

NAME OF SPECIES: <i>Ampelopsis brevipedunculata</i> (Maxim.) Trautv. (1)	
Synonyms: <i>Ampelopsis brevipedunculata</i> (Maxim.) Trautv. var. <i>maximowiczii</i> (Regel) Rehder; <i>Ampelopsis heterophylla</i> (Thunb.) Siebold & Zucc. (1) <i>Ampelopsis brevipedunculata</i> var. <i>elegans</i> (K. Koch) L. H. Bailey; <i>Ampelopsis glandulosa</i> var. <i>brevipedunculata</i> (Maxim.) Momiy.; <i>Ampelopsis glandulosa</i> var. <i>heterophylla</i> (Thunb.) Momiy.; <i>Cissus brevipedunculata</i> Maxim. (basonym); <i>Vitis brevipedunculata</i> (Maxim.) Dippel; <i>Vitis heterophylla</i> Thunb. (3)	
Common Name: Porcelain berry, Amur pepper-vine, porcelain-berry, turquoise-berry (1)	
A. CURRENT STATUS AND DISTRIBUTION	
I. In Wisconsin?	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	2. <u>Abundance</u> : 2 recorded occurrences in WI. (1)
	3. <u>Geographic Range</u> : Noted from 2 WI counties (1)
	4. <u>Habitat Invaded</u> : Roadside, oak woods (1) Disturbed Areas <input checked="" type="checkbox"/> Undisturbed Areas <input type="checkbox"/>
	5. <u>Historical Status and Rate of Spread in Wisconsin</u> : First documented in 1999. (1)
	6. <u>Proportion of potential range occupied</u> : Probably less than 1%.
II. Invasive in Similar Climate Zones	1. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	<u>Where (include trends)</u> : Massachusetts - Occurs in upland woodland edges and thickets and grows in full sun to partial shade (5). Porcelain-berry is found from New England to North Carolina and west to Michigan and is reported to be invasive in twelve states in the Northeast (10).
III. Invasive in Similar Habitat Types	1. Upland <input checked="" type="checkbox"/> Wetland <input checked="" type="checkbox"/> Dune <input type="checkbox"/> Prairie <input type="checkbox"/> Aquatic <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Grassland <input type="checkbox"/> Bog <input type="checkbox"/> Fen <input type="checkbox"/> Swamp <input type="checkbox"/> Marsh <input type="checkbox"/> Lake <input checked="" type="checkbox"/> Stream <input checked="" type="checkbox"/> Other: In New England porcelain berry is found in the following habitats: Abandoned Field Early Successional Forest; Edge Pasture; Planted Forest; Railroad Right-of-Way; Roadside; Utility Right-of-Way; Vacant Lot; Yard or Garden. It prefers moist soils and partial sun. It grows well along stream banks and thickets. It can also be found along shorelines, or in hedges. (6)
IV. Habitat Effected	1. <u>Soil types favored or tolerated</u> : Porcelain berry has no particular soil preference (4). <i>A. brevipedunculata</i> is drought-tolerant. It is adaptable to poor soils of varying pH (9). The plant prefers light (sandy), medium (loamy) and heavy (clay) soils and can grow in nutritionally poor soil. The plant prefers acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. It requires moist soil. (12)
	2. <u>Conservation significance of threatened habitats</u> :
V. Native Habitat	1. <u>List countries and native habitat types</u> : Far eastern Russia, China, Japan, Korea, & Taiwan (3). Thickets in hills all over Japan, and climbing up trees in valleys or over shrubs on hillsides at elevations of 100 - 600 metres in Heilongjiang, Jilin and Liaoning provinces of China (12).

