



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Tree Identification Guide



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Introduction

The following tree identification cards have been designed for students, volunteers, and tree enthusiasts to guide your exploration of trees. Care has been taken to create accurate descriptions of the general characteristics of woody plants. However, nature is wondrous in its variety and characteristics can (*and do*) vary. Colors, sizes, etc. can be subjective based on an observer's background and experience. Use of botanical terminology has been limited; however, some terminology seemed unavoidable and has been briefly defined. This guide has also been designed for print on 4x6 inch cards.

The statistician, George Box, once said, "...all models are wrong, some are useful..." and the same thing is true in plant identification guides, they are all wrong in their description of plants, but some are very useful. My hope is that this is one of the useful guides to help in your enjoyment of identifying the trees and shrubs you encounter.



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Using the Guide

### Across the Top:

**Common names** are typically easy for people to remember; however, they can be regional and numerous. The scientific name is the name of record. As an example: Hemlock is both a poisonous herbaceous plant (*Conium maculatum*) and a coniferous tree (*Pseudotsuga menziesii*), so the scientific name can be very important when talking with others or finding additional information. **Scientific names** are listed as *Genus species*. Example: *Quercus* is the genus that contains all of the oaks.

**Code** is used in programs like iTree or other inventory programs and was included as a quick standardized short-hand for referring to specific species.

**Status** is the native or non-native classification of the tree. For the purposes of this guide the status applies to the entire state of Nebraska. Status was obtained from the U.S. Forest Service & Geological Survey.



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Using the Guide

### Photographs:

All photographs were taken over several years to get various plant features (i.e. flowers, fruits, etc.). Many of the photos, for a given species, were taken of a single tree and as such they are only representations of what you might expect to see. For example: leaf sizes can vary great between sunny and shady sites. Also the photographs are intended to represent the "typical" form of a species...nature can produce amazing variety.

Use the photographs as a guide and not a template for the appearance of the plant you are trying to identify. Also, pay attention to the similarities within a genus. *Quercus* (the oaks), for example, have acorns and many of the species (though not all!) have leaves with lobes. Being able to narrow down a plant to a genus reduces the number of possible species you have encountered, helping to more quickly identify the plant.

All photographs taken by Dr. Eric A. North

## Descriptions & Terminology:

Plant descriptions are written below the images and are based on personal observation and descriptions from books listed in the reference section.

**Alternate/opposite/whorled:** describe the position of the leaf or bud on a twig and is a common identification trait. Ex: maples have buds/leaves that are opposite each other on a twig, oaks have with alternating position on a twig

**Serrate:** generally referring to a leaf edge, think of a bread knife blade

**Lenticels:** small white dots or lines on bark, twigs, or fruit

**Terminal bud:** bud at the end of a twig; **lateral buds** are along the twig

**Simple/compound:** refers to leaves. **Simple:** have one leaf blade attached to a stem ending at a bud. **Compound:** have multiple leaf blades and can be pinnately (long) or palmately (think palm of your hand).

## References & Additional Reading

- Woody Plants for the Central and Northern Prairies
  - Walter T. Bagley & Richard K. Sutton
- Trees of Nebraska
  - University of Nebraska-Lincoln, Extension, EC 1774
- Manual of Woody Landscape Plants
  - Michael Dirr
- Harlow and Harrar's Textbook of Dendrology
  - James W. Hardin, Donald J. Leopold, & Fred M. White
- Trees and Shrubs of Minnesota
  - Welby R. Smith
- Digital Representations of Tree Species Range Maps from "Atlas of United States Trees" by Elbert L. Little, Jr.
  - <https://esp.cr.usgs.gov/data/little/>

Common name  
*Scientific name*

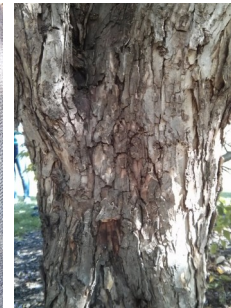
Code:

Status:

wild plum  
*Prunus americana*

Code: PRAM

Status: native



**Bark:**  
**Foliage:**  
**Twigs:**  
**Flower:**  
**Fruit:**

**Bark:** gray with longer flaky/platy stripes  
**Foliage:** dark green, oval with pointed tip, serrated edges  
**Twigs:** gray, with side twigs developing sharp points/thorns  
**Flower:** perfect, white flowers, groups of 2-5, fragrant; appearing in spring  
**Fruit:** purple/red, 1" wide, yellow interior flesh





UNIVERSITY OF  
**Nebraska**  
Lincoln

## black chokeberry

*Aronia melanocarpa*

Code: ARME13

Status: non-native



**Bark:** red/brown becoming gray with age

**Foliage:** dark lustrous green, oval with pointed tip, serrate leaf

**Twigs:** red/brown, slender and smooth (glabrous)

**Flower:** perfect, white with pink anthers and five petals

**Fruit:** dark purple pome, ripening fall



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Osage-orange

*Maclura pomifera*

Code: MAPO

Status: non-native



**Bark:** brown-orange with thin ridges; darker and irregular fissures with age

**Foliage:** ovate, coming to a point, smooth edge, up to 6" long, dark green, shiny

**Twigs:** moderately stout, tan/brown, spines at the base of buds/leaves, milky sap

**Flower:** male and female on separate plants, summer bloom, yellow-green

**Fruit:** round, aggregate of green drupes; large—softball size



UNIVERSITY OF  
**Nebraska**  
Lincoln

## witch-hazel

*Hamamelis virginiana*

Code: HAVI4

Status: non-native



**Bark:** smooth gray/brown; older stems, rough texture from lenticels

**Foliage:** wavy edges, large-toothed, broad elliptical shape, 3-6" long, 2-3.5" wide

**Twigs:** light gray/brown slightly hairy, zig-zag appearance

**Flower:** perfect, yellow to yellowish green with thin, strappy petals, blooming in late fall

**Fruit:** distinctive, woody capsule containing 2 seeds, 4 rounded points at end



UNIVERSITY OF  
**Nebraska**  
Lincoln

## paw-paw

*Asimina triloba*

Code: ASTR

Status: native



**Bark:** gray with thin and irregular ridges; smoother when young

**Foliage:** simple, alternate, large up to 12", smooth but wavy edge, pointed tip

**Twigs:** current year green and hairy, previous year gray, terminal bud no scales, lateral

**Flower:** bell-shaped, red/brown soft, perfect

**Fruit:** oval, 4" long, yellow turning brown, sweet





UNIVERSITY OF  
**Nebraska**  
Lincoln

willow  
*Salix* spp.

