

**Family:** *Plantaginaceae*

**Taxon:** *Maurandella antirrhiniflora*

**Synonym:** *Maurandya antirrhiniflora* Humb. & Bonpl. e. **Common Name:** snapdragon-vine  
twining-foxglove  
violet twining-snapdragon  
roving sailor

Questionnaire :	current 20090513	Assessor:	Patti Clifford	Designation:	EVALUATE
Status:	Assessor Approved	Data Entry Person:	Patti Clifford	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		y
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		n
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)		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		n
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		
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	y
605	Requires specialist pollinators	y=-1, n=0	n
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	
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	n
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	n
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: EVALUATE

WRA Score 5

## Supporting Data:

101	2012. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] No evidence of domestication that reduces invasive traits.
102	2012. WRA Specialist. Personal Communication.	[Has the species become naturalized where grown? NA]
103	2012. WRA Specialist. Personal Communication.	[Does the species have weedy races? NA]
201	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. <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) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"? 2 - high] Native distributional range: United States - New Mexico, Texas, Arizona, California; Mexico - Chihuahua, Coahuila, Durango, Nuevo Leon, San Luis Potosi, Sonora, Tamaulipas, Zacatecas, Aguascalientes, Guanajuato, Jalisco, Mexico, Oaxaca, Queretaro, Tlaxcala.
202	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. <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] Native distributional range: United States - New Mexico, Texas, Arizona, California; Mexico - Chihuahua, Coahuila, Durango, Nuevo Leon, San Luis Potosi, Sonora, Tamaulipas, Zacatecas, Aguascalientes, Guanajuato, Jalisco, Mexico, Oaxaca, Queretaro, Tlaxcala.
203	1985. Elisens, W.J.. Monograph of the Maurandynae (Scrophulariaceae - Antirrhineae). Systemic Botany Monographs. 5: 1-97.	[Broad climate suitability (environmental versatility)? Yes] Wide ecological tolerances.
203	2012. Calflora. Calflora - Maurandella antirrhiniflora. <a href="http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Maurandella+antirrhiniflora">http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Maurandella+antirrhiniflora</a>	[Broad climate suitability (environmental versatility)? Yes] Elevation: between 0 and 8530 feet.
204	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. <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 distributional range: United States - New Mexico, Texas, Arizona, California; Mexico - Chihuahua, Coahuila, Durango, Nuevo Leon, San Luis Potosi, Sonora, Tamaulipas, Zacatecas, Aguascalientes, Guanajuato, Jalisco, Mexico, Oaxaca, Queretaro, Tlaxcala.
205	2012. WRA Specialist. Personal Communication.	[Does the species have a history of repeated introductions outside its natural range? No] No evidence of repeated introductions.
301	2008. The Bishop Museum. Native and naturalized flowering plants of Hawaii - main Hawaiian Islands. The Bishop Museum, <a href="http://www.bishopmuseum.org/research/natsci/botany/dbandkeys/Main%20Islands%20Report.pdf">http://www.bishopmuseum.org/research/natsci/botany/dbandkeys/Main%20Islands%20Report.pdf</a>	[Naturalized beyond native range? Yes] Naturalized on Oahu, Hawaii.
302	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Garden/amenity/disturbance weed? No] No evidence.
303	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Agricultural/forestry/horticultural weed? No] No evidence.
304	2007. Randall, R.P.. Global Compendium of Weeds - Index. <a href="http://www.hear.org/gcw/">http://www.hear.org/gcw/</a>	[Environmental weed? No] No evidence.
305	2003. Groves, R.H./Hosking, J.R./Batianoff, G.N. et al.. Weed categories for natural and agricultural ecosystem weed management. Bureau of Rural Sciences, Canberra	[Congeneric weed? Yes] Maurandya barclaiiana is considered to be a minor problem weed in Australia, warranting control at 3 or fewer places in a state or territory.
401	2012. Baldwin, B.G./Goldman, D>H./Keil, D.J./Patterson, R. Rosatti, T.J. (eds.). The digital Jepson Manual: vascular plants of California, second edition, thoroughly revised and expanded (Google eBook). University of California Press, <a href="http://books.google">http://books.google</a>	[Produces spines, thorns or burrs? No] Perennial, climbing by twining stems or petioles. LF; gen alternate (proximal - most opposite on seedlings), entire to irregularly bristly-dentate, veins palmate. FR: spheric, chambers 2, unequal, dehiscent irregularly near tip. Seed: many rectangular, dark brown, tubercled.
402	2012. WRA Specialist. Personal Communication.	[Allelopathic? Unknown]
403	2010. Nickrent, D.. The parasitic plant connection. Department of Plant Biology, Southern Illinois University, Carbondale <a href="http://www.parasiticplants.siu.edu/index.html">http://www.parasiticplants.siu.edu/index.html</a>	[Parasitic? No] Not a parasitic genera.
404	2012. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown]

