

Trembling Aspen
Populus tremuloides



Identification:

Leaves: smooth, round to triangular-shaped leaves with a flattened stalk that is longer than the leaf. They are dark green above, paler underneath and turn golden yellow or red in the fall.

Flowers: the flowers are borne in male and female catkins on separate trees. Male catkins are small, 2 to 3 centimetres long, and the female catkins are larger, 4 to 10 centimetres long. Seeds ripen 4-6 weeks after flowering. Good seed crops occur every 4-5 years.

Fruit: tiny capsules covered with cottony down.

Bark: smooth and waxy appearance, pale green to almost white when young, becoming darker and furrowed into long flat-topped ridges with maturity, diamond-shaped marks about 1cm across sometimes occurs. A white chalk-like bloom often occurs on the south side of the trunk.

Wood: the wood of the trembling aspen is light, soft and low in strength. Its colour from white to gray.

Distribution/Location: Trembling aspen is the most widely distributed tree species in North America. It grows from Alaska across the Northwest Territories to Quebec and Newfoundland. It occurs in ALL Canadian provinces and most of the states of the United States.

Habitat: Occurs on a great variety of soils; prefers sheltered areas. Often grows in pure stands, especially as a young tree; also mixed with white spruce, black spruce, balsam fir, white birch, balsam poplar, and jack pine. It is considered a “nurse crop” because other broadleaf and conifers species enter a pure stand and eventually replace the aspen.

Growing Characteristics: It is a medium-sized tree, up to 25m high and 40cm in diameter, and 80 years old; larger and older on favorable sites. Trunk is long, cylindrical, smooth, with little taper; branch-free in the lower part through self-pruning. Crown is short and rounded. The root system is shallow and very wide-spreading.

Reproduction: Trembling aspen produce new trees via sexual and asexual reproduction. Sexual reproduction is rare because conditions have to be just right for the seeds to germinate and survive. Aspen are dioecious, meaning that "male and female flowers are on different plants of the same species." Trembling aspen first flowers when they are 10-20 years old and reach a production peak around 50 years old. The flowers are contained in catkins and are pollinated by the wind. The seeds are dispersed by the wind, some up to several kilometers, and they can also be scattered by water in aquatic environments. A single aspen can produce 1.6 million seeds every year, and larger crops are produced in 2-3 or 4-5 year intervals. The seeds can only survive with suitable temperatures, nutrient-rich soil, and plenty of water. Seedlings produced by sexual reproduction provide diversity in an otherwise genetically identical or similar colony of trees.

Asexual reproduction produces clones of identical trees. The extensive root system of an aspen sends up shoots or suckers where there is an area of sunlight. A mature system of roots can produce 400,000 to 1 million suckers per acre (0.4ha). Aspen clones rely on occasional habitat disturbances to provide them with enough sunlight to survive. These clone shoots are genetically identical to the original aspen, but are individual trees. A grove of aspen is commonly composed of a variety of widespread, interconnected clones. Most clones grow within 8m or even 25m of the parent tree. Clonal colonies survive for many years, some estimated to be hundreds or even thousands of years old! Aspen also sprout from root collars and stumps in asexual reproduction.

Uses: Traditional- Aspen branches boiled in water made a cleanser for guns, traps, and buckskins. Hunters would also wash themselves in this solution to remove human odour.

Modern- After decades of being treated as a weed, the forest industry now values aspen for pulp and wafer board. It is also used to make plywood, particleboard, pallets, crates, excelsior, and matches.



Fun facts:

Trembling aspen is exported for use in the chopstick industry.

Other names include quaking aspen or quivering aspen. In several native languages, the name translates as "woman's tongue" or "noisy leaf."

The trembling aspen is the most widely distributed tree in North America.

Roll the leaf stalk between your fingers to feel the flat stalk. This is why the trembling aspen can tremble with the slightest breeze.

Bibliography: *Trees in Canada* by John Laird Farrar page 346-347

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