

<b>Taxon:</b> <i>Erica canaliculata</i> Andrews	<b>Family:</b> Ericaceae
<b>Common Name(s):</b> channelled heath hairy grey heather	<b>Synonym(s):</b> <i>Erica canaliculata</i> var. <i>boscaweniana</i> <i>Ericoides canaliculatum</i> (Andrews)

<b>Assessor:</b> Chuck Chimera	<b>Status:</b> Assessor Approved	<b>End Date:</b> 15 Oct 2020
<b>WRA Score:</b> -1.0	<b>Designation:</b> L	<b>Rating:</b> Low Risk

**Keywords:** Shrub/Tree, Naturalized (Australia), Unarmed, Cut Flower, Wind-Dispersed

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	Intermediate
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	n
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		
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)	y
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals	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		
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)	y=1, n=0	y
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	y=1, n=-1	n
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	>3
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		
704	Propagules adapted to wind dispersal	y=1, n=-1	y
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 <sup>2</sup> )		
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	y
803	Well controlled by herbicides	y=-1, n=1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	n
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
	Hitchcock, A. (2012). <i>Erica canaliculate</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	[No evidence] " <i>Erica canaliculata</i> grows along the coastal plains and valleys from George to Humansdorp in the Western and Eastern Cape. This species is found on moist flats and lower slopes ."

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. (2020). 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"	Intermediate
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 13 Oct 2020]	"Native Africa SOUTHERN AFRICA: South Africa [Cape Province]"

202	Quality of climate match data	High
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 13 Oct 2020]	

203	Broad climate suitability (environmental versatility)	n
	Source(s)	Notes
	Dave's Garden. (2020). <i>Erica canaliculata</i> . <a href="https://davesgarden.com/guides/pf/go/60993/">https://davesgarden.com/guides/pf/go/60993/</a> . [Accessed 13 Oct 2020]	"Hardiness: USDA Zone 9a: to -6.6 °C (20 °F) USDA Zone 9b: to -3.8 °C (25 °F) USDA Zone 10a: to -1.1 °C (30 °F) USDA Zone 10b: to 1.7 °C (35 °F)"
	Hitchcock, A. (2012). <i>Erica canaliculate</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	"Horticultural zones Zone 2 Coastal winter rainfall, frost free"

Qsn #	Question	Answer
	Mucina, L., & Rutherford, M. (eds) 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute, Pretoria	[Occurs in Garden Route Granite Fynbos] "Climate MAP 350–880 mm (mean: 600 mm), with a slight low in early winter. Mean daily maximum and minimum temperatures 27.8°C and 6.8°C for January–February and July, respectively. Frost incidence 2 or 3 days per year."

204	Native or naturalized in regions with tropical or subtropical climates	n
	Source(s)	Notes
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 13 Oct 2020]	"Native Africa SOUTHERN AFRICA: South Africa [Cape Province]"
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	[No evidence] "References: Australia-N-855, Australia-N- 354, Australia-N-1450, Australia-W-1977."
	Brodie, C.J. & Reynolds, T.M. (2012), Review of recent plant naturalisations in South Australia and initial screening for weed risk, DENR Technical Report 2012/02, South Australian Department of Environment and Natural Resources, Adelaide	[Temperate] "Appendix 1. Exotic taxa first collected since 1970 and held in the State Herbarium" [ <i>Erica canaliculata</i> - Status * = A naturalised occurrence (an established introduction).]
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	Notes
	Brodie, C.J. & Reynolds, T.M. (2012), Review of recent plant naturalisations in South Australia and initial screening for weed risk, DENR Technical Report 2012/02, South Australian Department of Environment and Natural Resources, Adelaide	"Appendix 1. Exotic taxa first collected since 1970 and held in the State Herbarium" [ <i>Erica canaliculata</i> - Status * = A naturalised occurrence (an established introduction).]
	Dave's Garden. (2020). <i>Erica canaliculata</i> . <a href="https://davesgarden.com/guides/pf/go/60993/">https://davesgarden.com/guides/pf/go/60993/</a> . [Accessed 13 Oct 2020]	"Regional This plant is said to grow outdoors in the following regions: Clayton, California Hercules, California Salinas, California San Leandro, California"

301	Naturalized beyond native range	y
	Source(s)	Notes
	Brodie, C.J. & Reynolds, T.M. (2012), Review of recent plant naturalisations in South Australia and initial screening for weed risk, DENR Technical Report 2012/02, South Australian Department of Environment and Natural Resources, Adelaide	"Appendix 1. Exotic taxa first collected since 1970 and held in the State Herbarium" [ <i>Erica canaliculata</i> - Status * = A naturalised occurrence (an established introduction).]

