

Family: *Nyctaginaceae*

Taxon: *Mirabilis jalapa*

Synonym: *Mirabilis jalapa ssp.lindheimeri Standl.*
Mirabilis lindheimeri (Standl.) Shinnery

Common Name: beauty-of-the-night
false jalap
four-o'clock
marvel-of-Peru

Questionnaire :	current 20090513	Assessor:	Patti Clifford	Designation: H(HPWRA)
Status:	Assessor Approved	Data Entry Person:	Patti Clifford	WRA Score 15
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	y
301	Naturalized beyond native range		y = 1*multiplier (see Appendix 2), n= question 205	y
302	Garden/amenity/disturbance weed		n=0, y = 1*multiplier (see Appendix 2)	y
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	n
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0	y
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		y=1, n=0	y

411	Climbing or smothering growth habit	y=1, n=0	n
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	y
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	y
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	1
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	
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	
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	
801	Prolific seed production (>1000/m2)	y=1, n=-1	n
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	
803	Well controlled by herbicides	y=-1, n=1	
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: H(HPWRA)

WRA Score 15

Supporting Data:

101	2011. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] No evidence of domestication that reduces invasive ability.
102	2011. WRA Specialist. Personal Communication.	[Has the species become naturalized where grown?] NA
103	2011. WRA Specialist. Personal Communication.	[Does the species have weedy races?] NA
201	1934. Showalter, H.M.. Self flower-color inheritance and mutation in <i>Mirabilis jalapa</i> L.. Genetics. 19: 568-580. http://www.genetics.org/content/19/6/568.full.pdf	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"? 2] Native to Peru, Northern Mexico and the Southern boundary of the United States.
201	2011. Russell, A.B.. Fact sheet: <i>Mirabilis jalapa</i> . North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/perennials/Mirabja.htm	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"? 2] Origin South America
201	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"? 2] Believed to be native to Mexico.
202	2011. Russell, A.B.. Fact sheet: <i>Mirabilis jalapa</i> . North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/perennials/Mirabja.htm	[Quality of climate match data?] Origin South America.
202	2011. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN) [Online Database Index]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl	[Quality of climate match data?] Believed to be native to Mexico.
203	2011. Dave's Garden. PlantFiles: four o'clock, marvel of Peru <i>Mirabilis jalapa</i> . Dave's Garden, http://davesgarden.com/guides/pf/go/92/	[Broad climate suitability (environmental versatility)? Yes] Hardiness: USDA Zone 7b: to -14.9 °C (5 °F) USDA Zone 8a: to -12.2 °C (10 °F) USDA Zone 8b: to -9.4 °C (15 °F) USDA Zone 9a: to -6.6 °C (20 °F) USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11: above 4.5 °C (40 °F)
203	2011. Floridata. <i>Mirabilis jalapa</i> . www.floridata.com , http://www.floridata.com/ref/m/mira_jal.cfm	[Broad climate suitability (environmental versatility)? Yes] USDA Hardiness zones: 7-11.
203	2011. Russell, A.B.. Fact sheet: <i>Mirabilis jalapa</i> . North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/perennials/Mirabja.htm	[Broad climate suitability (environmental versatility)?] USDA Hardiness zones: 9-10.
204	1934. Showalter, H.M.. Self flower-color inheritance and mutation in <i>Mirabilis jalapa</i> L.. Genetics. 19: 568-580. http://www.genetics.org/content/19/6/568.full.pdf	[Native or naturalized in regions with tropical or subtropical climates? Yes] Native to Peru, Northern Mexico and the Southern boundary of the United States.
204	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Native or naturalized in regions with tropical or subtropical climates? Yes] "In Hawaii naturalized primarily in dry, disturbed areas, 0-610 m, on Midway Atoll,, Kauai, Oahu, Lanai, Maui and Hawaii."
205	1934. Showalter, H.M.. Self flower-color inheritance and mutation in <i>Mirabilis jalapa</i> L.. Genetics. 19: 568-580. http://www.genetics.org/content/19/6/568.full.pdf	[Does the species have a history of repeated introductions outside its natural range? Yes] <i>Mirabilis jalapa</i> was introduced to Europe by the Spanish in 1596.

