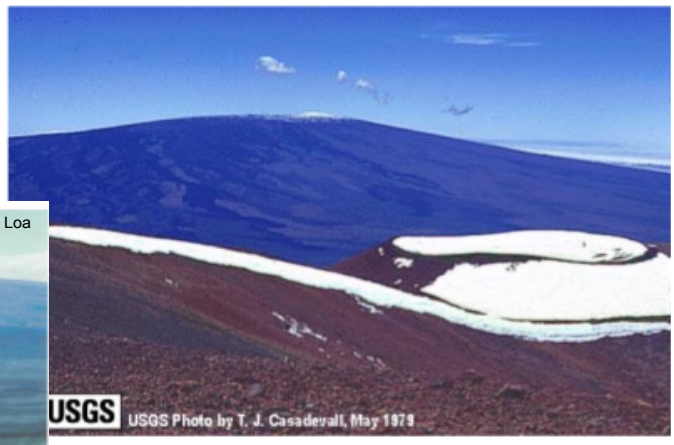
Shield volcanoes

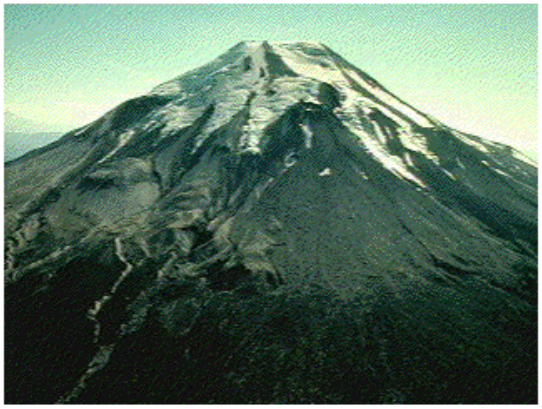


Kilaeua erupting

Note the low viscosity, runny lava.

