UF IFAS UNIVERSITY of FLORIDA

Assessment of Non-native Plants in Florida's Natural Areas

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Assessment date 28Aug 2015

	***Ficus sagittata* Central South**	Answer	Score
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 South Zone: suited to Zone 10	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in habitats with periodic inundation North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches South Zone: mean annual precipitation 40-60 inches	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	n	-2
3.02	Garden/amenity/disturbance weed	unk	
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	n	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	unk	-1
4.05	Toxic to animals	unk	0
4.06	Host for recognised pests and pathogens	unk	0
4.07	Causes allergies or is otherwise toxic to humans	unk	0
4.08	Creates a fire hazard in natural ecosystems	n	0
4.09	Is a shade tolerant plant at some stage of its life cycle	unk	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	unk	0
4.11	Climbing or smothering growth habit	y	1
4.12	Forms dense thickets	n	0
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat	n	0
6.02	Produces viable seed	y	1

6.03	Hybridizes naturally	unk	-1
6.04	Self-compatible or apomictic	n	-1
6.05	Requires specialist pollinators	y	-1
6.06	Reproduction by vegetative propagation	y	1
6.07	Minimum generative time (years)		
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
7.02	Propagules dispersed intentionally by people		
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	n	-1
7.05	Propagules water dispersed		
7.06	Propagules bird dispersed	y	1
7.07	Propagules dispersed by other animals (externally)		
7.08	Propagules dispersed by other animals (internally)	y	1
8.01	Prolific seed production		
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n	-1
8.03	Well controlled by herbicides		
8.04	Tolerates, or benefits from, mutilation or cultivation		
8.05			
	Total Score	**0**	
	Implemented Pacific Second Screening	**no**	
	Risk Assessment Results	**Low**	

section	**# questions answered**	**satisfy minimum?**
A	10	yes
B	6	yes
C	14	yes
total	30	yes

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Assessment date 28Aug 2015

	***Ficus sagittata* North**	Answer	Score
1.01	Is the species highly domesticated?	n	0
1.02	Has the species become naturalised where grown?		
1.03	Does the species have weedy races?		
2.01	Species suited to Florida's USDA climate zones (0-low; 1-intermediate; 2-high) North Zone: suited to Zones 8, 9 Central Zone: suited to Zones 9, 10 South Zone: suited to Zone 10	1	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	2	
2.03	Broad climate suitability (environmental versatility)	y	1
2.04	Native or naturalized in habitats with periodic inundation North Zone: mean annual precipitation 50-70 inches Central Zone: mean annual precipitation 40-60 inches South Zone: mean annual precipitation 40-60 inches	y	1
2.05	Does the species have a history of repeated introductions outside its natural range?	y	
3.01	Naturalized beyond native range	n	-2
3.02	Garden/amenity/disturbance weed	unk	
3.03	Weed of agriculture	n	0
3.04	Environmental weed	n	0
3.05	Congeneric weed	y	2
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	n	0
4.03	Parasitic	n	0
4.04	Unpalatable to grazing animals	unk	-1
4.05	Toxic to animals	unk	0
4.06	Host for recognised pests and pathogens	unk	0
4.07	Causes allergies or is otherwise toxic to humans	unk	0
4.08	Creates a fire hazard in natural ecosystems	n	0
4.09	Is a shade tolerant plant at some stage of its life cycle	unk	0
4.10	Grows on infertile soils (oligotrophic, limerock, or excessively draining soils). North & Central Zones: infertile soils; South Zone: shallow limerock or Histisols.	unk	0
4.11	Climbing or smothering growth habit	y	1
4.12	Forms dense thickets	n	0
5.01	Aquatic	n	0
5.02	Grass	n	0
5.03	Nitrogen fixing woody plant	n	0
5.04	Geophyte	n	0
6.01	Evidence of substantial reproductive failure in native habitat	n	0
6.02	Produces viable seed	y	1

6.03	Hybridizes naturally	unk	-1
6.04	Self-compatible or apomictic	n	-1
6.05	Requires specialist pollinators	y	-1
6.06	Reproduction by vegetative propagation	y	1
6.07	Minimum generative time (years)		
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
7.02	Propagules dispersed intentionally by people		
7.03	Propagules likely to disperse as a produce contaminant	n	-1
7.04	Propagules adapted to wind dispersal	n	-1
7.05	Propagules water dispersed		
7.06	Propagules bird dispersed	y	1
7.07	Propagules dispersed by other animals (externally)		
7.08	Propagules dispersed by other animals (internally)	y	1
8.01	Prolific seed production		
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n	-1
8.03	Well controlled by herbicides		
8.04	Tolerates, or benefits from, mutilation or cultivation		
8.05			
	Total Score	**#VALUE!**	
	Implemented Pacific Second Screening	**no**	
	Risk Assessment Results	**Low**	

section	**# questions answered**	**satisfy minimum?**
A	10	yes
B	6	yes
C	14	yes
total	30	yes

