

Family: *Fabaceae*

Taxon: *Mucuna bennettii*

Synonym: *Common Name:* New Guinea creeper
scarlet jade vine

Questionnaire :	current 20090513	Assessor:	Assessor	Designation: L
Status:	Assessor Approved	Data Entry Person:	HPWRA OrgData	WRA Score 2
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	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		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	
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	y
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	y
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0	
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	y
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	
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	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	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	
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	
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: L

WRA Score 2

Supporting Data:

101	1990. Wilmot-Deary, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Is the species highly domesticated? No evidence]
102	2013. WRA Specialist. Personal Communication.	NA
103	2013. WRA Specialist. Personal Communication.	NA
201	1990. Wilmot-Deary, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Species suited to tropical or subtropical climate(s) 2-High] "Cultivated in Tahiti: Papeari, Botanic Garden, 1982, Guerin 3998 (BISH) and said to be so also in Hawaii. Native to New Guinea."
202	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Quality of climate match data 2-High] "Native: ASIA-TROPICAL - Malesia: Papua New Guinea"
203	2003. Pienaar, K.. South African 'What Flower Is That?'. Struik Publishers, Cape Town, South Africa	[Broad climate suitability (environmental versatility)? No evidence] "New Guinea creeper or Scarlet jade vine. A vigorous climber to 10 m, suited best to warm subtropical and tropical conditions..."
204	2013. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Native: ASIA-TROPICAL - Malesia: Papua New Guinea"
205	1990. Keng, H.. The Concise Flora of Singapore: Gymnosperms and dicotyledons. Singapore University Press, Singapore	[Does the species have a history of repeated introductions outside its natural range? Singapore] "Introduced from New Guinea;"
205	2002. Glen, H.F.. Cultivated Plants of Southern Africa: Botanical Names, Common Names, Origins, Literature. Jacana, Johannesburg, South Africa	[Does the species have a history of repeated introductions outside its natural range? South Africa]
205	2011. Bautista, N.. The stunning Red Jade Vine. Bloom of the Week. Manila Bulletin. June 15, 2011. http://www.mb.com.ph/articles/322727/the-stunning-red-jade-vine [Accessed 05 Feb 2013]	[Does the species have a history of repeated introductions outside its natural range? Philippines] "The vine flourishes in tropical to semi-tropical regions such as the Philippines."
205	2013. Hawaiian Tropical Plant Nursery. Vines. http://www.hawaiiantropicalplants.com/vines.html [Accessed 05 Feb 2013]	[Does the species have a history of repeated introductions outside its natural range? Sold in Hawaii] " <i>Mucuna bennettii</i> - Fabaceae. Common name: Red jade vine. Tropical climber with racemes of bright red flowers. Each flower is about 2.5 inches long. The entire raceme is usually over a foot long. Stunning when in bloom. Growth is rapid in hot weather. Excellent for covering a fence, trellis, or arbor in frost free areas. In temperate regions, it can be grown in a large container. Prune back in the fall and bring indoors. Develops a woody trunk with age. "
301	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Naturalized beyond native range? No evidence]
302	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Garden/amenity/disturbance weed? No evidence]
303	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Agricultural/forestry/horticultural weed? No evidence]
304	2012. Randall, R.P.. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Environmental weed? No evidence]

