

**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>Drepanostachyum falcatum (blue bamboo)</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)	n	0
2.04	Native or naturalized in habitats with periodic inundation	n?	0
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	n	0
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	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	y	1
5.01	Aquatic	n	0

5.02	Grass	y	1
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		
6.04	Self-compatible or apomictic		
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	n	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	n	-1
8.01	Prolific seed production	n	-1
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>-3</b>

**Outcome**      **Accept\***

\*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	8	yes
B	11	yes
C	14	yes
total	33	yes

Data collected 2006-2007

Question number	Reference	Source data
1.01		cultivated, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01	1. Bell (2000) The Gardener's Guide to Growing Temperate Bamboos. Timber Press: Portland, Oregon. 2. BackyardGardener.com ( <a href="http://www.backyardgardener.com/plantname/pda_f7b9.html">http://www.backyardgardener.com/plantname/pda_f7b9.html</a> ).	1. genus <i>Drepanostachyum</i> found in dry subtropical forests; can withstand light frost 2. USDA hardiness zones 8 to 10
2.02		
2.03	Ohrnberger, D and J Goerrings (1983) The Bamboos of the World. Genus <i>Drepanostachyum</i> . Odenthal, Federal Republic of Germany.	very limited distribution in the western Himalayas from Ravi to Nepal; no evidence of naturalization elsewhere
2.04	Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ).	"It is important for the soil to be well drained."
2.05	1. Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ). 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	used horticulturally (1, 2)
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05		no evidence
4.01	Flora of Pakistan ( <a href="http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569">http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569</a> ).	no description of these traits
4.02		no evidence
4.03	Flora of Pakistan ( <a href="http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569">http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569</a> ).	no description of this
4.04	Meredith, TJ (2001) Bamboo for Gardens. Timber Press: Portland, Oregon.	"The genus is useful as forage or pasture for animals...In their natural environment, <i>Drepanostachyum</i> bamboos are often heavily browsed by animals...Heavily browsed,

		<i>Drepanostachyum falcatum</i> is seldom found in an unpillaged state in its natural habitats."
4.05	Meredith, TJ (2001) Bamboo for Gardens. Timber Press: Portland, Oregon.	"The genus is useful as forage or pasture for animals...In their natural environment, <i>Drepanostachyum</i> bamboos are often heavily browsed by animals...Heavily browsed, <i>Drepanostachyum falcatum</i> is seldom found in an unpillaged state in its natural habitats."
4.06		
4.07	Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ).	used as a vegetable [and no evidence of toxicity or allergenicity]
4.08		no evidence
4.09	1. Ohrnberger, D and J Goerrings (1983) The Bamboos of the World. Genus <i>Drepanostachyum</i> . Odenthal, Federal Republic of Germany. 2. Lodhiyal, LS, SP Singh, and N Lodhiyal (1998) Phenology, population structure and dynamics of ringal bamboo ( <i>Arundinaria falcata</i> ) in Nainital Hill of Central Himalaya. Tropical Ecology 39: 109-115. 3. Meredith, TJ (2001) Bamboo for Gardens. Timber Press: Portland, Oregon.	1. "Common in the understory of forests of White Oak ( <i>Quercus incana</i> ), in shady places like northern slopes". 2. " <i>Arundinaria falcata</i> Nees ('Ringal') is the most common bamboo of oak and deodar forests in moist shady places between 1200-2500 m elevation in the central Himalaya." 3. light: partial shade
4.1	Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ).	"Ringal will grow in light (sandy), medium (loamy) soil."
4.11	Meredith, TJ (2001) Bamboo for Gardens. Timber Press: Portland, Oregon.	bamboo, to 4 m
4.12	Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ).	"Forms dense thickets in evergreen oak forests that are usually damp".
5.01		terrestrial
5.02	Poaceae	USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland ( <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?407345">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?407345</a> ).
5.03	Poaceae	USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland ( <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?407345">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?407345</a> ).
5.04		

6.01		
6.02	Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ).	"Plants flower quite frequently in Britain and often produce viable seed."
6.03		
6.04		
6.05	Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ).	wind pollinated
6.06	1. Meredith, TJ (2001) Bamboo for Gardens. Timber Press: Portland, Oregon. 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	1. genus <i>Drepanostachyum</i> have pachymorph rhizome systems 2. propagate by division [for genus <i>Drepanostachyum</i> ]
6.07		many years until flowering, but time to vegetative reproduction unknown
7.01		
7.02	1. Aussie Gardening ( <a href="http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum">http://www.aussiegardening.com.au/findplants/plant/Drepanostachyum_falcatum</a> ). 2. Huxley (1992) The New Royal Horticultural Society Dictionary of Gardening. The MacMillan Press, London.	used horticulturally (1, 2) and as a soil stabilizer in Nepal (1)
7.03		no evidence
7.04	1. Flora of Pakistan ( <a href="http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569">http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569</a> ). 2. Clayton, W.D., Harman, K.T. and Williamson, H. (2006 onwards). GrassBase - The Online World Grass Flora ( <a href="http://www.kew.org/data/grasses-db/www/imp03263.htm">http://www.kew.org/data/grasses-db/www/imp03263.htm</a> ).	1. "Caryopsis linear, about 12 mm long" 2. "Caryopsis with adherent pericarp; fusiform; 12 mm long; apex unappendaged." [no evidence of adaptations to wind dispersal]
7.05		no evidence
7.06		grass
7.07	1. Flora of Pakistan ( <a href="http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569">http://www.efloras.org/florataxon.aspx?flora_id=5&amp;taxon_id=242420569</a> ). 2. Clayton, W.D., Harman, K.T. and Williamson, H. (2006 onwards). GrassBase - The Online World Grass Flora ( <a href="http://www.kew.org/data/grasses-db/www/imp03263.htm">http://www.kew.org/data/grasses-db/www/imp03263.htm</a> ).	1. "Caryopsis linear, about 12 mm long" 2. "Caryopsis with adherent pericarp; fusiform; 12 mm long; apex unappendaged." [no evidence of any means of attachment]
7.08		grass
8.01	1. Bell (2000) The Gardener's Guide to Growing Temperate Bamboos. Timber Press: Portland, Oregon. 2. Lodhiyal, LS, SP Singh, and N Lodhiyal (1998) Phenology, population structure and dynamics of ringal bamboo ( <i>Arundinaria falcata</i> ) in Nainital Hill of Central Himalaya. Tropical Ecology 39: 109-115.	1. "about 15 years between flowering" 2. flowers sporadically [so number of seeds/year is low]
8.02		
8.03		
8.04		
8.05		