

# The Trails at MSV

An Identification Guide to the Trees at the Museum of  
the Shenandoah Valley



A Joint project Of the Museum of the Shenandoah  
Valley and the Shenandoah Chapter of The Virginia  
Master Naturalists

*Paul Guay*

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## A Forest Reborn

Cattle were here, lazily grazing. And sometimes resting in the shade of aged oaks: red oaks, white oaks, black oaks, chinquapin oaks. These, the remnants of a forest past, had been left in place to offer a cool refuge from the summer sun. And there were thorny hedge apple trees too. Not the remnants of another forest, but the remnants of old hedgerows, impenetrable living fences, planted by farmers before the age of barbed wire. In late summer their fallen grapefruit-sized fruit proved a tasty treat for the cattle. Here and there, a native black haw viburnum found safe haven from the hungry cattle, amid craggy limestone outcroppings.

Then the cattle left. The trampled, but fertile pasture fell idle. A blank slate. But nature abhors a blank slate, wanting to fill it once again. Perhaps it began with the seeds of the hedge apples. The seeds, having passed unharmed through the cattle's gut, were deposited on the ground, along with a large amount of fertilizer. Now, free from trampling hoofs and hungry mouths the tiny sprouts were free to grow, everywhere, eventually becoming one of the commonest trees of the new forest.

And the planting continued.

Blue jays planted acorns. Squirrels planted walnuts and hickory nuts. Songbirds spread the seeds of wineberries, barberries, mulberries, viburnums, cherries, hawthorn, spicebush, sassafras, autumn olive, honeysuckle, and holly. Wind spread the seeds of tulip poplar, sycamore, ash, pine, maple, tree of heaven and elm. And humans planted neat rows and secret coppices of cultivated oaks and hickory trees. Single specimens of Swamp Magnolia and Witch Hazel were planted too.

Seeds came in from far and wide, often escaping from cultivation in nearby gardens and residential neighborhoods: Seibold's viburnum, pagoda tree, bee-bee tree, pin oak, mahalab cherry, and Norway maple.

Now, it's a forest like no other: A wonderful mix of native, non-native, invasive and exotic plants and works of art sculpted by the hands of women and men, a joint experiment by nature and by humans. With wide hiking paths winding through it, the Trails at MSV are a place to enjoy and ponder the wonder and beauty of nature, and of human endeavor, and of all of the secrets hidden therein.

and of all of the secrets hidden therein....

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## Many Thanks to:

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And Hilary Sorter for her expert technical assistance.

## DEFINITIONS



**FLOWER** with **MALE** parts only



**FLOWER** with **FEMALE** parts only



**PERFECT FLOWER**, flower with both **MALE** and **FEMALE** parts

### FLOWER GENDER:

Dioecious

**MALE** and **FEMALE** flowers on separate trees

Monoecious

**MALE** and **FEMALE** flowers on every tree

Polygamomonoecious

**MALE**, **FEMALE** and **PERFECT** flowers on every tree

Polygamodioecious

**MALE** and **PERFECT** flowers on one tree and **FEMALE** and **PERFECT** flowers on another

Protogynous

**FEMALE** flower parts fully developed with rudimentary **MALE** parts (Norway Maple)

Protoandros

**MALE** flower parts fully developed with rudimentary **FEMALE** parts (Norway Maple)

Heterodichogamous\*

\*Trees with **PROTOGYNOUS**, or **PROTOANDROUS**, or all **MALE**, and/or all **FEMALE** Flowers. Flower gender can change according to certain environmental conditions (Norway Maple)

\*Less than 0.1% of all trees (<https://link.springer.com/article/10.1007/s10342-022-01459-3>)

### FLOWER PARTS

#### Male Parts:

Pollen

The plants male germ cells that fertilize the **OVULE**

Anther

Produces the **POLLEN** grains

Filament

Stalk supporting the **ANTHER**

Stamen

**ANTHER** and **FILAMENT** together

#### Female Parts:

Stigma

Sticky tip of the **STYLE** that receives **POLLEN** grains

Style

Tube transferring **POLLEN** from **STIGMA** to **OVARY**

Ovary

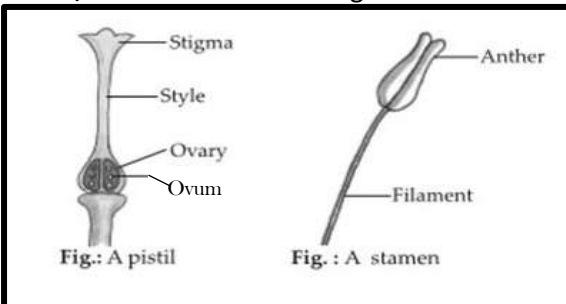
Female organ housing the **OVUUM**

Ovum

The plants 'egg' that develops into the seed when fertilized by the **POLLEN**

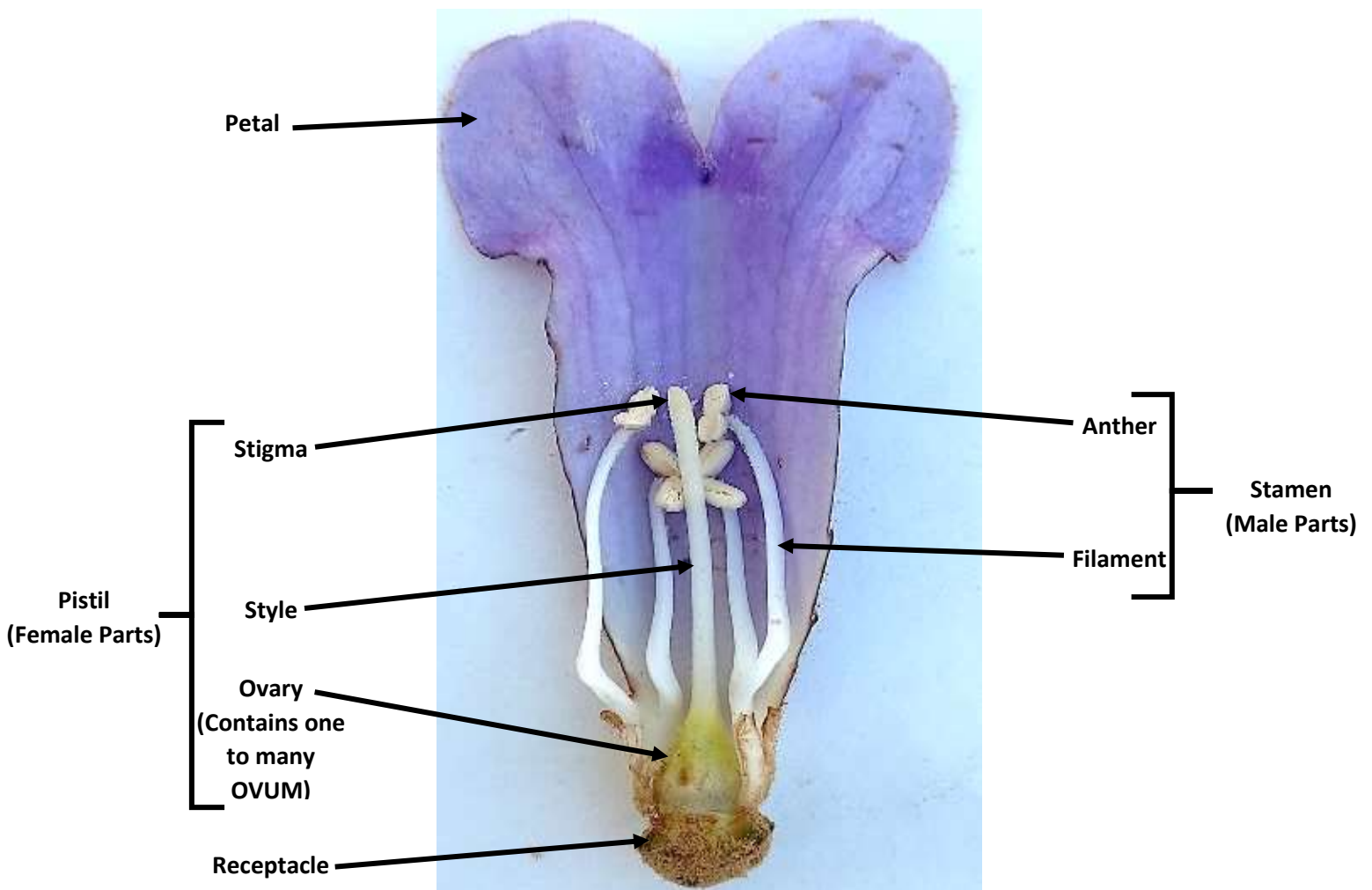
Pistil

**STIGMA**, **STYLE**, **OVARY** and **OVULE** together



# FLOWER ANATOMY

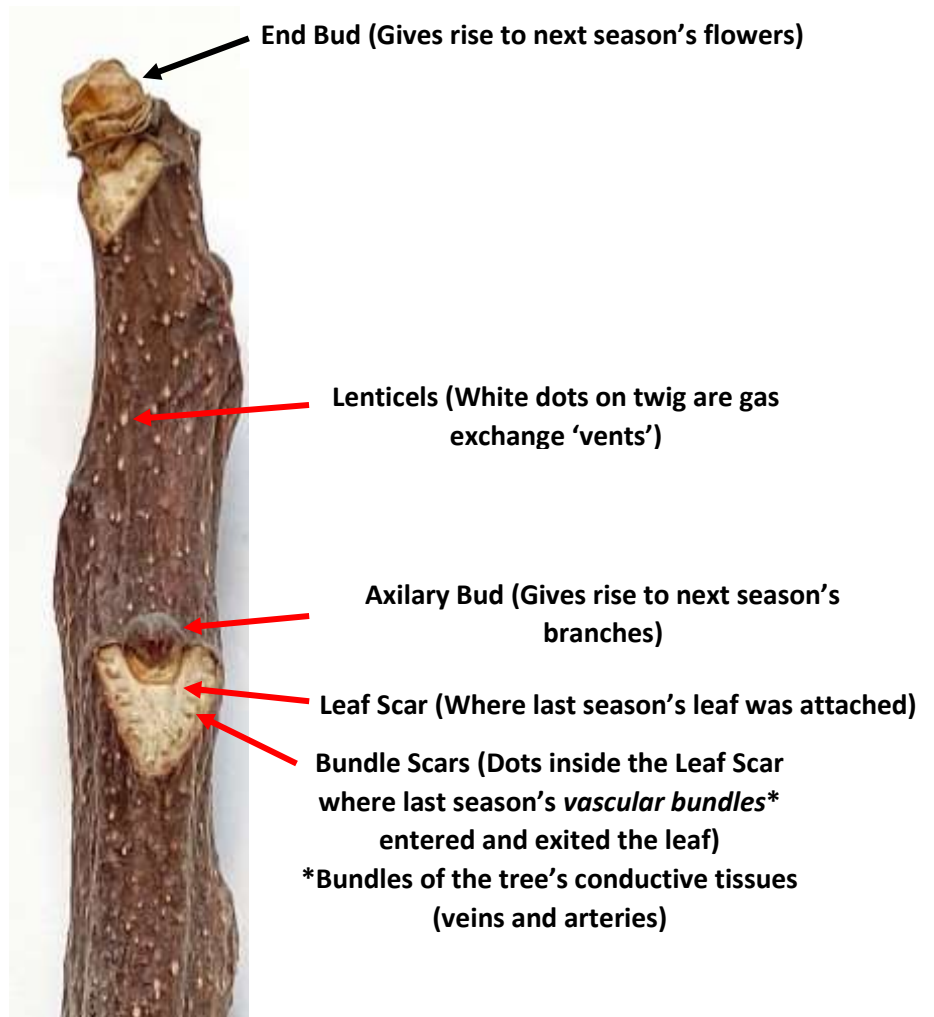
(Princess Tree Flower)





## TWIG ANATOMY

(Tree Of Heaven Twig)



All species of trees have a unique, SPECIES SPECIFIC, twig anatomy. These features alone can be positive Species ID Factors

## BARK ANATOMY

*Many species of trees can be identified by bark characteristics alone.*



**SMOOTH**  
**PAWPAW**



**LENTICELS**  
**SWEET CHERRY**



**SCALES**  
**WILD BLACK CHERRY**



**VERTICAL STRIPES**  
**RED OAK**



**VERTICAL CRACKS**  
**RED MAPLE**



**BLOCKY**  
**BLACK GUM,**  
**PERSIMMON**



**EXFOLIATING**  
**PLATES SHAGBARK**  
**HICKORY**



**INTERSECTING**  
**RIDGES WHITE**  
**ASH**



**HORIZONTALLY**  
**BROKEN RIDGES**  
**WHITE OAK**

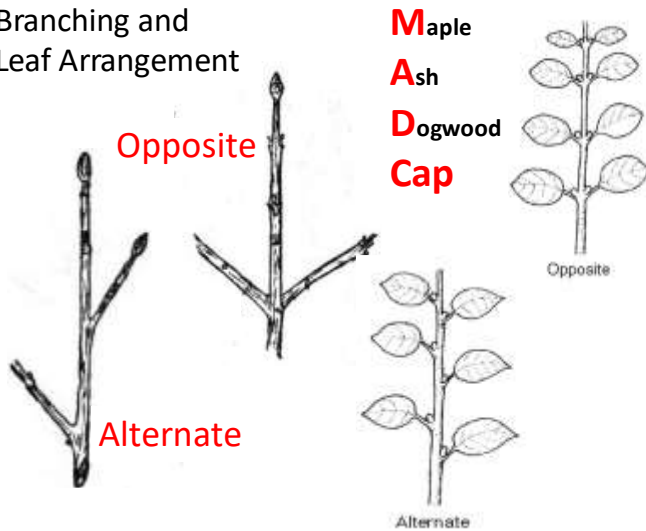


**EXFOLIATING**  
**PLATES WHITE OAK**



## BRANCH AND LEAF ARRANGEMENT

Branching and  
Leaf Arrangement



Opposite branching  
and leaves:

Maples, Ashes,  
Dogwoods and  
Caprifoliaceae  
(Viburnums and  
honeysuckles)

All others have  
Alternate branching  
and leaves

By noting the BRANCHING  
arrangement of a tree, you can  
immediately eliminate huge blocks  
of possibilities!

All photo entries are arranged as follows: Bark, Twig Anatomy, Flowers, Fruit, and Seeds.  
These features serve as positive Identification Factors to the Species level.

**All ruler measurements are in millimeters.**

Following the Photo Collections for each entry there is a brief description of:

**NOMENCLATURE:** (Origin and Meaning of the tree's Latin and Common Names)

**FLOWER GENDER:**

**POLLINATION METHOD:**

**WILDLIFE VALUE :**

**USES:** (Common industrial, culinary or medicinal uses)

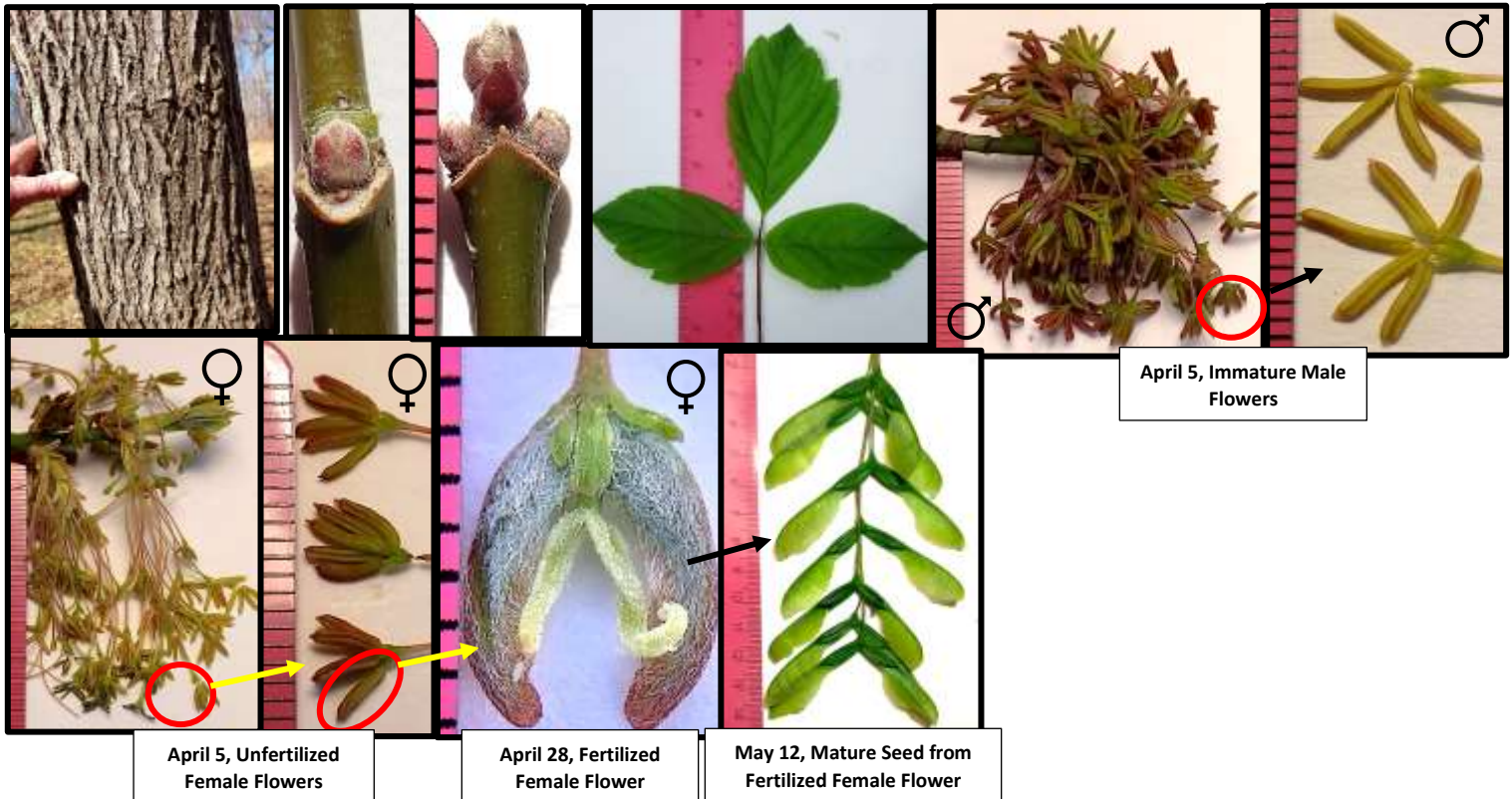
**STATUS:** (Native or non-native)

The reference citations in each text entry are  
hyperlinked to the referenced web article.

All ruler measurements are in Millimeters

## *Acer negundo* Box Elder, Ash Leaved Maple

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**NOMENCLATURE:** *Acer*: Latin for *sharp*, wood once used for making spears. *Negundo*: Leaves like those of *Vitex negundo*. **Box Elder**: Leaves like those of Elderberry, whitish wood like that of Boxwood.

**FLOWER GENDER:** Dioecious

**POLLINATION:** Wind

**DISPERSAL:** Wind. Seeds can be blown up to 100 yards from the parent.

**WILDLIFE VALUE:** At least 10 species of songbirds eat the seeds, as do Box Elder Bugs who congregate around the trees in the Fall when seeds ripen. <sup>1</sup> [https://www.illinoiswildflowers.info/trees/plants/box\\_elder.htm](https://www.illinoiswildflowers.info/trees/plants/box_elder.htm)

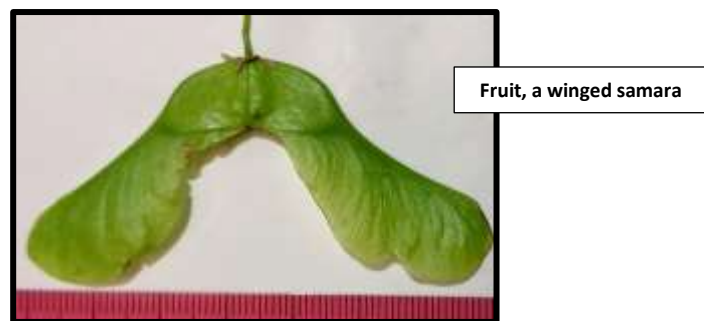
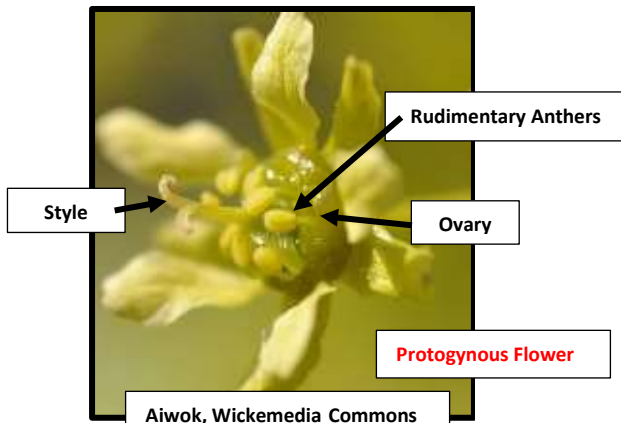
**USES: Industrial, Culinary:** Wood used for boxes, crates, shipping containers. Sap can be boiled down for syrup. Was a major source of sweetener for the Plains Indians and early settlers.

**STATUS:** Native

## *Acer platanoides*

## Norway Maple

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**NOMENCLATURE:** *Acer*: Latin for *sharp*, wood once used for making spears. *platanoides*: Latin for “looks like Platanus” (Sycamore) referring to the leaves. *Norway*: its native range (Europe and Western Asia) includes Norway

**FLOWER GENDER:** **Heterodichogamous:** Plants with **PROTOGYNOUS** flowers (**FEMALE** parts fully developed with rudimentary **MALE** parts), or **PROTOANDROUS** flowers (**MALE** parts fully developed with rudimentary **FEMALE** parts), or all **MALE** and or all **FEMALE** flowers. <sup>2</sup>

**POLLINATION:** Honeybees and bumblebees

**DISPERSAL:** Wind

**WILDLIFE VALUE:** Seeds eaten by Gamebirds, Songbirds, small mammals. Foliage browsed by moose, elk, deer. <sup>3</sup>

**USES:** **Industrial, Ornamental:** Wood for furniture, flooring, musical instruments (likely the favored wood of Italian violin makers Stradivari and Guarneri.