405	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[Toxic to animals? No] No evidence.
405	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Toxic to animals? No] No evidence.
406	2012. WRA Specialist. Personal Communication.	[Host for recognized pests and pathogens? Unknown]
407	2012. National Center for Biotechnology Information. PubMed. <a href="http://www.ncbi.nlm.nih.gov/sites/entrez">http://www.ncbi.nlm.nih.gov/sites/entrez</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, <a href="http://toxnet.nlm.nih.gov/">http://toxnet.nlm.nih.gov/</a>	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Causes allergies or is otherwise toxic to humans? No] Not toxic.
408	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Creates a fire hazard in natural ecosystems? No] Fire intolerant.
409	2003. Tenenbaum, F.. Taylor's encyclopedia of garden plants. Houghton Mifflin Harcourt, <a href="http://books.google.com/books?id=557KJL0TC48C&amp;pg=PA259&amp;dq=maurandella+antirrhiniflora&amp;hl=en&amp;sa=X&amp;ei=JzXJT8-AJo-62gXs873bCw&amp;ved=0CGAQ6AEwCDgK#v=onepage&amp;q=maurandella%2">http://books.google.com/books?id=557KJL0TC48C&amp;pg=PA259&amp;dq=maurandella+antirrhiniflora&amp;hl=en&amp;sa=X&amp;ei=JzXJT8-AJo-62gXs873bCw&amp;ved=0CGAQ6AEwCDgK#v=onepage&amp;q=maurandella%2</a>	[Is a shade tolerant plant at some stage of its life cycle? ] Full sun with dappled shade.
409	2012. Ladybird Johnson Wildflower Center. Native Plant Database - Maurandella antirrhiniflora. <a href="http://www.wildflower.org/plants/result.php?id_plant=MAAN9">http://www.wildflower.org/plants/result.php?id_plant=MAAN9</a>	[Is a shade tolerant plant at some stage of its life cycle? ] Part-shade.
409	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Is a shade tolerant plant at some stage of its life cycle? No] Shade intolerant.
410	2003. Tenenbaum, F.. Taylor's encyclopedia of garden plants. Houghton Mifflin Harcourt, <a href="http://books.google.com/books?id=557KJL0TC48C&amp;pg=PA259&amp;dq=maurandella+antirrhiniflora&amp;hl=en&amp;sa=X&amp;ei=JzXJT8-AJo-62gXs873bCw&amp;ved=0CGAQ6AEwCDgK#v=onepage&amp;q=maurandella%2">http://books.google.com/books?id=557KJL0TC48C&amp;pg=PA259&amp;dq=maurandella+antirrhiniflora&amp;hl=en&amp;sa=X&amp;ei=JzXJT8-AJo-62gXs873bCw&amp;ved=0CGAQ6AEwCDgK#v=onepage&amp;q=maurandella%2</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)?] Neutral to slightly alkaline pH.
410	2012. Ladybird Johnson Wildflower Center. Native Plant Database - Maurandella antirrhiniflora. <a href="http://www.wildflower.org/plants/result.php?id_plant=MAAN9">http://www.wildflower.org/plants/result.php?id_plant=MAAN9</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Various well-drained soils, especially on limestone. Well-drained sand, loam, caliche, limestone. Sandy, Sandy Loam, Medium Loam, Clay Loam Clay, Saline tolerant.
410	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)?] Soil pH, minimum 6.8, maximum 9.0. Adapted to coarse textured, medium textured, and fine textured soils.
411	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Climbing or smothering growth habit? Yes] Vine

