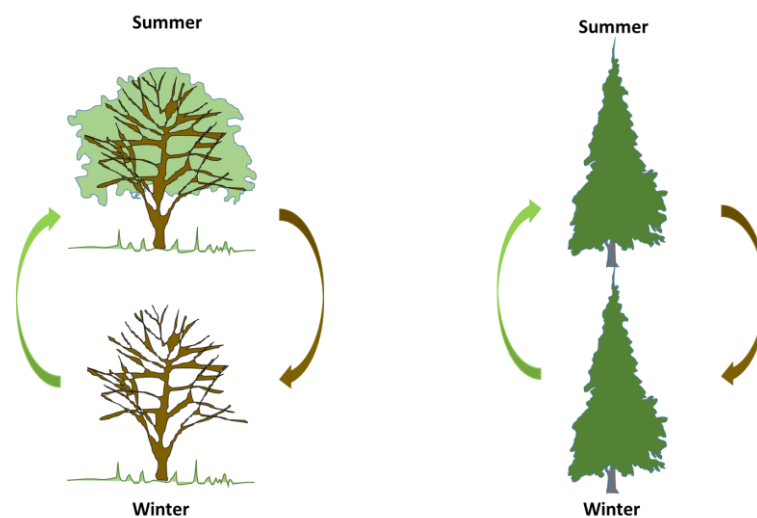


Broadleaf and coniferous woodland eco-systems

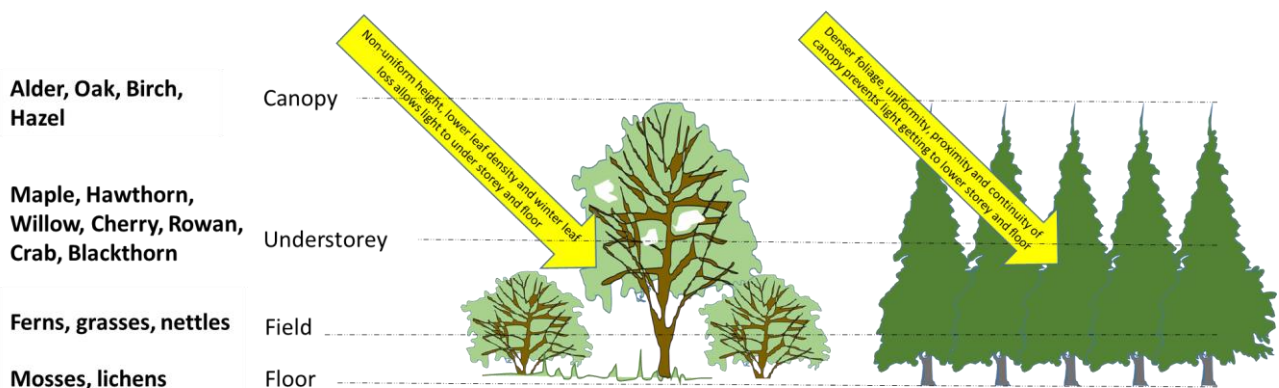


Broadleaf trees have flat leaves in a variety of shapes and sizes. They tend to be **deciduous** which means that they lose their leaves during the winter months. Different species of broadleaf trees grow at different rates and to varying heights. This creates a less homogenous structure to the wood. Smaller trees and shrubs, once established, will crowd out seedlings from taller trees, preventing the taller trees from dominating.

Coniferous trees, in contrast have needle like leaves and, with the exception of larch, retain their leaves all year round. As a result, coniferous trees significantly reduce the level of light reaching the understory and floor, throughout the year, discouraging other plants and favouring the propagation of conifer saplings.



The different characteristics of the two types of tree create distinct woodland habitats. The coniferous trees prevent the penetration of light all year round and this significantly reduces the level of vegetation below. Typically, a coniferous wood with a high homogeneity of height (such as is uniform plantations) will develop a barren carpet of pine needles on the floor beneath. In contrast, the winter period without foliage and the more varied leaf cover during the summer, both allow niches which other plants can occupy within a deciduous wood – for example; smaller trees, such as hawthorn, blackthorn and crab apple can develop to create a rich and varied **understorey**; hellaboros in winter, snow drops in spring and bluebells in early summer are all features of the **field** level of native deciduous woods.



Broadleaf and coniferous woodland eco-systems



The richer bio-diversity of plant form within a deciduous wood provides a better ecological environment for fungi, mosses, insects and animals. The canopy is inhabited by larger birds and squirrels. The understorey provides an excellent habitat for smaller birds. At the field level, rodents, foxes, rabbits and game birds form a sustainable food chain, whilst butterflies and other winged insects play an important role in pollination. At floor level, the rich mulch of decaying matter provides a home to micro-organisms as well as beetles, ants and other insects which play a valuable role in recycling nutrients.

Deciduous woods are therefore seen as more valuable to the delivery of environmental objectives.

However, it is important not to demonise coniferous woods. Whilst it is true that ill-thought out mass planting of conifers for economic reasons has left an ugly mark on the landscape across the United Kingdom, the inclusion of conifers in a managed mixed woodland has its merits. Conifers are well adapted to extreme weather conditions. They populate cold, barren landscapes, are resistant to winds and provide valuable winter cover for non-hibernating species such as birds, deer and foxes. Had I been allowed to plant a few conifers on the windward side of Tyggwhistle wood, I have no doubt that the failure rate of other species would have been lower and they would have established themselves more quickly.



This photograph, taken in Chopwell Woods illustrates the different types of cover provided by the evergreen fir trees on the right, which cast a dense shadow on the ground, and the more open, leafless cover of the silver birch on the left, which has allowed ferns to thrive underneath.