Taxon: Philodendron hederaceum (Jacq.) Schott **Family:** Araceae

Common Name(s): heartleaf philodendron **Synonym(s):** Philodendron cordatum hort.
Philodendron cuspidatum K. Koch & C. D. Bouché
Philodendron micans K. Koch
Philodendron scandens K. Koch & Sello

Assessor: Chuck Chimera **Status:** Approved **End Date:** 28 Dec 2023

WRA Score: 8.0 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Hemiepiphytic Vine, Naturalized, Toxic Sap, Shade Tolerant, Spreads Vegetatively

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	y
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n = question 205	y
302	Garden/amenity/disturbance weed	y = 1*multiplier (see Appendix 2), n = 0	y
303	Agricultural/forestry/horticultural weed		
304	Environmental weed		
305	Congeneric weed	y = 1*multiplier (see Appendix 2), n = 0	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	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
409	Is a shade tolerant plant at some stage of its life cycle	y = 1, n = 0	y

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		
603	Hybridizes naturally		
604	Self-compatible or apomictic		
605	Requires specialist pollinators	y = -1, n = 0	y
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	y = 1, n = -1	n
706	Propagules bird dispersed		
707	Propagules dispersed by other animals (externally)	y = 1, n = -1	n
708	Propagules survive passage through the gut		
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	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
	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	[Cultivars exist, but no evidence of domestication] "There are several recognized infraspecific taxa that vary in the coloration and surface texture (metallic, velvety, etc.) of the juvenile and adult leaves."
	Acevedo-Rodríguez, P. & Strong, M.T. (2005). Monocotyledons and Gymnosperms of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium 52: 1-415	[No evidence] "General distribution: Throughout tropical America. Distribution in Puerto Rico and the Virgin Islands: Common in moist forests of low and middle elevations. Fajardo, Guaynabo, Maricao, Río Grande, and Toa Baja; St. John, St. Thomas, and Tortola."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2023). 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 28 Dec 2023]	"Native Northern America REGION: Mexico Southern America CARIBBEAN: Hispaniola, Antigua and Barbuda, Cuba, Dominica, Guadeloupe, Jamaica, St. Kitts and Nevis, Montserrat, Martinique, Trinidad and Tobago, United States [Puerto Rico], St. Vincent and Grenadines CENTRAL AMERICA: Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, El Salvador NORTHERN SOUTH AMERICA: French Guiana, Guyana, Suriname, Venezuela BRAZIL: Brazil (n.) WESTERN SOUTH AMERICA: Bolivia, Colombia, Ecuador, Peru"

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 28 Dec 2023]	

203	Broad climate suitability (environmental versatility)	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	"It thrives best in warmth and humidity, but its popularity is no doubt due to its ability to withstand much abuse, such as the low humidity and low light levels commonly found in homes and interiorscapes."
	Tropicos.org. (2021). Missouri Botanical Garden. http://www.tropicos.org/. [Accessed 28 Dec 2023]	Collected over an elevation range of 2700 m (10°33'S) to 0 m (09°45'N) and latitudes from 00°35'S - 25°16'S and 00°02'N - 21°33'N

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 28 Dec 2023]	"Native Northern America REGION: Mexico Southern America CARIBBEAN: Hispaniola, Antigua and Barbuda, Cuba, Dominica, Guadeloupe, Jamaica, St. Kitts and Nevis, Montserrat, Martinique, Trinidad and Tobago, United States [Puerto Rico], St. Vincent and Grenadines CENTRAL AMERICA: Belize, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, El Salvador NORTHERN SOUTH AMERICA: French Guiana, Guyana, Suriname, Venezuela BRAZIL: Brazil (n.) WESTERN SOUTH AMERICA: Bolivia, Colombia, Ecuador, Peru"
	Murphy, M. (2023). BIISC Plant Pono Specialist - Invasive Plant Prevention. personal communication. 09 Nov	[Hawaii island] "Philodendron hederaceum (Habit: Roadside near stream and ocean. More than 50 individuals were growing over 200 m along the road.) I don't see a record for this in the 2019 Imada checklist. iNaturalist has 77 observations on Kauai, Oahu, Maui, and Hawaii Island. I assume it's been submitted on other islands. It was blanketing Costus spp, Guzmania sp, Odontanima sp, Miconia, Cestrum, and Falcataria all along Kahoa St along Honolii Stream."
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mänoa Valley, O'ahu. Bishop Museum Occasional Papers 87: 3-18	[Oahu] "Philodendron scandens K. Koch & Sello ssp. scandens f. micans Bunting [Syn: Philodendron hederaceum var. hederaceum (Jacq.) Schott] This climber and ground cover occurs in large patches in Aroid Valley, which is an unmanaged section of the Arboretum. It was also seen climbing dozens of trees in the vicinity of Aroid Valley. It is easily recognized by its cordate leaves, dark green to bronze, with a velvety upper surface in the juvenile form. Spread is probably exclusively vegetative. Material examined: O'AHU: Vine, climbing trees and blanketing the forest floor in Aroid Valley, Haukulu, Lyon Arboretum, 22 Jun 2005, C. Daehler 1301 (BISH)."
	Gallaher, T.J., Brock, K., Kennedy, B.H., Imada, C.T., Imada, K., & Walvoord, N. (2023). Plants of Hawai'i. http://www.plantsofhawaii.org.. [Accessed 28 Dec 2023]	[Philodendron hederaceum var. hederaceum] "Island Status Kaua'i Naturalized O'ahu Potentially Naturalizing Maui Naturalized Hawai'i Naturalized'

