Taxon: Bontia daphnoides L.

Family: Scrophulariaceae

Common Name(s): white alling
wild olive

Synonym(s): Bontia daphnoides var. minor
Bontia minor
Jacquinia ruscifolia
Regina gallorum

Assessor: Chuck Chimera

Status: Approved

End Date: 19 Sep 2025

WRA Score: 2.0

Designation: L

Rating: Low Risk

Keywords: Shrub/Tree, Naturalized, Coastal, Shade-Intolerant, Water-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	?
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n = question 205	y
302	Garden/amenity/disturbance weed	y = 1*multiplier (see Appendix 2), n = 0	n
303	Agricultural/forestry/horticultural weed	y = 2*multiplier (see Appendix 2), n = 0	n
304	Environmental weed	y = 2*multiplier (see Appendix 2), n = 0	n
305	Congeneric weed	y = 1*multiplier (see Appendix 2), n = 0	n
401	Produces spines, thorns or burrs	y = 1, n = 0	n
402	Allelopathic	y = 1, n = 0	n
403	Parasitic	y = 1, n = 0	n
404	Unpalatable to grazing animals	y = 1, n = -1	y
405	Toxic to animals		
406	Host for recognized pests and pathogens	y = 1, n = 0	n
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	y = 1, n = 0	n
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y = 1, n = 0	n

Qsn #	Question	Answer Option	Answer
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	y = 1, n = -1	n
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)		
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	y = 1, n = -1	n
705	Propagules water dispersed	y = 1, n = -1	y
706	Propagules bird dispersed		
707	Propagules dispersed by other animals (externally)	y = 1, n = -1	n
708	Propagules survive passage through the gut		
801	Prolific seed production (>1000/m2)	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	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**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	[No evidence] "escaped from cultivation. Bontia is genuinely native to a wide area in the Caribbean Basin. It is included in modern floras of the Bahamas (Correli & Correli), Puerto Rico (Little et al.), Jamaica (Adams), the Cayman Islands (Proctor), Hispaniola (Liogier, Timyan), the Lesser Antilles (Howard), St. John (Acevedo-Rodríguez), Dominica (DeFillips), and Guadeloupe and Martinique (Fournet)."

102	Has the species become naturalized where grown?	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	**Notes**
	WRA Specialist. (2025). 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**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Bontia is genuinely native to a wide area in the Caribbean Basin. It is included in modern floras of the Bahamas (Correli & Correli), Puerto Rico (Little et al.), Jamaica (Adams), the Cayman Islands (Proctor), Hispaniola (Liogier, Timyan), the Lesser Antilles (Howard), St. John (Acevedo-Rodríguez), Dominica (DeFillips), and Guadeloupe and Martinique (Fournet)."

202	Quality of climate match data	High
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Bontia is genuinely native to a wide area in the Caribbean Basin. It is included in modern floras of the Bahamas (Correli & Correli), Puerto Rico (Little et al.), Jamaica (Adams), the Cayman Islands (Proctor), Hispaniola (Liogier, Timyan), the Lesser Antilles (Howard), St. John (Acevedo-Rodríguez), Dominica (DeFillips), and Guadeloupe and Martinique (Fournet)."

203	Broad climate suitability (environmental versatility)	n
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"In its natural habitat, Bontia daphnoides is reported to occur in low, coastal communities variously described as sub-saline coastal thickets and dry woodlands on limestone (Proctor); dry, evergreen, littoral woodland (Hodge); coastal forests and salty flats (Little et al.)' or limestone flats, around ponds, and on open rocky slopes (Correli & Correli)."

Qsn #	Question	Answer
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"White alling is most common in coastal thickets between the tidal mangroves and the upland forests. These areas are flooded during storm surges and receive a moderate amount of salt spray. The soils vary from sandy to clayey, are usually high in organic matter, and range in pH from 7.0 to 8.5. The water table is usually within 2 m of the surface. In Puerto Rico, the species grows in areas that receive from 750 to 1800 mm of mean annual precipitation. White alling plants are moderately intolerant of shade, generally starting in openings. Seedlings and saplings survive in relatively sunny understories. Adults flower and fruit in intermediate crown positions. The species is rare in uplands, probably because of competition. It has been cultivated successfully at elevations up to 1,500 m (Little and others 1974). White alling grows as rare to common components of stands but does not form pure or nearly pure stands."