305	2003. Hammerton, J.. <i>Mucuna pruriens</i> : Weed, invasive, or multi-use crop for the Bahamas. College of the Bahamas Research Journal. 12: 4-15.	[Congeneric weed? Yes] "M. pruriens cannot be considered a serious weed on a global scale. Holm et al. (1977, 1997) do not list it as among the 180 worst weeds in the world. Holm et al. (1979), in their atlas of world weeds, do however list M. pruriens as "serious" in two countries (Mexico and Mozambique), as a "principal weed" also in two countries (Jamaica and Madagascar), and as a "common" weed in four countries (Guatemala, Kenya, Micronesia and Tanzania). It is reported as "present" as a weed in 16 countries, including the Dominican Republic and Puerto Rico. Cardenas et al. (1972) consider M. pruriens "common in cultivated fields, perennial crops, pastures, roadsides, and fencerows" in Latin America and the Caribbean. Ivens et al. (1978) regard M. pruriens as occurring "...throughout the tropics and common in West Africa in abandoned cultivation and forest clearings". Fournet & Hammerton (1991) describe it as almost exclusively a weed of cane fields in the Lesser Antilles, an Fournet (1978) describes it as also growing over bushes and hedges in Guadeloupe and Martinique. Adams (1972) records it as "frequent in cultivations, thickets and woodland margins" in Jamaica. In Barbados it is reported to be mainly a weed of cane fields, primarily in the higher parts of the island (Gooding et al., 1965). Neither the Global Invasive Species Database (GISP) of the World Conservation Union (IUCN) (retrieved at http://www.issg.org/database/welcome/html), nor the Florida Exotic Pest Plant Council (FLEPPC, 2001), or other Pest Plant Councils in the Southern USA (see http://www.exoticpestplantcouncil.org) lists M. pruriens as an invasive species. Hammerton (2002) suggests that this species bears watching closely for invasiveness."
305	2004. Bakar, B.H.. Invasive Weed Species in Malaysian Agro-Ecosystems : Species, Impacts and Management. Malaysian Journal of Science. 23: 1-42.	[Congeneric weed? Yes] "Leguminous cover crops are a common feature in young oil palm, rubber, and cocoa plantations in Malaysia. Commonly used legumes species from the genera Calopogonium, Styloanthus, Mucuna, and Pueraria, although M. pruriens was later abandoned due its strangling effects on the young oil palm, rubber, and cocoa crops (Ahmad Faiz, pers. comms.)."
401	1990. Wilmot-Dear, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Produces spines, thorns or burrs? No evidence] "Plant very similar to M. elegans with large very curved red flowers, differing only as follows: leaflets relatively larger, terminal usually over 11 cm long; calyx larger with longer lobes, lowest distinctly tail-like, at least 15 mm long."
402	2013. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	1990. Wilmot-Dear, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Parasitic? No] Fabaceae
404	1998. Matthews, C.. The introduction and establishment of a new leguminous cover crop, <i>Mucuna bracteata</i> under oil palm in Malaysia. Planter. 74: 359-368.	[Unpalatable to grazing animals? Unknown] "It has a high level of phenolic compounds which deters insects and cattle." "...It is also non palatable to cattle due to presence of high levels of phenolic compounds and there is no menace from cattle." [Related <i>Mucuna</i> species are unpalatable to cattle]
405	1969. Janzen, D.H.. Seed-Eaters Versus Seed Size, Number, Toxicity and Dispersal. Evolution. 23(1): 1-27.	[Toxic to animals? Unknown] "The urticating hairs on the pods of <i>Mucuna</i> sp. in Central America may be functional in protecting the developing (and sometimes fleshy when mature) seeds from monkeys or other climbing vertebrates." [No evidence, but irritating hairs may prevent seed predation]
405	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Toxic to animals? Unknown] "Fruits: Usually clothed with stinging hairs, 2 valved, septate or filled between the seeds" [No evidence, but stinging hairs may affect animals]
406	2011. Bautista, N.. The stunning Red Jade Vine. Bloom of the Week. Manila Bulletin. June 15, 2011. http://www.mb.com.ph/articles/322727/the-stunning-red-jade-vine [Accessed 05 Feb 2013]	[Host for recognized pests and pathogens? No significant pests that are not already widespread] "It can grow even faster if it's planted in soils that don't tend to get water-logged. Otherwise, the roots will rot and the plant runs the risk of getting afflicted with Phytophthora and Pythium fungal diseases. The Red Jade Vine maybe attacked occasionally by sucking insects like scales and mealy bugs. Insecticides will do the trick, especially during heavy infestations."
407	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Causes allergies or is otherwise toxic to humans? May cause rash or itchiness when handling] "Fruits: Usually clothed with stinging hairs, 2 valved, septate or filled between the seeds"
408	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Creates a fire hazard in natural ecosystems? Fire ecology unknown] "Tropical rainforests but also flourishes in tropical/semi-tropical regions as well" [No evidence, but possible that vines could act as a fuel ladder into trees]