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Wunderlin, R. P., Hansen, B. F., Franck, A. R., Bradley, K. A., & Kunzer, J. M. (2010). Plants new to Florida. Journal of the Botanical Research Institute of Texas, 4(1): 349-355	"Philodendron hederaceum (Jacq.) Schott var. oxycardium (Schott) Croat (Araceae). Native to Mexico, this species is frequently cultivated as an ornamental. It was planted along nature trails in Hattie Bauer Hammock when it was commercially operated as the tourist attraction Orchid Jungle. Now a county preserve, it has spread aggressively throughout undisturbed portions of the rockland hammock there. This is the first report of it naturalized in the continental United States."

Qsn #	Question	Answer
	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	"Philodendron scandens is probably the most common houseplant in the world." [Cultivated outdoors in the Hawaiian Islands]

301	Naturalized beyond native range	y
	Source(s)	**Notes**
	Wunderlin, R. P., Hansen, B. F., Franck, A. R., Bradley, K. A., & Kunzer, J. M. (2010). Plants new to Florida. Journal of the Botanical Research Institute of Texas, 4(1): 349-355	"Philodendron hederaceum (Jacq.) Schott var. oxycardium (Schott) Croat (Araceae). Native to Mexico, this species is frequently cultivated as an ornamental. It was planted along nature trails in Hattie Bauer Hammock when it was commercially operated as the tourist attraction Orchid Jungle. Now a county preserve, it has spread aggressively throughout undisturbed portions of the rockland hammock there. This is the first report of it naturalized in the continental United States."
	Murphy, M. (2023). BIISC Plant Pono Specialist - Invasive Plant Prevention. personal communication. 09 Nov	[Hawaii island. Unpublished record of naturalization] "Philodendron hederaceum (Habit: Roadside near stream and ocean. More than 50 individuals were growing over 200 m along the road.) I don't see a record for this in the 2019 Imada checklist. iNaturalist has 77 observations on Kauai, Oahu, Maui, and Hawaii Island. I assume it's been submitted on other islands. It was blanketing Costus spp, Guzmania sp, Odontanima sp, Miconia, Cestrum, and Falcataria all along Kahoa St along Honolii Stream. "
	Oppenheimer, H. (2008). New Hawaiian plant records for 2007. Bishop Museum Occasional Papers 100: 22-38	[Kauai & East Maui] "Philodendron scandens K. Koch & Sello New naturalized record One of the most widespread species of Araceae, native from Mexico to the West Indies and much of South America, this is also one of the most common houseplants (Staples & Herbst 2005: 610). The leaves are heart shaped, smooth; stems with long internodes; the axillary flowers have a green spathe, red at the base internally, and a white spadix. Fruit has not been observed but the species easily propagates from even short sections of discarded stem. On windward East Maui at low elevations in secondary forest it is naturalized in several areas, sprawling on the ground when younger and eventually climbing high into alien tree canopy. It is tolerant of shade. There are now four species of Philodendron Schott reported as naturalized on two islands, Kaua‘i and Maui (Lorence & Flynn 2002: 14-15; Oppenheimer 2004: 9; Oppenheimer 2007: 19); a key to the most commonly cultivated species is provided by Staples & Herbst (2005: 607-608). There are likely to be other species and/or islands with naturalized occurrences in Hawai‘i. Material examined. KAUA‘I: Näwiliwili, naturalized, 6 Apr 1988, T. Flynn 2895 (BISH). MAUI: East Maui, Häna Dist, Ka‘eho‘eho, naturalized, climbing 12 m or more in Ficus and Java plum trees, 37 m, 28 May 2007, Oppenheimer H50735." [Philodendron scandens is a synonym of Philodendron hederaceum var. hederaceum]
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mänoa Valley, O‘ahu. Bishop Museum Occasional Papers 87: 3-18	[Oahu. Casual or possibly naturalized] "Philodendron scandens K. Koch & Sello ssp. scandens f. micans Bunting [Syn: Philodendron hederaceum var. hederaceum (Jacq.) Schott] This climber and ground cover occurs in large patches in Aroid Valley, which is an unmanaged section of the Arboretum. It was also seen climbing dozens of trees in the vicinity of Aroid Valley. It is easily recognized by its cordate leaves, dark green to bronze, with a velvety upper surface in the juvenile form. Spread is probably exclusively vegetative. Material examined: O‘AHU: Vine, climbing trees and blanketing the forest floor in Aroid Valley, Haukulu, Lyon Arboretum, 22 Jun 2005, C. Daehler 1301 (BISH)."

