

d25 Cascade Range < Mt. St. Helens, Crater Lake, Juan de Fuca plate >

So what happens in a liberal democracy when Australian Aborigines demand that museum curators forbid all female staff members from handling the indigenous sacred objects that are on display in Sydney, out of respect for the sexual division of the world in Aborigine society? Or when Native American Lakotas object to the desecration of a sacred site by mountain climbers and by New Age religious worshipers, and the sacred site just happens to be Devils Tower National Monument (made famous by the movie 'Close Encounters of the Third Kind'), which is located in a public park in Wyoming? —Richard A. Shweder.
Answers are in *Who owns native culture?* by Michael F. Brown, 2003.¹

There is no such thing as an extinct continental-volcanic mountain with the recognizable conical shape of a volcano. Prolonged erosion will have made it unrecognizable except perhaps to a trained geologist. Caution dictates that a volcanic mountain with the classic shape of one² is at best deemed dormant. Active volcanoes are those that have erupted during historical time. In 1973 a new volcano covered Heimaey island, Iceland, with ash and lava. Parícutin, Mexico, in nine years grew to a height of 1,353 m. A surprised farmer witnessed its beginning cinder-spewing eruption in middle of a flat cornfield in 1943.³ But as eruptions can be less frequent than one every ten thousand years, the fact that a volcano has not erupted within living memory is no guarantee that soon it will not.⁴

The majestic Cascade Range volcanoes of northern California, Oregon, and Washington are not extinct. Two are active. Mt. St. Helens, Washington, erupted in 1857, became quiescent, then exploded dramatically: “Vancouver [OR]! Vancouver! This is it!”—last words of witness David A. Johnston, 8:32 a.m. (PST), May 18, 1980,⁵ and has been rebuilding episodically since.⁶ Mt. Lassen, northern California, erupted for six years ending in 1920. The most recently dormant is Crater Lake, Oregon. This low-elevation, rainwater and snow-meltwater ponding caldera (in which dormant Wizard Island records the last volcanic activity) was formed some 7,680 years ago when a volcanic mountain, possibly sacred to Amerindians, exploded away its glacier-bearing peak and collapsed.⁷

Mt. Rainier is dormant. During the Holocene, this volcano has generated at least 55 large lahars (mudflows). Some, as the largest 5,600 years ago that poured 3800 million cubic meters of mud (clay and other hydrothermal minerals) from the east side of the volcano down the Osceola valley, travel as far as Puget sound. The lahars, evidently originated by the failure of portions of the edifice that had been hydrothermally altered by dyke injection—the weakening, which led to failure, required some 50-100 thousand years. At earlier times of past great eruptions, *nuée ardente* (glowing avalanches) from Mt. Rainier have also reach Puget Sound. These vastly more dangerous events are recorded by welded tuffs (pronounced *toofs*). Ominously, Seattle is built on them.⁸ A massive side-collapse of ancient Mount Shasta (**Footnote d25.1**) is now known to explain “The volcanic hills, [that] stretch over the prairie towards the Shasty peak, and are probably” James Dwight Dana (1813-1895) speculated in 1841 “connected in origin with the former eruptions of this extinct volcano [although] none of the hills [have] the form of craters.”⁹

The oldest flows of the Cascade Range volcanoes are Pliocene in age.¹⁰

The Cascades volcanism has its explanation in the subduction of the Juan de Fuca plate¹¹ (the plate name commemorates the Greek navigator Apostolos Valerianos (died 1602) who in the service of the Spanish navy had that name when he explored the northwest coast of North America).¹²

Examples of extinct volcanoes are the Eocene Devils Tower, Wyoming, from which climbers are kept by Standing Rock Sioux Tribe members—known in their own language, as the Lakotas (Sioux is the Ojibwe word for the Lakotas and is regarded as something of an insult), and the Oligocene Shiprock, New Mexico, viewable from Indian route 33 but climbers are kept from it by the local Navaho.¹³ These are erosionally resistant volcanic necks. Much older central vent volcanoes have no such distinctive remnant form and so elude overt notice. □