***Family:*** ***Poaceae***

***Taxon:*** ***Bambusa tuldoides***

***Synonym:*** *Arundinaria angulata (Munro) Porterf.*
*Bambusa angulata Munro*
*Bambusa pallescens (Döll) Hack.*
*Guadua pallescens Döll*
*Bambusa ventricosa McClure*

***Common Name:*** puntingpole bamboo
verdant bamboo
qing gan zhu
Buddha's belly bamboo

**Questionaire :** current 20090513 **Assessor:** Assessor **Designation:**
**Status:** In Progress **Data Entry Person:** Assessor **WRA Score 2**

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| **101** | **Is the species highly domesticated?** | **y=-3, n=0** | **n** |
| **102** | **Has the species become naturalized where grown?** | **y=1, n=-1** | |
| **103** | **Does the species have weedy races?** | **y=1, n=-1** | |
| **201** | **Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"** | **(0-low; 1-intermediate; 2-high) (See Appendix 2)** | **High** |
| **202** | **Quality of climate match data** | **(0-low; 1-intermediate; 2-high) (See Appendix 2)** | **High** |
| **203** | **Broad climate suitability (environmental versatility)** | **y=1, n=0** | **n** |
| **204** | **Native or naturalized in regions with tropical or subtropical climates** | **y=1, n=0** | **y** |
| **205** | **Does the species have a history of repeated introductions outside its natural range?** | **y=-2, ?=-1, n=0** | **y** |
| **301** | **Naturalized beyond native range** | **y = 1*multiplier (see Appendix 2), n= question 205** | **y** |
| **302** | **Garden/amenity/disturbance weed** | **n=0, y = 1*multiplier (see Appendix 2)** | **n** |
| **303** | **Agricultural/forestry/horticultural weed** | **n=0, y = 2*multiplier (see Appendix 2)** | **n** |
| **304** | **Environmental weed** | **n=0, y = 2*multiplier (see Appendix 2)** | **n** |
| **305** | **Congeneric weed** | **n=0, y = 1*multiplier (see Appendix 2)** | **y** |
| **401** | **Produces spines, thorns or burrs** | **y=1, n=0** | **n** |
| **402** | **Allelopathic** | **y=1, n=0** | |
| **403** | **Parasitic** | **y=1, n=0** | **n** |
| **404** | **Unpalatable to grazing animals** | **y=1, n=-1** | |
| **405** | **Toxic to animals** | **y=1, n=0** | **n** |
| **406** | **Host for recognized pests and pathogens** | **y=1, n=0** | **n** |
| **407** | **Causes allergies or is otherwise toxic to humans** | **y=1, n=0** | **n** |
| **408** | **Creates a fire hazard in natural ecosystems** | **y=1, n=0** | |
| **409** | **Is a shade tolerant plant at some stage of its life cycle** | **y=1, n=0** | |

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| 410 | Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island) | y=1, n=0 | n |
| 411 | Climbing or smothering growth habit | y=1, n=0 | n |
| 412 | Forms dense thickets | y=1, n=0 | n |
| 501 | Aquatic | y=5, n=0 | n |
| 502 | Grass | y=1, n=0 | y |
| 503 | Nitrogen fixing woody plant | y=1, n=0 | n |
| 504 | Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers) | y=1, n=0 | n |
| 601 | Evidence of substantial reproductive failure in native habitat | y=1, n=0 | n |
| 602 | Produces viable seed | y=1, n=-1 | y |
| 603 | Hybridizes naturally | y=1, n=-1 | |
| 604 | Self-compatible or apomictic | y=1, n=-1 | |
| 605 | Requires specialist pollinators | y=-1, n=0 | n |
| 606 | Reproduction by vegetative fragmentation | y=1, n=-1 | n |
| 607 | Minimum generative time (years) | 1 year = 1, 2 or 3 years = 0, 4+ years = -1 | >3 |
| 701 | Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas) | y=1, n=-1 | n |
| 702 | Propagules dispersed intentionally by people | y=1, n=-1 | y |
| 703 | Propagules likely to disperse as a produce contaminant | y=1, n=-1 | n |
| 704 | Propagules adapted to wind dispersal | y=1, n=-1 | y |
| 705 | Propagules water dispersed | y=1, n=-1 | |
| 706 | Propagules bird dispersed | y=1, n=-1 | n |
| 707 | Propagules dispersed by other animals (externally) | y=1, n=-1 | n |
| 708 | Propagules survive passage through the gut | y=1, n=-1 | |
| 801 | Prolific seed production (>1000/m2) | y=1, n=-1 | n |
| 802 | Evidence that a persistent propagule bank is formed (>1 yr) | y=1, n=-1 | |
| 803 | Well controlled by herbicides | y=-1, n=1 | y |
| 804 | Tolerates, or benefits from, mutilation, cultivation, or fire | y=1, n=-1 | y |
| 805 | Effective natural enemies present locally (e.g. introduced biocontrol agents) | y=-1, n=1 | |
| | **Designation:** | **WRA Score** | **2** |

