

# Black Cottonwood

*Populus balsamifera* By Brianna Randall

The rivers and streams throughout much of Montana are defined by cottonwoods. These instantly recognizable deciduous trees outline riparian areas across the state, glowing yellow in the fall, filling the sky with swirls of their namesake seeds each spring, and shimmering their heart-shaped leaves in the summer breeze.

Just as these trees rely on healthy floodplains for their survival, rivers depend on them, too. Cottonwood roots stabilize streambanks, while the trees' great, arching branches shade the water below to keep temperatures cool during summer. Cottonwood forests provide food and shelter for over half of Montana's bird species, as well as many fish, wildlife, fungi, and insects.

Montana is home to three distinct cottonwood species: the narrow-leaf (*Populus angustifolia*), found mainly in the state's central and south-central region; the plains (*Populus deltoides*), found statewide except along the Idaho border; and the black (*Populus balsamifera*) named after its dark bark and which lives throughout Montana's western half. These fast-growing hardwoods are true Renaissance trees, able to thrive near water in diverse landscapes, including fertile deltas, rocky high-mountain creeks, or sandy desert washes.

## IDENTIFICATION

The trunks of mature black cottonwoods are gray and deeply furrowed, though young trees have smooth, white bark. Broad oval leaves taper to a point on the end.

## RANGE

One of the largest members of the willow family, *Populus balsamifera* is found from southern Alaska across Canada and down to the northern tier of the United States.

## SIZE

Black cottonwoods can reach 120 feet tall in Montana and six feet in diameter and live to be 200 years old or more.

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## CLIMATE

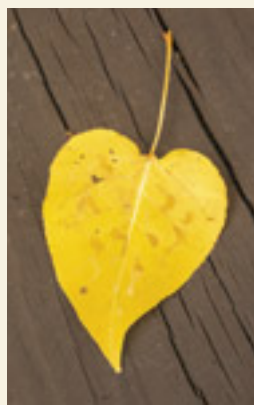
Cottonwoods can live in humid or arid climates, as long as they have deep alluvial soils with good aeration and abundant moisture. They can survive intense heat or frigid snowstorms, and colonize floodplains from sea level to 7,000 feet in elevation.

## FLOWERS AND SEEDS

In later winter, cottonwoods produce flower buds filled with a sticky aromatic resin. The buds turn into fuzzy fruiting flowers called catkins. From late May through late June, the female trees' fruits split to release clouds of fluff that resemble cotton. Tiny brown seeds are embedded in the silky white hairs to help them disperse on the wind.

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## REPRODUCTION

The success of cottonwood seeds is all about timing. For the best germination, they need to land on the gravel bars or sandy shores of a river or stream as the flood waters recede so they can take root in the residual silt. If



## SCIENTIFIC NAME

*Populus* is Latin for "people" and is the classical Latin name for poplar trees. *Balsamifera* ("balsam-bearing") refers to the resinous substance in the buds of the tree, thought to resemble fragrant balsam sap.

the seeds land too soon, they get washed away. If seeds land too late the ground is too dry for their threadlike roots to penetrate.

## FLORA AND FAUNA

When old cottonwoods topple into a river or stream, they provide habitat for fish and food for aquatic insects. On land, decaying or fallen cottonwoods produce fungi, including morel and oyster mushrooms, and provide cavities used by small mammals like mink, squirrels, and rabbits.

The bark and leaves of young cottonwoods supply food for elk, deer, and moose. Beavers gnaw on the bark and use the trees to build dams, which in turn create more wet habitat that can grow more cottonwoods.

Ospreys and eagles make nests atop large cottonwoods. Cavity nesters like woodpeckers rely on cottonwoods for shelter, while migrating neotropical birds such as yellow warblers rest and refuel in cottonwood groves, feeding on the rich supply of insects

## TRADITIONAL USES

The cottonwood's sweet-smelling resin, known as Balm of Gilead, has long been