Qsn #	Question	Answer
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence to date

302	Garden/amenity/disturbance 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, but no evidence of detrimental impacts] "References: Australia-N-855, Australia-N- 354, Australia-N-1450, Australia-W-1977."

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: Australia-N-855, Australia-N- 354, Australia-N-1450, Australia-W-1977."

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] "References: Australia-N-855, Australia-N- 354, Australia-N-1450, Australia-W-1977."

305	Congeneric weed	y
	Source(s)	Notes
	Weber, E. 2017. Invasive Plant Species of the World, 2nd Edition: A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	"Erica arborea ... The shrub has become invasive in Australia where its dense growth habit leads to extensive thickets crowding out native vegetation. It penetrates into Eucalyptus woodland and establishes a shrub layer in the forest, displacing other woody species (State of Queensland, 2014)." ... "Erica lusitanica ... Spanish heath is a serious invader of forests and woodland in areas of higher rainfall, able to completely dominate the shrub layer (Mather and Williams, 1990; Muyt, 2001). Regeneration of native woody plants is prevented and low-growing species are crowded out, including ground orchids in Australia (State of Queensland, 2014). Erica lusitanica establishes well in undisturbed vegetation. The shrub reproduces by seeds and seeding is prolific, there can be more than 450,000 seeds/ m2 in the soil (Muyt, 2001). Seeds are dispersed by water, wind and soil attaching to animals and machinery, and remain viable for 2– 4 years."

Qsn #	Question	Answer
401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	" <i>Erica canaliculata</i> is a large, erect shrub up to 2 or 3 m high, sometimes developing into a small tree up to 5 m tall. It is well branched and covered with small green leaves giving a fine, soft texture. The main stem develops into a trunk up to 100 mm in diameter on large specimens. The bark is grayish-brown and has grooves in the old stems."
402	Allelopathic	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	Unknown. No evidence found
403	Parasitic	n
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	" <i>Erica canaliculata</i> is a large, erect shrub up to 2 or 3 m high, sometimes developing into a small tree up to 5 m tall." [Ericaceae. No evidence]
404	Unpalatable to grazing animals	
	Source(s)	Notes
	Nelson, J. (2012). Christmas Heather, <i>Erica</i> or <i>Calluna</i> ? The Mountain Gardener's Blog. <a href="http://www.jannelsonlandscapedesign.com/wordpress/2012/12/08/christmas-heather/">http://www.jannelsonlandscapedesign.com/wordpress/2012/12/08/christmas-heather/</a> . [Accessed 14 Oct 2020]	"Christmas heather ( <i>erica canaliculata</i> ) is an evergreen, deer resistant shrub reaching about 6' tall and 4' wide." [Possibly unpalatable]
	PlantMaster. (2020). <i>Erica canaliculata</i>   Heather. <a href="http://www.plantmaster.com/share/eplant.php?plantnum=1133">http://www.plantmaster.com/share/eplant.php?plantnum=1133</a> . [Accessed 14 Oct 2020]	[Potentially unpalatable] "Tolerances Salt Ocean Spray, Heat, Windy Conditions, Deer"
405	Toxic to animals	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	No evidence
406	Host for recognized pests and pathogens	
	Source(s)	Notes
	The Royal Horticultural Society. (2020). <i>Erica canaliculata</i> - channelled heath. <a href="https://www.rhs.org.uk">https://www.rhs.org.uk</a> . [Accessed 14 Oct 2020]	"Pests - Prone to glasshouse red spider mite and scale insects under glass Diseases - May be affected by <i>Phytophthora</i> root diseases "