Code: SALIX

Status: native



**Bark:** yellowish-gray, becoming rougher texture with age

**Foliage:** deciduous, alternate, simple

**Twigs:** often times bright color current year growth (yellow, green, red); bud: single cap

**Flower:** small, imperfect, usually catkins, dioecious

**Fruit:** achene, germination requires moist soil



UNIVERSITY OF  
**Nebraska**  
Lincoln

sugar maple  
*Acer saccharum*

Code: ACSA3

Status: non-native



**Bark:** gray smooth when young; grey/brown with irregular platy ridges

**Foliage:** green, with 3-5 lobes; edges smooth

**Twigs:** red/brown with lenticels, turning gray with age

**Flower:** small green/yellow, long dangling stems, lacking petals, male and female separate

**Fruit:** paired "helicopter" (samaras) with bright green seed; horse-shoe shaped; summer-fall



UNIVERSITY OF  
**Nebraska**  
Lincoln

red maple  
*Acer rubrum*

Code: ACRU

Status: non-native



**Bark:** smooth, light gray when young, darker gray and furrowed at maturity

**Foliage:** 3 lobes per leaf, pointed, edges serrated, sinuses shallow and broad

**Twigs:** smooth red/brown in, then smooth gray

**Flower:** emerge in spring, yellow/green to red/pink with petals, polygamous

**Fruit:** paired 'helicopters' (samaras), ripening in spring

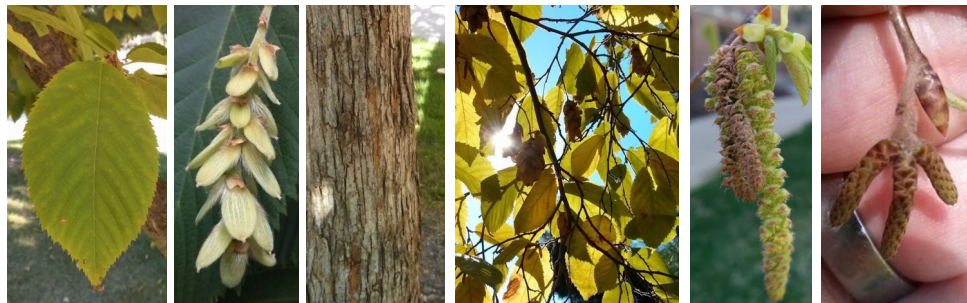


UNIVERSITY OF  
**Nebraska**  
Lincoln

hophornbeam  
*Ostrya virginiana*

Code: OSVI

Status: native



**Bark:** tan/brown with thin vertical strips

**Foliage:** green, oval with pointed tip, doubly serrated, short petiole

**Twigs:** slender, light gray to tannish brown or reddish brown, zig-zag appearance

**Flower:** male: 3-grouped greenish red catkins; female: single catkin, greenish red

**Fruit:** nutlet inside an air-bladder, groups stacked in hanging clusters, hairy





UNIVERSITY OF  
**Nebraska**  
Lincoln

**persimmon**  
*Diospyros virginiana*

Code: DIVI

Status: non-native



**Bark:** squarish thick blocky bark, dark brown/black color, orange fissures  
**Foliage:** glossy on top, pale wooly underside, oval shaped with fuzzy petiole  
**Twigs:** slightly zig-zag, flexible, gray/brown color  
**Flower:** bell shaped, .5", petals come in sets of four and curve out, typically dioecious  
**Fruit:** large, yellow orange round berries that wrinkle when ripe



UNIVERSITY OF  
**Nebraska**  
Lincoln

**red-osier dogwood**  
*Cornus sericea*

Code: COSE16

Status: native



**Bark:** thin with lenticels, red (sunlight) and green (shade) in color  
**Foliage:** ovate, veins curve towards leaf tip, red petiole, long silky strands in veins  
**Twigs:** slender, green, red or both; red branches typically exposed to sunlight  
**Flower:** perfect, 4 petals, flat-top grouping of terminal flower buds, small white flowers  
**Fruit:** spherical white or cream colored drupe, found in clusters



UNIVERSITY OF  
**Nebraska**  
Lincoln

**river birch**  
*Betula nigra*

Code: BENI

Status: non-native



**Bark:** papery, white, brown, salmon colors; darker brown and furrowed or platy with age  
**Foliage:** broad base with pointed tip, doubly serrated edge  
**Twigs:** brown/gray, slender and flexible, hairy, reddish and smooth with age  
**Flower:** catkins, male; droopy, light green. Female; short and upright, green  
**Fruit:** papery, light brown "cone" containing small nutlet