302	Garden/amenity/disturbance weed	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Senterre, B., & Dine, M. (2022). Toward a Seychelles Invasive Species Strategy and Action Plan (ISSAP): Biological factors.	"Just like Lygodium japonicum and Dolichandra unguis-cati, the various species of the Philodendron group are perfectly able to grow and dominate vegetation in the dark understorey of old growth forests, eliminating also epiphytic species from the trunk zone. Although there is some uncertainty on the altitudinal range of several species in this group, it is clear, from observations in Seychelles, that Philodendron hederaceum is in his optimal conditions in the submontane belt. So far this species seems to have spread only by diffusion, although it reproduces actively in several locations."
	WRA Specialist. (2023). Personal Communication	Listed as weedy or invasive in a few locations, due to its aggressive spreading nature, but direct impacts to agriculture or natural areas have yet to be documented.
	Gordon, D. R., Onderdonk, D. A., Fox, A. M., Stocker, R. K., & Gantz, C. (2008). Predicting invasive plants in Florida using the Australian weed risk assessment. Invasive Plant Science and Management, 1(2), 178-195	Philodendron scandens rated as a "Noninvader" in Appendix A.

303	Agricultural/forestry/horticultural weed	
	Source(s)	Notes
	Rodríguez, A. M., & Agüero, R. (2000). Identificación de malezas trepadoras del banano (Musa sp.) en la zona caribe de Costa Rica. Agronomía Mesoamericana, 11(1): 123-125	[Philodendron hederaceum listed as a climbing weed of banana crops, but impacts have not been specified] "Identification of climbing weeds of banana (Musa sp.) in the Atlantic region of Costa Rica. Population of climbing weeds in banana plantations of Costa Rica have increased over the years. Taxonomic identification of these species is needed as a basis for other studies. This study is an attempt in such direction, one that should be fine tuned in the future, since identification for many of the climbing species is rather difficult. Surveys were conducted at several farms of the Atlantic region of Costa Rica. Cucurbitaceae, Araceae and Fabaceae were the families with the greater number of species."

304	Environmental weed	
	Source(s)	Notes
	Wunderlin, R. P., Hansen, B. F., Franck, A. R., Bradley, K. A., & Kunzer, J. M. (2010). Plants new to Florida. Journal of the Botanical Research Institute of Texas, 4(1): 349-355	[No impacts reported, but spreading aggressively in a natural area. Could be regarded as an environmental weed in the future] "Philodendron hederaceum (Jacq.) Schott var. oxycardium (Schott) Croat (Araceae). Native to Mexico, this species is frequently cultivated as an ornamental. It was planted along nature trails in Hattie Bauer Hammock when it was commercially operated as the tourist attraction Orchid Jungle. Now a county preserve, it has spread aggressively throughout undisturbed portions of the rockland hammock there. This is the first report of it naturalized in the continental United States."
	De Costa, W. A. J. M., Hitinayake, H. M. J. B., & Dharmawardana, I. U. (2010). A physiological investigation into the invasive behaviour of some plant species in a mid-country forest reserve in Sri Lanka. Journal of the National Science Foundation of Sri Lanka, 29(1-2): 35-50	[P. scandens listed as invasive, but impacts unspecified] "Abstract: An introduced and naturalized plant species which increases its population excessively at the expense of other species in a given community is defined as an invasive species. The objective of this study was to determine whether some selected physiological characteristics were responsible for the invasive behaviour of eight plant species in the Udawattakelle forest reserve. These included saplings of three tree species, three shrub species and two herbaceous species" … Two of the early successional invasive species (i.e. Scindapsus and Philodendron) are herbaceous species"

305	Congeneric weed	y
	Source(s)	Notes

Qsn #	Question	Answer
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Philodendron aurantiifolium ... Weed of: Bananas, Orchards & Plantations References: Costa Rica-A-1513." ... "Philodendron inaequilaterum ... Weed of: Bananas, Orchards & Plantations References: Costa Rica-A-1513."
	van der Burg, W. J., De Freitas, J., Debrot, A. O., & Lotz, L. A. P. (2012). Naturalised and invasive alien plant species in the Caribbean Netherlands: status, distribution, threats, priorities and recommendations. PRI report 437. Institute for Marine Resources and Ecosystem Studies (IMARES) report C185/11, Wageningen, The Netherlands	"Philodendron giganteum is present on Saba and St. Eustatius (Howard 1979 vol 3). On The Mountain ('Mt Scenery' Saba) and the Quill, St Eustatius (Boldingh 1909). Distributed in Tropical America and is native to Dominica, Guadeloupe, Martinique, Montserrat, Saba, St. Eustatius, St. Kitts, St. Vincent (Broome et al. 2011). On Saba it massively invades abandoned farmland on the slopes, smothering all other vegetation and entering the natural vegetation (team obs., Figure 28)."

