fun! We enjoy quizzing and everything plants, and BUC combined those passions. Our team name came about by incorporating a plant with our university name. We had a few options - Royal Laurel-Bays was a close second.

We absolutely loved the experience! Competing in the knockout rounds was exciting and entertaining. We enjoyed the chance to show off the knowledge we'd gained from our education and experiences. We also loved how inclusive the challenge was, the questions were diverse and people of all different backgrounds were competing. The only downside was getting knocked out!

We are very excited for the Cambridge festival - to network with other enthusiastic botanists, learn from inspiring people and potentially open new doors. We will encourage people to represent our university in the competition next year. As master's students leaving the university in September, we will speak to our course leaders about advertising this possibility. They were just as excited as us to have a Royal Holloway team competing! A huge thank you to everyone who organises BUC and the student botany festival - we feel so grateful to have this opportunity.

The Claddagh Colvers - University of Galway

By Darragh Coyne

We first heard about BUC from our lecturers and decided to give it a go not knowing how we were going to get on with it.



Our experience with BUC was great, as it was a lot less daunting once we got into it. The atmosphere is really welcoming, and it was a good opportunity to test our knowledge. The breadth of topics that were covered in the challenge led to a really informative experience, as well as a good challenge.

We're really happy with how we did and we found the other teams to be really supportive. The Cambridge Festival is going to be a great opportunity to meet other botanists, and we can't wait to see how the finals turn out!

We would strongly recommend other people from our university take part in the challenge in future years, as even people outside of strictly botany can bring a lot to the challenge. Thanks so much for having us!

In The Hot Seta - Queen's University Belfast

By Eibhlinn Fee, Dean McCullough, Berta Beloviczky, Jack Alcorn and Amy Weir



2025 was the first year that Queen's University Belfast has taken part in Botanical University Challenge, but certainly won't be the last! Inspired by a friend of two of our team who had won last year's BUC and thought it would be a place for us too, we decided to give it a shot!

With the support of our school office we sent an email to all UG and PG students, with information about the Challenge and how to register interest - and which students did!



To select team members, we put together a quiz with questions similar to those asked in BUC. With our team assembled, we then began brainstorming names and landed on *In the Hot Seta*, combining the idiom 'In the hot seat' with 'seta', the stalk supporting the capsule of many mosses and liverworts. There was then just a simple registration form to complete and some last minute revision to cram in before we were taking part!

The knockout rounds, though competitive, were great fun and we enjoyed putting our knowledge to test while also learning many new things. Now we eagerly look forward to meeting the other teams and organisers at the Student Botany Festival at the University of Cambridge in August to further our journey. We'd really recommend that students put a team together next year - it's a great experience all round!

Team Name Competition

By Jonathan Mitchley

The ever-popular BUC team name competition has taken place again this year. With a recording-breaking 31 teams participating in BUC 2025, there were many super fun names to choose from. The competition opened on 12 February, day 1 of the online rounds, and closed at the end of that month.

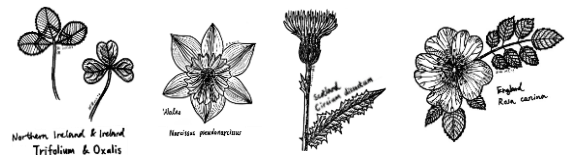
We received 281 responses - another record - and all team names got some votes but there was a cluster of four top-scoring names, receiving 27%, 16%, 14% and 13% of the votes respectively.

The other names received less than 10% of the votes, so with the kind of generosity folks are becoming used to from BUC, we have decided to award 4 prizes this year, and these will be announced and presented to the four botanical top wordsmith teams during the prize giving ceremony after the finals of BUC 2025 at Cambridge University Botanic Garden on 20 August 2025!

And in anticipation, here are all the team names. Which do you think topped the vote?

Institution	Team name
University of York	Yorchid
University of Portsmouth	Pain in the Grass
The University of Reading	The Fun-guys
Prifysgol Aberystwyth University	Xylem Asylum
Edge Hill University	Sedge Hill
Royal Botanic Garden Edinburgh	The Leguminati
Durham University	The Merry Stems
University of Southampton	Good Chives Only
University of Edinburgh	Thistle be Fun
University of Plymouth	Botanists of the Barbican
University of Aberdeen	Taxon, Taxoff
Royal Holloway, University of London	Royal Holly-Ways
Trinity College Dublin	HOT TO GROW!
University College Dublin	Plantastic Five
Eden Project University Centre	Cotyl-Edens
Queen's University Belfast	In the Hot Seta
University of Oxford	Oxford RADworts
Kew Gardens	Plantastic 4
Queen Mary University of London	Tree-mendous Team
Harper Adams University	Harper Hemlocks
Imperial College London	Anthoceratops
University of Nottingham	Phyte or Flight

University of Salford	Vine and Dandy
University of Dundee	Dioecious Dundee
Oxford Brookes University	Oxford Ragworts
University of Bristol	Bristol Sativa Divas
Anglia Ruskin University	First Things First, Amaryllis
University of Leeds	Manton Minions
University of Cambridge	Cambridge Botany Division
University of Galway	Claddagh Clovers
University of Sheffield	The Sheffield Sporangia



Who will be asking the questions in BUC 2025 Semi-final and Final?

