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American Basswood

*Family: Tiliaceae*

*Tilia americana*

**Leaves:** alternate, simple, 4”-8” long, coarsely serrate edges; heart-shaped, unequal base.

**Twigs:** slender, round 2-scaled, reddish bud. **Fruit:** 1/4-3/8”, round, under leaf like bract, no ridges.

**Bark:** light gray when young, darkens with age, narrow/shallow flat topped ridges.
American Elm

Family: Ulmaceae

*Ulmus americana*

a.k.a. white elm

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Photos: Dave Hanson

**Leaves:** alternate, simple, 3-6” long, doubly serrate edges, strongly uneven base, pointed tip.

**Fruit:** 3/8” - 1/2”, papery samara, oval wing, deeply notched tip, hairy; **Buds:** pointed, not hairy.

**Bark:** grayish, with deep furrowed ridges - in cross-section alternating layers of red and white.
Amur Maackia

Code: MAAM

Family:
Fabaceae

Non-native

Maackia amurensis

Leaves: alternate, pinnately compound, 8-12” long, 7-11 ovate to oblong smooth-edged leaflets, new foliage is silvery, fuzzy. Twigs: thin and brown. Fruit: 1-3” long, flat, brown pod. Bark: reddish to greenish, outer layers peeling, often multi stemmed. Form: small trees.
Amur Maple

**Acer ginnala**

*a.k.a. ginnala maple*

**Family:** Aceraceae

**Non-native**

**Leaves:** opposite, simple, 1½-3” long, shallow sinuses, 3 lobes - middle lobe larger than laterals.

**Twigs:** yellow-brown with small ⅛” buds. **Fruit:** 1” paired samara in a horse shoe shape.

**Bark:** smooth, grayish developing faint vertical stripes.

Photos: Dave Hanson
Leaves: opposite, pinnately compound, leaflets have petioles (not sessile as black ash).

Fruit: 1-2” single samara, “wing” stops where seed begins, seed is round in cross-section.

Bark: Gray/brown interlacing ridges form “diamond” patterns. Twigs: not as stout as black ash.
Austrian Pine

*Pinus nigra*

**Family:** Pinaceae

**Code:** PINI

**Non-native**

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**Needles:** 2 per bundle, 3-6” long, stiff. **Buds:** sharply-pointed, large whitish.

**Cones:** 2-3 inch, ‘armed’ with small spines, light brown in color. **Twigs:** fuzzy.

**Bark:** pinkish to grayish-black becoming deeply furrowed with irregular plates.

*Photos: Dave Hanson*
Balsam Fir

*Abies balsamea*

**Family:** Pinaceae

**Code:** ABBA

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**Needles:** evergreen, flattened, soft, 2-ranked (in rows), 2 white lines underside, persist 7-10 years.

**Cones:** 2-4” long, near tree top, erect on branch - cones don’t persist, leaving the central stalk.

**Bark:** gray, resin blisters - becomes reddish-brown and scaly. **Buds:** ¼-⅛”, resinous.
Bitternut Hickory

Family: Juglandaceae

*Carya cordiformis*

Leaves: alternate, pinnately compound, 5-11 sessile leaflets, elliptic to lanceolate.

Twigs: light gray, stout, Buds: sulfur yellow, fuzzy. Fruit: ¾”-1¼” nut is in 4-ribbed husk.

Bark: silvery gray, smooth in youth - breaking into shallow fissures with age.
Black Walnut

Family: Juglandaceae
Juglans nigra

Leaves: alternate, pinnately compound, 12-24” long, 9-23 leaflets; terminal leaflet small/missing.

Twigs: stout, light brown/orange, face-like leaf scar. Fruit: 1\(\frac{1}{2}\) - 2\(\frac{1}{2}\)” round nut, thick husk.

Bark: dark brown / grayish black, rough, deep narrow furrows. Pith: chambered, tan color.
Blue-Beech

Family: Betulaceae

*Carpinus caroliniana*

a.k.a. muscle-wood, hornbeam

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**Leaves:** alternate, simple, 2-5” long, ovate/elliptic, doubly toothed margin, bluish-green.

**Twigs:** Slender, zigzag twigs, male catkins absent in winter. **Buds:** 4-sided in cross-section.

**Bark:** smooth, gray, trunk ridged resembles muscle. **Fruit:** 4-6” catkins of nutlets, 3-lobed bracts.

Photos: Dave Hanson
Box elder

Family: Aceraceae

Acer negundo

Leaves: opposite, pinnately compound, 3-7 leaflets each 2-4” long, coarsely serrate (toothed).