204	Native or naturalized in regions with tropical or subtropical climates	y
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Bontia is genuinely native to a wide area in the Caribbean Basin. It is included in modern floras of the Bahamas (Correli & Correli), Puerto Rico (Little et al.), Jamaica (Adams), the Cayman Islands (Proctor), Hispaniola (Liogier, Timyan), the Lesser Antilles (Howard), St. John (Acevedo-Rodríguez), Dominica (DeFillips), and Guadeloupe and Martinique (Fournet)."
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"White alling is native to the Bahamas, the Greater and Lesser Antilles, Trinidad, Venezuela, and Guyana (Howard 1989, Little and others 1974). It is cultivated as an ornamental in Hawaii (Hawaiian Ecosystems at Risk 2001) and Spain (Sánchez 2001) and has naturalized in Florida (Nelson 1996)."

205	Does the species have a history of repeated introductions outside its natural range?	?
	Source(s)	**Notes**
	Little Jr, E. L., Woodbury, R. O., & Wadsworth, F. H. (1974). Trees of Puerto Rico and the Virgin Islands. Second Volume. Agriculture Handbook 449, US Department of Agriculture, Washington, D.C.	"Bahamas, Cuba, Hispaniola, Puerto Rico, and Virgin Islands. Through Lesser Antilles from St. Martin, Barbuda, and Antigua to Grenada, Barbados, and Trinidad. Also native or introduced along northern coast of South America from Aruba, Curacao, and Bonaire and Venezuela to Guyana. Planted and becoming naturalized beyond."
	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	"Two taxa are infrequently found in Hawaiian gardens. Bontia daphnoides Linnaeus, native to the West Indies, Bahamas, and coastal Venezuela,432 is a mounding shrub up to 12' tall with narrowly oblong leaves, 2.5-4" long and 0.5-.75" wide, tapered at both ends; solitary or paired, bilaterally symmetrical flowers in the leaf axils; and egg-shaped yellow drupes up to 0.66" long, strongly tapering at the apex. The attractive flowers are strongly 2-lipped, yellow with purple spots outside, the lower lip strongly downcurved, the inside of the flower tube covered in long purplish hair."

301	Naturalized beyond native range	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Gann GD, Trotta LB, and Collaborators. (2001-2025). Floristic Inventory of South Florida Database Online. The Institute for Regional Conservation. Delray Beach, Florida. https://regionalconservation.org/ircs/database/database.asp. [Accessed 16 Sep 2025]	"Family: Scrophulariaceae Group: Dicot Substrate: Terrestrial Habit: Shrub Perennation: Perennial Native Range: The West Indies, Central America (Bay Islands of Honduras) and northern South America. Map of select IRC data for peninsular Florida SOUTH FLORIDA Occurrence: Present SOUTH FLORIDA Native Status: Not Native, Naturalized SOUTH FLORIDA Cultivated Status: Cultivated "
	Little Jr, E. L., Woodbury, R. O., & Wadsworth, F. H. (1974). Trees of Puerto Rico and the Virgin Islands. Second Volume. Agriculture Handbook 449, US Department of Agriculture, Washington, D.C.	"RANGE.-Bahamas, Cuba, Hispaniola, Puerto Rico, and Virgin Islands. Through Lesser Antilles from St. Martin, Barbuda, and Antigua to Grenada, Barbados, and Trinidad. Also native or introduced along northern coast of South America from Aruba, Curacao, and Bonaire and Venezuela to Guyana. Planted and becoming naturalized beyond."
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"White alling is native to the Bahamas, the Greater and Lesser Antilles, Trinidad, Venezuela, and Guyana (Howard 1989, Little and others 1974). It is cultivated as an ornamental in Hawaii (Hawaiian Ecosystems at Risk 2001) and Spain (Sánchez 2001) and has naturalized in Florida (Nelson 1996)."

