A lush forest scene with moss-covered rocks and tree trunks. The foreground is dominated by large, rounded rocks covered in vibrant green moss. In the background, several large trees with thick trunks and dense green foliage stand tall. The overall atmosphere is moist and verdant, typical of a temperate forest.

# Why is Ireland so great for bryophytes?

Dr Joanne Denyer  
[joanne@denyerecology.com](mailto:joanne@denyerecology.com)  
Twitter: @Bryospod



**National Moss Day**



What are bryophytes?

*Hylocomiastrum umbratum*

# Bryophytes were the first land plants

‘Bryophytes’ refers to three clades of land plants:



Hornworts



Liverworts



Mosses

Bryophytes first appeared in the Cambrian period around 500 million years ago



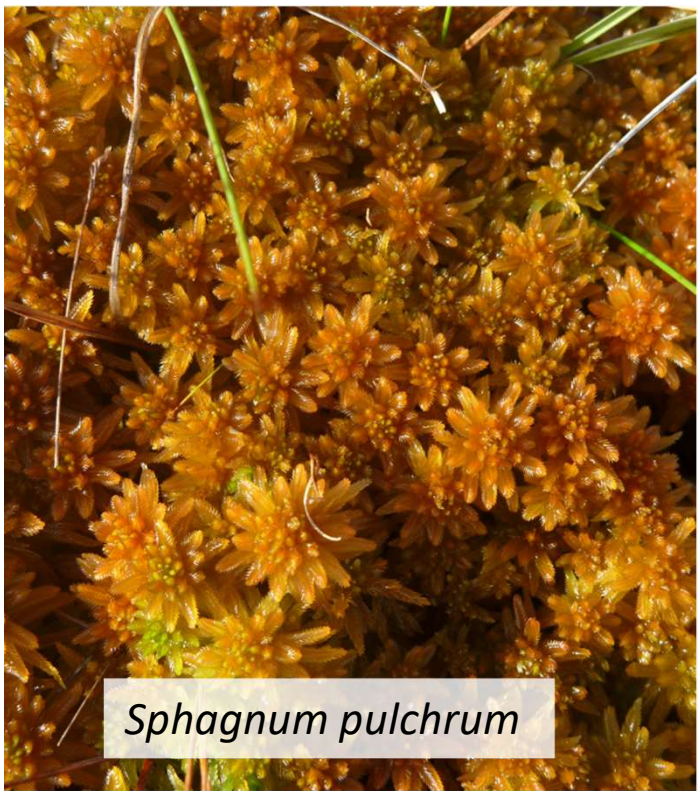
*Conocephalum conicum*



*Thuidium tamariscinum*



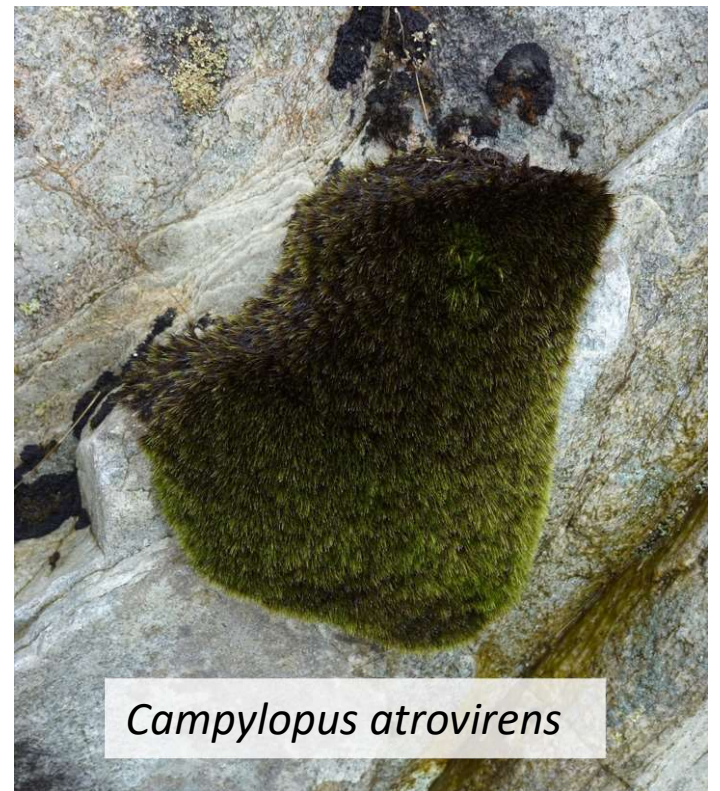
*Phaeoceros carolinianus*



*Sphagnum pulchrum*



*Herbertus hutchinsiae*



*Campylopus atrovirens*

A wide-angle landscape photograph of a mountain valley. In the foreground, a small stream flows through a narrow, grassy channel. The surrounding slopes are covered in vibrant green grass and moss. In the background, dark, rocky mountain peaks rise, partially shrouded in mist or low clouds. The overall atmosphere is serene and natural.