UNIVERSITY OF  
**Nebraska**  
Lincoln

**sweet birch**  
*Betula lenta*

Code: BELE

Status: non-native



**Bark:** dark purple/brown with lenticels; cracking into stiff plates, furrowed ridges  
**Foliage:** green, oval/heart-shaped, pointed tip; serrated, hairy veins and stem  
**Twigs:** slender, red/brown with lenticels, spur shoots; wintergreen when crushed  
**Flower:** male catkins are narrow, 2-3" long; female catkins are shorter/broader  
**Fruit:** small-winged nutlets



silver linden  
*Tilia tomentosa*

Code: TITO

Status: non-native



**Bark:** young bark is light gray, smooth; old bark is ridged, furrowed, gray/brown

**Foliage:** 2-5" long and wide, simple leaves, dark green top, light fuzzy bottom

**Twigs:** short stems covered in soft white hair

**Flower:** perfect, 5 petals, yellowish white flowers, fragrant

**Fruit:** egg-shaped, white, pubescent, hanging under a leafy bract

gray dogwood  
*Cornus racemosa*

Code: CORA6

Status: native



**Bark:** gray, smooth; slightly rougher with age

**Foliage:** oval shape, pointed tip, veins start at midrib and curve towards apex

**Twigs:** gray or reddish brown, slender

**Flower:** perfect, white, spherical to pyramidal shape

**Fruit:** spherical "berry" (drupe), whit to pale blue, fruit stems bright red

American hazelnut  
*Corylus americana*

Code: COAM3

Status: native



**Bark:** brown/gray, developing diamond pattern with age

**Foliage:** irregular base, broad oval, doubly serrate edge, rough texture

**Twigs:** brown and thin, hairy with zig-zag pattern

**Flower:** male: short catkins in clusters of 2-3, female: end of twig, inconspicuous

**Fruit:** nuts in a papery-husk

staghorn sumac  
*Rhus hirta*

Code: RHTY

Status: native



**Bark:** red/brown and velvety with young; brown with lenticels when older

**Foliage:** large leaf with 13-27 leaflets, bright green with serrated edges

**Twigs:** current year very fuzzy, center has large pith

**Flower:** green/yellow, hairy with male and female on separate plants

**Fruit:** upright, conical grouping of bright red hairy





UNIVERSITY OF  
**Nebraska**  
Lincoln

## smooth sumac *Rhus glabra*

Code: RHGL

Status: native



**Bark:** smooth when young, lenticels present, some cracking with age  
**Foliage:** pinnately compound, alternate, dark green, yellowish rachis, leaflets serrate  
**Twigs:** trunks are short, crooked; minimal branching, stout twigs  
**Flower:** dioecious, 6-10" panicles of yellow green flowers  
**Fruit:** scarlet red, hairy drupe, can persist into winter



UNIVERSITY OF  
**Nebraska**  
Lincoln

## apple *Malus* spp.

Code: MA2

Status: native



**Bark:** smooth gray or reddish, then flat strips or thin blocky plates when older  
**Foliage:** green, or green/red to purple—species/variety dependent  
**Twigs:** range from reddish to gray  
**Flower:** various: white, pink or purple; perfect flowers with 5 petals  
**Fruit:** pome (apple); size and color – variety dependent

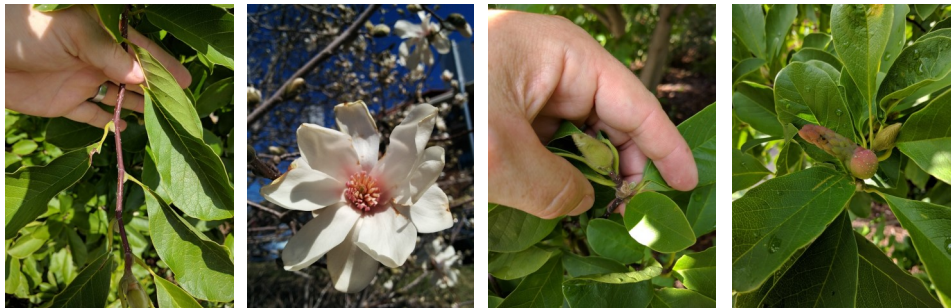


UNIVERSITY OF  
**Nebraska**  
Lincoln

## magnolia *Magnolia* spp.

Code: MA1

Status: non-native



**Bark:** gray and smooth, older bark may be scaly or cracked  
**Foliage:** round, slightly wavy appearance, smooth edges  
**Twigs:** gray, smooth, moderately stout  
**Flower:** perfect, showy display throughout entire canopy, white, pink, purple  
**Fruit:** large, round, red seeds



UNIVERSITY OF  
**Nebraska**  
Lincoln

## serviceberry *Amelanchier* spp.

Code: AM

Status: native



**Bark:** smooth gray, slight texture with age  
**Foliage:** dark or light green, broadly oval with smooth to serrated edges  
**Twigs:** gray/red smooth and slender  
**Flower:** perfect, 4 petals, white flowers, bloom in May  
**Fruit:** small, red/purple pomes, appearing in June