412	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Forms dense thickets? No] Vine.
501	1983. Elisens, W.J./Tomb, A.S.. Seed morphology in New World Antirrhineae (Scrophulariaceae): systematic and phylogenetic implications. Plant Systematics and Evolution. 142: 23-47. <a href="http://www.springerlink.com/content/u162037401v76148/fulltext.pdf">http://www.springerlink.com/content/u162037401v76148/fulltext.pdf</a>	[Aquatic? No] Terrestrial; vine.
502	1986. Elisens, W.J.. Pollen morphology and systematic relationships among New World species in tribe Antirrhineae (Scrophulariaceae). American Journal of Botany. 73: 1298-1311.	[Grass? No] Plantaginaceae also placed in Scrophulariaceae. Vine.
503	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Nitrogen fixing woody plant? No] Not a nitrogen fixer. Herbaceous.
504	2012. Baldwin, B.G./Goldman, D>H./Keil, D.J./Paterson, R. Rosatti, T.J. (eds.). The digital Jepson Manual: vascular plants of California, second edition, thoroughly revised and expanded (Google eBook). University of California Press, <a href="http://books.google">http://books.google</a>	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] Vine, without underground storage organs.
601	1985. Elisens, W.J.. Monograph of the Maurandyinae (Scrophulariaceae - Antirrhineae). Systemic Botany Monographs. 5: 1-97.	[Evidence of substantial reproductive failure in native habitat? No] M. antirrhiniflora is a widespread species; occurring from southeastern California and central Texas to Puebla.
601	2012. WRA Specialist. Personal Communication.	[Evidence of substantial reproductive failure in native habitat? No] No evidence.
602	2003. Tenenbaum, F.. Taylor's encyclopedia of garden plants. Houghton Mifflin Harcourt, <a href="http://books.google.com/books?id=557KJL0TC48C&amp;pg=PA259&amp;dq=maurandella+antirrhiniflora&amp;hl=en&amp;sa=X&amp;ei=JzXJT8-AJo-62gXs873bCw&amp;ved=0CGAQ6AEwCDgK#v=onepage&amp;q=maurandella%2">http://books.google.com/books?id=557KJL0TC48C&amp;pg=PA259&amp;dq=maurandella+antirrhiniflora&amp;hl=en&amp;sa=X&amp;ei=JzXJT8-AJo-62gXs873bCw&amp;ved=0CGAQ6AEwCDgK#v=onepage&amp;q=maurandella%2</a>	[Produces viable seed? Yes] Start plants from seeds or cuttings.
602	2012. Ladybird Johnson Wildflower Center. Native Plant Database - Maurandella antirrhiniflora. <a href="http://www.wildflower.org/plants/result.php?id_plant=MAAN9">http://www.wildflower.org/plants/result.php?id_plant=MAAN9</a>	[Produces viable seed? Yes] Propagate by seed.
602	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Produces viable seed? Yes] Propagate by seed.
603	2012. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	1985. Elisens, W.J.. Monograph of the Maurandyinae (Scrophulariaceae - Antirrhineae). Systemic Botany Monographs. 5: 1-97.	[Self-compatible or apomictic? Yes] Self-pollinating.
605	1986. Elisens, W.J.. Pollen morphology and systematic relationships among New World species in tribe Antirrhineae (Scrophulariaceae). American Journal of Botany. 73: 1298-1311.	[Requires specialist pollinators? No] Bee pollinated.
606	2012. USDA National Resources Conservation Service. Plants Database Maurandella antirrhiniflora. <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Reproduction by vegetative fragmentation? No] Propagate by seed. No vegetative spread rate.
607	2012. WRA Specialist. Personal Communication.	[Minimum generative time (years)? Unknown]

