

of Northern Ireland's Uplands An Insight to Key Flora and Fauna

SnixlbW ∭wi 9ìibliW





Mountaineering Ireland

Mountaineering Ireland is the representative body working on behalf of all hillwalkers and climbers on the island of Ireland. Membership is open to clubs and individuals. In addition to providing a comprehensive range of services to members, Mountaineering Ireland's work includes: protecting the mountain environment; improving and securing access; providing opportunities for young people to experience our sport and supporting skills development amongst all walkers and climbers. For more information on Mountaineering Ireland visit www.mountaineering.ie Follow us on Facebook @ www.facebook.com/mountaineeringireland

Environmental Defence Fund

Mountaineering Ireland's Environmental Defence Fund was established in the 1980s as an emergency fund to safeguard the quality of Ireland's mountain environment and to protect access o these areas. As an example, the Environmental Defence Fund was recently used to pay for a report on the landscape impact of a windfarm proposed for the western Mournes. The fund relies solely on goodwill contributions.

Donate and help protect the mountains

If you've enjoyed this leaflet, and you'd like to help protect access and the mountain environment, please consider making a donation today to Mountaineering Ireland's Environmental Defence Fund via the online shop at www.mountaineering.ie

Thanks to all who contributed

This publication was funded under the Northern Ireland Environment Agency NGO Challenge Fund 2015 administered by Northern Ireland Environment Link, updated 2020.

In addition to those who provided photographic images, Mountaineering Ireland is very grateful for the advice of Jim Bradley, Alan Cooper, Trevor Fisher, Therese Hamill, Rory Hodd, Patrick Lynch, Mike Maunsell, Teresa O'Hare, Kelley O'Reilly Smith, Mary Tubridy and particularly Vincent Mc Alinden. Series editor: Helen Lawless.

Cover photograph: 😸 Slieve Bearnagh, Mourne Mountains, courtesy of Leslie Ashe.



The upland environment of Northern Ireland

This guide aims to help you understand more about Northern Ireland's uplands and the wild plant and animal species that depend upon these areas for their existence The wilder character of Northern Ireland's upland environment becomes apparent at about 150m, where earth banks and dry-stone walls replace hedges and where gorse, heather and rushes become more frequent. The rougher terrain combines with harsher climatic conditions to constrain the extent of farming activity. Above 600m winter weather conditions sometimes approach those found in the arctic. The upland habitats of Northern Ireland with their plants and animals are very important in a European context. This is because we have prevailing southwesterly weather systems that give a mild wet, oceanic climate (more than 2m yearly rainfall on Cuilcagh in Fermanagh), a wide range of rock types (including Mournes granite, Sperrins schist, Antrim Hills basalt, Fermanagh limestone) and genetically distinct animals and plants. The peaty soils under most upland habitats are nutrient poor from centuries of high rainfall and very acidic from the activity of bog mosses (Sphagnum)

About 12,000 years ago the glaciations which carved our mountains retreated to reveal bare rock surfaces and an uneven topography of rock debris, sands and clays. The types of vegetation we see today (e.g. bog, heath and upland grassland habitats) vary depending primarily on rock type, climate and land use. They occur as a fascinating mosaic of different habitats, in patches of different sizes and shapes.



Key habitats in Northern Ireland's uplands

A habitat is a place where plants and animals live and grow; habitats are typically defined by their constituent species. Having names for different habitats allows ecologists to quantify and map changes to our biodiversity. But more than this, habitat names provide language that helps us connect the landscape with what lives there. Our mountain journeys take us through a mosaic of different habitats, with that variety adding life, colour and texture to our experiences. Habitat type can vary gradually with slope, aspect and altitude, or change abruptly to give clear boundaries.



25 **Raven** Corvus corax

60-68cm

The largest of the crow family and a common sight and sound of the mountains. ntelligent and sociable, they communicate using up to 30 different calls; but it is the deep, croaking "prruk, pruk" that draws attention. The Raven has a tumbling flight, diamond-shaped tail and long wings with 'fingers' at the end. A strongly erritorial bird, normally seen alone, but sometimes in twos or threes chasing other aptors out of their territory. The youngsters form social groups before settling down and mating for life.

