Taxon: Sauvagesia erecta L. **Family:** Ochnaceae

Common Name(s): creole tea **Synonym(s):** Sauvagesia adima Aubl.
Sauvagesia floribunda A. Chev.

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 10 Dec 2018

WRA Score: 7.0 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Naturalized, Pantropical Weed, Self-Compatible, Annual, Autochorous

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	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	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		
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed		
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
409	Is a shade tolerant plant at some stage of its life cycle		

Qsn #	Question	Answer Option	Answer
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		
411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets		
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	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	1
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	y
702	Propagules dispersed intentionally by people		
703	Propagules likely to disperse as a produce contaminant		
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	n
707	Propagules dispersed by other animals (externally)		
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)		
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**
	Hanelt, P. (ed.). 2001. Mansfeld's Encyclopedia of Agricultural and Horticultural Crops, Volume 3. Springer-Verlag, Berlin, Heidelberg, New York	"Tropical America and Africa. Cultivated at St. Lucia (Lesser Antilles) as a tea plant and grown in eastern Ecuador for medicinal purposes." [Cultivated, but no evidence of domestication]

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	WRA Specialist. 2018. Personal Communication	NA

103	**Does the species have weedy races?**	
	Source(s)	**Notes**
	WRA Specialist. 2018. Personal Communication	NA

Qsn #	Question	Answer
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, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 5 Dec 2018]	"Native Africa NORTHEAST TROPICAL AFRICA: Sudan EAST TROPICAL AFRICA: Kenya, Tanzania, Uganda WEST-CENTRAL TROPICAL AFRICA: Central African Republic, Congo, Zaire WEST TROPICAL AFRICA: Cote D'Ivoire, Ghana, Guinea, Nigeria, Senegal SOUTH TROPICAL AFRICA: Angola, Mozambique WESTERN INDIAN OCEAN: Madagascar Northern America SOUTHERN MEXICO: Mexico [Chiapas, Oaxaca, Veracruz (s.)] Southern America CARIBBEAN: Cuba, Dominican Republic, Grenada, Guadeloupe, Martinique, Montserrat, Netherlands Antilles, [Saba] Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines [St. Vincent] CENTRAL AMERICA: Belize, Costa Rica, El Salvador, Guatemala, [Alta Verapaz, Huehuetenango, Izabal] Honduras, Nicaragua, Panama NORTHERN SOUTH AMERICA: French Guiana, Guyana, Suriname, Venezuela BRAZIL: Brazil WESTERN SOUTH AMERICA: Bolivia, Ecuador, [Carchi, Cotopaxi, Esmeraldas, Los Rios, Napo, Pastaza, Pichincha] Peru [Amazonas, Apurimac, Cuzco, Huanuco, Junin, Loreto, Madre de Dios, Pasco, Puno, San Martin] SOUTHERN SOUTH AMERICA: Argentina, [Corrientes, Misiones] Paraguay"

202	Quality of climate match data	High
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 5 Dec 2018]	

203	Broad climate suitability (environmental versatility)	y
	Source(s)	**Notes**
	Tropicos.org. 2018. Missouri Botanical Garden. http://www.tropicos.org/. [Accessed 6 Dec 2018]	Collected from 0 - 2300 m elevation, demonstrating environmental versatility

204	Native or naturalized in regions with tropical or subtropical climates	y

Qsn #	Question	Answer
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 5 Dec 2018]	"Native Africa NORTHEAST TROPICAL AFRICA: Sudan EAST TROPICAL AFRICA: Kenya, Tanzania, Uganda WEST-CENTRAL TROPICAL AFRICA: Central African Republic, Congo, Zaire WEST TROPICAL AFRICA: Cote D'Ivoire, Ghana, Guinea, Nigeria, Senegal SOUTH TROPICAL AFRICA: Angola, Mozambique WESTERN INDIAN OCEAN: Madagascar Northern America SOUTHERN MEXICO: Mexico [Chiapas, Oaxaca, Veracruz (s.)] Southern America CARIBBEAN: Cuba, Dominican Republic, Grenada, Guadeloupe, Martinique, Montserrat, Netherlands Antilles, [Saba] Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines [St. Vincent] CENTRAL AMERICA: Belize, Costa Rica, El Salvador, Guatemala, [Alta Verapaz, Huehuetenango, Izabal] Honduras, Nicaragua, Panama NORTHERN SOUTH AMERICA: French Guiana, Guyana, Suriname, Venezuela BRAZIL: Brazil WESTERN SOUTH AMERICA: Bolivia, Ecuador, [Carchi, Cotopaxi, Esmeraldas, Los Rios, Napo, Pastaza, Pichincha] Peru [Amazonas, Apurimac, Cuzco, Huanuco, Junin, Loreto, Madre de Dios, Pasco, Puno, San Martin] SOUTHERN SOUTH AMERICA: Argentina, [Corrientes, Misiones] Paraguay"
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI.	"Possibly native to Africa (Dwyer, 1967), now naturalized throughout the tropics; in Hawai'i apparently recently naturalized in pastures and along roadsides at 425 m in the vicinity of Keopuka Loa, Moloka'i, and known only from several collections made in 1985 and 1986 (Hobdy 2424, 2554-2560, BISH)."

