Botanics discover a new species

Experts from Scotland’s leading botanical garden have discovered a previously unrecorded begonia nearly 7000 feet up a mountain on the other side of the world.

Dr Mark Hughes of the Royal Botanic Garden Edinburgh (RBGE) explained that the unusual plant was spotted growing on a cliff face in thick forest near the summit of Mount Tanggamus, in South Sumatra, Indonesia.

A sample cultivated in a tropical glasshouse in Edinburgh took three years to produce flowers and confirm it as a new species to science.

Botanist Dr Hughes, 53, said the new species – discovered at nearly twice the height of Ben Nevis – will soon be named and enter into the “catalogue of life on Earth”.

He said: “I’ll always remember collecting it as it was one of the most wretched nights of fieldwork I’ve ever had. We found the begonia on a rock just below the summit and we camped at the very top, in the cloud forest. It’s just below the equator so it’s warm and pleasant during the day but at night it was freezing.

“Sadie (Barber), my colleague from horticulture, and I had wanted to reach the summit before dark so when our Indonesian guides stopped for a break we pressed ahead and got there first.

“We realised during the night that we had camped on the windward side where the clouds come up and the mist precipitates. We weren’t prepared for the cold and wet and it was perishing.”

The cutting was cultivated in RBGE’s Living Collection of over 13,500 plant species, and finally blossomed in lockdown.

Dr Hughes, a specialist in begonias, said: “It wasn’t flowering when we discovered it. It stood out to me but it also looked similar to another species that we already knew.

“Now we can see it flowering, we can see it’s new – the other species only produces one or two flowers in a little bunch but this one had about 20 on a single bunch and they were different.

“It took about three years but it has been thriving here so it was worth all the pain of collecting it, because it’s really lovely.”

Dr Hughes has travelled to exotic locations around the world in his 20 years working for the RBGE. Together with his colleagues, he has helped describe hundreds of new plants, including threatened species.

In the last year, RBGE scientists have formally identified a dozen new species ranging from a single-celled diatom found in high intertidal marine rock pools in South Africa to a 50ft tall tree in the swamps of rainforests in the Congo.

They take inspiration from generations of pioneering RBGE plant hunters.

Dr Hughes said: “We are building on their work. There are things that were described over 100 years ago and have not been seen since, and we go back and re-find them.

“When I started I just had a thirst for seeing plants, but it is adventurous. I’ve climbed a large amount of the biggest

mountains in Sumatra – a lot of them volcanoes. I've seen some of the world's most amazing forests and that for me is just a day in the office.

"There is usually blood, sweat and tears in fieldwork. There is always something trying to bite you. You're always feeding the forest fauna when you are there – leeches and mosquitoes mostly.

"Most large animals disappear before you get near them but I've seen some whopping snakes. You also see spiders, particularly in the mornings. If you're first in line on the trail it's your job to clear the webs."

It has never been more important to catalogue the world's species, and to conserve them. Some of the RBGE's newly described species may have as yet unknown properties, while others already have cultural importance in their native lands.

Dr Hughes added: "We live on this amazing planet – some of the plants we have described are incredibly beautiful but they've never been given any formal recognition.

"Unless they have a name, these things could be lost and nobody would know. Once they have a name they have a presence and a voice on the conservation stage… We will never know enough because there is always more to be discovered."

Dr Hughes insists it's not all about the human perspective, however, adding: "We live on a unique planet in the universe, quite possibly the only place with life and who are we to erase it?

"It's taken millions of years to get here and evolve and it's our moral duty to protect it. And you don't know what you've got until it's gone."

Begonia discovery PHOTO © RGBE

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Dr Mark Hughes collecting begonia near summit of Gunung Tanggamus South Sumatra *Begonia discovery PHOTO © RGBE*

Dr Mark Hughes plant hunter in Sumatra *Begonia discovery PHOTO © RGBE*

West Sumatra thick montane forests *Begonia discovery PHOTO © RGBE*