

Taxon: *Schaueria calytricha* (Hook.) A.L.A.Côrtes

Family: Acanthaceae

Common Name(s): golden plume
hairy yellow-headed justicia

Synonym(s): *Justicia calycotricha* Link & Otto
Justicia calytricha Hook.
Justicia flavicoma Lindl.
Schaueria calycotricha (Link & Otto)
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Assessor: Chuck Chimera

Status: Assessor Approved

End Date: 25 Apr 2023

WRA Score: -3.0

Designation: L

Rating: Low Risk

Keywords: Tropical Herb/Shrub, Ornamental, Shade Tolerant, Butterfly-Pollinated, Ballistic Dispersal

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	?
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	n
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		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
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

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	n
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		
604	Self-compatible or apomictic		
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)		
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		
705	Propagules water dispersed		
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/m ²)	y=1, n=-1	n
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
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
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	[No evidence] "Distribution area and habitat: Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 m a.s.l."
102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	NA
103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2023). 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
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Distribution area and habitat: Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 m a. s. l."
202	Quality of climate match data	High
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Distribution area and habitat: Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 m a. s. l."
203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	The National Gardening Association. (2023). Golden Plume (<i>Schaueria calytricha</i>). https://garden.org/plants/view/462559/Golden-Plume-Schaueria-calytricha/ . [Accessed 17 Apr 2023]	"Minimum cold hardiness: Zone 10a -1.1 °C (30 °F) to +1.7 °C (35 °F) Maximum recommended zone: Zone 11"
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	[<1000 m elevation range] "Distribution area and habitat: Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 ma. s. l"
204	Native or naturalized in regions with tropical or subtropical climates	y

Qsn #	Question	Answer
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Distribution area and habitat: Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 m a. s. l."
	Gallaher, T.J., Brock, K., Kennedy, B.H., Imada, C.T., Imada, K., & Walvoord, N. (2020). <i>Plants of Hawai'i</i> . http://www.plantsofhawaii.org . [Accessed 24 Apr 2023]	"Only found in cultivation"

205	Does the species have a history of repeated introductions outside its natural range?	?
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Fortunately, the species is protected in the Serra da Tiririca State Park (Niterói, Rio de Janeiro state) and is cultivated in many botanical gardens around the world."
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Ornamental Dispersed by: Humans"
	Kwan, C. (2023). Consulting arborist. Pers. Comm. 24 March	[Cultivated on Oahu] "A guy that I've worked with before sent me this photo this morning and asked for plant ID. I used an app, and it came up with golden plume, <i>Schaueria calicotricha</i> . I Googled for it, and that appears to be correct. It's an ornamental shrub from Brazil. I asked him where the photo was from. He said it's in his backyard. He got seeds for the plant from one of his clients who had it in her yard. I, so apparently it sets seeds in Hawaii. "
	WRA Specialist. (2023). Personal Communication	Cultivated as an ornamental. Unclear how widely it has been introduced into regions with tropical climates.

301	Naturalized beyond native range	n
	Source(s)	Notes
	Gallaher, T.J., Brock, K., Kennedy, B.H., Imada, C.T., Imada, K., & Walvoord, N. (2020). <i>Plants of Hawai'i</i> . http://www.plantsofhawaii.org . [Accessed 17 Apr 2023]	"Only found in cultivation"
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	GBIF Secretariat (2023). <i>Schaueria calytricha</i> (Hook.) A.L.A.Côrtes. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/8844069 . [Accessed 17 Apr 2023]	No evidence

302	Garden/amenity/disturbance weed	n
	Source(s)	Notes
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	Listed as a weed, but a subsequent review of the supporting reference did not provide evidence for this designation.
	GBIF Secretariat (2023). <i>Schaueria calytricha</i> (Hook.) A.L.A.Côrtes. GBIF Backbone Taxonomy. Checklist dataset. https://www.gbif.org/species/8844069 . [Accessed]	No evidence

Qsn #	Question	Answer
	Meyer, J. Y., & Lavergne, C. (2004). Beautés fatales: Acanthaceae species as invasive alien plants on tropical Indo-Pacific Islands. Diversity and Distributions, 10(5-6): 333-347	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	Notes
	Meyer, J. Y., & Lavergne, C. (2004). Beautés fatales: Acanthaceae species as invasive alien plants on tropical Indo-Pacific Islands. Diversity and Distributions, 10(5-6): 333-347	No evidence
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