409	2013. Top Tropicals. <i>Mucuna bennettii</i> , <i>Mucuna bennettii</i> , <i>Mucuna albertisii</i> , <i>Mucuna novoguineensis</i> . http://toptropicals.com/catalog/uid/Mucuna_bennettii.htm [Accessed 05 Feb 2013]	[Is a shade tolerant plant at some stage of its life cycle? Yes] "Roots must be in shade." [Will therefore presumably only establish in a shaded environment]
410	2003. Pienaar, K.. South African 'What Flower Is That'?. Struik Publishers, Cape Town, South Africa	[Tolerates a wide range of soil conditions?] "This plant needs deep, rich soil, ample water, and regular pruning."
410	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Tolerates a wide range of soil conditions?] "Needs deep, rich soil and ample water"
411	1990. Wilmot-Dear, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Climbing or smothering growth habit? Yes] " <i>Mucuna elegans</i> " ... "Strong woody climber into tops of tall trees; stems glabrous or with few adpressed pale hairs mostly at nodes." ... " <i>Mucuna bennettii</i> " ... "Plant very similar to <i>M. elegans</i> with large very curved red flowers, differing only as follows: leaflets relatively larger, terminal usually over 11 cm long; calyx larger with longer lobes, lowest distinctly tail-like, at least 15 mm long."
411	2003. Llamas, K.A.. Tropical Flowering Plants. Timber Press, Portland, OR	[Climbing or smothering growth habit? Yes] "Aggressive vine needing strong support."
411	2008. iVillage Garden Web. Tropicals Forum - <i>Mucuna bennettii</i> seed. http://forums.gardenweb.com/forums/load/tropical/msg0923440217258.html [Accessed 05 Feb 2013]	[Climbing or smothering growth habit? Yes] "From what I have heard , the <i>M. bennettii</i> is more tropical then the Jade Vine , and also need to get a bit bigger . The lianas hanging down are enormous , and I have heard of massive trees brought down by the sheer weight of this climber."
412	2013. WRA Specialist. Personal Communication.	[Forms dense thickets? No] Woody vine
501	1990. Wilmot-Dear, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Aquatic? No] Terrestrial vines
502	1990. Wilmot-Dear, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Grass? No] Fabaceae
503	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Nitrogen fixing woody plant? Yes] "Very large, woody climbing vine" [Fabaceae]
504	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Very large, woody climbing vine"
601	2013. WRA Specialist. Personal Communication.	[Evidence of substantial reproductive failure in native habitat? Unknown]
602	1990. Keng, H.. The Concise Flora of Singapore: Gymnosperms and dicotyledons. Singapore University Press, Singapore	[Produces viable seed? Yes] "seeds obtained locally only through hand-pollination."
603	2013. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown] No evidence
604	2006. Padmesh, P./Reji, J./Jinish Dhar, M./Seeni, S.. Estimation of genetic diversity in varieties of <i>Mucuna pruriens</i> using RAPD. <i>Biologia Plantarum</i> . 50(3): 367-372.	[Self-compatible or apomictic? Unknown] "Genetic diversity was estimated in 13 accessions of the otherwise self pollinated <i>Mucuna pruriens</i> (L.) DC. (velvetbean) comprising varieties <i>pruriens</i> and <i>utilis</i> collected from tropical humid forest using 15 RAPD primers. " [Unknown for <i>M. bracteata</i> , but related <i>M. pruriens</i> exhibits self-compatibility]
605	1990. Wilmot-Dear, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Requires specialist pollinators? Presumably Yes] "seeds obtained locally only through hand-pollination."

