

**Family:** *Convolvulaceae*

**Taxon:** *Stictocardia beraviensis*

**Synonym:** *Argyrea beraviensis* (Vatke) Baker  
*Ipomoea beraviensis* Vatke

**Common Name:** Hawaiian sunset vine  
Hawaiian bells

Questionnaire :	current 20090513	Assessor:	Assessor	Designation:	EVALUATE
Status:	Assessor Approved	Data Entry Person:	Assessor	WRA Score	5
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		
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)		
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)		
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		
406	Host for recognized pests and pathogens		y=1, n=0		
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		n
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0		y
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0		y
411	Climbing or smothering growth habit		y=1, n=0		y

412	Forms dense thickets	y=1, n=0	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
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	y
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	1
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	
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed	y=1, n=-1	y
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	
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
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: EVALUATE

WRA Score 5

## Supporting Data:

101	1906. Oliver, D.. Flora of tropical Africa. Vol. IV, Sec. 2. Hydrophyllaceae to Pedalineae. L. Reeve and Co., London, UK	[Is the species highly domesticated? No] No evidence
102	2013. WRA Specialist. Personal Communication.	NA
103	2013. WRA Specialist. Personal Communication.	NA
201	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Species suited to tropical or subtropical climate(s) 2-High] "Native: AFRICA Northeast Tropical Africa: Ethiopia; Sudan East Tropical Africa: Kenya; Tanzania; Uganda West-Central Tropical Africa: Cameroon; Zaire West Tropical Africa: Ghana; Guinea; Guinea-Bissau; Liberia; Mali; Nigeria; Sierra Leone South Tropical Africa: Zambia Western Indian Ocean: Madagascar"
202	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Quality of climate match data 2-High]
203	1995. Sheat, B./Schofield, G.. Complete Gardening in Southern Africa. Struik Publishers, Cape Town, South Africa	[Broad climate suitability (environmental versatility)? No] " This woody evergreen with large ovate leaves is suited only to warmer areas."
203	2013. Tropicos.org. Tropicos [Online Database]. Missouri Botanical Garden, <a href="http://www.tropicos.org/">http://www.tropicos.org/</a>	[Broad climate suitability (environmental versatility)? Possibly. Collected in Madagascar from 50 m elevation at 16°22'00"S latitude up to 1300 m elevation at 19°04'00"S latitude]
204	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Native: AFRICA Northeast Tropical Africa: Ethiopia; Sudan East Tropical Africa: Kenya; Tanzania; Uganda West-Central Tropical Africa: Cameroon; Zaire West Tropical Africa: Ghana; Guinea; Guinea-Bissau; Liberia; Mali; Nigeria; Sierra Leone South Tropical Africa: Zambia Western Indian Ocean: Madagascar"
205	2013. Top Tropicals. <i>Stictocardia beraviensis</i> . <a href="http://toptropicals.com/html/toptropicals/plant_wk/sstictocardia.htm">http://toptropicals.com/html/toptropicals/plant_wk/sstictocardia.htm</a> [Accessed 11 Oct 2013]	[Does the species have a history of repeated introductions outside its natural range? Yes] "This evergreen climber with absolutely gorgeous blooms and lush big leaves is grown all over the Tropics and some subtropical areas."
301	2008. Foxcroft, L.C./Richardson, D.M./Wilson, J.R.U.. Ornamental Plants as Invasive Aliens: Problems and Solutions in Kruger National Park, South Africa. <i>Environmental Management</i> . 41: 32–51.	[Naturalized beyond native range? Yes] "Table 2 Ornamental alien plant species recorded per camp in the Kruger National Park, indicating the number of camps in which each species has been recorded, as well as mode of introduction" [ <i>Stictocardia beraviensis</i> - Evidence of naturalization? Yes]
301	2013. Hyde, M.A./Wursten, B.T./Ballings, P.. Flora of Zimbabwe: Cultivated Plants: Species information: <i>Stictocardia beraviensis</i> . <a href="http://www.zimbabweflora.co.zw/cult/species.php?species_id=166750">http://www.zimbabweflora.co.zw/cult/species.php?species_id=166750</a> [Accessed 14 October 2013]	[Naturalized beyond native range?] "Commonly cultivated e.g. in Harare gardens and sometimes persisting as a relic of cultivation. Not known to ever become naturalised in Zimbabwe."
302	2008. Tropicsphere. Distinguishing <i>Stictocardia</i> spp. <a href="http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333">http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333</a> [Accessed 14 Oct 2013]	[Garden/amenity/disturbance weed? Possibly Yes] "An annual vine. It is weedy and highly invasive, dropping copious seeds after flowering, then the parent plant declines or dies back entirely! The following year thousands of seeds will sprout with onset of rains. This plant was introduced (out of Thailand) by John Lucas though it is NOT an Asian species! Origin: said to occur on coastlines of eastern tropical Africa from Kenya to southern Africa. It has smaller, paler, crimson-orange flowers and small heart shaped leaves that are light green to yellowish green in color. The leaves are fully glabrous (smooth) to waxy. A precocious bloomer that can start to flower in 3 months from seed germinating!"
