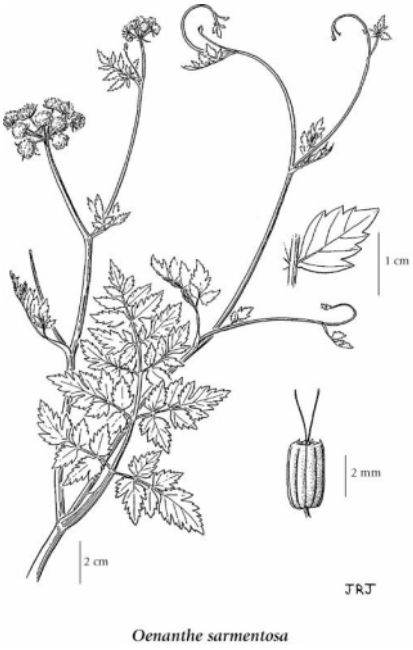
Plant Propagation Protocol for *Oenanthe sarmentosa*

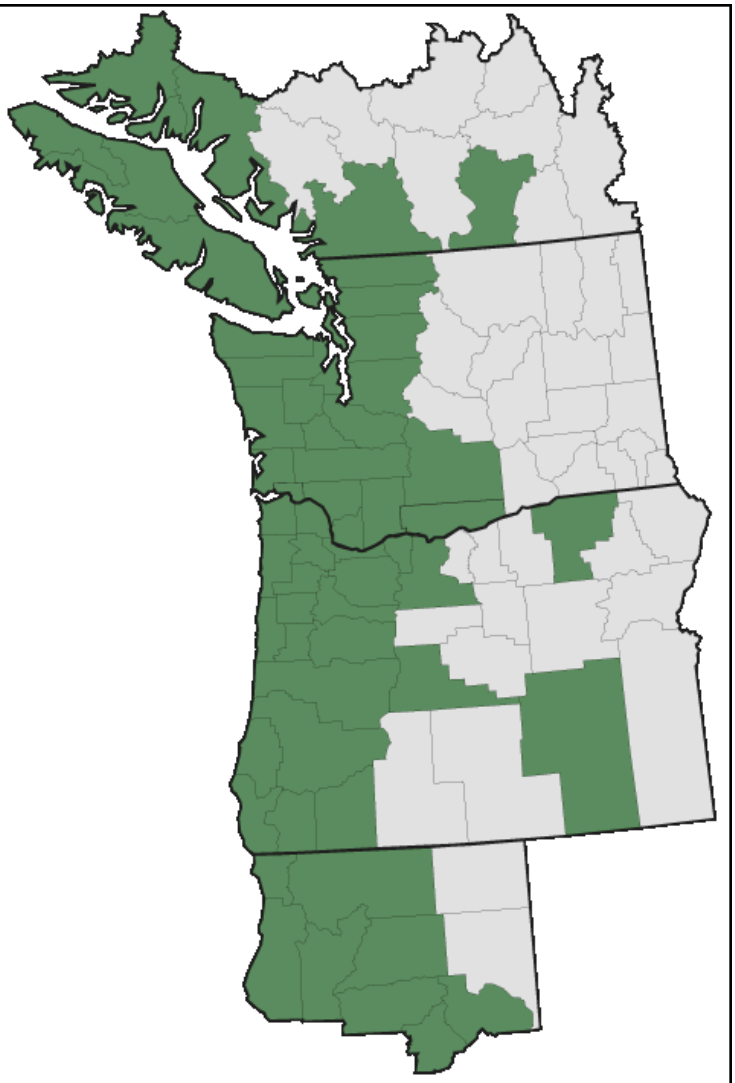
ESRM 412 – Native Plant Production

URL: https://courses.washington.edu/esrm412/protocols/2024/OESA.pdf



Oenanthe sarmentosa botanical illustration and foliage image [5]

TAXONOMY	
Plant Family	
Scientific Name	Apiaceae (Umbelliferae)[1,2]
Common Name	Umbellifers (Carrot, Celery, Parsley)
Species Scientific Name	
Scientific Name	Oenanthe sarmentosa C. Presl ex DC.
Varieties	none identified
Sub-species	“
Cultivar	“
Common Synonym(s)	“
Common Name(s)	Pacific Water-parsley, Water Parsley, Water Dropwort, Fineleaf waterdropwort
Species Code (as per USDA Plants database)	OESA
GENERAL INFORMATION	

Geographical range	 map showing distribution of *O. sarmentosa* across the Pacific Northwest, by county/province[9,2] The range of *O. sarmentosa* extends from Alaska down through central california along the coast/ west of the Cascades, and in lowland regions throughout.
Ecological distribution	moist, wetland ecosystems, streamsides, meadows, marshes, often found growing in stagnant water and prefers direct sunlight[4,8,10]
Climate and elevation range	found in cool mesothermal climates, low elevations, nearby water and/or inundated or saturated sites[4,10,13]
Local habitat and abundance	Often found with *Lysichitum americanum* in inundated areas as it prefers fully saturated, muddy soil types [4] common in damp, low-lying areas, within thickets, alongside water bodies, streams and marshlands, and in wet grasslands and clearings. Also seen on the

