
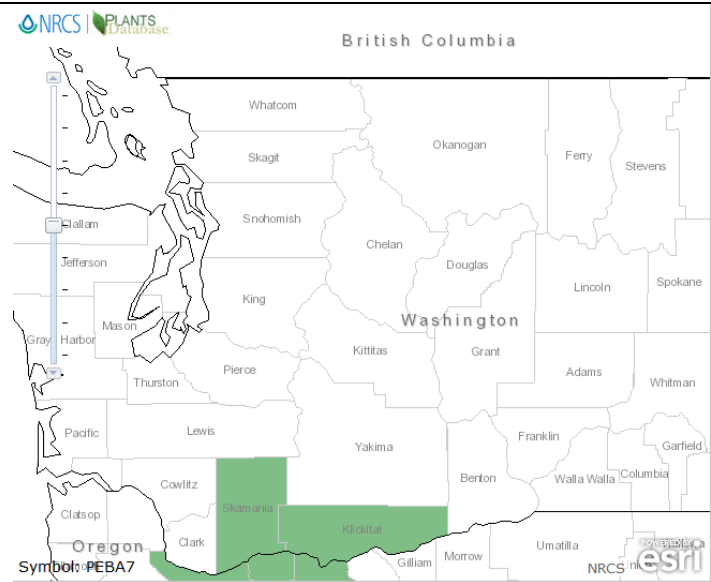


Plant Propagation Protocol for *Penstemon barrettiae*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/PEBA7.pdf>

TAXONOMY	
Plant Family	
Scientific Name	Scrophulariaceae ¹⁰
Common Name	Figwort Family ¹⁰
Species Scientific Name	
Scientific Name	<i>Penstemon barrettiae</i> A. Gray ¹⁰
Varieties	N/A
Sub-species	N/A
Cultivar	Gina ⁵
Common Synonym(s)	N/A
Common Name(s)	Barrett's beardtongue, Barrett's penstemon ¹⁰
Species Code (as per USDA Plants database)	PEBA7 ¹⁰
GENERAL INFORMATION	
Geographical range	 <p>Symbol: PEBA7</p>

	
Ecological distribution	<i>P. barrettiae</i> can be found in rocky habitats ⁹ , basalt cliffs, and talus slopes ⁸
Climate and elevation range	<i>Penstemon barrettiae</i> cannot handle extreme winter or summer temperatures, ⁹ prefers winter shade in cold climates, ⁵ and is found at low elevation ⁹ but has been found up to 3200 ft. ¹
Local habitat and abundance	<p><i>P. barrettiae</i> is considered a threatened species in Washington state and Oregon, with threats including recreation, collection, herbicide use, and timber harvest. ¹ It is found only in a handful of areas on the Columbia Gorge of south central Washington and north central Oregon, and along tributary rivers. ^{3 7} It is sometimes found with sagebrush ⁷ and is associated with <i>Lomatium suksdorfii</i>, <i>Penstemon richardsonii</i>, and <i>Erigeron</i> spp. ⁶</p> <p>Conservation Status: Threatened ¹⁰</p>
Plant strategy type / successional stage	
Plant characteristics	Long lived perennial, subshrub, forb/herb, forming dense clumps. ^{5 7 8 6} <i>P. barrettiae</i> is branched and shrubby growing up to 40 cm tall with very large 1 ½ in. lilac colored flowers that are long lived. ^{9 2 1 7} Leaves are opposite, evergreen, and blue to gray green with entire or toothed margins. ¹
PROPAGATION DETAILS	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)

Stock Type	N/A
Time to Grow	N/A
Target Specifications	N/A
Propagule Collection Instructions	<i>P. barrettiae</i> is considered a threatened species and seeds should not be collected from plants in the wild and instead obtained from local nurseries ⁷
Propagule Processing/Propagule Characteristics	N/A
Pre-Planting Propagule Treatments	Cold moist stratification is needed to break dormancy, seeds will begin to germinate after 8 weeks. ⁴ <i>Penstemon</i> seeds usually have higher germination rates after being stored dry for 6 months to a year in paper envelopes in a cool dry area ⁴
Growing Area Preparation / Annual Practices for Perennial Crops	Use a soilless mixture consisting of perlite or vermiculite that is dampened. Clean sand can also be used with the perlite and vermiculite. Use less vermiculite for <i>P. barrettiae</i> since it grows in drier conditions ⁴
Establishment Phase Details	When seeds have germinated immediately plant them into prepared pots and place the pots in an area where they receive bright light and warm temperatures. Diluted fertilizer can be used until leaves emerge. The seedlings should be kept at a temperature between 40-60 degrees F on a long day schedule to prevent them from drying out and disease ⁴
Length of Establishment Phase	N/A
Active Growth Phase	Plant in individual pots with mix of garden soil, sand, or pumice at sight of leaves and then slowly expose them to outdoor temperature, placing pots outside when the weather is warm and then back under the lights if the temperature drops ⁴
Length of Active Growth Phase	N/A
Hardening Phase	N/A
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	When seedlings have 2-3 pairs of leaves plant in prepared beds. At this stage some protection such as row cover should be used for a week ⁴
Other Comments	<i>P. barrettiae</i> should not be collected in the wild, as this is one of current threats to the species and instead seeds or plants should be bought from local nurseries ^{3 1}
INFORMATION SOURCES	
References	See below
Other Sources Consulted	

Protocol Author	Raona Mecka
Date Protocol Created or Updated	06/07/15

This propagation protocol template was modified by J.D. Bakker from that available at:
<http://www.nativeplantnetwork.org/network/SampleBlankForm.asp>

References

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