302	Garden/amenity/disturbance weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[No evidence] "Bontia daphnoides L. Scrophulariaceae Total N° of Refs: 6 Global Risk Score: 0.72 Rating: Low Preferred Climate/s: Mediterranean, Subtropical Origin: C Am Major Pathway/s: Herbal, Ornamental Dispersed by: Humans References: United States of America-W-179, Cuba-N-1505, -I-, Cuba-N-2024, Cuba-W-2055, Cuba-W-1977, Global--1324."

303	Agricultural/forestry/horticultural weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[No evidence] "References: United States of America-W-179, Cuba-N-1505, -I-, Cuba-N-2024, Cuba-W-2055, Cuba-W-1977, Global--1324."

304	Environmental weed	n
	Source(s)	**Notes**
	University of Florida, IFAS. (2025). Assessment of Non-Native Plantsin Florida's Natural Areas. https://assessment.ifas.ufl.edu/. [Accessed 16 Sep 2025]	"North, Central, South Not a problem species (un-documented)"
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[No evidence] "References: United States of America-W-179, Cuba-N-1505, -I-, Cuba-N-2024, Cuba-W-2055, Cuba-W-1977, Global--1324."

305	Congeneric weed	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"The monotypic Bontia occurs in the Caribbean Basin and in Dade County, Florida, where B. daphnoides L. was recently discovered."

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Liogier, H.A. (1997). Descriptive Flora of Puerto Rico and Adjacent Islands: Spermatophyta, Volume V. Acanthaceae to Compositae. La Editorial, UPR, San Juan, Puerto Rico	[No evidence] "Shrub or low bushy tree up to 9 m tall, nearly glabrous throughout; leaves oblong to linear-lanceolate or oblong-lanceolate, 3 -11 cm long, 1-2 cm broad, acute or acuminate at apex, narrowed at base into a petiole 0.5-15 cm long, the mid-nerve prominent beneath, the lateral nerves obscure, glandular-punctate; pedicels slender, 1-3 cm long; calyx lobes broadly triangular or ovate, 3-4 mm long, with an awl-shaped tip, fringed on the margins; corolla about 2 cm long, tawny-yellow blotched purple, the tube hairy within, about 1 cm long; limb about 1 cm long, the upper lip glabrous, the lower lip bearded on the middle lobe; drupe ovoid, tapered distally to a pointed persistent style base, 10-16 mm long green turning yellowish."

402	Allelopathic	n
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	[No evidence, Occurs with other vegetation] "In its natural habitat, Bontia daphnoides is reported to occur in low, coastal communities variously described as sub-saline coastal thickets and dry woodlands on limestone (Proctor); dry, evergreen, littoral woodland (Hodge); coastal forests and salty flats (Little et al.)' or limestone flats, around ponds, and on open rocky slopes (Correli & Correli). Associated species include Coccoloba uvifera (L.) L., Dodonaea viscosa (L.) Jacq., Euphorbia vaginulata Griseb., and Sophora tomentosa L. in Grand Turk (Guppy); C. uvifera, Thespesia populnea (L.) Solander ex Correa, Caesalpinia Bonduc (L.) Roxb., and Dalbergia ecastophyllum (L.) Taub, in Dominica (Hodge); and mangroves and C. uvifera in Puerto Rico (Little et al.)."

403	Parasitic	n
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Erect evergreen shrubs or small trees" [No evidence]

404	Unpalatable to grazing animals	y
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	[Presumably unpalatable] "Morton noted that leaves of Bontia daphnoides are used in chicken coops to repel lice. She also related that livestock avoid browsing on the foliage."

405	Toxic to animals	
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	[No evidence, but use as a fish poison suggests the possibility of some toxic properties] "Bontia is used medicinally in the Caribbean area. Ayensu reported that leaf teas are used to treat nephritis, hypertension, coughs, and colds, but he also found that leaf brews are also used as a fish poison."