Composite or strato volcanoes

Mt. Fuji



Mt. Shasta

Mt. Rainer

Mt. Hood

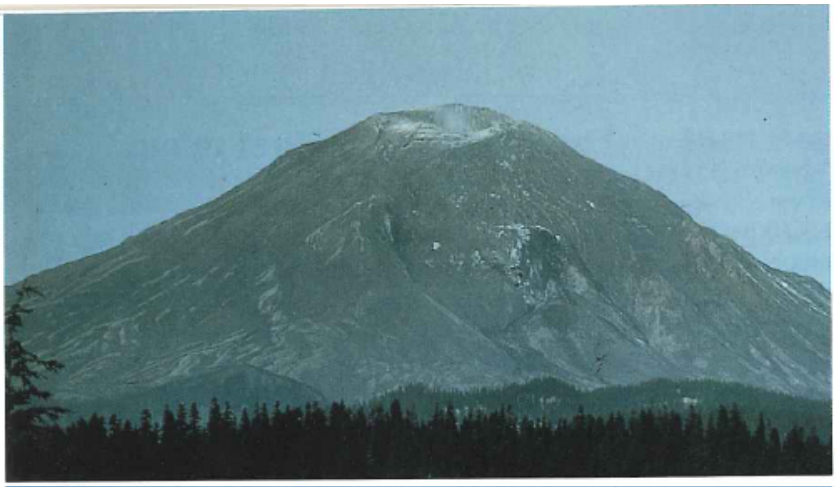
Composite (strato) volcanic eruptions

Mt. St. Helens 1980

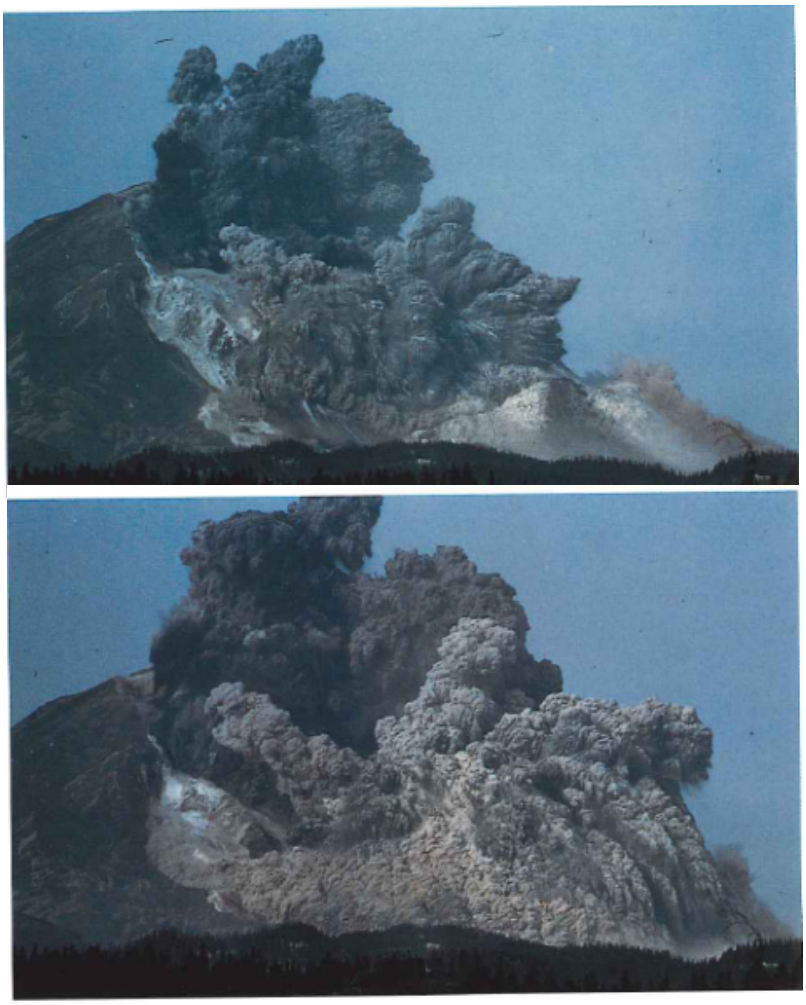
Mt. Pinatubo

Strato volcanoes can also have lava erupt.