605	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Requires specialist pollinators? Presumably Yes] "Pollinator animal: most likely birds with the reasons being: - flower is quite robust and sturdy to hold the weight and disturbance of the rummaging of a bird's beak - distance between anthers and stigma is quite large; insect would be unable to brush against both - shape of flower - quite tubular and deep - would accommodate the long beak of a bird"
606	2011. Bautista, N.. The stunning Red Jade Vine. Bloom of the Week. Manila Bulletin. June 15, 2011. http://www.mb.com.ph/articles/322727/the-stunning-red-jade-vine [Accessed 05 Feb 2013]	[Reproduction by vegetative fragmentation? No evidence] "The Red Jade Vine is propagated by seeds. Seeds are usually germinated in the nursery in a shady area. Seedlings are then transplanted in shaded areas, usually near a tree or trellis where it can climb."
607	2007. Dave's Gardern. Communities > Forums > Tropical Plants - Flowers on <i>Mucuna Bennettii</i> . http://davesgarden.com/community/forums/t/711609/ [Accessed 05 Feb 2013]	[Minimum generative time (years)? 2+] "I have 2 <i>Mucuna bennettii</i> vines but neither has flowered. They seem to be thriving and they are about 70 ft. long; both are 3 years old. Can anyone tell me how long these vines take to flower?" ... "Sometimes the first one takes a while...maybe 2 - 3 years."
607	2013. The New York Botanical Garden. Plant Talk - Jade of the South Pacific. http://www.nybg.org/plant-talk/2011/12/around-the-garden/jade-of-the-south-pacific/ [Accessed 05 Feb 2013]	[Minimum generative time (years)? 3 years in cultivation] " <i>Mucuna bennettii</i> made its way to us two years ago, hailing originally from New Guinea. It was only after a summer growth spurt earlier this year that it reached mature florescence in the fall, and has since produced cascades of crescent flowers."
701	2013. WRA Specialist. Personal Communication.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No evidence] Unlikely, as pods and seeds in the genus are large and lack means of external attachment
702	2013. Top Tropicals. <i>Mucuna benettii</i> , <i>Mucuna bennettii</i> , <i>Mucuna albertisii</i> , <i>Mucuna novoguineensis</i> . http://toptropicals.com/catalog/uid/Mucuna_benetti_i.htm [Accessed 05 Feb 2013]	[Propagules dispersed intentionally by people? Yes] "Amazing long cascading clusters of brilliant red flowers chained together to form a 3' to 4' long raceme of splendour. It's much rarer than its distant cousin (blue/green jade vine) but is very popular in gardens that accommodate this vine."
703	2013. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No evidence] Unlikely, as pods and seeds in the genus are large and would be easily detected in produce or other plant products
704	2013. WRA Specialist. Personal Communication.	[Propagules adapted to wind dispersal? No evidence] Pods and seeds in the genus are large and lack adaptations for wind dispersal
705	2010. Armstrong, W.P.. Bat-Pollinated <i>Mucuna</i> Flowers. Palomar University - Wayne's Word, waynesword.palomar.edu/mucuna.htm [Accessed 06 Feb 2013]	[Propagules water dispersed? Presumably Yes. Generic description] "The seeds are also known as "sea beans," because they are commonly carried by rivers into the ocean."
706	2013. WRA Specialist. Personal Communication.	[Propagules bird dispersed? No evidence] Pods and seeds lack adaptations for bird dispersal
707	2013. FlowerPowerLab. Red Jade Vine - <i>Mucuna bennettii</i> . http://flowerpowerlab.wikispaces.com/Red+Jade+Vine+-+Mucuna+bennettii [Accessed 05 Feb 2013]	[Propagules dispersed by other animals (externally)? Unknown] "Fruits: Usually clothed with stinging hairs, 2-valved, septate or filled between the seeds" [Unlikely. Hairs would likely deter animals from predeprating seeds, although hairs may potentially allow pods to adhere to fur]
708	2013. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown] Unknown if seeds would be consumed, but seed coat could potentially protect them from gut passage through an animal
801	2008. iVillage Garden Web. Tropicals Forum - <i>Mucuna bennettii</i> seed. http://forums.gardenweb.com/forums/load/tropical/msg0923440217258.html [Accessed 05 Feb 2013]	[Prolific seed production (>1000/m2)? Unlikely, given relatively large seeds in genus] "There is an enormous <i>Mucuna bennettii</i> flowering away at the park in town here , literally millions of flowers , and it has been putting on a fantastic show for weeks and weeks now. The ground will be covered in seeds soon."
802	1990. Wilmot-Dear, C.M.. A Revision of <i>Mucuna</i> (Leguminosae: Phaseoleae) in the Pacific. Kew Bulletin. 45(1): 1-35.	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown, but related species with short-lived seeds] " <i>Mucuna novoguineensis</i> " ... "Seeds the largest known of any <i>Mucuna</i> species, ± discoid, 4 cm diam, 18 mm in thickness, black and smooth; at first soft, germinating almost as soon as pods open and apparently (M. J. E. Coode, pers. comm.) very short-lived"
802	2008. iVillage Garden Web. Tropicals Forum - <i>Mucuna bennettii</i> seed. http://forums.gardenweb.com/forums/load/tropical/msg0923440217258.html [Accessed 05 Feb 2013]	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown] "Large tropical seeds usually need no treatment , and also have very short viability periods ." [Comment posted by grower in Australia]
802	2008. Royal Botanic Gardens Kew. Seed Information Database (SID). Version 7.1. http://data.kew.org/sid/	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown] "Storage Behaviour: Orthodox" [Generic description]

803	2013. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species
804	2011. Bautista, N.. The stunning Red Jade Vine. Bloom of the Week. Manila Bulletin. June 15, 2011. http://www.mb.com.ph/articles/322727/the-stunning-red-jade-vine [Accessed 05 Feb 2013]	[Tolerates, or benefits from, mutilation, cultivation, or fire? Possibly. Tolerates regular pruning] "The vine maybe pruned regularly in order to produce more branches, or to remove dead or dried branches."
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
- Related species have become invasive
- Shade tolerant
- Climbing vine may smother other vegetation
- Fruits usually clothed with stinging hairs
- Tolerates repeated pruning
- Lack of good information on ecology of seed dispersal makes accurate risk prediction difficult

Low Risk / Desirable Traits

- No reports of naturalization or invasiveness elsewhere
- Unarmed (no spines, thorns or burrs)
- Landscaping and ornamental value
- May require specialized pollinators to produce seed (may limit seed set in cultivation)