

Assessment date 9 November 2015

<i>Aristolochia maxima</i> 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	0	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high)	1	
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?	unk	
3.01	Naturalized beyond native range	y	1
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	1
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	unk	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	y	1
4.08	Creates a fire hazard in natural ecosystems	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	n	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	unk	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	unk	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	n	0
6.06	Reproduction by vegetative propagation	unk	-1
6.07	Minimum generative time (years)	unk	-1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	unk	-1
7.04	Propagules adapted to wind dispersal	y	1
7.05	Propagules water dispersed	?	
7.06	Propagules bird dispersed	unk	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	unk	-1
8.01	Prolific seed production	n	-1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n	-1
8.03	Well controlled by herbicides	unk	1
8.04	Tolerates, or benefits from, mutilation or cultivation	unk	-1
8.05		?	
Total Score			-3
Implemented Pacific Second Screening			n/a
Risk Assessment Results			Low

section	# questions answered	satisfy minimum?
A		9 yes
B		5 yes
C		12 yes
total		26 yes

Assessment date 9 November 2015

<i>Aristolochia maxima</i> 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?	unk	
3.01	Naturalized beyond native range	y	1
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	1
4.01	Produces spines, thorns or burrs	n	0
4.02	Allelopathic	unk	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	y	1
4.08	Creates a fire hazard in natural ecosystems	unk	0
4.09	Is a shade tolerant plant at some stage of its life cycle	n	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	unk	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	unk	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	n	0
6.06	Reproduction by vegetative propagation	unk	-1
6.07	Minimum generative time (years)	unk	-1
7.01	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	unk	-1
7.02	Propagules dispersed intentionally by people	y	1
7.03	Propagules likely to disperse as a produce contaminant	unk	-1
7.04	Propagules adapted to wind dispersal	y	1
7.05	Propagules water dispersed	?	
7.06	Propagules bird dispersed	unk	-1
7.07	Propagules dispersed by other animals (externally)	n	-1
7.08	Propagules dispersed by other animals (internally)	unk	-1
8.01	Prolific seed production	n	-1
8.02	Evidence that a persistent propagule bank is formed (>1 yr)	n	-1
8.03	Well controlled by herbicides	unk	1
8.04	Tolerates, or benefits from, mutilation or cultivation	unk	-1
8.05		?	
Total Score			-1
Implemented Pacific Second Screening			n/a
Risk Assessment Results			Low

section	# questions answered	satisfy minimum?
A		9 yes
B		5 yes
C		12 yes
total		26 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 (8-26-2015). 3. Global Biodiversity Information Facility (http://www.gbif.org/species/2873997 (8-26-2015))	No computer analysis was performed. 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 Central America, Peru, Equador, Mexico.
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/2873997 (8-26-2015))	1. Distribution in the native/cultivated range occurs in Af, Aw, As, Am
2.04	1. Climate Charts. World Climate Maps. http://www.climate-charts.com/World-Climates-Maps.html#rain (8-19-2015)2. Global Biodiversity Information Facility (http://www.gbif.org/species/2873997 (8-26-2015))	Native to regions with precipitation within the range of thee zones. For native regions see 2.01
2.05		no evidence
3.01	HEAR http://www.hear.org/gcw/species/aristolochia_maxima/ (8-28-2015)	Naturalized in Lousiana.
3.02		no evidence
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. Aristolochia maurorum is a principle weed in Jordan and Aristolochia bracteolata is a principle weed in Sudan
4.01	1. Flora of North America http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500161 (8-28-2015)	1. These features are not listed in the species description.
4.02		no evidence
4.03		no evidence
4.04		no evidence
4.05		no evidence
4.06		no evidence
4.07	1. Nature Watch New Zealand http://naturewatch.org.nz/taxa/54464-Aristolochia (8-28-2015) 2. Dave's Garden http://davesgarden.com/guides/pf/go/136860/#b (8-27-20195)	1. Aristolochia has been shown to be both a potent carcinogen and kidney toxin. Herbal compounds containing Aristolochia are classified as a Group 1 carcinogen by the International Agency for Research on Cancer.[16] Epidemiological and laboratory studies have identified Aristolochia to be a dangerous kidney toxin; Aristolochia has been shown associated with more than 100 cases of kidney failure. 2. All parts of plant are poisonous
4.08		no evidence
4.09	1. Dave's Garden http://davesgarden.com/guides/pf/go/136860/#b (8-27-20195) 2. Top Tropicals https://toptropicals.com/catalog/uid/Aristolochia_maxima.htm (8-28-2015)	1. Full sun 2. Full sun to partial sun
4.10	1. Biological Diversity http://biological-diversity.info/native_aristolochia.htm (8-28-2015)	1. appears to prefer limestone-based soils.

