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Woodlands

Origins

At the end of the last glacial period, the vegetation cover in Ireland was open and unforested but by 10,000 b.p. temperatures had become warmer and this allowed less cold-hardy flora to establish. The result was a vegetational succession that began with species of juniper, birch and hazel and reached a climax with oak and pine forest. Many of our native trees spread into Ireland across land bridges that connected the country to the rest of Europe. The open landscape was transformed to one of high forest interspersed with lake and fen. For thousands of years the landscape of Ireland remained covered by forests composed of oak, ash, elm, hazel, yew and other native trees.

With the arrival of human beings in Ireland, the landscape was fragmented to facilitate farming and, subsequently, cleared of forest to make way for crops and livestock. Most notable in this clearance of forest was the total removal of native Scots pine between 4000 and 1500 b.p. Elm is also thought to have declined dramatically with man's arrival. Vast tracts of land were cleared during the fifteenth to seventeenth centuries when quantities of timber were needed to fuel growing industrial development in both Britain and Ireland. By the end of that period Ireland's export market had ceased and timber was being imported.

Present Situation

Today, woodlands in Ireland are divided mainly between semi-natural woodlands and other woodland types, mainly commercial plantations. 'Ancient' woodland is now very rare and most stands of trees have been modified and managed to some extent by humans over centuries. Ireland is one of the least wooded countries in Europe with approximately 9% covered by forests. However only 1% is native woodland with the remaining 8% mainly non-native coniferous trees. Many of our native woodlands are currently under threat, principally from the invasion of non-native species, including rhododendron, laurel, beech, sycamore and spruce. They are also threatened by overgrazing by animals that feed on young broadleaf saplings. These factors prevent the natural regeneration of woodlands. Clearance of woodland and scrub vegetation to make way for development and agricultural activities is also creating pressure on our remnant woodlands.

Biodiversity and Ecology

During the colonisation of Ireland by woodlands, across the landbridges that joined the country to the rest of Europe, all the other components of what makes a woodland a complex community of plants and animals spread with them. Each species of tree carried with it a baggage of insects, birds, lichen and fungi, as well as herbs and plants that grew in its shade and in the soil it created. Insects, in particular, form complex webs of life. It is not surprising then that trees such as oak and willows have developed a large number of insects that feed only on them – over 450 species!

Woodlands are composed of a variety of trees and shrubs of differing heights. The layers will normally include a canopy layer of tall trees such as oak and ash, an under storey layer composed of shrubs such as hawthorn, holly and hazel. The ground layer will be made up of a variety of ferns, grasses, sedges and herbaceous plants. This gives a woodland a distinct vertical structure and provides a wide variety of habitats which in turn support a diverse range of flora and fauna. Dead wood and fallen trees are also important habitats within semi-natural woodlands and they support a wide range of very specialised insects and fungi.

Bluebells often grow in abundance in ancient broadleaf woodland

The main subdivision in the woodland section is between semi-natural woodlands and all other woodland types, including commercial plantations. Ancient woodland vegetation is now very rare in Ireland and most stands of trees have been modified and managed to some extent by humans over centuries. Because of this, the term 'semi-natural' is generally used for stands that resemble the potential natural woodland cover.

Seven types of semi-natural woodland are recognised.

- Oak-birch-holly woodland
- Oak-ash-hazel woodland
- Yew woodland
- Wet pedunculate oak-ash woodland
- Riparian woodland
- Wet willow-alder-ash woodland
- Bog woodland

Oak woodlands are amongst our most familiar and well loved woodlands. Very often, they contain a proportion of ash and birch, with hazel, holly and rowan scattered throughout. Oak woodlands can be found in Killarney, Co. Kerry, the Glen of the Downs, Co. Wicklow and Glenveagh, Co. Donegal, although there are small woods in most counties. Woodlands of damp, waterlogged sites are

dominated by willows, alder or ash, or by various combinations of some or all of these trees. This type of woodland can be found along rivers, lakeshores, fens and spring fed sites.
One of the rarest types of woodland in Ireland is the yew woodland, found on the Muckross Peninsula in Co. Kerry. This types of woodland is protected under Annex I of the EU Habitats Directive.