Twigs: green to purplish, waxy coating. Fruit: 1-1½” V-shaped paired samaras, persist in winter.

Bark: light brown, slightly ridged and furrowed, orangey at the bottom of the furrow.
Bur Oak

Family: Fagaceae

Quercus macrocarpa

Leaves: alternate, simple, 4-12” long, 5-9 rounded lobes, center sinuses cut to mid-rib.

Fruit: acorn, fringed (bur) cap covers ½ or more of ¾” to 2” acorn, acorns attached directly to twig.

Bark: grayish with vertical ridges, deeply furrowed. Bur oak can have corky twigs.
Crabapple

*Malus spp.*

**Family:** Rosaceae

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**Leaves:** alternate, simple, 1-3" long, elliptical-ovate, finely serrated, showy white to red flowers.

**Fruit:** small apple or pome (< 2"), variety of colors, some persist into late winter.

**Bark:** gray/pink thin, scaly/flaky. **Twigs:** moderately thick, foliage/fruit on spur shoots.

*Photos: Dave Hanson*
Eastern Cottonwood

Family: Salicaceae

*Populus deltoides*

**Leaves:** alternate, simple, triangular/heart shaped, shiny green; blunt, coarse, glandular teeth.

**Twigs:** large resinous buds, stout twigs. **Fruit:** $\frac{1}{4}$” long, 2 to 4-valved capsules, cottony seed.

**Bark:** gray/brown, very thick deep furrows, tall trees can be very large in diameter.

*Photos: Dave Hanson*
Eastern Redbud

Family: Caesalpinioideae

*Cercis canadensis*

**Leaves:** alternate, unifoliolate (appearing simple), smooth edge, shiny green, 1 1/2-4” petiole.

**Fruit:** 2 1/2-3 1/4” flat, bean-like pod, matures black. **Twigs:** slender, dark, small rounded buds.

**Bark:** smooth dark gray. **Flower:** pea-like, reddish-pink hues, on older wood, before foliage.
Eastern Red-cedar

Family: Cupressaceae

*Juniperus virginiana*

- **Needles:** evergreen, opposite, mature needles scale-like, Juvenile needles sharp, awl-like.
- **Cones:** typically 1-2 seeds in a ¼-½” diameter - ovoid, berry-like cone, ripe 1st season.
- **Bark:** thin gray-brown - vertical strips. You may notice small, brown pollen cones at branch tips.

Photos: Dave Hanson
European Buckthorn

*Family: Rhamnaceae*

*Rhamnus cathartica*

*Non-native*

**Leaves:** sub-opposite, simple, 2-3” long, elliptic to oval, finely serrated edge, arrcuate venation.

**Twigs:** Terminal thorn, buds on either side. **Fruit:** round, ¼” berry, shiny black, 3-4 seeds.

**Bark:** smooth, gray, reddish brown, lenticels, older trees dark gray and scaly. Yellow inner-bark.
**Ginkgo**

*Ginkgo biloba*

**Family:**
Ginkgoaceae

**Non-native**

**Leaves:** alternate, simple, 2-3” wide fan-shaped, often separated or cleft into two lobes (biloba).

**Fruit:** female trees produce orange-gold stinky flesh covering an almond sized nut.

**Bark:** light gray, irregular ridges, corky appearance. **Twigs:** gray, many spur or short shoots.

**Code:** GIBI

*Photos: Dave Hanson*
Hackberry

Family: Ulmaceae

Celtis occidentalis

Leaves: alternate, simple, singly toothed, uneven base; ovate in shape, nipple gall is common.


Bark: grayish, with distinct corky ridges. Form: medium to large tree at 40-70°, rounded crown.

Code: CEOC

Photos: Dave Hanson
Hawthorns

Family: Rosaceae
Crataegus spp.
Typically sold as thornless.

Leaves: alternate, simple, egg-shaped to oval, toothed and lobed, variable shapes within genera.
Twigs: red-brown to gray, may have sharp, stiff thorns. **Fruit:** apple-like (pome) yellow to red.
Bark: reddish brown to gray, scaly becomes fissured with age. Minnesota has 13 native species.

Photos: Dave Hanson
Honeylocust  

**Family:** Caesalpiniaceae  

*Gleditsia triacanthos*  
Typically sold as variety ‘Inermis’ (without thorns).

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**Leaves:** alternate, compound pinnately and bipinnately, 15-30 small leaflets.