One of the few upland bird species that is on the increase. Ravens feed mostly on carrion but will eat berries and beetles



26 Meadow pipit Anthus pratensis 14-15cm

Our most numerous upland bird, whose lisping "seep seep" call provides the ambient sound of the hills. Meadow Pipits are small and ordinary to look at; but in spring the male's simultaneous parachuting and singing display is a remarkable performance. Although several species play host to the Cuckoo, whose intrusive egg mimics its host, the Meadow Pipit is its preferred nursemaid. Most Meadow Pipits spend winter in the lowlands.

27 Skylark Alauda arvensis 17-19cm

The male Skylark defends his spring territory by ascending 50-100m where he hovers, warbling incessantly (chirruping for up to for 15 minutes at a stretch) before plummeting to the ground. Skylarks appear similar to Meadow Pipits, but can be distinguished by their song and flight pattern. The Meadow Pipit flies lower and his song is shorter, thinner in sound and he sings as he flutters down



Blanket Bog



Care: Paths across bog are particularly susceptible to erosion and widening. Help prevent urther damage to fragile blanket bog by keeping to the centre of existing paths and resisting the temptation to jump off peat hagg

Upland Heath

Where	What	Who	Status
Moving up the hill, as soils become less waterlogged, bog grades imperceptibly into heath.	Mature upland heath with a diverse structure, including heather at different growth stages and a moss layer at the base, provides a range of micro habitats which add to its biodiversity value.	Characterised by abundant dwarf shrubs such as heathers, bog myrtle, bilberry and gorse.	Considerable upland heathland loss in recent times.
Particularly prominent across the Antrim Hills, Sperrin Mountains, Mourne Mountains, Ring of Gullion and the scarp slopes of western Fermanagh.	Upland heath in summer colour is perhaps the most recognisable and most photographed upland habitat.	On wetter parts of the mountain, heathers will be found alongside purple moor-grass, deergrass and bog moss <i>(Sphagnum)</i> , this is known as wet heath .	Pressures include intensive livestock grazing, burning for agriculture, air pollution and afforestation.
A DAY		On better drained slopes, notably in the Eastern Mournes a greater abundance of the purple bell heather, the dominance of dwarf shrubs and the absence of purple moor grass, cottongrass and deer	Priority habitat in a European context

Care: Its woody shrubs can make upland heath susceptible to damage by fire. Heather is particularly sensitive to trampling

The Skylark's distinctive head-crest rises up when alarmed. In the uplands they feed mostly on seeds from grasses and sedges. Once a common farmland bird, pesticide use and changes to farming mean the upland margins are now important for summer breeding.



gorse bush. Distinctive in appearance, yet easy to recognise by its call which sounds like two stones being banged together (hence 'stone-chat'). Cold wet



29 Wheatear Oenanthe oenanthe 14-16cm

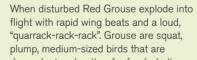
A delightful sign of summer, Wheatears are the earliest visitor to Ireland's mountains arriving from Africa in late March or early April. They time their arrival to coincide with the emergence of insects. The Wheatear's white rump

(the Victorians changed its name from 'white arse') is easily seen as it flies low between rocky perches. Often seen in pairs, the male has a striking wraparound eye-band (shades). The call is noisy 'chacks' interspersed with 'wheets', their parrot skills are close to perfection with the alarm calls of many other species retweeted

12

28 Stonechat Saxicola torquata 12-14cm

Resident and commonly found in the uplands, the robin-sized Stonechat is often seen perched on a fencepost or a seasons with reduced insect populations have a dire effect on their numbers. Most Stonechats breeding in uplands move to lower altitudes in autumn



30 Red Grouse

Lagopus lagopus

33-40cm

grass are indicators of

dry heath

dependent on heather for food, shelter and nesting. Heather makes up 90% of the Red Grouse diet. The loss of heath habitat through

wildfires, overgrazing and conversion to forestry plantations has greatly reduced the grouse population. The Antrim Hills and the Sperrins have the largest grouse numbers in Northern Ireland.



