Key Words: Low Risk, Woody Climber, Toxic, Milky Sap, Ornamental

Family: ***Apocynaceae***

Taxon: ***Mandevilla sanderi***

Synonym: *Dipladenia ×amoena T. Moore*
Dipladenia sanderi Hemsl. (basionym)

Common Name: Shrub displadenia
Brazilian jasmine

Questionaire : current 20090513 **Assessor:** Chuck Chimera **Designation:** L
Status: Assessor Approved **Data Entry Person:** Chuck Chimera **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**	**y**
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**	**n**
409	**Is a shade tolerant plant at some stage of its life cycle**	**y=1, n=0**	**n**
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**	
602	**Produces viable seed**	**y=1, n=-1**	**n**
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**	
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**	**y**
705	**Propagules water dispersed**	**y=1, n=-1**	**n**
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**	**n**
802	**Evidence that a persistent propagule bank is formed (>1 yr)**	**y=1, n=-1**	**n**
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	1933. Woodson, Jr., R.E.. Studies in the Apocynaceae. IV. The American Genera of Echitoideae. Annals of the Missouri Botanical Garden. 20(4): 605-790.	[Is the species highly domesticated?? No] "M. Sanderi is known at present only from a single specimen of a Brazilian plant imported by Sander & Co. of St. Albans, England. The type specimen, which has been examined in the course of this study, is deposited in the herbarium of the Royal Botanic Gardens, Kew, and a photograph has been incorporated in the herbarium of the Missouri Botanical Garden. Although closely related to M. Sellowii, the very distinct foliage appears to justify the retention of M. Sanderi -as a species."
102	2012. WRA Specialist. Personal Communication.	NA
103	2012. WRA Specialist. Personal Communication.	NA
201	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Species suited to tropical or subtropical climate(s) 2-High] "Native to Brazil…"
202	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Quality of climate match data 2-High]
203	1999. Gilman, E.F.. Mandevilla sanderi 'Red Riding Hood'. Fact Sheet FPS-398. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/mansana.pdf	[Broad climate suitability (environmental versatility)? No] "USDA hardiness zones: 10 through 11"
204	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Native to Brazil…"
205	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Does the species have a history of repeated introductions outside its natural range? Hawaiian Islands] "Mandevilla" … "Four taxa are occasionally grown in our gardens, and a few more may be found in botanical gardens."
205	2009. Chong, K.Y./Tan, H.T.W./Corlett, R.T.. A Checklist of the Total Vascular Plant Flora of Singapore: Native, Naturalized and Cultivated Species. Raffles Museum of Biodiversity Research, National University of Singapore, Singapore	[Does the species have a history of repeated introductions outside its natural range? Singapore] "Mandevilla sanderi (Hemsl.) Woodson; Apocynaceae; cultivated only"
205	2012. The Charles Darwin Foundation. Galapagos Species Checklist - Mandevilla sanderi. http://checklists.datazone.darwinfoundation.org/vascular-plants/magnoliophyta/mandevilla-sanderi-hemsl-woodson/	[Does the species have a history of repeated introductions outside its natural range? Galapagos] "Taxon introduced for agricultural or domestic use; not naturalized."
301	2007. Randall, R.P.. Global Compendium of Weeds - Mandevilla sanderi. http://www.hear.org/gcw/species/mandevilla_sanderi/	[Naturalized beyond native range? Listed as naturalised in the Galapagos, but the Galapagos Checklist contradicts this assertion]
301	2011. Guézou, A. et al.. CDF Checklist of Galapagos Introduced Plants. In: Bungartz, F. et al. (eds.). CDF Galapagos Species Checklist. Charles Darwin Foundation, Puerto Ayora, Galapagos http://www.darwinfoundation.org/datazone/checklists/ecological-group	[Naturalized beyond native range? Not in Galapagos] "Origin: Introduced, Cultivated"
301	2012. The Charles Darwin Foundation. Galapagos Species Checklist - Mandevilla sanderi. http://checklists.datazone.darwinfoundation.org/vascular-plants/magnoliophyta/mandevilla-sanderi-hemsl-woodson/	[Naturalized beyond native range? No evidence] "Taxon introduced for agricultural or domestic use; not naturalized." [Contradicts Randall 2007]

