

FEATURE



BOTANISTS BUC-ING THE TREND

Botanical skills are endangered. Fewer scientists learn about plants and recently one of the UK's last specialist species identification degrees has been cut. How do we reverse the extinction of botanical education? Cue Botanical University Challenge! **Sebastian Stroud** talks us through it.

I'm sitting in the master control suite of the Botanical University Challenge (an unfurnished meeting room with a plastic plant). An immense arrangement of specialised streaming gear is spread before me, rivalling the mixing studios of Abbey Road (a computer screen stolen from my father, some free streaming software, and my work laptop). It is the final round of Botanical University Challenge 2022.

Of eighteen teams, only one team can claim this year's prize: a copy for each of them of David Attenborough's *The Green Planet*, signed by the renowned broadcaster and biologist. Two exciting days into the competition, Manchester Metropolitan University's Stone Roses and the University of Nottingham's Rambling Brambles remain - it's the battle of the Rosaceae, or rather, the War of the Roses. Our illustrious chair, Dr Sandra Knapp from the Natural History Museum, asks a sequence of deviously devised botanical questions. Just a few right or wrong answers could hurl the students into victory or defeat.

Knapp takes aim for the final round of the competition, with The Stone Roses in her sights. (Play along if you dare - answers below). Her first question for the team: "Which part of the wasabi plant (*Eutrema japonicum*) is used to make the condiment?" An incorrect answer is shot from MMU's Stone Roses. The tension is

palpable. Knapp continues: "The concept of plant blindness has been widely discussed since the 1990s. Recently, an alternative term has been proposed. What is it?" Another incorrect answer from the Stone Roses - the Brambles are looking hopeful. Next up: "Tulips were introduced to Western Europe in the 1500s, they were highly valued by the early 1600s. But in 1637 soldiers were ordered to trample and destroy the plants, why?" The team mutter between themselves momentarily - a textbook answer in bulbonomics ensues.

A little later, the final scores are announced. The Rambling Brambles: 160; The Stone Roses: 130. It's a win for the University of Nottingham's team, and a massive round of virtual applause erupts from the online audience.

Behind the scenes, the planning and tech team breathe a sigh of relief - no catastrophic failures; the teams have played and behaved superbly; and most importantly, it has been terrific fun. Across the two days, we've corralled 5 distinguished chairs, 72 student contestants from 18 institutions, posed 316 botanical questions over 70 rounds, hosted countless tech rehearsals, and drunk an ungodly amount of *Coffea arabica*.

Botanical University Challenge is a grassroots organisation with a small budget and big ideas and even bigger plans for 2023 and beyond!





ROOTS

To those in the know, it's well established that there has been a marked decline in the number of learning opportunities for botanically aware students and botanical qualifications for industry professionals, potentially resulting from zoo-centric degree programmes, a phenomenon recently described by some of the planning team as the "botanical education extinction" (Stroud *et al.* 2022).

Ahead of the curve botanists and educators Jonathan Mitchley, John Warren, and Paul Ashton all noticed the impact of declining opportunities and initiatives for isolated plant-aware students. In 2015, they decided to tackle this issue head-on by creating an event that was to bring together these students and demonstrate that, far from a lack of interest, there remained many talented and knowledgeable student botanists. Thus, the first Botanical University Challenge was born, and the gauntlet thrown down.

The 2016 event that followed was modest, with five teams from across England and Wales, set in that iconic botanical institution the Royal Botanic Gardens Kew. They faced questions delivered by ethnobotanist, and science communicator extraordinaire, James Wong. Topics were wide ranging from tropical ecology, mountain plants to agricultural history and plants in music and literature. The BUC buzz had begun.

Since that first competition BUC has grown from strength to strength, hosting more teams and students each year from across the UK and, in 2022, for the first time, Ireland. Importantly, BUC has been immensely valuable to students, for example, NUI Galway's team recently commented, "The entire Galway Ginkgos team immensely enjoyed competing in BUC 2022 and team members remarked they felt BUC filled a gap that was missing in terms of student collaboration between Ireland and the UK."

