

Taxon: Clerodendrum xspeciosum Dombrain

Family: Lamiaceae

Common Name(s): Java glory bean
pagoda flower

Synonym(s): Clerodendrum thomsonae f.
Clerodendrum umbellatum var.

Assessor: Chuck Chimera

Status: Assessor Approved

End Date: 27 Apr 2020

WRA Score: 1.0

Designation: EVALUATE

Rating: Evaluate

Keywords: Tropical Climber, Naturalizes, Sterile Hybrid, Spreads Vegetatively, Resprouts

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	Low
203	Broad climate suitability (environmental versatility)	y=1, n=0	n
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	y
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	y
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	y
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n
408	Creates a fire hazard in natural ecosystems		
409	Is a shade tolerant plant at some stage of its life cycle		

Qsn #	Question	Answer Option	Answer
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	y
411	Climbing or smothering growth habit	y=1, n=0	y
412	Forms dense thickets	y=1, n=0	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	n
603	Hybridizes naturally		
604	Self-compatible or apomictic		
605	Requires specialist pollinators		
606	Reproduction by vegetative fragmentation	y=1, n=-1	y
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	n
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed		
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	n
801	Prolific seed production (>1000/m ²)	y=1, n=-1	n
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	n
803	Well controlled by herbicides	y=-1, n=1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	Is the species highly domesticated?	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Discrepancies exist regarding the nature of this taxon. Originally (1869), it was described as a hybrid under the name of <i>C. x speciosum</i> . Later, Voss (1894) considered this taxon as a form of <i>C. thomsonae</i> and Moldenke (1937) as a variety of <i>C. umbellatum</i> Poir. Moldenke, in 1983, changed his opinion, recognizing it as a form of <i>C. thomsonae</i> , but pointed out that the studies necessary to discard its hybrid nature do not yet exist."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Discrepancies exist regarding the nature of this taxon. Originally (1869), it was described as a hybrid under the name of <i>C. x speciosum</i> . Later, Voss (1894) considered this taxon as a form of <i>C. thomsonae</i> and Moldenke (1937) as a variety of <i>C. umbellatum</i> Poir. Moldenke, in 1983, changed his opinion, recognizing it as a form of <i>C. thomsonae</i> , but pointed out that the studies necessary to discard its hybrid nature do not yet exist. Due to the fact that the nature of this taxon has not been established with certainty, it seems to me appropriate to utilize the name of <i>C. x speciosum</i> , this being the most widely used name."

Qsn #	Question	Answer
202	Quality of climate match data	Low
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Discrepancies exist regarding the nature of this taxon. Originally (1869), it was described as a hybrid under the name of <i>C. x speciosum</i> . Later, Voss (1894) considered this taxon as a form of <i>C. thomsonae</i> and Moldenke (1937) as a variety of <i>C. umbellatum</i> Poir. Moldenke, in 1983, changed his opinion, recognizing it as a form of <i>C. thomsonae</i> , but pointed out that the studies necessary to discard its hybrid nature do not yet exist. Due to the fact that the nature of this taxon has not been established with certainty, it seems to me appropriate to utilize the name of <i>C. x speciosum</i> , this being the most widely used name." [Putative hybrid or variety of tropical plants]

203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"Hardiness: USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)"
	Plant Lust. (2020). <i>Clerodendrum x speciosum</i> . https://plantlust.com/plants/28936/clerodendrum-x-speciosum/ . [Accessed 27 Apr 2020]	"zones 8b-11"

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Preferred Climate/s: Mediterranean, Subtropical, Tropical"
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Status: Exotic, cultivated, persistent and naturalized in some localities in Puerto Rico. Distribution: Common in gardens in Puerto Rico and the Virgin Islands. Cultivated throughout the tropics."

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Common in gardens in Puerto Rico and the Virgin Islands. Cultivated throughout the tropics."
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Occasionally grown in Hawaii ..."

