

You Ain't From Around Here! Exotic Invasive of the Quarter: Callery Pear (*Pyrus calleryana*)

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We don't hate all pear trees. Pears planted for fruit are great! They provide edible produce and look pretty while doing it. Ornamental pears, however, are a different story. These commonly planted trees have been favored by many for their consistent flowering, compact shape and fast growth. Callery pear (*Pyrus calleryana*) is in the rose family and exhibits a surprising similarity to the invasive multiflora rose. But before we get to that, let's briefly explore the Callery pear story.

The species is native to China, Taiwan, Korea, Vietnam and Japan. It was brought to the United States in the early 1900's as a way to help fight fire blight – a disease which was having devastating impacts on the common pear (the one grown for fruit production) at that time. Callery pear exhibited resistance to the blight, and could be used as a rootstock for common pear – thus instilling resistance. So far so good.



By the 1950's, people began to notice that the Callery pear possessed some desirable aesthetic and growth qualities. With their abundant showy flowers, compact crowns, attractive fall foliage, thornless stems, fast growth rates, and ability to grow on harsh sites (such as compacted soils in housing developments), this tree, and in particular, the cultivar Bradford, were widely planted in urban and suburban areas.

Callery pear's aesthetic qualities, along with its ability to grow under harsh conditions, have led to many plantings in subdivisions and along roadways. Photo by: Adam Downing, VCE.

However, while it has showy flowers, they are quite foul-smelling. While it is fast-growing, its branch structure results in easily broken branches, and it doesn't live very long. And while it does well in

subdivisions, it also does well in any many other disturbed landscapes where we don't want it. Can it get worse? Yes...

In the early days, the risk of Callery pear becoming an invasive was believed to be negligible, as each cultivar is self-incompatible. A Bradford cultivar, for example, cannot breed with another Bradford. Any fruit produced is sterile. However, thanks to the extreme popularity of these ornamental pears, many cultivars have been developed (there are at least 16 different Callery cultivars). And two different cultivars can breed and produce fertile seed. With so many cultivars in so many places, there are plenty of opportunities for cross-pollination and production of viable seeds.

The small, marble-sized fruit is eaten by birds in the fall; the birds then proceed to disseminate the seeds long distances, as birds are wont to do. And, perhaps fittingly, the most common Callery pear seed-diners are European starlings, an exotic invasive bird (although the American robin also feeds on them).



Some of Callery pear's less desirable characteristics include large, aggressive thorns, and a tendency to take over natural areas. Photos by: Adam Downing, VCE.

What is the result of all this? In conversations with other resource professionals, we are hearing stories of escaped Callery pear exhibiting classic invasive plant properties.

Invasive plants are like weeds on steroids: hard to control, fast to establish and quick to spread. Callery pear establishes easily in open areas

such as along roadways and in hayfields that perhaps don't receive as much management as they should. In these areas, the pears form dense canopies, which exclude the growth of other, more desirable vegetation. In addition, as mentioned earlier, this particular invasive has another characteristic common to its relative, the multiflora rose. Callery pears often develop very aggressive thorns after the first few years of growth. These thorns are so destructive that a farmer in the Shenandoah Valley carries a tire repair kit with him to the hayfield.

You have all probably seen plenty of Callery pears, whether you know it or not. You may even have them in your neighborhood or on your property. Here are some identifying characteristics:

Leaf: Alternate, simple, heart-shaped to ovate with a finely serrated margin, 2 to 3 inches in length, shiny green above, paler and dull below.

Flower: Large (2 to 4 inches across) clusters of showy white flowers each 1/2 to 3/4 inch across, appearing before or with the leaves; often so densely flowering that the entire tree appears white.

Fruit: Small (1/2 inch diameter), round, brown pome, very bitter.

Twig: Glossy brown to reddish brown, medium in texture, spur shoots present; terminal buds are large (1/4 to 1/2 inch long), ovate, and covered in light brown wooly hairs.

Bark: At first smooth with numerous lenticels, light brown to reddish brown, becoming grayish brown with shallow furrows and scaly ridges.

Form: Typically quite upright and conical with very narrow branch angles. May reach 60 feet in height.

One thing to note: Callery pear looks a lot like the common pear. To tell them apart, take a close look at the buds – Callery pear buds are fuzzy, while the buds of the common pear are not. Or, wait until the fall when fruit develops. If it doesn't look like a pear you'd buy at the grocery store, it's probably a Callery.

We've been preaching against Callery pear for many years, even before we knew about the thorns. But now we know it is not only an environmental issue, but also a safety and potentially costly issue as well. So what can we do? We suggest the following two bold actions:

- Replace any ornamental pear trees you have with any number of excellent native flowering trees such as: common serviceberry (*Amelanchier arborea*), Allegheny serviceberry (*A. laevis*), cockspur hawthorne (*Crataegus crus-galli*), green hawthorne (*C. viridis*) and the native sweet crabapple (*Malus coronaria*).
- Refuse to purchase this tree! And if you see it at a garden store, educate them about its problems.

If you remove Callery pear, please be aware that you will need to take action in addition to cutting down the tree. The stumps sprout prolifically, and must be treated with herbicide. And, like the invasive that it is, the roots will also develop sprouts. One of the author's cut down a Callery from her front yard early this spring. Even though full-strength Roundup was applied immediately to the cut stump, she has had to continually mow root suckers all summer long. Hopefully over the next couple of years, the sweet crabapple which replaced the pear will provide enough shade to suppress the root suckers.

For more information on this plant do an online search for "The Beginning of a New Invasive Plant: A History of the Ornamental Callery" and watch this short video: <http://www.whsv.com/home/headlines/Invasive-Pear-Tree-Worries-Local-Farmer-214064281.html>

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