

FAMILIAR TREES OF MICHIGAN

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By James Neal, Michigan State University District Extension Leader, Resource Development, November 1970

Michigan the "Water Winter Wonderland" state is also well known for its vast forest cover. More than 54% of all the land in Michigan is covered with some kind of forest growth. In northern Michigan and in the Upper Peninsula from 70 to 90 per cent of each of the counties is in forests. Michigan has 19 million acres of forests. These produce annually 750 million dollars, consumer value, of timber products. In addition, forests provide protection for our land, water, and habitat for our wildlife. Forests also provide an environment for man to work, play, and study.

This booklet has been prepared to aid 4-H Club members, teachers, school groups, and others to identify and to know more about some of the more common trees of Michigan. Sixty-four trees are illustrated in this booklet with a key to help assist with the identification of some of these trees.

ACKNOWLEDGEMENTS:

Michigan State University would like to thank William Carey Grimm, noted botanist and science teacher for permission to use his outstanding drawings included in this bulletin. Appreciation is also extended to the Stackpole Company, Harrisburg, Pa., publishers of **The Book Of Trees** written and illustrated by Mr. Grimm. Without the permission of the author and the publisher this manual would not have been attempted.

There are many books available to anyone interested in further information about trees. Some of them are listed below:

Manual of the Trees of North America, Charles Sprague Sargent
Smith, Peter Publishing Co., New York, New York, 1952.

Michigan Trees, Charles Herbert Otis
University of Michigan Press, Ann Arbor, Michigan, 1931.

Michigan - Trees Worth-Knowing, Norman F. Smith
Michigan Department of Conservation, Lansing, Michigan, 1961.

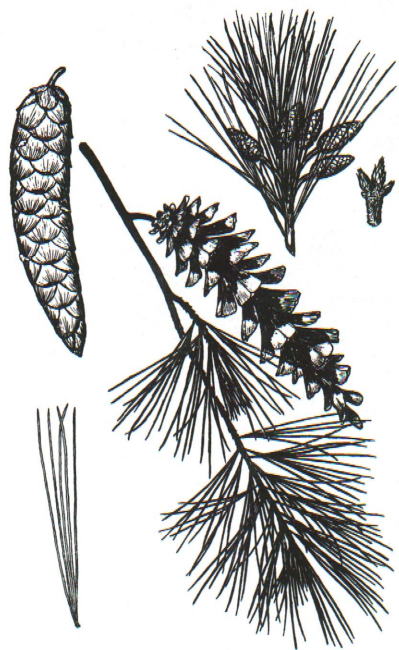
Textbook of Dendrology, William M. Harlow and Ellwood S. Harrar,
McGraw-Hill Book Company, New York, New York, 1958.

The Book of Trees, William C. Grimm
Stackpole Company, Harrisburg, Pennsylvania, 1965.

Trees, Herbert S. Zim and Alexander C. Martin
Simon and Schuster Publishing Company, New York 20, New York, 1952.

WHITE PINE

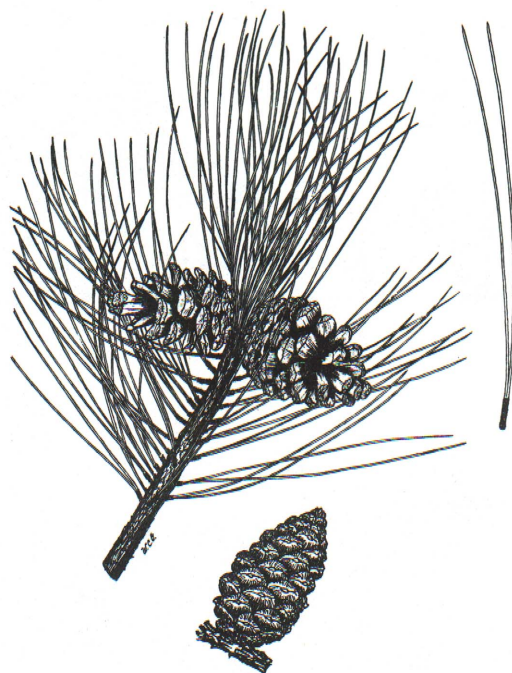
(*Pinus strobus*)



White Pine – Soft flexible bluish green needles, five in a bundle with a 4 to 8 inch cone slightly curved. Once called the “Monarch of the North”. State tree of Michigan.

RED PINE

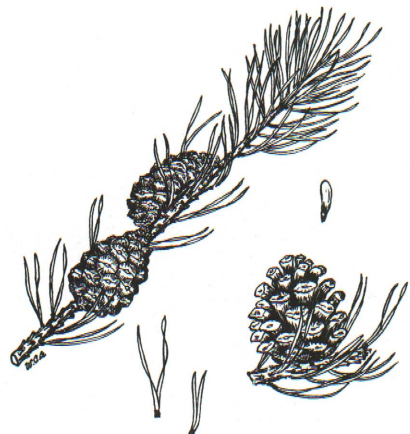
(*Pinus resinosa*)



Red Pine – Also called Norway pine. Needles dark green in color, two to a bundle and 4 to 6 inches long. The cones are 2 inches long. Needles break clean when bent.

JACK PINE

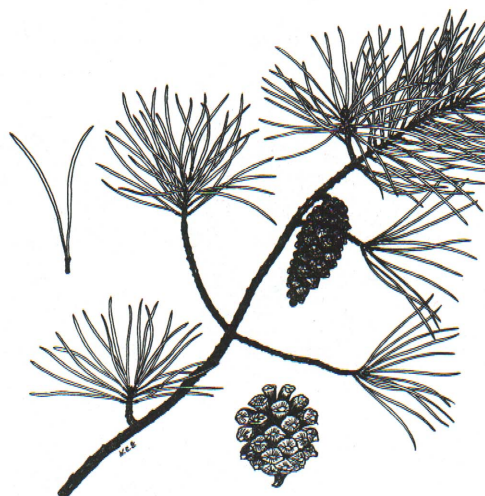
(*Pinus banksiana*)



Jack Pine – Tree of light sandy soils, forming pure stands on burned over forest lands in the north. Cones may remain closed for years, usually heat will open cones to release seed.

SCOTCH PINE

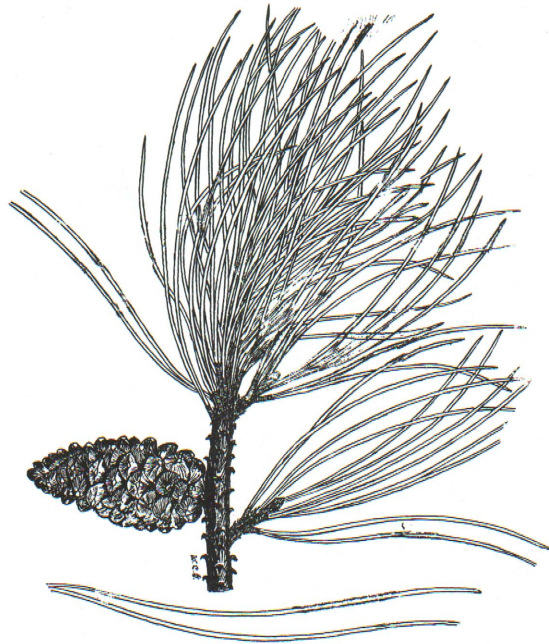
(*Pinus sylvestris*)



Scotch Pine – Bluish-green, slightly twisted needles. Cones 1½ to 2½ inches long, pointing backward along branches. Favorite for Christmas trees. Imported from Europe so usually planted.

AUSTRIAN PINE

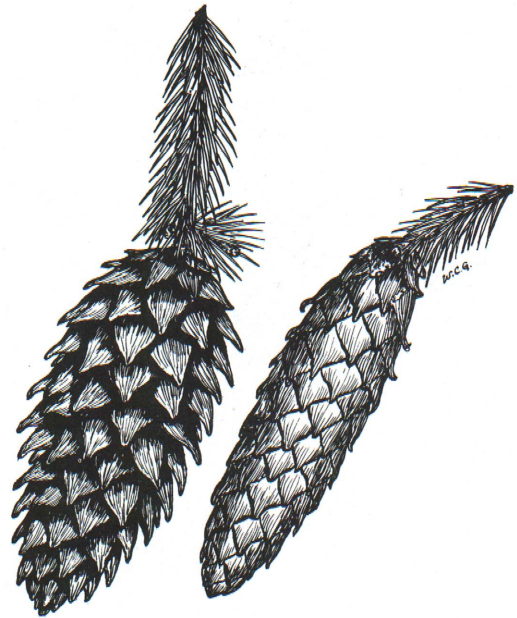
(*Pinus nigra*)



Austrian Pine – Similar to Red Pine. Dark dull green needles, 3 to 5 inches long. Cones are stalkless and 2 to 3 inches long. Frequently planted as an ornamental tree. A native of Europe.

NORWAY SPRUCE

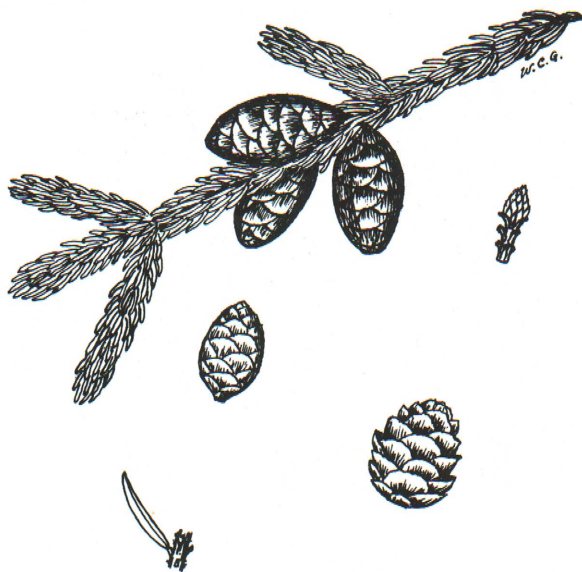
(*Picea abies*)



Norway Spruce – Imported tree planted as an ornamental. Large cylindrical cones 4 to 7 inches long. Branchlets hang from lateral limbs on older trees like weeping willow. Widely planted in the U. S.

