

Callery Pear



Background, Life History

Callery pear (*Pyrus calleryana*) is a deciduous tree, more commonly known as 'Bradford pear.' Native to China, it was first brought to the United States in 1917 for hybridization experiments to improve disease resistance of the common fruiting pear. The Bradford cultivar was widely planted as a promising new ornamental during the 1950s. Since then, many other cultivars were developed. While individual cultivars are considered self-sterile, different cultivars planted in close proximity cross-pollinate and produce fruits and viable seed. Shoots from rootstock developed with varying genotypes are also able to cross pollinate with the original tree. Spread occurs when the fruit of these hybrids is eaten and distributed by birds and other animals.

Concerns emerged over its structural weakness with limbs breaking from wind, ice and snow. More recently, the focus is on its escape from cultivation. Callery pear is adapted to a wide variety of environmental conditions, including heavy clay soils, drought, heat and pollution. Growing best in full sun, it also tolerates partial shading. Spreading into open, disturbed habitats, naturalization occurs within early successional fields, parks, rights of way, power lines and other natural open areas. It grows rapidly, flowers at a young age, often develops thorns and produces large amounts of seed. It is also establishing in the understory of forests and woodlands and is able to flower and fruit in small canopy openings.

Callery pear grows pyramidal to columnar in youth; with age it broadens and reaches heights of 30–50 feet. The bark is typically light gray. Alternate, simple, oval leaves grow to 3 inches long and 2 inches wide. The Bradford cultivar is without thorns, however, plants that have crossed with other cultivars may develop thorns. The glossy dark green leaves turn a deep reddish-purple in fall. Abundant clusters of 5-petaled, white flowers emerge in late March and April before leaf out. Round, small, olive-brown fruits appear from May to July.

Impacts

A single wild tree can spread quickly by seed and vegetative means, often forming dense thickets within several years and outcompeting native plants. In forested settings, it leafs out earlier than our native trees, effectively shading out spring wildflowers.





David J. Moorhead, University of Georgia, Bugwood.org

Abundant clusters of five-petaled white flowers bloom in early spring prior to leaf emergence.



Nancy Loewenstein, Auburn University, Bugwood.org

Glossy, oval leaves with fine toothed margins occur alternately on branches of naturalized callery pear, that often grow thorns.



David J. Moorhead, University of Georgia, Bugwood.org

Early blooming flowers, pyramidal shape, and dense groups of plants help to identify callery pear in early spring.

Control

In areas with light infestation, small trees can be removed by hand when the soil is moist, with care taken to remove the entire root. When too numerous, foliar spraying with a 2 to 5 percent systemic herbicide solution of glyphosate or triclopyr can be utilized in mid to late summer.

Medium to large trees should be cut down and stumps treated immediately with herbicide to prevent re-sprouting. Effective herbicides include glyphosate and triclopyr at a 25 to 50 percent solution. Less labor intensive control options include basal bark treatment and girdling. Basal bark treatment can be used for trees up to 6 inches in diameter by applying a 1:5 ratio of the ester formulation of triclopyr and basal oil in a 12-inch wide band around the entire circumference of the tree base. The most successful period for herbicide uptake is late winter/early spring or during the summer. Mature trees can be girdled during the spring and summer, by cutting through the bark around the entire trunk, 6 inches above the ground.

Due to the persistent seed bank and potential for re-sprouting, subsequent treatments will be required for several years.

Native Look-alikes

Serviceberry, plums, and crabapples bloom about the same time as callery pears, and all have five-petaled whitish flowers. Serviceberry petals are brighter white and are strap-shaped and wavy with space between, as opposed

to rounded and close together for the pear. Native plums have stamens (the threadlike stalks in the center of the flower) that are longer than the petals. Apple and crabapple flowers have a slightly pink hue, and apple tree branches are nearer to horizontal and less uniform compared to the vertical, symmetrical branching of callery pear.

Alternative Native Plants

American plum (*Prunus americana*)
Flowering dogwood (*Cornus florida*)
Eastern redbud (*Cercis canadensis*)
Hawthorn (*Crataegus spp.*)
Serviceberry (*Amelanchier arborea*)

Identifying Callery Pear

- Deciduous tree 30–50 feet in height, with wide spreading branches; may be thorny
- Shiny, dark green leathery leaves, with small toothed margins; reddish-purple in fall
- Five-petaled white flowers occur in spring prior to leaf-out; with small hard, brown fruits

For Additional Information

short.mdc.mo.gov/ZTA
invasive.org/weedcd/species/10957.htm
mipn.org

mdc.mo.gov

For more information or to report a population, contact your local Missouri Department of Conservation office, e-mail WildlifeDivision@mdc.mo.gov, or write:

Callery Pear
Missouri Department of Conservation
Invasive Species Coordinator
PO Box 180
Jefferson City, MO 65102–0180

