

Forest Health



The Threat from Our Own Backyards – Callery Pear

by Diana Olszowy with portions reprinted by permission from the Maryland Department of Natural Resources “Invader of the Month” series

Kentucky roadsides are lit up during April with the white blossoms of Callery pears (*Pyrus calleryana*). When the first cultivated variety was promoted to the horticultural industry in the early 1960s, the small flowering Asian tree seemed perfect for fast-growing suburban landscapes. Here was a well-behaved ornamental that could soften the harsh edges of newly built communities with its neat formal shape, explosion of bloom and showy fall color. It was not thorny like many pears, and because it did not self-pollinate, it produced small sterile fruits. But subsequent introductions of additional Callery pear varieties that did allow cross-pollination have turned an April snow shower of white blooms into a blizzard.

Callery pear or “Bradford” pear, as it is commonly called after the first commercial cultivar produced, grows quickly to about 20 to 30 feet tall. The leaves turn a deep scarlet in the fall. The half-inch flowers bloom in early spring, often before the leaves are out. Bradford pears have an upright growth habit and very tight branch crotch angles, making them susceptible to breaking or splitting in even mild windstorms. Even without breakage, the tree is relatively short-lived – 25 to 30 years.

Callery pears were originally cultivated in the early 1900s as root stock for commercial pears. The Bradford cultivar was introduced by the USDA to the horticultural industry for its rapid grown, dense foliage and spring profusion of

pure white blossoms. Although it seemed an ideal street tree, its tendency to split as it reached maturity made it

less desirable. Alternative cultivars less prone to splitting were developed and introduced – trees such as “Aristocrat,” “Chanticleer,” “Cleveland Select” and “Redspire.” With additional cultivars present in the landscape, cross-pollination occurred. Bradford and other once-sterile cultivars began to produce viable

seeds. And that is when the trouble began – the offspring of these once docile ornamentals became aggressive invaders. Bradford

pear seeds are now commonly sown by birds and spread rapidly from plantings into nearby meadows, pastures, roadsides, woodland edges, fence rows and other

sunny habitats. The trees choke out the native grasses, flowers and shrubs that would normally provide critical habitat for many of Kentucky’s birds, insects and butterflies. These seedling clusters are beginning to dominate the landscape, frequently occupying the forest edge space where native serviceberry, redbud and dogwood normally grow.

Invasive pears can be controlled by both mechanical and chemical means, but perhaps the most formidable obstacle to preventing the spread of wild seedlings of Callery pears is their popularity. Callery pear cultivars have been favorites for landscaping new developments and parking lots. In many communities, Bradford or a similar variety is the first



Callery pear trees have been escaping from urban plantings into adjacent woodlands. This advancing problem is becoming more obvious with each passing spring as their white flowers reveal a growing problem.



The white flower blooms of the Callery pear have made it a popular choice for many urban plantings. Unfortunately, the pollinated flowers turn into a fruit that is readily spread by birds.



Photos courtesy: above and left: James H. Miller, USDA Forest Service, Bugwood.org; right: Chuck Barger, University of Georgia, Bugwood.org

and only ornamental street tree. The ecological threat implied by the forests of wild Callery pears along our roadways is most often ignored; the April flower display is welcomed. But this seemingly innocuous invader is changing the native landscape. Public education and wild seedling control efforts will ensure that Kentucky's April floral snows are serviceberry blossom flurries, not Callery pear blizzards.

Table. 1 Control Methods for Callery Pear (*Pyrus calleryana*).

Method	Timing	Details and Cautions	Herbicides ¹
Cut-stump	June - September	Cut large stems and immediately treat the stump tops with herbicide.	Garlon 3A or a glyphosate herbicide as a 25- to 50-percent solution (2 to 6 quarts per 3-gallon mix). ORTHO Brush-B-Gon, Enforcer Brush Killer, and Vine-X are effective undiluted for treating cut-stumps
Hack and squirt	June - September	Make stem injections using undiluted herbicide in cut-spaces as indicated on the label.	Garlon 3A. Subsequent foliar application may be required to control new seedlings and re-sprouts
Basal bark spray	Any time	Spray the bottom 18 inches of the tree or sapling.	Apply Garlon 4 as a 20-percent solution (5 pints per 3-gallon mix) in a labeled basal oil product, vegetable oil or mineral oil with a penetrant, or fuel oil or diesel fuel (where permitted)
Foliar spray	June - September	Thoroughly wet all leaves with an herbicide in water with a surfactant.	Glyphosate herbicide or Garlon 3A as a 2-percent solution (8 ounces per 3-gallon mix)

¹The use of brand names is based on recommendations (US Forest Service) and does not imply endorsement. Read and follow all directions on label for personal protective equipment. Follow label directions and precautions in all cases, including where and how the herbicides can be used. Label information supersedes any published reports or recommendations contained in this publication.

About the Author:

Diana Olszowy is Stewardship and Education Branch Manager with the Kentucky Division of Forestry. She is also an editor of the Kentucky Woodlands Magazine. Kentucky Division of Forestry, 627 Comanche Trail, Frankfort, KY 40601; Phone: 502.564.4496; Fax: 502.564.6553; E-mail: diana.olszowy@ky.gov

A Key to Important Diseases of Common Deciduous Kentucky Landscape and Forest Trees

John R. Hartman¹, Jody M. Thompson², Julie W. Beale³ and Sara J. Long³

¹Plant Pathologist, University of Kentucky (retired).

²Forest Health Specialist, Kentucky Division of Forestry,
jody.thompson@ky.gov

³Plant Disease Diagnosticians, University of Kentucky.

The University of Kentucky College of Agriculture and the Kentucky Division of Forestry have teamed up to release a key to more than thirty of the most common diseases on more than ten common Kentucky trees. In addition, more than twenty internet links are included that may be helpful for learning to recognize tree diseases in more detail.

The key can be found at <http://forestry.ky.gov/foresthealth>

Photo courtesy: Joseph O'Brien, USDA Forest Service, Bugwood.org

