

THE PURDUE LANDSCAPE REPORT

Invasive Bradford/Callery Pear: Why it is so detrimental and what to plant instead.

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Most people these days have, at the very least, heard of Callery and Bradford pear trees and know something about the invasiveness of this ornamental street tree. But I still get questions about what it is and why it's so bad. So, I'd like to offer a little history of this infamous tree. Where did it come from, why it's been so popular and such an awful tree to plant, and some suggestions for better species to plant in its place.

Pyrus calleryana, the Callery pear (Fig. 1), was originally introduced from Asia to the United States in 1908. This was done in an attempt to breed pear trees that were resistant to fire blight, a bacterial disease that can spread rapidly causing leaves and branches to blacken as if burnt by fire, eventually resulting in death. Along with its resistance, the Callery pear was tested as a rootstock for the edible European pear (*Pyrus communis*) and its vigor in growth.

Callery Pear grows to a height of 30 to 50 feet with a spread up to 30 feet wide. Thick leaves grow alternately, are dark green, grow with sharp spurs along branches, and turn reddish-purple in the fall. They are one of the first trees to bloom and begin to grow in the spring and one of the last to drop their leaves in the fall. They produce a beautiful show of white flowers in the spring that have an unfortunate odor and an abundance of small fruits in the fall that are spread by birds and other wildlife. In fact, invasive European Starlings are one of the primary species that feed on and spread the fruits and seeds. Stems are smooth with light-colored lenticels while more mature stems are light to medium grey with fissures along the bark. Branching is usually upright in structure leading to poor branch unions that are weak and prone to failure. They grow quickly and tolerate a wide variety of planting locations and conditions, which led to the widespread use as both street and ornamental trees in urban plantings.

The Bradford pear tree is a variety of Callery pear cultivated in the early 1950s as a sterile tree without sharp spurs. Unfortunately, it cross-pollinated with other varieties leading to the rapid spread and out-competing of native species that we see in fields, along roadsides, and in forests today (Figs. 2 & 3). As awareness of the environmental issues of Callery pear spreads,

local and state governments are working on removing them from the landscape. It is often joked that pruning these trees is extremely simple, involving a single cut at the base of the tree.

Due to the extensive use of these trees over the past 7 decades though, removals can lead to a large loss of existing canopy, especially with mature trees. This loss is worth negating the ecological damage they cause and with patience can be replaced with more appropriate species. Suggestions include serviceberry (*Amelanchier laevis*), flowering dogwood (*Cornus florida*), redbud (*Cercis canadensis*), and crabapple (*Malus sylvestris*).

For more information on invasive pear trees or on how to remove them see the links below or contact me at bmccalli@purdue.edu
<https://www.purdue.edu/fnr/extension/id-that-tree-invasive-callery-pear/>
<https://arboretum.harvard.edu/stories/the-rise-and-fall-of-the-ornamental-callery-pear-tree/>



Figure 1: Bradford pear trees as street trees



Figure 2: Bradford/Callery pear trees spreading into wooded lot



Figure 3. Callery pear growing in naturalized area.

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