Taxon: Tradescantia spathacea **Family:** Commelinaceae

Common Name(s): boat-lily
Moses-in-the-cradle
oysterplant

Synonym(s): Rhoeo discolor (L'Hér.) Hance
Rhoeo spathacea (Sw.) Stearn
Tradescantia discolor L'Hér.

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 27 Feb 2015

WRA Score: 17.0 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Environmental Weed, Succulent Herb, Dense Groundcover, Spreads Vegetatively, Wind-Dispersed

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
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	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)	y
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		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals		
406	Host for recognized pests and pathogens		
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

Qsn #	Question	Answer Option	Answer
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	y
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		
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	2
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		
704	Propagules adapted to wind dispersal	y=1, n=-1	y
705	Propagules water dispersed	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	n
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	n
803	Well controlled by herbicides		
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)		

Supporting Data:

Qsn #	Question	Answer
101	**Is the species highly domesticated?**	**n**
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	[Assessment of wild type. Sterile cultivars may be less invasive] "Recent “dwarf ” cultivars apparently sterile or limited in their seed production, spreading primarily by vegetative offshoots where planted (Steve Kent, Tree of Life Nursery, 1998 personal communication)."

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	WRA Specialist. 2015. Personal Communication	NA

103	**Does the species have weedy races?**	
	Source(s)	**Notes**
	WRA Specialist. 2015. Personal Communication	NA

201	**Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"**	**High**
	Source(s)	**Notes**
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 26 Feb 2015]	"Native: NORTHERN AMERICA Southern Mexico: Mexico - Chiapas, Tabasco, Yucatan SOUTHERN AMERICA Caribbean: Antigua and Barbuda; Barbados; Grenada; Guadeloupe; Martinique; St. Lucia; St. Vincent and Grenadines Mesoamerica: Belize; Guatemala"

202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 26 Feb 2015]	

Qsn #	Question	Answer
203	**Broad climate suitability (environmental versatility)**	**n**
	Source(s)	**Notes**
	Missouri Botanical Gardens. 2015. Tradescantia spathacea . http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b653. [Accessed 26 Feb 2015]	"Winter hardy to USDA Zones 9-11 where it is noted for its ease of culture and tolerance for wide range of growing conditions. Best in filtered or part sun locations. Will grow in direct sun with some afternoon protection. Also grows in shade."
	Llamas, K.A. 2003. Tropical Flowering Plants. Timber Press, Portland, OR	"zones 9-11"

204	**Native or naturalized in regions with tropical or subtropical climates**	**y**
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Native to southern Mexico, Guatemala, and Belize and widely naturalized in the West Indies..."
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 26 Feb 2015]	"Native: NORTHERN AMERICA Southern Mexico: Mexico - Chiapas, Tabasco, Yucatan SOUTHERN AMERICA Caribbean: Antigua and Barbuda; Barbados; Grenada; Guadeloupe; Martinique; St. Lucia; St. Vincent and Grenadines Mesoamerica: Belize; Guatemala Naturalized: AFRICA Western Indian Ocean: Seychelles ASIA-TEMPERATE China: China [s.e.] ASIA-TROPICAL Malesia: Philippines NORTHERN AMERICA Southeastern U.S.A.: United States - Florida, Louisiana PACIFIC North-Central Pacific: United States - Hawaii Northwestern Pacific: Micronesia Southwestern Pacific: Fiji SOUTHERN AMERICA Caribbean: Bahamas; Cuba; Jamaica; Puerto Rico Mesoamerica: Honduras; Nicaragua Western South America: Ecuador; Peru"

205	**Does the species have a history of repeated introductions outside its natural range?**	**y**
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Distribution: Cultivated widely in the tropics and as a houseplant elsewhere (Small 1933)."

Qsn #	Question	Answer
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 26 Feb 2015]	Widely cultivated, naturalized in temperate Asia, s.e. United States (Florida), Seychelles, & Micronesia.

