



Freemont Cottonwood (*Populus fremontii*)

“The voice of the cottonwood tree was a soft, shimmering rattle....It was a quiet voice; perhaps that’s why the song it sang was so soothing, especially to the old ones.”

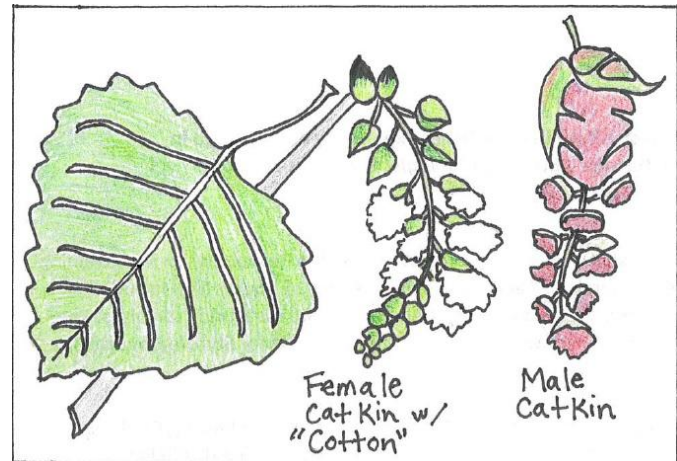
–Joseph M. Marshall III

Description: Fremont Cottonwoods soar into the sky, growing up to 100 feet tall with spreading branches that provide ample shade. These gentle giants of the desert can live to be 130 years old, and if you wrap your arms around one, your fingertips might not touch. Trunks of well-established trees can reach 10 feet in diameter and are covered in deeply furrowed, whitish bark. The Red Cliffs Desert Reserve is home to

trees of a more modest size that reach heights between 35 and 50 feet tall.

The magic of a Fremont Cottonwood is in its exquisite canopy of chordate (heart-shaped) leaves with scalloped edges. Flattened stems attach these leaves to branches. Wind passes smoothly over a round stem, but catches on a flattened stem, causing a lot of movement. Even the hint of a breeze sets the bright green leaves fluttering. Hikers who rest beneath the branches get to experience the tranquility that results from listening to the sweet susurrations of cottonwood leaves.

In April and May, trees bloom with drooping, 3-5” long catkins (flower spikes) that release clouds of wind-born pollen. In summer, female cottonwoods dust the red sandstone with “snow.” Tiny seeds, each attached to a silky hair, pile up on the rocks in white drifts. When clinging to the trees in large numbers, these silky seeds look like clumps of cotton. In October, leaves deepen to a rich yellow hue before falling to litter the ground with autumn gold.



Location: Look for Fremont Cottonwood near water. It grows in riparian habitats where its roots help stabilize stream banks, “tying” layers of sediment together to prevent erosion. In the Red Cliffs Desert Reserve, it grows along the banks of the Virgin River in Babylon and beside Quail Creek in the Red Cliffs National Conservation Area. Confluence Park is also a great spot to rest in the shade of cottonwoods growing on the banks of Ash Creek and LaVerkin Creek.



History: Early European explorers of the Southwest- like John C. Fremont for whom the tree is named- rejoiced at the site of distant cottonwood groves because they indicated water. These trees have always been linked to, and dependent upon, the natural flow of this precious resource. Their deep roots increase water saturation and help with groundwater re-charge, or the downward movement of water from surface to aquifer. This prevents excess runoff after rain and helps slow and absorb floodwaters. Additionally, cottonwoods maintain channel morphology and improve water quality by capturing nutrients.

Since the 1900’s, however, cottonwood communities have been in decline. Before dams and reservoirs, winter and spring floods uprooted riverbank trees, slowing the rate of succession- the orderly

process of change in a community's composition over time. When people began controlling volume and timing, they created "tame" rivers that allowed for quicker succession of riparian trees. Shade tolerant species survived to replace sun-hungry Cottonwoods. Today, people aid in the return of Fremont Cottonwoods by planting saplings in areas where tamarisk and Russian Olive have been removed.

Uses: Cottonwood communities, with their associated willows, grasses, annuals and aquatic herbs, add incredible diversity to arid environments. The huge amount of over-story canopy coverage creates a wide variety of perches, nest sites and places for birds to forage. Cottonwood-willow communities support 2-5 times more breeding bird species than forest types with less coverage. Hawks, eagles, great blue herons, woodpeckers, vireos and the endangered Southwestern Willow Flycatcher all utilize these shady groves, in addition to mammals like beaver, deer, squirrels and cattle.

Like other members of the *Salicaceae* (willow) family, cottonwoods contain salicin and populin. These precursors to aspirin help with inflammation, fever and pain. Poultices of the bark and leaves have antimicrobial properties and treated swellings, cuts, headaches, saddle sores and the swollen legs of horses. Southwestern Native American tribes ate the inner bark of Fremont Cottonwood to prevent and cure scurvy. Pueblo tribes used pieces of the trunk to make drums. Navajo women sometimes strung their looms between the strong lateral roots and branches of old cottonwoods that graced canyon bottoms and wove their beautiful designs below the sing-song leaves.

Sources:

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