

## ***Populus tremuloides* Michx.**

**Island Hul'q'umi'num' name:** qw'i'qw'iyulushulhp

**Upriver Halkomelem:** p'elp'álq'emá:lews

**English Name:** trembling aspen, quaking aspen, white poplar, golden aspen

**Family:** Salicaceae (Willow)

### **Identifying characteristics:**

*P. tremuloides* is a deciduous tree that typically grows 20-25 m tall and has smooth pale grey bark. This species is characterised by its long (2-7.5 cm), flat petioles which cause the leaves to flutter in the slightest breeze. The leaves produced by *P. tremuloides* are rounded to heart-shaped, 2.5-8 cm in diameter and have a finely toothed margin, a waxy dark green upper leaf surface and a dull green underside (efloraBC 2017).



### **Distribution**

*P. tremuloides* has the widest natural range of any deciduous tree on the continent, spanning from Northern British Columbia to Mexico and across the continent.

### **Natural and Cultural History**

**Habitat:** In British Columbia, *P. tremuloides* is endemic to meadows, wetlands, ridges, ravines, and other regions with cool temperatures and moist, nitrogen-rich soils (efloraBC 2017). This species is commonly found naturalized at the edges of disturbed areas, where it acts as a pioneer species by producing root sprouts, which grow to form a dense underbrush, as well as a significant amount of leaf litter to further support developing plant communities.

**Reproduction:** In early spring, both male and female trees produce brown catkins which range in length from 2.5-6.0 cm. For reproduction to take place, members of both sex must be present within a region. Once fertilization has taken place, the female inflorescences grow into light green, conical capsules which develop throughout the spring. If sexual reproduction is not possible, *P. tremuloides* will also propagate itself extensively through the production of root suckers (Little 2012). This tendency may result in entire stands of quaking aspen to consist of a single clone or several variations thereof. The largest reported stand of clonal *P. tremuloides* is

located in Utah, where it spans 106 acres and is speculated to be 80,000 years old, making it the one of the largest and oldest organisms on Earth (Dickson 2018).

**Wildlife Interactions:** In addition to providing shelter for a number of birds and small mammals, *P. tremuloides* also serves as a food source for a variety of wildlife including black bear, deer, beaver, moose, and ruffed grouse and, many of which consume the fallen bark, buds, and leaves of this plant (United States Department of Agriculture [USDA] 2002).

**Ethnobotany:** Records indicate that *P. tremuloides* was utilized as a medicinal plant by Indigenous groups across the continent. Most notably, the crushed leaves, stems, roots, and bark of this species were applied as a poultice to stings and minor wounds. Additionally, the Blackfoot, Salish, and Thompson used a decoction of the bark and stems to treat a variety of gastrointestinal ailments, ranging from minor cramping to parasites, as well as several venereal diseases including gonorrhea and syphilis (Moerman 2009). It is believed that this species improves digestion by stimulating the production of bile (Kloos 2017).

The Iroquois and Potawatomi extended the medicinal uses of *P. tremuloides* to provide treatment for their domestic animals, often in the form of either poultices for wounded horses or infusions of bark to deworm cats and dogs (Native American Ethnobotany Database 2018). In addition to its medicinal uses, *P. tremuloides* was also utilized as a food plant by a number of groups who dried the inner bark of the tree and then ground it into a fine flour that was used to make bread (Moerman 1998). Alternately, the inner bark was eaten raw or added to a stew either in strips or as a flour to aid in thickening the broth.

**Human Interest:** Today, the lightweight, decay-resistant wood produced by *P. tremuloides* makes it a suitable material to produce a variety of products, including furniture, pallets, and tongue depressors. The majority of *P. tremuloides* that is logged is used in pulp products such as books and newspapers (USDA 2018). Furthermore, this species' smooth pale bark, golden-yellow fall foliage, and ability to provide visual screening make it a popular choice for landscapers.

**Cultivation:** This species may be propagated either through seed or softwood cuttings. If choosing to cultivate *P. tremuloides* from seed, it is important to first stratify the seeds and then provide a germination environment that is continuously moist and has a temperature ranging between 15-25°C (USDA 2002). After germination has taken place, *P. tremuloides* will grow quickly, often reaching a height of 12 meters within 20 years (USDA 2018). Once established, this species is tolerant of a wide variety of soils, temperatures, and levels of light availability.

## **Recipe for Trembling Aspen Bark Tincture**

This tincture can be used for digestive wellness and anxiety relief (Kloos 2017).

**Conservation Note:** When stripping bark do not “ring” the tree, take smaller vertical strips to keep the tree alive. Find different trees each time you would like to harvest and rotate over several years to avoid permanently damaging or killing the tree.

### **Ingredients**

1 part dry bark

2 parts 40-proof (80%) alcohol- filtered water solution (1:1 ratio)

### **Usage**

Take 15-20 drops before a meal to aid in digestion and decrease inflammation.

Take 1-10 drops three times a day to decrease anxiety.



## **Recipe for Non-Alcoholic Bark Tea**

You may not have access to 40-proof alcohol, simply prefer a non-alcoholic supplement to aid in digestion or reduce anxiety, or happen upon a tree when you are exploring nature and want to try making fresh tea. Using a bark tea yields the same medicinal benefits without the alcohol.

### **Ingredients and Instructions**

1 part by weight of dry trembling aspen bark (or 2 parts by weight of fresh bark)

Place in a large saucepan and then add:

32 parts by volume of boiling water over the bark.

Let the mixture sit covered by 15 minutes.

Strain with a sieve, drink the recommended quantity and refrigerate for use within 24 hours.

### **Usage**

Drink 60-120 ml of tea up to 4 times per day.

## References

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