PSEUDOTSUGA MENZIESII / CORYLUS CORNUTA / POLYSTICHUM MUNITUM – TIARELLA TRIFOLIATA

Douglas-fir / beaked hazelnut / sword fern – threeleaf foamflower

Abbreviated Name: PSME/COCO/POMU-TITR

Sample size = 9 plots

DISTRIBUTION: This association occurs from southwestern Pierce County south in the Puget Trough and perhaps into the Willamette Valley of Oregon. Occurs in Pierce, Thurston, Lewis, and Clark counties.

GLOBAL/STATE STATUS: GNRS2? Natural-origin occurrences are very rare due to historic logging. Development and non-native species are threats. There is uncertainty about the pre-settlement abundance of this type.

ID TIPS: Dominated by Douglas-fir, with little to no western hemlock, western redcedar, or grand fir present. Beaked hazelnut dominates tall shrub layer. Sword fern dominates herb layer, either with >60% cover, or with lesser amounts of lady-fern, spreading woodfern, stinging nettle, or foamflower also present.

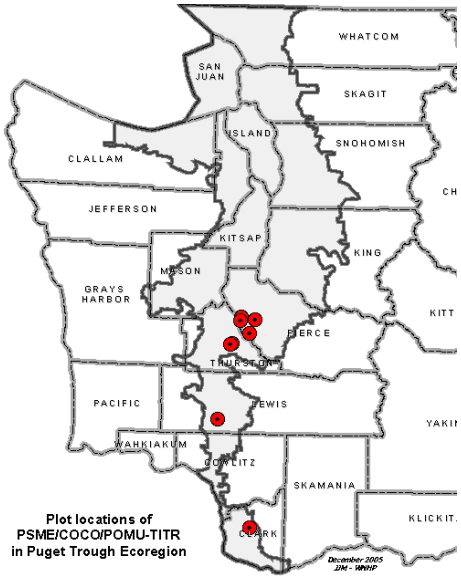
ENVIRONMENT: These sites are moist to very moist and appear to be relatively nutrient-rich. Sites are flat to moderately sloping, with varying aspect. Most plots are on glacial outwash plains or short slopes. Parent materials include sandy glacial outwash, alluvium, and ancient glacial drift. Soil texture ranges from silty clay loam to loamy sand. All mapped soil types are free of restrictive layers.
Precipitation: 41-53 inches (mean 45)
Elevation: 200-400 feet
Aspect/slope: various/ 0-40% (mean 17)
Slope position: plain, short, lower, mid
Soil series: Nisqually, Fitch, Prather, Washougal

DISTURBANCE/SUCCESSION: Fire is the primary natural disturbance. Old-growth stands show evidence of past low- to moderate-severity fire (underburns). Because this association is found primarily in landscapes that had significant amounts of fire-maintained prairies, it is likely that the absence of shade-tolerant conifers is due more to the fire history associated with prairie landscapes than with the inability of the shade-tolerant conifers to grow on these relatively moist sites. Some stands actually grow on soils that formerly supported prairies (Nisqually series) and are

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	71
bigleaf maple	Acer macrophyllum	67	27
cascara	Frangula purshiana	56	1
western hemlock	Tsuga heterophylla	33	1
Shrubs and Dwarf-shrubs			
beaked hazelnut	Corylus cornuta var. californica	100	21
common snowberry	Symphoricarpos albus var. laevigatus	100	5
trailing blackberry	Rubus ursinus ssp. macropetalus	89	7
dwarf Oregongrape	Mahonia nervosa	89	6
baldhip rose	Rosa gymnocarpa	89	1
red elderberry	Sambucus racemosa var. racemosa	78	4
red huckleberry	Vaccinium parvifolium	78	3
Indian plum	Oemleria cerasiformis	78	2
vine maple	Acer circinatum	44	9
serviceberry	Amelanchier alnifolia	44	2
tall Oregongrape	Mahonia aquifolium	44	2
English holly	Ilex aquifolium	44	2
salmonberry	Rubus spectabilis var .spectabilis	33	5
Graminoids			
Columbia brome	Bromus vulgaris	89	2
Dewey's sedge	Carex deweyana var. deweyana	78	2
Coast Range fescue	Festuca subuliflora	44	3
Forbs and Ferns			
sword fern	Polystichum munitum	100	53
sweet-scented bedstraw	Galium triflorum	100	2
threeleaf foamflower	Tiarella trifoliata var. trifoliata	78	4
inside-out flower	Vancouveria hexandra	67	12
bracken fern	Pteridium aquilinum var. pubescens	67	4
pathfinder	Adenocaulon bicolor	67	+
western trillium	Trillium ovatum ssp. ovatum	67	+
enchanter's nightshade	Circaea alpina ssp. pacifica	56	3
Siberian springbeauty	Claytonia siberica var. sibirica	56	2
western starflower	Trientalis borealis ssp. latifolia	56	1
stinging nettle	Urtica dioica ssp. gracilis	44	2
wall lettuce	Mycelis muralis	44	+
twinflower	Linnaea borealis ssp. longiflora	33	6
lady-fern	Athyrium filix-femina ssp. cyclosorum	33	4
Hooker's fairybells	Prosartes hookeri var. oregana	33	2
spreading woodfern	Dryopteris expansa	33	+


Chris Chappell photo



Plot locations of PSME/COCO/POMU-TITR in Puget Trough Ecoregion

Douglas-fir / beaked hazelnut / sword fern – threeleaf foamflower

a result of tree invasion on former prairies. Tree regeneration is usually largely absent or sparse in this association.

VEGETATION: Canopy dominated by Douglas-fir. Bigleaf maple usually forms a prominent to co-dominant lower tree canopy layer. Sword fern almost always dominates the understory, and is taller than average in this association. Beaked hazelnut forms a prominent to dominant tall shrub layer. Other frequent shrubs are common snowberry, trailing blackberry, Indian plum, dwarf Oregongrape, baldhip rose, red elderberry, and red huckleberry. Inside-out flower is usually present and often prominent. Sweet-scented bedstraw, Columbia brome, Dewey's sedge, threeleaf foamflower, enchanter's nightshade, western trillium, Siberian springbeauty and pathfinder are other frequent herbs.

CLASSIFICATION NOTES: Described by Chappell (1997, 2001) as part of PSME-(ABGR)/COCO/POMU. NatureServe (2005) lists it as a part of PSME/COCO/POMU.

MANAGEMENT NOTES: These sites appear to be quite productive for tree growth. Non-native English ivy (*Hedera helix*) does well on these sites and if present can quickly overwhelm the native understory. Herb Robert (*Geranium robertianum*) is another threatening invasive for this association.

BIODIVERSITY NOTES: State sensitive tall bugbane (*Cimicifuga elata*) occurs in this plant association.

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].