Chapter 15

THE EASTERN REDBUD

StandingNation-Human Alliance Bulletin

Guardians of Grace

- **TREES add grace and beauty to our homes and communities** by screening unattractive views and softening the harsh outlines of masonry, metal, asphalt, steel and glass.
- **TREES increase the sense of community.** Particularly in urban spaces, people walk and jog on tree-lined streets more, encouraging interaction with neighbors.
- **TREES reduce crime**. More interactions with neighbors translate into a lower crime rate as people who are more connected tend to look out for one another.

Diplomatic Relationships

- Redbud flowers, blooming in early spring when other plants are still dormant, are an important nectar source for honeybees, bumblebees, and butterflies.
- Redbud nectar attracts hummingbirds (if hummingbirds arrive in your areas before flowers are done blooming; this doesn't happen in my part of Michigan.)
- Bobwhite quail and a few songbirds are known to eat redbud seeds.
- This relation of the Judas-tree (*Cercis siliquastrum*) of western Asia, Judea, and southern Europe on which, legend has it, Judas Iscariot, who betrayed Jesus, hung himself; the once-white flowers are now forever red with shame or blood.

There was, in fact, a white variety ('Alba') recorded in the past, but it is not common.

- The bark was boiled and used by Native Americans to treat whooping cough. The bark was also used as an astringent to treat dysentery. The inner bark and roots were used to help stop vomiting, fevers and congestion.
- Native American prepared the shelled seeds to eat by boiling them like snap peas.
- The flowers—which are 25% protein, contain a significant amount o Vitamin C, and are full of antioxidants—were fried and also used as a food source.[1]
- Native people used the slender flexible reddish branches to weave into baskets.
- The redbud's pink flowers yield a yellow dye and the roots provide a red dye.
- George Washington made numerous diary entries which included details about the beauty of the redbud tree as well as notes regarding having transplanted seedlings from nearby a forest into his Virginia gardens at Mount Vernon.[2]
- The Eastern redbud was chosen to be the state tree of Oklahoma in 1937.
- Both buds and blossoms are edible, the latter most often added to salads for some say a "bright citrusy" (sweet and tart) taste, while others claim it is "nutty" or "almost like a radish."[3] The buds can be pickled and used as a caper substitute.[4]

---

[1] Melody Rose, "Tasty Treats from the Redbud Tree: *Cercis Canadensis,*" *Dave's Garden https://davesgarden.com/guides/articles/tasty-treats-from-the-redbud-tree-cercis-canadensis* (accessed 1/17/21).
[2] "American Redbud," *Arbor Day Foundation,* https://shop.arborday.org/american-redbud (accessed 7/07/20).
[3] Nancy Binderman, Chickasaw Nation Recreation Area guide, as quoted in "Pretty as Ever: The 80th Anniversary of the Redbud as Oklahoma's State Tree," *Oklahoma's News 4 "Great State" blog,* posted March 31, 2017, https://kfor.com/news/great-state/pretty-as-ever-the-80th-anniversary-of-the-redbud-as-oklahomas-state-tree/ (accessed 1/21/21).
[4] Anne Balogh, "Eastern Redbuds" in *Garden Design* (https://www.gardendesign.com/trees/eastern-redbud.html) (accessed 1/21/21).

"They can be added to pancakes or fritters or used as an attractive garnish on salads. Or you can use them to make a unique pickle relish!"[5]

A Tourist's Testimonial

Beauty in Our Forests

Deep in the forests in spring
When the redbird makes her first call
She sees only the green of the cedar
and the Redbud through brown leaves of fall. . . . [6]

—Maimee Lee Robinson Browne (1881-1963)

[5] Jim Mason of the Great Plains Nature Center as quoted by Frank Daniels III in the *Tennesean,* April 6, 2014 at: https://www.tennessean.com/story/opinion/2014/04/07/redbud-blooms-spring-truly-sprung/7389633/ (accessed 1/21/21).

[6] Maimee Lee Robinson Browne, *Redbud in Poetry* (n.p: Glencoe-Vacherie Press, 1964). Browne was a civic leader, conservationist, and poet, known as "Friend of the Redbud" who fiercely promoted making the redbud Oklahoma's state tree after she moved from New Orleans and fell in love with the tree. In 1937, after considerable opposition because the European redbud tree (*Cercis siliquastrum*), which it resembles, is known as the "Judas tree" (see story above), the tree was voted to state emblem (symbol) status. It became Oklahoma's official state tree in 1971.

