



The Callery (Bradford) Pear: A very damaging plant to Missouri

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What is Callery (Bradford) Pear?

Callery pear trees (*Pyrus calleryana*), also known as Bradford pears, are small to medium size (up to 40 ft. tall). They were introduced to America from Asia for the purpose of developing sturdy and disease-resistant fruit-bearing trees. After experimentation, the Bradford pear was developed as an ornamental, fast growing tree which did not bear fruit and did not produce seeds. Because Bradford pears had weak branches prone to splitting in winds and storms, they were further developed to resist splitting and breaking.

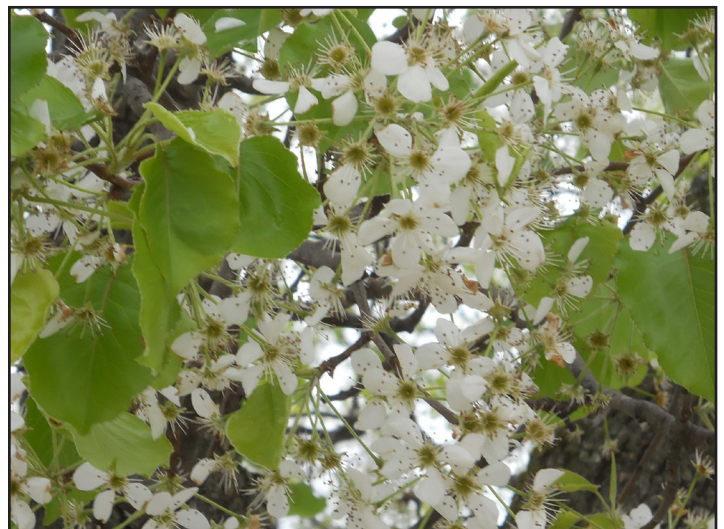
Unfortunately, this new variety of Bradford pear could cross-pollinate with other fruit bearing trees and produce fruit with seeds. The fruits are consumed by birds and transported to natural areas where the trees started growing wild and competing with native plants. Callery pears are now growing wild in fields, along forest edges and along roadsides.

This guide sheet is intended to provide readers with information on the Callery(Bradford) Pear. It should not be considered the whole information for your management needs the Callery Pear.

They form dense thickets and are considered a species damaging to the natural plant communities of Missouri. Callery pears grow and spread quickly, and they displace and out-compete native plants. In 2025, Missouri banned the importation and sale of Callery pears and several other invasive plants. Callery pears form large colonies of thorny brush near roadsides, forest edges, old fields, etc. They are conspicuous in early March when they bloom and, in the fall, when their leaves turn red.

The Negative Impacts of Callery Pear in Missouri

- The small, hard, Callery pear fruits are consumed by birds. The birds digest the fruit and spread the seed to natural areas such as forest edges, fields, prairies, etc.
- Callery pears are not native to North America. They have negative impacts on the environmental and economic health because they spread and displace native species of plants.
- The flowers of Callery pear have an unpleasant, dead animal odor. The flowers specialize in attracting flies, which serve as pollinators.
- Young Callery pear trees often grow thorns and form dense thickets, which are difficult to remove.
- The dense thickets formed by Callery pear are damaging to wildlife habitats.
- The leaves of Callery pear are of little value to insects or other animals. Few animals or insects feed on them.



Above: Callery/Bradford pears grow flowers with an unpleasant odor. The flowers can pollinate and produce small, hard, fruit.

How to recognize Bush Honeysuckle?

The Missouri Department of Conservation reports that Callery pear trees are present in every county in the state. They are deciduous trees shedding their leaves in the fall and growing to 30-50 ft. high when they mature. Young trees sometimes have thorny branches, but most adult trees don't. The branches tend to grow symmetrically on the trunk and tend to grow upward, vertically. Leaves are smooth, shiny, leathery, dark green, with small teeth at the edges. The leaves turn red, purple, or orange in the fall. When young and small, trees have orange or reddish leaves at the tip of the branches. The flowers bloom in early spring, before the leaves are grown. In Missouri, Callery pears bloom in early to mid-March, before most trees have leaves or flowers. The flowers are white, with round petals. In late summer and fall, the fruits are small, round, brown, hard, and grown in clusters.



