



The Moss Trail



About bryophytes

Mosses, also known as bryophytes, are non-vascular plants that lack true roots, leaves and stems. The term bryophyte includes the lesser known liverworts and hornworts too. Being one of the oldest plant groups, bryophytes were a beginning step in terrestrial plant evolution. Bryophytes evolved before seeds and have been reproducing via spores and regenerative fragments for over 400 million years. Here at the National Botanic Garden of Wales over 130 species have been recorded!



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Mae fersiwn Gymraeg o'r ddogfen hon ar gael



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*The Botanic Garden is
cloaked in beautiful bryophytes*

1. *Marchantia polymorpha* · Common Liverwort



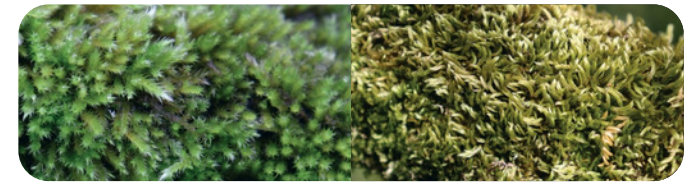
M. polymorpha is a striking thallose liverwort that has a flat, sheet-like appearance. Due to its ability to easily regenerate, Common Liverwort was used in many early tissue culture studies.

4. *Rhytidiadelphus squarrosus* · Springy Turf-moss



This moss is commonly associated with waxcap fungi in short sward grasslands. The denser mats feel springy to touch. Peering down the shoots will reveal a star shape formed by the leaf arrangement.

7. *Homalothecium sericeum* · Silky Wall Feather-moss



This moss forms lush patches, ranging in colour from green to orange. It is somewhat more distinct when dry as the branches curl up to create an eye-catching, silky appearance. Interestingly, the tiny leaves of this moss are pleated, aiding in water retention.

2. *Frullania dilatata* · Dilated Scalewort



Often forming thick, red-purple patches on the trunks and branches of trees, it's easy to miss the details of *F. dilatata*. Closer inspection reveals the scale-like leaves of this small liverwort. Fresh growth can be green, giving a more variable appearance.

5. *Grimmia pulvinata* · Grey-cushioned Grimmia



The striking white hairs reduce the effects of wind and UV light, allowing this moss to retain humidity even in exposed habitats such as bare rock. The sporophytes sit with the capsule pressed downwards until they are mature, creating little loops on the cushion surface.

8. *Metzgeria furcata* · Forked Veilwort



This tiny liverwort can form extensive patches, mostly as an epiphyte on the branches and trunks of trees. Looking closer, forks can be seen at the ends of the tiny, semi-translucent thallus ribbons, hence the words forked and veil are used as descriptors in the common name.

3. *Cryphaea heteromalla* · Lateral Cryphaea



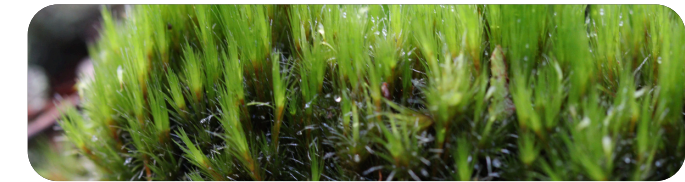
C. heteromalla was very rare in the 1980s due to sulphur dioxide pollution however, clean air legislation has allowed this moss to become common. The bottle brush appearance of the stems makes trees look woolly.

6. *Polytrichum juniperinum* · Juniper Haircap



Uncommonly for mosses, *P. juniperinum* has cells that transport water, creating distinctly thicker leaves and more robust shoots that can grow to larger sizes.

9. *Campylopus introflexus* · Heath Star-moss



This moss species is not native to the UK, but is now widely distributed after first being recorded in 1941. This is an easily recognisable species, especially when dry as the long hairpoints bend backwards, making the moss look starry.

1. Look down around the water feature.
2. Inspect the tree trunks.
3. Growing on the trunk of the *Ulmus x hollandica* 'Jacqueline Hillier' tree.
4. Take a closer look amongst the grass.
5. Take a look at the Devonian Red Sandstone.

6. At the base of the steps leading up into the boulder garden.
7. Take a look at the lower right branch of the *Lonicera maackii* f. *podocarpa* tree.
8. Look closely at the tree trunks.
9. Take a look at the big old fallen oak tree.

Helpful hints