

Plant Propagation Protocol for *Polypodium scolieri*

ESRM 412 – Native Plant Production

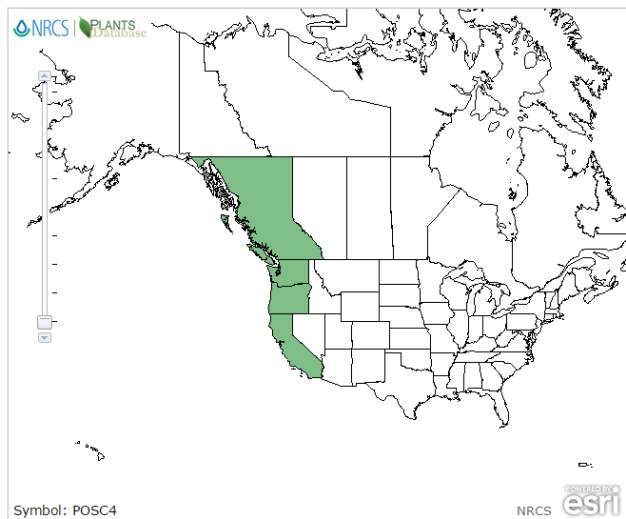
Spring 2015

Protocol URL: <https://courses.washington.edu/esrm412/protocols/POSC4.pdf>

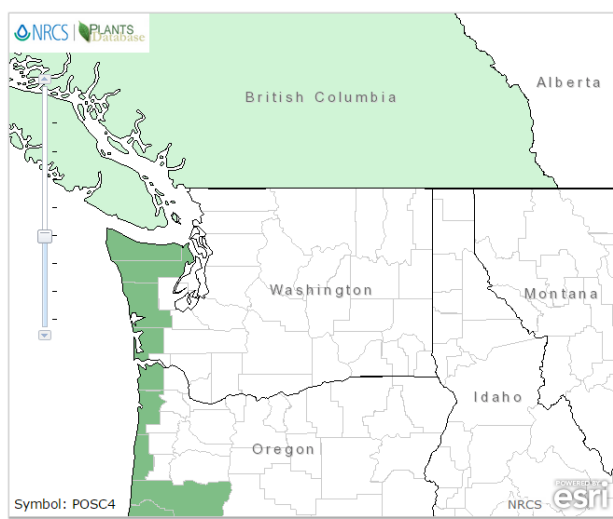


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(Source: “Polypodium scolieri”, *Rainy Side Gardens*)



North American Distribution



Washington State Distribution

From the USDA Plants Database¹⁵

TAXONOMY	
Plant Family	
Scientific Name	<i>Polypodiaceae</i>
Common Name	Polypody
Species Scientific Name	
Scientific Name	<i>Polypodium scolieri</i> Hook. & Grev.
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	Leathery polypody, Scouler's polypody, coast polypody, leather-leaf fern
Species Code (as per USDA Plants database)	POSC4 ¹⁵
GENERAL INFORMATION	
Geographical range	Coastal British Colombia to California ¹⁰ ; See maps above for North American and Washington State distribution ¹⁵ .
Ecological distribution	Found on coasts, generally in heavy fog or salt spray zones ¹⁰
Climate and elevation range	0-160m ¹⁰ , prefers moist soils, salt spray, and partial shade ¹⁴
Local habitat and abundance	Exposed cliffs, banks, tree trunks, or other coastal crevasses exposed to salt spray ^{9, 14, 15}
Plant strategy type / successional stage	Drought-tolerant ⁶
Plant characteristics	Perennial fern, growing from exposed rhizomes. Simple, leathery fronds of a dark evergreen shade, up to 12in in length ⁸
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Plants/ferns
Propagation Method	Sexual spores ^{2, 4, 13}
Product Type	Containers
Stock Type	Plants/ferns
Time to Grow	6-12 months ^{9, 11}
Target Specifications	6-24in long fronds, varying heights and widths ⁹
Propagule Collection Instructions	Ensure that spores are ripe before collecting; they will usually be a cinnamon color ^{2, 3, 11} . Choose a fern leaf to propagate from, set it between two pieces of paper for 1-2 weeks to allow it to dry. When dry, remove debris from the paper carefully ^{1, 2, 13}
Propagation Method	Vegetative ^{2, 4, 13}
Product Type	Containers, bareroot/rhizomes

