



# Identification of Hardwood Trees in Iowa

This publication is designed to help identify the most common hardwood or deciduous trees found in Iowa. It is based on vegetative characteristics including leaves, fruit, and bark. It is neither complete nor without possible oversights.

Separate species are grouped by similar characteristics, mainly based on type and arrangement of leaves. Remember, vegetative characteristics are quite variable; use more than one specimen for comparison.

## Alternate, Simple, Single Toothed, Triangle Shaped

*Populus deltoides*  
**Eastern Cottonwood**

Small branches are white or yellow; buds are resinous; leaf coarsely toothed.



*Populus grandidentata*  
**Bigtooth Aspen**

Small branches are white or yellow; buds not resinous and stick out from the twig; leaf coarsely toothed with flat petiole.



*Populus tremuloides*  
**Quaking Aspen**

Small branches are white or yellow; leaf 1 1/2-3 inches long and finely toothed; petiole is flat.



## Alternate, Simple, Single Toothed, Oval or Oblong Shaped

*Amelanchier arborea*  
**Serviceberry**

Leaves are hairy when young; shrubby tree with smooth, gray bark with dark lines; fruit is less than 1/2 inch diameter.



*Prunus americana*  
**Plum**

Shrubby tree with 1 inch diameter green to purple fruit; twigs are stubby, spur-like, and sometimes spine tipped; leaf with long pointed tip, 3-4 inches long.



*Prunus virginiana*  
**Chokecherry**

Leaf is finely toothed with outward curved teeth; leaves are thin; fruit is born in red clusters; bark is brownish and smooth.



*Prunus serotina*  
**Black Cherry**

Fruit born in purple to black clusters; leaf is finely toothed with teeth curved towards the tip, thick and waxy; old bark has black platy scales.



## Alternate, Simple, Long Thin Leaves

*Salix interior*  
**Sandbar Willow**

Buds with single bud scale; leaf has widely spaced marginal teeth, very narrow (1/4-3/8 inch); a shrubby species.



*Salix nigra*  
**Black Willow**

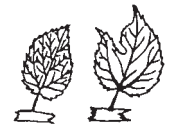
Buds with single bud scale; leaf is finely toothed, 3/8-3/4 inch wide.



## Alternate, Simple Leaves, Lobed with Pointed Tips

*Morus sp.*  
**Mulberry**

Leaf margins are coarsely toothed; if leaves are lobed, the lobing is extremely variable; fruit are composite fleshy seeds.



*Populus alba*  
**White Poplar**

Leaf underside and twigs are hairy and white; leaves are three to five lobed; branches are cream or white colored.



*Platanus occidentalis*  
**Sycamore**

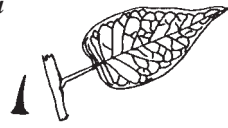
Leaves are three to five lobed, margins coarsely toothed; fruit is a hairy ball of seeds 1 inch in diameter; bark is scaly; inner bark is almost white; trunk appears mottled.



## Alternate, Simple Leaves, Thorns or Spines Present

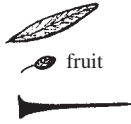
### *Maclura pomifera* Osage Orange

Leaves 3-5 inches long with smooth margins; thorns are straight and 1/2 inch in length.



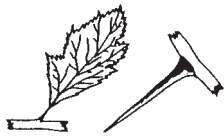
### *Elaeagnus angustifolia* Russian Olive

Leaf is long and narrow; leaf is silvery colored and scurfy.



### *Crataegus sp.* Hawthorns

Leaf margin is coarsely doubly toothed (almost lobed); thorns are unbranched.



## Alternate, Simple, Double- Toothed Leaves with Unequal Leaf Bases

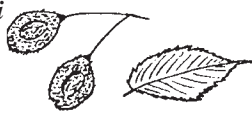
### *Celtis occidentalis* Hackberry

Leaves 2 1/2-4 inches long with a sharp pointed tip; bark has warty or corky ridges or growths.



### *Ulmus thomasii* Rock Elm

Leaves 2 1/2-4 inches long, smooth above, hairy below; twigs may have corky growths or wings; buds are brown.



### *Ulmus americana* American Elm

Leaves 4-6 inches long, hairy below; buds are brown; twigs are reddish brown and tend to droop.



### *Tilia americana* American Basswood

Leaves are 4-7 inches long, heart shaped; buds are red-brown and have two scales.



### *Ulmus rubra* Slippery Elm

Leaves 5-7 inches long, very rough above and hairy below; twigs are gray and grow upwards.



## Alternate, Simple, Double- Toothed Leaves with Equal Leaf Bases

### *Betula papyrifera* Paper Birch

Bark is white and papery, peeling horizontally.



### *Betula nigra* River Birch

Bark is brown to bronze, peeling horizontally; leaf base is wedge shaped; southern Iowa.



### *Carpinus caroliniana* American Hornbeam

Bark is smooth, thin, and blue gray; nut is connected to a three-lobed bract in spikelike clusters.



### *Ostrya virginiana* Ironwood

Bark is rough; nut is enclosed in a bladder-like sac, borne in clusters.



