



# Botanical Society of Britain & Ireland

## Europe's smallest and rarest fern turns up in the west of Ireland – from the tropical cloud-forest?

Scientists from Ireland and Britain are scratching their heads over the recent discovery in Killarney, County Kerry, of a tiny cloud-forest fern which had never been recorded before in Europe and whose nearest relatives are in the neotropics.

Irish-based botanist Dr Rory Hodd<sup>1</sup>, who spotted the new fern in a remote upland valley, far from the nearest road, said "It's rare to discover a new native plant species in Britain and Ireland – one that we think arrived 'under its own steam', not imported by humans - but it's frankly amazing to discover a genus that's completely new to Europe! This new fern, which doesn't even have an English name yet, is the only representative of its sub-family and the nearest other populations we know about are on the other side of the Atlantic Ocean - and in a different bioclimatic region."

Dr Hodd was plant-hunting in a remote part of the Killarney National Park in County Kerry, Southwest Ireland - one of Europe's few remaining fragments of temperate rainforest – when he discovered a few specimens of the fern growing on humid rocks. He collected and pressed a specimen<sup>2</sup> and sent it to Dr. Fred Rumsey<sup>3</sup> at the Natural History Museum, London, who, working with American colleagues who are experts on these plants, identified the tiny fern as *Stenogrammitis myosuroides*, part of a distinctive group of ferns known as the Grammitids, rare ferns that usually grow on trees in the tropics.

Dr Rumsey said "The nearest occurrences we have for these Grammitid ferns is mid-Atlantic, in the Azores, where there are two exceedingly rare species which have recently been listed as Critically Endangered. Prior to Dr Hodd's discovery, *S. myosuroides* was only known to occur in the montane cloud forests of Jamaica, Cuba and the Dominican Republic".

### So how did it get here?

Drs Hodd and Rumsey agree that it is extremely unlikely that this fern was introduced to Europe by humans, as Grammitid ferns have proved impossible to cultivate and this species grows on rocks rather than other plants, so would not be accidentally introduced on other imported species. Their current hypothesis is that *S. myosuroides* most likely arrived naturally in Ireland without human intervention. It may, they believe, have been lurking overlooked for thousands of years. The fern's diminutive size could help to explain why it might have been overlooked until now.

The remote site at which it was found is renowned for its diverse flora and includes other mosses and liverworts with which the fern grows in the tropics, although none of these plants seem to have jumped all the way across the Atlantic in one go. This is another reason why the discovery of this tiny fern is causing such a stir. Dr Rumsey added "Grammitid fern species do show huge distribution gaps but none has previously been found over 6000km from its nearest population!

## Important implications for nature conservation

Dr Hodd said "Certain features of the specimen collected in Kerry suggest that it may have been separated from the Neotropical populations for a long period of time and may be taxonomically distinct, but further work would be required to investigate this. The fact that *S. myosuroides* was able to grow and establish in Ireland may be evidence of climate change, but this species may equally have grown here undetected for very many years. This discovery highlights the importance of the Atlantic fringe of Europe, as it has a mild damp climate that supports a range of species that would not be able to persist in most parts of Europe. It also highlights the immense value of temperate oceanic rainforest, a habitat that is now mostly lost and highly degraded, as a refuge for a wide range of species that would not survive without its protection".

## What's in a name?

Drs Hodd and Rumsey have just published their find in *British and Irish Botany*<sup>4</sup> the scientific journal of the Botanical Society of Britain and Ireland<sup>5</sup>, and are looking forward to hearing the reactions of fellow members of the scientific community. As it's new to Europe, *Stenogrammitis myosuroides* doesn't have an English name yet. Its Latin name is a bit of a mouthful so Dr Rumsey is suggesting Kerry Mousetail Fern (*myosuroides* means mouse-tail) although as Dr Hodd points out, this doesn't reflect the tiny fern's amazing ability to hop across the ocean. But one thing's for sure: the discovery of *Stenogrammitis myosuroides* gives Ireland the rarest and arguably also the smallest fern recorded so far in Europe!

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## NOTES

1 Dr Rory Hodd is an independent botanical researcher, working on the conservation and monitoring of threatened and protected species and habitats across Ireland: [rlhodd@gmail.com](mailto:rlhodd@gmail.com)

2 The BSBI Code of Conduct (co-authored by Dr Rumsey) offers guidance on collecting plant specimens with conservation in mind and lists those species which are scheduled (protected by legislation) and should never be picked: [https://bsbi.org/wp-content/uploads/dlm\\_uploads/Code-of-Conduct-v5-final.pdf](https://bsbi.org/wp-content/uploads/dlm_uploads/Code-of-Conduct-v5-final.pdf).

3 Dr Fred Rumsey is Senior Curator in Charge, Historical Collections, in the Life Sciences Dept. of the Algae, Fungi & Plants Division of the Natural History Museum, London; he is also President of the British Pteridological Society: [f.rumsey@nhm.ac.uk](mailto:f.rumsey@nhm.ac.uk)

4. The paper can be viewed in full here:  
<https://britishandirishbotany.org/index.php/bib/article/view/48>

5 The Botanical Society of Britain and Ireland is (BSBI) is the leading society promoting the study, understanding and enjoyment of wild plants in Britain and Ireland. Founded in 1836, we are now one of the world's largest contributors of biological records, many collected by our volunteer members, both amateur and professional botanists, who benefit from our research, training and outreach programmes.

High resolution images of the fern are available. Please contact BSBI Communications Officer Louise Marsh: email [louise.marsh@bsbi.org](mailto:louise.marsh@bsbi.org) or phone 07725 862 957.