301	Naturalized beyond native range	y
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Native to southern Mexico, Guatemala, and Belize and widely naturalized in the West Indies..."
	Foxcroft, L. C., Richardson, D. M., & Wilson, J. R. 2008. Ornamental plants as invasive aliens: problems and solutions in Kruger National Park, South Africa. Environmental Management, 4 (1): 32-51	"Of the 257 alien plant species recorded (see Table 2), at least 85 taxa are known to be invasive somewhere in the world (using a rapid assessment in a commonly used internet search engine). The most widespread and common species include: ... Tradescantia spathacea..." ... "Table 2 Ornamental alien plant species recorded per camp in the Kruger National Park, indicating the number of camps in which each species has been recorded, as well as mode of introduction" ... "Tradescantia spathacea Sw. (= Rhoeo spathacea) - Evidence of naturalization? = Yes"
	Morgan, E. C., & Overholt, W. A. (2005). New records of invasive exotic plant species in St. Lucie county, Florida. Castanea, 70(1): 59-62	"Tradescantia spathacea Sw. (COMMELINACEAE)-Oyster Plant. Locally common in disturbed hammocks near residences which may be the source of parent plants. Morgan & Overholt 0026 (FLAS)."
	Frohlich, D. & Lau, A. 2010. New plant records from O'ahu for 2008. Bishop Museum Occasional Papers 107: 3-18	"Tradescantia spathacea, a bromeliad-like, low-maintenance species popular in cultivation as a ground cover, is native to southern Mexico, Guatemala, and Belize (Staples & Herbst 2005). It has been recorded as naturalized in the West Indies (Staples & Herbst 2005) and Florida, where it has invaded and disrupted native plant communities by forming a dense cover on the forest floor, preventing other plants from growing (Global Invasive Species Database 2005). This species is typified by its unique bromeliad-like habit and stiffly ascending, spirally-arranged, linear-lanceolate leaves with green upper sides and usually purple undersides. Inflorescences are axillary and usually sessile, with many flowers. Bracts are boat-shaped and nearly enclose the flowers, and are 2–4.5 cm x 2.54–5.6 cm. on o'ahu, an individual was collected growing out of a storm drain, and others were seen growing adventively and naturalized on several roadside surveys. Material examined. O'AHU: Makiki (UTM 620318 2357383), scraggly, etiolated herb ca 0.5 m tall, growing in sewer drain with Spathodea, obviously not planted, no flowers or fruit, 4 Sep 2008, OED 2008090401."
	Frohlich, D. & Lau, A. 2012. New plant records for the Hawaiian islands. Bishop Museum Occasional Papers 113: 27–54	"Tradescantia spathacea, or oyster plant, a sturdy plant commonly seen grown as a groundcover, was first collected as naturalized on o'ahu. on Kaua'i, several populations were seen growing out of a fallen log and scattered in the understory of a Casuarina grove. Material examined. KAUA'I: Kalāheo, on Papalina rd near Pālama St. lowland dry/mesic roadside area, growing on fallen log. Herb with purple undersides to leaves. No planted individuals in area. Scattered populations along road in dense Casuarina stand, 19 feb 2010, OED 2010021906."

Qsn #	Question	Answer
	Wiser, S. K., Drake, D. R., Burrows, L. E., & Sykes, W. R. (2002). The potential for long-term persistence of forest fragments on Tongatapu, a large island in western Polynesia. Journal of Biogeography, 29(5-6): 767-787	"When cover values are totalled across all plots, those alien species having the highest cover are the ancient introductions A. moluccana and O. compositus and the modern introductions M. indica, L. camara, Passiflora maliformis, E. mollis, O. hirtellus, Ipomoea alba, Tradescantia spathacea, and C. grandis."