BLACK SPRUCE

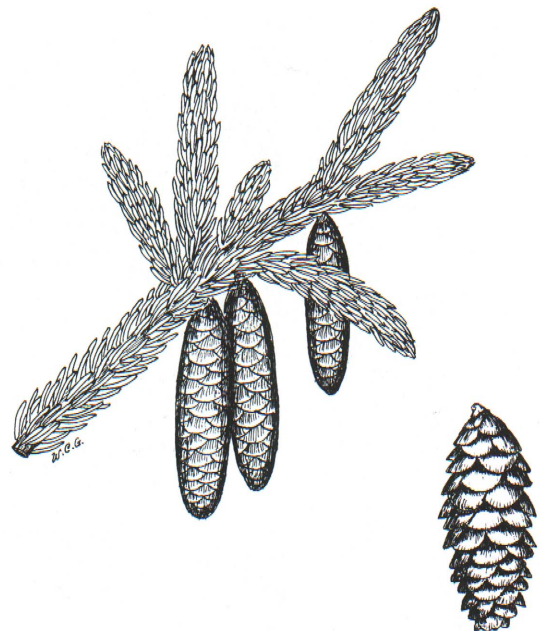
(*Picea mariana*)



Black Spruce – Truly a northern tree, extending to limits of tree growth. Needles blunt-pointed and 1/4 to 3/8 of an inch long. Cones 3/4 to 1 inch long. Often cut for Christmas trees.

WHITE SPRUCE

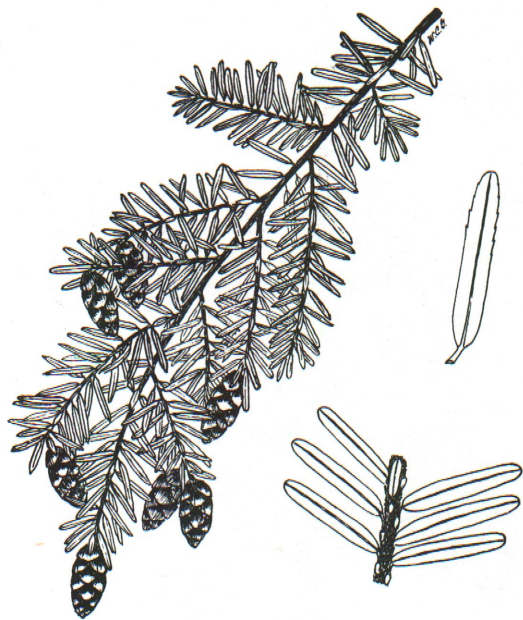
(*Picea glauca*)



White Spruce – Frequently used for Christmas trees and pulpwood. Bluish-green needle, 1/2 to 3/4 inches long. Cones are 1-1/2 to 2 inches long with thin, rounded, smooth-margined scales.

EASTERN HEMLOCK

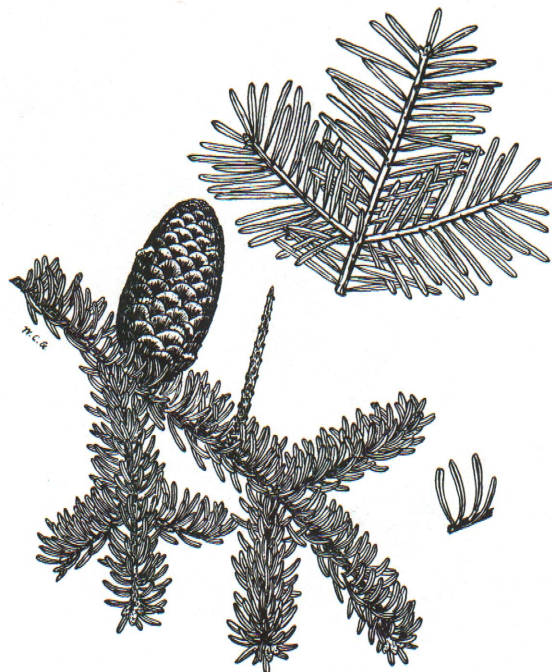
(Tsuga canadensis)



Eastern Hemlock – Leaves 1/2 inch long with a stalk which remains on the twig when leaf falls. Slightly notched leaf tips. Hemlock bark is rich in tannic acid, and used to be in demand for tanning hides.

BALSAM FIR

(Abies balsamea)



Balsam Fir – Favorite Christmas tree because of fragrant odor. Branches form "cross", symbol of Christmas and Easter. Flat leaf 3/4 inch long with two prominent whitish lines on the lower surface. Difficult to grow in plantations.

TAMARACK

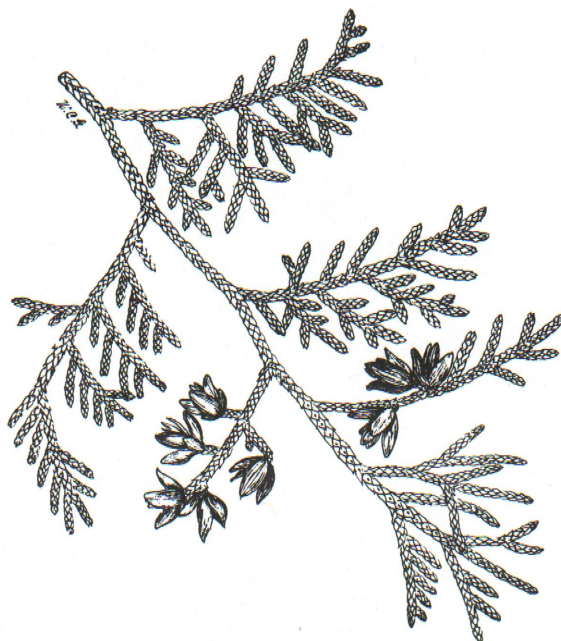
(Larix laricina)



Tamarack – Sheds leaves in fall. Leaf is 1/2 to 3/4 inches long, very narrow, soft and flexible. Leaf is pale-green in color turning yellow in fall. Used for poles and pulpwood. Wood is heavy, hard and strong.

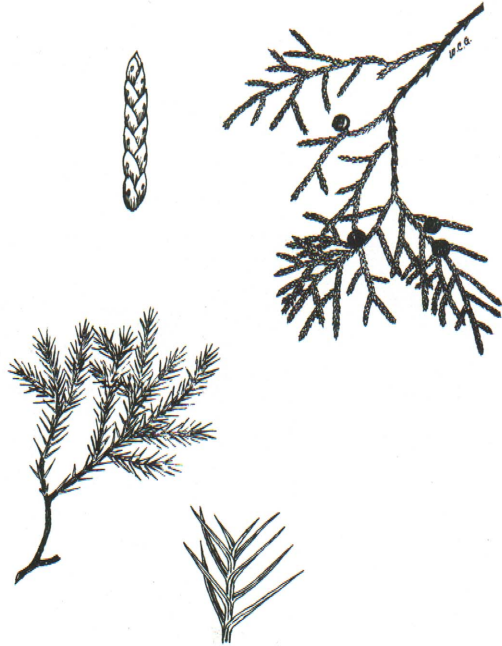
NORTHERN WHITE CEDAR

(Thuja occidentalis)



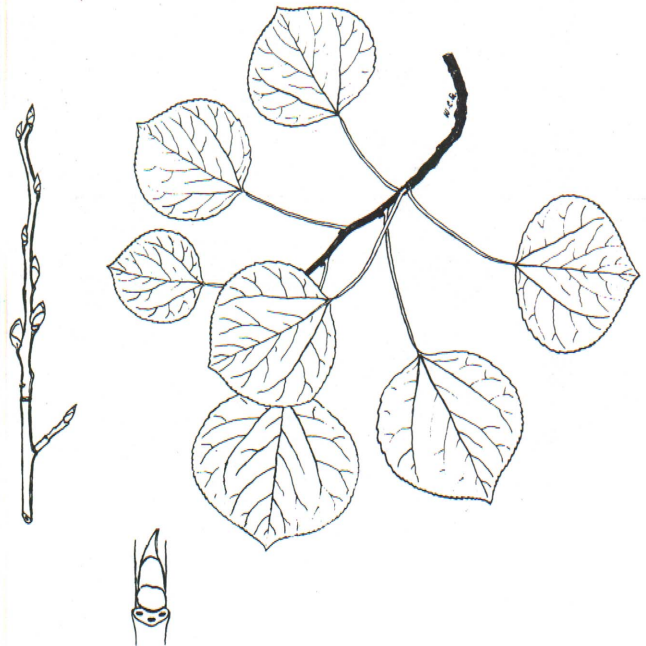
Northern White Cedar – Widely used for fence posts, shingles and poles. Leaves are 1/8 to 1/4 inch long and overlapping. Preferred food and cover for white-tailed deer.

EASTERN RED CEDAR (*Juniperus virginiana*)



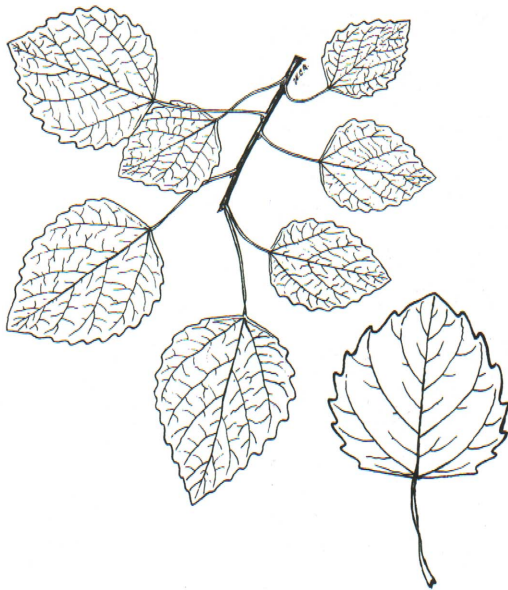
Eastern Red Cedar – Really a Juniper not a cedar. Used for cedar chests because of odor and color. Cones are dark blue and berry-like and have a sweet resinous taste. Good bird food.