	periphery of forests, frequently in areas with standing water that may not be permanent. It thrives at elevations from low to moderate. *O. sarmentosa* is commonly found across the region, with the exception of northern southeast Alaska.[4,10,13]
Plant strategy type / successional stage	With a vigorous production of above-ground biomass, high tolerance to replanting, and preference for growing in standing water, allowing it to filter/settle sediments in the water make this species well suited for riparian restoration application. [8,10]
Plant characteristics	*O. sarmentosa* is a fibrous-rooted perennial herb recorded with a wide range of sizes, from 30 to 150 cm, and has a chromosome number of 2n=44. The stems develop a dark red tinge late in the season.[4,5,7,8] General Characteristics:[4,5,7,8] - grows up to 1 meter long, with soft, weak, and loosely branched stems that are glabrous and sometimes root at the nodes. - hermaphrodite (has both male and female organs) and is self-fertile. - pollinated by insects and flowers from June to August. Leaves:[4,5,7,8] - leaves are pinnately divided 2-3 times, with leaflets that are toothed and cleft. - primary lateral veins of the leaflets are directed to the marginal teeth. - leaves have a celery-like odor and shape, and are oblong to ovular in outline. - The size of the leaflets is 1-6 cm and green in color. - leaves are generally 10–60 cm with blades 5–30 × 5–25 cm and petioles 10–30 cm. Flowers:[4,5,7,8] - flowering period is from May to July. - flowers are small and white, sometimes pink-tinged, and form in 5-20 compact clusters on 1-3 cm long stalks. - inflorescence is of compound umbels on long stalks, with numerous, small, narrow bractlets forming an involucel. - sepals are 0.5 -- 1 mm and lanceolate. Fruits:[4.5.7.8]

	- fruits are oblong, 2.5-3.5 mm long, and 2 mm wide, with ribs that are broader than the narrow intervals. - fruits mature in late summer and are maroon in color.
PROPAGATION DETAILS: SEED	
Ecotype	N/A
Propagation Goal	Plants (container)
Propagation Method	Seed
Product Type	container (plug)
Stock Type	
Time to Grow	>3 months
Target Specifications	plug with established root system, firm plug in container[11]
Propagule Collection Instructions	seeds are collected when flowers have matured and turned brown, between August and September [11]
Propagule Processing/Propagule Characteristics	Seed density is approximately 233 seeds/gram [12] no seed cleaning is required, seeds can be stored for longer periods when kept moist and refrigerated [11]
Pre-Planting Propagule Treatments	soak seeds in water at room temperature for 24 hours prior to a cold stratification period of 21-30 days and seeds should germinate in 30 days following seeding with a germination rate of 50% Seeds are sown beginning of June [11]
Growing Area Preparation / Annual Practices for Perennial Crops	sow seeds directly into containers of minimum 2”x7” (Deepot 16) with a standard potting mix containing peat, fir bark, sand, and perlite lightly cover seeds on the surface of media to sow [11]
Establishment Phase Details	If sown in a tray, seedlings are uppotted 30 days after germination to their own containers 2”x7” (Deepot 16) or larger, with an average transplant success of 70% [11]
Length of Establishment Phase	approx. 30 days [11]
Active Growth Phase	seedlings are watered with an automatic irrigation system to keep moist, frequency and setup specifications dependent on individual growing conditions [11]
Length of Active Growth Phase	2 months
Hardening Phase	N/A
Guidelines for Outplanting / Performance on Typical Sites	Once healthy plants have become well-established, they can be outplanted at the site in spring or early summer for the growing season [1]
PROPAGATION DETAILS: VEGETATIVE	

Ecotype	
Propagation Goal	plants, other propagules (daughter plants)
Propagation Method	Vegetative, dividing
Product Type	propagules, divisions ('cuttings')
Target Specifications	plant with stem and root system (rhizome) intact
Propagule Collection Instructions	divide propagule from mother plant in spring or autumn (bookends of growing season) by dividing a newer established portion of root system keeping stem intact with rhizome. [1]
Propagule Processing/Propagule Characteristics	none identified
Pre-Planting Propagule Treatments	"
Growing Area Preparation / Annual Practices for Perennial Crops	while it is best to pot up smaller divisions to grow for one year prior to planting, large divisions do well when planted directly to their permanent sites[1]
Establishment Phase Details	if smaller division, uppot smaller divisions and grow them in a cold frame under light shade until well established before outplanting[1]
Length of Establishment Phase	until established root system and has healthy new growth on own, 1-2 years following division from mother plant [1]
Active Growth Phase	keep soil moist and monitor for any visual issues
Length of Active Growth Phase	Approx. 1 year, until plant is healthy and growing independently
Hardening Phase	N/A
Guidelines for Outplanting / Performance on Typical Sites	Once healthy plants have become well-established, they can be outplanted at the site in spring or early summer for the growing season [1]
Other Comments	
INFORMATION SOURCES	
References	1. Plants For A Future. (2024). Oenanthe sarmentosa Water Dropwort,Water parsley PFAF Plant Database. Retrieved from PFAF. 2. USDA Plants Database. (2014). Oenanthe sarmentosa C. Presl ex DC. Retrieved from USDA. 3. Burke Herbarium Image Collection. (2024). Oenanthe sarmentosa. Retrieved from Burke Herbarium. 4. E-Flora BC: Electronic Atlas of the Flora of BC. (2020). Oenanthe sarmentosa C. Presl ex DC.

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Other Sources Consulted	N/A
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