Qsn #	Question	Answer
	UC Pest Management Guidelines. (2020). Floriculture and Ornamental Nurseries Heather ( <i>Calluna vulgaris</i> , <i>Erica</i> spp.) Disease Control Outlines. UC ANR Publication 3392, <a href="http://ipm.ucanr.edu/PMG/r280111811.html#DISEASE">http://ipm.ucanr.edu/PMG/r280111811.html#DISEASE</a> . [Accessed 14 Oct 2020]	[Possibly] "Armillaria root rot - ( <i>Armillaria mellea</i> ) Symptoms are similar to crown rot but distribution in the field is different. Examination of affected plants reveals white fungus plaques beneath the bark at or below soil line on main stem. <i>Erica canaliculata</i> and <i>E. hirtiflora</i> have been infected. " ... "Root and crown rot - ( <i>Pythium</i> spp., <i>Phytophthora cinnamomi</i> ) Plants are stunted or may suddenly wilt and collapse. Roots are killed and the base of the stem (crown) is attacked, causing a complete or partial girdling. <i>Erica hirtiflora</i> (= <i>E. regerminans</i> ) and <i>E. hyemalis</i> are very susceptible. <i>Erica canaliculata</i> ( <i>E. melanthera</i> ) is moderately resistant and <i>E. persoluta</i> is resistant."

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	No evidence

408	Creates a fire hazard in natural ecosystems	
	Source(s)	Notes
	Mucina, L., & Rutherford, M. (eds) 2006. The vegetation of South Africa, Lesotho and Swaziland. <i>Strelitzia</i> 19. South African National Biodiversity Institute, Pretoria	[Occurs in the Garden Route Granite Fynbos. Fire risk and flammability unknown. Other <i>Erica</i> species are flammable] "Vegetation & Landscape Features Moderately undulating plains and undulating hills on the coastal forelands. Dense proteoid and ericoid shrubby grassland. Proteoid and graminoid fynbos are dominant with ericaceous fynbos in seeps. In the west, most remnants of this type are dominated by proteas. Eastwards graminoid and ericaceous fynbos are dominant on the flat plateaus, with proteas confined to the steep slopes."

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	Powrie, F. (1998). <i>Grow South African Plants</i> . National Botanical Institute, Kirstenbosch	" <i>Erica canaliculata</i> Numerous small pink flowers at the tips of small branchlets between November and January. Prefer moist cool to half shade forest conditions"
	Hitchcock, A. (2012). <i>Erica canaliculate</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	"It tolerates full sunlight in the open where it will be more compact in growth reaching a height of about 3 m. It is however more often found along forest margins where it grows into a small tree 5 m tall." ... "This species is ideal for a fynbos garden or even for a semishade garden as long as it gets some direct sunlight in the day."
	Dave's Garden. (2020). <i>Erica canaliculata</i> . <a href="https://davesgarden.com/guides/pf/go/60993/">https://davesgarden.com/guides/pf/go/60993/</a> . [Accessed 15 Oct 2020]	"Sun Exposure: Full Sun"
	The Royal Horticultural Society. (2020). <i>Erica canaliculate</i> - channelled heath. <a href="https://www.rhs.org.uk">https://www.rhs.org.uk</a> . [Accessed 15 Oct 2020]	"Sunlight Full Sun Partial Shade"

Qsn #	Question	Answer
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 15 Oct 2020]	"It grows in poor, well drained, acidic soils derived from weathered quartzite." ... "Erica plants are adapted to living in poor soils, but, for best results, should be regularly fed with diluted organic liquid or small amounts of organic pellet fertilizers."
	The Royal Horticultural Society. (2020). <i>Erica canaliculata</i> - channelled heath. <a href="https://www.rhs.org.uk">https://www.rhs.org.uk</a> . [Accessed 15 Oct 2020]	"Soil Sand, Clay, Chalk, Loam pH Neutral, Acid, Alkaline"
	Shoot Gardening. (2020). <i>Erica canaliculata</i> (Channelled heath). <a href="https://www.shootgardening.co.uk/plant/erica-canaliculata">https://www.shootgardening.co.uk/plant/erica-canaliculata</a> . [Accessed 15 Oct 2020]	"Soil type Chalky, Clay, Loamy, Sandy (will tolerate most soil types) Soil drainage Moist but well-drained, Well-drained Soil pH Acid, Alkaline, Neutral"

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	" <i>Erica canaliculata</i> is a large, erect shrub up to 2 or 3 m high, sometimes developing into a small tree up to 5 m tall."

