

Ohio Invasive Plant Assessment Protocol

Botanical Name: *Ampelopsis brevipedunculata*
 Common Name: Porcelainberry
 Family Name: Vitaceae
 Assessment conducted by: OIPC Team

Step I Outcome: **Continue**
 Step II Score: **40**
 Step II Outcome: **Pending Further Review**

Score

Notes

References

Directions: Place an "X" in the Score column next to the selected answer to each of the four questions.

Step I

1. Is this plant known to occur in the state and listed as "noxious" on any federal or Ohio Department of Agriculture plant list?
 Yes. Place on invasive plant list, no further investigation needed. **STOP**
 No. Continue on to question 2.

X

2. Has this plant demonstrated widespread dispersion and establishment (i.e. high numbers of individuals forming dense stands) in natural areas across two or more regions in Ohio?^a
 Yes. Place on invasive plant list, no further investigation needed. **STOP**
 No. Continue on to question 3.

X

Occurring in 3 regions of OH but not enough information to estimate pop sizes. Species tendency to create dense monocultures will likely change this answer to yes, if it is officially documented.

1,2

3. Does this plant form self-replicating populations outside of cultivation in Ohio and is it documented to alter the composition, structure, or normal processes or functions of a natural ecosystem?
 Yes
 No
 Unknown

X

More information is needed to know how it will impact ecological processes and functions in OH.

4. Is the plant listed as invasive in an adjoining state or a nearby state east of the Mississippi within the USDA Plant Hardiness zones 5-6?^{b,c}
 Yes
 No
 Unknown

x

PA,MA,TN,CT,NY

3,4,5,6,7,8,15,17,18

If the answer was yes for both questions 3 and 4, the plant is placed on the invasive plant list and no further research is needed. Stop here. If the answer is no for both questions 3 and 4, the plant is not considered invasive and no further investigation is warranted. Otherwise, proceed to Step II.

Step II: Invasion Status

Directions: Place the appropriate numerical score (or "U") in the Score column next to the selected answer to each of these 18 questions.

1. Current Invasion in Ohio

- plant is not found in natural areas (0 pts.)
- plant is found in natural areas but only because it persist from previous planting in that location (e.g. old home sites) (0 pts.)
- plant is only expanding from sites of previous planting (1 pt.)
- plant occurs in natural areas away from site of planting (3 pts.)
- Information unknown (U)

3

Species is present in natural areas, but how it arrived there is not documented.

1,2

2. State Distribution^a

- plant is not naturalized in any region of Ohio (0 pts.)
- plant is naturalized in only one region in Ohio (1 pt.)

- plant is naturalized in two regions in Ohio (2 pts.)
- plant is naturalized in three regions in Ohio (3 pts.)
- plant is naturalized in four regions in Ohio (4 pts.)
- plant is naturalized in five regions in Ohio (5 pts.)
- Information unknown (U)

3

regions 2,3,4

1,2

3. Regional/US Distribution

- plant is not considered to be a problem in any other state (0 pts.)
- plant has been reported as a widespread problem in another non-neighboring state within the USDA Plant Hardiness Zones 5-6 (1 pt.)
- plant has been reported to be a widespread problem in 1-2 adjoining states (3 pts.)
- plant has been reported to be a widespread problem in 3 or more adjoining states (5 pts.)
- plant has been reported to be a widespread problem in similar habitat outside the US (1 pt.)

3

One adjoining state (PA), as well as MA; 14=>also considered an invasive in NY; 15=>"Porcelain berry is common throughout the eastern United States" and "distributed from New Hampshire south to Georgia and west to Iowa." 17,18=>invasive in NY

3,7,14,15,17,18

- Information unknown (U)

Step II: Biological Characters

4. Vegetative Reproduction

- no vegetative reproduction (0 pts.)
- reproduces readily within the original site (1 pt.)
- has runners or spreading rhizomes that root easily (3 pts.)
- fragments easily and fragments can be easily dispersed (4 pts.)
- has runners or spreading rhizomes that root easily AND fragments easily and fragments can be easily dispersed (5 pts.)
- Information unknown (U)

3

9,11

5. Sexual Reproduction

- no sexual reproduction (0 pts.)
- infrequent sexual reproduction (1 pt.)
- frequent sexual reproduction, but high variation among years in seed production (3 pts.)
- frequent sexual reproduction (one or more events per year) (5 pts.)
- Information unknown (U)

3

Produces flowers and seeds throughout summer. Default answer is 3 pts because there is no info regarding variation among seed production.

1,8

6. Number of Viable Seeds or Propagules per Plant

- few (0-10) (1 pt.)
- moderate (11-1,000) (3 pts.)
- prolific (>1,000) (5 pts.)

3

15=>up to 48 inflorescences per plant when grown with Virginia creeper but reduced 55-70% when grown with other invasive vines. [Assuming that each flower may produce at least one seed, 3 pts is the conservative answer here.]

15

- Information unknown (U)

7. Flowering Period

- one month or less per year (0 pts.)
- two months (1 pt.)
- three to five months (2 pts.)
- longer than five months (3 pts.)

2

Species flowers throughout the summer (June-Sept).

8,9,10,11

- Information unknown (U)

8. Dispersal Ability

- low potential for long-distance seed/propagule dispersal (>1km) (0 pts.)
- medium potential for long-distance seed/propagule dispersal (3 pts.)
- high potential for long-distance seed/propagule dispersal (5 pts.)