304	Environmental weed	n
	Source(s)	Notes
	Meyer, J. Y., & Lavergne, C. (2004). Beautés fatales: Acanthaceae species as invasive alien plants on tropical Indo-Pacific Islands. Diversity and Distributions, 10(5-6): 333-347	No evidence
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

305	Congeneric weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	Meyer, J. Y., & Lavergne, C. (2004). Beautés fatales: Acanthaceae species as invasive alien plants on tropical Indo-Pacific Islands. Diversity and Distributions, 10(5-6): 333-347	No evidence, although several other Acanthaceae have become invasive

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). Plant Systematics and Evolution, 302, 819-851	[No evidence] "Shrubs 0.8-1.5 m tall; young stems subquadrate, glabrous or hirsute with eglandular trichomes 0.2-0.5 mm long concentrated in 2 lines. Petiole 1-8.5 cm long; blade 8-18.5 x 2.7-8 cm, ovate to lanceolate or rarely oblong, cuneate to cordate or rarely rounded at base, acute to attenuate at apex, membranaceous, surfaces glabrous or with eglandular trichomes (usually restricted to major veins, at least on adaxial surface) 0.1-0.5 mm long, margin repand with appressed eglandular trichomes 0.08-0.2 mm long."

Qsn #	Question	Answer
402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Shrubs 0.8-1.5 m tall; young stems subquadrate, glabrous or hirsute with eglandular trichomes 0.2-0.5 mm long concentrated in 2 lines." [No evidence]

404	Unpalatable to grazing animals	
	Source(s)	Notes
	Daniel, T. F. (2004). <i>Acanthaceae of Sonora: taxonomy and phytogeography</i> . <i>California Academy of Sciences</i> 55: 690-805	[Unknown for <i>Schaueria calytricha</i>] "Acanthaceae are generally palatable to animals that ingest them. Virtually all Sonoran Acanthaceae serve as browse for both native animals and livestock. Hence, they are often found grazed back to or nearly to the ground; more luxuriant growth is often encountered among cacti and thorny shrubs that make it less accessible to large browsers. Felger (1999) indicated that <i>Holographis virgata</i> near Guaymas is heavily browsed by cattle, deer, and rabbits. He also noted (2000:64) that in open places in northwestern Sonora, <i>Carlowrightia arizonica</i> "is almost always grazed by rabbits, rodents, and especially chuckwallas, which reduce the plant to a mass of short, stubby stems." Yetman and Van Devender (2002) noted the importance of numerous Acanthaceae as forage for livestock. One of their informants noted that in the tropical deciduous forests of southern Sonora many goats and cows depend on these palatable and abundant plants for survival following the regional rains."

405	Toxic to animals	n
	Source(s)	Notes
	Quattrocchi, U. (2012). <i>CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology</i> . CRC Press, Boca Raton, FL	No evidence
	Wagstaff, D.J. (2008). <i>International poisonous plants checklist: an evidence-based reference</i> . CRC Press, Boca Raton, FL	No evidence

406	Host for recognized pests and pathogens	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	Unknown

407	Causes allergies or is otherwise toxic to humans	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Quattrocchi, U. (2012). CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence
	Wagstaff, D.J. (2008). International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	[No evidence. In rainforest habitat] "Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 ma. s. l."

409	Is a shade tolerant plant at some stage of its life cycle	y
	Source(s)	Notes
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Light Preference Full Sun, Semi-Shade"
	The National Gardening Association. (2023). Golden Plume (<i>Schaueria calytricha</i>). https://garden.org/plants/view/462559/Golden-Plume-Schaueria-calytricha/ . [Accessed 25 Apr 2023]	"Sun Requirements: Partial or Dappled Shade Partial Shade to Full Shade"

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	n
	Source(s)	Notes
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Plant & Rootzone Preference - Tolerance: Easy to Grow, Fertile Loamy Soils, Well-Drained Soils"
	The National Gardening Association. (2023). Golden Plume (<i>Schaueria calytricha</i>). https://garden.org/plants/view/462559/Golden-Plume-Schaueria-calytricha/ . [Accessed 25 Apr 2023]	"Soil pH Preferences: Slightly acid (6.1 – 6.5) Neutral (6.6 – 7.3)"

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Shrubs 0.8-1.5 m tall; young stems subquadrate, glabrous or hirsute with eglandular trichomes 0.2-0.5 mm long concentrated in 2 lines."