301	2012. Wagner, W.L./Herbst, D.R./Khan, N./Flynn, T.. Hawaiian Vascular Plant Updates: A Supplement to the Manual of the Flowering Plants of Hawai`i & Hawai`i's Ferns & Fern Allies. http://botany.si.edu/pacificislandbiodiversity/hawaianflora/supplement.htm	Naturalized beyond native range? No evidence from Hawaiian Islands]
302	2007. Randall, R.P.. Global Compendium of Weeds - Mandevilla sanderi. http://www.hear.org/gcw/species/mandevilla_sanderi/	[Garden/amenity/disturbance weed? No evidence]
302	2012. Wagner, W.L./Herbst, D.R./Khan, N./Flynn, T.. Hawaiian Vascular Plant Updates: A Supplement to the Manual of the Flowering Plants of Hawai`i & Hawai`i's Ferns & Fern Allies. http://botany.si.edu/pacificislandbiodiversity/hawaianflora/supplement.htm	[Garden/amenity/disturbance weed? No evidence]
303	2007. Randall, R.P.. Global Compendium of Weeds - Mandevilla sanderi. http://www.hear.org/gcw/species/mandevilla_sanderi/	[Agricultural/forestry/horticultural weed? No evidence]
303	2012. Wagner, W.L./Herbst, D.R./Khan, N./Flynn, T.. Hawaiian Vascular Plant Updates: A Supplement to the Manual of the Flowering Plants of Hawai`i & Hawai`i's Ferns & Fern Allies. http://botany.si.edu/pacificislandbiodiversity/hawaianflora/supplement.htm	[Agricultural/forestry/horticultural weed? No evidence]
304	1999. Gilman, E.F.. Mandevilla sanderi 'Red Riding Hood'. Fact Sheet FPS-398. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/mansana.pdf	[Environmental weed? No evidence] "Invasive potential: not known to be invasive"
304	2007. Randall, R.P.. Global Compendium of Weeds - Mandevilla sanderi. http://www.hear.org/gcw/species/mandevilla_sanderi/	[Environmental weed? No evidence]
305	2007. Randall, R.P.. Global Compendium of Weeds - Mandevilla laxa. http://www.hear.org/gcw/species/mandevilla_laxa/	[Congeneric weed? M. laxa]
305	2010. Australian Association of Bush Regenerators. Bushland Weeds of the Blue Mountains Region. http://www.aabr.org.au/index.php?option=com_content&view=article&id=53:bushland-weeds-of-the-blue-mountains-region&catid=92:weed-lists&Itemid=75	[Congeneric weed? Yes] M. laxa listed as a weed, but with no description of impacts
305	2012. PlantNET. New South Wales flora online - Mandevilla laxa (Ruiz & Pav.) Woodson. Royal Botanic Gardens & Domain Trust,, Sydney http://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Mandevilla~laxa	[Congeneric weed? Possibly] "Mandevilla laxa" … " Grown in gardens and naturalized in several areas," [No evidence of negative impacts]
401	1933. Woodson, Jr., R.E.. Studies in the Apocynaceae. IV. The American Genera of Echitoideae. Annals of the Missouri Botanical Garden. 20(4): 605-790.	[Produces spines, thorns or burrs? No] "Glabrous, suffruticose lianas; stems terete, relatively stout; leaves opposite, petiolate, broadly oblong elliptic, apex shortly acuminate, base rounded to very obscurely cordate, 4.5-6.0 cm. long, 2.5-3.0 cm. broad, coriaceous, pale and nitidulous, sparsely glandular above; petiole 0.75-1.0 cm. long; nodal appendages obsolete or extremely inconspicuous, at least above; racemes simple, lateral, alternate, about as long as the subtending leaves,"
401	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Produces spines, thorns or burrs? No] "Woody climber, ± erect when young. Lvs crowded close together; peti ca 0.25" long; blades broadly elliptic, 1.75-2.4" x 1-1.25", smooth and glossy green above, paler below, apex bluntly pointed; stipular appendages minute or absent."
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]

