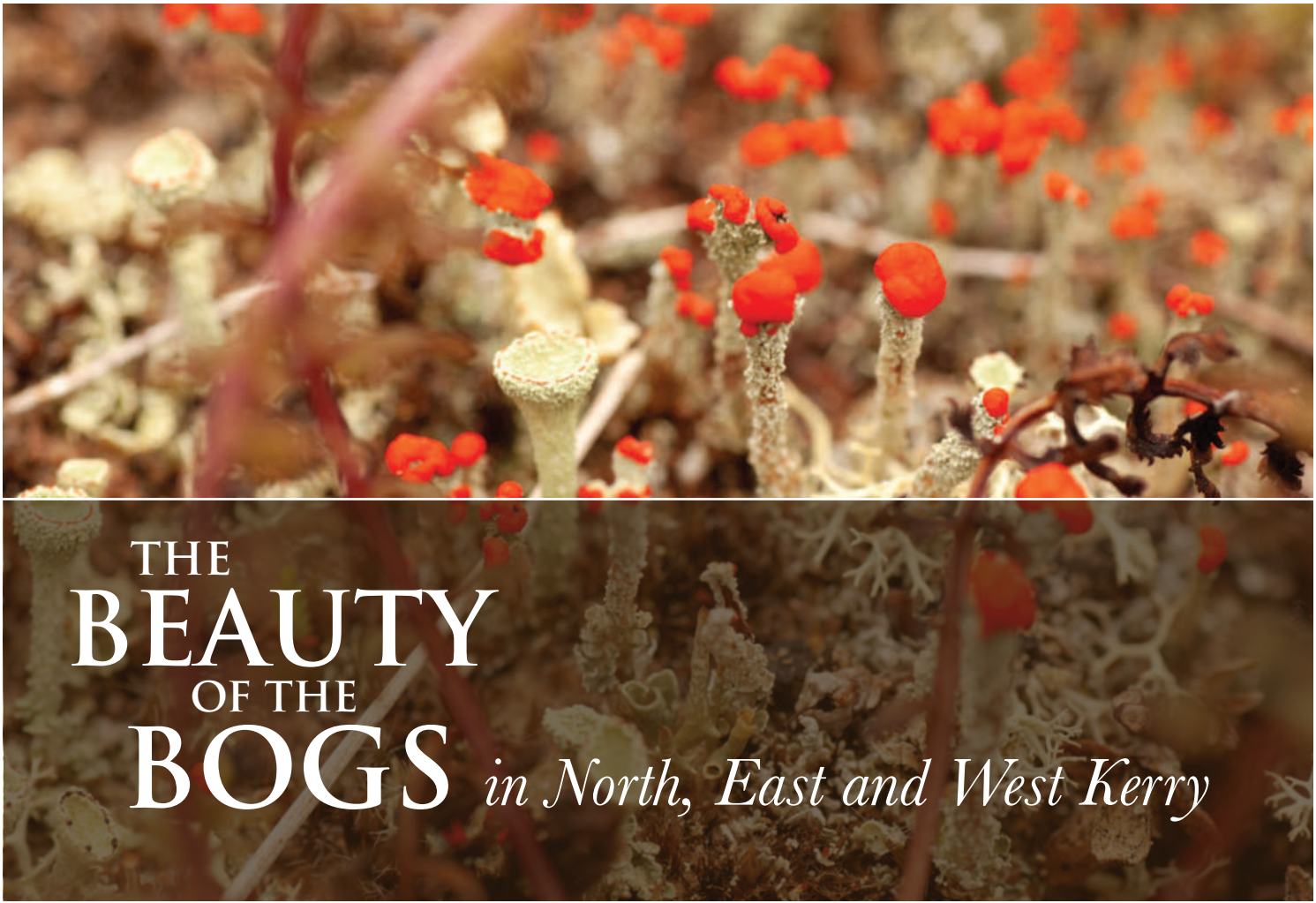


THE BEAUTY OF THE BOGS *in North, East and West Kerry*

The Beauty of the Bog

Bog Asphodel
Front Cover Image: Matchstick Lichen

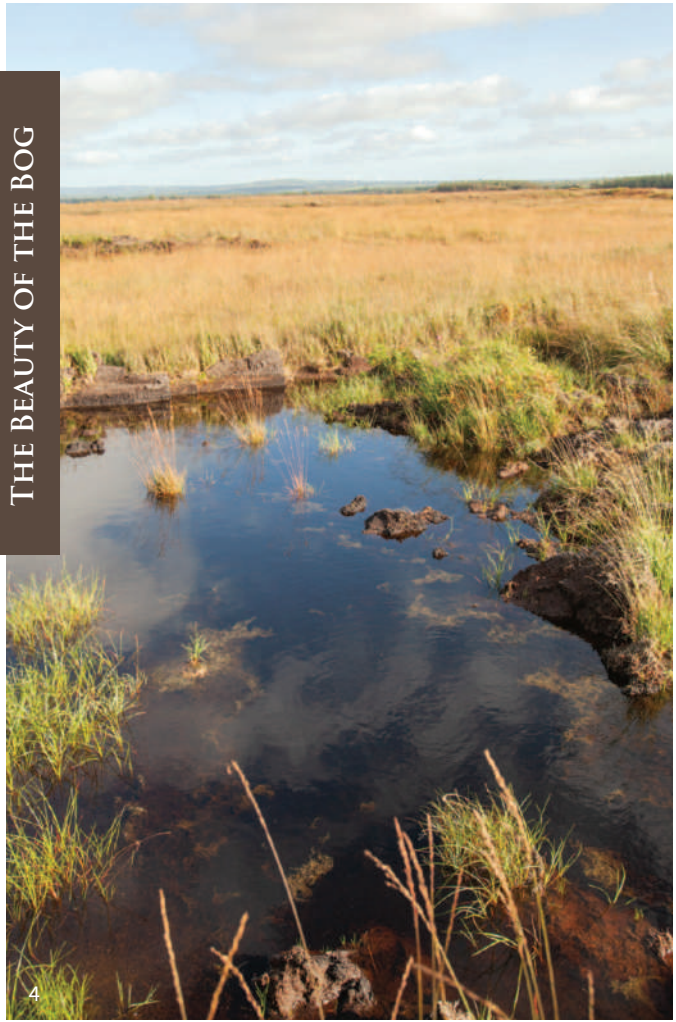
Bogs are very important and beautiful places with unique and precious ecosytems. They provide habitats for a vast array of plants and animals.

Bogs contain 90% water and 10% dead plants. They play an important role in regulating water and preventing flooding. Peat is the result of the accumulation of partially decayed plants over thousands of years. The dead plants don't rot because they grow in waterlogged conditions where there is little oxygen. Bacteria and fungi, the agents of decay, are prevented from working in these conditions.

Bogs act as carbon sinks, accumulating and storing millions of tonnes of carbon. They have a vital function in controlling the green house gases that cause climate change. Bogs cover about 3% of the earth's land surface area, yet they store roughly 30% of all land based carbon.

Many of Ireland's bogs date back almost 10,000 years. It is estimated that they once covered almost a million acres of land in Ireland. However, today, less than 1% of that figure remains as active, living bog.

Efforts are being made to protect Ireland's bogs. We have a number of protected bogs in North, East and West Kerry and more information and maps can be found on the National Parks and Wildlife Service website (www.npws.ie).



Natural Heritage Area (NHA)

These areas are considered important for the wildlife and habitats. They may also hold species of plants and animals whose habitat needs protection. They are legally protected from damage under the Wildlife Amendment Act (2000).
We have 4 bogs designated as NHA's in this area:

1. **Bunnarudee Bog** (Raised Bog)
2. **Anna More Bog** (Blanket Bog)
3. **Mount Eagle Bog** (Blanket Bog)
4. **Knockatarriv/Knockariddera** (Blanket Bog)

Special Areas of Conservation (SAC)

These are prime wildlife conservation areas, considered to be important on a European as well as Irish level. The legal basis on which SACs are selected and designated is the EU Habitats Directive, which was brought into Irish law in 2011.
We have 3 bogs designated as SAC's in this area:

5. **Moanveanlagh Bog** (Raised Bog)
6. **Slieve Mish Mountain** (Blanket Bog)
7. **Mount Brandon** (Blanket Bog)

Special Protection Areas (SPA)

Ireland is required under the EU Birds Directive (2009) to designate Special Protection Areas (SPAs) for the protection of rare, vulnerable and migratory species of birds. Wetlands are very important for wintering waterbirds. Extensive areas of blanket bog and upland habitats provide breeding and foraging for endangered species. We have one SPA of international importance here in this area of Kerry.
This SPA is a stronghold for the Hen Harrier and supports the largest concentration of the species in the country.

8. Stacks to Mullaghareirk Mountains (Blanket Bog)

What is the Difference between Blanket Bogs and Raised Bogs?

Although these two bog types have much in common there are important differences in their distribution, development, structure and vegetation.

Biodiversity of Our Bogs

The bogs here in North, East and West Kerry are rich habitats for diverse species of plants and animals. Here is just a small selection of what you can expect to see when visiting the beautiful bog landscape.

Bog Cotton | Ceannbhán

Bog cotton comes in two forms - single headed and many headed bog cotton. The two plants are very similar, with white fluffy cotton seed heads and grassy leaves which are seen from June each year. The white cotton flowers with seeds attached are easily dispersed by the wind.

Many Headed Bog Cotton produces four to five white seed heads that at first glance look like cotton wool. It is the deepest rooting plant on the bog. Its roots reach into the peat to a depth of 60cm. Many Headed Bog Cotton is sometimes called the 'bog snorkeller'. It has specially adapted leaves and stems that contains a tissue, which is full of air channels. This brings oxygen from the aerial part of the plant to the roots of the plant deep in the peat.

Single Headed Bog Cotton has only one white fluffy seed head.
Bog Cotton was used in the past to stuff pillows.

Bog Asphodel | Sciollam na Móna

This plant has yellow star shaped flowers with six pointed petals seen in July and August. They are found on the tips of tall stiff stems. Later in the year, the spiky nut-like orange fruiting heads are seen. The flower heads were once harvested and used for dyeing.

Bog Asphodel is also known as 'Brittle Bones' as it contains chemicals which have an adverse weakening effect on the bones of grazing animals. Its latin name translates into 'bone breaker' in English!

Bog Asphodel hibernates in winter. It's leaves turn orange as it reabsorbs all the nutrients from the leaves into an underground stem. It is in flower on Irish bogs in July.

Cross-leaved Heath | Fraoch Naoscaí

Cross-leaved heath is a type of heather with a distinctive pink, bell-shaped flowers that attract all kinds of nectar-loving insects.

Deer Sedge | Cíb Cheannghéas

Sedges are found all over bogs in Ireland. They are more ancient than grasses (appearing more than 160 million years ago), and more tolerant of wet conditions. Their stems are solid and usually triangular in cross section. Sedge flowers are wind-pollinated.

Deer sedge has long needle like leaves with brownish grass like flowers at the tip. In winter the leaves of deer sedge die back from their tips. All of the food in the plants is recycled and stored over the winter in underground bulbs ready for the spring growth.

Ling Heather | Fraoch Coiteann

Ling Heather is one of the tallest plants found on living peat forming bogs, growing to a height of 50cm. It is a woody, shrubby plant with special adaptations that allow it live on the bog surface all year long.

Even though it lives in a wetland, Ling Heather prefers the drier parts of the bog. It has small waxy leaves to prevent transpiration (water loss) from the plant during long warm days of summer or in the cold winter winds. Ling Heather also holds very little water within its body ensuring it does not freeze in winter.