TREMBLING ASPEN (*Populus tremuloides*)



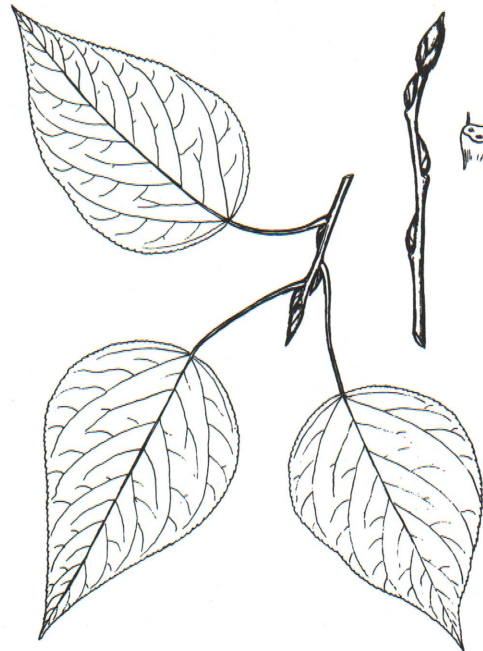
Trembling Aspen – Commonly called “popple” or “poplar”. Leaves are round and “quake” in the slightest breeze. Tree enjoyed by deer and beaver. Excellent pulpwood tree.

LARGE-TOOTHED ASPEN (*Populus grandidentata*)



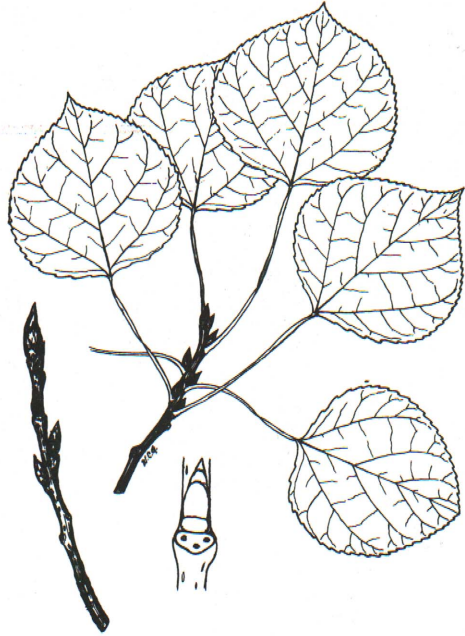
Large-Toothed Aspen – Similar to trembling Aspen only leaf has large coarse margin. Leaf stem also flat which causes quaking in a breeze. Tree bark is more yellowish in color than trembling Aspen. Best of the aspens for lumber and pulpwood.

BALSAM POPLAR (*Populus balsamifera*)



Balsam Poplar – Balm of Gilead, tacamahac, are other common names of balsam poplar. Leaf is 3 to 6 inches long. Buds are brown and very resinous and fragrant.

EASTERN COTTONWOOD (*Populus deltoides*)



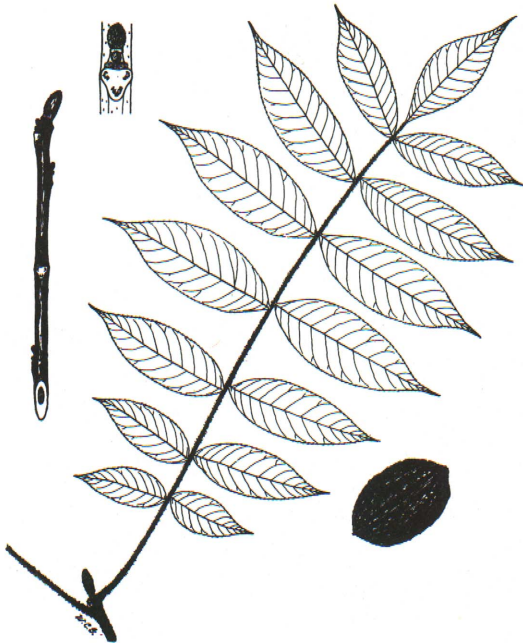
Eastern Cottonwood - Leaf heart shaped, 3 to 5 inches long. Planted as a street and shade tree. Tree grows fast and limited in use. Used for boxes, excelsior, crates, and baskets.

BLACK WILLOW (*Salix nigra*)



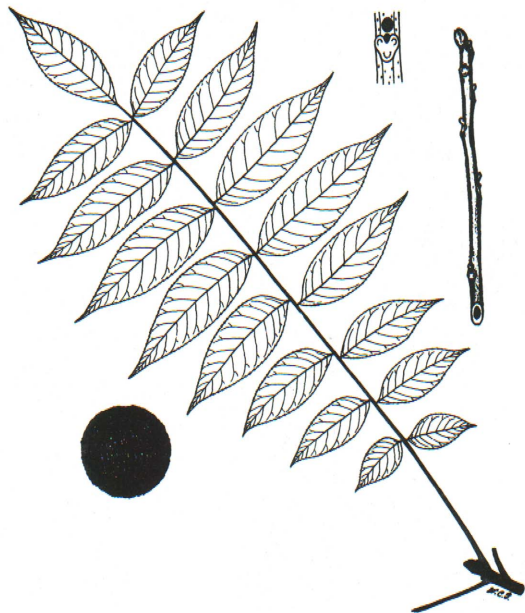
Black Willow - Grows along banks of streams and bottomlands close to water. Leaves lance shaped and 3 to 6 inches long. 1/4 to 5/8 inch wide. Small amounts of this wood are used for artificial limbs.

BUTTERNUT (*Juglans cinerea*)



Butternut - Also known as white walnut. Leaves are 15 to 30 inches long, with 11 to 17 in. leaflets. Fruit is an oblong 2 - 2-1/2 inch nut. Tolerates more northerly climate than black walnut. Wood of very little value. Twigs have a chocolate colored chambered pith.

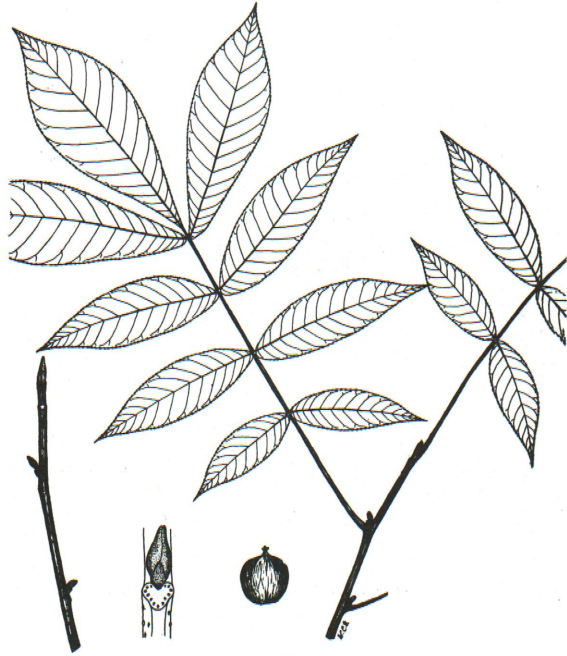
BLACK WALNUT (*Juglans nigra*)



Black Walnut - Queen of American cabinet woods. Also used for gun stocks. Nuts are good for cakes and cookies. Leaves are 12 to 24 inches long. Twigs have a pale brown chambered center.

BITTERNUT HICKORY

(*Carya cordiformis*)



Bitternut Hickory – At all seasons bitternut hickory can be identified by bright, yellow, granular buds. Leaves 6 to 10 inches long with 7 to 11 leaflets. Fruit too bitter to eat.

SHAGBARK HICKORY

(*Carya ovata*)



Shagbark Hickory – Stout twigs and gray bark which hangs loosely helps to identify this tree. Leaves 8 to 14 inches long with usually 5 leaflets. The nuts are edible. The wood makes good tool handles.

YELLOW BIRCH

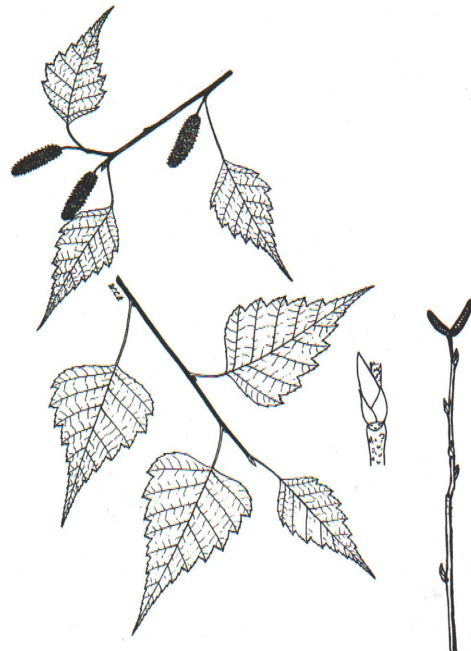
(*Betula alleghaniensis*)



Yellow Birch – Most valuable of all birches. One of the principal members of the climax beech-birch-maple forest association. Identified by amber-yellow to silvery-yellowish-gray bark which peels off in thin film-like curls. Widely used for fancy veneer.

GRAY BIRCH

(*Betula populifolia*)



Gray Birch – Also called white birch and poplar birch. Leaves are triangle-shaped. 2 to 3 inches long. Bark is tight and chalky-white with dark triangular-shaped blotches below branches.

PAPER BIRCH

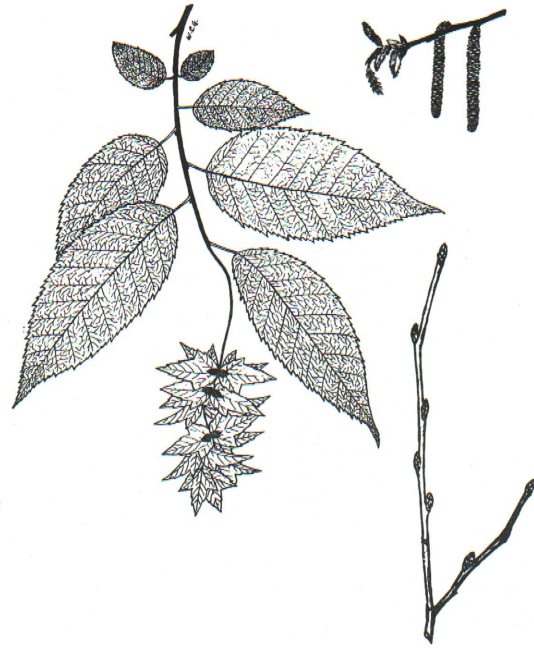
(Betula papyrifera)



Paper Birch – Known as canoe birch and white birch. Creamy-white bark which peels off in thin papery layers exposing orange-colored inner bark. Wood used for toothpicks and spools.

