

Taxon: <i>Caralluma adscendens</i> var. <i>fimbriata</i>	Family: Apocynaceae
Common Name(s): caralluma kannada maakada singi	Synonym(s): <i>Caralluma fimbriata</i> Wall.

Assessor: Chuck Chimera	Status: Assessor Approved	End Date: 24 Jun 2015
WRA Score: -2.0	Designation: L	Rating: Low Risk

Keywords: Succulent, Shrub, Cactus-like, Fly-pollinated, Wind-Dispersed

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
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	?
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	n
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		
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals	y=1, n=-1	n
405	Toxic to animals		
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans		
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		

Qsn #	Question	Answer Option	Answer
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		
411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets		
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		
604	Self-compatible or apomictic	y=1, n=-1	n
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
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		
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)		
708	Propagules survive passage through the gut	y=1, n=-1	n
801	Prolific seed production (>1000/m ²)		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	Is the species highly domesticated?	n
	Source(s)	Notes
	Bruyns, P. V., Farsi, A. A., & Hedderson, T. (2010). Phylogenetic relationships of <i>Caralluma</i> R. Br. (Apocynaceae). <i>Taxon</i> , 59(4): 1031-1043	[Widely cultivated. No evidence of domestication] "Here we paid particular attention to <i>C. adscendens</i> var. <i>fimbriata</i> , which has been recorded from Myanmar and peninsular India via Arabia (where it was formerly known as <i>C. subulata</i>) to West Africa (where it was previously called <i>C. dalzielii</i>) (Bruyns, 1992). Among our samples, we included two accessions of <i>C. adscendens</i> var. <i>fimbriata</i> , one from India and one from Arabia. Our analyses show them to be closely related sisters (PP = 0.97). This suggests that, since this plant is widely cultivated for medicinal purposes (Bruyns, 2005), its present-day distribution has been greatly extended by human activity and so this subclade is native to the Indian region."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	High
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	" <i>Caralluma adscendens</i> occurs from Senegal east to Somalia and also in Saudi Arabia, Yemen, India and Sri Lanka."

202	Quality of climate match data	High
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	

Qsn #	Question	Answer
203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	" <i>Caralluma adscendens</i> occurs on gravelly soils and rocky hills, from sea-level up to 1000 m altitude. It tolerates high temperatures and an annual rainfall as low as 400 mm."

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	" <i>Caralluma adscendens</i> occurs from Senegal east to Somalia and also in Saudi Arabia, Yemen, India and Sri Lanka."

205	Does the species have a history of repeated introductions outside its natural range?	?
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"It is cultivated in many localities."
	WRA Specialist. 2015. Personal Communication	Many supplements produced from this plant are commercially available, but there is limited information on the sale or cultivation of live plants outside its native range.

301	Naturalized beyond native range	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Adnan, M., Jan, S., Mussarat, S., Tariq, A., Begum, S., Afroz, A., & Shinwari, Z. K. (2014). A review on ethnobotany, phytochemistry and pharmacology of plant genus <i>Caralluma</i> R. Br. <i>Journal of Pharmacy and Pharmacology</i> , 66(10), 1351-1368	" <i>Caralluma</i> is not an invasive species so modern cultivation techniques should be developed for its commercial exploitation."

Qsn #	Question	Answer
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence

305	Congeneric weed	
	Source(s)	Notes
	Groves, R. H., & Di Castri, F. (eds.). 1991. Biogeography of Mediterranean Invasions. Cambridge University Press, Cambridge, UK	"Appendix 27.1. The most common plants invasive in the rangelands of the Mediterranean Basin" [Includes <i>Caralluma</i> , but no species, or impacts, have been identified]
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	<i>Caralluma penicillata</i> listed as a weed [Impacts unspecified, and unable to find further evidence of weediness or invasiveness]

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Small shrub with basally trailing, then upright, much-branched, succulent stems, 30–60 (–100) cm tall; stem basally up to 2 cm in diameter, concavely 4-angled, at apex tapering to a pointed tip, reddish dotted; tubercles blunt, protruding, spreading horizontally or upwards; latex present. Leaves simple, small, rudimentary."
	Reddy, C. S., Reddy, K. N., & Raju, V. S. (2008). Supplement to Flora of Andhra Pradesh India. Deep Publications, Delhi, India	[With tubercles] " <i>Caralluma adscendens</i> (Roxb.) Haw. var. <i>fimbriata</i> (Wall.) Grav" ... "Dwarf glabrous herbs. Stems small, not definitely attenuate, equal thickness throughout, creamy reddish distally, not streaked, angles rounded. Leaves scaly, arising on tubercles."

