Chimonobambusa tumidissinoda (Qiongzhuea tumidinoda) Walking Stick Bamboo		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 FL 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		
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic		
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	n	-1
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	y	1
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	unk	0
4.11	Climbing or smothering growth habit	unk	0
4.12	Forms dense thickets	unk	0
5.01	Aquatic	n	0
5.02	Grass	y	1
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	n	-1
6.04	Self compatible or apomictic	n	-1
6.05	Requires specialist pollinators	n	0
6.06	Reproduction by vegetative propagation	y	1
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		
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)	n	-1
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**	
	Implemented Pacific Second Screening	**No**	
	Risk Assessment Results	**Low Risk**	

section	# questions answered		satisfy minimum?
A		10	yes
B		6	yes
C		14	yes
total		30	yes

completed12/16/2014

	Reference	Source data
1.01		Cultivated, but no evidence of selection for reduced weediness.
1.02		skip to 2.01
1.03		skip to 2.01
2.01	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif). 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (00 Month 0000).	No computer analysis was performed. 1. Global hardiness zone: 6-10; equivalent to USDA Hardiness zones: 6a-10b . 2. Native to ASIA TEMPERATE China: Sichuan, Yunnan
2.02		No computer analysis was performed. Native range is well known; refer to 2.01 source data.
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf).	1. Distribution in the native range occurs in CWB, DWC, ET
2.04	1. ChinaMaps http://www.chinamaps.org/china/provincemaps 12-10-2014, 2. World Bank http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisRegion=Asia&ThisCCode=CHN	1. and 2. Annual precipitation 31.5-60 inches
2.05	1. Scottish Bamboo http://www.scottishbamboo.com/Chimonobambusa_Tumidissinoda.htm, 2. Provender Nurseries http://www.provendernurseries.co.uk/product_detail.cfm?ProductID=14600&ProductName=chimonobambusa-tumidissinoda	Readily available from internet nurseries.
3.01		No evidence
3.02		Various nursery websites suggest control for spread (via rhizome cutting)
3.03		No evidence
3.04		no evidence
3.05	1. Hawaiian Ecosystems at Risk project (HEAR) http://www.hear.org/gcw/species/chimonobambusa_falcata/, 2. Hawaiian Ecosystems at Risk project (HEAR) http://www.hear.org/gcw/species/chimonobambusa_marmorea/	
4.01		These structures are not included in the description of this species.
4.02		No evidence found
4.03	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (00 Month 0000).	1. Family: Poaceae (not a parasitic family).
4.04	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (12-10-2014). 2. Deeproot Plant Base http://www.deeproot.co.uk/pbo/plantdetail.php?plantname=Chimonobambusa+tumidissinoda	1. Used for forage for large animals, i.e. pandas, 2. Soft vegetable
4.05		See 4.04
4.06		No evidence found