c. 835 taxa  
50% of Europe's bryoflora  
5% of the World's bryoflora

(Hyper)oceanic climate



# Some important features

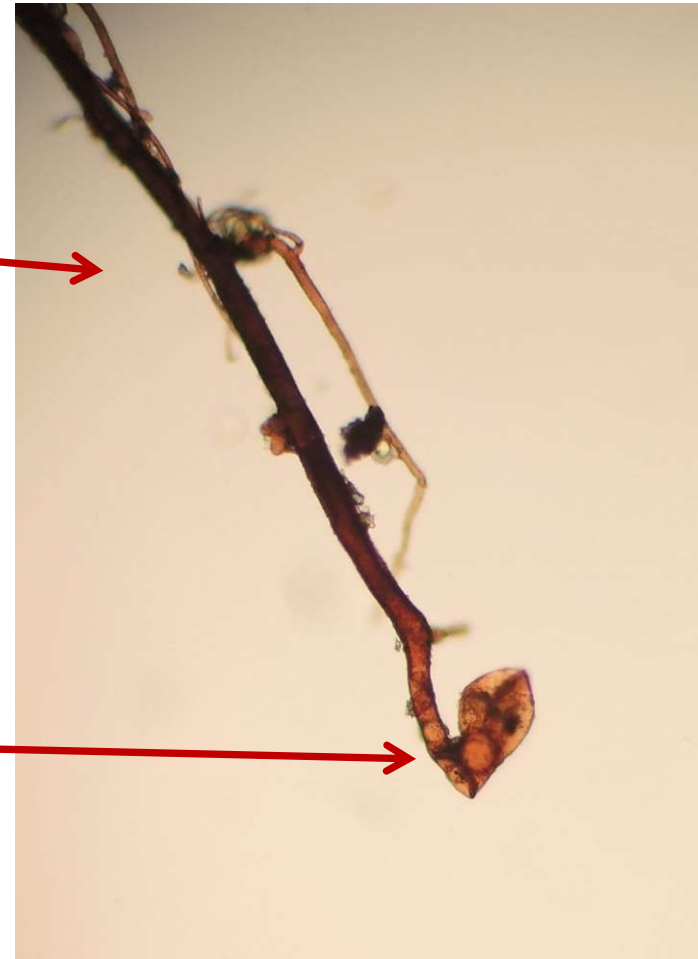
Bryophytes do not have roots



Rhizoids

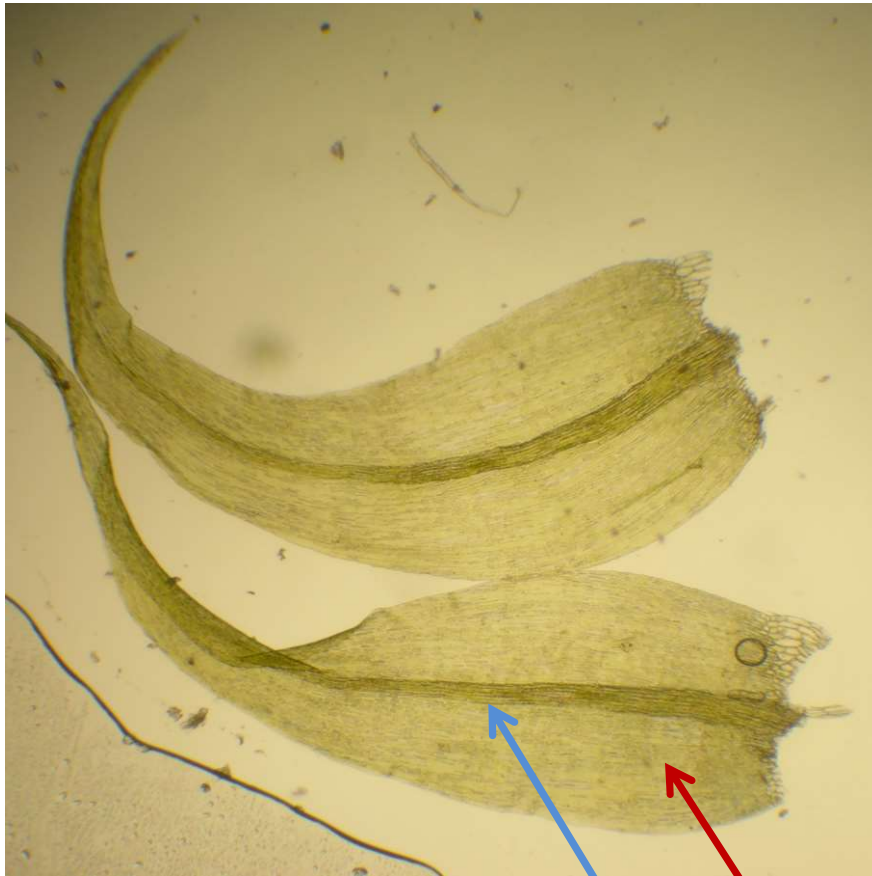


(Tuber)