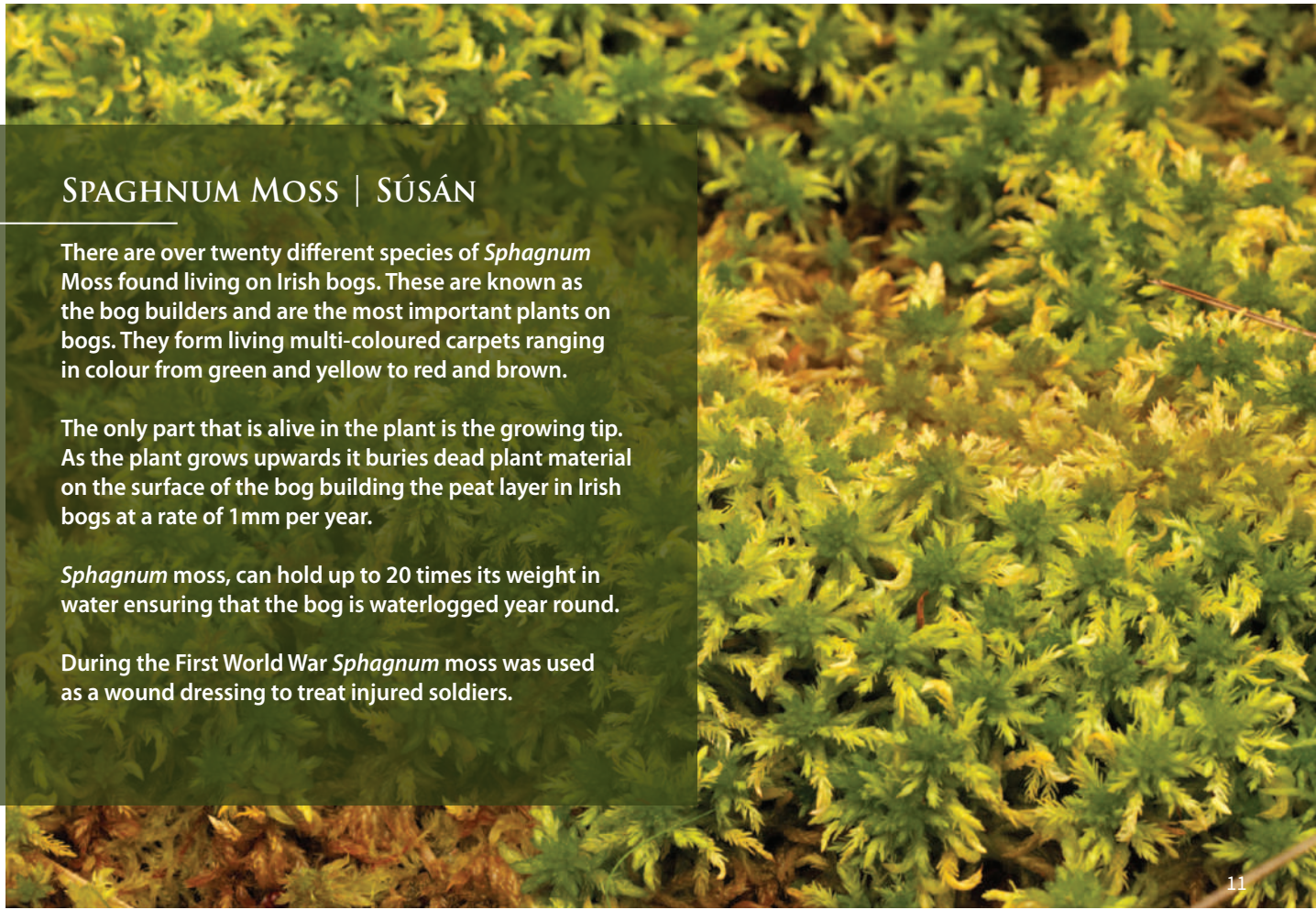
Ling Heather makes its own food by photosynthesis making use of its evergreen leaves year round. You can expect to see the pretty purple/pink flowers from August to October each year.

LICHEN | LÉICEAN

A lichen is actually two organisms working together: a fungus and an algae in a symbiotic relationship. Both live in harmony benefitting from being in the relationship. The alga makes glucose through photosynthesis while the fungus collects ingredients such as water for the alga.

They survive on the bogland habitat all year as they have the ability to dry out in winter, preventing the plant from freezing. Lichens are very sensitive to air pollution: the more lichens you find in a place the cleaner the air.

There are lots of different lichen in the bogs in this area including Beard Lichen, Cup Shaped Lichen and Matchstick Lichen (front cover). Matchstick Lichen is particularly striking with red-capped branches known as 'podetia'.



