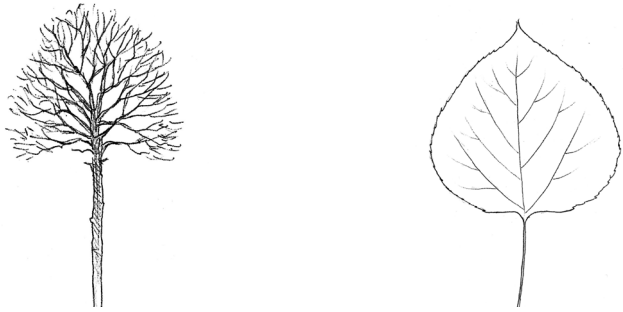
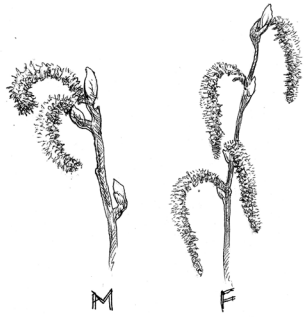
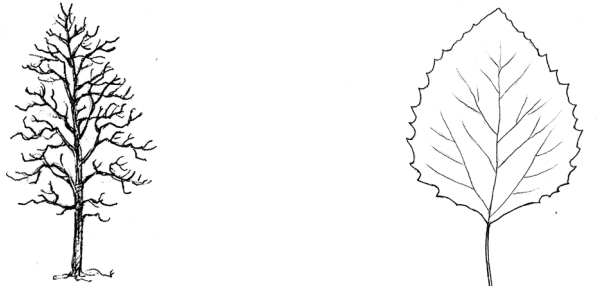
POPLAR *(Aspen, Cottonwood) (Populus tremuloides and Populus grandidentata) (Peuplier faux-tremble and Peuplier à grandes dents)*



Tree Profile [Trembling Aspen] – Leaf



Catkins (male + female)



Tree Profile [Large Tooth Aspen]– Leaf

POPULARLY SPEAKING, POPLARS, by virtue of their natural range into every province and territory of Canada, ought to be the Canadian National Tree, with the Poplar leaf waving in the wind on a green or yellow-gold Canadian Flag as the natural Poplar leaves flutter in every wind.

Poplar leaves have a flattened stem, a.k.a. "petiole," that is perpendicular to the plane the leaves are on. After the stem catches

a gust of wind and turns to one side, the leaf catches it next and turns them to the other side, one after the other, until the wind passes. Thus the stem and leaf "catch" every small breeze going by. For a Tree with wood that is not very strong, this is a great defence against wind damage. Other hardwood Trees' leaves "streamline" into a cone-like shape that allows them to shed wind.

Quaking Aspen (*Populus tremuloides*) has the greatest range of the Poplars, and, with its many cousins, like **Largetooth Aspen (*Populus grandidentata*)**, helps bring the Populus family (Populus = "people") into nearly every area of Canada and the United States, reaching also into Mexico. In many areas, being so tolerant of draught, it is the only tree that will grow naturally. Many a settler has felt blessed by its presence, though the logger generally snubs his nose at Poplar except for pulpwood or when all else has been logged out.

The main limiting factor of Poplar's spreading, especially by seed, is its great need for pure, unshaded sunlight. The constant, direct light helps make Poplar such a nutritious food for so many of the wildlife of the forest.

Another peculiarity of Poplar is its dioecious habit: Each tree has either a female or a male flower, never both. This encourages genetic diversity. Only Ash, Balsam Poplar, Willow, and Red Maple Trees also have this dioecious habit.

However, Aspen Poplars will often choose to reproduce without seeds. Instead they will horizontally send out long roots that send up new clonal Trees covering acres and acres of land. These clonal colonies make up some of the largest, if not THE largest, life form on Earth. Each Tree in the colony will flower, leaf out, and drop their leaves at the same time. In 1966, a single clonal Poplar colony in Utah was found to cover forty-three hectares with over 47,000 stems/Trees. It is over 800,000 years old.

A benefit to the Poplar of its cloning habit is that after a forest fire has gone through a colony, the remaining root crowns and stumps will send up new Trees. Other competing Trees and weeds will have died from the heat, yet the Poplars rise again. Thus a forest fire can be rejuvenating for a Poplar clonal colony.

As with many natural pests, some of the pests that affect Quaking Aspen can benefit biodiversity. For example, heart-rot fungus (*Fomes igniarius populinus*) causes the inner wood of Quaking Aspen to decay, creating cavities that can be used as shelter by woodpeckers, owls, flying squirrels, and other wildlife.

Hypoxylon canker, a native disease that spreads through a clonal colony until the whole grove dies, hastens the succession to a mature forest with Trees that sprouted under the shade of the pioneering Poplars.

