

Bur Oak



***Quercus macrocarpa* Michx.**

Family – Fagaceae (Beech)

Genus – *Quercus* (Oak)

Species – *Quercus macrocarpa* Michx.

History and Value:

The bur oak is known by other common names such as blue oak, mossy-overcup oak, and scrub oak.

The latin species name for this tree is *macrocarpa*, meaning large fruit or acorn. Native people collected the edible nuts in the fall, and dried and ground them into a rich, nutritious flour. Because of its resistance to injury by fire and its resistance to drought, it was a common “homestead” tree of pioneers along the prairie borders.

The wood is commercially valuable and marketed as white oak. Because it is easily grown it makes a fine tree for streets and lawns.

Tree Description and Habitat:

The bur oak is a large tree, often reaching over 100 feet tall. When growing on open sites it becomes a wide, spreading tree.

Bur oak is one of the most drought resistant oaks of North America. It often dominates severe sites with thin soils, heavy clay-pan soils, gravelly ridges, and coarse-textured hills. But it is relatively intolerant of flooding. If first-year seedlings are submerged 2 weeks or longer, their

mortality may be 40 to 50 percent. Bur oaks seedlings have very rapid root growth; the taproot penetrates deeply into the soil before the leaves unfold. At the end of the first growing season tap roots can be as much as 4.5 feet deep, explaining why they can survive on dry sites.

The bur oak is widely distributed throughout the Great Plains of North America, from Canada to southeast Texas, and the Eastern United States. It is a generally slow-growing tree found on dry uplands and sandy plains, but it is also found on fertile limestone soils and moist bottomlands. It is often found in prairie grassland fringes and is often planted in shelterbelts.

A northern variety of the bur oak, *Quercus macrocarpa* var. *olivaeformis* exists, having acorns about half the size of the southern form.

Fruit: The acorns are the largest of any North American oak, and are an important wildlife food. The acorns are very large, (1-2 in) long and (1-1.5 in) broad, with a large warty cup that wraps much of the way around the nut, with large overlapping scales and often a fringe at the edge of the cup. Acorns ripen with the year of pollination and drop from the tree as early as August or as late as November.



Germination usually occurs soon after seedfall, but in northern climates they may remain dormant through the winter. Good seed crops occur every 2 or 3 years, with no crops or light crops in intervening years. Bur oaks bear seeds up to an age of 400 years, older than reported for any other oak species. The minimum seed-bearing age is sometimes up to 35 years.

Leaves:

The leaves are alternate 6 to 12 inches long, and 5-6 in wide, variable in shape, with a many lobes on the margin.



Flowers and pollination:

The bur oak has both male and female flowers on the same branches. Male flowers are long, drooping slender yellow-green catkins, 2 to 4 inches long.



Female flowers are single, short green spikes, tinged in red and appear shortly after the leaves.

It can be self-pollinating, but favors cross pollination, Pollen appears to germinate better on the stigmas of another tree. It flowers from April in the South to June in the North.

Twigs: Twigs are stout and yellow-brown in color, with multiple small round buds. The twigs often have corky ridges



Bark: The bark is ashy gray to brown *in* color. It is quite scaly and rugged, with noticeable vertical ridges on large, older trees.