403	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Parasitic? No] Apocynaceae
404	2012. eHow. Are Mandevilla Flowers Toxic?. http://www.ehow.com/facts_7396220_mandevilla-flowers-toxic_.html	[Unpalatable to grazing animals? Unknown] "Restrict your pet's access to plants to avoid accidental ingestion. Humans or animals that suffer from low-toxicity symptoms after ingestion of mandevilla flowers should see a doctor or veterinarian." [Milky sap and toxic properties may deter browsing]
405	2012. eHow. Are Mandevilla Flowers Toxic?. http://www.ehow.com/facts_7396220_mandevilla-flowers-toxic_.html	[Toxic to animals? Yes] "The California Poison Control System warns that humans or animals who ingest plant materials can suffer from adverse effects."
406	1999. Gilman, E.F.. Mandevilla sanderi 'Red Riding Hood'. Fact Sheet FPS-398. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/mansana.pdf	[Host for recognized pests and pathogens? No evidence] "No pests or diseases are of major concern. Plants are occasionally bothered by scale and mealybugs."
407	2012. eHow. Are Mandevilla Flowers Toxic?. http://www.ehow.com/facts_7396220_mandevilla-flowers-toxic_.html	[Causes allergies or is otherwise toxic to humans? Yes] "Ingesting mandevilla flowers may cause mild toxicity symptoms, such as gastrointestinal discomfort, nausea and vomiting. The California Poison Control System warns that humans or animals who ingest plant materials can suffer from adverse effects. Allergic reactions and choking are often caused by plant ingestion, especially in children."
407	2012. Florida Plants Online. Poisonous Plants. http://www.floridaplants.com/mpois.htm	[Causes allergies or is otherwise toxic to humans? Yes] "Poisonous Plants Common in South Florida" [Includes Mandevilla sanderi (Dipladena)]
407	2012. Top Tropicals. Mandevilla sanderi. Top Tropicals Botanical Garden, http://toptropicals.com/cgi-bin/garden_catalog/cat.cgi?uid=mandevilla_red	[Causes allergies or is otherwise toxic to humans? Yes] "Parts of plant are poisonous if ingested."
408	2012. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? No] Used in cultivation with no records of naturalization, and no reports of increased fire risks in cultivated settings.
409	1999. Gilman, E.F.. Mandevilla sanderi 'Red Riding Hood'. Fact Sheet FPS-398. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/mansana.pdf	[Is a shade tolerant plant at some stage of its life cycle? No] "Light requirement: plant grows in full sun"
410	1999. Gilman, E.F.. Mandevilla sanderi 'Red Riding Hood'. Fact Sheet FPS-398. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/mansana.pdf	[Tolerates a wide range of soil conditions? Yes] "Soil tolerances: slightly alkaline; clay; sand; acidic; loam;"
411	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Climbing or smothering growth habit? Yes] "Woody climber, ± erect when young."
412	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Forms dense thickets? No] "Woody climber," [Yes to 4.11]
501	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Aquatic? No] "Woody climber, ± erect when young." [Terrestrial]
502	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Grass? No] Apocynaceae
503	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Nitrogen fixing woody plant? No] Apocynaceae