American beech  
*Fagus grandifolia*

Code: FAGR

Status: non-native



**Bark:** smooth, thin, blue/gray

**Foliage:** alternate, simple, oval, pointed tip, serrated, v-shaped veins, hairy along veins

**Twigs:** slender, brown, sometimes hairy; long slender terminal bud

**Flower:** male tiny, fuzzy, hanging at the end of silky stalks; female, end of branch, in pairs

**Fruit:** brown, spiky husk, 1-3 triangular nuts inside

bitternut hickory  
*Carya cordiformis*

Code: CACO15

Status: native



**Bark:** light gray/brown, smooth, lightly textured shallow fissures with age

**Foliage:** 5-7 leaflets, serrate, base leaflets smaller than terminal leaflet

**Twigs:** moderately stout, gray/brown

**Flower:** male: pendulous catkins, yellow/green; female: short spikes, green

**Fruit:** nut in leathery husk (green then brown), 4-sectioned spherical husks

cornelian-cherry  
*Cornus mas*

Code: COMA

Status: non-native



**Bark:** gray/brown, flaky

**Foliage:** egg-shaped, pointed tip, wedge shaped base, dark green top, light green below

**Twigs:** angles, green, reddish streaks, short appressed hairs

**Flower:** perfect, dense, short-stalks, 4 yellow bracts at cluster base, yellow petals

**Fruit:** half an inch long, cherry-red coloring

tulip tree, yellow-poplar  
*Liriodendron tulipifera*

Code: LITU

Status: non-native



**Bark:** gray, smooth or lightly textured when young; then interlacing furrows

**Foliage:** 4-lobed with a rounded base, 3-8" wide, distinctive shape

**Twigs:** slender or stout, shiny green or red/brown, then gray, stipules and scars

**Flower:** perfect, yellow/green petals (6), orange interior, ~3" tall

**Fruit:** narrow, conical, aggregate of samaras, green then brown, 3" long





UNIVERSITY OF  
**Nebraska**  
Lincoln

## American sweetgum

*Liquidambar styraciflua*

Code: LIST2

Status: non-native



**Bark:** gray/brown, smooth developing deep furrows with rounded ridges

**Foliage:** green, star-shaped with 5-7 pointed lobes

**Twigs:** moderately stout, red to yellow/brown, often with corky-wings, aromatic

**Flower:** female: rounded and 2-beaked, male: upright, panicle

**Fruit:** globe-shaped, opening into beak-like structure; hanging on 2-3" stems



UNIVERSITY OF  
**Nebraska**  
Lincoln

## green ash

*Fraxinus pennsylvanica*

Code: FRPE

Status: native



**Bark:** gray with narrow interlaced ridges (smooth when young)

**Foliage:** opposite, pinnately compound, 5-9 leaflets

**Twigs:** stout, current year greenish; leaf scar has flat-top, terminal bud large, brown, pointed

**Flower:** male and female on separate trees; yellowish white, lacking petals

**Fruit:** single winged seed, "canoe paddle" shaped; when present, often hanging in groups



UNIVERSITY OF  
**Nebraska**  
Lincoln

## American chestnut

*Castanea dentata*

Code: CADE

Status: non-native



**Bark:** brown/gray with ridges; become deeper & irregular with age

**Foliage:** alternate, simple, shiny green, narrow with small teeth along edge

**Twigs:** shiny, yellow to brown, terminal bud with rounded base and abruptly pointed tip

**Flower:** male, creamy white irregularly spaced on long stem; female at base of the stalk

**Fruit:** very spiny husk (green then brown), containing chestnuts



UNIVERSITY OF  
**Nebraska**  
Lincoln

## northern red oak

*Quercus rubra*

Code: QURU

Status: native



**Bark:** gray/brown, smooth when young; gray with flat-topped ridges, furrowed with age

**Foliage:** alternate, simple, lobe with bristled tips 4-8" long

**Twigs:** slender, red/brown with lenticels & lateral buds slightly raised, terminal pointed

**Flower:** dioecious, same tree; male catkin, long, green, numerous; female, short, fewer

**Fruit:** acorn with shallow cap, mature in autumn after two seasons.





UNIVERSITY OF  
**Nebraska**  
Lincoln

## pin oak *Quercus palustris*

Code: QUPA

Status: non-native



**Bark:** gray/brown & smooth when young, shallow furrows and rough ridges with age  
**Foliage:** alternate, simple, lobed, lobes ending in a point, often deep red in fall  
**Twigs:** slender, current year red/brown, shiny; then gray; terminal bud red, pointed  
**Flower:** dioecious, same tree; male catkin, long, green, numerous; female, short, fewer  
**Fruit:** round acorn with a scaled cap, covering less than a 1/4 of the acorn, strips visible



UNIVERSITY OF  
**Nebraska**  
Lincoln

## bicolor oak *Quercus bicolor*

Code: QUBI

Status: non-native



**Bark:** gray/brown, exfoliating scales when young; blocked & deeply fissured with age  
**Foliage:** alternate, simple with shallow rounded lobes, shiny green top, white underside  
**Twigs:** slender, gray with clustered rounded terminal buds  
**Flower:** dioecious, same tree; male catkin, long, green, numerous; female, short, fewer  
**Fruit:** acorns with long stem, cap about 1/4 the kernel with rough bumps



UNIVERSITY OF  
**Nebraska**  
Lincoln

## white oak *Quercus alba*

Code: QUAL

Status: native



**Bark:** light gray, narrow ridges, developing blocky irregular patches with age  
**Foliage:** alternate, simple with several fairly uniform lobes (highly variable in size/shape)  
**Twigs:** current year reddish, terminal buds clustered  
**Flower:** dioecious, same tree; male catkin, long, green, numerous; female, short, fewer  
**Fruit:** acorn with a cap covering the top 1/4, yellow turning brown



UNIVERSITY OF  
**Nebraska**  
Lincoln

## bur oak *Quercus macrocarpa*

Code: QUMA

Status: native



**Bark:** grayish with deep furrows & vertical ridges  
**Foliage:** alternate, simple with irregular lobes, typically two lobes deep to leaf center  
**Twigs:** can have corky ridges, terminal buds are clustered and rounded  
**Flower:** dioecious, same tree; male catkin, long, green, numerous; female, short, fewer  
**Fruit:** acorns with a large fringed-cap