**Supporting Data:**

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| 101 | 2002. Stapleton, C.M.A.. Bambusa ventricosa vs Bambusa tuldoides. Bamboo. 23: 17-18. | [Is the species highly domesticated? No] "Ohrnberger (1999) in his reference work on bamboo names in current use around the world included Bambusa ventricosa as a synonym of B. tuldoides, and this would now appear to reflect the consensus of opinion in the areas where such bamboos are grown, in China, S.E Asia, and the United States." |
| 101 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Is the species highly domesticated? No] "usually cultivated near or around villages, occurs in two forms depending on where it grows,…" |
| 102 | 2013. WRA Specialist. Personal Communication. | NA |
| 103 | 2013. WRA Specialist. Personal Communication. | NA |
| 201 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Species suited to tropical or subtropical climate(s) 2-High] "Southern China, Vietnam, Asia temperate and tropical." |
| 202 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Quality of climate match data 2-High] |
| 203 | 1995. But, P.P.H./Chia, L.C.. Bambusa tuldoides Munro [Internet] Record from Proseabase. Dransfield, S. & Widjaja, E.A. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org [Accessed 24 July 2013] | [Broad climate suitability (environmental versatility)? No] "In tropical Asia Bambusa tuldoides grows naturally at low altitudes. In the United States (California, Florida) it grows well in subtropical areas and is noted to be frost hardy (to —7°C)." |
| 203 | 2013. Dave's Garden. PlantFiles: Buddha's Belly Bamboo Bambusa tuldoides 'Ventricosa'. http://davesgarden.com/guides/pf/go/2432/ [Accessed 25 July 2013] | [Broad climate suitability (environmental versatility)? No] "Hardiness:<br>USDA Zone 8a: to -12.2 °C (10 °F)<br>USDA Zone 8b: to -9.4 °C (15 °F)<br>USDA Zone 9a: to -6.6 °C (20 °F)<br>USDA Zone 9b: to -3.8 °C (25 °F)<br>USDA Zone 10a: to -1.1 °C (30 °F)<br>USDA Zone 10b: to 1.7 °C (35 °F)<br>USDA Zone 11: above 4.5 °C (40 °F)" |
| 204 | 2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html | [Native or naturalized in regions with tropical or subtropical climates? Yes] "DISTRIBUTION Asia-temperate: China and eastern Asia. Asia-tropical: India and Indo China. Pacific: north-central. South America: southern South America" |
| 204 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Native or naturalized in regions with tropical or subtropical climates? Yes] "Southern China, Vietnam, Asia temperate and tropical." |
| 205 | 1995. But, P.P.H./Chia, L.C.. Bambusa tuldoides Munro [Internet] Record from Proseabase. Dransfield, S. & Widjaja, E.A. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org [Accessed 24 July 2013] | "Bambusa tuldoides is a native of southern China and Vietnam. It is widely cultivated in southern China, Japan, South-East Asia and has also been introduced to Europe, the United States, Honduras, Puerto Rico and Brazil." |
| 205 | 2010. Guerreiro, C.I./Lizarazu, M.A.. Flowering of Bambusa tuldoides (Poaceae, Bambusoideae, Bambuseae) in southern South America. Darwiniana. 48(1): 25-31. | [Does the species have a history of repeated introductions outside its natural range? Yes] "Bambusa tuldoides is native to China, has spread all over Southeastern Asia and is widely cultivated in tropical and subtropical regions of America. In Argentina, it is found in the Northwest and Northeast down to the Paraná River Delta where apparently it has become naturalized (Parodi, 1943)." |
| 301 | 2010. Guerreiro, C.I./Lizarazu, M.A.. Flowering of Bambusa tuldoides (Poaceae, Bambusoideae, Bambuseae) in southern South America. Darwiniana. 48(1): 25-31. | [Naturalized beyond native range? Yes] "In Argentina, it is found in the Northwest and Northeast down to the Paraná River Delta where apparently it has become naturalized (Parodi, 1943)." |
| 302 | 2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia | [Garden/amenity/disturbance weed? No] No evidence |