302	Garden/amenity/disturbance weed	y
	Source(s)	**Notes**
	Llamas, K.A. 2003. Tropical Flowering Plants. Timber Press, Portland, OR	"Infests flower beds, container plants, palm trunks, gutters, and roof tiles. Fast-growing. Removal of seedlings before bloom strongly advised. A restricted species in South Florida."
	Missouri Botanical Gardens. 2015. Tradescantia spathacea . http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b653. [Accessed 26 Feb 2015]	[Environmental weed. See 3.04] " It has shown invasive tendencies by escaping gardens and naturalizing in parts of Louisiana and Florida."

303	Agricultural/forestry/horticultural weed	n
	Source(s)	**Notes**
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	No evidence [Environmental weed. See 3.04]

Qsn #	Question	Answer
304	**Environmental weed**	**y**
	Source(s)	**Notes**
	Langeland, K.A.& Stocker, R.K. 2001. Control of Non-native Plants in Natural Areas of Florida. SP 242. Institute of Food & Agricultural Sciences, University of Florida, Gainesville, FL	"Comments: Succulent with sword-shaped rosettes of leaves, green on upper surface, bright purple on lower surface; highly invasive, forming extensive colonies."
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Ecological Significance: Introduced from tropical America (Morton and Ledin 1952, Small 1933). A favorite garden plant in the tropics, noted in 1933 (Small) as naturalized in peninsular Florida, in cultivated grounds and pinelands. Also noted as naturalized in 1947 (Bailey and Bailey), in 1968 (Ward), and later as a rare escapee from cultivation in southwest Florida (Wunderlin 1982). Noted as spreading irrepressibly in south Florida, volunteering far from planting sites on rock walls and building roofs, and on trees (Morton 1976, 1982). Spreads readily from cultivation by both seed and self-propagation of offshoots (Watkins and Wolfe 1986). Forms dense ground cover and clumps quickly (Hunt 1977). Has escaped into coastal tropical hammocks, where the dense cover prevents seedling growth of native canopy tree species (D. F. Austin, Florida Atlantic University, 1996 personal communication)."
	Queensland Government. 2011.Weeds of Australia - Moses-in-the-cradle - Tradescantia spathacea. http://keyserver.lucidcentral.org/weeds/data/080c0106-040c-4508-8300-0b0a06060e01/media/Html/Tradescantia_spathacea.htm. [Accessed 26 Feb 2015]	"Moses-in-the-cradle (Tradescantia spathacea) is regarded as an environmental weed in Queensland and is also listed in the Global Invasive Species Database (GISD)."

305	Congeneric weed	y
	Source(s)	**Notes**
	Standish, R. J., Robertson, A. W., & Williams, P. A. (2001). The impact of an invasive weed Tradescantia fluminensis on native forest regeneration. Journal of Applied Ecology, 38(6): 1253-1263	"Tradescantia fluminensis is an invasive weed of New Zealand, eastern Australia and Florida, where it carpets the ground in canopy-depleted native forest remnants and prevents regeneration. The aim of our study was to determine the Tradescantia biomass levels at which this occurs."
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Tradescantia fluminensis" ... "Ecological Significance: Occurs most densely in partial or full shade of disturbed and undisturbed hammocks, particularly in moist or wet areas but also in well-drained woodlands and shady residential yards. Forms dense monocultural ground cover that can be 60 cm (2 ft) deep in overlapping leafy stems (Kelly and Skipworth 1984). Smothers native ground cover and seedlings of overstory species (K. C. Burks, Florida DEP, personal observation; Godfrey and Wooten 1979); acts similarly in remnant lowland forests of New Zealand (Kelly and Skipworth 1984), where it has become an important naturalarea pest. Also a weed of disturbed areas in New South Wales, Australia (Reed 1977), and an agricultural weed in its native range, particularly Brazil (Kelly and Skipworth 1984)."