Knowing the above, it's easy to understand why Poplar branches inherently have large quantities of natural rooting hormone in them, as do Willow branches. If a few branches are placed in water for a few days, the water will take on the hormones, which then can be used to help root other plant cuttings and transplants.

Poplar has been found to have another unique attribute: It can photosynthesize light through its pale green bark. This is a great help during those years when their leaves are totally eaten by forest tent caterpillars. Beech and Sycamore Trees also have chlorophyll in their barks. They are all deeper in colour in the summer and lighter in the winter due to a slowdown of photosynthesis.

As can be imagined, a Tree that has such a wide area of distribution, thus availability to people, will have been tried for many a bodily condition and malaise. Poplar has stood well the test of popular medicine. Mostly the inner bark has been used, perhaps because it is available year-round, especially in winter when poor nutrition and challenging weather open people up to more disease.

That being said, Poplar is one of the most researched of Trees. Scientific studies abound about Poplar's many qualities and inherent nutrient contents. New ones appear every year.

BUDS

POPLAR BUD SALVES are often substituted for Balsam Poplar bud salves, as they have similar qualities, although Poplar buds are not as potent as the latter ones. Boiled in fat (often bear fat, though coconut and other oils will do), the buds are considered a soothing salve to be used for earaches and as a nasal application to cure coughs and colds in adults and children. When Poplar bud oil is added to other ointments, they are less likely to become rancid.

In Romania and Russia, studies have shown Poplar bud extracts to be very useful for bedsores; resistant infections; and healing skin incisions, wounds, burns, and post-operative abscesses. It has also been used sparingly as a kidney tonic.

FLOWERS

POPLAR CATKINS IN early spring contain 20 per cent protein, more than any cereal crop. Steeped in cold water, the resulting "tea"

can be taken as a blood purifier. They are rich in flavonoids, such as chrysin, which has the ability to prevent testosterone from converting to progesterone.

SEEDS

A FEW NATIVE PEOPLES have reported using the cotton (as in "Cottonwood") from the seed carriers as absorbents when treating open sores. The fluff helps the seeds go beyond their own home territory to find new, open, shade-less soil for new Poplars to grow.

LEAVES

POPLAR'S HABIT OF being one of the first Trees to leaf out and one of the last to drop its leaves is a happy feature.

I like to pick Poplar leaves in early spring when they are quite tender, often reddish brown, and less bitter than they will be later in the year. I'll prune off a branch and then pull off a row of young leaf clusters in one pull of my fingers from base to tip as a nourishing snack. I believe that we need to experience all the "tastes" in life, as the Ayurvedic teachers say, and perhaps by choosing which bitter to add to my life, I will not attract other forms of bitterness.

Similarly, later in spring and into summer and autumn, the leaves will become tougher, making them more resistant to pests. At this time, they can also be made into a slightly bitter tea for easing stomach discomfort.

Rubbing the mashed (or chewed) leaves on an insect bite can relieve the itch of the sting. They can also be applied directly on a cut.

Ontario did research in the 1970s to prove that Poplar leaves would make a good feed concentrate for chickens. They contain 20–30 per cent of their dried weight as protein and all eight essential amino acids, a higher percentage than in oats or wheat. Plus they have been found to contain vanillin and benzoic acid, an anti-fungal.

Zinc, lignans, and flavonoids are found in both the leaves and bark of Poplar.

BARK

THE TEA OF the inner bark of Poplar has been used successfully for toning up a rundown condition from old age or disease; reducing fevers; treating urinary diseases and retention (often due to prostate or kidney inflammation), acute rheumatism, jaundice,

and hay fever; arresting nausea and morning sickness; treating neuralgia, influenza, cholera, failing appetite, indigestion, faintness, diabetes (when mixed with the inner bark of White Pine), hysteria, tuberculosis, VD, diarrhea and dysentery, sciatica, nephritis, coughs, worms and parasites, and headaches due to liver problems or stomach conditions of flatulence and acidity.

As a bitter and digestive tonic, Poplar bark tea and tincture have been used as a debility tonic for restoring weight and appetite, especially in the elderly suffering chronic digestive complaints. It has also been shown to be very effective as a tincture in cases of asthma associated with hyperthyroidism.

The inner bark tea has also been used as a sedative (the salicin content would be the active ingredient here) and is quite often claimed to be better than quinine, and with fewer side effects, for all conditions where quinine is used. The usual brew is one teaspoon lightly boiled in a cup of water then steeped for half an hour and drunk two or more times per day.

As an external skin wash, the tea of the inner bark can be used for inflammation, cuts, scratches, wounds, burns, eczema, strong perspiration, and sore eyes.

