

***PSEUDOTSUGA MENZIESII - JUNIPERUS SCOPULORUM /
FESTUCA (ROEMERI, RUBRA) - ASPIDOTIS DENSA***

Douglas-fir - Rocky Mountain juniper / fescue - Indian's dream

Abbreviated Name: PSME-JUSC/FEST-ASDE

Synonym: *Pseudotsuga menziesii - Juniperus scopulorum /
Festuca (idahoensis, rubra) - Aspidotis densa*

Sample size = 8 plots

DISTRIBUTION: Occurs only on a few islands in western Skagit County. Best developed on Cypress Island.

GLOBAL/STATE STATUS: GNRS1. Less than 5 occurrences exist in a very small global range. Continuing increase in density of these woodlands is probably a threat in some areas.

ID TIPS: Open canopy Douglas-fir, or less commonly madrone. Understory dominated by Roemer's or red fescue. Rocky Mountain juniper or Indian's dream present. Occurs on serpentine soils.

ENVIRONMENT: Sites are dry to very dry and relatively nutrient-poor. Occurs mostly on serpentine-influenced soils. Slopes tend to be southerly or westerly. Parent materials can include colluvium, residuum, and possibly glacial till (latter would be mixed with one of former). Soils are probably quite shallow under existing stands.

Precipitation: 27-30 inches

Elevation: 150-1350 feet

Aspect/slope: SE to NW; 35-60

Slope position: upper, mid, ridgetop

Soil series: Guemes, dystric xerochrepts, lithic haploxerols

Special: Serpentine

DISTURBANCE/SUCCESSION: Tree density has increased with fire suppression and may be continuing to increase in some of these woodlands. Probably was more extensive in pre-Western settlement landscape than currently, due to more frequent fires. Shallow and harsh soils probably help limit pace of succession toward forest in absence of fire. Heavy deer browsing on some islands probably retards tree establishment and growth, and therefore succession to forest, as well.

VEGETATION: Woodland or open forest usually dominated by Douglas-fir.; occasionally dominated by Pacific madrone with Douglas-fir present. Rocky Mountain juniper is usually present as

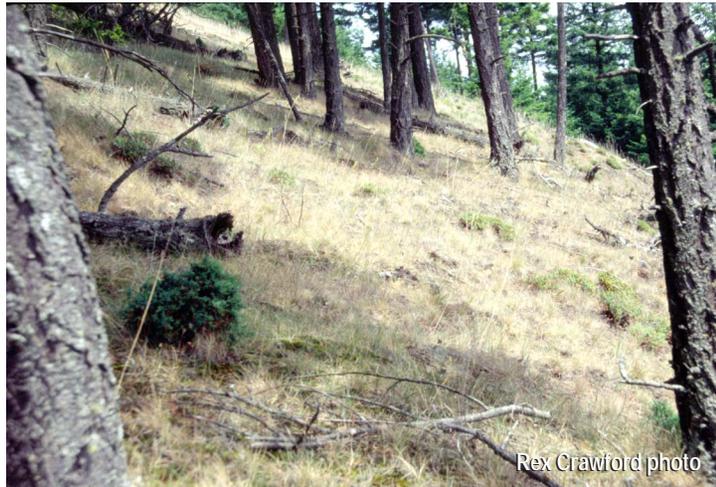
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Vegetation Composition Table (selected species):

Con = constancy, the percent of plots within which each species was found;
Cov = cover, the mean crown cover of the species in plots where it was found; + = trace (< 0.5% cover).

Trees	Kartesz 2005 Name	Con	Cov
Douglas-fir	<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	100	31
Rocky Mountain juniper	<i>Juniperus scopulorum</i>	88	9
lodgepole pine	<i>Pinus contorta</i> var. <i>contorta</i>	75	8
Pacific madrone	<i>Arbutus menziesii</i>	63	16
Shrubs and Dwarf-shrubs			
baldhip rose	<i>Rosa gymnocarpa</i>	75	3
tall Oregongrape	<i>Mahonia aquifolium</i>	75	2
hairy honeysuckle	<i>Lonicera hispidula</i>	50	3
Graminoids			
blue wildrye	<i>Elymus glaucus</i>	100	8
early hairgrass	<i>Aira praecox</i>	75	4
red fescue	<i>Festuca rubra</i>	63	21
California brome	<i>Bromus carinatus</i>	63	3
Roemer's fescue	<i>Festuca roemerii</i>	50	20
western fescue	<i>Festuca occidentalis</i>	50	11
prairie junegrass	<i>Koeleria macrantha</i>	38	6
silver hairgrass	<i>Aira caryophyllea</i>	38	2
wood-rush	<i>Luzula (comosa, multiflora</i> ssp. <i>multiflora)</i>	38	1
Forbs and Ferns			
Indian's dream	<i>Aspidotis densa</i>	75	4
yarrow	<i>Achillea millefolium</i> var. <i>occidentalis</i>	63	2
meadow death camas	<i>Zigadenus venenosus</i> var. <i>venenosus</i>	63	1
western starflower	<i>Trientalis borealis</i> ssp. <i>latifolia</i>	50	1
early blue violet	<i>Viola adunca</i> var. <i>adunca</i>	38	2
Hooker's onion	<i>Allium acuminatum</i>	35	+
field chickweed	<i>Cerastium arvense</i> ssp. <i>strictum</i>	25	4
Wallace's selaginella	<i>Selaginella wallacei</i>	25	3
woolly sunflower	<i>Eriophyllum lanatum</i> var. <i>lanatum</i>	25	+
common strawberry	<i>Fragaria virginiana</i> ssp. <i>platyptala</i>	25	+
Pacific sanicle	<i>Sanicula crassicaulis</i>	25	+

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Rex Crawford photo



Plot locations
of PSME-JUSC/FEST-ASDE
in the Puget Trough

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a small tree. Lodgepole pine is often present to co-dominant. The understory is dominated or co-dominated by the grasses Roemer's and/or red fescue. The nativity of red fescue in this habitat is uncertain. Blue wildrye is consistently present. Western fescue is prominent in half the plots. Other herbs usually present include Indian's dream (a fern), California brome, yarrow, early hairgrass, and death camas. Shrubs are usually present only in small amounts, with tall Oregongrape and baldhip rose being frequent.

CLASSIFICATION NOTES: This association has not been previously described and is not recognized by NatureServe (2005). We are not certain about the identity of the dominant fescue (Roemer's or red) on some of our plots.

MANAGEMENT NOTES: Especially in areas without heavy deer browse on Douglas-fir seedlings and saplings, it may be necessary to remove small Douglas-fir in order to maintain or restore woodland with herbaceous understory. Care should be taken to avoid disturbances so intense that they facilitate loss of native understory or massive increase of non-native herbs. Prescribed burning is a management tool that merits further research and evaluation.

BIODIVERSITY NOTES: Some of the plant species found on serpentine soils may have developed unique physiological and/or genetic adaptations to the chemical and hydrologic stresses of those soils. There are two vascular plant species in the Puget Trough, Rocky Mountain juniper and Indian's dream, that the data indicate are more common on these soils than elsewhere, and there may be other vascular or non-vascular species with a similar occurrence pattern.

Chappell, C.B. 2006. Upland plant associations of the Puget Trough ecoregion, Washington. Washington Department of Natural Resources, Natural Heritage Program, Olympia, WA. [\[http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf\]](http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf).