

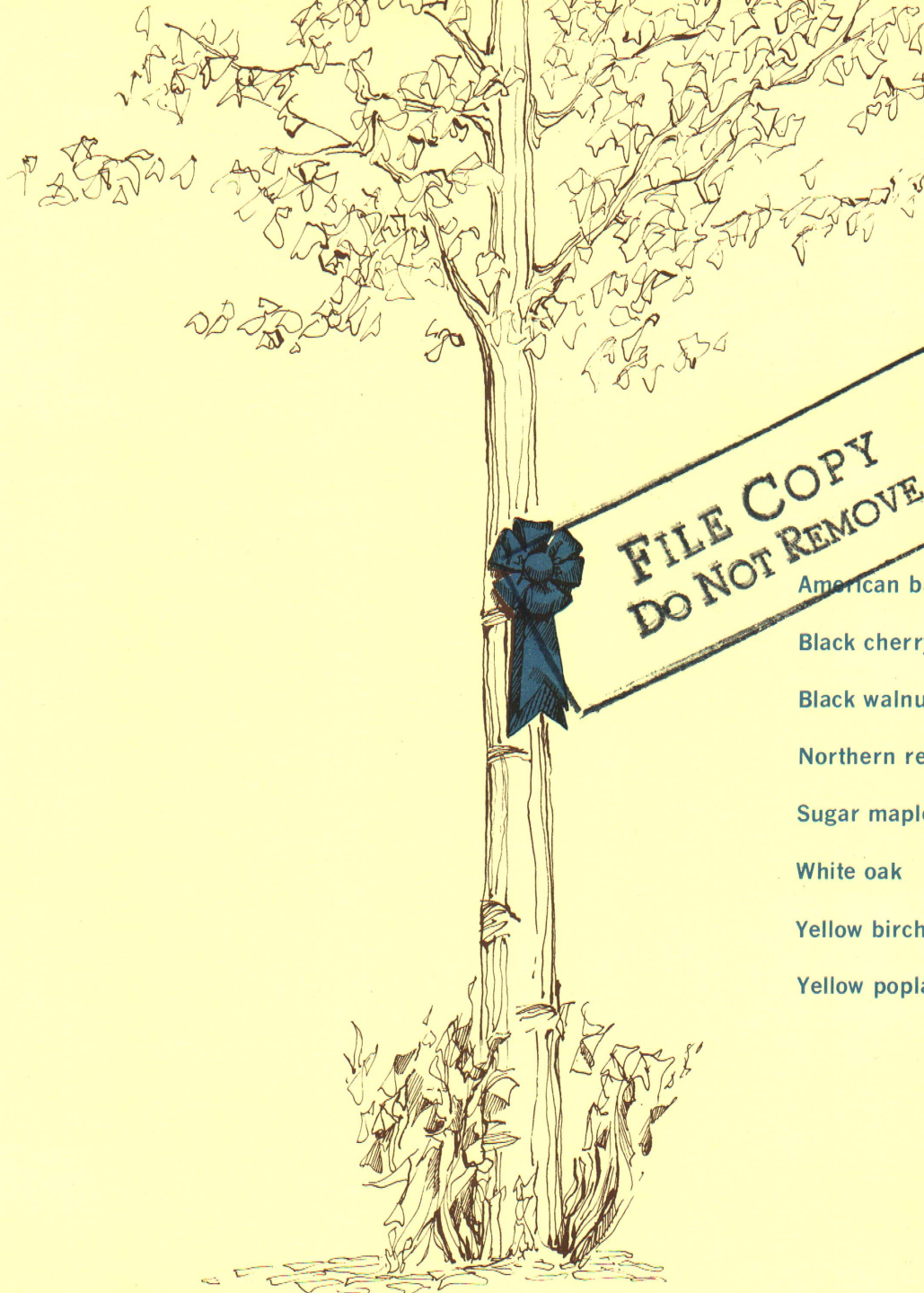
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“Let’s Manage Some” Blue Ribbon Hardwoods No. 2  
Michigan State University  
Cooperative Extension Service  
Natural Resources Series  
Melvin R. Koelling, Lester E. Bell and Roy E. Skog  
June 1968  
20 pages

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**FILE COPY  
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American basswood

Black cherry

Black walnut

Northern red oak

Sugar maple

White oak

Yellow birch

Yellow poplar

"LET'S MEET SOME"  
**BLUE RIBBON HARDWOODS**

No. 2 of a Series

Extension Bulletin E 621  
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Cooperative Extension Service  
Michigan State University





Let's Meet Some

# BLUE RIBBON TREES

MELVIN R. KOELLING

LESTER E. BELL

ROY E. SKOG

A GREAT DEAL OF CONCERN and attention has been given to the ever-decreasing supply of high quality hardwood trees in the past few years. Increases in demand by wood-using industries, especially the paneling and furniture industries, have resulted in a scarcity of high value hardwood logs needed for the manufacture of quality products.

