

**Family:** *Melastomataceae*

**Taxon:** *Tibouchina longifolia*

**Synonym:** *Rhexia longifolia* Vahl (*basionym*)

**Common Name:** long leaf glory tree  
white flower tibouchina

Questionnaire :	current 20090513	Assessor:	Patti Clifford	Designation:	EVALUATE
Status:	Assessor Approved	Data Entry Person:	Patti Clifford	WRA Score	3
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		
406	Host for recognized pests and pathogens		y=1, n=0		
407	Causes allergies or is otherwise toxic to humans		y=1, n=0		
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		
411	Climbing or smothering growth habit		y=1, n=0		n

412	Forms dense thickets	y=1, n=0	
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	
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	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	
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	
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: EVALUATE

WRA Score 3

## 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). <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: Mexico; Cuba; Dominican Republic; Hispaniola; St. Kitts and Nevis; St. Vincent and Grenadines; Trinidad and Tobago; Belize; Costa Rica; El Salvador; Guatemala; Honduras; Nicaragua; Panama; Venezuela; Bolivia; Colombia; Ecuador; Peru.
202	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <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: Mexico; Cuba; Dominican Republic; Hispaniola; St. Kitts and Nevis; St. Vincent and Grenadines; Trinidad and Tobago; Belize; Costa Rica; El Salvador; Guatemala; Honduras; Nicaragua; Panama; Venezuela; Bolivia; Colombia; Ecuador; Peru.
203	2006. Daly, D.C./Costa, D.P./Melo, A.W.F.. The salao vegetation of Southwestern Amazonia. <i>Biodiversity and Conservation</i> . 15: 2905-2923.	[Broad climate suitability (environmental versatility)? Yes] From Mexico to Bolivia to 2100 m elevation; floodplain (va' rzea) and terra firme forests.
204	2012. USDA ARS National Genetic Resources Program. Germplasm Resources Information Network - (GRIN). <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: Mexico; Cuba; Dominican Republic; Hispaniola; St. Kitts and Nevis; St. Vincent and Grenadines; Trinidad and Tobago; Belize; Costa Rica; El Salvador; Guatemala; Honduras; Nicaragua; Panama; Venezuela; Bolivia; Colombia; Ecuador; Peru.
205	2012. WRA Specialist. Personal Communication.	[Does the species have a history of repeated introductions outside its natural range? No] No evidence.
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 the island of Hawaii.
302	2007. Randall, R.. Global Compendium of Weeds <i>Tibouchina longifolia</i> (Melastomataceae). <a href="http://www.hear.org/gcw/species/tibouchina_longifolia/">http://www.hear.org/gcw/species/tibouchina_longifolia/</a>	[Garden/amenity/disturbance weed? No] No evidence.
303	2007. Randall, R.. Global Compendium of Weeds <i>Tibouchina longifolia</i> (Melastomataceae). <a href="http://www.hear.org/gcw/species/tibouchina_longifolia/">http://www.hear.org/gcw/species/tibouchina_longifolia/</a>	[Agricultural/forestry/horticultural weed? No] No evidence.
304	2007. Randall, R.. Global Compendium of Weeds <i>Tibouchina longifolia</i> (Melastomataceae). <a href="http://www.hear.org/gcw/species/tibouchina_longifolia/">http://www.hear.org/gcw/species/tibouchina_longifolia/</a>	[Environmental weed? No] No evidence.
305	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 <a href="http://www.ctahr.hawaii.edu/invweed/weedsHi.html">http://www.ctahr.hawaii.edu/invweed/weedsHi.html</a>	[Congeneric weed? Yes] <i>Tibouchina urvilleana</i> forms dense thickets in disturbed forest areas in Hawaii. There are herbicides available for control.
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] "Laxly branched subshrubs 0.5-2 m tall; young branches subquadrate, densely covered with appressed to antrorsely spreading, smooth hairs."
402	2012. 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] Melastomataceae.
404	2012. WRA Specialist. Personal Communication.	[Unpalatable to grazing animals? Unknown]

