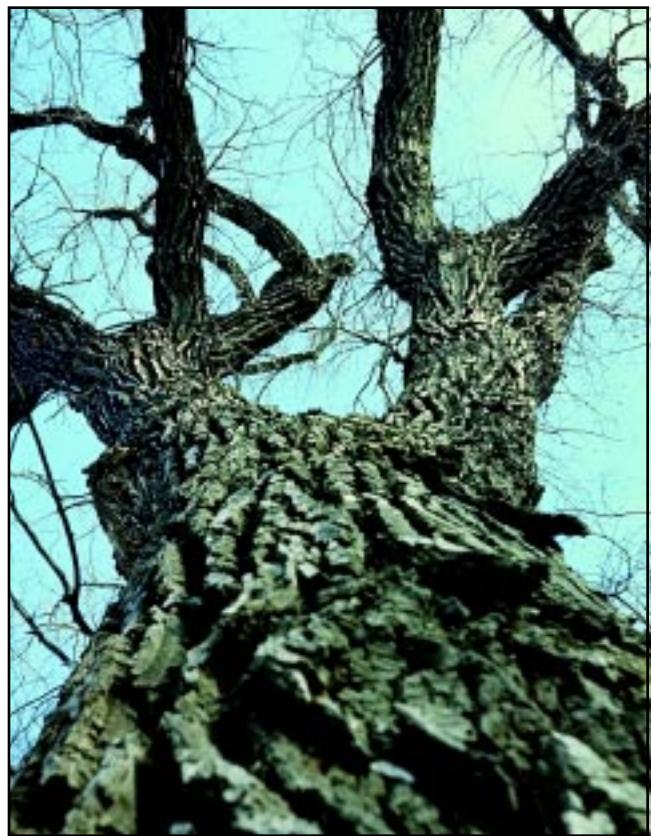


Cottonwood



Cottonwood (*Populus deltoides*)

General Description

The largest and fastest growing tree in the state. Native to moist soils along streams and wetlands throughout the state. Flood control dams have reduced spring flooding and the success of natural cottonwood regeneration along riparian areas. The largest living tree in North Dakota is 110 feet tall with a canopy spread of 94 feet.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Chestnut-brown, sticky, conical.

Bud Size - Medium, 1/2 to 3/4 inch long.

Leaf Type and Shape - Simple leaves, triangular-cordate, acuminate tips, petioles are flattened.

Leaf Margins - Coarsely-dentate with curved teeth, entire near apex and base.

Leaf Surface - Glabrous.

Leaf Length - 3 to 5 inches.

Leaf Width - 3 to 5 inches.

Leaf Color - Lustrous, bright-green during summer, golden-yellow in late fall.

Flowers and Fruits

Flower Type - Unisexual catkins on female trees bear many seeds surrounded by silky or cottony hairs.

Flower Color - Tiny brownish-red flowers early in spring.

Fruit Type - Capsule, 3 to 4 valved.

Fruit Color - Light brown, seeds in a mass of "cotton".

Form

Growth Habit - Upright and narrow when young; branches spread to form a large open crown with age.

Texture - Coarse, summer; coarse, winter.

Crown Height - 50 to 100 feet.

Crown Width - 40 to 75 feet.

Bark Color - Light-gray when young, turning ash-gray and forming thick, flattened, curved ridges separated by deep furrows on older trees.

Root System - Shallow and wide-spreading, greater than height.

Environmental Requirements

Soils

Soil Texture - Loams to sands are most favorable.

Soil pH - 4.5 to 8.0. More alkaline tolerant than *Populus* cultivars.

Windbreak Suitability Group - 1, 1K, 2, 2K.

Cold Hardiness
USDA Zone 2.

Water

Requires a moist site. Tolerates drought on upland sites with high water table.

Light

Requires full sun.

Uses

Conservation/Windbreaks

Tall tree for field and farmstead windbreaks and riparian plantings.

Wildlife

Hollow trees make ideal den sites for wildlife. Young trees are used by deer, rabbits, mice and beaver for food.

Twigs and young branches make good browse. Buds used by grouse.

Agroforestry Products

Wood - Used for making boxes, crates, and pallets.

Food - Native Americans ate the young sprouts and inner bark because of its nutritive value and sweetness.

Medicinal - *Populus* species contain salicin used as an anti-rheumatic drug, a disinfectant, an antiseptic and for eczemas.

Urban/Recreational

Primarily used as a massive shade tree in river side parks or other low, moist areas.

Cultivated Varieties

Siouxland Cottonwood (*Populus deltoides* 'Siouxland') - Male, rust resistant cultivar released by SDSU, Brookings, South Dakota.

Carolina Poplar (*Populus x euramericana*) - Hybrids of *P. deltoides* and *P. nigra* (Black Poplar), native to Europe (see Hybrid Poplar).

Many hybrid cultivars are similar but do not achieve similar heights or girth of native cottonwoods.

Related Species

Balsam Poplar (*P. balsamifera*)

White Poplar (*P. alba*)

Pests

Common diseases include Melampsora leaf rust, Septoria leaf spot and canker, Cytospora canker, wetwood, and stem decay. Common insect pests include poplar borer, aphids, poplar bud gall mite, poplar vagabond aphid and poplar leaf beetles.