

## Living with Volcanoes Summer Session 2005

### General trip route

This trip was run from Spokane, WA to the Columbia River gorge and down the coast of Oregon to Crescent City, CA and the Redwoods of Northern California and back north to Mount Hood. The route from Spokane, WA was I-90 west to Ritzville, I-395 south to the Tri-Cities, through Kennewick and into Oregon via Route 82 and Route 730 to I-84 westbound. Stops were planned along the Columbia River Gorge (see below). In Portland, Route 8 to Route 6 to Tillamook brought us to Route 101 (Oregon Coastal highway), which we followed into northern California and Crescent City, CA. We travelled east on Route 199 to Jedediah Smith Redwood State Park and north back into Oregon to Cave Junction and Oregon Caves National Monument. The latter part of the trip took us north on Route 199 over Grants Pass, I-5 north to Route 26, north on Route 35 to Mount Hood, followed by a return to Spokane via I-84 and points northward.

### Physiographic provinces and areas covered

Columbia Plateau

Cascade Mountains

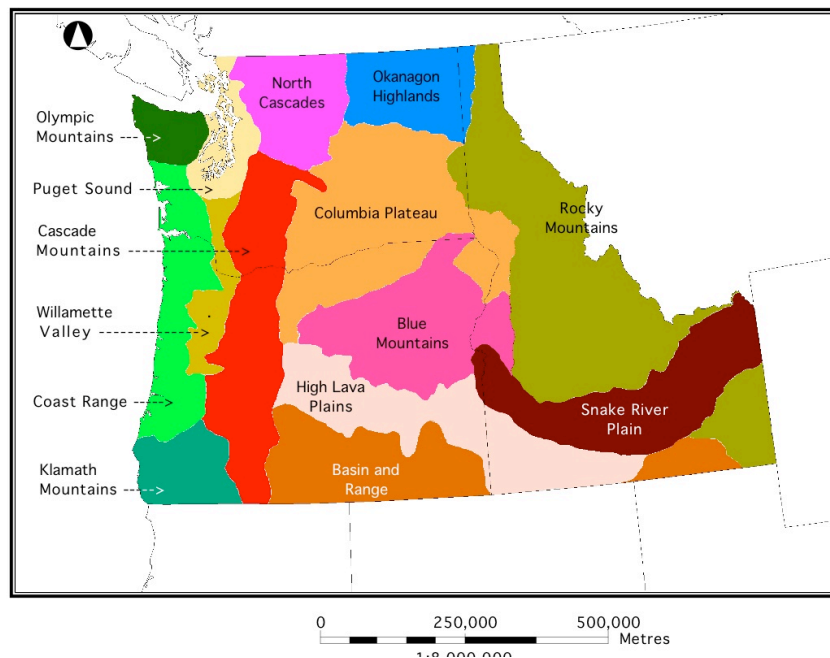
#### Geology of the Pacific Northwest Physiographic Provinces

Cartography by Frank D. Granshaw  
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**Note:**  
Boundaries are approximate

##### Reference

Rosenfeld, C., 1985, Landforms and Geology, in *Atlas of the Pacific Northwest*, Kimerling, A.J. and Jackson, P.L., p. 40



### **Suggested geology topics for discussion during trip**

- Physiographic provinces of Washington State
- Columbia River flood basalts
- Channeled Scablands
- Cascade Range volcanoes
- Volcanism and volcanic hazards at Mount St. Helens
- Volcanism and volcanic hazards at Mount Rainier
- Seismic activity in western Washington
- Lahars, pyroclastic flows
- Mass wasting
- Lava tube formation

**Columbia Plateau** – Outcrops of columnar jointed basalt and pillow lavas are abundant in the area.

- Vantage overlook – Columbia River

### **Mount St. Helens** – suggested stops

- Bear Meadow
- Miner's Car
- Meta Lake
- Norway Pass hike
- Harmony hike to shore of Spirit Lake
- Windy Ridge hike
- Tatoosh andesite columns
- Ape Cave
- Mount St. Helens Visitor Center
- Toutle River sediment retention structure
- Coldwater Ridge Visitor Center
- Johnston Ridge Observatory and crater overlook

### **Mount Rainier** – suggested stops

- Emmons Glacier hike from White River Campground
- Sunrise
- Box Canyon hike
- Paradise hikes
- Nisqually valley
- Longmire hike and National Park Inn

There are a couple of field guides for both Mount St. Helens and Mount Rainier that are useful in planning your trip. These are listed below. The National Park Service (<http://www.nps.gov>) is also a good resource.

Decker, R. and Decker, B. (1996) Road Guide to Mount Rainier National Park. Double Decker Press.

Decker, R. and Decker, B. (2002) Road Guide to Mount St. Helens. Updated Edition. Double Decker Press.

Pringle, P.T. (1993) Roadside Geology of Mount St. Helens National Volcanic Monument and Vicinity. Washington Department of Natural Resources, Division of Geology and Earth Resources Information Circular 88.