205	**Does the species have a history of repeated introductions outside its natural range?**	**y**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI.	"Possibly native to Africa (Dwyer, 1967), now naturalized throughout the tropics; in Hawai'i apparently recently naturalized in pastures and along roadsides"

301	**Naturalized beyond native range**	**y**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI.	"Possibly native to Africa (Dwyer, 1967), now naturalized throughout the tropics; in Hawai'i apparently recently naturalized in pastures and along roadsides at 425 m in the vicinity of Keopuka Loa, Moloka'i, and known only from several collections made in 1985 and 1986 (Hobdy 2424, 2554-2560, BISH)."

Qsn #	Question	Answer
	Starr, F., Starr, K. & Loope, L.L. 2004. New plant records from the Hawaiian Archipelago. Bishop Museum Occasional Papers 79: 20-30	"Sauvagesia erecta L. New island record Previously known from Moloka'i (Wagner et al., 1990), S. erecta is now also known from Maui where it is along roads on the moist windward coast of East Maui. This collection represents a new island record for Maui. Material examined: MAUI: East Maui, Wahinepe'e, a couple small patches growing in first clearing after bamboo forest at Waikamoi/Wahinepe'e gate on Häna Hwy, 800 ft [243 m], 3 Aug 2002, Starr & Starr 020803-3."

302	Garden/amenity/disturbance weed	y
	Source(s)	**Notes**
	Woodson, Jr., R. E.. Schery, R. W. & Dwyer, J. D. (1967). Flora of Panama. Part VI. Family 119. Ochnaceae. Annals of the Missouri Botanical Garden, 54(1): 25-40	"A pantropic weed."
	Liogier, H.A. (1994). Descriptive Flora of Puerto Rico and Adjacent Islands. Spermatophyta, Volume III. Cyrillaceae to Myrtaceae. La Editorial, UPR, San Juan, Puerto Rico	"a pantropical weed."
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i apparently recently naturalized in pastures and along roadsides at 425 m in the vicinity of Keopuka Loa" [Naturalized in pastures & roadsides, suggesting disturbance may aid in establishment, but impacts to crop or livestock production unknown]
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[Cited as a weed of pastures. Impacts to crop or livestock production unknown] "Weed of: Pastures References: United States of America-N- 101, Peru-A-153, United States of America-N-301, United States of America- N-839, United States of America-N-1292, Peru-A-87, Brazil--1767."

303	Agricultural/forestry/horticultural weed	
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[A weed of pastures. Impacts to crop or livestock production unknown] "Sauvagesia erecta L. Ochnaceae Total N° of Refs: 7 Aqua - Habit: Herb Preferred Climate/s: Subtropical, Tropical Major Pathway/s: Crop, Herbal Weed of: Pastures References: United States of America-N- 101, Peru-A-153, United States of America-N-301, United States of America- N-839, United States of America-N-1292, Peru-A-87, Brazil--1767."

304	Environmental weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

Qsn #	Question	Answer
305	Congeneric weed	
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[Cited as a weed. Impacts unknown] "Sauvagesia brownei Planch. Ochnaceae Total N° of Refs: 1 References: Jamaica-A-87."

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[No evidence] "Glabrous perennial herbs, usually somewhat woody toward base; stems weakly ascending, 1-3 dm long, unbranched or few-branched. Leaves oblong-lanceolate, 10-40 mm long, 3-12 mm wide, venation prominent on upper surface, margins callose-serrate, apex acute, base attenuate, petioles 2-5 mm long, stipules conspicuous, linear-subulate, 5-10 mm long, pectinate-ciliate, the cilia up to 6.5 mm long."

