

NATURAL HERITAGE

(2009)

NH 006

After the glaciers had melted at the end of the last ice age, forests, first of birch, Scot's pine and hazel then of oak and ash, began to cover most lowland areas of Ireland.

Progressive waves of human settlers, from Neolithic man to English and Scottish Planters, have gradually cleared the once extensive forests to create farm land and harvest timber, which was needed in huge amounts for ships and barrels, buildings and charcoal production.

Today, less than 8% of the Province is covered in trees and most of these are recent conifer plantations. In fact Northern Ireland has the smallest percentage of woodland in the whole of Europe, where the average is 21%.

WOODLAND FLOWERS AND FERNS

Woodland plants overcome the problems of shade cast by the canopy and shrub layers in three ways:

1. Early Flowering – the plant completes its life-cycle before full canopy of leaves has developed on the trees; e.g. lesser celandine, wood anemone, wood sorrel, with garlic, primrose, bluebell, wood sage, yellow pimpernel, cuckoo pint, violet, wild strawberry.
2. Shade Tolerant – these plants can grow in the low light levels under the full mid-summer canopy: e.g., ground ivy, honeysuckle, herb robert, brambles, ferns, mosses, liverworts.
3. Glades and Open Areas – some plants prefer to avoid the shade of trees: e.g., foxglove, wild raspberry, burdock.

Canopy

Upper branches of main trees like oak, ash and beech. The amount of shade cast by the canopy determines which shrubs and plants can grow in the lower layers.

Shrub layer

Smaller trees and shrubs, like holly, hazel, hawthorn, elder and guelder rose, that are shade tolerant.

Field

Flowering plants, grasses and ferns.

Ground layer

Mosses, liverworts and lichens.

WOODLAND EXAMPLE



BEECH



HAWTHORN



FERNS



MOSESSES

FUNGI

Fungi in the form of toadstools or brackets on the bark of trees are often seen in autumn woodlands. These distinctive fruiting bodies are only a tiny part of the whole organisation. The rest of the fungus is a huge mass of thread-like fibres called mycelia which are hidden from sight inside living trees or dead wood or in the leaf litter of the woodland floor.

Fungi are a vital part of the woodland ecosystem. Many live on dead organic matter like fallen leaves and dead wood which they break down to release nutrients back into the soil. Other fungi are parasitic, sometimes causing disease and death in older trees.

WOODLAND INVERTEBRATES

About 10% of woodland invertebrates are associated with dead wood, feeding on the rotting wood itself, or on the creatures that live within it.

Shield bugs, frog hoppers and aphids feed on plant sap through their piercing mouth parts. Ground beetles and centipedes hunt through the leaf litter for slugs and other invertebrate prey. Worms feed on plant debris in woodland soils, while slugs and snails graze on algae, lichens and fungi.

Sheltered lanes and glades, where flowers can grow in profusion, are favoured by woodland butterflies (eg speckled wood, wood white, holly blue and tortoise shell) and moths (eg swallow prominent, December and brimstone moths).

BIRDS

More types of bird are found in broadleaved woods than in any other habitat because woods provide the variety of structure and shelter required by breeding birds for nesting sites, display areas and song posts that is unmatched elsewhere.

The sparrow hawk is chiefly a bird of extensive woodlands where it hunts year round exclusively for small birds. It has relatively short but broad wings which give superb manoeuvrability and enable it to chase small birds through dense woodland vegetation.



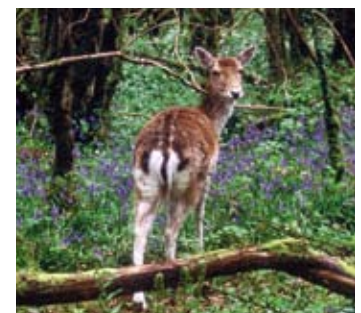
WILD GARLIC



FERN



MOUSE



FALLOW DEER

Owls (barn and long-eared) nest in holes in mature trees. They feed mainly on small rodents taken from the woodland floor or from surrounding grassland areas.