401	Produces spines, thorns or burrs	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	[No evidence] "Botanical Description: Perennial herb with short, stout stem nearly hidden by overlapping leaf bases. Forms clumps by offshoots from fleshy rootstock. Leaves spreading-erect, closely overlapping in spiral pattern. Blades broadly linear, sharp-tipped, waxy, stiff, somewhat fleshy, 15-30 cm (6-12 in) long and 2.5-8 cm (1-3 in) wide; upper surfaces dark green or green with pale yellow stripes; lower surfaces usually purple. Flowers small, white, clustered within a folded (boat-shaped) bract (spathe) 3-4 cm long, short-stalked from leaf axils. Three petals, 6 stamens with hairy stalks; fruit a 2-seeded capsule, in clusters within the bract."

402	Allelopathic	
	Source(s)	**Notes**
	Fujii, Y., Parvez, S. S., Parvez, M., Ohmae, Y., & Iida, O. 2003. Screening of 239 medicinal plant species for allelopathic activity using the sandwich method. Weed Biology and Management, 3(4): 233-241	"Table 1. Screening of leaf litter of 239 medicinal plant species under different families using the sandwich method" [Rhoeo spathacea did not show stronger inhibitory activity greater than the mean in laboratory trials]

403	Parasitic	n
	Source(s)	**Notes**
	Flora of North America Editorial Committee. 2000, Flora of North America: North of Mexico, Volume 22. Oxford University Press, Oxford, UK	"Herbs, erect or ascending, rarely rooting at nodes." [No evidence. Commelinaceae]

404	Unpalatable to grazing animals	
	Source(s)	**Notes**
	Nellis, D.W. 1997. Poisonous plants and animals of Florida and the Caribbean. Pineapple Press Inc., Sarasota, FL	"Wildlife, including deer, raccoons and ducks, eat the plant."
	Backyard Gardener. 2015. Tradescantia spathacea. http://www.backyardgardener.com/plantname/pda_0e49.html. [Accessed 26 Feb 2015]	[Tolerates deer. May not be preferred browse] "Tolerances: deer, drought, heat & humidity, rabbits, seashore, slope,"
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	[Unknown] "Leaves eaten, or at least nibbled, by raccoons, ducks, and dogs (Morton 1982)."

Qsn #	Question	Answer
405	**Toxic to animals**	
	Source(s)	**Notes**
	Spoerke, D.G. & Smolinske, S.C. 1990. Toxicity of Houseplants. CRC Press, Boca Raton, FL	"Animals - Two wire-haired terriers that had been rolling around in a planting of Rhoeo spathacea developed eye irritation from being exposed to the juice from the broken leaves."
	Wiersema, J.H. & León, B. 1999. World Economic Plants: A Standard Reference. CRC Press, Boca Raton, FL	"Poison (mammals)"
	CABI. 2015.Tradescantia spathacea in: Invasive Species Compendium. www.cabi.org/isc	"The species can be poisonous in large quantities if swallowed. "
	Nellis, D.W. 1997. Poisonous plants and animals of Florida and the Caribbean. Pineapple Press Inc., Sarasota, FL	"Wildlife, including deer, raccoons and ducks, eat the plant."

406	**Host for recognized pests and pathogens**	
	Source(s)	**Notes**
	Gilman, E.F. 2007. Rhoeo spathacea Oyster Plant, Moses In The Cradle. FPS510 Revised. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu/. [Accessed 26 Feb 2015]	"Caterpillars and mites can be a problem for oyster plant." ... "Pests and Diseases - Fungus, root rot, and leaf spot can all be problems for oyster plant, especially if plants receive irrigation."
	Missouri Botanical Gardens. 2015. Tradescantia spathacea . http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b653. [Accessed 27 Feb 2015]	"No serious insect or disease problems. Rot may occur if soils are kept too moist. Watch for mealybugs, scale, whiteflies and spider mites."
	Standish, R.J. 2001. Prospects for biological control of Tradescantia fluminensis Vell. (Commelinaceae). DOC Science Internal Series 9. New Zealand Department of Conservation, Wellington, New Zealand	Host for Phytophthora sp., Pythium sp., Alternaria sp., Curvularia eragrostidis, Colletotrichum sp., Phyllosticta sp., Rhizoctonia solani.

