

# habitats of the Comeragh Mountains bns stnslq, elemins ant otni theiani nA

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# **Mountaineering Ireland**

Mountaineering Ireland is the representative body working on behalf of all hillwalkers, climbers and mountaineers 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; promoting responsible participation in our activities, and supporting skills development amongst all walkers and climbers. For more information on Mountaineering Ireland visit www.mountaineering.ie Follow us on 🚹 🞯 💟

# Thanks to all who contributed

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In addition to those who provided photographic images, Mountaineering Ireland is particularly grateful for the input of Owen Carton, Julie Larkin, Alan Lauder, Vincent Mc Alinden, Aine McGirl, Declan McGrath, Mario Mac Rory, Michael Maunsell, Michael O'Donoghue, Caoimhe Ní Shuilleabháin, and James Whelan, Series editor: Helen Lawless

Cover photograph: Red squirrel in the Nire valley, courtesy of Mario Mac Rory



# The environment of the Comeragh Mountains

This guide aims to help you understand more about the Comeragh Mountains and the wild plant and animal species that depend upon this environment for their existence

The central feature of the Comeraghs is a high plateau with the Knockanaffrin ridge stretching northwards and the Monavullagh ridge to the south. The Comeraghs are made up of sandstones and conglomerate (sediments that contained rounded pebbles), laid down over 400 million years ago. Look for the sandstone's red hue in streambeds or places where the rock is freshly exposed. The red colour came from the oxidisation of iron.

The name Comeragh is from the Irish 'Cumarach', meaning abounding in hollows and river confluences. The Comeragh plateau is skirted by several impressive corries or coums, carved out by glaciers, the last of which receded over 10,000 years ago. Many of the coums contain lakes, providing attractive focal points for walkers.

The wildness of the Comeragh landscape contrasts with the rich agricultural land that surrounds the mountains. The vegetation we see in the Comeraghs today (e.g. bog, heath and upland grassland habitats) occurs as a fascinating mosaic of different habitats, in patches of different sizes and shapes.

Much of the Comeragh Mountains is designated as a Special Area of Conservation (SAC) to protect its habitats, which are important in a European context. There is also a second, smaller, SAC in the Nire Valley, made up of three areas of old oak woodland of ecological importance.



# Key habitats in the Comeragh Mountains

A habitat is a place where plants and animals live and grow; habitats are typically defined by their constituent species. Habitats and biodiversity are integral to the natural and cultural heritage of the Comeragh Mountains.

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. Habitat type can vary gradually with slope, aspect and altitude, or change abruptly to give clear boundaries. Our mountain journeys take us through a mosaic of different habitats, with that variety adding life, colour and texture to our experiences.



#### 26 Peregrine Falcon Fabhcún Gorm - Falco peregrinus 38-45cm

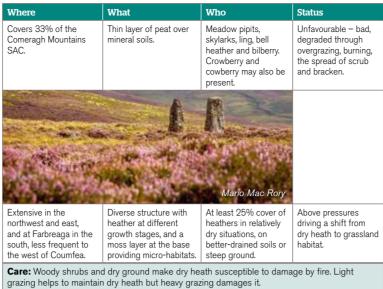
Famously the fastest creature on the planet, reaching over 300 km/h. This extraordinary feat has been witnessed at Coumshingaun, likely due to the high cliffs and opportunity to launch attacks. Peregrines focus on their target, including jackdaws, rooks, pigeons and ducks, and knock them out in mid-air in a stoop dive. From March to June loud screeching calls near cliffs may declare the presence of a nest. Peregrines were close to extinction in the 1960s, but the population recovered following the banning of DDT insecticide. 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.



#### **27 Kestrel** Pocaire Gaoithe Falco tinnunculus

33-37cm Best known for their ability to hover when hunting small mammals and birds, Kestrels use their long wings and long tail, spread like a fan, to maintain a fixed position in the air. Probably the most common raptor in the Comeraghs, Kestrels are likely to be observed around plantations or in the coums. Nesting akes place on lower crags or in trees, often in an old crow nest. Males have a fine blue-grey head and rump, while females are brown with dark bars.