504	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Woody climber, ± erect when young. Lvs crowded close together; peti ca 0.25" long; blades broadly elliptic, 1.75-2.4" x 1-1.25", smooth and glossy green above, paler below, apex bluntly pointed; stipular appendages minute or absent."
601	1933. Woodson, Jr., R.E.. Studies in the Apocynaceae. IV. The American Genera of Echitoideae. Annals of the Missouri Botanical Garden. 20(4): 605-790.	[Evidence of substantial reproductive failure in native habitat? Unknown] "M. Sanderi is known at present only from a single specimen of a Brazilian plant imported by Sander & Co. of St. Albans, England. The type specimen, which has been examined in the course of this study, is deposited in the herbarium of the Royal Botanic Gardens, Kew, and a photograph has been incorporated in the herbarium of the Missouri Botanical Garden. Although closely related to M. Sellowii, the very distinct foliage appears to justify the retention of M. Sanderi -as a species."
602	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Produces viable seed? Not in Hawaiian Islands] "Frt not seen"
602	2009. Boutebtoub, W./Chevalier, M./Mauget, J.-C./Sigogne, M./Morel, P./Galopin, G.. Localizing Starch Reserves in Mandevilla sanderi (Hemsl.) Woodson Using a Combined Histochemical and Biochemical Approach. HortScience. 44(7): 1879-1883.	[Produces viable seed? Apparently not in cultivation] "This plant is vegetatively propagated by taking cuttings from mother plants. This operation involves the removal of leafy branches, depriving the plant of part of its biomass and, as a result, its glucidic compounds."
603	1997. Martin, T.. Taylor's Weekend Gardening Guide to Indoor Gardens: A Complete How-To-Guide to Selecting, Planting, and Caring for the Best Plants for Every Indoor Landscape. Houghton Mifflin Harcourt, New York	[Hybridizes naturally? Unknown] "The best varieties for the average windowsill are the Mandevilla sanderi hybrids." ["Hybrid" cultivars have been created, but unknown if natural hybridization may occur]
604	1999. Torres, C./Galetto, L.. Factors constraining fruit set in Mandevilla pentlandiana (Apocynaceae). Botanical Journal of the Linnean Society. 129: 187-205.	[Self-compatible or apomictic? Unknown. Other Mandevilla exhibit self-compatibility] "The reproductive success of Mandevilla pentlandiana was studied to disclose its reproductive strategy, and to determine the links between nectar production, breeding system, fruit set and inflorescence size. The plant produces many inflorescences with a large number of flowers but initiates few fruits (9%). This vine is self-compatible but not autogamous."
604	2004. Löhne, C./Machado, I.C./Porembski, S./Erbar, C./Leins, P.. Pollination biology of a Mandevilla species (Apocynaceae), characteristic of NE-Brazilian inselberg vegetation. Botanische Jahrbücher für Systematik. 125(2): 229-243.	[Self-compatible or apomictic? Unknown. Other Mandevilla exhibit self-compatibility] "Although autogamy does not occur in unvisited flowers due to strict herkogamy, self-pollination mediated by visiting insects seems possible in the self-compatible flowers. Assuming that insect-mediated autogamy occurs, the high pollen load on the stigma at the end of anthesis can be understood: Even if a bee does not spend much time in the population of Mandevilla investigated, single flower visits may ensure successful pollen transfer. This insect-mediated self-pollination may be interpreted as compensation for the low frequency of flower visitors on inselbergs."
605	2004. Löhne, C./Machado, I.C./Porembski, S./Erbar, C./Leins, P.. Pollination biology of a Mandevilla species (Apocynaceae), characteristic of NE-Brazilian inselberg vegetation. Botanische Jahrbücher für Systematik. 125(2): 229-243.	[Requires specialist pollinators? Probably Yes. Description of related species] "Flowers of this Mandevilla species are large, tubular to salverform and very showy due to bright pink colour and exposed presentation on the plant. Although nectar production could not be proved, anatomical studies showed a typical secretory tissue at the base of the gynoecium. Flowers were visited by different species of large bees, but visitation rate - at least during the observation phase - was very low. However, ca. 60 % of the flowers analysed were naturally pollinated and ca. 35 % set fruit."
605	2007. More, M./Sersic, A.N./Cocucci, A.A.. Restriction of Pollinator Assemblage Through Flower Length and Width in Three Long-Tongued Hawkmoth–Pollinated Species of Mandevilla (Apocynaceae, Apocynoideae). Annals of the Missouri Botanical Garden. 94: 485-5	[Requires specialist pollinators? Probably Yes. Related species require specialist pollinators] "The long-tongued hawkmoth species Manduca sexta (L.) was the major pollinator of Mandevilla longiflora (Desf.) Pichon and Mandevilla petraea (A. St.-Hil.) Pichon. Surprisingly, another long-tongued species, Manduca tucumana (Rothschild & Jordan), was the main pollinator of the short flowered Mandevilla laxa (Ruiz & Pav.) Woodson. Here, the operative flower width was a decisive factor restricting the pollinator spectrum to hawkmoths with proboscides narrow enough to release the pollination apparatus. Short tongued hawkmoths, which also have wider proboscides, cannot release the pollination mechanism. In M. petraea, the operative length, and not the operative width, restricts the pollinator assemblage. Thus, two different plant strategies were observed to restrict the pollinator spectrum: floral tube length and the operative width of the pollination mechanism." …"The three Mandevilla species studied were pollinated exclusively by nocturnal hawkmoths. There are previous records of hawkmoth pollination for only nine species of Apocynaceae s.l., of which three belong to Asclepiadoideae"