**STATUS:** Non-native

Introduced here in 1750 as an ornamental. In 1950's and 60's it became a popular substitute for American Elm as a street tree. Now considered to be an invasive exotic. Still available in the nursery trade. <sup>4</sup>

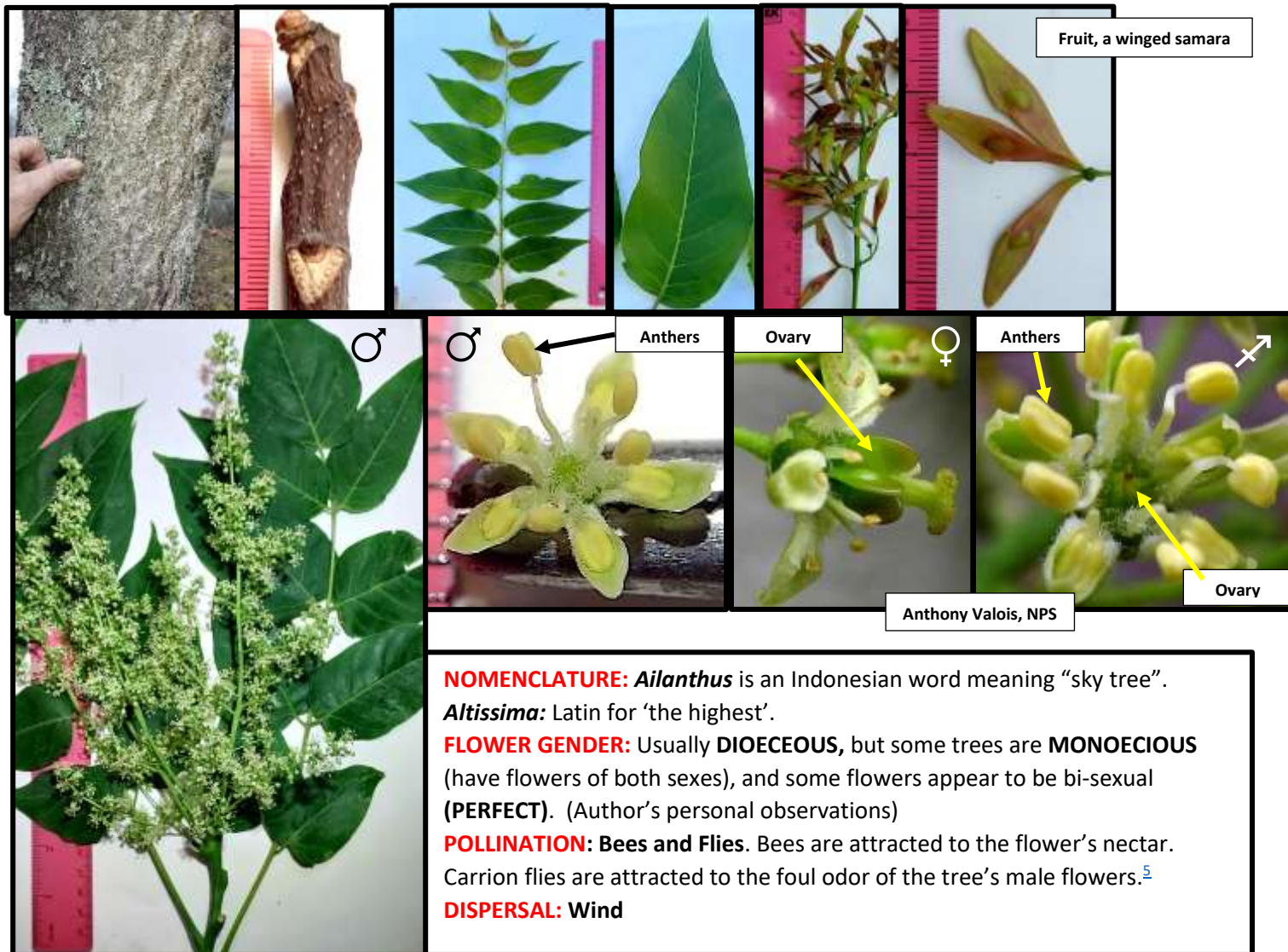
<sup>2</sup>[https://www.researchgate.net/publication/360799456\\_Flowering\\_behavior\\_of\\_clones\\_in\\_a\\_Norway\\_maple\\_Acer\\_platanoides\\_seed\\_orchard\\_and\\_mating\\_system\\_analysis\\_using\\_nuclear\\_SSR\\_markers](https://www.researchgate.net/publication/360799456_Flowering_behavior_of_clones_in_a_Norway_maple_Acer_platanoides_seed_orchard_and_mating_system_analysis_using_nuclear_SSR_markers)

<sup>3</sup> [https://www.illinoiswildflowers.info/trees/plants/norway\\_maple.htm](https://www.illinoiswildflowers.info/trees/plants/norway_maple.htm)

<sup>4</sup><https://www.fs.usda.gov/database/feis/plants/tree/acepla/all.html>



## *Ailanthus altissima* Tree of Heaven



**NOMENCLATURE:** *Ailanthus* is an Indonesian word meaning “sky tree”.

**Altissima:** Latin for ‘the highest’.

**FLOWER GENDER:** Usually **DIOECIOUS**, but some trees are **MONOECIOUS** (have flowers of both sexes), and some flowers appear to be bi-sexual (**PERFECT**). (Author’s personal observations)

**POLLINATION:** **Bees and Flies**. Bees are attracted to the flower’s nectar. Carrion flies are attracted to the foul odor of the tree’s male flowers.<sup>5</sup>

**DISPERSAL:** **Wind**

**WILDLIFE VALUE:** **None**. This tree is the favored host of the destructive Spotted Lantern Fly. Introduced here in 2014 as an egg-mass on a shipment of decorative stone from China. The pests are a threat to many agricultural crops, including walnuts, grapes, hops, apples, blueberries, and stone fruits.<sup>6</sup>

**USES:** **Ornamental**

**STATUS:** **Invasive Non-Native**. Native to China.

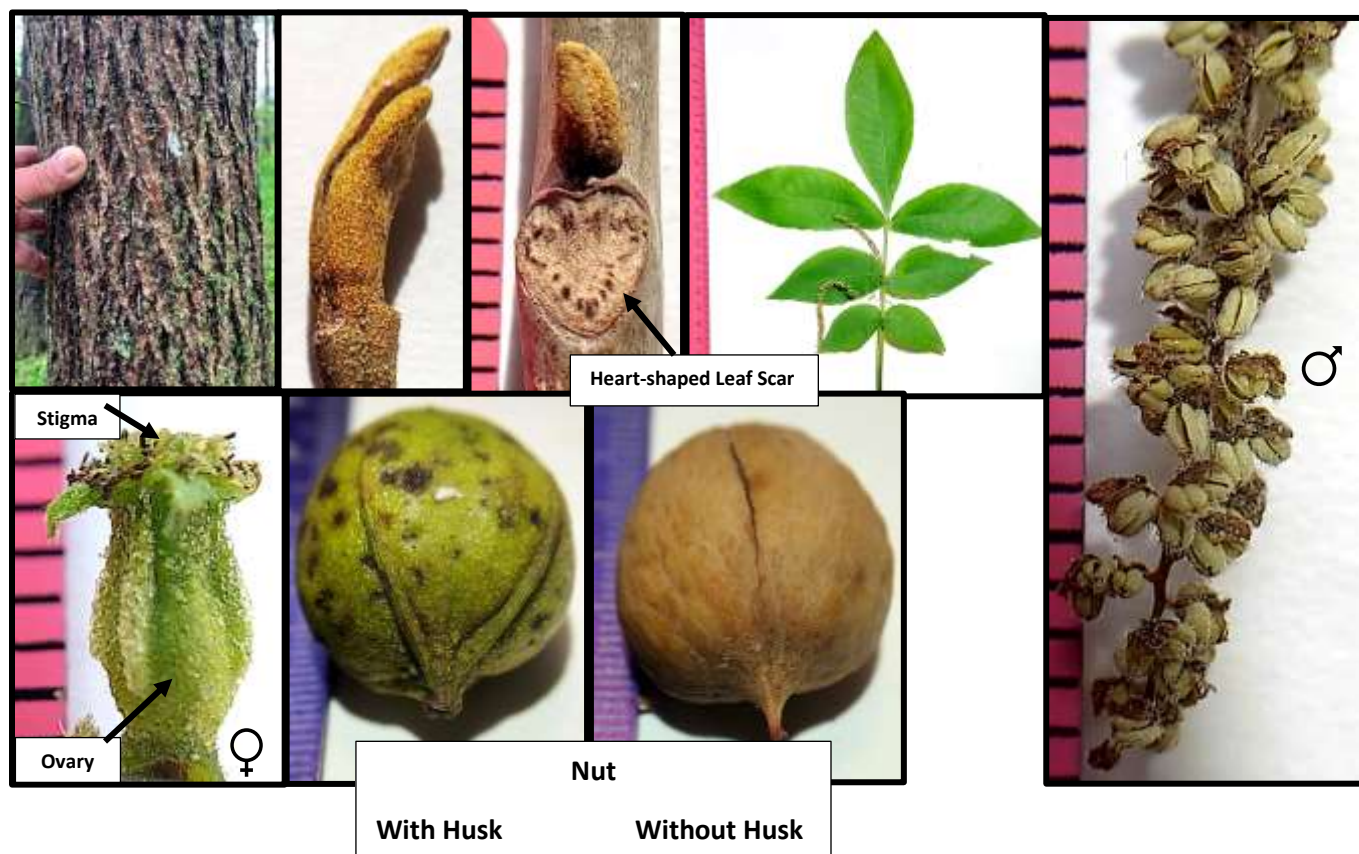
First Imported to U.S. in 1784 as an ornamental. Now considered to be a highly invasive exotic. A mature tree can produce up to 2 million seeds annually.<sup>7</sup>

<sup>5</sup> <https://davisla.wordpress.com/2011/09/09/plant-of-the-week-ailanthus-altissima/>

<sup>6</sup> <https://mda.maryland.gov/plants-pests/Pages/spotted-lantern-fly.aspx>

<sup>7</sup> <https://www.fs.usda.gov/database/feis/plants/tree/ailalt/all.html>

## *Carya cordiformis* Bitternut Hickory



**NOMENCLATURE:** *Carya*: Princess Carya was a character in Greek Mythology who had a love affair with the lesser god Dionysus. After her death, Dionysus immortalized her by changing her into a walnut tree. *Cordiformis* is Latin for 'heart-shaped' re the shape of the leaf scar. **Bitternut**: The nuts have a high, bitter tannic acid content. The word **hickory** is a contraction of the Algonquian word for all Hickory trees, *pocohicora*.

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Gravity

**WILDLIFE VALUE:** **Little**: The very bitter nuts are generally not eaten by wildlife.<sup>8</sup>

**USES: Industrial:** The hard wood of bitternut hickory is used for making tools, furniture, paneling, dowels, ladders, charcoal, and fuel. Early settlers used the nut oil in oil lamps.<sup>9</sup>

**STATUS:** Native

*Here, the hazel thicket stood—  
There, the almost pathless wood  
Where the shellbark hickory tree  
Rained its wealth on you and me.  
Autumn! as you loved us then,  
Take us to your heart again!*

James Whitcomb Riley, Time of Clearer Twitterings

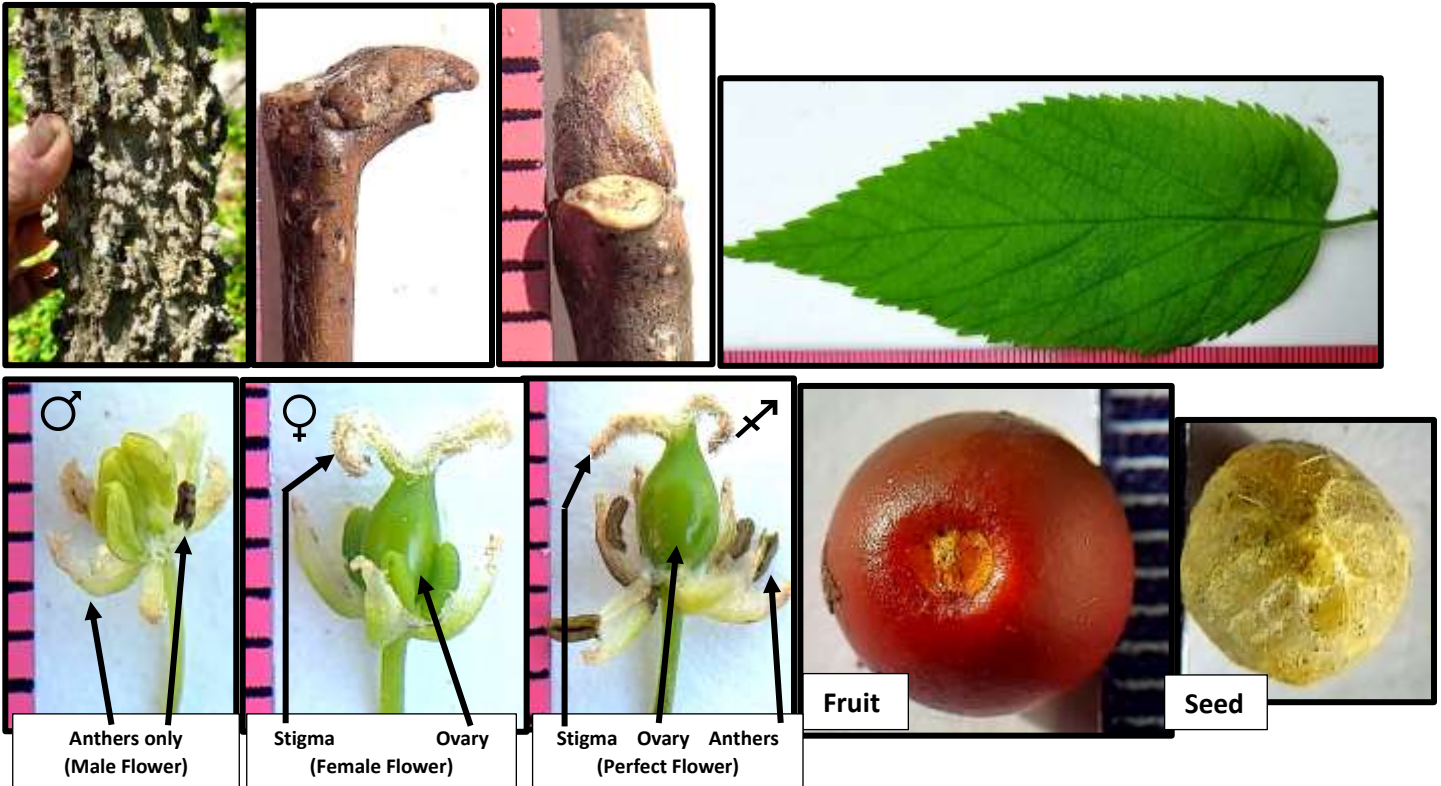
<sup>8</sup>[https://www.srs.fs.usda.gov/pubs/misc/ag\\_654/volume\\_2/carya/cordiformis.htm](https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/carya/cordiformis.htm)

<sup>9</sup>[https://www.srs.fs.usda.gov/pubs/misc/ag\\_654/volume\\_2/carya/cordiformis.htm](https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/carya/cordiformis.htm)



## *Celtis occidentalis* Common Hackberry

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**NOMENCLATURE:** *Celtis*: Ancient Greek name for any tree with sweet fruit. *Occidentalis*: Latin for 'of or from the west' re: its native range in Western Hemisphere. **Hackberry**: A contraction of 'hagberry', a European Cherry with a similar fruit.

**FLOWER GENDER:** Polygamomonoecious<sup>10</sup>: Producing male, female, and perfect flowers on each tree.

**POLLINATION:** Wind

**DISPERSAL:** Songbirds, Gamebirds, and Small Mammals eat the fruits and spread the seeds in their scat

**WILDLIFE VALUE:** Moderate. Not an important wintertime food source for birds and small mammals.<sup>13</sup> Has little food value as the large seed occupies over 98% of the fruit's total volume. Some songbirds and gamebirds consume the fruits.

**USES: Industrial, Medicinal, Culinary:** Furniture, boxes/crates, veneer, turned objects, and bent parts. All Native American used the Berries as food, and decoctions of the bark as medicine. <sup>11</sup>

**STATUS:** Native

One of the oldest known foraged foods, hackberry fruit has been found in human food caches around the world, including from 500,000 years ago in the burial site of **Peking Man**.<sup>12</sup> The thin layer of the fruit's pulp has the flavor of ripe dates. Pulverized whole fruits, including the **oily, protein rich kernel**, can be formed into balls or bars like trail mix.<sup>11</sup> Mourning Cloak Butterfly caterpillars are hosted by Hackberry trees.<sup>13</sup>

<sup>11</sup> <https://www.valuefood.info/3101/health-benefits-of-hackberry/>

<sup>12</sup> <https://www.nature.com/articles/136577b0>.

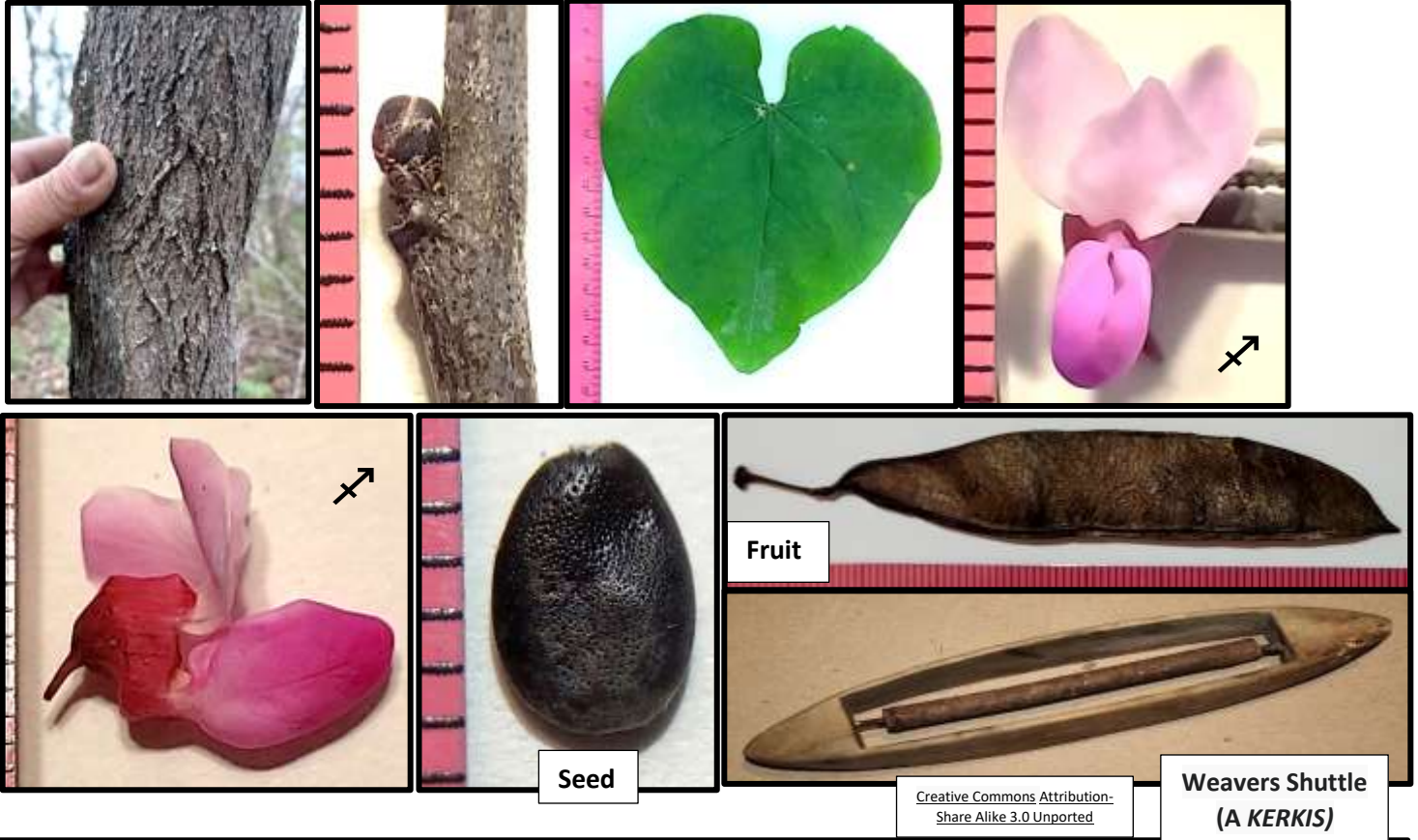
<sup>13</sup> <http://www.illinoiswildflowers.info/trees/plants/hackberry.html>



Oily kernel inside seed



## *Cercis canadensis* Eastern Redbud



**NOMENCLATURE:** *Cercis*: From the Greek, 'kerkis' (a weaver's shuttle) re the shape of the seed pod. *Canadensis*: 'from Canada'. **Eastern**: native range confined to Eastern half of North America.

**FLOWER GENDER:** **Perfect**: The trees are self-fertile.

**POLLINATION:** **Honeybees and Bumblebees**

**DISPERSAL:** **Wind**. In winter, the lightweight pods are blown about by the wind. Can become invasive in nearby flower beds.

**WILDLIFE VALUE:** Bees feed on the plant's nectar and pollen. Seeds eaten by Quail, Cardinals, and Grosbeaks.<sup>14</sup>

**USES:** **Ornamental, Culinary, Medicinal**: The colorful blooms last longer (about a month) than any other spring blooming native tree. The flowers can be eaten raw and have a sweet, citrusy flavor (from Vitamin C). Native Americans consumed the flowers and roasted young seed pods. (Cook first!)

Tea made from inner bark was used as worm medicine and cold remedy.

**STATUS:** Native

### Redbud Flower Tea:

1 cup flowers (Washed and stemmed)

4 cups water

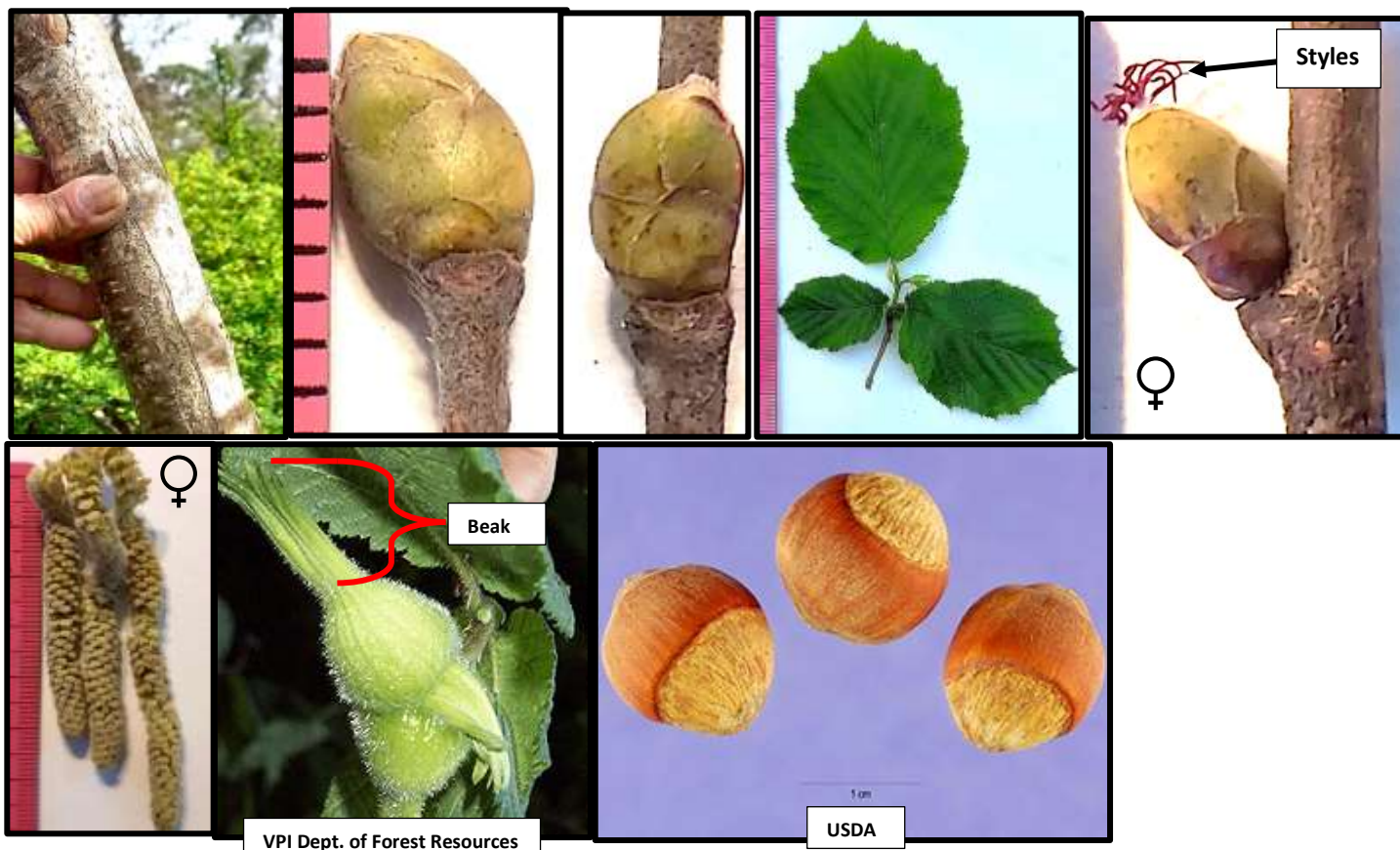
Add flowers to water, bring to boil, remove from heat, let steep, enjoy.