Montane Heath

Where	What	Who	Status
The natural treeline in Northern Ireland is believed to be approximately 500- 600m.	The government first started planting commercial conifer plantations in Northern Ireland from 1911, before this the landed estates such as Glenarm, Annesley and Kilmorey had more mixed planting regimes and it is these which give glimpses of the potential native tree cover can bring to appropriate upland sites.	The main native trees are birch and mountain ash with occasional stunted oak on schist or granite bedrock, and with hazel and ash on limestone or basalt bedrock.	General absence of native woodland in Northern Ireland's uplands.
Widespread felling during the 16th and 17th centuries and grazing practices since have left only small patches of native, deciduous woodland above 200m.		Recently you may have noticed native tree corridors alongside new forestry plantings.	Some sites are showing degradation due to increased recreation activity.
At Aughrim Hill in the Mournes the Woodland Trust are currently planting what will be the largest native woodland in Northern Ireland (110,000 native trees on 60 hectares).			

Care: Consider the benefits native woodland can bring to our uplands and lend your support to actions that help bring the trees back.



31 Peregrine Falcon

Falco peregrinus 38-49cm

The Peregrine Falcon is the largest breeding falcon in Northern Ireland and the fastest creature on the planet. It is streamlined to dive at speeds of over 320km/h to strike its prey with a single fatal blow from its strong talons. When not attacking, the Peregrine flies with a series of short wing beats and alternating glides, tilting to show its pale under-feathers and broad pointed wings.

From March to June loud screeching calls near rocky ledges may declare the sence of a nest. Help protect this magnificent species by moving away as disturbance causes unnecessary stress for the birds and interrupts their ability to hunt and provide for their chicks. Peregrines were close to extinction in the 1960s but the population recovered following the banning of DDT. Peregrines prey on smaller birds including pigeons, and because of this are subject to persecution. Any deliberate disturbance should be reported to the NI Raptor Study Group.

32 Buzzard

Buteo buteo If it's a big bird it's most likely to be a Buzzard, now the commonest and most widespread bird of prey in Northern Ireland. Identified in flight by its broad, rounded wings with 'fingers', it also has a more widely fanned tail than the much larger Golden Eagle, but is more easily distinguished by its pale cummerbund. A varied diet of small mammals, birds, carrion, and even earthworms and large insects has enabled their range to extend across a range of habitats. Like other predators, Buzzards strengthen prey populations by removing weaker individuals. The crag at Buzzard's Roost in the Mournes is typical of their upland breeding grounds.



Upland Acid Grassland

Where	What	Who	Status
Occupying better drained soils on heavily grazed upland landscapes.	Of greater cultural than wildlife interest, but remains a habitat to some scarce and declining species.	The open nature of grasslands allows small plants such as tormentil and heath milkwort to grow.	Some heavily grazed grasslands are dominated by mat-grass.
		These areas are also important for ground- nesting birds.	A reduction in sheep numbers could improve biodiversity.
Care: Grasses grow from the base making grassland habitats more resilient to trampling than blanket bog or heath			

Where	What	Who	Status
When the going gets woody, brambles catch at your clothing, gorse spines stick in your socks, and you're weaving your way through willows, you are now in scrub!	Nature's stepping stone to woodland.	Important shelter and food sources for small mammals and upland birds such as stonechat.	Now gaining increasing credit for its role in carbon and water cycling.
•		10 × 12 × 12 × 110 × 110	11

Care: Not greatly affected by recreation activity, the biggest threat to the survival of scrub is how it's undervalued as a habitat.

Cliff and Scree

Where	What	Who	Status
Mountain cliffs, rock outcrops and scree.	A refuge for flowering plants and mosses which grazing animals have removed from more accessible locations.	The mountain avens, moss campion and purple saxifrage on Binevenagh's basalt cliffs are rare arctic-alpine species that have survived there since the end of last glaciation.	Relatively robust habitats, historically protected by their inaccessibility.
		Nesting site for pergerine and raven.	Some sites are showing degradation due to increased recreation activity.
Care: Climb carefully as the mosses and flowering plants hanging on in all steep, roc			on in all steep, rocky

terrain are slow-growing and sensitive to physical disturbance.

Dogs on the hills - an animal welfare issue

900

The survival of the birds and animals that live in the uplands is often in question due to harsh weather, predators and limited food. Disturbance by dogs is detrimental to already vulnerable wildlife.

The presence of a dog will also cause stress to sheep, and where dogs are off-lead sheep may be chased and injured. The failure of a minority of dog owners to keep their dogs under control means that dogs are not welcome in most upland areas.