Two distinguished botanists will be asking questions of the four teams in the semi-finals and finals of Botanical University Challenge 2025.



Professor Beverley Glover is Director of Cambridge University Botanic Garden and Head of the Evolution and Development Group in the Department of Plant Sciences at the University of Cambridge. Her research investigates the evolution and development of features in flowers that attract pollinating insects. She combines and integrates several approaches to this problem, using molecular biology as well as functional analyses with bumblebees and other pollinators.



Professor Paul Ashton is Professor of Botany at Edge Hill University. His research interests include landscape connectivity, plant identification and the ecology of grasslands. He has worked with several taxa but is particularly fond of the sedges.

He was one of the co-founders of Botanical University Challenge and is currently the President of the Botanical Society of Britain and Ireland (BSBI). About Botanical University Challenge he has this to say:

One of my aims as BSBI President- indeed one of my career aims- has been to promote and popularise botany. Without the next generation of talented and committed individuals the subject will disappear and now we need an understanding of plants more than ever. BUC is a significant part of the aim and it is incredibly rewarding to see it flourish and to see it generate so much enthusiasm. It is an immense honour to be asked to chair one of the live rounds. I look forward to the event as always.

We are also very grateful to Dr Chris Dixon who was willing to step in at short notice and ask the questions in Round 1.



Dr Chris Dixon has a PhD in botany from the University of Vienna and is an author, expert field botanist and plant photographer. He is curator of the British and Irish Herbarium at the Natural History Museum, London which has representatives of almost all the native and established non-native plant taxa, including 1,163 type specimens. He has created an interactive key to the flora of Britain and Ireland, MAKASUES, and is BSBI county recorder for East Gloucestershire.

Welcome to the Third Student Botany Festival!

By Dr Raffaella (Raffy) Hull, Cambridge University Botanic Garden

Spring is here, and with it, we are busy planning the programme for the BUC Third Student Botany Festival. This year, we at Cambridge University Botanic Garden are delighted to host the event, bringing together students from across the UK and Ireland for three days of discovery, discussion and hands-on experience with the world of plants.

The festival is about more than just botany; it's a space to connect with fellow students, exchange ideas and explore the future of plant science and biodiversity conservation. Whether you're deep into research, considering career paths or simply fascinated by the diversity of plants, there will be something here for you.

One of the highlights of this year's programme is the Plant Science Showcase, celebrating the wealth of plant-related research taking place in Cambridge. During this panel, leading researchers will share their work – from monitoring the effects of climate change on meadows to understanding how nutrient trade is regulated between plants and symbiotic fungi. This is an opportunity to hear from experts shaping the field and to ask the big questions about where plant science is heading.

For those thinking beyond academia, the Careers Outside Academia Panel will introduce the many paths available to botanically skilled students. A background in botany and plant science don't just lead to research; it opens doors to conservation, horticulture, science communication, policy and industry. You'll hear from professionals from organisations including Fauna & Flora and the World Conservation Monitoring Centre, who have built diverse and rewarding careers, proving that a background in plants can take you in many directions.

But this festival isn't just about listening - it's about getting outside in the Garden and developing your botany skills. You'll be able to choose from a range of workshops, whether you're interested in tropical botany, botanical Latin or techniques in curation. There will be something to match your interests - or challenge you to engage with plants in a whole new way.

Cambridge in summer is the perfect setting for a celebration of botany. We can't wait to welcome you to the Garden, where we'll share ideas, build connections and, most importantly, celebrate our shared passion for plants. Watch this space for more details on the programme later this year!



View across the Main Lawn of Cambridge University Botanic Garden. There will be tours of the Garden and botanical workshops that make use of the plant collection. Image credit: Howard Rice.



The Sainsbury Laboratory, which is located within CUBG and houses the Library and Herbarium. Talks and panel discussions will take place in the Sainsbury Laboratory Auditorium, and workshops will take place in the lab's breakout spaces. Image credit: Howard Rice.



The Sainsbury Laboratory Courtyard, located next to the CUBG Café and opens out into the Garden. The Careers Showcase and networking opportunities will take place here (weather dependent). Image credit: Howard Rice.