Leaves are usually only one cell thick



Leaf blade

Nerve/ costa

Desiccation tolerance



*Syntrichia papillosa*





*Grimmia pulvinata*

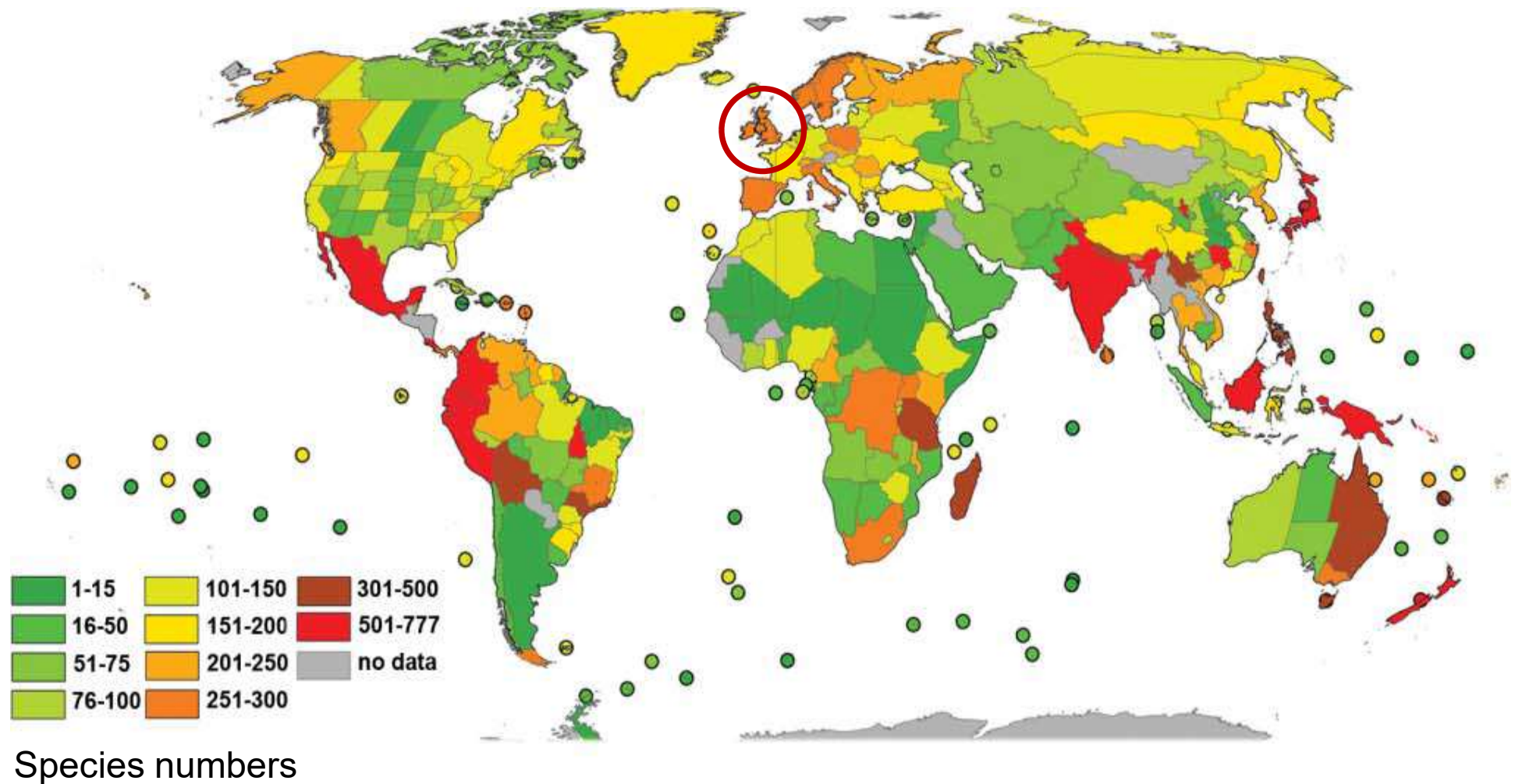


*Trichocolea tomentella*



*Bazzania trilobata*

# Liverwort distribution

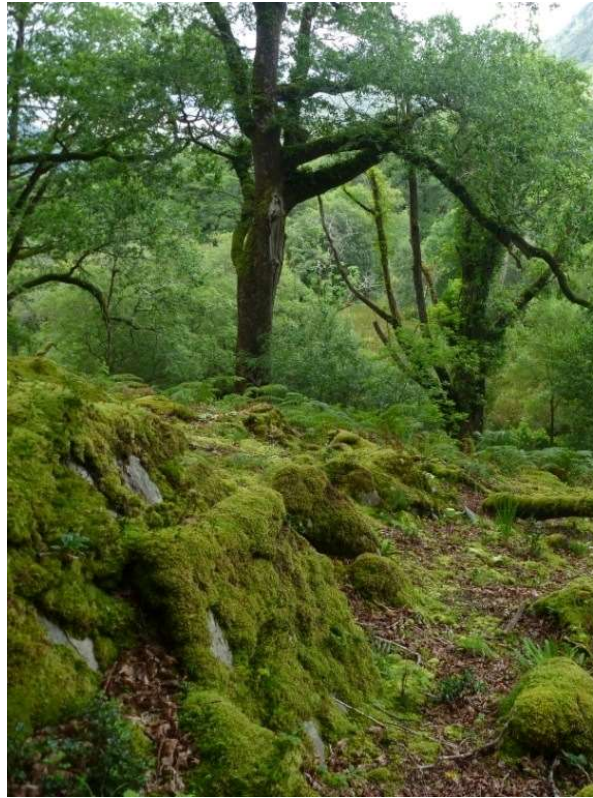


Konrat et al (2008) *Early Land Plants Today: Liverwort Species Diversity and the Relationship with Higher Taxonomy and Higher Plants*

Liverwort habitats that are relatively frequent in Ireland BUT extremely rare globally



Coastal grassland/  
dune slacks



Atlantic oak woodland



Atlantic communities  
of large liverworts

# Global distribution of coastal temperate rainforest



Map provided by Dr David Genney, Lower Plants Policy and Advice Officer, Nature Scot