- Information unknown (U)

9. Generation Time

- long juvenile period (>5 or more years for trees, 3 or more years for other growth forms) (0 pts.)
- short juvenile period (<5 years for trees, <3 years for other forms) (3 pts.)
- Information unknown (U)

10. Establishment

- unable to invade natural areas (0 pts.)
- can only colonize certain habitat stages (e.g. early successional habitats) (1 pt.)
- aggressively colonizes and establishes in edge habitats (3 pts.)
- aggressively colonizes and establishes in intact and healthy natural areas (6 pts.)
- Information unknown (U)

Step II: Ecological Importance

11. Impact on Ecosystem Processes

- no known effect on ecosystem-level processes (0 pts.)
- moderate effects on ecosystem-level processes (e.g., changes in nutrient cycling)(3 pts.)
- causes long-term, substantial alterations in the ecosystem (e.g., changing fire regime of an area, changing hydrology of wetlands) (6 pts.)

12. Impact on Rare Organisms

- no known negative impact on Ohio State-listed or federal-listed plants or animals (0 pts.)
- negatively impacts listed species, such as through displacement or interbreeding (3 pts.)

13. Impact on Native Animals

- no known negative impact on animals (0 pts.)
- documented direct or indirect negative effects on animal taxa (3 pts.)

14. Impact on Native Plants

- no known negative effects on native plants (0 pts.)
- negatively impacts some native plants (increasing their mortality and/or recruitment of certain taxa) (3 pts.)
- impacts native plants to such an extent that community structure is greatly altered (6 pts.)

5

8=>Seeds dispersed by birds, small animals, and white-tailed deer; Seeds also float and might disperse through waterways. 15=>"Porcelain berry's chief attraction is its colorful berries, which are spread by water, birds, and possibly other animals (Mehrhoff et al. 2003)." 17=>bird dispersed.

8,15,17

3

Within 2 years

10,11

3

15=>plant forms large mats, especially along edge habitats and in waste places.

8,15

0

16=>species had higher litter decomposition rate than native species. 18=>species had lower leaf loss and higher biomass than grape in early establishment. [Still need more concrete information to answer this question.]

16,18

0

no evidence

0

no evidence

3

Shades out other plants (seedlings, saplings, small trees) and when growing vertically on another plant, the species makes the host plant

8,11,15,17,18

15. Hybridization

- no known instances of hybridization with other plant species (0 pts.)
- can hybridize with native Ohio plants or commercially-available species, but seeds are inviable (1 pt.)
- can hybridize with native Ohio plants or commercially-available species, producing viable seed (3 pts.)

0

no evidence

16. Population Density

- occurs only as small, sporadic populations or individuals (1 pt.)
- typically forms small, monospecific patches (3 pts.)
- is a dominant plant in area where population occurs (absolute cover 15-50%) (4 pts.)
- forms an extensive, monospecific stand (absolute cover >50%) (5 pts.)

3

This is a dominant plant species in some natural areas in New England. "Porcelainberry vines can dominate the vegetation by forming a uniform "blanket" over shrubs, trees, and the ground, especially on forest edges. In New York, porcelainberry maintained well over 100% combined cover with Amur honeysuckle (Lonicera maackii) on some sites" (8).

8

17. Role in Succession in Natural Areas

- successional information is unknown (0 pts.)
- is an early successional species that temporarily invades a disturbed site but does not persist as the site matures (0 pts.)
- readily invades disturbed sites and persists, but does not interfere with succession (1 pt.)
- readily invades disturbed sites, persists and interferes with succession of native plants (4 pts.)

0

8=> Species occurs in natural areas of all phases of succession. Is capable of influencing "succession by killing supportive vegetation and preventing seedling emergence". 14=>species appears to be tolerant of herbivory (similar to native species). 18=>"18=>species had lower leaf loss and higher biomass than grape in early establishment."

8,14,18

18. Number of Habitats Invaded

Forestlands: Floodplain forest, hemlock-hardwood forest, mixed mesophytic forest, beech-maple forest, oak-maple forest, oak-hickory forest.

Grasslands: Alvar*, beach-dune community*, bur oak savanna*, slough-grass-bluejoint prairie*, sand barren*, big bluestem prairie, little bluestem prairie

Wetlands: Bog*, fen*, twigrush-wiregrass wet prairie*, marsh, buttonbush swamp, mixed shrub swamp, hemlock-hardwood swamp*, maple-ash-oak swamp,

* Considered a rare plant community in Ohio by ODW's Biodiversity Database Program.

+ = xeric limestone prairies or cedar glades and post oak openings are unique to the Interior Low Plateau Region of Adams, Highland and Pike Counties, and are not included in Schneider and Cochrane (1997)

- not found in any natural habitats in Ohio (0 pts.)
- only found in 1 broad category (1 pt.)
- found in 2 broad categories or 2 rare habitat types (3 pts.)
- found in 3 broad categories or 3 rare habitat types (4 pts.)
- found in 4 or more rare habitat types (5 pts.)

3

15=>"streams and rivers, as well as in early successional fields, edges, pastures, railroad and utility rights-of-way, and waste places where there are moist soils and partial to full sun (Mehrhoff et al. 2003)." 17=>found in

8,9,15,17

Total Score:

40

Number of Unknowns:

0

Total Points	Assessment Decision
4 or more U	Insufficient Data
0-34	Not Known to be Invasive
35-44	Pending Further Review
45-80	Invasive

Outcome:

Pending Further Review