Recent attempts have been made by industry, government, and educational institutions to reverse this trend and provide for future supplies of high quality material by encouraging private production of high value trees.

It is estimated that present production of hardwood forests could be more than doubled through intensified management. Since the greater portion of high value hardwood trees are growing on fertile, well drained soils, additional production would be obtained principally by timber stand improvement practices. These would be aimed at reducing the competition of cull and defective trees and obtaining complete utilization of available growing space for quality trees.

Pruning and thinning of younger stands would be

necessary under most conditions. In addition, some new planting would be desirable.

This publication, second in a series on Blue Ribbon hardwoods, identifies and describes some of the Michigan trees which are worthy of more intensive management practices.

While all species would benefit from intensified management, special emphasis is given to this select group of quality hardwoods. They include: American basswood, black cherry, black walnut, northern red oak, sugar maple, yellow poplar, white oak, and yellow birch.

In addition to identifying their characteristics, a map shows the Michigan geographic distribution of each species. While some trees may be found outside the indicated range, productivity and management success will be greater if new plantings of specific trees are made within natural geographical boundaries for the species.

Other publications in this series will follow on planting, weed control, fertilization, pruning, thinning, and general management information.

*Blue Ribbon Trees is a promotional program sponsored by Michigan State University, the Michigan Department of Conservation, and related forest industries to encourage commercial production of high quality hardwood trees.*





# American Basswood

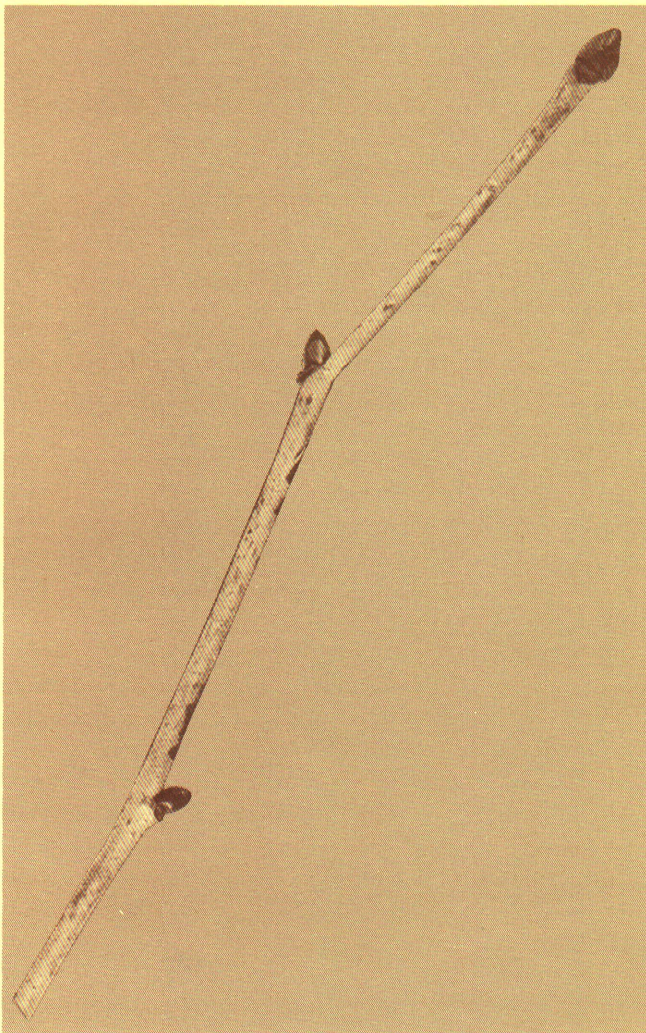
(*Tilia americana* L.)

**Leaves** — Alternate, large, 5 to 6 inches long, 3 to 4 inches wide; generally heart-shaped, lopsided, coarsely toothed; dark, shiny green above, underside smooth except for tufted hairs at vein intersections.

**Twigs** — Red or greenish, stout, zig-zag in appearance; buds broadly egg shaped with 2 prominent overlapping scales.

**Bark** — Smooth, gray on young trees; narrowly ridged on older tree; fissured, somewhat scaly when mature.

**General** — American basswood, also known as basswood or linden, is a large, important tree in the central and northern hardwood forest. It normally grows 70 to 100 feet tall, although this will vary depending on site. It grows rapidly on deep, moist, loamy soils where it is frequently associated with sugar maple, black cherry and yellow poplar. In general, it is not found in pure stands. American basswood is a prolific sprouter and is frequently found in clumps, although reproduction from seed is also common. From a distance this clustering feature is often an aid in identification.



The valuable creamy, light colored wood of American basswood possesses many desirable working properties. It is used extensively in novelties, woodenware, boxes, excelsior, furniture stock, veneer, and many other items.





Botanical Range (Entire State)







## Black Cherry

(*Prunus serotina* Ehrh.)

