



Dublin Mountains
Partnership

**A Guide to 10 Common
Bryophytes of Dublin
Upland Woodlands**



Introduction to Bryophytes in the Dublin Mountains

This guide introduces you to ten common mosses and liverworts (bryophytes) which you will find at many sites in the Dublin Mountains. The woodlands and heathland in the Dublin Mountains support a high abundance and diversity of bryophytes, with some species which are rare elsewhere in Co. Dublin. Both conifer plantations and woodlands with native tree species can provide bryophyte habitat – if you look you will find them in most habitats. Places to look include the forest floor, tree trunks and branches, rocks in woodland and streams, wet areas in paths, under heather bushes and in ditches and track edges.

The bryophytes comprise three closely related groups of plants: liverworts, hornworts and mosses. Hornworts tend to occur in nutrient rich disturbed soil, such as hedgerow banks and arable fields. They are rare/ absent in the Dublin Mountains and are not included in this guide. Bryophytes were the first land plants and have some features which allowed them to survive the early conditions on land. They do not have roots and absorb most of their water over the surface of the plant and leaves. For this reason many species favour humid places where they won't dry out. Species of drier habitats such as walls, however are able to tolerate drying and will enter a dormant state until it rains again! If you look at the mosses on a wall when they are wet and dry you will see that they can look very different.

Ireland has high bryophyte diversity and is important for bryophyte conservation at a European and International level. There are almost 800 bryophyte species in Ireland.

Some reasons why it is interesting to learn more about bryophytes are:

- Bryophytes are present year round and so you can study them in winter.
- They are found in all Irish habitats, from lowland rivers to upland mountain tops. They can also be found in artificial habitats such as urban walls, tarmac, paths and even sometimes on cars!
- In some Irish habitats, bryophytes are the main plant species present, for instance raised and blanket bogs, fens and the ground, trunks and branches in many different types of woodland.
- Bryophytes can be sensitive to environmental conditions so they can be used as 'indicator' species to provide information on water levels, humidity, the acidity/ alkalinity of a substrate (pH) and air and water pollution for instance. They are often used to assess whether protected habitats are in good or poor condition.

Most bryophytes can be identified at any time of the year. They are easier to identify when they are wet, so it is a good idea to look for them after rain (or in the wetter winter months). A hand lens (x10 or x20 magnification) is helpful for looking at small identification details.

The 10 bryophytes shown in this guide are found across the Dublin Mountains, see map on page 15, Coillte's Cruagh and Ticknock forests are the top places to see all 10.

All images and content by Joanne Denyer of Denyer Ecology.

Liverworts

There are two groups of liverworts: leafy liverworts with a main stem and two rows of leaves and non-leafy liverworts (thalloid liverworts) which don't have leaves and are similar to some lichens.



Leafy liverworts



Non leafy liverworts

Liverworts have a fruiting body (*sporophyte*) with a clear stalk and a black capsule.

Mosses

There are three groups of mosses: upright unbranched mosses (*acrocarpous mosses*); creeping branched mosses (*pleurocarpous mosses*) and bog mosses (*Sphagnum mosses*).



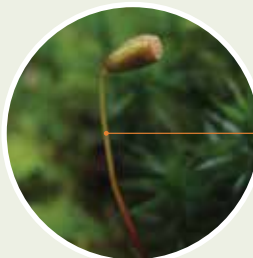
Upright, unbranched moss



Creeping, branched moss



Bogmoss



Moss

Mosses have a fruiting body (*sporophyte*) with an opaque stalk and capsules of varying colours.

Leafy liverworts

White Earwort

Diplophyllum albicans

White Earwort is usually found in humid shady places. It forms flat patches on boulders and woodland banks. These are often a grey green colour, but can also be slightly brown. The flat shoots have a main stem with a row of leaves either side. The leaves are folded which makes it appear as if there are four rows of leaves. A pale line runs along the leaf but you may need magnification to see this.



Thalloid liverworts

Overleaf Pellia *Pellia epiphylla*

Overleaf Pellia is found in damp places such as the edges of streams and wet woodland banks. The plants do not have stems and leaves like leafy liverworts and mosses. Instead they have a broad 'thallus' a bit like a lichen. This is dark green and thicker than leafy liverworts, but is still slightly transparent. This plant has a fruiting body with a clear stalk and a black capsule.



Upright, unbranched mosses (*acrocarps*)

Broom Forkmoss

Dicranum scoparium

Broom Forkmoss grows in cushions in places such as woodland banks and fallen logs. The cushions are medium sized and usually around 5cm tall. Each upright shoot has pale yellow green leaves which are transparent. The leaves may be straight or slightly curved away from the stem.



Upright, unbranched mosses (*acrocarps*)

Common Haircap

Polytrichum commune

Common Haircap grows in cushions in damp areas such as wet grassland, wet woodland and ditch edges. This is the tallest Irish moss species and stems can be 40cm in height. The shoots have dark green leaves which are thick and opaque. The leaves whorl around the stem and feel tough.



**Branched mosses on the woodland floor
of an upland conifer plantation**



Common Tamarisk-moss on woodland soil



Waved Silk moss on the edge of a rotting tree stump



Little Shaggy-moss on a boulder



Neat Feathermoss at the base of a tree

Creeping, branched mosses (*pleurocarps*)

Found on the ground in woodlands



Waved SilkmoSS

Plagiothecium undulatum

Waved SilkmoSS has pale flat shoots which grow in flat patches on the woodland floor and on logs. The large broad leaves are crinkled (undulate).

Shoots have **little** or no branching.