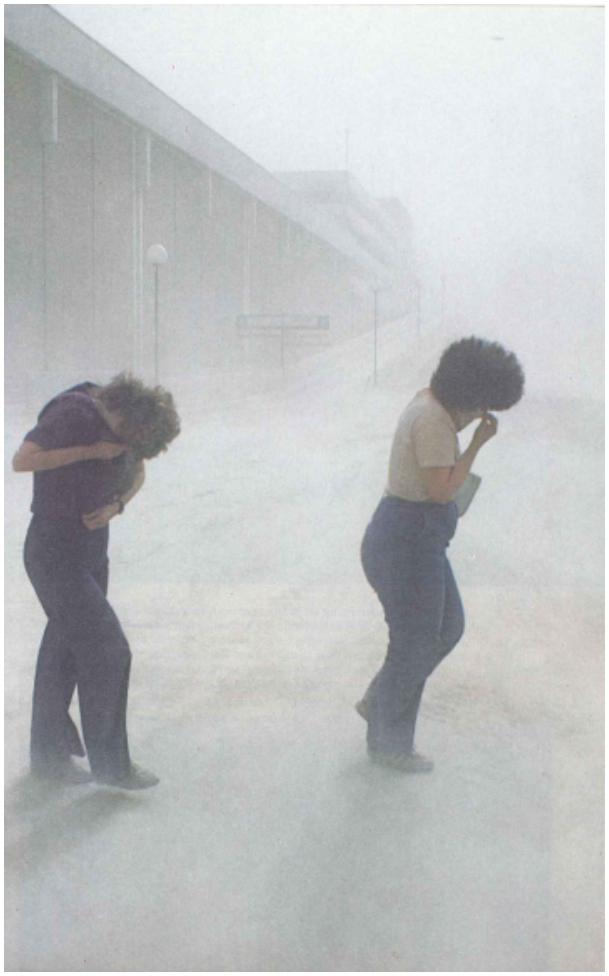
Mt. St. Helens before 1980

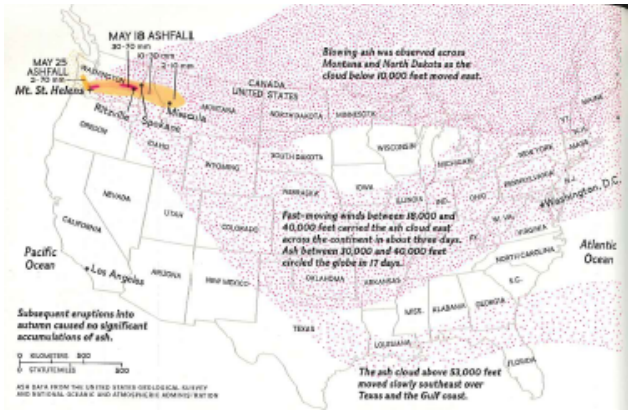


Photos taken about 1 second apart showing the eruption following the landslide on the northern side of the mountain.



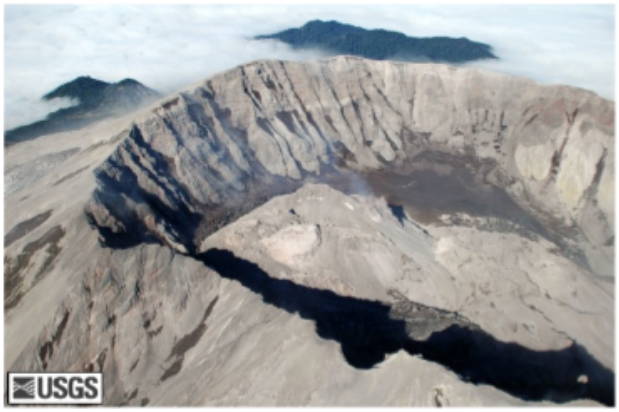
TOWERING WALL OF DESTRUCTION—searing gas, ash, and rock—races toward Bear Meadow at 200 miles an hour. As photographer Gary Rosenquist fled in his car, along with other campers, he snapped this final frame of a remarkable sequence that begins with the foldout on the following pages.



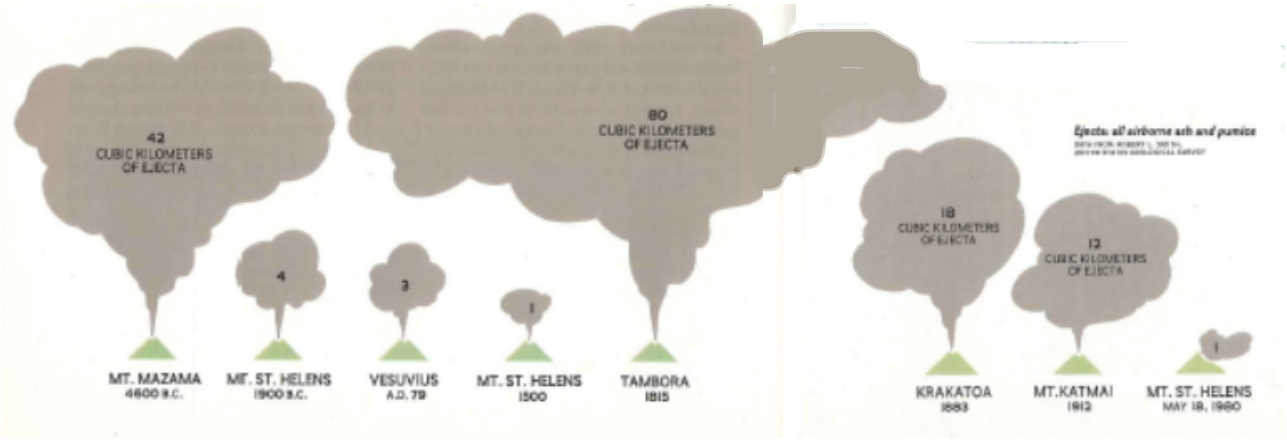


Eruption 500 times greater than an atomic bomb.
Eruption heard 225 miles away.
Complete darkness in Spokane, WA 250 miles away.
1300 feet of the mountain's elevation gone.
520 million tons of ash into the air.

