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Quaking aspen
Populus Tremuloides

General

Quaking aspen are a fascinating, beautiful species of tree. They are the most widely distributed deciduous tree species on the planet and are the main deciduous tree species throughout most of the mountainous western United States. Their white trunks and vivid yellow fall color stand out sharply against the surrounding pine and spruce forest. Their leaves are known for the unique way they tremble in the breeze, and has given them their nickname, “quakies.”

Aspen are a clonal species, which means they commonly reproduce by sending up new shoots from an underground root system. This creates a grove of what appear to be separate aspen trees, but which is, in fact, a single plant. The individual trunks of this plant may live a few hundred years, at most, but the clone itself can live to incredibly ancient ages. A single aspen clone found in an isolated mountain valley in the southern Rockies is potentially estimated (based on its unique leaf shape, which is only found otherwise in the fossil record) to be over 1,000,000 years old, making it possibly oldest living organism. Aspen clones from the Black Hills are generally estimated to be 8,000-10,000 years old. One in Utah, mentioned below, is estimated to be approximately 80,000 years old. These are estimates because no section of the wood lasts that long to provide an absolute date, but in any case, these are some very old plants. Collected aspen seedlings and saplings are nearly always individual shoots from one of these ancient clones.

Aspen clones can grow to great sizes. A clone in Utah is over 106 acres in size, making it possibly the largest, known living things. Aspen clones can also move across the landscape over time, as they send out new shoots in one direction and shed old shoots in the opposite direction. Thus, they are a tree that can actually walk (Ok, very slowly) through the woods.

Light

Aspen prefer a bright location with full sun. The best location would give them full bright sun in the morning and then at least some shade during the

heat of the afternoon. The roots should be protected from overheating during the summer.

Water

Aspen should be watered regularly. This species prefers soil that is moist and cool. In the wild aspen are usually found in shallow draws or other locations with slightly deeper, moister soils. In summer I usually water lightly every morning and more thoroughly in the evening. A small pot will require more frequent watering than a large one.

Winter

Quaking aspen are extremely winter hardy and can easily tolerate temperatures well below zero when precautions are taken. They should be protected from animals as deer and rodents will eat the bark and shoots. They can be kept in an unheated garage or greenhouse. They should freeze at least once or twice per winter to ensure dormancy and can stay frozen for the whole winter without harm. The root system can be damaged by periods of warmer winter weather followed by sudden, intense cold snaps however, so it is best if they are kept in a spot where temperatures will remain relatively cool and stable.

Fertilizer

A mild fertilizer of almost any kind will work well. A slow-release fertilizer like Osmocote, or Bio-gold works well.

Training

Quaking aspen are best trained with a “clip and grow” technique. Vigorous new shoots can be pruned back to promote side branching. Wiring, if done at all, must be done very carefully and should be kept to a minimum. Aspen easily shed branches that are stressed. A tree that is over-stressed is likely to fail and instead send up new shoots from the root system. The trunk and leaves can be enjoyed and improved from time to time with light pruning.

Potting a collected aspen

Because of their clonal growth pattern, the root system of a collected aspen will be different from that of most trees. The general pattern is that the tree will have a heavy root on each side of the trunk, going out in opposite directions from each other. The feeder roots that come off these heavier roots are usually very fine and can be easily damaged when cleaning the root system. For this reason it is best to do only a minimal amount to the roots of a newly collected aspen. I generally don't do much more than remove grasses and forbs from the root ball and thin it out a bit. I have had the best luck simply putting the root pad essentially “as is” in a shallow container with some bonsai soil and then filling in the edges with more soil. A deciduous soil mix, such as is used for Japanese maples, is appropriate.

After the tree becomes established the original soil can be carefully broken up and removed bit by bit and replaced with bonsai soil.

When the tree is repotted several years later the rest of the original soil can be removed.