301	Naturalized beyond native range	y
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Qsn #	Question	Answer
	Source(s)	Notes
	McCormack, G. 2007. Cook Islands Biodiversity Database, Version 2007.2. Cook Islands Natural Heritage Trust, Rarotonga. http://cookislands.bishopmuseum.org . [Accessed 27 Apr 2020]	"COOK ISLANDS STATUS: Introduced - Recent, Not naturalised; Land, lowlands"
	Kar, A., Goswami, N. K., & Saharia, D. (2012). Occurrence and uses of <i>Clerodendrum</i> Linnaeus (Verbenaceae) in Assam, India. <i>Pleione</i> 6(1): 101-109	"It is interesting to note that a good number of recorded species of <i>Clerodendrum</i> Linnaeus are grown as ornamentals. Introduced ornamentals like <i>C. thomsonae</i> and <i>C. x speciosum</i> were never naturalized in this region."
	Gann GD, Stocking CG and Collaborators. (2001-2019). Floristic Inventory of South Florida Database Online. The Institute for Regional Conservation. Delray Beach, Florida. https://www.regionalconservation.org/ . [Accessed 27 Apr 2020]	"SOUTH FLORIDA Native Status: Not Native, Naturalized"
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Status: Exotic, cultivated, persistent and naturalized in some localities in Puerto Rico."
	Guézou, A., Trueman, M., Buddenhagen, C. E., Chamorro, S., Guerrero, A. M., Pozo, P., & Atkinson, R. (2010). An extensive alien plant inventory from the inhabited areas of Galapagos. <i>PLoS One</i> , 5(4), e10276	"Table S1 ... <i>Clerodendrum x speciosum</i> ... Cu) Cultivated (introduced for cultivation, not naturalized)"
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence in the Hawaiian Islands to date

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289/ . [Accessed 27 Apr 2020]	"On Mar 20, 2016, coriaceous from ROSLINDALE, MA wrote: ... I'd be reluctant to plant this in the ground in a semitropical garden without a root barrier, because of the aggressive spreading, but this is not listed as an ecologically invasive plant (a hazard to the natural environment) anywhere."
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

Qsn #	Question	Answer
305	Congeneric weed	y
	Source(s)	Notes
	CABI. (2020). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	"C. chinense is a highly invasive weed in tropical and subtropical ecosystems. " ... "C. indicum is a small shrub which is listed in the Global Compendium of Weeds as 'environmental weed' 'naturalized' and 'weed' (Randall, 2012)." ... "C. speciosissimum is an attractive shrub or subshrub listed as an environmental weed, naturalized weed, and cultivation escape" ... "C. quadriloculare is a highly invasive perennial shrub."

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[No evidence] "Slightly woody vine, twining, attaining 3 m in length. Stems obtusely quadrangular, striate, minutely puberulent; stipules absent. Leaves opposite, 7.5-15.5 × 5.7-8 cm, elliptical or ovate, chartaceous, the apex acuminate, the base rounded or cordiform, the margins entire or remotely sinuate; upper surface glabrous; lower surface glabrous, pale green, with numerous dots, the veins prominent and minutely puberulent; petioles 1-2 cm long, sulcate, puberulent. Inflorescences of axillary dichasial cymes; bracts minute, subulate."

402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Slightly woody vine, twining, attaining 3 m in length." [Lamiaceae (alt.Labiatae). No evidence]

404	Unpalatable to grazing animals	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	Unknown. Other species may be palatable

405	Toxic to animals	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"Danger: N/A"

Qsn #	Question	Answer
	Gardenersworld.com (2020). <i>Clerodendrum x speciosum</i> . https://www.gardenersworld.com/plants/clerodendrum-x-speciosum/ . [Accessed 27 Apr 2020]	"No reported toxicity to: No reported toxicity to Birds No reported toxicity to Cats No reported toxicity to Dogs No reported toxicity to Horses No reported toxicity to Livestock No reported toxicity to People"
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	The Royal Horticultural Society. (2020). <i>Clerodendrum x speciosum</i> - Java glory bean. https://www.rhs.org.uk . [Accessed 27 Apr 2020]	"Pests - Can get glasshouse red spider mite and glasshouse whitefly Diseases - Generally disease free"

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum Clerodendrum Species, Heart Vine, Java Glory Vine - Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"Danger: N/A"
	Gardenersworld.com (2020). <i>Clerodendrum x speciosum</i> . https://www.gardenersworld.com/plants/clerodendrum-x-speciosum/ . [Accessed 27 Apr 2020]	"No reported toxicity to: No reported toxicity to Birds No reported toxicity to Cats No reported toxicity to Dogs No reported toxicity to Horses No reported toxicity to Livestock No reported toxicity to People"
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Slightly woody vine, twining, attaining 3 m in length." [Unknown. Probably not, but could potentially act as a fuel ladder in fire prone habitats]

409	Is a shade tolerant plant at some stage of its life cycle	

Qsn #	Question	Answer
	Source(s)	Notes
	Gardenersworld.com (2020). <i>Clerodendrum x speciosum</i> . https://www.gardenersworld.com/plants/clerodendrum-x-speciosum/ . [Accessed 27 Apr 2020]	"Sun exposure: Dappled shade, full sun, partial shade"
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289/ . [Accessed 27 Apr 2020]	"Sun Exposure: Full Sun"
	The Royal Horticultural Society. (2020). <i>Clerodendrum x speciosum</i> - Java glory bean. https://www.rhs.org.uk . [Accessed 27 Apr 2020]	"Sunlight Full Sun Partial Shade"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	The Royal Horticultural Society. (2020). <i>Clerodendrum x speciosum</i> - Java glory bean. https://www.rhs.org.uk . [Accessed 27 Apr 2020]	"Moisture Moist but well-drained Soil Loam, Clay, Sand pH Acid, Alkaline, Neutra"
	Gardenersworld.com (2020). <i>Clerodendrum x speciosum</i> . https://www.gardenersworld.com/plants/clerodendrum-x-speciosum/ . [Accessed 27 Apr 2020]	"Soil type: Clay / heavy / moist / well drained / light / sandy"

411	Climbing or smothering growth habit	y
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Slightly woody vine, twining, attaining 3 m in length."