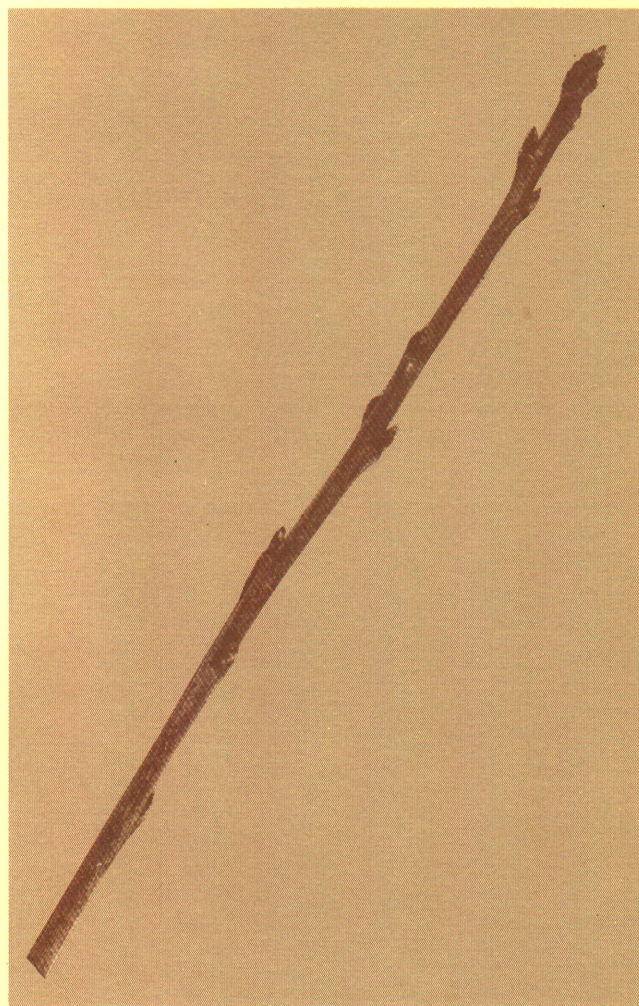
**Leaves** — Alternate, narrow, oval, pointed; 2 to 6 inches long, 1 to 1½ inches wide; dark, shiny green above, underside dull pale green with reddish brown hair along the base of the midrib; finely toothed, frequently drooping.

**Twigs** — Slender, reddish-brown with frequent spur shoots on older branches; bitter almond taste; twigs frequently covered with grayish, scaly, down-like cover; buds long pointed with several visible scales.

**Bark** — On young trees, thin and smooth with small horizontal openings; on older trees, irregular-shaped, easily peeled scales.

**General** — Black cherry makes its best development on deep, rich, moist soils, however, it may occur on a variety of soil and site conditions. In forest stands it is usually a straight, clear-boled tree which may attain a height of 60 to 80 feet. In the open, it normally develops into a limby, normally crooked, spreading tree of low commercial value. Usually not occurring in pure stands, black cherry is found with American beech, yellow birch, northern red oak, yellow poplar or sugar maple. The species is very hardy, and is found in some of the northernmost hardwood forests.

The reddish-brown, close-grained wood is highly prized for fine furniture and veneer. In addition to being easily worked, it is hard and can withstand considerable abuse. The reddish color tends to darken with age, thereby adding to its furniture value. The lighter colored sapwood has been used extensively for printer's blocks.



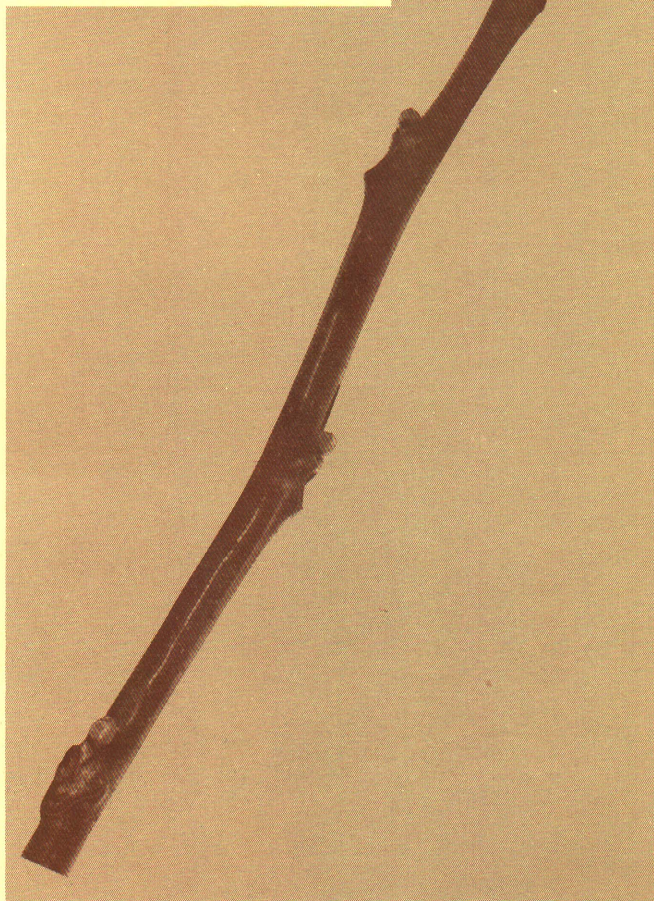
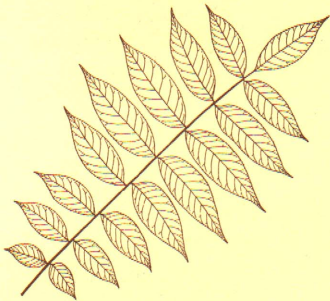




Botanical Range (Entire State)







# Black Walnut

(*Juglans nigra* L.)

