

Taxon: <i>Dalechampia aristolochiifolia</i> Kunth	Family: Euphorbiaceae
Common Name(s): butterfly purple wings purple wings silk crepe flower	Synonym(s): <i>Dalechampia cordata</i> Ruiz ex Pax & <i>Dalechampia pubescens</i> Ruiz ex Pax

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 11 Jul 2022
WRA Score: 2.0	Designation: L	Rating: Low Risk

Keywords: Tropical Liana, Ornamental, Stinging Hairs, Self-Compatible, Explosively Dehiscent

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)	High
203	Broad climate suitability (environmental versatility)	y=1, n=0	y
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	?
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	n
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	y
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals		
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	y
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)		
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	y
603	Hybridizes naturally	y=1, n=-1	n
604	Self-compatible or apomictic	y=1, n=-1	y
605	Requires specialist pollinators	y=-1, n=0	y
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
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		
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/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
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
	Kubitzki, K. (ed.). (2014). The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales. Springer, New York	"Dalechampia aristolochiifolia Kunth is a recently marketed horticultural vine increasingly cultivated in warm temperate regions for its colorful bracts (generally advertised on the internet incorrectly as <i>D. dioscoreifolia</i>)."
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (Euphorbiaceae). Botanical Journal of the Linnean Society, 105(2), 137-177	No evidence in genus
102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	NA
103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2022). 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
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (Euphorbiaceae). Botanical Journal of the Linnean Society, 105(2), 137-177	"Distribution: seasonal forests, Peru."
202	Quality of climate match data	High
	Source(s)	Notes
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (Euphorbiaceae). Botanical Journal of the Linnean Society, 105(2), 137-177	"Distribution: seasonal forests, Peru."
203	Broad climate suitability (environmental versatility)	y
	Source(s)	Notes
	Tropicos.org. (2022). Tropicos v3.3.2. Missouri Botanical Garden. http://www.tropicos.org/ . [Accessed 8 Jul 2022]	Collected from 500 m to 3000 m elevation in native range [Broad elevation range]
204	Native or naturalized in regions with tropical or subtropical climates	y

Qsn #	Question	Answer
	Source(s)	Notes
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (Euphorbiaceae). <i>Botanical Journal of the Linnean Society</i> , 105(2), 137-177	"Distribution: seasonal forests, Peru."
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence of naturalization in the Hawaiian Islands

205	Does the species have a history of repeated introductions outside its natural range?	?
	Source(s)	Notes
	Kubitzki, K. (ed.). (2014). <i>The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales</i> . Springer, New York	" <i>Dalechampia aristolochiifolia</i> Kunth is a recently marketed horticultural vine increasingly cultivated in warm temperate regions for its colorful bracts (generally advertised on the internet incorrectly as <i>D. dioscoreifolia</i>)."

301	Naturalized beyond native range	n
	Source(s)	Notes
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	WRA Specialist. (2022). Personal Communication	No evidence found in the peer-reviewed literature or web searches

302	Garden/amenity/disturbance 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
	CABI. (2022). <i>Invasive Species Compendium</i> . Wallingford, UK: CAB International. www.cabi.org/isc	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
	CABI. (2022). <i>Invasive Species Compendium</i> . Wallingford, UK: CAB International. www.cabi.org/isc	No evidence

Qsn #	Question	Answer
304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	CABI. (2022). Invasive Species Compendium. Wallingford, UK: CAB International. www.cabi.org/isc	No evidence