	Reference	Source data
1.01		cultivated, but no evidence of selection for reduced weediness
1.02		
1.03		
2.01	1. PERAL NAPPFAST Global Plant Hardiness (http://www.nappfast.org/Plant_hardiness/NAPPFAST%20Global%20zones/10-year%20climate/PLANT_HARDINESS_10YR%20lgnd.tif). 2. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?409896 (24 Aug 2015). 3. Global Biodiversity Information Facility (http://www.gbif.org/species/5571076 accessed 26 Aug 2015)	No computer analysis was performed. Suitable for Central and South zones. 1. Global hardiness zone: 10, 11, 12, 13; equivalent to USDA Hardiness zones: USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F) USDA Zone 11a: to USDA Zone (40 °F) USDA Zone 11b: to (45 °F) USDA Zone 12a: to (50 °F) USDA Zone 12b: to (55 °F). 2. Native to ASIA-TEMPERATE China: China - Guangxi [s.w.], Hainan, Yunnan [s.] ASIA-TROPICAL Indian Subcontinent: Bangladesh; Bhutan; India [n.e.] North Indian Ocean: India - Andaman and Nicobar [Andaman Islands] Indo-China: Myanmar; Thailand; Vietnam Malesia: Indonesia - Celebes, Java, Kalimantan, Lesser Sunda Islands [Timor], Moluccas, Sumatra; Malaysia; Philippines PACIFIC Northwestern Pacific: Palau
2.02		
2.03	1. Köppen-Geiger climate map (http://www.hydrol-earth-syst-sci.net/11/1633/2007/hess-11-1633-2007.pdf). 2. Global Biodiversity Information Facility (http://www.gbif.org/species/5571076 accessed 26 Aug 2015)	1. Distribution in the native/cultivated range occurs in Af, Aw, Am, Cwa
2.04	1. Climate Charts. World Climate Maps. http://www.climate-charts.com/World-Climate-Maps.html#rain (8-19-2015) 2. Global Biodiversity Information Facility (http://www.gbif.org/species/5571076 accessed 26 Aug 2015)	1. Native to areas with rainfall within this range.
2.05	1. Dartfrog Nursery http://www.dartfrog.co.uk/plants.html (8-20-2015) 2. Steve's Leaves http://stevesleaves.com/store#!/~/product/id=28623884 (8-20-2015)	1. and 2. Avaliable on online nurseries outside of its native range
3.01		no evidence
3.02	1. Useful Tropical Plants http://tropical.theferns.info/viewtropical.php?id=Ficus+sagittata (8-20-2015)	1. The aerial roots can completely encircle the trunk of the host tree, constricting its growth - this, coupled with the more vigorous top growth, can lead to the fig outcompeting and killing the tree in which it is growing
3.03		no evidence
3.04		no evidence
3.05	1. Holm, LeRoy G. A Geographical Atlas of World Weeds. Malabar, FL: Krieger Pub., 1991. Print.	1. Ficus pumiila is a common weed in Australia and Ficus hirta is common weed in Indonesia
4.01	1. Hill, Dennis S. 1967. Figs of Hong Kong. Hong Kong University Press http://www.nhm.ac.uk/resources/research-curation/projects/chalcidoids/pdf_Y/Hill967c.pdf (8-20-2015)	1. These features are not represented in the species description.
4.02		no evidence
4.03		no evidence
4.04		no evidence
4.05		no evidence
4.06	1. Plant Rescue http://www.plantsrescue.com/ficus-sagittata/ (8-20-2015)	1. Susceptible to spider mites
4.07	1. Dave's Garden http://davesgarden.com/guides/pf/go/78623/#b (8-20-2015)	1. Handling plant may cause skin irritation or allergic reaction
4.08		no evidence