UNIVERSITY OF  
**Nebraska**  
Lincoln

## American basswood

*Tilia americana*

Code: TIAM

Status: native



**Bark:** smooth gray/red/brown when young, gray/brown & with shallow/narrow ridges

**Foliage:** alternate, simple; somewhat heart-shaped with a pointed tip, toothed edges

**Twigs:** slender, slight zig-zag appearance; terminal bud round, may be green or red

**Flower:** perfect, 5 petals, yellowish white flowers, fragrant

**Fruit:** small nutlet under leafy bract turning brown



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Amur maple

*Acer tataricum*

Code: ACTA80

Status: non-native



**Bark:** smooth, gray when young, develops narrow irregular ridges with age

**Foliage:** opposite, simple, lobed generally 3, with a middle lobe longer than wide

**Twigs:** very slender, yellow/green or red/brown terminal bud pointed, but very small

**Flowers:** white/green, small clusters, polygamous

**Fruit:** paired "helicopters" (samaras); many, persisting in winter



UNIVERSITY OF  
**Nebraska**  
Lincoln

## silver maple

*Acer saccharinum*

Code: ACSA1

Status: native



**Bark:** smooth, silvery gray when young; develops thin, gray strips with age

**Foliage:** alternate, simple with lobes and coarsely toothed; underside silvery gray

**Twigs:** slender, red/brown in current year, smooth gray by year two

**Flower:** brown/red small in clusters, polygamous

**Fruit:** paired "helicopters" (samaras in spring)



UNIVERSITY OF  
**Nebraska**  
Lincoln

## boxelder

*Acer negundo*

Code: ACNE

Status: native



**Bark:** light orange/brown, slight fissures (young) - ridged & furrowed, dusty brown (mature)

**Foliage:** opposite, pinnately compound leaflets slightly lobed or coarsely toothed

**Twigs:** current year green or purple, waxy white coat. Buds hidden under leaf-stem

**Flower:** dioecious, male/female separate; insignificant, blooms early spring

**Fruit:** paired "helicopters" (samaras) green to brown persisting in winter





UNIVERSITY OF  
**Nebraska**  
Lincoln

## Norway maple

*Acer platanoides*

Code: ACPL

Status: non-native



**Bark:** gray/brown and smooth when young, dark & deeply furrowed with age  
**Foliage:** opposite, simple, 3-5" wide, pointed lobes, wavy edge (cultivars— red/maroon)  
**Twigs:** brown, rounded terminal buds. Current year green, gray/brown with age  
**Flower:** monoecious, yellow/green flowers, appear in spring before foliage  
**Fruit:** 'helicopters' ~2" green to brown, 'mustache' shaped, mature in fall



UNIVERSITY OF  
**Nebraska**  
Lincoln

## black walnut

*Juglans nigra*

Code: JUNI

Status: native



**Bark:** dark brown/gray, narrow furrows (wood is highly prized)  
**Foliage:** alternate, pinnately compound 10-20" long, generally missing terminal leaflet  
**Twigs:** stout, light brown current twig fuzzy & bud, inside (pith) divided into tan chambers  
**Flower:** male, long catkins; female, wooly spike at branch tip  
**Fruit:** round green husk about golf ball sized, producing dark stain



UNIVERSITY OF  
**Nebraska**  
Lincoln

## pecan

*Carya illinoensis*

Code: CAIL

Status: non-native



**Bark:** brown with gray flecks, ridges, & color back more with age  
**Foliage:** alternate, pinnately compound, thin-linear leaflets, pointed slightly curved  
**Twigs:** current year green, second year gray/brown  
**Flower:** male; long, green string of small flowers (catkins); female, short spike  
**Fruit:** oblong, green husk, 4 "peels"



UNIVERSITY OF  
**Nebraska**  
Lincoln

## black cherry

*Prunus serotina*

Code: PRSE

Status: native



**Bark:** shiny, dark with lenticels when young, older dark curling scales ("burnt potato chip")  
**Foliage:** alternate, simple, narrow with serrate edge, orange hairs underside along vein  
**Twigs:** shiny red/brown with lenticels, red/brown bud, smells of almond when scratched  
**Flower:** perfect, narrow grouping of small/white flowers with 4 petals  
**Fruit:** small red/purple in clusters





UNIVERSITY OF  
**Nebraska**  
Lincoln

## quaking aspen

*Populus tremuloides*

Code: POTR5

Status: non-native



**Bark:** smooth white or green when young, develops dark gray ridges & furrows with age

**Foliage:** alternate, simple round with toothed edge, flat stem

**Twigs:** current year red/brown, terminal bud small pointed with obvious scales

**Flower:** dioecious; male and female catkins long “fluffy” gray/white, with red & green

**Fruit:** capsule with “fluffy” cottony seed



UNIVERSITY OF  
**Nebraska**  
Lincoln

## eastern cottonwood

*Populus deltoides*

Code: PODE

Status: native



**Bark:** gray, thick deep furrows with flat-topped ridge

**Foliage:** alternate, simple, triangular shape with rounded teeth, green & shiny, stem flat

**Twigs:** gray/green with “bumpy” leaf & bud scar, large sticky yellow/green buds

**Flower:** dioecious; male: 1 inch reddish catkin; female, sparse yellow-green catkin

**Fruit:** capsule, 3-4 valves with tufted-cottony seeds; wind/water dispersal



UNIVERSITY OF  
**Nebraska**  
Lincoln

## American sycamore

*Platanus occidentalis*

Code: PLOC

Status: native



**Bark:** mottled brown/white/green, flaking/patchy & creamy/white smooth underneath

**Foliage:** alternate, simple 4-8” wide, lobed (like maple), coarse toothed edge

**Twigs:** slender, false terminal bud, single bud-cap, lateral buds hidden under leaf-stem

**Flower:** monoecious, small, clusters of yellow (male) and red (female) flowers on long stem

**Fruit:** round “ball” of many tightly packed seeds (achenes), persists in winter



UNIVERSITY OF  
**Nebraska**  
Lincoln

## yellowwood

*Cladrastis kentukea*

Code: CLKE

Status: non-native



**Bark:** silver-gray, sometimes a blackened color, smooth, slightly rougher with age

**Foliage:** alternate, pinnately-compound, leaflets oval

**Twigs:** current year, chocolate brown, then gray; buds hidden under the leaf stem

**Flower:** monoecious, white clusters on long drooping stems

**Fruit:** flat, brown pods hanging in clusters, legumes





UNIVERSITY OF  
**Nebraska**  
Lincoln

## black locust *Robinia pseudoacacia*

Code: ROPS

Status: non-native



**Bark:** gray/brown furrowed, with rope-like ridges, may appear orange under the ridge  
**Foliage:** alternate, pinnate compound, board-oval leaflets with smooth edges, light green  
**Twigs:** thin, with small spines at the base of buds along the twig  
**Flower:** monoecious, white flowers, in large clusters, very fragrant  
**Fruit:** brown seed pod (a legume)



