

Botanists are disappearing, just when the world needs them most

July 14 2022, by Sebastian Stroud



Credit: Annika Geijer-Simpson, Author provided

Can you recall any of the plants you saw today?

Probably not. As a species, we are not programmed to recognize and register everything we see within our field of vision. This would be an overwhelming amount of information for our brains to process.

You can however, with a little time and practice, be trained to read the

plants around you: to recognize which species they belong to and their names, their relationships with other organisms and what they are telling you about the environment they live in. This is to develop what some call a natural literacy.

Most people suffer from what is commonly known as "plant blindness," a term coined by U.S. botanists Elisabeth Schussler and James Wandersee. They described it as "the inability to see or notice the plants in one's own environment." Unless taught, people don't tend to see plants—despite the fact that at any given moment, there is likely to be a plant—or something made by plants—nearby.

In our [latest study](#), my fellow researchers and I found that people are not only less aware of plants through a lack of exposure and a loss of knowledge, but demand for an education in botany and opportunities to study it in the U.K. have diminished too.

The extinction of botanical education

Botany, once a compulsory component of many biology degrees and school programs, is disappearing fast. It has been over a decade since a [student](#) was enrolled in a botany degree in the U.K. We believe there has been a gradual erosion of knowledge about plants among biology graduates and the [general public](#) as a result.

We examined the number of U.K. students graduating across a variety of biological science programs from 2007 to 2019 and found that students studying plant science were outnumbered almost one to 200 by those studying general biology. When we scrutinized the modules offered to students on plant science courses at U.K. universities, we were surprised to find that only 14% focused solely on plants. Only 1% of modules in [plant science](#) and biological science programs offered any form of training in identifying [plant species](#).

Students are not introduced to the diversity of plant forms and functions at U.K. universities and are certainly not engaged with how fascinating and dynamic the floral world is. The result is a growing skills gap, with a looming shortage of professionals capable of effectively managing environmental projects. Well-meaning but careless management is not just ineffective, it can add to environmental degradation.



Credit: Tuan PM from Pexels

For example, planting thirsty species of tree in the name of capturing carbon from the air can deprive precious bog plants of much needed water. Recklessly cutting and trimming grasslands can wipe out

populations of rare orchids.

Harnessed properly, there is no doubt that plants and the services they provide can help solve looming climate and ecological crises. Restoring flood meadows and riverside habitats can reduce flooding from the extreme downpours which are likely to become more common in some areas as the Earth warms.

Less teaching about plants and the ensuing disconnection from the natural world will, if not reversed, have irreparable and disastrous consequences. How many generations of botanists remain before we no longer have the expertise to understand when ecosystems are on the brink of irreparable loss and damage?

The [Scottish government](#) has highlighted the lack of a skilled workforce to implement nature-based solutions and argues that "nature literacy" must become a core skill for various professionals, from planners, engineers, architects and educators to farmers, foresters and fishers.

The problem is vast. Various other studies have documented falling plant literacy [worldwide](#). While other studies have identified that plant content is often neglected in [textbooks](#) and students who are unable to recognize even [local plant species](#). Our study revealed that the U.K. curriculum neglects plant ecology and how to identify species, with most of this education taking place at a rudimentary level in primary schools.

Reversing the decline in plant knowledge

Reviving botanical education is possible by presenting students and the public with evidence of how plants can combat the challenges of the 21st century. An invested and knowledgeable public is one well-equipped to demand environmental policy reform.

Botanists can support this ambition, but ultimately, change needs to come from those who decide policy. This is why botanists must agitate to bring botany back into the classroom and beyond.

One thing we couldn't fully convey in our paper is just how fascinating and exciting the plant kingdom is. In my experience as an educator, there is no student who cannot be reached. Stories about [plants](#) are woven into every society's history, politics and culture. Plants are relevant to every person on the planet—most just don't know it yet.

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