Update on the BUC LinkedIn group

By Alastair Culham, University of Reading

The BUC LinkedIn group aims to provide continuity of contact among like minded botanists that persists after graduation. Its growth has been slow but steady with 123 current members comprising mostly the BUC student competitors but also a growing group of academics that have acted as team mentors. We are using the group to promote botanical events, job adverts and PhD opportunities; botanical publications, talks and other planty news. This year we have advertised around 40 PhD places, eight specialist botanical jobs and a range of student placements.

It's also a must for keeping up to date with the latest developments in BUC. If you are already a member, please think about posting your news here. Are you a PhD student who has just published a paper? You can share it here. This is a forum that will thrive if you use it and each new year of BUC will add new recruits.

Lauren Baker • 1st
Secondary Education Officer at University of Oxford Botanic Garden and Arbo...
★ Admin • Admin • 4mo

Plantlife are a great organisation and have two internships available at the moment, one on the peat-free team and one on the policy and advocacy team. ...more

Plantlife Peat-free Campaign Intern
environmentjob.co.uk

7 1 comment

Like Comment

Add a comment...

Alastair Culham • You
Associate Professor of Botany at University of Reading
★ Admin • Admin • 3mo

RHS Science and Collections Summer Studentship during summer 2025

We have four projects next year: ...more

Science and Collections Studentship / RHS Gardening
rhs.org.uk

Billy Fullwood and 1 other

Like Comment

73 impressions View analytics

Jonathan Mitchley • 1st
Associate Professor of Field Botany at University of Reading
★ Admin • Admin • 1mo

And then there were 22! Twenty-two plantastic teams compete in knockout round 2 on Wednesday 19th February starting at 2pm GMT, watch the live stream on the BUC YouTube Channel! The top 8 teams (more if there are ties for 8th place) ...more

BOTANICAL UNIVERSITY CHALLENGE

Round 2 - 19th February 2pm Online
Quarter Finals - 26th February 2pm Online
Semi-finals & Finals - 20th August
2pm Sainsbury Lab, CUBG

Download play along sheets from BUC website
Watch livestream on BUC YouTube

Cambridge University Botanic Garden

We are grateful for support from the New Phytologist Foundation, BSBI, FSC and others currently in discussion

Snap, Tag, Identify: BUC's iNaturalist Project Smashes Milestone with 36,500 Records

By Kian Hayles-Cotton, University of York

You and 6 others

Highlight this post by pinning it at the top. Pin this post

Alastair Culham • You
Associate Professor of Botany at University of Reading
★ Admin • Admin • 3mo

The new CROCUS Doctoral Landscape Partnership PhDs are now advertised online - I've got a couple of projects on offer
<https://lnkd.in/eAekCyV6> ...more

Find PhD CR2025_48: The mystery of widespread endemics: why do some species spread while others don't? at Universi...
findaphd.com

2

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130 impressions View analytics

Botanical University Challenge iNaturalist Network

About

In association with Botanical University Challenge, this project collects all botanical (as well as mycological and phylogenetic) records made by past participants of BUC. Please feel free to help each other identify species and put all the vast botanical knowledge that you've learned to good use!

Read More Project Journal

Overview	36,461 OBSERVATIONS	3,899 SPECIES	1,487 IDENTIFIERS	36 OBSERVERS	Stats
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Recent Observations

Matali Rumex crispus 2 a day ago	Ivy-leaved Crowfoot Ranunculus hedraeus 2 2 days ago	Lungwort Pneumonia officinalis 2 a day ago	Calcareous Rimmed Lichen Cladonia calcarata 2 11 days ago
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The BUC recording project on the popular citizen-science recording platform iNaturalist has reached a new high with over 36,500 records, covering 3900 species, between the 36 students who have taken part so far. The project collects records submitted by BUC alumni and current contestants on iNaturalist where students can share photos of what plants, fungi or algae they've seen whilst out and about, tag the location and date. You can also put those identification skills that you've learnt for BUC to good use by helping to identify other students' records.

These records go through to GBIF and iRecord where they can be used by international and UK scientists to monitor changes in the distribution of individual species, which is especially important in the ongoing climate and biodiversity crises.

Recent highlights include an Easter Orchid (*Earina autumnalis*) from New Zealand from Alfred Bradley, *Coleophoma empetri* - a fungus that attacks Crowberry in West Yorkshire from Jake Dalzell, *Uromyces aloes* - a rare fungus that attacks *Aloe* species from Finn Harrigan on the Isle of Wight and Tunbridge Filmy Fern (*Hymenophyllum tunbrigense*) from Dartmoor by Jess Duffy.

