

Family: *Melastomataceae*

Taxon: *Tetrazygia bicolor*

Synonym: *Miconia bicolor* Triana
Melastoma bicolor Mill. (basionym)

Common Name: West Indian lilace

Questionnaire :	current 20090513	Assessor:	Patti Clifford	Designation: H(HPWRA)
Status:	Assessor Approved	Data Entry Person:	Patti Clifford	WRA Score 7
101	Is the species highly domesticated?		y=-3, n=0	n
102	Has the species become naturalized where grown?		y=1, n=-1	y
103	Does the species have weedy races?		y=1, n=-1	n
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	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)	n
401	Produces spines, thorns or burrs		y=1, n=0	n
402	Allelopathic		y=1, n=0	n
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	n
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	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	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	
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	
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	y
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	
706	Propagules bird dispersed	y=1, n=-1	y
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m ²)	y=1, n=-1	y
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: H(HPWRA)

WRA Score 7

Supporting Data:

101	2011. WRA Specialist. Personal Communication.	[Is the species highly domesticated? No] No evidence of domestication that reduces invasive characteristics.
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	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.	[Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical" High]. Native range: Cuba; the Bahama archipelago; southern Florida.
202	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.	[Quality of climate match data? High] Native range: Cuba; the Bahama archipelago; southern Florida.
203	1999. Gilman, E.F.. Tetrazygia bicolor. FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Broad climate suitability (environmental versatility)? No] USDA Hardiness zones: 10B-11.
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] Native range: Cuba; the Bahama archipelago; southern Florida.
205	1999. Gilman, E.F.. Tetrazygia bicolor. FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Does the species have a history of repeated introductions outside its natural range? No] No evidence of repeated introductions.
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] Naturalized in Hawaii in mesic to wet forest and disturbed areas such as along roads and trail sides near Hilo and reported from Nanawale Forest Reserve, Puna District, Hawaii.
302	2003. Motooka, P./Castro, L./Nelson, D./Nagai, G./Ching,L.. Weeds of Hawaii's Pastures and Natural Areas: An Identification and Management Guide. CTAHR, UH Manoa, Honolulu, HI http://www.ctahr.hawaii.edu/invweed/weedsHi.html	[Garden/amenity/disturbance weed?No] Poses a potential threat to invade disturbed forests.
303	2011. WRA Specialist. Personal Communication.	[Agricultural/forestry/horticultural weed? No] No evidence.
304	2011. WRA Specialist. Personal Communication.	[Environmental weed? No] No evidence.
305	2011. WRA Specialist. Personal Communication.	[Congeneric weed? No] No evidence.
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] Shrubs or small trees up to 6 m tall; young branches rounded to subquadrate.
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] Melastomaceae.
403	2010. Nickrent, D.. The parasitic plant connection. Department of Plant Biology, Southern Illinois University, Carbondale http://www.parasiticplants.siu.edu/index.html	[Parasitic? No] Melastomaceae.
404	2011. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown.]
405	2011. National Center for Biotechnology Information. PubMed. U.S. National Library of Medicine, Bethesda, Maryland http://www.ncbi.nlm.nih.gov/	[Toxic to animals? No] No evidence of toxicity.

405	2011. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, http://toxnet.nlm.nih.gov/	[Toxic to animals? No] No evidence of toxicity.
406	1999. Gilman, E.F.. <i>Tetrazygia bicolor</i> . FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Host for recognized pests and pathogens? No] No serious pests are usually seen on this species.
407	1999. Gilman, E.F.. <i>Tetrazygia bicolor</i> . FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Causes allergies or is otherwise toxic to humans? No] Fruits are edible.
407	2011. National Center for Biotechnology Information. PubMed. U.S. National Library of Medicine, Bethesda, Maryland http://www.ncbi.nlm.nih.gov/	[Causes allergies or is otherwise toxic to humans? No] No evidence.
407	2011. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, http://toxnet.nlm.nih.gov/	[Causes allergies or is otherwise toxic to humans? No] No evidence.
408	2011. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? No] No evidence.
409	1999. Gilman, E.F.. <i>Tetrazygia bicolor</i> . FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Is a shade tolerant plant at some stage of its life cycle?] Can survive in full sun, but prefers partial shade.
409	2011. Natives for Your Neighborhood. <i>Tetrazygia bicolor</i> . Institute for Regional Conservation, http://regionalconservation.org/beta/nfyn/plantdetail.asp?tx=Tetrnico	[Is a shade tolerant plant at some stage of its life cycle?] Full sun.
410	1940. Phillips, W.S.. A tropical hammock on the Miami (Florida) Limestone. <i>Ecology</i> . 21: 166-175.	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] <i>Tetrazygia bicolor</i> is a component of the hummock vegetation on (miami) Florida limestone substrate.
410	1999. Gilman, E.F.. <i>Tetrazygia bicolor</i> . FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] Grows well on most well-drained soils. Soils: acidic, alkaline, sand, loam, clay
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] Shrubs or small trees.
412	2011. WRA Specialist. Personal Communication.	[Forms dense thickets?] Unknown.
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] Melastomaceae.
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] Melastomaceae.
504	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.	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers) ? No] Melastomaceae.
601	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.	[Evidence of substantial reproductive failure in native habitat? No]
602	2011. Natives for Your Neighborhood. <i>Tetrazygia bicolor</i> . Institute for Regional Conservation, http://regionalconservation.org/beta/nfyn/plantdetail.asp?tx=Tetrnico	[Produces viable seed? Yes] Can be grown from de-pulped seed.