402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	Notes
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Glabrous perennial herbs, usually somewhat woody toward base; stems weakly ascending, 1-3 dm long, unbranched or few-branched." [Ochnaceae. No evidence]

404	Unpalatable to grazing animals	
	Source(s)	Notes
	WRA Specialist. 2018. Personal Communication	Unknown

405	Toxic to animals	n
	Source(s)	Notes
	Tropical Plants Database, Ken Fern. (2018). Sauvagesia erecta. http://tropical.theferns.info/viewtropical.php?id=Sauvagesia+erecta. [Accessed 7 Dec 2018]	"Known Hazards - None known"
	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

406	Host for recognized pests and pathogens	

Qsn #	Question	Answer
	Source(s)	**Notes**
	WRA Specialist. 2018. Personal Communication	Unknown

407	**Causes allergies or is otherwise toxic to humans**	**n**
	Source(s)	**Notes**
	Tropical Plants Database, Ken Fern. (2018). Sauvagesia erecta. http://tropical.theferns.info/viewtropical.php?id=Sauvagesia+erecta. [Accessed 7 Dec 2018]	"Known Hazards - None known"
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Sauvagesia erecta … A decoction to treat chest pains." [Medicinal. No evidence of toxicity]
	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**
	Liogier, H.A. (1994). Descriptive Flora of Puerto Rico and Adjacent Islands. Spermatophyta, Volume III. Cyrillaceae to Myrtaceae. La Editorial, UPR, San Juan, Puerto Rico	"Herbaceous, annual sometimes perennial and woody at base' … "Grassy banks in moist or wet districts, ascending to higher elevations," [Unlikely in wet habitats]
	Starr, F., Starr, K. & Loope, L.L. 2004. New plant records from the Hawaiian Archipelago. Bishop Museum Occasional Papers 79: 20-30	"Previously known from Molokaʻi (Wagner et al., 1990), S. erecta is now also known from Maui where it is along roads on the moist windward coast of East Maui." [Unlikely in moist, windward habitats]

409	**Is a shade tolerant plant at some stage of its life cycle**	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawaiʻi Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i apparently recently naturalized in pastures and along roadsides" [Shade tolerance unknown. Habitat suggests high light environment]
	Starr, F., Starr, K. & Loope, L.L. 2004. New plant records from the Hawaiian Archipelago. Bishop Museum Occasional Papers 79: 20-30	"Previously known from Molokaʻi (Wagner et al., 1990), S. erecta is now also known from Maui where it is along roads on the moist windward coast of East Maui. This collection represents a new island record for Maui. Material examined: MAUI: East Maui, Wahinepeʻe, a couple small patches growing in first clearing after bamboo forest at Waikamoi/Wahinepeʻe gate on Häna Hwy, 800 ft [243 m], 3 Aug 2002, Starr & Starr 020803-3." [Shade tolerance unknown. Habitat suggests high light environment]

Qsn #	Question	Answer
410	**Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)**	
	Source(s)	**Notes**
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"Usually in moist or wet soil of savannas, open grassy banks, moist thickets, or pine forest, 1,450 meters or less"

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Glabrous perennial herbs, usually somewhat woody toward base; stems weakly ascending, 1-3 dm long, unbranched or few-branched."

412	Forms dense thickets	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i apparently recently naturalized in pastures and along roadsides" [No evidence]
	Starr, F., Starr, K. & Loope, L.L. 2004. New plant records from the Hawaiian Archipelago. Bishop Museum Occasional Papers 79: 20-30	"S. erecta is now also known from Maui where it is along roads on the moist windward coast of East Maui" [No evidence]
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"Usually in moist or wet soil of savannas, open grassy banks, moist thickets, or pine forest, 1,450 meters or less" [No evidence]

501	Aquatic	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Terrestrial herb] "Glabrous perennial herbs, usually somewhat woody toward base; stems weakly ascending, 1-3 dm long, unbranched or few-branched. … in Hawai'i apparently recently naturalized in pastures and along roadsides"

502	Grass	n
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 6 Dec 2018]	Family: Ochnaceae Subfamily: Ochnoideae Tribe: Sauvagesieae

Qsn #	Question	Answer
503	**Nitrogen fixing woody plant**	**n**
	Source(s)	**Notes**
	USDA, ARS, Germplasm Resources Information Network. 2018. National Plant Germplasm System [Online Database]. http://www.ars-grin.gov/npgs/index.html. [Accessed 6 Dec 2018]	Family: Ochnaceae Subfamily: Ochnoideae Tribe: Sauvagesieae

504	**Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Glabrous perennial herbs, usually somewhat woody toward base; stems weakly ascending, 1-3 dm long, unbranched or few-branched."

