

The Effects of Thinning and Burning on the Distribution of Bracken Fern and Salal in Skokomish Savanna Restoration

Lindsey Hamilton, Master in Environmental Horticulture, Candidate
School of Environmental and Forest Sciences, University of Washington



Figure 1: Olympic National Forest thinned/burned unit in 2003.

- **Background:** Prior to European settlement, savannas of the southeastern Olympic Peninsula were primarily managed by anthropogenic (deliberate) burning for harvesting of plants and for hunting.
- Bracken fern (*Pteridium aquilinum*) rhizomes, harvested from savannas, long served as one of the major carbohydrate sources for native tribes in the Pacific Northwest.

- **Restoration Need:** Fire management stopped, and a less diverse woodland plant community developed.
- Salal (*Gaultheria shallon*) is the dominant and competitive understory species and shade-intolerant plants, like bracken fern, have been suppressed.

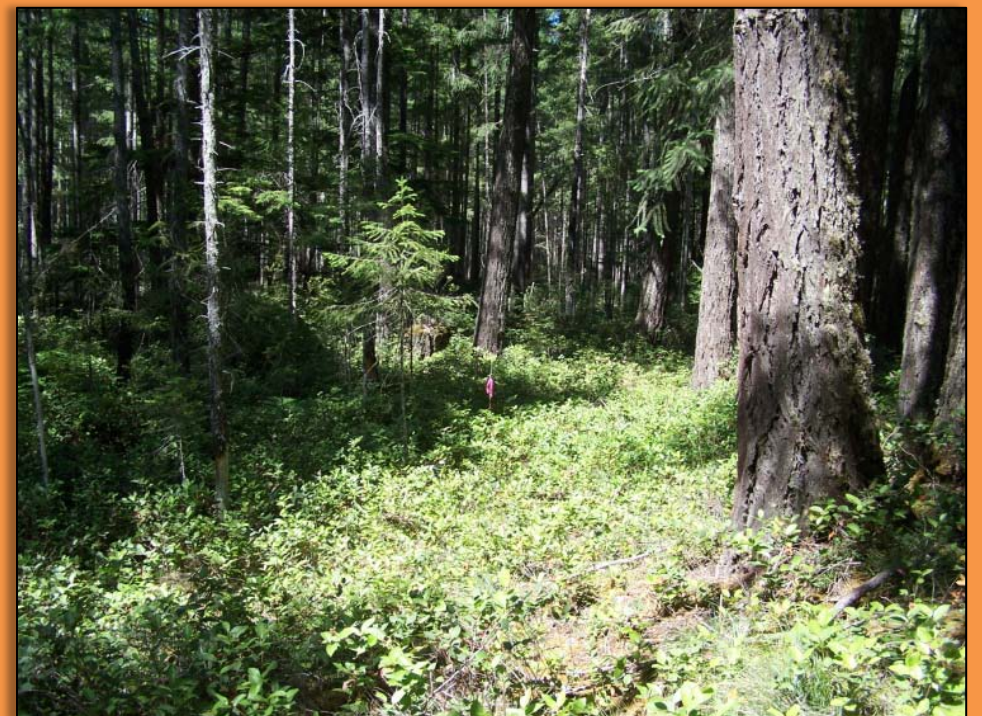


Figure 2: ONF Woodland unit in 2010; overgrown savanna with dominant salal understory.



Figure 3: ONF thinned/burned unit in 2010; bracken fern and salal understory.

- **Objective:** Determine the effect that thinning and burning has had on the abundance and distribution of bracken fern and salal.
- This study will help to inform Forest Service management decisions in the restoration of Olympic Peninsula savannas to their pre-European condition.

I would like to give special thanks to: Dr. Kern Ewing (UW), Dr. Jim Fridley (UW), Dr. David Peter (ONF) and Robin Shoal (ONF).