



## TREES AND SHRUBS

Flood Plain Prairie Species  
Urban Forest Species  
Black Hills Forest Species

---

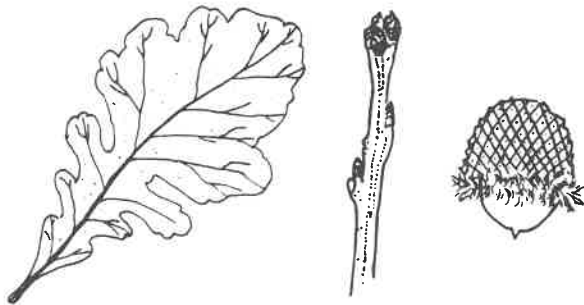
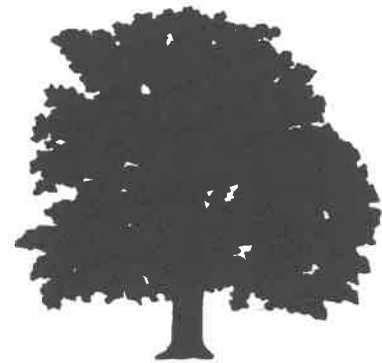
---

# BUR OAK

(*Quercus macrocarpa*)

## Description

*Quercus* is the Latin name for oak. *Macrocarpa* comes from the Greek *Makros* meaning "large" and *karpos* meaning "seed" in reference to the large acorns. Other common names for bur oak are mossycup oak and scrub oak. The tree is known by the Lakota as *u'tahu can*, meaning "acorn stem tree." Other American Indians referred to bur oak as *tashka* (Omaha), *chashke* (Winnebago), and *patki natawawi* (Pawnee).



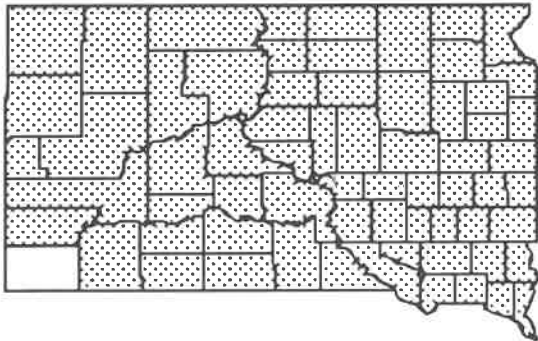
The bur oak is in the family Fagaceae along with the other oaks, beeches and chestnuts. Its leaves are *deciduous*, *alternate*, *simple*, 6 to 12 inches (15 to 30 cm) long, with 5 to 9-rounded lobes. Bur oak flowers appear on old or new wood, often as the leaves unfold. The flowers occur on several to many flowered spikes. The fruit is a *nut* (acorn) about 1 inch (2.54 cm) or less in length with one-

half or more of the nut enclosed in a fringed cup. Twigs are stout, usually covered with corky ridges after a year or two. The bark is dark gray with deep vertically aligned ridges. Some trees have patches of shallow, smooth bark surrounded by the normally seen ridged bark. These smooth areas are caused by fungi decomposing the rough outer bark. This disease is known as smooth patch and while not harmful to the tree (think of it as dandruff!), it is very noticeable.

## Distribution

Bur oak is one of the most widely distributed oaks in eastern North America.

Its natural range extends from New Brunswick to extreme eastern Wyoming. Bur oak is found as far north as central Manitoba and south to central Tennessee and southern Texas. Bur oak is the state tree of Illinois. It is found throughout South Dakota except in the extreme southwest corner of the state.



**Native Distribution**

Bur oak tolerates a wide variety of soil and moisture conditions. It is found along the dry slopes of the Ohio River and the moist bottomlands of the Mississippi River. It is a *transitional species* between the prairie and the eastern forests.

In South Dakota, bur oak is found on the terraces along streams and in the adjacent draws. It often grows to the top of the slopes and becomes the first tree to be established on the prairie. The growing conditions near the top of the slope are much harsher. Along the Missouri River, it is not uncommon to find bur oak as large trees near the base of the slopes and as bushes near the top.

Bur oak is intermediate in shade tolerance. On well-drained, bottomland soils, bur oak is replaced by maples and basswood. On the drier sites, along the prairie edge, bur oak often forms pure stands and is a *climax species*.

## Natural History

Publication of the *Bur Oak* fact sheet was funded by the S.D. Department of Agriculture, Division of Forestry, Pierre, SD.

Bur oak is very resistant to drought and fire injury. The thick, corky bark protects the tree from prairie fires. Bur oak also develops a deep root system in its early years. This allows it to survive long periods of drought.

**Life Span:** Bur oak, as with many oaks, is a very long-lived tree. The average life span is between 200 and 400 years.

**Size:** The largest bur oak is in Paris, Kentucky. It is 319 inches (810 cm) in circumference, 95 feet (29 m) tall and has a branch spread of 102 feet (31 m). It is not uncommon for the crowns of old bur oaks to be wider than they are tall. The largest bur oak in South Dakota is the "Council Oak" in Hermosa. This tree is 181 inches (460 cm) in circumference, 39 feet (12 m) tall and has a branch spread of 65 feet (20 m).

## Significance

The wood of the bur oak is strong and durable, making it useful for ship decking and furniture. The wood from bur oak, and other white oak species, is not very porous, which makes it good for barrels. The high density wood is an excellent firewood. It will burn longer and hotter than an equal volume of elm or cottonwood logs.

The American Indians used the acorns of oaks as a food source. The acorns, which are often bitter tasting, were first leached with wood ashes to make the acorn more palatable.

Wildlife also use the bur oak acorns as a food source. The acorns are rich in carbohydrates and fats, and are eaten by turkeys, squirrels and deer. Birds may serve as an important means of dispersing bur oak. Blue jays can carry 3 to 5 acorns at a time and may carry them for several miles. The acorns are cached for a future food supply. Many are forgotten and will germinate to form new bur oaks.