

## Gorge to Shore Summer Session 2004

### 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.

### Physiographic provinces and areas covered

Columbia Plateau  
Cascade Mountains

Willamette Valley  
Coast Range

Klamath Mountains

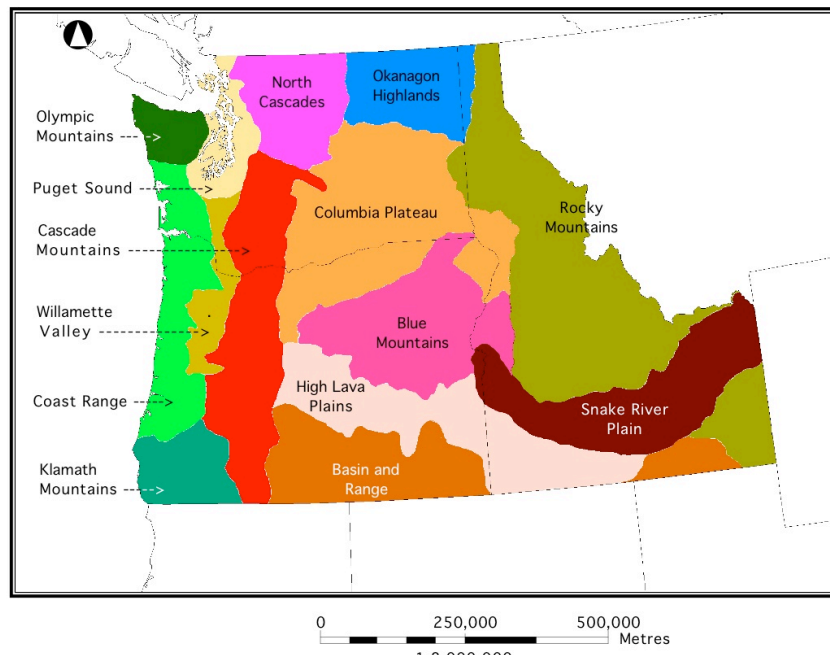
### Geology of the Pacific Northwest Physiographic Provinces

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 and Oregon
- Columbia River flood basalts
- Channeled Scablands
- Columbia River gorge mass wasting
- River, coastal, shoreline and dune processes
- Seismic activity in western Washington
- Tsunamis
- Ophiolite complexes
- Cave formation
- Volcanism and volcanic hazards at Mt. Hood

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

### **Columbia River Gorge – suggested stops**

- Cascade Locks – Bonneville Landslide
- Dodson debris flows (from heavy rainfalls in 1996) (private property)
- Ainsworth State Park – debris flows
- Multnomah Falls view and hike to the top of the falls, rock fall discussion
- Bridal Veil Falls and Latourell Falls
- Crown Point Lookout for a fantastic view of the gorge
- Chanticleer Point, Women's Forum State Park, Rooster Rock

There are several excellent geology field trip guides to the Columbia River Gorge and Oregon coast that are available. See the references.

### **Oregon Coast – suggested stops**

- Cape Lookout State Park - recent landslides, shoreline processes
- Depoe Bay
- Devils Punch Bowl and Otter Crest
- Yaquina Head
- Agate Beach
- Yachats
- Cape Perpetua
- Florence dunes
- Coos Bay, Sunset Bay State Park and Cape Arago
- Bandon
- Cape Blanco
- Rogue River – stop along a gravel bar and see how many different kinds of rocks can be identified

**Oregon Dunes National Recreation Area** – if time allows, schedule a dune tour.

**Crescent City, CA** – This is the location for the headquarters for Redwood National and State Parks and is also the site of destruction from the 1964 tsunami generated by a powerful earthquake in Japan.

**Jedediah Smith Redwoods State Park** – Be sure to include a walk through the majestic redwoods that grow here!

**Oregon Caves National Monument** – This is a cave tour worth seeing!

**Mt. Hood** – Timberline Lodge hike, andesite