Puccinellia nutkaensis

Alaska alkali grass
Poaceae (Grass Family)

Status: State Sensitive
Rank: G4?S2

General Description: Adapted from Hitchcock et al. (1969): This glabrous perennial grass is 8 to 24 in. (20-60cm) tall, and often more or less stoloniferous. The ligules are obtuse, and up to 1/16 in. (1-3.5 mm) long. The leaf blades are 1/32 to 1/2 in. (1-2 mm) broad, open and spreading, and flat to somewhat involute (with the margins rolling inward toward the upper side). The panicle (inflorescence) is 2 to 6 in. (5-15 cm) long, with slightly erect branches that are mostly only ½ to 1-1/2 in. (1-3 cm) long and smooth to slightly coarse in texture due to a covering of short stiff hairs. The spikelets are 4-7 flowered. The glumes (paired bracts at the base of a spikelet) are broad. Usually one or both are slightly irregularly toothed (erose) or erose-ciliate (sparsely fringed with minute hairs toward the tip). The first glume is about 1/16 in. (1.5 mm) long, and the second is 1/16 in. (2.2-2.5 mm) long. There are two bracts that subtend each floret: the lemma and the palea. The lemmas are 1/8 in. (3-3.6 mm) long, with abruptly narrow erose-ciliolate tips, to erose and even lobed above, with a sparse cover of short hairs near the base. The palea is almost equal to the lemma. The anthers are up to 1/16 in. (.7-1.2) mm long, and usually partially exerted.

Identification Tips: Within its range in Washington, *Puccinellia nutkaensis* is most closely related to *P. pumila*. The two taxa can be distinguished by their different heights. *P. nutkaensis* is 8 to 24 in. (20-60 cm) tall, and *P. pumila* is mostly 4 to 8 in. (10-20 cm) tall. The panicle of *P. nutkaensis* is 2 to 6 in. (5-15 cm) long, with slightly erect branches that are mostly only ½ to 1-1/2 in. (1-3 cm) long and smooth to slightly coarse in texture due to a covering of short stiff hairs, versus the panicle of *P. pumila*, which is 1-1/2 in. to 4 in. (3-10 cm) long with few erect, smooth branches. They both flower from June through August. Use of a technical key is necessary, as this taxon is very difficult to identify and poses taxonomic problems.

Phenology: The taxon has been reported flowering from June through August.

Range: This species is known from Washington north through British Columbia to Alaska. In Washington there are historical sightings of *Puccinellia nutkaensis* in Island, Jefferson, San Juan, Whatcom, Skagit, Thurston and Kitsap counties.

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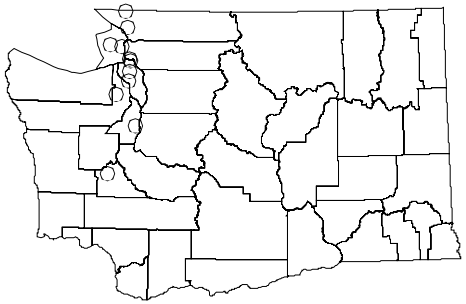
Known distribution
of *Puccinellia nutkaensis*
in Washington



● Current (1980+)
○ Historic (older than 1980)

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Habitat: *Puccinellia nutkaensis* has been found in salt marshes, gravel ridges, in moist pockets of gravelly prairies, near high tide lines, in crevices receiving salt spray, and in mud flats. It occurs in marshes with inland saltgrass (*Distichlis spicata*), Virginia glasswort (*Salicornia virginica*), seaside arrowgrass (*Triglochin maritimum*), and marsh jaumea (*Jaumea carnosa*).

Ecology: The taxon has been found along the coast in rock outcrops that receive sea spray, salt marshes, mud flats, and gravelly areas near the beach. It appears to be a facultative halophyte and occurs at the ecotone between tidally influenced areas and terrestrial vegetation.

State Status Comments: There are less than fifteen known historical populations in Washington, dating back to 1922.

Inventory Needs: All known occurrence sites are old and should be revisited and surveyed for much needed updates of population information. Additional inventory work is needed to accurately assess its status in Washington. Appropriate habitats in Island, Jefferson, San Juan, Whatcom, Skagit, Thurston and Kitsap counties should be systematically surveyed for new populations.

Threats and Management Concerns: Threats include various shoreline developments and habitat degradation such as the filling of salt marshes and potential oil spills.

References:

Hitchcock, C.L., A. Cronquist, M. Ownbey, J.W. Thompson. 1969. *Vascular Plants of the Pacific Northwest* Part 1: *Vascular Cryptogams, Gymnosperms, and Monocotyledons.* University of Washington Press, Seattle, WA. 914 pp.

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