405	2012. WRA Specialist. Personal Communication.	[Toxic to animals? Unknown]
406	2012. WRA Specialist. Personal Communication.	[Host for recognized pests and pathogens? Unknown]
407	2012. WRA Specialist. Personal Communication.	[Causes allergies or is otherwise toxic to humans? Unknown]
408	2012. WRA Specialist. Personal Communication.	[Creates a fire hazard in natural ecosystems? No] No evidence of biomass buildup.
409	2012. WRA Specialist. Personal Communication.	[Is a shade tolerant plant at some stage of its life cycle? Unknown]
410	2012. Biodiversity and Environmental Resource Data System of Belize. <i>Tibouchina longifolia</i> . <a href="http://www.biodiversity.bz/find/specimens/profile.phtml?dcid=59245">http://www.biodiversity.bz/find/specimens/profile.phtml?dcid=59245</a>	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)?] In Belize <i>Tibouchina longifolia</i> grows in shale and acidic soil.
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] Subshrub.
412	2012. 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; subshrub.
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] Melastomataceae.
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] <i>Tibouchina</i> .
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] Subshrub.
601	2012. WRA Specialist. Personal Communication.	[Evidence of substantial reproductive failure in native habitat? No] No evidence.
602	2012. WRA Specialist. Personal Communication.	[Produces viable seed? Unknown]
603	2012. WRA Specialist. Personal Communication.	[Hybridizes naturally? Unknown]
604	2012. WRA Specialist. Personal Communication.	[Self-compatible or apomictic? Unknown]
605	2011. Obregon Corredor, D.. Origen botánico de la miel y el polen provenientes de nidos de <i>Melipona eburnea</i> Friese, 1900 y <i>Tetragonisca angustula</i> (Latreille, 1811), (Apidae: Meliponini) para estimar su potencial polinizador.	[Requires specialist pollinators? No] Bee pollinated.
606	2012. WRA Specialist. Personal Communication.	[Reproduction by vegetative fragmentation? Unknown]
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	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] Naturalized on the island of Hawaii.

703	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 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] Fruiting hypanthium 4-4.5 mm long 3-4 mm wide. Seeds 0.25-0.5 mm long.
705	2006. Daly, D.C./Costa, D.P./Melo, A.W.F.. The salao vegetation of Southwestern Amazonia. Biodiversity and Conservation. 15: 2905-2923.	[Propagules water dispersed? Yes] From Mexico to Bolivia to 2100 m elevation; floodplain (várzea) and terra firme forests.
706	2012. WRA Specialist. Personal Communication.	[Propagules bird dispersed? Unknown]
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] Fruiting hypanthium 4-4.5 mm long 3-4 mm wide. Seeds 0.25-0.5 mm long. [no means of external attachment]
708	2012. WRA Specialist. Personal Communication.	[Propagules survive passage through the gut? Unknown]
801	2012. WRA Specialist. Personal Communication.	[Prolific seed production (>1000/m <sup>2</sup> ) ? Unknown]
802	2001. Baskin, C.C./Baskin, J.M.. Seeds ecology, biogeography, and evolution of dormancy and germination. Academic Press, San Francisco, CA	[Evidence that a persistent propagule bank is formed (>1 yr)? No] Non-dormant.
803	2012. WRA Specialist. Personal Communication.	[Well controlled by herbicides? Unknown]
804	2012. WRA Specialist. Personal Communication.	[Tolerates, or benefits from, mutilation, cultivation, or fire? Unknown]
805	2012. WRA Specialist. Personal Communication.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown]

## **Risk Traits Summary**

### **High Risk Traits:**

- Native distribution tropical and subtropical regions
- Broad environmental suitability
- Naturalized on Island of Hawaii
- Congeneric weed
- Dispersed intentionally by people (limited dispersal)
- Dispersed by water

### **Low Risk Traits:**

- Not a weed elsewhere (limited cultivation though)
- Does not produce spines, thorns, burrs
- Not wind dispersed
- Seeds are not dormant