

**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>Cocculus laurifolius (cocculus)</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	n	-2
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	n	0
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	n	0
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	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	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	?	
6.03	Hybridizes naturally		
6.04	Self-compatible or apomictic	n	-1
6.05	Requires specialist pollinators		
6.06	Reproduction by vegetative fragmentation		
6.07	Minimum generative time (years)	4	-1
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)		
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		
<b>Total Score</b>			<b>0</b>

<b>Outcome</b>	<b>Accept*</b>
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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	10	yes
C	12	yes
total	28	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		cultivated as an ornamental, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01	1. Hortocopia 4.0 2. Martin, Virtual Library of Phoenix Landscape Plants ( <a href="http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/cocculusaurifolius.html">http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/cocculusaurifolius.html</a> ).	1. hardy range: 9A to 11 2. USDA hardiness zones: 8-11
2.02		
2.03		
2.04		
2.05	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	"Distribution: Nepal, India, Burma (Myanmar), Indo-China, southern China, Taiwan, Japan, Thailand, Sumatra, Java and the Philippines... <i>C. laurifolius</i> is sometimes cultivated as an ornamental, e.g. in milder parts of North America and Europe."
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05	Holm (1979) A Geographical Atlas of World Weeds. John Wiley and Sons.	<i>C. carolinus</i> is considered present as a weed of agriculture in the U.S.
4.01	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	no description of these traits
4.02		no evidence
4.03	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	no description of this
4.04		
4.05		
4.06	Hortocopia 4.0	No serious pests, diseases, or damaging agents.
4.07	1. Hortocopia 4.0 2. Burrows and Tyrl (2001)	1. "All plant parts are suspected as

	Toxic Plants of North America. Iowa State University Press, Ames.	poisonous. Pollen from male plants causes allergenic reactions". 2. "Although there are few, if any, reports of intoxications due to species of <i>Cocculus</i> , they contain several biologically active alkaloids...Thus, there is a basis for considering these species as minor toxicologic risks if they are eaten in sufficient quantity."
4.08		no evidence
4.09	1. Hortocopia 4.0 2. Watkins, Sheehan, and Black (2005) Florida Landscape Plants: Native and Exotic. University Press of Florida. 3. Martin, Virtual Library of Phoenix Landscape Plants ( <a href="http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/cocculuslaurifolius.html">http://www.public.asu.edu/~camartin/plants/Plant%20html%20files/cocculuslaurifolius.html</a> ).	1. exposure: full shade to partial sun 2. full sun or partial shade 3. "Full sun to shade although becomes less dense in shade...Plants are not reproductive...in shade."
4.1	Watkins, Sheehan, and Black (2005) Florida Landscape Plants: Native and Exotic. University Press of Florida.	"Soils of many types are acceptable."
4.11	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	"An erect shrub or small tree up to 6 m tall"
4.12		no evidence
5.01		terrestrial
5.02	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Menispermaceae
5.03	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.	Menispermaceae
5.04		
6.01		
6.02		all descriptions of propagation involve cuttings
6.03		
6.04	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	dioecious
6.05		
6.06		
6.07	1. Hortocopia 4.0 2. Schneidau (2006) University of Arizona Pima County Cooperative Extension ( <a href="http://cals.arizona.edu/pima/gardening/aridplants/Cocculus_laurifolius.html">http://cals.arizona.edu/pima/gardening/aridplants/Cocculus_laurifolius.html</a> ).	1. average growth rate 2. "to 25 ft; very slow to reach this size"
7.01		

7.02	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	" <i>C. laurifolius</i> is sometimes cultivated as an ornamental, e.g. in milder parts of North America and Europe."
7.03		no evidence
7.04	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	fruit is a rotund drupe, about 4 mm in diameter
7.05		no evidence
7.06		fruit is a drupe
7.07	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	fruit is a rotund drupe
7.08		fruit is a drupe
8.01	Lemmens and Bunyapraphatsara, eds. (2003) Plant Resources of South-East Asia. No. 12. Medicinal and poisonous plants 3. Backhuys Publishers, Leiden.	fruits are 1-seeded drupes
8.02		
8.03		
8.04		
8.05		