

You Ain't from Around here! Exotic Invasive of the Quarter: Porcelain-berry (*Ampelopsis glandulosa* var. *brevipedunculata*)

By: Jennifer Gagnon, Virginia Tech



Porcelain-berry forms dense mats, covering up native species, and resulting in a mono-culture. Photo by: Steve Manning, Invasive Plant Control.

While I've never seen this species in person, looking at photos, I can understand why porcelain-berry was introduced to the United States in the 1870's as an ornamental bedding and screening plant. This climbing vine has spectacular multi-colored berries that don't even look real. It forms dense vine thickets that provide privacy and create lovely arbors.

Being in the same family as grapes, the berries and cooked leaves are edible. I've not tasted the berries, but they are generally considered not very palatable to humans. But the birds like them. And an on-line resource center for edible and otherwise useful plants attributes some medicinal properties to the fruits, roots, and leaves, including treatment of clots, boils, abscesses, ulcers, and aches.

"DO NOT, I REPEAT DO NOT BUY THIS PLANT!!! And if you see your local nurseries selling it please notify them that it is an INVASIVE MONSTER. IF YOU CAN IDENTIFY IT, RIP OR CLIP IT. Regardless of your zone, do not even take the chance. Here in the New England/ Tri-State area it is wreaking havoc and displacing thousands of acres of native, beautiful habitat EVERY YEAR. It is utterly horrifying to myself (a botanist and horticulturalist). Sure it might not seem so bad on your trellis, but keep in mind that the birds will eat the berries and drop them to another spot which exponentially increases their numbers. The seed passing through the birds' gut actually increases the germination rates by helping to remove the dormancy inhibitors naturally found in the seed (same with Asiatic bittersweet). DO NOT BUY THIS PLANT. DO NOT HELP IT SPREAD, IT NEEDS NO HELP. There are plenty other beautiful NATIVE vines anyways." On Sep 16, 2014, Eudai67 from Hamden, CT.

This consumer review from a gardening site that sells porcelain-berry pretty much says it all. As with many exotic invasive species, there is a confusing mix of information on the internet. On another gardening website, they provide useful tips for growing porcelain-berry. And, while at the end of the article they recommend checking with the local Extension office to see if it is invasive in your area, they will still sell it to you anyway (except for Massachusetts where it is prohibited).



The striking multi-colored fruits of porcelain-berry, as well as its ability to create dense screen-forming mats, make it popular in commercial horticulture. Photo by: Nancy Lowenstein, Auburn University.

Porcelain-berry is native to Japan, China, Korea, and eastern Russia. Since its introduction, it has spread from New England to North Carolina, and west to Michigan and Ontario. It can currently be found in 10 counties in Virginia, including Albemarle, Arlington, Chesterfield, Fairfax, Frederick, Goochland, Henrico, Loudoun, Prince William, and Westmoreland.

Virginia's Department of Natural Heritage lists it as a highly invasive species. It grows rapidly and is fairly resistant to diseases and insects. This woody vine forms dense mats that shade out native species and outcompete them for water and nutrients. It spreads by seeds (with the help of birds).

Porcelain-berry grows best in moist, slightly shady areas along stream banks and in thickets. But it is an adaptable species and can also be found growing on dry soil and in full sun. The vine is less tolerant of heavy shade and permanently wet soils.

How to Identify Porcelain-berry

Form: Deciduous, woody, climbing vine. Young twigs are hairy, bark has lenticels (white spots) and does not peel. Vines climb with tendrils that grow opposite the leaves on the stems, 15-20 feet long.

Leaves: Three to five deep lobes, resembling grape leaves. Alternately arranged, sometimes variegated with hairy undersides. Edges of mature leaves are toothed. Can exhibit high variability in shape, including smooth edges.

Flowers: Tiny, greenish-yellow, fading to white in mid-summer. Grow in cymes (flat-topped flower cluster with innermost flowers opening first, free petals), opposite the leaves.

Fruit: Clusters of shiny, hard, porcelain-like berries in various shades of white, yellow, lilac, or green that mature to a bright turquoise in September through October. Berries are ¼ inch in diameter and contain 2-4 seeds. All colors can be found on a single fruit cluster at one time.

Pith: (center portion of the stem) is white and continuous across the nodes.

If you think you have this species on your property, before embarking on a control project, please make certain you aren't confusing it with some of the native plants it resembles. Porcelain-berry is closely related to the native fox grape.

Fox grape has a brown pith (instead of white), no lenticels on the bark, and the bark shreds and peels. Also, the fruits hang downwards, like the traditional grape clusters we are accustomed to.



Map of confirmed instances of porcelain-berry in Virginia. Map from USDA PLANTS.



(a) Porcelain-berry vine, (b) unripe fruits, (c) smooth-shaped leaves, and (d) lobed leaves. Photos by: (a & b) Leslie J. Mehrhoff, University of Connecticut, and (c & d) Karen A. Rawlins, University of Georgia.

How to Control Porcelain-berry

Manual: While it is possible to hand-pull the vines, they have extensive root systems that intertwine with the roots of desirable species, making manual eradication difficult. If you attempt hand-pulling, do it in the fall or spring, which will prevent flowers from forming the following season. Always pull before fruits appear. You may leave the pulled vines on-site, allowing them to decompose and return nutrients to the soil. If you have a dense thicket of porcelain-berry, be aware that there may be native species you want to protect growing underneath.

Chemical: Spot application of glyphosate to individual plants towards end of growing season is the most effective means of chemical control. But be careful to protect desired species, as glyphosate is a non-specific herbicide, and will kill all vegetation it comes in contact with. And, as with all invasive species control projects, regular monitoring is necessary to remove future infestations.

Commercial: One of the main problems with controlling porcelain-berry is that it is still popular in the horticultural trade. The most effective means of control is to remove it from commercial trade and promote native species that fill the same gardening niche. Good native alternatives include trumpet creeper (*Campsis radicans*), trumpet honeysuckle (*Lonicera sempervirens*), and devil's darning needles (*Clematis virginiana*).

Jennifer Gagnon is an Extension Associate, jgagnon@vt.edu, 540-231-6391.

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