Cross Sections

These cross sections highlight the remarkable diversity of topography across the state. The land surface is shown with an extreme vertical exaggeration, required at this small scale to make the state’s relief visible—if the vertical and horizontal scales were the same, Mount Hood would appear less than one-tenth of an inch high.

The three north-to-south transects illustrate markedly different landscapes. The Coast Range is generally low and very steep, cut by the innumerable streams of this notably wet region. In the south, the Klamath Mountains are geologically distinct and much higher than the mountains in the north, but also deeply dissected. In contrast, the Cascade crest is a comparatively level ridge, punctuated by a series of volcanoes too recent to have been heavily eroded. The third cross section shows the dramatic uplift of the Strawberry Mountains and the impressive fault block of Steens Mountain. Both of these features rise far above the nearly level plateaus and basins of Central Oregon and are deeply cut by glacial erosion (see pages 132-133).

The three west-to-east transects show the regional differences within the Coast Range along with the contrasting character of the western and eastern slopes of the Cascades. The western side is much wetter, drops to a lower elevation and is consequently much more deeply eroded. The Cascade volcanoes are generally symmetrical—even in collapse, as Crater Lake shows. The tilted fault block mountains of Central and Eastern Oregon are distinctly asymmetrical. They typically rise steadily from a “hinged” baseline to an abrupt edge at the fault plane. When the blocks are composed of erosion-resistant basalts, as in Winter Ridge and Steens Mountain, the exposed uplifted face forms a spectacular near-vertical wall.

1 Coast Range from North to South

2 Crest of the Cascades from North to South

3 Eastern Oregon from North to South

4 Pacific Ocean at Cape Lookout to the Snake River at Hells Canyon

5 Pacific Ocean at Florence to the Snake River at Ontario

6 Pacific Ocean at Gold Beach to the Idaho Border South of Jordan Valley