

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>Ficus pumila (climbing fig)</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)		
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	y	0
3.02	Garden/amenity/disturbance weed	n	0
3.03	Weed of agriculture	y	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	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	n	0
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	y	1
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)	y	1
4.11	Climbing or smothering growth habit	y	1
4.12	Forms dense thickets	y	1
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	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)	y	1
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)	n	-1
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	y	-1
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			10

Outcome	Reject*
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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	6	yes
B	11	yes
C	18	yes
total	35	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		cultivated, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01		
2.02		
2.03		
2.04		
2.05	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	"widely cultivated in tropical to warm temperate regions as an ornamental"
3.01	New Zealand Plant Conservation Network (2005) New Zealand Adventive Vascular Plant List.	fully naturalized in New Zealand
3.02		no evidence
3.03	Holm (1979) A Geographical Atlas of World Weeds. John Wiley and Sons.	Considered a common weed of agriculture in Australia.
3.04	Starr, Starr, and Loope (2003) <i>Ficus pumila</i> . Plants of Hawaii, Reports. USGS, Biological Resources Division (http://www.hear.org/starr/hiplants/reports/pdf/ficus_pumila.pdf).	"There have been no accounts of pollinator wasps being introduced to places where <i>F. pumila</i> is cultivated and spread has been only by vegetative means." [and no evidence of weediness]
3.05	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	<i>Ficus carica</i> considered an environmental weed in Australia and the western US.
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		no evidence
4.06	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	1. pest-free 2. No pests, diseases, or damaging agents of major concern.
4.07	Hortocopia 4.0	"Pollen causes little or no allergies." [and no evidence of toxicity]

4.08		no evidence
4.09	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	1. "Will grow on almost any soil under any light conditions" 2. full shade to full sun
4.1	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	"Will grow on almost any soil under any light conditions"
4.11	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	"creeping or climbing woody, evergreen vine"
4.12	Haley (1997) Weed Index, Environment Bay of Plenty (http://www.boprc.govt.nz/weeds/Weed267.asp).	"creates a dense, smothering mass as it develops"
5.01		terrestrial
5.02	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Moraceae
5.03	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Moraceae
5.04	1. Starr, Starr, and Loope (2003) <i>Ficus pumila</i> . Plants of Hawaii, Reports. USGS, Biological Resources Division (http://www.hear.org/starr/hiplants/reports/pdf/ficus_pumila.pdf). 2. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	1. "roots adventitious, nodal" 2. "climbing by numerous tenacious aerial roots"
6.01		
6.02	Starr, Starr, and Loope (2003) <i>Ficus pumila</i> . Plants of Hawaii, Reports. USGS, Biological Resources Division (http://www.hear.org/starr/hiplants/reports/pdf/ficus_pumila.pdf).	"It can be propagated from seeds but must be pollinated by its associated pollinator wasp for seeds to be viable."
6.03		prevented by specificity of pollinator
6.04		
6.05	1. Chen, Li, and Ma (2003) Egg-laying and pollinating behavior of <i>Blastophaga pumilae</i> . Acta Entomologica Sinica 46: 35-39.	Each fig species pollinated by a different species of gall wasp. <i>F. pumila</i> pollinated by <i>Blastophaga pumilae</i> (1).
6.06	Starr, Starr, and Loope (2003) <i>Ficus pumila</i> . Plants of Hawaii, Reports. USGS, Biological Resources Division (http://www.hear.org/starr/hiplants/reports/pdf/ficus_pumila.pdf).	"roots adventitious, nodal"
6.07		
7.01	Haley (1997) Weed Index, Environment Bay of Plenty (http://www.boprc.govt.nz/weeds/Weed267.asp).	"Capable of spreading from garden rubbish dumps at roadsides."

7.02	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	"widely cultivated in tropical to warm temperate regions as an ornamental"
7.03		no evidence
7.04	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	fruit is a pear-shaped syconium, to 2 inches long
7.05		no evidence
7.06		fig (fleshy fruit)
7.07		no evidence of any means of attachment
7.08		fig (fleshy fruit)
8.01	Starr, Starr, and Loope (2003) <i>Ficus pumila</i> . Plants of Hawaii, Reports. USGS, Biological Resources Division (http://www.hear.org/starr/hiplants/reports/pdf/ficus_pumila.pdf).	"There have been no accounts of pollinator wasps being introduced to places where <i>F. pumila</i> is cultivated and spread has been only by vegetative means."
8.02		
8.03	Haley (1997) Weed Index, Environment Bay of Plenty (http://www.boprc.govt.nz/weeds/Weed267.asp).	"Spray with Metsulfuron herbicide 5 grams to 10 litres of water in a knapsack sprayer. This recommendation is based on a successful operation on a substantial infestation."
8.04		
8.05		