205	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Does the species have a history of repeated introductions outside its natural range? Yes] Naturalized in Hawaii prior to 1871.
205	2009. Koh, H.L./Kian, C.T./Tan, C.H.. A guide to medicinal plants: an illustrated, scientific and medicinal approach (Google eBook). World Scientific, Singapore	[Does the species have a history of repeated introductions outside its natural range? Yes] Medicinal. "Its leaves are used a decoction for abscesses, juice for wounds and cooked with pork as tonic. The leaves are also placed on boils, blisters and to relieve urticaria. In Indochina, the seeds are used as a purgative. The roots are used a laxative in a decoction, with or without pork, for colds, inflammation and leucorrhoea. In Malagassy, Madagascar, they are used to treat intestinal pains. In South America, the roots are used as purgative agents."
301	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Naturalized beyond native range? Yes] "In Hawaii naturalized primarily in dry, disturbed areas, 0-610 m, on Midway Atoll,, Kauai, Oahu, Lanai, Maui and Hawaii."
302	2011. Floridata. Mirabilis jalapa. www.floridata.com, http://www.floridata.com/ref/m/mira_jal.cfm	[Garden/amenity/disturbance weed? Yes] Four o'clocks self seed and may become a nuisance if not kept under control. If left to spread unchecked, they then can be difficult to eliminate because of the large, deep-rooted tubers.
302	2011. San Diego Chapter of the American Society of the Landscape Architects and San Diego Chapter of the California Native Plant Society. San Diego County invasive ornamental plant guide. http://www.asla-sandiego.org/Download/Pg_08_mod.pdf	[Garden/amenity/disturbance weed? Yes] Invasive in San Diego County, California where it is known to spread from disturbed areas into natural areas (riparian, wetland and coastal sage).
303	2011. WRA Specialist. Personal Communication.	[Agricultural/forestry/horticultural weed? No] Listed as an agricultural weed in the Global Compendium of Weeds, but there no evidence of impact and control in the literature.
304	2011. WRA Specialist. Personal Communication.	[Environmental weed? No] No evidence of impact or control. [scored as a garden/disturbance weed]
305	2011. Washington State Noxious Weed Control Board. Wild four o'clock Mirabilis nyctaginaceae class A weed. Washington State Noxious Weed Control Board, http://www.nwcb.wa.gov/weed_info/Written_findings/Mirabilis_nyctaginea.html	[Congeneric weed? Yes] Mirabilis nyctaginea is a noxious weed in Washington State, USA. "In Washington State this species has shown the ability to spread from a small 10 acre site to several hundred acres, where an aggressive control program continues to be necessary to reduce the infestation size. Wild four o'clock is capable of establishing in a wide range of habitats in our state, including orchards, alfalfa fields, range lands, sandy, rocky or heavy cultivated soils, dry meadows, railroad embankments and vacant lots of industrial/residential areas. This plant grows along river areas where it is found downstream in high water areas, and it is found growing along the inside of an old irrigation canal."
401	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Produces spines, thorns or burrs? No] "Erect perennial herbs 4-10 dm tall, from a thick root; stems forked, many-branched. Leaves triangular ovate to broadly triangular-subcordate, 4-14 cm long, 2-8.5 cm wide, glabrous, rarely puberulent, apex acute to acuminate, petiolate."
402	2008. Gui-fang, X./Ming-jiu, L./Yu-lei, L.. Invasion characteristics and invasion risk assessment of Mirabilis jalapa. Xibei Zhiwu Xuebao. 28: 765-770.	[Allelopathic?] In this research on the invasive potential of Mirabilis jalapa, the results indicated that M. jalapa had allelopathic effects on other plants, inhibiting the seed germination and seedling growth of wheat and cabbage. [The research did not indicated if leachate was used in the experiment.]
402	2011. WRA Specialist. Personal Communication.	[Allelopathic?] Unknown.
403	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Parasitic? No] Nyctaginaceae.
404	2011. Garden Fairy. Four o'clock Mirabilis spp.. http://www.gardenfairy.com/garden/mirabilis.htm	[Unpalatable to grazing animals?] Deer resistant.
405	1986. Hill, R.J.. Poisonous plants of Pennsylvania. Pennsylvania Department of Agriculture, Harrisburg http://research.vet.upenn.edu/PoisonousPlantsofPA/Mirabilisjalapa/tabid/5462/Default.aspx	[Toxic to animals?] Children have been poisoned from ingestion of four-o'clock roots and seeds. Livestock might also be susceptible.
405	2008. Wagstaff, D.J.. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	[Toxic to animals?] No evidence of toxicity.