Tree-Tripping

- Have you seen a redbud tree in bloom? You can find one by looking for a pointillistic blooms growing right off of, emerging directly from the graceful branch architecture of a small dark-limbed tree. Up close, the blossoms may look like tiny, ruffled, fuchsia balls.
- Have you seen a redbud tree blooming in a woods or forest? When I visit my grandchildren in North Carolina in March, Eastern redbuds are blooming from the edges of woods along the trails and highways.
- All deciduous trees develop flowers in order to produce seeds. Landscapers often refer to those trees. who produce flowers very visibly, with petals—instead of shyly, say, like the silver maple—as “flowering trees.” Do you know the progression of when which “flowering trees,” known for their flowers, come into bloom in your area? Of course, different cultivars of the same flowering tree can bloom at different times, but generally, one can find a basic pattern of order across the possible flowering tree species in a given area. In Southeast Michigan, for instance, Eastern redbud is the first harbinger of spring and catalpa trees bloom as late as early July.
- Below are 25 species of flowering trees (some of these species are more common, perhaps, as bushes, but can manifest as trees, e.g., lilacs). Which trees would you recognize?
    - Apple
    - Catalpa
    - Cherry, Japanese/Yoshino flowering

    - Crabapple
    - Crêpe Myrtle
    - Dogwood, Flowering/Kousa/Pacific/Cornelian Cherry
    - Eastern Redbud
    - Fringe trees
    - Hawthorn
    - Horse chestnut
    - Jacaranda
    - Lemon tree
    - Lilac tree
    - Lime tree
    - Magnolias, Southern/Saucer/Star
    - Mimosa trees
    - Orange trees
    - Pear trees
    - Persian silk tree
    - Plum
    - Quince
    - Serviceberry/Juneberry/Saskatoon
    - Smoke tree
    - Weeping cherry
    - Witch hazel
- With what other flowering trees are you familiar in your area or places you visit?

- Keeping track of the dates of the color progression from early spring to early summer in the trees around you is an interesting nature journal opportunity. Of course, you can extend this project to include the appearance of seeds/fruit in summer and fall . . . to the color change of leaves from last summer through fall . . . to the leaf drop from fall into winter.
- If you want to practice identifying trees based on their leaves, head for a county, state or national park, or a cemetery, where you'll find a wide variety of trees to learn and practice your identification skills. Of course, getting out and walking in your community, can also provide such an opportunity.
- What would your personal tree-identifying "question tree" look like?

Tree Dreams

- Have you ever planted a flowering tree?
- Have you ever planted a flowering tree in honor of a birth or marriage or in memory of someone who has died?
- If you were to plant a flowering tree in the next year, what kind of tree—"flowering" or other—would you plant and where would you plant it?

Tree's Big Idea: **LEAVES**

What can be left to say about the leaves of trees? We've looked at one component—chlorophyll—and several processes in which leaves engage: photosynthesis, transpiration, abscission, and considered one particular type of leaves: needles.

When we think of “non-needle” leaves—other than their different shades of green in spring and summer and what colors they change in fall and their different textures—we might think of the geometry of leaves. Knowing how to describe the shape and arrangement, the margin, and the venation of a tree’s leaves all can contribute to identifying a tree during much of the year, between when a tree leafs out in the spring and until the leaves fall.

How does a dendrologist, a person who studies trees, define the differences between the individual shapes of leaves and their arrangement on the trees branches? At least 40 terms for describing leaf shape and leaf arrangement exist[7]. In addition to the shape and arrangement of leaves, one can consider the 12 different types of margins (edges) of a leaf (non-toothed or toothed—either regularly or irregularly[8]; smooth or bearing hair, bristles, or spines) and the 9 possible types of leaf venation (the arrangement of the veins)[9]. If that’s your thing, when it comes to leaves, so much morphology to revel in! However, be forewarned: every tree guide author appears to have his/her own system of terms for describing leaf attributes.

Nonetheless, generally, a few simple terms may well get you to identification of a tree species:

---

[7] “Leaf and Leaflet Shapes,” “Glossary of leaf morphology,” *Wikipedia* https://en.wikipedia.org/wiki/Glossary_of_leaf_morphology#/media/File:Leaf_morphology.svg (accessed 1/23/21).
[8] “Margin,” in “Glossary of leaf morphology,” *Wikipedia*, https://en.wikipedia.org/wiki/Glossary_of_leaf_morphology#/media/File:Leaf_morphology.svg (accessed 1/23/21).
[9] “Venation,” in “Glossary of leaf morphology,” *Wikipedia* https://en.wikipedia.org/wiki/Glossary_of_leaf_morphology#/media/File:Leaf_morphology.svg (accessed 1/23/21).