**Redbud Syrup:** To the tea, add 1/3 Cup sugar, 1 tsp lemon juice, boil down to thicken.

<sup>14</sup><https://www.illinoiswildflowers.info/trees/plants/redbud.htm>

*Corylus cornuta*

## Beaked Hazelnut



**NOMENCLATURE:** *Corylus*: From the Greek word for the plant, 'krylos'. *Cornuta*: From the Latin 'cornu' for horn, re the fruit's BEAK. **Hazelnut**: re: the leaves resemble those of Witch Hazel

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind The trees are not self-fertile.

**DISPERSAL:** Squirrels, blue jays, and gamebirds: These species often 'cache' nuts for later use and often overlook cached nuts, which can later sprout to form additional plants.<sup>15</sup>

**WILDLIFE VALUE:** Small mammals and many gamebirds consume the sweet, protein rich nuts.<sup>15</sup>

**USES:** Culinary, Medicinal: The tasty nuts have a long history of use by humans. Native Americans used a poultice of the inner bark to stop bleeding.

**STATUS:** Native

Native range of *Corylus cornuta*



Virginia Tech Dept. of Forest Resources

Hazelnuts are a **boreal** (of the North) species. But its native range extends South, along the cooler, higher elevations of the Appalachians, into northern Georgia.<sup>16</sup>

The plants can't produce a nut crop without another *Corylus* nearby for cross-pollination. This single specimen at MSV could be a remnant of a previous native population of an escapee from nearby cultivation.

<sup>15,16</sup> <https://www.fs.usda.gov/database/feis/plants/shrub/corcor/all.html>

## *Crataegus crus-galli* Cockspur Hawthorne



VPI Dept. of Forest Resources

### Fruit



VPI Dept. of Forest Resources

**NOMENCLATURE:** *Crataegus*: Named for *Kratos*, the Greek god of strength, re the tree's extremely hard wood. *Crus-galli*: From the Latin 'crus' for shin and 'gallus' for cock or rooster re the tree's 3-inch thorns resembling *cockspurs*. **Hawthorn**: A contraction of the Old English term 'hagathorn', re any thorny plant used for hedgerows.

**FLOWER GENDER:** **Perfect** The trees are self-fertile.

**POLLINATION:** Honeybees, bumblebees, and flies

**DISPERSAL:** Birds, small mammals eat the fruit and deposit the seeds in their scat.

**WILDLIFE VALUE:** The fruits are an important late season food source for birds and small mammals. <sup>17</sup>

**USES: Culinary, Medicinal, Industrial:** Jelly, jam and wine can be made from the berries. The hard wood was used for tools and tool handles. Decoctions of the fruit and inner bark used as a cold remedy.

**STATUS:** Native

In Virginia there are 41 different varieties of Hawthorne (native and non-native species, naturally occurring varieties and hybrids), making identification a challenge. Cockspur Hawthorne may be one of the easiest to identify because of its uniquely shaped *oblanceolate* leaves. <sup>18</sup>

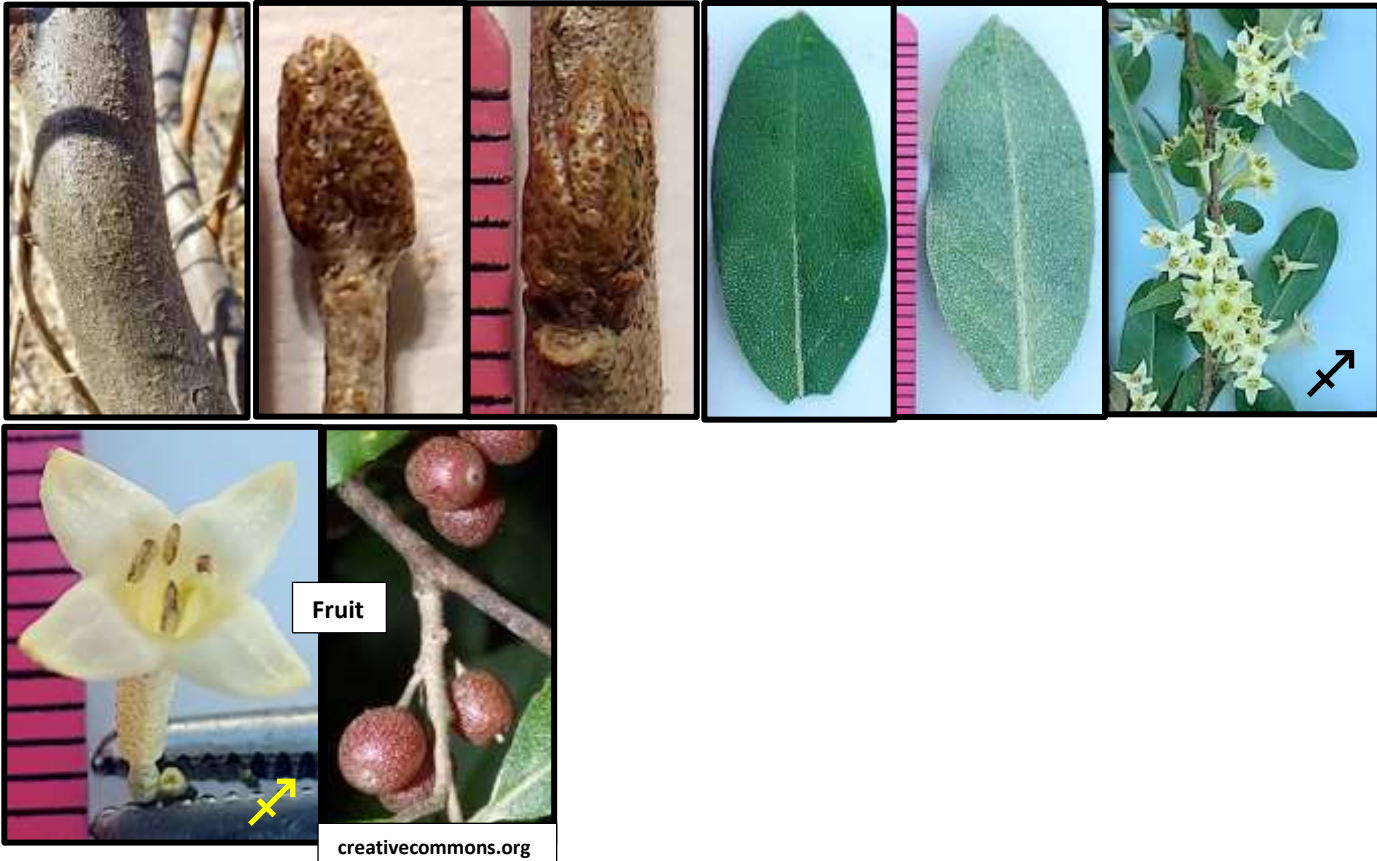
<sup>17</sup> [https://www.illinoiswildflowers.info/trees/plants/cockspur\\_haw.html](https://www.illinoiswildflowers.info/trees/plants/cockspur_haw.html)

<sup>18</sup> Weakley, A.S., J.C. Ludwig, J.F. Townsend, 2012 Flora of Virginia, P 861



## *Elaeagnus umbellata* Autumn Olive

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**NOMENCLATURE:** *Elaeagnus*: From the Greek 'elaia' (olive) and 'agons' (pure). *Umbellata*: re flowers in flat-topped clusters called 'umbels'. **Autumn Olive**: the olive-like fruits ripen in early autumn

**FLOWER GENDER:** Perfect. The plants are self-fertile

**POLLINATION:** Bees, butterflies, and hummingbirds.

**WILDLIFE VALUE:** Pollen, nectar and fruits are important food sources for pollinators, birds, small mammals, and bears.<sup>19</sup>

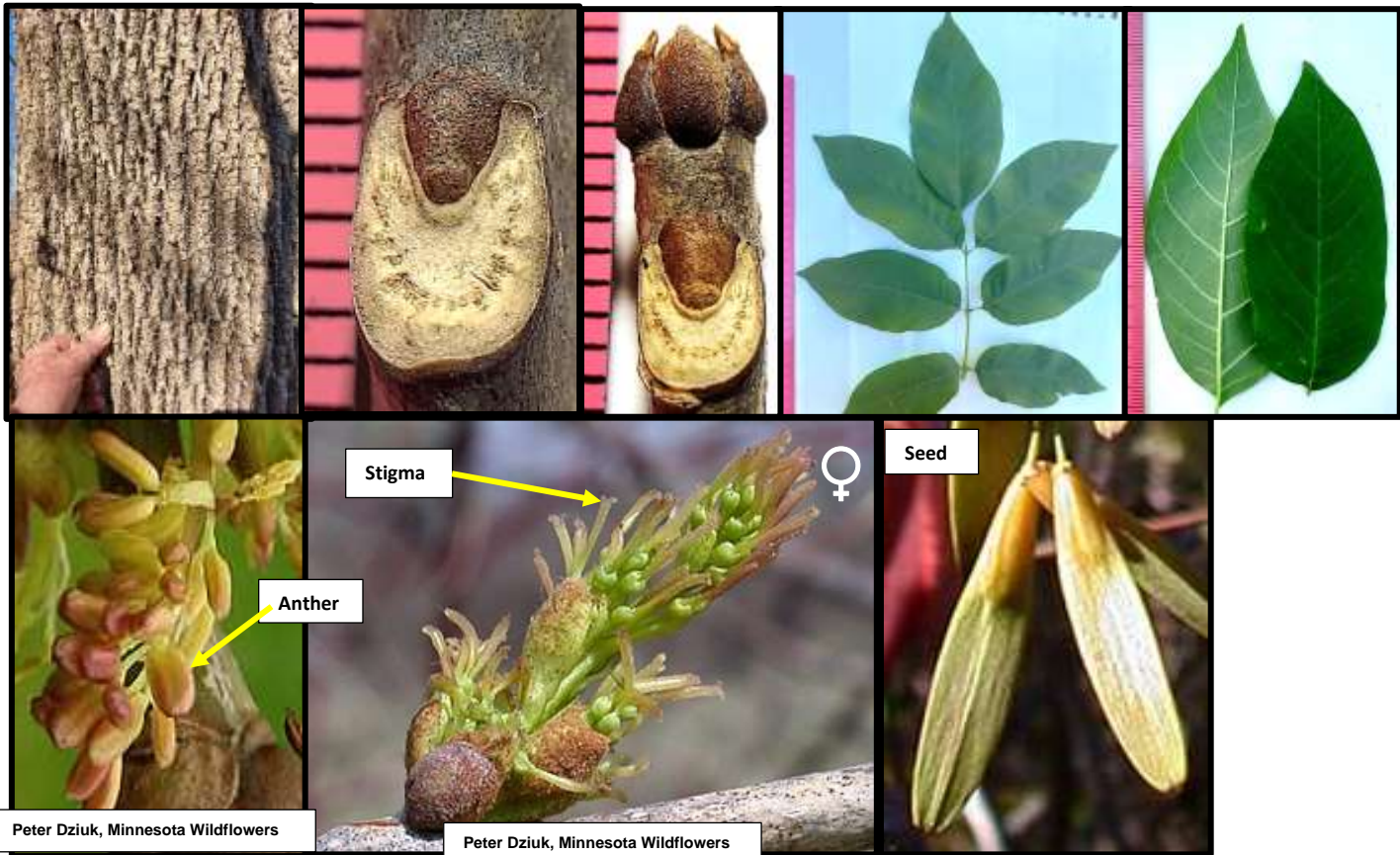
**USES:** Industrial, Ornamental, Culinary: Introduced here in 1830 for shelter belts, erosion control, wasteland reclamation, wildlife habitat, and as an ornamental. The sweet, tangy fruits used for jam, jelly or consumed fresh

**STATUS:** Non-native, invasive exotic. As a highly invasive exotic, it has the potential to displace native plants on a widespread scale.

Introduced here in 1830. In the late 1960s and early 1970s the USDA recommended planting Autumn Olive for wildlife cover and food to attract gamebirds.<sup>20</sup>

<sup>19</sup> <https://www.illinoiswildflowers.info/trees/tables/table35.htm>

<sup>20</sup> <https://www.nature.org/en-us/about-us/where-we-work/united-states/indiana/stories-in-indiana/autumn-olive/>



Peter Dziuk, Minnesota Wildflowers

Peter Dziuk, Minnesota Wildflowers

**NOMENCLATURE:** *Fraxinus*: The ancient Latin word for the tree. *Americana*: From North America. *Ash*: A contraction of the ancient Greek word for the beech tree, *aesc* (pronounced 'ask'). *Aesc* is also the Greek word for *spear* as the wood was commonly used to make spears. **White** refers to the whitish color of the wood.

**FLOWER GENDER:** **Dioecious** Male and female flowers on separate trees.

**POLLINATION:** **Wind**

**DISPERSAL:** **Wind** The seeds (a winged samara), can be blown up to 100 yards from the parent.

**WILDLIFE VALUE:** Gamebirds, songbirds and small mammals consume the nutrient rich seeds.<sup>21</sup>

**USES:** **Industrial:** The strong, flexible, shock resistant wood is used for tool handles, furniture, cabinetry, sports equipment, and most famously, baseball bats.

**STATUS:** **Native**

The Emerald Ash Borer is a beetle native of Eastern Asia, believed imported here in 1999 as *larvae* in a wooden (Ash) shipping container. Ash trees in 35 US states are being threatened with extinction by the pest, whose *larvae* invade and destroy the trees' inner bark, killing the tree.<sup>22</sup> The low (bitter) tannic acid content of Ash leaves makes them a favorite food of tadpoles, and the insect species on which many birds rely for food. This disruption of this food chain is causing declines in animal populations dependent upon the Ash trees' food chain for

<sup>21</sup> [https://www.illinoiswildflowers.info/trees/plants/white\\_ash.html](https://www.illinoiswildflowers.info/trees/plants/white_ash.html)

<sup>22</sup> <https://www.invasivespeciesinfo.gov/terrestrial/invertebrates/emerald-ash-borer>

<sup>23</sup> <https://www.gettingmoreontheground.com/2019/07/21/ash-trees-a-celebration-and-a-lament/>

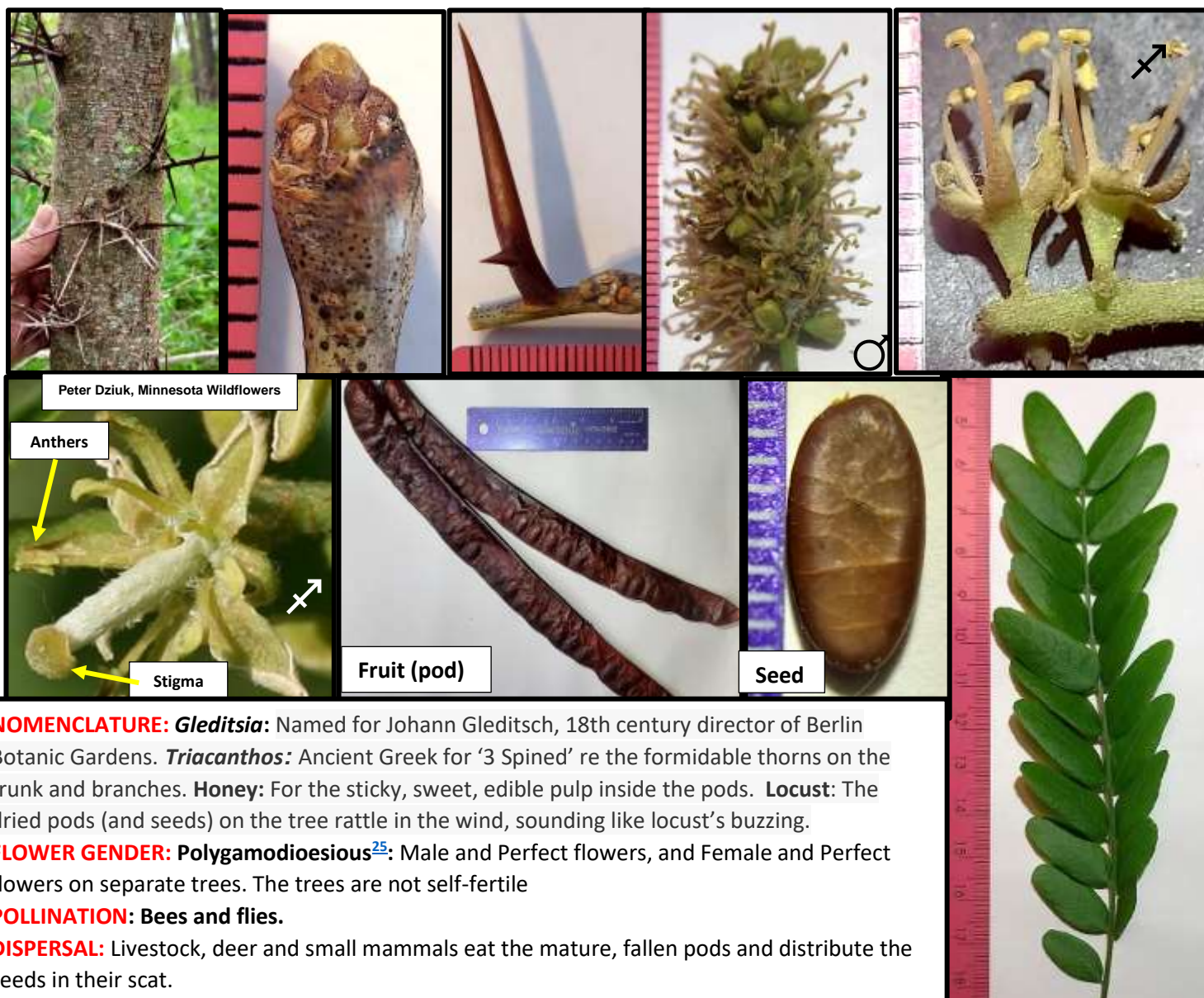


Emerald Ash Borer



## *Gleditsia triacanthos* Honey Locust

Page18



**NOMENCLATURE:** *Gleditsia*: Named for Johann Gleditsch, 18th century director of Berlin Botanic Gardens. *Triacanthos*: Ancient Greek for '3 Spined' re the formidable thorns on the trunk and branches. **Honey**: For the sticky, sweet, edible pulp inside the pods. **Locust**: The dried pods (and seeds) on the tree rattle in the wind, sounding like locust's buzzing.

**FLOWER GENDER:** Polygamodioecious<sup>25</sup>: Male and Perfect flowers, and Female and Perfect flowers on separate trees. The trees are not self-fertile

**POLLINATION:** Bees and flies.

**DISPERSAL:** Livestock, deer and small mammals eat the mature, fallen pods and distribute the seeds in their scat.

**WILDLIFE VALUE:** Pollen and nectar are important foods for bees. The sweet nutritious pods are eaten by livestock, small mammals, and some birds.<sup>26</sup>

**USES: Culinary, Industrial:** Native Americans used the nutritious edible pods which are up to 16% protein, 30% sugar, 60% carbohydrates and 8% fat. Individual trees can produce up to 250 lbs. of pods each year.<sup>26</sup> The sweet sticky pulp inside the pod was dried and used as a sweetener, sometimes called "poor man's brown sugar". The green, unripe seeds were cooked and eaten like lima beans. The hard ripe seeds were roasted, ground into flour, or made into a coffee-like beverage.<sup>27</sup> Native Americans used the wood for construction, tool handles, weapons, and bows.

**STATUS:** Native to Mississippi and Ohio River Valleys. Not native (introduced) to Virginia.<sup>26</sup>

Early explorer William Bartram writes in 1791: "I observed, in the antient cultivated fields, 1. *Diospyros*, 2. *Gleditsia triacanthos*, 3. *Prunus Chickasaw*, 4. *Callicarpa*, 5. *Morus rubra*, 6. *Juglans exaltata*, 7. *Juglans nigra*, which inform us, that these trees were cultivated by the ancients, on account of their fruit, as being wholesome and nourishing food. Tho' these are natives of the forest, yet they thrive better, and are more fruitful, in cultivated plantations, and the fruit is in great estimation with the present generation of Indians:"<sup>28</sup>

<sup>25,26</sup> <https://www.fs.usda.gov/database/feis/plants/tree/gletri/all.html>

<sup>27</sup> <https://communityenvironment.unl.edu/plant-month-honeylocust>

<sup>28</sup> see page 38 of: <https://quod.lib.umich.edu/e/evans/N17871.0001.001/1:7.4?rgn=div2;view=fulltext>



## *Hamamelis virginiana* Witch Hazel

Page19



Seed



Seed Capsule

**NOMENCLATURE:** *Hamamelis*: From the Greek 'háma' for 'occurring together', and mâlon, the fruit of any tree, possibly because the tree frequently has leaves, flowers, and fruit present simultaneously.

**Virginia**: from Virginia. **Witch**: the forked branches were used for dowsing (sometimes called 'witching') for water sources. **Hazel**: the leaves look like those of the hazel nut.

**FLOWER GENDER:** Perfect

**POLLINATION:** Insects (flies) The tree blooms in October and November when pollinating bees are usually hibernating.

**DISPERSAL:** When the seed capsules ripen, they pop open and eject the seeds up to 20 feet.<sup>29</sup>

**WILDLIFE VALUE:** Grouse, Turkey and Squirrels eat the seeds.<sup>29</sup>

**USES: Medicinal, Industrial, Culinary:** Native American: Tea made from the leaves and bark were used to combat colds, coughs, dysentery, and to heal cuts, bruises, and insect bites. The flexible twigs were woven into baskets. The edible seeds taste like pistachios.<sup>30</sup>

**Status:** Native

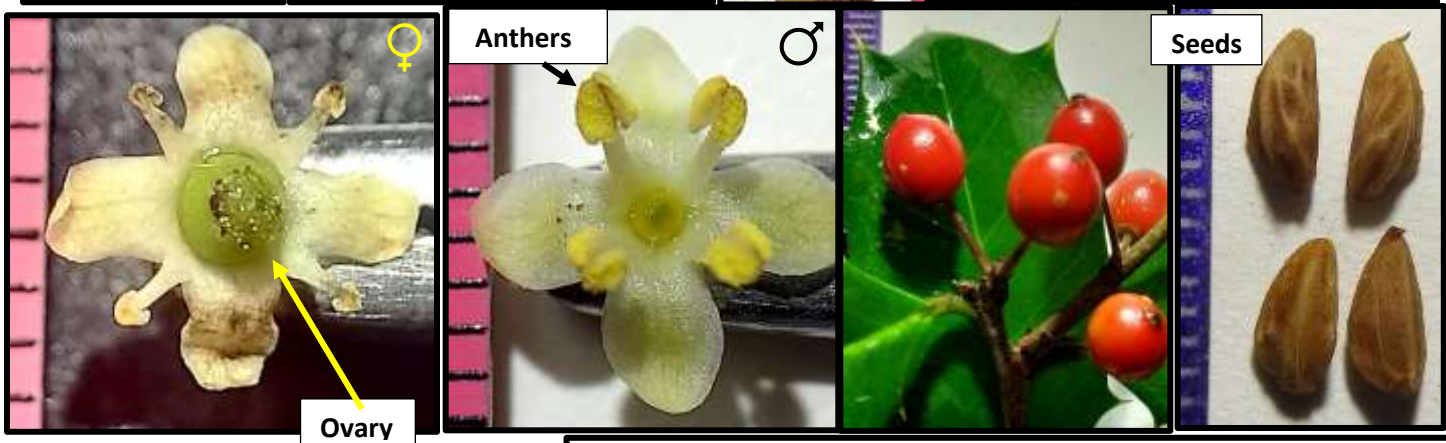
*"When the red leaves are all down, and the geese are gone, I go looking for Witch Hazel. It never lets me down. ...a scrap of ragged yellow flowers, a light in the window when winter is closing in all around."* Robin Wall Kimmerer, *Braiding Sweetgrass*

<sup>29</sup> [https://www.illinoiswildflowers.info/trees/plants/witch\\_hazel.htm](https://www.illinoiswildflowers.info/trees/plants/witch_hazel.htm)

<sup>30</sup> [https://www.silive.com/homegarden/garden/2011/03/witchhazel\\_the\\_other\\_harbinger.html](https://www.silive.com/homegarden/garden/2011/03/witchhazel_the_other_harbinger.html)

## *Ilex opaca* American Holly

Page20



Holm Oak, *Quercus ilex*

GNU GENERAL PUBLIC LICENSE Ghjandi.jpg

**NOMENCLATURE:** *Ilex*: The latin name of the holly genus, chosen by Carl Linnaeus for the resemblance of the leaves to the Mediterranean native Holm Oak, originally called *Ilex*. ***Opaca***: From the Latin 'opacus', meaning shaded or dark, re the trees habit as an understory, shade loving tree. **Holly**: A contraction of the Old English 'holen' meaning 'holy' as pre-Christian religions believed the tree to be blessed with its ability to remain green throughout the winter.

