

Assessment date 9 November 2015

<i>Philodendron hederaceum var oxycardium</i> All Zones		Answer	Score
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 South Zone: suited to Zone 10	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in habitats with periodic inundation North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches South Zone: mean annual precipitation 40-60 inches	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	unk	
3.01	Naturalized beyond native range	n	0
3.02	Garden/amenity/disturbance weed	n	0
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	n	0
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	n	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	?	
4.05	Toxic to animals	y	1
4.06	Host for recognised pests and pathogens	y	1
4.07	Causes allergies or is otherwise toxic to humans	y	1
4.08	Creates a fire hazard in natural ecosystems	n	0
4.09	Is a shade tolerant plant at some stage of its life cycle	n	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	unk	0
4.11	Climbing or smothering growth habit	y	1
4.12	Forms dense thickets	unk	0
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat	n	0
6.02	Produces viable seed	?	

6.03	Hybridizes naturally	n	-1
6.04	Self-compatible or apomictic	unk	-1
6.05	Requires specialist pollinators	?	
6.06	Reproduction by vegetative propagation		
6.07	Minimum generative time (years)		
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	unk	-1
7.04	Propagules adapted to wind dispersal	n	-1
7.05	Propagules water dispersed		
7.06	Propagules bird dispersed		
7.07	Propagules dispersed by other animals (externally)	unk	-1
7.08	Propagules dispersed by other animals (internally)		
8.01	Prolific seed production	n	-1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)		
8.03	Well controlled by herbicides	y	-1
8.04	Tolerates, or benefits from, mutilation or cultivation		
8.05		?	
Total Score			-1
Implemented Pacific Second Screening			n/a
Risk Assessment Results			Low

section	# questions answered	satisfy minimum?
A		10 yes
B		9 yes
C		10 yes
total		29 yes

	Reference	Source data
1.01		cultivated, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif). 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (11/9/2015). 3. Global Biodiversity Information Facility (http://www.gbif.org/species/2871005 accessed 11/9/2015)	No computer analysis was performed. 1. Global hardiness zone: 9, 10, 11 ; equivalent to USDA Hardiness zones: USDA Zone 9a: to -6.6 °C (20 °F) USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11a: to USDA Zone (40 °F) USDA Zone 11b: to (45 °F) . 2. Native to
2.02		
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. Global Biodiversity Information Facility (http://www.gbif.org/species/2871005 accessed 11/9/2015)	1. Distribution in the native/cultivated range occurs in Bsk, Bsh, Aw, Am
2.04	1. Climate Charts. World Climate Maps. http://www.climate-charts.com/World-Climate-Maps.html#rain (8-19-2015) 2. Global Biodiversity Information Facility (http://www.gbif.org/species/2871005 accessed 11/9/2015)	This species is native to areas with with 38-97 inches of precipitation.
2.05		Commercially available and listed as
3.01		No evidence
3.02		No evidence
3.03		No evidence
3.04		No evidence
3.05		No evidence
4.01	1. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. http://www.aroid.org/genera/philodendron/Philodendron/Solenost erigma/hederaceum.php (10-18-2015)	These features are not in the description of the species.
4.02		No Evidence
4.03	1. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. http://www.aroid.org/genera/philodendron/Philodendron/Solenost erigma/hederaceum.php (10-18-2015)	The species shows no parasitic functions.
4.04		No Evidence
4.05	1. ASPCA https://www.asPCA.org/pet-care/animal-poison-control/toxic-and-non-toxic-plants/heartleaf-philodendron (10-14-2015) 2. University of Florida IFAS http://gardeningsolutions.ifas.ufl.edu/plants/houseplants/heartleaf-philodendron.html (10-15-2015) 3. Dave's Garden (http://davesgarden.com/guides/pf/go/736/#b accessed 11/9/2015)	1. Toxic to dogs and cats 2. Philodendrons are toxic to pets; chewing on plants can cause oral pain, drooling, foaming, vomiting, and moderate to severe swelling of the lips, tongue, oral cavity, and upper airway. 3. All parts of plant are poisonous if ingested
4.06	1. Dr. Leonard Perry, Professor, University of Vermont as part of PSS121, Indoor Plants. http://pss.uvm.edu/pss123/folphil.html (10-5-2015) 2. University of Florida http://mrec.ifas.ufl.edu/foilage/fofnotes/phil-hl.htm (10-6-2015)	1. mosaic virus, leaf spots, root rot, mealybugs, scales, spider mites 2. The major arthropod pests of this plant species include aphids, moths (worms), fungus gnats, mealybugs, mites, scales, and thrips.
4.07	1. Dave's Garden http://davesgarden.com/guides/pf/go/736/#b (10-12-2015) 2. University of Florida IFAS http://gardeningsolutions.ifas.ufl.edu/plants/houseplants/heartleaf-philodendron.html (10-15-2015)	1. All parts of plant are poisonous if ingested. Handling plant may cause skin irritation or allergic reaction 2. People can also have mild allergic reactions to the sap, resulting in an itchy rash.
4.08		no evidence

