

## **A brief history of forests in Great Britain and Ireland**

### ***Human Influence***

The first trees began to colonise the tundra of Great Britain and Ireland during the late glacial period from 10,000 BC. They were limited only by high altitude, severe wind exposure and waterlogging. By 3000 BC everywhere that trees would grow was covered with forest, sometimes called the 'wildwood'. The earliest evidence of large-scale clearance coincides with the introduction of Neolithic agriculture between 3100 and 2900 BC. During the Bronze Age (1700 to 500 BC) clearance extended into higher elevations though the great majority of the country remained forest. The Iron Age Celts arrived in about 400 BC, and with their superior equipment, began large-scale clearances to provide land for cultivation and for grazing. This process of felling, burning and grazing animals on coppice regrowth and seedlings, and converting forest to arable land and pasture went on for hundreds of years.

During the first twelve centuries AD much of the modern landscape became recognisable and the things which distinguish modern woodland from wildwood became widespread, including the separation of the woods from each other, definition of boundaries, enclosure to prevent grazing and, above all, management. By the 1000 it has been estimated that about 20 per cent of Great Britain and Ireland were covered with forest, though in England at this time it was probably less. Even then, some districts had scarcely any woods and elsewhere the landscape consisted predominantly of farmland with islands of woods rather than forest with isolated clearings.

Clearance continued particularly rapidly in Norman times and by their contemporaries in Scotland and Ireland. By 1150 the remaining fragments of untouched forest had been converted or cleared in England and Wales. In Scotland and Ireland patches may have survived for much longer though these rapidly decayed via the wood pasture system and the growth of sheep grazing after 1745. Most woods were managed on a coppice-with-standards system and usually wood from the coppice rather than timber from the standards was regarded as more important. The main coppice species were much the same as found in ancient woods today. Of the timber trees, oak was by far the most common.

Between 1400 and 1750 many social and economic changes occurred: there was more clearance for agriculture and much felling to raise capital for industry; the population increased and farmhouses, villages and towns were rebuilt with timber-framed houses. However, the woods proved most enduring and, of those that survived clearance, many only differed in detail in 1900 from what they had been 650 years earlier.

### ***The last 100 years***

Coppicing and other traditional forms of woodland management fell into decline in the latter 19th century because of the loss of traditional markets. Coal replaced wood as a fuel and railways and canals enabled cheap coal to be brought to the countryside. Many metal and later, plastics substitutes became available for traditional woodland produce and imported timber became cheaper. By the beginning of the 20th century almost 5 per cent of Britain and only 1.5 per cent of Ireland was covered with trees.

There was then a swing towards plantation forestry for the production of timber and this received a major impetus when the First World War prevented imports on a large scale, which by then amounted to over 90 per cent of all timber used. The Forestry Commission was founded in 1919 and the initial aim was for the State to afforest, mostly with conifers, 716,000 ha and to maintain the existing 1,526,000 ha in Great Britain and Ireland in a productive condition. The objective was strategic: to provide a reserve of timber which could be used in the event of another war.

Subsequently separate forest services became responsible for this work in what is now the Republic of Ireland and Northern Ireland. Objectives changed with time: in the 1960s, economic forestry rather than

the creation of a strategic reserve became the overriding aim. More recently this policy has been relaxed so that due account can be taken of the conservation, landscape and other values especially of broadleaved woods. Most of the new planting was on moorland or heath, with species introduced from elsewhere: Sitka spruce, Douglas fir and Corsican pine are often at least twice as productive as native broadleaved species and they grow to usable sizes in less than half the time. However, little attempt was made to convert native woodland to exotic conifers until after the Second World War. Until then there were still thousands of woods which retained a substantial degree of biological continuity with their medieval or earlier vegetation.

### ***Broadleaved woodland and the need for tree breeding***

During the First World War, Great Britain and Ireland had to rely upon local woods to provide most of the colossal quantities of timber that were required: then, as now, 90% of all timber used was imported, mostly from regions that had seemingly inexhaustible supplies of better timbers than could be grown at home. The native woodlands were felled on a gigantic scale with most of the best trees being removed. The woods did not have time to recover, nor had the newly created coniferous forests become productive before the Second World War resulted in a repeat of the onslaught. The only trees left behind were generally small and badly formed. They were individuals that had been selected dysgenically, that is they possessed undesirable genetic qualities so that their progeny were likely to be less well-adapted individuals, possibly being more prone to diseases, and possessing qualities that made them undesirable for the purposes for which they were being grown, such as slow growth and poor form). This is in stark contrast to practices by our continental European neighbours.

In 1980 there were estimated to be 314,000 ha of unproductive 'scrub' and largely obsolete coppice in Britain and 367,000 ha of broadleaved high forest which together represented 3 per cent of the land area of Great Britain. A further 1,355,000 ha (6 per cent) was coniferous high forest.

Since the 1980s, broadleaved tree planting has increased enormously, but though breeding introduced conifers has received huge levels of Government support since 1945, broadleaved tree breeding has received practically none. Most of what was started has since been lost through spending cuts and 'rationalizations'. Most resources were, and still are devoted to conifers, particularly Sitka spruce. In fact, of the many tree improvement projects that have been initiated, only the one for Sitka spruce has ever finished and delivered improved trees. Government attitudes towards growing broadleaved trees are dominated by their values for conservation, landscape and amenity, which are placed far higher than producing high quality timber. The British and Irish Hardwoods Improvement Programme was consequently set up in 1991 with the objective of improving the genetic qualities of broadleaved trees in an attempt to repair some of the defects described.

One of the most important aspects of BIHIP's work is the introduction of more genetic diversity into the seven species being worked upon by selecting 'plus' trees (*i.e.* the best of what is left) from a wide range of sites and letting them (or their progeny) interbreed in seed orchards. This should have the effect of producing trees that are far more resilient to predicted climate change than existing populations besides being more valuable. BIHIP holds the firm belief that unless woodlands can yield an economic return to their owners, they will be neglected and most of the many benefits they can confer upon society will be lost.

### **Sources of information:**

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