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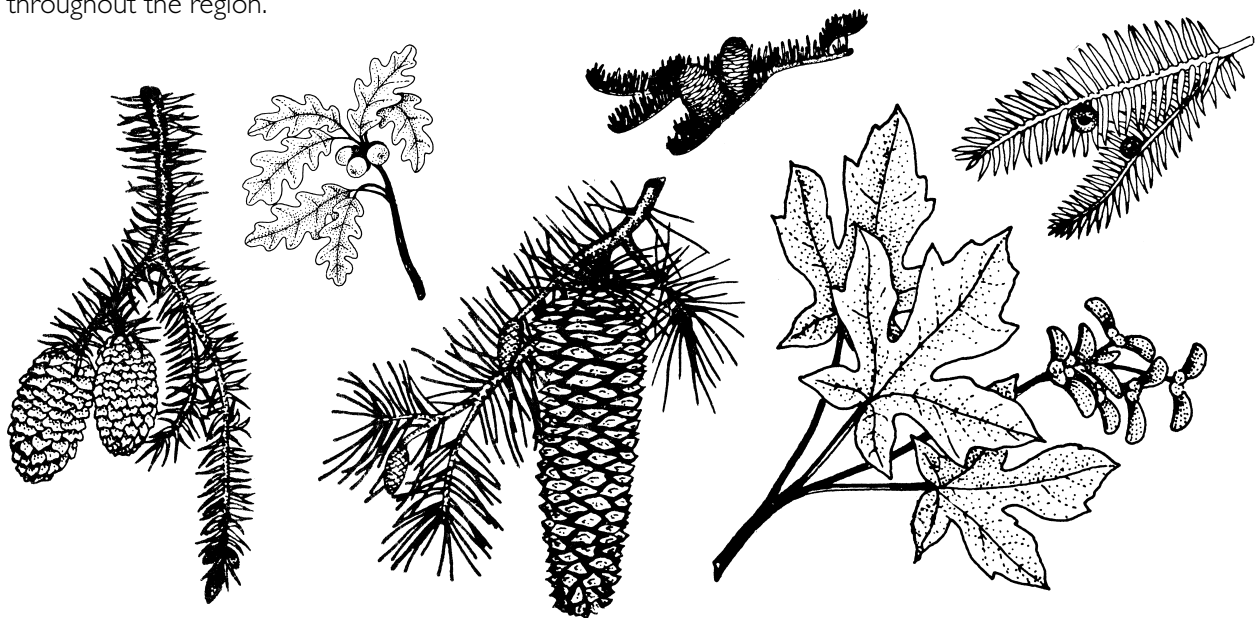
## Plant Indicator Species Of Coastal Forested Slopes

The following tables illustrate the great diversity of plants and plant community associations that can be found growing on Puget Sound shorelines. There are other plants that you may be familiar with which are not listed.

The influences of Puget Sound's intricate waterways, the surrounding mountains, and long term human impacts have contributed to a wide variability in plant occurrence and range. Some species are found only in specific locales while others are seen throughout the region.

Representative trees, shrubs, and herbaceous species have been included to furnish readers with information relating to the assessment of relative slope stability and other characteristics of the vegetation found on a given shoreline area. Caution should be exercised in the use of the tables; natural processes and vegetational development is more complex than can be represented here.

For those more comfortable with common names; an index of common names is provided.



**This list is not to be used in determining appropriate species for use in revegetation and restoration of slopes on Puget Sound.** Neither should it be considered an exhaustive list of species occurring on coastal slopes in this region. Nature is more variable and complicated than can be completely represented in a chart. This table is necessarily a simplification. The attributes described in this table are accurate only for forested coastal bluffs on Puget Sound. In using this information all of the species present on a slope should be considered. Large old trees can be considered an indicator of stability. Small, young trees are often an indicator of recent disturbance or instability. For purposes of this list, marine riparian areas are considered by their nature to be disturbed. A wet hydrologic regime often indicates unstable conditions on slopes. For this reason, wetland species are considered a warning sign of potential slope instability. Species marked as both deciduous and evergreen may show vegetative growth during mild coastal winters.

