

# An Introduction to Welsh Woodlands, woodland biodiversity and Ancient woodlands

## Welsh Landscapes

Man has been changing the face of the landscape in Wales for thousands of years. At the end of the Ice Age, Wales developed a mixture of broadleaved and pine forests. Over time the broadleaves displaced the pine completely. With the trees came the other plants and animals which rely on the forest habitat. Our early ancestors began to clear the forest, first to harbour game then to create farmland. The area of broadleaf woodland declined steadily so that by 1500 AD woodland cover was little higher than now. The use of timber and broadleaf woodlands have always played an important part in our lives and culture.

## Native Welsh broadleaf trees

Most broadleaf woodland in Wales contains one or more of the following species: - Oak, ash, beech, sycamore, birch, cherry, hazel, alder, rowan, hawthorn and holly. Short-lived light seeded species like birch can soon be overtaken by light demanding oak and ash. Below the canopy, shade-bearing species such as beech and hawthorn bide their time until a mature neighbouring tree dies. This sensitive balance is disturbed when woodland is clear cut or grazed.

## Woodland Biodiversity

Biodiversity is, literally, the variety of life on earth. It embraces all living plants and animals (including mankind), their genetic variation and the ecosystems on which they depend. Biodiversity is everywhere: in gardens, fields, hedgerows, rivers, mountains, cliffs and in the sea.

Biodiversity also sustains our lives. A healthy natural environment is a vital part of a sustainable and robust society in Wales. Our natural environment is of great economic importance, providing food, materials and medicines, regulating air and water quality and forming part of the cultural identity, providing the landscape and seascape setting that contributes to our mental and physical health.

## Rich and diverse habitat for birds, mammals and woodland plants

The work of Coed Cymru concentrates on “close to nature” forestry and reliance on natural regeneration of mixed-age and mixed-species woodlands. Mixed woodland of uneven age and structure provides habitats for many plants and animals. The process of creating and sustaining mixed age and mixed species woodlands will help us in Wales to meet



international commitments to sustain global biodiversity. Coed Cymru's advice ensures that any management will be compatible with actual or potential wildlife value.

## Ancient semi-natural woodland (ASNW)

There is no undisturbed natural woodland left in Wales but we do have significant areas of ancient semi natural woodland. This is land that can be considered to have been wooded for at least 400 years, since 1600 when the first reliable maps were produced. In Wales, the ancient woodland inventory uses the first detailed OS maps dating from 1800's and sites included on the register are assumed to have been wooded for 400 years. There are around 95,000 hectares of ASNW in Wales, almost a third of all our woodland and forest area. However, around 30,000 hectares of this has been planted with non-native species, often conifer, (see Plantations on Ancient Woodland Sites, below) and much of the rest is in fragile condition, with limited structural diversity and often subject to overgrazing.

ASNW are important as these sites are relatively undisturbed and the complex ecosystems could not be recreated today by planting, as disturbed and modified soils within a fragmented landscape will not foster ancient woodland characteristics which include: a) no obvious planting b) the presence of ancient and/or veteran trees c) understory vegetation such as bluebells, yellow rattle, lesser celandine, wood anemone primrose and late successional lichens and mosses. Ancient woodland supports more endangered species than any other UK habitat. At least 152 protected species rely on ancient woodland being in good condition.

Our woodland management systems, based on the continuous cover approach achieve a balance between protecting and enhancing the woodland ecosystem and managing for improved timber production.

## Plantation on Ancient Woodland Sites (PAWS: comprises more than 50% Conifer)

After the two World Wars, the UK strived to become self-sufficient in terms of timber supply. As a consequence, much of our native and diverse ancient woodlands which were felled during the wars, were re-planted with conifers which, due mainly to the increased shading, drastically changed the woodland environment. Light levels were reduced in the understory and the conifers created unfavourable conditions for native broadleaved species, threatening their survival. Efforts are currently on-going to restore these areas to include native species and recover ancient woodland ecosystems to Restored Ancient Woodland Sites (RAWS).



## Forgotten Trees

Elm, Aspen and Lime were formerly very common in Wales but not so today. Our native elm is the Wych Elm, *Ulmus glabra* but we also had English Elm, a hybrid probably brought here in Roman times and occasionally Cornish Elm, *Ulmus minor*, along the Glamorgan coast. All of these suffered very badly during the Dutch Elm Disease outbreak in the 1970's. By propagating cuttings from large trees we hope to increase the number of Wych Elm and Cornish Elm. Elm is a suitable food plant for a wide variety of moths and some butterflies.

Mature trees can be an important substrate for lichens. Aspen is a native poplar found sporadically in many parts of Wales. Because the male and female flowers are borne in separate trees Aspen seldom produces seed in Wales but this species does reproduce readily from suckers and root cuttings. It is a suitable food plant for a number of moth species. Aspen is very susceptible to grazing and browsing by livestock and deer which is why it is now much rarer than it was. Small leaved lime is found in a number of ancient woodlands throughout Wales but it is best known in the lower Wye Valley. It seldom sets seed in our climate and it may be that the trees we have are a relic of a warmer period in the past. Successful seeding does occur in Eastern England and small leaved lime may be one of these species that will benefit from climate change. As one of our few shade tolerant native trees it is particularly useful in the understorey of a woodland. The leaves are very palatable and support a wide variety of insects.

## Further Information

More information on the categories of Ancient woodland can be found on Natural Resources Wales website along with the [Ancient Woodland Inventory](#) information.

