

STAND DESCRIPTION

Plot Name: TB13 (Mount Rainier National Park Permanent Plot)

Plot Size: 1 ha

Established: 1978

Remeasurements: 1983, 1989, 1994

Site Description:

Latitude: 46.74

Longitude: 121.84

Elevation: 1018 m

Aspect: SW

Slope: 10%

Landform: broad bench at the southern end of Rampart Ridge (above the Kautz Creek mudflow)

Soil Parent Material: andesite and breccia colluvium

Soil: unnamed

Plant Association: *Tsuga heterophylla*/*Berberis nervosa*

Age Class: mature with scattered old-growth

Soils:

The soil at this plot site has not been described.

General Stand Description:

The *Tsuga heterophylla*/*Berberis nervosa* association generally occurs at moderate elevations on lower slopes or valley bottoms with southerly exposure. The age class of this stand is 150 years and dates to the last severe fire that swept the region. However, more than 10 old-growth Douglas-fir (in the plot) survived the fire and remain as fire-scarred relicts from a stand that originated more than 750 years ago.

Douglas-fir and western hemlock are the dominant canopy trees, with Pacific silver fir and western redcedar as less abundant associates. Tree regeneration is largely made up of Pacific silver fir and western hemlock.

The understory is sparse with very low cover of shrubs and herbs. Total tall shrub cover is only about 2% contributed by *Vaccinium parvifolium* and *V. ovalifolium*. The low shrub and herb layer is dominated by *Berberis nervosa*, but it only totals 3% cover. Other, very scattered herbaceous species include *Chimaphila menziesii*, *Goodyera oblongifolia*, *Linnaea borealis*, and *Rubus pedatus*. The only plants which are thriving in the understory are mosses which have almost 50% cover.

Stand Structure and Composition

Live Tree Data at Last Measurement (1994)

Basal area: 90.0 m²/ha, Psme-46.9 m²/ha, Tshe-29.2 m²/ha, Thpl-13.4 m²/ha, Abam-0.5 m²/ha.

Stem numbers: 455/ha, Tshe-275/ha, Psme-114/ha, Thpl-46/ha, Abam-20/ha

Diameter distribution: median-34.3 cm, quadratic mean-50.2 cm, maximum-159.4 cm.

Age: not available

Height: not available

Volume: 1386.5 m³/ha, Psme-741.2 m³/ha, Tshe-450.8 m³/ha, Thpl-188.0 m³/ha, Abam-6.5 m³/ha

Biomass: 702.8 Mg/ha, Psme-426.0 Mg/ha, Tshe-211.1 Mg/ha, Thpl-62.6 Mg/ha, Abam-3.0 Mg/ha.

Coarse Woody Debris: not available

Ecosystem and Population Dynamics (measurements for most recent interval, 1989-1994)

Net Bole Production: 4.5 Mg/ha/yr

Annual Mortality: 4.8 Mg/ha/yr

Percent of Trees Dying: Total-1.5%/yr (18% broken, 11% uprooted), Tshe-1.6%/yr, Thpl-1.4%/yr, Psme-1.3%/yr, Abam-0.