Plant Indicator Species Of Coastal Forested Slopes

Botanical Name	Common Name	Non-Native Invasive Plant	Life Form	Successional Stage	Hydro-logic Regime	Tolerance	Erosion Control Value	Relative Slope Stability
See Common Name Index for Cross Reference		Usually indicative of disturbed and/or unstable conditions.	A..... Annual P..... Perennial H..... Herbaceous W.... Woody D..... Deciduous E..... Evergreen O..... Overstory Canopy U..... Understory Canopy	E..... Early T..... Transitional L..... Late	W.... Wet M..... Moist D..... Dry	SS..... Salt & Spray S..... Shade NI.... No Information	D..... Detrimental V..... Variable EC... Surface Erosion Control SS..... Slope Stabilization	U..... Unstable V..... Variable D..... Disturbed S..... Stable
Lowest Strata: Groundcovers, Subshrubs, And Vines								
Arctostaphylos uva-ursi	Kinnikinnik		P,W, E	T	D		EC	D
Blechnum spicant	Deer Fern		P, H, D, E	T, L	W, M	S	EC	S
Carex spp.(1)	Sedge		P, H, D, E	T, L	W, M, D (1)	S	EC	U,V
Cirsium arvense	Canada Thistle	√	P, H, D	E	M, D		D	U, D
Cornus unalaschensis	Bunchberry		P, H, D	T, L	M, D	S	EC	S
Digitalis purpurea	Foxglove	√	P, H, D	E	D		D	U, D
Epilobium angustifolium	Fireweed		P, H, D	E, T	D		D, V	U, D
Equisetum spp.(2)	Horsetail		P, H, D, E	E, T	W, M, D (2)	S	EC, D, V	U, D
Fragaria spp.(3)	Strawberry		P, H, D	T, L	M, D	SS, S	EC	S
Hedera helix	English Ivy	√	P,W, E	T, L	M, D	SS, S	D	U, D
Heracleum mantegazzianum	Giant Hogweed	√	P, H, D	E	M, D	S	D	U, D
Juncus spp.	Rush		P, H, D	E, T, L	W, M	S	EC	U, V
Linnaea borealis	Twin Flower		P, H, D, E	E, T, L	M, D	S	EC	D, S
Lysichiton americanum	Skunk Cabbage		P, H, D	L	W	S		V
Mahonia nervosa	Low Oregon Grape		P,W, E	T, L	M, D	SS, S	EC	S
Maianthemum dilatatum	False Lily of the Valley		P, H, D	T, L	W, M, D	SS, S	EC	V
Mimulus guttatus	Monkey Flower		P, H, D	E, T	W, M			V
Polygonum cuspidatum	Japanese Knotweed	√	P, H, D	E, T	W, M, D	S	D	U, D
Polystichum munitum	Swordfern		P, H, D, E	T, L	M, D	SS, S	EC	D, S
Potentilla pacifica	Silverweed		P, H, D	E, T	W, M	SS		U
Pteridium aquilinum	Bracken Fern		P, H, D, E	E, T	M, D		D, V	U, D, V
Rubus ursinus	Trailing Blackberry		P,W, D, E	E, T	D	SS, S	EC	D, V