# Dry Heath



# Wet Heath

Where	What	Who	Status	
Damp ground with heather.	Peat depth less than 50cm.	Snipe, Cross-leaved heath, bog asphodel, heather, deergrass, and possibly marsh fritillary.	Unfavourable – bad, due to overgrazing, burning, drainage, afforestation.	
Along the Mahon Valley, on the slopes of Barracree and Lyre mountains.	Diverse structure with heather at different growth stages, and a moss layer at base providing micro-habitats.	At least 25% cover of heathers, differs from dry heath in that purple moor grass is more common.	In places suffers from erosion from human and livestock feet.	
<b>Care:</b> As a woody plant, heather is particularly sensitive to trampling. Paths across wet heath are particularly susceptible to erosion and widening. Help prevent further damage by keeping to				

# Montane heath

the centre of existing paths.

Low, wind-pruned habitat restricted to the highest part of the Comeraghs. Characterised by woolly fringe moss, lichens, dwarf shrubs and clubmosses. Vulnerable to pressure of grazing, recreation and climate change. Keeping within established path lines protects this rare and threatened habitat.

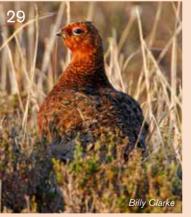
#### **Upland Acid Grassland**

Encroaching in heathland areas due to grazing pressure which has reduced heather cover. Species like tormentil and heath milkwort should be present, often important areas for ground-nesting birds. More resilient to trampling than bog or heath.

#### **Cliff and Scree**

A refuge for flowering plants and mosses which grazing animals have removed from more accessible locations. Important nesting sites for peregrine and ravens. The plants hanging on in steep and rocky terrain are slow-growing and sensitive to disturbance.

as heathland provide habitat for Meadow Pipits and Skylarks, the preferred diet of harriers. Though males have a distinctive pale blue-grey and pale plumage with jet-black wingtips, females are larger and mid-brown with a striped 'ringed' tail and both sexes have an obvious white rump.



#### 29 Red Grouse Cearc/Coileach Fraoigh Lagopus lagopus hibernicus 33-38cm

Red Grouse is a threatened species in Ireland, experiencing a 50% decline in national distribution between the early 1970s and 2008. A combination of habitat loss through afforestation, largescale peat extraction and a reduction of heather from overgrazing by sheep and burning have been significant factors in the decline. They primarily feed on young heather shoots year-round, with chicks feeding on insects. Grouse are plump, ground-nesting birds - males have dark chestnut plumage, a loud guttural call warning others to 'stay back' and a red eye comb, while females have a more subtle colouration

**30 Meadow Pipit** Riabhóg mhóna Anthus pratensis

14-15cm Our most numerous upland bird, whose lisping "seep seep" call provides the ambient sound of the hills. While their numbers have remained relatively stable in Ireland, they have experienced

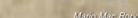
significant declines elsewhere due to agricultural intensification. A fluttering, 'parachute' display flight can be seen during courtship. Although several species play host to the Cuckoo, whose intrusive egg mimics its host, the Meadow Pipit is its preferred nursemaid. Most Meadow Pipits tend to move in flocks to the lowlands in winter.

#### **31 Skylark** Fuiseog Alauda arvensis

16-18cm starling, these are streaky brown birds with a small crest that can be raised when the bird is excited or alarmed. The male Skylark defends his spring territory by ascending 50 to 100m where he hovers, warbling incessantly (chirruping for up to 15 minutes at a stretch) before plummeting to the ground. Although Skylarks have experienced national population decline, the number of breeding birds in the Comeraghs appears to have remained stable.







areas of heather moorland and in young forestry plantations. Courtship entails a spectacular aerobatic display called the

#### **28 Hen Harrier** Cromán na gCearc Circus cyaneus 45-55cm These raptors have had stable breeding populations in the region for forty years, tending to ground-nest in the better