Native, Non Native and Naturalised
The Irish flora is depauparate relative to that of the European mainland and even that of Britain There are about 33 species of tree that are native or 'probably native' in Ireland. These include the following:

Native Trees and Shrubs of Ireland

Alnus glutinosa	Alder	*Rhamnus catharticus*	Buckthorn
Arbutus unedo	Strawberry Tree	*Salix alba*	White Willow
Betula pendula	Silver Birch	*Salix caprea*	Goat Willow
Betula pubescens	Downy Birch	*Salix cinerea*	Grey Willow
Corylus avellana	Hazel Woods	*Salix fragilis*	Crack Willow
Crataegus monogyna	Hawthorn	*Salix myrsinifolia*	Dark-leaved Willow
Euonymus europaeus	Spindle-tree	*Salix phylicifolia*	Tea-leaved Willow
Frangula alnus	Alder buckthorn	*Salix pentandra*	Bay Willow
Fraxinus excelsior	Ash	*Salix purpurea*	Purple Osier
Ilex aquifolium	Holly	*Salix triandra*	Almond-leaved Willow
Juniperus communis	Juniper	*Salix viminalis*	Osier
Malus sylvestris	Crab Apple	*Sambucus nigra*	Elder
Pinus sylvestris	Scots Pine	*Sorbus anglica*	Whitebeam
Populus nigra	Black Poplar	*Sorbus aria*	Common Whitebeam
Populus tremula	Aspen	*Sorbus aucuparia*	Rowan
Prunus avium	Wild Cherry	*Sorbus devoniensis*	French Hales
Prunus padus	Bird Cherry	*Sorbus hibernica*	Irish Whitebeam
Quercus petraea	Sessile Oak	*Sorbus ripicola*	Rock Whitebeam
Quercus robur	Pedunculate Oak	*Taxus baccata*	Yew
		Ulmus glabra	Wych Elm

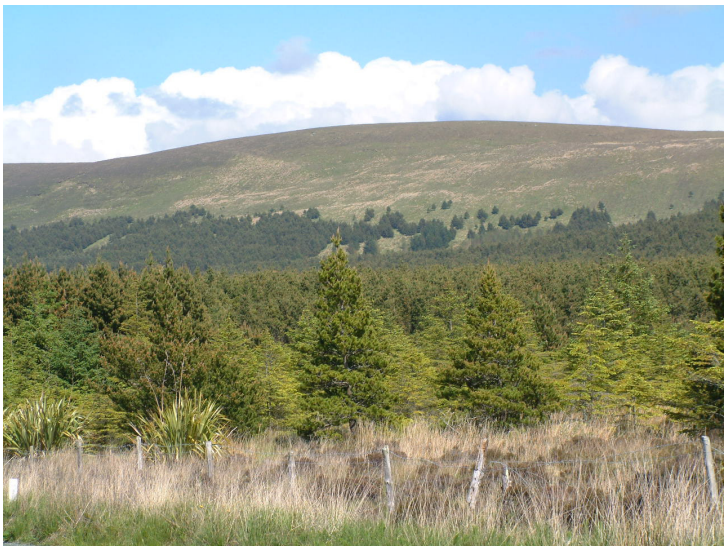
Some common non-native broadleaved trees that occur in Irish woodlands include beech, sycamore, limes, horse chestnut, Spanish chestnut and hornbeam. Yew and Scot's pine are the only conifers that can be considered native to Ireland; the latter has been widely re-introduced following a major decline and possible extinction in prehistoric times.
For many people the difference in conservation value between native trees and shrubs and those that are non-native or naturalised is difficult to understand. Familiar trees such as beech and sycamore are not native species but were instead brought in to Ireland by humans in the more recent past. These trees are now naturalised in Ireland. Oak, Scots pine and elm were here before humans arrived on the Island. The value of native trees and shrubs lies not only in their association with our history but also in their ecological value. Native woodlands support many more organisms than non-native trees because the native flora and fauna have developed together with the trees over thousands of years.

Commercial Forestry
When the state forest service was established in 1904 only 1.4% of Ireland's land area was covered by forests. The state embarked on an active policy for afforestation. A minimum cover of 1 million acres (405,000 ha) of forest was the target set. By 1951, forest cover in the Republic of Ireland was 1.8%. However, most of the planting undertaken comprised non-native species and even native planting was often derived from foreign provenance. Sitka spruce, lodgepole pine, Norway spruce and

Scots pine were the most abundantly planted species. In 1985, a review of Irish woodlands concluded that 6% of the state (382,000 ha) was wooded (Review Group on Forestry, 1985). By 1985, one single species, sitka spruce, accounted for almost half (49%) of state planting and broadleaved species only 5%.