Plant Indicator Species Of Coastal Forested Slopes

Botanical Name	Common Name	Non-Native Invasive Plant	Life Form	Successional Stage	Hydrologic Regime	Tolerance	Erosion Control Value	Relative Slope Stability
See Common Name Index for Cross Reference		Usually indicative of disturbed and/or unstable conditions.	A..... Annual P..... Perennial H..... Herbaceous W..... Woody D..... Deciduous E..... Evergreen O..... Overstory Canopy U..... Understory Canopy	E..... Early T..... Transitional L..... Late	W.... Wet M..... Moist D..... Dry	SS..... Salt & Spray S..... Shade NI.... No Information	D..... Detrimental V..... Variable EC.... Surface Erosion Control SS..... Slope Stabilization	U..... Unstable V..... Variable D..... Disturbed S..... Stable
Lowest Strata: Groundcovers, Subshrubs, And Vines (continued)								
Tiarella trifoliata	Foam Flower		P, H, D	T, L	M	S	EC	U, V
Tellima grandiflora	Fringecup		P, H, D	T, L	D	S	EC	D, S
Tolmiea menziesii	Piggyback Plant		P, H, D	T, L	M, D	S	EC	D, S
Urtica dioica	Stinging Nettle		P, H, D	E, T	M, D	S	EC, V	D, V
Middle Strata: Shrubs and Small Trees								
Acer circinatum	Vine Maple		P, W, D, U	E, T, L	M, D	S	EC, SS	D, S
Acer glabrum(4)	Douglas Maple		P, W, D, O	T, L	D	SS	SS	D, S
Amelanchier alnifolia	Serviceberry		P, W, D	E, T, L	D	SS, S	EC, SS	S
Arctostaphylos columbiana	Hairy Manzanita		P, W, E	T, L	D	SS	EC, SS	S
Buddleia davidii	Butterfly Bush	√	P, W, D	E, T	D		D	U, D
Ceanothus sanguineus(5)	Red-stem Ceanothus		P, W, D	E, T	D	NI (SS)	EC, SS	D, S
Ceanothus velutinus(5)	Snowbrush		P, W, E	E, T	D	NI (SS)	EC, SS	D, S
Cornus stolonifera	Redtwig Dogwood		P, W, D	E, T	W, M, D	NI (SS)	EC, SS	D, V
Corylus cornuta	Beaked Hazel		P, W, D	E, T, L	M, D	S, SS	EC, SS	D, S
Crataegus douglasii	Black Hawthorn		P, W, D	T, L	W, M, D	S	EC, SS	D, S
Cytisus scoparius	Scot's Broom	√	P, W, D	E, T	D	SS	D	U, D
Gaultheria shallon	Salal		P, W, E	T, L	D	SS, S	EC	S, V
Holodiscus discolor	Oceanspray		P, W, D	E, T, L	D	SS, S	EC, SS	S, V
Ilex aquifolium	English Holly	√	P, W, E	E, T, L	M, D	SS, S	D	D
Lonicera hispidula	Purple Honeysuckle		P, W, D	T, L	D	SS	EC	S
Lonicera involucrata	Twinberry		P, W, D	T, L	W, M, D	SS, S	EC, SS	S
Mahonia aquifolium	Tall Oregon Grape		P, W, E	E, T, L	D	SS	EC, SS	S

Plant Indicator Species Of Coastal Forested Slopes

Botanical Name	Common Name	Non-Native Invasive Plant	Life Form	Successional Stage	Hydro-logic Regime	Tolerance	Erosion Control Value	Relative Slope Stability
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Middle Strata: Shrubs and Small Trees (continued)								
Oemleria cerasiformis	Indian Plum		P,W,D	T, L	D	S	EC	S
Philadelphus lewisii	Mock-orange		P,W,D	T	D	SS	EC, SS	S
Physocarpus capitatus	Pacific Ninebark		P,W,D	T, L	W, M	S	EC, SS	S
Rhododendron macrophyllum	Bigleaf Rhododendron		P,W,E	T, L	D	S	EC	S
Ribes lacustre	Swamp Gooseberry		P,W,D	T, L	W, M		EC	U,V
Ribes sanguineum	Redflowering Currant		P,W,D	T, L	M, D	SS	EC, SS	S
Rosa eglanteria	Sweetbriar Rose	√	P,W,D	E,T	W, M, D	NI, SS	D	D
Rosa gymnocarpa	Baldhip Rose		P,W,D	T	D	S	EC, SS	S
Rosa nutkana	Nootka Rose		P,W,D	T, L	M, D	SS	EC, SS	D, S
Rosa pisocarpa	Swamp Rose		P,W,D	T, L	W, M, D	S	EC, SS	S
Rubus discolor (=R. ameniaca);	Himalayan Blackberry;	√	P,W,D, E	E,T	M, D	SS	D	U, D
R. laciniatus	Cutleaf Blackberry		P,W,D, E	E,T	M, D	NI (SS)	D	U, D
Rubus parviflorus	Thimbleberry		P,W,D	T	M, D	SS, S	EC	D,V
Rubus spectabilis	Salmonberry		P,W,D	E,T	W, M, D	SS, S	EC, D	D,V
Sambucus racemosa	Red Elderberry		P,W,D	E,T	M, D	S	EC	D,V
Shepardia canadensis	Soapberry		P,W,E	T	D	SS	EC, SS	D, S
Symphoricarpos albus	Common Snowberry		P,W,D	T	D, M	SS	EC, SS	D, S
Ulex europaeus	Gorse	√	P,W,E	T	D	SS	D	D
Vaccinium ovatum	Evergreen Huckleberry		P,W,E	E, T, L	D	S	EC	S
Vaccinium parvifolium	Red Huckleberry		P,W,D	E, T, L	D	S	EC	S