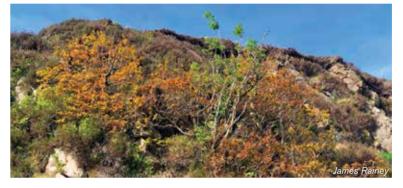


# **Blanket Bog**

Where	What	Who	Status	
Wet, soft ground, with moss hummocks and pools.	Layer of peat 50cm to 3 metres deep.	Expect frogs, dragonflies, bog moss ( <i>sphagnum</i> ), bog cotton, deer grass, bog asphodel, ling, cross-leaved heath and various colourful lichens.	Unfavourable – bad, degraded through overgrazing, burning, drainage, peat extraction and the impact of recreation	
		Mario Mac Rory		
Found in valley bottoms and draped across gentle mountain slopes and ridges.	Dead bog moss and plant matter accumulated over several thousand years.	Most of the living plant material is in the less waterlogged top 5cm.	A changing, drier climate will lead to further degradation.	
The plateau around Knockaunapeebra and Fauscoum. Peat haggs are evidence of the depth of peat that has been lost from parts of the plateau.		Home to species specially adapted to live in a nutrient-poor environment, e.g. sundew.	Healthy, active blanket bog is a priority habitat in a European context.	
from parts of the plateau. Care: Woody shrubs and dry ground make dry heath susceptible to damage by fire. Light grazing helps to maintain dry heath but heavy grazing damages it.				

# Scrub

Nature's stepping stone towards woodland, in scrub you'll find gorse, brambles, willow and difficult walking! A much under-valued habitat that provides shelter and food sources for small animals and upland birds such as stonechat.



# Woodland

Birch and mountain ash along stream gullies tell us a bit about what the natural woodland cover would have been in the Comeraghs. The old oak woodland in the Nire Valley is designated as a Special Area of Conservation.

# **32 Wheatear**

#### Clochrán 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 is easily seen as it flies low between rocky perches (its name is derived from the Old English for 'white arse'). Often seen in pairs, the male has a striking black 'bandit mask', females are browner. The call is noisy 'chacks' interspersed with 'wheets', their parrot skills are close to perfection with the alarm calls of many other species retweeted.





#### 34 Stonechat Caislín cloch Saxicola rubicola 12-14cm

Resident and commonly found in the uplands, the robin-sized Stonechat is often seen perched on a fencepost or a gorse bush. Distinctive in appearance, dark brown to black above with a bright orange breast and a white collar, and with an easily recognised call which sounds like two stones being banged together (hence 'stone-chat'). Cold wet is with reduced insect population have a dire effect on their numbers. Most Stonechats breeding in uplands move to lower altitudes in autumn.



# 33 Chough

Cág Cosdearg - Pyrrhocorax pyrrhocorax 37-41cm

Choughs are easy to identify. The Irish name for Chough (Cág cosdearg) means 'red-legged Jackdaw' due to their black plumage, red legs and bill (bill can be yellowish-brown in juveniles). They are likely to be seen on rocky coasts or in upland areas with short grassland. They specialise in feeding on soil invertebrates, insects and berries. Highly accomplished fliers, their flight pattern can include barrel rolls, steep swooping dives and soaring on updrafts beside cliffs.

# **Comeragh Upland Communities Project**

Hill farming has shaped the landscape, habitats and biodiversity of the Comeraghs. It now delivers a high-quality lamb output. However, in recent years the farmers of Teagasc's Waterford Hill Sheep Discussion Group, against the background of habitat changes, realised the need for a greater understanding of the mountain's habitats and how to manage them. The farmers were also beginning to realise the potential of the uplands to deliver other outputs ecosystem services - that include water supply, climate change mitigation, cultural heritage, and recreation. These new outputs have the potential to contribute to the viability of their enterprise for themselves, their children and the benefit of the broader Comeragh communities and visitors.

However, achieving the right upland solutions requires knowledge, understanding, and a commitment to work together by all the key actors. The Comeragh Upland Communities project represents an initial exploration of how the farmers' upland habitat management knowledge and experiences might be developed. To date, farmers have had few, if any, opportunities to learn about habitat management. These new skills will facilitate farmers in implementing the sometimes-challenging management changes required to deliver a broader range and mix of goods and services. Farmers taking ownership of the need for change is critical to its success. This leaflet came from the project's aim to build a better relationship between the farming and non-farming Comerage communities that could enhance the opportunity for better social, economic and environmental outcomes.