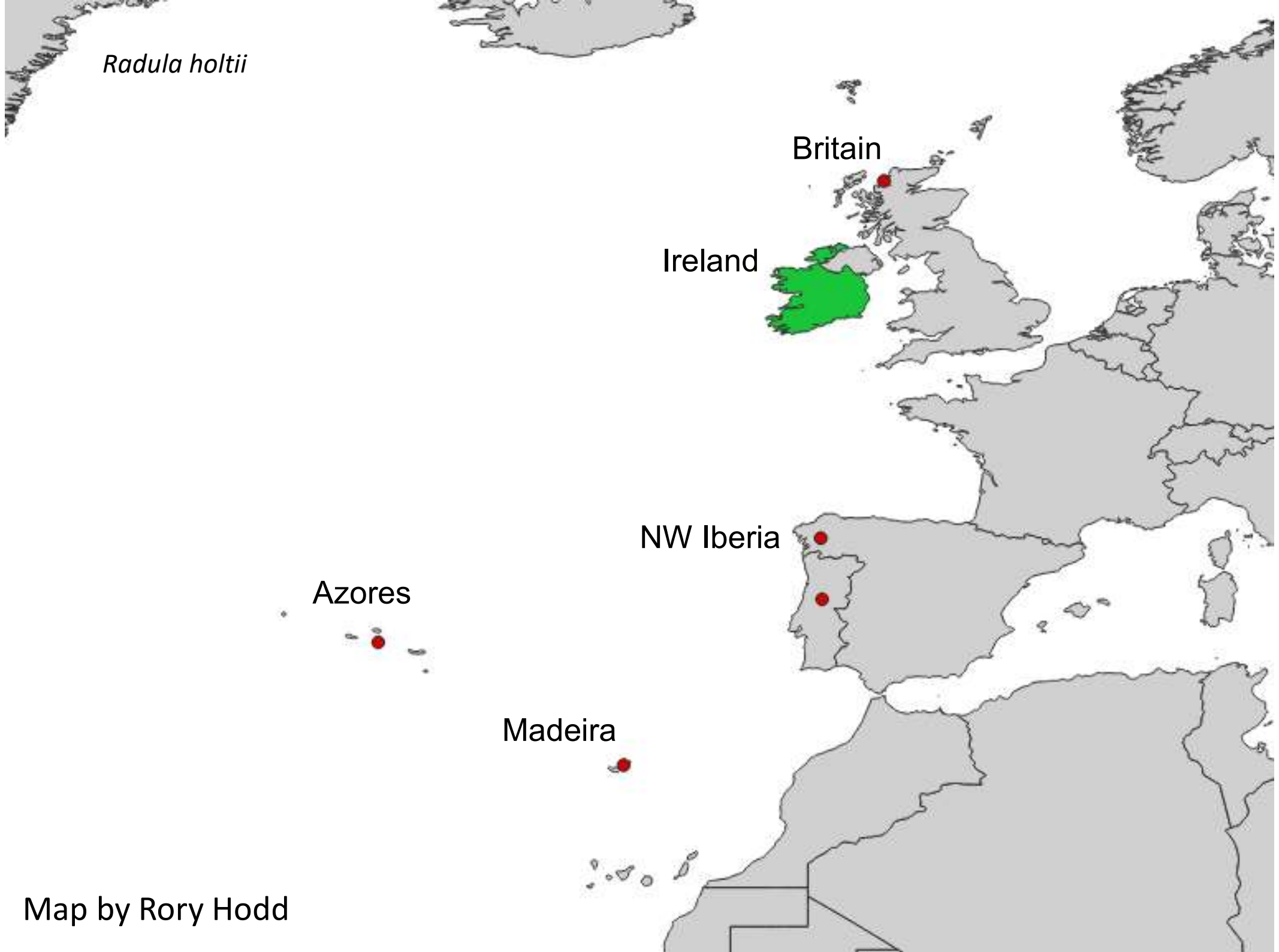






*Radula holtii* (photo by Rory Hodd)

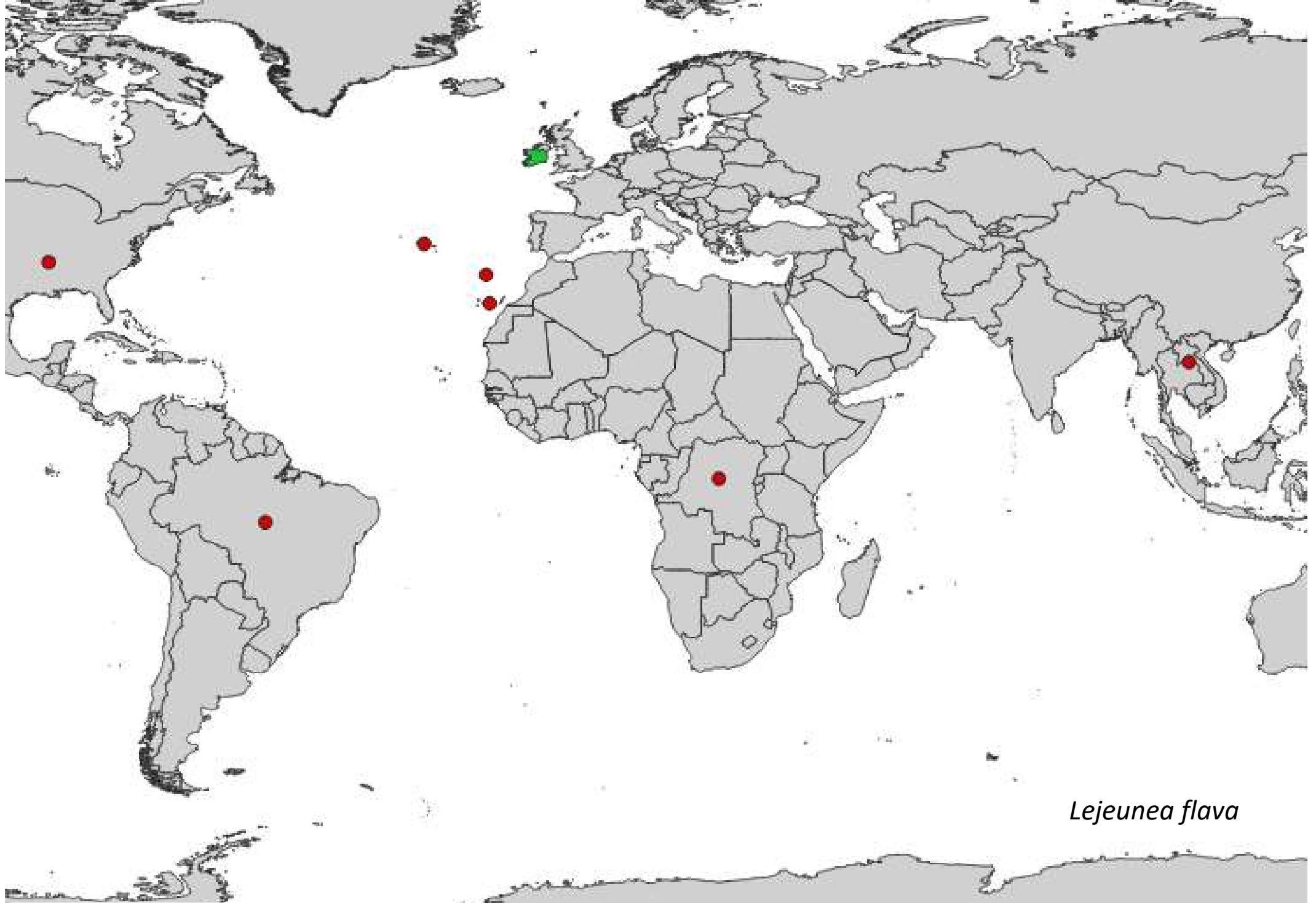
*Radula holtii*



Map by Rory Hodd



*Lejeunea flava* (photo by Rory Hodd)



