



A Guide to Irish Bog Habitats



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Blanket Bog Habitat in the Wicklow Mountains. © Cillian Breathnach

Bogs are wetlands made of peat, plants and water combined together. 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. The main source of water to a peatland is from rainfall which means the peatland is acidic pH 4.

Raised bogs formed in lakes left behind after the Ice Age which slowly filled with dead

plants. *Sphagnum* moss is abundant on raised bogs and can hold up to 20 times its weight in water ensuring that the bog is waterlogged year round.

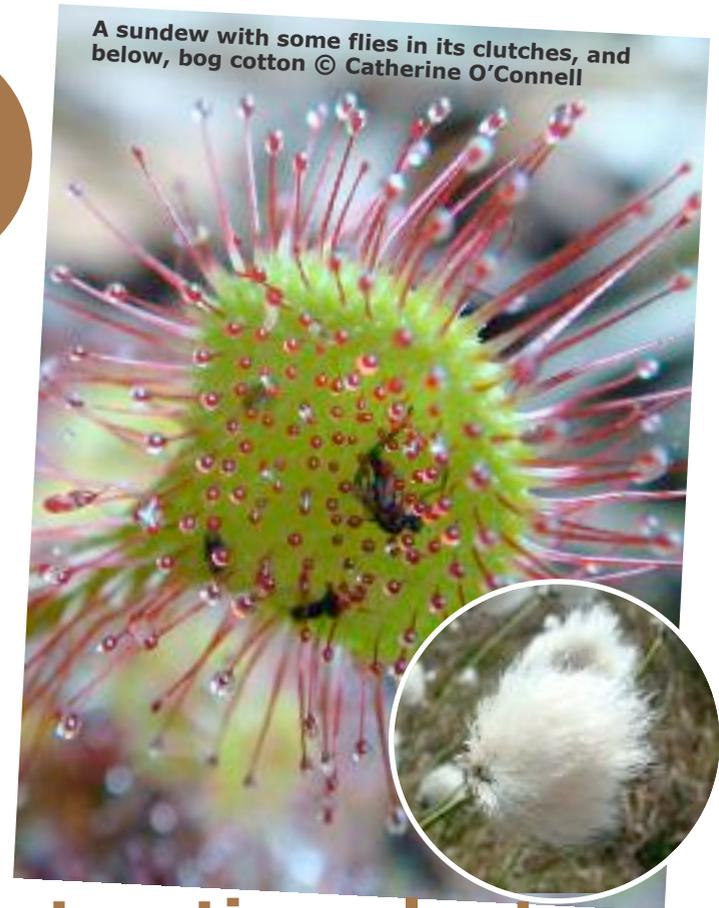
Blanket bogs develop on poorly drained soils where the weather is very wet. All of the country's high mountains are covered in this type of bog as are the western lowlands, where it rains two out of every three days.

How Irish bogs grow

Bog plants



AMAZING FACTS
Sphagnum moss can hold 20 times its weight in water



A sundew with some flies in its clutches, and below, bog cotton © Catherine O'Connell

Bog Mosses or *Sphagnum* are the most important plants on bogs. They form a living multi-coloured carpet over the entire surface of the bog. The different types of bog moss grow to form hummocks or hollows on the bog. They grow quickly and hold up to 20 times their own weight in water. When they die their remains do not decay but collect as peat or turf.

heads and looks like cotton wool. Bog asphodel has glowing yellow flowers with orange anthers (front cover). Bogbean grows in pools and its white flowers can be seen in May and June.

Shrubs such as cranberry and bilberry bear edible fruits, while the scent of bog myrtle help to repel biting insects.

Ling Heather grows on the drier hummocks of bog moss. Bog cotton has lovely white seed

Insect-eating plants

Plants are normally eaten by insects. On the bogs, however, the opposite happens as it is the insects that become the prey. The leaves of 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 and absorbed by the plant.