Above: In Missouri, Callery pear bloom very early in spring (early to mid-March) and can be noticed by their small, white flowers. Young trees often grow around mature trees and form thorny thickets.

Removal and Control of Callery Pear

Young plants: Callery/Bradford pears have thorns, grow fast and often form dense thickets. Young plants can be recognized by the shape of their leaves. At the tip of the branches, the leaves on young trees often have an orange, reddish, or pinkish hue. Young trees can be pulled from the ground manually when the soil is soft or moist, but it is important to remove as much of the root system as possible, to prevent re-growth. It is important to check periodically for regrowth, which will likely happen. Young plants can also be destroyed with commercially available solutions of 2%-5% glyphosate or triclopyr herbicide sprayed on the leaves. Prescribed fire kills the top of the young plants, but they re-grow from roots.

Cutting large trees and treating the stumps: Older trees are impossible to pull by hand and would likely re-grow from roots left in the ground. They are best removed in summer and early fall by cutting them as close to the ground as possible and applying a solution of 20%-40% glyphosate or triclopyr on the cut stump with a brush or a sprayer, immediately after cutting. After cutting mature plants, many young stems may grow from the roots and seeds remaining in the soil. These are best sprayed on the leaves with 2%-5% glyphosate or triclopyr.

Basal bark treatment: On mature trees 4-8" in diameter, a concentrated (20%-40%) solution of the ester triclopyr and basal oil should be applied on the bark at the base of the tree. The application should be 10-14" wide around the entire base of the tree. This treatment works best in late winter, early spring, and summer.

Girdling: Mature trees can be killed by cutting 1" deep through the bark around the entire trunk, 6-8" above the ground. It is likely that re-growth from roots or seeds will occur around the mature trees. It is recommended to inspect the area for new growth and spray young saplings with 2-5% herbicide as described above.

Long-term care and monitoring: Because Callery pears grow for several years from seeds dispersed by birds and from roots, after mechanical removal, spraying, or cutting, it is necessary to monitor annually for regrowth. If mature trees remain in the area, it is likely that they will continue to spread. Any young plants should be recognized and detected early, when they can easily be removed by spot application of 2% herbicide or triclopyr on the leaves.

Application of herbicides: Application of herbicide should be done carefully. Always read the label and follow instructions carefully. Always inspect spraying equipment and use correctly. Always wear protective long sleeve clothing, gloves, and other protective equipment. Avoid overspray on people, pets, wildlife, or desirable plants. Many herbicides are not approved for use near water. Always read and follow manufacturer's label and instructions.



Above, from left: Larger Callery pear can be removed by cutting and spraying the cut stems. Small trees can be sprayed on the leaves. Young trees often have orange leaves at the tip of their branches, which are sometimes purple or pink.

Alternative trees for homeowners

Because Callery pear damage wildlife habitats and displace native plants, the State of Missouri has banned the sale of Bradford pears. There are occasional programs and announcements for rewarding (“buy-back”) homeowners who cut Bradford/Callery pears and replace them with native species. There are quite a few small to medium trees that are decorative and are suitable as replacements.

Alternative native or non-invasive trees

- Domestic varieties of fruit trees, any species: apples, cherries, pears, peaches, etc.
- Flowering dogwood
- Eastern redbud
- Serviceberry
- Hawthorn
- American plum and other species of native plum

Planning and paying for removal and control of Callery Pear and healthy, productive grasslands and forests.

Lincoln University in Jefferson City, Missouri, through its Renewable Resources and Natural Resources Programs, can help with designing and planning land management that would improve and enhance the health of forests and habitats for wildlife.

The Missouri Department of Conservation, through its Community and Private Lands Section, has private lands conservationists located in most counties. They can help by designing the best management plans for removal and control of invasive species and provide information and assistance about various government cost-sharing programs available to landowners interested in improving their grasslands and forests. Training workshops and seminars about forest, grassland, and wildlife habitat management are offered at Lincoln University and throughout Missouri periodically.

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