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] "Non-woody vine, glabrous, that climbs by means of aerial roots and attains 10 m in length. Stems cylindrical and smooth, producing watery and caustic latex when wounded; juvenile stems flexuous, with short internodes (ca. 10 cm); adult stems up to 2 cm in diameter, the internodes elongate and with nodes that present an annular scar; the lateral branches pendulous. Cataphylls up to 12 cm long, caducous. Leaves broadly ovate, coriaceous, 14-30 × 10-20 cm, the apex acuminate to cuspidate, the base cordiform, the margins entire or slightly undulate, pale; upper surface dull, sometimes glaucous, with the midvein prominent and broadened; lower surface yellowish green, dull, with the midvein and some of the lateral veins prominent; petioles arcuate or ascendant, 10-15 cm long, almost cylindrical. Inflorescence axillary, solitary, ascendant; peduncles robust, 5-9 cm long; spathe persistent, ca. 15 cm long, thick, convolute, almost cylindrical, yellowish outside and reddish inside when mature; spadix almost sessile, cylindrical, robust, whitish, as long as the spathe."

402	Allelopathic	
	Source(s)	**Notes**
	WRA Specialist. (2023). 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.	"Non-woody vine, glabrous, that climbs by means of aerial roots and attains 10 m in length." [Araceae. No evidence]

404	Unpalatable to grazing animals	
	Source(s)	**Notes**
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	[Unknown, but oxalates likely deter browsing] "Chewing the leaves of philodendrons results in painful burning and swelling of the mouth parts because of the oxalates. Contact dermatitis also occurs. The insoluble oxalates do not produce systemic poisoning in humans. Cross sensitivity was observed. Allergic contact sensitivity."

Qsn #	Question	Answer
405	Toxic to animals	y
	Source(s)	**Notes**
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Chewing the leaves of philodendrons results in painful burning and swelling of the mouth parts because of the oxalates. Contact dermatitis also occurs. The insoluble oxalates do not produce systemic poisoning in humans. Cross sensitivity was observed. Allergic contact sensitivity."
	ASPCA. (2023). Toxic and Non-Toxic Plants - Heartleaf Philodendron. https://www.aspca.org/pet-care/animal-poison-control/toxic-and-non-toxic-plants/heartleaf-philodendron. [Accessed 28 Dec 2023]	"Toxicity: Toxic to Dogs, Toxic to Cats, Toxic to Horses Toxic Principles: Insoluble calcium oxalates Clinical Signs: Oral irritation, pain and swelling of mouth, tongue and lips, excessive drooling, vomiting (not horses), difficulty swallowing"

406	Host for recognized pests and pathogens	
	Source(s)	**Notes**
	Hayward, A. C. (1972). A bacterial disease of Anthurium in Hawaii. Plant Disease Reporter, 56(10), 904-908	"Abstract : The disease, which occurred only on cv. Kansako Red of A. andraeanum, was characterized by angular, pale brown, necrotic spots, 1-3 mm with a marked chlorotic halo. Scales of bacterial exudate occurred on the under surface of older leaves; on younger leaves the scales were less obvious and the lesions were dark brown-black and more extensive. A bacterium consistently isolated from the leaves and spathes of infected plants resembled Xanthomonas dieffenbachiae in host range and cultural and physiological characteristics. Symptoms were reproduced by spray inoculation on the same cv., also through wounds on Philodendron oxycardium and through the stomata on Dieffenbachia picta. The origin of the outbreak is unknown. " [Philodendron scandens is a host of this pathogen]
	Wisler, G. C., Zettler, F. W., Hartman, R. D., & McRitchie, J. J. (1978). Dasheen mosaic virus infections of philodendrons in Florida. Dasheen mosaic virus infections of philodendrons in Florida 91: 237-240	"Abstract : This virus was detected in plants of Philodendron oxycardium in Fla. foliage nurseries, causing chlorotic streak, mosaic and/or distortion symptoms and reductions in leaf area, leaf number and vine length. Several other P. spp. and hybrids were susceptible in inoculation tests but were not found naturally infected." [Philodendron scandens is an alternate host]
	Gilman, E.F. (1999). Philodendron scandens Heart Leaf Philodendron. FPS472. IFAS, University of Florida, Gainesville, FL. http://edis.ifas.ufl.edu/. [Accessed 28 Dec 2023]	"Pests and Diseases No pests are of major concern, but occasionally bothered by scales. No diseases are of major concern, but occasionally bothered by leaf spots."