402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

403	Parasitic	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Small shrub with basally trailing, then upright, much-branched, succulent stems, 30–60 (–100) cm tall" [No evidence. Family: Apocynaceae / Asclepiadaceae]

404	Unpalatable to grazing animals	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Oldfield, S. 1997. Cactus and Succulent Plants - Status Survey and Conservation Action Plan. IUCN, Gland, Switzerland	"Grazing is a particular threat to succulents such as <i>Caralluma</i> spp. which are not protected by spines or the presence of unpalatable substances such as the latex of <i>Euphorbia</i> spp."
	Vartak, V.D. 1959. Some Edible Wild Plants from the Hilly Region of the Poona District, Bombay State. Journal of the Bombay Natural History Society 56(1): 8-25	[Palatable to humans. Probably palatable to animals] "Common in crevices of rocks along the slopes of the denuded hills. The entire plant is eaten as a vegetable mostly by Punjabis and northern people."
	Balakrishnan, V., Robinson, J. P., Kasamy, A. M., & Ravindran, K. C. (2009). Ethno veterinary studies among farmers in Dindigul district Tamil Nadu, India. Global Journal of Pharmacology 3(1): 15-23	[Possibly palatable to cattle] "Farmers believe that feeding leaves of <i>Caralluma adscendens</i> R. Br. (muyal kathu, muyal kurabu) in odd numbers. i.e. 3,5,7 or 9, can relieve bloat."

405	Toxic to animals	
	Source(s)	Notes
	Naingade, S., Jadhav, A., & Surve, S. (2013). <i>Caralluma fimbriata</i> : an overview. International Journal of Pharmacy and Biological Sciences, 3(1), 281-286	"Extract by oral administration in male and female Wistar rats is carried out by dose 2g/kg body weight and 5g/kg body weight. observation is done for 14 days." ... "All animals was well survive [sic]. thus, <i>Caralluma fimbriata</i> is safe as it does not show any toxic effect. <i>Caralluma fimbriata</i> extract did not produce signs of toxicity at very high doses of 5 g/kg and it could be classified in the classification of : LD50 more than 5 g/Kg."

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 14 April	" <i>Caralluma fimbriata</i> (Indian cultivar) suffers from soil rot but not black spot disease."

407	Causes allergies or is otherwise toxic to humans	
	Source(s)	Notes
	Quattrocchi, U.. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	" <i>Caralluma adscendens</i> " ... cooked plant eaten as vegetable ... Young stems ground with onion and tamarind and made into a paste used to cure digestive problems." ... " <i>Caralluma fimbriata</i> ... eaten raw or cooked, famine food ... Eaten to suppress appetite, to enhance endurance."
	Useful Tropical Plants Database. 2015. <i>Caralluma adscendens</i> . http://tropical.theferns.info/viewtropical.php?id=Caralluma+adscendens . [Accessed 23 Jun 2015]	"The Moors people of the western Sahara are said to make a strong poison by macerating the crushed stems in sheep urine[299]."
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[No evidence] "In dry rural India the plant (as <i>Caralluma fimbriata</i>) is cooked and eaten with spices as a vegetable, and it is preserved as chutneys and pickles. It is eaten raw by laborers as an appetite and thirst suppressant and endurance enhancer. The fruits are sometimes cooked and eaten with salt. Recently the dried plants or extract of the plant have received a lot of attention on the internet as a hunger suppressant to reduce weight."

Qsn #	Question	Answer
408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[No evidence. A succulent plant of sparsely vegetated sites] "Caralluma adscendens occurs on gravelly soils and rocky hills, from sea-level up to 1000 m altitude."
	Vartak, V.D. 1959. Some Edible Wild Plants from the Hilly Region of the Poona District, Bombay State. Journal of the Bombay Natural History Society 56(1): 8-25	[Unlikely. Succulent, and in sparsely vegetated habitats with low fuel loads] "An erect fleshy, almost leafless herb, reaching about 20 cm. high. The plant looks like small cactus. Common in crevices of rocks along the slopes of the denuded hills."