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| 303 | 2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia | [Agricultural/forestry/horticultural weed? No] No evidence |
| 304 | 2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia | [Environmental weed? No] No evidence |
| 305 | 2003. Blundell, A.G./Scatena, F.N./Wentsel, R./Sommers, W.. Ecorisk assessment using indicators of sustainability: invasive species in the Caribbean National Forest of Puerto Rico. Journal of forestry. 101(1): 14-19. | [Congeneric weed? Yes] "The ongoing colonization by both Africanized honeybees (Apis mellifera) and bamboo (Bambusa sp., family Poaceae) pose large threats. Introduced bamboo can form monospecific stands in riparian zones…" … "Bambusa vulgaris was introduced to Puerto Rico at least 150 years ago from Southeast Asia (Francis 1993) and planted in the national forest about 70 years ago to control soil erosion along steep dirt roads. It has since colonized many streams that intersect roads and formed monocultures in some riparian areas (O'Connor et al. 2000)." … "Bamboo accounts for both benefits and costs for the Caribbean National Forest: the positive services of erosion control versus competition with native plants. Once established, however, bamboo is extremely difficult to eradicate. Clumps are resilient to physical damage, and the entire rhizome must be removed to prevent resprouting" |
| 305 | 2008. Global Invasive Species Database. Bambusa vulgaris. http://www.issg.org/database/species/ecology.asp?si=1399&fr=1&sts=&lang=EN | [Congeneric weed? Yes] "Bambusa vulgaris forms extensive monospecific stands where it occurs, excluding other plant species. B. vulgaris colonises along streams into forest...Control of Bambusa vulgaris infestation is difficult. "Best to cut down and spray the regrowth" |
| 401 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Produces spines, thorns or burrs? No] "Culms 6–10 m, 3–5 cm in diam., apically slightly drooping; internodes 30–36 cm, initially thinly white powdery; wall thick; nodes slightly prominent, basal 1 or 2 with rings of graywhite silky hairs below and above sheath scar; branching from base up. Branches several to many, clustered, central 3 dominant. Culm sheaths deciduous, convex and slanted along outer margin for 1/10–1/8 of length of sheath, with 1–3 pale yellow stripes toward outer margin, glabrous, apex asymmetrically arched; auricles unequal, outer one larger, ovate to ovate elliptic, ca. 2.5 × 1–1.4 cm, slightly wrinkled; inner one smaller, ovate to elliptic, ascending, ca. 1/2 size of larger; oral setae slender, undulate; ligule 3–4 mm, laciniate, densely fimbriate; blade deciduous, erect, asymmetrically ovate triangular to narrowly triangular, sparsely deciduously stiffly brown or pale brown strigose, base slightly rounded and then extending outward to join auricles for 5–7 mm, nearly 2/3–3/4 width of sheath apex, margin slightly wrinkled near base and fringed, apex subulate, acuminate. Leaf blade lanceolate to narrowly lanceolate, 10–18 × 1.5–2 cm, abaxially densely pubescent, adaxially glabrous or sparsely pilose near base." |
| 402 | 2013. WRA Specialist. Personal Communication. | [Allelopathic? Unknown] |
| 403 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Parasitic? No] Poaceae |
| 404 | 1983. Duke, J.A.. Handbook of Energy Crops - Bambusa arundinacea. http://www.hort.purdue.edu/newcrop/duke_energy/bambusa_arundinacea.html | [Unpalatable to grazing animals? Unknown] "Bambusa arundinacea" … "Leaves used as fodder." [Related Bambusa species are palatable] |
| 404 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Unpalatable to grazing animals? Unknown] "young shoots bitter and edible…" [Description refers to human consumption, so possible palatable to animals] |
| 405 | 2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL | [Toxic to animals? No] No evidence |
| 406 | 2013. Toto Agriculture. Bambusa tuldoides. http://phil.totoagriculture.org/FactsheetBrowse.aspx?factsheet=Plants&searchSpecies=Bambusa%20tuldoides [Accessed 24 July 2013] | [Host for recognized pests and pathogens? No] "No serious diseases and pests have been reported." |
| 407 | 2010. Guerreiro, C.I./Lizarazu, M.A.. Flowering of Bambusa tuldoides (Poaceae, Bambusoideae, Bambuseae) in southern South America. Darwiniana. 48(1): 25-31. | [Causes allergies or is otherwise toxic to humans? No evidence] "Wherever man has come into contact with bamboo, he has found multiple uses for it. In the case of Bambusa tuldoides, its culms have been used in construction, scaffolding, tool handles, furniture and crafts. It is also used to make hats, ropes and baskets, its shoots are edible (Watson & Dallwitz, 1992; Rúgolo de Agrasar & Puglia, 2004; Stapleton, 2007b). As an ornamental, it is mainly used as a barrier to wind or soil erosion especially when planted along river banks." |