603	2011. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2011. WRA Specialist. Personal Communication.	[Self-compatible or apomictic?] Unknown.
605	2006. Waser, N.M./Ollerton, J.. Plant pollinator interactions: from specialization to generalization. University of Chicago Press,	[Requires specialist pollinators? No] Bee pollinated. [Family description]
606	2011. WRA Specialist. Personal Communication.	[Reproduction by vegetative fragmentation? Unknown.
607	1999. Gilman, E.F.. <i>Tetrazygia bicolor</i> . FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Minimum generative time (years)?] Growth rate moderate.
607	2011. Natives for Your Neighborhood. <i>Tetrazygia bicolor</i> . Institute for Regional Conservation, http://regionalconservation.org/beta/nfyn/plantdetail.asp?tx=Tetrbico	[Minimum generative time (years)?] Growth rate moderate.
701	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.	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? Yes] Naturalized in Hawaii in mesic to wet forest and disturbed areas such as along roads and trail sides near Hilo and reported from Nanawale Forest Reserve, Puna District, Hawaii.
702	1999. Gilman, E.F.. <i>Tetrazygia bicolor</i> . FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Propagules dispersed intentionally by people? Yes] Grown in small quantities by a small number of nurseries.
702	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.	[Propagules dispersed intentionally by people? Yes] In Hawaii, infrequently cultivated.
703	2011. WRA Specialist. Personal Communication.	[Propagules likely to disperse as a produce contaminant? No] No evidence.
704	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.	[Propagules adapted to wind dispersal? No] Fruit a bluish black, fleshy, many seeded berry. Berries 6-8 mm long. Seeds 1.5-2 mm long. [no mechanism for wind dispersal]
705	2011. WRA Specialist. Personal Communication.	[Propagules water dispersed? Unknown] Fruit a bluish black, fleshy, many seeded berry. Berries 6-8 mm long. Seeds 1.5-2 mm long.
706	1999. Gilman, E.F.. <i>Tetrazygia bicolor</i> . FPS-577: .University of Florida IFAS Extension, http://edis.ifas.ufl.edu/pdffiles/FP/FP57700.pdf	[Propagules bird dispersed? Yes] Birds enjoy the berries.
706	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.	[Propagules bird dispersed? Yes] Fruit a berry.
707	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.	[Propagules dispersed by other animals (externally)? No] Fruit a bluish black, fleshy, many seeded berry. Berries 6-8 mm long. Seeds 1.5-2 mm long. No mechanism for external attachment.
708	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.	[Propagules survive passage through the gut? Yes] Fruit a bluish black, fleshy, many seeded berry. Berries 6-8 mm long. Seeds 1.5-2 mm long.
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/m ²)? Yes] Fruit a bluish black, fleshy, many seeded berry. Berries 6-8 mm long. Seeds 1.5-2 mm long.
801	2011. Herbst, D.. <i>Tetrazygia bicolor</i> . Herbarium of Bernise P. Bishop Museum. Bish Accession No. 1984.447: .	[Prolific seed production (>1000/m ²)? Yes] Based on a 1' x 1/2' branch with three inflorescences containing ~ 75 berries.
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.

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- 804 1983. Gunderson, L./Taylor, D./Craig, J.. Fire effects on flowering and fruiting, patterns of understory plants in pinelands of Everglades National Park. SERC 83/04: 36. South Florida Research Center, <http://www.nps.gov/ever/naturescience/upload/SFRC-83-0>
- 805 2011. WRA Specialist. Personal Communication. [Effective natural enemies present locally (e.g. introduced biocontrol?) Unknown.]
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