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See Common Name Index for Cross Reference		Usually indicative of disturbed and/or unstable conditions.	A..... Annual P..... Perennial H..... Herbaceous W .... Woody D..... Deciduous E..... Evergreen O ..... Overstory Canopy U..... Understory Canopy	E..... Early T ..... Transitional L..... Late	W .... Wet M..... Moist D..... Dry	SS..... Salt & Spray S..... Shade NI .... No Information	D..... Detrimental V ..... Variable EC..... Surface Erosion Control SS..... Slope Stabilization	U ..... Unstable V ..... Variable D..... Disturbed S..... Stable
Upper Strata: Trees								
Abies grandis	Grand Fir		P,W,E,O	T,L	M,D	SS,S	SS	S
Acer macrophyllum	Bigleaf Maple		P,W,D,O	T,L	M,D	SS,S	SS	S
Alnus rubra	Red Alder		P,W,D,O	E,T	W,M,D	SS	V,SS	U,D,S,V
Arbutus menziesii	Pacific Madrone		P,W,E,O	E,T,L	D	SS	SS	D,S
Cornus nuttallii	Pacific Dogwood		P,W,D,U	T,L	D	S	SS	S
Picea sitchensis	Sitka Spruce		P,W,E,O,U	L	W,M,D	SS,S	SS	S
Pinus contorta	Shore Pine		P,W,E,O	T	M,D	SS	SS	S
Pinus monticola	Western White Pine		P,W,E,O	T,L	M,D	SS	SS	S
Prunus emarginata	Bitter Cherry		P,W,D,O	E,T	M,D	SS	SS	D,S
Pseudotsuga menziesii	Douglas Fir		P,W,E,O	E,T,L	D	SS	SS	S
Quercus garryana	Oregon White Oak		P,W,D,O	T,L	M,D		SS	S
Rhamnus purshiana	Cascara		P,W,D,U	T	M,D	S	EC,SS	D,S
Salix hookeriana	Hooker's Willow		P,W,D,O	E,T	W,M	SS	SS	D,V
Salix scouleriana	Scouler's Willow		P,W,D,O	E,T	M,D	SS	SS	D,V
Taxus brevifolia	Pacific Yew		P,W,E,U	L	M,D	SS,S	SS	S
Thuja plicata	Western Red Cedar		P,W,E,U,O	L,T	W,M,D	SS,S	SS	S
Tsuga heterophylla	Western Hemlock		P,W,E,U,O	T,L	M,D	S	SS,V	S,V
Notes								
<p>(1) Carex deweyana occurs in moist forest understories. Carex Inops and C. tumulicola occur on well-drained prairies, coastal rocky balds, and coastal sandy bluffs. All other Carexes occur in wet situations.</p> <p>(2) Equisetum hyemale may occur in both wet conditions and on sandy well-drained coastal bluffs.</p> <p>(3) The three coastal Fragaria species in the Puget lowlands may occur in open coastal and forested areas.</p> <p>(4) Acer glabrum is locally common in the San Juan Islands; otherwise rare in the Puget lowlands.</p> <p>(5) These Ceanothus species occur from Hood Canal north on the Olympic Peninsula. They require episodic fire for natural germination and establishment.</p>								