If you'd like to get involved, set up a free iNaturalist account, join the project called: Botanical University Challenge iNaturalist Network, and email: Kian Hayles-Cotton (kian.hayles-cotton@york.ac.uk).

BUC Gets Social: A New Botanical Chapter Begins on TikTok (BUC-Tok!)

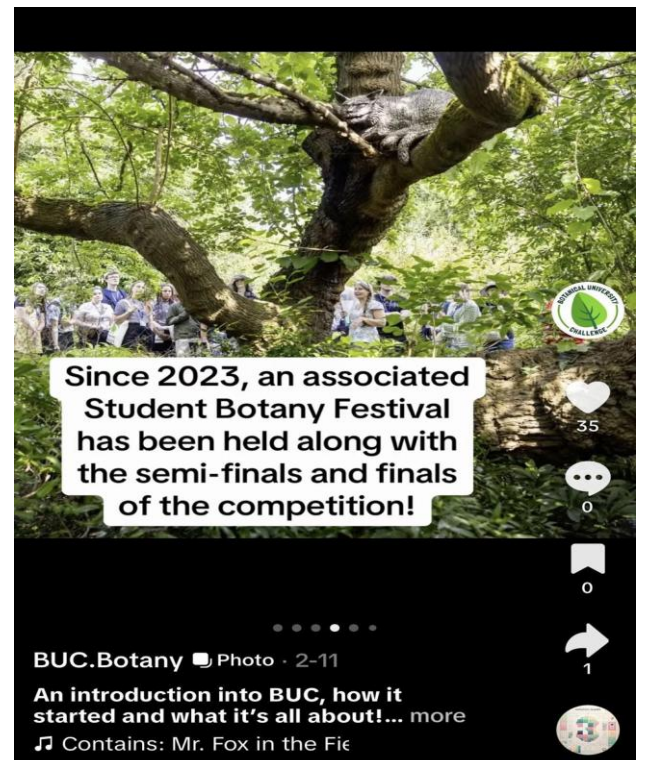
By Izzy Beresford, University of Southampton

The vision for the BUC TikTok is ultimately to promote BUC, to get more students involved with the challenge and the festival. So far, I have only made videos about the progress of the competition, but I have big plans.

I want start a series called 'Why botany, why now?'. Of course, I must give all the credit for this title to Dr Sandra Knapp (a personal hero) as she often poses this question in her speeches and lectures (See The Thyme's interview with her [here](#). In November of last year, I was lucky enough to attend a talk by Sandy at the BSBI annual conference 2024



Ever since then I couldn't get it out of my head and I kept thinking why botany, why now? For my series I would like to visit botanical gardens, formal gardens, gardens of family and friends, nurseries and other botanical attractions and ask willing participants the question: why botany, why now?



The answers to this question are never ending, but I hope to find the common theme between them. In a time of imminent ecological collapse, we must look to our plants, fungi, and algae - they were here first, weren't they?! I hope this series will also showcase the different avenues of botany and show younger people the diverse botanical career opportunities available. I also hope this series will give visibility to smaller, less visited gardens and nurseries to give recognition to the amazing people who work there.

Of course, the Student Botany Festival will also be a wonderful opportunity for continuation of my series. As well, I will make videos about the competition and festival to show what BUC is all about and how it is the unmissable botany event of the year. Maybe we will even get an updated rendition of [Botanical Rhapsody](#) for TikTok - I dare to dream!

Little Blue Bulbs – years studying their relationships – and then a viva exam!

By Dr Hannah Hall, University of Reading

The bulbous subtribe Hyacinthinae - which I affectionately call my “little blue bulbs” - is a remarkable group of over 300 spring-flowering species in the Asparagaceae family (subfamily Scilloideae).



Three of Hannah's favourite plants, *Muscari armeniacum* (grape-hyacinth), *Hyacinthoides non-scripta* (bluebell) and *Prospero autumnale*, (autumn squill). Image credit: Hannah Hall

They are found across the Mediterranean, the Irano-Turanian region, and even as far as Eastern Asia. Many of these plants are well known in horticulture, including the popular garden and grape hyacinths.

Back in the 1990s, botanists grouped these species into 21 different genera based on their morphological characteristics, mainly floral and bulb. However, until now, no one had thoroughly tested whether these groupings hold up when looking at the plants' DNA. My research set out to fill this gap by using modern genomic techniques to build detailed phylogenomic trees for Hyacinthinae, sampling widely across its generic and geographic range.