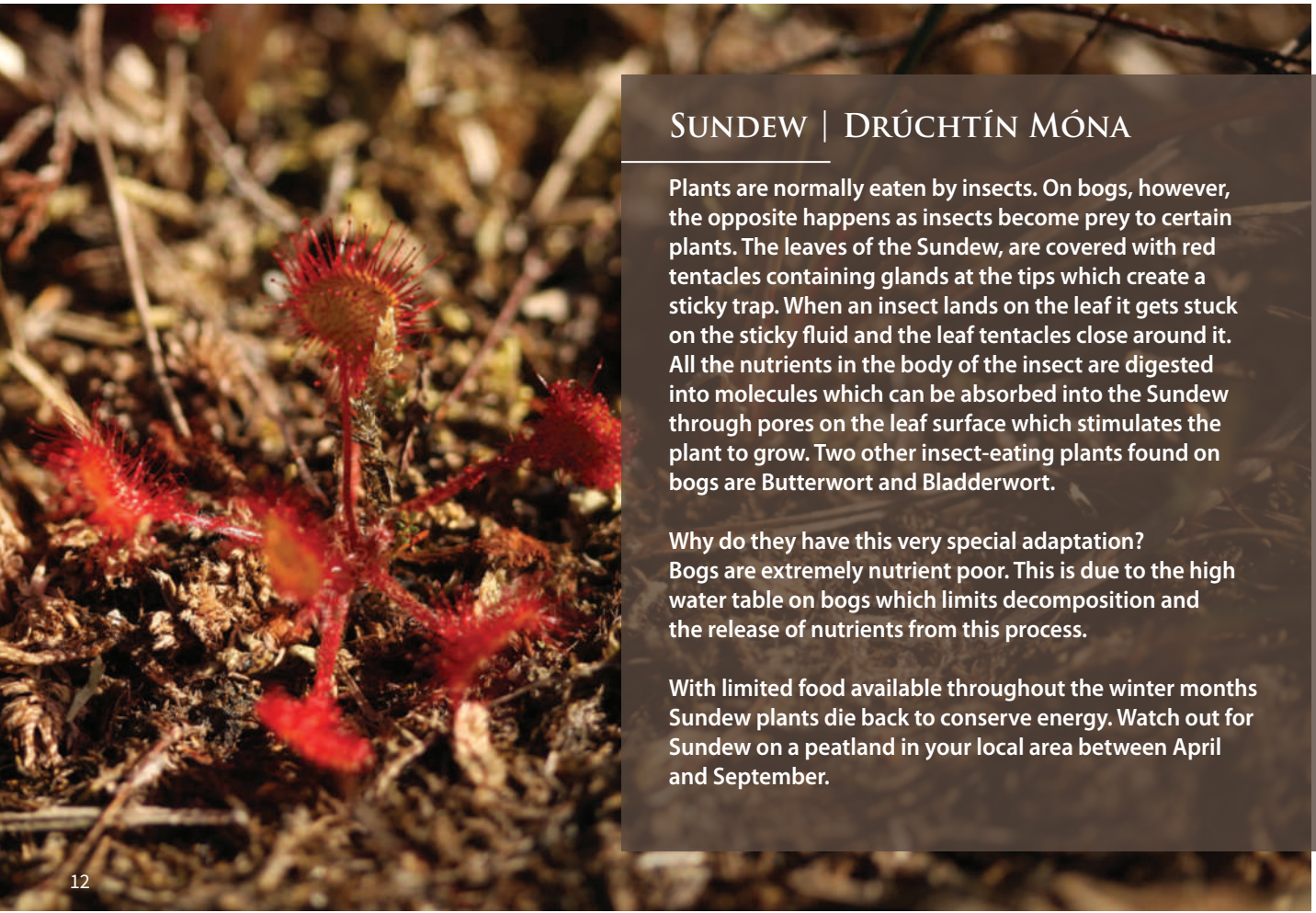
Spaghnum Moss | Súsán

There are over twenty different species of *Sphagnum* Moss found living on Irish bogs. These are known as the bog builders and are the most important plants on bogs. They form living multi-coloured carpets ranging in colour from green and yellow to red and brown.