AMERICAN HORNBEAM

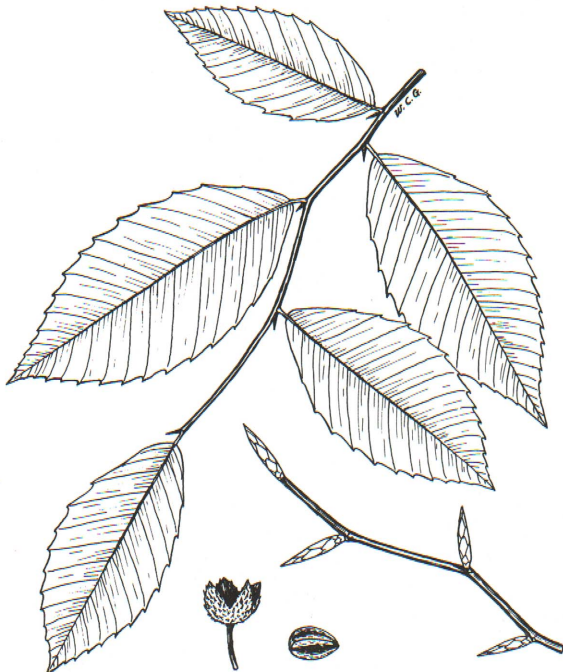
(Ostrya virginiana)



American Hornbeam – Distinguished by small, contorted and vertically fluted trunks which have smooth, dark bluish-gray bark. Leaves are alternate and from 2 to 4 inches in length. A small tree 10 to 30 feet in height. Used as an ornamental.

AMERICAN BEECH

(Fagus grandifolia)



Beech – The “initial” tree because of the smooth gray bark which is easy to carve upon. Leaves turn a bronzed-brown color in the fall. Beechnuts are enjoyed by white tailed deer and grouse.

NORTHERN RED OAK

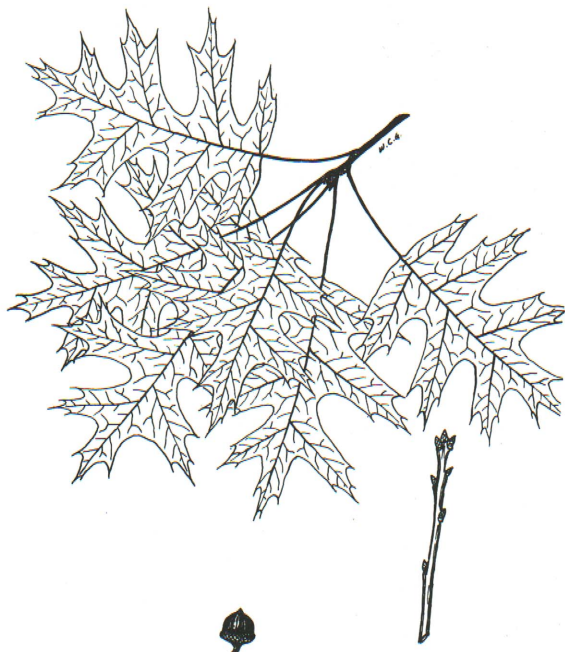
(Quercus rubra)



Northern Red Oak – Valuable shade tree along streets and about home grounds. Becomes a large tree 70 to 90 feet in height and 2 to 4 feet in diameter. Also valuable for furniture, cooperage and interior work.

PIN OAK

(Quercus palustris)



Pin Oak – Takes its name from the short, stiff, pin-like shoots with which its branches are studded. Attractive form, so used for ornamental purposes. Selected for shade tree use on highly acid soils.

BLACK OAK

(Quercus velutina)



Black Oak – Nearly black trunk with characteristic bright yellow inner bark. Uses are similar to red oak. Grows on dry or rocky slopes and ridges.

BUR OAK

(Quercus macrocarpa)



Bur Oak – Corky ridges on branchlets. Large acorns 1 to 2 inches with short stalks and having fringed margins. Also called overcup oak. Leaf almost divided in half by deep sinus.

WHITE OAK

(Quercus alba)



White Oak – One of the largest and most valuable trees growing in Michigan. Whiskey barrels, flooring and furniture are some uses. Leaves are 5 to 9 inches long with a smooth leaf margin.

SWAMP WHITE OAK

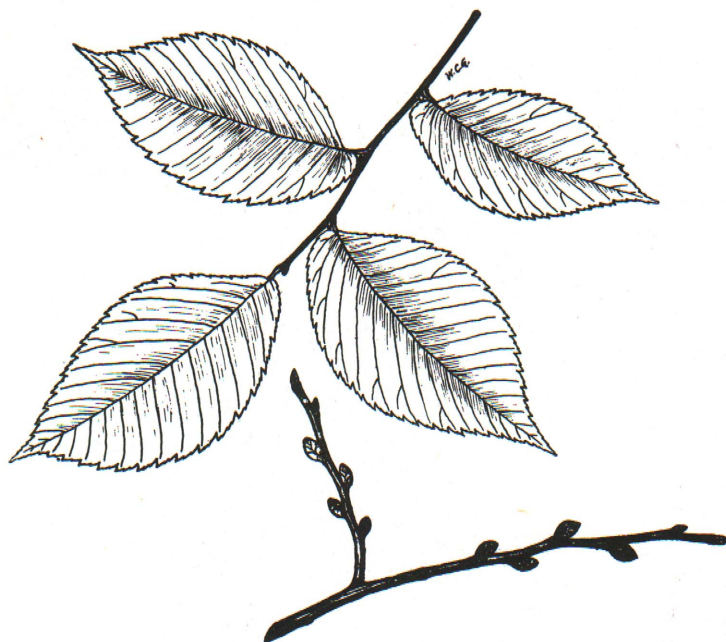
(*Quercus bicolor*)



Swamp White Oak – Dark brownish bark of the branches peels off and exposes light colored inner bark. Similar to white oak but wood is more knotty.

AMERICAN ELM

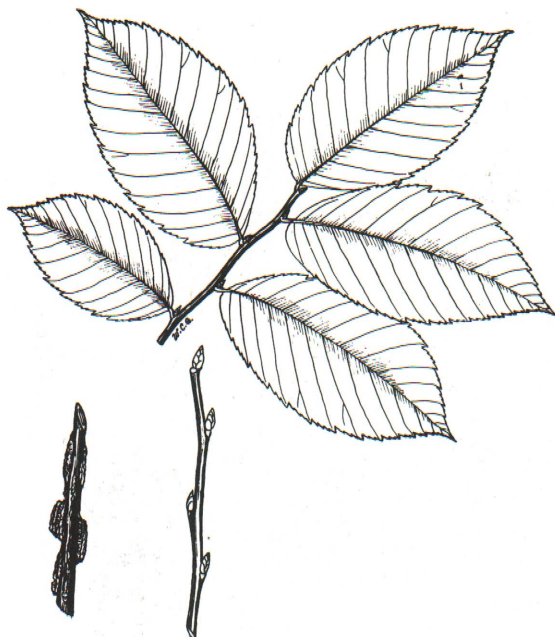
(*Ulmus americana*)



American Elm – The “umbrella shaped” tree common along Michigan roadways. The Dutch elm disease is threatening to eliminate this tree particularly in lower Michigan. Leaves oval shaped, and two sides are unequal.

ROCK ELM

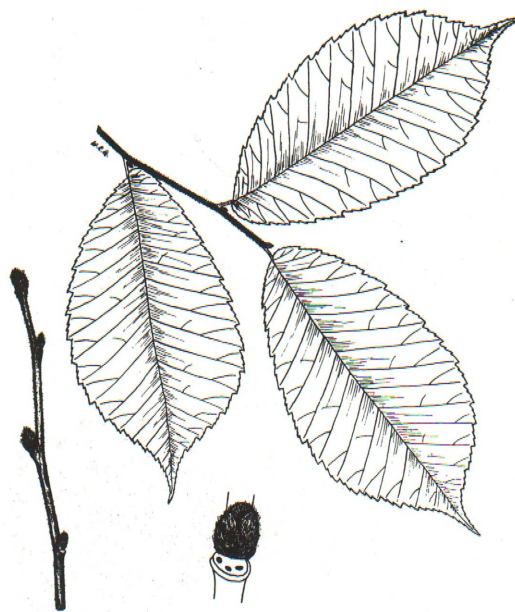
(*Ulmus thomasi*)



Rock Elm – Also called cork elm because of 1 to 4 parallel but discontinuous wings on branches. Leaves 2½ to 4½ inches long, pointed with unequal sides and smooth surface.

SLIPPERY ELM

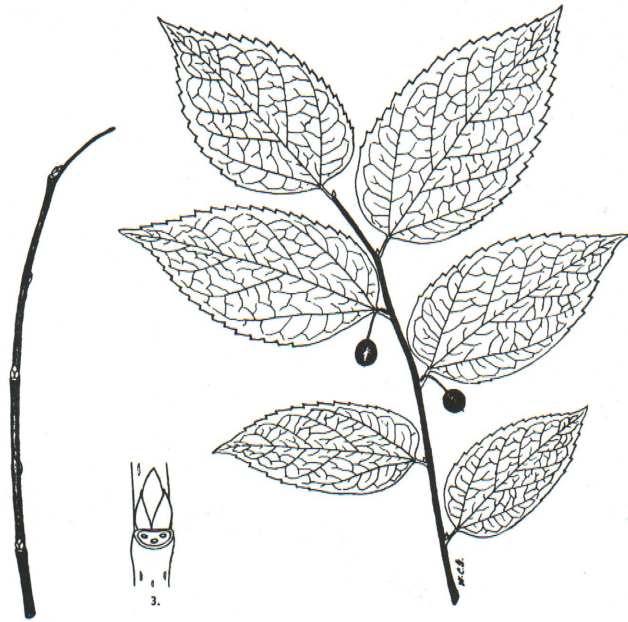
(*Ulmus rubra*)



Slippery Elm – Leaves 4 to 7 inches long, oval shaped. Leaf surface very rough to touch. Inner bark “slippery.”