The results showed that, for the most part, DNA and traditional morphology tell the same story - meaning that the genera defined by morphological traits generally align with their evolutionary relationships. However, some boundaries needed adjusting, particularly within the *Fessia* group. When looking more closely at *Muscari*, I found that the DNA and morphological traits did not quite match up. This likely stems from a process called incomplete lineage sorting, where species retain genetic similarities from their ancestors even after diverging into distinct forms.

My research also uncovered new insights into the biogeographical history of Hyacinthinae. By analysing protein-coding genes from chloroplast DNA, I traced the origins of these fascinating bulbs back to the Late Oligocene, around 25–30 million years ago, in what is now sub-Saharan Africa. As Earth's landscapes shifted, Hyacinthinae expanded into the Mediterranean, with its major lineages beginning to diverge during the early to mid-Miocene - a time of mountain building and a shift towards a drier and more seasonal climate. This timing aligns with the evolution of other Mediterranean bulbous plants like *Narcissus* and *Gagea*, which were likely pre-adapted to these conditions thanks to their nutrient-storing underground bulbs. This challenges the common assumption that the Mediterranean's rich plant diversity is primarily shaped by the emergence of its modern climate.

In February 2025, I had my viva. These are often seen as daunting and stressful, but I found mine to be both enjoyable and engaging. While it is still an exam - and exams are always a little nerve-wracking - it was also a fantastic opportunity to discuss my research with experts who were genuinely interested in my work. To prepare for my viva, I read through my thesis in two stages. First, I gave it a careful read to catch any grammatical mistakes and refresh my memory on the key points. Then, I went through it again, this time thinking like an examiner - highlighting areas where I might be questioned. For example, I expected to be asked why I chose one analytical method over another or to justify my choice of generic boundaries. To stay one step ahead, I wrote my answers on post-it notes and stuck them in my thesis. Since I could bring it into the viva, this meant I had a handy set of quick-reference notes if I needed them. It turned out to be a great way to feel more confident and prepared!

My viva lasted 2 hours and 30 minutes - packed with fascinating questions, and critical discussions. Then came the nerve-wracking wait as the examiners deliberated. When I stepped back into the room, they sat me down, looked at me, and said the words I'd been working toward for years: "Congratulations, Dr. Hannah Hall."



Hannah after coming out of her viva surrounded her supportive friends and mentors. Image credit: Dr Hannah Hall

In that moment, the imposter syndrome (which almost every PhD student knows all too well) vanished. I had done it. I was officially a Doctor - of the "little blue bulbs" that had captured my heart and curiosity for the past four years.

Leaf Through This: Books Rooted in Botany and Lore

by Catherine Martinez, University of Reading

Let's take a moment to look around our spice racks, medicine cabinets, and the dark corners of human history. Plants and fungi infuse our everyday lives in ways we often don't consider. From folklore to flavourings, plants shape our experiences of the world and these books are a wonderful snapshot of how.



Kew: Witch's Garden - plants in folklore, magic and traditional medicine by Sandra Lawrence

Plants have long been a part of human cultural history, inspiring their own folklore and a sense of the mythical. Kew's *Witch's Garden* is a wonderful snapshot of some of those stories, exploring how cultures have historically thought about and used plants in culinary, medicinal, and spiritual practices

Sandra Lawrence provides overviews of the vast diversity of uses and thus stories a single plant can have without overloading the reader, instead offering a well presented nugget to capture the curiosity of someone wanting to learn more.

Witch's Garden also gives an introduction to concepts such as the Doctrine of Signatures and various harvesting practices such as tying a dog to the mandrake instead of hand picking. For such an easy to read and concise book, *Witch's Garden* is packed with knowledge.

As a bonus, the book is beautifully illustrated with artwork and photographs from Kew's herbarium. All of this serves to bring to life the plants that have permeated our lives, kitchens and cultures.

***Most Delicious Poison: The Story of Nature's Toxins - from spices to vices* by Noah Whiteman**

This fun and easy to digest book explores the evolutionary relationships between humans and our poisons. From caffeine to capsaicin to cyanide, Whiteman takes the reader on a tour of some of the compounds so intrinsic to our everyday lives. With explanations of the biochemistry, evolutionary arms race, and social context of these natural toxins, the reader comes away from *Most Delicious Poison* with a new perspective on human and natural history. I found the interweaving of anecdotes to break up the denser biochemical sections effective and interesting, lending a more personal angle to the text. This book is also easy to dip in and out of, making it a perfect read for the morning commute, so long as you don't mind a few odd looks! Overall, *Most Delicious Poison* is well worth a read, both for the wealth of information but also the human story within.