## COMMON NAME INDEX

\*Non-Native Invasive

### LOWEST STRATA: GROUNDCOVERS, SUBSHRUBS, & VINES

Bracken Fern.....	Pteridium aquilinum
Bunchberry.....	Cornus unalaschkensis
* Canada Thistle.....	Cirsium arvense
Deer Fern.....	Blechnum spicant
* English Ivy.....	Hedera helix
False Lily of the Valley.....	Maianthemum dilatatum
Fireweed.....	Epilobium angustifolium
Foam Flower.....	Tiarella trifoliata
* Foxglove.....	Digitalis purpurea
* Giant Hogweed.....	Heracleum mantegazzianum
Horsetail.....	Equisetum spp.
* Japanese Knotweed.....	Polygonum cuspidatum
Kinnikinnik.....	Arctostaphylos uva-ursi
Low Oregon Grape.....	Mahonia nervosa
Monkey Flower.....	Mimulus guttatus
Piggyback Plant.....	Tolmiea menziesii
Rush.....	Juncus spp.
Sedge.....	Carex spp.
Silverweed.....	Potentilla pacifica
Skunk Cabbage.....	Lysichiton americanum
Stinging Nettle.....	Urtica dioica
Strawberry.....	Fragaria spp.
Trailing Blackberry.....	Rubus ursinus
Twin Flower.....	Linnaea borealis

### MIDDLE STRATA: SHRUBS AND SMALL TREES

Baldhip Rose.....	Rosa gymnocarpa
Beaked Hazel.....	Corylus cornuta
Black Hawthorn.....	Crataegus douglasii
* Butterfly Bush.....	Buddleia davidii
Common Snowberry.....	Symphoricarpos albus
* Cutleaf Blackberry.....	Rubus laciniatus
Douglas Maple.....	Acer glabrum
* English Holly.....	Ilex aquifolium
Evergreen Huckleberry.....	Vaccinium ovatum
* Gorse.....	Ulex europaeus
Hairy Manzanita.....	Arctostaphylos columbiana
* Himalayan Blackberry.....	Rubus discolor (=R. ameniaca);
Indian Plum.....	Oemleria cerasiformis
Mock-orange.....	Philadelphus lewisii

Plant Indicator Species Of Coastal Forested Slopes

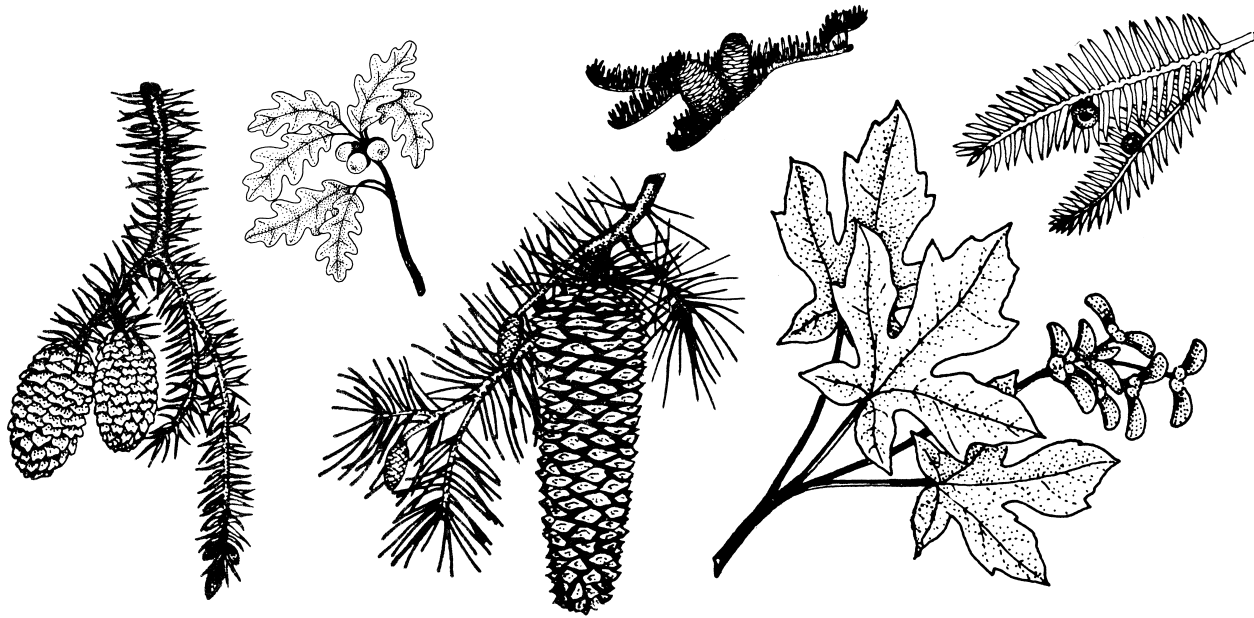
**MIDDLE STRATA: SHRUBS AND SMALL TREES (CONTINUED)**