Qsn #	Question	Answer
	U.S. Food and Drug Administration. (2025). FDA Poisonous Plant Database. https://www.fda.gov/food/science-research-food/fda-poisonous-plant-database. [Accessed 17 Sep 2025]	No evidence

406	Host for recognized pests and pathogens	n
	Source(s)	**Notes**
	Kaufman, L. V., Zarders, D. R., & Wright, M. G. (2021). Susceptibility of Endemic Myoporum (Naio) Species and Populations to Klambothirps myopori in Hawai ‘i. Pacific Science, 74(3), 309-318	[Given the available literature, Bontia daphnoides is not documented as a host for Klambothrips myopori. The thrips seems fairly specialized to Myoporum species so far] "An invasive thrips species (Klambothrips myopori, Thysanoptera), originally from Australia, attacks and inflicts severe damage to endemic Myoporum species in Hawai‘i. There is concern that the thrips will cause local extinctions of Myoporum in Hawai‘i. This study examined susceptibility of different Myoporum populations from various Hawaiian Islands to K. myopori infestation and dieback of aerial plant parts. Experimental exposures of plants from different populations were conducted in common garden studies. All M. sandwicense populations included in the study were highly susceptible to infestation and severe dieback of leaves and shoots occurred. Plants from a single M. stellatum population were less susceptible to attack and subsequent dieback of stems. Management options for populations under pressure from K. myopori are discussed."
	WRA Specialist. (2025). Personal Communication	There is no evidence that Bontia daphnoides is a host of important agricultural, forestry, or quarantine pests or pathogens. Its closest ecological tie is to the Myoporum group (same family), which does host serious pests like Klambothrips myopori, but so far Bontia itself has not been reported as affected.

407	Causes allergies or is otherwise toxic to humans	n
	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	"Leaf infusion for nephritis, diabetes, jaundice, hypertension, cold, cough, cytotoxic; extracts of the plant used to control intestinal worms, herpes, inflammation, insect bites, ulcers and wounds; leaves steeped and the brew administered to people suffering from fish poisoning. Insecticidal, acaricidal.)"
	WRA Specialist. (2025). Personal Communication	Bontia daphnoides has been used in traditional medicine, but it has not been tested for safety or effectiveness. The plant may contain strong chemicals, and it could cause side effects or interact with medicines. Do not use this plant as a treatment without first talking to a doctor or healthcare provider.

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	**Notes**

Qsn #	Question	Answer
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"White alling is most common in coastal thickets between the tidal mangroves and the upland forests. These areas are flooded during storm surges and receive a moderate amount of salt spray. The soils vary from sandy to clayey, are usually high in organic matter, and range in pH from 7.0 to 8.5. The water table is usually within 2= m of the surface. In Puerto Rico, the species grows in areas that receive from 750 to 1800 mm of mean annual precipitation. White alling plants are moderately intolerant of shade, generally starting in openings. Seedlings and saplings survive in relatively sunny understories. Adults flower and fruit in intermediate crown positions. The species is rare in uplands, probably because of competition. It has been cultivated successfully at elevations up to 1,500 m (Little and others 1974). White alling grows as rare to common components of stands but does not form pure or nearly pure stands."
	WRA Specialist. (2025). Personal Communication	here is no evidence that Bontia daphnoides contributes to increased fire risk in natural ecosystems. The species is an evergreen shrub or small tree of coastal habitats, typically growing in sandy, salt-exposed environments. While its foliage is somewhat resinous, it does not produce the fine, continuous fuels (e.g., dry grasses or twig litter) that promote ignition or carry fire. It is not listed in fire-hazard plant databases or invasive species fire-risk assessments for Florida, Hawai'i, or other regions where it is cultivated or naturalized. No field reports associate it with altered fire regimes.