*Lejeunea flava*

Map by Rory Hodd

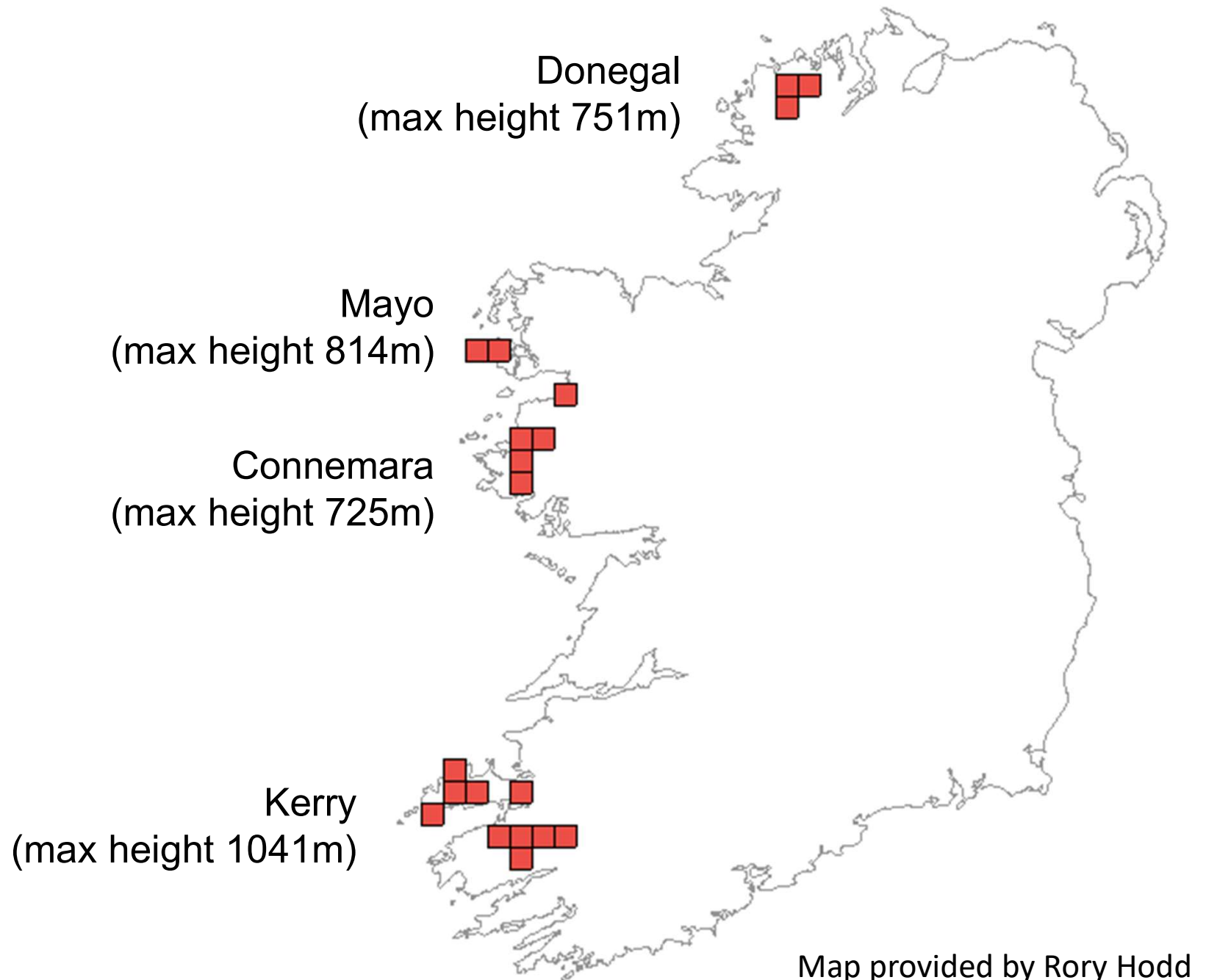


*Pleurozia purpurea*



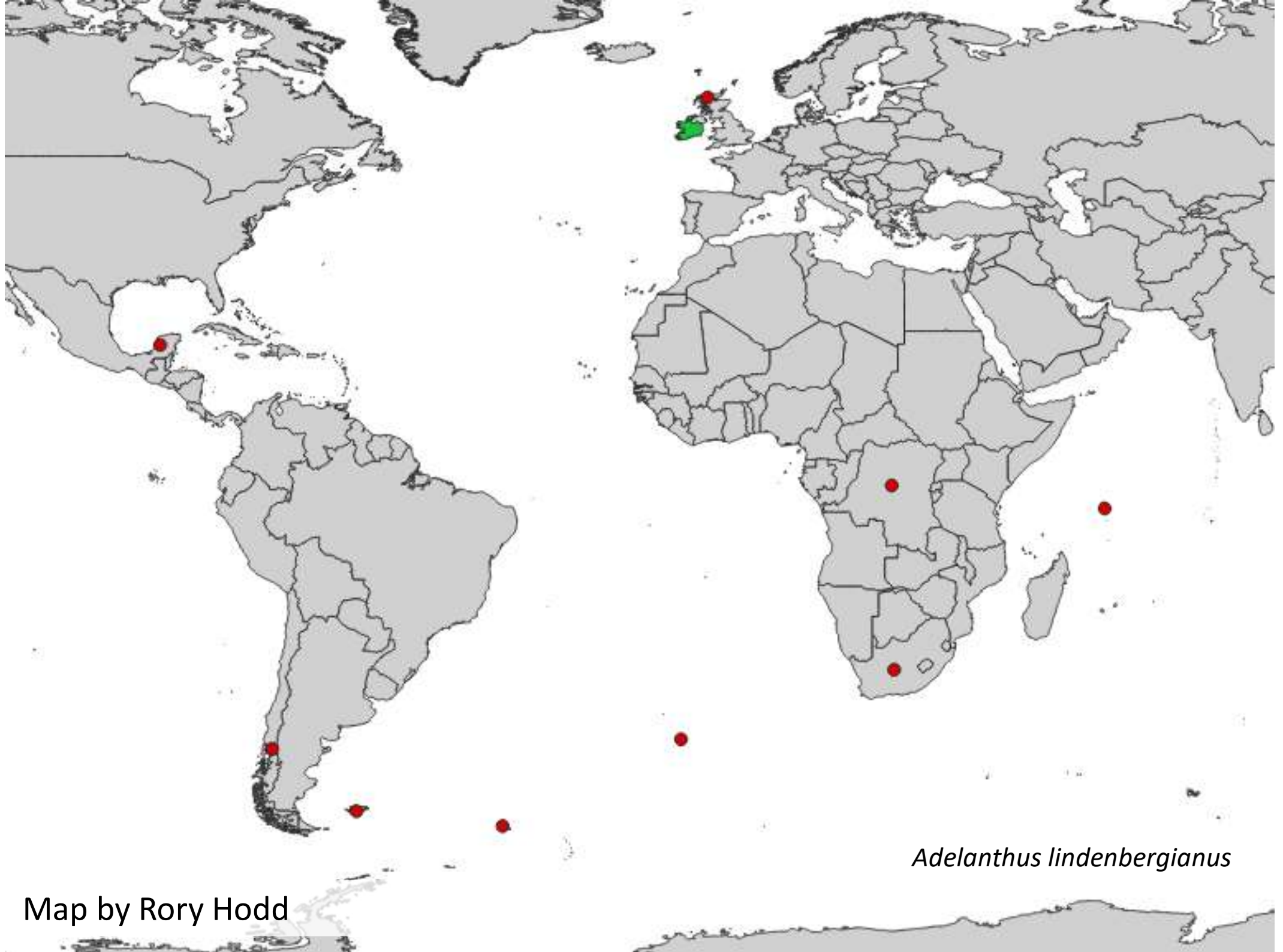
*Herbertus hutchinsiae*