Butterworts, have sticky glands along the margins of the leaves. They can roll them around any trapped insects and digest them. And Bladderworts, which grow in bog pools, lure their prey with the use of a sugar mucilage at the entrance of tiny bladders found among the leaves. When an insect approaches, the mouth of the bladder opens suddenly and sucks in the creature in a gulp of water.

Bog minibeasts

Carnivorous flying insects, such as dragonflies and damselflies, enjoy hunting over bogs where there are lots of smaller flying insects for them to feed on such as midges and mosquitoes. They lay their eggs under water in bog pools. The larvae spend up to three years developing in the pool. They are ferocious predators. After this time they emerge from the pool to become a flying insect and exploit a new habitat for food.

There is a great diversity of life within bog pools and many other minibeasts can be found here for example: water beetles, water boatmen, pond skaters, freshwater hoglice, fly larvae, freshwater shrimps and tadpoles.



Adult dragonfly emerging.
© Peter Foss



Raft Spider © Catherine O'Connell



Water Beetle © Nuala Madigan



Pond Skater
© Catherine O'Connell

Bog spiders

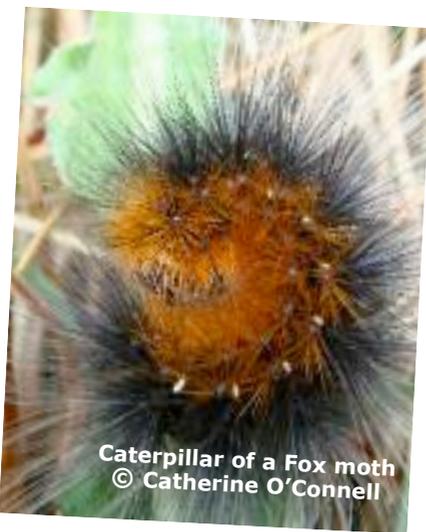
If you visit the bog on a summer's morning you will notice the plants are covered in beautiful spider webs. Many species of spider live happily on the bog. The most impressive spider of all is the Raft Spider (*Dolomedes fimbriatus*). It is Ireland's largest spider and is semi-aquatic and lives in bogs and fens where it hunts

aquatic prey. It sits still on the surface of the water feeling for vibrations on the water made by potential prey. It is sometimes referred to as the Jesus spider as it has tiny hairs at the tip of its long legs that allow it to run across the surface of the water. This expert predator feeds on insects, other spiders, dragonfly and damselfly larvae and sometimes even tadpoles!



Bog insects

AMAZING FACTS
Marsh fritillary will only feed on the Devil's-bit scabious



Caterpillar of a Fox moth © Catherine O'Connell

On a still and sunny day in May or June you might be lucky enough to see the beautiful and endangered Marsh fritillary butterfly. They live in bogs where there is plenty of their food plant the Devil's-Bit Scabious. Another rare butterfly - the Large Heath - can be found in bog habitats, it feeds on cross-leaved heath and bog cotton so relies on bogs to survive.

Many species of moth also live in bogs. If you search through the sedge and heather you may find the caterpillar of the Fox moth or an Emperor moth cocoon.

Mammals

When you visit a bog the animal you are most likely to see running away is the Irish Hare. Even if you do not see the hare you may find its droppings, straw coloured oval balls. Hares feed on heather and bog cotton. Unlike Rabbits, hares do not dig burrows they build their shelter or form in a

moss hummock on the bog surface. They can live, breed and shelter on the bog in relative safety. Foxes, Badgers and Shrews make occasional foraging journeys to the bog but they don't live there. Red deer graze blanket bogs in summer.



