

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>Allamanda schottii</i> (bush allamanda)			
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	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	0
4.01	Produces spines, thorns or burrs	y	1
4.02	Allelopathic	n	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals		
4.05	Toxic to animals	?	
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	?	
4.1	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils)	y	1
4.11	Climbing or smothering growth habit	?	
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		
6.01	Evidence of substantial reproductive failure in native habitat		
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally		
6.04	Self-compatible or apomictic	y	1
6.05	Requires specialist pollinators	n	0
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	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		
7.07	Propagules dispersed by other animals (externally)	?	
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			7

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	7	yes
C	10	yes
total	23	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	Horticopia 4.0	hardy range 10B to 11
2.02		
2.03	1. van Valkenburg and Bunyapraphatsara, eds. (2001) Plant Resources of South-East Asia. No. 12(2). Medicinal and poisonous plants. Backhuys Publishers, Leiden. 2. Liogier (1995) Descriptive Flora of Puerto Rico and Adjacent Islands. Vol. 4. Editorial de la Universidad de Puerto Rico.	1. native to southern Brazil; locally naturalized in South-East Asia 2. naturalized in Puerto Rico
2.04		
2.05	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	" <i>Allamanda schottii</i> , bush allamanda, is native to Brazil but is widely cultivated for its large yellow flowers".
3.01	1. Liogier (1995) Descriptive Flora of Puerto Rico and Adjacent Islands. Vol. 4. Editorial de la Universidad de Puerto Rico. 2. van Valkenburg and Bunyapraphatsara, eds. (2001) Plant Resources of South-East Asia. No. 12(2). Medicinal and poisonous plants. Backhuys Publishers, Leiden.	1. cultivated and persistent in Puerto Rico 2. locally naturalized in South-East Asia
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05	1. Space, Waterhouse, Miles, Tiobech, and Rengulbai (2003) Report to the Republic of Palau on Invasive Plant Species of Environmental Concern. USDA Forest Service, Institute of Pacific Islands Forestry, Honolulu. 2. Csurhes and Edwards (1998) Potential Environmental Weeds in Australia. Queensland Department of Natural Resources.	1. <i>A. cathartica</i> considered a major invasive species on Palau (see Table D); "it has invaded forest and savanna in central Babeldaob [island in Palau]". 2. "Stanton (pers. comm.) reports that <i>A. cathartica</i> has become quite invasive in several National Parks of far north Queensland."
4.01	Missouri Botanical Garden, Kemper Center for Home Gardening (http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=A481).	prickly, burlike fruits
4.02		no evidence
4.03	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	no description of this
4.04		
4.05		sap considered toxic, but no evidence regarding animals
4.06		
4.07	1. Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland. 2. Missouri Botanical Garden, Kemper Center for Home Gardening (http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=A481). 3. Gilman (1999) <i>Allamanda nerifolia</i> .	1. "Like other allamandas, the sap is poisonous." 2. "the stems exude a toxic milky sap" BUT 3. "Unlike Yellow Allamanda, this plant is non-poisonous."

	University of Florida, IFAS Extension, FPS-31 (http://hort.ufl.edu/shrubs/ALLNERA.PDF).	
4.08		no evidence
4.09	1. Horticipia 4.0. 2. Gilman (1999) <i>Allamanda neriifolia</i> . University of Florida, IFAS Extension, FPS-31 (http://hort.ufl.edu/shrubs/ALLNERA.PDF). 3. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London. 4. Missouri Botanical Garden, Kemper Center for Home Gardening (http://www.mobot.org/gardeninghelp/plantfinder/Plant.a.sp?code=A481).	1. partial shade or partial sun to full sun; "These viney-shrubs require full sun for best flowering" 2. part shade/part sun; "Full to part sun is required for best growth and flower display. Plants in the shade will flower poorly." 3. "Grow in full sun, but with shade from the strongest summer sun". [for genus <i>Allamanda</i>] BUT 4. full sun
4.1	1. Horticipia 4.0. 2. Gilman (1999) <i>Allamanda neriifolia</i> . University of Florida, IFAS Extension, FPS-31 (http://hort.ufl.edu/shrubs/ALLNERA.PDF). 3. Missouri Botanical Garden, Kemper Center for Home Gardening (http://www.mobot.org/gardeninghelp/plantfinder/Plant.a.sp?code=A481).	1. "Suitable soil is well-drained/loamy, sandy or clay...Allamanda is tolerant of various soil types". 2. soil tolerances: alkaline, acidic, clay, sand, loam; "any soil is suitable for good growth" BUT 3. "Grow in organically rich...well-drained soils".
4.11	1. Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland. 2. 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. 3. Gilman (1999) <i>Allamanda neriifolia</i> . University of Florida, IFAS Extension, FPS-31 (http://hort.ufl.edu/shrubs/ALLNERA.PDF). 4. Horticipia 4.0. 5. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London. 6. Liogier (1995) Descriptive Flora of Puerto Rico and Adjacent Islands. Vol. 4. Editorial de la Universidad de Puerto Rico.	1. vine-like shrub 2. growth habit: vine BUT 3. "It does not climb structures like many of the other Allamandas." 4. shrub 5. "Erect, glabrous shrub to 1.5 m. Branches sometimes clambering." 6. "Glabrous erect shrub to 2 m tall, sometimes with scandent branches"
4.12		no evidence
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.	Apocynaceae
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.	Apocynaceae
5.04		
6.01		
6.02	1. Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland. 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	propagate by seeds (1, 2)
6.03		
6.04	Sakane, M. (1990) Observations about the floral biology	"Observations on the floral

	of <i>Allamanda schottii</i> Pohl. Hoehnea 17: 27-32.	biology of <i>Allamanda schottii</i> Pohl showed that this species may be autogamous or allogamous."
6.05	Sakane, M. (1990) Observations about the floral biology of <i>Allamanda schottii</i> Pohl. Hoehnea 17: 27-32.	"The most frequent visitors to the flowers are butterflies, bees and wasps, but fertilization is carried out by butterflies of the genus <i>Phoebis</i> ."
6.06		
6.07	1. Horticipia 4.0. 2. Gilman (1999) <i>Allamanda neriifolia</i> . University of Florida, IFAS Extension, FPS-31 (http://hort.ufl.edu/shrubs/ALLNERA.PDF).	1. average growth rate 2. moderate growth rate
7.01		
7.02	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	" <i>Allamanda schottii</i> , bush allamanda, is native to Brazil but is widely cultivated for its large yellow flowers".
7.03		no evidence
7.04	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	fruits are spiny, globose capsules to 7 cm in diameter [no evidence of adaptations to wind dispersal]
7.05		no evidence
7.06		
7.07	Whistler (2000) Tropical Ornamentals: a Guide. Timber Press, Portland.	fruits are spiny, globose capsules to 7 cm in diameter
7.08		
8.01		
8.02		
8.03		
8.04		
8.05		