***The Lost Apothecary* by Sarah Penner**

If fictional poisons are more to your taste, *The Lost Apothecary* might be your next read. This historical fiction tells the story of an apothecary in 1791 where poisons are sold to desperate women to free them from the men in their lives, and of a modern day aspiring historian investigating the "apothecary murders". These two timelines weave and collide in a tale of vengeance, community, and secrets, set to a backdrop of the plants and potions used to kill.

This book is perfect for fans of historical mysteries and non-linear narratives.

While perhaps not the most botanically themed book for this list, I always find the fiction surrounding poisons derived from plants to be that much more gripping when I've taken the time to read up on and study those plants involved.

Sleeping Beauty of the Plant World: Meet Moonwort

Daisy Baggs, Royal Botanic Gardens Kew



Who can resist a cryptogam with a vernacular name as alluring as the Moonwort? Known to science as *Botrychium lunaria*, the genus is derived from the Greek *botrys* referring to the grape-like arrangement of the sporangia, and the specific epithet *lunaria* from the Latin *luna* describing the crescent moon shaped pinna of the vegetative frond. It resides in the family Ophioglossaceae, alongside the closely related and equally curious Adder's Tongue Fern.

The rather simple aboveground body of this curious plant is made up of just one vegetative and one fertile frond growing from a single stem. This simplicity belies the complexity of its subterranean life cycle which has fascinated plant fanatics for years.

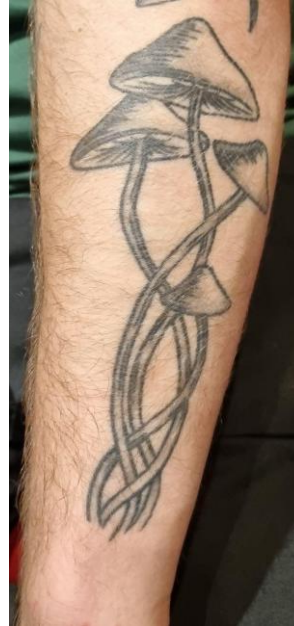
If one dared to anthropomorphize Moonwort it could be compared to an unreliable friend, for this plant may not deign to appear for years. It can remain in its below ground state for up to ten years, where it furnishes its nutritional requirements with carbon produced by mycorrhizal fungal partners. Its spores drop and make their way deep into the ground to avoid the light, before it is able to germinate.

Despite its elusive nature, *B. lunaria* is widespread across the UK, although in recent times observations suggest their population is in decline. Although it is said to be a northern and upland species, it favours a variety of habitats including sand dunes, unimproved meadows, and grassy moors and heaths. Its fronds, making at most only 25cm, are easily missed, but its unique morphology makes it a real treat to find.

This curious plant has a rich association with magic and folklore, perhaps in part due to its ephemeral nature. It was thought to have the power to unfasten locks and remove the shoes from horses' feet. Described as a vulnerary herb, the fronds are said to have been used as a poultice to heal wounds or consumed to treat illness – but in this day and age not recommended!

Skin Deep Science: The Tattoos of some of Britain's Plant Lovers

Admire the tattoos on some of the botanists at the Botanical Society of Britain and Ireland's annual conference at the Natural History Museum, London, in November. As well as accurate drawings of plants, there are lichens, fungi and insects!



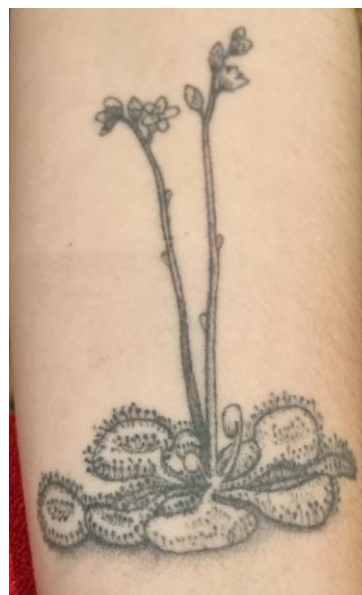
Fungal fruiting bodies



Two plants and the head of a moth



A foliose lichen



*Round-leaved sundew
(*Drosera rotundifolia*)*

The Great Green Getaway: Exploring Botanic Gardens Across the UK & Ireland

By Meriel Jones, BUC Planning Team

If you could spend a week visiting botanic gardens in the UK and Ireland, which ones would you go to? Some are major world institutions while others focus on their local communities. However, all bring amazing plants to people.

How about starting in Scotland? The city of Inverness in the Scottish Highlands hosts [Inverness Botanic Garden](#) founded in 1993 that is very much part of the community, with social activities alongside exotic plants of desert and the tropics in glasshouses to enjoy on even the coldest days.