**FLOWER GENDER:** Dioecious. Separate Male and Female plants.

**POLLINATION:** Bees, flies, wasps, butterflies, and moths. <sup>31</sup>

**DISPERSAL:** Birds

**WILDLIFE VALUE:** Berries eaten by gamebirds, songbirds, and woodpeckers who spread the seeds in their scat. <sup>31</sup>

**USES: Ornamental, Medicinal:** Holly leaf tea was used to cure of bronchitis, influenza, fevers, rheumatism, and jaundice. <sup>32</sup>

**Status:** Native

<sup>31</sup> [https://www.illinoiswildflowers.info/trees/plants/am\\_holly.html](https://www.illinoiswildflowers.info/trees/plants/am_holly.html)

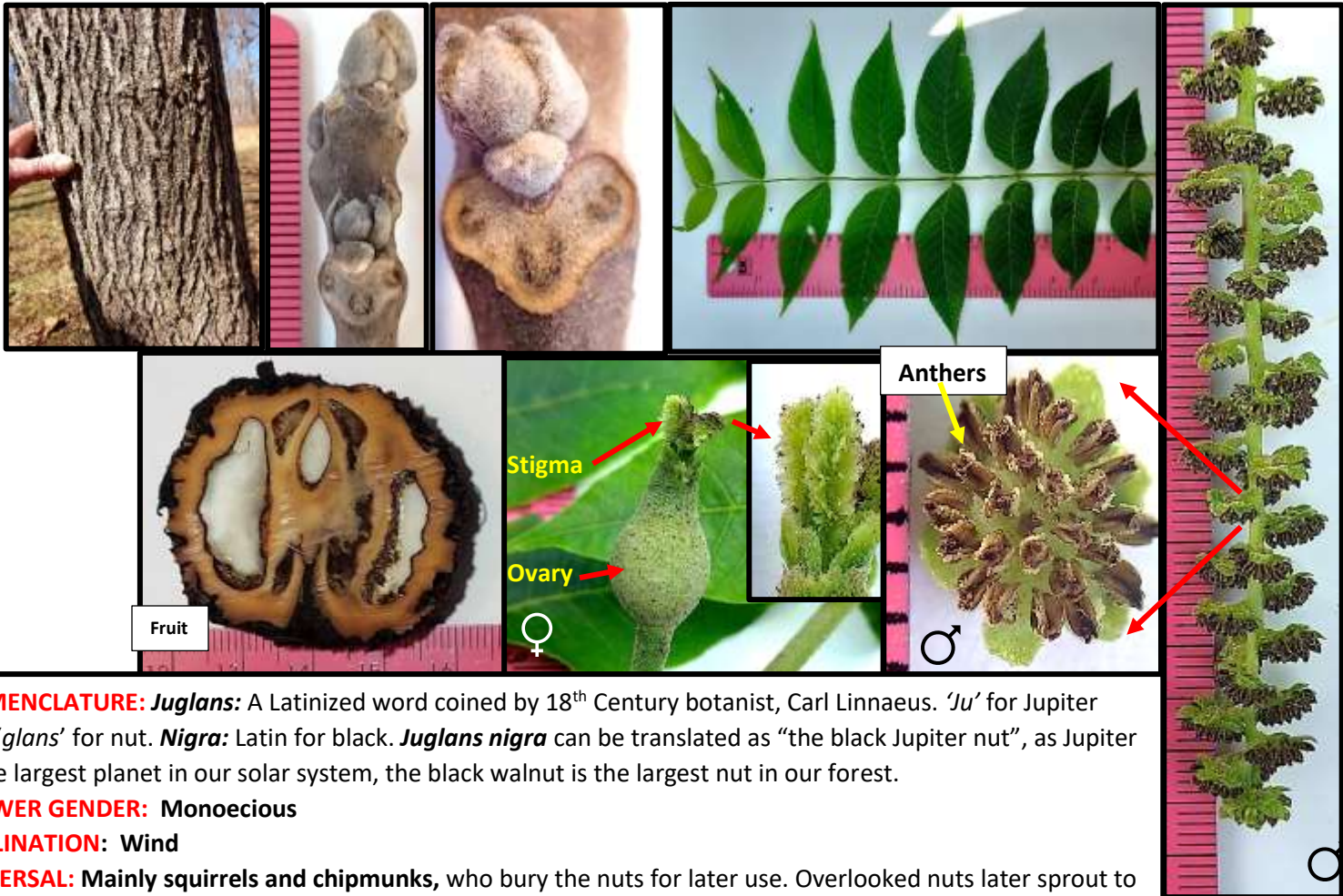
<sup>32</sup> [http://www.bio.brandeis.edu/fieldbio/medicinal\\_plants/pages/Holly.html](http://www.bio.brandeis.edu/fieldbio/medicinal_plants/pages/Holly.html)

But give me holly, bold and jolly,  
Honest, prickly, shining holly;  
Pluck me holly leaf and berry  
For the day when I make merry.  
Christina Rossetti, 1850



# *Juglans nigra* Black Walnut

Page21



**NOMENCLATURE:** *Juglans*: A Latinized word coined by 18<sup>th</sup> Century botanist, Carl Linnaeus. 'Ju' for Jupiter and 'glans' for nut. *Nigra*: Latin for black. *Juglans nigra* can be translated as "the black Jupiter nut", as Jupiter is the largest planet in our solar system, the black walnut is the largest nut in our forest.

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Mainly squirrels and chipmunks, who bury the nuts for later use. Overlooked nuts later sprout to form new trees.

**WILDLIFE VALUE:** **Exceptional:** Black walnut (and all other nut trees) form the basis for of one of the world's most important food chains. Through photosynthesis, nut trees create protein, fats oils, and sugars from sunlight, air, and water. These nutrients are transferred to predatory animals (like foxes, coyotes, bobcats, mountain lions, bears, hawks, eagles, owls and even humans) via the bodies of squirrels and chipmunks.<sup>33</sup>

**USES:** **Industrial, Medicinal:** Wood highly prized for furniture, paneling, veneer, decorative objects, and gunstocks.<sup>34</sup> A high-grade table syrup can be made from the sap.

**STATUS:** Native

<sup>33</sup> [https://www.illinoiswildflowers.info/trees/plants/black\\_walnut.htm](https://www.illinoiswildflowers.info/trees/plants/black_walnut.htm)

<sup>34</sup> <https://www.fs.usda.gov/database/feis/plants/tree/jugnia/all.html>

Christmas Eve, 2022  
Looking up, were Walnut's coarse  
branches, black and bony, like  
skeleton fingers, grasping at the cold  
blue-gray sky.



Dec. 28, 2022.

This night, Jupiter has descended, held in the  
arms of a silvery Cheshire moon, both  
silhouetted just beyond Walnut's black fingers.  
The fancy of their grasping finally revealed.  
Jupiter's planet, and Jupiter's Black Nut...  
together...in sky and earth!



Peter Dziuk, Minnesota Wildflowers

Peter Dziuk, Minnesota Wildflowers

Peter Dziuk, Minnesota Wildflowers

**NOMENCLATURE:** *Juniperus*: From the Latin 'junio' for young and 'parere' for 'to look or appear', re the evergreen nature of the plant. *Virginiana*: From Virginia. '**Red Cedar**' because of the similarity in aroma and color of the wood to true cedars.

**FLOWER GENDER:** Dioecious

**POLLINATION:** Wind

**DISPERSAL:** Birds

**WILDLIFE VALUE:** At least 25 species of songbirds and gamebirds eat the tree's berries, which are technically cones.<sup>35</sup>

**USES: Medicinal, Industrial:** Native Americans used tea made from the berries, or inhaled steam from boiled needles to treat coughs and colds.<sup>36</sup> Wood used for moth-proof chests and boxes, furniture, and carvings.

**STATUS:** Native

In the early 1700's Dutch physician Franciscus Sylvius invented an alcoholic decoction of the berries for use as a diuretic. It later became the more popular Gin of today.<sup>37</sup> The ripe berries are the favorite food of the Cedar Waxwing.

<sup>35</sup><https://www.illinoiswildflowers.info/trees/tables/table127.htm>

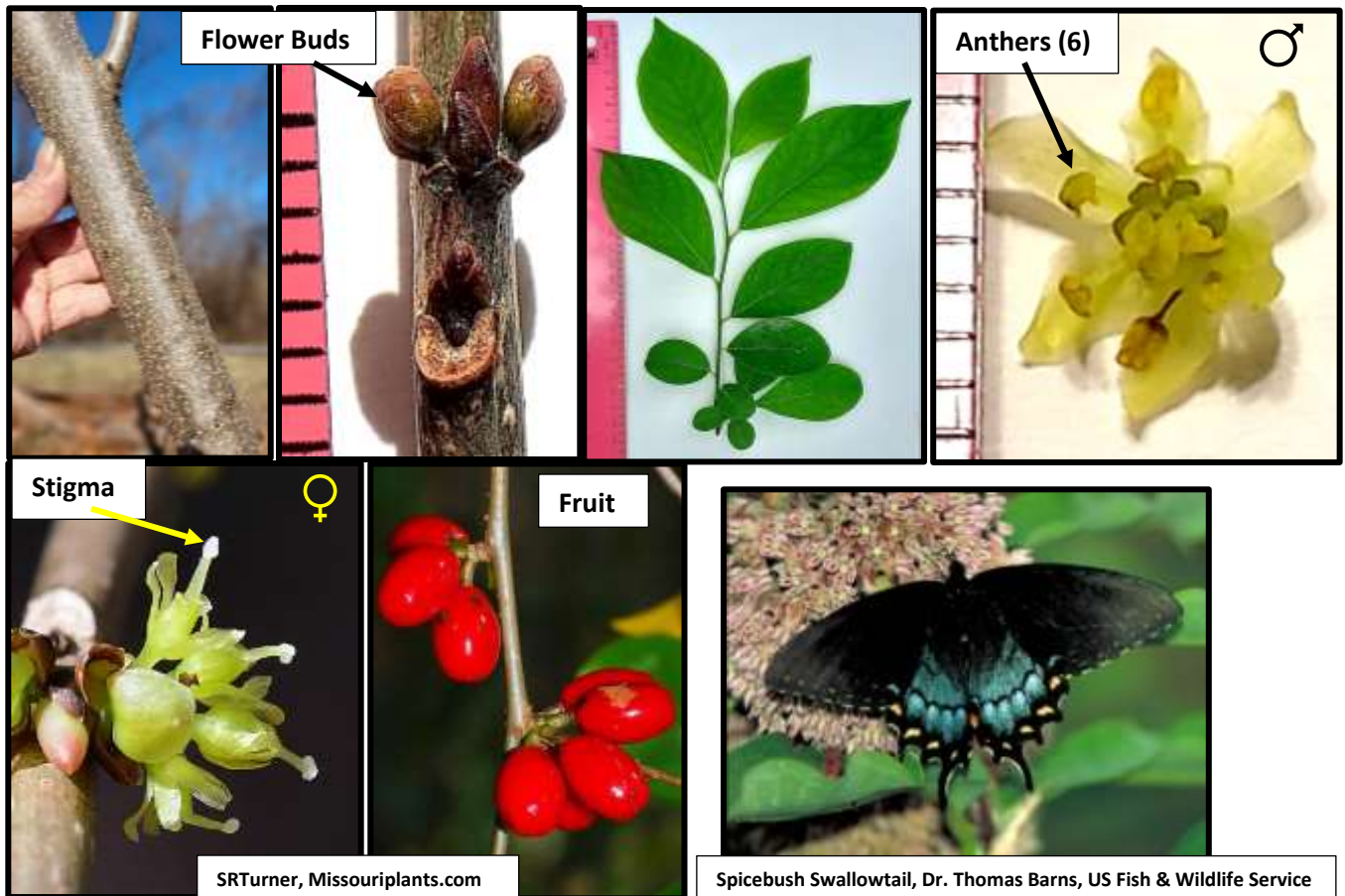
<sup>36</sup>[https://www.wildflower.org/plants/result.php?id\\_plant=juvi](https://www.wildflower.org/plants/result.php?id_plant=juvi)

<sup>37</sup><https://www.usaspiritsratings.com/en/blog/insights-1/history-of-gin-and-how-it-started-241.htm>



## *Lindera benzoin* Spice Bush

Page23



SRTurner, MissouriPlants.com

Spicebush Swallowtail, Dr. Thomas Barns, US Fish & Wildlife Service

**NOMENCLATURE:** *Lindera*: Named for 18th century Swedish botanist Johann Linder. *Benzoin*: All parts contain terpenes and camphor with an aroma like *benzoin*, the resin from *Styrax benzoin*, (used for incense, perfume, topical antiseptic) a tree native to Sumatra. *Spice Bush*: From the citrusy aroma of the crushed leaves, berries, stems and twigs.

**FLOWER GENDER:** **Dioecious** Male and female flowers on separate plants. If planted as a native ornamental, a male plant is needed for berry production on the female plants. Most plants in the wild are male.

**POLLINATION:** Bees and flies

**DISPERSAL:** Birds

**WILDLIFE VALUE:** Gamebirds and songbirds eat the energy rich, oily berries. Spicebush (and the closely related Sassafras) is a host plant for the Spicebush Swallowtail caterpillar. <sup>38</sup>

**USES: Culinary, Medicinal:** Native Americans used bark, twig, berry, and leaf tea for colds, fever and to treat typhoid. Crushed dried berries were used to season meat. <sup>39</sup>

**STATUS:** Native

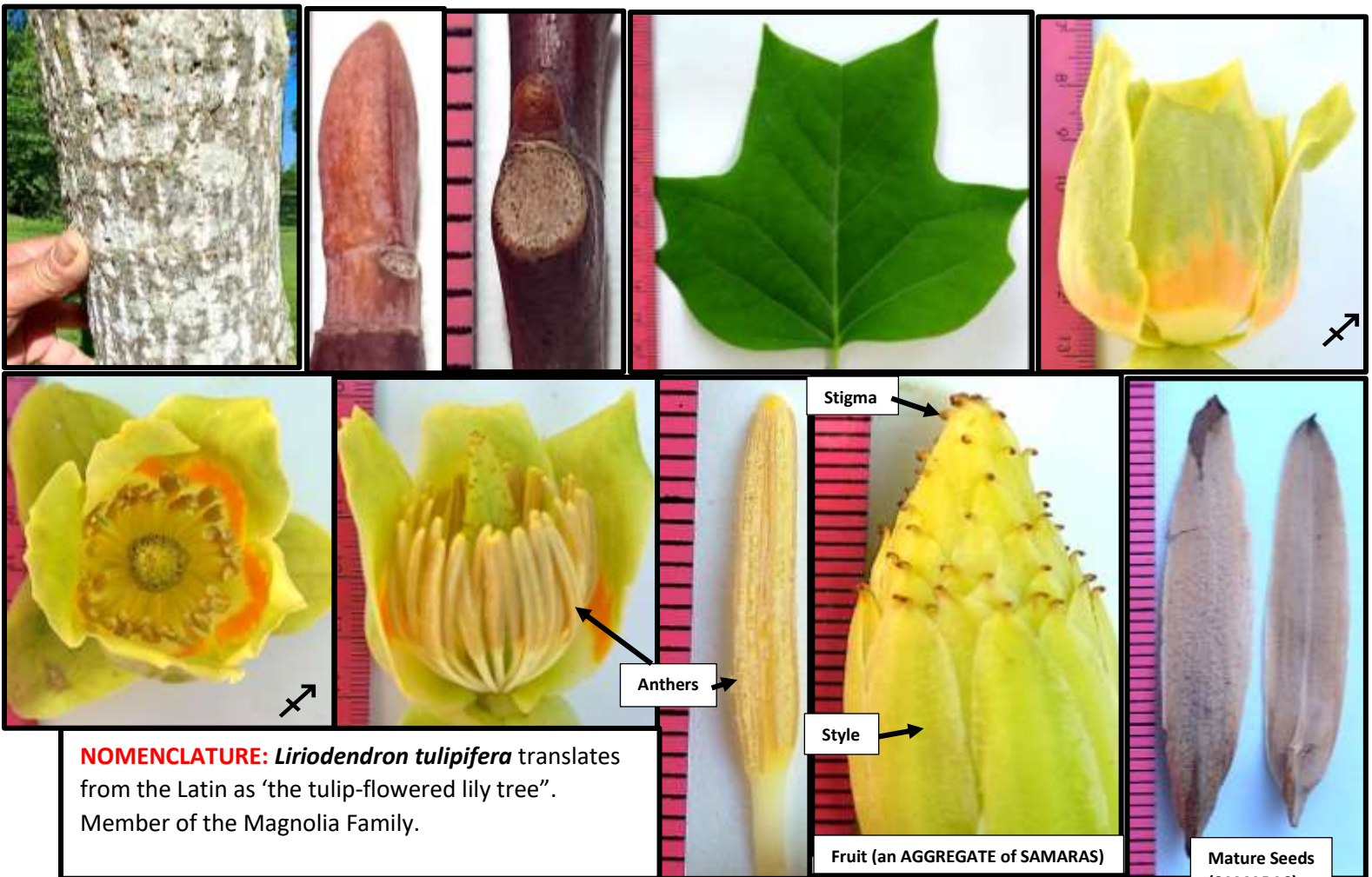
For tea, crush a handful of fresh leaves and steep in hot (not boiling) water for ten minutes. Sweeten with maple syrup. Use crushed berries (pulp and seeds) as a substitute for all-spice.

<sup>38</sup> <https://vnps.org/the-spicebush-swallowtail-butterfly-its-host-plants-and-the-new-threat-they-face/>

<sup>39</sup> <https://thedruidsgarden.com/2021/03/14/sacred-trees-in-the-americas-spicebush-lindera-benzoin-magic-ecology-and-sacred-uses/>

# *Liriodendron tulipifera* Tulip Poplar

Page24



**NOMENCLATURE:** *Liriodendron tulipifera* translates from the Latin as 'the tulip-flowered lily tree'. Member of the Magnolia Family.

**FLOWER GENDER:** Monoecious

**POLLINATION:** Honeybees, bumblebees, hummingbirds. Flowers sometimes self-fertile. Seed production and viability are enhanced by cross pollination with nearby trees.<sup>40</sup>

**DISPERSAL:** Wind

**WILDLIFE VALUE:** Moderate: The seeds are eaten by songbirds, gamebirds, squirrels, and mice.<sup>40</sup>

**USES:** Culinary, Industrial, Medicinal: Nectar makes a dark, smokey flavored honey. Wood used for veneer, plywood, furniture, and pulpwood. Native Americans used the powdered inner bark for colds, cough syrup and as a substitute for quinine in treating malaria. The long straight trunks were used to make dug-out canoes.<sup>40</sup>

**STATUS:** Native

Prior to the Ice Age, several species of *Liriodendron* grew throughout the Northern Hemisphere. Now, worldwide, only 2 species remain. *L. tulipifera* and *L. chinense* (In China and Viet Nam).<sup>41</sup>

Both were found and described in 1753 by Swedish Botanist, Carl Linnaeus.

<sup>40</sup><https://www.fs.usda.gov/database/feis/plants/tree/liitul/all.html>

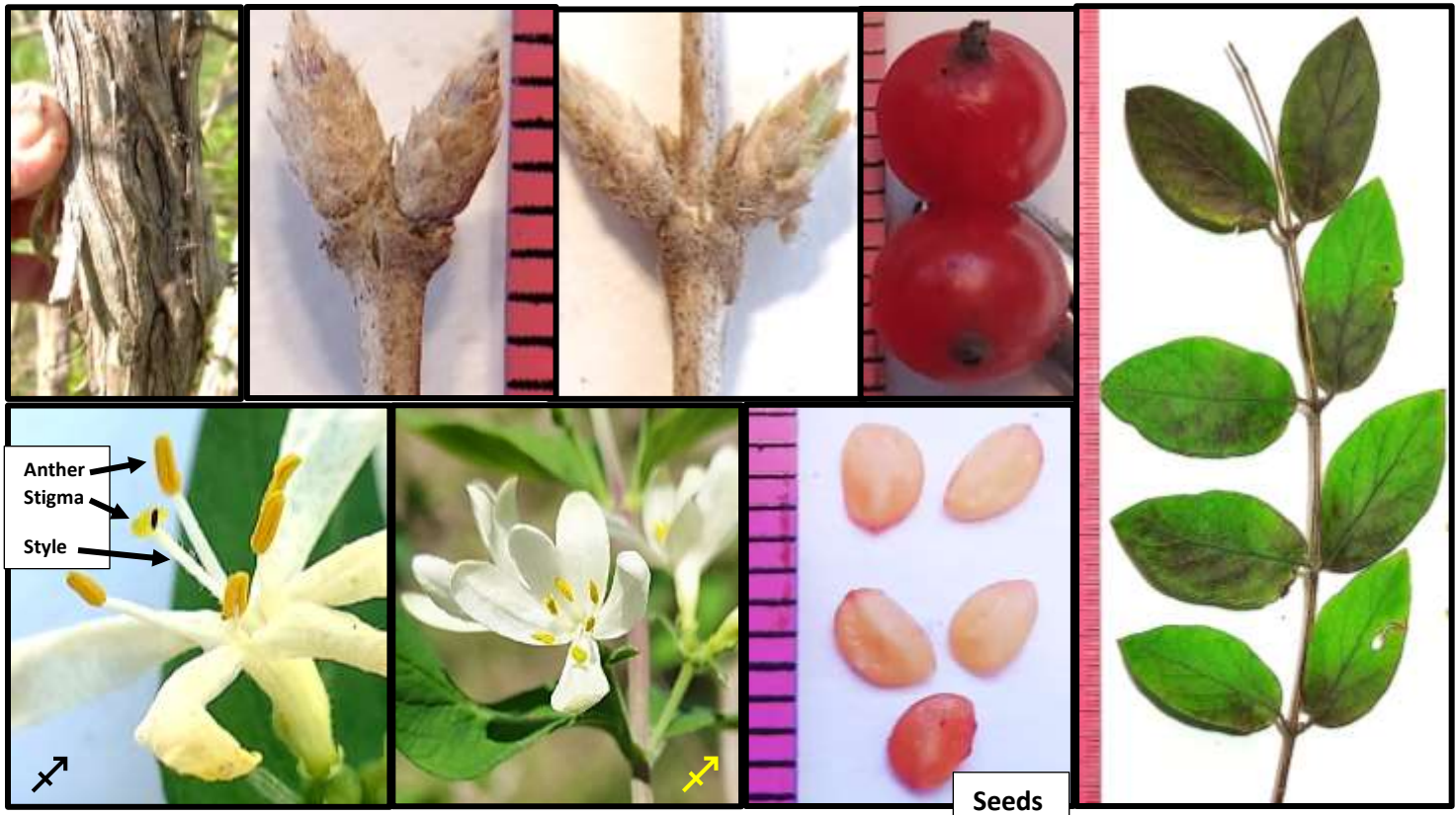
<sup>41</sup> Archaeanthus: Paleontologists Identify Ancient Ancestor of Tulip Tree | Sci.News

*L. chinense* flower



I. Kenpei, Creative Commons Attribution ShareAlike 2.1 Japan License





**NOMENCLATURE:** *Lonicera*: Named for Adam Lonitzer, 16th century German botanist. *Morrowii*; Named for Dr. James Morrow, 19th century agriculturist for Com. Matthew Perry's expedition to Japan.