The inner bark can be chewed or boiled to make a poultice for muscular and joint pain, and applied thickly as a healer for cuts and wounds after drawing the edges together. It can also be wrapped around fractures while still moist. When it dries, it becomes as hard as a plaster cast. The same poultice has also been applied to reduce hernias and ruptures.

Known for using all parts of a buffalo creatively with little or no waste, the Native American peoples seem to have done similarly with the Poplar tree. The Potawatomi even burned the bark and mixed the resultant ashes with lard to make a salve to apply to sores on their horses. The Gwich'in people mixed the ashes into dog food as a dewormer.

The sweetish sap layer between bark and wood was scraped in spring or early summer by many Indigenous peoples and eaten raw as a delicacy or scrambled up like eggs. They said children especially liked it. The Assiniboine thought it was so juicy, tasty, and sweet that they called it "ice cream Tree." They thought it tasted like honeydew melon.

Cree Indians have eaten the inner bark of Poplar in early spring, as have other folks when food is scarce, often as a flour extender

or soup base. The flour has also been used in a smoking mix to extend it and to mellow out the taste of the smoke.

Powder

THOSE PEOPLE WHO have handled Poplar Trees or logs will recall the white powder that coats mostly the southern side of the outer bark. This is actually yeast. A few pieces of the bark, or scrapings of the powder, make a sourdough starter that takes a couple days to get going. Then it will get the mix growing and the bread a-rising.

This white powder, which reflects sunlight in the spring, slows the Poplars' sprouting. Scraped off and mixed with fat, it has been used as a sunblock, a deodorant, and antiperspirant. It has also been applied to cuts and deep wounds to help coagulation and stop bleeding. It's also been used as a replacement for talcum powder.

Sap

POPLAR SAP HAS been found to contain a good quantity of glutathione just before the flowering of the catkins. Our bodies use this powerful anti-oxidant to help the liver detoxify organic material and neutralize heavy metals. Methionine is also present in the sap, though it is most prevalent in May and June.

TRUNK

THE COTTONWOOD TREE (*Populus deltoides*) is sacred to the Dakota and Lakota (Sioux) peoples and is used prominently in the Sun Dance Ceremony. In areas with few other Trees, Poplar has been commonly used for canoe paddles and even tipi poles.

Now mostly cut for pulp for paper and chipboard, Poplar is recently being used in PureBond plywood from Northern Ontario as the wood of their non-formaldehyde (no-VOC) building plywood. It has also been cut for matchsticks by steaming the logs and peeling the layers off in uniform widths. Its lack of flavour lends it well for its use as tongue depressors, chopsticks, ice cream sticks, and sauna benches.

Landscapers use Poplar Trees' quick growth, drought resistance, resistance to extremes of cold and heat, and shallow spreading roots to help stabilize areas from erosion, for reclamation, windbreaks, and shelterbelts. However, the same characteristic of quick growth and shallow, spreading roots can buckle sidewalks and damage sewer systems.

ROOTS

POPLAR ROOT HAS also found a place in popular medicine. Root suckering (the tendency of a tree to put out new little trees from its roots, often quite extensively; a.k.a. "cloning") being the main means of propagation for a few species of this vigorously growing tree, this is only proper. The main quality of the root seems to be astringency.

The Dene people of the Arctic used it for stopping the blood flow after amputation. Similarly, the Chippewa mixed an equal amount of water and Balsam Poplar and Poplar roots and steeped them without boiling to give every hour to a woman with "excessive flow during confinement" and for preventing premature birth and/or miscarriage.

The Delaware and other Algonkians made a strong brew as a tonic for general debility. The Têtes de Boule people boiled the rootlets until the liquid was syrupy and applied the thick liquid to rheumatic or painful joints.

ASHES

POPLAR WOOD ASHES can be added to recipes to replace salt and/or baking soda by doubling the amount in the recipe. Any charcoal sifted out of the ashes can be used as an intestinal antiseptic due to its great absorbency. It is considered by many to be one of the best woods for making medicinal charcoal.

WILDLIFE FOOD

TREMBLING ASPEN IS an important food source for wildlife as well as providing shelter when growing, as they do, in pure stands. Deer, beavers, snowshoe hares, and especially moose eat the bark and twigs, while many species of birds eat the buds and seeds. Poplar is definitely the favourite food of beavers, which have been noted as eating up to four pounds of bark per day. The leaves are the favourite food of black bears in the months of May and June. They will even climb to the Tree's top to gather and eat them. Wolves, coyotes, and deer eat the leaves as an intestinal dewormer.

A Tree that grows in pure sunlight with such vigour and is sought by so many mammals for food speaks quite ably of its kind offering of great nutrition and energy.