

ALRU/RUSP/CAOB-LYAM:

red alder / salmonberry / slough sedge – skunk cabbage

Mixed Coniferous-Deciduous Forest – PFO, PSS, PEM

From Chappell, C.B. 1999. Ecological Classification of Low-Elevation Riparian Vegetation on the Olympic Experimental State Forest: A First Approximation. April.

Vegetation Composition and Structure:

This community is a deciduous hardwood forest with a moderate to dense shrub layer and a well-developed herbaceous layer. Moss cover is relatively low. The broadleaf deciduous tree canopy is typically closed. The shrub layer is primarily dominated by medium to medium-tall deciduous shrubs. The herb layer is dominated by graminoids and forbs.

The overstory tree layer is dominated by red alder (ALRU). Sitka spruce (PISI) may be present in the canopy in small amounts. Tree regeneration is limited primarily to large woody debris substrates and, when present, is mostly Sitka spruce. The shrub layer is dominated by salmonberry (RUSP). The herbaceous layer is dominated by slough sedge (CAOB) or skunkcabbage (LYAM) with youth-on-age (TOME) codominant. Either slough sedge or skunkcabbage has >5% cover and slough sedge is always present. Occasional co-dominants include rough-stalk bluegrass (POATRI), creeping buttercup (RARE), Pacific golden-saxifrage (CHGL), and kneeling angelica (ANGE). Other frequent species include Pacific water-parsley (OESA), lady-fern (ATFI), Cooley's hedge-nettle (STCI), sword fern (POMU), Oregon oxalis (OXOR), yellow monkey-flower (MIGU), and enchanter's nightshade (CIAL).

Species	Code	Constancy	Cover
Overstory trees		100	93
<i>Alnus rubra</i>	ALRU	100	93
<i>Picea sitchensis</i>	PISI	67	8
Understory trees		100	6
<i>Picea sitchensis</i>	PISI	67	2
Shrubs		100	60
<i>Rubus spectabilis</i>	RUSP	100	57
<i>Acer circinatum</i>	ACCI	67	4
Forbs and ferns		100	73
<i>Tolmiea menziesii</i>	TOME	100	34
<i>Polystichum munitum</i>	POMU	100	6
<i>Oenanthe sarmentosa</i>	OESA	100	6
<i>Stachys ciliata</i>	STCI	100	4
<i>Athyrium filix-femina</i>	ATFI	100	4
<i>Chrysosplenium glechomifolium</i>	CHGL	67	15
<i>Oxalis oregana</i>	OXOR	67	8
<i>Mimulus guttatus</i>	MIGU	67	4
<i>Circaea alpina</i>	CIAL	67	3
<i>Lysichiton americanus</i>	LYAM	33	30
<i>Ranunculus repens</i>	RARE	33	20

<i>Angelica genuflexa</i>	ANGE	33	20
Graminoids		100	41
<i>Carex obnupta</i>	CAOB	100	30
<i>Poa trivialis</i>	POATRI	33	30
Moss		100	20

Environment and Distribution:

This community occurs on frequently flooded, somewhat poorly to poorly drained soils of well-developed riverine floodplains. Sites sampled were low terraces or floodplains located in the lower to middle portion of the floodprone zone (mean floodprone position index .46; 1-3 feet above bankfull). The surface soil texture was silt loam with no coarse fragments. Subsoils varied in texture. A high water table is present during the growing season. Depth to mottling or water table ranged from 12 to 80 cm (mean 46). Inferred nitrogen status was rich to moderate. There was a very small amount of bare ground exposed.

Valleys were broad to very broad, with very low to low gradients. Streams had major floodplain development (Rosgen types C and E) and had sand, gravel, or cobble beds. These were medium to large streams (bankfull width 31-148 feet) with moderate to high sinuosity located in u-shaped glacial trough valleys and lower alluviated valleys. Floodprone zones ranged from 200 to 700 feet wide. Surficial geology was alluvium or glacial drift. Mean annual precipitation ranged from 95 to 125 inches and elevation ranged from 200 to 600 feet.

Succession and Disturbance:

Sampled stands ranged in age from 32 to 78 years old. Wet soils and frequent flooding limit conifer regeneration primarily to large conifer logs. Over long time frames this association would be expected to succeed toward a potential vegetation of Sitka Spruce/Slough Sedge-Skunkcabbage (PISI/CAOB-LYAM). The rate of this succession may depend on frequency and type of flooding and availability of conifer logs. In the absence of conifer logs, succession could lead to shrub or herbaceous dominance after the alder dies out. Major disturbance is likely to result in reestablishment of alder. Heavy use by elk on one site showed apparent increases in cover of rough-stalk bluegrass (POATRI) and creeping buttercup (RARE), and reductions in salmonberry cover.

Associated Vegetation:

The riparian types that occurred adjacent were the Sitka Spruce/Vine Maple (PISI/ACCI), Red Alder/Salmonberry (ALRU/RUSP), Sitka Spruce/Oregon Oxalis (PISI/OXOR), Red Alder/Salmonberry/Pacific Golden-saxifrage (ALRU/RUSP/CHGL), Black Cottonwood-Bigleaf Maple-Sitka Spruce/Salmonberry (POTR-ACMA-PISI/RUSP), Lady-fern (ATFI), Pacific Ninebark (PHCA), as well as backwater channels.

Similar Riparian Associations in this Classification:

The Red Alder/Salmonberry (ALRU/RUSP) and Red Alder/Salmonberry/Pacific Golden-saxifrage (ALRU/RUSP/CHGL) communities have less than 5% cover of slough sedge and skunk cabbage. The Sitka Spruce-Red Alder/Skunkcabbage (PISI-ALRU/LYAM) community lacks slough sedge, has less salmonberry and more spruce and hemlock. The Sitka Spruce/Slough Sedge-Skunkcabbage (PISI/CAOB-LYAM) community is dominated by spruce rather than alder.

Relationship to Other Classifications:

This community is relatively similar in composition to the community of the same name described by Kunze (1994) from western Washington surge plain wetlands. Similar vegetation has also been described in Oregon.