4.07		No evidence
4.08		No evidence
4.09	1. UGA Extension Growing Bamboo in Georgia (B 1357) http://extension.uga.edu/publications/detail.cfm?number=B1357, 2. Bambous de France http://www.bambousdefrance.fr/genres/Chimono/tumidissinoda.html	1. Prefers 60% shade, 2. Thrives in partial sun to nearly full shade
4.10		No evidence found
4.11		No evidence
4.12		Online photos indicate dense thickets, but evidence from native range on this subject is lacking
5.01	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (00 Month 0000).	1. Family: Poaceae.
5.02	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (00 Month 0000).	1. Family: Poaceae.
5.03	1. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (00 Month 0000).	1. Family: Poaceae.
5.04	1. Wang, K. et al. 2010. Identification of genes related to the development of bamboo rhizome bud. Journal of Experimental Botany, 61(2): 551–561.	1. According to the type of the rhizome, bamboos have been divided into three groups: scattered bamboos with a monopodial rhizome, caespitose bamboos with a sympodial rhizome, and pluricaespitose bamboos with a monopodial and sympodial rhizome. The rhizome bud can either develop into a bamboo shoot which will grow into a bamboo culm in a very short period, or develop into a new rhizome which will enable the sustainable production of the bamboo grove.
6.01		No evidence to support as this species is known in cultivation only.
6.02		no evidence found.
6.03	1. John, CK et al. 1994. Selection - A valuable method for bamboo improvement. Current Science (Bangalore), 66(11): 822-824.	1. The peculiar flowering behaviour in bamboos make genetic improvement by hybridizations very difficult. The flowering and seeding at long intervals (7-120 years) render the overlapping of flowering in more than one species, in the same locality very difficult to obtain, making attempts at hybridizations impossible.
6.04	1. John, CK et al. 1994. Selection - A valuable method for bamboo improvement. Current Science (Bangalore), 66(11): 822-824.	1. Reproductive biology is not well understood in most of the species. Two categories are apparent so far: (i) species which exhibit dichogamy and protogyny and (ii) species in which the androecium and gynoecium mature at the same time. In species under the first category, only cross-pollination is possible. In the second category selfing is difficult because of the differential position of the anthers and the stigma, when they are mature.
6.05	1. Shor, B., Southern California Chapter. From Flowers to Seedlings. American Bamboo Society. Accessed: 18 March 2014. http://www.bamboo.org/GeneralInfoPages/FromFlowersToSeedlings.html	1. Most bamboos are wind-pollinated. Insects may be involved with some species.

6.06	1. Wang, K. et al. 2010. Identification of genes related to the development of bamboo rhizome bud. Journal of Experimental Botany, 61(2): 551–561.	1. The rhizome bud can either develop into a bamboo shoot which will grow into a bamboo culm in a very short period, or develop into a new rhizome which will enable the sustainable production of the bamboo grove.
6.07	C. J. Hsueh, Tong-pei Yi and De-zhu Li Taxon, Vol. 45, No. 2 (May, 1996), pp. 217-221 Validation of Qiongzhuea and Correlated Species Names (Gramineae, Bambusoideae)	"The first flowering specimen was gathered in 1965 and was again too poor for the purposes of bamboo taxonomy (Soderstrom & Young, 1983). "The first set of complete specimens was collected in 1973 by T. P. Yi in S.W. Sichuan. The flowering cycle of this species is fortunately not as long as that of some other bamboos: it flowered again in 1976…"
7.01		
7.02	1. Scurlock et al. 2000 Bamboo: an overlooked biomass resource? Biomass and Bioenergy, 19:229-244. 2. Liese and Hamburg. 1987. Research on bamboo. Wood Science and Technology, 21:189-209 3. Deeproot Plant Base http://www.deeproot.co.uk/pbo/plantdetail.php?plantname=Chimonobambusa+tumidissinoda (12-12-2014)	1. Cultivated for erosion control, windbreaks, building material, food, bamboo fiber clothes, etc. 2. Also, has been proposed as a source for pulp for paper and possible biofuel source. 3. "usage: Good architectural plant. The knobbly canes are popular for making walking sticks in China. Young shoots are edible."
7.03	1. John, CK et al. 1994. Selection - A valuable method for bamboo improvement. Current Science (Bangalore), 66(11): 822-824.	1. Very unlikely. The longevity of the seeds varies from species to species, but usually only last 2-3 months under natural conditions. Furthermore, seeds must be sowed immediately in optimal conditions to prevent damping off.
7.04		No morphological features (i.e., wings) that would suggest bamboo seeds are adapted for wind.
7.05		No evidence
7.06		No evidence
7.07		No morphological features that would suggest bamboo seeds are adapted for attachment.
7.08		No evidence found
8.01		No Evidence
8.02	1. John, CK et al. 1994. Selection - A valuable method for bamboo improvement. Current Science (Bangalore), 66(11): 822-824.	1. The longevity of the seeds varies from species to species. Under natural conditions it is for 2-3 months.
8.03		No evidence found
8.04		No evidence found
8.05		No evidence found