

Eastern cottonwood

Populus deltoides

Physical characteristics

Trunk | Bark: The bark of a mature cottonwood is so thick that it can withstand fires with just minimum damage. Yet, they are also known for having “weak” wood and will drop branches occasionally, particularly during windy spells.

Leaf: The leaf is very coarsely toothed, the teeth are curved and gland tipped, and the petiole is flat. The leaves are dark green in the summer and turn yellow in the fall. In dry locations they drop their leaves early from the combination of drought and leaf rust, leaving their fall color dull or absent.



“Trembling Leaves”

An identifying characteristics of the Eastern Cottonwood tree is that because its leaves are sail-like shaped with long flat stems they have a tendency to tremble and flutter from even the slightest breeze.

Flower | Seeds: Its flowers, called catkins, are produced on single-sex trees in early spring. In early summer seed capsules split open to release the numerous small seeds attached to cotton-like strands.



Life span: Eastern cottonwoods typically live 70 to 100 years, but they have the potential to live 200 to 400 years if they have a good growing environment.

Ecological characteristics

In natural conditions, Eastern cottonwood trees typically grow near a water source. Cottonwood groves are typically indicative that a water source is nearby as they consume large amounts of water in their growth cycle; a mature cottonwood tree uses 200 gallons of water a day. Cottonwoods are so dependent on water that they will drop leaves during an extended period of drought in order to conserve moisture. If a cottonwood root is cut, it will “bleed” water for days until the cut heals.

Distribution range

While mud banks left after floods provide ideal conditions for seedling germination, human soil cultivation has allowed them to increase their range away from such habitats. The Eastern cottonwood is native to North America, growing throughout the eastern, central, and southwestern United States, the southernmost part of eastern Canada, and northeastern Mexico.

Relationship with other species

Non-human: When a cottonwood loses a branch, it is likely the heartwood will begin to rot at the break, forming holes that make the ideal accommodations for birds, squirrels or bees to build nests.

Humans: American pioneers used the cottonwood’s leaves for animal fodder and herbal teas, its canopy for shelter and its wood for fire and crafts.

Though cottonwood pollen aggravates allergies, these large, adaptable and hearty trees provide shade and beauty across the country.



When used in home landscaping to provide cooling shade, space requirements can become an issue. As the tree matures, its roots will lift the soil surrounding the tree, referred to as root flair.

Pests: Once past the seedling-sapling size, cottonwood trees have few significant insect or disease pests. Leaf feeding insects and leaf diseases are not uncommon, but rarely injurious.