# Distribution of hepatic mat in Ireland





*Adelanthus lindenbergianus*



Map by Rory Hodd

*Adelanthus lindenbergianus*



# Habitat quality





*Meesia triquetra*



*Paludella squarrosa*



Species photos by Rory Hodd (pictured!)



*Didymodon maximus*

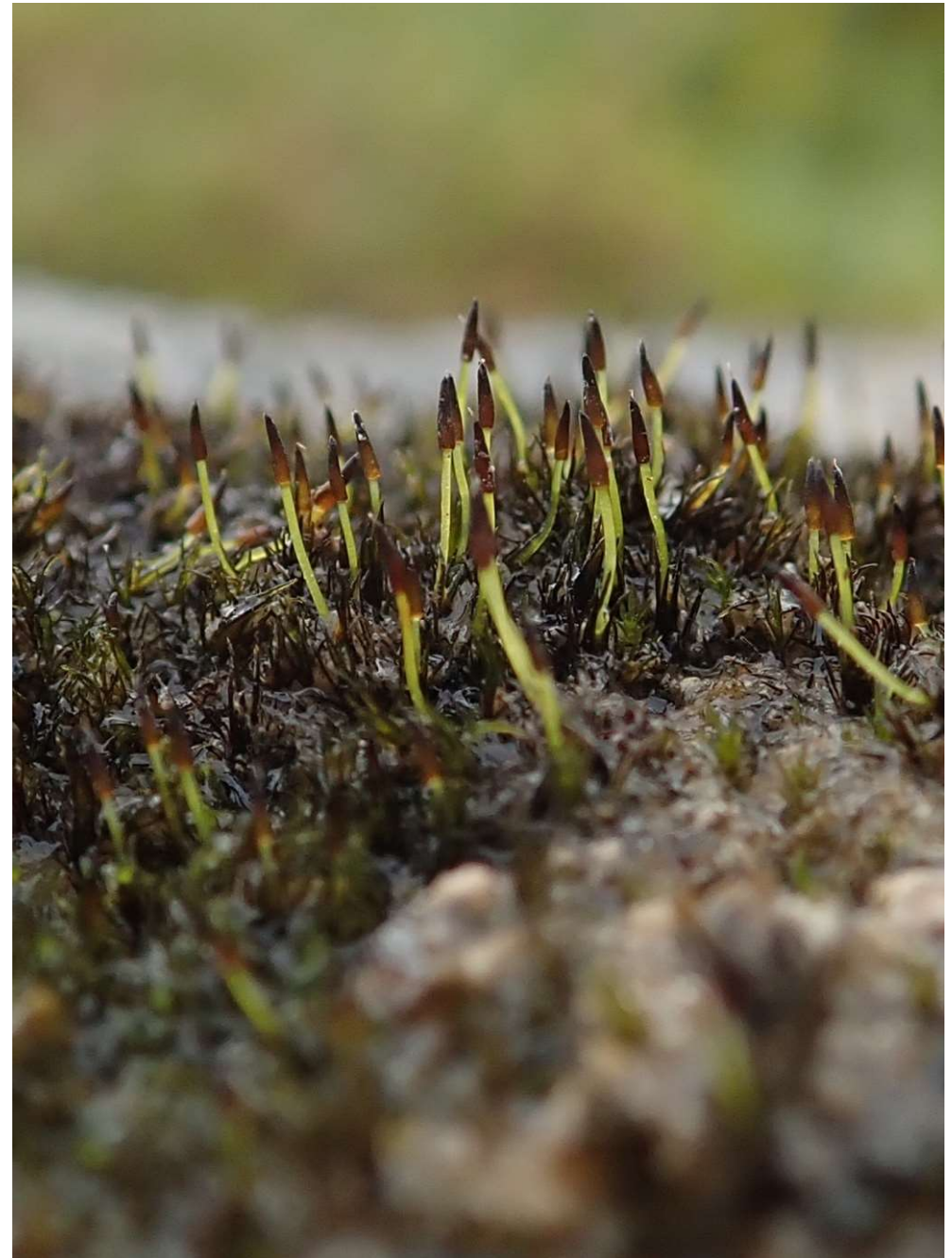
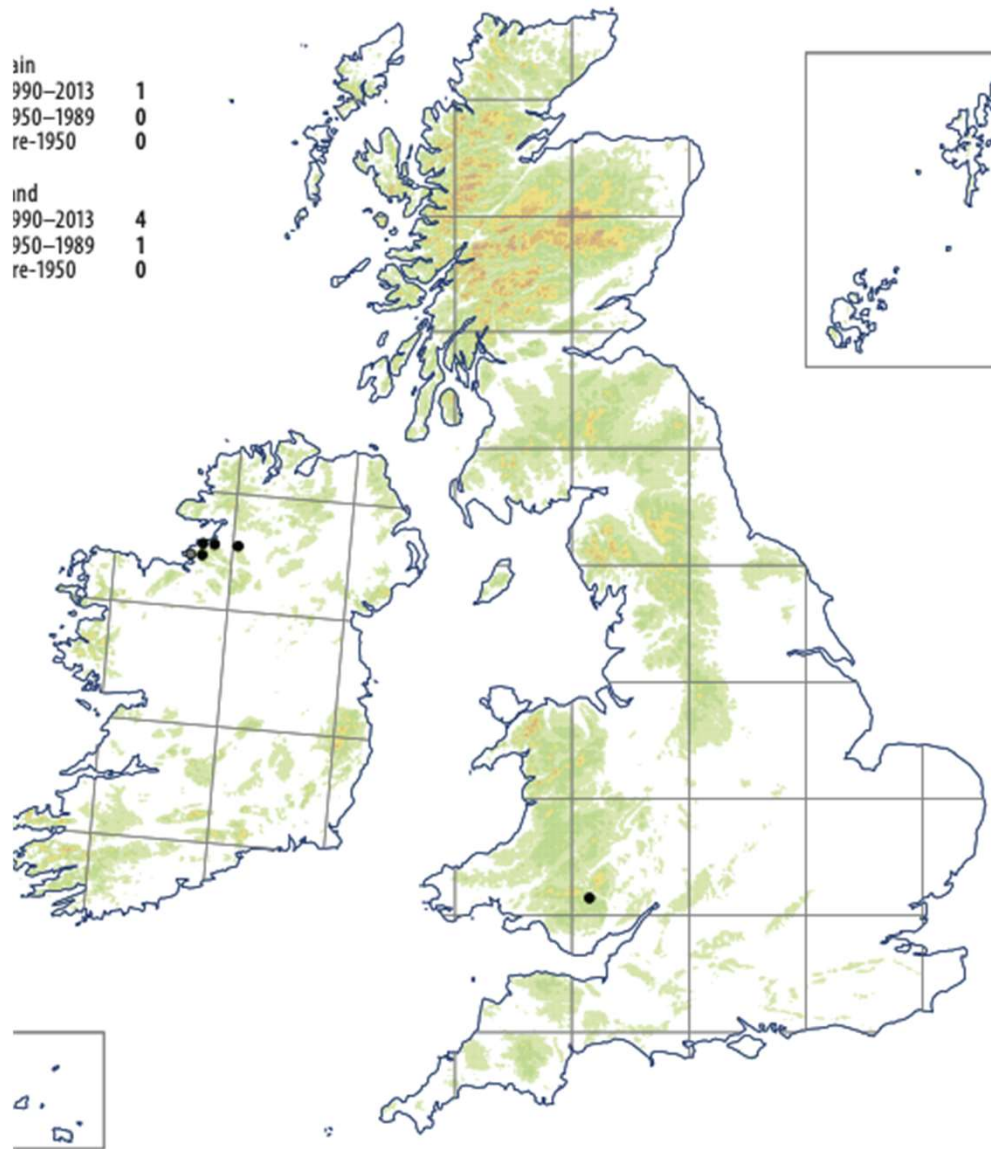