Nootka Rose .....	Rosa nutkana
Oceanspray .....	Holodiscus discolor
Pacific Dogwood.....	Cornus nuttallii
Pacific Ninebark.....	Physocarpus capitatus
Pacific Rhododendron.....	Rhododendron macrophyllum
Purple Honeysuckle.....	Lonicera hispidula
Red Elderberry.....	Sambucus racemosa
Red Huckleberry.....	Vaccinium parvifolium
Red-Flowering Currant.....	Ribes sanguineum
Red-stem Ceanothus.....	Ceanothus sanguineus
Redtwig Dogwood.....	Cornus stolonifera
Salal .....	Gaultheria shallon
Salmonberry .....	Rubus spectabilis
* Scot's Broom .....	Cytisus scoparius
Serviceberry .....	Amelanchier alnifolia
Snowbrush.....	Ceanothus velutinus
Soapberry.....	Shepardia canadensis
Swamp Gooseberry.....	Ribes lacustre
Swamp Rose.....	Rosa pisocarpa
* Sweetbriar Rose .....	Rosa eglanteria
Tall Oregon Grape.....	Mahonia aquifolium
Thimbleberry .....	Rubus parviflorus
Twinberry.....	Lonicera involucrata
Vine Maple.....	Acer circinatum

**UPPER STRATA: OVERSTORY TREES**

Bigleaf Maple.....	Acer macrophyllum
Bitter Cherry .....	Prunus emarginata
Cascara .....	Rhamnus purshiana
Douglas Fir.....	Pseudotsuga menziesii
Grand Fir.....	Abies grandis
Hooker's Willow.....	Salix hookeriana
Oregon White Oak.....	Quercus garryana
Pacific Madrone .....	Arbutus menziesii
Pacific Yew .....	Taxus brevifolia
Red Alder .....	Alnus rubra
Scouler's Willow.....	Salix scouleriana
Shore Pine.....	Pinus contorta
Sitka Spruce.....	Picea sitchensis
Western Hemlock .....	Tsuga heterophylla
Western White Pine.....	Pinus monticola
Western Red Cedar .....	Thuja plicata

## Plant Indicator Species Of Coastal Forested Slopes



NOTE: The information presented here is from the author's personal observations, the observations of colleagues in related fields, and a variety of published sources, as listed below:

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- Minore, D. 1979. *Comparative Autecological Characteristics of Northwestern Tree Species: A Literature Review*. GTR-PNW-87. USDA Forest Service. PNW Forest and Range Experiment Station.

Readers who have additional information, additional bibliographic citations, or comments are invited to contact the author: (360)341-3433 — [elliott@greenbeltconsulting.com](mailto:elliott@greenbeltconsulting.com)