



PLANT ID Guide

GUIDE TO NEAREST LIVING RELATIVES OF FOSSILIZED PLANTS



PALEOECOLOGY IN THE OKANAGAN HIGHLANDS

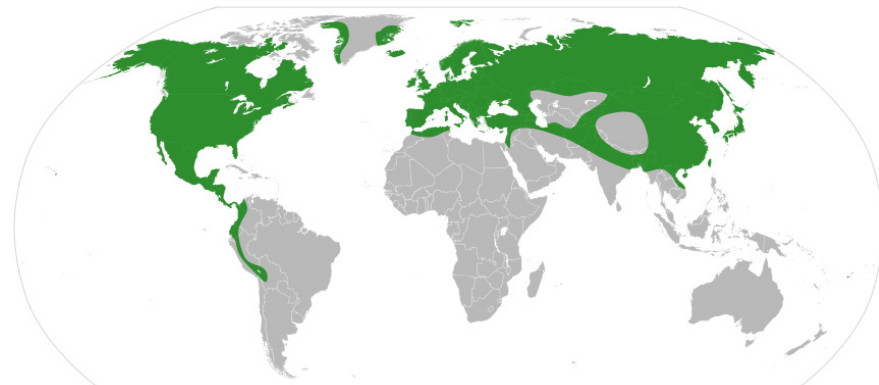


Alder leaves. Wikimedia user W.carter, Public Domain image.

Alder (*Alnus*)

Alnus is the genus of alder trees, which are in the birch family. Alders are deciduous flowering plants which are wind-pollinated. Male and female trees produce pollen or seed-bearing catkins. Alder leaves can be between 4-11 cm in length

MAT	-12°C to 20°C
CMMT	-31°C to 12°C
MAP	120 to 2000 mm/yr



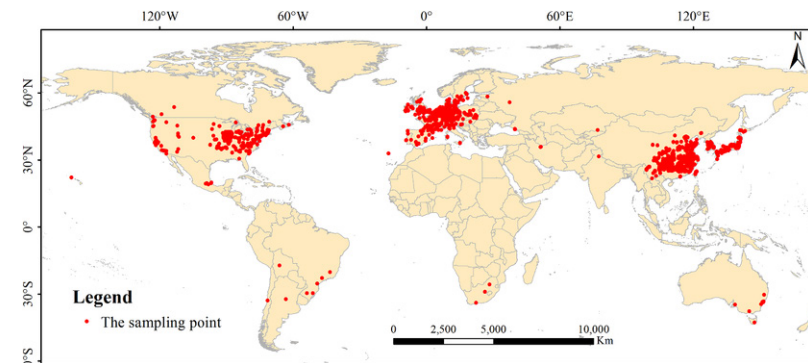
Global alder distribution. Wikimedia user Ninjatacoshell, used through CC license 3.0.

Ginkgo (*Ginkgo*)

Ginkgo is a genus of non-flowering seed plants which once had a widespread distribution worldwide. However, ginkgos are now native only to two tiny areas in eastern China, where they were saved from extinction and cultivated by Chinese monks for a thousand years. Ginkgos are now found around the world, but only because they are transported and planted in gardens and parks. Like ferns, male ginkgos produce motile sperm that swim to fertilize the egg produced within ovules in female plants. *Ginkgo* leaves are typically between 5-10 cm.



Ginkgo leaves. Wikimedia user Bem Skala, used through GNU FDL.



Wang, Lukun; Liu, Jiamin; Liu, Jing; Wei, Haiyan; Fang, Yaqin; Wang, Daju; Chen, Ruidun; Gu, Wei (2023). Revealing the long-term trend of the global-scale *Ginkgo biloba* distribution and the impact of future climate change based on the ensemble modeling. Biodiversity and Conservation, VL -32, DO - 10.1007/s10531-023-02593-z

