



Under the Oaks

Arboretum Newsletter of the
Memphis Botanic Garden

Volume 14

Tennessee's official Arbor Day is March 6th! Show your support by attending one of these local events:

- The City of Memphis, 1400 block of Monroe, will host a tree planting at 10 a.m. Free pecan and overcup oak trees while supplies last.
 - Germantown - Free Kousa Dogwood and Eastern Redbud trees for Germantown residents only (proof required) at 9 a.m.. Call 757-7375 for more information.
 - Collierville Middle School - 580 Quinn Rd. - 11 a.m.
 - Stop in at the Memphis Botanic Garden and pick up a tree map, highlighting the more than 130 types of trees throughout the Garden's 96 acres. Try Tree Trivia and learn more about trees and the ways you can protect and preserve them at our Arbor Day information table. Free pecan trees while supplies last. Trees can be picked up at the visitors Center after 9 a.m.
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A Tale of Good Intentions, Broken Dreams, and Uncontrollable Offspring...

By Linnea West, Tennessee Urban Forestry Council

Pyrus calleryana 'Bradford', Bradford Callery Pear, Family Rosaceae

Pyrus calleryana, native to China and Korea, was introduced to the United States in 1908 to breed fireblight resistance to fruiting pears. This goal was never reached but the effort produced over two dozen ornamental cultivars.



James H. Miller, UDSA Forest Service,
Bugwood.org



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Contrary to becoming the dream tree, the Bradford Pear and other *Pyrus calleryana* cultivars proved to be the opposite. The Bradford cultivar,

developed in 1963, was widely hyped by landscapers and became the fashionable tree for yards, retail areas, and parks. It was also planted extensively as a street tree.

Originally propagated by cuttings to be uniform and self-sterile, the Bradford and other cultivars sprout prolifically from their grafted buttress roots, reverting to the thorny habit of Callery Pear and requiring repeated pruning for home and city use.

These widely-planted cultivars are able to cross-pollinate freely, and their offspring are spreading by seed over fields and roadsides of the southeast and into 27 states, crowding out native plants and the wildlife dependent on them.



The Callery cultivars and escaped hybrids sprout from their roots, creating dense thickets with 3" long thorns. Get a close view with our *P. calleryana* 'Aristocrat' on the SW corner of the Visitors Center (shown here).

Photo by Jan Castillo, Tennessee Urban Forestry Council

Horticulturist Dr. Michael Dirr calls Bradford Pear a "weed tree whose weak limbs break off and litter roadways" and warns that the Bradford Pear "has reached epidemic proportions" (Michael Dirr-*Manual of Woody Landscape Plants*, 6th edition, revised 2009).

Problems with the Bradford Pear (and other Callery cultivars) include:

- The trees are short-lived, rarely more than 10-15 years
- Inherent growth style: tight V crotches split easily and weak limbs are prone to breaking (especially in ice or high winds)
- Susceptibility to fireblight
- Prolific sprouting from buttress roots which revert to the thorny characteristics of Callery Pear
- Putrid smell of the blooms
- Invasive habit (Bradford Pear is now considered an Exotic Invasive.)

So, what can we plant to replace our Bradford Pears?

The Tennessee Exotic Pest Plant Council has several recommendations of flowering trees native to our region. These indigenous trees and shrubs are structurally strong, require little or no maintenance, have attractive flowers, foliage, and fruit to nurture wildlife and bring enduring beauty to our yards, city streets and parks. We can avoid the cookie-cutter look of short-lived Bradford pears with vibrant, diverse native plants of the mid-south:

- *Amelanchier arborea* and *A. laevis* (Downy and Allegheny Serviceberry)
- *Crataegus spp* (Hawthornes)
- *Prunus angustifolia* (Chickasaw Plum)
- *Viburnum rufidulum* (Rusty Blackhaw)
- *Cercis canadensis* ('Royal White' Redbud)
- *Chionanthus virginicus* (Fringe Tree)

Visit www.tneppc.org for more native trees and shrubs to replace exotic invasives.



Tilia Americana, Our Native Basswood Tree

By Jenny Sabatier, Memphis Area Master Gardener

Expect the unexpected from this beautiful tree. It is often called an American Linden or Basswood, and is in the family Tiliaceae. A few centuries ago, it was a friend of Native Americans, providing them with lightweight wood as well as a stringy inner bark from which they made strong rope. Early settlers also made ropes, baskets, and simple tools from the pliable wood.

Tilia is difficult to identify in winter and is sometimes mistaken for an elm. Once the tree leafs out, identification is easier. The leaves are large, saw-toothed and have a central vein running from the base to the pointed end. The leaf is asymmetrical, and almost as wide as long. In early

summer, after most trees have blossomed, Tilia's pale yellowish flowers appear, generally in clusters of 5 to 7. They are suspended by a stem attached to a long, narrow ribbon-like 'sail' leaf.



Sketch by Linnea West.

The flowers give off a strong, sweet fragrance that drive bees joyfully insane with desire. Thus the tree is often called the "bee tree." The honey is considered of premium quality. The small flowers produce pea-sized hard capsules, each holding 1 to 3 seeds. In autumn, the sail leaf detaches and carries them off with a good breeze. Tilia can be propagated by cuttings and grafting. It often spreads by suckering. Propagation by seed is not dependable.

Tilia has other bragging points. The wood is light and fine grained, bends easily and can be used for making boxes, musical instruments, furniture, yardsticks, and objects made of unfinished wood. The name basswood is derived from the name bast, denoting the inner bark fibers that are used in basket making. Tilia becomes a large tree but there are a few cultivars that may require less growing space. According to Michal Dirr (Manual of Woody Landscape Plants, 6th edition, Revised 2009) 'Lincoln' might be a good choice for yards with limited space.



In 2012, the Tennessee Urban Forestry Council designated Memphis Botanic Garden as the first Center of Excellence for Urban Forestry in Tennessee. As a Center of Excellence, the Garden will host educational programs, help with certification of arboretums in the region, and serve as a resource to the community for tree information and education.

The American Conifer Society recognized Memphis Botanic Garden's Conifer Collection as a certified Conifer Reference Garden in 2014.

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