305	Congeneric weed	y
	Source(s)	Notes
	Soria, M., Gardener, M. R., & Tye, A. (2002). Eradication of potentially invasive plants with limited distributions in the Galapagos Islands. Turning the tide: the eradication of invasive species, 287-292	"Most invasions commence in the urban and agricultural zones with plants principally dispersing into the National Park along paths and roads (Schofield 1973; Jaramillo 1999). For example, species such as <i>Urochloa brizantha</i> , <i>Abrus precatorius</i> , <i>Dalechampia scandens</i> , and <i>Leucaena leucocephala</i> have dispersed from the agricultural zone and are starting to invade the arid and semi-arid areas of Santa Cruz." ... "A programme to eradicate several species has been initiated in Santa Cruz Island and is to be expanded to other islands. The programme commenced in Santa Cruz because most resources are there and it is the island with the most complete invasive database. Target species include the trees <i>Citharexylum gentryi</i> and <i>Leucaena leucocephala</i> , several scramblers in the genus <i>Rubus</i> , and climbers such as <i>Dalechampia scandens</i> and <i>Pueraria phaseoloides</i> . <i>Rubus</i> spp. in particular are known as invasives worldwide." [Invading natural areas in Galapagos and targeted for control]
	University of Florida, IFAS. (2022). Assessment of Non-Native Plants in Florida's Natural Areas. https://assessment.ifas.ufl.edu/ . [Accessed 8 Jul 2022]	<i>Dalechampia scandens</i> was assessed in 2013 and is "Predicted to be invasive and not recommended by IFAS"

401	Produces spines, thorns or burrs	y
	Source(s)	Notes
	Ensikat, H. J., Wessely, H., Engeser, M., & Weigend, M. (2021). Distribution, ecology, chemistry and toxicology of plant stinging hairs. <i>Toxins</i> , 13(141)	"Figure 3. Morphological and chemical details of <i>Tragia</i> -type stinging hairs on <i>Dalechampia aristolochiifolia</i> plants"
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (Euphorbiaceae). <i>Botanical Journal of the Linnean Society</i> , 105(2), 137-177	"Section 2. <i>Dioscoreifoliae</i> ... Twining or clambering vines (rarely erect subshrubs); vegetative parts with stinging hairs"

402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

Qsn #	Question	Answer
403	Parasitic	n
	Source(s)	Notes
	Macbride, J.F. (1951). Flora of Peru. Volume XIII, Part IIIA, Number 1. Field Museum of Natural History, Chicago	"Liana, the younger branchlets puberulent-tomentulose and sparsely hirsute" [Euphorbiaceae. No evidence]

404	Unpalatable to grazing animals	
	Source(s)	Notes
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (Euphorbiaceae). Botanical Journal of the Linnean Society, 105(2), 137-177	"Twining or clambering vines (rarely erect subshrubs); vegetative parts with stinging hairs" [Stinging hairs may deter browsing]
	Silva, D. M. D., Riet-Correa, F., Medeiros, R. M., & Oliveira, O. F. D. (2006). Toxic plants for livestock in the western and eastern Seridó, state of Rio Grande do Norte, in the Brazilian semiarid. Pesquisa Veterinária Brasileira, 26, 223-236	[<i>Dalechampia</i> spp. suspected, but not confirmed, to be toxic. Palatability unknown, but presumably plants are being consumed by animals either intentionally or incidentally] " <i>Dalechampia</i> sp (tamiarana). Nove entrevistados mencionaram esta planta como causadora de lesões irritativas na mucosa oral em caprinos, bovinos e ovinos." [Translation: <i>Dalechampia</i> sp (tamiarana). Nine respondents mentioned this plant as a cause of irritative lesions in the oral in goats, cattle and sheep.] "Os produtores mencionaram, também, diversas plantas cuja toxicidade, em forma espontânea, não é comprovada. Algumas dessas como <i>Paullinia</i> sp, <i>Passiflora</i> sp, <i>Dalechampia</i> sp e <i>Portulaca oleracea</i> foram testadas experimentalmente sem causarem sinais clínicos (Tokarnia et al. 2000). Dentre essas, <i>Portulaca oleracea</i> é descrita como causando intoxicação por oxalatos em outros países (Radostits et al. 2000)." [Translation: The producers also mentioned several plants whose toxicity, in spontaneous form, is not proven. Some such as <i>Paullinia</i> sp, <i>Passiflora</i> sp, <i>Dalechampia</i> sp and <i>Portulaca oleracea</i> were tested experimentally without causing signs clinical trials (Tokarnia et al. 2000). Among these, <i>Portulaca oleracea</i> is described as causing oxalate poisoning in other countries (Radostits et al. 2000).]
	Assis, T. S., Medeiros, R. M., Araújo, J. A. S. D., Dantas, A. F., & Riet-Correa, F. (2009). Plant poisonings in ruminants and equidae in the Sertao of Paraíba, Brazil. Pesquisa Veterinária Brasileira, 29, 919-924	[Potentially toxic to goats. Unclear if consumption is intentional or incidental] " <i>Dalechampia</i> sp. (tamiarana) da família Euphorbiaceae. Esta planta foi citada por dois produtores, da região de São Domingos e Pombal, como causadora de irritação da mucosa oral e da pele em caprinos." [Translation: <i>Dalechampia</i> sp. (tamiarana) of the family Euphorbiaceae. This plant was mentioned by two producers, from the region of São Domingos and Pombal, as a cause of irritation of the oral mucosa and skin in goats.]

