

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>Chloranthus sessilifolius</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)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in regions with an average of 11-60 inches of annual precipitation	y	1
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	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	?	
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		
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		
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)	?	
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			1

Outcome	Accept*
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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	11	Yes
B	6	Yes
C	10	Yes
total	27	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	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20Igd.tif). 2. Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis. 3. Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188.	1. Global hardiness zones 5-10 (and potentially 11-13 if including southeast Asia and New Guinea). 2. China: Fujian, Guangdong, Guangxi, Guizhou, Jiangxi, Sichuan. 3. "Mainly distributed in eastern and southern Asia as well as New Guinea".
2.02		
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis. 3. Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188.	1. Three climatic regions. 2. China: Fujian, Guangdong, Guangxi, Guizhou, Jiangxi, Sichuan. 3. "mainly distributed in eastern and southern Asia as well as New Guinea" [tropical]
2.04	Climate Source (http://www.climatesource.com/cn/fact_sheets/chinapt_xl.jpg).	For the regions listed, average annual precipitation ranges from 19.7 inches/year to 196.9 inches/year.
2.05	RHS Plantfinder (http://www.rhs.org.uk/RHSPLANTFINDER/plantlist.asp?code=EBee+).	Sold in the United Kingdom.
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence

3.05		no evidence
4.01	Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	no description of these traits
4.02		
4.03	Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	no description of parasitism
4.04		
4.05	Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	no evidence
4.06		
4.07	Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	Used medicinally [no evidence of toxicity].
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).	Entisols are present in this region.
4.11	Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	"Herbs perennial...stems erect, rather strong, 1 or several in a fascicle".
4.12		
5.01	Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188.	"Suffrescent or herbaceous habit...perennial herbs"; terrestrial.
5.02	Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188.	Chloranthaceae
5.03	Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188.	Chloranthaceae

5.04	Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	"Rhizomes strong, 5-7 mm in diam., with many slightly thick, fibrous roots".
6.01		no evidence
6.02		
6.03		
6.04		
6.05		
6.06	Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	"Rhizomes strong, 5-7 mm in diam., with many slightly thick, fibrous roots".
6.07		
7.01		
7.02	RHS Plantfinder (http://www.rhs.org.uk/RHSPLANTFINDER/plantlist.asp?code=EBee+).	Sold in the United Kingdom.
7.03		no evidence
7.04	1. Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188. 2. Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	1. "Drupe-like berries that are green, white, or yellowish when mature". 2. "Drupes brown, subglobose, ca. 2.5 cm." [no evidence of adaptations to wind dispersal]
7.05		
7.06	1. Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188. 2. Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	1. "Drupe-like berries that are green, white, or yellowish when mature". 2. "Drupes brown, subglobose, ca. 2.5 cm."
7.07	1. Kong, HZ, Lu, AM, and Endress, PK (2002) Floral organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188. 2. Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	1. "Drupe-like berries that are green, white, or yellowish when mature". 2. "Drupes brown, subglobose, ca. 2.5 cm." [no evidence of adaptations to external dispersal]
7.08	1. Kong, HZ, Lu, AM, and Endress, PK (2002) Floral	1. "Drupe-like berries that are

	organogenesis of <i>Chloranthus sessilifolius</i> , with special emphasis on the morphological nature of the androecium of <i>Chloranthus</i> (Chloranthaceae). Plant Systematics and Evolution 232: 181-188. 2. Wu, ZY and Raven, PH (editors), Flora of China, Vol. 4, p. 137. Science Press, Beijing, & Missouri Botanical Garden Press, St. Louis.	green, white, or yellowish when mature". 2. "Drupes brown, subglobose, ca. 2.5 cm."
8.01		
8.02		
8.03		
8.04		
8.05		