**FLOWER GENDER:** Perfect

**POLLINATION:** Honeybees, bumblebees, hummingbirds, sphynx moth and butterflies

**DISPERSAL:** Birds

**WILDLIFE VALUE:** **Little:** 12 species of songbirds eat the berries. The berries are low in protein and fat are not a nutritious food source for birds.<sup>42</sup>

**USES:** **Ornamental:** Imported here in 1800s from Japan and China as an ornamental.

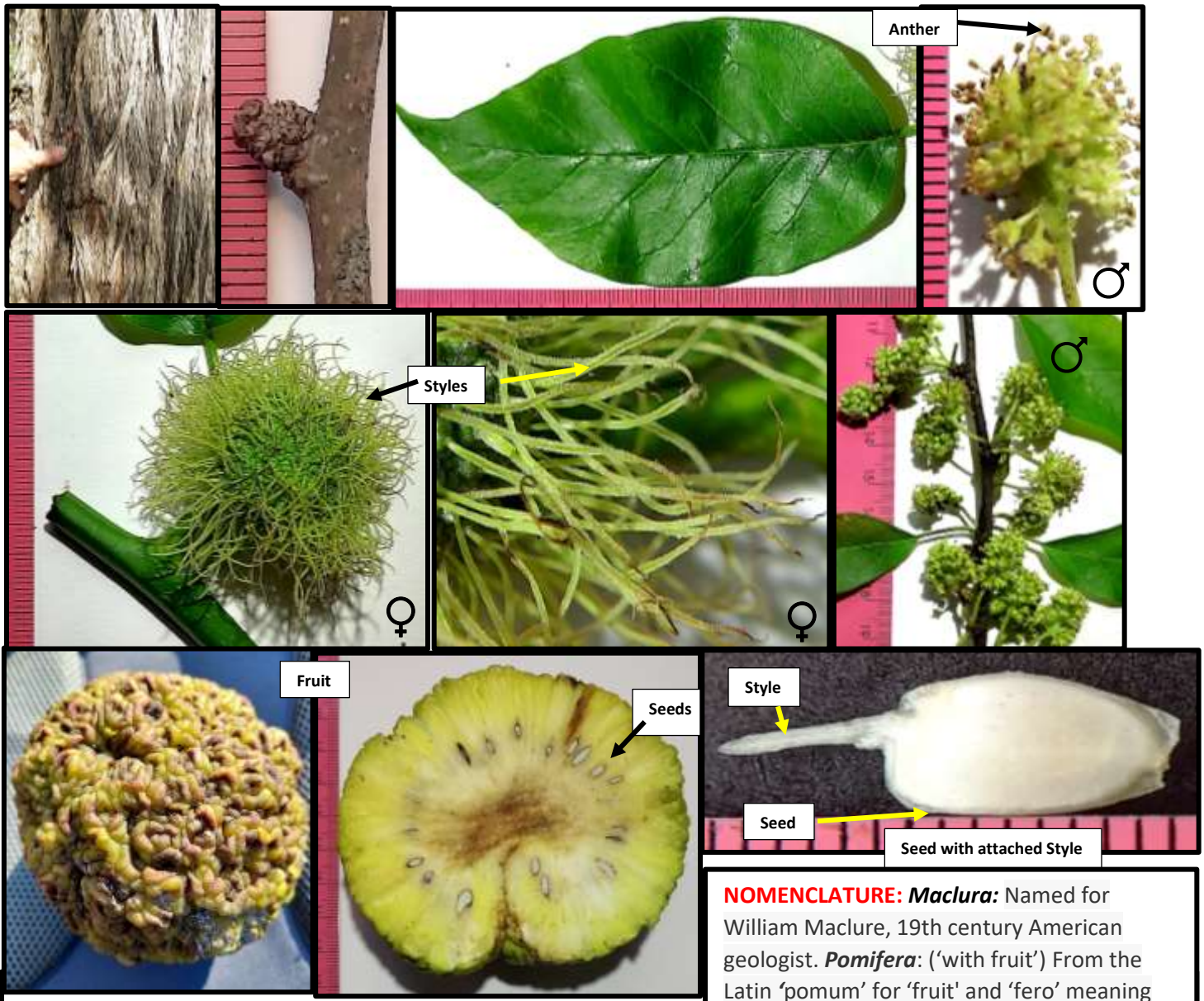
**STATUS:** Non-native, highly invasive

Many of the songbirds known to eat berries have some feathers with yellow pigment, originating from pigments in the berries that they eat. The berries of Marrow's Honeysuckle contain *rhodoxanthin*, a rare carotenoid pigment of deep red hue. Consumption of these berries can change the normal feather coloration of some birds from yellow to orange.<sup>43</sup>

<sup>42</sup>[https://www.illinoiswildflowers.info/trees/plants/morrow\\_hs.htm](https://www.illinoiswildflowers.info/trees/plants/morrow_hs.htm)

<sup>43</sup> <https://bioone.org/journals/ornithological-science/volume-19/issue-1/osj.19.99/Do-Fruits-Bearing-the-Red-Carotenoid-Rhodoxanthin-Affect-Avian-Plumage/10.2326/osj.19.99.short>

***Maclura pomifera* Hedge Apple, Osage Orange, Bow Wood** Page26



**NOMENCLATURE:** *Maclura*: Named for William Maclure, 19th century American geologist. *Pomifera*: ('with fruit') From the Latin 'pomum' for 'fruit' and 'fero' meaning

**FLOWER GENDER:** Dioecious

**POLLINATION:** Wind

**DISPERSAL:** Humans and perhaps horses and cattle

**WILDLIFE VALUE:** Very little. The leaves, twigs and fruits contain an unpalatable, bitter white latex sap. Squirrels occasionally tear apart the fruit to eat the seeds.<sup>44</sup>

**USES:** **Industrial:** 19<sup>TH</sup> Century farmers used the trees to construct hedgerows. Native Americans used the wood for bows. **STATUS:** Reintroduced in Virginia

Before the Ice Age, 7 species of *Maclura* grew in North America. At that time their primary seed dispersers were thought to be the now extinct Pleistocene mammoths, mastodons, and giant ground sloths. Without their original seed dispersers, the trees that survived the ice were unable to spread beyond their *ice age refuge* in the Red River Valley of Texas. Early settlers replanted them nation-wide as hedge rows (before barbed wire). Virtually all of the Hedge Apples that we see today are descended from the plants of these hedgerows.<sup>45</sup>

<sup>44</sup> <https://www.fs.usda.gov/database/feis/plants/tree/macpom/all.html>

<sup>45</sup> <https://www.earth.com/news/Osage-orange-megafauna-extinction/>



## Magnolia virginiana Sweetbay Magnolia

Page27



**NOMENCLATURE:** *Magnolia*: Named for Pierre Magnol, 17th century French botanist. *Virginiana*: From Virginia. **Sweetbay**: The flowers have a sweet lemony fragrance, and the leaves resemble those of the Bay Laurel, native to the Mediterranean region

**FLOWER GENDER:** Perfect

**POLLINATION:** Beetles\*

**DISPERSAL:** Birds

**WILDLIFE VALUE:** The bright red fruits are eaten by woodpeckers, kingbirds, red-eyed vireos, mockingbirds, robins, thrushes, crows, cardinals, squirrels, mice among others.<sup>46</sup>

**USES: Medicinal, Industrial, Ornamental:** Native Americans used decoctions of inner bark to treat malaria. Wood previously used for venetian blind slats. Its attractive, scented flowers, leathery leaves and general form make all *Magnolia* species valuable as ornamentals. Native varieties are available from select nurseries.

**STATUS:** Native to the Southeastern US, including Virginia.

\*According to the fossil record, Magnolias evolved nearly 100 million years ago, during the age of dinosaurs, well before there were any bees. At that time, beetles were the only available pollinators. Today, beetles remain the *Magnolia*'s principal pollinators, attracted to the flowers' protein rich pollen.

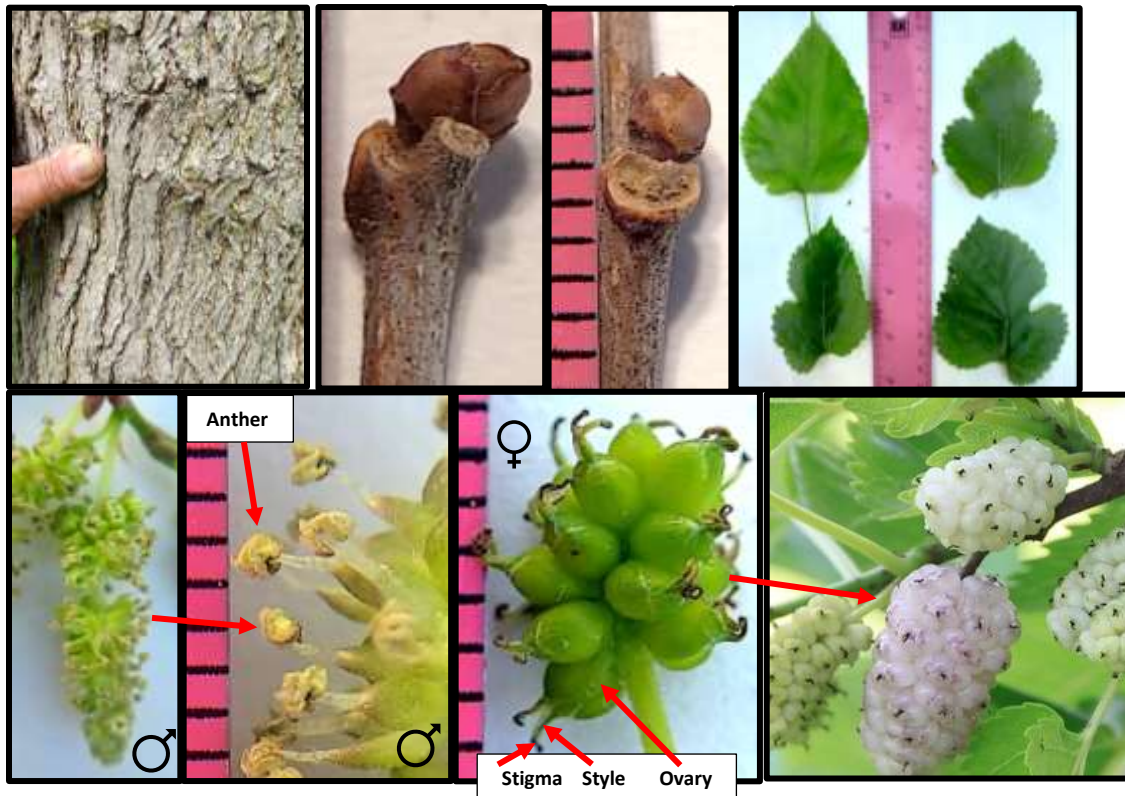
Magnolias may have the distinction of being the world's first flowering tree.<sup>47</sup>

<sup>46</sup> <https://www.fnps.org/plant/magnolia-virginiana>

<sup>47</sup> <https://arboriculture.wordpress.com/2016/01/06/a-history-of-the-magnolia/>

## *Morus alba* White Mulberry

Page28



**NOMENCLATURE:** **Morus:** From the Latin 'morum', the fruit of the mulberry tree. **Alba:** Latin for 'white'. **Mul** is a contraction of the Latin name for the tree. The fruits can be white, pink, red or nearly black.

**FLOWER GENDER:** **Dioecious:** male and female flowers on separate trees. (Some trees are rarely **monoecious**)

**POLLINATION:** Wind

**DISPERSAL:** Birds, Small mammals

**WILDLIFE VALUE:** **Exceptional:** At least 35 bird species are known to eat the fruits and deposit the seeds in their scat. Small mammals and box turtles also eat the fruits and spread the seeds.<sup>48</sup>

**USES:** **Industrial, Culinary:** The leaves are the favored food of silkworms. First imported here in early 1600's in a failed attempt to start the silk industry. In 1624, the Virginia Legislature required every landowner to plant at least 4 White Mulberries.<sup>49</sup>

**STATUS:** **Non-native, introduced.** Native of China. Currently found in every state in the US.<sup>48</sup>

Unlike true berries, the fruits of all mulberries are COMPOUND DRUPES (peaches, plums, and cherries are DRUPES\*)<sup>48</sup>. Each spherical segment of the 'berry' is a separate fruit containing a single seed. When in bloom, each of these segments is a separate female flower, complete with its own stigma, style, and ovary.

\* DRUPES are fruits arising from a single flower, whose ovary contains a single ovum, resulting in a fruit with a single seed.

<sup>48</sup> <https://www.fs.usda.gov/database/feis/plants/tree/moralb/all.html>

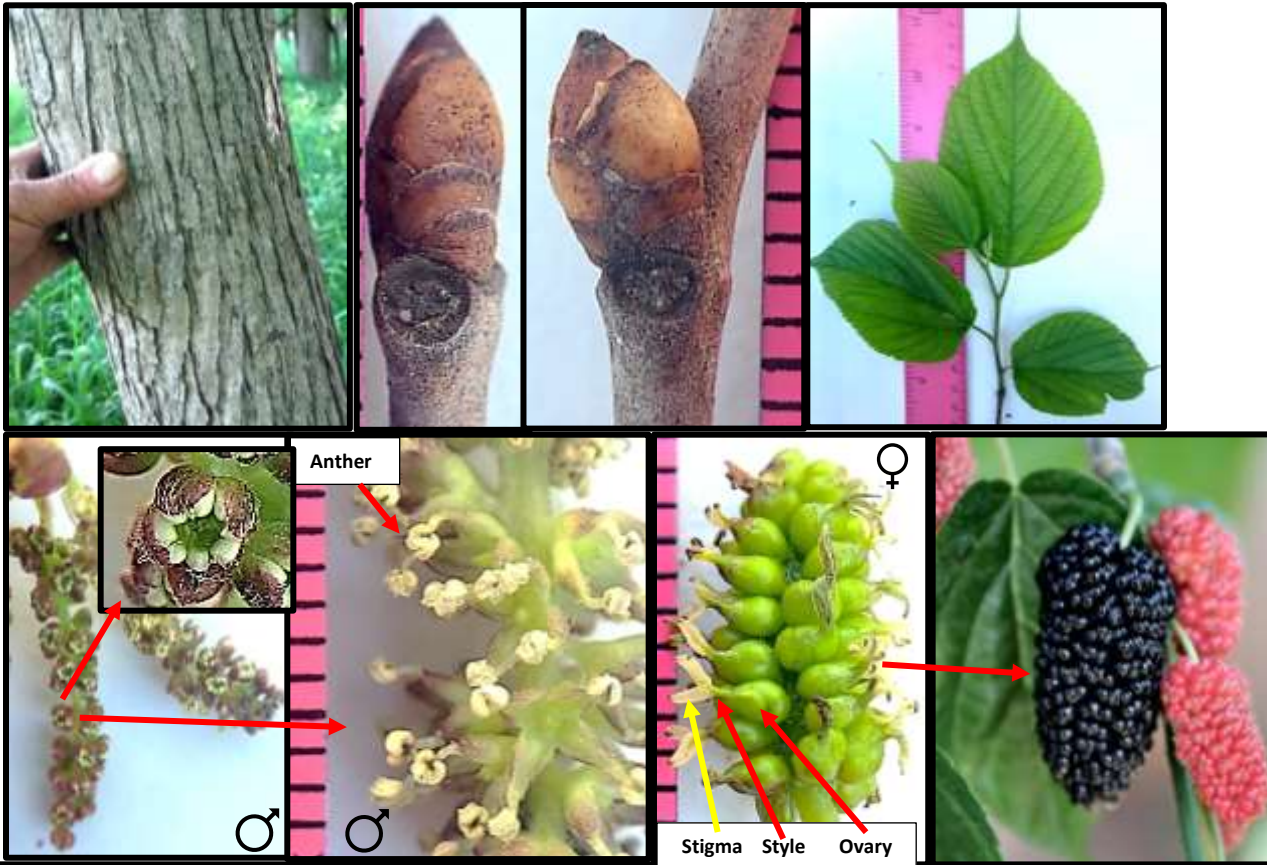
<sup>49</sup> <https://oll.libertyfund.org/page/1619-laws-enacted-by-the-first-general-assembly-of-virginia>



## *Morus rubra*

## Red Mulberry

Page29



**NOMENCLATURE:** **Morus:** From the Latin 'morum', the fruit of the mulberry tree. **Rubra:** Latin for red. **Mul** is a contraction of the Latin name for the tree.

**FLOWER GENDER:** **Dioecious:** male and female flowers on separate trees. (Some trees are rarely **monoecious**)

**POLLINATION:** Wind

**DISPERSAL:** Birds, small mammals

**VALUE: Exceptional:** At least 35 bird species are known to eat the fruits and deposit the seeds in their scat. Small mammals and box turtles also eat the fruits and spread the seeds.<sup>50</sup>

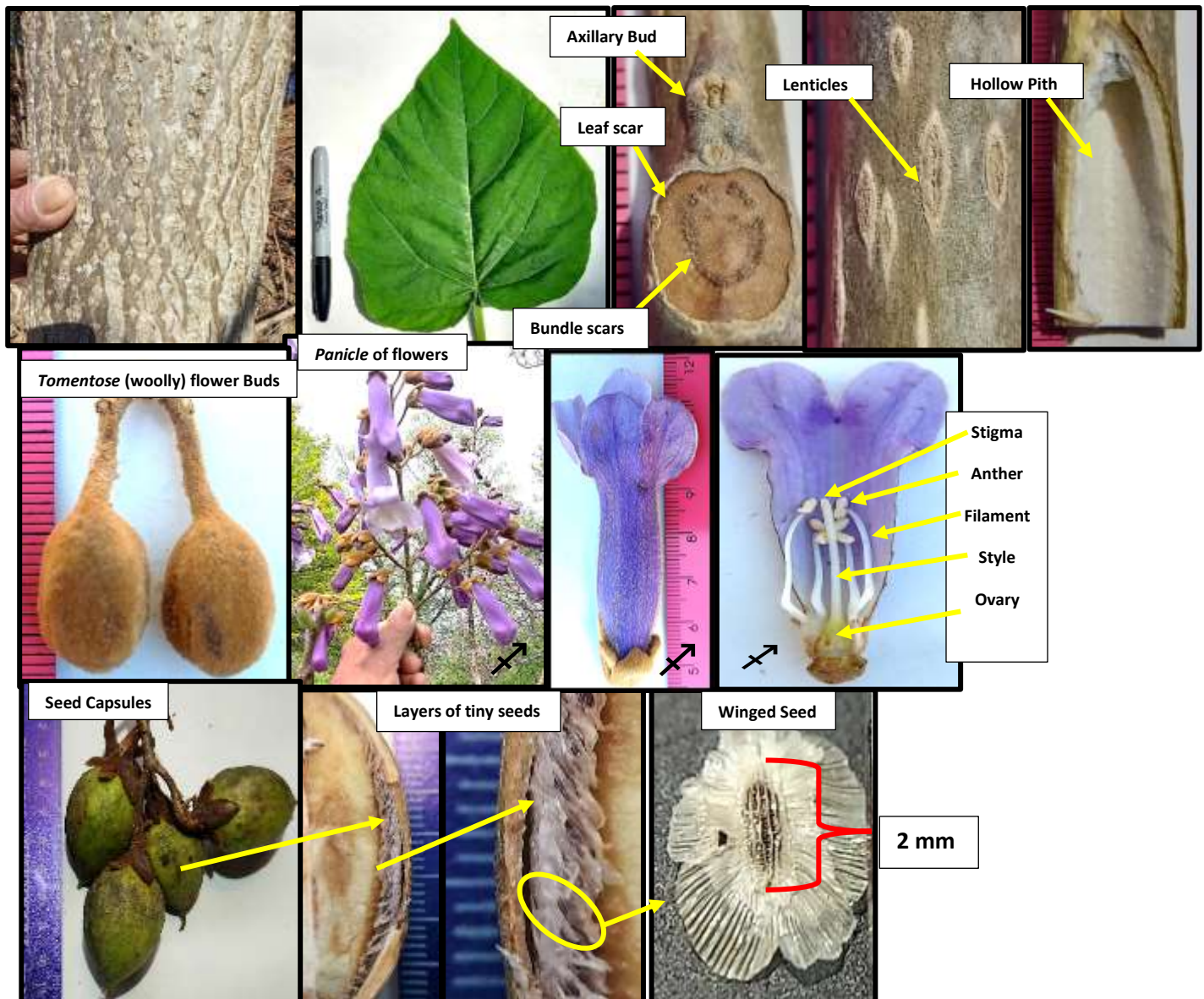
**USES: Culinary:** Native Americans consumed the fruits and juice fresh or mixed with cornmeal and baked into bread and fritters. Dried berries were mixed with animal fat for pemmican for winter use. Still used for fresh fruit, juice, pies, jam, and wine.

**STATUS:** Native

The non-native white mulberry readily hybridizes with the increasingly scarce native red mulberry. This hybrid is more vigorous than the native red mulberry. As a result, there is widespread concern that the red mulberry may become extinct, being replaced by the hybridized variety.<sup>51</sup>

<sup>50</sup><https://www.illinoiswildflowers.info/trees/tables/table261.html>

<sup>51</sup> <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2745.2006.01152.x>



**NOMENCLATURE:** Named for Anna Paulownia, daughter of Russian Tsar Paul I, and the *tomentose* flower buds.

**FLOWER GENDER:** Perfect, monoecious

**POLLINATION:** Insects

**NATIVE RANGE:** China

**SEED DISPERSAL:** Wind: A single seed capsule contains up to 2,000 seeds. A mature tree can produce up to 20 million seeds annually.<sup>52</sup> Listed as MODERATELY INVASIVE by US Forest service.<sup>52</sup>

**WILDLIFE VALUE:** Little: Leaves may be browsed by deer

**USES:** Ornamental, Industrial: Wood for lightweight construction, veneer, furniture, cabinetry. A 12' saw log can sell for \$3,000. Seeds once used as packing material for porcelain from China.<sup>53</sup>

**STATUS:** Non-native: Native to China and Japan. Imported here in 1840 as an ornamental.

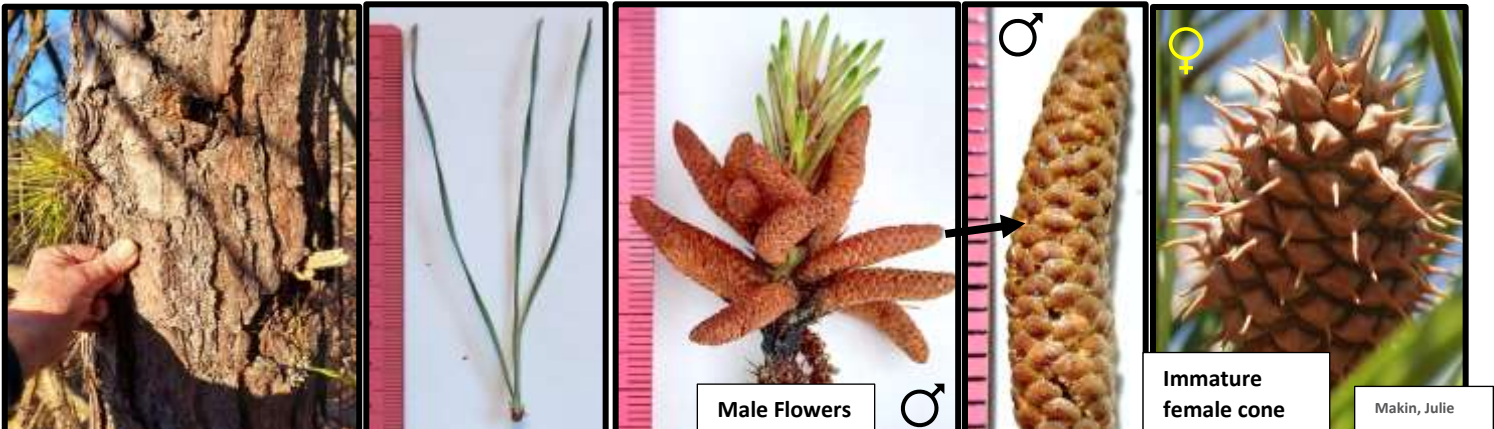
In Japan, when a daughter was born to a couple, a Princess tree was planted. When she married, the Princess tree was harvested, and the wood was used to construct a dresser or chest as a wedding present.<sup>54</sup>

<sup>52</sup> <https://www.fs.usda.gov/database/feis/plants/tree/pautom/all.html>

<sup>53</sup> <https://treepeopleofwallawalla.com/trees/the-worlds-most-valuable-tree/>