407	Causes allergies or is otherwise toxic to humans	y
	Source(s)	**Notes**
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Chewing the leaves of philodendrons results in painful burning and swelling of the mouth parts because of the oxalates. Contact dermatitis also occurs. The insoluble oxalates do not produce systemic poisoning in humans. Cross sensitivity was observed. Allergic contact sensitivity."
	Nelson, L., Shih, R.D. & Balick, M.J. (2007). Handbook of Poisonous and Injurious Plants, The New York Botanical Garden. Springer, New York, NY	[Mildly toxic] "Clinical Findings: Although this plant contains calcium oxalates, they are not well organized and therefore not typically associated with the same toxicity as dumbcane (Dieffenbachia species). Substantial ingestion may cause some gastrointestinal irritation including nausea, vomiting, and diarrhea. Most cases result in no symptoms. Management: Most cases result in no toxicity. Intravenous hydration, antiemetics, and electrolyte replacement may be necessary for patients with severe gastrointestinal symptoms, particularly in children."

408	Creates a fire hazard in natural ecosystems	n

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	"It is most common in moist tropical forests but has been found in wetter areas as well." [No evidence. Unlikely given evergreen habit and wet 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	"It thrives best in warmth and humidity, but its popularity is no doubt due to its ability to withstand much abuse, such as the low humidity and low light levels commonly found in homes and interiorscapes."
	Gilman, E.F. (1999). Philodendron scandens Heart Leaf Philodendron. FPS472. IFAS, University of Florida, Gainesville, FL. http://edis.ifas.ufl.edu/. [Accessed 28 Dec 2023]	"Light requirement: plant grows in the shade"
	Dehgan, B. (2023). Garden Plants Taxonomy: Volume 1: Fern.s, Gymnosperms, and Angiosperms (Monocots). Springer Nature, Cham, Switzerland	"Partial to deep shade, in well-drained fertile moist soils"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	Dehgan, B. (2023). Garden Plants Taxonomy: Volume 1: Fern.s, Gymnosperms, and Angiosperms (Monocots). Springer Nature, Cham, Switzerland	"Partial to deep shade, in well-drained fertile moist soils; slight salt tolerance"
	Gilman, E.F. (1999). Philodendron scandens Heart Leaf Philodendron. FPS472. IFAS, University of Florida, Gainesville, FL. http://edis.ifas.ufl.edu/. [Accessed 28 Dec 2023]	"Soil tolerances: slightly alkaline; clay; sand; acidic; loam"
	Shoot Gardening. (2023). Philodendron scandens (Sweetheart vine). https://www.shootgardening.co.uk/plant/philodendron-scandens. [Accessed 28 Dec 2023]	"Soil type - Chalky, Clay, Loamy Soil drainage - Moist but well-drained, Well-drained Soil pH - Acid, Alkaline, Neutral"

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.	"Non-woody vine, glabrous, that climbs by means of aerial roots and attains 10 m in length."
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mānoa Valley, O'ahu. Bishop Museum Occasional Papers 87: 3-18	"This climber and ground cover occurs in large patches in Aroid Valley, which is an unmanaged section of the Arboretum. It was also seen climbing dozens of trees in the vicinity of Aroid Valley."

412	Forms dense thickets	n
	Source(s)	Notes
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mānoa Valley, O'ahu. Bishop Museum Occasional Papers 87: 3-18	[A climber that may form dense ground cover] "This climber and ground cover occurs in large patches in Aroid Valley, which is an unmanaged section of the Arboretum. It was also seen climbing dozens of trees in the vicinity of Aroid Valley."

Qsn #	Question	Answer
501	Aquatic	n
	Source(s)	Notes
	Acevedo-Rodríguez, P. & Strong, M.T. (2005). Monocotyledons and Gymnosperms of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium 52: 1-415	[Terrestrial] "Common in moist forests of low and middle elevations."

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 28 Dec 2023]	Family: Araceae Subfamily: Aroideae Tribe: Philodendreae

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 28 Dec 2023]	Family: Araceae Subfamily: Aroideae Tribe: Philodendreae

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.	"Non-woody vine, glabrous, that climbs by means of aerial roots and attains 10 m in length."

601	Evidence of substantial reproductive failure in native habitat	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	"Philodendron scandens is perhaps the most common and widespread species in the family, ranging from Mexico to the West Indies, Trinidad, Venezuela, the Guianas, Brazil, Peru, and Bolivia."
	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: Native, locally common. Distribution: Abundant in moist forests at lower to middle elevations. Also on St. John, St. Thomas, and Tortola. Of widespread distribution in the Neotropics."