601	**Evidence of substantial reproductive failure in native habitat**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Possibly native to Africa (Dwyer, 1967), now naturalized throughout the tropics"
	Dwyer, J. (1945). The Taxonomy of the Genus Sauvagesia (Ochnaceae). Bulletin of the Torrey Botanical Club, 72(6), 521-540	"Sauvagesta erecta L. This plant, a common pantropical weed, is perhaps the best known species of the genus and of the tribe Luxemburgieae."

602	**Produces viable seed**	**y**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Fruit a septicidal capsule. Seeds globose, reticulate, not winged."
	Tropical Plants Database, Ken Fern. (2018). Sauvagesia erecta. http://tropical.theferns.info/viewtropical.php?id=Sauvagesia+erecta. [Accessed 6 Dec 2018]	"Propagation: Seed -"

603	**Hybridizes naturally**	
	Source(s)	**Notes**
	WRA Specialist. 2018. Personal Communication	Unknown. No evidence found

604	**Self-compatible or apomictic**	**y**
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2014. The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales. Springer, New York	"Self-compatibility (in the weedy Sauvagesia erecta) as well as self-incompatibility (e.g. Ouratea spruceana) was observed."

Qsn #	Question	Answer
605	**Requires specialist pollinators**	**n**
	Source(s)	**Notes**
	Nadia, T. D. L., & Machado, I. C. (2005). Buzz pollination and breeding system of two species of Sauvagesia L. (Ochnaceae). Brazilian Journal of Botany, 28(2), 255-265	"(Buzz pollination and breeding system of two species of Sauvagesia L. (Ochnaceae)). Reproductive phenology, floral biology, pollination, and breeding system of Sauvagesia erecta L. and S. sprengelii A. St.-Hil. were studied, respectively, in a remnant of Atlantic forest, located at the “Parque Estadual Dois Irmãos”, Recife, and in open areas, Goiana, both in Pernambuco state, northeastern Brazil. The species have pollen flowers with poricidal anthers and a staminodial envelope, which surrounds the stamens and the gynoecium, creating an apical pore to pollen release. The pattern of flowering of both species is continual. The species are self-compatible, autogamic and do not set apomictic fruits. Exclusively bees, mainly of the families Apidae and Halictidae, visited the flowers of both species. Bees of the genus Paratetrapedia visited only S. erecta flowers. Bombus brevivillus Franklin, Florilegus similis Urban, Xylocopa muscaria Fabricius were observed visiting only S. sprengelii flowers. Nevertheless, Augochloropsis species visited flowers of both species. Buzz pollination mechanism takes place with all these bee species acting as effective pollinators, excepting for one species of Paratetrapedia, which is a pollen thief. According to the pollinators' behaviour, the staminodial envelope has a function on the buzz pollination process, which characterizes a mechanism of transference of function, already mentioned to the family."
	Kubitzki, K. (ed.). 2014. The Families and Genera of Vascular Plants. Vol. XI. Flowering Plants. Eudicots: Malpighiales. Springer, New York	"The predominance of poricidal anthers or of the "poricidal system", where the pore is formed by staminodes (Fig. 60B; Kubitzki and Amaral 1991), suggests that pollination by bees capable of vibrating the anthers or the staminodes around the stamens to collect pollen ("buzz-pollination") is common in the family."

606	Reproduction by vegetative fragmentation	n
	Source(s)	**Notes**
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"Plants erect, annual or probably at times perennial," … "seeds minute, ellipsoid, deeply pitted."
	Tropical Plants Database, Ken Fern. (2018). Sauvagesia erecta. http://tropical.theferns.info/viewtropical.php?id=Sauvagesia+erecta. [Accessed 10 Dec 2018]	"Propagation - Seed"

607	Minimum generative time (years)	1
	Source(s)	**Notes**
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"Plants erect, annual or probably at times perennial"

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y

Qsn #	Question	Answer
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i apparently recently naturalized in pastures and along roadsides"
	Starr, F., Starr, K. & Loope, L.L. 2004. New plant records from the Hawaiian Archipelago. Bishop Museum Occasional Papers 79: 20-30	"Previously known from Moloka'i (Wagner et al., 1990), S. erecta is now also known from Maui where it is along roads on the moist windward coast of East Maui."
	WRA Specialist. 2018. Personal Communication	Although small seeds apparently lack means of external attachment, distribution and naturalization along roads suggests inadvertent dispersal facilitate by human traffic (vehicles, footwear or equipment)

