

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>Pitcairnia karwinskyana</i>			
Question number	Question	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)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	n	0
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?	n	
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	n	0
4.06	Host for recognised pests and pathogens		
4.07	Causes allergies or is otherwise toxic to humans	n	0
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		
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)		
4.11	Climbing or smothering growth habit	n	0
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	y?	1
6.03	Hybridizes naturally	n	-1
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators		
6.06	Reproduction by vegetative fragmentation		
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	n	-1
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	y	1
7.05	Propagules water dispersed	n	-1
7.06	Propagules bird dispersed		
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)		
8.01	Prolific seed production		
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			-3

Outcome	Accept*
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*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	7	yes
B	8	yes
C	11	yes
total	26	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		no evidence of cultivation
1.02		
1.03		
2.01		
2.02		
2.03	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	distribution: central and southern Mexico [and no evidence of naturalization elsewhere]
2.04		
2.05		no evidence
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05		no evidence
4.01	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	no description of these traits
4.02		no evidence
4.03	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	no description of this
4.04		
4.05		no evidence
4.06		
4.07		no evidence
4.08		no evidence
4.09		
4.1		
4.11	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	terrestrial, saxicolous, or epiphytic herb
4.12		no evidence
5.01	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	terrestrial, saxicolous, or epiphytic
5.02	USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN)	Bromeliaceae

	[Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland (http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?414424).	
5.03	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?414424).	Bromeliaceae
5.04	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	"Since the primary root never reaches any appreciable size, root anatomy is necessarily based on adventitious roots or on secondary roots. Adventitious roots originate inside the basal part of the stem and take over the function of the defunct primary root. Secondary roots of course are branch roots."
6.01		
6.02		
6.03	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	"Natural hybrids between bromeliads appear to be rather rare under field conditions...The Pitcairnioideae...have no recorded generic hybrids and...few specific ones".
6.04		
6.05		
6.06		
6.07		
7.01		
7.02		no evidence
7.03		no evidence
7.04	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	"Seeds produced by most of the plants of this subfamily have entire appendages, are small and light and can be carried easily by the wind...Seeds [of <i>P. karwinskyana</i>] fusiform, long-caudate at both ends."
7.05		no evidence
7.06		
7.07	Smith, LB and RJ Downs (1974) Flora Neotropica. Monograph No. 14. Pitcairnioideae (Bromeliaceae). Hafner Press, New York.	fruits of genus <i>Pitcairnia</i> are capsules [no evidence of any means of attachment]
7.08		
8.01		
8.02		
8.03		
8.04		
8.05		