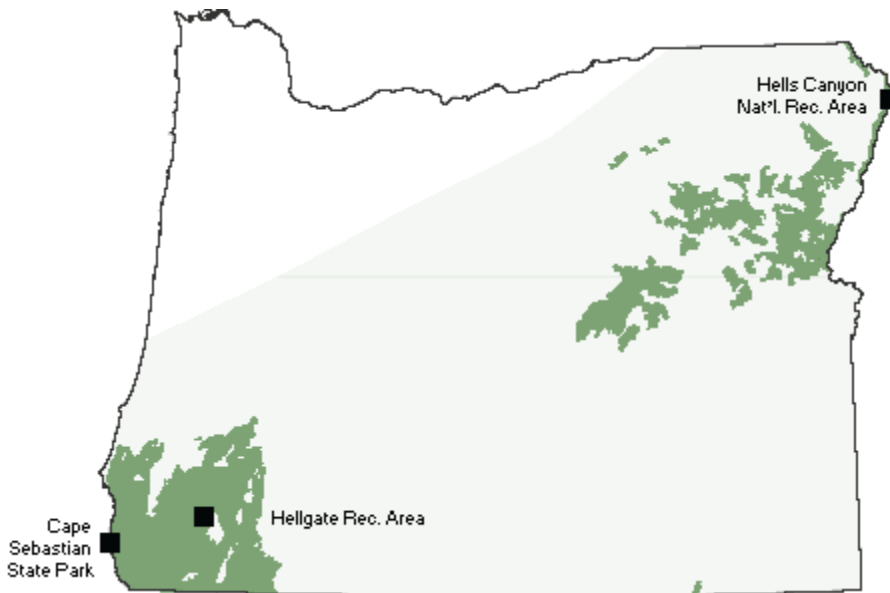


Exotic Terranes of Oregon



Oregon's oldest rocks originated as volcanic island arcs far out in the ocean, at a time when the Pacific Northwest coast ended near the present Oregon-Idaho border. These rocks are known as "exotic terranes" because they came from other places. Riding on the floor of the Pacific Ocean as it subducted beneath North America, they were too big or too thick to easily slide beneath the edge of the North American continent; instead, they remained in the subduction zone and welded themselves to the edge of the growing plate.

The result we see today is a fascinating array of varied rocks; thick slices of the oceanic crust, limestone with tropical corals, volcanic seamounts, shiny blue-green serpentinite, and large areas of totally crushed and broken rock called *mélange*, produced by the incredible forces of two tectonic plates smashing together. Although these rocks probably extend beneath the entire state, they are largely buried by younger rocks and can be found at the surface only in the Klamath Mountains and in northeast Oregon.