The Comeragh Upland Communities is a European Innovation Partnership project administered by the Department of Agriculture, Food and the Marine. The EU Recovery Instrument Funding funded the project under the Rural Development Programme 2014-2022.



# Dogs on the hills - an animal welfare issue

The survival of the birds and animals that live in the uplands is often threatened by 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 the Comeragh Mountains and in most upland areas.

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

The Mountains
Thank You for

Parking carefully	Leaving gateways clear and allowing space for wide vehicles Car-pooling so there's less pressure for space Having the skills to find your way Being prepared for the best and worst of weather Removing a predatory threat to wildlife and sheep Giving sheep and wildlife safer space to feed and breed	
Looking after yourself		
Leaving your dog at home		
Preventing erosion	Keeping within existing path lines Choosing robust ground to walk on	
Being considerate	Respecting the privacy of local people Engaging with the people you meet	
Leaving no litter	Carrying a bag to take home your rubbish Picking up litter that you come across	
Helping others to care	Sharing why the place is special Showing how to reduce our impact on nature	
Appreciating the beauty	Taking care to protect flora and fauna Sharing photos of nature and landscape.	
Putting something back	Supporting and using local shops and services Being aware of what's going on in the places you love	

Mountaineering Ireland thanks you for helping to protect access and care for the places that provide us with such fantastic experiences

#### 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

Learn more about Ireland's upland environment and how we can help protect these special habitats and species on the Signposts page at www.mountaineering.ie

#### Record some of the biodiversity you see

Reinforce your knowledge and contribute to the evidence base to help protect upland habitats and species, by submitting your sightings through www.biodiversityireland.ie or by using the biodiversity data capture app.

# **1** Irish Hare

Giorria Éireannach - 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. Considerably larger than rabbits, hares live entirely above ground. 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 eves 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.



# **2 Fox**

Madra Rua/Sionnach - Vulpes vulpes Length (inc. tail) 100-120cm Cunning, stealthy and overall charismatic animals, foxes are canids, members of the family that contains domesticated dogs, wolves, and coyotes. Highly adaptable and found across Ireland in a wide range of natural and urban habitats, foxes are common throughout the Comeraghs, especially in the rocky coums. While some foxes establish a home range, others live nomadically roaming from place to place. Largely solitary animals, foxes produce a litter of four or five cubs, which both adults care for, before the family separates in the autumn. Foxes are extraordinarily omnivorous, feeding on carrion, rabbits and other small mammals, ground-



nesting birds, insects and berries.

#### **3 Red Squirrel** lora rua - Sciurus vulgaris Length body 22cm, tail 18cm The deep red-brown colour, its curved,

bushy tail and upright posture are the hallmarks of this attractive animal. A native species, the Red Squirrel has been present since before the last ice

# 4 Otter

Madra uisce/Dobharcú - Lura lutra Length (incl. tail) 100-130cm

Otters are secretive and largely nocturnal, so the sight of an otter's labrador-like head in a Comeragh mountain river or lake will make your day. Their diet is mainly fish, but otters also eat small mammals, birds and frogs. In upland rivers and streams, where fish are less abundant, an otter territory could stretch to 10-15km long. The otter's presence can be confirmed by their droppings, called a spraint, found on prominent boulders and hummocks along watercourses. Spraints have a distinctive, pleasant smell - like mown hay or jasmine tea.



age, it died out with the removal of woodland but was reintroduced from Britain in 1815. The Red Squirrel is totally dependent on woodland as a habitat, and spends most of its time high up in the trees. In the mountains, its food is largely conifer cones, with its presence indicated by the core of conifer cones on the forest floor.