405	Toxic to animals	
	Source(s)	Notes
	Assis, T. S., Medeiros, R. M., Araújo, J. A. S. D., Dantas, A. F., & Riet-Correa, F. (2009). Plant poisonings in ruminants and equidae in the Sertao of Paraíba, Brazil. Pesquisa Veterinária Brasileira, 29, 919-924	" <i>Dalechampia</i> sp. e <i>Croton</i> sp. foram citadas pelos entrevistados como possíveis plantas tóxicas, que ainda não tiveram sua toxicidade comprovada." [Translation: <i>Dalechampia</i> sp. and <i>Croton</i> sp. were cited by interviewed as possible toxic plants, which still their toxicity has not been proven.]

Qsn #	Question	Answer
	Silva, D. M. D., Riet-Correa, F., Medeiros, R. M., & Oliveira, O. F. D. (2006). Toxic plants for livestock in the western and eastern Seridó, state of Rio Grande do Norte, in the Brazilian semiarid. <i>Pesquisa Veterinária Brasileira</i> , 26, 223-236	[<i>Dalechampia</i> spp. suspected, but not confirmed, to be toxic] " <i>Dalechampia</i> sp (tamiarana). Nove entrevistados mencionaram esta planta como causadora de lesões irritativas na mucosa oral em caprinos, bovinos e ovinos." [Translation: <i>Dalechampia</i> sp (tamiarana). Nine respondents mentioned this plant as a cause of irritative lesions in the oral in goats, cattle and sheep.] "Os produtores mencionaram, também, diversas plantas cuja toxicidade, em forma espontânea, não é comprovada. Algumas dessas como <i>Paullinia</i> sp, <i>Passiflora</i> sp, <i>Dalechampia</i> sp e <i>Portulaca oleracea</i> foram testadas experimentalmente sem causarem sinais clínicos (Tokarnia et al. 2000). Dentre essas, <i>Portulaca oleracea</i> é descrita como causando intoxicação por oxalatos em outros países (Radostits et al. 2000)." [Translation: The producers also mentioned several plants whose toxicity, in spontaneous form, is not proven. Some such as <i>Paullinia</i> sp, <i>Passiflora</i> sp, <i>Dalechampia</i> sp and <i>Portulaca oleracea</i> were tested experimentally without causing signs clinical trials (Tokarnia et al. 2000). Among these, <i>Portulaca oleracea</i> is described as causing oxalate poisoning in other countries (Radostits et al. 2000).]
	WRA Specialist. (2022). Personal Communication	Unconfirmed reports of toxicity may be related to stinging hairs on plant