Please respect wildlife and farms animals by not taking dogs onto the hills. Where dogs are welcome, ensure that your dog is under effective control at all times. Make sure to clean up after your dog - there are risks to humans and livestock from dog faeces.

Responsible recreation - can others enjoy tomorrow what we enjoy today?

Walkers and climbers enjoy the uplands mainly for the physical challenge, the serenity and the beauty. The seasonal colour of habitats and wildflowers the smell of heather, chance meetings with a hare or a fox and the flight of a peregrine falcon, all give treasured and worthwhile experiences.

When you leave a tarmac road to head into the hills, you will be on land that is often owned and worked by farmers and foresters (most land is owned by individuals or private trusts, some is owned by public bodies such as Northern Ireland Water and the Forest Service). Much of this land carries legal protection from one or more upland conservation designations (Area of Special Scientific Interest, Special Area of Conservation, National Nature Reserve). These areas are special, representing many of our most important habitats, plant species and animal species of international conservation importance (www.daera-ni.gov.uk/topics/biodiversity).

Upland habitats provide us with essential services such as carbon storage in peat and lowland flood alleviation. We believe that everyone who visits or works the uplands should become aware of the impacts we have on the habitats, wildlife and services. The obvious impacts include litter - carry a small bag to take your litter home and consider picking up other litter you notice on the hills

The most visible impact of recreation activity in the uplands is the mark of our cumulative footfall, evident in muddy and eroded scars across the mountains. By choosing to walk on robust surfaces, such as rock, grass and drier ground, and keeping to the centre of paths we can mitigate the spread of path erosion. Path repair work is expensive, walkers and climbers are encouraged to consider contributing through monetary donation or voluntary effort.

With the exception of Forest Service land, a small number of public rights of way and designated walking routes, access for walkers and climbers in Northern Ireland is on an informal basis, which depends on the goodwill and tolerance of landowners. We can all help maintain that goodwill by acting responsibly. Find out more by visiting the Access and Environment section of www.mountaineering.ie

Signposts

Learn more about Northern Ireland's upland environment and how we can help protect these special habitats and species from the websites below:

belfasthills.org butterfly-conservation.org ccght.org daera-ni.gov.uk/topics/biodiversity habitas.org.uk ispotnature.org helpingthehills.ie leavenotraceireland.org

marblearchcavesgeopark.com mournelive.com nationaltrust.org.uk/appeal/ slieve-donard-path-appeal ringofgullion.org rspb.org.uk ulsterwildlife.org wildflowersofireland.net

Smartphone apps like Google Lens can help you identify what you find on the mountains, but it's best to confirm sightings through other sources. If you have made a positive identification please submit wildlife sightings to the Centre for Environmental Data and Recording (search for CEDaR online recording). This can provide valuable data on the distribution of species and contribute to conserving them.

1 Irish Hare Lepus timidus hibernicus Length 50-60cm

Native and unique to Ireland, the Irish hare is a sub-species of the mountain hare found throughout northern Europe. Hare numbers have declined due to changes in lowland farming practice, but they remain relatively common in the uplands. Neat, flattened vegetation amongst grassy tussocks is an indication of a hare's resting place called a form. Forms provide concealment, shelter and a view of the surrounding area. As the hare's eyes are set in the side of its head its field of vision is almost 360°. When disturbed, the hare dashes across hillsides at speeds up to 50km/hr. During snowy winters white or partially white hares can occasionally be seen in Ireland.



2 **Fox** Vulpes vulpes

Length (inc. tail) 100-120cm A member of the dog family, though

some scientists now claim foxes share more characteristics with cats, the red fox has the largest natural distribution across the globe of any land mammal other than humans

Foxes are extraordinarily opportunistic, omnivorous predators, feeding on carrion, small mammals (particularly rodents) and ground-nesting birds. Depending on habitat and season. invertebrate prey can contribute 30% or more of the diet. As food is scarce in the uplands a fox's territory can range up to 10 square kilometres. Although the fox's night vision is five times better than humans they hunt more by sound than sight.