Mt. St. Helens after 1980



Mt. Pinatubo 1991



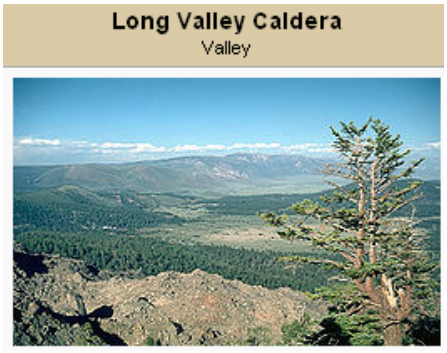
Mt. St. Helens was actually a rather small eruption compared to others.

Long Valley, California 760,000 years ago 615 cubic km
17 by 32 km large

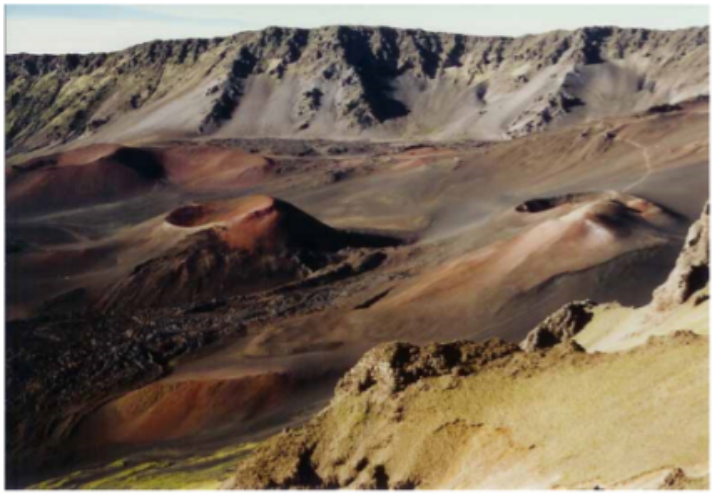
Yellowstone 2,000,000 years ago 2400 cubic km
enough material to cover the entire USA 45 m deep
1,300,000 years ago 1000 cubic km
640,000 years ago 1000 cubic km
55 by 72 km large

Tuba, Indonesia 4,000 years ago 2400 cubic km

The northeastern part of Yellowstone Caldera, with the Yellowstone River flowing through Hayden Valley and the caldera rim in the distance