406	2011. WRA Specialist. Personal Communication.	[Host for recognized pests and pathogens? No] No evidence.
407	1986. Hill, R.J.. Poisonous plants of Pennsylvania. Pennsylvania Department of Agriculture, Harrisburg http://research.vet.upenn.edu/PoisonousPlantsofPA/Mirabilisjalapa/tabid/5462/Default.aspx	[Causes allergies or is otherwise toxic to humans? Yes] Children have been poisoned from ingestion of roots and seeds.
407	2009. Koh, H.L./Kian, C.T./Tan, C.H.. A guide to medicinal plants: an illustrated, scientific and medicinal approach (Google eBook). World Scientific, Singapore	[Causes allergies or is otherwise toxic to humans?] Medicinal. "Its leaves are used a decoction for abscesses, juice for wounds and cooked with pork as tonic. The leaves are also placed on boils, blisters and to relieve urticaria. In Indochina, the seeds are used as a purgative. The roots are used a laxative in a decoction, with or without pork, for colds, inflammation and leucorrhoea. In Malagassy, Madagascar, they are used to treat intestinal pains. In South America, the roots are used as purgative agents."
407	2011. Garden Fairy. Four o'clock Mirabilis spp.. http://www.gardenfairy.com/garden/mirabilis.htm	[Causes allergies or is otherwise toxic to humans? Yes] Seeds are extremely poisonous.
408	2011. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? No] No evidence of fuel accumulation.
409	2011. Brandies, M.. Fragrant plants for the shade. Gardens Florida, http://www.gardensflorida.com/weekly/shade.html	[Is a shade tolerant plant at some stage of its life cycle? Yes] Sun to full shade.
409	2011. Garden Fairy. Four o'clock Mirabilis spp.. http://www.gardenfairy.com/garden/mirabilis.htm	[Is a shade tolerant plant at some stage of its life cycle? Yes] Full sun to partial shade.
410	2011. Dave's Garden. PlantFiles: four o'clock, marvel of Peru Mirabilis jalapa. Dave's Garden, http://davesgarden.com/guides/pf/go/92/	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Soil pH: 6.1 to 6.5 (mildly acidic) 6.6 to 7.5 (neutral) 7.6 to 7.8 (mildly alkaline)
410	2011. Floridata. Mirabilis jalapa. www.floridata.com , http://www.floridata.com/ref/m/mira_jal.cfm	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Mirabilis jalapa thrives in most soils.
411	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Climbing or smothering growth habit? No] Erect perennial herbs 4-10 dm tall.
412	2011. WRA Specialist. Personal Communication.	[Forms dense thickets? No] No evidence of thicket formation.
501	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Aquatic? No] Terrestrial.
502	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Grass? No] Nyctaginaceae.
503	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Nitrogen fixing woody plant? No] Herbaceous.
504	2011. Garden Fairy. Four o'clock Mirabilis spp.. http://www.gardenfairy.com/garden/mirabilis.htm	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? Yes] Roots are tuberous and can be stored for planting in the Spring. Plants can also be divided in early Spring.
504	2011. Russell, A.B.. Fact sheet: Mirabilis jalapa. North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/perennials/Mirabja.htm	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? Yes] Tuberous root.
601	2011. WRA Specialist. Personal Communication.	[Evidence of substantial reproductive failure in native habitat? No] No evidence.
602	2011. Garden Fairy. Four o'clock Mirabilis spp.. http://www.gardenfairy.com/garden/mirabilis.htm	[Produces viable seed? Yes] "Four o'clocks thrive in ordinary soil in full sun or partial shade, sending up numerous volunteer seedlings every year (even in cold parts of the country.)"