409	Is a shade tolerant plant at some stage of its life cycle	n
	Source(s)	**Notes**
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"White alling plants are moderately intolerant of shade, generally starting in openings. Seedlings and saplings survive in relatively sunny understories. Adults flower and fruit in intermediate crown positions. The species is rare in uplands, probably because of competition."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	n
	Source(s)	**Notes**
	Little Jr, E. L., Woodbury, R. O., & Wadsworth, F. H. (1974). Trees of Puerto Rico and the Virgin Islands. Second Volume. Agriculture Handbook 449, US Department of Agriculture, Washington, D.C.	"Being tolerant of salt, they are common around houses on sandy shores of Guyana."
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Bontia is uncommonly cultivated in Florida and does not appear in the nursery trade. It is tolerant of pruning, salt, poor soil, and alkalinity, and thus seems to have horticultural potential (Nellis)."
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"The soils vary from sandy to clayey, are usually high in organic matter, and range in pH from 7.0 to 8.5. The water table is usually within 2 m of the surface."

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Liogier, H.A. (1997). Descriptive Flora of Puerto Rico and Adjacent Islands: Spermatophyta, Volume V. Acanthaceae to Compositae. La Editorial, UPR, San Juan, Puerto Rico	"Shrub or low bushy tree up to 9 m tall, nearly glabrous throughout"

Qsn #	Question	Answer
412	**Forms dense thickets**	n
	Source(s)	**Notes**
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"White alling grows as rare to common components of stands but does not form pure or nearly pure stands."

501	**Aquatic**	n
	Source(s)	**Notes**
	Little Jr, E. L., Woodbury, R. O., & Wadsworth, F. H. (1974). Trees of Puerto Rico and the Virgin Islands. Second Volume. Agriculture Handbook 449, US Department of Agriculture, Washington, D.C.	[Terrestrial] "In coastal forests, shores, and salty flats at sea level, mostly local, uncommon, and scattered, but spread by planting."

502	**Grass**	n
	Source(s)	**Notes**
	POWO (2025). Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; https://powo.science.kew.org/. [Accessed 16 Sep 2025]	Scrophulariaceae

503	**Nitrogen fixing woody plant**	n
	Source(s)	**Notes**
	POWO (2025). Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; https://powo.science.kew.org/. [Accessed 16 Sep 2025]	Scrophulariaceae

504	**Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)**	n
	Source(s)	**Notes**
	Kubitzki, K. & Kadereit, J.W. (eds.). (2004). The families and genera of vascular plants: Volume VII. Flowering plants, Dicotyledons. Lamiales (except Acanthaceae including Avicenniaceae). Springer-Verlag, Berlin, Heidelberg, New York	"Small trees or shrubs. Leaves alternate, entire, shortly petiolate, lamina linear-lanceolate, acute at apex. Inflorescence a raceme with single flowers in the axils of frondose bracts. Calyx campanulate, lobes broadly ovate. Corolla tawny-yellow with purple, campanulate, limb deeply 2-lipped, lower lip recurved, mid-lobe densely bearded, tube long and curved. Stamens 4, subexserted to included, thecae somewhat divergent. Ovary ovoid, with 4 ovules per locule, style filiform, stigmatic for most of its length. Drupe ovoid, yellow. One species, B. daphnoides L., Caribbean to northern South America."

Qsn #	Question	Answer
601	**Evidence of substantial reproductive failure in native habitat**	n
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Bontia is genuinely native to a wide area in the Caribbean Basin. It is included in modern floras of the Bahamas (Correli & Correli), Puerto Rico (Little et al.), Jamaica (Adams), the Cayman Islands (Proctor), Hispaniola (Liogier, Timyan), the Lesser Antilles (Howard), St. John (Acevedo-Rodríguez), Dominica (DeFillips), and Guadeloupe and Martinique (Fournet)."

602	**Produces viable seed**	y
	Source(s)	**Notes**
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"Reproduction.–White alling flowers and fruits throughout the year (Little and others 1974). Fruits collected in Puerto Rico averaged 0.311 + 0.015 g/fruit. Air-dried seeds cleaned from the above collection averaged 0.0898 + 0.0033 g/seed or 11,000 seeds/kg. Sown in commercial potting mix, 44 percent of the seeds germinated between 12 and 68 days after sowing (author's observation)."

