

Australia/New Zealand Weed Risk Assessment adapted for Florida.

Data used for analysis published in: Gordon, D.R., D.A. Onderdonk, A.M. Fox, R.K. Stocker, and C. Gantz. 2008. Predicting Invasive Plants in Florida using the Australian Weed Risk Assessment. *Invasive Plant Science and Management* 1: 178-195.

<i>Philodendron scandens (heart-leaf philodendron)</i>			
Question number	Question	Answer	Score
1.01	Is the species highly domesticated?	?	
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)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)		
2.04	Native or naturalized in habitats with periodic inundation		
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	n	-2
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		
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	y	1
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)		
4.11	Climbing or smothering growth habit	y	1
4.12	Forms dense thickets	n	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		
6.02	Produces viable seed		
6.03	Hybridizes naturally	n	-1
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators	y?	-1
6.06	Reproduction by vegetative fragmentation	y	1
6.07	Minimum generative time (years)		
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	n	-1
7.05	Propagules water dispersed	n	-1
7.06	Propagules bird dispersed	y	1
7.07	Propagules dispersed by other animals (externally)	?	
7.08	Propagules dispersed by other animals (internally)	y	1
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		
8.04	Tolerates, or benefits from, mutilation or cultivation		
8.05	Effective natural enemies present in Florida, or east of the continental divide		
Total Score			0

Outcome	Accept*
----------------	----------------

*Used secondary screen from: Daehler, C. C., J.L. Denslow, S. Ansari, and H. Kuo. 2004. A risk assessment system for screening out harmful invasive pest plants from Hawaii's and other Pacific islands. *Conserv. Biol.* 18: 360-368.

section	# questions answered	satisfy minimum?
A	5	yes
B	9	yes
C	14	yes
total	28	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		
1.02		
1.03		
2.01		
2.02		
2.03		
2.04		
2.05	Conover, Osborne, and Chase (1984) Heart-leaf philodendron. Foliage Digest 7: 3-6.	"Heart-leaf philodendron is still one of the best foliage plants available and is utilized for potted plants, totem poles and hanging baskets."
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05		no evidence
4.01	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	no description of these traits
4.02		no evidence
4.03	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	no description of this
4.04		
4.05	Burrows and Tyrl (2001) Toxic Plants of North America. Iowa State University Press, Ames.	"philodendrons are purported to be nephrotoxic and possibly neurotoxic, the latter problem confined to cats"
4.06		
4.07	Horticopia 4.0	"All parts of this plant are poisonous if ingested, causing burning and irritation around the mouth and throat."
4.08		no evidence
4.09	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	partial to deep shade
4.1		
4.11	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	herbaceous vine; vigorous, climbing
4.12		no evidence
5.01		terrestrial

5.02	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	Araceae
5.03	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	Araceae
5.04	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (Araceae) of Central America. <i>Philodendron hederaceum</i> . (http://www.aroid.org/genera/philodendron/Philodendron/Solenosterigma/hederaceum.htm)	"roots brown, to 10 cm long" [no description of bulbs, corms, or tubers]
6.01		
6.02		
6.03	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (Araceae) of Central America. Pollination Biology. (http://www.aroid.org/genera/philodendron/pollibiol.htm)	"Though more studies must be made on pollination biology of <i>Philodendron</i> 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		
6.05	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (Araceae) of Central America. Pollination Biology. (http://www.aroid.org/genera/philodendron/pollibiol.htm)	"Pollinators are members of subfamily Dynastinae in the family Scarabaeidae (Fig. 32). All beetles determined to date from either Central American or South American <i>Philodendron</i> are members of the genera <i>Cyclcephala</i> or <i>Erioscelis</i> ."
6.06	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (Araceae) of Central America. <i>Philodendron hederaceum</i> . (http://www.aroid.org/genera/philodendron/Philodendron/Solenosterigma/hederaceum.htm)	roots at nodes
6.07		
7.01		
7.02	Conover, Osborne, and Chase (1984) Heart-leaf philodendron. <i>Foliage Digest</i> 7: 3-6.	"Heart-leaf philodendron is still one of the best foliage plants available and is utilized for potted plants, totem poles and hanging baskets."
7.03		no evidence
7.04	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (Araceae) of Central America. Berries. (http://www.aroid.org/genera/philodendron/berries.htm)	fruits are berries

7.05		no evidence
7.06	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (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."
7.07	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (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."
7.08	Croat (1997) A Revision of <i>Philodendron</i> Subgenus <i>Philodendron</i> (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	Allergenica (http://www.allergenica.com/details.asp?plantid=163)	fruits are rarely produced
8.02		
8.03		

8.04		
8.05		