

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>Terminalia randii</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	y	1
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	y	2
4.01	Produces spines, thorns or burrs	y	1
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		
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	y	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			2

Outcome	Evaluate
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section	# questions answered	satisfy minimum?
A	10	Yes
B	6	Yes
C	9	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	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20gnd.tif). 2. van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	1. Global hardiness zones 10-11(-12?). 2. South Africa.
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. van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	1. Only two climatic regions. 2. South Africa.
2.04	Atlapedia Online (http://www.atlapedia.com/online/countries/zimbabwe.htm).	Rainfall is highest on the High Veld with an average annual precipitation of up to 1,020 mm (40 inches) while the Middle Veld receives 410 mm to 610 mm (16 to 24 inches) and the Low Veld receives less than 400 mm (12 inches).
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.	<i>Terminalia oblongata</i> is a principal weed in Australia.
4.01	van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	"Spines up to 20 mm long, often in clusters of up to 5."
4.02		

4.03	van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	no description of parasitism
4.04		
4.05	van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	no evidence
4.06		
4.07	van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	no evidence
4.08		
4.09		
4.1	1. USDA, National Resources Conservation Services (NRCS), Soil Survey Division, World Soil Resources (http://soils.usda.gov/use/worldsoils/mapindex/order.html). 2. van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	1. Zimbabwe: mostly alfisols throughout the country with some entisols. 2. "Often on Kalahari sand or in rocky places".
4.11	1. van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa. 2. Liben, L (1968) Flore du Congo du Rwanda et du Burundi. Spermatophytes. Combretaceae. Le Ministère de l'Agriculture and Jardin botanique national de Belgique, Brussels. 3. Leistner, OA (2000) Seed plants of Southern Africa: families and genera. National Botanical Institute, Pretoria.	1. "Rigid shrub or small tree, with a rather open crown". 2. "Arbres forestiers de grande taille, fréquemment munis de contreforts, ou arbustes de savane, monoïques. [Forest trees of large size, frequently with buttresses, or monoecious shrubs of the savanna.]" [genus description]. 3. "Trees, usually small in our area but sometimes very tall elsewhere, or rarely shrubs" [genus description].
4.12		
5.01		terrestrial
5.02		Combretaceae
5.03		Combretaceae
5.04	1. van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa. 2. Liben, L (1968) Flore du Congo du Rwanda et du Burundi. Spermatophytes. Combretaceae. Le Ministère de l'Agriculture and Jardin botanique national de Belgique, Brussels. 3.	1. "Rigid shrub or small tree, with a rather open crown". 2. "Arbres forestiers de grande taille, fréquemment munis de contreforts, ou arbustes de savane, monoïques. [Forest trees of large size, frequently

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6.01	van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	no evidence
6.02		
6.03		
6.04		
6.05		
6.06		
6.07		
7.01		
7.02		no evidence
7.03		no evidence
7.04	1. van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa. 2. Liben, L (1968) Flore du Congo du Rwanda et du Burundi. Spermatophytes. Combretaceae. Le Ministère de l'Agriculture and Jardin botanique national de Belgique, Brussels. 3. Leistner, OA (2000) Seed plants of Southern Africa: families and genera. National Botanical Institute, Pretoria.	1. "Fruit a flattened, winged nut, 10-25 x 6-12 mm, yellowish green tinged with red to purple red, drying to brown." 2. "Fruits extrêmement variables, drupacés à samaroides, indéhiscent; ailes +/- développées (toujours bien développées dans les espèces congolaises) [Fruits extremely variable, drupes or samaras, indehiscent; wings +/- developed (species from the Congo always have wings)]" [genus description]. 3. "Fruit a pseudocarp, very variable in size and shape but usually 2-winged" [genus description].
7.05		
7.06	van Wyk, B and van Wyk, P (1997) Field guide to trees of Southern Africa. Struik, Cape Town, South Africa.	Fruit a flattened, winged nut, 10-25 x 6-12 mm, yellowish green tinged with red to purple red, drying to brown.
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7.08		
8.01		
8.02		
8.03		
8.04		
8.05		