

**PSEUDOTSUGA MENZIESII – TSUGA HETERPHYLLA /
HOLODISCUS DISCOLOR / POLYSTICHUM MUNITUM**

Douglas-fir – western hemlock / oceanspray / sword fern
Abbreviated Name: PSME-TSHE/HODI/POMU

Sample size = 11 plots

DISTRIBUTION: This association occurs mostly in the Olympic rainshadow area of Island and San Juan counties, and probably also Clallam Co. Most significant occurrences are on Orcas Island and central to northern Whidbey Island. It also occurs rarely elsewhere in the Puget Trough, with plots from southeast Thurston Co. and Lewis Co. A similar association occurs in southwestern British Columbia.

GLOBAL/STATE STATUS: G2G3S1. There are 5 relatively good-condition occurrences known in Washington. Much of the area of this type has been displaced or degraded by development or agriculture. The vast majority of stands have been significantly impacted by past timber harvest. Development is an ongoing threat.

ID TIPS: Oceanspray or common snowberry occupy >10% cover and sword fern occupies >10% cover. Salal and evergreen huckleberry are absent or <10% cover. Refer to key.

ENVIRONMENT: These sites are slightly dry to slightly moist and appear to be relatively nutrient-rich. Sites are flat to steep. Northerly to easterly aspects are characteristic. Most often found on topographic plains or short slopes. Parent materials include sedimentary bedrock, glacial till, and alluvium. Soil textures vary from silt loams to sandy loams, typically with abundant gravel or stones. Occurs primarily in dry climatic zones, often at higher elevations within these zones.

Precipitation: 22-57 inches (mean 35)

Elevation: 100 - 700 feet

Aspect/slope: WNW to SE/ 0-80% (mean 23)

Slope position: short, plain, lower, upper, mid

Soil series: Pickett, Whidbey, Andic xerochrepts, Casey, Baldhill, Cloquato

DISTURBANCE/SUCCESSION: Fire and wind are important natural disturbances. Old-growth stands show evidence of past low- to moderate-severity fire (underburns). Blowdown from wind storms is much in evidence in many stands on Whidbey Island

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Vegetation Composition Table (selected species):

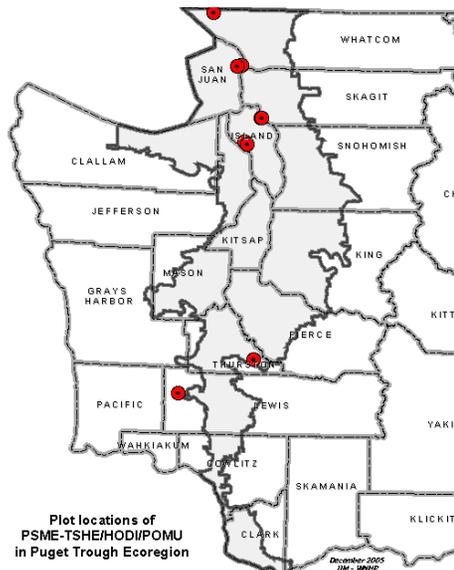
Con = constancy, the percent of plots within which each species was found;
Cov = cover, the mean crown cover of the species in plots where it was found;
+ = trace (< 0.5% cover).

Trees	Kartesz 2005 Name	Con	Cov
Douglas-fir	Pseudotsuga menziesii var. menziesii	100	63
western hemlock	Tsuga heterophylla	73	26
grand fir	Abies grandis	55	16
Pacific yew	Taxus brevifolia	36	4
western redcedar	Thuja plicata	27	22
red alder	Alnus rubra	27	12
Shrubs and Dwarf-shrubs			
oceanspray	Holodiscus discolor	100	24
trailing blackberry	Rubus ursinus ssp. macropetalus	100	8
baldhip rose	Rosa gymnocarpa	91	4
dwarf Oregongrape	Mahonia nervosa	73	15
common snowberry	Symphoricarpos albus var. laevigatus	73	9
orange honeysuckle	Lonicera ciliosa	64	3
red elderberry	Sambucus racemosa var. racemosa	64	1
Indian plum	Oemleria cerasiformis	45	6
salal	Gaultheria shallon	45	2
red huckleberry	Vaccinium parvifolium	36	9
vine maple	Acer circinatum	27	10
beaked hazelnut	Corylus cornuta var. californica	18	14
Graminoids			
Columbia brome	Bromus vulgaris	64	12
Coast Range fescue	Festuca subuliflora	55	4
nodding trisetum	Trisetum canescens	45	6
Alaska oniongrass	Melica subulata	36	6
Forbs and Ferns			
sword fern	Polystichum munitum	100	24
sweet-scented bedstraw	Galium triflorum	100	3
western starflower	Trientalis borealis ssp. latifolia	91	2
bracken fern	Pteridium aquilinum var. pubescens	82	4
wall lettuce	Mycelis muralis	64	2
spreading woodfern	Dryopteris expansa	64	1
threeleaf foamflower	Tiarella trifoliata var. trifoliata	55	4
twinflower	Linnaea borealis ssp. longiflora	36	2
pathfinder	Adenocaulon bicolor	36	1
cutleaf foamflower	Tiarella trifoliata var. laciniata	27	10
Hooker's fairybells	Prosartes hookeri var. oregana	9	13

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Chris Chappell photo



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(all of which are relatively close to saltwater shorelines). Grand fir may increase in importance with blowdown. Western hemlock, grand fir, and/or western redcedar increase over time in the absence of fire, Douglas-fir decreases, though still remains prominent after hundreds of years. Young stands may have little hemlock. Red alder increases with ground disturbance and canopy opening. With a seed source, red alder sometimes regenerates abundantly after logging. Conifers will become dominant after stand age 70-100 years if alder dominates early. On Orcas Island, the PSME-TSHE/TITRLA association appears to be a function of heavy deer browsing on sites that could support PSME-TSHE/HODI/POMU.

VEGETATION: Douglas-fir dominates or co-dominates the canopy. Western hemlock, grand fir, or western redcedar can co-dominate the canopy. Tree regeneration layers are dominated by western hemlock, grand fir, and/or western redcedar. Hemlock is usually present, redcedar only occasionally. Red alder is occasionally prominent. The well-developed shrub layer is usually dominated or co-dominated by oceanspray, which is always present. Dwarf Oregongrape and common snowberry are usually present and often prominent to co-dominant. Vine maple is occasionally prominent to co-dominant. Other frequently occurring shrubs and vines are trailing blackberry, baldhip rose, orange honeysuckle, and red elderberry. Sword fern dominates or co-dominates the herb layer. Columbia brome is usually present and sometimes prominent to co-dominant. Cutleaf foamflower is occasionally prominent. Sweet-scented bedstraw, western starflower, bracken fern, wall lettuce, spreading woodfern, Coast Range fescue, and threeleaf foamflower are frequent present.

CLASSIFICATION NOTES: Also described by Chappell (1997). NatureServe (2005) does not currently recognize this association, but will in the future under the name PSME-(TSHE)/HODI/POMU.

MANAGEMENT NOTES: Stands that have not been previously harvested should be considered for conservation status. Non-native English ivy (*Hedera helix*) and herb Robert (*Geranium robertianum*) are threats to this association. Non-native foxglove (*Digitalis purpurea*) has increased dramatically in some stands in response to blowdown.

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>].