FOX © Éamon de Buitléar

Irish hare © David MacPherson

Other animals



Viviparous Lizard © Peter Foss



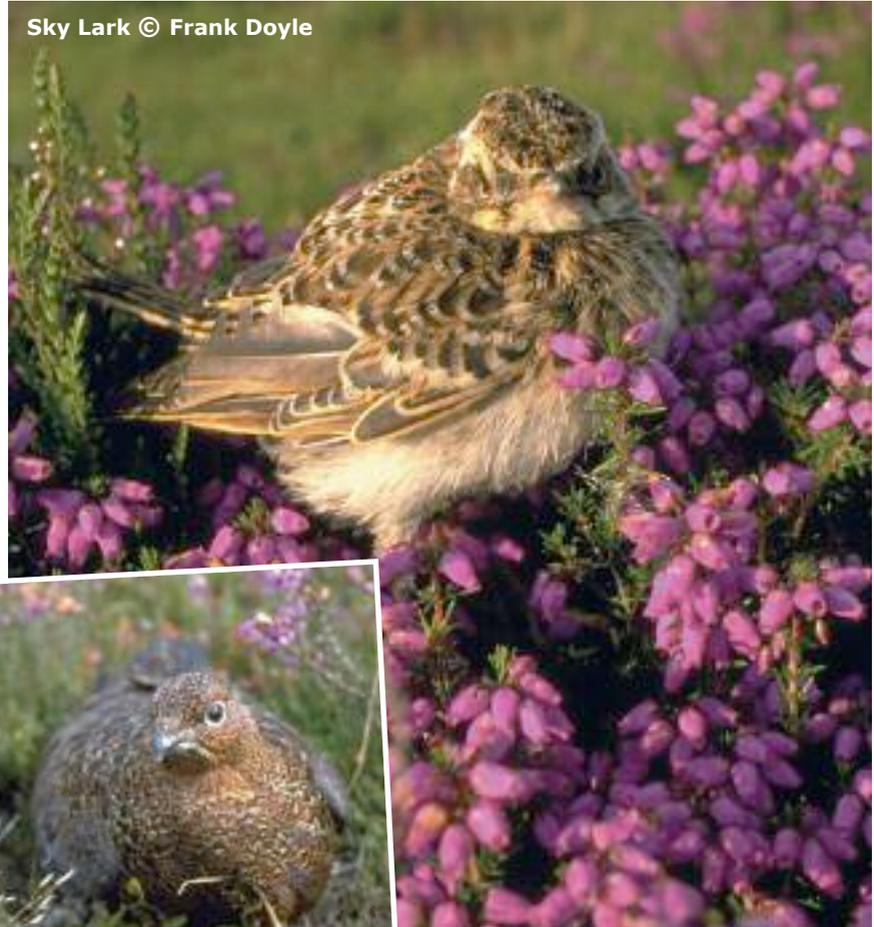
Common Frog © Catherine O'Connell

Frogs are the most common animal found on bogs. Frogs are amphibians hunting on the drier bog surface but they need to return to water to breed. Breeding takes place in ponds in spring. Clumps of frog spawn may be seen in bog pools which later develop into tadpoles. The Viviparous Lizard may be seen on bogs on a sunny day. On warm days it can be seen sunning itself on rocks or lichen hummocks but will rapidly move away if disturbed.

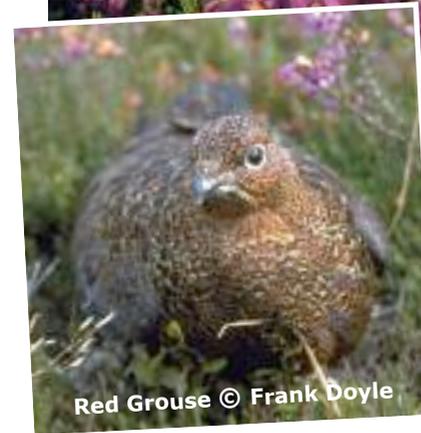


Blanket bog at Liffey Head © Catherine O'Connell

AMAZING FACTS
The Viviparous Lizards can shed its tail to escape predators!



Sky Lark © Frank Doyle



Red Grouse © Frank Doyle

Birds

Some of Ireland's most beautiful song birds live in remote bog habitats. These include the skylark and meadow pipit. Because there are few trees on bogs, the birds must nest on the ground in hummocks. Skylarks nest on the ground but mark their territory by singing rapturous songs as they ascend up into the sky.