Ireland's ratification of the Convention on Biological Diversity (CBD) in 1996, increasing public concern over the environmental effects of coniferous block planting, and lobbying by various groups has prompted Coillte (the state forestry body) to increase the proportion of broadleaved species planted. The current forestry programme seeks to encourage the planting of broadleaved trees by offering higher grants to landowners willing to plant them. However, conifers are often faster growing and therefore a more enticing prospect in the short term. In 1999, it was estimated that 13,182 ha of the Coillte forest were under broadleaved species. Of this, beech accounted for almost 30%, oak for 22.6%, and ash for 17%. Sycamore, birch and alder are among the other species planted.

In recent years the importance of our native woodlands has been revived and projects such as the Native Woodland Scheme and the People's Millennium Forests have attempted to bolster the decline of our native woodlands and promote a woodland culture in Ireland. Afforestation grants are available from the Forest Service of the Department of Agriculture and Food. The precise rates are determined by the type of land and the species planted.



Native broadleaf woodland will support a greater diversity of plant and animal species than commercial forestry

Legislation

Natural Heritage Areas (NHA) and Special Areas for Conservation (SAC) are designations that apply to areas of significant conservation value irrespective of ownership. NHAs are provided for under the Wildlife Acts (1976, Amendment 2000). The principals underlying the designation are usually considered during planning procedures etc. The European Union Habitats Directive provides for the designation of SACs, and most NHAs (and many National Parks and Nature Reserves) are now contained within an SAC. Designation of sites is ongoing.

Certain Irish woodland habitats, which are rare or important on a European scale, have been given special status in this process. These are alluvial woodland, woodland on intact bog, yew woodland and old sessile oak woodland. Invasion by native species and sub-optimum grazing levels threaten many woodlands within NHAs and SACs.

Certain activities within SACs, and NHAs can only be carried out with the permission of the Minister for the Environment, Heritage and Local Government, and these 'Notifiable Actions' vary depending on the type of habitat that is present on the site. These and several other activities can only be undertaken with permits or licences. In the case of NHAs, 3 months written prior notice is required to

be given to the Minister before undertaking any notifiable activities. More information on habitat designations and restricted activities can be found on www.npws.ie
The felling of trees is controlled under the Forestry Act, 1946. If you want to cut down any tree or uproot any tree over 10 yrs you must get a felling licence from the Forest Service. It is an offence to cut down trees without a licence or to break a condition of a felling licence. Penalties apply for those who commit such offences. Trees certified as dangerous to road traffic users, on account of age or condition or trees within 100 feet of any building do not require a licence. More information on obtaining a felling licence can be found on in the Forest Service section of www.agriculture.gov.ie

Under the Planning and Development Act 2000 any local authority can issues a Tree Preservation Order (TPO) to preserve any single tree or group of trees and bring them under planning control. Tree preservation orders are only made if it appears that a tree or group of trees need to be protected in the interests of amenity in the environment.

What can I do?

- Why not plant a native tree in your back garden? Some trees such as oak and ash may grow too big for suburban back gardens. Smaller trees such as rowan, silver birch, wild cherry and crab apple are more appropriate for smaller gardens and will provide a source of food for birds during the winter.
- If you don't have room for a tree, why not sponsor a native tree. The Tree Council of Ireland and the Native Woodland Trust both have sponsorship schemes for native trees.
- Get involved in tree planting within you local community. Many Local Authorities provide trees to community groups, residents groups and Tidy Towns associations for planting in amenity areas. Contact the Parks Department of your local authority for further details
- National Tree Week 2007 will be held from 4-10 March 2007 and events will be organised by the Tree Council of Ireland, Coillte, Local Authorities and community groups. Past events have included included forest walks, tree planting ceremonies, workshops, talks, competitions and tree planting.
- The Native Woodland Scheme provides financial support for landowners to protect and enhance existing native woodlands and to establish new native woodlands. Both elements include native woodland on riparian sites adjoining streams, rivers and lakes. Further information is available from the Forest Service of the Department of Agriculture and Food, Johnstown Castle, Co. Wexford.