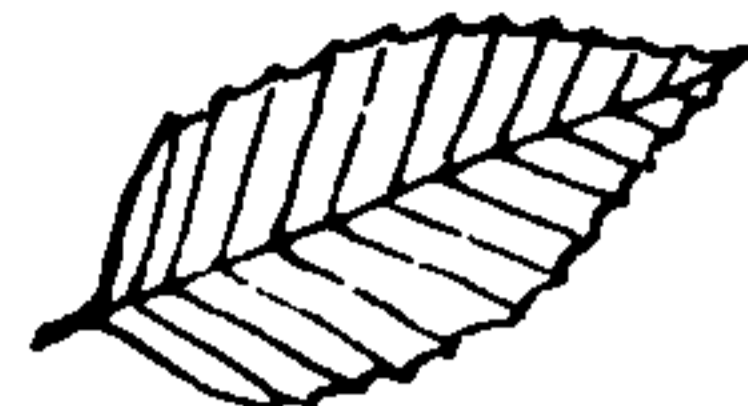












### C. Leaves Alternate and Simple (Continued)

BEECH <i>Fagus grandifolia</i>		Leaves 3-6" long, shiny, pointed, tapered base, straight veined, each vein ending in a sharp tooth on margin; seeds edible, contained in a spiny bur; bark silver-gray, smooth.
WHITE OAK <i>Quercus alba</i>		Leaves 5-9" long, with 5-9 rounded or wavy lobes, and shallow or deep rounded spaces in between; acorn covered one-third or less by cup; bark ash-gray to light brown, flaky.
BUR OAK <i>Quercus macrocarpa</i>		Leaves 6-12" long, lobes rounded, upper half of leaf broad, deeply cut near middle; acorn covered one-half or more by bur-fringed cup; bark brown or gray with long vertical ridges.
RED OAK <i>Quercus rubra</i>		Leaves 5-9" long, dull, lobes bristle-tipped, generally extending about half way to center; acorn covered one-quarter or less by shallow cup; bark brown to black, ridges flattened, smooth on upper trunk, inner bark pink.
BLACK OAK <i>Quercus velutina</i>		Leaves 5-7" long, shiny, lobes bristle-tipped, variable in length, but usually extending more than half way to center; acorn covered about one-third by loose-scaled cup, bark black, ridges rough, rounded; inner bark yellow.
PIN OAK <i>Quercus palustris</i>		Leaves 3-6" long, shiny, lobes bristle-tipped, variable in length, often extending nearly to center; acorn enclosed only at base by flat cup; bark black, shallowly grooved or smooth; branches slender, lower ones horizontal or drooping.

### D. Leaves Alternate and Compound

SHAGBARK HICKORY <i>Carya ovata</i>		Leaves composed mostly of 5 tapered, finely toothed leaflets, the three upper ones largest; fruit 1-2" in diameter, husk thick, separating into 4 sections, nut edible; bark light gray, with loosely attached outcurving stripes.
BITTERNUT HICKORY <i>Carya cordiformis</i>		Leaves composed of 7-9 tapered, finely toothed leaflets, more or less equal in size; fruit about 1" in diameter, husk thin, opening only half way, nut bitter, bark gray, tight, with narrow, flat interlacing ridges.
BLACK WALNUT <i>Juglans nigra</i>		Leaves 1-2" long, composed of 15-23 finely toothed leaflets; fruit 1 1/2-2" in diameter, containing an edible nut; bark with interlacing, rounded ridges, deep brown, chocolate brown when shaved.
BLACK LOCUST <i>Robinia pseudoacacia</i>		Leaves composed of 7-19 oblong, blunt, smooth margined leaflets; twigs with short prickles; flowers white, fragrant, in drooping clusters; seeds in short, flat pods; bark thick, coarse, dark reddish brown.
HONEY LOCUST <i>Gleditsia triacanthos</i>		Leaves often branched into several stems each with 15-30 leaflets, 1-2" long, minutely toothed; seeds in a flat, twisted reddish-brown pod, 12-18" long; bark gray, broken into broad flat plates; thorns on branches and trunk. (A thornless variety is commonly planted.)