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[Shade tolerance unknown. A low-stature plant of sparsely vegetated sites. Likely occurs in high light environments] "Small shrub with basally trailing, then upright, much-branched, succulent stems, 30–60 (–100) cm tall" ... "Caralluma adscendens occurs on gravelly soils and rocky hills, from sea-level up to 1000 m altitude."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"...occurs on gravelly soils and rocky hills..."

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Small shrub with basally trailing, then upright, much-branched, succulent stems, 30–60 (–100) cm tall"

412	Forms dense thickets	
	Source(s)	Notes
	Suresh, H. S., Bhat, H.R., Dattaraja, H. S. 1999. Flora of Mudumalai Wildlife Sanctuary, Nilgiris, Tamil Nadu. Technical Report No. 64, Center for Ecological Sciences, Indian Institute of Science, Bangalore, India	[A component of thicket vegetation] "Caralluma adscendens" ... "Frequent in scrub and dry areas found in the thickets that are protected from grazing Has distribution in India, Sri Lanka and Myanmar"
	Reddy, C. S., Reddy, K. N., & Raju, V. S. (2008). Supplement to Flora of Andhra Pradesh India. Deep Publications, Delhi, India	[No evidence] "Occasional, growing on laterite and rocky places in dry hills."

501	Aquatic	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[Terrestrial] " <i>Caralluma adscendens</i> occurs on gravelly soils and rocky hills, from sea-level up to 1000 m altitude."

502	Grass	n
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 23 Jun 2015]	"Family: Apocynaceae subfamily: Asclepiadoideae tribe: Ceropegieae subtribe: Stapeliinae. Also placed in: Asclepiadaceae "

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/ . [Accessed 23 Jun 2015]	[No evidence] "Family: Apocynaceae subfamily: Asclepiadoideae tribe: Ceropegieae subtribe: Stapeliinae. Also placed in: Asclepiadaceae "

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Small shrub with basally trailing, then upright, much-branched, succulent stems, 30–60 (–100) cm tall; stem basally up to 2 cm in diameter, concavely 4-angled, at apex tapering to a pointed tip, reddish dotted; tubercles blunt, protruding, spreading horizontally or upwards; latex present. Leaves simple, small, rudimentary."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	" <i>Caralluma adscendens</i> has a wide geographic distribution but is nowhere common. Its morphological diversity is large and probably its genetic diversity as well."

602	Produces viable seed	y
	Source(s)	Notes
	Useful Tropical Plants Database. 2015. <i>Caralluma adscendens</i> . http://tropical.theferns.info/viewtropical.php?id=Caralluma+adscendens . [Accessed 23 Jun 2015]	"Propagation Seed - Cuttings."

Qsn #	Question	Answer
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Seeds oblong, c. 12 mm × c. 4 mm, at apex with coma of white hairs 3–4 cm long."

603	Hybridizes naturally	
	Source(s)	Notes
	Sarkaria, J. S. 2005. National Cactus and Succulent Garden and Research Center, Panchkula, Haryana, India. http://kssarkaria.org/cactus/cactus-book2.html . [Accessed 23 Jun 2015]	"In its Southern distribution, <i>Caralluma stalagmifera</i> is found alongside this species, but no hybrids between the two were noticed."
	Albers, F. & Meve, U. (eds.). 2002. Illustrated Handbook of Succulent Plants: Asclepiadaceae. Springer Science & Business Media, Berlin - Heidelberg - New York	[Possibly Yes] "In addition, the following intergeneric hybrids are known: <i>C. adscendens</i> var. <i>attenuata</i> x <i>C. adscendens</i> var. <i>gracilis</i> , <i>C. Arabica</i> s <i>C. penicillata</i> , <i>C. diffusa</i> x <i>C. umbellata</i> ."

