

## Callery Pear, *Pyrus calleryana*



A young callery pear in a landscape.

Callery pear (*Pyrus calleryana*) is a species of pear tree native to China that was brought to the US in the early 1900's in an unsuccessful attempt to improve fireblight resistance in edible pears. This fast-growing deciduous tree in the rose family (Rosaceae) wasn't promoted as an ornamental until the 1950's. It is relatively short lived (less than 25 years) and hardy in zones 4-9. Callery pear is now considered an invasive species in many areas of the eastern US, as it outcompetes many native plants and trees, especially in disturbed areas.

Callery pear can grow 50-65 feet tall, but is generally much shorter in landscapes. The bark of young trees is light brown to reddish-brown and smooth with numerous lenticels. As the tree matures the bark becomes grayish brown with shallow furrows. The species has an irregular shape and thorny branches, but the cultivars planted as ornamentals are thornless and have been selected for uniform shape. Young trees often are conical, but eventually become oval to spreading with a rounded crown when mature. Many cultivars that were selected for their narrow form, especially 'Bradford', are very susceptible to damage by high winds, ice storms, or heavy snowfall

because of crowded branches with narrow crotch angles that break easily causing the tree to split. These trees have a shallow root system, so are difficult to plant under, and often sucker heavily.

The trees bloom in early spring before the leaves have expanded. The branches are profusely covered with white, five-petaled flowers up to an inch in diameter. Although the appearance of the flower-covered trees is quite attractive, the scent is pungent and rather unpleasant. Flowers are followed by loose clusters of small (to ½ inch diameter), persistent, russet-colored, inedible, almost woody fruits (pomes). Trees are generally self-incompatible (unable to produce fertile seeds when self-pollinated) and will not produce viable seed when cross-pollinated with another tree of the same cultivar. However, they



Callery pear blooms in early spring (L), with branches heavily covered (C) with white flowers (R).



will produce viable seed when cross-pollinated by different cultivars. The resulting seedlings often are very different from the parents, many with undesirable traits (including thorns). Named cultivars are propagated commercially from cuttings and grafted on hardy rootstock. After the hard fruits are softened by frost they are eaten by birds which disperse the seeds; if the seeds are fertile they can sprout and establish wild stands which can become invasive. In many areas of the eastern US where lots of different cultivars had been planted, this interbreeding occurred readily and led to the progeny invading nearby fields, right-of-ways, parks or other natural open areas by the 1990's.

Callery pear produces a dense canopy soon after the flowers drop. The alternate oval leaves with wavy, finely toothed margins are about 1½ to 3 inches long, and change from a dark glossy green to brilliant yellow, orange, pink, red, purple, or bronze in autumn. Individual leaves may have several colors, but often are just a single color, with different colored leaves on a tree to produce a lustrous effect. As the leaves turn color late in the season they can be killed by a hard frost before full color can develop, leaving the leaves an unexciting brown.



This small tree is best grown in full sun in moist, well-drained loam soil, but it adapts to a wide range of soil conditions including heavy clay. It is somewhat drought tolerant once established. Trees should be pruned when young in winter to establish good branching that will be less prone to breakage as the trees age. Cultivars are suitable for smaller sites, as a specimen planting or in small groups.

The smooth, glossy leaves change from green (L) to brilliant colors in the fall (R).



Callery pear through the seasons.

Once considered the perfect street tree, with profuse early bloom, a restricted pyramidal shape, good fall color, and its tolerant of many soil types and pollution, it has been widely planted in urban and suburban areas (overplanted in many places). It is quite common on city streets, around commercial buildings and in parks.



Callery pear is often used as a street tree.

Some of the many cultivars of callery pear available include:

- 'Aristocrat' – pyramidal with more open and horizontal branches, it has better structural strength than 'Bradford' but is susceptible to fire blight and fall color can be inconsistent.
- 'Autumn Blaze' - has earlier fall color than other cultivars, but has thorns and is somewhat susceptible to fire blight.
- 'Bradford' – introduced in Maryland in 1960, it has dense upward growth and a tight branching pattern (good in small spaces), but the many weak crotches make it highly susceptible to damage unless pruned when very young.
- 'Capital' – has better structural strength than 'Bradford' but is very susceptible to fire blight. zone 5
- Chanticleer® – (also known as 'Cleveland Select', 'Select', 'Stone Hill' or 'Glen's Form') is considered to be one of the best of the cultivars. This narrow selection from Cleveland, Ohio, introduced in 1965, has resistance to fire blight and is less prone to storm damage. Leaves turn mahogany red to purple-red in the fall, but the color is not as good as other cultivars. It produces less fruit than other types. It grows 25-30 feet tall and 15 feet wide.
- New Bradford® ('Holmford') – is more oval to rounded than pyramidal and has yellow to orange-red fall color. zone 5b
- 'Redspire' – is broadly oval to rounded with yellow to orange-red fall color. zone 5b

While this can be a nice tree in many situations, because of its smelly flowers, weak wood, and potential for invasiveness (not observed in Wisconsin, however, likely because seedlings are not as hardy as grafted plants; however caution should be used especially near natural areas), callery pear is not a tree to recommend for every landscape. Remove unhealthy or old, deteriorating trees where possible and consider other trees for new landscape projects. Some alternatives include serviceberry (*Amelanchier*), 'Royal White' redbud (*Cercis canadensis*), many cultivars of flowering crabapple, and Sargent cherry (*Prunus sargentii*).



Callery pear in bloom on the UW campus.

– Susan Mahr, University of Wisconsin - Madison

### Additional Information:

- *Pyrus calleryana* 'Aristocrat' – on the Missouri Botanic Garden's Kemper Center for Home Gardening website at [www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/c133/pyrus-calleryana-aristocrat.aspx](http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/c133/pyrus-calleryana-aristocrat.aspx)
- *Pyrus calleryana* 'Capital' – on the Missouri Botanic Garden's Kemper Center for Home Gardening website at [www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/c162/pyrus-calleryana-capital.aspx](http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/c162/pyrus-calleryana-capital.aspx)
- *Pyrus calleryana* 'Chanticleer' – on the Missouri Botanic Garden's Kemper Center for Home Gardening website at [www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a720/pyrus-calleryana-chanticleer.aspx](http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/a720/pyrus-calleryana-chanticleer.aspx)
- *Pyrus calleryana* – on the Floridata website at [www.floridata.com/Plants/Rosaceae/Pyrus%20calleryana/233](http://www.floridata.com/Plants/Rosaceae/Pyrus%20calleryana/233)
- *Pyrus calleryana* 'Bradford' – University of Florida Extension Publication #ENH-695 at [edis.ifas.ufl.edu/st537](http://edis.ifas.ufl.edu/st537)