

# Tree identification guide



Special thanks to the Urban Forestry Outreach, Research and Extension Nursery and Lab in the Department of Forest Resources at the University of Minnesota for providing the content and images included in this guide.

# American Basswood

Code: TIAM

Family:  
Tiliaceae

*Tilia americana*



*Tilia americana* var. *boulevard*

Photos: Dave Hanson

**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.

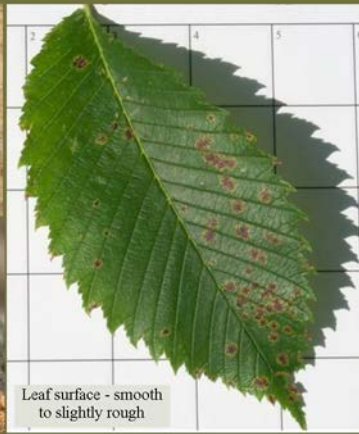
**Bark:** light gray when young, darkens with age, narrow/shallow flat topped ridges.

# American Elm

Code: ULAM

Family:  
Ulmaceae

*Ulmus americana*  
a.k.a. white elm



Photos: Dave Hanson

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

**Fruit:**  $\frac{3}{8}$ " -  $\frac{1}{2}$ ", 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

*Maackia amurensis*

Non-native



Photos: Dave Hanson

**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

Code: ACGI

Family:  
Aceraceae

*Acer ginnala*  
a.k.a. ginnala maple

Non-native



Photos: Dave Hanson

**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.

# Ash (green & white)

Code: FR

Family:  
Oleaceae

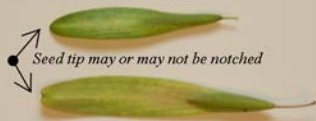
*Fraxinus pennsylvanica* and *Fraxinus americana*

(Code: FRPE)

(Code: FRAM)



*F. pennsylvanica*



*F. americana*



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

Code: PINI

Family:  
Pinaceae

*Pinus nigra*

Non-native



Photos: Dave Hanson

**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.



# Balsam Fir

Code: ABBA

Family:  
Pinaceae

*Abies balsamea*



Photos: Dave Hanson

**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:** 1/8-1/4", resinous.

# Bitternut Hickory

Code: CACO

Family:  
Juglandaceae

*Carya cordiformis*



Dave Hanson ©  
*Carya cordiformis*

Photos: Dave Hanson

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

**Twigs:** light gray, stout, **Buds:** sulfur yellow, fuzzy. **Fruit:**  $\frac{3}{4}$ "-1 $\frac{1}{4}$ " nut is in 4-ribbed husk.

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

# Black Walnut

Code: JUNI

Family:  
Juglandaceae

*Juglans nigra*



Photos: Dave Hanson

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

**Twigs:** stout, light brown/orange, face-like leaf scar. **Fruit:** 1½-2½" round nut, thick husk.

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

# Blue-Beech

Code: CACA

Family:  
Betulaceae

*Carpinus caroliniana*  
a.k.a. muscle-wood, hornbeam



Photos: Dave Hanson

**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.

# Boxelder

Code: ACNE

Family:  
Aceraceae

*Acer negundo*



Photos: Dave Hanson

**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

Code: QUMA

Family:  
Fagaceae

*Quercus macrocarpa*



Photos: Dave Hanson

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

**Fruit:** acorn, fringed (bur) cap covers  $\frac{1}{2}$  or more of  $\frac{3}{4}$ " to 2" acorn, acorns attached direct to twig.

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

# Crabapple

Code: MA2

Family:  
Rosaceae

*Malus spp.*



Photos: Dave Hanson

**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.

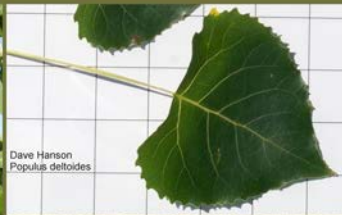
**Bark:** gray/pink thin, scaly/flaky. **Twigs:** moderately thick, foliage/fruit on spur shoots.

