

Welcome to the Moors for the Future Partnership's printable guide to Sphagnum and other common mosses and lichens characteristic of the Peak District National Park and South Pennines.

Use this guide to try your hand at spotting and identifying this fascinating, attractive and yet often over looked group of plants and fungi and find out how they help make these moorlands such important and unique places.

If you have a smartphone search for MoorMOSS on the Apple and Android app stores to find our interactive version of this field guide.

## Moss - Sphagnum

---



### Austin's Bog-moss

*Sphagnum austinii*



- Big, often hard hummocks or carpets to 50cm in height. Branches are "maggot" shaped.
- Hazel-nut brown often with a greenish centre to capitula.



### Red Bog-moss

*Sphagnum capillifolium*



- Forms dense, firm hummocks or carpets. Also found in small patches.
- The capitulum (the growing tip) often looks like a pom-pom. Surface of the hummock is bumpy, resembling cauliflower florets.
- Plants are all or mostly dark wine-red except if shaded, when they are green.



### Feathery Bog-moss

*Sphagnum cuspidatum*



- Larger than most species, with very long narrow leaves, looking 'feathery' when floating.
- Messy-looking (like matted wet fur) when lifted out of water.
- Usually green, sometimes with mustard colours. Almost white in colour when dry.



### Cow-horn Bog-moss

*Sphagnum denticulatum*



- Variable in shape, usually in patches or carpets. Upper branches are smooth and often curved like a cow's horns.
  - Green or yellowish, sometimes dark copper.
-

# Moss - Sphagnum

---



## Flat-topped Bog-moss

*Sphagnum fallax*



- Variable in shape, in extensive carpets or small patches.
- Capitula are star shaped, convex and mostly green, sometimes with mustard colours.
- Tolerant of some pollution.



## Fringed Bog-moss

*Sphagnum fimbriatum*



- In loose carpets and patches, with long, thin, drooping branches.
- Stem leaves form a fringed 'ruff' at stem apex (visible with a hand lens).
- Capitula are small, with a very conspicuous terminal bud in the centre.
- Green, often a whitish-green.
- Often with reproductive "capsules" present.



## Rusty Bog-moss

*Sphagnum fuscum*



- Forms compact, distinctly smooth looking hummocks.
- Ginger brown colour is very characteristic and *Sphagnum fuscum* never shows any trace of red or pink. Green forms do, however, occur occasionally. Stems are dark brown/black.



## Magellanic Bog-moss

*Sphagnum magellanicum*



- In low hummocks or carpets.
- Usually red, dark wine-red and rarely green (when shaded). The only chunky red species. Can look brownish when it dries out.



## Blunt-leaved Bog-moss

*Sphagnum palustre*



- In low hummocks or large, untidy mats
  - Straw-coloured to green, sometimes with flecks of salmon-pink.
  - Brown in centre of capitulum in autumn and winter, which contrasts with paler outside branches.
-

## Moss - Sphagnum

---



### Papillose Bog-moss

*Sphagnum papillosum*



- Big fat shoots and grows into hummocks or carpets.
- Easily confused with *Sphagnum palustre*, but often has more stubby, cigar-shaped branches and less fluffy shoots.
- Typically a pale brown-yellow colour but can be green. Never any red present. On bogs, any trace of red in the leaves or stem of a plant signifies that the plant is *Sphagnum magellanicum*.



### Lustrous Bog-moss

*Sphagnum subnitens*



- Loose hummocks or small patches.
- Brick-red or salmon pink to green. Centre of capitulum often green with red 'halo' around edges
- Capitulum less than 2cm wide and in dense hummocks the outer branches grow up above the centre making the capitulum appear somewhat concave.



### Soft Bog-moss

*Sphagnum tenellum*



- The smallest UK species. In small patches or mixed with other species. Fragile and disintegrates when handled.
- Leaves at branch ends sometimes stick out like crab's claws.
- Usually a bright yellow-orange colour and sometimes with hints of green. May be green when submerged for long periods.

## Moss - other

---



### Common Haircap

*Polytrichum commune*



- Forms attractive hummocks of wiry and generally unbranched shoots all pointing upwards.
  - Can grow as tall as 40cm but usually to 20cm.
  - Star-like form when viewed from above.
  - When present the 4-sided, box-like capsule (produced in summer) is distinctive and produced on a long (to 12 cm), reddish stalk.
-

## Moss - other

---

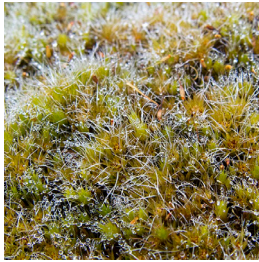


### Broom Fork-moss

*Dicranum scoparium*



- Yellow-dark green in colour this moss forms cushions and grows to about 10cm in height.
- Leaves, which are 4-7.5mm in length are thin, spearhead-shaped and taper to a fine point.



