Taxon: Anthurium andraeanum Linden ex André **Family:** Araceae

Common Name(s): flamingo flower
flamingo lily
lace leaf
oilcloth flower

Synonym(s): Anthurium venustum Sodiro

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 28 May 2021

WRA Score: 5.0 **Designation:** L **Rating:** Low Risk

Keywords: Ornamental Herb, Unarmed, Toxic, Shade-Tolerant, Bird-Dispersed

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	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	n
301	Naturalized beyond native range		
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		
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	y=1, n=-1	y
405	Toxic to animals	y=1, n=0	y
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	y=1, n=0	n

Qsn #	Question	Answer Option	Answer
409	Is a shade tolerant plant at some stage of its life cycle	y=1, n=0	y
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	y
603	Hybridizes naturally		
604	Self-compatible or apomictic		
605	Requires specialist pollinators	y=-1, n=0	y
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	2
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	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	y
707	Propagules dispersed by other animals (externally)		
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m2)	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		
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**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	[Used as the source of a number of hybrids and cultivars. Species itself not domesticated] "The obake anthurium hybrids are entirely Hawaiian in origin. Local commer-cial growers have used improved varieties of the tropical American species Anthurium andraeanum as parent stock co develop very different and unusual variegated anthuriums."

102	Has the species become naturalized where grown?	
	Source(s)	**Notes**
	WRA Specialist. (2021). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	**Notes**
	WRA Specialist. (2021). 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**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2021). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 19 May 2021]	"Native Southern America WESTERN SOUTH AMERICA: Colombia (s.w.), Ecuador [Carchi, Esmeraldas, Imbabura, Napo] Cultivated (also cult.)"

202	Quality of climate match data	High
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2021). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 19 May 2021]	

Qsn #	Question	Answer
203	**Broad climate suitability (environmental versatility)**	**n**
	Source(s)	**Notes**
	Kamemoto, H. & Kuehnle, A. R. (1996). Breeding Anthuriums in Hawaii. University of Hawaii Press, Honolulu, HI	"According to Croat (pers. comm.), this species occurs in premontane forests at elevations from 1,800 to 4,000 feet (600 to 1,200 m)."
	Missouri Botanical Garden. (2021). Anthurium andraeanum . http://www.missouribotanicalgarden.org. [Accessed 19 May 2021]	"Zone: 11 to 12"

204	**Native or naturalized in regions with tropical or subtropical climates**	**y**
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2021). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 19 May 2021]	"Native Southern America WESTERN SOUTH AMERICA: Colombia (s.w.), Ecuador [Carchi, Esmeraldas, Imbabura, Napo] Cultivated (also cult.)"
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence in Hawaiian Islands

205	**Does the species have a history of repeated introductions outside its natural range?**	**n**
	Source(s)	**Notes**
	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	"Genuine A. andraeanum Andre is rare in cultivation (and in the wild) and might be grown only by anthurium breeders."
	Mayo, S. J. (1985). Flora of Tropical East Africa - Araceae. A.A. Balkema, Rotterdam, Netherlands	"Widely cultivated throughout the world as an ornamental plant; many cultivars exist which differ in the shape and colour of spathe and spadix." [May be referring to cultivars]

301	**Naturalized beyond native range**	
	Source(s)	**Notes**
	Witt, A.B.R., Kiambi, S., Beale, T. & Van Wilgen, B.W. (2017). A preliminary assessment of the extent and potential impacts of alien plant invasions in the Serengeti-Mara ecosystem, East Africa. Koedoe, 59(1), 1-16	"TABLE 1: Alien plant species, including some native plant species which may be growing outside of their natural range, recorded in the Serengeti-Mara ecosystem and immediate surrounds (excluding vegetable crops and grains)." [Anthurium andraeanum - Naturalised within tourist facilities = No; Invasive outside of tourist facilities = No]
	Foxcroft, L. C., Richardson, D. M., & Wilson, J. R. (2008). Ornamental plants as invasive aliens: problems and solutions in Kruger National Park, South Africa. Environmental Management, 4 (1): 32-51	"Table 2 Ornamental alien plant species recorded per camp in the Kruger National Park, indicating the number of camps in which each species has been recorded, as well as mode of introduction" [Anthurium andraeanum - Cultivated ? Yes; Evidence of naturalization? No]