302	2013. Barbaine's. <i>Stictocardia beraviensis</i> . <a href="http://www.barbaine.com/pages/stictocardia_lien.htm">http://www.barbaine.com/pages/stictocardia_lien.htm</a> [Accessed 11 Oct 2013]	[Garden/amenity/disturbance weed? Potentially] "This plant enjoys heat and can cope with rather dry air, it will grow preferably in a well drained deep soil and may become invasive if general environment allows it."
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	2006. Trusty, J.L./Kesler, H.C./Delgado, G.H.. Vascular Flora of Isla del Coco, Costa Rica. Proceedings of the California Academy of Sciences. 57(7): 247–355.	[Congeneric weed? Naturalized] "Stictocardia tiliifolia" ... "Extremely common in human created disturbed areas and steep areas that undergo landslides on Isla del Coco. Native to Africa through Malaysia, naturalized from south Florida to Guyana."
305	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Congeneric weed? Possibly <i>S. tiliifolia</i> . Naturalized and weedy in locations, but evidence of impacts not documented]
401	1906. Oliver, D.. Flora of tropical Africa. Vol. IV, Sec. 2. Hydrophyllaceae to Pedalineae. L. Reeve and Co., London, UK	[Produces spines, thorns or burrs? No] "A woody climber with finely pubescent stems. Leaves distinctly petioled, cordate-ovate, acute, about 3 in. long and broad, thin, finely pubescent on both surfaces."
402	2013. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	1906. Oliver, D.. Flora of tropical Africa. Vol. IV, Sec. 2. Hydrophyllaceae to Pedalineae. L. Reeve and Co., London, UK	[Parasitic? No evidence] "A woody climber with finely pubescent stems. Leaves distinctly petioled, cordate-ovate, acute, about 3 in. long and broad, thin, finely pubescent on both surfaces."
404	2012. FAO. Common Weeds in Vanuatu. <a href="http://www.fao.org/ag/AGP/AGPC/doc/Publicat/FAOBUL2/B201.htm">http://www.fao.org/ag/AGP/AGPC/doc/Publicat/FAOBUL2/B201.htm</a>	[Unpalatable to grazing animals? Unknown] "Stictocardia can become dominant in overgrazed coastal pastures, being unpalatable, (and probably poisonous), to livestock." [referring to <i>Stictocardia tiliaefolia</i> ]
405	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Toxic to animals? Unknown. No evidence from genus]
405	2012. FAO. Common Weeds in Vanuatu. <a href="http://www.fao.org/ag/AGP/AGPC/doc/Publicat/FAOBUL2/B201.htm">http://www.fao.org/ag/AGP/AGPC/doc/Publicat/FAOBUL2/B201.htm</a>	[Toxic to animals? Unknown] "Stictocardia can become dominant in overgrazed coastal pastures, being unpalatable, (and probably poisonous), to livestock." [referring to <i>Stictocardia tiliaefolia</i> ]
406	1995. Sheat, B./Schofield, G.. Complete Gardening in Southern Africa. Struik Publishers, Cape Town, South Africa	[Host for recognized pests and pathogens? Unknown. No evidence]
406	2011. Armitage, A.M.. Armitage's Vines and Climbers: A Gardener's Guide to the Best Vertical Plants. Timber Press, Portland, OR	[Host for recognized pests and pathogens? Unknown. No evidence]
407	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Causes allergies or is otherwise toxic to humans? No evidence]
408	2013. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? No evidence] Climbing vine could potentially act as a fuel ladder, but there is no evidence that this species is particularly flammable
409	1995. Sheat, B./Schofield, G.. Complete Gardening in Southern Africa. Struik Publishers, Cape Town, South Africa	[Is a shade tolerant plant at some stage of its life cycle?] "Plant in full sun"
409	2013. Dave's Garden. PlantFiles: <i>Stictocardia</i> , Hawaiian Sunset Vine, Hawaiian Bells - <i>Stictocardia beraviensis</i> . <a href="http://davesgarden.com/guides/pf/go/168689/">http://davesgarden.com/guides/pf/go/168689/</a> [Accessed 06 Oct 2013]	[Is a shade tolerant plant at some stage of its life cycle?] "Sun Exposure: Full Sun Sun to Partial Shade"
409	2013. Top Tropicals. <i>Stictocardia beraviensis</i> . <a href="http://toptropicals.com/html/toptropicals/plant_wk/sstictocardia.htm">http://toptropicals.com/html/toptropicals/plant_wk/sstictocardia.htm</a> [Accessed 11 Oct 2013]	[Is a shade tolerant plant at some stage of its life cycle? Yes] "takes both full sun and shade, even deep shade" ... "As with any blooming plants, the rule is - the more sun, the more flowers. However, this plant can be planted in shade probably with advantage: it will still continue blooming profusely, but the leaves will grow much larger, that will create a gorgeous tropical look."
410	2013. Dave's Garden. PlantFiles: <i>Stictocardia</i> , Hawaiian Sunset Vine, Hawaiian Bells - <i>Stictocardia beraviensis</i> . <a href="http://davesgarden.com/guides/pf/go/168689/">http://davesgarden.com/guides/pf/go/168689/</a> [Accessed 06 Oct 2013]	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)?] "Soil pH requirements: 6.1 to 6.5 (mildly acidic) 6.6 to 7.5 (neutral) 7.6 to 7.8 (mildly alkaline)"
410	2013. Growing on the Edge. <i>Stictocardia beraviensis</i> . <a href="http://www.growingontheedge.net/viewtopic.php?p=18639">http://www.growingontheedge.net/viewtopic.php?p=18639</a> [Accessed 11 Oct 2013]	[Tolerates a wide range of soil conditions? Yes] "They seem not to be very particular about the type of soil (grown in container)."