603	**Hybridizes naturally**	n
	Source(s)	**Notes**
	Kubitzki, K. & Kadereit, J.W. (eds.). (2004). The families and genera of vascular plants: Volume VII. Flowering plants, Dicotyledons. Lamiales (except Acanthaceae including Avicenniaceae). Springer-Verlag, Berlin, Heidelberg, New York	"One species, B. daphnoides L., Caribbean to northern South America." [No evidence]

604	**Self-compatible or apomictic**	y
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	[Apparently self-fertile] "Observations by the author of a cultivated shrub in Miami revealed no animal visitors to the flowers of B. daphnoides. Nevertheless, flowers set abundant fruits with apparently fertile seeds. Even flowers that were experimentally bagged in bud matured fully formed fruits and seeds, an observation suggesting autogamy or parthenogenesis."

Qsn #	Question	Answer
605	Requires specialist pollinators	n
	Source(s)	**Notes**
	Kubitzki, K. & Kadereit, J.W. (eds.). (2004). The families and genera of vascular plants: Volume VII. Flowering plants, Dicotyledons. Lamiales (except Acanthaceae including Avicenniaceae). Springer-Verlag, Berlin, Heidelberg, New York	"Pollination and Reproductive Systems. Pollination is by insects, especially by Hymenoptera; melittophily (Euryglossa) has been observed in Eremophila (Exley 1998)." [Family traits]
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"There are no published studies of the pollination biology of Bontia daphnoides, although the bilabiate corolla, the purple crest of trichomes, and assurgent anthers are suggestive of bee pollination (Proctor et al.). Observations by the author of a cultivated shrub in Miami revealed no animal visitors to the flowers of B. daphnoides. Nevertheless, flowers set abundant fruits with apparently fertile seeds. Even flowers that were experimentally bagged in bud matured fully formed fruits and seeds, an observation suggesting autogamy or parthenogenesis."

606	Reproduction by vegetative fragmentation	n
	Source(s)	**Notes**
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	[No evidence] "White alling flowers and fruits throughout the year (Little and others 1974). Fruits collected in Puerto Rico averaged 0.311 + 0.015 g/fruit. Air-dried seeds cleaned from the above collection averaged 0.0898 + 0.0033 g/seed or 11,000 seeds/kg. Sown in commercial potting mix, 44 percent of the seeds germinated between 12 and 68 days after sowing (author's observation). Seeds are dispersed by water and presumably by birds and mammals that eat the fruits. Fruit production is usually good and seedlings are common in small openings near seed sources. Although white alling are often tipped in hurricanes, they sprout from the trunks and reform vertical crowns."
	WRA Specialist. (2025). Personal Communication	Bontia daphnoides does not reproduce by vegetative fragmentation under natural conditions; it reproduces sexually by seed, although it can be propagated by cuttings in horticulture.

607	Minimum generative time (years)	
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Seeds germinate more reliably after the ripe fruits have been soaked in fresh water for two or three months. Bontia daphnoides makes a vigorous, fast-growing, ornamental shrub." [Bontia daphnoides likely reaches reproductive maturity in about 2-3 years from seed under good growing conditions. In harsher coastal sites, this could take longer.]

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	**Notes**
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"Drupes are ovoid, tapering to a point with a permanently attached style. Their corky-textured flesh is yellowish-green to yellow at maturity, has a slightly bitter taste, and contains a single hard-shelled stone (Howard 1989, Liogier 1997, Little and others 1974)." ... "Seeds are dispersed by water and presumably by birds and mammals that eat the fruits." [No evidence, and both fruits and seeds lack means of external attachment]