Qsn #	Question	Answer
	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. PLoS One, 5(4), e10276	"Table S1." [Anthurium andraeanum - Cu) Cultivated (introduced for cultivation, not naturalized)]
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[Cited as naturalized or escaping in a few references. A subsequent review of the cited references did not confirm naturalization. In the case of the Galapagos, the species was described as not naturalized] "Anthurium andraeanum Linden Araceae Total N° of Refs: 9 Toxic - Habit: perennial Herb Preferred Climate/s: Mediterranean, Subtropical, Tropical Origin: S Am Major Pathway/s: Ornamental Dispersed by: Humans, Escapee References: Galapagos Islands-CN-1157, South Africa-U-1247, Global-CD-1611, South Africa-N-1991, Burundi-N-2012, Algeria-W-1977, Burundi-W-1977, India-W-1977, South Africa-W-1977."
	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

302	Garden/amenity/disturbance weed	n
	Source(s)	**Notes**
	GBIF Secretariat (2021). Anthurium andraeanum Linden ex André. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/2872695. [Accessed 27 May 2021]	Recorded as introduced in: South Africa; Evidence of impact = No Recorded as introduced in: India; Evidence of impact = No Recorded as introduced in: Ecuador; Evidence of impact = No Recorded as introduced in: Seychelles; Evidence of impact = No Recorded as introduced in: Algeria; Evidence of impact = No Recorded as introduced in: Burundi; Evidence of impact = No

303	Agricultural/forestry/horticultural weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	GBIF Secretariat (2021). Anthurium andraeanum Linden ex André. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/2872695. [Accessed 27 May 2021]	Recorded as introduced in: South Africa; Evidence of impact = No Recorded as introduced in: India; Evidence of impact = No Recorded as introduced in: Ecuador; Evidence of impact = No Recorded as introduced in: Seychelles; Evidence of impact = No Recorded as introduced in: Algeria; Evidence of impact = No Recorded as introduced in: Burundi; Evidence of impact = No

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

Qsn #	Question	Answer
	GBIF Secretariat (2021). Anthurium andraeanum Linden ex André. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/2872695. [Accessed 27 May 2021]	Recorded as introduced in: South Africa; Evidence of impact = No Recorded as introduced in: India; Evidence of impact = No Recorded as introduced in: Ecuador; Evidence of impact = No Recorded as introduced in: Seychelles; Evidence of impact = No Recorded as introduced in: Algeria; Evidence of impact = No Recorded as introduced in: Burundi; Evidence of impact = No

305	Congeneric weed	
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	A number of Anthurium species are listed as naturalized and/or weeds, but evidence of negative impacts have not been verified for any of the species listed

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	[No evidence] "A small, herbaceous, evergreen plant that grows to about 3 feet in height. Shiny, foot-long, leathery leaves unfurl from tops of very slender rodlike stems. Older plants send down thin aerial roots to support the foliage mass. Highly variegated capelike spathes in combinations of green and pink surround a bright yellow spadix. (Other obakes show different form and color combinations.) Ripening spadices produce seeds."

402	Allelopathic	
	Source(s)	**Notes**
	WRA Specialist. (2021). Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	"A small, herbaceous, evergreen plant that grows to about 3 feet in height." [No evidence]

404	Unpalatable to grazing animals	y
	Source(s)	**Notes**
	Scott, S. & Thomas, C. (2000). Poisonous Plants of Paradise: First Aid and Medical Treatment of Injuries from Hawaii's Plants. University of Hawaii Press, Honolulu, HI	[Sometimes chewed on by pets, but calcium oxalate generally makes plants unpalatable] "All parts of the anthurium plant may contain bundles of needlelike calcium oxalate crystals, but most are in the leaves and stems." ... "The amount of calcium oxalate in a plant varies greatly from species to species and often even within the same species. The toxicity of anthurium plants is questionable among researchers; some do not list anthuriums as toxic; others do."