MAMMALS

Wood mice and pygmy shrews can be found in most Northern Ireland woodlands.

Hedgehogs, badgers and foxes tend to live on the edge of woodland and forage into fields and grassland beyond. Many types of bat will hawk (hunt) for insects along woodland edges and lanes, and in clearings.

Our native red squirrel can be found in woods and forests across most of the Province, while grey squirrels which were introduced to Ireland in 1911, prefer broadleaved woods and are mostly confined to the southern half of the Province.

Deer can be found in many of the larger woods throughout Northern Ireland. Fallow deer are the most widespread species while red deer and sika deer can be found mainly in Fermanagh and Tyrone.

BIRDS FOUND IN BROADLEAVED WOOD

	Feeding	Nesting
Canopy layer	willow warbler blue tit bullfinch	heron wood pigeon crow
Shrub and field layer	great tit, wren goldcrest	blackbird wren mistle thrust
Ground layer	wood pigeon blackbird woodcock	willow-warbler woodcock pheasant

THREATS TO WOODLANDS

Natural woods are dynamic: old trees die and collapse leaving gaps which are colonised by new saplings and shrubs. However any major change in the natural conditions within a wood is a potential threat to the woodland ecology: many woodland plants and animals cannot survive and may take decades to return when conditions improve, if at all.

1. Grazing – alters and reduces the diversity of the woodland species present and prevents the growth of new tree samplings. This is the main threat to many woodlands in Northern Ireland
2. Clearance – this is the most drastic change, but it can create diversity if the woodland is allowed to regenerate
3. Neglect – coppiced areas and glades grow over, excluding the plants, insects and birds of open spaces
4. Rubbish tipping and vandalism
5. Invasion by non-native species – rhododendron, laurel and sycamore can gradually take over

MANAGEMENT FOR CONSERVATION

The value of a wood for nature conservation usually depends on:

1. maintaining existing semi-natural plant communities
2. maintaining or creating habitat variety, eg, glades, streams, marshy areas and trees of different sizes
3. looking after rare species
4. removing invasive species and encouraging regeneration of woodland

PROTECTED WOODLANDS

Designation	Number of sites	Area (hectares)
ASSI	12	320
NNR	17	790
FNR	23	1180
NT	11	1420
RSPB	9	516
UWT	1	240
Total	70*	4445*

*The totals are not the sum of the figures given because, where a site has more than one designation, it is only included once in the total.

For a description of these areas, see Fact Sheet CON002.

BROADLEAF WOODS TO VISIT

Belvoir Forest Park, off Newtownbreda dual carriageway, Belfast.

Glenariff Forest Park, on A43 north of Ballymena, Co Antrim.

Marble Arch National Nature-Reserve, on Marlbank Scenic Loop, Co Fermanagh.

Roe Valley Country Park, Dogleap Road, Limavady, Co Londonderry.

Rostrevor Oakwood National Nature Reserve, Rostrevor, Co Down.

FURTHER READING

Wildlife Conservation in Managed Woodlands and Forests - *Harris, E + Harris, J.* (1991). Blackwell, Oxford. ISBN 0 631 16032 9

The Irish Woods since Tudor Times - *McCracken, E.* (1971). Institute of Irish Studies, Belfast. ISBN 0 7153 5008 0.

A Field Guide to the Trees of Britain and Northern Europe - *Mitchell, A.* (1988). Collins, London. ISBN 0 00 219213 6.

The Conservation of Lowland Broadleaf Woodland - *Nature Conservancy Council.* (1988). Nature Conservancy Council, Peterborough. ISBN 0 86139 2019.

Available from English Nature Enquiry Service, Northminster House, Peterborough, PE1 1UA, England.

WETLANDS

Our aim is to protect, conserve and promote the natural and built environment for the benefit of present and future generations.

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