

**PSEUDOTSUGA MENZIESII - ARBUTUS MENZIESII /  
VACCINIUM OVATUM**

Douglas-fir - Pacific madrone / evergreen huckleberry  
Abbreviated Name: PSME-ARME/VAOV

Sample size = 9 plots

**DISTRIBUTION:** Known to occur only in western Pierce, northern Thurston, and Mason counties. Possible in Kitsap, King, and Jefferson counties.

**GLOBAL/STATE STATUS:** GNR1. A naturally rare type of very restricted range. There are only 4 known relatively good quality occurrences. Most stands have been altered by past timber harvest or fragmentation. Fungal diseases are a potential threat.

**ID TIPS:** Dominated or co-dominated by Pacific madrone. Western hemlock, western redcedar and grand fir absent or present in small amounts (<10% cover). Understory dominated or co-dominated by evergreen huckleberry (minimum 5% cover).

**ENVIRONMENT:** These sites are moderately dry to dry and appear to be relatively nutrient-poor. Most frequent on sunny slopes adjacent to saltwater. Occurs on glacial till and glacial drift sands. Usually found on moderate to steep slopes, especially those with sunny aspects (south to west).

**Precipitation:** 40-54 inches (mean 44)

**Elevation:** 20-300 feet

**Aspect/slope:** SE to WNW/ 5-90% slope (mean 38)

**Slope position:** all except bottoms

**Soil series:** Alderwood, Harstine, Shelton, xerochrepts

**DISTURBANCE/SUCCESSION:** In the pre-Western settlement landscape, a moderate-severity fire regime likely prevailed (variable severity, intermediate frequency). Madrone resprouts after fire or cutting, and is capable of living for a few hundred years. Madrone dominance, and Douglas-fir subordination or even absence, should be favored by repeated high-severity fires, clearcut logging followed by natural regeneration, or selective logging of Douglas-fir. Douglas-fir is likely to increase in abundance without disturbance, but does not appear to be excluding or out-competing madrone, even when madrone is overtopped, because the canopy of fir remains relatively open on these sites, which are steep, dry, or are located

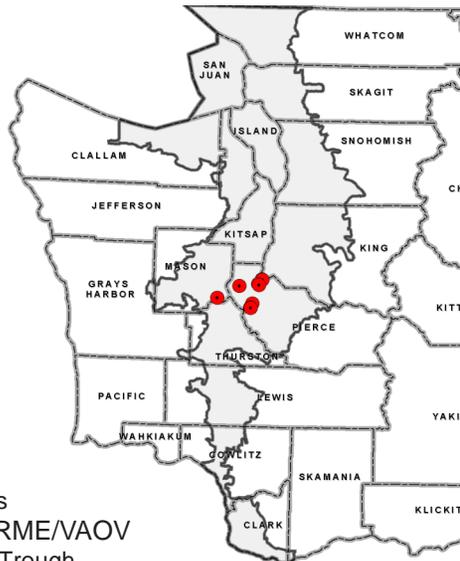
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**Vegetation Composition Table (selected species):**

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).

<b>Trees</b>	<b>Kartesz 2005 Name</b>	<b>Con</b>	<b>Cov</b>
Pacific madrone	Arbutus menziesii	100	57
Douglas-fir	Pseudotsuga menziesii var. menziesii	100	52
Scouler's willow	Salix scouleriana	44	2
western hemlock	Tsuga heterophylla	33	4
western redcedar	Thuja plicata	22	4
<b>Shrubs and Dwarf-shrubs</b>			
salal	Gaultheria shallon	100	53
evergreen huckleberry	Vaccinium ovatum	100	41
beaked hazelnut	Corylus cornuta var. californica	78	5
oceanspray	Holodiscus discolor	78	5
hairy honeysuckle	Lonicera hispidula	78	2
dwarf Oregongrape	Mahonia nervosa	56	3
red huckleberry	Vaccinium parvifolium	56	2
baldhip rose	Rosa gymnocarpa	56	1
serviceberry	Amelanchier alnifolia	44	2
common snowberry	Symphoricarpos albus var. laevigatus	44	1
poison-oak	Toxicodendron diversilobum	22	2
<b>Forbs and Ferns</b>			
bracken fern	Pteridium aquilinum var. pubescens	100	3
sword fern	Polystichum munitum	67	1
spotted coralroot	Corallorhiza maculata	33	+

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Plot locations  
of PSME-ARME/VAOV  
in the Puget Trough

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adjacent to sunny shorelines. Fungal diseases (*Natrassia* canker, *Fusicoccum* branch dieback), which may be non-native, appear to be facilitating at least local decline in madrone.

**VEGETATION:** Forest dominated or co-dominated by Pacific madrone, typically with Douglas-fir co-dominant (all stands seen to date). Madrone often forms a subcanopy below taller Douglas-fir. Small amounts of western hemlock or western redcedar may be present. The understory is usually dominated by salal and evergreen huckleberry. Oceanspray, beaked hazelnut, and hairy honeysuckle are usually present. The poorly developed herb layer usually has small amounts of bracken fern and, less commonly, sword fern.

**CLASSIFICATION NOTES:** Also described by Chappell (1997). NatureServe (2005), Chappell and Giglio (1999), and Chappell (2001) consider PSME-ARME/VAOV part of PSME-ARME/GASH.

**MANAGEMENT NOTES:** Experimentation with prescribed fire may be warranted, especially where fungal diseases are resulting in madrone decline. More research on management strategies focused on the diseases is recommended.

**BIODIVERSITY NOTES:** The fruit of madrone is highly sought-after by birds in the fall and early winter.

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>].