# Eastern Cottonwood

Code: PODE

Family:  
Salicaceae

*Populus deltoides*



Photos: Dave Hanson

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

**Twigs:** large resinous buds, stout twigs. **Fruit:** ¼" long, 2 to 4-valved capsules, cottony seed.

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



# Eastern Redbud

Family:  
Caesalpiniaceae

*Cercis canadensis*



Photos: Dave Hanson

**Leaves:** alternate, unifoliolate (appearing simple), smooth edge, shiny green, 1½-4" petiole.

**Fruit:** 2½-3¼" 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

Code: JUVI

Family:  
Cupressaceae

*Juniperus virginiana*



Photos: Dave Hanson

**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.

# European Buckthorn

Code: RHCA

Family:  
Rhamnaceae

*Rhamnus cathartica*

Non-native



Photos: Dave Hanson

**Leaves:** sub-opposite, simple, 2-3" long, elliptic to oval, finely serrated edge, arccuate 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

Code: GIBI

Family:  
Ginkgoaceae

*Ginkgo biloba*

Non-native



Photos: Dave Hanson

**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.

# Hackberry

Code: CEOC

Family:  
Ulmaceae

*Celtis occidentalis*



Photos: Dave Hanson

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

**Twigs:** twigs slender, zigzagged. **Pith:** chambered. **Fruit:** ¼-¾" single, purple berry-like drupe.

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

# Hawthorns

Code: CR

Family:  
Rosaceae

*Crataegus spp.*  
Typically sold as thornless.



Photos: Dave Hanson

**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.

# Honeylocust

Code: GLTR

Family:  
Caesalpinaceae

*Gleditsia triacanthos*

Typically sold as variety 'Inermis' (without thorns).



Photos: Dave Hanson

**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.

# Ironwood

Code: OSVI

Family:  
Betulaceae

*Ostrya virginiana*  
a.k.a. hop-hornbeam



Photos: Dave Hanson

**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.



# Japanese Tree Lilac

Code: SYRE

Family:  
Oleaceae

*Syringa reticulata*

Non-native



Photos: Dave Hanson

**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.

# Kentucky Coffeetree

Code: GYDI

Family:  
Caesalpiniaceae

*Gymnocladus dioica*



Photos: Dave Hanson

**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

Code: TICO

Family:  
Tiliaceae

*Tilia cordata*

Non-native



Photos: Dave Hanson

**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

Code: SO

Family:  
Rosaceae

*Sorbus decora* and *S. americana*  
Showy mountain ash and American mountain ash



Photos: Dave Hanson

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

**Twigs:** twig, stout gray-reddish. **Buds:** dark, pointed, resinous, hairy. **Fruit:** small red-orange

“berries” in a cluster. **Bark:** grayish, smooth, lenticels in youth - ages to splitting, peeling, rough.