412	Forms dense thickets	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Slightly woody vine, twining, attaining 3 m in length."

501	Aquatic	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[Terrestrial] "Distribution: Common in gardens in Puerto Rico and the Virgin Islands. Cultivated throughout the tropics."

502	Grass	n
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Qsn #	Question	Answer
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/ . [Accessed 24 Apr 2020]	Family: Lamiaceae (alt.Labiatae) Subfamily: Ajugoideae

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/ . [Accessed 24 Apr 2020]	Family: Lamiaceae (alt.Labiatae) Subfamily: Ajugoideae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Slightly woody vine, twining, attaining 3 m in length."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[NA] "Due to the fact that the nature of this taxon has not been established with certainty, it seems to me appropriate to utilize the name of <i>C. x speciosum</i> , this being the most widely used name."

602	Produces viable seed	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Fruit unknown."
	Dave's Garden. (2020). <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289/ . [Accessed 27 Apr 2020]	"On Mar 20, 2016, coriaceous from ROSLINDALE, MA wrote: ... It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds."

603	Hybridizes naturally	
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Qsn #	Question	Answer
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[Putative hybrid. Unknown if able to hybridize with other taxa] "Discrepancies exist regarding the nature of this taxon. Originally (1869), it was described as a hybrid under the name of <i>C. x speciosum</i> . Later, Voss (1894) considered this taxon as a form of <i>C. thomsonae</i> and Moldenke (1937) as a variety of <i>C. umbellatum</i> Poir. Moldenke, in 1983, changed his opinion, recognizing it as a form of <i>C. thomsonae</i> , but pointed out that the studies necessary to discard its hybrid nature do not yet exist."

604	Self-compatible or apomictic	
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[Unknown, but probably irrelevant. Reported to be a sterile hybrid] "Inflorescences of axillary dichasial cymes; bracts minute, subulate. Calyx more or less urceolate, 1.0-1.5 cm long, intense pink to purple, puberulent, the sepals lanceolate, connate at the base, acuminate at the apex; corolla red or red-orange, hypocrateriform, 2.5-3 cm long, the tube quite narrow, the lobes rounded; filaments pink, twice as long as the corolla; style pink, as long as the filaments. Fruit unknown."

605	Requires specialist pollinators	
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	[Unknown, but probably irrelevant. Reported to be a sterile hybrid] "Inflorescences of axillary dichasial cymes; bracts minute, subulate. Calyx more or less urceolate, 1.0-1.5 cm long, intense pink to purple, puberulent, the sepals lanceolate, connate at the base, acuminate at the apex; corolla red or red-orange, hypocrateriform, 2.5-3 cm long, the tube quite narrow, the lobes rounded; filaments pink, twice as long as the corolla; style pink, as long as the filaments. Fruit unknown."

606	Reproduction by vegetative fragmentation	y
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds. I'd be reluctant to plant this in the ground in a semitropical garden without a root barrier, because of the aggressive spreading, but this is not listed as an ecologically invasive plant (a hazard to the natural environment) anywhere."

Qsn #	Question	Answer
607	Minimum generative time (years)	
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	[Time to maturity unknown, but irrelevant. A sterile hybrid that spreads vegetatively] "It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds." [Could potentially be spread by discarded cuttings or plant material]

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Common in gardens in Puerto Rico and the Virgin Islands. Cultivated throughout the tropics."
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Occasionally grown in Hawaii ..."

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	[No evidence] "It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds. I'd be reluctant to plant this in the ground in a semitropical garden without a root barrier, because of the aggressive spreading, but this is not listed as an ecologically invasive plant (a hazard to the natural environment) anywhere."

704	Propagules adapted to wind dispersal	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Fruit unknown."

Qsn #	Question	Answer
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds. I'd be reluctant to plant this in the ground in a semitropical garden without a root barrier, because of the aggressive spreading, but this is not listed as an ecologically invasive plant (a hazard to the natural environment) anywhere."

