

**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>Schotia latifolia</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)	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	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	y	1
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat	n	0
6.02	Produces viable seed	y	1
6.03	Hybridizes naturally	y	1
6.04	Self-compatible or apomictic		
6.05	Requires specialist pollinators	n	0
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	n	-1
7.05	Propagules water dispersed		
7.06	Propagules bird dispersed	y	1
7.07	Propagules dispersed by other animals (externally)	y	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.		
<b>Total Score</b>			<b>3</b>

<b>Outcome</b>	<b>Evaluate</b>
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section	# questions answered	satisfy minimum?
A	10	Yes
B	6	Yes
C	13	Yes
total	29	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 ( <a href="http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20gnd.tif">http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20gnd.tif</a> ). 2. Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 3. Goldblatt, P and Manning, J (2000) <i>Cape plants: a conspectus of the Cape flora of South Africa</i> . National Botanical Institute, Pretoria and Missouri Botanical Garden, St. Louis, Missouri.	1. Global hardiness zones 9-10. 2. Distribution lies in subtropics; "It will probably be tender to heavy frosts as it does not naturally occur in these areas." 3. SE [Cape] (Knysna to E Cape).
2.02		
2.03	1. Köppen-Geiger climate map ( <a href="http://www.hydro-earh-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf">http://www.hydro-earh-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf</a> ). 2. Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 3. Goldblatt, P and Manning, J (2000) <i>Cape plants: a conspectus of the Cape flora of South Africa</i> . National Botanical Institute, Pretoria and Missouri Botanical Garden, St. Louis, Missouri.	1. 1-2 climatic regions. 2. "The main centre of distribution is in the Eastern Cape but it does occur in restricted areas within Mpumalanga and Limpopo Province." 3. SE [Cape] (Knysna to E Cape).
2.04	Atlapedia Online ( <a href="http://www.atlapedia.com/online/countries/southafr.htm">http://www.atlapedia.com/online/countries/southafr.htm</a> ).	For South Africa: "Average annual precipitation varies from 400 mm (16 inches) in the east to less than 50 mm (2 inches) in the northwest coastal regions. Average annual precipitation in Cape Town is 510 mm (20 inches)"
2.05	1. Worldplants.com	1. Small plants and 2. seeds being

	( <a href="http://www.worldplants.com/schotia.htm">http://www.worldplants.com/schotia.htm</a> ). 2. Top Tropicals ( <a href="http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=Schotia_latifolia">http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=Schotia_latifolia</a> ).	sold in the U.S.
3.01		no evidence
3.02		no evidence
3.03		no evidence
3.04		no evidence
3.05		no evidence
4.01	1. Aubrey, A (2007) Schotia latifolia Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 2. Palmer E & Pitman N (1973) Trees of southern Africa. Cape Town: A. A. Balkema.	no description of these traits
4.02		
4.03	1. Aubrey, A (2007) Schotia latifolia Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 2. Palmer E & Pitman N (1973) Trees of southern Africa. Cape Town: A. A. Balkema.	no description of parasitism
4.04		
4.05	1. Aubrey, A (2007) Schotia latifolia Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 2. Palmer E & Pitman N (1973) Trees of southern Africa. A. A. Balkema, Cape Town. 3. Gaylard A and Kerley GIH (1997) Diet of tree hyraxes <i>Dendrohyrax arboreus</i> (Hyracoidea: Procaviidae) in the Eastern Cape, South Africa. Journal of Mammalogy 78(1): 213-221.	1. "Birds are attracted by the nectar"; "monkeys eat the seeds". 2. "The foliage is browsed by animals." 3. A principal dietary item of the tree hyrax in two areas. [no evidence of toxicity]
4.06		
4.07	1. Aubrey, A (2007) Schotia latifolia Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 2. Palmer E & Pitman N (1973) Trees of southern Africa. Cape Town: A. A. Balkema. 3. Watt, JM and Breyer-Brandwijk, MG (1962) The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone Ltd., Edinburgh and London.	1. "The flat pods and edible seeds may have been the origin of the common name boer-bean, which refers to the Dutch settlers and farmers who used it for food." 2. The Hottentots used to roast the green pods and eat the seeds within, a practice learned later by the Europeans and Bantu." 3. "The bean and seed are edible...the young bean is eaten by the Bantu and the