**Leaves** — Compound, 13 to 23 simple leaflets on each alternate leaf, leaflets 3 to 4 inches long, 1 to 1¼ inches wide, pointed, finely-toothed margins; smooth, dark yellow green above, lower surface pale green, soft and downy.

**Twigs** — Thickened, light brown, covered with soft brownish hair at first; pith in center of twig buff-colored, chambered; buds short and covered with silky, grayish hairs.

**Bark** — Dark brown, almost black; frequently fissured on young trees, irregularly blocked on older trees.

**General** — Black walnut is one of America's most valuable and highly prized hardwood trees. It grows most rapidly and develops best on deep, rich, moist river-deposited soils. Heights of 90 feet are not uncommon for older trees. Rapid growth is common on good sites, and it frequently does well on upland soils. It rarely occurs in extensive pure stands. Most often it is found with yellow poplar, white ash, black cherry, or American beech.

The wood of black walnut ranks as America's foremost cabinet and furniture wood. It has excellent machining properties, strength-to-weight ratios and shock-resistant abilities. Its resistance to splintering has made it a unanimous choice for gunstocks. It is also used extensively for quality furniture, veneer, woodenware and novelties. Nutmeats from the fruits of black walnut are used extensively in food and confectionery.

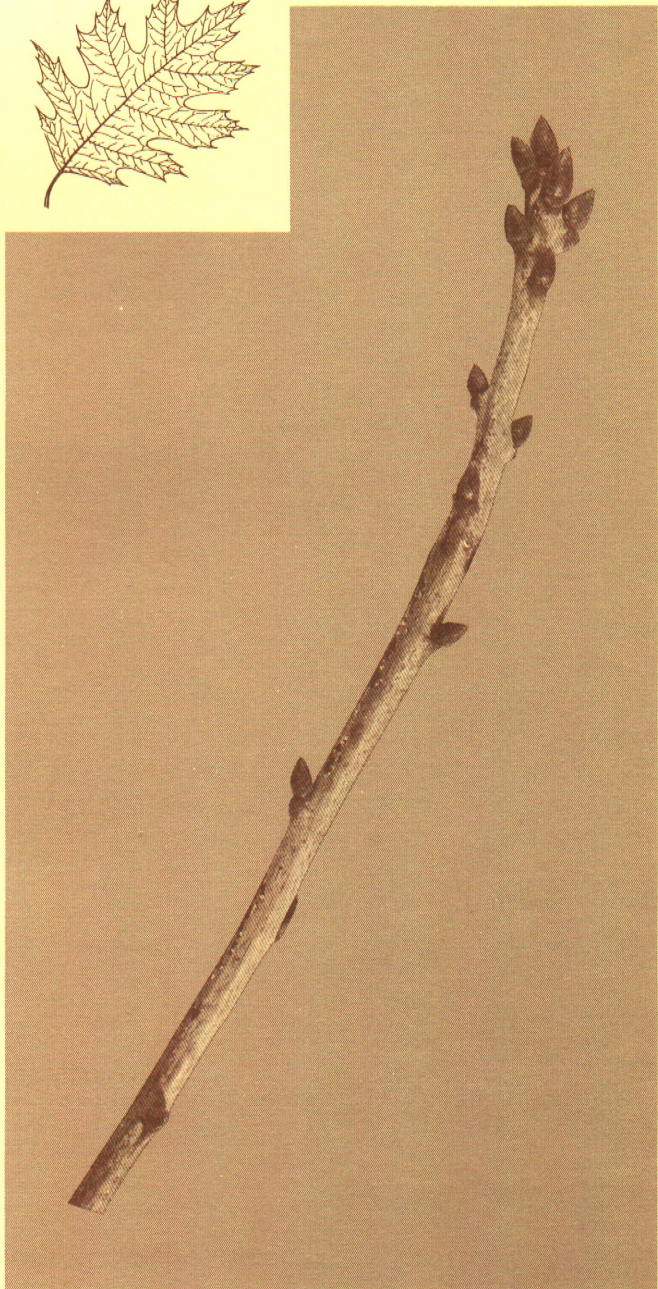




 Botanical Range







# Northern Red Oak

(*Quercus rubra* L.)

**Leaves** – Alternate, large, 5 to 8 inches long, 4 to 5 inches wide, roughly egg-shaped in outline, with 7 to 11 bristle tipped lobes; upper surface dull, dark green; pale, yellow green beneath with tufts of hair in vein axils.