UNIVERSITY OF  
**Nebraska**  
Lincoln

## honey-locust *Gleditsia triacanthos*

Code: GLTR

Status: native



**Bark:** red/brown scaly/cracked ridges, with lenticels when young, may have stiff thorns  
**Foliage:** alternate, pinnately or bi-pinnately compound, leaflets small & oval  
**Twigs:** zig-zag in appearance, buds generally no visible, may have thorns  
**Flower:** polygamo-dioecious; greenish-bronze, male slightly longer than female  
**Fruit:** long, twisted pods, green turning leather brown, seed brown "bean" shaped



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Kentucky coffeetree *Gymnocladus dioica*

Code: GYDI

Status: native



**Bark:** gray platy with curling edges develops brown with rough fissures  
**Foliage:** alternate, pinnately or bi-pinnately compound with many leaflets, large to 36" long  
**Twigs:** thick/stout, large leaf scar  
**Flower:** polygamo-dioecious; 3-5 petals and sepals, greenish yellow  
**Fruit:** (females trees only) large seed pod, starts yellow matures leather brown, hard seed



UNIVERSITY OF  
**Nebraska**  
Lincoln

## American elm *Ulmus americana*

Code: ULAM

Status: native



**Bark:** grayish (often white streak present), furrowed ridges. "Bacon" pattern when cut  
**Foliage:** alternate, simple, doubly serrate edges, uneven at base, tip pointed  
**Twigs:** slender, reddish brown in current year. **Bud:** red/brown pointed, non-hairy  
**Flower:** monoecious, insignificant, green/brown, appears before foliage  
**Fruit:** circular, small, papery with hairs and notch at top





UNIVERSITY OF  
**Nebraska**  
Lincoln

## hackberry *Celtis occidentalis*

Code: CEOC

Status: native



**Bark:** grayish, with distinct hard-corky ridges

**Foliage:** alternate & simple, serrated edge, uneven base. Nipple gall is common

**Twigs:** twigs slender, slightly zigzagged

**Flower:** monoecious, small/inconspicuous, gold/yellow; male in clusters; female, solitary

**Fruit:** dark purple berry-like with hard seed



UNIVERSITY OF  
**Nebraska**  
Lincoln

## northern catalpa *Catalpa speciosa*

Code: CASP

Status: non-native



**Bark:** reddish when young, gray/brown with age, shallow irregular fissures/ridges

**Foliage:** whorled, simple, very large heart shaped, with smooth edges

**Twigs:** stout, buds and leaf-scars arranged in a whorled pattern

**Flower:** perfect, large white, with purple/orange markings

**Fruit:** long, thin "sting-bean" fall/winter



UNIVERSITY OF  
**Nebraska**  
Lincoln

## horsechestnut *Aesculus hippocastanum*

Code: AEHI

Status: non-native



**Bark:** gray/brown with stiff scaly patches as trees age

**Foliage:** opposite, palmately compound, large, narrow at base with round end

**Twigs:** stout, gray, with sticky & shiny buds

**Flower:** monoecious, upright flowers, large & white

**Fruit:** spiny husks with leather brown nuts



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Ohio buckeye *Aesculus glabra*

Code: AEGL

Status: non-native



**Bark:** light gray develops light corky layer to brown and furrowed on older trees

**Foliage:** opposite, palmately compound, leaflets long, slightly narrow with pointed tip

**Twigs:** stout, with large non-sticky, pointed brown bud, large shield shaped leaf-scar

**Flower:** monoecious, upright grouping of green/yellow flower

**Fruit:** smooth/spiny husk with brown nut





UNIVERSITY OF  
**Nebraska**  
Lincoln

## Amur corktree *Phellodendron amurense*

Code: PHAM

Status: non-native



**Bark:** very corky in feel, furrowed/ridged, light gray

**Foliage:** opposite, pinnately compound, 10-15" long, 5-11 leaflets, smooth edges.

**Twigs:** stout, yellowish-gray on current growth, bud hidden under leaf stem

**Flower:** dioecious; male and female, non-showy, yellow/green

**Fruit:** small drupe, green then purple/black at maturity



UNIVERSITY OF  
**Nebraska**  
Lincoln

## pawpaw *Asimina triloba*

Code: ASTR

Status: native



**Bark:** gray with thin & irregular ridges; smoother when young

**Foliage:** simple, alternate, large up to 12", smooth but wavy edge, pointed tip

**Twigs:** current year green & hairy, previous year gray, terminal bud no scales, lateral

**Flower:** perfect, bell-shaped, red/brown soft, appear in early spring

**Fruit:** oval, 4" long, yellow turning brown, sweet



UNIVERSITY OF  
**Nebraska**  
Lincoln

## eastern redbud *Cercis canadensis*

Code: CECA

Status: native



**Bark:** smooth red/gray when young, red/brown & scaly/platy when mature

**Foliage:** alternate, simple, heart-shaped with smooth edge

**Twigs:** slender, red/gray. Flower/lateral buds reddish small, held tight to branch

**Flower:** monoecious, pink small, in groups held tight to twig

**Fruit:** small, papery, pod, legume



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Japanese tree lilac *Syringa reticulata*