3 Badger Meles meles Length (inc. tail) 90-95cm

A shy, nocturnal hunter, with an omnivorous diet similar to the fox's, badgers are rarely seen on the hills in daylight. Evidence of their presence

4 Ground Beetle Carabus nitens Length 13-18mm

This distinctive member of the ground beetle family (or 'clocks' as they are often known) may be found on upland blanket bog. Northern Ireland holds important European populations of Carabus nitens, yet there are no recorded sightings south of Carlingford Lough. Many ground beetles vomit on their prey and then wait for the digestive enzymes to make their food more fluid and easier to eat. Beetle species make up 25% of all known life form:



could be the discovery of a sett (with signs of fresh digging or discarded bedding by the entrance), a 5-toed footprint, or tufts of stiff grey hair caught on a fence. The sett is a system of underground tunnels and chambers which may be occupied for hundreds of years.

Badgers typically live in social groups of two to six. In the uplands groups tend to be smaller and badgers can be solitary.



5 Common Heath Moth

Ematurga atomaria Wingspan 22-34mm Flight May – June

The delicate, common heath moth can be seen flying above heather on warm days in late May and June. Males are easily identified by their large combed antennae which they use to seek out females. The caterpillars feed off heather. Common heaths and other moths are an important food source for many upland animals. Only a tiny fraction of eggs laid by a female will successfully survive to adulthood, most being taken by birds during their larval or caterpillar stage to feed to hungry nestlings.



6 Emperor Moth Saturnia pavonia Wingspan 50-80mm Flight April – May The emperor is the largest moth in Ireland. In spring you may see

a red blur as the males hurtle

on earth, with about 400,000 species described, and perhaps as many more waiting to be identified.



across the uplands at up to 25km/h seeking females and showing their red underwings. There is reason for their hurry because they have no mouths, do not feed as adults and live for only a week or two.

In summer you may see the impressive emperor caterpillars (up to 6cm long) basking in sunshine. They spend the winter in tough cocoons, emerging for their brief winged freedom the next spring.



7 Lizard Zootoca vivipara Length (inc. tail) 10-16cm Hibernates: Oct - March

The lizard, Ireland's only native reptile, may be spotted near warm, dry walls and rocks. Your attention may be caught by the sight or sound of this shy creature quickly disappearing after basking in the sun. Lizards hibernate under thick grassy tussocks or deep inside stone walls. While other reptiles lay eggs, young common lizards break free from their eggs while still inside their mother. If caught, a lizard can avoid death by shedding its tail, leaving the hunter with a twitching stump. It can grow a new, shorter tail, but this will take much valuable energy. Due to its elusive nature, record all sightings through CEDaR (see



8 Frog Rana temporaria Body length 6-9cm

uplands, where wet vegetation and open water provide safety to breed, hibernate and hunt. The frog's skin colour is highly varied and can change tone to match its The females lay large numbers of eggs counter the range of predators that eat spawn and tadpoles. Around one in fifty of the eggs laid will actually survive to winter frogs hide in frost-free sites, such as under old heather stumps, grassy tussocks and deep inside dry stone walls.



9 Bog Moss Sphagnum spp.

Bog mosses (Sphagnum) have vivid green and red hues. They form spongy ummocks on wet peat and bog pools. Their acidic nature inhibits the decomposing action of bacteria and fungi, the consequent build-up of dead plant matter forms peat, at a rate of approximately 1mm every year. The specialised water-retaining cells of Bog moss allow it to absorb up to 20 times its own weight of water by capillary action. Both these special characteristics led Bog moss to be harvested, dried and exported for use as an antiseptic wound dressing during World War I.



10 Fir Clubmoss

Huperzia selago Named for its resemblance to a

miniature fir tree, fir clubmoss is one of Ireland's four species of clubmoss. A characteristic mountain species. which thrives above 300m. Clubmosses are amongst the oldest known plants. During the Carboniferous period (350 million years ago) clubmosses were the dominant plant life and are likely to have grown up to 30m tall. Today's clubmosses are much smaller (5-12cm) but their basic structure has altered little.



11 Bog Asphodel

Narthecium ossifragum A bog plant with a delicate yellow flower and upright leaves. The flower spike turns into a deep orange seed-head, which lasts well into winter The species' scientific name 'ossifragum' means 'bone breaker' referring to the old belief that after grazing on it the bones of sheep and cattle became brittle. In fact, most bog vegetation is calcium deficient and unless supplements are given, livestock can suffer mineral deficiency.