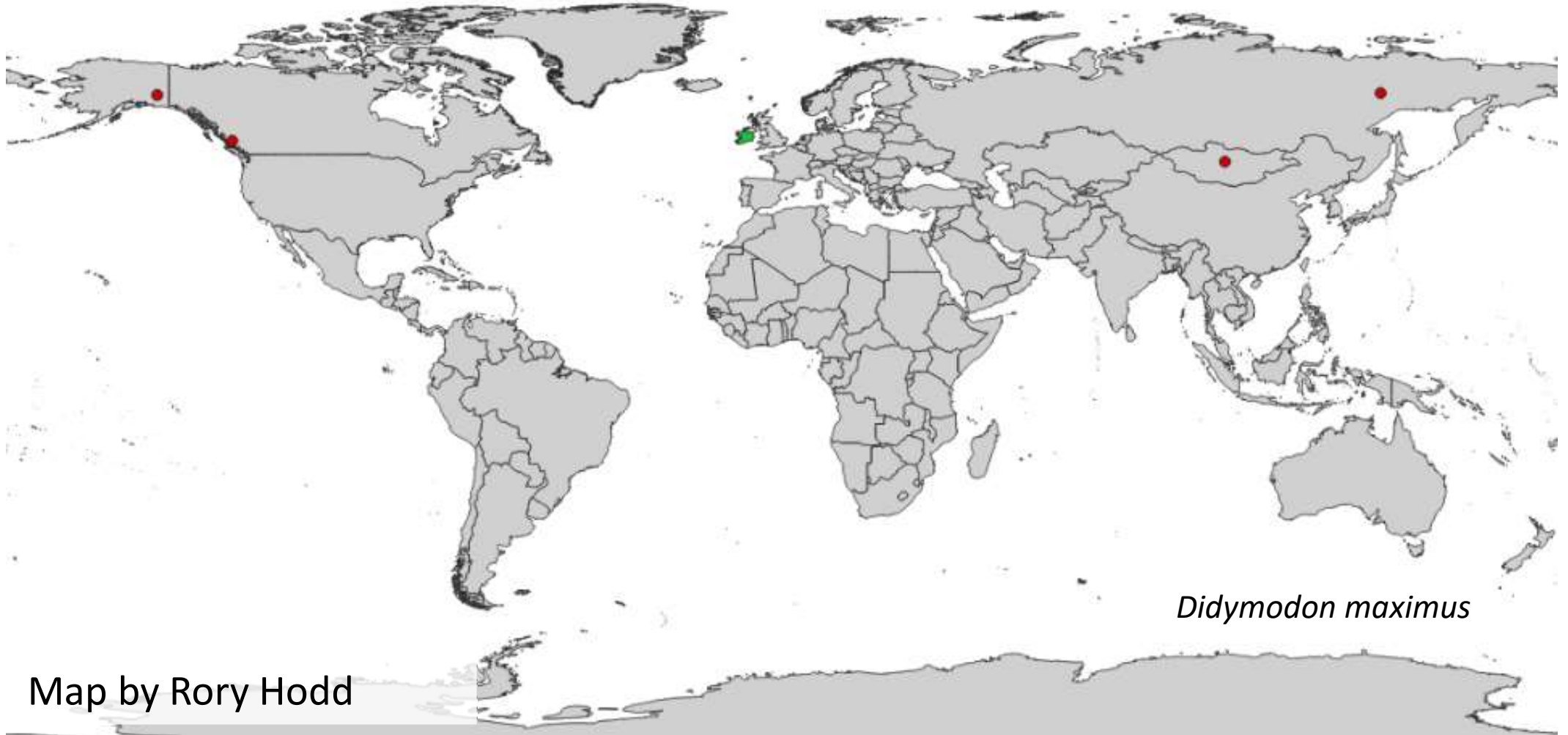
*Seligeria oelandica*



*Seligeria patula*

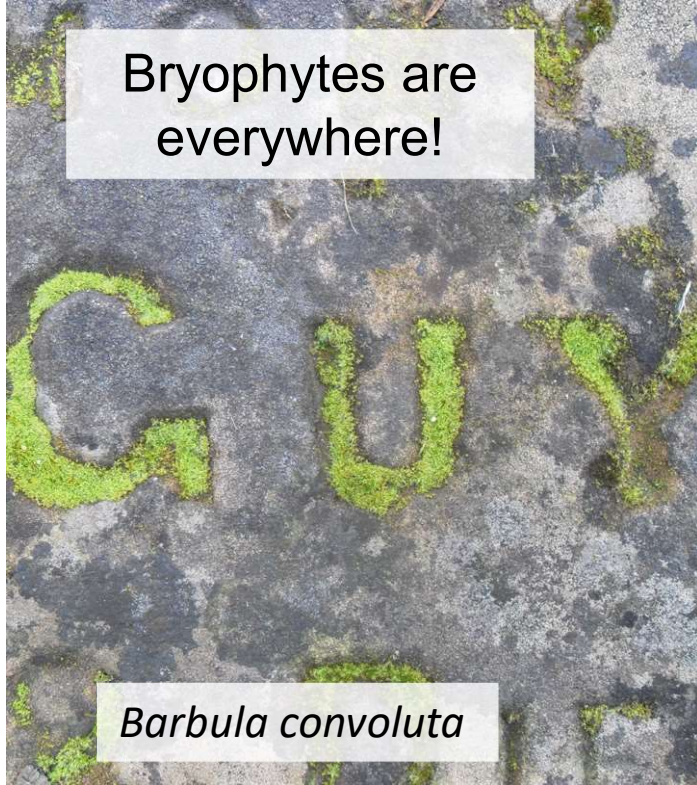
## *Seligeria oelandica*





Map by Rory Hodd

Bryophytes are everywhere!



*Barbula convoluta*



*Splachnum sphaericum*



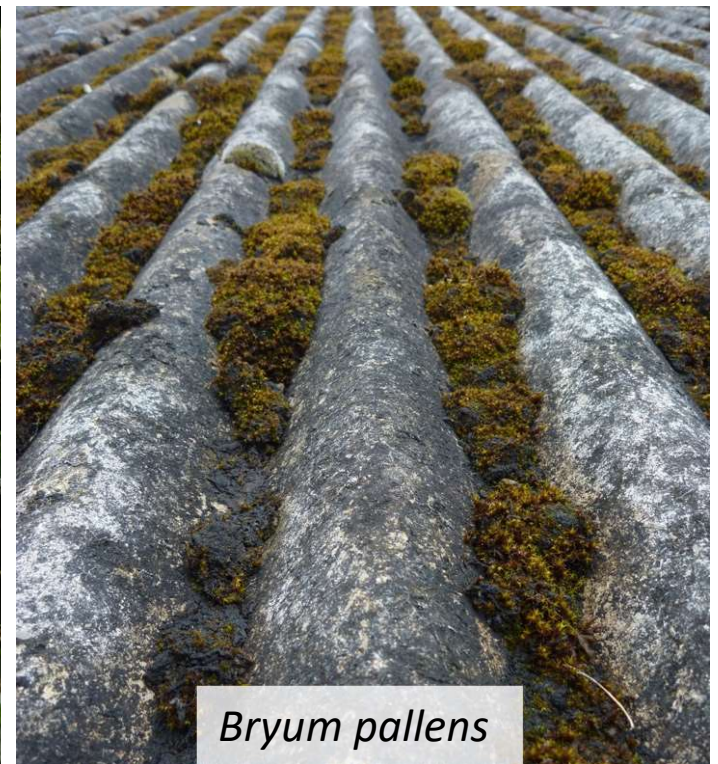
*Brachythecium rutabulum*



*Tortula muralis*



*Tetraplodon mniodes*



*Bryum pallens*

## Why get involved?

- Lots of habitats to explore
- Bryophytes are everywhere!
- Few bryologists in Ireland
- Can make NVCR and contribute useful distribution data
- No modern floras – Wicklow flora in progress
- Few VCRs - lots of openings
- Habitat indicators

BBS website:

<https://www.britishbryologicalsociety.org.uk>

Irish Bryophyte Group mailing list:

[joanne@denyerecology.com](mailto:joanne@denyerecology.com)