Qsn #	Question	Answer
702	Propagules dispersed intentionally by people	y
	Source(s)	**Notes**
	Little Jr, E. L., Woodbury, R. O., & Wadsworth, F. H. (1974). Trees of Puerto Rico and the Virgin Islands. Second Volume. Agriculture Handbook 449, US Department of Agriculture, Washington, D.C.	"Bahamas, Cuba, Hispaniola, Puerto Rico, and Virgin Islands. Through Lesser Antilles from St. Martin, Barbuda, and Antigua to Grenada, Barbados, and Trinidad. Also native or introduced along northern coast of South America from Aruba, Curacao, and Bonaire and Venezuela to Guyana. Planted and becoming naturalized beyond."
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"It is cultivated as an ornamental in Hawaii (Hawaiian Ecosystems at Risk 2001) and Spain (Sánchez 2001) and has naturalized in Florida (Nelson 1996)."
	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	"Two taxa are infrequently found in Hawaiian gardens. Bontia daphnoides Linnaeus, native to the West Indies, Bahamas, and coastal Venezuela,432 is a mounding shrub up to 12' tall with narrowly oblong leaves, 2.5–4" long and 0.5–.75" wide, tapered at both ends; solitary or paired, bilaterally symmetrical flowers in the leaf axils; and egg-shaped yellow drupes up to 0.66" long, strongly tapering at the apex. The attractive flowers are strongly 2-lipped, yellow with purple spots outside, the lower lip strongly downcurved, the inside of the flower tube covered in long purplish hair."

703	Propagules likely to disperse as a produce contaminant	n
	Source(s)	**Notes**
	Little Jr, E. L., Woodbury, R. O., & Wadsworth, F. H. (1974). Trees of Puerto Rico and the Virgin Islands. Second Volume. Agriculture Handbook 449, US Department of Agriculture, Washington, D.C.	"The stone fruits (drupes) turning from yellow green to light green at maturity, have calyx remaining at base and short point at apex from base of style, thin yellow slightly bitter flesh, a large whitish thick-walled stone, and few whitish seeds less than 1/8 inch long." [No evidence. Because the fruits are not part of any food crop and do not resemble common agricultural produce, they are unlikely to enter markets or be transported as a contaminant.]

704	Propagules adapted to wind dispersal	n
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"The exocarp is smooth and shiny and covered with pellucid dots; the mesocarp is corky and air-filled. The endocarp is bony. The fruits are buoyant in fresh water and are probably water-dispersed. Under experimental conditions, some fruits containing well-formed seeds remained afloat for three months or more, while others sank in a few days."

705	Propagules water dispersed	y
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Bontia produces fruits throughout the year (Little et al.). Fruits are greenish yellow when ripe, and the pedicel and style remain attached to the fruit when it falls. The exocarp is smooth and shiny and covered with pellucid dots; the mesocarp is corky and air-filled. The endocarp is bony. The fruits are buoyant in fresh water and are probably water-dispersed. Under experimental conditions, some fruits containing well-formed seeds remained afloat for three months or more, while others sank in a few days."

Qsn #	Question	Answer
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"Seeds are dispersed by water and presumably by birds and mammals that eat the fruits."

706	Propagules bird dispersed	
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	[Buoyant fruit] "The exocarp is smooth and shiny and covered with pellucid dots; the mesocarp is corky and air-filled. The endocarp is bony. The fruits are buoyant in fresh water and are probably water-dispersed. Under experimental conditions, some fruits containing well-formed seeds remained afloat for three months or more, while others sank in a few days."
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	[Possibly, Morphology suggests possibility of dispersal by frugivores, but habit and buoyancy suggest water dispersal] "Drupes are ovoid, tapering to a point with a permanently attached style. Their corky-textured flesh is yellowish-green to yellow at maturity, has a slightly bitter taste, and contains a single hard-shelled stone (Howard 1989, Liogier 1997, Little and others 1974)." ... "Seeds are dispersed by water and presumably by birds and mammals that eat the fruits."

707	Propagules dispersed by other animals (externally)	n
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"The exocarp is smooth and shiny and covered with pellucid dots; the mesocarp is corky and air-filled. The endocarp is bony. The fruits are buoyant in fresh water and are probably water-dispersed. Under experimental conditions, some fruits containing well-formed seeds remained afloat for three months or more, while others sank in a few days." [The species produces fleshy drupes with smooth surfaces. They are not spiny, hooked, or sticky, so they are unlikely to adhere to fur, feathers, or animal hooves.]

708	Propagules survive passage through the gut	
	Source(s)	**Notes**
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	[Possibly. Morphology suggests possibility of dispersal by frugivores, but habit and buoyancy suggest water dispersal] "Drupes are ovoid, tapering to a point with a permanently attached style. Their corky-textured flesh is yellowish-green to yellow at maturity, has a slightly bitter taste, and contains a single hard-shelled stone (Howard 1989, Liogier 1997, Little and others 1974)." ... "Seeds are dispersed by water and presumably by birds and mammals that eat the fruits."

