

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>Phoenix reclinata (Senegal date palm)</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?	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	n	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	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	n	0
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	y	1
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	y	1
6.04	Self-compatible or apomictic	n	-1
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)		
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		
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n?	-1
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			5

Outcome	Evaluate*
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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	10	yes
C	17	yes
total	34	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		used horticulturally, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01		
2.02		
2.03	Barrow (1998) A monograph of <i>Phoenix</i> L. (Palmae: Coryphoideae). Kew Bulletin 53: 513-575.	" <i>Phoenix reclinata</i> occurs throughout tropical and subtropical Africa, northern and southwestern Madagascar and the Comoro Islands... <i>Phoenix reclinata</i> is a widely distributed species growing in a range of habitats"
2.04	Barrow (1998) A monograph of <i>Phoenix</i> L. (Palmae: Coryphoideae). Kew Bulletin 53: 513-575.	" <i>Phoenix reclinata</i> is a widely distributed species growing in a range of habitats, often seasonally water-logged or inundated..."
2.05	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	used horticulturally (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 in Bermuda.
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.	spines at base of petiole
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	Barrow (1998) A monograph of <i>Phoenix</i> L. (Palmae: Coryphoideae). Kew Bulletin 53: 513-575.	fruits are eaten by a wide variety of birds and mammals [and no mention of toxicity in horticultural or toxicity references]

4.06		
4.07	Barrow (1998) A monograph of <i>Phoenix</i> L. (<i>Palmae: Coryphoideae</i>). Kew Bulletin 53: 513-575.	The fruits, seeds, palm heart, and sap are all consumed by people.
4.08		no evidence
4.09	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Watkins, Sheehan, and Black (2005) Florida Landscape Plants: Native and Exotic. University Press of Florida. 3. Gilman and Watson (1994) <i>Phoenix reclinata</i> : Senegal date palm. University of Florida, IFAS Extension (http://edis.ifas.ufl.edu/pdffiles/ST/ST44000.pdf).	1. full sun 2. light requirement: full sun 3. "Growing easily in full sun or partial shade"
4.1	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Watkins, Sheehan, and Black (2005) Florida Landscape Plants: Native and Exotic. University Press of Florida.	1. various well-drained soils 2. "Thrives on well-drained, dry, sandy soils"
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: tree
4.12	Barrow (1998) A monograph of <i>Phoenix</i> L. (<i>Palmae: Coryphoideae</i>). Kew Bulletin 53: 513-575.	"Clustering palm, often thicket-forming"
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.	Arecaceae
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.	Arecaceae
5.04		
6.01		
6.02	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	propagation by seed
6.03	Uhl and Dransfield (1987) <i>Genera Palmarum</i> . Allen Press, Lawrence, Kansas.	"Species [of <i>Phoenix</i>] are known to hybridize freely."
6.04	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	dioecious

6.05	Henderson (1986) A review of pollination studies in the Palmae. The Botanical Review 52: 221-259.	Honeybees visit flowers of <i>P. reclinata</i> , and entomophily suspected for the genus as a whole.
6.06	1. Gilman and Watson (1994) <i>Phoenix reclinata</i> : Senegal date palm. University of Florida, IFAS Extension (http://edis.ifas.ufl.edu/pdf/ST/ST44000.pdf). 2. Watkins, Sheehan, and Black (2005) Florida Landscape Plants: Native and Exotic. University Press of Florida.	1. "Propagation is by seed or division of the many suckers which appear at the base of old clumps." 2. propagation by division of offsets
6.07	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	1. slow growth rate 2. average growth rate [but time to vegetative reproduction unknown]
7.01		
7.02	1. Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida. 2. Hortocopia 4.0	used horticulturally (1, 2)
7.03		no evidence
7.04	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	fruit is an ovoid drupe, to .75 in long
7.05		no evidence
7.06	1. Zona (2005) Additions to "A review of animal-mediated seed dispersal of palms" (http://www.virtualherbarium.org/palms/psdispersal.html). 2. Barrow (1998) A monograph of <i>Phoenix</i> L. (Palmae: Coryphoideae). Kew Bulletin 53: 513-575.	1. <i>Phoenix reclinata</i> dispersed by palm nut vultures and green turacos. 2. Also dispersed by parrots.
7.07	Dehgan, B. (1998) Landscape Plants for Subtropical Climates. University Press of Florida.	fruit is an ovoid drupe, to .75 in long - no evidence of any means of attachment
7.08	1. Kinnaird (1992) Competition for a forest palm: use of <i>Phoenix reclinata</i> by human and nonhuman primates. Conservation Biology 6: 101-107. 2. Barrow (1998) A monograph of <i>Phoenix</i> L. (Palmae: Coryphoideae). Kew Bulletin 53: 513-575.	1. <i>Phoenix reclinata</i> accounts for a major portion of the diet of the Tana River crested mangabey (<i>Cercocebus galeritus galeritus</i>); many seeds predated upon, but some dispersed; 100% of <i>Phoenix</i> seeds extracted from mangabey feces germinated. 2. Also dispersed by elephants and lemurs.
8.01	Barrow (1998) A monograph of <i>Phoenix</i> L. (Palmae: Coryphoideae). Kew Bulletin 53: 513-575.	one seed per fruit
8.02	von Fintel, Berjak, and Pammenter (2004) Seed behaviour in <i>Phoenix reclinata</i> Jacquin, the wild date palm. Seed Science Research 14: 197-204.	"It is generally recommended that palm seeds should be planted fresh, as viability is lost within a relatively short time." [probably dry storage...]
8.03	Langeland and Stocker (2001) Control of non-native plants in natural areas of Florida. University of Florida, IFAS Extension, SP 242 (http://edis.ifas.ufl.edu/pdf/WG/WG20900.pdf).	"Treatment: Cut stems near ground level and treat with 50% Garlon 3A or 10% Garlon 4 or apply 10% Garlon 4 to meristem...All methods listed have been found effective under certain

		circumstances."
8.04		
8.05		