

Plant Profiles: HORT 2242 Landscape Plants II

Botanical Name: *Ostrya virginiana*

Common Name: hophornbeam, American hophornbeam, ironwood

Family Name: Betulaceae – birch family

General Description: *Ostrya virginiana* is a native tree commonly found in woodlands of the Chicago area and eastern United States. It typically grows as an understory tree in dry upland woods. However, it can also be found in somewhat rich moist woods where it mingles with another native species, *Carpinus caroliniana*, American hornbeam. Although these two species briefly share habitat, *Carpinus caroliniana* grows primarily in moist, even wet sites while *Ostrya virginiana* is predominate in a drier habitat. In the landscape, *Ostrya virginiana* is a small to intermediate size tree that is tolerant of a wide range of soil and moisture conditions though it does best in moist, well-drained soils in full to part sun.

Zone: 3-9

Resources Consulted:

Dirr, Michael A. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Champaign: Stipes, 2009. Print.

"The PLANTS Database." *USDA, NRCS*. National Plant Data Team, Greensboro, NC 27401-4901 USA, 2014. Web. 17 Mar. 2014.

Swink, Floyd, and Gerould Wilhelm. *Plants of the Chicago Region*. Indianapolis: Indiana Academy of Science, 1994. Print.

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Keywords/Tags: Betulaceae, *Ostrya virginiana*, hophornbeam, American hophornbeam, ironwood, tree, deciduous



Whole plant/Habit:

- Description: *Ostrya virginiana* is pyramidal in youth becoming more rounded in maturity. In leaf, it has a medium to coarse texture but during the dormant season the many small, thin twigs creates a fine-textured silhouette.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: February 7, 2009
- Image File Name: hophornbeam_1100990.png



Whole plant/Habit:

- Description: Hophornbeam can be grown multi-trunk as seen in this image or as a single trunk specimen.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: April 15, 2008
- Image File Name: hophornbeam_0772.png



Bark:

- Description: The bark of hophornbeam is gray-brown and arranged in exfoliating vertical strips. It looks as if it has been "cat scratched"!
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: February 6, 2009
- Image File Name: hophornbeam_0051.png



Bark:

- Description: The "cat scratched" bark feature helps to distinguish hophornbeam (*Ostrya*) from hornbeam (*Carpinus*) which has smooth bark.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: Winter 2014
- Image File Name: ostrya_carpinus_bark_6736s.png



Branch/Twig:

- Description: The alternate, zig-zag, reddish-brown twigs are somewhat pubescent when first formed but become glabrous as they mature. Typical of plants in the Betulaceae family, *Ostrya virginiana* produces many slender, fine twigs.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: October 14, 2008
- Image File Name: hophornbeam_0793.png



Bud:

- Description: The buds are alternate, brown, pointed and have imbricate scales. They diverge (point away) from the stem. If you look closely you will see there is no true terminal bud. This is also evident in the picture illustrating branch/twig qualities.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: February 6, 2009
- Image File Name: hophornbeam_0057.png



Flower:

- Description: Hophornbeam is monoecious. It produces separate male and female flowers on the same plant. The male catkins (pictured here) form at the end of the twigs and are usually in clusters of three. This is sometimes referred to as looking like a goosefoot or bird toes! They are formed in fall and are present throughout the winter.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 30, 2010
- Image File Name: hophornbeam_6250.png



Flower:

- Description: In early spring the male catkins elongate and form pollen which is dispersed by wind. The female catkins, which are greenish and inconspicuous, form in early spring.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: May 4, 2005
- Image File Name: hophornbeam_0354.png



Fruit:

- Description: The fruits of *Ostrya virginiana* are very distinctive and provide an excellent identification feature, in one form or another, throughout the year. The fruit cluster resembles the fruit of true hops, *Humulus lupulus*, which is used in making beer; hence the common name of hophornbeam. The nutlets are enclosed in individual greenish, inflated sacs arranged in a cluster.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: June 22, 2008
- Image File Name: hophornbeam_1595.png



Fruit:

- Description: By the end of the season the fruit sacs have turned brown and begin to fall off the cluster. They are a desirable food source for a variety of birds and mammals.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: October 14, 2008
- Image File Name: hophornbeam_0795.png

**Fruit:**

- Description: Frequently the peduncle (stalk) that held the fruit sacs remains on the tip of the stem. This can serve as an identification tool even after the individual fruits have dispersed.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: February 6, 2009
- Image File Name: hophornbeam_0054.png

**Leaf:**

- Description: The leaves are alternate, simple, with a strong pinnate vein pattern. They have an elliptical shape with doubly serrate margins and an acuminate (drawn out) leaf tip.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: May 21, 2005
- Image File Name: hophornbeam_1385.png

**Leaf:**

- Description: The petiole and axils of the veins are hairy.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: September 5, 2010
- Image File Name: hophornbeam_1190833.png



Leaf:

- Description: Notice that the veins fork before reaching the end of the leaf. This feature can help distinguish *Ostrya* from *Carpinus*.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: June 22, 2008
- Image File Name: hophornbeam_1597.png



Leaf:

- Description: Fall color is greenish-yellow. On some specimens dried brown leaves will remain on the tree throughout most of the winter. The yellow fall color helps identify *Ostrya virginiana* from *Carpinus caroliniana* which usually has red in its fall color. Also notice the leaf margins have both large and small forward pointing "saw-like" teeth. This is an example of a doubly-serrate leaf margin.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: October 14, 2008
- Image File Name: hophornbeam_0797.png



Winter interest:

- Description: The male catkins create an interesting texture, plus they provide an excellent winter identification feature!
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 30, 2010
- Image File Name: hophornbeam_6248.png

**Special ID feature(s):**

- Description: The highly unique hop-like fruit clusters in all stages of development (or remnant peduncle) will be the best identification feature.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: October 26, 2008
- Image File Name: hophornbeam_1060681.png