604	Self-compatible or apomictic	n
	Source(s)	Notes
	Rau, E. 2015. President, Sustainable Bioresources, LLC. Personal Communication. 14 April	"All of my specimens are cuttings from a single genotype. They bloom but have never produced seeds. Attempts to hand pollinate the plants by transfer of pollinaria between plants failed. They are likely self sterile. "

605	Requires specialist pollinators	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[Fly-pollinated] "Flowers 1–2 together, axillary, scattered, bisexual, 5-merous, regular, drooping, with fetid smell; pedicel 1–4 mm long; sepals triangular, 2–3 mm long, acute; corolla c. 2.5 cm in diameter, flat to shortly campanulate, pale green, often finely dotted with purple, sometimes striped, corolla lobes lanceolate, 1–3 cm × 1–1.5 cm, bluntly acuminate, basally broader and horizontally striped, apex brownish to reddish, variably long-hairy at apex; outer corona bowl shaped, lobes brownish to dark purple, inner corona lobes longer than the outer ones, deeply divided, filiform." ... "In Africa <i>Caralluma adscendens</i> flowers during the rainy season from May to August. The flowers are pollinated by flies."

606	Reproduction by vegetative fragmentation	
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	" <i>Caralluma adscendens</i> can easily be propagated from stem cuttings."

Qsn #	Question	Answer
607	Minimum generative time (years)	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[Unlikely. Adapted for wind dispersal, but hairs might allow seeds to adhere to a surface & be transported externally] "Seeds oblong, c. 12 mm × vc. 4 mm, at apex with coma of white hairs 3–4 cm long."

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"It is cultivated in many localities."

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Seeds oblong, c. 12 mm × c. 4 mm, at apex with coma of white hairs 3–4 cm long." [No evidence. Seeds relatively large & with conspicuous hairs. Unlikely to become a contaminant of produce]

704	Propagules adapted to wind dispersal	y
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Fruit consists of a pair of follicles, each follicle fusiform, 10–15 cm × c. 1 cm, apex acuminate. Seeds oblong, c. 12 mm × c. 4 mm, at apex with coma of white hairs 3–4 cm long."

705	Propagules water dispersed	
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Seeds oblong, c. 12 mm × c. 4 mm, at apex with coma of white hairs 3–4 cm long." [Unlikely. Seed adapted for wind-dispersal, but hairs may provide temporary buoyancy & could aid in secondary dispersal by water]

706	Propagules bird dispersed	n
	Source(s)	Notes

Qsn #	Question	Answer
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[No evidence. Not fleshy-fruited] "Fruit consists of a pair of follicles, each follicle fusiform, 10–15 cm × c. 1 cm, apex acuminate. Seeds oblong, c. 12 mm × c. 4 mm, at apex with coma of white hairs 3–4 cm long."
707	Propagules dispersed by other animals (externally)	
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	"Seeds oblong, c. 12 mm × c. 4 mm, at apex with coma of white hairs 3–4 cm long." [No evidence, but hairs aid in external attachment]
708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Gordon, D. R., Mitterdorfer, B., Pheloung, P. C., Ansari, S., Buddenhagen, C., Chimera, C., ... & Williams, P. A. 2010). Guidance for addressing the Australian Weed Risk Assessment questions. <i>Plant Protection Quarterly</i> , 25(2): 56-74	"Answer 'no' where the taxon is unlikely to be eaten by animals or if seeds are not viable following passage through the gut." [Fruit & seeds unlikely to be consumed. Seeds adapted for wind dispersal]
801	Prolific seed production (>1000/m²)	
	Source(s)	Notes
	Sanogo, R., 2010. <i>Caralluma adscendens</i> (Roxb.) R.Br. In: Schmelzer, G.H. & Gurib-Fakim, A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands	[Unknown] "Fruit consists of a pair of follicles, each follicle fusiform, 10–15 cm × c. 1 cm, apex acuminate. Seeds oblong, c. 12 mm × c. 4 mm, at apex with coma of white hairs 3–4 cm long."
802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown
803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species
804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	

Qsn #	Question	Answer
	Source(s)	Notes
	WRA Specialist. 2015. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits

- Grows in tropical climates
- Reproduces by seeds in native range
- Seeds dispersed by wind
- Limited biological and ecological information reduces accuracy of risk prediction

Low Risk Traits

- No reports of invasiveness or naturalization, but limited evidence of widespread introduction outside native range
- Palatable to humans and animals
- Medicinal and ornamental uses
- Probably self-incompatible