602	Produces viable seed	
	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	"It is propagated from stem cuttings or by simple layering of the stems." [No description of fruits or seeds]
	Standley, P.C. & Steyermark, J.A. (1958). Flora of Guatemala. Fieldiana: Botany Volume 24. Part I. Chicago Natural History Museum Press	"The Guatemalan specimens are all sterile and their determination therefore is uncertain." [No description of fruit or seed provided]

Qsn #	Question	Answer
	International Aroid Society. (2023). Philodendron hederaceum. http://www.aroid.org/genera/philodendron/Philodendron/Solenosterigma/hederaceum.php. [Accessed 28 Dec 2023]	[Seed production in Hawaii may be limited or absent] "The true flowers including male, sterile male and female grow upon the spadix and if pollinated by an appropriate insect the female flowers will produce berries which contain seeds. If the plant is pollinated the berries are greenish white and will develop along the spadix. If a bird or other animal eats the berry and drops a seed in its droppings a new plant may form. Those seeds often end up on the branch of a tree and as a result, Philodendron hederaceum is known to science as a hemiepiphytic vine. Hemiepiphytes are species that are capable of beginning life on a tree branch or they may begin as a seed dropped on the ground which proceeds to climb."
	Shoot Gardening. (2023). Philodendron scandens (Sweetheart vine). https://www.shootgardening.co.uk/plant/philodendron-scandens. [Accessed 28 Dec 2023]	[Seeds mentioned among propagation methods, but seed production may be limited or absent in the Hawaiian Islands] "Propagation - Air layering in spring. Sow seeds at 20-25 degrees C in spring. Root semi-ripe cuttings using bottom heat. Propagation methods - Layering, Leaf cuttings, Seed, Stem tip cuttings"
	rarepalmseeds.com. (2023). Philodendron hederaceum var. hederaceum. https://www.rarepalmseeds.com/philodendron-hederaceum-var-hederaceum. [Accessed 28 Dec 2023]	Seeds sold commercially on-line

603	Hybridizes naturally	
	Source(s)	**Notes**
	Croat, T.B. (1997). A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. http://www.aroid.org/genera/philodendron/Contents.php. [Accessed 9 Feb 2021]	[Unknown. Possible within genus] "Breeding studies (see section on Breeding Behavior) have shown that Philodendron species have few if any barriers to cross-pollination, owing perhaps to the fact that there are other physical and temperal barriers to cross-pollination. Two species of Philodendron are seldom in flower simultaneously in a given area. Even when they are, there are other parameters which affect separation. Beetles tend to fly at certain elevations above the ground (Schatz, 1990), helping to prevent cross-pollination of species that occur at radically different strata. In addition, specific attractants, i.e., species-specific pheromones, exist in many species because most flowering species attract principally a single beetle. The sloppiness in the system, when it occurs, is owing to opportunistic beetle visitors (G. Schatz & H. Young, pers. comm.), pers. comm.) and this might produce some hybridization. Suspected hybrids, though rare, are seen in the field. It is not known if these suspected hybrids are themselves fertile and capable of reproducing."

604	Self-compatible or apomictic	
	Source(s)	**Notes**
	Ramírez, N. (2005). Plant sexual systems, dichogamy, and herkogamy in the Venezuelan Central Plain. Flora-Morphology, Distribution, Functional Ecology of Plants, 200 (1), 30-48	"Appendix A Sexual system, dichogamy, herkogamy, and dispersal syndrome for 210 plant species in the Venezuelan Central Plain" [Philodendron hederaceum listed exhibiting protogyny - Botanically, protogyny occurs in some plant species in which the stigma develops, withers, and dies before the anthers mature, suggesting plants will not be self-pollinated]

605	Requires specialist pollinators	y
	Source(s)	**Notes**
	Croat, T.B. (1997). A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. http://www.aroid.org/genera/philodendron/Contents.php. [Accessed 9 Feb 2021]	"Pollinators are members of subfamily Dynastinae in the family Scarabaeidae (Fig. 32). All beetles determined to date from either Central American or South American Philodendron are members of the genera Cyclcephala or Erioscelis."

Qsn #	Question	Answer
	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	"The inflorescences of Philodendron have a 24-h flowering cycle (Gibernau et al. 1999, 2000; Gibernau and Barabe´ 2002), beginning with the receptivity of the female flowers on the first night and finishing with the release of pollen on the second night (Gibernau et al. 1999, 2000). They are mainly pollinated by beetles of the genus Cyclocephala (Gibernau 2003) that are attracted to the inflorescence during the heating and odoriferous period of the spadix."