**5** Common Lizard Laghairt choiteann - Zootoca vivipara

Length (inc. tail) 10-16cm The Common Lizard, Ireland's only native reptile, may be spotted basking in the sun in habitats such as heath, bog and woodland. Lizards quickly scamper for cover if disturbed. 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. While other reptiles hatch eggs, lizards are unusual because their offspring emerge from egg membranes within an hour of birth. Newly-born lizards are selfreliant, receiving no parental care whatsoever



#### **6** Common Frog Frog coiteann - Rana temporaria Length: 6-7cm

open water provide safety to breed and hunt. The frog's skin colour is highly varied and can change tone to match its surroundings within a few hours. Females lay up to 5,000 eggs, to counter the range of predators



stripe). From June onwards Fox Moth caterpillars feed on grasses, heather, bilberry and brambles, until they overwinter in leaf litter or loose soil. In spring, the caterpillars emerge to bask in the sun, before pupating in a cocoon for a month to metamorphose into adult moths



#### **9** Emperor Moth Leamhan Impire - *Saturnia pavonia* Length (caterpillar) 60mm Wingspan: 55-80mm Flight: Apr-May

One of our most spectacular moths the Emperor, is also one of our largest. In spring you may see a red blur as the males hurtle 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 bright green caterpillars basking in sunshine. They spend the winter in tough cocoons, emerging for their brief winged freedom the next spring.



#### **10 Common Hawker** Seabhchaí coiteann - Aeshna juncea Length 74mm, wingspan 100mm Flight: Jun-Oct

Dragonflies and their smaller relatives, damselflies are an ancient insect group whose ancestors were in the skies long before dinosaurs appeared on earth. Common Hawkers are large, fast-flying dragonflies, which can make sharp turns, hover and fly backwards. The name hawker refers to their ability to catch prey in flight using their feet or mouth. Common Hawkers may be spotted around rivers and bog pools in upland areas, where the females lay their eggs by dipping the end of their body into the water. Common Hawkers spend most of their lives in water as nymphs, taking up to four years to levelop into adults



#### **11 Ground Beetle** Ciaróg talún - Carabus granulatus

Length: 16-23mm The commonest of Ireland's 211 different species of ground beetles, sometimes referred to as 'clocks', Carabus granulatus has a preference for damp and shaded ground, and can be found across the country, particularly in mountain areas and blanket bogs. It's quite large for a beetle and can be bronze, green or black in colour. Ground beetles are predatory - Carabus granulatus feeds on a variety of insects and worms, but mainly predates on snails, using its powerful mandibles (jaws) to reach into the snail's shell.

# **12 Heathers**

All three heathers commonly found in the Comeraghs 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. 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 heather honey.



# **13** Devil's-bit Scabious

Odhrach bhallach - Succisa pratensis Watch out for these violet-coloured. rounded flower-heads on tall stems in damp places, marshes, heaths and hedgerows. Devil's-bit Scabious is the food plant for the caterpillars of the Marsh Fritillary, one of Ireland's rarest butterflies. The flowers are an important food source for late-flying butterflies and moths. Why the name Devil's-bit Scabious? Apparently the devil cut its root short because he was angered that the plant healed so many diseases (skin diseases including scabies, other wounds and running sores, also bad eyes, coughs and liver disease).





#### 14 Bog Asphodel Sciollam na móna - Narthecium

ossifragum A bog plant with a delicate yellow flower

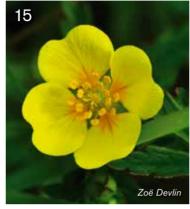
and upright leaves. The flower spike turns into a deep orange seed-head, which lasts well into winter. The species' scientific name 'ossifragum' means 'bone breaker' referring to the old belief that after grazing on it the bones of sheep and cattle became brittle. In fact, most bog vegetation is calcium deficient and without supplements, livestock in these areas can suffer mineral deficiency.





Ling Heather (Fraoch mór / Calluna vulgaris) is the most abundant of our heathers; it is tolerant of most soils and found almost anywhere in the mountains. Note the very small, and very pretty flower. The leaves are overlapping and appear to cling to the stem.





# **15 Tormentil**

Néalfartach - Potentilla erecta A small flower that all hillwalkers and hillfarmers should recognise! Tormentil's bright-yellow flowers, with four heartshaped petals, dot our hillsides for half the 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.





#### 6 Gorse Aiteann

European Gorse Ulex europaeus (70 -200cm high) Western Gorse Ulex gallii (in photo) (up to 80cm high)

Spiky shrubs with distinctive yellow flowers that provide shelter and protection for ground-nesting birds, and young saplings. 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 bluish-green stems and thorns, flowers in spring, and gives off a coconut smell on sunny days. European Gorse is found almost everywhere. 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 flowers in the autumn

# Beautiful mountains. Fragile environment. A special experience

#### that eat spawn and tadpoles. Around one in fifty of the eggs will survive to become a froglet, and the very lucky ones might live to be eight! In winter frogs hibernate in frost-free sites, such as under grassy tussocks and deep inside dry stone walls.