705	Propagules water dispersed	
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	[Unknown. Possible that stem fragments could be moved by water if plants are cultivated in riparian areas.] "It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds. I'd be reluctant to plant this in the ground in a semitropical garden without a root barrier, because of the aggressive spreading, but this is not listed as an ecologically invasive plant (a hazard to the natural environment) anywhere."

706	Propagules bird dispersed	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Fruit unknown." [Genus has bird dispersed species, but this is a sterile hybrid that is cultivated, and may spread vegetatively]

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds. I'd be reluctant to plant this in the ground in a semitropical garden without a root barrier, because of the aggressive spreading, but this is not listed as an ecologically invasive plant (a hazard to the natural environment) anywhere."

708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Clerodendrum</i> <i>Clerodendrum</i> Species, Heart Vine, Java Glory Vine - <i>Clerodendrum speciosum</i> . https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	[Sterile hybrid] "It has a reputation for producing suckers at a substantial distance from the first stem. It is a sterile hybrid and does not produce viable seeds. I'd be reluctant to plant this in the ground in a semitropical garden without a root barrier, because of the aggressive spreading, but this is not listed as an ecologically invasive plant (a hazard to the natural environment) anywhere."

801	Prolific seed production (>1000/m2)	n
	Source(s)	Notes

Qsn #	Question	Answer
	Acevedo-Rodríguez, P. 2005. Vines and Climbing Plants of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium Volume 51: 1-483. Smithsonian Institution, Washington, D.C.	"Fruit unknown."
	Dave's Garden. (2020). Clerodendrum Clerodendrum Species, Heart Vine, Java Glory Vine - Clerodendrum speciosum. https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"It is a sterile hybrid and does not produce viable seeds"

802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	Notes
	Dave's Garden. (2020). Clerodendrum Clerodendrum Species, Heart Vine, Java Glory Vine - Clerodendrum speciosum. https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	"It is a sterile hybrid and does not produce viable seeds"

803	Well controlled by herbicides	y
	Source(s)	Notes
	Swarbrick, J.T. 1997. Weeds of the Pacific Islands. Technical paper no. 209. South Pacific Commission, Noumea, New Caledonia	[Control methods for <i>C. chinense</i> would likely be effective] "Probably susceptible to: 1) foliar application of arboricides such as picloram, metsulfuron methyl, glyphosate and triclopyr at standard rates and dilutions; 2) cut-stump application of the same herbicides; 3) soil application of hexazinone, karbutilate, fluroxypyr and bromacil at standard rates"
	Englberger, K. 2009. Invasive weeds of Pohnpei: A guide for identification and public awareness. Conservation Society of Pohnpei, Kolonia, FM	[Control methods for <i>C. chinense</i> would likely be effective] "Young plants can be sprayed by a herbicide such as triclopyr (Garlon 4). Undiluted herbicide can be applied to the cut stems of larger plants with woody stems"
	Motooka, P., Castro, L., Nelson, D., Nagai, G. & Ching, L. 2003. Weeds of Hawaii's Pastures and Natural Areas: An Identification and Management Guide. CTAHR, UH Manoa, Honolulu, HI	[Control methods for <i>C. chinense</i> would likely prove effective] "A little work done suggests hormone-type herbicides in timely repeat applications will control this weed"

804	Tolerates, or benefits from, mutilation, cultivation, or fire	y
	Source(s)	Notes
	Dave's Garden. (2020). Clerodendrum Clerodendrum Species, Heart Vine, Java Glory Vine - Clerodendrum speciosum. https://davesgarden.com/guides/pf/go/60289// . [Accessed 27 Apr 2020]	[Tolerates and resprouts after cutting] "It was grown over a large pergola, but it had also spread far and wide by suckering. The upright suckers had been cut to 1-2' and formed a spectacularly flowering ground cover. "

Qsn #	Question	Answer
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Thrives in tropical climates
- Naturalized in Puerto Rico, and possibly elsewhere, but no evidence in the Hawaiian Islands to date
- Other *Clerodendrum* species are invasive
- Tolerates many soil types
- Climbing, and potentially smothering, growth habit
- Reproduces vegetatively by suckering
- Propagated, and dispersed, intentionally by people
- Able to resprout after cutting

Low Risk Traits

- No reports of negative impacts where cultivated or naturalized
- Unarmed (no spines, thorns, or burrs)
- Non-toxic
- Reported to be a sterile hybrid
- Lack of seed production limits ability to disperse long distances
- Herbicides may provide effective control if needed

Second Screening Results for Vines & Lianas

- (A) Reported as a weed of cultivated lands?> No
(B) Unpalatable to grazers Or known to form dense stands?> Unknown
(C) Shade tolerant or known to form dense stands?> Possibly shade tolerant.
(D) Bird- Or clearly wind- dispersed?> No. Does not produce seeds
Outcome = Evaluate