412	Forms dense thickets	n
	Source(s)	Notes
	Mucina, L., & Rutherford, M. (eds) 2006. The vegetation of South Africa, Lesotho and Swaziland. <i>Strelitzia</i> 19. South African National Biodiversity Institute, Pretoria	[A component of "Dense proteoid and ericoid shrubby grassland", but no indication that one species dominates this vegetation community] "Vegetation & Landscape Features Moderately undulating plains and undulating hills on the coastal forelands. Dense proteoid and ericoid shrubby grassland. Proteoid and graminoid fynbos are dominant with ericaceous fynbos in seeps. In the west, most remnants of this type are dominated by proteas. Eastwards graminoid and ericaceous fynbos are dominant on the flat plateaus, with proteas confined to the steep slopes."
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 15 Oct 2020]	[No evidence] " <i>Erica canaliculata</i> grows along the coastal plains and valleys from George to Humansdorp in the Western and Eastern Cape. This species is found on moist flats and lower slopes "

501	Aquatic	n
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	[Terrestrial] " <i>Erica canaliculata</i> grows along the coastal plains and valleys from George to Humansdorp in the Western and Eastern Cape. This species is found on moist flats and lower slopes ."

502	Grass	n
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Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 13 Oct 2020]	Family: Ericaceae Subfamily: Ericoideae Tribe: Ericaceae

503	Nitrogen fixing woody plant	n
	<b>Source(s)</b>	<b>Notes</b>
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <a href="https://npgsweb.ars-grin.gov/">https://npgsweb.ars-grin.gov/</a> . [Accessed 13 Oct 2020]	Family: Ericaceae Subfamily: Ericoideae Tribe: Ericaceae

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	<b>Source(s)</b>	<b>Notes</b>
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	" <i>Erica canaliculata</i> is a large, erect shrub up to 2 or 3 m high, sometimes developing into a small tree up to 5 m tall."

601	Evidence of substantial reproductive failure in native habitat	n
	<b>Source(s)</b>	<b>Notes</b>
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	" <i>Erica canaliculata</i> is common along the southern Cape coastal plains and as such has been classified in the Red List as Least Concern."

Qsn #	Question	Answer
602	Produces viable seed	y
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	" <i>Erica canaliculata</i> is easily grown from fresh seed which remains optimally viable for approximately five years after which it begins to lose its viability by degrees. Seed should be sown in late summer or autumn with germination greatly enhanced by the application of smoke which mimics the conditions in nature. Seed is sown onto a well-drained, slightly acidic growing medium consisting of a combination of river sand and well decomposed pine bark in roughly equal proportions. Seed germinates in about six weeks, emerging as tiny, delicate plantlets that must be lightly watered with a watering can. Let the seedlings grow to about 10 mm tall before pricking them out into small individual pots. Young seedlings are encouraged to grow by feeding them every week with a diluted organic fertilizer. Seedlings grow slowly and will only be big enough after twelve months when they may be planted into the garden. It is advisable to plant out during the cooler autumn or early winter months to allow the plants to establish before the onset of summer."

603	Hybridizes naturally	
	Source(s)	Notes
	McIndoe, A.. (2005) <i>The Horticulture Gardener's Guides: Shrubs</i> . David & Charles, Devon, UK	[Unknown. Hybrids documented in genus] " <i>Erica x veitchii</i> (zone 7-9) is a hybrid between <i>Erica arborea</i> and <i>Erica lusitanica</i> ."

604	Self-compatible or apomictic	
	Source(s)	Notes
	Aparicio, A. (1995). Seed germination of <i>Erica andevalensis</i> Cabezudo and Rivera (Ericaceae), an endangered edaphic endemic in southwestern Spain. <i>Seed Science and Technology</i> 23(3): 705-713	[Unknown. Related species self-compatible] "From a biological point of view, inbreeding depression in the self-compatible and mostly selfing <i>E. andevalensis</i> if there is any, does not seem to be related to germination capability of the seeds."

605	Requires specialist pollinators	n
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	"It appears to be pollinated by bees and small insects."
	Johannsmeier, M.F. (2016). <i>Beeplants of South Africa</i> . Sources of nectar, pollen, honeydew and propolis for honeybees. <i>Strelitzia</i> 37. South African National Biodiversity Institute, Pretoria	[ <i>E. canaliculata</i> - Beeplant Value = N3 P3] "The information in this column refers to the nectar ( N ) and/or pollen ( P ) values of a beeplant, which are ranked from 0 to 4. The numbers denote the following: 0 = no nectar/pollen is available to, or collected by, honeybees; 1 = poor or minor source; 2 = minor to medium source; 3 = medium to good source; 4 = very good or major source."