HACKBERRY

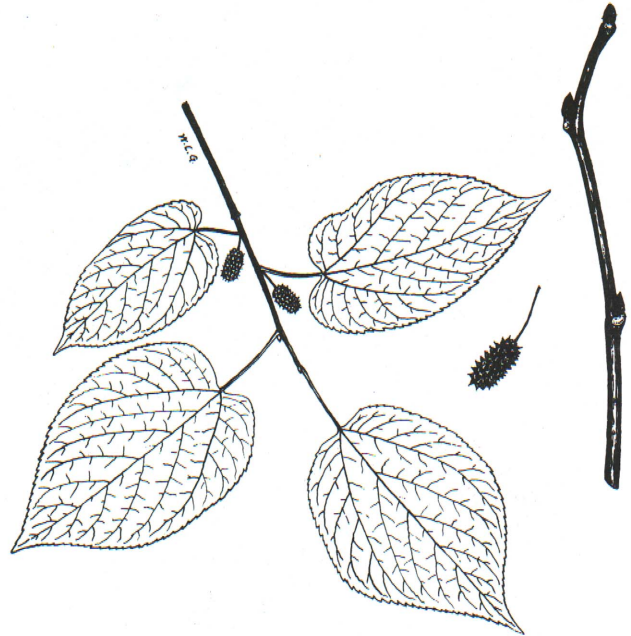
(*Celtis occidentalis*)



Hackberry – Leaves alternate, 2 to 4 inches long. Also called sugarberry. Fruits are pea shaped, dark purplish in color with a sweet taste similar to dates.

RED MULBERRY

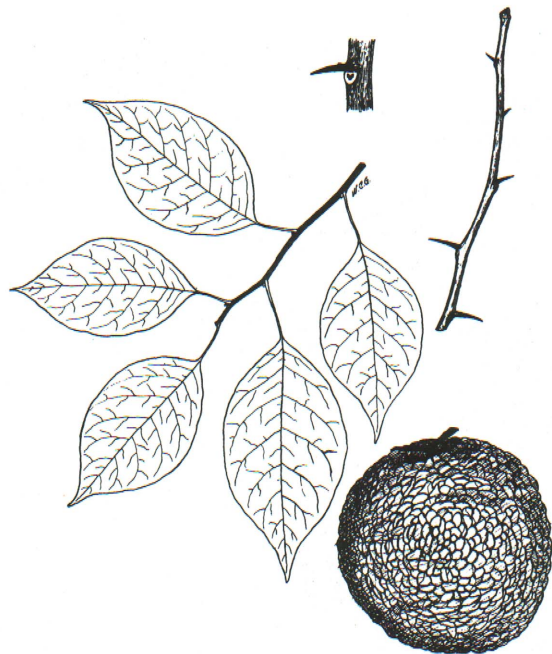
(*Morus rubra*)



Red Mulberry – Small tree seldom over 30 feet tall. The edible black fruit is enjoyed by robins, wood thrush, catbirds and cedar wax wings.

OSAGE - ORANGE

(*Maclura pomifera*)



Osage Orange – Planted for hedge rows. Fruit resembles pale green oranges, 3 to 5 inches in diameter. Orange colored wood sometimes used for making archery bows.

TULIP - TREE

(*Liriodendron tulipifera*)



Tulip Tree – Also called tulip poplar. Flowers resemble tulips so the name – tulip tree. Fine wood used for furniture, musical instruments, etc. Bees make excellent honey from the flower of this tree.

SASSAFRAS

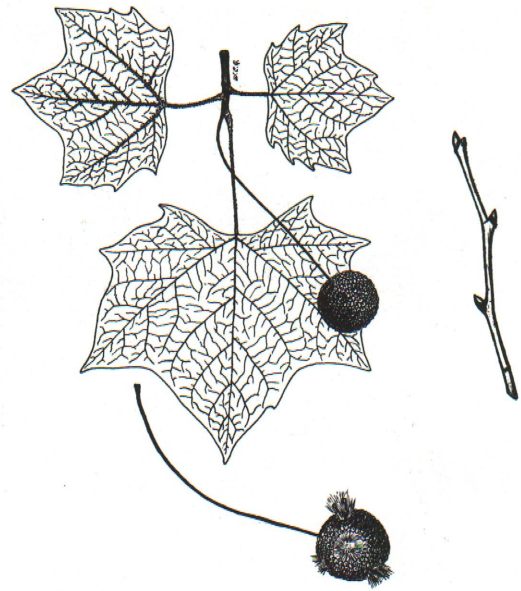
(*Sassafras albidum*)



Sassafras – Noted for sassafras tea which is brewed from bark of roots. Three shaped leaves, unlobed, 3-lobed and 2-lobed or mitten shaped.

SYCAMORE

(*Platanus occidentalis*)



Sycamore – Mottled bark and scaly. Large leaf resembling a maple. Fruit, ball-shaped 1 inch in diameter on a slender stalk.

AMERICAN MOUNTAIN-ASH

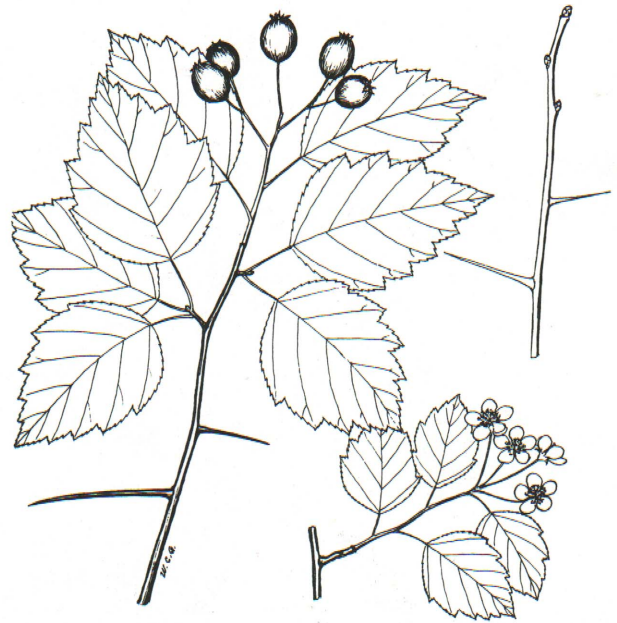
(*Sorbus americana*)



American Mountain Ash – Brilliant orange-red colored berries in clusters most characteristic of this tree. The fruit is enjoyed by many birds. An ornamental tree.

VARIABLE THORN

(*Crataegus macrasperma*)



Variable Thorn – A shrub or small tree with white flowers in May. Branches thorny, pale brown with scaly bark.

WILD BLACK CHERRY

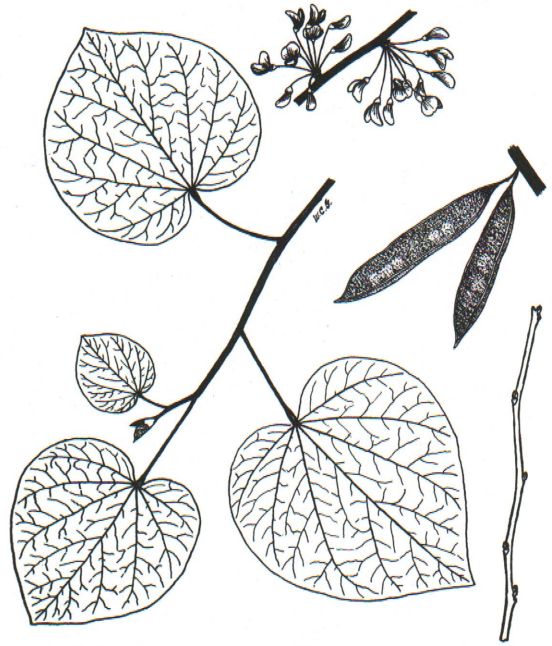
(*Prunus serotina*)



Wild Black Cherry – Valuable tree used for furniture, solidly or as a veneer. Fruits are purplish black and enjoyed by man and animal alike.

REDBUD

(*Cercis canadensis*)



Redbud – Also called Judas tree. Tree is 15 to 30 feet in height. An ornamental tree which has a pretty lavender-rose pea-like blossoms near Easter time before leaves come out. Leaves are heart shaped.

KENTUCKY COFFEE-TREE (*Gymnocladus dioica*)



Kentucky Coffee Tree – Leaves are alternate and twice compounded. The fruit is a broad thick, flattened, reddish-brown pod, 4 to 10 inches long.

HONEY LOCUST

(*Gleditsia triacanthos*)



Honey Locust – Usually trunk and large branches have thick stout branched spines. Thornless variety planted for ornamental use. Fruit, like Kentucky coffee tree, is a 10 to 18 inch flat pod.

STAGHORN SUMAC

(*Rhus typhina*)



Staghorn Sumac – Stout, dense, velvety, twigs, makes this small tree resemble antlers of the male deer in velvet. Sumac seldom grows over 20 feet in height. Wood of no commercial value.

STRIPED MAPLE

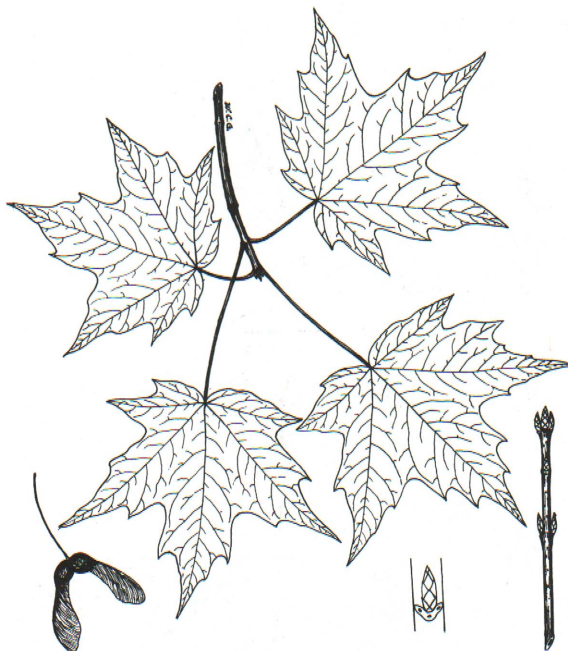
(*Acer pensylvanicum*)



Striped Maple – Green to reddish brown bark with conspicuous whitish lines or streaks. Also called moosewood or goosefoot maple. Leaves are 5 to 6 inches long and nearly as broad.