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

407	Causes allergies or is otherwise toxic to humans	y
	Source(s)	Notes
	Kubitzki, K. (ed.). (2014). <i>The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales</i> . Springer, New York	"A number of genera (<i>Cnidioscolus</i> , <i>Dalechampia</i> , <i>Tragia</i>) are implicated in dermatitis."
	Amber Leaf Landscaping. (2022). Purple Wings (<i>Dalechampia</i>). https://www.amberleaflandscaping.com.au/plant-directory/dalechampia/ . [Accessed 11 Jul 2022]	" <i>Dalechampia</i> , as with all <i>Euphorbia</i> , produces a milky, caustic sap which can cause a reaction on sensitive skin. Wear gloves and avoid rubbing your eyes when handling the plant to be on the safe side."
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (<i>Euphorbiaceae</i>). <i>Botanical Journal of the Linnean Society</i> , 105(2), 137-177	"Twining or clambering vines (rarely erect subshrubs); vegetative parts with stinging hairs" [Hairs may contribute to rash or dermatitis]

408	Creates a fire hazard in natural ecosystems	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Fire ecology from native range unknown. As a liana, could serve as a fuel ladder.

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

Qsn #	Question	Answer
	Source(s)	Notes
	San Marcos Growers. (2022). <i>Dalechampia aristolochiifolia</i> - Purple Wings. https://www.smgrowers.com . [Accessed 11 Jul 2022]	"Exposure: Cool Sun/Light Shade" ... "Plant in full sun to medium shade and water moderately. Blooms less and is less vigorous when kept dry."
	Amber Leaf Landscaping. (2022). Purple Wings (<i>Dalechampia</i>). https://www.amberleaflandscaping.com.au/plant-directory/dalechampia/ . [Accessed 11 Jul 2022]	"The Silk Crepe Flower is a relatively easy plant to grow. It can handle full sun or part shade."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	Notes
	San Marcos Growers. (2022). <i>Dalechampia aristolochiifolia</i> - Purple Wings. https://www.smgrowers.com . [Accessed 11 Jul 2022]	"It is hardy to about 20-25 degrees F but does not like wet feet in winter, so good soil drainage or a root area that stays dry then is needed."
	Amber Leaf Landscaping. (2022). Purple Wings (<i>Dalechampia</i>). https://www.amberleaflandscaping.com.au/plant-directory/dalechampia/ . [Accessed 11 Jul 2022]	"Plant into a moist, humus rich soil and ensure a steady water flow."

411	Climbing or smothering growth habit	y
	Source(s)	Notes
	Macbride, J.F. (1951). Flora of Peru. Volume XIII, Part IIIA, Number 1. Field Museum of Natural History, Chicago	"Liana, the younger branchlets puberulent-tomentulose and sparsely hirsute"

412	Forms dense thickets	n
	Source(s)	Notes
	Macbride, J.F. (1951). Flora of Peru. Volume XIII, Part IIIA, Number 1. Field Museum of Natural History, Chicago	Liana

501	Aquatic	n
	Source(s)	Notes
	Webster, G. L., & Armbruster, W. S. (1991). A synopsis of the neotropical species of <i>Dalechampia</i> (Euphorbiaceae). Botanical Journal of the Linnean Society, 105(2), 137-177	[Terrestrial] "seasonal forests, Peru."

502	Grass	n
	Source(s)	Notes
	Tropicos.org. (2022). Tropicos v3.3.2. Missouri Botanical Garden. http://www.tropicos.org/ . [Accessed 11 Jul 2022]	Euphorbiaceae

503	Nitrogen fixing woody plant	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Tropicos.org. (2022). Tropicos v3.3.2. Missouri Botanical Garden. http://www.tropicos.org/ . [Accessed 11 Jul 2022]	Euphorbiaceae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Macbride, J.F. (1951). Flora of Peru. Volume XIII, Part IIIA, Number 1. Field Museum of Natural History, Chicago	"Liana, the younger branchlets puberulent-tomentulose and sparsely hirsute, the 5-10 mm. long petioles densely so"

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Kubitzki, K. (ed.). (2014). The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales. Springer, New York	" <i>Dalechampia aristolochiifolia</i> Kunth is a recently marketed horticultural vine increasingly cultivated in warm temperate regions for its colorful bracts (generally advertised on the internet incorrectly as <i>D. dioscoreifolia</i>)." [No evidence]