Code: SYRE

Status: non-native



**Bark:** smooth red/brown, with lenticels, developing small rectangular block with age

**Foliage:** opposite, simple, smooth edge, oval coming to a tip

**Twigs:** brown with lenticels, often two terminal buds, with obvious scales

**Flower:** monoecious, small, showy white horizontal grouping, very fragrant

**Fruit:** capsules, splits in two, sometimes persists into winter





UNIVERSITY OF  
**Nebraska**  
Lincoln

## European buckthorn

*Rhamnus cathartica*

Code: RHCA

Status: non-native



**Bark:** smooth, red/brown with lenticels, darker & scaly on older trees

**Foliage:** opposite, sub-opposite, alternate, simple, serrate edge

**Twigs:** thin, gray, two terminal buds with thorn between, lateral buds often on spur shoots

**Flower:** dioecious, small, green, inconspicuous

**Fruit:** round, shiny purple/black berry-like



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Amur Maackia

*Maackia amurensis*

Code: MAAM

Status: non-native



**Bark:** orange to greenish, oval peeling outer layer

**Foliage:** alternate, pinnately compound leaflets, emerging spring leaves fuzzy silver

**Twigs:** current growth, gray/brown, slight zig-zag **Bud:** pointed green/purple, slightly flat

**Flower:** monoecious, upright grouping of small white flowers

**Fruit:** small-seed pod green to brown



UNIVERSITY OF  
**Nebraska**  
Lincoln

## pagoda dogwood

*Cornus alternifolia*

Code: COAL

Status: non-native



**Bark:** smooth with gray/brown streaks on green

**Foliage:** alternate, round to oval with distinct arched veins, smooth edge

**Twigs:** slender, green/brown; form is tiered branches

**Flower:** monoecious, small, white, appear in late spring

**Fruit:** starts green mature to a dark purple on red-stalk



UNIVERSITY OF  
**Nebraska**  
Lincoln

## musclewood

*Carpinus caroliniana*

Code: CACA

Status: native



**Bark:** thin, smooth gray. Rippled wood, give the trunk & branches a “muscle” appearance

**Foliage:** alternate, simple, oval with pointed tip, finely serrated edge, red/yellow fall color

**Twigs:** slender, zig-zag with small pointed buds reddish/brown

**Flower:** dioecious, same plant; male, catkins; female, catkin, flowers arranged in pairs

**Fruit:** a leafy bract hanging groups with a small nutlet underneath





UNIVERSITY OF  
**Nebraska**  
Lincoln

## Callery pear

*Pyrus calleryana*

Code: PYCA

Status: non-native



**Bark:** reddish brown with narrow ridges, blocky-plates with age

**Foliage:** alternate, simple; oval to round with pointed tip, glossy green

**Twigs:** moderately stout, brown with lenticels; terminal bud round, white, fuzzy

**Flower:** perfect, small, white with pink, "stinky"

**Fruit:** small round, brown with lenticels



UNIVERSITY OF  
**Nebraska**  
Lincoln

## ginkgo

*Ginkgo biloba*

Code: GIBI

Status: non-native



**Bark:** light gray with ridges, corky to touch

**Foliage:** alternate, simple with thin veins, fan-shaped some with deep "notch" or lobe

**Twigs:** gray with spur-shoots & cone-shaped bud. Lacking fine twigs or twiggy appearance

**Cone:** fleshy cone, green then yellow/orange, stinks when crushed (female only)



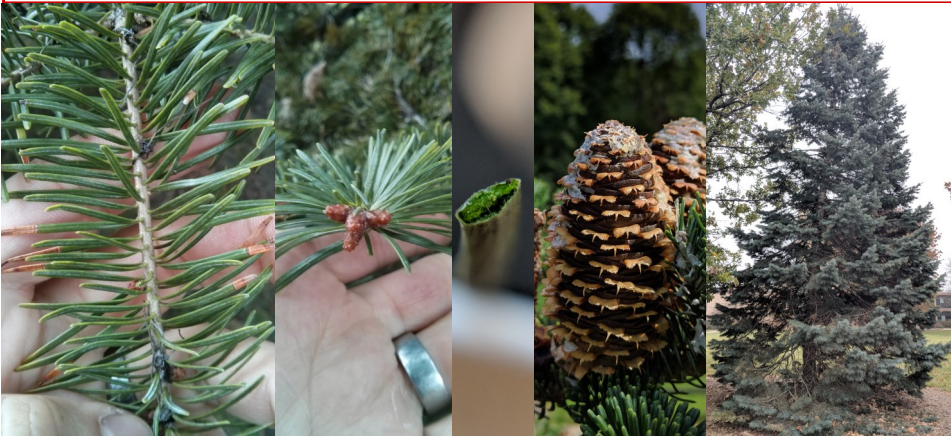
UNIVERSITY OF  
**Nebraska**  
Lincoln

## fir

*Abies* spp.

Code: AB

Status: non-native



**Needles:** short, flat, flexible, attached to twigs by suction-cup shaped structure

**Cones:** cones are deciduous, growing upright on the topside of branches,

**Form:** excurrent, central leader usually present



UNIVERSITY OF  
**Nebraska**  
Lincoln

## pine

*Pinus* spp.

Code: PI2

Status:



**Needles:** vary greatly in length, in bundles of 2, 3, or 5; held together and attached to the branch by the fascicle

**Cones:** vary greatly in size, woody

**Form:** varies depending on species





UNIVERSITY OF  
**Nebraska**  
Lincoln

## spruce *Picea* spp.

Code: PI1

Status:



**Needles:** short, pointed, stiff, attached to branch with small peg, square cross-cut  
**Cones:** papery scales, vary in size, hang down off branches, usually concentrated in upper branches  
**Form:** excurrent, usually central leader present



UNIVERSITY OF  
**Nebraska**  
Lincoln

## arborvitae *Thuja occidentalis*

Code: THOC

Status: non-native



**Bark:** thin brown/gray vertical strips, fibrous  
**Foliage:** evergreen, fanned & flattened scales, soft, aromatic  
**Twigs:** orange/brown thin, flexible  
**Cone:** upright, 1/2", oblong, oblong, slightly woody, brown



UNIVERSITY OF  
**Nebraska**  
Lincoln

## eastern red cedar *Juniperus virginiana*

Code: JUVI

Status: native



**Bark:** thin red-brown - vertical shredding strips, thin  
**Foliage:** evergreen, young needles sharp (awl), older needles overlapping scale  
**Form:** pyramidal or columnar, typically wider at the base, top often "drooping"  
**Cones:** circular to oval, bluish berry-like (female). Small, brown at foliage tip (male)



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Douglas-fir *Pseudotsuga menziesii*