SUGAR MAPLE

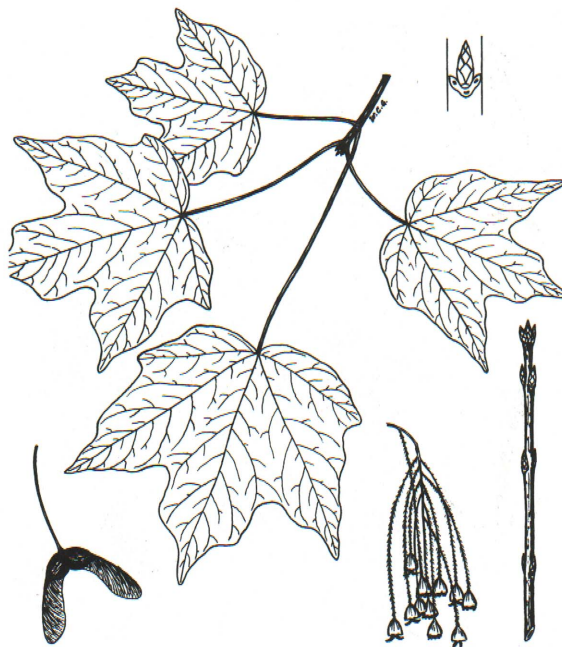
(*Acer saccharum*)



Sugar Maple – The "maple syrup" tree. Also used in furniture, flooring, novelties, and spools and bobbins. Abnormalities may cause "curly maple" or birdseye maple grain which is valuable for cabinets.

BLACK MAPLE

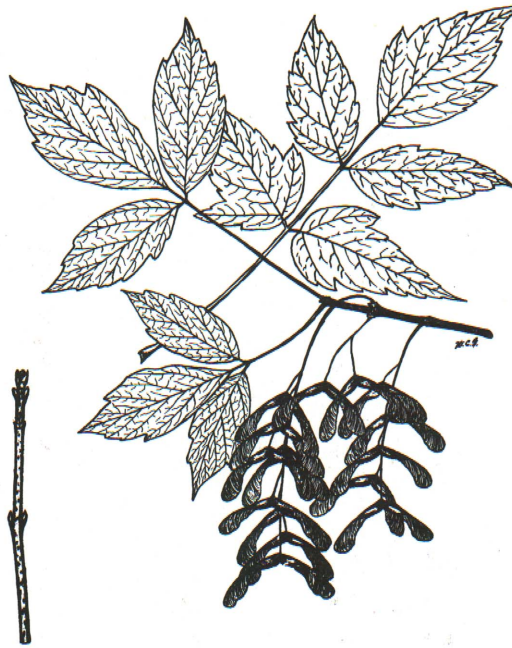
(*Acer nigrum*)



Black Maple – Resembles sugar maple but bark is darker with leaves that droop and 3-lobed. Sugar maple and black maple lumber are both marketed as "hard maple."

BOX-ELDER

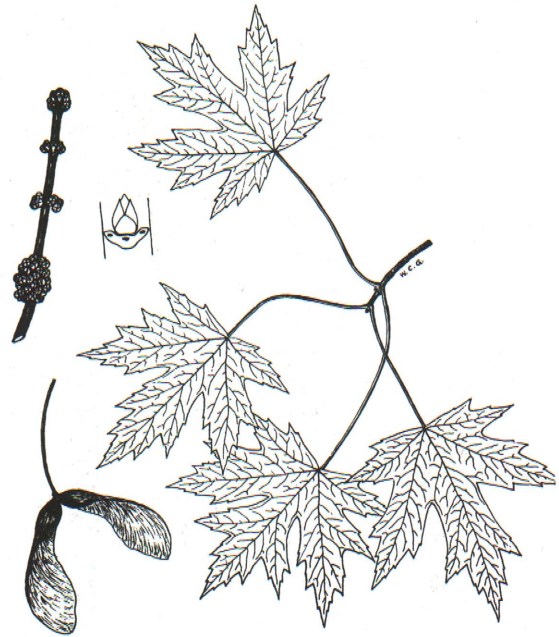
(*Acer negundo*)



Boxelder – A unique maple because leaves are pinnately compound with 3 to 5 leaflets. Twigs are stout and purplish in color with a white bloom which is easily rubbed off,

SILVER MAPLE

(*Acer saccharinum*)



Silver Maple – Extensively planted as an ornamental tree along streets. Leaf is silver on top side with white underneath, deeply 5-lobed. Fruits or samara are largest of maple 1½ to 2½ inches long.

RED MAPLE

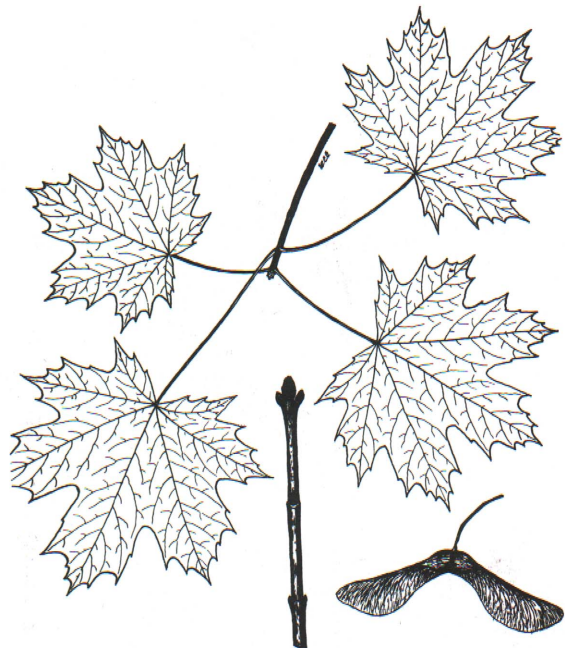
(*Acer rubum*)



Red Maple – Twigs are slender, and bright red in winter. Often called soft maple. Characteristically leaves are a brilliant red in fall.

NORWAY MAPLE

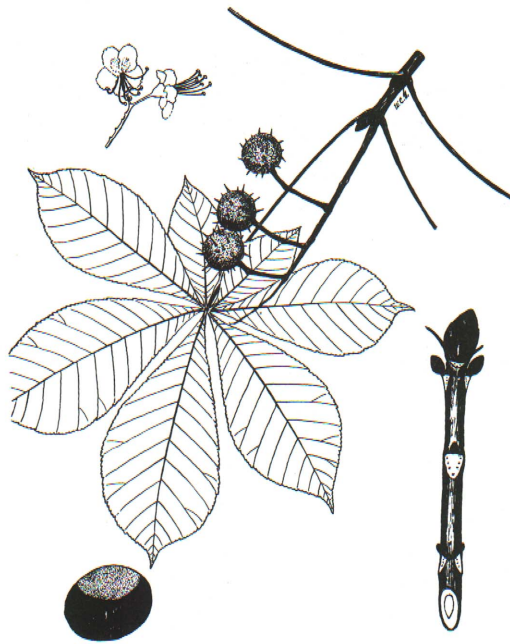
(*Acer platanoides*)



Norway Maple – A native of Europe. Planted in U. S. for shade tree use. Well adapted to city smoke and dusts. Holds leaves well into fall.

HORSE CHESTNUT

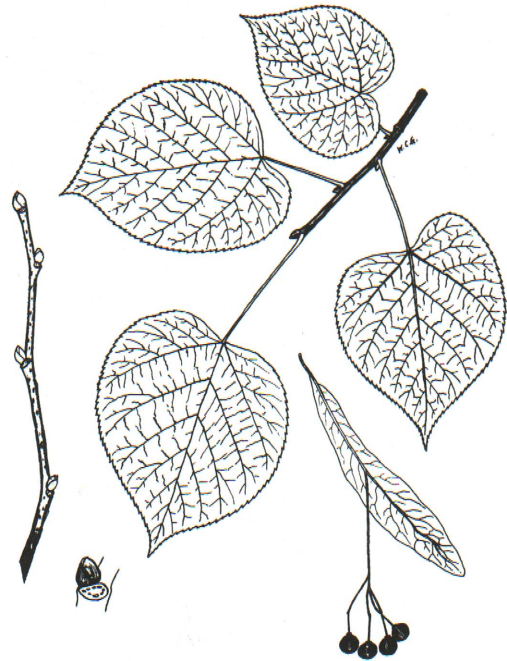
(*Aesculus hippocastanum*)



Horse Chestnut – “Buckeye” to many people. Planted as a shade tree. Fruit is a smooth lustrous brown nut. Leaflets are 4 to 6 inches long. Some superstitious people carry the nuts in their pockets to prevent rheumatism. Nuts are not edible.

AMERICAN BASSWOOD

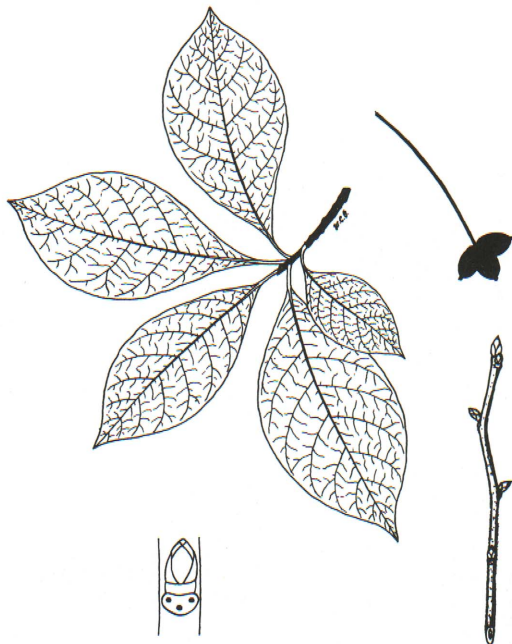
(*Tilia americana*)



American basswood – “American linden” is the common name. Sprouts freely. Leaves are heart shaped and are 4 to 6 inches long. Makes excellent honey.

BLACK GUM

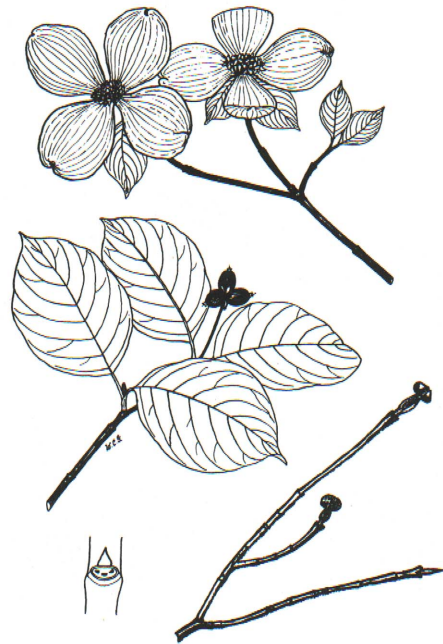
(*Nyssa sylvatica*)



Black Gum – Also called black tupelo. Leaves are thick, 2 to 5 inches long with wedge-shaped bases. Leaves tend to cluster in fives.