602	Produces viable seed	y
	Source(s)	Notes
	Macbride, J.F. (1951). Flora of Peru. Volume XIII, Part IIIA, Number 1. Field Museum of Natural History, Chicago	"capsules 12 mm. broad, cocci carinate; seeds 5 mm. long, muriculate, variegated."
	Pemberton, R. W., & Liu, H. (2008). Naturalized Orchid Bee Pollinates Resin-reward Flowers in Florida: Novel and Known Mutualisms. <i>Biotropica</i> , 40(6), 714-718	" <i>Dalechampia aristolochiifolia</i> , on the other hand, is not autogamous and depends on pollinator visits to set fruit (Armbruster 1988). This was confirmed in our studied plants as two isolated plants placed inside a screen enclosure failed to fruit. The self-compatibility of our potted <i>D. aristolochiifolia</i> was also confirmed because a single <i>D. aristolochiifolia</i> plant growing where the orchid bee is abundant set fruit. All hand pollinated flowers set fruit, but none of the control (bagged), nor any of the untreated open <i>C. lanceolata</i> flowers set fruit. This indicated that <i>C. lanceolata</i> is an obligate outcrosser"

603	Hybridizes naturally	n
	Source(s)	Notes
	Armbruster, W. S., & Muchhala, N. (2009). Associations between floral specialization and species diversity: cause, effect, or correlation?. <i>Evolutionary Ecology</i> , 23(1), 159-179	"Hybrids between <i>Dalechampia</i> species are almost never found in the field, even when pollinators move between closely related species (e.g. Armbruster and Steiner 1992). An extensive interspecific crossing program between both sympatric and allopatric species in the greenhouse at the University of California Davis, conducted 1979–1981, resulted in no definitive hybrids (Armbruster and Herzig 1984; Armbruster “unpublished data”). This suggests strongly that there are effective postzygotic barriers to hybridization."

604	Self-compatible or apomictic	y
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Qsn #	Question	Answer
	Source(s)	Notes
	Pemberton, R. W., & Liu, H. (2008). Naturalized Orchid Bee Pollinates Resin-reward Flowers in Florida: Novel and Known Mutualisms. <i>Biotropica</i> , 40(6), 714-718	" <i>Dalechampia aristolochiifolia</i> , on the other hand, is not autogamous and depends on pollinator visits to set fruit (Armbruster 1988). This was confirmed in our studied plants as two isolated plants placed inside a screen enclosure failed to fruit. The self-compatibility of our potted <i>D. aristolochiifolia</i> was also confirmed because a single <i>D. aristolochiifolia</i> plant growing where the orchid bee is abundant set fruit. All hand pollinated flowers set fruit"
	Kubitzki, K. (ed.). (2014). <i>The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales</i> . Springer, New York	"Self-compatibility is also the rule in <i>Dalechampia</i> (e.g., Sazima et al. 1985)."

605	Requires specialist pollinators	y
	Source(s)	Notes
	Pemberton, R. W., & Liu, H. (2008). Naturalized Orchid Bee Pollinates Resin-reward Flowers in Florida: Novel and Known Mutualisms. <i>Biotropica</i> , 40(6), 714-718	" <i>Dalechampia aristolochiifolia</i> , on the other hand, is not autogamous and depends on pollinator visits to set fruit (Armbruster 1988)."
	Kubitzki, K. (ed.). (2014). <i>The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales</i> . Springer, New York	"Other pseudanthiate euphorbs exhibit highly specialized pollination. Most neotropical <i>Dalechampia</i> are pollinated by females of one or a few species of resin-collecting bees (Armbruster 1984, 1988)."
	Armbruster, W. S. (1988). Multilevel Comparative Analysis of the Morphology, Function, and Evolution of <i>Dalechampia</i> Blossoms. <i>Ecology</i> , 69(6), 1746-1761	"Table 4. Results of pollinator-exclusion experiments with <i>Dalechampia</i> ." [<i>D. aristolochiifolia</i> - Ovules producing seed without insect pollination = 0%]