The red grouse feeds on Ling Heather. It has a very distinct "go back, go back" sounding call. Even if you do not see a Red Grouse, you may find clumps of its sausage like droppings on the bog. Sadly, the red grouse is no is under threat because of habitat loss through heather burning, disturbance and predation.

Birds of prey

Peregrine Falcon © Frank Doyle

Waders

**AMAZING
FACTS**
There are only
150 breeding
pairs of Curlew
in Ireland



Bogs are a fantastic hunting ground for Ireland's birds of prey. The rare and protected Hen Harrier makes its nest on the bog surface. They will hunt and feed on ground dwelling birds and mammals. The Merlin is Ireland's smallest bird of prey. They can often be seen

chasing Meadow Pipits, their favourite prey. The Buzzards call is a distinctive sound that can be heard overhead. The Peregrine Falcon is a very impressive bird. It can fly at speeds of up to 180mph as it swoops down to catch prey.



The soft peaty soil of Ireland's bogs are ideal feeding grounds for waders. These birds can stick their long bills into the soft peat as they search for food. The Snipe, also known as the bog bleater, is a common species in bogs. Its tail feathers make a bleating sound as it flies over its nesting sites, marking its territory. They nest in tussocks on the ground and when disturbed fly away in a distinctive zig zag pattern. The iconic call of the Curlew was once a familiar sound in Ireland's bogs. Curlew breed on bogs during the summer and then migrate to the coast for the winter where they are joined by other winter visitors. Unfortunately it is not as common any more due to habitat destruction and predation. Action must be taken to protect these birds and help boost the current breeding population.



Turf cut from Cloncrow bog
© Eugene Dunbar

AMAZING FACTS
Over 100 bog bodies have been discovered in Irish bogs

Bog treasures

The cool, waterlogged conditions in the bog are what prevent decay. Even the plants that once grew on the bog do not rot but collect as peat. Bogs grow by 1mm each year. This means that any discovery of treasure can be dated crudely based on the depth of the find in the bog. Many bog bodies have been found over the years, some dating back as far as 390 BC - the Iron Age. Bog butter is another common find. It is thought that local people would dig a hole in the bog and store their butter and other perishables in it to keep them cold and fresh. Remains of the Great Irish Elk have been found excellently preserved in bogs. This impressive animal dates from 12,000 years ago.



Milling peat from the bog
© Cillian Breathnach



Footing turf by hand.
© Catherine O'Connell

Turf cutting and peat milling

Peatlands once covered 1,346,882 ha (16%) of the land surface in Ireland. Through a combination of exploitation (turf cutting and peat milling) and reclamation of land for forestry and agriculture; only 23% of peatlands remain of conservation value today.

In the last century the traditional method of hand cutting the turf was replaced by machinery. This has allowed for

large areas of bogs to be destroyed very quickly.

Bogs are valuable habitats for wildlife but they also provide many ecosystem services such as water storage and climate regulation. It is important that we protect the small areas of bogs that still remain in good hydrological condition so that future generations can enjoy their beauty.



Bog Butter
© Catherine O'Connell



Giant Irish Deer antlers
© Catherine O'Connell

Save the bogs



The Irish Peatland Conservation Council (IPCC) is an environmental NGO. Its mission is to conserve a representative sample of Ireland's peatlands for future generations to enjoy. The IPCC has been working to save bogs for over 30 years and has run numerous projects around the country to achieve our goal. With only 23% of Ireland's peatlands remaining of conservation value it is important that these habitats are protected and conserved.

IPCC:

- Restore, manage and conserve peatland nature reserves
- Protect peatland wildlife
- Run peatland education programmes for schools
- Monitor over 1000 peatlands of conservation value
- Produce and publish information on peatlands
- Train volunteers to help us to save bogs
- Meet visitors to bogs at the Bog of Allen Nature Centre



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FACTS**
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