606	Reproduction by vegetative fragmentation	n
	Source(s)	Notes

Qsn #	Question	Answer
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 15 Oct 2020]	[Propagated from rooted cuttings, but no evidence of natural vegetative spread] " <i>Erica canaliculata</i> is rooted from cuttings in autumn or spring in multi-trays on heated benches under mist spray. Select small tip or heel cuttings about 20-30 mm long, taking thin wood from the previous season's growth. Heel cuttings are preferred where a short side shoot is removed from the stem. The base of the cutting is treated with a rooting hormone for semi-hardwood cuttings which are then placed into a rooting medium of 50:50 fine milled bark and polystyrene or perlite "

607	Minimum generative time (years)	>3
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 15 Oct 2020]	"Seedlings grow slowly and will only be big enough after twelve months when they may be planted into the garden." [Based on one year's growth in ideal nursery conditions, it is assumed that plants will not reach maturity until at least 3-4 years of age]

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	n
	Source(s)	Notes
	Brown, N. A. C., Van Staden, J., Daws, M. I., Johnson, T., & Van Wyk, A. E. (2003). Patterns in the seed germination response to smoke in plants from the Cape Floristic Region, South Africa. <i>South African Journal of Botany</i> , 69 (4), 514-525	"Appendix 1: Species from the Cape Floristic Region tested for a germination response to smoke." [ <i>Erica canaliculata</i> - Dispersal mode (DM): W = wind]

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	PlantMaster. (2020). <i>Erica canaliculata</i>   Heather. <a href="http://www.plantmaster.com/share/eplant.php?plantnum=1133">http://www.plantmaster.com/share/eplant.php?plantnum=1133</a> . [Accessed 14 Oct 2020]	[Promoted and sold commercially on a number of websites] " <i>Erica canaliculata</i> is an erect, bushy evergreen shrub growing to 6 feet tall and as wide. White bell-shaped flowers bloom profusely at the ends of the lateral branches in fall and winter. It grows well in full coastal sun to light shade. Tolerates heavy soil with little to occasional irrigation - best if not over irrigated in summer. As it is tender to frost (Hardy to around 25F), this plant is often grown as a container plant in protected areas. "

703	Propagules likely to disperse as a produce contaminant	
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 15 Oct 2020]	[Unknown, but long seed viability and use in cut flower trade suggests seed could be spread in dry flower arrangements] " <i>Erica canaliculata</i> is easily grown from fresh seed which remains optimally viable for approximately five years after which it begins to lose its viability by degrees."

704	Propagules adapted to wind dispersal	y
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Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	Brown, N. A. C., Van Staden, J., Daws, M. I., Johnson, T., & Van Wyk, A. E. (2003). Patterns in the seed germination response to smoke in plants from the Cape Floristic Region, South Africa. <i>South African Journal of Botany</i> , 69 (4), 514-525	"Appendix 1: Species from the Cape Floristic Region tested for a germination response to smoke." [Erica canaliculate - Dispersal mode (DM): W = wind]

705	Propagules water dispersed	
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. (2020). Personal Communication	Small, wind-dispersed seeds could possibly be secondarily dispersed by water, but direct evidence is lacking

706	Propagules bird dispersed	n
	<b>Source(s)</b>	<b>Notes</b>
	Brown, N. A. C., Van Staden, J., Daws, M. I., Johnson, T., & Van Wyk, A. E. (2003). Patterns in the seed germination response to smoke in plants from the Cape Floristic Region, South Africa. <i>South African Journal of Botany</i> , 69 (4), 514-525	"Appendix 1: Species from the Cape Floristic Region tested for a germination response to smoke." [Erica canaliculate - Dispersal mode (DM): W = wind]

707	Propagules dispersed by other animals (externally)	n
	<b>Source(s)</b>	<b>Notes</b>
	Brown, N. A. C., Van Staden, J., Daws, M. I., Johnson, T., & Van Wyk, A. E. (2003). Patterns in the seed germination response to smoke in plants from the Cape Floristic Region, South Africa. <i>South African Journal of Botany</i> , 69 (4), 514-525	"Appendix 1: Species from the Cape Floristic Region tested for a germination response to smoke." [Erica canaliculate - Dispersal mode (DM): W = wind]

708	Propagules survive passage through the gut	n
	<b>Source(s)</b>	<b>Notes</b>
	Brown, N. A. C., Van Staden, J., Daws, M. I., Johnson, T., & Van Wyk, A. E. (2003). Patterns in the seed germination response to smoke in plants from the Cape Floristic Region, South Africa. <i>South African Journal of Botany</i> , 69 (4), 514-525	"Appendix 1: Species from the Cape Floristic Region tested for a germination response to smoke." [Erica canaliculate - Dispersal mode (DM): W = wind]