## Alternate, Simple, Lobed Leaves; Lobes with Pointed Tips; Fruit an Acorn

### *Quercus palustris* Pin Oak

Lobe sinuses reach almost to leaf mid-vein, acorn is round with cap covering one-third or less; southern Iowa.



### *Quercus ellipsoidalis* Northern Pin Oak

Lobe sinuses reach almost to leaf mid-vein; acorn is oval with cap covering almost one-half; northern Iowa.



### *Quercus rubra* Red Oak

Lobe sinuses reach one-half way to mid-vein; seven to eleven lobes; leaf is green below; acorn cap does not extend up the acorn.



### *Quercus velutina* Black Oak

Lobe sinuses reach one-half way to mid-vein; five to seven lobes; sinuses are broad; leaf is coppery colored below; acorn cap reaches one-half way up the acorn with a rough margin.



### *Quercus imbricaria* Shingle Oak

Leaf not lobed; leathery, dull green with bristle tip; leaves 4-6 inches long with entire wavy margin.



## Alternate, Simple, Lobed Leaves; Lobes with Rounded Tips; Fruit an Acorn

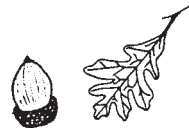
### *Quercus bicolor* Swamp White Oak

Lobes are very shallow and irregular; acorn cap is rough and fringed.



### *Quercus alba* White Oak

Seven to nine lobes; acorn is mostly spherical with a smooth cap.



*Quercus muehlenbergii*  
**Chinkapin Oak**

Leaf margins are very coarsely toothed with rounded tips.



*Quercus macrocarpa*  
**Bur Oak**

Five to nine lobes; leaf is divided in half near center with a deep lobe almost to mid-vein; top portion of leaf is more wavy than lobed; acorn cap is fringed.



**Alternate, Compound Leaves with Thorns or Spines**



*Gleditsia triacanthos*  
**Honey Locust**

Two to eight inch long thorns that are branched; attached to stem and twigs (thorns may be absent).



seed pod

*Robinia pseudoacacia*  
**Black Locust**

One-half inch long spines occur at the leaf base.



seed pod

**Alternate Compound Leaves with More Than 11 Leaflets**

*Gymnocladus dioica*  
**Kentucky Coffee Tree**

Leaves double compound with 40 or more leaflets; leaflet is 1-3 inches long.



seed pod



*Juglans cinerea*  
**Butternut**

Eleven to 17 leaflets; ternlinal leaflet is usually present and large; pith is chambered and dark chocolate brown.



*Juglans nigra*  
**Black Walnut**

Fifteen to 23 leaflets; terminal leaflet is usually absent or small; pith is chambered and tan in color.



**Alternate, Compound Leaves with Five to Nine Leaflets**

*Carya ovata*  
**Shagbark Hickory**

Five leaflets, 7-14 inches long; large terminal bud; bark smooth when young and shaggy when older.



*Carya cordiformis*  
**Bitternut Hickory**

Leaf is 6-9 inches long; seven to eleven leaflets; buds are colored a sulfur yellow; nut husk is thin.



*Carya laciniosa*  
**Shellbark Hickory**

Five, seven, or nine leaflets; leaf is 15-22 inches long and hairy below; old bark is shaggy; twigs are orange-brown.



*Carya tomentosa*  
**Mockernut Hickory**

Leaf is 9-14 inches long; seven to nine leaflets; twigs are hairy and reddish brown or brownish gray; nut husk is thick.



**Opposite Compound Leaves**

*Aesculus glabra*  
**Ohio Buckeye**

Five leaflets, palmately compound; fruit is a spiny, leathery seed capsule with one seed.



*Aesculus hippocastanum*  
**Horse-chestnut**

Seven leaflets, palmately compound; fruit is a short-spined leathery seed capsule with one or more seeds.



*Acer negundo*  
**Boxelder**

Three to five leaflets, pinnately compound; twigs are covered with whitish bloom; fruit a double samara.



*Fraxinus sp.*  
**Ashes**

Five or more leaflets; fruit a double samara.



**Opposite Simple Leaves**

*Cornus sp.*  
**Dogwoods**

Leaves 3-6 inches long; veins run parallel to leaf margin; mid-vein contains fine strands when pulled apart.



*Acer saccharum*  
**Sugar Maple**

Leaves with five lobes, margin is smooth; fruit is a u-shaped samara.



*Acer rubrum*  
**Red Maple**

Leaf with three main lobes; lobe sinuses are sharp, with toothed margins; fruit a v-shaped samara.



*Catalpa speciosa*

**Catalpa**

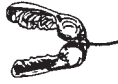
Leaves, 8-12 inches, heart-shaped; fruit is a long, 8-20 inch pod.



*Acer nigrum*

**Black Maple**

Leaf with three main lobes; lobe sinuses are rounded with mostly smooth margins; fruit is a u-shaped samara.



*Acer saccharinum*

**Silver Maple**

Leaves with five or more lobes; sinuses are sharp angles with coarse teeth; fruit is a v-shaped samara; leaf light in color under surface.



---

Prepared by Paul H. Wray, extension forester.

**... and justice for all**

The Iowa Cooperative Extension Service's programs and policies are consistent with pertinent federal and state laws and regulations on nondiscrimination. Many materials can be made available in alternative formats for ADA clients.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Stanley R. Johnson, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.