SHOOTS

From the seed of an idea, BUC has grown rapidly and in ways that have surprised even the seed-sowers! From in-person events at Kew (2016), Reading (2019) to Liverpool (2020) the botanical contest has expanded beyond expectations. In 2021, being forced online during lockdown, it rushed no less than fifteen teams and a large YouTube audience. BUC2022 repeated the online formula but added new twists to accommodate further growth to eighteen teams. The hunger for our innovative approach to bringing together the community of aspiring students and professional botanists across the country was palpable.

Of course, there is still a long way to go to improve botanical pathways through primary, secondary and tertiary education, but BUC demonstrates, by the sheer breadth of question themes, that there is a botanist in everyone. In truth, we all know something about plants whether it is through the food we eat, our gardens, or forays in the countryside.



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Climate change and nature recovery are both set to create jobs that require more people with botanical skills but there is a lack of qualifications and institutions that can supply these professionals of tomorrow (Stagg & Dillon 2022).



GROWTH

So, what are the next steps for BUC? We have big dreams of international challenges, arenas filled with the deafening roar of the fans of our superstar botanists, revitalising school and undergraduate curricula and filling the public eye with an awe and fascination for the botanical world again.

However, before we fulfil these lofty dreams, we've got plenty planned for this year. By the time this article is out, the first two rounds of BUC2023 will be done with a record 25 teams participating, and we'll be gearing up for the BUC finals and, with the support of the British Ecological Society, Gatsby Foundation, and New Phytologist Foundation, bringing you the first BUC Student Botany Festival, hosted by the University of Nottingham, in July. This two-day event hosts not only the live BUC2023 final, but is also jam packed with exciting speakers, careers workshops, student posters and presentations, networking opportunities, research tours, identification workshops, and maybe also you, why not?

So, if you are an undergraduate or postgraduate student, early career researcher, or just fascinated in botany and interested in joining us, please don't hesitate to reach out. If you can't make the live final and Student Botany Conference don't worry, most events will be livestreamed, and you can join in on the challenge from home! If you're a plant-focussed institution and wish to join the BUC community, get in touch to learn more about how to rally behind our vision of botanical training and enthusiasm at all stages of education.

At a time when we need optimism, BUC brings that optimism, through BUC we can all celebrate the depth of talent and range of knowledge amongst students, the tenacity and charisma of teaching staff and those institutions that are teaching plant-focussed courses and joining in with the fun that is BUC. This is why BUC is a game changer and the community it is building a great platform to facilitate a new botanical plant-based narrative together. ✨

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Or contact us via:
j.mitchley@reading.ac.uk

THE AUTHORS

Sebastian Stroud (University of Leeds), Dr Jonathan Mitchley (University of Reading), Professor Emeritus John Warren (Aberystwyth University), Dr Meriel Jones (University of Liverpool), Dr Sven Batke (Edge Hill University), and Susan Medcalf (Natural England)

REFERENCES

- Parsley, K.M., 2020. Plant awareness disparity: A case for renaming plant blindness. *Plants, People, Planet*, 2, 598-601.
- Stagg, B. C. & Dillon, J. 2022. Plant awareness is linked to plant relevance: A review of educational and ethnobiological literature (1998–2020). *Plants, People, Planet*, 4, 579-592.
- Stroud, S., Fennell, M., Mitchley, J., Lydon, S., Peacock, J. & Bacon, K. L. 2022. The botanical education extinction and the fall of plant awareness. *Ecology and evolution*, 12, e9019.

1. The stem, i.e. the caudex. Wasabi is a caudiciform plant with fine roots. The stem is finely grated to create the condiment.
2. Plant Awareness Disparity (PAD) – plant blindness is a disability metaphor and should be avoided (Parsley, 2020).
3. The price collapsed by 1637 and the plants were destroyed in an attempt to stabilise the market.

ANSWERS