12 Heathers

All three heathers commonly found in Ireland provide vital food, offer stability to friable peaty soils and create habitats essential to the life cycle of many of the species featured in this leaflet. When all stages of growth from young shoots to aged woody plants are present, heather plays a central role in a healthy upland habitat. Healthy heathlands are not only priority habitats under EU directives they also provide valuable year-round

grazing, recognized by their eligibility for Single Farm Payments. Without grazing heathland would gradually develop into woodland. The loss of heather to wildfire or severe overgrazing has disastrous effects on the many animals, birds, frogs and insects that shelter beneath its evergreen canopy, feed on shoots or sip nectar from its flowers. You may notice tiny holes in Bell Heather flowers; drilled by bees to extract the nectar. This nectar when processed by honeybees makes much soughtafter honey, most notably the Mourne

13 Heath Spotted Orchid

Heather Honey.

Dactylorhiza maculata Ireland's most common orchid, the Heath Spotted Orchid has pink-mauve flowers and dark spots on its leaves: it occurs on on heath and bogs. Orchids grow slowly, taking several years to flower. Orchid seeds carry no food reserves, making them incredibly light for successful wind dispersal. Survival after germination depends on tapping into a soil fungus which helps the young orchids gather essential nutrients





14 Heath Milkwort

Polygala serpyllifolia Heath Milkwort grows on acid, peaty soils, and blanket bogs. A low-growing plant with several stems; the flowers (usually blue, but occasionally pink, mauve or white) are said to be shaped like tinv udders. Its name, milkwort, comes from the fact that this plant was traditionally used to make an infusion vhich, when ingested, would help to increase the flow of mothers' milk. This belief and the name Polygala, meaning much milk' come from Ancient Greece.







12a: Ling Heather (Calluna vulgaris) is the most abundant of our heathers; it is tolerant of most soils and found almost bell-shaped pink flowers hang in a anywhere in the mountains. Note the very small, and very pretty flower. The leaves are overlapping and appear to cling to the stem.





15 Common **Butterwort**

Pinguicula vulgaris Butterwort, with its distinctive rosette of yellow-green leaves is a killing machine! It occurs on bog and wet heath, where it supplements its nutrient-poor diet by trapping insects on its sticky leaf surface and digesting them for their mineral nutrients. The insects have little chance of escape as butterworts possess possibly the strongest natural glues.





16 Round-leaved Sundew

Drosera rotundifolia

Sunshine colours radiate from this tiny and beautiful plant which grows on wet bogs. The sundew lures insects to their death, by catching them on long sticky hairs. The added food value from digesting insects helps the plant survive on nutrient-deficient peaty soils. Historically used to cure all manner of ailments from warts to whooping cough, sundew displays a pretty little white flower atop a slender stalk.







Hibernates Nov - Jan Frogs are surprisingly common in the surroundings within a few hours. (1,000-5,000) as a natural way to become a froglet, and the very lucky ones might live to be eight! All sightings should be recorded. In



12b: Cross-leaved Heath (Erica tetralix) is found in wetter places. Plump bunch at the top of the stem. Crossleaved Heath is named for the way its blue-green leaves are arranged in fours around the stem in a cross formation.





17 Tormentil Potentilla erecta

If there's one flower every hillwalker should recognise, it's this one. Tormentil's bright-yellow flowers, with four heartshaped petals, dot our hillsides for up to eight months each year. An indicator of acidic soil, Tormentil is abundant over hill grassland, heath and bog. Tormentil has been used to treat a range of ailments in humans and livestock, and in the 1700s it was used to tan leather (as its roots contain a lot of tannin and there was a shortage of trees and tree bark in Ireland at that time). It still has uses in complementary medicine today, including to treat toothache, sore throats and diarrhoea.





18 Lichens Cladonia floerkeana, Cladonia chlorophaea

The pioneering ability of lichens to establish in locations too hostile for plants (such as bare rock) is the result of a symbiotic partnership between a fungus and an alga. The fungus provides the structure and the alga, which can



12c: Bell Heather (Erica cinerea) is found on thin peat and stony soils, often with Ling. Vivid purple bellshaped flowers grow in groups along the plant's wiry stems. The leaves grow in threes, with tufts of shorter leaves where the longer leaves join the stem.



photosynthesise, produces energy for growth. Use your phone or the magnifying lens on your compass to look close-up at these diverse and bizarre organisms. With almost 1,200 lichen species in Ireland, identification can be difficult, most of us are happy just to admire their beauty! Cladonia floerkeana is a bog specialist and one of a number of red-tipped lichens commonly known as 'matchstick' lichens. Cladonia chlorophaea has cupshaped stalks. They grow on bare peat and dead woody stems in heath and bog. Watch out too for the bushy, grey-green Cladonia portentosa, commonly found on bogs and amongst heather.