4.09	1. Dave's Garden http://davesgarden.com/guides/pf/go/736/#b (10-12-2015) 2. University of Florida IFAS http://gardeningsolutions.ifas.ufl.edu/plants/houseplants/heartleaf-philodendron.html (10-15-2015)	1. Light Shade 2. Heart-leaf philodendrons enjoy bright diffuse light, but will tolerate a range of lighting conditions from diffused light to shade;
4.10		No evidence
4.11	1. University of Minnesota Extension http://www.extension.umn.edu/garden/yard-garden/landscaping/best-plants-for-tough-sites/docs/08464-complete.pdf (10-13-2015)	1. Vining plant that can trail or grow up supports.
4.12		No evidence
5.01		Family: Araceae
5.02		Family: Araceae
5.03		No evidence
5.04	1. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. http://www.aroid.org/genera/philodendron/Philodendron/Solenostigma/hederaceum.php (10-18-2015)	These features are not in the description of the species.
6.01		no evidence
6.02	1. Dave's Garden http://davesgarden.com/guides/pf/go/736/#b (10-12-2015) 2. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. Berries. (http://www.aroid.org/genera/philodendron/berries.htm)	1. plant does not set seed, flowers are sterile, or plants will not come true from seed 2. Seeds contained in fruit.
6.03	1. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. Pollination Biology. (http://www.aroid.org/genera/philodendron/pollibiol.htm)	1. Though more studies must be made on pollination biology of Philodendron and even though the beetle pollination system is somewhat sloppy and imprecise, a combination of a moderately strong beetle-plant specificity, coupled with severe phenological constraints and narrow windows of pollination opportunities (perhaps as little as a few hours per year) work to reduce interspecific hybridization. Although hybrids can be readily produced under greenhouse conditions, evidence for hybridization is not apparent among wild populations.
6.04		No evidence
6.05		No evidence, but there is evidence that congeners do have specialists
6.06		No evidence
6.07		No evidence
7.01		No evidence
7.02		Ornamentals are readily available commercially and on the internet
7.03		No evidence
7.04	1. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. Berries. (http://www.aroid.org/genera/philodendron/berries.htm)	Fruits are berries
7.05		No evidence
7.06	1. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. Berries. (http://www.aroid.org/genera/philodendron/berries.htm)	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. Inflorescences 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 inflorescence is large, and even faintly scented when fully mature, making it an appealing meal even for mammals such as monkeys.
7.07		No evidence

7.08	1. Croat (1997) A Revision of Philodendron Subgenus Philodendron (Araceae) of Central America. Berries. (http://www.aroid.org/genera/philodendron/berries.htm)	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.
8.01	1. INFRUCTESCENCE pendent, often on leafless stems; spathe dark green, weakly glossy outside; pistillate spadix 5--8 cm long, 3.5--4 cm diam.; 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. [few seeds per berry] 2. FLOWERING SEASON: Rarely produced FRUITS: Berries, rarely produced	1. http://www.aroid.org/genera/Philodendron/Philodendron/Solenost erigma/hederaceum.htm (10-18-2015) 2. Allergenica http://www.allergenica.com/Details.asp?PLANTID=163 (10-18-2015)
8.02		No evidence
8.03	1. Stamps, R. H. , Bodnaruk, W. H., Jr.1982. Herbicide application to heartleaf philodendron stock beds.Proceedings of the Florida State Horticultural Society, Vol. 94, pp. 117-119	1. Oxadiazon at 2.2 kg/ha, napropamide at 4.5 kg/ha,simazine at 2.2 kg/ha, oxadiazon + alachlor at 1.7 + 1.7 kg/ha or simazine + napropamide at 1.1 + 4.5 kg/ha was applied twice at 3-month intervals in 1980 and 1981 to ground stock beds of Philodendron scandens oxycardium. Alachlor at 2.2 kg/ha was applied at 6-week intervals. Weed control was very good with the treatments containing oxadiazon and poor to fair with the others. No herbicide treatment caused significant visual symptoms of phytotoxicity. The treatments did not affect internode length or cutting weight compared with controls and had no effect on rooting of cuttings taken from treated beds, or on subsequent growth of the cuttings. Node position had little effect on rooting of cuttings.
8.04		
8.05		no evidence