602	2011. Russell, A.B.. Fact sheet: <i>Mirabilis jalapa</i> . North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/perennials/Mirabja.htm	[Produces viable seed? Yes] Propagate by seed or division of tuberous root.
603	1912. United States National Herbarium, United States. Division of Botany, National Museum of Natural History (U.S.) Dept. of Botany, United States National Museum. Contributions from the United States National Herbarium volume 13 (Google eBook). Smithsonian	[Hybridizes naturally?] " <i>Mirabilis cordata</i> Brouss is a form described from cultivated material, thought to be a hybrid of <i>M. Jalapa</i> and <i>M. Longiflora</i> , since it combines the peculiarities of those two species. The only material that has been seen is that from cultivated plants in European gardens. It has been stated that <i>M. cordata</i> is found in the wild, but the writer has not seen it."
604	1973. Cruden, R.W.. Reproductive biology of weedy and cultivated <i>Mirabilis</i> (Nyctaginaceae). <i>Journal of Botany</i> . 60: 802-809.	[Self-compatible or apomictic? Yes] <i>Mirabilis jalapa</i> is self-compatible.
605	1973. Cruden, R.W.. Reproductive biology of weedy and cultivated <i>Mirabilis</i> (Nyctaginaceae). <i>Journal of Botany</i> . 60: 802-809.	[Requires specialist pollinators? No] <i>Mirabilis jalapa</i> is self-compatible.
605	1986. Martinez del Rio, C./Burquez, A.. Nectar production and temperature dependent pollination in <i>Mirabilis jalapa</i> L.. <i>Biotropica</i> . 18: 28-31. http://www.uwyo.edu/cmdelrio/site/Publications_files/MdR%26Burquez.pdf	[Requires specialist pollinators? No] In this study on nectar production and pollination, <i>Mirabiis jalapa</i> was pollinated by four hawkmoth species. <i>Erinnyis ello</i> is the main pollinator followed by <i>Hyles lineata</i> .
606	2011. Russell, A.B.. Fact sheet: <i>Mirabilis jalapa</i> . North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/perennials/Mirabja.htm	[Reproduction by vegetative fragmentation? Yes] Propagate by division of tuberous root.
607	2011. Floridata. <i>Mirabilis jalapa</i> . www.floridata.com , http://www.floridata.com/ref/m/mira_jal.cfm	[Minimum generative time (years)? 1] Fast growing. Grown as annuals in cool regions. Plant seeds in the Spring or divide tubers at any time.
701	1986. Hill, R.J.. Poisonous plants of Pennsylvania. Pennsylvania Department of Agriculture, Harrisburg http://research.vet.upenn.edu/PoisonousPlantsofPA/Mirabilisjalapa/tabid/5462/Default.aspx	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? Yes] This widely cultivated plant occasionally escapes to roadsides and wastelands.
702	2001. Hanelt, P. (ed.). <i>Mansfeld's encyclopedia of agricultural and horticultural crops: (except ornamentals).. Angiospermae - monocotyledones: orchidaceae - pandanaceae</i> , Volume 5. Springer-Verlag, Berlin, Heidelberg, New York	[Propagules dispersed intentionally by people? Yes] Worldwide cultivated as an ornamental.
702	2009. Koh, H.L./Kian, C.T./Tan, C.H.. A guide to medicinal plants: an illustrated, scientific and medicinal approach (Google eBook). World Scientific, Singapore	[Propagules dispersed intentionally by people? Yes] "Its leaves are used a decoction for abscesses, juice for wounds and cooked with pork as tonic. The leaves are also placed on boils, blisters and to relieve urticaria. In Indochina, the seeds are used as a purgative. The roots are used a laxative in a decoction, with or without pork, for colds, inflammation and leucorrhoea. In Malagassy, Madagascar, they are used to treat intestinal pains. In South America, the roots are used as purgative agents."
703	2011. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No] No evidence of produce contamination.
704	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. <i>Manual of the flowering plants of Hawaii</i> . Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Propagules adapted to wind dispersal? No] Anthocarp. [no adaptation for wind dispersal]
705	2011. San Diego Chapter of the American Society of the Landscape Architects and San Diego Chapter of the California Native Plant Society. San Diego County invasive ornamental plant guide. http://www.asla-sandiego.org/Download/PG_08_mod.pdf	[Propagules water dispersed? Yes] <i>Mirabilis jalapa</i> invades riparian areas and wetlands in San Diego County, California. [documented distribution along waterways]
706	2011. WRA Specialist. Personal Communication.	[Propagules bird dispersed?] Unknown.
707	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. <i>Manual of the flowering plants of Hawaii</i> . Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Propagules dispersed by other animals (externally)? No] Anthocarp. [no means of external attachment]

708	2011. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut?] Unknown.
801	1999. Wagner, W.L./Herbst, D.R./Sohmer, S.H.. Manual of the flowering plants of Hawaii. Revised edition.. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Prolific seed production (>1000/m2)? No] Fruit an antherocarp; one seeded.
802	2011. WRA Specialist. Personal Communication.	[Evidence that a persistent propagule bank is formed (>1 yr)?] Unknown.
803	2011. WRA Specialist. Personal Communication.	[Well controlled by herbicides?] Unknown.
804	2011. Garden Fairy. Four o'clock <i>Mirabilis</i> spp.. http://www.gardenfairy.com/garden/mirabilis.htm	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] Roots are tuberous and can be stored for planting in the Spring. Plants can also be divided in early Spring.
804	2011. Russell, A.B.. Fact sheet: <i>Mirabilis jalapa</i> . North Carolina State University, http://www.ces.ncsu.edu/depts/hort/consumer/fact_sheets/perennials/Mirabja.htm	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] Propagate by division of tuberose root.
805	2011. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)?] Unknown.