# Northern Catalpa

Code: CASP

Family:  
Bignoniaceae

*Catalpa speciosa*



Photos: Dave Hanson

**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.

# Northern Pin Oak

Code: QUEL

Family:  
Fagaceae

*Quercus ellipsoidalis*

Commonly planted: Eastern Pin Oak - *Quercus palustris*



Photos: Dave Hanson

**Leaves:** alternate, simple, 3-5" long, 5-7 bristle-tipped lobes; sinuses cut nearly to midrib.

**Fruit:** acorns, cone-shaped cap,  $\frac{3}{8}$ - $\frac{5}{8}$ " cone-shaped (ellipsoidal) acorns.

**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

Code: THOC

Family:  
Cupressaceae

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



Photos: Dave Hanson

**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'.

# Ohio Buckeye

Code: AEGL

Family:  
Hippocastanaceae

*Aesculus glabra*

Non-native



Photos: Dave Hanson

**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

Code: PRPE

Family:  
Rosaceae

*Prunus pensylvanica*  
a.k.a. Fire Cherry



Photos: Dave Hanson

**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.

# Red Maple

Code: ACRU

Family:  
Aceraceae

*Acer rubrum*



Spring  
maturing  
double  
samara



Photos: Dave Hanson

**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

Code: PIRE

Family:  
Pinaceae

*Pinus resinosa*  
a.k.a. Norway pine



Photos: Dave Hanson

**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.

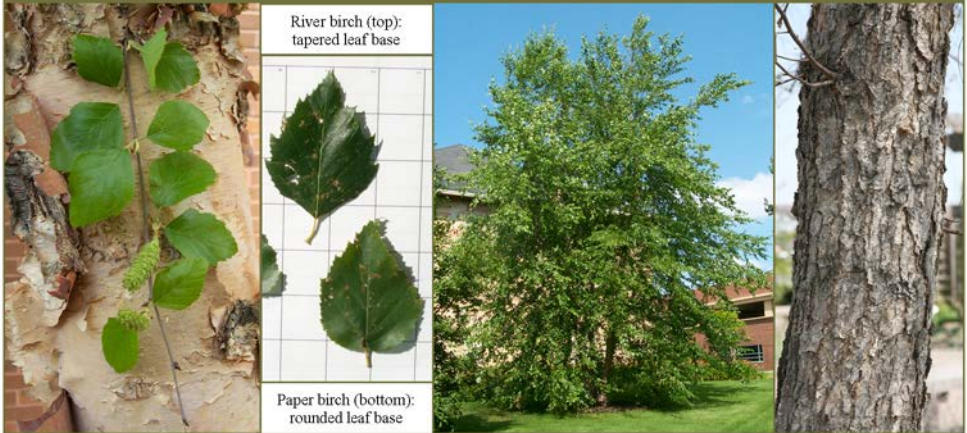
**Bark:** reddish-gray large blocks. **Buds:** pointed, reddish-brown, ragged scales.

# River Birch

Code: BENI

Family:  
Betulaceae

*Betula nigra*  
a.k.a. Red Birch



River birch (top):  
tapered leaf base

Paper birch (bottom):  
rounded leaf base

Photos: Dave Hanson

**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.

# Scotch Pine

Code: PISY

Family:  
Pinaceae

*Pinus sylvestris*  
a.k.a. Scots pine

Non-native



Photos: Dave Hanson

**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.

# Serviceberry

Code: AM

Family:  
Rosaceae

*Amelanchier spp.*  
a.k.a. Juneberry



Photos: Dave Hanson

**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.

# Silver Maple

Code: ACSA1

Family:  
Aceraceae

*Acer saccharinum*



Photos: Dave Hanson

**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.

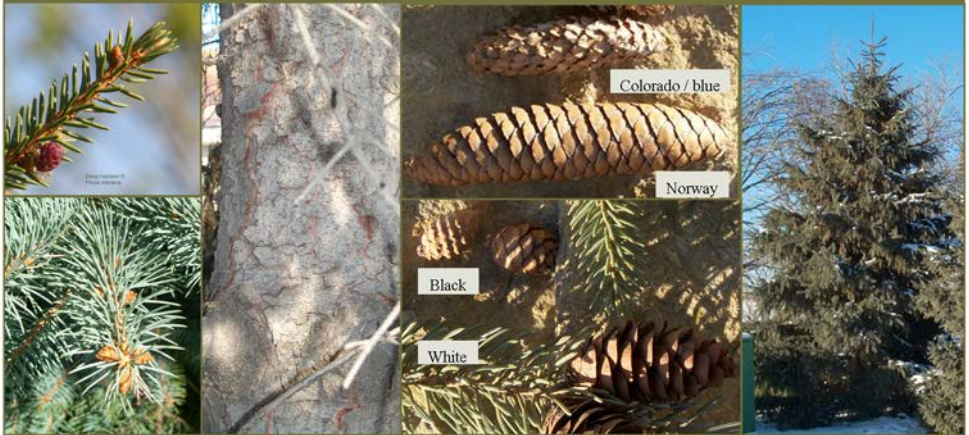
**Bark:** Light, silvery-gray and smooth in youth - gray/brown strips; lifting and shaggy with age.

# Spruces

Code: P11

Family:  
Pinaceae

*Picea spp.*



Photos: Dave Hanson

**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

Code: ACSA2

Family:  
Aceraceae

*Acer saccharum*



Photos: Dave Hanson

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

**Twigs:** brown, pointed buds. **Fruit:** 1-1¼" long, paired; horseshoe shape, green turning brown.

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

# Swamp White Oak

Code: QUBI

Family:  
Fagaceae

*Quercus bicolor*



Photos: Dave Hanson

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

**Fruit:**  $\frac{3}{4}$ " to  $1\frac{1}{4}$ " paired acorns, 1"-4" stalk. Acorns mature in the autumn.

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

# Tulip Poplar

Code: LITU

Family:  
Magnoliaceae

*Liriodendron tulipifera*

Non-native



Photos: Dave Hanson

**Leaves:** alternate, simple, 4-6" long and wide, 4 lobed, shallow sinuses, large stipules, unique.  
**Fruit:** 2½-3" long, cone-like, clustered samaras, erect. **Twig:** stout, brownish. **Buds:** flat, valvate.  
**Bark:** grayish, breaking into interlacing rounded ridges. **Flower:** 1½-2" wide, yellow, tulip-like.

# White Oak

Code: QUAL

Family:  
Fagaceae

*Quercus alba*



Photos: Dave Hanson

**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.



Hennepin County  
Environment and Energy

[hennepin.us/trees](https://hennepin.us/trees)  
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