**Twigs** – Moderately thickened, reddish-brown; terminal buds clustered, covered by numerous reddish brown scales.

**Bark** – Tight, smooth on young trees becoming rough and shallowly fissured; bark on upper bole broken into broad flat-top plates, lower trunk dark and very blocky on old trees.

**General** – Northern red oak is a most important hardwood timber tree in eastern North America. Under forest conditions this tree may attain a height of 70 to 90 feet, and diameters of 20 to 30 inches. It grows best on moist loamy soils where it is found with American basswood, black cherry, sugar maple and certain hickories. However, it is widely distributed throughout the eastern United States on a variety of soils and contributes much to the annual cut of oak timber. Reproduction is obtained both from stump sprouts and seedlings. It is widely used as an ornamental tree due to its symmetry and relative freedom from pests.

Northern red oak wood is strong, hard and relatively close grained. It finds extensive use in general construction, certain types of cooperage, railroad ties, veneer, hardwood flooring, furniture and miscellaneous items.





■ Botanical Range (Entire State)







# Sugar Maple

(*Acer saccharum* Marsh.)

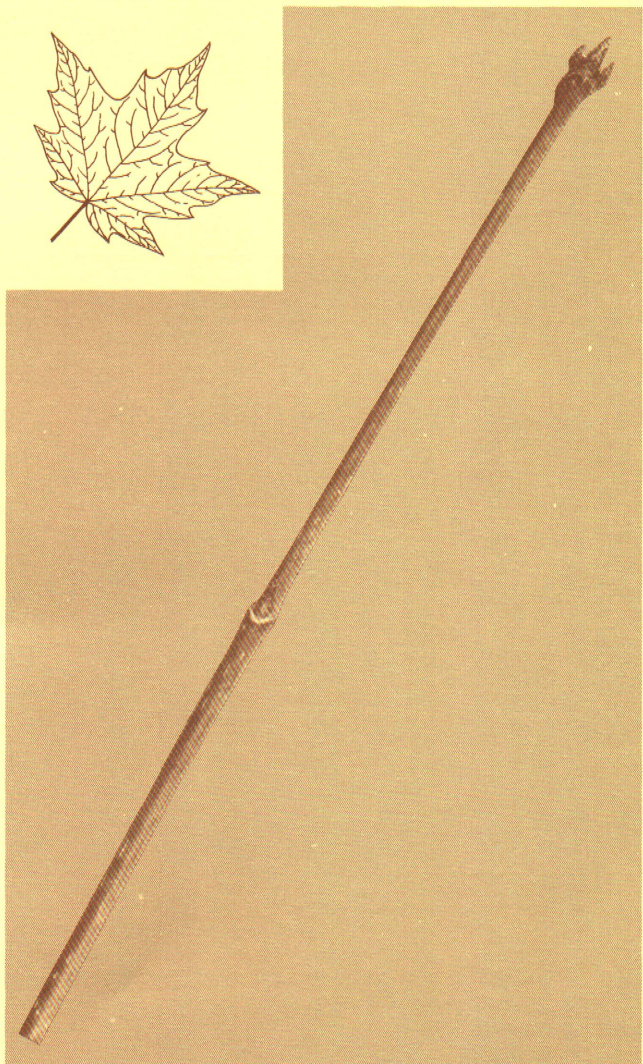
**Leaves** — Opposite, 5-lobed, lobes are long, pointed, with blunt teeth, 3 to 5 inches in diameter; smooth margins; bright green above, paler green beneath.

**Twigs** — Slender, shiny, reddish-brown; buds narrow and sharply pointed with numerous small scales.

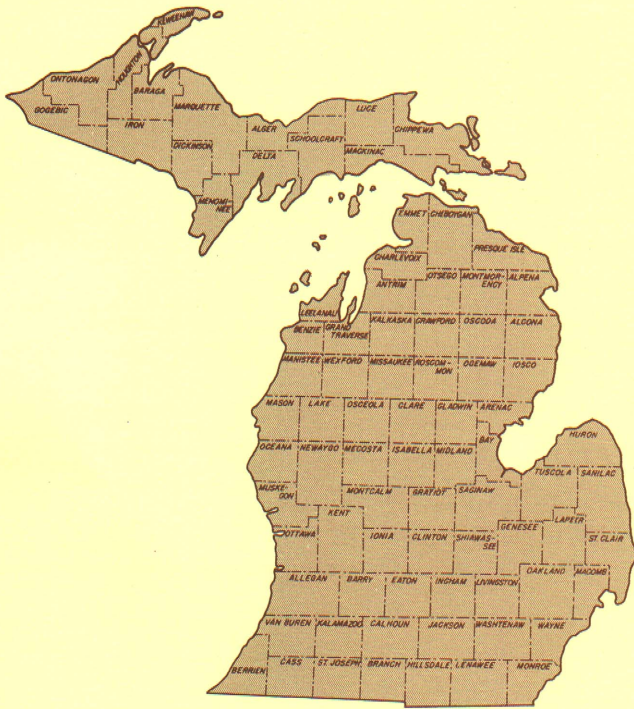
**Bark** — Light gray, smooth on young trees; on older trees becoming darker, more broken and deeply grooved into long, irregular, thick plates or scales.