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| 408 | 2013. WRA Specialist. Personal Communication. | [Creates a fire hazard in natural ecosystems? Unknown] No indication that this bamboo promotes fire, but dense growth could potentially fuel fires in cultivated settings |
| 409 | 2013. Backyard Gardener. Bambusa tuldoides. http://www.backyardgardener.com/plantname/pda_37a7.html [Accessed 24 July 2013] | [Is a shade tolerant plant at some stage of its life cycle?] "Light Range: Part Shade to Full Sun" |
| 409 | 2013. Monrovia. Punting Pole Bamboo - Bambusa tuldoides. http://www.monrovia.com/plant-catalog/plants/314/punting-pole-bamboo.php [Accessed 24 July 2013] | [Is a shade tolerant plant at some stage of its life cycle?] "Light needs: Partial to full sun" |
| 410 | 2012. Queensland Government. Waterwise Plant Selector - Punting Pole Bamboo (Bambusa tuldoides). http://www.nrm.qld.gov.au/waterwise/plantselector/details.php?plant_id=636 [Accessed 24 July 2013] | [Tolerates a wide range of soil conditions? No] "Soil type: Loam" |
| 410 | 2013. Backyard Gardener. Bambusa tuldoides. http://www.backyardgardener.com/plantname/pda_37a7.html [Accessed 24 July 2013] | [Tolerates a wide range of soil conditions? No] "pH Range: 5.5 to 6.5 Soil Range: Sandy Loam to Clay Loam Water Range: Normal to Moist" |
| 411 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Climbing or smothering growth habit? No] "Arborescent bamboos, occasionally shrubby or scrambling, 1–20 m." [Genus description] |
| 412 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Forms dense thickets? No evidence] "Open, or densely tufted, sympodial, culms erect o nearly erect or slightly nodding…" [A sympodial - clumping (i.e. non running) bamboo] |
| 412 | 2013. Backyard Gardener. Bambusa tuldoides. http://www.backyardgardener.com/plantname/pda_37a7.html [Accessed 24 July 2013] | [Forms dense thickets? No] "Grows in tight clumps and produces many thick-walled culms. It is similar to B. tulda but is smaller and hardier. Clump bamboos have underground stems that sprout vertical shoots much closer to their parent plants, growing slowly outward. " |
| 501 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Aquatic? No] "Low hills, river banks, commonly cultivated around villages. Guangdong, Guangxi." |
| 502 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Grass? Yes] Poaceae |
| 503 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Nitrogen fixing woody plant? No] Poaceae |
| 504 | 2010. Gordon, D.R./Mitterdorfer, B./Pheloung, P.C. et al.. Guidance for addressing the Australian Weed Risk Assessment questions. Plant Protection Quarterly. 25(2): 56-74. | [Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "This question relates to perennial plants with tubers, corms or bulbs. This question is specifically to deal with plants that have specialized organs and should not include plants merely with rhizomes/ stolons" |
| 601 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Evidence of substantial reproductive failure in native habitat? No] "flowers occur very rarely…" [Due to plant phenology rather than external factors] |
| 602 | 2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymolog. CRC Press, Boca Raton, FL | [Produces viable seed? Potentially, but very rarely] "flowers occur very rarely…" … "propagated by rhizomes and culm cuttings…" … "Also, viable seed production of B. tuldoides has recently been recorded for the first time for Brazil (Filgueiras & Castro de Silva, 2007)." |
| 602 | 2007. Filgueiras, T.S./Castro de Silva., R.M.. Sporadic flowering in six introduced woody bamboos (Poaceae: Bambusoideae) in Brazil. Bamboo Science and Culture. 20: 11-14. | [Produces viable seed? Yes] "Apparently, caryopsis formation in all these five bamboos species in Brazil seems to be the exception, rather than the rule. Caryopsis formation was only observed in a single instance, in a population of Bambusa tuldoides in the State of Goiás (Table 1, Fig. 1B). Subsequently after falling to the ground, some caryopses germinated and produced healthy seedlings. Each seedling was somewhat morphologically distinct from each other, which suggests sexual origin of the caryopses rather than apomixis. However, the flowering culms of the same species in the Federal District (Brasilia area) did not produce caryopses." |