MAT	5°C to 23°C
CMMT	-13°C to 6°C
MAP	250 to 2000 mm/yr

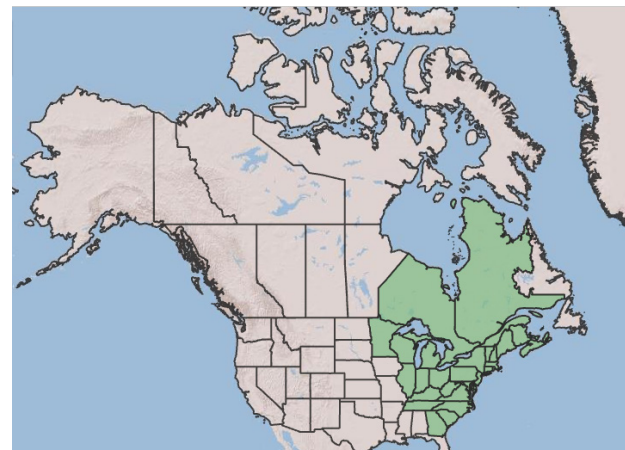


Sweetfern leaves. Wikimedia user Sten Porse, used through CC license 3.0

Sweetfern (*Comptonia*)

Comptonia or sweetfern is not a fern, but rather a genus of flowering plants found in eastern Canada and the U.S. It is a deciduous shrub that grows to a little over a metre in height. Its aromatic leaves can be used to brew tea.

MAT	7°C to 15°C
CMMT	-15 °C to 7°C
MAP	750 to 2050 mm/yr



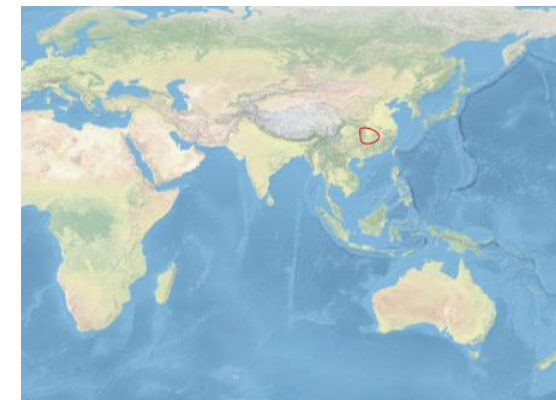
Sweetfern distribution. Public Domain image, U.S. Department of Agriculture.

Dawn Redwood (*Metasequoia*)

Metasequoia is a genus of trees with only one remaining species living: *Metasequoia glyptostroboides*. All fossil and living trees in this genus are cypresses and are deciduous. They have very flat needles that sit opposite to each other that range between 1-3 cm. This means that they shed their needles in the cold season - unusual for trees with needles!



Metasequoia leaves. Wikimedia user Rasbak, used through CC license 3.0.



Distribution of dawn redwood in the wild, outlined in red.

MAT	13°C to 24°C
CMMT	1°C to 12°C
MAP	1050 to 1750 mm/yr

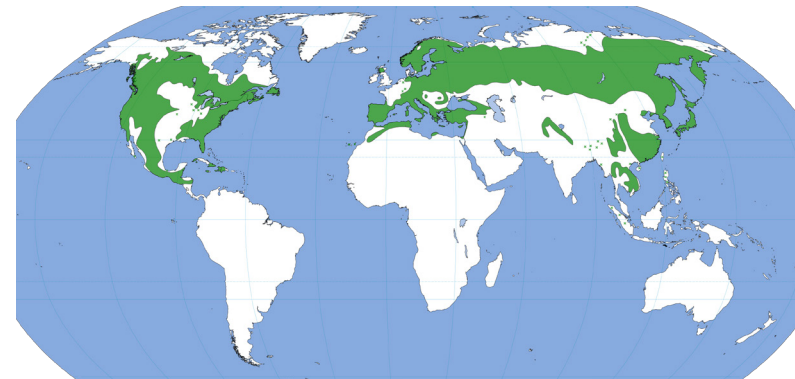


Pine needles. Wikimedia user Dmitry Makeev, used through CC license 4.0

Pine (*Pinus*)

Pinus is the genus of pine trees, evergreen conifers with long, pointed needle-shaped leaves. Their needles can range from just 5 cm up to nearly 50 cm! Pines are the most abundant Canadian conifers, with 9 species found in this country. Like other conifers, pine trees are wind-pollinated, with male and female cones.