Neat FeathermoSS/ 'Juicy Lucy'

Pseudoscleropodium purum

Neat FeathermoSS lives up to its name with a very neat appearance. This is because the leaves overlap each other giving it a smooth look to the shoots ('Juicy Lucy' moss). The leaves are medium size and have a very fine point at the tip. It has a green stem.

Shoots have frequent **regular** branching.



Little Shaggy-moss

*Rhytidiadelphus
loreus*

The leaves of Little Shaggy-moss are curved and bend away from the stem so it has a 'shaggy' look (compare with Neat Feathermoss/ 'Juicy Lucy'). It has a red stem which contrasts with the mid-green leaves.

Shoots have frequent **irregular** branching.



Common Tamarisk-moss

*Thuidium
tamariscinum*

Tamarisk moss is one of the most branched of all Irish mosses and looks like a feather or fern. The stems and branches have very small leaves which are hard to see without magnification. The stem and leaves are pale to bright green.

Shoots are **highly** branched and feather like.

Bog mosses (*Sphagnum*)

Acute-leaved Bogmoss *Sphagnum rubellum*

Acute-leaved Bogmoss grows in wet areas. It forms hummocks in wet heathy areas and at the edges of tracks where there is water. The shoots have a striking wine red 'capitula' or head and the stems are also red. The branch leaves may be white, pink or red. It is a slender plant.



Upright, unbranched mosses (*acrocarps*)

Blunt-leaved Bogmoss *Sphagnum palustre*

Blunt leaved Bog moss grows in low mounds or carpets in wet areas such as the edges of tracks. Unlike Acute-leaved Bogmoss, it is not found in wet heathland. The shoots have a white or brown coloured 'capitula' or head. The stems are dark and the branch leaves are pale. It has larger leaves than Acute-leaved Bogmoss.



Summary

10 common bryophytes of the Dublin Mountains



Leafy liverwort
White Earwort
Diplophyllum albicans



Non leafy liverwort
Overleaf Peltia
Peltia epiphylla



Upright, unbranched moss
Broom Forkmoss
Dicranum scoparium



Upright, unbranched moss
Common Haircap
Polytrichum commune



Creeping, branched moss
Waved Silkmoth
Plagiothecium undulatum



Creeping, branched moss
Neat Feathermoss/'Juicy Lucy'
Pseudoscleropodium purum



Creeping, branched moss
Little Shaggy-moss
Rhynchospora loreus



Creeping, branched moss
Common Tamarisk-moss
Thuidium tamariscinum

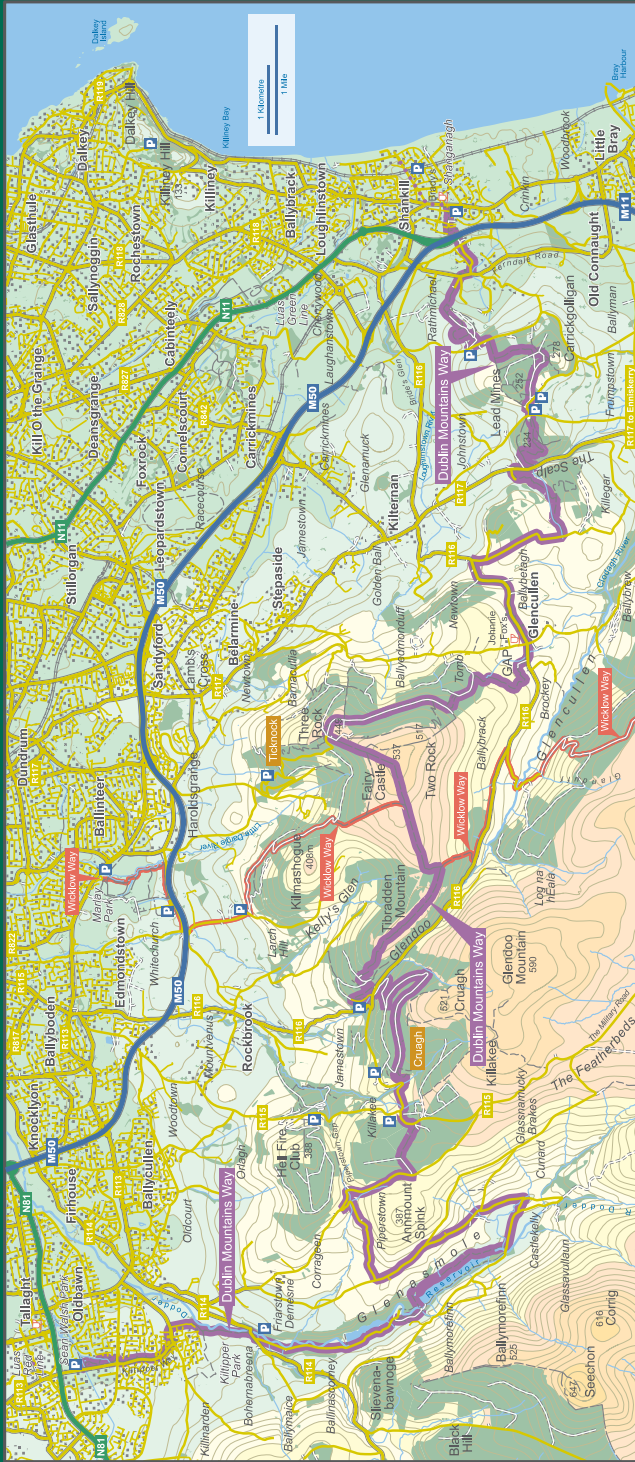


Bog moss
Acute-leaved Bogmoss
Sphagnum rubellum



Bog moss
Blunt-leaved Bogmoss
Sphagnum palustre

Map of Dublin Mountains





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