405	Toxic to animals	y

Qsn #	Question	Answer
	Source(s)	**Notes**
	Knight, A. (2007). A Guide to Poisonous House and Garden Plants. CRC Press, Boca Raton, FL	"Dogs and cats that chew repeatedly on the leaves and stems of anthuriums may salivate excessively and vomit as a result of the irritant effects of the calcium oxalate crystals embedded in their oral mucous membranes. The painful swelling in the mouth may prevent the animal from eating for several days. Severe conjunctivitis may result, if plant juices are rubbed in the eye."
	McKenzie, R. (2020). Australia's Poisonous Plants, Fungi and Cyanobacteria: A Guide to Species of Medical and Veterinary Importance. CSIRO Publishing, Clayton South, VIC	"Full scientific names and synonyms: Anthurium andraeanum André and its cultivars [syn. Anthurium × cultorum Birdsey]; Anthurium bakeri Hook. f.; Anthurium crystallinum Linden and André; Anthurium scherzerianum Schott and its cultivars [syn. Anthurium × hortulanum Birdsey]" "Toxin: Oxalate rhaphide crystals Toxic parts of the plant: All parts Animals affected: Humans (children), dogs, cats and caged birds Conditions of poisoning: Access to house or garden plants or floral arrangements containing them. Contact with skin or eyes has been reported to cause irritation in some people. Toxic dose: Chewing part of one leaf, inflorescence or fruit is enough to initiate clinical signs."

406	Host for recognized pests and pathogens	
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	"INSECTS/DISEASES For thrips, apply diazinon or malathion. For scale and mealybugs, use malathion. For anthracnose disease of the spadices, spray captan fungicide on the flower heads, using I teaspoon fungicide per gallon of water. During dry weather spider mites may deform foliage and flowers; control with malathion."

Qsn #	Question	Answer
407	**Causes allergies or is otherwise toxic to humans**	**y**
	Source(s)	**Notes**
	McKenzie, R. (2020). Australia's Poisonous Plants, Fungi and Cyanobacteria: A Guide to Species of Medical and Veterinary Importance. CSIRO Publishing, Clayton South, VIC	"Full scientific names and synonyms: Anthurium andraeanum André and its cultivars [syn. Anthurium × cultorum Birdsey]; Anthurium bakeri Hook. f.; Anthurium crystallinum Linden and André; Anthurium scherzerianum Schott and its cultivars [syn. Anthurium × hortulanum Birdsey]" "Toxin: Oxalate rhaphide crystals Toxic parts of the plant: All parts Animals affected: Humans (children), dogs, cats and caged birds Conditions of poisoning: Access to house or garden plants or floral arrangements containing them. Contact with skin or eyes has been reported to cause irritation in some people. Toxic dose: Chewing part of one leaf, inflorescence or fruit is enough to initiate clinical signs."
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	[Anthurium andraeanum] "Irritant. Ingestion can cause painful irritation of the mouth and throat, blistering, dysphagia (difficulty in swallowing), hoarseness. Ingestion usually does not occur because chewing quickly causes painful irritation of the mouth and throat. Flamingo lily contains calcium oxalate raphide crystals, which cause painful swelling in the mouth and throat upon ingestion. These crystals readily penetrate mucous membranes, leading to irritation; crystals are not poisonous. Crushed leaves rubbed on caterpillar sores."

408	**Creates a fire hazard in natural ecosystems**	**n**
	Source(s)	**Notes**
	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	"Anthuriums require a shaded, high-humidity environment protected from damaging winds and salt spray." [No evidence. Unlikely given habit and habitat]

409	**Is a shade tolerant plant at some stage of its life cycle**	**y**
	Source(s)	**Notes**
	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	"Anthuriums require a shaded, high-humidity environment protected from damaging winds and salt spray."

410	**Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)**	**y**
	Source(s)	**Notes**
	The Royal Horticultural Society. (2021). Anthurium andraeanum - flamingo flower. https://www.rhs.org.uk. [Accessed 27 May 2021]	"Soil Loam, Sand pH Acid, Alkaline, Neutral"

411	**Climbing or smothering growth habit**	**y**

Qsn #	Question	Answer
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	"A small, herbaceous, evergreen plant that grows to about 3 feet in height."
	Kamemoto, H. & Kuehnle, A. R. (1996). Breeding Anthuriums in Hawaii. University of Hawaii Press, Honolulu, HI	"Plants are epiphytic, sometimes short-stemmed and erect on tree branches, but also vinelike with long internodes growing on large trees entangled with other vines."