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| 602 | 2010. Guerreiro, C.I./Lizarazu, M.A.. Flowering of Bambusa tuldoides (Poaceae, Bambusoideae, Bambuseae) in southern South America. Darwiniana. 48(1): 25-31. | [Produces viable seed? Yes] "With this information, we estimate the flowering cycle of B. tuldoides in southernmost America to be approximately 23 years. Viable seed production is reported for the first time in Argentina." … "In the same garden where the clump was cultivated, we could confirm the presence of seedlings of B. tuldoides grown from seeds produced by the flowering clump (Fig. 3). Thus, viable seed production occurred." |
| 603 | 2013. WRA Specialist. Personal Communication. | [Hybridizes naturally? Unknown] Other Bambusa species have been artificially crossed |
| 604 | 2001. Koshy, K.C./Jee, G.. Studies on the absence of seed set in Bambusa vulgaris. Current Science. 81 (4): 375-378. | [Self-compatible or apomictic? Unknown] "In spite of germination, the pollen tube did not find its way into the style, to effect fertilization. This appears to be the result of self-incompatibility. Self incompatibility can be confirmed only when pollen grains of a different clone are available for effective cross pollination" [description is for B. vulgaris, a related species. Unknown for B. tuldoides] |
| 605 | 1994. Zomlefer, W.B.. Guide to Flowering Plant Families. The University of North Carolina Press, Chapel Hill & London | [Requires specialist pollinators? No] Poaceae [anemophilous. Wind-pollinated] |
| 606 | 2006 (onwards). Clayton, W.D./Vorontsova, M.S./Harman, K.T./Williamson, H.. GrassBase - The Online World Grass Flora. http://www.kew.org/data/grasses-db.html | [Reproduction by vegetative fragmentation? No] "Rhizomes short; pachymorph" [Bamboos with pachymorph rhizomes usually spread much slower than leptomorph bamboos, and the culms are usually arranged in a tightly spaced clump, which is known as a caespitose habit.] |
| 606 | 2013. Bamboo Headquarters. Bambusa tuldoides - Punting Pole Bamboo. http://www.bamboohq.com/bambusa-tuldoides-621.html [Accessed 24 July 2013] | [Reproduction by vegetative fragmentation? No] "Clumping / Non-Invasive" |
| 607 | 2010. Guerreiro, C.I./Lizarazu, M.A.. Flowering of Bambusa tuldoides (Poaceae, Bambusoideae, Bambuseae) in southern South America. Darwiniana. 48(1): 25-31. | [Minimum generative time (years)? 23+] "With this information, we estimate the flowering cycle of B. tuldoides in southernmost America to be approximately 23 years." … "According to the methodology proposed by Kawamura (1927), we calculated flowering intervals of 43, 26, 23, 22 and 24 years." |
| 701 | 2013. WRA Specialist. Personal Communication. | [Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] No evidence, and unlikely, as this is a clumping bamboo that flowers infrequently, and after long intervals |