Stock Type	Plants/ferns
Time to Grow	0-2 months ⁹
Target Specifications	6-24in long fronds, varying heights and widths
Propagule Collection Instructions	Divided rhizomes can be transplanted immediately ^{1, 3, 11}
Propagule Processing/Propagule Characteristics	
Pre-Planting Propagule Treatments	Be sure that both medium and container are sterile ^{3, 11}
Growing Area Preparation / Annual Practices for Perennial Crops	Compost or other rich, moist media works best, can be kept moist by putting pot in plastic bag ⁴ .
Establishment Phase Details	Ensure rich and consistently moist soil as it grows into maturity ^{4, 7} . Access to light and even temperatures (about 50-60 F) for 2-4 weeks ^{1, 11}
Length of Establishment Phase	2-5 months ¹²
Active Growth Phase	Prothalli to sporophyte stage ^{3, 11, 12}
Length of Active Growth Phase	6-12 months ¹¹
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage and Shipping	
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	Outplanting can occur in late spring, early summer of the following year ^{4, 9}
Other Comments	<i>Polypodium</i> has some herbal medicinal qualities ^{4, 5} , although significance in <i>P. scolieri</i> is unknown. Rhizomes and other parts of the plant were used by Native Americans as a kind of food or candy ^{5, 16} .

INFORMATION SOURCES

References	<p>¹ Burrell, C. Colston. Ferns: <i>Wild Things Make a Comeback in the Garden</i>. Brooklyn, NY: Brooklyn Botanic Garden, 1994. Print.</p> <p>² "Collecting Spores." <i>American Fern Society</i>. N.p., n.d. Web. 09 May 2015.</p> <p>³ Cullina, William. "Growing Ferns from Spores." (n.d.): n. pag. Web. 7 May 2015.</p> <p>⁴ Das', Kuntal, and John Wilking Einstein. "Samambaia - The Future Focus for Indian Researchers in the Treatment of Psoriasis." <i>Thai Journal of Pharmaceutical Sciences</i> 31 (2007): 46-49. 2007. Web. 7 May 2015.</p> <p>⁵ Gill, Steven J. <i>Ethnobotany of the Makah and Ozette People, Olympic Peninsula, Washington (USA)</i>. Thesis, p.221. Washington State University, 1983. N.p.: n.p.,</p>
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	<p>1983. Print.</p> <p>⁶ Hardy Fern Foundation. "Polypodium Scouleri - Leathery Polypody." <i>The Hardy Fern Foundation</i>. N.p., n.d. Web. 08 May 2015. (hardy fern foundation)</p> <p>⁷ Hildebrand, T. J., et al. "A New Hybrid Polypodium Provides Insights Concerning the Systematics of Polypodium scouleri and its Sympatric Congeners." <i>American Fern Journal</i> 92.3 (2002): 214-228.</p> <p>⁸ Hitchcock, C. H., A.J. Cronquist, F. M. Ownbey & J. W. Thompson. 1969. <i>Vascular Cryptogams, Gymnosperms, and Monocotyledons</i>. 1: 1-914. In C. L. Hitchcock Vasc. Pl. Pacif. N.W. University of Washington Press, Seattle. Print.</p> <p>⁹ Hoshizaki, Barbara Joe. <i>Fern Growers Manual</i>. New York: Knopf, 1975. Print.</p> <p>¹⁰ Jepson, Willis Linn, James C. Hickman, and Willis Linn Jepson. "The Jepson Manual: Higher Plants of California." Berkeley, University of California, 1993. Print. (ucjeps.berkeley)</p> <p>¹¹ Jones, Judith. "Growing Ferns from Spores." <i>Brooklyn Botanic Garden</i>. Brooklyn Botanic Garden, n.d. Web. 08 May 2015. (bbg.growingferns)</p> <p>¹² Knobloch, Irving W. "Tetraploid Polypodium." <i>American Fern Journal</i> 52.2 (1962): 65-68. <i>American Fern Society</i>. Web. Apr. 1962.</p> <p>¹³ Lowery, Al. <i>Propagating Ferns</i> (n.d.): n. pag. University of California. Web. 9 May 2015.</p> <p>¹⁴ "Polypodium scouleri." <i>Lady Bird Johnson Wildflower Center</i>. Lady Bird Johnson, 01 Jan. 2007. Web. 08 May 2015. (LadyBird Johnson)</p> <p>¹⁵ "Polypodium scouleri, Leathery Polypody." <i>Plants Database</i>. United States Department of Agriculture, n.d. Web. 7 May 2015.</p> <p>¹⁶ Turner, Nancy J., and Barbara S. Efrat. <i>Ethnobotany of the Hesquiat Indians of Vancouver Island</i>. Victoria:</p>
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	British Columbia Provincial Museum, 1982. Print.
Other Sources Consulted	<p>"Leathery Polypody." <i>Dave's Garden</i>. N.p., n.d. Web. 08 May 2015.</p> <p>"Polypodium Scouleri." <i>Encyclopedia of Puget Sound</i>. University of Washington, 2015. Web. 9 May 2015.</p> <p>"Polypodium scouleri." <i>Rainy Side Gardens</i>. N.p., n.d. Web. 08 May 2015.</p>
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