411	2000. Cullen, J./Walters, S.M.. The European garden flora: a manual for the identification of plants cultivated in Europe, both out-of-doors and under glass. Dicotyledons (Part IV). Cambridge University Press, Cambridge, UK	[Climbing or smothering growth habit? Yes] "Woody climber reaching 14 m. Leaves 16-20 cm, acute or blunt; stalk as long as or slightly shorter than the leaf."
411	2013. Top Tropicals. <i>Stictocardia beraviensis</i> . <a href="http://toptropicals.com/html/toptropicals/plant_wk/s_tictocardia.htm">http://toptropicals.com/html/toptropicals/plant_wk/s_tictocardia.htm</a> [Accessed 11 Oct 2013]	[Climbing or smothering growth habit? Yes] "super-fast growing, can cover a fence, trellis, arbor or any unwanted views within a few weeks to a couple months"
412	1994. Muasya, J.M./Young, T.P./Okebiro, D.N.. Vegetation map and plant checklist of Ol Ari Nyiro ranch and the Mukutan Gorge, Laikipia, Kenya. <i>Journal of East African Natural History</i> . 83(2): 143-197.	[Forms dense thickets? No. A climber] "Climber; flowers deep red; leaves alternate and simple; bushland; occasional."
501	1987. Leonor, M.. <i>Stictocardia beraviensis</i> (Vatke) Hall. f.: <i>Flora Zambesiaca</i> Vol.8 part:1. Convolvulaceae. <a href="http://apps.kew.org/efloras/namedetail.do?qry=na_melist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064">http://apps.kew.org/efloras/namedetail.do?qry=na_melist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064</a> [Accessed 11 Oct 2013]	[Aquatic? No] "Habitat: Riverine Forest."
502	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Grass? No] Convolvulaceae
503	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl">http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl</a>	[Nitrogen fixing woody plant? No] Convolvulaceae
504	1987. Leonor, M.. <i>Stictocardia beraviensis</i> (Vatke) Hall. f.: <i>Flora Zambesiaca</i> Vol.8 part:1. Convolvulaceae. <a href="http://apps.kew.org/efloras/namedetail.do?qry=na_melist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064">http://apps.kew.org/efloras/namedetail.do?qry=na_melist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064</a> [Accessed 11 Oct 2013]	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Strong woody twiner, climbing into crowns of trees. Stems densely pubescent when young and glabrescent yellowish later. Leaf lamina ovate up to 16 x 14 cm. acute or blunt at the mucronate apex, shallowly cordate or truncate, glabrous or very sparingly pilose above, very densely grey-velvety beneath to glabrous or glabrescent; lateral nerves closely parallel; petiole up to 17 cm. long."
601	1906. Oliver, D.. <i>Flora of tropical Africa</i> . Vol. IV, Sec. 2. Hydrophyllaceae to Pedalineae. L. Reeve and Co., London, UK	[Evidence of substantial reproductive failure in native habitat? No evidence]
601	1987. Leonor, M.. <i>Stictocardia beraviensis</i> (Vatke) Hall. f.: <i>Flora Zambesiaca</i> Vol.8 part:1. Convolvulaceae. <a href="http://apps.kew.org/efloras/namedetail.do?qry=na_melist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064">http://apps.kew.org/efloras/namedetail.do?qry=na_melist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064</a> [Accessed 11 Oct 2013]	[Evidence of substantial reproductive failure in native habitat? No evidence]
602	1995. Sheat, B./Schofield, G.. <i>Complete Gardening in Southern Africa</i> . Struik Publishers, Cape Town, South Africa	[Produces viable seed? Yes] "Propagate from ripe seed"
603	2013. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2013. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	1997. Austin, D.F./Demissew, S.. <i>Unique Fruits and Generic Status of Stictocardia</i> (Convolvulaceae). <i>Kew Bulletin</i> . 52(1): 161-169.	[Requires specialist pollinators? Yes] "Table 2. Corolla traits, possible pollinators and distribution in <i>Stictocardia</i> ." ... "[ <i>S. beraviensis</i> - Pollinator = birds]
605	2001. Austin, D.F./Eich, E.. <i>Synopsis of Stictocardia with another Madagascan species, S. mojangensis</i> (Convolvulaceae). <i>Willdenowia</i> . 31: 79-85.	[Requires specialist pollinators? Yes] "Corolla crimson or scarlet, with or without internal yellow nectar guides; apparently adapted for bird pollination" ... "Corolla crimson, 4.5-5.5 cm long ... <i>S. beraviensis</i> "
606	1995. Sheat, B./Schofield, G.. <i>Complete Gardening in Southern Africa</i> . Struik Publishers, Cape Town, South Africa	[Reproduction by vegetative fragmentation? No evidence] "Propagate from ripe seed"