**General** — Sugar maple is probably America's best known hardwood tree. Due to its exceptional value as a shade and ornamental tree, it has been widely planted. It may attain a height of 80 to 100 feet on favorable forest sites. Most rapid growth is achieved on deep, well-drained loamy soils; however, it will grow on a variety of upland sites. It occasionally forms pure stands, but is more commonly found in association with American beech, yellow birch, northern red oak, and American basswood. It is a very tolerant tree and this fact together with frequent prolific seed production, favorable sprouting habits, and high degree of tolerance, contribute to nearly pure sugar maple understories in some hardwood forests.

The wood of sugar maple is heavy, hard, close-grained and highly desired within the lumber industry. It is used for furniture, veneer, bowling pins, flooring, woodenware, novelties and many other items. Certain trees produce wood with a highly decorative figure known as *birds eye* which is prized for cabinet woods. Sugar maple sap is the principal source of maple syrup and sugar.



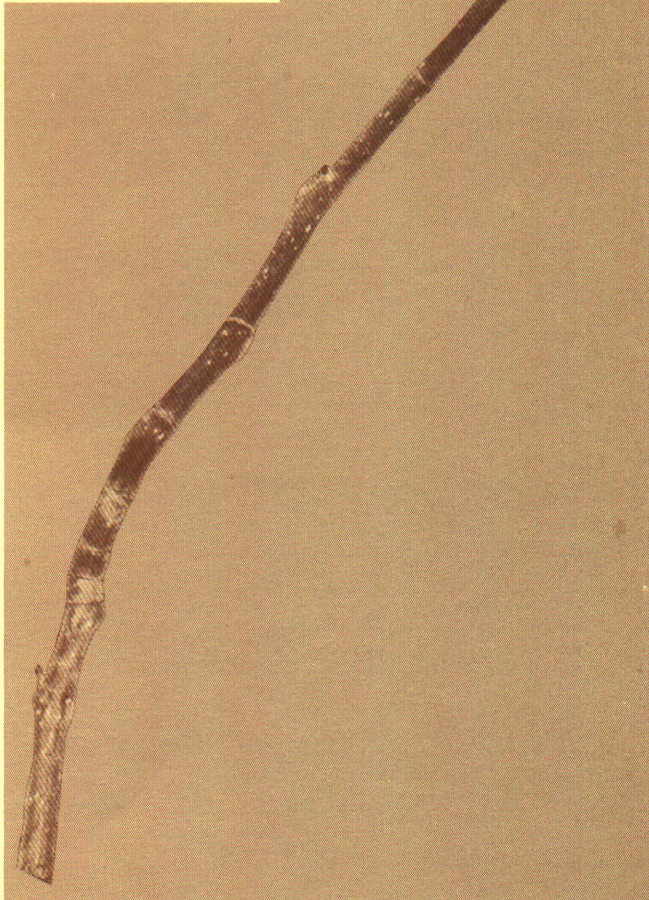
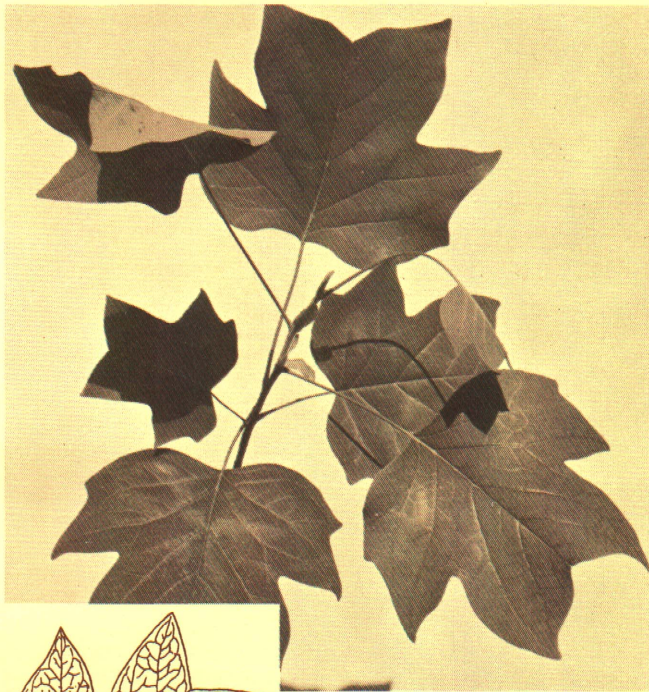




 Botanical Range (Entire State)







# Yellow Poplar

(*Liriodendron tulipifera* L.)

**Leaves** — Alternate, 4 to 6 inches in diameter; mostly four lobed with shallow notch or nearly flat on top; edges of lobes smooth; dark yellow-green above, underside pale, often with a whitish bloom.

