

Fremont Cottonwood

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SCIENTIFIC NAME: *Populus fremontii*. From the Greek *populus*, meaning "people," possibly from the number of continually moving leaves. The specific epithet *fremontii* is in honor of John C. Fremont, explorer and territorial governor of Arizona.

DESCRIPTION: Fremont cottonwoods attain a height of 100 feet and a trunk diameter of 4 to 6 feet. Stout, spreading, or pendulous branches form a broad, open crown. Twigs are green to yellow and turn gray with age. Bark of young trees is light gray or brownish, thin, and smooth. As the tree ages, the bark turns darker, thickens, and breaks into furrowed irregular ridges. Male and female flowers grow on separate trees. Male flowers are 1.25 to 3.25 inches long. Female trees produce fluffy white seeds which are broadcast in the spring and give the cottonwood its common name. Leaves are simple, alternate, deciduous, and heart-shaped, length 2 to 2.5 inches, width 2 to 3 inches.

HABITAT: This cottonwood typically grows along streams and rivers, wherever sufficient groundwater exists. Cottonwoods fringe the banks of waterways, and for early desert travelers they indicated a reliable supply of water within digging depth.

DISTRIBUTION: Fremont cottonwoods historically occurred nearly everywhere in Arizona south of the Mogollon Rim, along streams, in bottomlands, and around water holes in woodlands and chaparral, grassland, and desert communities from sea level to 6,500 feet elevation. Today some of the healthiest representatives of the cottonwood-willow community are found along the San Pedro River in southeastern Arizona, and the Hassayampa River near Wickenburg.

BIOLOGY: When cottonwood seeds are ripe they become wind-borne. They are typically dispersed as receding spring floodwater exposes moist scoured

zones of sand and gravel, which are ideal for seed germination. Cottonwoods are easily propagated from cuttings, grow rapidly, and are relatively short-lived.

Wildlife and livestock eat the sweet bark, seedlings, and new growth of saplings, and beavers build dams with the branches. Cottonwoods host a variety of insect fauna that attracts an abundance of insectivorous birds. Many birds also use cottonwoods for nesting; notable among them are bald eagles, common black hawks, and gray and zone-tailed hawks.

STATUS: The cottonwood-willow community type is considered one of the most important native habitat types in North America. It supports a highly diverse assemblage of neotropical migrant birds. The decline of this community is primarily due to groundwater depletion, stream flow diversion, flood control structures, and livestock grazing. Dams along water systems reduce the scouring flood events that facilitate a productive seed bed. Salt cedar, an exotic tree that invades and dominates prime cottonwood habitat, has proliferated primarily because of these changes in hydrology. Salt cedar duff is highly flammable; rapid regrowth after fires gives salt cedar a competitive advantage over less fire-adapted native riparian vegetation.

MANAGEMENT NEEDS: In Arizona, limited recovery of this invaluable wildlife habitat type may be achieved through various management practices. Adjusting flows from dams to mimic natural scouring events can produce healthy seed beds for regeneration. Local salt cedar eradication may also be viable if semi-natural flood regimes are reinstated. Fencing can limit livestock and wildlife grazing, especially during the growing season, and can be used to reduce soil compaction and stream-bank erosion by controlling access to riparian areas by livestock seeking water. Protection of riparian habitat is a major public concern in Arizona and, if achieved, would help to restore and sustain the towering Fremont cottonwoods that once dominated the state's watercourses. ♣