Inverness Botanic Garden. Image credit: Wikimedia Commons, Jim Barton, CC BY-SA 2.0

From there, travel south to Edinburgh and the second oldest botanic garden in the UK. [Royal Botanic Gardens Edinburgh](#) is 70 acres of landscape that began as a physic garden in 1670. It is now globally important for biodiversity science, horticulture and education (including a BUC student team - The Leguminati!), and home to thousands of plants and employs over 250 people. Then on to its partner [Logan Botanic Garden](#) in an almost sub-tropical region near Cairnryan that allows a collection of southern hemisphere plants. It is also conveniently near the car ferry to Northern Ireland.

After the voyage, the first visit is to the [Botanic Gardens in Belfast](#) founded in 1828 and now run by Belfast City Council. It has a spectacular palm house and tropical ravine and the local University boasts a brand new BUC 2025 team - In the Hot Seta!

Further south lies the [National Arboretum of Northern Ireland at Castlewellan Forest Park](#) now owned by the government. This started as a private estate in 1740 and by 1900 held over 1800 species of trees and shrubs. Neglect later in the century reduced the number but it's still internationally important.

Driving further south into Ireland there is one of the [National Botanic Gardens of Ireland at Glasnevin](#), near the centre of Dublin. Started by the Dublin Royal Society in 1790, this garden is of international importance for its scientific research, education, plant collection and herbarium. (Two colleges and two BUC 2025 teams in Dublin of course, HOT TO GROW, and Plantastic Five!). Then take another car ferry back across the sea to the [National Botanic Garden of Wales](#) near Carmarthen. The famous Great Glasshouse is a single span and home to plants from Mediterranean climates around the world.

Continuing westward this botanic garden road-trip ends with [University of Bristol Botanic Garden](#). It's mission to educate, communicate and conserve. Starting in 1882 with a grant of £15, it has moved around the city and arrived at its current location in 2004. Of course, that city hosts yet another BUC 2025 team - Bristol Sativa Divas!

There are many more botanic gardens in the UK and Ireland. Which ones would you visit on your road-trip?



One Botanical Garden road-trip, but it would take much longer than 21 hours 28 minutes

A Plant Joke

What is the clumsiest plant?

A Whoopsie Daisy!

Mastering the Next Step: Navigating Postgraduate Pathways

By Meriel Jones, BUC Team

Masters degrees have grown in popularity very substantially to the point where they are starting to become part of the typical graduate pathway. There is considerable diversity in the type and organisation of Masters degrees. Traditionally, free-standing Masters degrees are taken after completing a first degree (e.g. BSc) and last a full calendar year. However, some institutions offer students an integrated Masters (e.g. MBIol) instead of a Bachelor degree, requiring at least 4 years of study. This adds an extra year to a BSc degree for an industrial, vocational or research placement, with additional academic study.

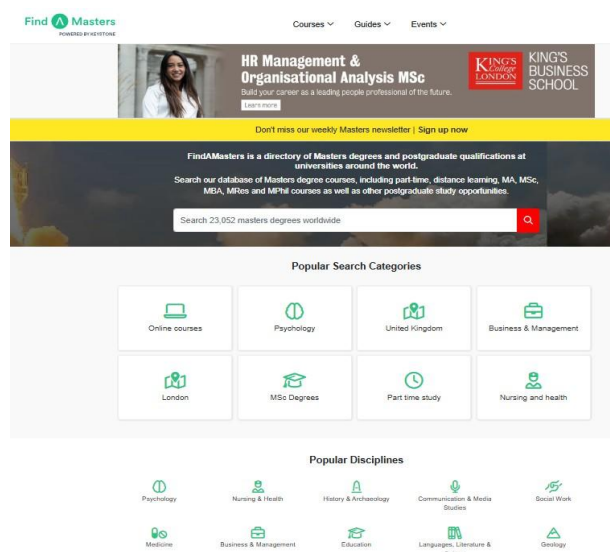
Masters degrees cover smaller subject areas in much greater depth than in a first degree. Because of their specialisation and diversity, it is very important to find out enough information to ensure that any Masters degree you select will cover content delivered in the way that you want. Many offer part-time options which may fit in well with career plans. Fewer students take Masters degree programmes, so that they are much more likely to be started (or discontinued) than BSc degrees so ensure you get up-to-date information.

Masters degrees do not have to be taken immediately after a first degree. Some are highly vocational and prefer students to have practical experience before embarking on advanced study. If using the degree for a change of career-path, it is advisable to obtain enough experience, or at least information, to ensure that the time and cost of the degree will really take you in the direction you want. Sometimes employers will fund and allow staff to take a Masters degree, especially if the programme is available part-time.

Masters programmes can include extensive experience of cutting-edge scientific research, which is useful if you are thinking about that for a career (e.g. MRes, MPhil). However, they differ from a doctoral research degree in that the time available is shorter and frequently includes taught elements.