FLOWERING DOGWOOD

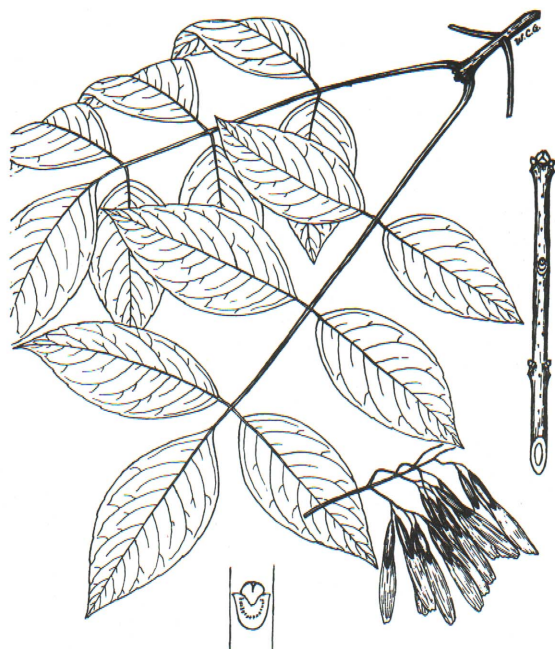
(*Cornus florida*)



Flowering Dogwood – A flowering tree seldom reaching any commercial size. Extensively planted as ornamental. Flowers shaped like a cross and blooms at Easter time.

WHITE ASH

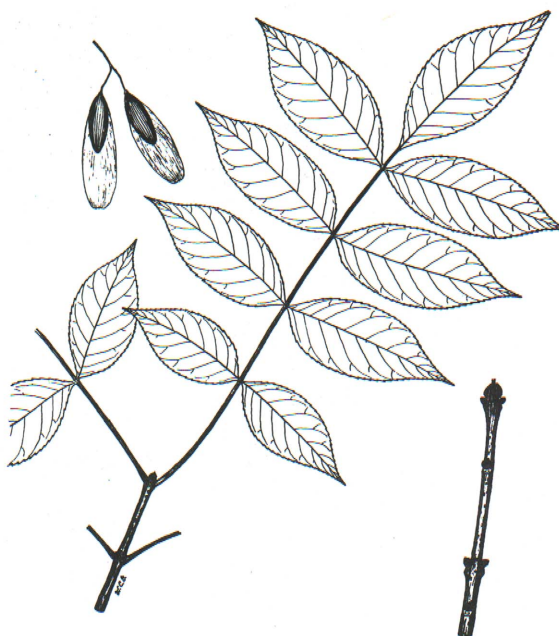
(*Fraxinus americana*)



White Ash – Baseball bats, handles, snowshoes, and skis are common products made from this wood. A compound leaf with 5 to 9 leaflets (usually 7).

BLACK ASH

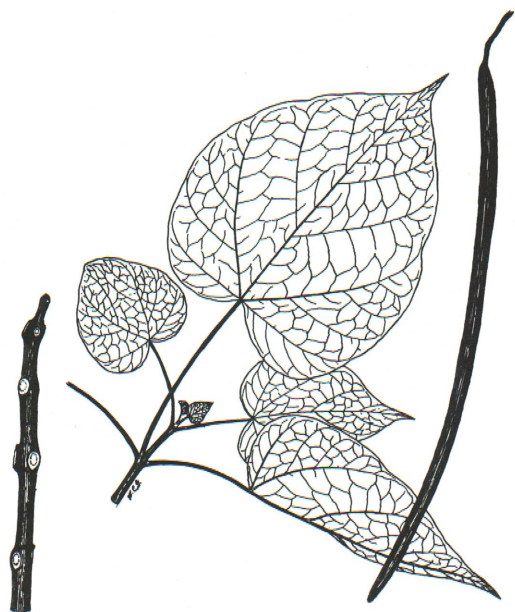
(*Fraxinus nigra*)



Black Ash – Leaves are 10 to 16 inches long with 7 to 11 (usually 9) leaflets. Occupies wet, low areas. Used for basket making, barrel hoops, etc.

NORTHERN CATALPA

(*Catalpa speciosa*)



Northern Catalpa – Large 4 to 8 inch leaf, 3 to 5 inches wide. Fruits are 8 to 15 inches long, banana shaped, but less than 1/2 inch in diameter. Sometimes used for fence posts.

WHITE POPLAR

(*Populus alba*)



White Poplar – Leaves are dark-green above, and silvery white beneath. Leaf under-surface is white and wooly. Also called silver leaf poplar. Often seen around old residences in the country.

KEY TO COMMON NATIVE TREES OF MICHIGAN

I. Trees with needle-like or scale-like leaves; fruit a cone, or cone-like (conifers).

A. Leaves needle-like.

1. Leaves in bundles or on clusters.

a. Leaves in bundles

1. Leaves or needles in 5's White Pine

2. Leaves or needles in 2's

a. Leaves 4 - 6 inches long Red Pine

b. Leaves 1 - 2 inches long Jack Pine

b. Leaves in clusters, soft and flexible, shed in fall. Tamarack

2. Leaves not in bundles

a. Leaves flattened.

1. Leaves $\frac{1}{2}$ inch long, cones $\frac{1}{2}$ to $\frac{3}{4}$ inch and pendent Hemlock

2. Leaves $\frac{3}{4}$ inch long, cones 2 to 3 inches and erect Balsam Fir

b. Leaves four sided.

1. Branchlets smooth, needles ill-scented, 1-2 inch cones. White Spruce

2. Branchlets hairy, needles pleasantly scented short needle

$\frac{1}{2}$ - $\frac{3}{4}$ inch cones. Black Spruce

B. Leaves scale-like

1. Branchlets flattened in fan-like sprays, fruit reddish brown. Northern White Cedar

2. Branchlets 4 angled, not in fan-like sprays, fruit berry-like and dark blue. Red Cedar

II. Trees with broad, flat leaves of many shapes and patterns (broad leaf trees).

A. Leaves compound.

1. Opposite.

a. Palmately compound; seven leaflets Horse Chestnut

b. Pinnately compound.

1. Leaf margins entire or finely toothed, leaflets distinctly petioled; fruit a single samara. Ashes

2. Leaf margins coarsely toothed or lobed, leaflets somewhat petioled or sessile; fruit a double samara. Box-elder

2. Alternate.

a. Leaflets small, less than 2 inches long; fruit a pod, branches with thorns. Honey Locust

b. Leaflets large, more than 2 inches long.

1. Fruit, a pod, 4 to 10 inches long, reddish brown. Kentucky Coffee Tree

2. Fruit a drupe, $\frac{3}{16}$ inches on an erect conical cluster Staghorn Sumac

3. Fruit a nut; twig pith chambered.

a. Pith, buff colored Black Walnut

b. Pith, chocolate colored Butternut

4. Fruit a nut; twig-pith homogeneous. True Hickories

B. Leaves simple.

1. Opposite

a. Leaves lobed (star-like); fruit a samara Maples

b. Leaves not lobed

1. Large, heart-shaped; fruit a cylindrical pod 6 to 14 inches long. Catalpa

2. Small to medium, ovate; fruit a red berry, borne in clusters Dogwood

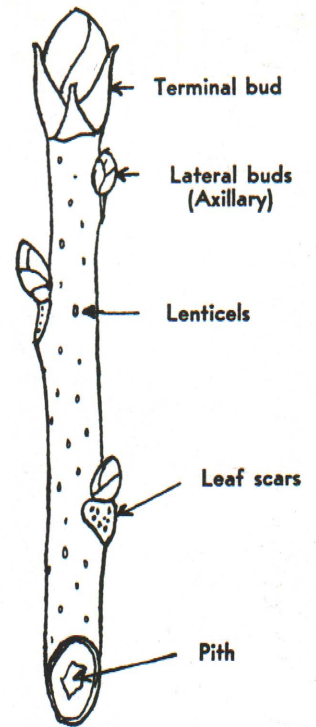
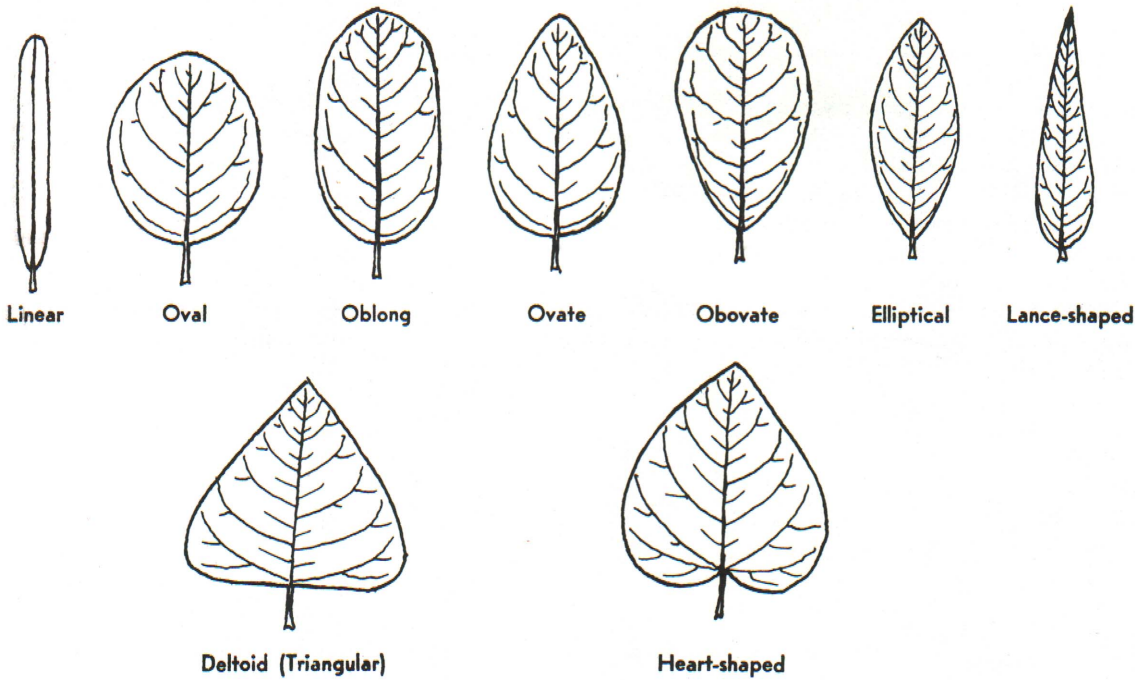
2. Alternate

a. Leaves lobed or notched.