407	**Causes allergies or is otherwise toxic to humans**	**y**
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Can cause in humans a stinging, itching, and/or rash from contact with plant surfaces or the copious astringent juice (Morton 1982)."
	Nellis, D.W. 1997. Poisonous plants and animals of Florida and the Caribbean. Pineapple Press Inc., Sarasota, FL	[Unlikely to be consumed by humans in large quantities, but skin irritation is likely] "The watery juice reddens the skin and provokes a stinging, itching, burning sensation. Gardeners often suffer a rash from extensive skin contact with the plant or its sap. Transient pain and irritation result from a droplet of the juice contacting the eye. Burning of the mouth and throat, stomach pain and intestinal irritation result from internal use."

408	**Creates a fire hazard in natural ecosystems**	**n**
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Perennial herb with short, stout stem nearly hidden by overlapping leaf bases." [No evidence. Unlikely. May deter fire in areas where it grows]

Qsn #	Question	Answer
	Langeland, K.A.& Stocker, R.K. 2001. Control of Non-native Plants in Natural Areas of Florida. SP 242. Institute of Food & Agricultural Sciences, University of Florida, Gainesville, FL	"Succulent with sword-shaped rosettes of leaves, green on upper surface, bright purple on lower surface; highly invasive, forming extensive colonies." [Succulent habit may reduce fire risk]

409	Is a shade tolerant plant at some stage of its life cycle	y
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"It thrives in the rock garden under full sun but also forms a luxuriant carpet in the shade and can be used indoors under bright light."
	Gilman, E.F. 2007. Rhoeo spathacea Oyster Plant, Moses In The Cradle. FPS510 Revised. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu/. [Accessed 26 Feb 2015]	"Light requirement: plant grows in part shade/part sun; plant grows in the shade"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	**Notes**
	Floridata. 2012. Tradescantia spathacea. http://www.floridata.com/ref/T/trad_spa.cfm. [Accessed 27 Feb 2015]	"Although it likes soil with substantial organic matter, oysterplant will grow in sand or even coral rock."
	Gilman, E.F. 2007. Rhoeo spathacea Oyster Plant, Moses In The Cradle. FPS510 Revised. University of Florida, IFAS, Gainesville, FL. http://edis.ifas.ufl.edu/. [Accessed 27 Feb 2015]	"Soil tolerances: alkaline; clay; sand; acidic; loam; occasionally wet"

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Erect rosette plant, bromeliad-like...."

412	Forms dense thickets	y
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Forms dense ground cover and clumps quickly (Hunt 1977). Has escaped into coastal tropical hammocks, where the dense cover prevents seedling growth of native canopy tree species (D. F. Austin, Florida Atlantic University, 1996 personal communication)."

Qsn #	Question	Answer
501	**Aquatic**	**n**
	Source(s)	**Notes**
	Weber, E. 2003. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Terrestrial] "Coastal tropical hammocks adn scrub, pinelands, disturbed sites. Its dense clumps form a continuous cover on the floor, preventing growth and establishment of native plants. Tree seedlings are unable to grow in these stands"

502	**Grass**	**n**
	Source(s)	**Notes**
	Flora of North America Editorial Committee. 2000, Flora of North America: North of Mexico, Volume 22. Oxford University Press, Oxford, UK	Commelinaceae

503	**Nitrogen fixing woody plant**	**n**
	Source(s)	**Notes**
	Flora of North America Editorial Committee. 2000, Flora of North America: North of Mexico, Volume 22. Oxford University Press, Oxford, UK	Commelinaceae

504	**Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)**	**n**
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Perennial herb with short, stout stem nearly hidden by overlapping leaf bases. Forms clumps by offshoots from fleshy rootstock."

601	**Evidence of substantial reproductive failure in native habitat**	**n**
	Source(s)	**Notes**
	CABI. 2015.Tradescantia spathacea in: Invasive Species Compendium. www.cabi.org/isc	No evidence

602	**Produces viable seed**	**y**
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Although it is possible to do so, oyster plant is seldom grown from seed."
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Dispersed by seed to aerial surfaces such as walls, but vector of transport uncertain, perhaps wind. Recent “dwarf ” cultivars apparently sterile or limited in their seed production, spreading primarily by vegetative offshoots where planted (Steve Kent, Tree of Life Nursery, 1998 personal communication)."