Code: PSME

Status: non-native



**Bark:** smooth, gray when young; thick ridges, brown/red when older  
**Foliage:** singly attached, flat needle coming to a point, generally soft  
**Twigs:** gray with a pointed & scaled terminal bud  
**Cone:** papery cone with smooth scale & distinct bracts emerging from scales





UNIVERSITY OF  
**Nebraska**  
Lincoln

## ponderosa pine

*Pinus ponderosa*

Code: PIPO

Status: native



**Bark:** grayish & scaly, becoming irregular, furrowed red-brown plates

**Foliage:** 2 & 3 bundled needles, 6" to 8" in length

**Cones:** 3" to 6" in length, scales having stiff spines



UNIVERSITY OF  
**Nebraska**  
Lincoln

## eastern white pine

*Pinus strobus*

Code: PIST

Status: non-native



**Bark:** smooth, silvery when young, developing thick, dark-gray furrows

**Foliage:** soft, light green in bundles of 5 needles

**Form:** pyramidal when young, maturing to large up-turned branches

**Cones:** longer than wide, 5-8" long, thick, white resin on scales



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Scotch pine

*Pinus sylvestris*

Code: PISY

Status: non-native



**Bark:** young - papery, flaky, orange - older - gray/brown, scales & plates

**Foliage:** needles in pairs between 1" - 3" long

**Twigs:** thin, gray/brown with a pointed orange terminal bud

**Cones:** small woody cones up to 3" long, slightly egg-shaped; male-pollen cone, yellow



UNIVERSITY OF  
**Nebraska**  
Lincoln

## Austrian pine

*Pinus nigra*

Code: PINI

Status: non-native



**Bark:** gray/black with red/pink having irregular plates developing furrows with age

**Foliage:** needles attached in pairs, 5-7" long

**Twigs:** gray with large white resin buds

**Flower/fruit:** 3-4" long; tan, woody scales with a small spine (falls off at maturity)



Norway spruce  
*Picea abies*

Code: PIAB

Status: non-native



**Bark:** gray flaky, scaly

**Foliage:** single needle, can roll easily between thumb and index finger

**Twigs:** orange-brown with drooping curtain-like branchlets

**Flower/fruit:** large cone with thin-stiff scales 6-8" long

Colorado spruce  
*Picea pungens*

Code: PIPU

Status: non-native



**Bark:** grayish-brown flaky or scaly. Frequent bluish sap oozing from wounds

**Foliage:** singly attached needles, very sharply points; green or bluish in color

**Twigs:** orange for current year's growth

**Cone:** 3-5" long, with fringed papery scales; brown to golden in color, hanging down on branch

white spruce  
*Picea glauca*

Code: PIGL

Status: non-native



**Bark:** brown/gray some red platy, scaly

**Foliage:** needles singly attached, needles are square and pointed

**Twigs:** gray with some orange, no hairs

**Cones:** small 1-2" long, brown with papery scales, scales with smooth edges

balsam fir  
*Abies balsamea*

Code: ABBA

Status:



**Bark:** gray/green, resin blisters cover the trunk; breaks into plates with age

**Foliage:** green, white lines under needle, flat, attached to twig with 'suction cup'

**Twigs:** smooth with small gray hairs

**Flower:** yellow, beneath needles, appearance similar to catkins

**Fruit:** purple, then gray/brown; upright on branch; cone scales; pegs on branch





UNIVERSITY OF  
**Nebraska**  
Lincoln

## yew

*Taxus spp.*

Code: TAXUS

Status: native



**Bark:** thin, flaky plates, red/brown

**Foliage:** dark green upper, light green/yellow under; flat with pointed tip

**Twigs:** flexible, yellow/green

**Fruit:** fleshy, red cups surrounding a bluish seed



UNIVERSITY OF  
**Nebraska**  
Lincoln

## eastern hemlock

*Tsuga canadensis*

Code: TSCA

Status:



**Bark:** grayish to brownish red, scaly when young, large flaky plates with age

**Foliage:** long tapering needles, dark green with two white stomatal lines

**Twigs:** thin, brown to gray

**Flower:** pollen bearing: yellow, small, round; cone producing: green at twig tip

**Fruit:** egg-shaped, light brown



UNIVERSITY OF  
**Nebraska**  
Lincoln

## lacebark pine

*Pinus bungeana*

Code: PIBU

Status: non-native



**Bark:** gray and silver patches, greenish young stems

**Foliage:** margins finely toothed, needles very rigid and sharp, dark green, raised midrib

**Twigs:** grayish-green, shiny and smooth

**Fruit:** cones are terminal or lateral, 2-3 inches long, 2 inches wide, light yellow-ish brown



UNIVERSITY OF  
**Nebraska**  
Lincoln

## jack pine

*Pinus banksiana*

Code: PIBA2

Status: native



**Bark:** scaly, irregular flaky plates; flakes reveal a yellow orange inner bark with outer layer is brown-black

**Foliage:** yellow-green needles; 2-needled bundles, often twisted

**Twigs:** smooth twigs with red-brown coloring

**Flower:** male flowers are yellowish while female colors are purple

**Fruit:** cone is 1-3 inches long, curved inward and usually closed





UNIVERSITY OF  
**Nebraska**  
Lincoln

white fir  
*Abies concolor*

Code: ABCO

Status: non-native



**Bark:** gray, smooth with few resinous blisters; deeply, irregularly ridged with age  
**Foliage:** blue-green needles, singularly attached with “suction cup”, curved up, smells citrusy when crushed  
**Twigs:** yellow/green on current year, then gray/brown  
**Flower:** male red/violet



UNIVERSITY OF  
**Nebraska**  
Lincoln

baldcypress  
*Taxodium distichum*

Code: TADI2

Status: non-native



**Bark:** thin and fibrous with a pattern of flat ridges and narrow furrows  
**Foliage:** deciduous, linear and flat  
**Twigs:** start off green and become brown after the first year  
**Cones:** small purple-green cones when immature and turn brown with maturity