

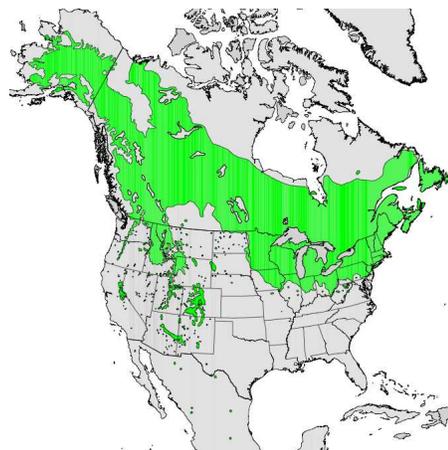
My Friend the Aspen

Populus tremuloides Michx.

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My friend is commonly known as trembling aspen, quaking aspen, poplar, popple, white poplar, or just Aspen. Some people also call it the ghost tree due to the chalky-white bark. This much maligned and often ignored and overlooked tree, often thought of as a weed, is found across all of Manitoba. It is in fact is one of the most widely distributed trees in North America stretching from Mexico to Alaska and coast to coast. In well drained fertile soils it can be as tall as 40m with a trunk diameter of 60cm. In much of southern Manitoba, with heavy clay soils, the trees are much smaller and often thought of as the neighbourhood 'bush'. The individual stems only live 60-90 years. There are several other less common poplars in Manitoba – Balsam Poplar (*Populus balsamifera* L.), Largetooth Aspen (*Populus grandidentata* Michx.), Eastern Cottonwood (*Populus deltoids* Marsh.).



Aspen have white or cream coloured smooth trunks and small roundish leaves that end in a pointed tip and have fine teeth. The leaves have a flat petiole (stem) which is stronger in one direction than the other which allows the leaves to flutter in the slightest breeze. It is this fluttering that gives the tree the common name quaking or trembling Aspen. Flowers appear before the leaves in the spring as catkins with male and female flowers on separate trees (clones). Seed pods mature along the central stem of the hanging female catkin. A good seed crop is produced every 2-3 years, in some cases a single tree may produce millions of seeds. The seeds deteriorate in a matter of days and few are fortunate enough to find good conditions to germinate. The tree spreads and reproduces primarily through suckering. Bark is a light greyish green sometimes chalky white, with a smooth waxy lustre.



Aspen reproduce prolifically through suckers which are genetically identical to the parent tree. Adult trees produce a chemical that inhibits suckers but if the parent tree is removed through fire or logging (or beavers) the root suckers grow quickly. These suckers, with the support of the existing root systems, can grow up to 1 meter every year for the first 10 years. In the year after disturbance it is not unknown for an aspen clone to send up 100,000 suckers per hectare. The stems are so dense you can not walk through the bush, don't even bother to try to portage. Over time the trees thin out due to competition for light and other resources. In the spring it is often easy to spot a single clone since they

will all be the same sex and will flower and leaf out at the same time. When the leaves turn golden in the fall every tree in the same clone will usually change at the same time - sometimes making interesting aerial patterns.

If you consider something being genetically identical and interconnected as the same organism then Aspen clones could be considered both the largest and oldest living things on earth. Clones can be fairly small, only a few trees, but sometimes they can also appear as whole forest. There is a 106 acre 6,000 ton stand of genetically identical quaking aspen in the Wasatch Mountains of Utah. The age of this giant clone has been estimated at 10,000 years or more.



The wood has been used to make traditional canoe paddles, tepee poles, deadfalls, snow shovels, snowshoe frames, crates boxes, washboards, and floor boards. Whistles were made out of hollowed out stems. It is now commonly used in plywood, Aspenite, and oriented strand board. Water was run through the ashes to obtain a caustic solution to make soap when combined with animal grease. It is commonly used as firewood. The dry wood has been used for smoking meat and fish. A friend of mine uses poplar wood to fire clay pots the temperature and ash giving unique glaze patterns. Young branches are used to make baskets, wreaths, furniture. The wood is odourless and tasteless so it is used to make tongue depressors, ice cream sticks, and chopsticks. Because it grows so quickly, in many areas the poplar is the only common tree, it was used for almost everything.

The tree is a favourite food of beaver; an adult beaver can consume 1-2kg of the thin bark daily. Apparently the original range of the beaver corresponds to that of the Aspen suggesting a close connection between the two. Branches and logs are used to build lodges and dams. Ruffed grouse are also dependent on Aspen where they breed and nest in mid-sized stands, in the winter they eat the male flower buds. The buds are a good source of calcium, fibre and vitamin A. Hares and rabbits gnaw the bark off of young trees, often killing the stem. Deer and moose browse the twigs and leaves. Porcupines also show a distinct preference for aspen bark as well.

Rodents and birds are not the only animals that like Aspen Poplar. There are over 300 insects and 150 diseases that attack trembling aspen. The forest tent caterpillar probably causes the greatest and most noticeable damage. Some outbreaks, in the worst years, can cover more than 100,000 square kilometres; millions of the caterpillars defoliating whole stands in just a few days. Having consumed everything the army of caterpillars descend the tree and go searching for more eating everything in their path along the way. Within a short time the aspens recover growing a new set of leaves to continue to collect sunlight and grow. Periodically the caterpillar population crashes because of a parasitic fly which destroys the caterpillars by laying eggs in their cocoons.

Much of the tree is edible (although from my experience not very palatable). Apparently you can eat the inner bark and cambium in the spring with some sources claiming it tastes like honeydew melon – I have not found this to be the case. The sap has been made into syrup. At one time the ashes were even used as a source of salt.

The tree has a wide range of traditional medicinal uses. The leaves chewed and applied to bee or wasp stings relieve the pain. Masticated leaves also help with mosquito bites and cuts. Claims have been made for the poplar to treating heart disease, cancer, poisoning, even diabetes. The inner bark and powdery bark bloom has been used to stop bleeding. The leaves and bark contain salicylates and thus have pain, fever, and anti-inflammatory activities.

The ghost tree is ubiquitous in canoe country and usually overlooked because of its weedy short lived nature. Next time when portaging or paddling along a golden fall shore take another look at this amazing tree.

Reference Information

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