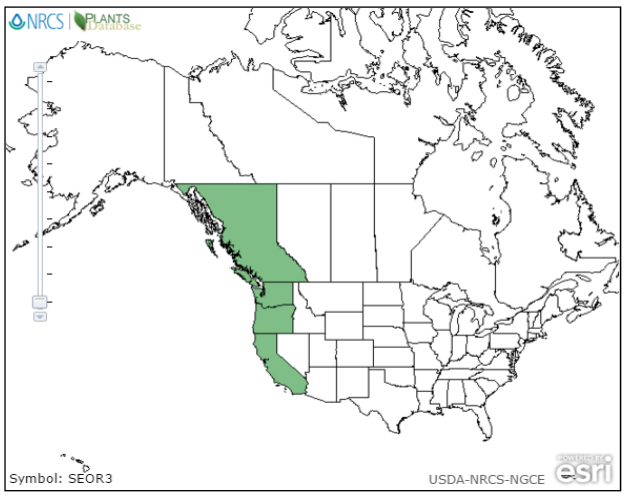
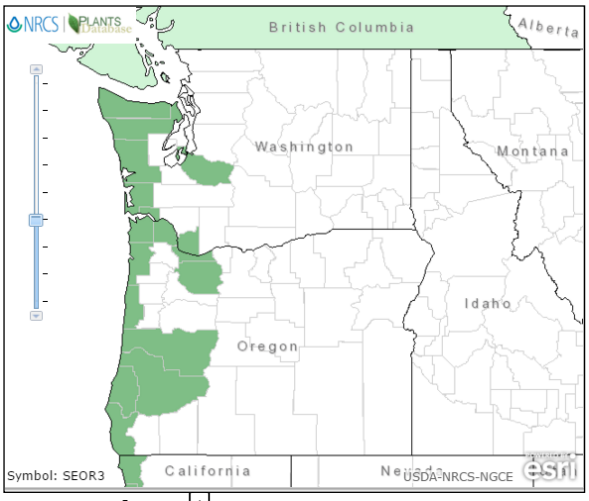
Plant Propagation Protocol for *Selaginella oregana*
ESRM 412 – Native Plant Production
Protocol URL: https://courses.washington.edu/esrm412/protocols/SEOR3.*pdf*





Images from USDA Plants Database [1]

TAXONOMY	
Plant Family	
Scientific Name	Selaginellaceae [1]
Common Name	Spike Moss Family[1]
Species Scientific Name	
Scientific Name	*Selaginella oregana* D.C. Eaton [1]
Varieties	None
Sub-species	None
Cultivar	None
Common Synonym(s)	None
Common Name(s)	Oregon selaginella[2], Oregon Spike-moss [1], Festoon spike-moss [3],
Species Code (USDA Plants database)	SEOR3 [1].
GENERAL INFORMATION	
Geographical range	USA (CA, OR, WA), CAN (BC) [1]. In Washington, *S. oregana* is found in Clallum, Jefferson, Gray's Harbor, Pacific, Clatsop, Columbia, Clark, and Pierce counties[1]. In Oregon, Tillamook, Clackamus, Lincoln, Lane, Douglas, Coos, and Curry counties [1]. In California *S. oregana* is found in Del Norte and Humboldt counties [1]. *See Distribution Maps
Ecological distribution	Usually found hanging from the branches of *Acer macrophyllum* along the coast of the Pacific Northwest and in the rainforests of the Olympic National Forest[4].
Climate and elevation range	Prefers cool, moist coastal climates, especially fog

	belts and high-rainfall areas [11]. US Department of Agriculture hardiness zones 5 to 8[11]. Found in mid to low elevations [4].
Local habitat and abundance	S. oregana typically grows epiphytically on *Acer macrophyllum, Acer circinatum, Populus trichocarpa,* and *Alnus rubra* [2,]. It also grows in festooned mats along shaded and rocky riverbanks [2, 3].
Plant strategy type / successional stage	Usually grows as an epiphyte [2, 3]. This genus is tolerant of desiccation due to its thick cuticle and stress-induced branch curling mechanism [6].
Plant characteristics	Forms wiry spikes to upright candelabras of leafage with scale-like leaves composed of a single vein or midrib forming dense spirals of foliage 2-3 mm wide [11]. Stems are radially symmetric with rhizophores on the upper-side of pendent stems or all throughout on terrestrial stems [7]. Trailing foliage can reach up to 60cm in length [11].
PROPAGATION DETAILS	
Vegetative propagation as explained by Milne[9] and Benca[8]	
Ecotype	N/A
Propagation Goal	Plants.
Propagation Method	Vegetative
Product Type	Cuttings, division
Stock Type	N/A
Time to Grow	4 months until fully established [8].
Target Specifications	Once fully rooted or when root primordia and runners have appeared to expand across the flat [8].
Propagule Collection Instructions	Actively growing shoots with et least one young, undamaged root should be harvested from the parent plant near the shoot apices using pruners [8].
Propagule Processing/Propagule Characteristics	N/A
Pre-Planting Propagule Treatments	Carefully remove sediment and senescent tissue from cuttings with cool soft tap water [8]. Wrap cuttings in moist paper towel, ensuring root and root primordia are in contact with the paper towel [8].
Growing Area Preparation / Annual Practices for Perennial Crops	Growing media: 3:1 pumice/sandy or clayey loam [8, 12]. Standard 1020 flats or 2 11x11 half trays placed in web flat, clear propagation dome, plug tray holes with rockwool [8, 9].
Establishment Phase Details	During establishment phase grow under high humidity

	under diffuse light, preferably under propagation tents [12]. Store in plastic cups during the rooting stage and only apply fertilize (use diluted kelp or orchid fertilizer) after root growth [12].
Length of Establishment Phase	4 months [8].
Active Growth Phase	Runners and root primordia, spreads and covers tray like a carpet [8, 10].
Length of Active Growth Phase	6-8 months to climax phase [8].
Hardening Phase	N/A
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	Wrap rooted specimen in moistened paper towel and place in misted zip-lock baggy [9, 12]. Store bags in cooler during transportation.
Length of Storage	It is recommended to repot every one or two years [12].
Guidelines for Outplanting / Performance on Typical Sites	None.
Other Comments	Propagation by spore is not a recommended practice for *S. oregana* due to lack of successful results [10, 11]
INFORMATION SOURCES	
References	*See Below
Other Sources Consulted	Huang, T. (13 April 2016). Personal interview.
Protocol Author	Holly Elling Jessup
Date Protocol Created or Updated	06/4/16

References

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