412	Forms dense thickets	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). Plant Systematics and Evolution, 302, 819-851	"Distribution area and habitat: Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 ma. s. l." [No evidence in native range]

501	Aquatic	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). Plant Systematics and Evolution, 302, 819-851	[Terrestrial] "Southeastern Brazil; Rio de Janeiro state; in rain forests, from 150 to 700 ma. s. l."

502	Grass	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). Plant Systematics and Evolution, 302, 819-851	Acanthaceae

503	Nitrogen fixing woody plant	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). Plant Systematics and Evolution, 302, 819-851	Acanthaceae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). Plant Systematics and Evolution, 302, 819-851	"Shrubs 0.8-1.5 m tall; young stems subquadrate, glabrous or hirsute with eglandular trichomes 0.2-0.5 mm long concentrated in 2 lines."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). Plant Systematics and Evolution, 302, 819-851	"Conservation status: <i>Schaueria calytricha</i> is known from 46 collections corresponding to ten subpopulations and EOO of 420 km ² . We observed subpopulations with ca. 200 mature individuals, but we did not find the species in Caho Frio and Arraial do Caho. In addition, the areas where the species is found in the city of Rio de Janeiro and vicinity are touristic and suffer high anthropic pressures, suggesting a decline of the species distribution range and quality of habitat. Therefore, the conservation status of this species is assessed as Endangered (EN), for reasons Blab(i, iii) under IUCN (2014) guidelines."

602	Produces viable seed	y
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Qsn #	Question	Answer
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Capsules 1.2-1.5 cm long, stipe 6-7 mm long, glabrous; seeds ca. 3.2 mm wide, lenticular, reticulate with microgranules when immature, tuberculate, margin without tubercles."
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Fruits: Fruits are known as capsules and contain only a few seeds. They open forcefully with explosive dehiscence. Seeds are attached to hook-like structures inside the fruit which may cause seeds to fly further away from the plant during dehiscence."
	Kwan, C. (2023). Consulting arborist. Pers. Comm. 24 March	[Sets seed on Oahu, Hawaiian Islands] "A guy that I've worked with before sent me this photo this morning and asked for plant ID. I used an app, and it came up with golden plume, <i>Schaueria calicotricha</i> . I Googled for it, and that appears to be correct. It's an ornamental shrub from Brazil. I asked him where the photo was from. He said it's in his backyard. He got seeds for the plant from one of his clients who had it in her yard., so apparently it sets seeds in Hawaii. "

603	Hybridizes naturally	
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	Unknown. No evidence found.

604	Self-compatible or apomictic	
	Source(s)	Notes
	Culley, T. M., & Klooster, M. R. (2007). The Cleistogamous Breeding System: A Review of Its Frequency, Evolution, and Ecology in Angiosperms. <i>Botanical Review</i> , 73(1), 1-30	"Table I List of cleistogamous families and genera in angiosperms. Shown are the number of species within each genera classified as exhibiting complete, induced, dimorphic, or unclear cleistogamy. Additional references for some species can be found in Lord (1981)" [Unknown. Cleistogamy reported from the genus <i>Schaueria</i>]

605	Requires specialist pollinators	n
	Source(s)	Notes
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Pollination Method(s): Biotic (Fauna) (Insects (Butterfly, Moth))"

606	Reproduction by vegetative fragmentation	
	Source(s)	Notes
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Propagation Method: Stem Cutting" [Unknown if natural vegetative spread occurs. No evidence found]

Qsn #	Question	Answer
607	Minimum generative time (years)	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	Unknown

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Capsules 1.2-1.5 cm long, stipe 6-7 mm long, glabrous; seeds ca. 3.2 mm wide, lenticular, reticulate with microgranules when immature, tuberculate, margin without tubercles." [Seeds small, but otherwise lack means of external attachment]
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Seed or Spore Dispersal: Abiotic (Explosive Dehiscence)"

