

Picea engelmannii

[Synonyms : *Abies engelmannii*, *Picea columbiana*, *Picea glauca* var. *engelmannii*]

ENGELMANN SPRUCE is an evergreen tree. Native to western North America (especially the Rocky Mountains) it has needle-like leaves (spines) and small hanging, pale brown cones.

It is also known as Arizona spruce, Balsam, British Columbia sitka-spruce, Coast spruce, Coast west spruce, Columbian spruce, Engelmann elm, *Engelmann-Fichte* (German), *Engelmannsgran* (Danish, Swedish), Engelmann's spruce, *Epicea d'Engelmann* (French), *Épinette d'Engelmann* (French-Canadian), Great tideland spruce, Menzies spruce, Mountain spruce, *Pino real* (Spanish), Rocky Mountain spruce, Sequoia silver spruce, Silver spruce, Sitka spruce, *Smrek engelmannov* (Slovak), *Smrk engelmannův* (Czech), Tideland spruce, West Coast spruce, Western white spruce, White pine, and White spruce.

The leaves have an initial disagreeable smell when bruised. The flowers are pollinated by the wind.

Warning – working with the wood can cause dermatitis.

The tree is a protected species (as a Christmas tree) in the state of Nevada in the United States.

Engelmannii commemorates a German-born American physician and botanist, Georg Engelmann (1809-1884), who emigrated to the United States in 1832 and practised medicine in St. Louis, Missouri. He carried out biological and botanical research (concentrating on western North American flora) and is said to have been the first voice to declare that some American grape species (*Vitis*) are immune to attack from *Phylloxera* (the plant lice). From 1836-1884 he also made meticulous meteorological observations. He became a founder member of the St. Louis Academy of Science in 1856. Engelmann wrote some highly respected botanical papers some of which were published in *Botanical Works of the Late George Engelmann*.

The tree was a source of food for several North American Indian tribes including the Thompson Indians who collected the edible sap, and the Okanagan-Colville tribe who used the branches to make a tea.

The Thompson Indians attributed special powers to Engelmann spruce as they believed that when specifically sought out it could bestow good fortune.

Wood from this tree was used by local North American Indian tribes for building – and its soft lightweight structure also recommended it for making toys – by both the Quileute and Hoh Indians, and they used fibre from branches and roots for making rope and cord.

Paiute Indians slept on a mattress of Engelmann spruce branches when camping, and the bark provided basketry material for the Thompson tribe. The latter also used the bark not only for roofing but also for covering their canoes, and they shaped it into cooking utensils as well.

Engelmann spruce featured in Navajo Indian ceremonial ritual.

One or two North American Indian tribes valued medicinal properties in various parts of the tree. On the one hand Thompson Indians seem to have placed considerable faith in a needle and gum decoction for curing cancer – and this was also prescribed for coughs.

(They used the pitch to treat eczema.) On the other hand the Okanagan-Colville Indians relied upon the bark in treatments for tuberculosis and general lung disorders.

The resinous bark has been used for tanning – and the reddish tinged, very pale yellow wood has not only provided timber for building construction but also fuel, and it has been used to make charcoal too. The wood has been used primarily for making railway sleepers, poles, mine props and flooring.. It has also been pulped, and made into paper – and on a very limited scale into musical instruments.

Engelmann spruce has been cultivated as an ornamental plant and as a component of reforestation programmes. (In some parts of the Swiss Alps it has been planted at high altitudes to give protection from the weather.) It has also served as a Christmas tree although it has not been as popular in this capacity as some of its close relatives.

In the wild the tree has provided shelter for big game. Grouse enjoy eating the buds and leaves (needles), while the seeds provide food for American titmice (chickadees), squirrels, voles and mice.