801	Prolific seed production (>1000/m2)	
	<b>Source(s)</b>	<b>Notes</b>
	Weber, E. 2017. <i>Invasive Plant Species of the World</i> , 2nd Edition: A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Unknown, but other Erica species capable of prolific seed production] "Erica lusitanica establishes well in undisturbed vegetation. The shrub reproduces by seeds and seeding is prolific, there can be more than 450,000 seeds/ m2 in the soil (Muyt, 2001). Seeds are dispersed by water, wind and soil attaching to animals and machinery, and remain viable for 2– 4 years."

Qsn #	Question	Answer
802	Evidence that a persistent propagule bank is formed (>1 yr)	y
	Source(s)	Notes
	Hitchcock, A. (2012). <i>Erica canaliculata</i> . PlantZAfrica. SANBI. <a href="http://pza.sanbi.org/erica-canaliculata">http://pza.sanbi.org/erica-canaliculata</a> . [Accessed 13 Oct 2020]	" <i>Erica canaliculata</i> is easily grown from fresh seed which remains optimally viable for approximately five years after which it begins to lose its viability by degrees."

803	Well controlled by herbicides	y
	Source(s)	Notes
	Weber, E. 2017. <i>Invasive Plant Species of the World</i> , 2nd Edition: A Reference Guide to Environmental Weeds. CABI Publishing, Wallingford, UK	[Methods to control invasive relative would likely prove effective if needed] " <i>Erica lusitanica</i> ... Herbicides can be applied to cut stumps; the effectiveness of this method can be enhanced by peeling or cutting off the outer bark on stumps and treating the exposed sapwood as well. Cutting plants close to the ground before flowering occurs prevents flowering and seeding for the year (Muyt, 2001)."

804	Tolerates, or benefits from, mutilation, cultivation, or fire	n
	Source(s)	Notes
	The Heather Society. (2020). Cape heaths and other African species. <a href="https://www.heathersociety.org/category/heathers/erica-cape/erica-cape-species/">https://www.heathersociety.org/category/heathers/erica-cape/erica-cape-species/</a> . [Accessed 15 Oct 2020]	" <i>Erica cerinthoides</i> ... The "Fire Erica", is one of a few <i>Ericas</i> that resprout from a woody rootstock after fire." [No such indication that <i>Erica canaliculata</i> resprouts after fire]
	Brown, N. A. C., Van Staden, J., Daws, M. I., Johnson, T., & Van Wyk, A. E. (2003). Patterns in the seed germination response to smoke in plants from the Cape Floristic Region, South Africa. <i>South African Journal of Botany</i> , 69 (4), 514-525	[ <i>Erica canaliculata</i> listed as a seeder, as opposed to a re-sprouter, suggesting it may not resprout after fires] "Appendix 1: Species from the Cape Floristic Region tested for a germination response to smoke. Smoke response (SR) as assessed by a significant difference between the control and smoke treatment using a t-test ( $P < 0.05$ ): Y = yes; N = no. Growth form (GF): A = annual; G = geophyte; HP = herbaceous perennial; WP = woody perennial. Regeneration strategy (RS): RSD = seeder; RSP = re-sprouter. Seed retention (SS): S = serotinous/canopy stored; NS = shed/stored in soil. Dispersal mode (DM): A = animal/bird; W/P = wind/passive (in Mesembryanthemaceae, H = water dispersal) (germination and life-history data obtained from a wide variety of sources [see references in materials and methods in text]). Species nomenclature is according to Goldblatt and Manning (2000). Germination data are generally given as percentages. However, for some groups, especially the Ericaceae, germination is given as number of seedlings per gram of seed. Where data were available, $\pm$ standard error was included with germination %. Abbreviation GPNG = germination percentages not given in reference"

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. (2020). Personal Communication	Unknown

**Summary of Risk Traits:**

## High Risk / Undesirable Traits

- Naturalized in South Australia
- Other *Erica* species have become invasive
- Tolerates many soil types
- Reproduces by seeds
- Seeds dispersed by wind and intentionally by people
- Seeds remain viable for up to five years, and are likely to form a persistent seed bank

## Low Risk Traits

- No reports of negative impacts where naturalized
- Unarmed (no spines, thorns, or burrs)
- Non-toxic
- Not reported to spread vegetatively
- Herbicides, if needed, may provide effective control