1. Leaves as wide as they are long.

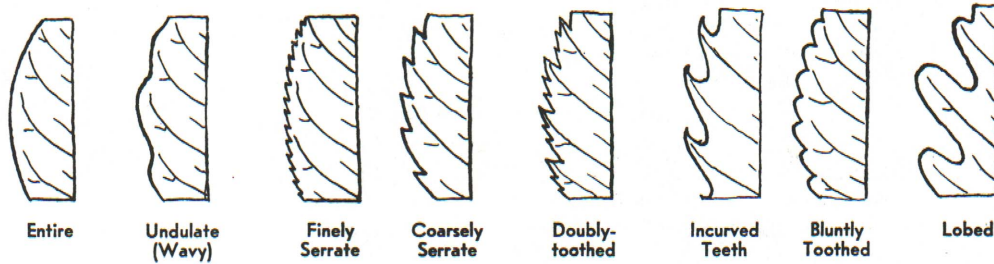
a. Twigs and leaves aromatic, leaves of three forms; entire, mitten-shaped and 3 lobed. Sassafras

- b. Twigs and leaves not aromatic, leaves of one form
 - 1. Leaf margin entire, four lobed; flower tulip-shaped. **Yellow Poplar**
 - 2. Leaf margins not entire.
 - a. Leaf margin finely to coarsely toothed, petioles **Cottonwood**
laterally flattened. **Aspen, Poplars**
 - b. Leaf mitten shaped, twigs zig-zag; fruit edible **Mulberry**
 - c. Leaf one form, pointed lobes, hollow petiole at base;
old bark peels in thin curled pieces. **Sycamore**
- 2. Leaves longer than wide.
 - a. Leaves medium to large, fruit an acorn
 - 1. Leaves bristle tipped, inside of acorn shell hairy; kernel bitter **Red or Black Oaks**
 - 2. Leaves rounded; inside of acorn shell smooth; kernel sweet. **White Oaks**
 - b. Leaves not lobed or notched.
 - 1. Leaves with unequal bases, one-sided as to midrib position
 - a. Margins doubly serrate. **Elms**
 - b. Margin not doubly serrate.
 - 1. Leaf heart-shaped; fruit a small woody nut subtended
by a leaf like blade. **Basswood**
 - 2. Leaf ovate; fruit a small dark red drupe, corky bark **Hackberry**
 - 2. Leaves with equal-base (not one-sided)
 - a. Leaf margin entire
 - 1. Leaf heart-shaped; fruit a legume **Redbud**
 - b. Leaf margin not entire.
 - 1. Spiny, toothed or bristle-like at the end of each vein;
fruit a nut.
 - a. Bark smooth, blue gray; terminal bud long, pointed;
fruit a small triangular nut. **Beech**
 - 2. Margin finely or doubly serrate.
 - a. Margin doubly serrate.
 - 1. Bark white and peeling **White Birch**
 - 2. Bark white and tight to tree **Gray Birch**
 - 3. Bark yellow and peeling, wintergreen taste. **Yellow Birch**
 - 3. Margins not doubly serrate.
 - a. Fruit fleshy, leaves finely toothed, fruit a one-seeded drupe **Cherry**
 - b. Fruit not fleshy, leaf petiole short, leaves lance shaped
with long tapered tips. **Willow**

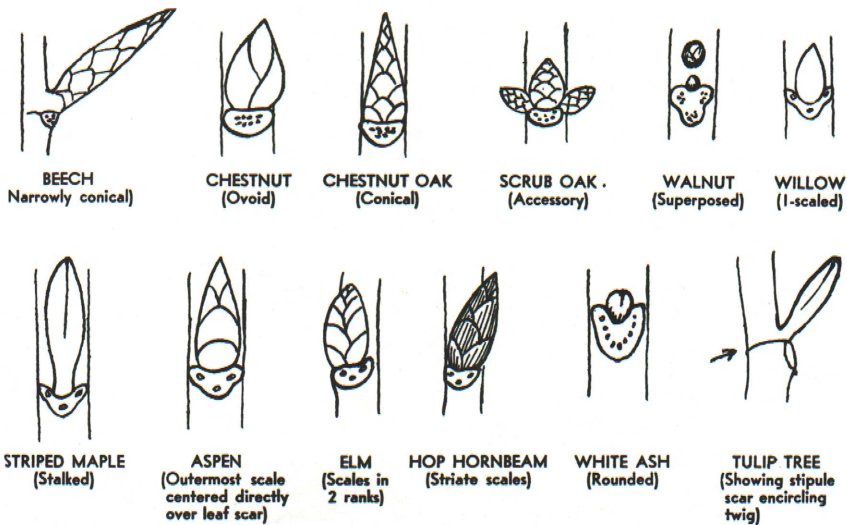


TWIG WITH A TERMINAL BUD
(Hickory)

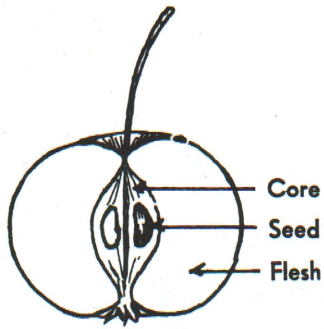
SHAPES OF LEAVES



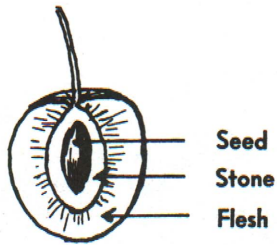
TYPES OF LEAF MARGINS



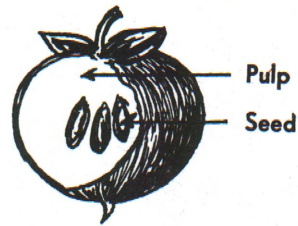
TYPES OF BUDS



POME
(Wild Crab Apple)



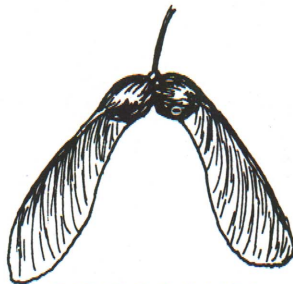
DRUPE
(Cherry)



BERRY
(Persimmon)



SAMARA
(Slippery Elm)



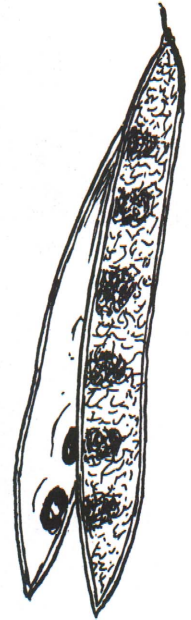
DOUBLE SAMARA
(Sugar Maple)



SAMARA
(White Ash)



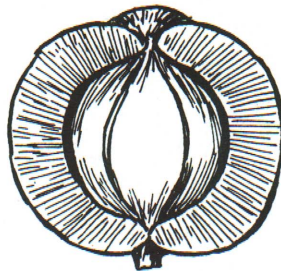
CAPSULES
(Mountain Laurel & Willow)



LEGUME
(Common Locust)



ACORN
(Red Oak)



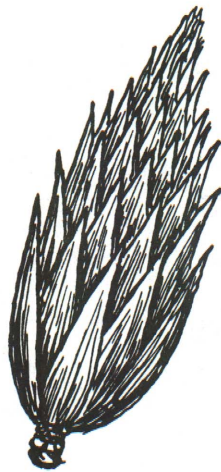
NUT WITH DEHISCENT HUSK
(Shagbark Hickory)



NUTLET
(Hornbeam)



CONE
(Hemlock)



AGGREGATE OF SAMARAS
(Tulip Tree)



STROBILE: WINGED NUTLET
(Gray Birch)

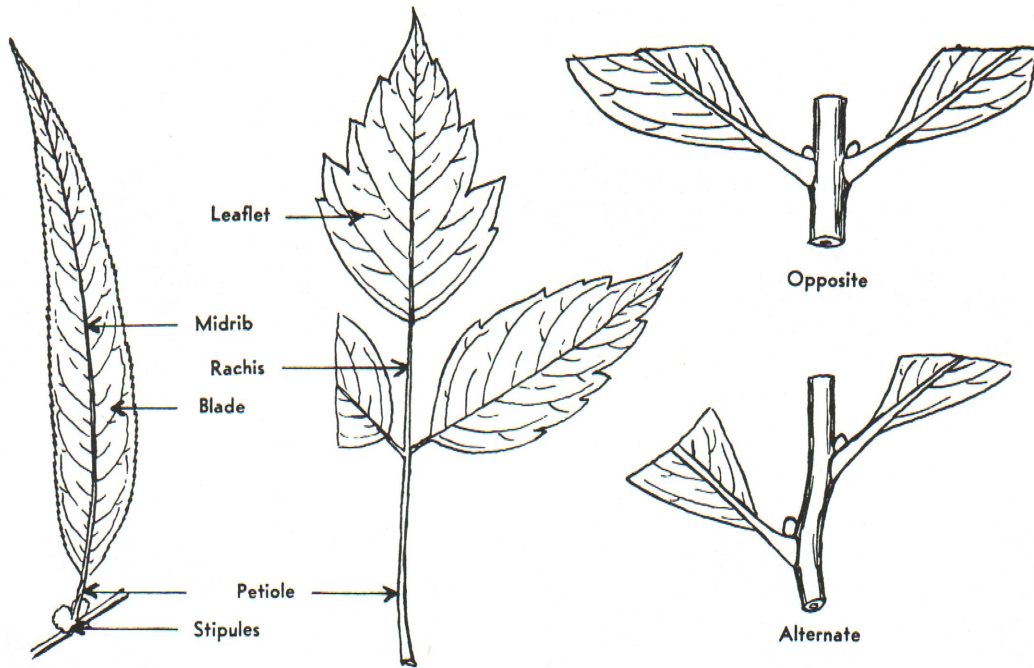


MULTIPLE FRUIT OF SMALL DRUPES
(Red Mulberry)



AGGREGATE OF FOLLICLES
(Magnolia)

TYPES OF FRUITS



PARTS, TYPES, AND POSITIONS OF LEAVES