- *Conifers*—trees that reproduce via cones, not flowers—can have needles classified as:
  - **Single**, like spruces, firs, cypress, and hemlocks (none of which we've examined here)
  - **Clustered**, like the pines, e.g., Eastern white pine and Colorado pinyon
  - **Scaly**, like both cedars, cypress, and juniper, e.g., Northern white-cedar (*Thuja occidentalis*), the common juniper, Eastern redcedar (*Juniperus Virginiana*).
- *Deciduous* trees—those that reproduce via flowers—can be classified—by their leaf arrangement, which describes how their petioles are attached to the leaf stem:
  - **Simple** (with a single leaf blade)**:**
    - **Non-lobed**, a basic shape—oblong, heart-shaped, fan-shaped—like the leaves of the American beech, Eastern flowering dogwood, and crepe myrtle (all oblong) or the Eastern cottonwood, Eastern redbud, and catalpa (all heart-shaped), or the ginkgo (fan-shaped).
    - **Lobed** where the margins of the leaf are deeply indented—palmately lobed (leaves radially spreading from a point like fingers on a hand), pinnately lobed (leaves arranged on each side of a central axis, like a feather)—like the leaves of the sweetgum, sycamore, and any kind of maple, except for box elder (palmately lobed) or any kind of oak (pinnately lobed).

- **Compound** (with multiple leaflets), like ash, hickory, walnut, pecan, black locust, and honey locust.
    - **Singly (pinnately) compound—**think of a "feather-like" arrangement, like the ash, hickory, walnut, pecan, and black locust trees
    - **Doubly (pinnately) compound**—like the honey locust, a tree with 12-24"-long leaves each composed of 14-30 one-inch leaflets
    - **Palmately compound—**think of a "finger-like" arrangement, like the horse chestnut tree or the buckeye tree.

The challenge in determining whether what you're looking at is a leaf or a leaflet can be conquered by examining where the leaf attaches to the stem. If there is no **axillary bud**, it's a leaflet, not a leaf. The "axil" is the upper angle formed by the junction of a leaf with its stem. Look there: is there a budlike structure? If there is, you're looking at a leaf; if not, it's a leaflet.

There's yet one more characteristic of leaves that can help you identify the tree standing before you: how are the leaves' petioles (leaf stalk) *attached* to the twig? You have only three choices to consider here. Is the arrangement of the leaves on the twig:

- *Alternate* -- leaves are attached at different levels on the stem
- *Opposite* -- leaves are attached at the same level in pairs
- *Whorled* -- three or more leaves attached at the same level.

If you become interested in identifying trees, you may develop your own "I.D.-ing tree" of questions. An example of such a question tree might be:

"Conifer or deciduous?

If a conifer, scaly or needly?

If needly, in single or in clusters?

If a deciduous leaf, simple or compound?

If simple, lobed or not?

If not lobed, what shape?

With an alternate, opposite, or whorled attachment?

If compound, pinnately or palmately?

If pinnately, singly or doubly?

With an alternate, opposite, or whorled attachment?

Here are some interesting notes to consider regarding tree terminology:

- Not all *evergreen* trees are *conifers*; most holly and all azalea and boxwood shrubs have leaves, not needles, and reproduce via flowers, not cones, but they maintain their leaves year round, i.e., are "evergreen."
- The term *broadleaf* is not synonymous with *deciduous;* holly, azalea, and boxwoods have leaves—not needles—but are evergreen.
- A larch—a dominant tree in boreal forests—is a *conifer*, but—surprise!—it is also a *deciduous* tree that loses its needles in the autumn.

Of course, there's an app for this. Currently, at least three highly-reviewed, free iPhone apps (two are available to Android users as well) can help you with tree identification:

- **iNaturalist**[10]
  Free on iPhone and Android. Artificial intelligence is used to identify all kinds of plants and wildlife. The app also provides a social network for naturalists—users can record and share observations of trees, add them to the database, and also

[10] https://www.inaturalist.org/

ask the community for help in identifying finds. iNaturalist is a joint initiative of the National Geographic Society and California Academy of Sciences.

- **Virginia Tech Tree ID**[11]
  Free on both iPhone and Android. This tree-identifying app was produced from Virginia Tech's dendrology portal, which includes a wealth of photographs and high-quality information, which can now be accessed from your phone while you are looking at the tree you are trying to identify. The app features a number of filtering options, which allow the user to narrow down the potential species in question to just those within the user's area. Another feature offered by the app is the ability to send tree-identification questions to "Dr. Dendro," who will help you distinguish between closely related taxa.

- **Leafsnap**[12]
  Free (and only available) to iPhone users. This app uses visual recognition software to correctly recognize trees and will catalog your photos so you can build your own reference library. Developed by the Smithsonian Institution, the University of Maryland, and Columbia University.

Before you jump on an app, you may want to consider if you enjoy knowing how to read an analog clock, use a compass, do simple math operations without a calculator, or read a paper map. Being able to determine the species of a tree you meet in a park or on the street without an app can be a very rewarding endeavor.

[11] https://apps.apple.com/us/app/vtree/id576191197 and https://play.google.com/store/apps/details?id=org.pottssoftware.agps21&hl=en_US&gl=US
[12] https://plantidentifier.info/