Qsn #	Question	Answer
	Missouri Botanical Gardens. 2015. Tradescantia spathacea . http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b653. [Accessed 26 Feb 2015]	"Easily propagated by seeds, stem cuttings or division."

603	Hybridizes naturally	
	Source(s)	**Notes**
	Anderson, E., & Hubricht, L. (1938). Hybridization in Tradescantia. III. The evidence for introgressive hybridization. American Journal of Botany, 25(6): 396-402	[Unknown. Hybridization occurs in genus] "Previous studies of the American species of Tradescantia have shown that interspecific hybridization is comparatively frequent between the eighteen or more species closely related to Tradescantia virginiana. The analysis in this research "further demonstrates that introgression is roughly proportional to the frequency of the introgressive species and that it is greater when plants are growing as weeds than when they occupy more natural habitats"

604	Self-compatible or apomictic	y
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Cross-pollinated by insects, or self-pollinated (Zomlefer 1983)."
	Moriuchi, J.B. 2006. A Comparison of Invasive and Noninvasive Commelinaceae in a Phylogentic Context. PhD Dissertation. Florida State University, Tallahassee, FL	"Table 28. Continuous characters used for comparative phylogenetic analysis." [Tradescantia spathacea - Autogamous selfing (proportion) = 0.286 (n = 70, Burns, this study)]

605	Requires specialist pollinators	n
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Cross-pollinated by insects, or self-pollinated (Zomlefer 1983)."

606	Reproduction by vegetative fragmentation	y
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"Propagation is by division of large clumps or replanting suckers that form around the base of mature plants."
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Roots renewed easily when pulled up or broken (Morton 1982)."

607	Minimum generative time (years)	2
	Source(s)	**Notes**
	Llamas, K.A. 2003. Tropical Flowering Plants. Timber Press, Portland, OR	"Fast-growing. Removal of seedlings before bloom strongly advised."

Qsn #	Question	Answer
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	[Probably can reproduce, at least vegetatively, in 1-2 years] "Spreads readily from cultivation by both seed and self-propagation of offshoots (Watkins and Wolfe 1986)." ... "Roots renewed easily when pulled up or broken (Morton 1982)." ... "Flowers all year (Wunderlin 1982),"

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y
	Source(s)	**Notes**
	Global Invasive Species Database. 2006. Tradescantia spathacea. http://www.issg.org/database/species/ecology.asp?si=493&fr=1&sts=sss&lang=EN. [Accessed 27 Feb 2015]	"Garden escape/garden waste: Discarded garden waste. Commonly planted (often in cemeteries) and escaping in Tonga. (PIER, 2002)."

702	Propagules dispersed intentionally by people	y
	Source(s)	**Notes**
	Staples, G.W. & Herbst, D.R. 2005. A Tropical Garden Flora - Plants Cultivated in the Hawaiian Islands and Other Tropical Places. Bishop Museum Press, Honolulu, HI	"...a common ornamental in Hawai'i and throughout the tropics."
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Distribution: Cultivated widely in the tropics and as a houseplant elsewhere (Small 1933)."

703	Propagules likely to disperse as a produce contaminant	
	Source(s)	**Notes**
	Llamas, K.A. 2003. Tropical Flowering Plants. Timber Press, Portland, OR	[Potential for accidental dispersal through potted plants or potting material exists] "Infests flower beds, container plants, palm trunks, gutters, and roof tiles. Fast-growing. Removal of seedlings before bloom strongly advised. A restricted species in South Florida."