Cinder cones



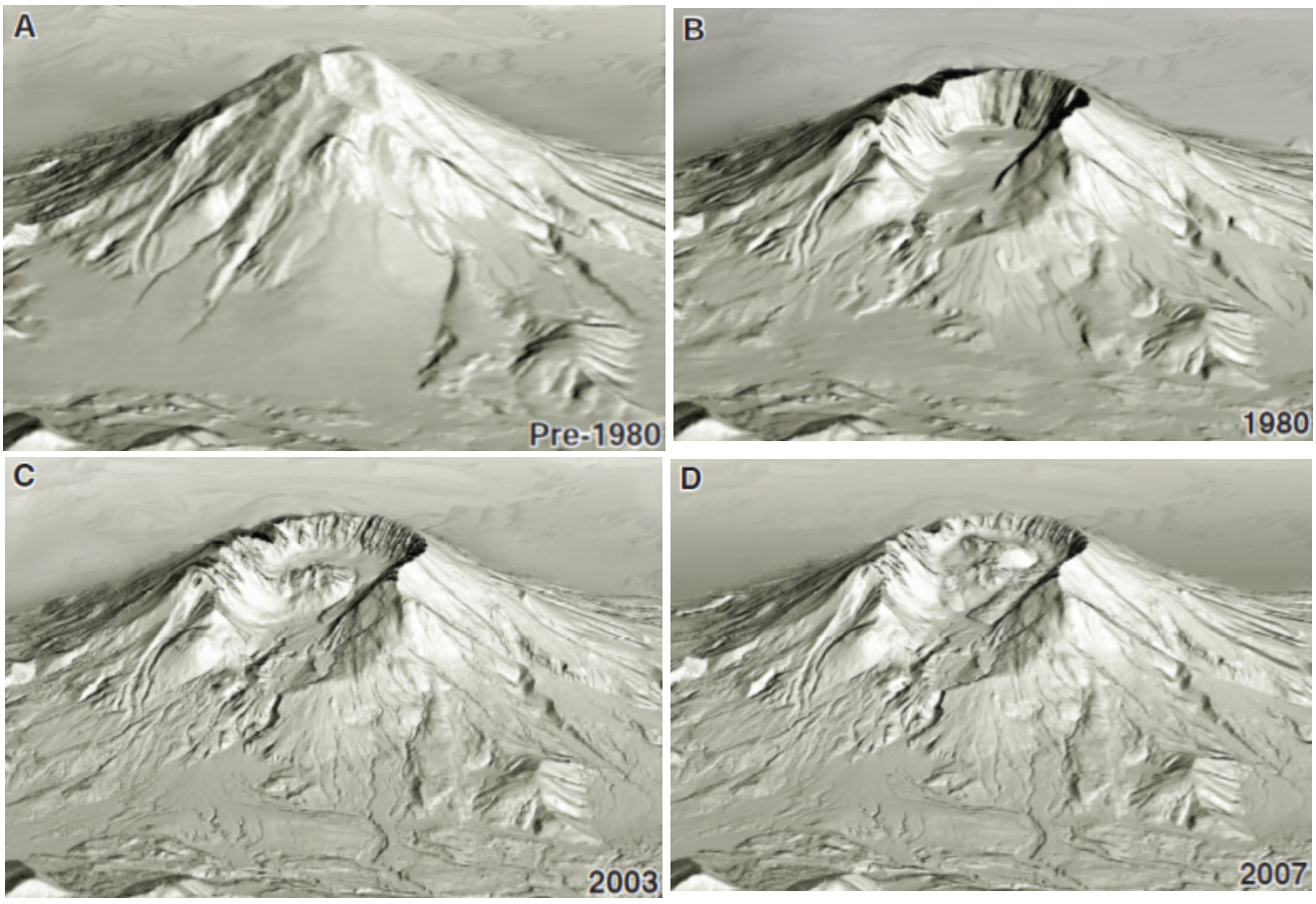
Haleakala Cinder Cones Of Maui

Mojave desert

Mt. Etna, Italy erupting

Cinder cone eruptions are like fireworks.

Mt. St. Helen's lava dome



Notice the growth of the lava dome.

"Normal lava dome"

Together fill in this data table to compare and contrast the different types of volcanoes.

Volcano Type	Where are they found?	What is the viscosity of the lava and why is it that viscosity?	What type of eruptions occur?	How large are they and what is their shape?	Why do they have this size and shape?
Shield	Hot spots	Low, the magma is pure from the mantle	Gentle	HUGH, gentle slopes	Lots of runny lava
Cinder Cone	On other volcanoes and at rift valleys	Higher,cool and with some silica	Fireworks	Small, steep sided	Crumbly rock which piles up on top
Strato or Composite (same volcano - two names!)	At subduction boundaries	Very high, contaminated magma	Violent, explosive	Large mostly steep sided	Layers of ash, rock and lava
Lava domes (not really a volcano)	On volcanoes and at rift valleys	Higher, cool and with some silica	Slow and oozing	Small, rounded, dome like	Very viscous lava piles up

Attachments

 tongan volcano