



*Ellen Hutchins*

IRELAND'S FIRST FEMALE BOTANIST

# Micro-nature Guide to the BRYOPHYTES OF WEST CORK

Discover the fascinating miniature world  
of mosses and liverworts.



**WILD ATLANTIC WAY**  
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## What are mosses and liverworts?

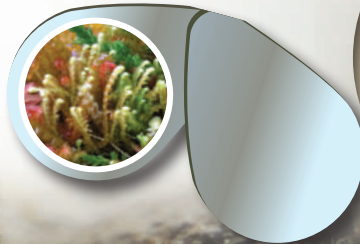
Bryophytes – mosses and liverworts - are tiny plants. They are the simplest plants that grow on land. Unlike trees and flowers, they do not have roots and produce spores instead of seeds. Because they are rootless, mosses and liverworts must absorb their food and water through their leaves and other surfaces. This means they usually grow in damp, shady woodlands.

## Where are mosses and liverworts found?

Mosses and liverworts grow from sea level to mountain top. They grow in bogs, lawns, on walls and even in cracks in the pavements. However, they are at their lushest and most diverse in humid, shady woodlands. In West Cork, woodlands like those in Glengarriff Nature Reserve are a paradise for bryophytes, with sheets of mosses and liverworts growing on every rock face, riverbank and tree trunk.

## What do bryophytes look like?

Mosses and liverworts are usually green, although they can be other colours e.g. red, orange or yellow. Some liverworts are broad and flat like little tongues, others appear leafy. Unlike liverworts, mosses always have distinct stems and leaves. Some look like miniature green trees, complete with trunk and branches, others form clumps that grow to look like tiny pine forests or velvety cushions.



## Facts about mosses and liverworts

There is such an abundance of mosses on earth that they absorb more carbon than all the trees in the world. This 'carbon capture' is needed to help prevent climate change. So, it is just as important to save tiny plants as it is to save trees!

Mosses and liverworts are ancient life-forms: the oldest bryophyte fossils are over 470 million years old. They existed before dinosaurs began walking the earth.

Some of the mosses and liverworts that grow in the west of Ireland are tropical species, which grow nowhere else in Europe. They can survive here because of the mild, damp climate, which is like a tropical cloud forest.

A close-up photograph of mosses and liverworts. Several green and yellow capsules (spore cases) are visible, attached to thin, reddish-brown stems. The background is a soft-focus view of a mossy forest floor.

The mild, damp climate of south west Ireland, including Bantry Bay, makes it one of the best places in Europe for mosses and liverworts. Over 800 species of bryophyte grow in Ireland, almost 50% of the European total.

# Liverworts

Some liverworts are flat, leathery and opaque i.e. light can't pass through them. The commonest of this type (thallose) is Overleaf Pellia which grows on damp soil and near streams.

Other liverworts are leafy with thin, translucent leaves which light can pass through easily. Some of these have leaves with two points, the commonest being Bifid Crestwort. It grows in woodlands, heathlands and even in damp lawns. If you find it, give it a sniff: it has a strong earthy scent.

Overleaf Pellia  
(*Pellia epiphylla*)



Bifid Crestwort  
(*Lophocolea bidentata*)

# Mosses

There are three main types of moss:

- bog-mosses,
- tufty mosses,
- branched mosses.

**Bog-mosses** (*Sphagnum* species) are big, spongy, soggy mosses with cells full of water. They mostly grow in peatlands (bogs and wet heath). They are the most colourful mosses and can be green, red, orange, pink or yellow.

Bog-mosses  
(*Sphagnum* species)







Bank Haircap  
(*Polytrichastrum  
formosum*)

**Tufty mosses** (acrocarpous mosses) usually grow in upright tufts, clumps or patches.

The haircap mosses are distinctive and quite easy to find in woodlands or on bogs. They can grow to over 10cm high which is tall for a moss! They grow upright like tiny conifer trees, with narrow, sharply pointed leaves, spreading out in a star-shape.

Wall Screw-moss is one of the commonest mosses in towns and villages. It loves lime mortar in walls or growing on concrete. It forms small cushions with leaves that have a long, silvery point, like a hair, and are tightly curled up when dry. When wetted, it springs back to life and the leaves spread outwards.



Wall  
Screw-moss  
(*Tortula muralis*)



Tamarisk  
Feather-moss  
(*Thuidium  
tamariscinum*)

**Branched mosses** (pleurocarpous mosses) are usually more sprawling than tufty mosses and can look like tiny tree branches or feathers.

Tamarisk Feather-moss is a large moss with arching stems that neatly branch three times giving it a fine, feathery appearance. It grows on soil and over rocks in woodland, where it can form big patches.

Springy Turf-moss is a small upright moss with a red stem, commonly found in lawns. Its leaves curve sharply away from the stem in all directions, so when viewed from above it can look like an array of little stars.



Springy  
Turf-moss  
(*Rhytidiadelphus  
squarrosus*)

# How to see bryophytes?

You are never far from a moss or liverwort, so you can look for them whenever you are outside.

From a distance a lot of mosses and liverworts can look similar: a green fuzzy mat. To see all the tiny, beautiful features of mosses and to see the differences between species, a hand lens or a macro setting on your phone camera is very useful.



For more information, including a more detailed guide to the mosses and liverworts of the Bantry Bay area, see [www.ellenhutchins.com/bryophytes/](http://www.ellenhutchins.com/bryophytes/)



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