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Fortunately, the species is protected in the Serra da Tiririca State Park (Niterói, Rio de Janeiro state) and is cultivated in many botanical gardens around the world."
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Ornamental Dispersed by: Humans"

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	Notes
	Randall, R.P. (2017). <i>A Global Compendium of Weeds</i> . 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Ornamental Dispersed by: Humans"

704	Propagules adapted to wind dispersal	
	Source(s)	Notes
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Seed or Spore Dispersal: Abiotic (Explosive Dehiscence)" [Wind likely facilitates the distance and direction of seeds]

705	Propagules water dispersed	
	Source(s)	Notes
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Seed or Spore Dispersal: Abiotic (Explosive Dehiscence)" [No direct evidence of dispersal by water, but secondary dispersal may be a possibility for small-seeded species]

706	Propagules bird dispersed	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Capsules 1.2-1.5 cm long, stipe 6-7 mm long, glabrous; seeds ca. 3.2 mm wide, lenticular, reticulate with microgranules when immature, tuberculate, margin without tubercles." [Not fleshy-fruited]
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Seed or Spore Dispersal: Abiotic (Explosive Dehiscence)"

707	Propagules dispersed by other animals (externally)	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Capsules 1.2-1.5 cm long, stipe 6-7 mm long, glabrous; seeds ca. 3.2 mm wide, lenticular, reticulate with microgranules when immature, tuberculate, margin without tubercles." [Unlikely, as seeds lack means of external attachment]
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Seed or Spore Dispersal: Abiotic (Explosive Dehiscence)"

708	Propagules survive passage through the gut	n
	Source(s)	Notes
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	"Capsules 1.2-1.5 cm long, stipe 6-7 mm long, glabrous; seeds ca. 3.2 mm wide, lenticular, reticulate with microgranules when immature, tuberculate, margin without tubercles." [Fruit morphology suggests seeds are unlikely to be consumed and internally dispersed]
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	Seed or Spore Dispersal: Abiotic (Explosive Dehiscence)

801	Prolific seed production (>1000/m2)	n
	Source(s)	Notes
	Flora Fauna Web. (2023). <i>Schaueria calytricha</i> . https://www.nparks.gov.sg/florafaunaweb/flora/3/7/3724 . [Accessed 25 Apr 2023]	"Fruits: Fruits are known as capsules and contain only a few seeds. They open forcefully with explosive dehiscence. Seeds are attached to hook-like structures inside the fruit which may cause seeds to fly further away from the plant during dehiscence."
	Côrtes, A. L. A., Daniel, T. F., & Rapini, A. (2016). Taxonomic revision of the genus <i>Schaueria</i> (Acanthaceae). <i>Plant Systematics and Evolution</i> , 302, 819-851	[Generic description. 4-seeded capsules] "Capsules stipitate, head clavate, retinacula present, septa with retinacula remaining attached to inner wall of mature capsule; seeds 4, lenticular to obovoid, brown when mature, usually reticulate, tuberculate, margin with tubercles present or absent."

Qsn #	Question	Answer
802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	Notes
	Baskin, C.C. & Baskin, J.M. (2014). <i>Seeds Ecology, Biogeography, and Evolution of Dormancy and Germination</i> . Second Edition. Academic Press, San Francisco, CA	Unknown. No information on seed storage or longevity reported for genus.

803	Well controlled by herbicides	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species.

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	Unknown

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2023). Personal Communication	Unknown

Summary of Risk Traits:

Schaueria calytricha is an erect perennial shrub native to rainforests of southeastern Brazil. Also known as Golden Plume, its white or off-white flowers with yellow or orange accents attract butterflies and hummingbirds. Cultivated as an ornamental, no reports of naturalization or invasiveness have been documented in the genus, although the ballistically dispersed seeds suggest local naturalization may be possible.

High Risk / Undesirable Traits

- Grows and could spread in regions with tropical climates.
- Shade-tolerant.
- Reproduces by seeds.
- Seeds dispersed by explosive dehiscence and through intentional cultivation.
- Gaps in biological and ecological information may reduce accuracy of the risk prediction.

Low Risk Traits

- No reports of naturalization or invasiveness are documented in this species or in the genus.
- Unarmed (no spines, thorns, or burrs).
- Limited seed production (4-seeded capsules).