801	Prolific seed production (>1000/m2)	n
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Each fruit contains one or more seeds within the endocarp, and more than one seed may germinate from a single endocarp." [Seeds are primarily dispersed by water, and possibly birds, so seeds are spread out rather than concentrated under parent plants.]

802	Evidence that a persistent propagule bank is formed (>1 yr)	

Qsn #	Question	Answer
	Source(s)	**Notes**
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"Seeds germinate more reliably after the ripe fruits have been soaked in fresh water for two or three months." [Seed longevity unknown]
	SER, INSR, RBGK, (2023). Seed Information Database (SID). https://ser-sid.org/. [Accessed 19 Sep 2025]	"Storage Behaviour Orthodox Conditions 100 % viability following drying to mc's in equilibrium with 15 % RH and freezing for 166 days at -20°C at RBG Kew, WP"

803	Well controlled by herbicides	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	Unknown. There is no empirical data on herbicide control for Bontia daphnoides.

804	Tolerates, or benefits from, mutilation, cultivation, or fire	y
	Source(s)	**Notes**
	Francis, J. K. (ed.). (2004). Wildland shrubs of the United States and its Territories: thamnic descriptions: volume 1. Gen. Tech. Rep. IITF-GTR-26. USDA, Forest Service, International Institute of Tropical Forestry, San Juan, PR, & USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO	"Although white alling are often tipped in hurricanes, they sprout from the trunks and reform vertical crowns."
	Zona, S. (1998). The Myoporaceae in the southeastern United States. Harvard Papers in Botany, 3(2), 171-179	"It is tolerant of pruning, salt, poor soil, and alkalinity, and thus seems to have horticultural potential (Nellis)."

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	Unknown. Bontia daphnoides is not documented as a host for Klambothrips myopori. The thrips remains specifically associated with Myoporum species, and is currently severely impacting the native Hawaiian species Myoporum sandwicense

Summary of Risk Traits:

Bontia daphnoides, commonly known as sea trumpet, is a small evergreen shrub or tree native to the Caribbean and northern South America. It is valued for its tolerance to harsh coastal conditions, including salt spray, wind, and poor sandy soils, which makes it a popular ornamental plant in tropical regions. The plant produces fleshy drupes that are primarily dispersed by birds, and it typically grows in open, sunny habitats along shorelines. Bontia daphnoides has been cultivated in gardens and coastal plantings in places like Florida and Hawai'i, where it has occasionally escaped into natural areas, but it is not considered a major invasive species.

The plant does possess a few traits that require mindful management, such as its ability to produce viable seeds that can be dispersed by water and its tolerance of pruning and damage. However, these are outweighed by its low-risk characteristics, including its inability to form dense thickets, its shade intolerance, and the fact that it is not known to be allelopathic, toxic, or a host for significant pests. For these reasons, Bontia daphnoides is not expected to become a problematic invasive plant in Hawaii.

High Risk / Undesirable Traits
Naturalized outside its native range (e.g., Florida).
Intentionally dispersed by people via cultivation.
Water-dispersed, buoyant propagules.
Tolerates mutilation and resprouts after damage.
Self-compatible, enabling reproduction without pollinators.
Produces viable seeds with moderate germination rates.
Unpalatable to grazing animals.

Low Risk Traits
Not a weed (garden, agricultural, environmental)
Not allelopathic, parasitic, or toxic to humans/animals.
Does not create fire hazards or form dense thickets.
Shade-intolerant.
No vegetative reproduction or unintentional dispersal.
Low seed production.
Not a host for major pests or pathogens.

Second Screening Results for Trees/Tree-like Shrubs

(A) Shade tolerant or known to form dense stands?> No.
(B) AND Bird- Or clearly wind- dispersed?> Possible bird-dispersed.
(C) Life cycle <4 years? Unknown
Outcome = Accept (Low Risk)