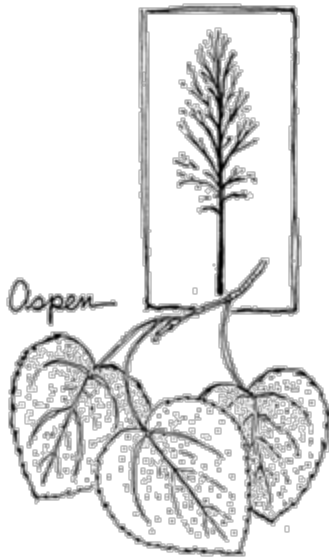


Quaking Aspen



Common name: **Quaking aspen**

Scientific name: *Populus tremuloides*

Aspen are the most widely distributed tree species in North America. They grow in Alaska and Canada, all the way south to Mexico. To withstand such a wide range in climatic conditions, aspen grow at lower altitudes in the north and higher altitudes in the south. Quaking aspens are conspicuously absent from the U.S. southeast, because there are no high elevation mountains to act as habitat.

Individual quaking aspen stems usually live for about 50 to 60 years, sometimes up to 150 in the West. However, in many cases, each tree is actually part of a much larger organism, since multiple stems can sprout from the same root system. When trees that are a part of these large clones die, they are eventually replaced with new growth. Therefore, while one stem has a relatively short lifespan, the entire clone can live for tens of thousands of years!

Quaking aspens can reproduce via pollen and eggs that are contained in pendulous flowers called **catkins**. However, it's much more common for them to reproduce asexually by sending up new stems from a single root system.

The combination of all of the stems (also called **ramets**) and their single root system is a structure called a **clone**. Aboveground, the many different stems appear to be separate trees, but they are all genetically identical.

The quaking aspen is considered a single organism because all the stems originate from one root system.

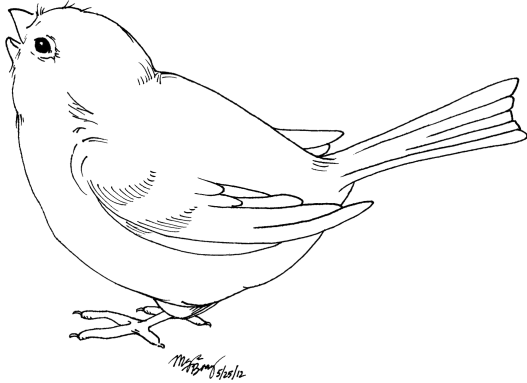


Dendrologists (scientists that study trees) have a couple simple tricks for telling one clone from another. For starters, all trees of the same clone will change leaf color at the same time in the fall. The synchrony continues in spring when the trees gain flowers and re-grow leaves.

[UNDERLINE ANY UNFAMILIAR WORDS IN THIS HANDOUT AND DISCUSS THEM WITH OTHERS TO LEARN MORE ABOUT WHAT THEY MEAN IN VARIOUS CONDITIONS.]

Quaking Aspen

Quaking aspen clones are virtually impossible to kill. Individual stems can be destroyed by humans, wildlife, and disease, but the belowground root system is resistant to almost all of these factors. Pocket gophers, which feed on roots, seem to be one of the few creatures able to curtail the growth of aspen groves. The other major inhibitor of aspen growth is fire suppression. Quaking aspens require intense sunlight to grow, but when other trees spring up in the forest, aspen stems are shaded out. Fire reduces canopy cover and allows for the continued growth of quaking aspens. While the root system will survive with little care, proper management of the stems above-ground is important, since both people and wildlife make use of the trees.



What birds, small mammals, or insects live in close proximity to aspen? Why?

Describe the appearance of a quaking aspen tree in winter. Include colors, textures, and details of the surrounding habitat.

Draw a quaking aspen stand as it appears in the mountain regions of Colorado. Use colored pencils to lightly sketch color.