| 702 | 1995. But, P.P.H./Chia, L.C.. Bambusa tuldoides Munro [Internet] Record from Proseabase. Dransfield, S. & Widjaja, E.A. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org [Accessed 24 July 2013] | [Propagules dispersed intentionally by people? Yes] "Bambusa tuldoides is mainly cultivated as an ornamental, often as a hedge. When cultivated in pots or under unfavourable circumstances, the plant remains small with swollen internodes (''Buddha's belly bamboo'') and is thus much treasured in bonsai and horticulture. The culms are used for farm equipment and as punting poles and scaffolding, while the splits are employed in weaving utensils and handicrafts. Young shoots are edible. Shavings of the culm cortex (''chuk yu'') are used in Chinese medicine for febrile diseases, haematuria, epistaxis and infantile epilepsy." |
| 702 | 2010. Guerreiro, C.I./Lizarazu, M.A.. Flowering of Bambusa tuldoides (Poaceae, Bambusoideae, Bambuseae) in southern South America. Darwiniana. 48(1): 25-31. | [Propagules dispersed intentionally by people? Yes] "...widely cultivated in tropical and subtropical regions of America." |
| 703 | 2010. Guerreiro, C.I./Lizarazu, M.A.. Flowering of Bambusa tuldoides (Poaceae, Bambusoideae, Bambuseae) in southern South America. Darwiniana. 48(1): 25-31. | [Propagules likely to disperse as a produce contaminant? No] "With this information, we estimate the flowering cycle of B. tuldoides in southernmost America to be approximately 23 years. Viable seed production is reported for the first time in Argentina." [No evidence, and unlikely, as this bamboo produces viable seeds, albeit probably only after long period] |
| 704 | 1994. Zomlefer, W.B.. Guide to Flowering Plant Families. The University of North Carolina Press, Chapel Hill & London | [Propagules adapted to wind dispersal? Yes] "Caryopsis terete, slightly curved, ca. 8 mm, ca. 1.5 mm in diam., apex obtuse and thickened, hispid, with remains of style." [When produced, seeds presumably wind or gravity dispersed] |
| 705 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Propagules water dispersed? Possibly Yes] "Low hills, river banks," [Distribution suggests propagules may be moved by water] |
| 706 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Propagules bird dispersed? No] "Caryopsis terete, slightly curved, ca. 8 mm, ca. 1.5 mm in diam., apex obtuse and thickened, hispid, with remains of style." [Seeds rarely produced. Seeds, if/when produced, are not within a fleshy-fruit] |
| 707 | 2006. Wu, Z.Y./Raven, P.H./Hong, D.Y. ( eds.). Flora of China. Vol. 22 (Poaceae). Science Press & Missouri Botanical Garden Press, Beijing & St. Louis | [Propagules dispersed by other animals (externally)? No] "Caryopsis terete, slightly curved, ca. 8 mm, ca. 1.5 mm in diam., apex obtuse and thickened, hispid, with remains of style." [Unlikely. Seeds rarely produced. Seeds, if/when produced, lack means of external attachment] |
| 708 | 2013. WRA Specialist. Personal Communication. | [Propagules survive passage through the gut? Unknown] Unlikely to be internally dispersed |