**Twigs:** reddish/brown and may have thorns. **Fruit:** 6-18” long, 1” wide, brown twisted pods.

**Bark:** reddish/brown scaly ridges, a “cracking” appearance - may have sharp, 3-branched thorns.

Photos: Dave Hanson
Ironwood

*Ostrya virginiana*

a.k.a. hop-hornbeam

**Family:** Betulaceae

**Leaves:** alternate, simple, 2-5” long, ovate to elliptic, doubly serrate with pointed tip.

**Twigs:** Slender twigs, pointed buds, male catkins present near twig ends.

**Bark:** rough, thin, loose rectangular strips. **Fruit:** clustered oval, inflated pouches covering nuts.

*Photos: Dave Hanson*
Japanese Tree Lilac
*Syringa reticulata*

**Family:** Oleaceae

**Code:** SYRE

**Non-native**

**Leaves:** opposite, simple, 2-4” long, elliptical/ovate, smooth edge, showy white flower, fragrant.

**Twigs:** stout, brown, white lenticels, large buds. **Fruit:** 2-parted green capsule matures to brown.

**Bark:** smooth reddish brown, white horizontal lenticels.

*Photos: Dave Hanson*
Kentucky Coffeetree

*Gymnocladus dioicus*

**Family:** Caesalpiniaceae

**Code:** GYDI

**Leaves:** alternate, bipinnately (doubly) compound, 12-36” long with 6-15 leaflets.

**Twigs:** stout, inconspicuous buds. **Fruit:** 4-10” long, 1½-2” wide, dark red-brown seed pod.

**Bark:** Gray/brown rough fissured, edges lifting/curling. **Pith:** large, soft, salmon colored.
Little-leaf Linden
*Tilia cordata*

**Family:** Tiliaceae

**Code:** TICO

**Non-native**

**Leaves:** alternate, simple, 1½-3” long, ovate to heart shaped, sharp fine serrate edges.

**Twigs:** slender, green-brown or red-tinged, buds brownish.

**Bark:** gray - brown, ridged, shallow furrows. **Fruit:** round nutlets under a bract, slightly ridged.
Mountain Ash

Family: Rosaceae

*Sorbus decora* and *S. americana*

Showy mountain ash and American mountain ash

Leaves: alternate, pinnately compound, 6-10” long, 11-17 sharp, finely-toothed leaflets.


Photos: Dave Hanson
Northern Catalpa

Family: Bignoniaceae

Catalpa speciosa

Code: CASP

Leaves: opposite or whorled, simple, 5-12” long, “heart” shaped. Flower: large, showy, white.

Twigs: stout reddish brown, large leaf scars. Fruit: 10-18” long, skinny pod. Pith: solid, white.

Bark: gray reddish brown, irregular shallow fissures, scaly ridges.

Photos: Dave Hanson
Northern Pin Oak

Family: Fagaceae

Quercus ellipsoidalis

Commonly planted: Eastern Pin Oak - Quercus palustris

Leaves: alternate, simple, 3-5” long, 5-7 bristle-tipped lobes; sinuses cut nearly to midrib.
Bark: gray to dark brown, smooth, shiny in youth, develops flat-topped ridges, shallow furrows.
Form for identification: descending lower branches, horizontal central branches, ascending upper.
Northern White-cedar

**Family:** Cupressaceae

*Thuja occidentalis*
a.k.a. - Arborvitae.

**Needles:** evergreen, scale-like, flattened and generally soft, fan-like, aromatic.

**Cones:** ½” long, oblong, usually upright on branch, light brown in color, typically 4 fertile scales.

**Bark:** thin gray-brown - vertical strips.

**Form:** small to medium trees at 25-50’.

Photos: Dave Hanson
Ohio Buckeye

*Aesculus glabra*

**Family:** Hippocastanaceae

**Non-native**

**Code:** AEGL

**Leaves:** opposite, palmately compound, 5-7 serrate leaflets each 2-6” long, lance shaped leaflets.

**Fruit:** 1-2” rounded nut-like, thick husk, prickles. **Twig:** grayish. **Flower:** spikes, yellow, showy.

**Bark:** grayish brown, corky patches on older trees. **Buds:** light brown, dry appearance.
Pin Cherry

*Prunus pensylvanica*

*a.k.a. Fire Cherry*

**Family:** Rosaceae

**Leaves:** alternate, simple, lance-shaped to elliptic - finely toothed margins, long pointed tip.

**Fruit:** drupes ¼” diameter, not in clusters, matures bright red. **Twigs:** reddish, orange lenticels.

**Bark:** red-gray prominent lenticels are tan to orangey in color. Foliage and fruit on spur shoots.
Family: Aceraceae

Red Maple

Acer rubrum

Leaves: opposite, simple, 2-4” long, 3 up to 5 pointed lobes; “V” sinuses and toothy margins.