#### 7 Marsh Fritillary Fritileán Réisc - Euphydryas aurinia Wingspan: 35-50mm Flight: May-Jul

Marsh Fritillary butterflies are brightly coloured, with a mosaic of brown, orange and cream markings that form a chequered pattern. They rely on the Devil's Bit Scabious plant for their lifecycle. Adults lay eggs on the underside of the leaves and the resulting caterpillars feed exclusively on this species. While the population has declined, colonies may be found in damp grassland, degraded bogs, wet heath and fens up to 300m in elevation. Thanks to the EU Habitats Directive, this is Ireland's only legally protected insect.



#### **8 Fox Moth** Leamhan Sionnaigh - Macrothylacia rubi Length (caterpillar) 70mm Wingspan: 40-65mm

Flight: May-Jun Frogs are surprisingly common in the More likely to be seen in late summer uplands, where damp vegetation and as a caterpillar, the adult Fox Moth is an easily missed large brown moth which flies in May-June. The caterpillar is exceptionally hairy and has an orange stripe along the length of its body (the similar Oak Eggar moth caterpillar, also common in the uplands, lacks this



Cross-leaved Heath (Fraoch naoscaí / Erica tetralix) is found in wetter places. Plump bell-shaped pink flowers hang in a 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 Heath Milkwort**

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





## **18 Heath Spotted** Orchid Nuacht bhallach an chaoráin

Dactylorhiza maculata Ireland's most common orchid, the Heath Spotted Orchid has pink-mauve flowers

and dark spots on its leaves; it occurs 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.





Bell Heather (Fraoch cloigíneach / Erica cinerea) is found on thin peat and stony soils, often with Ling. Vivid purple bell-shaped 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





# **19 Fir Clubmoss**

Aiteann Muire - 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



# 20 Round-leaved Sundew

Drúchtín móna - Drosera rotundifolia Sunshine colours radiate from this tinv 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.



#### 21 Bog cotton Ceannbhár

Common Cottongrass - Eriophorum angustifoliun Hare's Tail Cottongrass - Eriophorum

vaginatum

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 grass-like leaves (often tinged reddish purple at the end). The leaves emerge (in triangular formation) from wet peat and bog-pools. The leaves and roots of Common Cottongrass have chambers that conduct air down



# 22 Bog Moss

Súsán - Sphagnum Bog mosses (Sphagnum species) have vivid green and red hues. They form spongy hummocks 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.



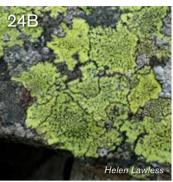
#### 23 Lousewort Lus an ghiolla - Pedicularis sylvatica

Watch out for this low-growing plant on damp ground and ogland. Lousewort got its name because it was believed to cause lice in sheep. There's no evidence that Lousewort causes lice, but the plant hosts a tiny snail that can transmit liver-fluke larvae to sheep, and sheep with liver-fluke often have lice too! Lousewort is a semi-parasitic plant, it latches onto the roots of grasses and other plants to acquire minerals from the other plant, a useful adaptation for a species that grows on land with a limited supply of nutrients. The leaves are often purple-tinged.



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 and roofing felt. It was also used to stuff pillows, make candle-wicks and as tinder to start fires.





#### 24 Lichens Léicin

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 photosynthesise, produces energy for growth.

24A - Cladonia floerkeana is a boo 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. 24B - The yellow-green Map lichen or (Rhizocarpon geographicum) is a 'crustose' lichen, it grows flat and tight against hard acidic rocks and walls, mainly in mountain areas with low levels of pollution. Map lichen gets its name from the way the dark borders between the lichen patches make them look like countries on a map.



# 25 Whort / Fraughan

Fraochán - 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. In many parts of the Comeraghs the highly nutritious berries were picked for export to Britain, especially during the two world wars.





Mountaineering Ireland



clubmosses are much smaller (5-12cm)