### Heath Star-moss

*Campylopus introflexus*



- A small (to 5cm but usually far smaller), compact species which is easy to recognise.
- Has hairy tips to the shoots which give it an almost cactus-like appearance when dry.
- Hairs largely held at right-angle to shoot with a few pointing up.



### Bog Bead-moss

*Aulacomnium palustre*



- Grows between 3-12cm in height and forms tufts.
- Leaves are a pale yellow-green, spear-shaped and 4-6mm in length.
- The stems often have ginger-brown felt-like rhizoids (hairy growths) growing on them.



### Woolly Fringe-moss

*Racomitrium lanuginosum*



- A grey-green coloured moss.
- Shoots are 2-5cm long and irregularly branched.
- Shoots have an upright growth form and leaves (3-6mm) terminate in a long white hair.



### Red-stemmed Feather-moss

*Pleurozium schreberi*



- Generally easy to recognise with its feather-like branching structure, red stems and bright yellow-green or bright green leaves.
  - The leaves, which are 2-2.5mm long, are oval in shape with a broad, blunt tip.
  - It is a large (shoots 2 to several centimetres long), irregularly branched, upright, grey-green plant with a conspicuous hair point at the end of 3-6 mm long leaves that often curve in one direction.
  - Leaves are also concave and envelope the stem.
-

## Moss - other

---



### Little Shaggy-moss

*Rhytidiadelphus loreus*



- Shoots can grow to 20cm in length. Branches irregularly so not symmetrical.
- Like *Pleurozium schreberi* it has a red stem.
- Leaves are about 3mm in length and have a broad, oval base, which narrows to a long, tapering tip that point in the same direction.

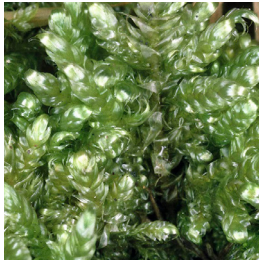


### Waved Silk-moss

*Plagiothecium undulatum*



- A large, conspicuous and distinctive moss which is flattened.
- The pale-green shoots are several cm long and about 5-6mm wide.
- Leaves arranged in opposite pairs, giving this moss a neat appearance.



### Heath Plait-moss

*Hypnum jutlandicum*



- Shoots are 2-3cm in length and leaves are very small - usually under 2mm in length.
- Leaves curl under at the tip.
- This moss is normally a washed out pale-green colour and is irregularly branched.

## Liverwort

---



### Liverworts

*Marchantiophyta*



The most familiar and distinctive Liverworts are the Thalloid Liverworts which have a flattened, prostrate growth form with overlapping scales/leaves. The Leafy Liverworts have more species and tend to look more moss-like.

---

# Lichen

---



## Reindeer lichen

*Cladonia portentosa*



- An easily recognisable lichen evocative of arctic tundra.
- It has a thin “stem” with branches usually dividing into three but with the penultimate sometimes dividing into two.
- Generally grey, green-grey in colour. Grows to 6-7cm in height and may be found in small discrete patches or form large mats.



## British soldier lichen

*Cladonia floerkeana*



- A very distinctive, upright lichen with red-capped branches (known as ‘Podetia’) which some liken to a red-tipped match stick.
- This species can grow between 1-3cm but more often is found 10-30mm in height.



## False pixie cup

*Cladonia chlorophaea*



- A small (2-3cm), upright species of lichen which has a stick-like growth form.
  - Each fruiting body (‘podetia’) terminates in a concave cup.
  - Light green, grey-green in colour.
-

## Moors for the Future Partnership

Since 2003, the Moors for the Future Partnership has been working to reverse more than 200 years of damage from industrial pollution and wildfires that left large areas of uplands bare of vegetation in the South Pennine Moors Special Area of Conservation and Special Protection Area.

The £5.5 million EU LIFE+ MoorLIFE project is a key part of the initiative. Its primary objective is to restore habitats of European significance – protecting active blanket bog by restoring bare and eroding peat. In just five years, more than 2,000 acres of Peak District and South Pennine moorland has been restored.



Photo showing cottongrass plugs being planted out

© Moors for the Future Partnership

The project has key benefits for communities on both sides of the Pennines in terms of improved landscape, water quality and diversity of upland fauna and flora. The blanket bogs are home to many important birds including the endangered twite, curlew and golden plover. Peat-forming Sphagnum moss, which has nearly disappeared from this area due to industrial pollution and wildfires, and other key upland plants - heather, cottongrass, bilberry, crowberry, cloudberry and cross leaved heath – has been re-introduced.



Photo showing healthy blanket bog

© Tim Melling

The MoorLIFE Project was funded by the EU Life+ programme, led by the Peak District National Park Authority and delivered by the Moors for the Future Partnership. Partners: Environment Agency, Natural England, National Trust, United Utilities, Yorkshire Water.

Find out more at [www.moorsforthefuture.org.uk](http://www.moorsforthefuture.org.uk)

