

Australia/New Zealand Weed Risk Assessment adapted for United States.

Data used for analysis published in: Gordon, D.R. and C.A. Gantz. 2008. Potential impacts on the horticultural industry of screening new plants for invasiveness. Conservation Letters 1: 227-235. Available at: <http://www3.interscience.wiley.com/cgi-bin/fulltext/121448369/PDFSTART>

<i>Psychotria chiapensis</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 U.S. climates (USDA hardiness zones; 0-low, 1-intermediate, 2-high)	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	1	
2.03	Broad climate suitability (environmental versatility)	n	0
2.04	Native or naturalized in regions with an average of 11-60 inches of annual precipitation	?	
2.05	Does the species have a history of repeated introductions outside its natural range?	?	
3.01	Naturalized beyond native range	n	-1
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	n	0
4.02	Allelopathic		
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		
4.09	Is a shade tolerant plant at some stage of its life cycle		
4.1	Grows on one or more of the following soil types: alfisols, entisols, or mollisols	y	1
4.11	Climbing or smothering growth habit	n	0
4.12	Forms dense thickets		
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	n	0
6.02	Produces viable seed		
6.03	Hybridizes naturally		
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators	y	-1
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	n	-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		
7.06	Propagules bird dispersed	?	
7.07	Propagules dispersed by other animals (externally)	n	-1
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 U.S.		
Total Score			-5

Outcome	Accept
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section	# questions answered	satisfy minimum?
A	9	Yes
B	6	Yes
C	10	Yes
total	25	yes

Data collected 2008

Question number	Reference	Source data
1.01		used horticulturally, but no evidence of significant modification
1.02		
1.03		
2.01	<p>1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20gnd.tif). 2. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago. 3. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago. 4. Tropicos.org. Missouri Botanical Garden. 16 May 2008 <http://www.tropicos.org/Name/27903371>. 5. Lorence, DH (1999) A Nomenclator of Mexican and Central American Rubiaceae. Missouri Botanical Garden Press, St. Louis, Missouri.</p>	<p>1. Global hardiness zones (10?-)11-13. 2. "The species ranges from southern Mexico and Belize to central Panama." 3. "Panama to southern Mexico". 4. Distribution: Mexico (Chiapas). 5. "Type: Mexico: Chiapas".</p>
2.02		
2.03	<p>1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago. 3. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago. 4. Tropicos.org. Missouri Botanical Garden. 16 May 2008 <http://www.tropicos.org/Name/27903371>. 5. Lorence, DH (1999) A Nomenclator of Mexican and Central American Rubiaceae. Missouri Botanical Garden Press, St. Louis, Missouri.</p>	<p>1. Only one climatic region. 2. "The species ranges from southern Mexico and Belize to central Panama." 3. "Panama to southern Mexico". 4. Distribution: Mexico (Chiapas). 5. "Type: Mexico: Chiapas".</p>
2.04	<p>1. Atlapedia Online (http://www.atlapedia.com/online/countries/costa.htm). 2. Atlapedia Online (http://www.atlapedia.com/online/countries/belize.htm).</p>	<p>1. For Costa Rica: average annual precipitation is 3,300 mm (130 inches) and rainfall patterns vary from region to region. 2. For Belize: Average annual precipitation varies from 1,270 mm (50 inches) in the north to more than 3,810 mm (100 inches) in the south.</p>
2.05		no evidence

3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05	Holm, L, JV Pancho, JP Herberger, and DL Plucknett (1979) A Geographical Atlas of World Weeds. John Wiley and Sons, New York.	One species is present as a weed in Peru.
4.01	Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago.	no description of these traits
4.02		
4.03	Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago.	no description of parasitism
4.04		
4.05	Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago.	no evidence
4.06		
4.07	Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago.	no evidence
4.08		
4.09		
4.1	USDA, National Resources Conservation Services (NRCS), Soil Survey Division, World Soil Resources (http://soils.usda.gov/use/worldsoils/mapindex/order.html).	Mexico (south): mostly inceptisols with some alfisols and ultisols, a very small amount of entisols and mollisols (and a very small amount of andisols); Belize: inceptisols, mollisols, and ultisols; Guatemala: mostly alfisols, mollisols, and ultisols, with a small amount of inceptisols (and a small region of andisols on the Pacific Coast); El Salvador: mostly ultisols with small amounts of inceptisols and entisols (and andisols on the Pacific Coast); Honduras: mostly alfisols, inceptisols, and ultisols, with very small amounts of entisols and mollisols; Nicaragua: mostly ultisols, with some alfisols and inceptisols (also with some andisols on the

		Pacific Coast); Costa Rica: mostly ultisols with a small amount of inceptisols (also with a small amount andisols); Panama: almost all ultisols with a very small amount of inceptisols (and also a very small amount of andisols).
4.11	1. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago. 2. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago.	1. "A shrub or sometimes a small tree with a dense, rounded crown...Cufodontis has reported the plant as scandent, but such a habit in this group would be most unusual; other collectors report it as an erect shrub or tree". 2. "Shrubs, treelets, or small trees, 2.5-8(-10) m tall, much-branched with rounded crown".
4.12		
5.01		terrestrial
5.02	1. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago. 2. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago.	Rubiaceae
5.03	1. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago. 2. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago.	Rubiaceae
5.04	1. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago. 2. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago.	1. "A shrub or sometimes a small tree with a dense, rounded crown...Cufodontis has reported the plant as scandent, but such a habit in this group would be most unusual; other collectors report it as an erect shrub or tree". 2. "Shrubs, treelets, or small trees, 2.5-8(-10) m tall, much-branched with rounded crown".
6.01	Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago.	no evidence
6.02		

6.03		
6.04		
6.05	Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago.	"It is pollinated by long-tongued sphingid moths".
6.06		
6.07		
7.01		
7.02		no evidence
7.03		no evidence
7.04	1. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago. 2. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago.	1. Fruits 12-16 mm long (not including the calyx) and 9-13 mm diam., ellipsoid to ovoid, purple-black, strongly 4-angled, persisting calyx 2-3 mm long; pyrenes 10-13 mm long, 7 mm broad and 3 mm thick, bony, with 3 dorsal ribs and concave areas between". 2. "Fruit baccate, containing normally 2 nutlets" [genus description]. [no evidence of adaptations to wind dispersal]
7.05		
7.06	Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago.	"Fruits fleshy drupes"; "All the fruits appear to be bird-dispersed" [genus description].
7.07	1. Burger, W (Editor) (1993) Flora Costaricensis. Family #202 Rubiaceae. Fieldiana Botany New Series, No. 33. Field Museum of Natural History, Chicago. 2. Standley, PC (1938) Flora of Costa Rica. Fieldiana: Botany 18, no. 1-4. Field Museum of Natural History, Chicago.	1. Fruits 12-16 mm long (not including the calyx) and 9-13 mm diam., ellipsoid to ovoid, purple-black, strongly 4-angled, persisting calyx 2-3 mm long; pyrenes 10-13 mm long, 7 mm broad and 3 mm thick, bony, with 3 dorsal ribs and concave areas between". 2. "Fruit baccate, containing normally 2 nutlets" [genus description]. [no evidence of adaptations to external dispersal]
7.08		
8.01		
8.02		
8.03		
8.04		
8.05		