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| 801 | 1995. But, P.P.H./Chia, L.C.. Bambusa tuldoides Munro [Internet] Record from Proseabase. Dransfield, S. & Widjaja, E.A. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org [Accessed 24 July 2013] | [Prolific seed production (>1000/m2)? No] "Seed production is very low. Individual plants, however, may show a deviant flowering behaviour: some plants in Honduras (introduced from southern China), for example, have shown some culms in a flowering state (without producing seed) ever since their introduction, with no apparent reduction in vegetative vigour." |
| 802 | 2013. WRA Specialist. Personal Communication. | [Evidence that a persistent propagule bank is formed (>1 yr)? Unknown] |
| 803 | 1961. Cruzado, H.J./Muzik, T.J./Kennard, W.C.. Control of Bamboo in Puerto Rico by Herbicides. Weeds. 9 (1): 20-26. | [Well controlled by herbicides? Probably Yes] "The combination of TCA and monuron at the rate of 0.8 and 0.4 pounds, respectively, per 50 culms, gave excellent kill in Bambusa multiplex and Dendrocalamus strictus" [Related invasive Bambusa is effectively controlled by herbicides. B. oliveriana would probably be effectively controlled as well] |
| 804 | 1995. But, P.P.H./Chia, L.C.. Bambusa tuldoides Munro [Internet] Record from Proseabase. Dransfield, S. & Widjaja, E.A. (Editors). PROSEA (Plant Resources of South-East Asia) Foundation, Bogor, Indonesia http://www.proseanet.org [Accessed 24 July 2013] | [Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Growth and development Shoots of Bambusa tuldoides emerge above the soil in the rainy season and develop to their full height in less than a year. The lateral branches often develop before the culm reaches its full height. A culm becomes mature in 2 years. From an experiment in Canton, China, the following data are available (for a planted 1-year-old single-culm rhizome cutting): average culm height increased from 3 m in the 1st year to 12 m in the 5th year after planting, average culm diameter increased from 3 to 5.8 cm, number of new culms increased from 4 to 21, total number of culms from 4 to 73 showing a decrease in the ratio of numbers of new culms to old from 4 to 0.4. In Puerto Rico Bambusa tuldoides rhizome cuttings developed 30—40 culms within 6 years after planting. About 10—12 years after planting, clumps were considered mature because at that age the annual number of new shoots was equal to the annual number of culms that died; maximum height was 13—14 m. In Florida (United States) a maximum culm height of 18 m has been reported. Flowering may start at the age of 50 years. In southern China clumps usually die after flowering. Seed production is very low. Individual plants, however, may show a deviant flowering behaviour: some plants in Honduras (introduced from southern China), for example, have shown some culms in a flowering state (without producing seed) ever since their introduction, with no apparent reduction in vegetative vigour." [Will resprout after repeated cutting] |
| 805 | 2013. WRA Specialist. Personal Communication. | [Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown] |

**Summary of Risk Traits**

**High Risk / Undesirable Traits**

- Thrives in tropical climates
- Reported to be naturalized in the Argentina
- Related Bambusa species have become invasive
- May produce viable seeds that can be dispersed by gravity, wind or people
- May resprout after repeated cutting or harvesting of shoots & culms (may be difficult to remove from unwanted areas)

**Low Risk / Desirable Traits**

- No negative impacts have been documented
- Non-toxic
- Edible shoots
- Landscaping and ornamental value
- A sympodial, or clumping bamboo
- Long time to reproductive maturity
- Lack of seed production until possibly at the end of long life cycle