MAT	-8°C to 24°C
CMMT	-31°C to 11°C
MAP	200 to 2000 mm/yr



Pine distribution. Wikimedia user Agnieszka Kwiecień, used through CC license 3.0.

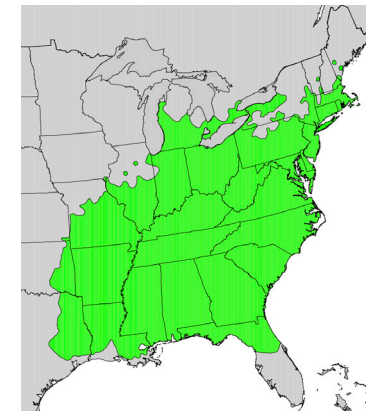
Laurels (*Sassafras*)



Sassafras leaves. Wikimedia user David Stang, used through CC license 4.0

Sassafras is a genus of laurel trees. Laurels are a group of flowering plants that are found in eastern North America and eastern Asia. These woody dicots grow to heights of 10 to 30 metres. *Sassafras* leaves and twigs are aromatic, producing a pleasant citrus fragrance when crushed.

MAT	6°C to 22°C
CMMT	-8°C to 13°C
MAP	720 to 1600 mm/yr



Sassafras range. USGS, public domain.

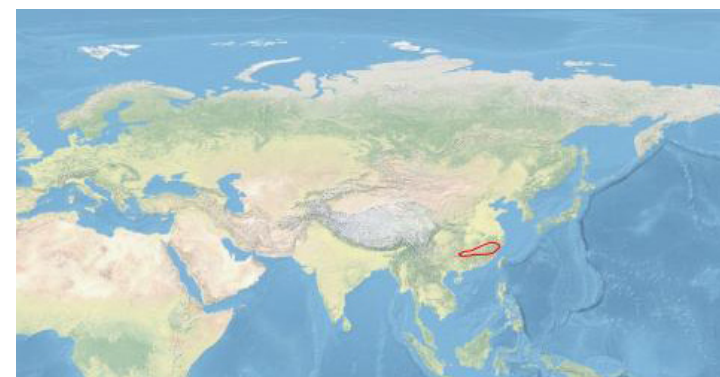


Golden larch needles. Wikimedia user David Stang, used through CC license 4.0

Golden Larch (*Pseudolarix*)

Pseudolarix or Chinese golden larch is a genus of pine trees. Unlike most pine trees, it is deciduous: In fall, its needles turn yellow (or golden) and are shed. Chinese golden larch is an ornamental tree often planted in parks and gardens. It can grow to 40 metres in height. The seeds of the golden larch are triangular and shaped for dispersal using wind.

MAT	15°C to 22°C
CMMT	0°C to 15°C
MAP	800 to 2000 mm/yr



Golden larch distribution in wild outlined in red.

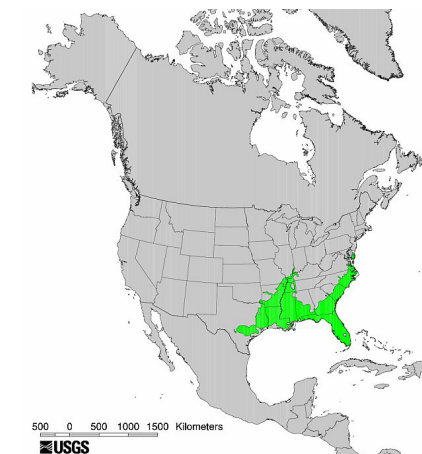
Bald cypress (*Taxodium*)

Taxodium, or bald cypress, are currently found in southern regions of North America. Cypressess are conifers with flattened needle-shaped leaves. Their needles alternate! Like other conifers, pine trees are wind-pollinated, with male and female cones.



Cypress cone. Wikimedia user Agnieszka Kwiecień, Nova, used through CC license 4.0

MAT	12°C to 25°C
CMMT	-1°C to 20°C
MAP	280 to 2000 mm/yr



Taxodium distribution. USGS, public domain.