		Hottentot and the seed is sometimes roasted for eating". [no evidence of toxicity]
4.08		
4.09		
4.1	USDA, National Resources Conservation Services (NRCS), Soil Survey Division, World Soil Resources ( <a href="http://soils.usda.gov/use/worldsoils/mapindex/order.html">http://soils.usda.gov/use/worldsoils/mapindex/order.html</a> ).	Alfisols are the predominant soil order in this region.
4.11	Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ).	Tree 3m to 15m high, depending on habitat.
4.12	Coates Palgrave, K (2002) <i>Trees of Southern Africa</i> . Cape Town: Struik Publishers.	"A small to medium sized, slender tree 3 to 10 m in height."
5.01		terrestrial
5.02	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?33302">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?33302</a> ).	Fabaceae
5.03	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?33302">http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?33302</a> ).	Woody Fabaceae.
5.04	Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ).	Tree 3m to 15m high, depending on habitat.
6.01		no evidence
6.02	Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ).	Tree is propagated by seed.
6.03	Palmer E & Pitman N (1973) <i>Trees of southern Africa</i> . Cape Town: A. A. Balkema.	"Its distribution overlaps that of <i>Schotia afra</i> , and where this happens

		hybrids between the two species are known."
6.04		
6.05	1. Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 2. Palmer E & Pitman N (1973) <i>Trees of southern Africa</i> . Cape Town: A. A. Balkema.	1. "The flowers also attract insects such as wasps, ants, beetles, and flies, which in turn attract birds and reptiles." 2. "popular with birds, and insects such as beetles, flies, wasps and ants."
6.06		
6.07		
7.01		
7.02	1. Worldplants.com ( <a href="http://www.worldplants.com/schotia.htm">http://www.worldplants.com/schotia.htm</a> ). 2. Top Tropicals ( <a href="http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=Schotia_latifolia">http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=Schotia_latifolia</a> ).	1. Small plants and 2. seeds being sold in the U.S. [no other evidence of propagules being dispersed intentionally]
7.03		no evidence
7.04	1. Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 2. Coates Palgrave, K (2002) <i>Trees of Southern Africa</i> . Cape Town: Struik Publishers.	1. "As with the other boer-bean species, the pods peel away from their outer edges, leaving these narrow rims with the seeds attached hanging on the tree". 2. "The seeds are oval, flattened, up to 2 cm in diameter." [no evidence of adaptations to wind dispersal]
7.05		
7.06	1. Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ). 2. Palmer E & Pitman N (1973) <i>Trees of southern Africa</i> . Cape Town: A. A. Balkema.	1. "The seeds have fleshy, yellow arils with a high oil content, making them very attractive to birds. This is possibly a way of dispersing seed as the bird may carry its prize off, discard the seed and eat the aril." 2. "Arils are rich and fatty and act as a bait to birds which find them more attractive than the beans."
7.07	Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> ).	"Other animals such as ants or small mammals would most likely carry away seeds that fall to the ground, as they would also find the aril irresistible."
7.08	1. Aubrey, A (2007) <i>Schotia latifolia</i> Jacq. PlantzAfrica.com ( <a href="http://www.plantzafrica.com/plantqrs/schotialati.htm">http://www.plantzafrica.com/plantqrs/schotialati.htm</a> )	1. "Monkeys eat the seeds". 2. "Monkeys open the pods - which are astringent and which they spit out -

	m). 2. Palmer E & Pitman N (1973) Trees of southern Africa. Cape Town: A. A. Balkema.	and eat the seeds." [possibly seed predation].
8.01		
8.02		
8.03		
8.04		
8.05		