606	Reproduction by vegetative fragmentation	y
	Source(s)	**Notes**
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mänoa Valley, O'ahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative."
	Acevedo-Rodríguez, P. & Strong, M.T. (2005). Monocotyledons and Gymnosperms of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium 52: 1-415	"Vine to 10 m long, rooting at nodes; stem cylindrical, 1-2 cm diam.,"

607	Minimum generative time (years)	
	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	"It is propagated from stem cuttings or by simple layering of the stems."
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mänoa Valley, O'ahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative." [Ability to spread vegetatively and presumed absent or reduced seed set in Hawaii may make this question irrelevant]

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	"It is propagated from stem cuttings or by simple layering of the stems." [Ability to spread vegetatively suggests plants could be dispersed by garden waster or discarded cuttings]

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	"Philodendron scandens is probably the most common houseplant in the world. It thrives best in warmth and humidity, but its popularity is no doubt due to its ability to withstand much abuse, such as the low humidity and low light levels commonly found in homes and interiorscapes."

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	**Notes**
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mänoa Valley, O'ahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative." [No evidence. Limited or absent seed production in the Hawaiian Islands would minimize risk of any produce contamination]

Qsn #	Question	Answer
704	**Propagules adapted to wind dispersal**	n
	Source(s)	**Notes**
	International Aroid Society. (2023). Philodendron hederaceum. http://www.aroid.org/genera/philodendron/Philodendron/Solenosterigma/hederaceum.php. [Accessed 28 Dec 2023]	[Fruit, if produced, would be presumably consumed and seeds dispersed by frugivores] "berries greenish white; seeds 1--2 per locule, somewhat orange, many per berry, more or less ovoid to oblong ellipsoid, (1.5)3--5 mm long, 2.5--4 mm diam., with weak constriction (nipple) and densely covered with raphide cells."

705	**Propagules water dispersed**	n
	Source(s)	**Notes**
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mānoa Valley, Oʻahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative." [Could possibly be spread by vegetative fragments in riparian areas, but no direct evidence has been found to date]

706	**Propagules bird dispersed**	
	Source(s)	**Notes**
	Ramírez, N. (2005). Plant sexual systems, dichogamy, and herkogamy in the Venezuelan Central Plain. Flora-Morphology, Distribution, Functional Ecology of Plants, 200 (1), 30-48	"Appendix A Sexual system, dichogamy, herkogamy, and dispersal syndrome for 210 plant species in the Venezuelan Central Plain" [Philodendron hederaceum - Dispersal syndrome = F, frugivore]
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mānoa Valley, Oʻahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative." [Fruit and seed production may be limited or absent]
	Exotic Rainforest. (2023). Philodendron hederaceum. https://www.exoticrainforest.com/Philodendron%20hederaceum%20pc.html. [Accessed 28 Dec 2023]	[Presumably bird dispersed, but fruit and seed production may be limited or absent in the Hawaiian Islands] " If the plant is pollinated the berries are greenish white and will develop along the spadix. If a bird or other animal eats the berry and drops a seed in its droppings a new plant may form. Those seeds often end up on the branch of a tree and as a result, Philodendron hederaceum is known to science as a hemiepiphytic vine. Hemiepiphytes are species that are capable of beginning life on a tree branch or they may begin as a seed dropped on the ground which proceeds to climb."

707	**Propagules dispersed by other animals (externally)**	n
	Source(s)	**Notes**
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mānoa Valley, Oʻahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative."
	Croat, T.B. (1997). A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. http://www.aroid.org/genera/philodendron/Contents.php. [Accessed 28 Dec 2023]	[Sticky seeds could be externally dispersed if berries were produced and consumed or handled by a frugivore, but it is more likely that any seeds produced would be consumed and dispersed internally] "Though little is known about fruit dispersal, the mesocarp surrounding the seeds contained within each locule is juicy or gelatinous and is usually sweet and sticky, making it logically animal dispersed. Infructescences are frequently seen which appear to have been pecked apart by birds (Fig. 36). Certainly the sticky seeds, often many per berry, would logically be easily dispersed on birds beaks. Alternatively the infructescence is large, and even faintly scented when fully mature, making it an appealing meal even for mammals such as monkeys."

Qsn #	Question	Answer
708	Propagules survive passage through the gut	
	Source(s)	Notes
	Croat, T.B. (1997). A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. http://www.aroid.org/genera/philodendron/Contents.php. [Accessed 28 Dec 2023]	[Presumably yes if fruit and seeds are produced. Limited or absent fruiting and seeding in Hawaii may eliminate this mode of dispersal] "Though little is known about fruit dispersal, the mesocarp surrounding the seeds contained within each locule is juicy or gelatinous and is usually sweet and sticky, making it logically animal dispersed. Infructescences are frequently seen which appear to have been pecked apart by birds (Fig. 36). Certainly the sticky seeds, often many per berry, would logically be easily dispersed on birds beaks. Alternatively the infructescence is large, and even faintly scented when fully mature, making it an appealing meal even for mammals such as monkeys."

