

THE GRAND CANYON OF THE YELLOWSTONE

The canyon varies from 800 to 1200 feet in depth and from 1500 to 4000 feet in width. Its length is about 24 miles. The upper 2½ miles is the most colorful section. Hot spring activity has continued through the ages altering the lava rock to produce lovely colors which are largely due to varied iron compounds. Have you noticed that steam vents and geysers are still at work on the canyon walls?





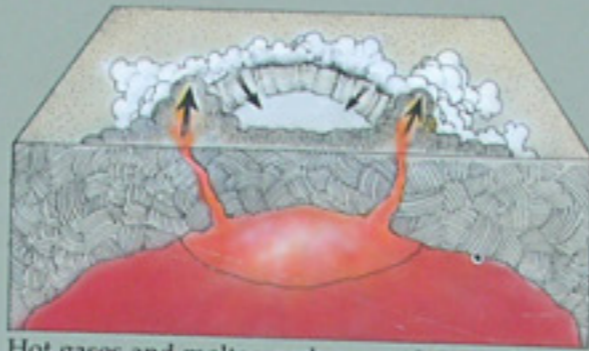


Heart of the Caldera

The eastern ridgeline is the rim of a huge crater. Here a volcanic eruption blew cubic miles of glassy material into the atmosphere—remnants carried as far as Texas and California—then the crust collapsed, forming a caldera or basin. Though a catastrophe 600,000 years ago seems unimaginably remote, subsurface activity has been ongoing. Bare patches in the forest reveal Washburn Hot Springs, where superheated water boils up along caldera fracture lines.

The volcano's energy source lies beneath your feet, centered only ten miles to the southeast. From the summit of Purple Mountain or Mount Washburn you can see not only the extent of the caldera but also mysterious bulges in the relatively level plateau. The same twin magma chambers that fired the eruption are now upwarping or doming, forecasting future volcanism.

There are no trails to Washburn Hot Springs. The ground there is unstable—geologists have fallen through the crust and suffered serious burns. Sulfuric acid in the area can burn through clothing.



Hot gases and molten rock erupted through fractures above the magma chamber.



The area above the blown-out part of the magma chamber collapsed to form a vast caldera.

