

Know Your Stuff

Sedges, Rushes & Grasses

Sedges have edges, rushes are round and grasses have knuckles right down to the ground

Whilst you are out enjoying your various pursuits in the mountains of Britain the vast areas of grassland that make up extensive areas of our upland regions often go without much consideration for their diversity or history.

In this article we take a look at their history in Britain and also illustrate the differences between the major groups of grass-like plants: grasses, sedges and rushes.

A bit of history

Grasslands form one of the most widespread and extensive habitats in all upland regions of the British Isles. A few grasslands appear above the potential limit of tree growth or on steep cliffs, but the majority appear in areas which were once wooded. They owe their existence mainly to management such as grazing, mowing or burning which prevents trees or shrubs from becoming established.

The development of grasslands below the natural tree limit is linked with the development of human exploitation of the uplands. Pollen diagrams trace the spread of grassland species associated with forest clearance with early Neolithic settlers whose domesticated grazing animals prevented tree regeneration.

The major increase in grassland came in the Iron Age from North Yorkshire and Cumbria southwards. This phase probably coincided with the development of hay making and associated cutting tools such as scythes. The Domesday Book showed that meadows and pasture were widespread in 1086 and during mediaeval times large hay meadows often had communal or shared ownership and a structure of laws and traditions. Above the valleys and settlements a pattern of upland farming was established with enclosed pastures on valley sides and unenclosed rough grazing on the higher ground.

Economics has had an important part in the changing landscape of our uplands. For instance in Tudor times wool prices were high and many landowners converted arable land to pasture and during the Napoleonic Wars more arable land was required and grasslands were ploughed up. Despite all these land use changes the unenclosed rough pastures have remained much the same except for the grazing pressure.

Grassland species vary greatly according to the underlying soils and geology. A basic division is acidic, neutral and calcareous grasslands. Acid grasslands are the most widespread through the uplands and have been managed by rough grazing, little altered since prehistoric times. Sheep are the most important grazers today but cattle, horses and pigs have also been important and continue in areas such as Dartmoor and Exmoor. The soils are acidic due to the geology but also from nutrients being leached in the cool, wet climate. As a consequence the grasslands have a limited range of species.

Grasses, sedges and rushes can be hard to identify but there are some differences between the groups which may make it easier to distinguish. Their flowers are rather drab as they rely on the wind for pollination and the flowers have no use for showy petals or scent and nectar.

Grasses have knuckles

Grasses are plants with long narrow leaves which have parallel veins running along them. Their stems are hollow and rounded and their flowers are grouped into spikelets. The 'knees' of grasses are joint-like nodes found along the hollow, rounded stem.

Matt grass (*Nardus stricta*)

This abundant tussock forming grass has stiff, bristle-like leaves. The leaves are edged with hard silicate crystals making it unpalatable to sheep. The leaves persist during the autumn and fade to a straw-like colour which is a dominant characteristic in a winter landscape. The straw coloured, hard tufts may be seen uprooted, discarded by grazing sheep!



Purple moor grass (*Molinia caerulea*)

A prominent, tussock-forming grass of blanket bog, damp moors and heaths. The leaves are fairly soft and have a purple tinge to them. During the autumn the large tussocks, often a foot tall and which can dominate wet valley floors, die and turn yellow and remain throughout the bleak winter months. The dead leaves can often be seen forming distinctive ribbons winding through the vegetation.

Sedges have edges

Sedges have solid, three-sided stems and leaves that appear folded along their middle. The leaves form a cylinder around the stem (unlike grasses which form a sheath). The flowers are of single sex and grouped into separate catkin-like spikelets with females at the base and males towards the tip.

Cotton grass (*Eriophorum angustifolium*)

The fluffy white, cotton-like heads of cotton grass are a common sight in upland bogs. Despite its name it is a member of the sedge family. Each stalk carries 3-5 flowerheads which produce cotton-like fruits from June onwards. Hares-tail cotton grass (*E. vaginatum*) found also on wet peaty soil is easily identified by its single flowerhead. Old uses of the flowers include stuffing pillows but the strands are not long enough to spin into thread and weave into cloth.



Deer grass (*Trichophorum cespitosum*)

Widespread and common in boggy areas and wet heath. It forms a tussock with each shoot capped by a simple flower-like spike. During the autumn months the green fades to a fawn and orange – resembling the colour of deer hence its name. It is very resistant to trampling surviving heavily trodden paths. I liken it to a bald monk!

Rushes are round

Rushes have solid, pithy rounded stems and their leaves are either flat and hairless or cylindrical forming continuous cylinders around the stem. The woodrushes always have flat leaves which bear long white hairs. The flowers are easy to spot and close up look like those of lilies & Tulips.



Soft rush (*Juncus effusus*)

Large dense patches of Soft rush often indicate wet ground. The large clumped stems can often reach 1.5m in height and have distinctive brown flowers pointing sideways from a point towards the tip. It is unpalatable to sheep and cattle but enjoyed by ponies which are used by farmers to manage their spread in wet fields. The spongy pith has been used to make candles by dipping in animal fat creating a slow-burning taper. It is reported that the phrase 'to burn the candle at both end' comes from doing that with these tapers as a reckless waste of candles.

Heath rush (*Juncus squarrosus*)

This small rush forms dense tufts which can be recognised by the rosette of leaves which strongly bend back to create a circle of waxy leaves with the surrounding taller grasses being held back. It is common on acid grasslands especially where sheep grazing is heavy. It can be seen also on trodden paths as its bent leaves form a flattened rosette which gives it an advantage under walkers boots!