VI. Legal Classification	<p>1. <u>Listed by government entities?</u> Connecticut - potentially invasive-not banned; Massachusetts - prohibited. (2)</p> <p>2. <u>Illegal to sell?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Massachusetts (2)</p>
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS	
I. Life History	<p>1. <u>Type of plant:</u> Annual <input type="checkbox"/> Biennial <input type="checkbox"/> Monocarpic Perennial <input type="checkbox"/> Herbaceous Perennial <input type="checkbox"/> Vine <input checked="" type="checkbox"/> Shrub <input type="checkbox"/> Tree <input type="checkbox"/></p> <p>2. <u>Time to Maturity:</u></p> <p>3. <u>Length of Seed Viability:</u> Seed may be viable in the soil for several years (7).</p> <p>4. <u>Methods of Reproduction:</u> Asexual <input checked="" type="checkbox"/> Sexual <input checked="" type="checkbox"/> <u>Notes:</u> A. brevipedunculata reproduces by seed and vegetatively from stem or root segments (9). Resprouting will occur in response to cutting of above-ground portions (7).</p> <p>5. <u>Hybridization potential:</u></p>
II. Climate	<p>1. <u>Climate restrictions:</u> Hardiness Zones: 4 to 8. (4)</p> <p>2. <u>Effects of potential climate change:</u></p>
III. Dispersal Potential	<p>1. <u>Pathways - Please check all that apply:</u></p> <p><u>Unintentional:</u> Bird <input checked="" type="checkbox"/> Animal <input checked="" type="checkbox"/> Vehicles/Human <input type="checkbox"/> Wind <input type="checkbox"/> Water <input checked="" type="checkbox"/> Other: The fruit can float, so water can disperse these plants long distances (6).</p> <p><u>Intentional:</u> Ornamental <input checked="" type="checkbox"/> Forage/Erosion control <input checked="" type="checkbox"/> Medicine/Food: <input type="checkbox"/> Other: Still for sale on multiple internet horticulture/nursery sites (8). Food and/or habitat for wildlife; erosion control on slopes; stream and river bank stabilization (13).</p> <p>2. <u>Distinguishing characteristics that aid in its survival and/or inhibit its control:</u> Ampelopsis brevipedunculata grows rapidly and is difficult to control. The seeds are known to have a high germination rate, aiding the establishment of this plant. (6). Porcelain-berry vines can grow up to 15 ft. in a single growing season, especially when rainfall is abundant (7).</p>
IV. Ability to go Undetected	<p>1. HIGH <input type="checkbox"/> MEDIUM <input checked="" type="checkbox"/> LOW <input type="checkbox"/></p>
C. DAMAGE POTENTIAL	
I. Competitive Ability	<p>1. <u>Presence of Natural Enemies:</u> Nine species of fungi and thirteen species of arthropods have been recorded for Ampelopsis species. (10)</p> <p>2. <u>Competition with native species:</u> This climbing vine shades out native shrubs and young trees (11).</p> <p>3. <u>Rate of Spread:</u> -changes in relative dominance over time: -change in acreage over time:</p>

	HIGH(1-3 yrs) <input type="checkbox"/> MEDIUM (4-6 yrs) <input type="checkbox"/> LOW (7-10 yrs) <input type="checkbox"/> Notes:
II. Environmental Effects	<p>1. <u>Alteration of ecosystem/community composition?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Outcompetes native plants for water and nutrients, and forms monoculture thickets (8).</p> <p>2. <u>Alteration of ecosystem/community structure?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: Because it is a vine, Ampelopsis brevipedunculata has the ability to grow up and smother native vegetation (6). Can shade out trees, shrubs, and understory (8).</p> <p>3. <u>Alteration of ecosystem/community functions and processes?</u> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Notes: None mentioned, but large accumulation of biomass may affect organic matter, nutrient content of soil and fire regime (inferred) (8).</p> <p>4. <u>Allelopathic properties?</u> YES <input type="checkbox"/> NO <input type="checkbox"/> Notes:</p>
D. SOCIO-ECONOMIC Effects	
I. Positive aspects of the species to the economy/society:	Notes: Ornamental vine, including the cultivar 'Elegans' - The young leaves are white tinged with pink but become green with white variegations at maturity(4). Leaves, leaf buds, and stems are edible. Medicinal uses: The fresh fruits, roots and leaves are antiphlogistic, depurative and febrifuge. Resolves clots. It is used externally in the treatment of boils, abscesses and ulcers, traumatic bruises and aches. (12)
II. Potential socio-economic effects of requiring controls: Positive: Negative:	Notes: A proven invasive and favorite food of Japanese beetle. Its variegated (and less vigorous) cultivar 'Elegans' is a popular landscape vine. The 2006 Wisconsin Nursery Association's Wholesale Source Book lists 7 growers, most likely of the cultivar 'Elegans'. (14)
III. Direct and indirect socio-economic effects of plant:	Notes: One nursery sells \$500/year (didn't care if it was regulated), variegated is in commerce- Johnson's Nursery stopped growing because so invasive, did grow var. it does come true from seed- comes out as var., compared to species, didn't seem to be a problem, but not worth the risk to keep growing it (15)
IV. Increased cost to sectors caused by the plant:	Notes:
V. Effects on human health:	Notes:
VI. Potential socio-economic effects of restricting use: Positive: Negative:	Notes:
E. CONTROL AND PREVENTION	
I. Costs of Prevention (including education; please be as specific as possible):	Notes:

II. Responsiveness to prevention efforts:	Notes: Most effective control is removal from commercial trade and the use of alternative plants for landscaping and gardening (7).
III. Effective Control tactics:	Mechanical <input checked="" type="checkbox"/> Biological <input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Times and uses: Chemical control in combination with manual and mechanical methods is effective and likely to be necessary for large infestations. The systemic herbicides triclopyr and glyphosate have been used successfully. (7)
IV. Minimum Effort:	Notes: Prevention of flowering, fruiting and production of mature seeds will help reduce its spread (7).
V. Costs of Control:	Notes:
VI. Cost of prevention or control vs. Cost of allowing invasion to occur:	Notes:
VII. Non-Target Effects of Control:	Notes: Because the roots of <i>A. brevipedunculata</i> plants often merge with shrubs or other desirable vegetation, manual removal is difficult in well-established patches without damaging the desirable vegetation as well (9).
VIII. Efficacy of monitoring:	Notes:
IX. Legal and landowner issues:	Notes:

F. REFERENCES USED:

- UW Herbarium
- WI DNR
- TNC
- Native Plant Conservation Alliance
- IPANE
- USDA Plants

Number	Reference
1	Wisconsin State Herbarium. 2007. WISFLORA: Wisconsin Vascular Plant Species (http://www.botany.wisc.edu/wisflora/). Dept. Botany, Univ. Wisconsin, Madison, WI 53706-1381 USA.
2	USDA, NRCS. 2007. The PLANTS Database (http://plants.usda.gov , 13 April 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA
3	USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?2964 (13 April 2007)
4	Michigan State University Extension. http://web1.msue.msu.edu/msue/imp/modop/00001938.html
5	The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts. Massachusetts Invasive Plant Advisory Group, February 28, 2005.
6	IPANE. http://www.lib.uconn.edu/webapps/ipane/browsing.cfm?descriptionid=38
7	PCA Alien Plant Working Group. http://www.nps.gov/plants/alien/fact/ambr1.htm
8	NatureServe Explorer at http://www.natureserve.org/explorer were updated to be current with NatureServe's central databases as of February 10, 2007. All other data were updated as of October 6, 2006. Note: This report was printed on April 13, 2007
9	Global Invasive Species Database, 2007. <i>Ampelopsis brevipedunculata</i> . Available from: http://www.issg.org/database/species/ecology.asp?si=292&fr=1&sts=sss [Accessed 13 April 2007].
10	USDA Forest Service, Weed of the Week. WOW 07-13-06.

	http://www.na.fs.fed.us/fhp/invasive_plants/weeds/porcelain-berry.pdf
11	Swearingen, J., K. Reshetiloff, B. Slattery, and S. Zwicker. 2002. Plant Invaders of Mid-Atlantic Natural Areas. National Park Service and U.S. Fish & Wildlife Service, 82 pp. http://www.invasive.org/eastern/midatlantic/ambr.html
12	Plants for a Future. http://www.pfaf.org/database/plants.php?Ampelopsis+brevipedunculata
13	Energent vegetation of the urban ecosystem. http://www.gsd.harvard.edu/loeb_library/information_systems/projects/E_vue/plants/ampelopsis_breviped.htm
14	Ed Hasselkus, UW Emeritus Horticulture Professor. Comments on Invasive Plant Classification 2007.
15	SAG Meeting, 9-17-07

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