

# Larch – *Larix* genus

A very interesting group of conifers, they are deciduous – they lose their needles in the autumn. Other deciduous conifers include the golden larch [\*Pseudolarix amabilis\*](#), the dawn redwood [\*Metasequoia glyptostroboides\*](#), the Chinese swamp cypress [\*Glyptostrobus pensilis\*](#) and the bald cypresses in the genus [\*Taxodium\*](#).

Growing from 20 to 60m tall, they are native to much of the cooler temperate northern hemisphere, on lowlands in the north and high on mountains further south. Larches are among the dominant plants in the boreal forests of Siberia and Canada. They have been widely planted in plantations.

There are eleven (or ten, see *L. czekanowskii*) accepted species of larch subdivided on the basis of the most recent phylogenetic investigations:

## North American species

- [\*Larix laricina\*](#) – Tamarack or American larch. Parts of Alaska and throughout Canada and the northern United States from the eastern Rocky Mountains to the Atlantic shore.
- [\*Larix lyallii\*](#) – Subalpine larch. Mountains of northwest United States and southwest Canada, at very high altitude.
- [\*Larix occidentalis\*](#) – Western Larch. Mountains of northwest United States and southwest Canada, at lower altitudes (Pacific Northwest).

## Eurasian species

### Northern Eurasian species with short bracts

- [\*Larix decidua\*](#) – European larch. Mountains of central [Europe](#).
- [\*Larix sibirica\*](#) – Siberian larch. Plains of western [Siberia](#).
- [\*Larix gmelinii\*](#) – Dahurian larch. Plains of central and eastern Siberia.
- [\*Larix kaempferi\*](#) – Japanese larch. Mountains of central [Japan](#).
- [\*Larix czekanowskii\*](#) – Uncertain. Its origin could be hybrid.

### Southern Euroasiatic species with long bracts

- [\*Larix potaninii\*](#) – Chinese larch. Mountains of southwestern China (Sichuan, northern Yunnan provinces).
- [\*Larix mastersiana\*](#) – Masters' larch. Mountains of western China.
- [\*Larix griffithii\*](#) – Himalayan larch. Mountains of the eastern Himalayas.

## Description and distribution

Western Larches can reach 50–60 m. The larch's tree crown is sparse and the branches are brought horizontal to the stem, even if some species have them characteristically pendulous. Larch shoots are dimorphic, with leaves borne singly on long shoots typically 10–50 centimetres long and bearing several buds, and in dense clusters of 20–50 needles on short shoots only 1–2mm long with only a single bud. The leaves (light green) are needle-like, 2–5 centimetres long, slender (under 1cm wide).

The larches are streamlined trees, the root system is broad and deep and the bark is finely cracked and wrinkled in irregular plaques.



Subalpine larch in autumn



Tamarack in autumn



Western larch in autumn

The male flowers (small cones) are orange-yellowish and fall after pollination. The female flowers (or cones) are erect, small, 1–9cm long, green or purple, brown in ripening and lignify (called now strobilus) 5–8 months after pollination; in about half the species the bract scales are long and visible, and in the others, short and hidden between the seed scales. Those native to northern regions have small cones (1–3cm) with short bracts, with more southerly species tending to have longer cones (3–9cm), often with exserted bracts, with the longest cones and bracts produced by the Himalayan larch. The seeds are winged. Larch trees can retain old cones on their stems for many years.



Japanese larch - male (above) and female (below right) cones of emerging in spring



European larch foliage and cones



Subalpine larch male fall foliage and cone (strobilus)

They are important forest trees of Russia, Central Europe, United States and Canada. They require a cool and fairly humid climate and for this reason they are found in the mountains of

the temperate zones, while in the northernmost boreal zones ones they are also found in the plain. The larches are pioneer species not very demanding towards the soil and they are very long-lived trees. They live in pure or mixed forests together with other conifers or more rarely broad-leaved trees.

Most if not all of the species can be hybridised in cultivation. A well-known hybrid, the Dunkeld larch *Larix × marschlinsii*, which arose more or less simultaneously in Switzerland and Scotland when *L. decidua* and *L. kaempferi* hybridised when planted together.

Larvae of a number of Moths and Butterflies species can be found eating parts of the Larch.

## Diseases

Larches are prone;

- to the fungal canker disease [\*Lachnellula\* ssp.](#) (larch canker); this is particularly a problem on sites prone to late spring frosts, which cause minor injuries to the tree allowing entry to the fungal spores.
- to [\*Phytophthora ramorum\*](#). In late 2009 the disease was first found in Japanese larch trees in the English counties of Devon, Cornwall and Somerset, and has since spread to the south-west of Scotland and Ireland.
- [\*Laricifomes officinalis\*](#) is another mushroom found in Europe, North America and northern Asia that causes internal wood rot. It is almost exclusive guest of Larch.

## Uses

The wood is bicolor, with salmon pink heartwood and yellowish white sapwood. Texture moderately fine but uneven. Grain straight. A prominent growth figure is defined by denser and darker latewood.

Larch wood is valued for its tough, waterproof and durable qualities. Top quality knot-free timber is in great demand for building [yachts](#) and other small boats, for exterior cladding of buildings, and interior paneling. The timber is resistant to rot when in contact with the ground, and is suitable for use as posts and in fencing. The hybrid Dunkeld larch is widely grown as a timber crop in Northern Europe, valued for its fast growth and disease resistance. (EN 350-2 lists larch as slightly to moderately durable; this would make it unsuitable for ground contact use without preservative in temperate climates, and would give it a limited life as external cladding without coatings.)

Larch on oak was the traditional construction method for Scottish fishing boats in the 19th century.

In Central Europe larch is viewed as one of the best wood materials for the building of residences. Planted on borders with birch, both tree species were used in pagan cremations. Larches are often used in bonsai culture, where their knobby bark, small needles, fresh spring foliage, and – especially – autumn colour are appreciated. European larch, Japanese larch, and Tamarack larch are the species most commonly trained as bonsai.

The European larch has reddish gray bark and produces a clear oleoresin known as Venetian turpentine. Larch wood is coarse-grained, strong, hard, and heavy; it is used in ship construction and for telephone poles, mine timbers, and railroad ties.

European Larch was introduced as a plantation species into the UK in the 17<sup>th</sup> century. It has a green density of 750kg/m<sup>3</sup> and air dry density of 560kg/m<sup>3</sup>. Relatively easy to dry but care should be taken to avoid splitting and twisting. Relatively easy to work except for knots. Shrinkage about 2% radial and 5% tangential. Tends to split when nailed, pre drilling near ends is needed. Glues satisfactorily.

Western Larch has an air dry density of 600kg/m<sup>3</sup>.