412	Forms dense thickets	n
	Source(s)	**Notes**
	Kamemoto, H. & Kuehnle, A. R. (1996). Breeding Anthuriums in Hawaii. University of Hawaii Press, Honolulu, HI	"Plants are epiphytic, sometimes short-stemmed and erect on tree branches, but also vinelike with long internodes growing on large trees entangled with other vines." [No evidence]

501	Aquatic	n
	Source(s)	**Notes**
	Kamemoto, H. & Kuehnle, A. R. (1996). Breeding Anthuriums in Hawaii. University of Hawaii Press, Honolulu, HI	"Plants are epiphytic, sometimes short-stemmed and erect on tree branches, but also vinelike with long internodes growing on large trees entangled with other vines."

502	Grass	n
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2021). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 27 May 2021]	Family: Araceae Subfamily: Pothoideae Tribe: Anthurieae

503	Nitrogen fixing woody plant	n
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2021). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 27 May 2021]	Family: Araceae Subfamily: Pothoideae Tribe: Anthurieae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	**Notes**
	Kamemoto, H. & Kuehnle, A. R. (1996). Breeding Anthuriums in Hawaii. University of Hawaii Press, Honolulu, HI	"Plants are epiphytic, sometimes short-stemmed and erect on tree branches, but also vinelike with long internodes growing on large trees entangled with other vines."

601	Evidence of substantial reproductive failure in native habitat	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2021). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 27 May 2021]	[No evidence] "Native Southern America WESTERN SOUTH AMERICA: Colombia (s.w.), Ecuador [Carchi, Esmeraldas, Imbabura, Napo] Cultivated (also cult.)"

602	Produces viable seed	y
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	"Established horticultural varieties are reproduced from offshoots from the parent plant. New horticultural varieties are developed from seeds; spread seeds over moistened, finely crushed tree fern fiber and keep constantly moist. Sometimes older plant tops are removed with a few aerial roots and replanted."

603	Hybridizes naturally	
	Source(s)	**Notes**
	Sheffer, R. D. (1974). Chromosome number and compatibility in the genus Anthurium (Araceae) with a taxonomic revision of the sect. Tetraspermium. PhD Dissertation. University of Hawaii, Honolulu	[Unknown. Artificial hybrids possible] "Engler (1905) had also indicated that A. subsignatum Engler included crosses between A. andreanum and two velvety leaf types (A. magnificum and A. warocqueanum) , but these hybrids could not be obtained by the author.(Group V) could be crossed to what the author calls Group VI."

604	Self-compatible or apomictic	
	Source(s)	**Notes**
	Kubitzki, K. (ed.). (1998). The Families and genera of vascular plants. Volume IV. Flowering plants, Monocotyledons: Alismatanae and Commelinanae (except Gramineae). Springer-Verlag, Berlin, Heidelberg, New York	"Some cases of self-pollination or apomixis are known or suspected (Anthurium gracile, triploid Amorphophallus paeoniifolius, Arum idaeum, A. hygrophilum, Pinellia)."
	Chouteau, M., Barabé, D., & Gibernau, M. (2006). A comparative study of inflorescence characters and pollen-ovule ratios among the genera Philodendron and Anthurium (Araceae). International Journal of Plant Sciences, 167(4), 817-829	[Several other species capable of selfing] "Among all Anthurium inflorescences bagged, nine species produced seeds and therefore were considered able to self-pollinate"

605	Requires specialist pollinators	y
	Source(s)	**Notes**
	Williams, N. H., & Dressler, R. L. (1976). Euglossine pollination of Spathiphyllum (Araceae). Selbyana, 1(4), 349-356	"In addition to the neotropical species of Spathiphyllum, certain species of Anthurium Schott and Xanthosoma Schott are also pollinated by male euglossine bees" [Anthurium andraeanum pollinated by euglossine bees]

606	Reproduction by vegetative fragmentation	

Qsn #	Question	Answer
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	"Established horticultural varieties are reproduced from offshoots from the parent plant." [Possibly. Propagation by offshoots suggests natural vegetative spread could occur]