<sup>54</sup> [https://www.srs.fs.usda.gov/pubs/misc/ag\\_654/volume\\_2/paulownia/tomentosa.htm](https://www.srs.fs.usda.gov/pubs/misc/ag_654/volume_2/paulownia/tomentosa.htm)





Mature Cone

**NOMENCLATURE:** *Pinus*: Latin word for pine or fir trees. *Rigida*: Re the stiff, rigid, pointed needles

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Wind. A high percentage of Pitch Pinecones only open to disperse their seeds when heated by a forest fire. <sup>55</sup>

**WILDLIFE VALUE:** **Exceptional:** Gamebirds, songbirds, woodpeckers, squirrels, and mice eat the protein rich seeds. <sup>55</sup>

**USES:** **Industrial:** The resinous, rot resistant wood was used in shipbuilding, fencing and railroad ties. <sup>55</sup>

**STATUS:** Native

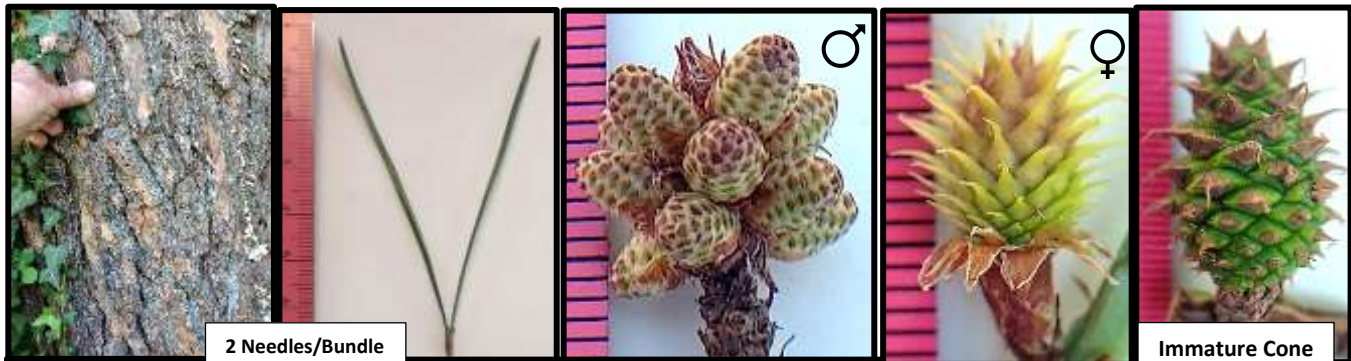
Early Colonists called the pitch pine 'torchwood' as a knotty-ended branch served as excellent long burning torch. It was also referred to as 'candlewood', as small splits of the resinous wood made effective, but smokey, candles. Large amounts of turpentine can be distilled from the wood. <sup>56</sup>

<sup>55</sup> <https://www.fs.usda.gov/database/feis/plants/tree/pinrig/all.html>

<sup>56</sup> <http://www.arnoldia.arboretum.harvard.edu/pdf/articles/2015-72-3-lighting-the-night-the-use-of-pitch-pine-and-bayberry-in-colonial-new->

## *Pinus virginiana* Virginia Pine

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2 Needles/Bundle

Immature Cone



Mature Cone

**NOMENCLATURE:** *Pinus*: Latin word for pine or fir trees. *Virginiana*: From Virginia

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Wind. A high percentage of Virginia Pine cones only open to disperse their seeds when heated by a forest fire.<sup>57</sup>

**WILDLIFE VALUE:** Exceptional: Gamebirds, songbirds, woodpeckers, squirrels, and mice eat the protein rich seeds.

**USES: Industrial, Ornamental:** Formerly used for mine shaft props, railroad ties, lumber, and charcoal. Currently used for reforestation of abandoned agricultural sites, mine sites and burned-over forests. Virginia pine is the most popular of the cultivated *native* Christmas trees.<sup>58</sup>

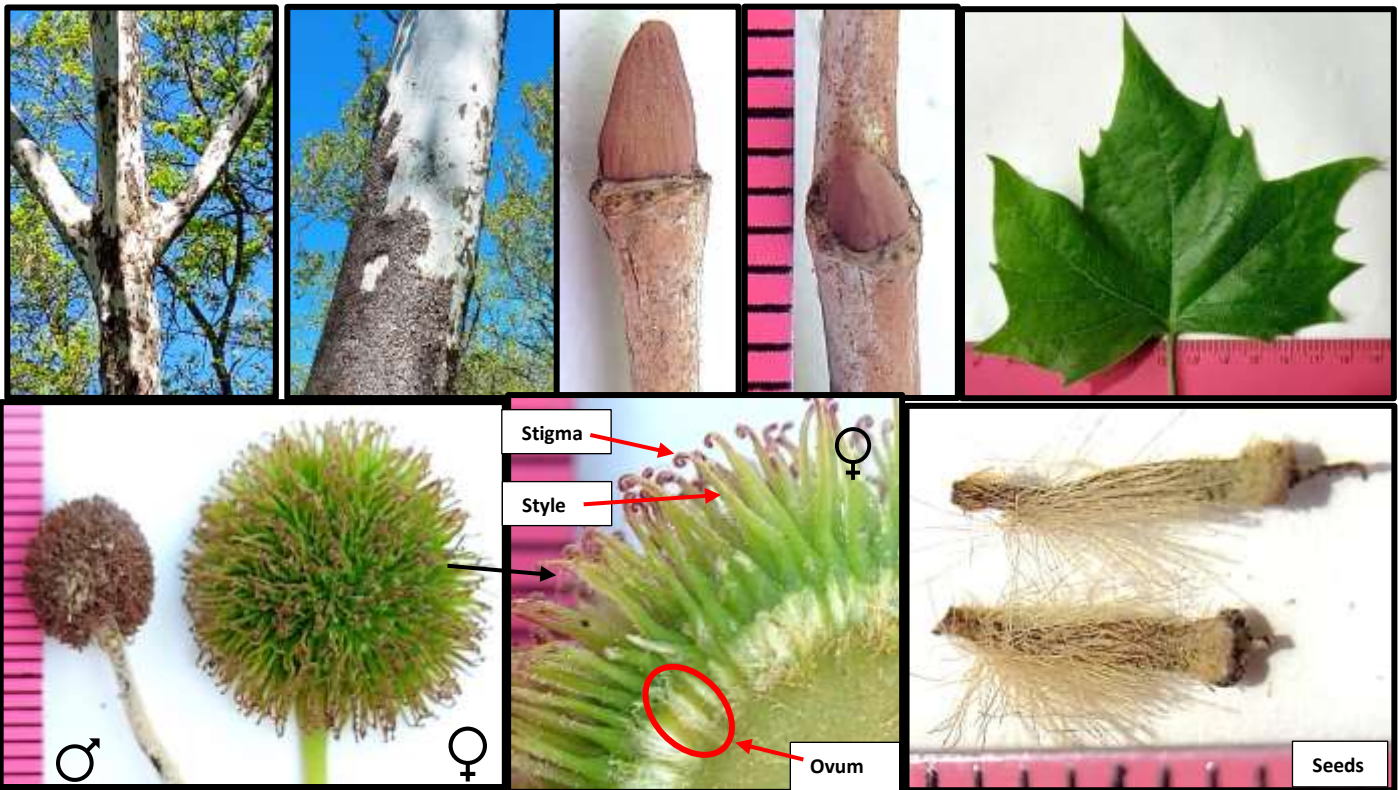
**STATUS:** Native

Virginia pine is an aggressive invader of burned sites. Although not as fire resistant as other pines, fire stimulates the release of seeds from the cones. Seedling densities on burned sites can be as much as 40 times higher than that of unburned sites.<sup>59</sup>

<sup>57</sup> <https://www.fs.usda.gov/database/feis/plants/tree/pinvir/all.html>

<sup>58</sup> <https://realchristmastrees.org/education/tree-varieties/virginia-pine/>

<sup>59</sup> <https://www.fs.usda.gov/research/treesearch/12932>



**NOMENCLATURE:** *Platanus*: From the Greek *platanos*, the ancient word for the European Sycamore, *Platanus orientalis*. *Occidentalis*: From the Latin 'occidens' for westerly, re its native habitat in North America. **Sycamore**, as the tree's fruit and leaves resemble that of the sycamore fig, *Ficus sycomorus*, a native of Africa and Eastern Mediterranean Countries. <sup>60</sup>

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Wind: The tiny, lightweight seeds bear feathery tufts and are easily blown about by the wind.

**WILDLIFE VALUE:** Moderate: A variety of songbirds are known to eat the seeds.

**USES:** Culinary, Medicinal, Industrial: Native Americans used a *Tea made from inner bark to treat dysentery, colds, lung ailments, measles, and cough*. The hard-to-split wood is favored for butcher blocks. A high quality, butterscotch flavored syrup can be made from the sycamore's sap. <sup>61</sup>

**STATUS:** Native

Today's familiar sycamore street tree is an 'accidental' hybrid cross between the American and European sycamores, called the London Plane Tree. In the mid 1600's the original hybrid was discovered as a single seedling in a private garden in London where an American Sycamore was planted near a European sycamore. <sup>62</sup>

<sup>60</sup>[http://www.flowersinIsrael.com/Ficussycomorus\\_page.htm](http://www.flowersinIsrael.com/Ficussycomorus_page.htm)

<sup>61</sup> <https://www.forestwildlife.org/how-to-make-sycamore-syrup/>

<sup>62</sup> <http://londonist.com/2015/03/the-secret-history-of-the-london-plane-tree>

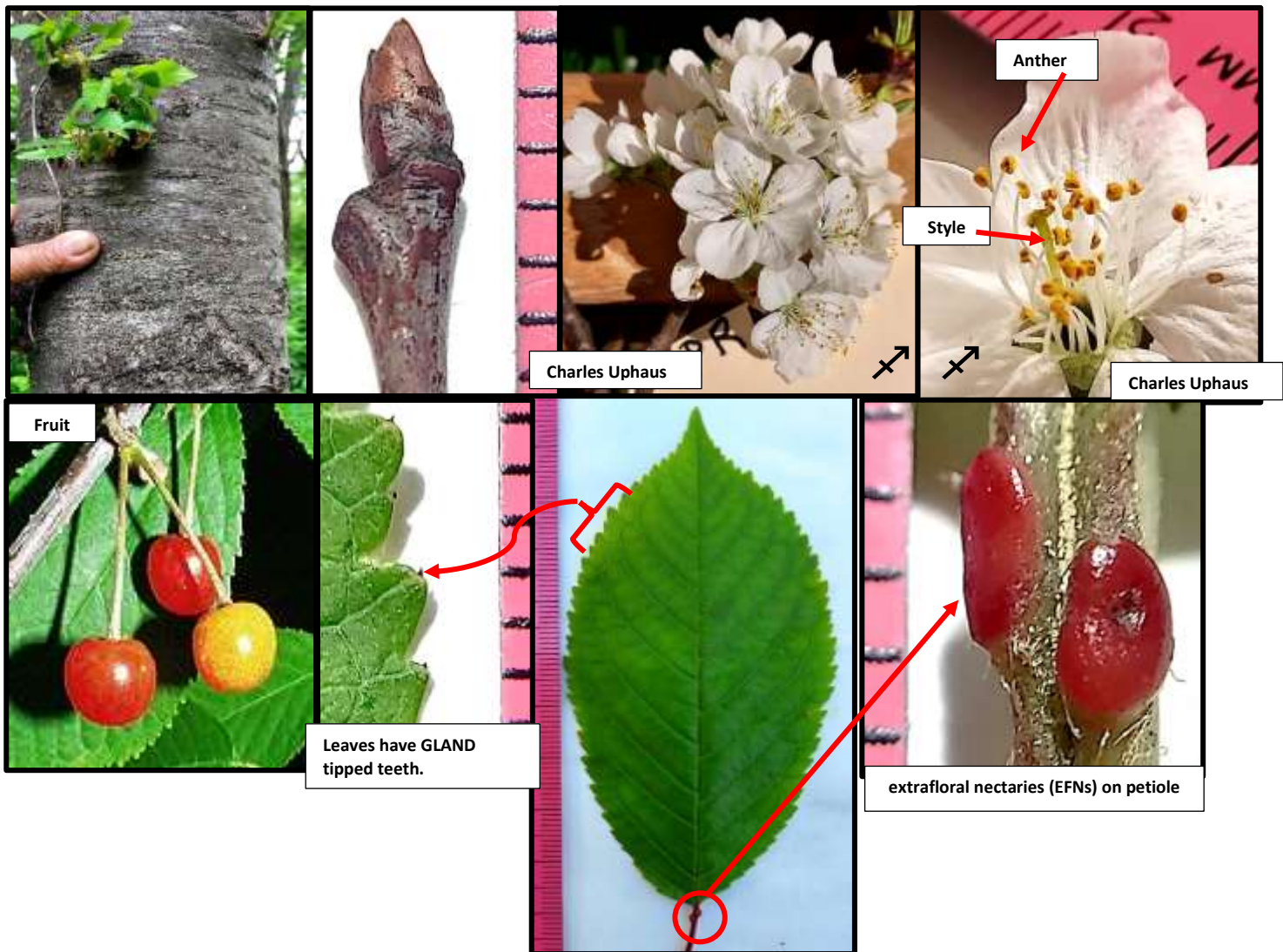
Down along the dwindled creek  
We go loitering. We speak  
Only with old questionings  
Of the dear remembered things  
Of the days of long ago,

When the stream seemed thus and so In  
our boyish eyes: - The bank  
Greener then, through rank on rank  
Of the mottled sycamores  
Touching tops across the shores...  
**Time of Clearer Twitterings**, James  
Whitcomb Riley



## *Prunus avium* Bird Cherry

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**POLLINATION:** Honeybees, bumblebees, flies

**DISPERSAL:** Birds and mammals consume the fruit and deposit the seeds in their scat.

**WILDLIFE VALUE:** **Exceptional:** Fruit is a favorite food of Black Bear, Gray Fox, Red Fox, Eastern Chipmunk, Squirrels, Opossum, Raccoon, and Mice and at least 40 species of gamebirds and songbirds.<sup>63</sup>

**USES:** **Culinary, Agricultural:** The Bird Cherry is the main source of most culinary cherry varieties. It was imported here by early colonists as a source of table fruit, grafting stock and breeding stock for other cultivated varieties.<sup>64</sup>

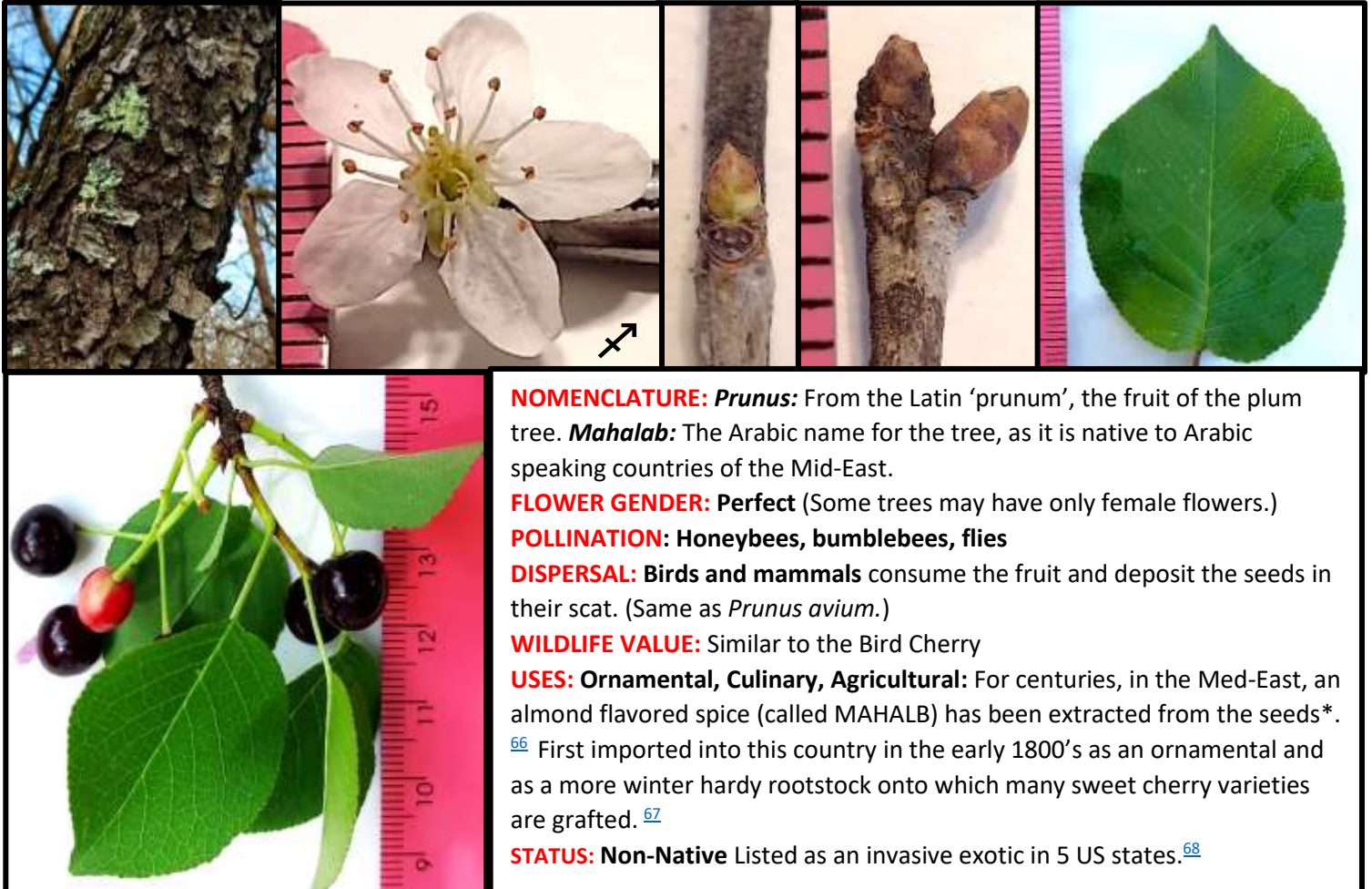
**STATUS:** **Non-native** Native to Europe and Western Asia.

Extrafloral Nectaries (EFNs) are nectar producing glands located away from the flowers, usually on leaves or stems. Producing sugary nectar all season, they attract ants and other carnivorous insects, who will help defend the plants from leaf eating insects. EFNs have been found in a total of 3941 species distributed across 745 genera and 108 families.<sup>65</sup>

<sup>63</sup><https://www.illinoiswildflowers.info/trees/tables/table12.htm>

<sup>64</sup> <https://americanillustration.org/project/prunus-avium/>

<sup>65</sup> <https://academic.oup.com/aob/article/111/6/1243/153869> (See “Phylogenetic distribution” paragraph.)



**NOMENCLATURE:** *Prunus*: From the Latin 'prunum', the fruit of the plum tree. *Mahalab*: The Arabic name for the tree, as it is native to Arabic speaking countries of the Mid-East.

**FLOWER GENDER:** Perfect (Some trees may have only female flowers.)

**POLLINATION:** Honeybees, bumblebees, flies

**DISPERSAL:** Birds and mammals consume the fruit and deposit the seeds in their scat. (Same as *Prunus avium*.)

**WILDLIFE VALUE:** Similar to the Bird Cherry

**USES: Ornamental, Culinary, Agricultural:** For centuries, in the Med-East, an almond flavored spice (called MAHALB) has been extracted from the seeds\*.

<sup>66</sup> First imported into this country in the early 1800's as an ornamental and as a more winter hardy rootstock onto which many sweet cherry varieties are grafted. <sup>67</sup>

**STATUS: Non-Native** Listed as an invasive exotic in 5 US states. <sup>68</sup>

Like other cherries, the Mahalab cherry has EFNs, which may or may not be present on the leaf petiole.

Mahalab cherries are frequent in the woods along the Museum's trails and in spring put on a fine show of flowers and bright red and shiny purple fruits. Their contorted form and ability to grow in rock breaks make them an outstanding feature of natural beauty and art. \*The seeds of all cherries contain toxins that can release CYANIDE into the blood.

<sup>66</sup> [http://gernot-katzers-spice-pages.com/engl/Prun\\_mah.html](http://gernot-katzers-spice-pages.com/engl/Prun_mah.html)

<sup>67</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0304423816301911>

<sup>68</sup> <https://www.invasive.org/browse/subinfo.cfm?sub=11574>



## *Prunus serotina* Wild Black Cherry

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**NOMENCLATURE:** *Prunus*: From the Latin 'prunum', the fruit of the plum tree. *Serotina*: From the Latin 'serus' meaning late, as the tree blooms in August, much later than the spring blooming cherries.

**FLOWER GENDER:** Perfect

**POLLINATION:** Honeybees, bumblebees, flies

**DISPERSAL:** Birds and mammals consume the fruit and deposit the seeds in their scat.

**WILDLIFE VALUE:** Similar to the Bird Cherry. Because of its late blooming period, it offers pollinators an important nectar and pollen source when other sources are scarce.

**USES:** Culinary, Medicinal, Industrial: Native Americans ate the fresh fruits or mixed the dried fruits with animal fat and meat scraps for PEMMICAN, an energy rich food for winter consumption. Bark tea was used to treat colds, coughs, tuberculosis.<sup>69</sup> The hard, close grained, reddish-brown wood is highly prized for cabinetry and furniture. <sup>69</sup>

**STATUS:** Native

Fruit (VPI Dept of Forest Resources)

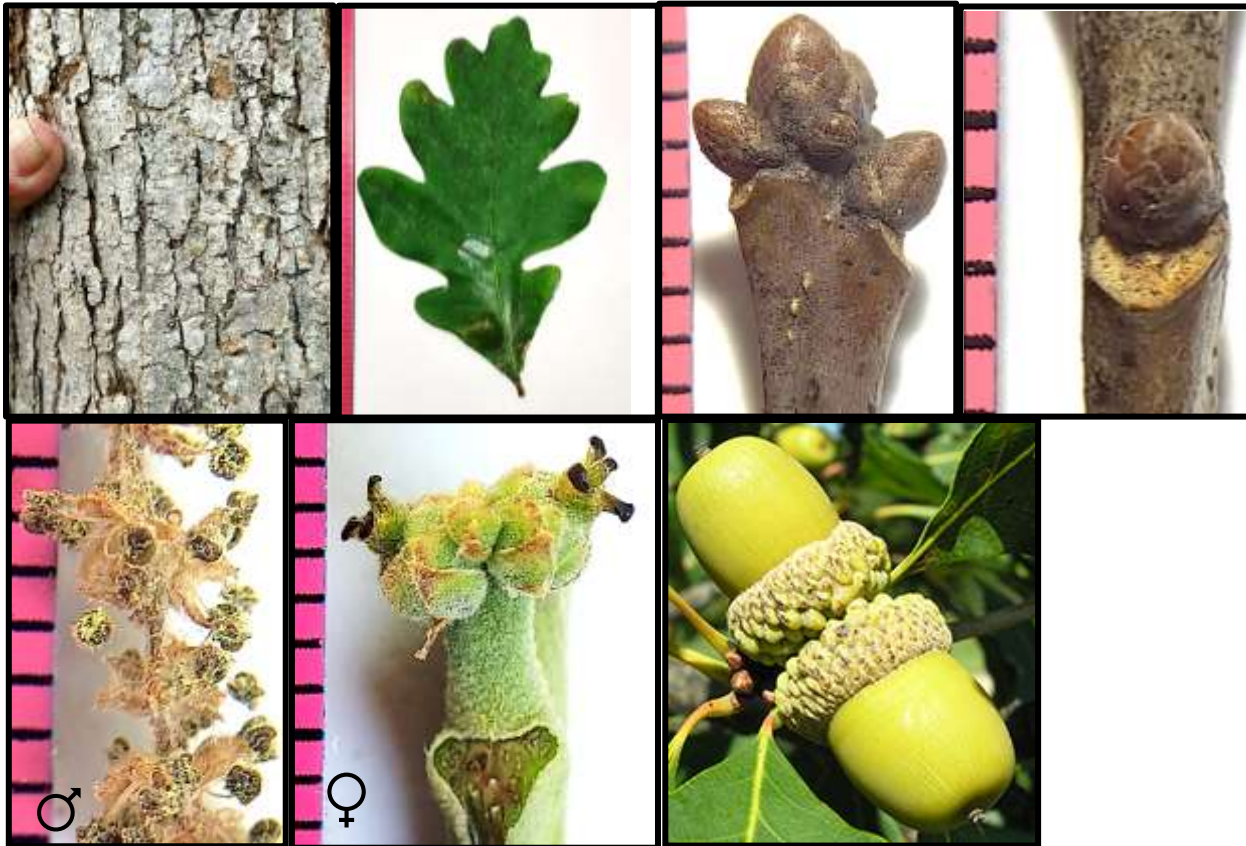
In Virginia there are only 3 **common native** species of cherry, the Pin Cherry, Choke Cherry, and Black Cherry. A fourth native species, the rare Sand Cherry, is found in only 3 Virginia counties<sup>70</sup> (Agusta, Culpepper and Fairfax). <sup>69</sup><https://georgiawildlife.com/out-my-backdoor-benefits-black-cherry-trees>

<sup>70</sup> <http://vaplantatlas.org/index.php?s=&c=cherry&do=search%3Aadvanced&search=Search>

*Loveliest of trees, the cherry now  
Is hung with bloom along the bough  
and stands about the woodland ride  
Wearing white for Eastertide.  
Now, of my threescore years and ten  
Twenty will not come again,*

*And take from seventy springs a score  
It only leaves me fifty more.  
And since to look at things in bloom  
Fifty springs are little room,  
About the woodlands I will go  
To see the cherry hung with snow.  
A. E. Houseman Cir. 1910*





**NOMENCLATURE:** *Quercus*: From the ancient Celtic words *quer* for beautiful, and *quez* for tree. *Alba*: Latin word for white. **White** likely refers to the whitish color of the wood.