606	Reproduction by vegetative fragmentation	
	Source(s)	Notes
	Reynolds, C. (2008). Beautify Yard With Butterfly Imitators. <i>The Ledger</i> . Jan 18. https://www.theledger.com . [Accessed 11 Jul 2022]	[Possibly. Can be propagated vegetatively by cuttings] "Winged beauty (<i>Dalechampia aristolochiifolia</i>) is hardy in Polk, climbing up to 15 feet high in full or part sun on enriched, well-drained sites. It can be grown on a trellis, arbor or chain-link fence or allowed to ramble up a small tree, where its bright bracts appear from mid-spring to late autumn. Because it's hardy and well-behaved, at least when compared to many other vines, winged beauty deserves to be widely planted. Propagate by warm-season cuttings."

607	Minimum generative time (years)	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes

Qsn #	Question	Answer
	Armbruster, W. S. (1982). Seed production and dispersal in <i>Dalechampia</i> (Euphorbiaceae): divergent patterns and ecological consequences. <i>American Journal of Botany</i> , 69 (9), 1429-1440	"Excepting the effects of gravity and/or moving water, the dispersal of <i>Dalechampia</i> seeds appears to be solely the result of explosive dehiscence of the capsules. The seeds themselves lack arils, caruncles or any other apparent "rewards" for animal dispersal agents. They are too large and smooth to attach externally to animals."

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Kubitzki, K. (ed.). (2014). <i>The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales</i> . Springer, New York	" <i>Dalechampia aristolochiifolia</i> Kunth is a recently marketed horticultural vine increasingly cultivated in warm temperate regions for its colorful bracts (generally advertised on the internet incorrectly as <i>D. dioscoreifolia</i>)."

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Armbruster, W. S. (1982). Seed production and dispersal in <i>Dalechampia</i> (Euphorbiaceae): divergent patterns and ecological consequences. <i>American Journal of Botany</i> , 69 (9), 1429-1440	"Excepting the effects of gravity and/or moving water, the dispersal of <i>Dalechampia</i> seeds appears to be solely the result of explosive dehiscence of the capsules. The seeds themselves lack arils, caruncles or any other apparent "rewards" for animal dispersal agents. They are too large and smooth to attach externally to animals."

704	Propagules adapted to wind dispersal	
	Source(s)	Notes
	Armbruster, W. S. (1982). Seed production and dispersal in <i>Dalechampia</i> (Euphorbiaceae): divergent patterns and ecological consequences. <i>American Journal of Botany</i> , 69 (9), 1429-1440	"Excepting the effects of gravity and/or moving water, the dispersal of <i>Dalechampia</i> seeds appears to be solely the result of explosive dehiscence of the capsules. The seeds themselves lack arils, caruncles or any other apparent "rewards" for animal dispersal agents. They are too large and smooth to attach externally to animals." [Wind may influence distance and direction of explosively dehisced seeds]

705	Propagules water dispersed	
	Source(s)	Notes
	Armbruster, W. S. (1982). Seed production and dispersal in <i>Dalechampia</i> (Euphorbiaceae): divergent patterns and ecological consequences. <i>American Journal of Botany</i> , 69 (9), 1429-1440	"Excepting the effects of gravity and/or moving water, the dispersal of <i>Dalechampia</i> seeds appears to be solely the result of explosive dehiscence of the capsules. The seeds themselves lack arils, caruncles or any other apparent "rewards" for animal dispersal agents. They are too large and smooth to attach externally to animals." [Water may secondarily disperse explosively dehisced seeds]