704	Propagules adapted to wind dispersal	y
	Source(s)	**Notes**
	CABI. 2015.Tradescantia spathacea in: Invasive Species Compendium. www.cabi.org/isc	"T. spathacea can be dispersed by seeds, cuttings, offshoots or root fragments. Seeds are dispersed by wind, and roots resprout easily when pulled up or broken (Morton, 1982; Richard and Ramey, 2007)."

705	Propagules water dispersed	n
	Source(s)	**Notes**
	CABI. 2015.Tradescantia spathacea in: Invasive Species Compendium. www.cabi.org/isc	"T. spathacea can be dispersed by seeds, cuttings, offshoots or root fragments. Seeds are dispersed by wind, and roots resprout easily when pulled up or broken (Morton, 1982; Richard and Ramey, 2007)."

706	Propagules bird dispersed	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"fruit a 2-seeded capsule, in clusters within the bract."
	CABI. 2015.Tradescantia spathacea in: Invasive Species Compendium. www.cabi.org/isc	"T. spathacea can be dispersed by seeds, cuttings, offshoots or root fragments. Seeds are dispersed by wind, and roots resprout easily when pulled up or broken (Morton, 1982; Richard and Ramey, 2007). Damaged plants and plant fragments can also resprout from the roots (Langeland and Burks, 2008)."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	**Notes**
	CABI. 2015.Tradescantia spathacea in: Invasive Species Compendium. www.cabi.org/isc	"Capsules 3-valved; seeds rugose-reticulate, with usually a linear hilum."
	Acevedo-Rodríguez, P. & Strong, M.T. 2005. Monocotyledons and Gymnosperms of Puerto Rico and the Virgin Islands. Contributions from the United States National Herbarium 52: 1-415	[No means of external attachment] "Capsules 3-valved; seeds rugose-reticulate, with usually a linear hilum." ... "Seeds oblong ellipsoid with linear hilum."

708	Propagules survive passage through the gut	n
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	[Unlikely. Not ingested] "Fruit a two-seeded capsule in clusters in the bract"

801	Prolific seed production (>1000/m2)	
	Source(s)	**Notes**
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	[Unknown] "Spreads readily from cultivation by both seed and self-propagation of offshoots (Watkins and Wolfe 1986)."

802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	**Notes**
	Dave's Garden. 2015. PlantFiles: Moses-in-a-Basket, Boatlily, Oyster Plant, Christ in the Cradle - Tradescantia spathacea. http://davesgarden.com/guides/pf/go/650/. [Accessed 27 Feb 2015]	"Seed does not store well; sow as soon as possible"

Qsn #	Question	Answer
803	**Well controlled by herbicides**	
	Source(s)	**Notes**
	CABI. 2015.Tradescantia spathacea in: Invasive Species Compendium. www.cabi.org/isc	[Efficacy unknown] "In Florida, experts have recommended foliar treatment with 3-10% triclopyr in water or oil applied to buds, or 2% glyphosate (Florida Exotic Pest Plant Council, 2011)."

804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	**y**
	Source(s)	**Notes**
	Weber, E. 2003. Invasive Plant Species of the World. A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	"Damaged plants easily resprout from the root."
	Langeland, K.A. & Burks, K.C. (eds.). 2008. Identification and Biology of Non-Native Plants in Florida's Natural Areas. UF/IFAS Distribution, Gainesville, FL	"Roots renewed easily when pulled up or broken (Morton 1982)."

805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	
	Source(s)	**Notes**
	WRA Specialist. 2015. Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits
• Thrives in tropical climates
• Widely naturalized
• Garden weed
• Environmental weed
• Other Tradescantia species have become invasive
• Toxic to animals & people if consumed; sap causes dermatitis
• Shade-tolerant
• Tolerates many soil types
• Forms dense ground cover that excludes other vegetation
• Reproduces by seeds and vegetatively
• Self-compatible
• Seeds dispersed by wing & intentionally by people
• Damaged plants easily resprout from the root

Low Risk Traits
• Unarmed (no spines, thorns or burrs)
• Ornamental
• Seeds do not store well and may not form a persistent seed bank
• Herbicides might provide effective control