702	**Propagules dispersed intentionally by people**	
	Source(s)	**Notes**
	WRA Specialist. 2018. Personal Communication	Unknown. Mode of introduction unspecified. No evidence of intentional cultivation, but used medicinally in parts of natural range

703	**Propagules likely to disperse as a produce contaminant**	
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Weed of: Pastures: [Unknown. No evidence, but small seeded and occurring in pastures. Could possibly be moved accidentally with animal feed or crop harvests]

704	**Propagules adapted to wind dispersal**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Fruit a septicidal capsule. Seeds globose, reticulate, not winged."
	Tannus, J. L., Assis, M. A., & Morellato, L. P. C. (2006). Fenologia reprodutiva em campo sujo e campo úmido numa área de cerrado no sudeste do Brasil, Itirapina-SP. Biota Neotropica 6(3): bn02806032006	[Dispersal mode of Sauvagesia erecta described as autochory] "Table 1. Angiosperm species of the studied area at Itirapina – SP (22º15'43"-50"S and 47º53' 54'W) according to APG II (2003) with indication of the number of vouchers per specie (N), life forms (hábito), physiognomy of occurrence (fisionomia), dispersal modes (MD), flowering (Flor) and fruiting (Fruto) period. AA=woody species; HS=herbaceous species; C.S.=dry grassland; C.U.=wet grassland; ANE=anemochory; AUT=autochory; ZOO=zoochory; IND=unknown."

705	**Propagules water dispersed**	**y**
	Source(s)	**Notes**
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"This and other species of Sauvagesia are characteristic plants of wet savannas and banks of creeks." [Autochorous dispersal, but proximity to creeks suggests water may facilitate secondary seed movement]

706	**Propagules bird dispersed**	**n**

Qsn #	Question	Answer
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Fruit a septicidal capsule. Seeds globose, reticulate, not winged." [Autochorous. No evidence]

707	Propagules dispersed by other animals (externally)	
	Source(s)	**Notes**
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"capsule slightly longer than the persistent sepals; seeds minute, ellipsoid, deeply pitted." [Unknown. No means of external attachment, but small size may facilitate attachment in soil adhering to animals]

708	Propagules survive passage through the gut	n
	Source(s)	**Notes**
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"capsule slightly longer than the persistent sepals; seeds minute, ellipsoid, deeply pitted." [Unknown if seeds can survive gut passage, but not adapted for, and unlikely to be consumed and internally dispersed]

801	Prolific seed production (>1000/m2)	
	Source(s)	**Notes**
	Standley, P.C. & Williams, L.O. 1961. Flora of Guatemala. Fieldiana: Botany. Volume 24 - Part VII - Number 1. Chicago Natural History Museum	"capsule slightly longer than the persistent sepals; seeds minute, ellipsoid, deeply pitted." [Seed numbers unknown]

802	Evidence that a persistent propagule bank is formed (>1 yr)	
	Source(s)	**Notes**
	Royal Botanic Gardens Kew. (2018) Seed Information Database (SID). Version 7.1. Available from: http://data.kew.org/sid/. [Accessed 10 Dec 2018]	"Storage Behaviour: No data available for species or genus. Of 1 known taxa of family OCHNACEAE, 100.00% Orthodox(p/?)"

803	Well controlled by herbicides	
	Source(s)	**Notes**
	WRA Specialist. 2018. 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. 2018. Personal Communication	Unknown

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	

Qsn #	Question	Answer
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI.	[Unknown] "in Hawai'i apparently recently naturalized in pastures and along roadsides at 425 m in the vicinity of Keopuka Loa, Moloka'i"

Summary of Risk Traits:

High Risk / Undesirable Traits
• Elevation range exceeds 1000 m, demonstrating environmental versatility
• Thrives in tropical climates
• Naturalized on Molokai and Maui (Hawaiian Islands)
• A pantropical weed of roadsides and pastures
• Reproduces by seeds
• Self-compatible
• Annual and perennial life cycle
• Autochorous, but distribution in heavily trafficked areas and along streams likely facilitates secondary dispersal
• Gaps in biological and ecological information may limit accuracy of risk prediction

Low Risk Traits
• Despite description as a pantropical weed, there are generally no descriptions of detrimental impacts
• Unarmed (no spines, thorns, or burrs)
• Non-toxic
• Not reported to spread vegetatively