606	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Reproduction by vegetative fragmentation? No evidence] "Dipladenias are usually propagated by cuttings, although seed may be used if available."
607	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Minimum generative time (years)? Unknown] "Frt not seen"
701	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules likely to be dispersed unintentionally? No] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Seeds wind-dispersed in genus, but fruit apparently not produced in Hawaiian Islands]
702	1999. Gilman, E.F.. Mandevilla sanderi 'Red Riding Hood'. Fact Sheet FPS-398. Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL http://hort.ifas.ufl.edu/database/documents/pdf/shrub_fact_sheets/mansana.pdf	[Propagules dispersed intentionally by people? Yes["Outstanding plant: plant has outstanding ornamental features and could be planted more"
702	2009. Boutebtoub, W./Chevalier, M./Mauget, J.-C./Sigogne, M./Morel, P./Galopin, G.. Localizing Starch Reserves in Mandevilla sanderi (Hemsl.) Woodson Using a Combined Histochemical and Biochemical Approach. HortScience. 44(7): 1879-1883.	[Propagules dispersed intentionally by people? Yes] "Mandevilla sanderi (Hemsl.) Woodson (Woodson, 1933) is a plant native to Brazil, increasingly used in horticulture for its ornamental aspect, abundant and extended flowering, persistent and glossy foliage, tolerance to limited water availability, and resistance to many plant pests."
703	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules likely to disperse as a produce contaminant? No evidence] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Seeds wind-dispersed in genus, but fruit apparently not produced in Hawaiian Islands]
704	1994. Mori, S.A./Brown, J.L.. Report on Wind Dispersal in a Lowland Moist Forest in Central French Guiana. Brittonia. 46(2): 105-125.	[Propagules adapted to wind dispersal? Yes, if produced] "Seeds with terminal tufts of hairs (Fig. 4) are found in some species of Bromeliaceae (subfamily Tillandsioideae), Apocynaceae (species of Forsteronia, Mandevilla, and Odontadenia), Asclepiadaceae (Asclepias curassavica, Matelia sp.), and Rubiaceae (Hillia illustris)."
704	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules adapted to wind dispersal? Yes, if produced] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Seeds wind-dispersed in genus, but fruit apparently not produced in Hawaiian Islands]
705	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules water dispersed? No] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Seeds wind-dispersed in genus, but fruit apparently not produced in Hawaiian Islands]
706	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules bird dispersed? No] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Seeds wind-dispersed in genus, but fruit apparently not produced in Hawaiian Islands]
707	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules dispersed by other animals (externally)? Possibly, if seeds were produced] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Tuft of hairs may adhere to fur on animals, but fruit apparently not produced in Hawaiian Islands]
708	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Propagules survive passage through the gut? Unknown] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Seeds wind-dispersed in genus, but fruit apparently not produced in Hawaiian Islands. If produced, unlikely to be consumed]
801	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Prolific seed production (>1000/m2)? No] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen." [Seeds numerous in genus, but fruit apparently not produced in the Hawaiian Islands]
802	2005. Staples, G.W./Herbst, D.R.. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	[Evidence that a persistent propagule bank is formed (>1 yr)? No] "Seeds numerous, ± boat-shaped, with tuft of hairs." … " … "Mandevilla sanderi" … "Frt not seen."
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown] No information on herbicide efficacy or chemical control of this species

804	2012. Monrovia. Red Riding Hood Mandevilla - Mandevilla sanderi 'Red Riding Hood'. http://www.monrovia.com/plant-catalog/plants/1842/red-riding-hood-mandevilla.php	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown] "Prune annually to control size. Pruning time: winter." … "With a little pruning, you can shape this vine to your own preference." [Tolerates regular pruning, but unknown if plant resprouts after heavy pruning]
805	2012. 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
- Congeneric Weed (*Mandevilla laxa*)
- Toxic properties
- Tolerates many soil conditions (and potentially able to exploit many different habitat types)
- Intentionally planted by people (increases chances of escape)
- Seed (if produced) dispersed whole by wind

Low Risk / Desirable Traits

- No records of naturalization or invasiveness reported
- Unarmed
- Requires full sun
- Fruit & seed rarely, if ever, produced in cultivation
- Lack of seed production minimizes risk of escape
- Landscaping and ornamental value