**Twigs** — Moderately stout, dark reddish brown; bitter to the taste; large terminal bud with 2 large duck-bill shaped scales.

**Bark** — Tight and smooth on young trees, greenish-gray; becoming rough with interlacing ridges and deep furrows on older trees.

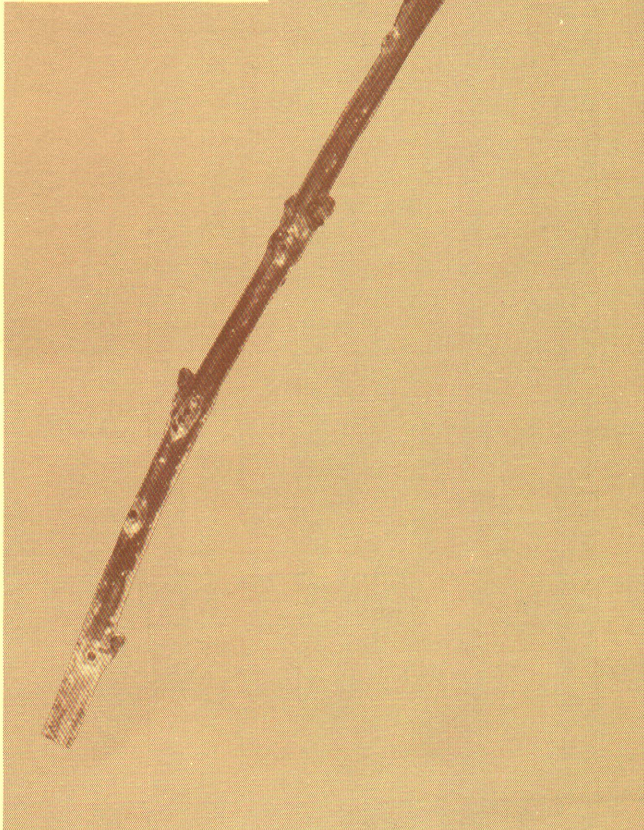
**General** — Yellow poplar, also known as tulip tree, and tulip poplar is one of the finest and largest American hardwood trees. It frequently attains a height of 80 to 100 feet and larger. In forest stands the trunk remains remarkably clear of side branches, often for distances of 70 feet or more. It prefers deep, moist well-drained soils, but will survive on somewhat drier sites.

Wood from yellow poplar is light yellow to greenish brown and is popular with cabinet and furniture manufacturers. It is also used for interior trim, musical instruments, veneer, wooden-ware and other novelty items. The heartwood is very durable when used out of doors. It is frequently planted as an ornamental due to its pleasing form, unusual leaves and attractive flowers.









## White Oak

(*Quercus alba* L.)

**Leaves** — Alternate, 4 to 9 inches long, 2 to 4 inches wide, somewhat wider near the tip; margin with 7 to 9 smooth-edged lobes; smooth and bright green above, pale and somewhat whitened beneath.

**Twigs** — Moderately stout, greenish-red to purplish-gray; smooth buds broadly rounded, clustered on tip; reddish-brown scales.

**Bark** — Light ashy gray; variable but usually shallowly fissured with long loose scales; may be blocky on older trees.

**General** — White oak is the most important member of the oak family in America. It contributes much to the annual harvest of oak lumber in the eastern United States. White oak trees normally range in height from 60 to 80 feet, although larger trees are not uncommon. Clean boles develop in forest stands; however, large wide-spreading crowns are common when growing in the open. Maximum growth is obtained on deep soil, such as found in coves or high bottomlands; however, it grows well on a variety of sites. It may occur in pure or nearly pure stands, but is more commonly grown with other oaks, American basswood, white ash, and various hickories. Reproduction occurs from frequent large seed crops and from sprouts.

White oak lumber possesses uniform strength, is highly durable and has an attractive color. The wood also contains inclusions in the pores known as tyloses which make it especially desirable for tight cooperage. Other uses include furniture, flooring, construction lumber, veneer, interior trim, boat lumber and railroad ties. Due to its long life span and attractive open-grown form it is often used as a shade tree.





 Botanical Range







# Yellow Birch

(*Betula alleghaniensis* Britton)