4.09	1. Steve's Leaves http://stevesleaves.com/store#!/~/product/id=28623884 (8-20-2015) 2. Dave's Garden http://davesgarden.com/guides/pf/go/78623/#b (8-20-2015)	1. Shade to partial sun 2. Light shade
4.10	1. Singapore National Park System https://florafaunaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=5590 (8-20-2015)	1. Moist Soils, Well-Drained Soils [Not enough evidence of soil preference exists for this rare plant to answer this question regionally]
4.11	1. Useful Tropical Plants http://tropical.theferns.info/viewtropical.php?id=Ficus+sagittata (8-20-2015) 2. Plant Rescue http://www.plantsrescue.com/ficus-sagittata/ (8-20-2015) 3. Steve's Leaves http://stevesleaves.com/store#!/~/product/id=28623884 (8-20-2015)	Ficus sagittata is a climbing shrub when young, often starting life as an epiphyte. 2. It is a root climber with thin, young green shoots that become brown when older 3. trailing or climbing
4.12		no evidence of thicket forming growth
5.01		Family: Moraceae
5.02		Family: Moraceae
5.03		no evidence
5.04		no evidence of these structures
6.01		no evidence
6.02	1. Singapore National Park System https://florafaunaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=5590 (8-20-2015) 2. Useful Tropical Plants http://tropical.theferns.info/viewtropical.php?id=Ficus+sagittata (8-20-2015)	1. Angiosperm (Flowering Seed Plants) 2. This plant is propagated by seed.
6.03		no evidence
6.04	1. Singapore National Park System https://florafaunaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=5590 (8-20-2015)	1. The plant is dioecious with each plant bearing male or female flowers.
6.05	1. Useful Tropical Plants http://tropical.theferns.info/viewtropical.php?id=Ficus+sagittata (8-20-2015) 2. Singapore National Park System https://florafaunaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=5590 (8-20-2015)	1. The female fig wasp enters a fig and lays its eggs on the short styled female flowers while pollinating the long styled female flowers. Wingless male fig wasps emerge first, inseminate the emerging females and then bore exit tunnels out of the fig for the winged females. Females emerge, collect pollen from the male flowers and fly off in search of figs whose female flowers are receptive. In order to support a population of its pollinator, individuals of a Ficus spp. must flower asynchronously. A population must exceed a critical minimum size to ensure that at any time of the year at least some plants have overlap of emmission and reception of fig wasps. Without this temporal overlap the short-lived pollinator wasps will go locally extinct 2. Its flowers are pollinated by fig wasps.
6.06	1. Plant Rescue http://www.plantsrescue.com/ficus-sagittata/ (8-20-2015) 2. Dave's Garden http://davesgarden.com/guides/pf/go/78623/#b (8-20-2015)	1. Ficus sagittata root easily from tip cuttings 2. Softwood cuttings and layering propagate this species
6.07		no evidence
7.01		no evidence
7.02	1. Useful Tropical Plants http://tropical.theferns.info/viewtropical.php?id=Ficus+sagittata (8-20-2015) 2. Singapore National Park System https://florafaunaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=5590 (8-20-2015)	1. It is cultivated for its ornamental value 2. A sought after garden ornamental
7.03		no evidence

7.04	1. Hill, Dennis S. 1967. Figs of Hong Kong. Hong Kong University Press http://www.nhm.ac.uk/resources/research-curation/projects/chalcidoids/pdf_Y/Hill967c.pdf (8-20-2015)	1. Seeds are carried in figs, it is unlikely this format is conducive to wind dispersal.
7.05		no evidence
7.06	1. Hill, Dennis S. 1967. Figs of Hong Kong. Hong Kong University Press http://www.nhm.ac.uk/resources/research-curation/projects/chalcidoids/pdf_Y/Hill967c.pdf (8-20-2015) 2. Singapore National Park System https://florafaunaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=5590 (8-20-2015)	Produces figs, which makes bird dispersal likely, however this is undocumented. 2. Bird-Attracting (Fruits)
7.07		no evidence
7.08	1. 1. Singapore National Park System https://florafaunaweb.nparks.gov.sg/special-pages/plant-detail.aspx?id=5590 (8-20-2015) 2. Hill, Dennis S. 1967. Figs of Hong Kong. Hong Kong University Press http://www.nhm.ac.uk/resources/research-curation/projects/chalcidoids/pdf_Y/Hill967c.pdf (8-20-2015)	1. Seed / Spore Dispersal: Biotic (Fauna) (Vertebrates (Bat); Vertebrates (Other Mammal)) 2. Produces edible figs which are likely conducive to internal dispersal.
8.01	1. Hill, Dennis S. 1967. Figs of Hong Kong. Hong Kong University Press http://www.nhm.ac.uk/resources/research-curation/projects/chalcidoids/pdf_Y/Hill967c.pdf (8-20-2015)	1. Seeds are carried in figs, unlikley in prolific number.
8.02		no evidence of seed bank. Seeds banks are not characteristic of ficus.
8.03		no evidence
8.04		no evidence
8.05		no evidence