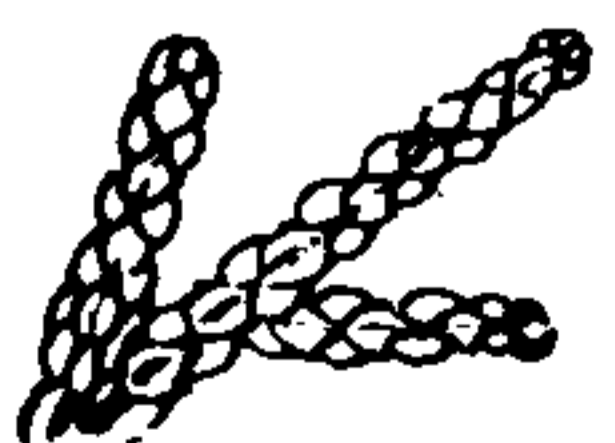

## MICHIGAN DEPARTMENT OF NATURAL RESOURCES FOREST MANAGEMENT DIVISION SIMPLE KEY TO MICHIGAN TREES

### I. Conifers or Evergreens

#### A. Leaves Like Needles

WHITE PINE <i>Pinus strobus</i>		Needles 5 in a cluster, 3-5" long, blue-green, soft; cones 4-8" long, with flexible scales; bark on young trunks smooth, greenish-gray, on old trunks gray and deeply furrowed; branches whorled.
RED PINE <i>Pinus resinosa</i>		Needles in pairs, 4-8" long, straight, flexible; cones egg-shaped, 2" long; bark reddish-gray to red, flaky; branches whorled. (AUSTRIAN PINE - <i>P. nigra</i> : needles same length as red pine, stiff, sharp, twisted; bark gray-black; not native.)
JACK PINE <i>Pinus banksiana</i>		Needles in pairs, 1-1 1/2" long, often twisted; cones 1-2" long, lopsided, remaining for many years; bark brown to black, scaly or furrowed. (SCOTCH PINE - <i>P. sylvestris</i> : needles slightly longer than jack pine; bark orange-red, not native.)
TAMARACK <i>Larix laricina</i>		Needles light blue-green, soft, single along new twigs, in clusters on short spurs on older branchlets; needles drop in autumn, spurs remain; cones 1/2" long, erect; bark reddish-brown, scaly. Also called larch.
BALSAM FIR <i>Abies balsamea</i>		Needles fragrant, flattened, blunt, 1/2 to 1 1/4" long, not stalked, two whitish parallel lines underneath, lying flat or up-curved; bark ash-gray, smooth, containing pitch blisters; top of tree spire-like; branches whorled.
HEMLOCK <i>Tsuga canadensis</i>		Needles 1/2" long, flat, blunt, short-stalked, two whitish parallel lines underneath; cones 1/2" long, hanging at ends of twigs; bark cinnamon brown, deeply grooved on large trees.
SPRUCE <i>Picea</i> species		Needles 1/4 to 3/4" long, L-angled, sharp, on raised bases; bark scaly. (BLACK SPRUCE - <i>P. mariana</i> : cones nearly round, 3/4" in diameter. WHITE SPRUCE - <i>P. species glauca</i> : cones 1-2" long. NORWAY SPRUCE - <i>P. abies</i> : cones 4-6" long; not native.)





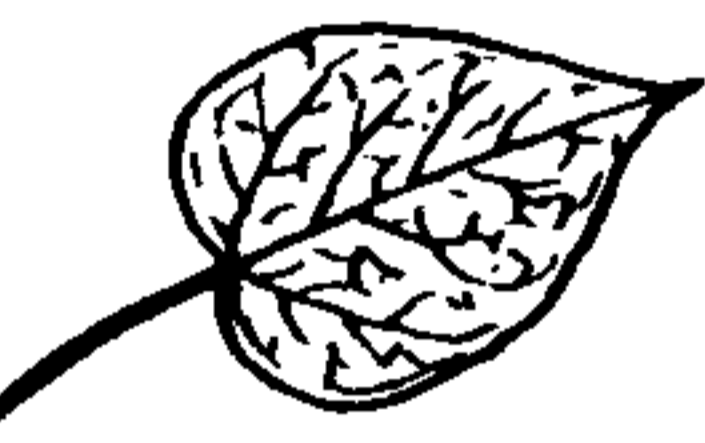
#### B. Leaves Like Scales

NORTHERN WHITE CEDAR <i>Thuja occidentalis</i>		Leaves small, flattened, overlapping scales, fragrant when crushed; cones 1/2" long, erect; bark gray-brown with narrow, interlacing ragged ridges. Also called arborvitae. Many ornamental varieties.
RED CEDAR <i>Juniperus virginiana</i>		Leaves small, overlapping, tight or sharp-tipped scales; fruit a pea-sized blue berry; bark reddish brown, shreddy. Also called juniper. Many ornamental varieties.