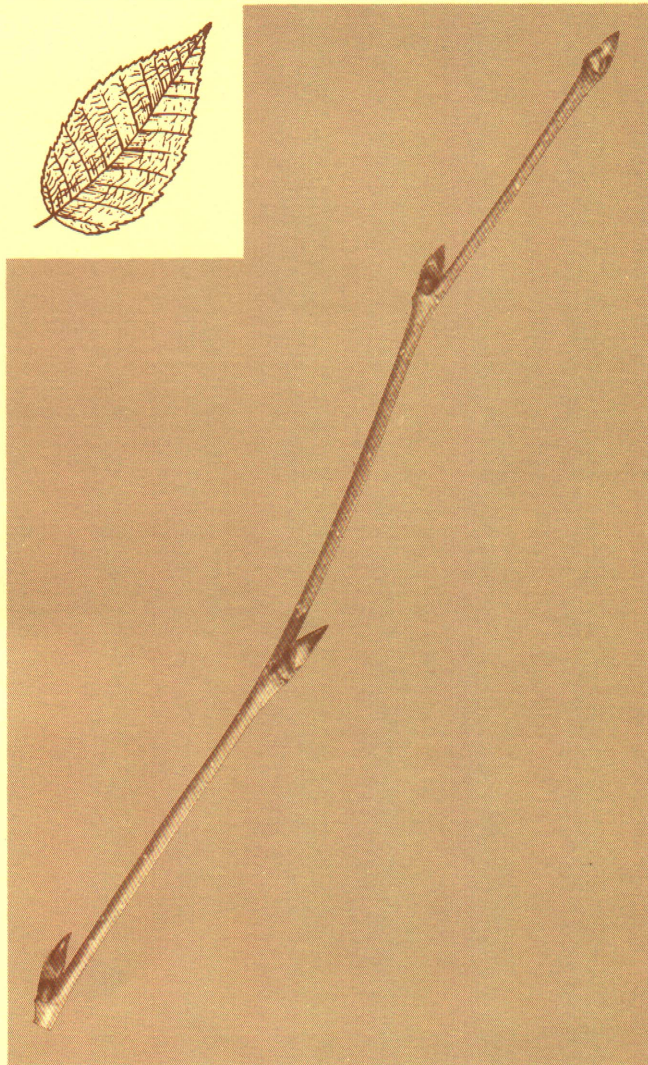
**Leaves** — Alternate, oval; 3 to 5 inches long, 1½ to 2 inches wide, mostly sharp pointed with sharp and double toothed margins; upper surface dull, dark green; smooth, yellow green below.

**Twigs** — Slender, dull yellowish-brown to dark brown; aromatic with a faint odor and taste of winter-green; oval buds with chestnut-brown scales; short, spur shoots present on older trees.

**Bark** — On young stems, tight lustrous gray or bronze color, separates into easily peeled horizontal strips; on older trunks gray or blackish, deeply grooved, breaking up into reddish-brown plates.

**General** — Yellow birch represents the most important North American member of the birch family. It is also one of the larger eastern hardwoods, attaining a height of 60 to 80 feet. In forest stands, the bole is frequently clear of lateral branches for a considerable distance from the ground. It achieves its best growth and development on sandy loam soils, although it may be found on steep, rocky, soils. It is normally found growing with other hardwoods — chiefly sugar maple and American beech. Its prolific seeding habits and ability to germinate and grow on any moist area account for its excellent reproductive ability.

Yellow birch wood is heavy, hard, and strong. Its close grain and ease of working make it especially attractive for use in furniture, veneer, interior trim, woodenware, handles, and spools. It is also desirable for chemical distillation purposes.







 Botanical Range





## SELECTED BIBLIOGRAPHY

- Collingwood, G. H. and Brush, W. D. 1964. *Knowing Your Trees*, The American Forestry Association, Washington.
- Harlow, W. M. and Harrar, E. S. 1958. *Textbook of Dendrology*, McGraw-Hill Book Company, New York. 561 pp.
- Little, Elbert L. 1953. *Check List of Native and Naturalized Trees of the United States*, Supt. of Documents, U.S. Govt. Printing Office, Washington, D.C.
- Otis, Charles, 1965, *Michigan Trees*, University of Michigan Press, Ann Arbor, Mich. 362 pp. Rev.
- Smith, N. E. 1961. *Michigan Trees Worth Knowing*. 60 pp. Michigan Department of Conservation, Lansing.

## PHOTO CREDITS:

Leaves, pp. 2, 4, 6, 8, 10, 12, 14 – School of Forestry, University of Missouri; p. 16 – Michigan Department of Conservation.

Trees, p. 7 (Black Walnut) – R. L. Olmstead, Michigan Department of Conservation; p. 17 (Yellow Birch) – U.S. Forest Service.

## FOR ADDITIONAL ASSISTANCE

In working with Blue Ribbon hardwoods you may need additional help; if you do contact the following:

For educational assistance:

- Your local County Extension Agent, Cooperative Extension Service

For on-the-ground forestry advice:

- Your local District Forester, Michigan Department of Conservation

For soils work or site selection:

- Your local Soil Conservationist, County Soil Conservation District, U.S. Soil Conservation Service

For financial assistance:

- Your local county office of the Agricultural Stabilization Committee – Agricultural Conservation Program

For general information on forestry and tree farming:

- Extension Forester, Cooperative Extension Service, Michigan State University, East Lansing, Michigan 48823
- The American Forest Products Industries Inc., 1816 N. Street, N.W., Washington, D.C. 20036
- The Fine Hardwoods Association, 666 North Lake Shore Drive, Chicago, Illinois 60611
- The American Walnut Manufacturers Association, 666 North Lake Shore Drive, Chicago, Illinois 60611