4.11	1. Dave's Garden http://davesgarden.com/guides/pf/go/136860/#b (8-27-2019) 2. Top Tropicals https://toptropicals.com/catalog/uid/Aristolochia_maxima.htm (8-28-2015)	1. Climber 2. A large and vigorous climber,
4.12		no evidence
5.01		Family: Aristolochiaceae
5.02		Family: Aristolochiaceae
5.03		no evidence
5.04	1. Flora of North America http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500161 (8-28-2015)	1. no evidence of these features
6.01		no evidence
6.02	1. Dave's Garden http://davesgarden.com/guides/pf/go/136860/#b (8-27-2019) 2. Flora of North America http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500161 (8-28-2015)	1. Propagated by seed 2. Propagated by seed
6.03		no evidence
6.04	1. Sakai, Shoko. <i>Aristolochia</i> spp. (Aristolochiaceae) pollinated by flies breeding on decomposing flowers in Panama. 7 September 2001.	1. The failure to set fruit in self-pollinated flowers and the extremely high fruit set in cross-pollinated flowers of <i>Aristolochia maxima</i> suggest that the species is self-incompatible.
6.05	1. Sakai, Shoko. <i>Aristolochia</i> spp. (Aristolochiaceae) pollinated by flies breeding on decomposing flowers in Panama. 7 September 2001. 2. Fair Child Garden http://www.fairchildgarden.org/newsroom-media-center/blogs/artmid/761/articleid/303/put-what-in-your-pipe 3. Dave's Garden http://davesgarden.com/guides/pf/go/136860/#b (8-27-2019)	1. <i>A. maxima</i> is pollinated by <i>Drosophila</i> spp. (Drosophilidae, Diptera), which utilize <i>Aristolochia</i> flowers as a breeding site only occasionally... The beetles and phorids may also play a role in pollination of <i>A. maxima</i> . 2. <i>Aristolochia maxima</i> is pollinated by flies. 3. This plant is attractive to bees, butterflies and/or birds
6.06		no evidence
6.07		no evidence
7.01		no evidence
7.02	1. Sunshien Seeds http://www.sunshine-seeds.de/Aristolochia-maxima-45669p.html?language=en (8-31-2015) 2. Top Tropicals https://toptropicals.com/catalog/uid/Aristolochia_maxima.htm (8-28-2015)	1. and 2. Traded as an ornamental for outside gardens.
7.03		no evidence
7.04	1. Sakai, Shoko. <i>Aristolochia</i> spp. (Aristolochiaceae) pollinated by flies breeding on decomposing flowers in Panama. 7 September 2001. 2. Meller, Barbara. 2014. The first fossil <i>Aristolochia</i> (Aristolochiaceae, Piperales) leaves from Austria. <i>Palaeontologia Electronica</i> Vol. 17, Issue 1;21A; 17p;	1. Fruits of <i>A. maxima</i> and <i>A. inflata</i> matured in early March and late January, respectively. They dehisce acropetally, and seeds are dispersed by wind. 2. Many extant <i>Aristolochia</i> species have winged seeds which might be adapted to wind dispersal but can also allow floating on a water surface for a longer time.
7.05	1. Meller, Barbara. 2014. The first fossil <i>Aristolochia</i> (Aristolochiaceae, Piperales) leaves from Austria. <i>Palaeontologia Electronica</i> Vol. 17, Issue 1;21A; 17p;	1. Many extant <i>Aristolochia</i> species have winged seeds which might be adapted to wind dispersal but can also allow floating on a water surface for a longer time.
7.06		No evidence
7.07	1. Flora of North America http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500161 (8-28-2015)	1. No evidence seeds are adapted for attachment.
7.08		no evidence
8.01	Sakai, Shoko. <i>Aristolochia</i> spp. (Aristolochiaceae) pollinated by flies breeding on decomposing flowers in Panama. 7 September 2001.	Mature fruits of <i>A. maxima</i> are cylindrical and large, measuring ~12 × 5 cm, with 520 ± 140 seeds (N = 10) (mean ± SD, throughout the text)
8.02		no evidence
8.03		no evidence
8.04		no evidence
8.05		no evidence