Dormant Season Identification of Porcelain Berry (*Ampelopsis brevipedunculata*), and How to Differentiate it From Native Woody Vines

Frank Hassler
Good Oak Ecological Services

DRAFT: 4/4/19

Introduction:

Porcelain Berry (*Ampelopsis brevipedunculata*) is a new invasive plant in Wisconsin which is classified as "Prohibited" under the states NR40 invasive species law. As such, early detection and control is needed to prevent this species from becoming established in this state.

Unfortunately, this species is very similar in appearance to other lianas (woody vines) in the Vitaceae family, especially **Wild Grape** (*Vitis riparia*) and **Virginia Creeper** (*Parthenocissus quinquefolia)*, making detection difficult. These three species often grow in similar habitats; woodland edges, shrublands, fencerows and trailsides, and often grow intermixed with each other. This makes differentiating between the three species during the dormant season a challenge. Dormant season identification is, however, important to the control effort. The brushy environments it grows in can have a lot if visual clutter during the growing season from the leaves of many other shrubs and lianas. With leaves off in the dormant season, we are able to see more easily into these areas of crowded vegetation to detect small populations and individual plants that would be hidden during the growing season.

General Characteristics of Each Species:

The growth forms of porcelain berry, wild grape and Virginia creeper are similar. All three will climb up and over shrubs and up the trunks of trees in the canopy. Virginia creeper is often found climbing the trunks of trees (and other vertical surfaces) by using the adhesive disks at the end of its tendrils to adhere to tree bark. With time, these tendrils can become extremely abundant along the stem as the vine appears to be rooting into the tree. However, it will also free-climb like the other two species, and when it does, it can easily be confused with porcelain berry. Virginia creeper will also ramble along the ground and develop roots from its stem, forming a ground cover. Porcelain berry has not been observed doing this.

Virginia creeper stems are rarely greater than 3 cm in diameter. Porcelain berry and wild grape can get much larger; a stem diameter of 10 cm is not uncommon and some wild grape can be 20 cm in diameter, or larger. Once established, porcelain berry tends to grow in 'colonies' of several vines climbing from the same root. However, this is not a consistent characteristic, especially in recently established populations.

There are some minor differences in the physical qualities of the wood of these three lianas. Virginia creeper vines are very pliable and can be bent easily without breaking. Porcelain berry is stiffer, and sturdier, more like a 'stick' than a vine, and bends rather than snaps. Wild grape is moderately stiff, however, even relatively large stems snap easily when bent.

On the following pages are the four best characteristics to look for to differentiate these species from each other during the dormant season.

1) Bark:

- Wild grape bark has a linear pattern running down the length of the vine, even on the smallest twigs. It gets more shaggy/shredded/exfoliated as it ages, with long fibrous strips peeling off. The color is often a rusty brown, sometimes burgundy in the smallest stems.

- Porcelain berry bark is beige in color and covered with lenticels. The bark is smooth on young stems, and as they age the bark splits into diamond-shape patterns and forms thin flakes.

- Virginia creeper bark cannot easily be differentiated from porcelain berry bark.

- Bark is the best way to differentiate wild grape from porcelain berry as this difference can easily be seen at a distance.

2) Nodes and Leaf Scars:

- Virginia creeper leaf scars protrude from the stem, are relatively large and concave, especially on small stems. They often look like ears sticking out of the stem. Nodes have a slight to no bulge.

- The nodes of porcelain berry are prominent bulges in the stem especially on smaller/younger vines. The leaf scars are small, and overall convex as part of the node.

- The nodes and leaf scars of wild grape are similar to porcelain berry and cannot easily be used to differentiate these species.

- <u>The large and protruding leaf scars on Virginia creeper are the best way to differentiate it from porcelain berry, but they are less obvious on larger diameter vines.</u>

3) Tendrils:

- Virginia creeper tendrils can be differentiated in that they are more slender and delicate, even on large vines, being about 1mm to 2mm diameter. Some, but not all, tendrils end in a small adhesive disk. The tendrils are highly coiled and spring-like, even when not attached to a foreign object.

- The tendrils of porcelain berry can be delicate on smaller vines, but as the vine grows they get longer and more robust, often >2mm in diameter. They tend to extend further from the vine, and are less coiled unless they contact an object to wrap around. These tendrils always terminate in a fine point.

- The tendrils of wild grape are very similar to those of porcelain berry.

- <u>This can be a helpful, second characteristic to look for, in addition to the leaf scar to differentiate Virginia creeper from porcelain berry.</u>

4) Pith:

- Porcelain berry's pith is solid and bright white, pearly, glossy, sometimes seeming iridescent. Wood is tan or brownish, contrasting with the white pith.

- Virginia creeper's pith is variable greenish-white to brown, sometimes partially hollow to porous. Wood is typically greenish.

- Wild grape's pith is light brown to dark brown, wood is often greenish.

- Since only porcelain berry has a white pith, this is a fairly consistent way to tell these three species apart, especially when coupled with observing bark and leaf scars. However, it requires the extra effort of getting one's hands on the vine and cutting it open.

Other Similar Species:

Thicket creeper (*Parthenocissus inserta*): Very similar to Virginia creeper, however this species lacks tendrils.

Summer grape (*Vitis aestivalis*): Bark and other characteristics are more similar to wild grape than to porcelain berry. However, the leaf shape is very similar to porcelain berry. More information can be found in our growing season identification guide (forthcoming). Generally uncommon in Wisconsin.

Oriental Bittersweet (*Celastrus orbiculatus*): Bark is somewhat similar. Oriental bittersweet lacks tendrils and twines/wraps around other stems to climb. PB never twines around other plants and always has tendrils. This species is also highly invasive and should also be controlled aggressively.