606	2008. Tropicsphere. Distinguishing <i>Stictocardia</i> spp. <a href="http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333">http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333</a> [Accessed 14 Oct 2013]	[Reproduction by vegetative fragmentation? No evidence] "An annual vine. It is weedy and highly invasive, dropping copious seeds after flowering, then the parent plant declines or dies back entirely! The following year thousands of seeds will sprout with onset of rains. This plant was introduced (out of Thailand) by John Lucas though it is NOT an Asian species! Origin: said to occur on coastlines of eastern tropical Africa from Kenya to southern Africa. It has smaller, paler, crimson-orange flowers and small heart shaped leaves that are light green to yellowish green in color. The leaves are fully glabrous (smooth) to waxy. A precocious bloomer that can start to flower in 3 months from seed germinating!"
607	2008. Tropicsphere. Distinguishing <i>Stictocardia</i> spp. <a href="http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333">http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333</a> [Accessed 14 Oct 2013]	[Minimum generative time (years)? <1] "A precocious bloomer that can start to flower in 3 months from seed germinating!"
607	2011. Armitage, A.M.. Armitage's Vines and Climbers: A Gardener's Guide to the Best Vertical Plants. Timber Press, Portland, OR	[Minimum generative time (years)? 1. Annual] "That they are annual, perhaps don't grow as rapidly as one would like, or have less than overwhelming flowers will forever keep these plants below the radar."
701	1987. Leonor, M.. <i>Stictocardia beraviensis</i> (Vatke) Hall. f.: Flora Zambesiaca Vol.8 part:1. Convolvulaceae. <a href="http://apps.kew.org/efloras/namedetail.do?qry=namelist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064">http://apps.kew.org/efloras/namedetail.do?qry=namelist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064</a> [Accessed 11 Oct 2013]	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No evidence] "Capsule globose, up to 2 cm. in diam., straw coloured, woody. Seeds black, more or less granular." [Unlikely, as capsules & seeds lack means of external attachment]
702	2013. Top Tropicals. <i>Stictocardia beraviensis</i> . <a href="http://toptropicals.com/html/toptropicals/plant_wk/sstictocardia.htm">http://toptropicals.com/html/toptropicals/plant_wk/sstictocardia.htm</a> [Accessed 11 Oct 2013]	[Propagules dispersed intentionally by people? Yes] "This evergreen climber with absolutely gorgeous blooms and lush big leaves is grown all over the Tropics and some subtropical areas."
703	2008. Tropicsphere. Distinguishing <i>Stictocardia</i> spp. <a href="http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333">http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333</a> [Accessed 14 Oct 2013]	[Propagules likely to disperse as a produce contaminant? Unknown] "An annual vine. It is weedy and highly invasive, dropping copious seeds after flowering, then the parent plant declines or dies back entirely! The following year thousands of seeds will sprout with onset of rains. "
703	2013. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? Unknown]
704	1975. Woodson, Jr.; R.E./Schery, R.W./Austin, D.F.. Flora of Panama. Part IX. Family 164. Convolvulaceae. Annals of the Missouri Botanical Garden. 62(1): 157-224.	[Propagules adapted to wind dispersal? No] "Fruits indehiscent, thin-walled, surrounded by enlarged fleshy sepals, subspheroidal; seeds 4, ovoid, grayish brown, minutely pubescent." [Genus description]
705	1997. Austin, D.F./Demissew, S.. Unique Fruits and Generic Status of <i>Stictocardia</i> (Convolvulaceae). Kew Bulletin. 52(1): 161-169.	[Propagules water dispersed? Yes] "Guppy (1906) and Muir (1937) recorded floating and probable water dispersal in <i>Stictocardia</i> "