19 Sweet Vernal-grass Anthoxanthum odoratun

Sweet Vernal-grass occurs in hill grassland and heath as tufts formed from wiry flower stems surrounded by flattened grass leaves (with white hairs where the leaf joins the stem). One of the first spring grasses to re-grow on hillsides, it is an important early food source for grazing animals. Traditionally, it was used as a hay fever remedy. Crush the leaves and a sweet vanilla-hay fragrance is released. The





21 **Purple Moor-grass**

Molinia caerulea

A coarse perennial grass, characteristic of wet peaty slopes and valley bottoms. In early spring its fresh green leaves are grazed by livestock before they become unpalatable

In late summer the flower-heads (below) turn purple, whilst in autumn the leaves turn red-brown bringing delightful shades to the hills, before dying off to a light buff colour. Its characteristic tussock growth creates a mosaic of humps and hollows that add refuge value for wildlife but can make for difficult walking.





22 Bilberry / Blaeberry

Vaccinium myrtillus

Found growing on heaths and dry bogs, this dwarf shrub is deciduous. Leaves return in spring and pink bell-shaped flowers follow soon after. Harvesting the delicious black fruits in summer is a celebrated ancient folk ritual. The local community around Slieve Croob still gathers to pick bilberries on Blaeberry Sunday at the beginning of August. In many parts of Ireland the highly nutritious berries were picked for export to Britain, especially during the two world wars. Bilberries are closely related to the blueberries of North America.



20 Bog Cotton

Eriophorum angustifolium (Common Cottongrass) Eriophorum vaginatum (Hare's Tail Cottongrass)

The white heads of Bog Cotton or Cottongrass are easily recognised, but look more closely and you may see two species. Common Cottongrass has multiple white seed-heads and long, smooth grasslike leaves (often tinged reddish purple at the end). The leaves emerge (in triangular formation) from wet peat and bog-pools. The leaves and roofing felt. It was also used to and roots of Common Cottongrass nave chambers that conduct air



23 Bracken

Pteridium aquilinum (Height up to 2m)

In spring, Bracken's curled leaves emerge from the soil and unfurl into a branched leaf (this branching distinguishes it from other ferns). Bracken is poisonous to livestock and if uncontrolled, can extend over large areas of hillside (as seen on the lower slopes of the Mournes and the Antrim Plateau). The spread of Bracken has been favoured by the dominance of sheep on the hills, as the heavier hooves of cattle would damage its emerging fronds. Bracken's dense canopy provides shade for primroses and bluebells and important breeding habitat for birds, but is also known to harbour ticks.

Bracken dies off with the first frost and brings beautiful colours to the hills in autumn.



24 Gorse or Whin

European Gorse Ulex europaeus (70 – 200cm high) Western Gorse Ulex gallii (photo above) (up to 80cm high) Spiky shrubs with distinctive yellow flowers that provide shelter and protection for ground nesting birds, and young saplings. Like clover, gorse is a nitrogen-fixer and effectively makes its own fertilizer. Harvested in the past as winter fodder for cattle and horses, and for use as domestic fuel, gorse is highly flammable and burns at a high temperature. The taller European Gorse, with bluishgreen stems and thorns, flowers in spring, and gives off a coconut smell on sunny days in May and June. European Gorse is found almost ervwhere, it needs deeper soils and indicates land abandonment. Western Gorse (also known as Autumn Gorse) is characteristic of dry heath habitat, it grows as a dense, spiky mat, and lowers in the autumn.

down to the root tips in the oxygendeficient peat. However, Hare's Tail Cottongrass lacks this feature; it has a single white seed-head in a dense tussock of wiry leaves and will be found growing on firm peat. The minute seeds of Bog Cottons have fine white hairs, for wind dispersal. Unlike true cotton, the hairs of Bog Cotton lack tensile strength. Up to about 100 years ago they were mixed with wool or cotton and used in the manufacture of cloth, carpets stuff pillows, make candle-wicks and as tinder to start fires.