## II. Broadleaves or Deciduous Trees

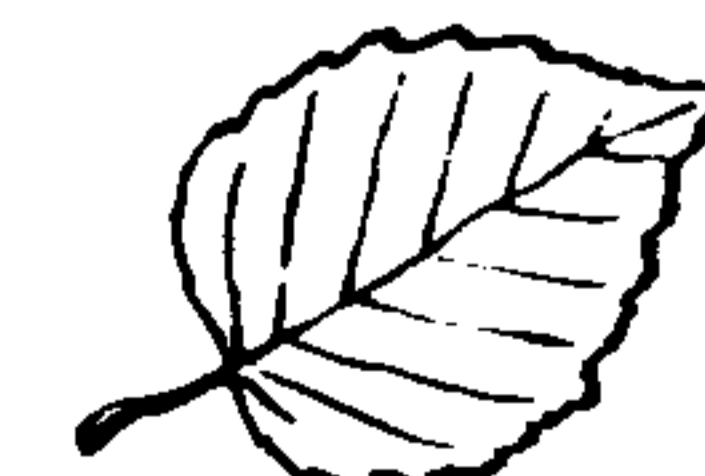

### A. Leaves Opposite and Simple

SUGAR MAPLE <i>Acer saccharum</i>		Leaves 3-5" long, as wide or wider, with 5 (or 3) pointed lobes, scattered secondary points along margin; seeds in pairs, wings parallel or slightly spreading, drop in autumn; bark on trunks gray, unevenly furrowed.
RED MAPLE <i>Acer rubrum</i>		Leaves 3-5" long, about as wide, usually with 3 pointed lobes, margin fine-toothed; leaf stem red; seeds in pairs, wings at right-angles, drop late spring; bark on twigs red, on trunk gray, flaky.
SILVER MAPLE <i>Acer saccharinum</i>		Leaves 3-6" long; about as wide, deeply cut into 5 pointed lobes, margins coarse-toothed, silvery green underneath; seeds in pairs, wings in-curved, drop in late spring; bark on trunk light gray to brown, flaky.
NORWAY MAPLE <i>Acer platanoides</i>		Leaves 5-8" long, often wider, with 5 pointed lobes and scattered secondary points; leaf stem with milky juice; seeds in pairs, wings wide-spread, drop in autumn; bark on trunk dark brown, finely furrowed. Common street tree. Not native.
CATALPA <i>Catalpa speciosa</i>		Leaves opposite or whorled, 8-12" long, heart-shaped, margin smooth; flowers white, showy; seeds in brown, slender, cigar-shaped pods 10-20" long; bark red-brown to gray-brown; broken into thick scales. Not native.