705	2008. Catarino, L./Martins, E.S./Basto, M.F./Diniz, M.A.. An annotated checklist of the vascular flora of Guinea-Bissau (West Africa). Blumea-Biodiversity, Evolution and Biogeography of Plants. 53(1): 1-222.	[Propagules water dispersed? Possibly, if along water courses] "Herbaceous climber, in riparian forest."
706	1997. Austin, D.F./Demissew, S.. Unique Fruits and Generic Status of <i>Stictocardia</i> (Convolvulaceae). Kew Bulletin. 52(1): 161-169.	[Propagules bird dispersed? No] "...the living fruits are the texture of other nonfleshy fruits in the family, somewhat leathery."
707	1987. Leonor, M.. <i>Stictocardia beraviensis</i> (Vatke) Hall. f.: Flora Zambesiaca Vol.8 part:1. Convolvulaceae. <a href="http://apps.kew.org/efloras/namedetail.do?qry=namelist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064">http://apps.kew.org/efloras/namedetail.do?qry=namelist&amp;flora=fz&amp;taxon=5926&amp;nameid=15064</a> [Accessed 11 Oct 2013]	[Propagules dispersed by other animals (externally)? No] "Capsule globose, up to 2 cm. in diam., straw coloured, woody. Seeds black, more or less granular." [No evidence, and unlikely as capsules & seeds lack means of external attachment]
708	2013. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown, but not adapted for consumption or internal dispersal]
801	2008. Tropicsphere. Distinguishing <i>Stictocardia</i> spp. <a href="http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333">http://www.tropicsphere.com/main/forums/viewtopic.php?f=2&amp;t=8333</a> [Accessed 14 Oct 2013]	[Prolific seed production (>1000/m <sup>2</sup> )? Possibly] "An annual vine. It is weedy and highly invasive, dropping copious seeds after flowering, then the parent plant declines or dies back entirely! The following year thousands of seeds will sprout with onset of rains. This plant was introduced (out of Thailand) by John Lucas though it is NOT an Asian species!"
802	2008. Royal Botanic Gardens Kew. Seed Information Database (SID). Version 7.1. <a href="http://data.kew.org/sid/">http://data.kew.org/sid/</a>	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown] "Storage Conditions: 100 % viability following drying to mc's in equilibrium with 15 % RH and freezing for 9 months at -20°C at RBG Kew, WP" [Orthodox seed storage. Unknown from field conditions]
803	2013. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species

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804	2013. Top Tropicals. <i>Stictocardia beraviensis</i> . <a href="http://toptropicals.com/html/toptropicals/plant_wk/s_tictocardia.htm">http://toptropicals.com/html/toptropicals/plant_wk/s_tictocardia.htm</a> [Accessed 11 Oct 2013]	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Relatively cold hardy, will take a few hours of light frost, and will come back from roots if killed with longer periods of cold " ... "You may trim any unwanted twigs which won't hurt the plant appearance - on the contrary, it will encourage new blooms in leaf axils"
805	2013. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents) Unknown]

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## **Summary of Risk Traits**

### **High Risk / Undesirable Traits**

- Thrives in tropical climates
- Naturalized in Kruger National Park, South Africa
- Possibly weedy in cultivated settings
- Shade tolerant
- Tolerates many soil types
- Climbing/smothering growth habit
- Reaches maturity in under 1 year
- Seeds dispersed intentionally by people and by water
- Can resprout if only aboveground vegetative material is removed

### **Low Risk Traits**

- Unarmed
- Values as an ornamental for the showy flowers