Natural Heritage & Endangered Species Program

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
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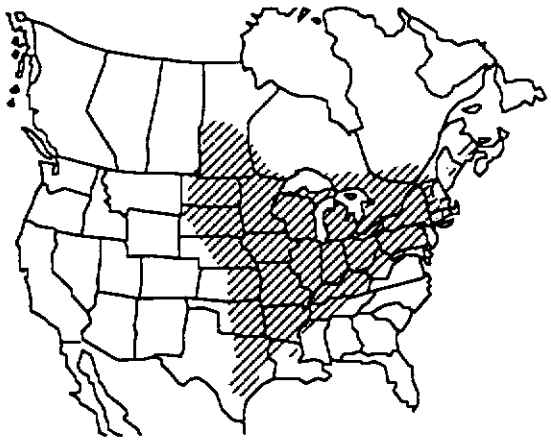
MASSACHUSETTS PLANTS OF SPECIAL CONCERN

BUR OAK /MOSSY-CUP OAK
(Quercus macrocarpa Michx.)

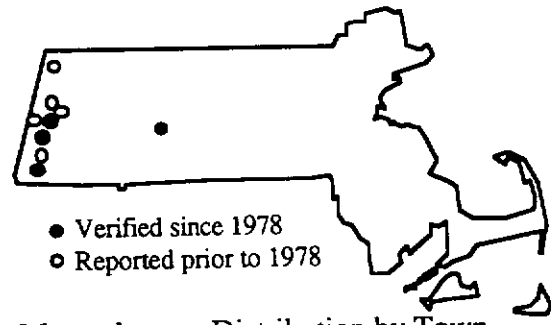
Description

Bur Oak, a member of the Beech family (Fagaceae), is a large stately tree up to 50 m (160 feet) tall with rough, deeply furrowed, flaky bark. The leaves, which are 10-30 cm (4-12 in) long, are narrow and slightly rounded at the base, broad at the tip; pale beneath with a fine, dense pubescence, and lustrous green above. There are 4-7 pairs of rounded lobes and deep "U"-shaped sinuses towards the base but shallow blunt teeth at the tip. The large rounded cups which hold the acorn have fringe-like or mossy edges, have a deep saucer shape and cover 1/3 to all of the acorn. Acorns measure 1-4 cm (.4-1.6 in) in diameter. Minimum seed-bearing age of Bur Oak is 35 years. A good seed crop occurs every 2-3 years. Bur Oak is a characteristic feature of mesic prairies in the Midwest.

Gleason,HA The New Britton and Brown Illustrated Flora of the Northeastern U.S. & Adjacent Canada New York Botanical Garden,1952.



Range of Bur Oak



Massachusetts Distribution by Town

Similar Species

Swamp White Oak (Q. bicolor) may be mistaken for Bur Oak. Swamp White Oak inhabits maple swamps and floodplain woodlands in acid as well as in basic (alkaline) soils. In Massachusetts, it may occur with Bur Oak in southern Berkshire County. The leaves of Swamp White Oak are more or less uniformly toothed all around the margins and lack the deep lobing of Bur Oak. Acorn cups are less fringed.

Habitat in Massachusetts

Bur Oak is found in forested fens, forested swamps, and floodplain forests influenced by calcareous (alkaline, basic) seepage water. The tree usually occurs in mesic-wet sites with seasonal flooding in shady areas, although trees will persist well and germinate in the open. Bur Oak may occur alongside Green Ash, Black Ash, Basswood, Elm, Red Maple, White Pine, Larch, Yellow Birch, Hemlock, Swamp White Oak, Ironwood, and various shrubs.

Range

Bur Oak is found from New Brunswick(very rarely) and Quebec to Ontario and southern Manitoba, south to Virginia, Alabama, Arkansas, and Texas.

Population Status

Bur Oak is listed as "Special Concern" in Massachusetts. There have been 17 recent verified occurrences and 3 additional historical (prior to 1978) occurrences. Proven records are confined to Berkshire County save for one occurrence in Hampshire County. Threats to Bur Oak include logging, high flooding, and, in one instance, a rising water table due to beaver activity. Bur Oak is also considered rare in Alabama, Canada, Connecticut, Delaware, Iowa, Illinois, Louisiana, Maryland, Mississippi, Montana, New Hampshire, Tennessee, and Virginia.