

Teacher information 1: The Scots Pine Forest

What are native Caledonian pine forests?

Native Caledonian pine forest contain Scots pine and a range of other trees, including junipers, birches, willows, and rowan and, in some areas, aspens. Many of the oldest trees in Scotland are found in native pinewoods. As the largest and longest lived tree in the Caledonian forest the Scots pine is a keystone species in the ecosystem, forming the backbone of which many other species depend. Scots pine trees over 200 years old are known as 'grannies', but they are young compared to one veteran pine in a remote part of Glen Loyne that was found to be over 550 years old.

Native Caledonian pinewoods are more than just trees. They are home to a wide range of species that are found in similar habitat in Scandinavia and other parts of northern Europe and Russia. Despite this wide distribution, the Scots pine forests in Scotland are unique and distinct from those elsewhere because of the absence of any other native conifers.

Native pinewoods have also provided a wide range of products that were used in everyday life in rural Scotland. Timber was used to build houses; berries, fungi and animals living in the pinewood provided food; and fir-candles were cut from the heart of old trees to provide early lighting. More recently, native pinewoods provided timber during the First and Second World Wars when imports to Britain were interrupted.

How much native Caledonian pinewood is there in Britain?

After the last Ice Age, Scotland's 'rainforest' covered thousands of square kilometres in the Scottish Highlands. In the centuries and millennia since then, the Caledonian Forest shrank in area, due to both climatic factors and the impact of humans, so that by the second half of the last century a mere 4% survived.

The natural biodiversity of the Caledonian Forest had been seriously impacted too, with most of the large mammals such as beaver, wild boar, lynx, brown bear and wolf gone, and many other species, from red squirrels to plants such as twinflower, substantially reduced in numbers.

Today, native Caledonian pinewoods are found at 84 sites in the north and west of Scotland, covering around 875 square kilometres (Native Woodland Survey of Scotland 2014)



What species live in native Caledonian pinewoods?

Native Caledonian pinewoods provide habitat for a wide range of species. Plants include blaeberry (bilberry), creeping ladies tresses, twinflower, one-flowered and serrated wintergreen. There are specialist mosses, such as the ostrich plume moss, and a rare group of fungi known as tooth fungi.

Many birds, insects and butterflies are found in the native Caledonian pinewoods. They range from micro species living under bark to the Timberman, a longhorn beetle with antennae more than 10 cm across.

The only bird which is endemic to the UK (i.e. found here and no where else) is the Scottish Crossbill which is confine to the pinewoods. The beak is crossed, which it used to prise open the tightly fitting scales of the Scots pine cones. The seed is the main food for this rare bird.

Mammals include the red squirrel which extracts seed from the pine cone while they are still on the trees and the pine marten which eats voles, small birds and berries. Larger mammals found include the wildcat and red deer.

What are the threats to native Caledonian pinewoods?

The native Caledonian pinewoods are now well protected, but threats remain from fire and overgrazing. Red band needle blight is a fungus which infects Scots pine (and other pine trees). It is another threat as it causes loss of needles and can result in the death of the tree.

How we manage our woods

Many landowners manage their native pinewoods and are trying to restore them. The Forestry Commission, for example, is involved in the management of 24 native pinewoods. Each has a management plan that aims to restore and expand the native pinewood. This includes removing non-native trees, encouraging regeneration through management of grazing animals, and in some places planting young native trees. In some of the larger native Caledonian pinewoods, interpretation trails described the history and wildlife of the area.

For further information about the Scots Pine forest visit www.treesforlife.org.uk and www.forestry.gov.uk

For more information on the history of Scottish forests visit http://scottish-forest-history.net/maps/main_map.html