

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>Neyraudia reynaudiana (Burma reed)</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	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	n	
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	y	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	n	0
4.08	Creates a fire hazard in natural ecosystems	y	1
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	n	0
4.12	Forms dense thickets	n	0
5.01	Aquatic	n	0

5.02	Grass	y	1
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		
6.05	Requires specialist pollinators	n	0
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	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	n	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	y	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	y	1
8.05	Effective natural enemies present in Florida, or east of the continental divide		
Total Score			11

Outcome	Reject*
----------------	----------------

*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	10	yes
C	17	yes
total	34	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		
2.04	1. Weber (2003) Invasive Plant Species of the World. CABI Publishing. 2. Guala (1990) Element Stewardship Abstract for <i>Neyraudia reynaudiana</i> . The Nature Conservancy, Arlington, VA.	1. "In the native range, this grass is found at bogs..." 2. "It has often been collected in marshy areas..."
2.05	1. Kairo, Ali, Cheesman, Haysom, and Murphy (2003) Invasive Species Threats in the Caribbean Region. Report to the Nature Conservancy. 2. Langeland and Burks, eds. (1998) Identification and Biology of Nonnative Plants in Florida's Natural Areas. University of Florida.	only documented introduction (not including Florida) is the Bahamas (1, 2)
3.01	Kairo, Ali, Cheesman, Haysom, and Murphy (2003) Invasive Species Threats in the Caribbean Region. Report to the Nature Conservancy.	Considered naturalized and invasive in the Bahamas.
3.02		no evidence
3.03		no evidence
3.04	Kairo, Ali, Cheesman, Haysom, and Murphy (2003) Invasive Species Threats in the Caribbean Region. Report to the Nature Conservancy.	Considered invasive in the Bahamas.
3.05		no evidence
4.01	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	no description of these traits
4.02		no evidence
4.03	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	no description of this
4.04		
4.05	Rasha (2005) Burma reed. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/nere1.htm).	<i>N. reynaudiana</i> "is reported to be poisonous to buffalo" in Bhutan.

4.06		
4.07		no evidence
4.08	1. Platt and Gottschalk (2001) Effects of exotic grasses on potential fine fuel loads in the groundcover of south Florida slash pine savannas. International Journal of Wildland Fire 10: 155-159. 2. Rasha (2005) Burma reed. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/nere1.htm).	1. Potential fuel loads were much higher in areas with <i>N. reynaudiana</i> than in areas without it. 2. "Burma reed is a highly combustible fuel source because of its overall plant mass, its large feathery flower plumes, and the dense, hay-like leaf litter it produces. This hay-like litter enhances the fire's movement along the ground, while the flower plumes carry the flames high into the air."
4.09	Guala (1990) Element Stewardship Abstract for <i>Neyraudia reynaudiana</i> . The Nature Conservancy, Arlington, VA.	"It is remarkably tolerant with respect to edaphic and light regimes although it seems to prefer open, high light, areas."
4.1	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	"often growing on infertile soils" in the native range
4.11	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.	growth habit: graminoid
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.	Poaceae
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.	herbaceous Poaceae
5.04		
6.01		
6.02	Rasha (2005) Burma reed. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/nere1.htm).	"Burma reed reproduces by seed"
6.03		
6.04		
6.05		likely wind-pollinated (grass)
6.06	1. Weber (2003) Invasive Plant Species of the World. CABI Publishing. 2. Guala (1990) Element Stewardship Abstract for <i>Neyraudia reynaudiana</i> . The Nature Conservancy, Arlington, VA.	1. short, coarse rhizomes 2. "extensive and robust rhizome system"
6.07		
7.01	Rasha (2005) Burma reed. PCA Alien Plant	"Seeds and rhizomes are also

	Working Group (http://www.nps.gov/plants/alien/fact/here1.htm).	transported inadvertently in limestone rock from infested quarries"
7.02	Rasha (2005) Burma reed. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/here1.htm).	"Burma reed has no known economic value."
7.03		no evidence
7.04	Weber (2003) Invasive Plant Species of the World. CABI Publishing.	"Seeds are dispersed by wind."
7.05		no evidence
7.06		wind dispersed
7.07		no evidence of any means of attachment
7.08		wind dispersed
8.01	1. Hammer (1998) The cane grasses. Wildland Weeds 1: 9. 2. Rasha (2005) Burma reed. PCA Alien Plant Working Group (http://www.nps.gov/plants/alien/fact/here1.htm).	1. "Burma reed is a highly prolific seed producer; each clump contains approximately 40 stalks with 12 to 20 flowering plumes, and can potentially produce up to 120,000 seeds." 2. "Burma reed plants flower twice each year, producing hundreds of thousands of tiny seeds"
8.02		
8.03	Guala (1990) Element Stewardship Abstract for <i>Neyraudia reynaudiana</i> . The Nature Conservancy, Arlington, VA.	Application of Roundup, possibly in combination with cutting, appears to be an effective control.
8.04	1. Weber (2003) Invasive Plant Species of the World. CABI Publishing. 2. Guala (1990) Element Stewardship Abstract for <i>Neyraudia reynaudiana</i> . The Nature Conservancy, Arlington, VA.	1. "It vigorously resprouts after damage." 2. "The extensive and robust rhizome system allows it to survive cutting and heavy disturbance."
8.05		