607	Minimum generative time (years)	2
	Source(s)	**Notes**
	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	"First flowering takes place eighteen months to three years after germination."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
	Source(s)	**Notes**
	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	"The berries are brightly colored but odorless and the seeds are sticky, making them ideal for dispersal by birds." [Sticky seeds may have the ability to be externally dispersed]

702	Propagules dispersed intentionally by people	y
	Source(s)	**Notes**
	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	"Genuine A. andraeanum Andre is rare in cultivation (and in the wild) and might be grown only by anthurium breeders."

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	**Notes**
	WRA Specialist. (2021). Personal Communication	No direct evidence found. Cultivated as an ornamental, but probably unlikely to be dispersed accidentally as a contaminant

704	Propagules adapted to wind dispersal	n
	Source(s)	**Notes**
	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	"The berries are brightly colored but odorless and the seeds are sticky, making them ideal for dispersal by birds."

705	Propagules water dispersed	n
	Source(s)	**Notes**
	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	"The berries are brightly colored but odorless and the seeds are sticky, making them ideal for dispersal by birds."

706	Propagules bird dispersed	y

Qsn #	Question	Answer
	Source(s)	**Notes**
	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	"The berries are brightly colored but odorless and the seeds are sticky, making them ideal for dispersal by birds."

707	Propagules dispersed by other animals (externally)	
	Source(s)	**Notes**
	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	"The berries are brightly colored but odorless and the seeds are sticky, making them ideal for dispersal by birds." [Sticky seeds may have the ability to be externally dispersed]

708	Propagules survive passage through the gut	y
	Source(s)	**Notes**
	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	"The berries are brightly colored but odorless and the seeds are sticky, making them ideal for dispersal by birds." [Presumably Yes]

801	Prolific seed production (>1000/m2)	n
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	[Unlikely. No information reviewed suggests prolific seed production from this ornamental plant] "Ripening spadices produce seeds. When well grown, plants produce year-round blooms, generally about eight flowers and leaves per year."

802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	**Notes**
	Doijode, S.J. (2001). Seed Storage of Horticultural Crops. Food Product Press, Inc., Binghamton, NY	"Anthurium seeds exhibit recalcitrant storage behavior (Stanwood, 1987). They survive for an exceptionally short period under ambient conditions. Seeds lose viability rapidly on desiccation, and it is difficult to store them longer, even under moist conditions; furthermore, high seed moisture is favorable for the growth of pathogens. However, seed viability is preserved for a shorter period when seeds are stored in berries."

803	Well controlled by herbicides	
	Source(s)	**Notes**
	WRA Specialist. (2021). Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species.

Qsn #	Question	Answer
804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	
	Source(s)	**Notes**
	Clay, H.F. & Hubbard, J.C. (1987). The Hawaii Garden: Tropical Exotics. University of Hawaii Press, Honolulu, HI	"Established horticultural varieties are reproduced from offshoots from the parent plant." [Unknown. Could possibly resprout if damaged, given ability to produce offsets]

805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	
	Source(s)	**Notes**
	WRA Specialist. (2021). Personal Communication	Cultivated in Hawaii. No indication of natural enemies limiting spread of this or other Anthurium species

Summary of Risk Traits:

High Risk / Undesirable Traits
• Thrives, and can potentially spread, in regions with tropical climates
• Reported to be naturalized in some introduced locations, but this has not been confirmed.
• Unpalatable to animals.
• Contains calcium oxalate crystals; toxic to animals and people if ingested.
• Shade tolerant.
• Tolerates many soil types.
• Reproduces by seeds and potentially vegetatively by offsets.
• Seeds adapted for dispersal by birds or possibly other frugivorous animals.
• Intentionally cultivated by people.

Low Risk Traits
• No reports of invasiveness or detrimental impacts where cultivated.
• Unarmed (no spines, thorns, or burrs).
• Seeds recalcitrant, and not likely to form a persistent seed bank.

Second Screening Results for Herbs or Low Stature Shrubby Life Forms

(A) Reported as a weed of cultivated lands? No
Outcome = Accept (Low Risk)