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Birds and squirrels hide the seeds in caches for later wintertime consumption. Some acorns are overlooked, and later germinate.

**WILDLIFE VALUE:** **Exceptional.** The low (bitter) tannic acid content of the acorns makes them a favorite food of gamebirds, crows, jays, black bears, squirrels, chipmunks, and mice.<sup>71</sup>

**USES: Industrial, Medicinal, Culinary:** The heavy, strong wood is used to make furniture, flooring, paneling, framing, railroad ties, fence posts, barrels, and ship hulls. Native Americans used the bark tea to treat colds, fevers, and dysentery. The nuts were shelled, ground to a powder, washed several times to remove the bitter tannins, and cooked with water or meat broth to form a mash<sup>72</sup> called *wiiwish*.

**STATUS:** Native

Each fall the tree's *cambium* layer (containing the tree's tube-like conductive tissues) dies to form the *annular rings*. In white oaks, these dying tubes fill with resinous structures called *tyloses*, becoming sealed and waterproof. Sawn timbers, boards and barrel staves of white oak consist of layer upon layer of these resin-filled, waterproof pores, making the wood the perfect waterproof material for ship hulls and wine barrels.<sup>72</sup>

<sup>71</sup> [https://www.illinoiswildflowers.info/trees/plants/white\\_oak.html](https://www.illinoiswildflowers.info/trees/plants/white_oak.html)

<sup>72</sup> <https://www.baillie.com/hardwood-lumber-blog/item/315-red-oak-vs-white-oak>

## *Quercus muehlenbergii* Chinquapin Oak



**NOMENCLATURE:** *Quercus*: From the ancient Celtic words *quer* for beautiful, and *quez* for tree. *Muehlenbergii*: Named after Gotthif Muhlenberg, 18<sup>th</sup> century German botanist. *Chinquapin*: Algonquian Indian word for the Allegheny dwarf chestnut, *Castanea pumila*, which has similar looking leaves.

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Birds and squirrels hide the seeds in caches for later wintertime consumption. Some acorns are overlooked, and later germinate. \*

**WILDLIFE VALUE:** Exceptional. The low (bitter) tannic acid content of the acorns makes them a favorite food of gamebirds, crows, jays, black bears, squirrels, chipmunks, and mice. Chinquapin Oak acorns are sweeter and more palatable than other oaks.

**USES: Industrial, Medicinal, Culinary:** The heavy, strong wood is used to make furniture, flooring, paneling, framing, railroad ties, fence posts, barrels, and ship hulls. Native Americans used the bark tea to treat colds, fevers, and dysentery. The nuts were shelled, ground to a powder, washed several times to remove the bitter tannins, and cooked with water or meat broth to form a mash<sup>74</sup> called *wiwish*. Being a type of white oak, the wood can be used for wine barrels and casks.

**STATUS:** Native

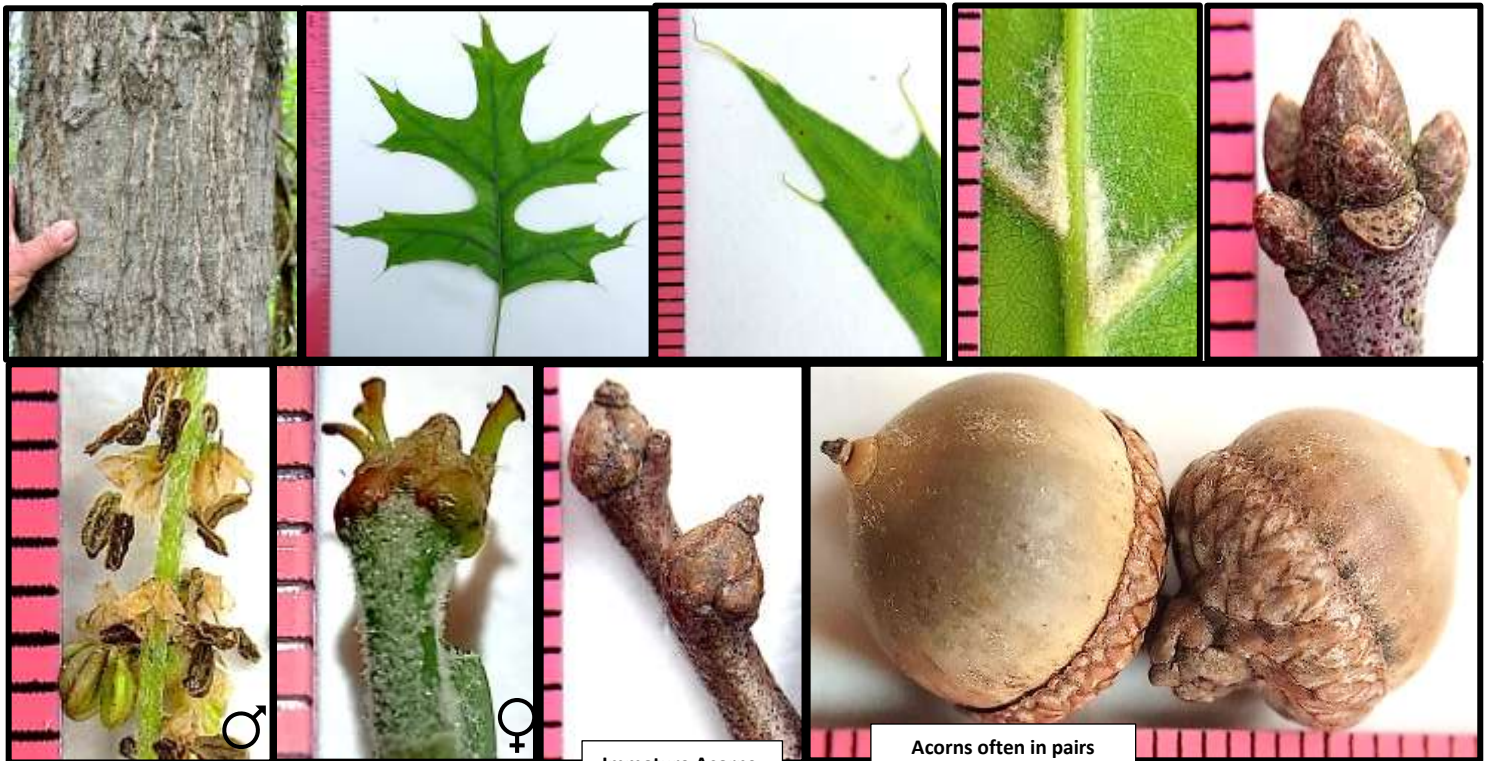
\* Blue Jays are the main seed dispersers of oaks, with individual birds caching up to 8,000 acorns each year. Acorns are typically cached in open sites, as far as a kilometer from the source, under several centimeters of soil and then covered with leaf litter. The birds can retrieve up to 95% of the cached acorns, but overlooked acorns have a high germination rate and can repopulate recently disturbed or burned over areas.<sup>75</sup>

<sup>73</sup> Weakley, A.S., J.C. Ludwig, J.F. Townsend. 2012. Flora of Virginia, p 618

<sup>74</sup> <https://www.fs.usda.gov/database/feis/plants/tree/quemue/all.html>

<sup>75</sup> <https://www.ecologycenter.us/acorn-production/dispersal-agents-of-oak.html>





**NOMENCLATURE:** *Quercus*: From the ancient Celtic words 'quer' for beautiful, and 'quez' for tree. *Palustris*: From the latin 'palus' for swamp or marsh, as the tree's favored habitat is in or near *seasonal* wetlands. Also adapted to poorly drained clay soils. **Pin**: Refers to frequently broken lower branches that laeve persistent, pin-like stubs.

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Birds and squirrels hide the seeds in caches for later wintertime consumption. Some acorns are overlooked, and later germinate.

**WILDLIFE VALUE:** Acorns eaten by gamebirds, crows, jays, lack bears, squirrels, chipmunks, and mice. Since pin oaks often grow near wetlands, they are also an important food source for ducks.

**USES:** **Ornamental, Culinary:** For lumber, because the trunks are exceedingly knotty. Next to red oak, pin oak is the most popular oak for landscaping. Some Native Americans brewed a coffee-like beverage from the roasted and ground acorns.<sup>76</sup>

Oaks are generally divided into two groups: the White Oak group and the Red Oak group. Both groups are easily distinguished by their leaf shapes. White Oak leaves have rounded, blunt tipped lobes. Red Oak leaves have pointed, bristle tipped lobes. The Acorns of the White Oaks mature in a single season while those of the Red Oaks require 2 seasons.<sup>77</sup> Pin oaks are a member of the Red Oak group.

<sup>76</sup><https://www.fs.usda.gov/database/feis/plants/tree/quepal/all.html>

<sup>77</sup><https://extension.missouri.edu/publications/g9414>

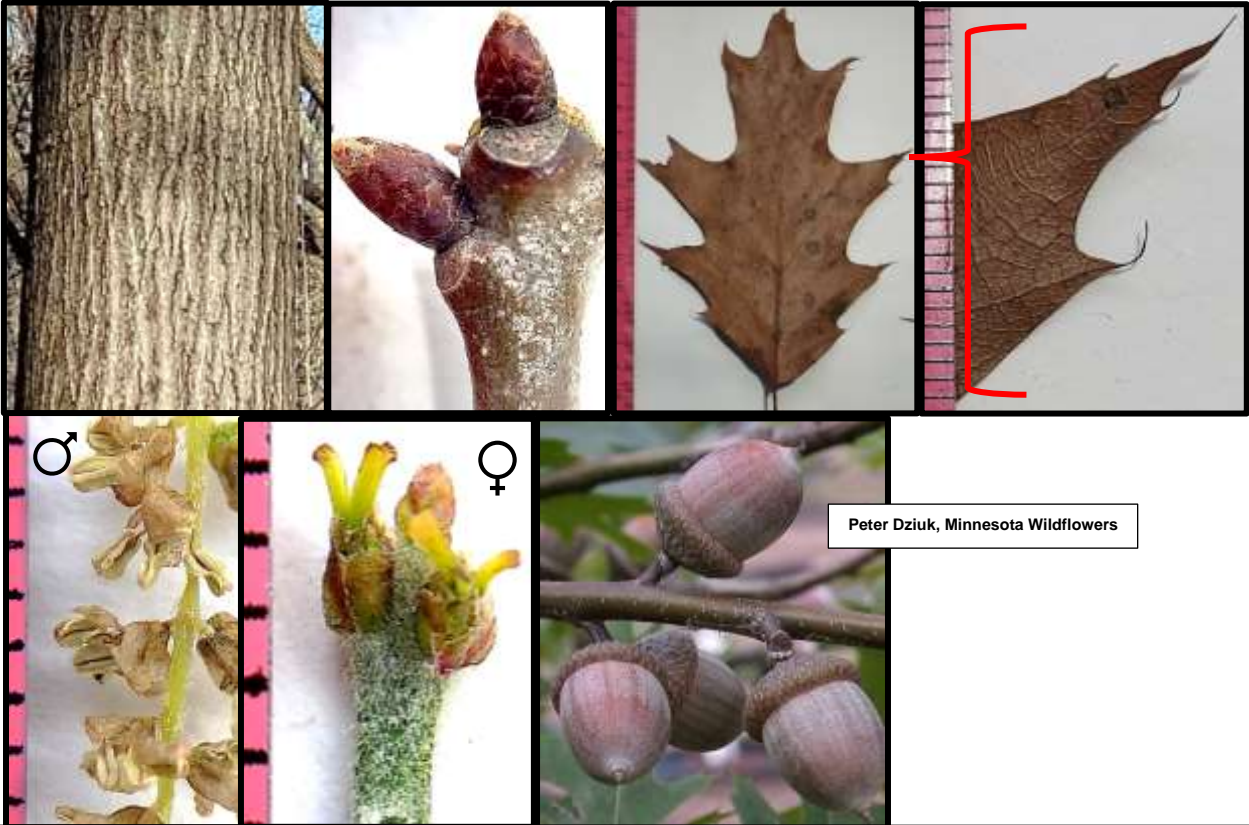


White Oak Group



Red Oak Group





**NOMENCLATURE:** *Quercus*: From the ancient Celtic words *quer* for beautiful, and *quez* for tree. *Rubra*: The latin word for red. Red likely refers to the reddish color of the wood

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Birds and squirrels hide the seeds in caches for later wintertime consumption. Some acorns are overlooked, and later germinate.<sup>78</sup>

**WILDLIFE VALUE: Exceptional:** Acorns eaten by a wide variety of gamebirds, songbirds, waterfowl, and small mammals.

**USES: Industrial:** The wood of northern red oak has been used to make railroad ties, fenceposts, veneer, furniture, cabinets, paneling, flooring, caskets, pulpwood, and fuel.<sup>78</sup>

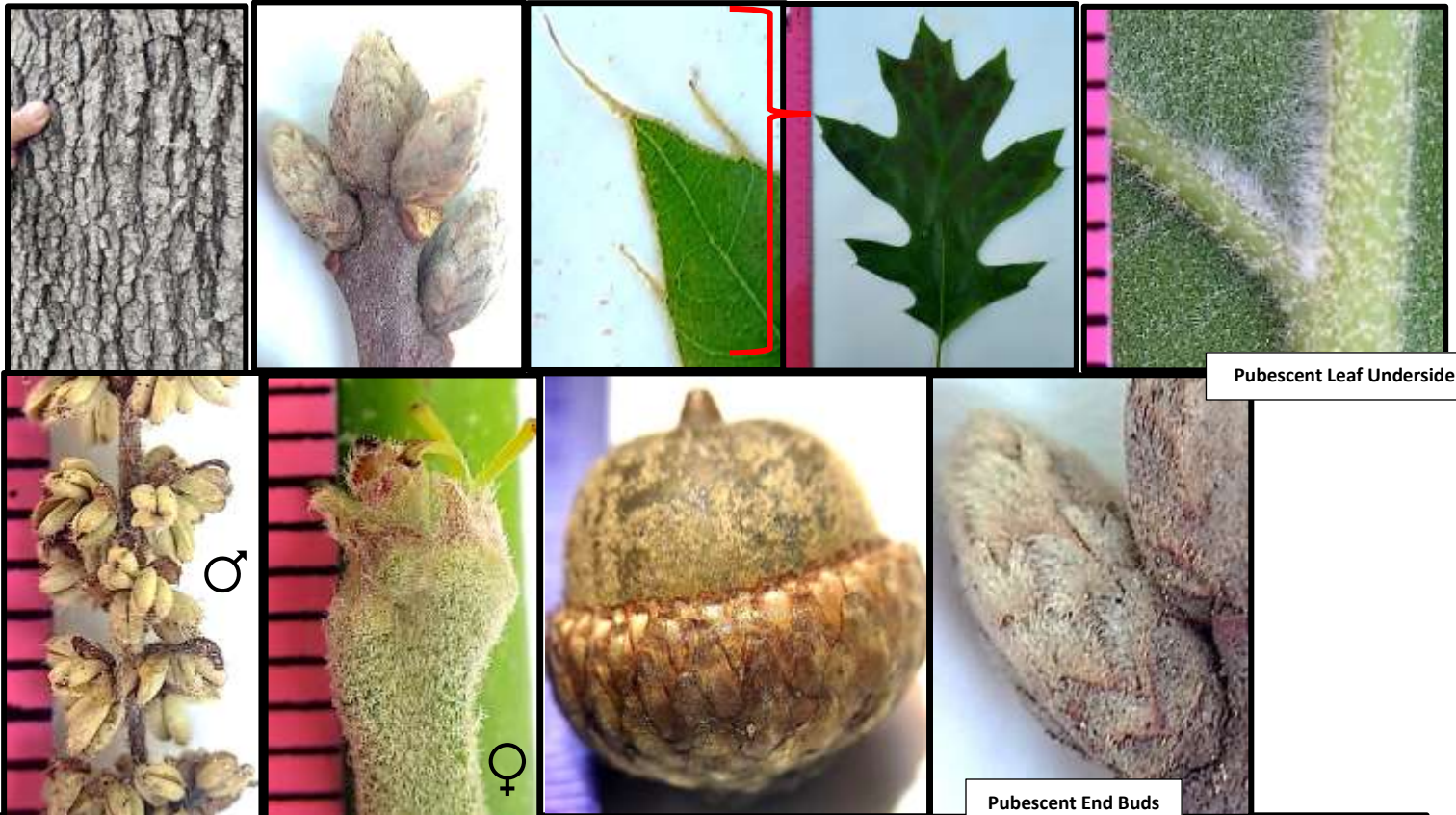
**STATUS:** Native

The acorns of the Red Oak are the preferred winter food of the gray squirrel. A single wild turkey can consume up to 220 Red Oak acorns in a single feeding. Acorns can be up to 55% of white-tailed deer's winter diet. A heavy acorn food crop increases the reproductive success of black bears. Red oak acorns are a good energy source, containing starches, sugars, and fats, with about 1300 calories per pound.<sup>78</sup>

<sup>78</sup> <https://www.fs.usda.gov/database/feis/plants/tree/querub/all.html>

## Quercus velutina Black Oak

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**NOMENCLATURE:** *Quercus*: From the ancient Celtic words *quer* for beautiful, and *quez* for tree, the Celt's 'Beautiful Tree'. *Velutina*: From the Latin '*valleris*', for wool or fleece, re the velvety hairs (pubescence) on the tree's endbuds and leaf undersides. **Black**: re the tree's nearly black bark

**FLOWER GENDER:** Monoecious

**POLLINATION:** Wind

**DISPERSAL:** Birds and squirrels hide the seeds in caches for later wintertime consumption. Some acorns are overlooked, and later germinate

**WILDLIFE VALUE:** Same as Red Oak

**USES:** Same as Red Oak. In addition, a yellow dye can be extracted from the orange-colored inner bark of the Black Oak<sup>79</sup>. **STATUS:** Native

In the US there are approximately 90 distinct *species* of oaks. Most oak species flower at about the same time in the spring. In a mixed oak forest, the female flowers of the separate species are constantly exposed to, and occasionally fertilized by, the male pollen of other species. As a result, there are about 90 additional, *hybrid oak varieties* in the US. Hybrid crosses do not occur between the White Oak and Red Oak groups.

In Virginia, the Black Oak is known to hybridize with at least 12 other species of the Red Oak group.<sup>79</sup>

<sup>79</sup> <https://www.fs.usda.gov/database/feis/plants/tree/quevel/all.html>

# Oak Tree,

By George Bernard Shaw

I took an acorn and put it in a pot.  
I then covered it with earth, not a lot  
Great pleasure was mine watching it grow.  
The first budding green came ever so slow.  
I watered my plant twice a week  
I knew I would transplant it down by the creek.  
One day it would be a giant oak,  
To shield me from the sun a sheltering cloak  
Lovers will carve their initials in the bark,  
An arrow through a heart they will leave their mark.  
It will shelter those caught in a fine summers rain,  
Under its leafy bows joy will be again.  
Creatures of the wilds will claim it for their own,  
Squirrels will reside here in their own home.  
Birds will build nests and raise their young,  
They will sing melodies a chorus well sung.  
Under its branches grass will grow,  
Here and there a wild flower it's head will show.  
My oak tree for hundreds of years will live.  
Perhaps the most important thing I had to give.



Max Ronnersjo [Creative Commons Attribution-Share Alike 3.0 Unported](#)



## *Robinia pseudoacacia*    Black Locust

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**NOMENCLATURE:** *Robinia*: Named for Jean Robin\*, 17th century herbalist to King Henri IV and King Louis XIII. *Pseudoacacia*: Or false acacia, as the thorny branches resemble those of the Red Acacia, native to the eastern Mediterranean region. **Black locust**: Originally mis-identified by early colonists in Jamestown Va. as the *Carob Tree*, also native to the Eastern Mediterranean region. The fruits of the Carob are thought to be the 'locusts' eaten by John the Baptist in the wilderness.<sup>82</sup>

**FLOWER GENDER:** Perfect

**POLLINATION:** Honeybees and bumblebees

**DISPERSAL:** Wind. The lightweight pods are easily blown about by the wind.

**WILDLIFE VALUE:** Minimal. Most parts of the tree, including the seeds, are toxic. Occasionally the seeds are eaten by ground squirrels and gamebirds.<sup>80</sup>

**USES:** Culinary (limited), Industrial: Flower nectar makes an exceptional honey. Frequent tree cavities are used extensively as homes by squirrels and birds. Native Americans, early colonists and farmers made extensive plantings outside the tree's native Blue Ridge Mountain range to harvest the wood for construction, tools, bows, and fuel.<sup>81</sup>

**STATUS:** Native

The third hardest wood (After Live Oak and Hedge Apple) native to North America, it was used extensively in shipbuilding during the war of 1812.

\*According to 18<sup>th</sup> Century Botanist Carl Linnaeus, in 1601 Jean Robin planted an American Black Locust in the gardens of the French **National Museum of Natural History**. It was still alive as late as 1963. The longevity record for Black Locust is 300 years.<sup>82</sup> <sup>80</sup> [https://www.illinoiswildflowers.info/trees/plants/bl\\_locust.html](https://www.illinoiswildflowers.info/trees/plants/bl_locust.html)

<sup>81</sup> <https://www.livescience.com/50732-black-locust-tree-shaped-the-united-states.html>

<sup>82</sup> <https://barkhouse.com/2020/11/04/black-locust-the-tree-on-which-the-us-was-built/>





VPI Dept of Forest Resources



**NOMENCLATURE:** *Sassafras*: Origin unknown, perhaps one of the many Native American names for the plant. *Albidum*: From the Latin *albus*, for white, re the tree's white inner bark.

**FLOWER GENDER:** Dioecious

**WILDLIFE VALUE: Exceptional:** The oily, high calory fruits are eaten by at least 2 dozen varieties of songbirds and gamebirds. Also eaten by small mammals and bears. Along with the closely related Spicebush, Sassafras is an alternate host for the Spicebush Swallowtail butterfly.<sup>83</sup>

**DISPERSAL:** Birds.

**USES: Medicinal, Culinary, Industrial, Ornamental:** Native Americans used various parts pf the plant to treat wounds, urinary tract infections and fevers. **Culinary:** Dried and powdered leaves are used as a thickener and flavoring for soup, stews, and the Cajun dish, filé gumbo.<sup>84</sup> Root bark previously used to flavor traditional root beer and tea but banned by FDA in 1960 as a possible carcinogen.<sup>85</sup> The rot resistant, fine-grained wood was used in ship building and furniture.