The only part that is alive in the plant is the growing tip. As the plant grows upwards it buries dead plant material on the surface of the bog building the peat layer in Irish bogs at a rate of 1mm per year.

Sphagnum moss, can hold up to 20 times its weight in water ensuring that the bog is waterlogged year round.

During the First World War *Sphagnum* moss was used as a wound dressing to treat injured soldiers.



Sundew | Drúchtín Móna

Plants are normally eaten by insects. On bogs, however, the opposite happens as insects become prey to certain plants. The leaves of the Sundew, are covered with red tentacles containing glands at the tips which create a sticky trap. When an insect lands on the leaf it gets stuck on the sticky fluid and the leaf tentacles close around it. All the nutrients in the body of the insect are digested into molecules which can be absorbed into the Sundew through pores on the leaf surface which stimulates the plant to grow. Two other insect-eating plants found on bogs are Butterwort and Bladderwort.

Why do they have this very special adaptation?
Bogs are extremely nutrient poor. This is due to the high water table on bogs which limits decomposition and the release of nutrients from this process.

With limited food available throughout the winter months Sundew plants die back to conserve energy. Watch out for Sundew on a peatland in your local area between April and September.

Common Frog | Loscann

The Common Frog is an Amphibian meaning it can live both in water and on land. It must return to water to breed and complete its lifecycle. Frogs have lungs which allow them to breathe on land but under water they breathe through their skin.

The frog's long sticky tongue is attached to the front part of its mouth. It can flick it out to catch flies. The colourful pattern on the frog's skin helps to disguise it from enemies such as rats, herons and hedgehogs. A frog can also make it's skin become darker or lighter to match it's surroundings. This camouflaging colour change takes about two hours to effect.

Curlew /Crotach

The iconic call of the Curlew was once a familiar sound on Ireland's bogs. Sadly today the Curlew is the most threatened bird in Ireland. The National Parks and Wildlife Service recorded a 98% decline in the breeding population since the 1980's. There are currently less than 130 pairs reported to be breeding in Ireland. Action is being taken to protect these birds and help boost the current breeding population by conservationists working with farmers and land owners.

Curlew spend most of the year along the coastline of Ireland but move to Irish bogs in the summer to nest and rear their young. Their camouflaged plumage helps to hide the adult bird sitting on the nest from predators such as fox and grey crow.

© Barry O'Donoghue

Hen Harrier | Cromán na gCearc

The Hen Harrier is a bird of prey and one of Ireland's most spectacular bird species. Adult males are a pale grey colour, females and young birds are brown with a white rump and a long, barred tail.

The Hen Harrier is a ground nesting bird adapted to open moorland and marginal grassland habitats. The traditional nesting habitat of Hen Harrier has been predominantly heather.

The national Hen Harrier population has been declining for the last 40 years with only an estimated 108-157 pairs remaining. The habitats that the Hen Harrier depends on, have decreased over the years due to changes in land use.

© Paula Farrell

Marsh Fritillary Butterfly

The Marsh Fritillary butterfly is an endangered species listed in the European Union Habitats and Species Directive. The effect of this legislation is to give protection to both the animal and its habitat. The Devil's Bit Scabious plant is the main food source of the Marsh Fritillary caterpillar.

Can you identify these plants on your bog walk?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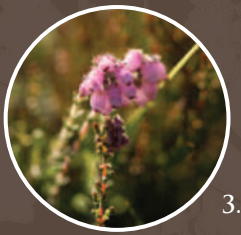
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1. Bog Cotton | Ceannbhán, 2. Bog Asphodel | Sciollam na Móna, 3. Cross-leaved Heath | Fraoch Naoscaí
4. Deer Sedge | Cíb Cheannghéas, 5. Ling Heather | Fraoch Coiteann, 6. Lichen | Léicean
7. Matchstick Lichen | Caipín Dearg, 8. Spaghnum Moss | Súsán, 9. Sundew | Drúchtín Móna

THE BEAUTY OF THE BOG

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