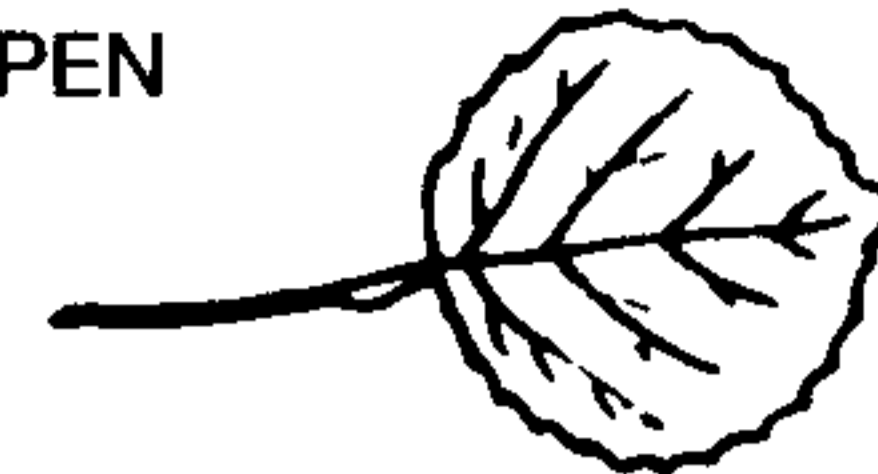


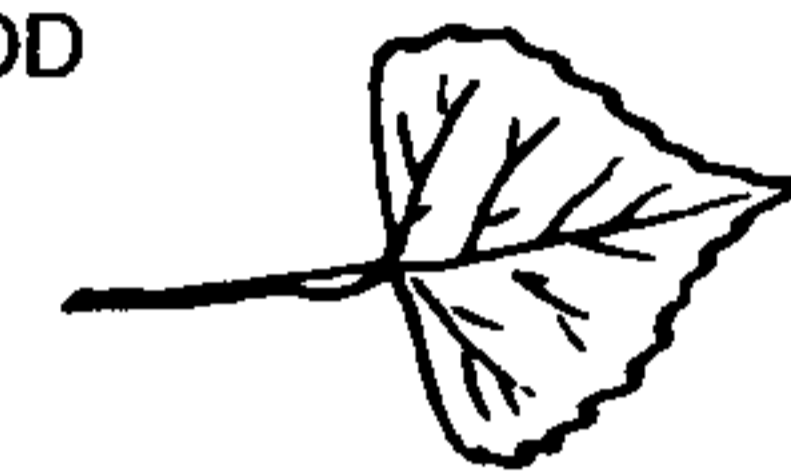


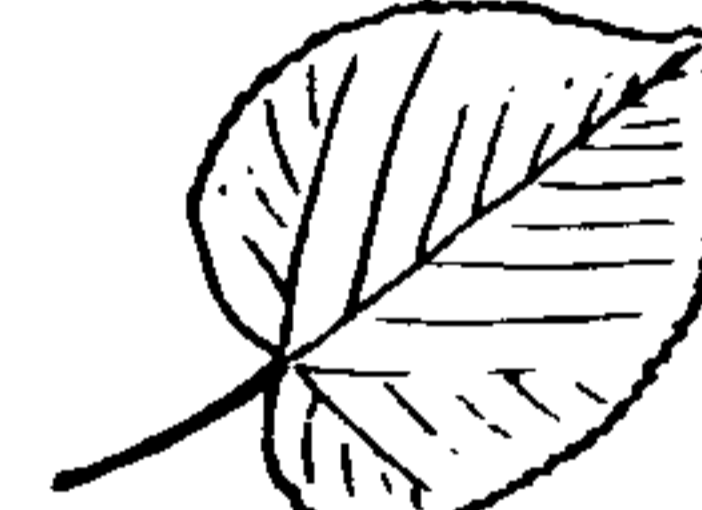
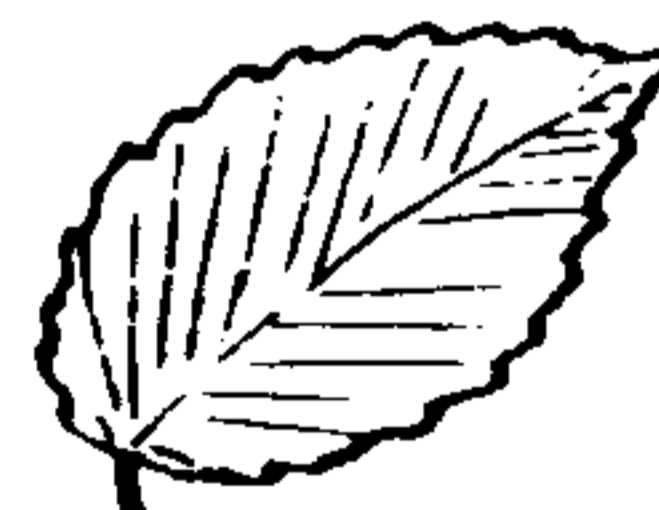



### B. Leaves Opposite and Compound

WHITE ASH <i>Fraxinus americana</i>		Leaves with usually 7 short-stalked, smooth or slightly toothed leaflets; seeds with paddle-shaped wings, 1-2" long; bark ash-gray with narrow, interlacing ridges and wedge-shaped grooves. (BLACK ASH - <i>F. nigra</i> : leaflets not stalked.)
BOX ELDER <i>Acer negundo</i>		Leaves with 3-5 oval, pointed leaflets, margins nearly smooth or coarsely toothed; paired seeds in persistent hanging clusters, wings in-curved, mature in early summer; bark light to dark brown, shallowly furrowed.
HORSE-CHESTNUT <i>Aesculus hippocastanum</i>		Leaves composed of 7 whorled, tapered leaflets, 5-7" long, margins bluntly toothed, stems grooved; flowers white, in showy upright clusters; seeds large, shiny, red-brown, in a thick spiny cover; bark dark brown, broken into thin plates. Not native.