How to find what Masters degrees are available in the UK, Ireland or other countries? Even if you like the look of one at your current institution, it is worth seeing what else is available. The website FindAMasters (<https://www.findamasters.com/>) is the best place to start to survey what is available and has much useful advice and forums as well as listing thousands of degree programmes. Most institutions offer virtual or in person Masters Open Days, opportunities to talk with current students and a wealth of programme information.

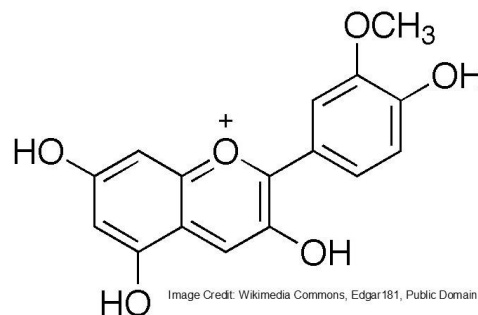
The key message about Masters degrees is: do your research before embarking on one.



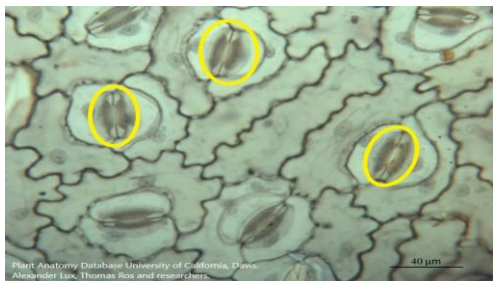
Screenshot of FindAMasters website

BUC Then... Test Yourself on Past Challenge Questions

1. Of which class of plant compounds is peonidin a member?

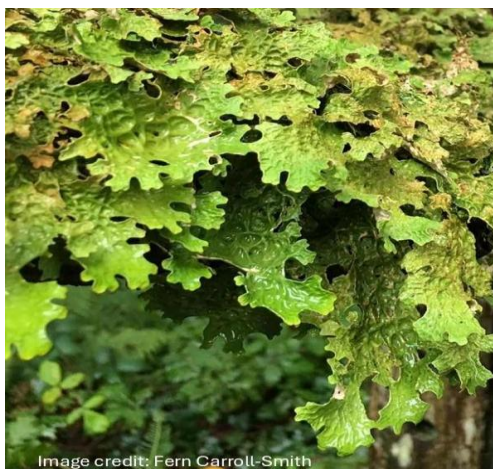


2. What is the name of the type of cells some of which are outlined in yellow?



3. Plant anatomist Katherine Esau pioneered the use of what instrument to study plant viruses?

4. Identify the genus or common name of this lichen.



ABOUT *The Thymes* TEAM

BUC Planning Team

Layout and Design: Helena Brown (RBGE) & Rabinoor Khurana (University of Dundee)

Graphics: Yi Zhao (University of Cambridge).

Editors: Meriel Jones (University of Liverpool, retired), John Warren (Associate Tutor FSC), Jonathan Mitchley (University of Reading).

WANTED: YOU to join *The Thymes* Team!

Do you have an eye for detail and are a whizz at formatting, design, and layout? We would love to hear from you!

Contribute to *The Thymes*

Got a botanical story or other content to contribute? Are you interested in editing or design? We need your skills and enthusiasm! Contact us: botanicaluniversitychallenge@gmail.com

OUR BUC 2025 SPONSORS

Fund raising is vital to support the work BUC does for the online quiz rounds but especially the Student Botany Festival. The fundraising team for BUC 2025 is Raphaella (Raffy) Hull from Cambridge University Botanic Garden, Lauren Baker from Oxford Botanic Garden and Arboretum and Jonathan Mitchley, from University of Reading. This trio have started by contacting all the institutions who have participated, encouraging them to offer support for their teams. We have also contacted our list of previous funders and some new potential funders. So far we have pledges from New Phytologist Foundation, University of Reading, RBG Kew, University of Durham, University College Dublin and Trinity College Dublin and one private sponsor. We are quite early in the process, and will continue this campaign through the summer to enable us to fund the 3rd Student Botany Festival free of charge for our students. **If you are aware of any potential funders for our project supporting and inspiring the next generation of botanists, please email j.mitchley@reading.ac.uk**



Date of Next Issue: July 2025

Answers to the BUC taster questions (NB All have featured in previous BUC contests):

1. Anthocyanins
2. Guard cells
3. (Transmission) Electron microscopy
4. *Lobaria (pulmonaria)*; Lungwort lichen
5. Ryegrasses (*Lolium* sp.)