706	Propagules bird dispersed	n
	Source(s)	Notes

Qsn #	Question	Answer
	Armbruster, W. S. (1982). Seed production and dispersal in <i>Dalechampia</i> (Euphorbiaceae): divergent patterns and ecological consequences. <i>American Journal of Botany</i> , 69 (9), 1429-1440	"Excepting the effects of gravity and/or moving water, the dispersal of <i>Dalechampia</i> seeds appears to be solely the result of explosive dehiscence of the capsules. The seeds themselves lack arils, caruncles or any other apparent "rewards" for animal dispersal agents. They are too large and smooth to attach externally to animals."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Armbruster, W. S. (1982). Seed production and dispersal in <i>Dalechampia</i> (Euphorbiaceae): divergent patterns and ecological consequences. <i>American Journal of Botany</i> , 69 (9), 1429-1440	"Excepting the effects of gravity and/or moving water, the dispersal of <i>Dalechampia</i> seeds appears to be solely the result of explosive dehiscence of the capsules. The seeds themselves lack arils, caruncles or any other apparent "rewards" for animal dispersal agents. They are too large and smooth to attach externally to animals."

708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Armbruster, W. S. (1982). Seed production and dispersal in <i>Dalechampia</i> (Euphorbiaceae): divergent patterns and ecological consequences. <i>American Journal of Botany</i> , 69 (9), 1429-1440	"Excepting the effects of gravity and/or moving water, the dispersal of <i>Dalechampia</i> seeds appears to be solely the result of explosive dehiscence of the capsules. The seeds themselves lack arils, caruncles or any other apparent "rewards" for animal dispersal agents. They are too large and smooth to attach externally to animals."

801	Prolific seed production (>1000/m2)	n
	Source(s)	Notes
	Pemberton, R. W., & Liu, H. (2008). Naturalized Orchid Bee Pollinates Resin-reward Flowers in Florida: Novel and Known Mutualisms. <i>Biotropica</i> , 40(6), 714-718	[Unknown, but unlikely, especially if pollinators are not present] " <i>Dalechampia aristolochiifolia</i> , on the other hand, is not autogamous and depends on pollinator visits to set fruit (Armbruster 1988). This was confirmed in our studied plants as two isolated plants placed inside a screen enclosure failed to fruit. The self-compatibility of our potted <i>D. aristolochiifolia</i> was also confirmed because a single <i>D. aristolochiifolia</i> plant growing where the orchid bee is abundant set fruit. All hand pollinated flowers set fruit"

802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	Notes
	Farnsworth, E. (2000). The Ecology and Physiology of Viviparous and Recalcitrant Seeds. <i>Annual Review of Ecology and Systematics</i> , 31, 107-138	[Related species with recalcitrant seeds] "In natural populations, these seeds may germinate readily within the fruit or soon after dehiscence, and they do not persist in the soil seed bank. These types of embryos rapidly lose viability if they are dried or chilled; hence they are termed "recalcitrant" to storage" ... "TABLE 1 Plant species with recalcitrant or viviparous seeds" [<i>Dalechampia scandens</i> - Seed status = R (recalcitrant)]

Qsn #	Question	Answer
803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2022). Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Broad elevation range (>1000 m)
- Another species, *Dalechampia scandens*, regarded as a high risk, invasive species in Florida and the Galapagos
- Vegetative parts with stinging hairs
- Possibly toxic to animals (unverified)
- Sap, and possibly stinging hairs, reported to cause dermatitis in humans
- Climbing, and potentially smothering habit
- Reproduces by explosively dehisced seeds
- Self-compatible
- Explosively dehisced seeds dispersed by gravity, possibly water, and through intentional cultivation
- Gaps in biological and ecological information may reduce accuracy of risk prediction

Low Risk Traits

- No reports of invasiveness or naturalization, but extent of introduction and cultivation outside native range is unclear
- Specialized pollinator requirements may limit seed set in areas lacking resin-collecting bees

Second Screening Results for Vines & Lianas

(A) Reported as a weed of cultivated lands?> No

(B) Shade tolerant or known to form dense stands?> Possibly shade tolerant.

(C) Bird- Or clearly wind- dispersed?> No. Gravity and possibly water may move the explosively dehisced seeds

Outcome = Accept (Low Risk)