

Douglas Fir (*Pseudotsuga menziesii*)



General Information:

Douglas fir is a member of the pine family. It is a non-native species introduced in the early 19th century. It is a native of western North America, the species and was introduced here in 1827 by Scottish botanist David Douglas and its latin name, Menziessi, comes from another Scottish botanist Archibald Menzies who discovered the species in 1791.

It is widely planted for timber and for ornamental purposes and around 3% of the UK's conifers are Douglas firs. It grows best in the wetter conditions on the west coast but there are plenty growing around Rothimurchus estate. The TreeZone course includes several Douglas Firs, the largest of which supports the big nest where the zipline starts.



Vital statistics:

In its native range in North America the Douglas fir can reach heights of over 75m and some trees have been recorded as living to 1400 years old. The tallest living tree is over 99m and resides at Brummit Creek in the US state of Oregon. It is the second tallest tree species in the world after the coastal redwood. In the UK they can grow to around 60m and live for several hundred years.



Box of Knowledge

A native American folk tale tells of how the Douglas fir cone comes to have its curious three-pointed bracts: the bracts are thought to be the tail and back legs of mice which hide inside the cones during a forest fire. There is some truth to this tale as the Douglas fir has non-flammable bark to protect it from forest fires.

Ecosystem

Douglas fir grows rapidly and fully grown trees cast a deep shade. It grows in a variety of soil types but will not grow in waterlogged soil or in competition with heather. Larger birds of prey, such as buzzards favour tall conifers such as Douglas fir for nesting sites. The seeds of Douglas fir provide food for several small mammals and woodland birds. Douglas fir forests in Scotland are known to support the red squirrel and the pine marten as well as numerous invertebrate species, including several species of moths. The moist, warm microclimate in Douglas fir stands provides perfect conditions for many fungi and mosses.

Box of Knowledge

The strength and height of the Douglas Fir made its wood ideal for use as masts on sailing ships and also for flagpoles but these attributes also make it perfect for our aerial assault course.



Bark, leaves, flowers and seeds.

Young trees have grey-green bark with resin blisters that release a strong fragrance. With age, the bark becomes purple-brown with horizontal cracks and when mature it is thick and corky with wide, pale-brown fissures. Branches are whorled and ascending. The buds are red-brown, scaly and slender, tapering to a point; they resemble beech tree buds. Douglas fir foliage resembles that of silver firs. The needles are solitary, flat, soft, slightly pointed long. The foliage is dense and heavy and emits a sweet, fruity resinous scent.

Douglas fir is monoecious (both male and female flowers are found on the same tree). Male flowers are pendulous, oval clusters of yellow stamens growing on the underside of last year's shoots near the tip. Female flowers are upright tufts or brushes, green to pinkish red, growing at the tips of twigs.

Female flowers ripen rapidly into cones that are oval, slightly elongated and hang downward. Protruding from each scale on the cone is a distinctive three-pointed bract (the shape responsible for the myth about the fleeing mouse) which is unique among conifers. The tree is wind pollinated and seeds are oval and fixed to an oval, brown, papery wing.





References:

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