801	Prolific seed production (>1000/m2)	n
	Source(s)	Notes
	Betrock's Allergenica. (2021). Philodendron scandens. http://www.allergenica.com. [Accessed 9 Feb 2021]	"Berries, rarely produced"
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mānoa Valley, Oʻahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative."

802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	Notes
	Daehler, C. C. & Baker, R. F. (2006). New Records of Naturalized and Naturalizing Plants Around Lyon Arboretum, Mānoa Valley, Oʻahu. Bishop Museum Occasional Papers 87: 3-18	"Spread is probably exclusively vegetative." [Propagule bank unlikely to be formed in Hawaiian Islands, where fruit and seed production may be rare or absent]

803	Well controlled by herbicides	y
	Source(s)	Notes

Qsn #	Question	Answer
	Allonsy, A. (2023). How to Kill a Philodendron. http://homeguides.sfgate.com/kill-philodendron-27558.html. [Accessed 28 Dec 2023]	[General description. Herbicides, if necessary, provide effective control] "You may need to kill your philodendrons if they overwhelm their surroundings, contract disease or if you simply no longer want them." ... "Foliar Spray" ... herbicide application is a fastacting way to kill the plant and ensure it does not come back." ... "Mix a 2-percent solution of glyphosate herbicide with diesel fuel or kerosene in a spray bottle. Products that contain glyphosate are sold with varying concentrations, so read the product label carefully for specific mixing instructions. Use a small spray bottle to kill a small philodendron houseplant, or a garden sprayer if treating a dense patch of large philodendron bush plants, such as lacy tree philodendron (Philodendron bipinnatifidum)." ... "Spray the herbicide solution directly onto the leaves of the philodendron, being careful not to target surrounding plants. The kerosene or diesel fuel helps to fully coat the leaves and doesn't drip off as readily as herbicide mixed with water; the blue marking dye makes it easy to distinguish leaves that you already sprayed." ... Cut Stem Application. 1. Prepare a 18- to 21 percent solution of glyphosate herbicide mixed with kerosene or diesel fuel in a small, disposable bowl. Add blue marking dye, if desired, but it's not as necessary with this type of application. 2. Cut thick stemmed philodendrons, such as the larger, tree-like cut-leaf philodendron (Philodendron bipinnatifidum), with lopping shears or a pruning saw, leaving an 8- to 12-inch stem protruding from the ground. 3. Paint the cut tip of the philodendron stems with the herbicide solution, using a small household paintbrush. Paint the stems within one hour of cutting because fresh-cut stems are better able to absorb the herbicide into the root system. 4. Paint the outside of the remaining stem with the herbicide solution, providing a greater surface area through which the herbicide absorbs into the roots. 5. Allow a few days for the herbicide to take effect, in which the plant slowly"

804	Tolerates, or benefits from, mutilation, cultivation, or fire	y
	Source(s)	**Notes**
	CTAHR. (2023). Heart Leaf Philodendron (Philodendron scandens oxycardium). https://www.ctahr.hawaii.edu/uhmplants/Heart%20Leaf%20Philodendron.htm. [Accessed 28 Dec 2023]	"The growing tips should be pruned regularly so that it does not turn into a sparse and lanky plant." [Tolerates regular pruning]

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	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	"Heartleaf philodendron can be used as an indoor ground cover or in hanging basket in˜ sheltered, cool spot outdoors." [Unknown]

Summary of Risk Traits:

Philodendron hederaceum (synonym: Philodendron scandens) is a vigorous herbaceous vine native from Mexico to the West Indies and much of South America and is one of the most common houseplants. Fruit has not been observed in the Hawaiian Islands but the species easily propagates from even short sections of discarded stem. It is now reported to be naturalized on Kauai, Maui, Hawaii and potentially Oahu, and may smother or overgrow other desirable vegetation.

High Risk / Undesirable Traits
• Broad climate suitability
• Thrives, and able to spread, in regions with tropical climates
• Naturalized on Kauai and Maui, as well as Hawaii Island (unpublished)
• Possibly naturalizing on Oahu, Hawaiian Islands, and naturalized in Florida
• A possible weed of banana crops in Costa Rica
• Described as invasive, and weedy in non-native forests of the Hawaiian Islands
• Other Philodendron species are invasive
• Poisonous to animals and humans
• Tolerates many soil types
• Climbing and smothering growth habit
• Reproduces vegetatively, and possibly by bird-dispersed seeds in some locations
• Tolerates repeated cutting and pruning

Low Risk Traits
• Unarmed (no spines, thorns, or burrs)
• Seed production may be limited in cultivation (possibly due to pollinator limitations)
• Limited or absent seed production limits ability to spread
• Herbicides can effectively control Philodendron species