701	2012. WRA Specialist. Personal Communication.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? No] No evidence.
702	2012. B&T World Seeds. <i>Maurandella antirrhiniflora</i> purple. <a href="http://b-and-t-world-seeds.com/carth.asp?species=Maurandella%20antirrhiniflora%20purple&amp;sref=85294">http://b-and-t-world-seeds.com/carth.asp?species=Maurandella%20antirrhiniflora%20purple&amp;sref=85294</a>	[Propagules dispersed intentionally by people? Yes] B & T World Seeds has seed for sale.
702	2012. Dave's Garden. PlantFiles: roving sailor, twining snapdragon, snapdragon vine <i>Maurandella antirrhiniflora</i> . <a href="http://davesgarden.com/guides/pf/go/1203/">http://davesgarden.com/guides/pf/go/1203/</a>	[Propagules dispersed intentionally by people? Yes] One vendor has seed for sale.
703	2012. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No] No evidence.
704	1983. Elisens, W.J./Tomb, A.S.. Seed morphology in New World Antirrhineae (Scrophulariaceae): systematic and phylogenetic implications. <i>Plant Systematics and Evolution</i> . 142: 23-47. <a href="http://www.springerlink.com/content/u162037401v76148/fulltext.pdf">http://www.springerlink.com/content/u162037401v76148/fulltext.pdf</a>	[Propagules adapted to wind dispersal?] "Seeds of the New World Antirrhineae mostly seem adapted for water dispersal although some adaptations for wind dispersal (e.g. wings, light weight) are evident."
705	1983. Elisens, W.J./Tomb, A.S.. Seed morphology in New World Antirrhineae (Scrophulariaceae): systematic and phylogenetic implications. <i>Plant Systematics and Evolution</i> . 142: 23-47. <a href="http://www.springerlink.com/content/u162037401v76148/fulltext.pdf">http://www.springerlink.com/content/u162037401v76148/fulltext.pdf</a>	[Propagules water dispersed? Yes] "Seeds of the New World Antirrhineae mostly seem adapted for water dispersal although some adaptations for wind dispersal (e.g. wings, light weight) are evident."
705	2012. Baldwin, B.G./Goldman, D>H./Keil, D.J./Patterson, R. Rosatti, T.J. (eds.). <i>The digital Jepson Manual: vascular plants of California</i> , second edition, thoroughly revised and expanded (Google eBook). University of California Press, <a href="http://books.google">http://books.google</a>	[Propagules water dispersed? Yes] Found in desert flats and washes <2600 m.
706	1983. Elisens, W.J./Tomb, A.S.. Seed morphology in New World Antirrhineae (Scrophulariaceae): systematic and phylogenetic implications. <i>Plant Systematics and Evolution</i> . 142: 23-47. <a href="http://www.springerlink.com/content/u162037401v76148/fulltext.pdf">http://www.springerlink.com/content/u162037401v76148/fulltext.pdf</a>	[Propagules bird dispersed? No] "Seeds of the New World Antirrhineae mostly seem adapted for water dispersal although some adaptations for wind dispersal (e.g. wings, light weight) are evident."
707	2012. Baldwin, B.G./Goldman, D>H./Keil, D.J./Patterson, R. Rosatti, T.J. (eds.). <i>The digital Jepson Manual: vascular plants of California</i> , second edition, thoroughly revised and expanded (Google eBook). University of California Press, <a href="http://books.google">http://books.google</a>	[Propagules dispersed by other animals (externally)? No] FR: spheric, chambers 2, unequal, dehiscent irregularly near tip. Seed: many rectangular, dark brown, tubercled. [no means of external attachment]
708	2012. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? No] Unlikely to be eaten.
801	2012. WRA Specialist. Personal Communication.	[Prolific seed production (>1000/m <sup>2</sup> )? Unknown] [possibly]
802	2012. WRA Specialist. Personal Communication.	[Evidence that a persistent propagule bank is formed (>1 yr)? Unknown]
803	2012. Calflora. Calflora - <i>Maurandella antirrhiniflora</i> . <a href="http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Maurandella+antirrhiniflora">http://www.calflora.org/cgi-bin/species_query.cgi?where-taxon=Maurandella+antirrhiniflora</a>	[Well controlled by herbicides? Unknown]
804	2012. USDA National Resources Conservation Service. Plants Database <i>Maurandella antirrhiniflora</i> . <a href="http://plants.usda.gov/java/charProfile?symbol=MAAN9">http://plants.usda.gov/java/charProfile?symbol=MAAN9</a>	[Tolerates, or benefits from, mutilation, cultivation, or fire?] Does not coppice and is not fire resistant.
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]



## Summary of Risk Traits

### High Risk Traits

- Native distribution includes subtropics
- Wide ecological tolerances
- Naturalized on Oahu, Hawaii
- Congeneric weed
- Tolerates wide range of soil types
- Climbing habit
- Viable seeds
- Self-pollinating
- Water dispersal (possibly wind)

### Low Risk Traits

- Not a weed elsewhere
- No spines, thorns or burrs
- Not parasitic
- Non-toxic
- Not a fire promoter
- Does not fix nitrogen
- Doesn't reproduce from vegetative fragmentation
- Not bird dispersed
- Doesn't tolerate mutilation, cultivation or fire