Twigs: reddish with red buds. Fruit: ¾-1” long paired (two winged) seeds; red turning to brown.

Bark: Young trees have smooth gray bark, becoming dark gray and rough when older.
Red Pine

Family: Pinaceae

*Pinus resinosa*

a.k.a. Norway pine

Needles: 2 per bundle, 4-6” long, needles break cleanly when bent, persist to 4th or 5th year.

Cones: 1½-2¼” long, sub-sessile, typically paired, unarmed - compare to ponderosa pine.


Photos: Dave Hanson
River Birch

*Betula nigra*

a.k.a. Red Birch

**Family:** Betulaceae

**Leaves:** alternate, simple, doubly toothed margins, triangular or wedge leaf base.

**Twigs:** reddish-brown twigs, prominent lenticels. Shiny male catkins are present at twig ends.

**Bark:** coppery to pinkish peeling bark in youth, matures to be dark gray and coarse.

Photos: Dave Hanson
Scotch Pine

Family: Pinaceae
*a.k.a. Scots pine*

*Pinus sylvestris*

Non-native

**Needles:** 2 per bundle, 1½-3½” long, twisted, pairs not divergent - almost wrapped.

**Cones:** 1½-2½”, single to paired, light brown, tip bent back.

**Bark:** upper trunk / branches papery, flaky, orangey to green, main stem grayish, scaly plates.

Photos: Dave Hanson
Serviceberry

Family: Rosaceae

Amelanchier spp.
a.k.a. Juneberry

Leaves: alternate, simple, 1-3” long, serrated, ovate. Flowers: showy white, early spring.

Twigs: slender, long pointed bud; Fruit: ½” berry - red in June maturing to purple.

Bark: grayish with thin vertical ridges. Form: native shrub - available as single stem small tree.

Photos: Dave Hanson

Code: AM
Silver Maple

Acer saccharinum

Family: Aceraceae

Leaves: opposite, simple, 5-7” wide, 3-5 pointed lobes, deep cut sinuses, silvery underside.

Twigs: reddish-brown, clustered reddish buds. Fruit: 1-3” long samaras, paired, maturing brown.

Bark: Light, silvery-gray and smooth in youth - gray/brown strips; lifting and shaggy with age.

Photos: Dave Hanson
Spruces

Family: Pinaceae

Code: PI1

Picea spp.

Needles: single, pointed 1/2” to 2” long, typically 4-sided so roll between index finger and thumb.

Cones: black 1/2-1 1/4”, white 1 1/4-2 1/2”, CO blue 2-4”, Norway 4-6”. All have layered scales.

Bark: thin gray-brown flaky/scaly. Form: conical, typical “Christmas Tree” shape.
Sugar Maple

Family:
Aceraceae

Acer saccharum

Leaves: opposite, simple, 3-6” long, 3-5 pointed lobes; “U” sinuses, coarsely toothed margins.

Twigs: brown, pointed buds. Fruit: 1-1 ¼” long, paired; horseshoe shape, green turning brown.

Bark: Young gray/brown and smooth; Becomes dark and deeply furrowed when older.

Photos: Dave Hanson
Swamp White Oak

Family: Fagaceae

Quercus bicolor

Leaves: alternate, simple, 4-7” long, 5-12 shallow rounded lobes, shiny green top, whitish below.

Fruit: ¾” to 1¼” paired acorns, 1”-4” stalk. Acorns mature in the autumn.

Bark: light brown, papery, scales become blocky and deeply fissured with age.

Photos: Dave Hanson
Tulip Poplar

Family: Magnoliaceae

Liriodendron tulipifera

Non-native

Leaves: alternate, simple, 4-6” long and wide, 4 lobed, shallow sinuses, large stipules, unique.


Bark: grayish, breaking into interlacing rounded ridges. Flower: 1½-2” wide, yellow, tulip-like.
White Oak

*Quercus alba*

**Family:** Fagaceae

**Leaves:** alternate, simple, 4-9” long, 5-9 rounded lobes, sinuses nearly uniform in depth.

**Fruit:** acorn, $\frac{3}{8}”$ to $1\frac{1}{4}”$ acorns, cap covers top $\frac{1}{4}-\frac{1}{3}$, acorn is attached via a $\frac{1}{4}”$ stalk.

**Bark:** Light ashy-gray, narrow vertical ridges, with age breaks into blocky, irregular shapes.

*Photos: Dave Hanson*