### C. Leaves Alternate and Simple

WHITE BIRCH <i>Betula papyrifera</i>		Leaves 2-4" long, oval, pointed, with rounded or tapered base, margins double-toothed; bark on twigs and young tree dark red, older trunks cream or chalky white, peeling in papery shreds or sheets.
YELLOW BIRCH <i>Betula alleghaniensis</i>		Leaves 3-5" long, oval, pointed, with rounded or heart-shaped base, margins double-toothed, winter-green odor when crushed; young bark silvery yellow with papery curls, old trunks gray with ragged plates.

### C. Leaves Alternate and Simple (Continued)

QUAKING ASPEN <i>Populus tremuloides</i>		Leaves nearly round, with a small tip, margins finely toothed; leaf stems flattened; seeds in hanging tassels or catkins; bark whitish to yellow-green, smooth, with black branch scars, rough and furrowed at base.
LARGETOOTH ASPEN <i>Populus grandidentata</i>		Leaves oval, pointed, margins prominently wavy-toothed; leaf stems flattened; seeds in hanging tassels or catkins; bark olive green to brownish green, smooth, with black branch scars, rough and furrowed at base.
BALM-OF-GILEAD <i>Populus balsamifera</i>		Leaves taper pointed with rounded base, margins finely toothed, rusty flecks on under side; leaf stems not flattened; seeds in hanging tassels or catkins; bark dark gray, rough, with flattened ridges.
COTTONWOOD <i>Populus deltoides</i>		Leaves triangular with tapered point and flat base; margins coarsely toothed; leaf stems flattened; seeds in hanging tassels or catkins; bark light brown to gray, with deep grooves and prominent ridges.
WILLOW <i>Salix species</i>		Leaves narrow, very long pointed with finely toothed margins; seeds in hanging tassels or catkins; bark on young branches yellow to green, shiny, on old trunks brown to black, with long ridges and deep grooves. Many species with generally similar characteristics.
BLACK CHERRY <i>Prunus serotina</i>		Leaves 3-6" long, narrow, taper pointed, margins finely toothed with sharp, in-curving teeth; fruit dark red, pea-sized, edible berries clustered on drooping stems; bark brown to black, broken into thin scales.
BASSWOOD <i>Tilia americana</i>		Leaves 5-6" long, broadly heart-shaped with unequal sides, margins sharply toothed; pea-sized seeds hang from center of narrow-leaf like structure; bark dark gray, compact, with shallow grooves and narrow parallel ridges.
AMERICAN ELM <i>Ulmus americana</i>		Leaves 4-6" long, oval, taper-pointed, base lop-sided, margins coarsely double-toothed; bark dark gray, with flat, scaly ridges, and alternate light and dark corky layers; arching branches give tree "urn" shape. (SLIPPERY ELM - <i>U. rubra</i> : leaves sandpaper rough; bark without alternate layers.)
SASSAFRAS <i>Sassafras albidum</i>		Leaves vary in shape from oval to those with 2 or 3 distinct lobes; leaves and twigs spicy-fragrant when crushed; fruit a dark blue berry; bark on twigs bright green, on trunk reddish brown with broad, flat ridges and deep grooves.
SYCAMORE <i>Platanus occidentalis</i>		Leaves up to 10" wide, with 3-5 broad, pointed lobes; leaf stem hollowed at base; seeds in round dangling heads; bark mottled, brown scales flake off to expose tan, pale green or creamy white smooth underbark.
TULIP POPLAR <i>Liriodendron tulipifera</i>		Leaves 4-6" long, symmetrical, usually 4-lobed, wide base, with a broad notch at top, margins smooth; flowers tulip-like, yellow-green; bark dark gray, deeply furrowed with prominent vertical, pointed ridges.