**STATUS:** Native

The Sassafras is an outstanding NATIVE ornamental tree. In spring, the abundant fragrant yellow flowers are a favorite of native pollinators. During the summer, the multi-shaped, matte green leaves, contorted limbs and round headed form combine to make a striking specimen. Add to that the collage of red, yellow, and orange fall colored leaves and the red and purple fruits, and you have a specimen of unparalleled beauty and wildlife value. Difficult to transplant from the wild, it can be started from seed or container grown plants can be purchased from select nurseries. Since the plant is *dioecious* a male pollinator is needed for female fruit production.

<sup>83</sup><https://www.illinoiswildflowers.info/trees/plants/sassafras.htm>

<sup>84</sup> <https://www.fs.usda.gov/database/feis/plants/tree/sasalb/all.html>

<sup>85</sup>[https://www.medicinenet.com/why\\_is\\_sassafras\\_banned/article.htm](https://www.medicinenet.com/why_is_sassafras_banned/article.htm)





# *Styphnolobium japonicum* (Also *Sophora japonica*) Japanese Pagoda Tree Page44



By Penarc, Attribution ShareAlike 4.0 International



By Ryuch, Attribution ShareAlike 4.0 International

**NOMENCLATURE:** *Styphnolobium*: From the Greek *styptokos* meaning astringent, re the astringency of the flowers and pods, and *lobion*, meaning 'to hang loosely' as in *lobe*. *Japonicum*: From Japan, but actually native to China. **Pagoda Tree**: The tree was traditional planted around Buddhist temples in Japan. <sup>86</sup>

**FLOWER GENDER:** Monoecious

**POLLINATION:** Honeybees and bumblebees

**DISPERSAL:** Uncertain.

**WILDLIFE VALUE:** Limited. "Its fruits develop late, and its pods remain on the trees into winter, when squirrels and starlings have been seen eating the seeds."<sup>87</sup>

**USES:** Ornamental, Medicinal: Used in traditional Chinese medicine.<sup>86</sup>

**STATUS:** Non-Native. The pagoda tree has been identified as an emerging invasive threat in the mid-Atlantic region.<sup>86</sup>

<sup>86</sup><https://plants.ces.ncsu.edu/plants/styphnolobium-japonicum>

<sup>87</sup>(See *Sophora*, Page 83) <https://www.yumpu.com/en/document/read/29021533/seed-dispersal-by-birds-and-animals-in-the-arnold-arboretum>

Pagoda Tree planted in 1763 at The Royal Botanic Gardens, London, England

Deror avi [Creative Commons](#) Attribution-Share Alike 3.0





## *Tetradium danielii* (also *Evodia daniellii*) Bee Bee Tree

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Five, two-parted seeds per capsule

Infertile Fertile



5 parted seed capsules

**NOMENCLATURE:** *Tetradium*: Latin for 'of or having 4', re the number of flower parts. The 6 known species of *Tetradium* usually have 4 flower parts. (Flowers of *T. danielii* usually have 5 parts.)<sup>88</sup> *Daniellii*: Named for William Freeman Daniell (1818–1865) British army surgeon and botanist. **Bee bee** as the flower nectar attracts bees.

**FLOWER GENDER:** Monoecious

**POLLINATION:** Honeybees, bumblebees

**DISPERSAL:** Uncertain. "The shiny black seeds of *Evodia* are ready for collection in late September, and starlings come to feed when the capsules open".<sup>89</sup>

**WILDLIFE VALUE:** Valuable source of late season (August) nectar when other sources are scarce.

**USES:** Ornamental, Culinary (limited): Introduced to the US in 1905 at Harvard's Arnold Arboretum. Also Honey.

**STATUS:** Non-native, potentially highly invasive.<sup>90</sup>

\*In the unusual 2-parted seeds, the larger part is a functional, fertile seed containing a normal embryo, a soft, starchy interior (the *endocarp*, a food reserve for the developing embryo), and a hard, impermeable seed coat. It is permanently attached to the smaller, infertile segment which has *no* embryo, the same starchy, nutritious endocarp, and a thinner, brittle seed coat.<sup>88</sup>

**Conjecture:** Seed eating birds may ingest both segments as a unit and may be able to digest the starchy endocarp of the smaller segment while the larger segment (a viable seed) may pass through their digestive tract unharmed. Thus, birds are rewarded with an energy rich meal in exchange for their role as seed dispersers.

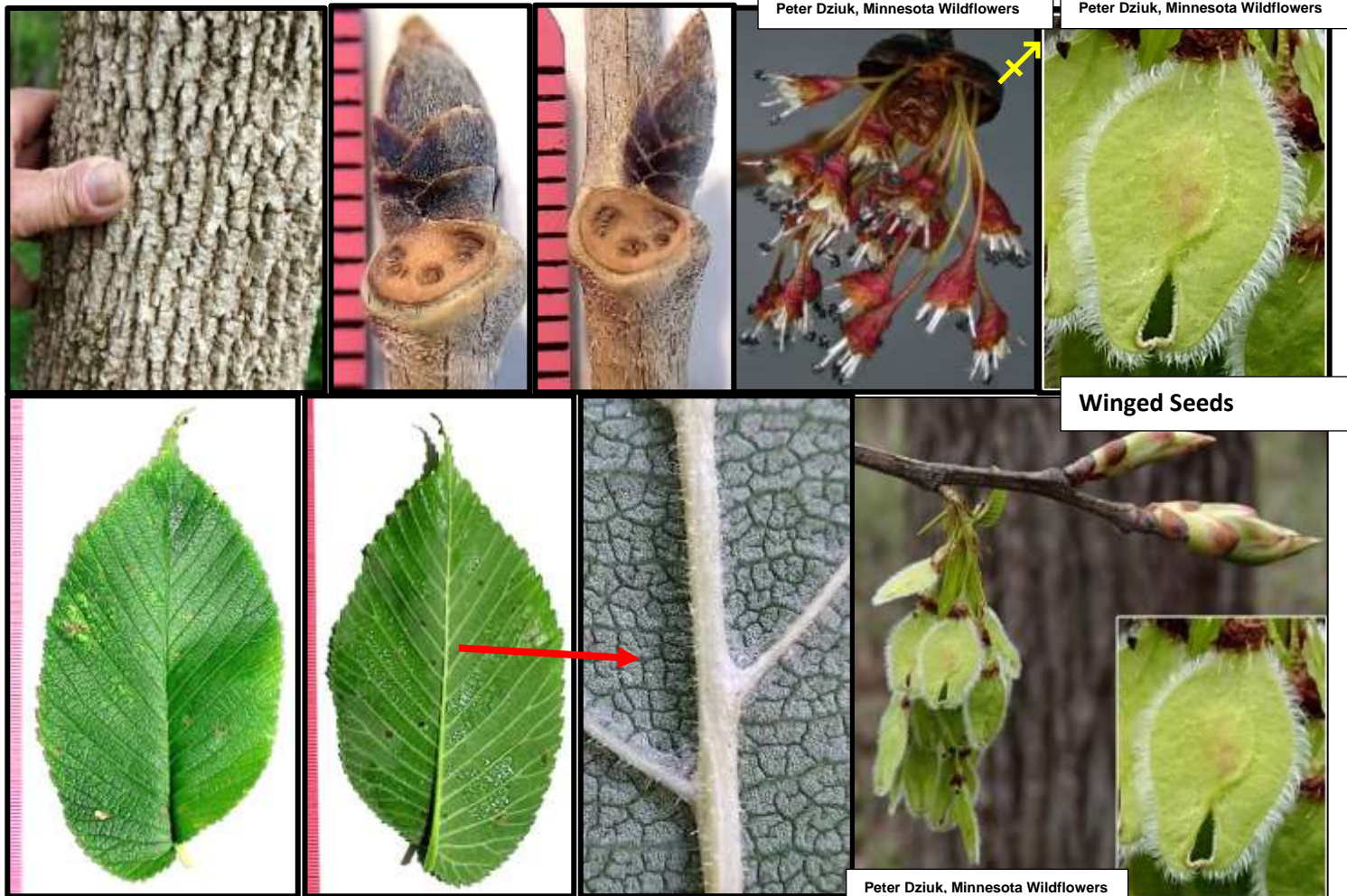
<sup>88</sup><http://flora.huh.harvard.edu/china/PDF/PDF11/Tetradium.pdf>

<sup>89</sup> (See *Evodia*, Page 78) Seed Dispersal by Birds and Animals in the Arnold Arboretum (yumpu.com)

<sup>90</sup> *Tetradium* WRA 110117.pdf (maryland.gov)

# *Ulmus americana* American Elm

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**NOMENCLATURE:** *Ulmus*: The latin word for the tree. *Americana*: from America.

**FLOWER GENDER:** Perfect (Flowers appear before leaves in late March)<sup>91</sup>

**POLLINATION:** Wind (primarily) Honeybees sometimes collect pollen from the early blooming flowers and may serve as minor pollinators.<sup>91</sup>

**DISPERSAL:** Wind

**WILDLIFE VALUE:** Significant. The nutritious seeds ripen in early spring (April) when other food sources are scarce. Seeds are eaten by a variety of gamebirds, songbirds, squirrels, and chipmunks.<sup>91</sup>

**USES:** Ornamental, Industrial: Furniture, flooring, boat keels, ship rigging, wagon wheels

**STATUS:** Native

The vertical wood grain of American Elm ascends the tree's trunk in a spiraling pattern, reversing its direction each year, making it exceptionally hard to split. This made it the perfect material for wagon wheels and ship rigging.<sup>92</sup>

<sup>91</sup> [https://www.illinoiswildflowers.info/trees/plants/am\\_elm.html](https://www.illinoiswildflowers.info/trees/plants/am_elm.html)

<sup>92</sup> <https://www.brighton-hove.gov.uk/news/2019/elms-helm>

Ship's Deadeyes and Blocks made from Elm.

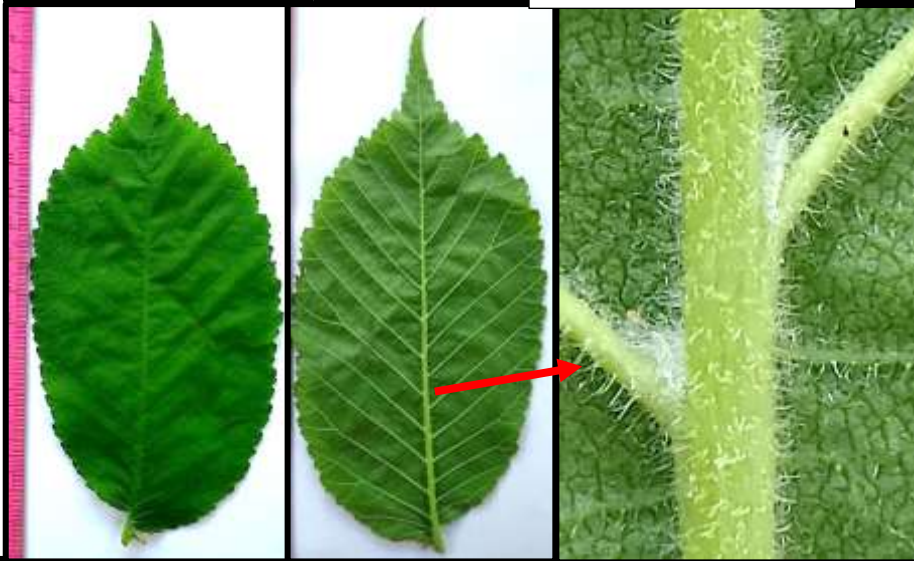




## *Ulmus rubra* Red Elm, Slippery Elm



Peter Dziuk, Minnesota Wildflowers



**NOMENCLATURE:** *Ulmus*: The latin word for the tree. *Rubra*: Latin word for *red*, re the color of the tree's wood. **Slippery**: re the slippery, *mucilaginous* inner bark.

**FLOWER GENDER:** **Perfect** (Flowers appear before leaves in late March).

**POLLINATION:** **Wind (primarily)**  
Honeybees sometimes collect pollen from the early blooming flowers and may serve as minor pollinators.

**DISPERSAL:**  
**Wind**

**WILDLIFE VALUE:** **Significant.** The nutritious seeds ripen in early spring (April) when other food sources are scarce. Seeds are eaten by a variety of gamebirds, songbirds, squirrels, and chipmunks. <sup>93</sup>

**USES:** **Medicinal, Culinary, Ornamental:** Early colonists and Native Americans used decoctions of the edible, mucilaginous inner bark both fresh and dried (powdered) to sooth sore throats, heartburn, stomach upset, wounds and burns, and as a poverty food. <sup>94</sup>

**STATUS:** **Native**

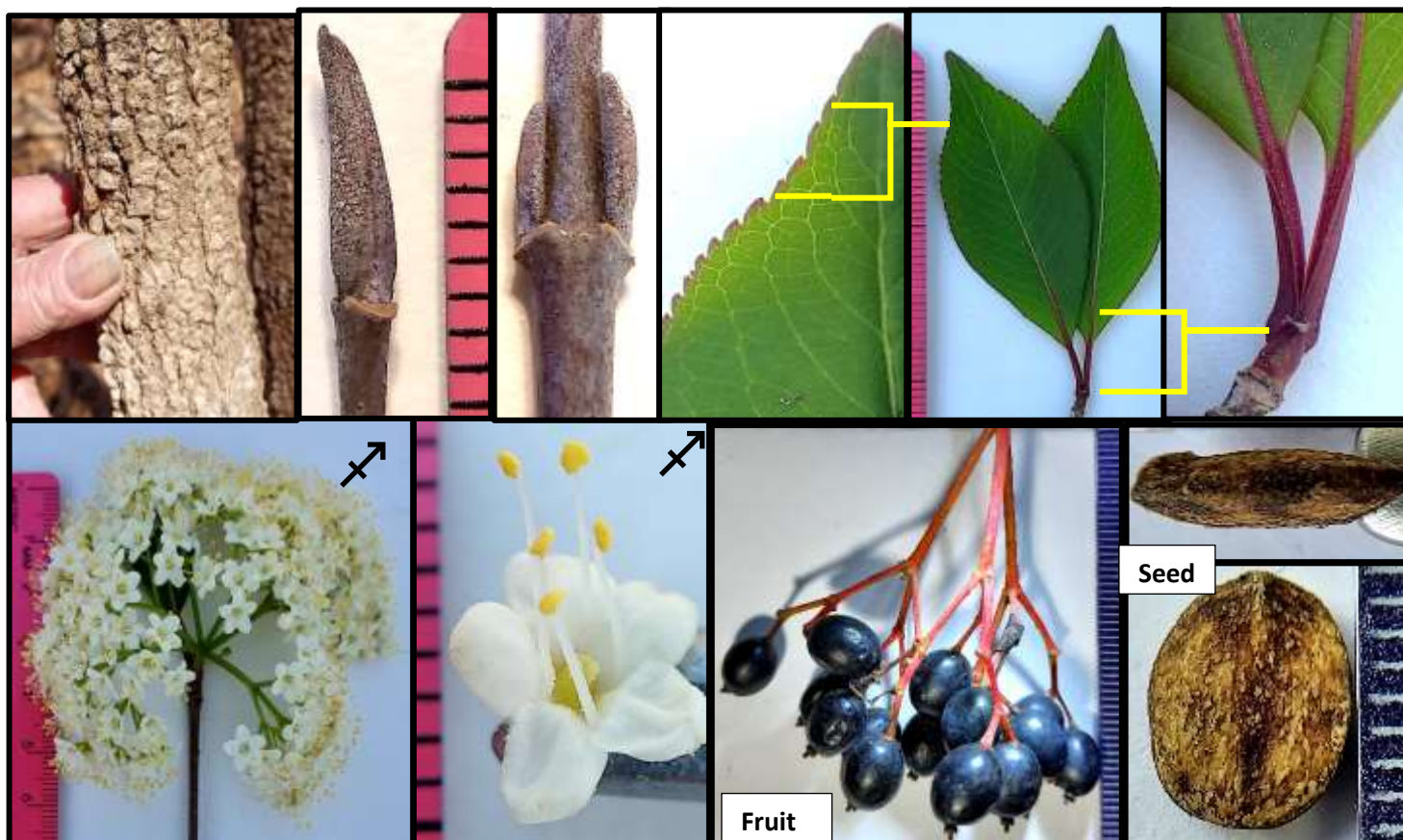
Elms were once the most common street and park tree on the US, with a 1937 census counting over 25 million trees. Since then, an estimated 77 million cultivated and wild Elm trees have been killed by Dutch Elm Disease (DED). DED was introduced here in 1928 in a shipment of logs from Europe sent to an Ohio furniture manufacturer. DED is fungal disease spread by the elm bark beetle, who carry the fungal spores on and in their bodies. Control of DED is possible with injections of fungicides but is prohibitively expensive. Efforts in Alberta, Canada led by a non-profit called the Society to Prevent Dutch Elm Disease (STOPDED) mean that the province today has about 600,000 healthy American elms – among the most impressive collection of elms on the continent. Edmonton alone has about 80,000 elm trees. <sup>95</sup>

<sup>93</sup>[https://www.illinoiswildflowers.info/trees/plants/slippy\\_elm.htm](https://www.illinoiswildflowers.info/trees/plants/slippy_elm.htm)

<sup>94</sup><https://www.fs.usda.gov/database/feis/plants/tree/ulmrub/all.html>

<sup>95</sup><https://treecanada.ca/article/preserving-the-elm-cathedrals-across-canadian-cities/>





**NOMENCLATURE:** *Viburnum*: The ancient Latin word for *Viburnum lantana*, the Wayfaring Tree, native to the Mediterranean region of Europe and Northern Africa. *Prunifolium*: Latin for 'leaves like a cherry' re the shape of the leaves. **Black Haw**: The ripe fruits are blue-black, in color, and the form of the plant resembles a Hawthorne.

**FLOWER GENDER:** Perfect

**POLLINATION:** Small bees, flies and hummingbirds

**DISPERSAL:** Birds and small mammals eat the fruits and deposit the seeds in their scat.<sup>96</sup>

**WILDLIFE VALUE:** **Exceptional.** In spring, the fragrant flowers are an important source of nectar and pollen for pollinators. In late summer and fall, the fruits are eaten by at least 21 species of songbirds (some migratory), gamebirds, squirrels, chipmunks, mice, and foxes.<sup>96</sup>

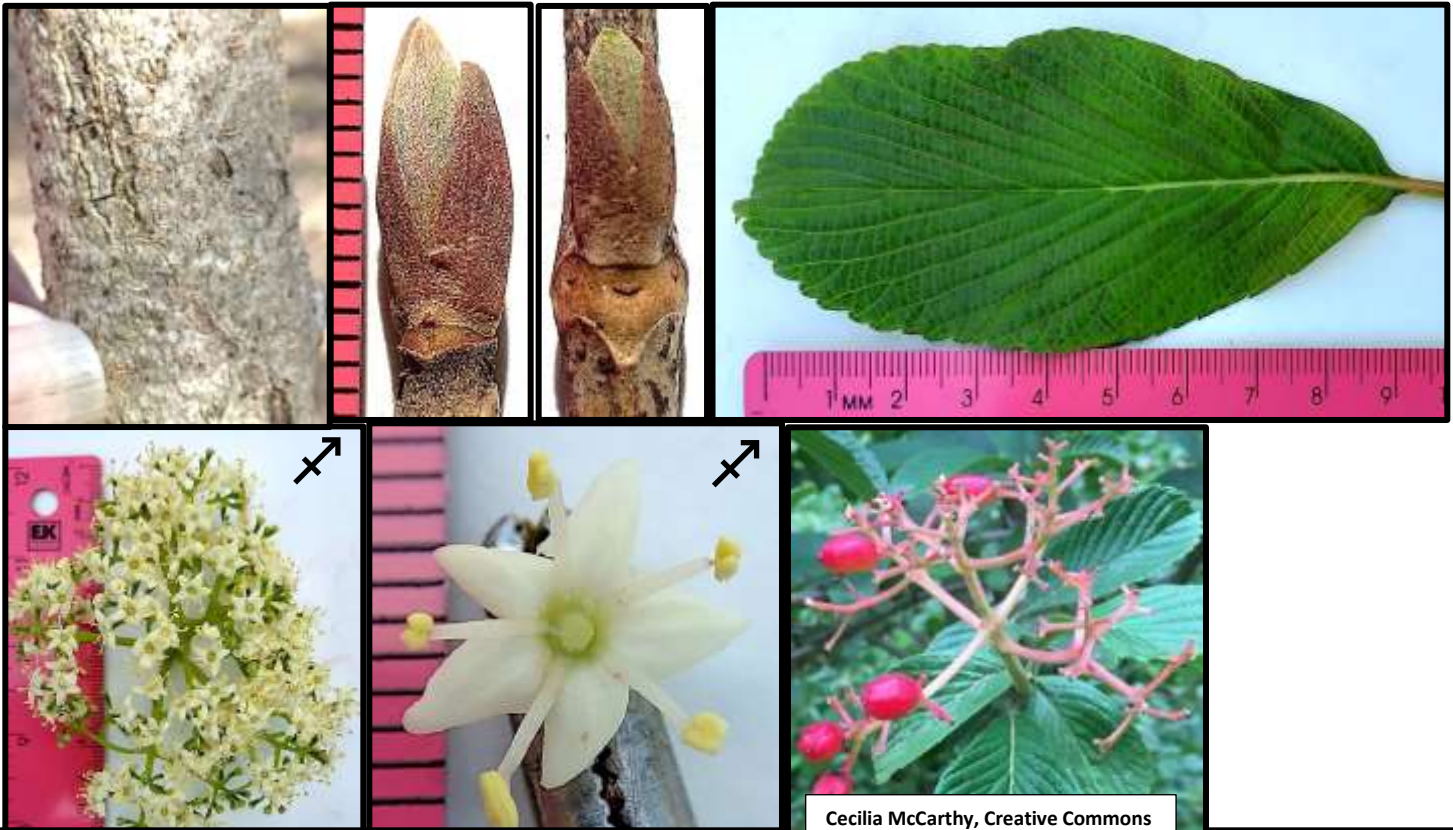
**USES: Medicinal, Culinary, Ornamental:** Native Americans used root bark tea to relieve muscular cramps, headache (the tea contains aspirin-like *salicin*), fever and morning sickness.<sup>97</sup> **Culinary:** The ripe fruits can be eaten fresh or made into jam and preserves.

**STATUS: Native** <sup>96</sup> <https://www.illinoiswildflowers.info/trees/tables/table9.htm>

<sup>97</sup> Andrew Chevallier (1996). *The Encyclopedia of Medicinal Plants: A practical reference guide to more than 550 key medicinal plants and their uses.* p. 279

Ah! will any minstrel say,  
In his sweetest roundelay,  
What is sweeter, after all,  
Than black haws, in early Fall—  
Fruit so sweet the frost first sat,  
Dainty-toothed, and nibbled at!  
James Whitcomb Riley  
Time of Clearer Twitterings

Black Haw makes an outstanding native landscaping plant, offering exceptional wildlife value, fragrant spring flowers, beautiful summer foliage, fall colors of red and yellow and edible fruits. The plants are not self-fertile, so two are needed for cross-pollination and fruit production. Improved cultivated varieties are available from select nurseries.



**NOMENCLATURE:** *Viburnum*: The ancient Latin word for *Viburnum lantana*, the Wayfaring Tree, native to the Mediterranean region of Europe and Northern Africa. *Sieboldii*: Named for Franz Philipp von Siebold, 19th century German botanical Japan researcher.

**FLOWER GENDER:** Perfect

**POLLINATION:** Small bees, flies, and hummingbirds. <sup>98</sup>

**DISPERSAL:** Birds and small mammals eat the fruits <sup>98</sup> and deposit the seeds in their scat.

**WILDLIFE VALUE:** Same as *Viburnum prunifolium*, but not recommended.

**USES:** Ornamental

**STATUS:** Non-native: Native to Japan, and a potentially invasive exotic in the US.

As a relatively new introduction, the ecological effects of Siebold's viburnum are unknown. A large, quick growing, shade tolerant shrub with a high reproductive potential, the species can change both the composition and density of the shrub layer in habitats it invades by out competing other vegetation. <sup>98</sup>

<sup>98</sup> <https://www.lhprism.org/species/viburnum-sieboldii>

