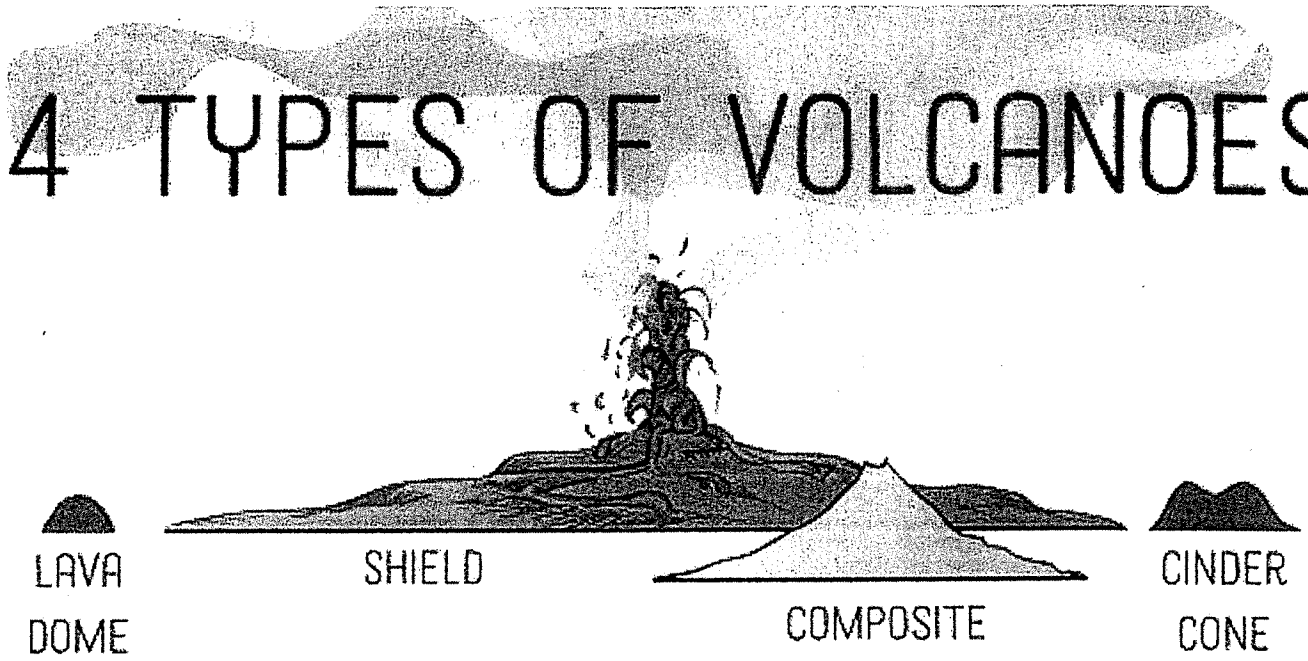


Learn the different types of volcanoes

Different Types of Volcanoes

When we think of volcanoes, often the image that comes to mind is a catastrophic Hollywood-worthy explosion. Actually, there are different types of volcanoes—some are in fact very dangerous, while others are not. In order to understand the true nature of a volcano, it is important to know what kind it is..

Generally, volcanologists divide volcanoes into four major types.

Different Types of Volcanoes

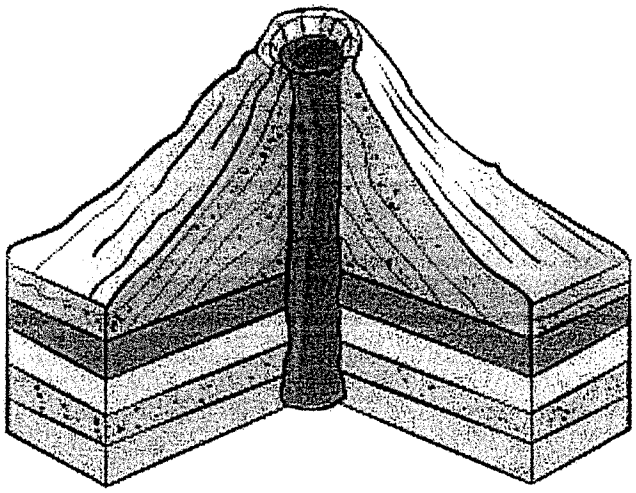
Type of Volcano	Shape	Height	Slope
Cinder Cone, AKA Scoria Cone	Symmetrical cone	Up to 1,200 feet (370 meters)	30-40 degrees
Shield	Tall and broad	Up to over 30,000 feet (9,000 meters)	Roughly 10 degrees near the base and 5 degrees near the top
Composite, AKA Strato	Tall, steep, and symmetrical	Up to 8,000 feet (2,400 meters)	Roughly 6 degrees near the base and roughly 30 degrees near the top
Lava Dome	Dome	Up to 330 feet (100 meters)	25-30 degrees

What Is a Volcano?

A volcano is a vent that directly connects magma to the surface of the Earth. Geologists and professional volcanologists usually classify volcanoes into four different types, based on their shape, magnitude, structure, material, and type of eruption.

An Eruption From an Active Volcano

CINDER CONE VOLCANO (AKA SCORIA CONE)



FORMS WHEN EXPLOSIVE ACTIVITY THROWS MAGMA INTO THE AIR, WHICH COOLS INTO CINDERS AND SETTLES AROUND THE VOLCANO'S OPENING. THESE EMERGE IN JUST A FEW YEARS DURING ONE ACTIVE PERIOD; AFTERWARD, THEY ARE USUALLY EXTINCT, BUT THEY MAY OCCUR ON THE SIDE OF A LARGER VOLCANO.

Cinder Cones

One of the most common types of volcanoes is the cinder cone. Less dangerous compared to other types, cinder cones only grow to about 1,000-1,200 feet tall. Unlike some of the other types of volcanoes—namely, shield volcanoes and composite volcanoes—cinder cones are usually created from a single opening. The opening of a cinder cone is a cone-shaped structure, while the steeps are formed of the erupted, fragmented cinders that fall close to the chimney/vent.

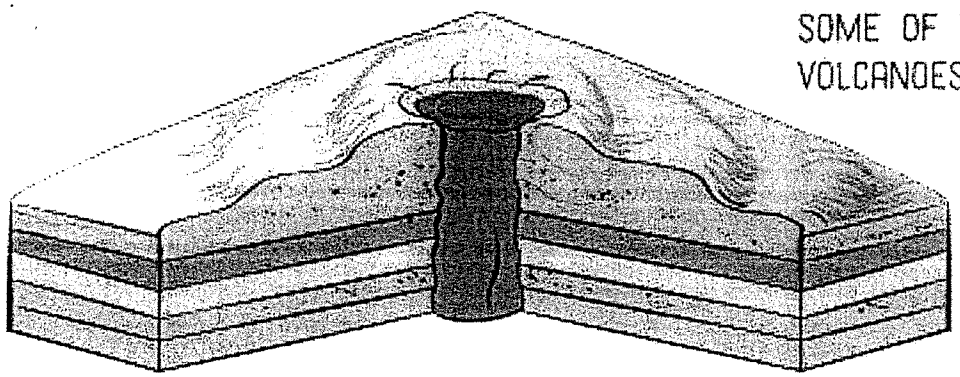
The manner of eruption for cinder cones is relatively simple. When the lava erupts, cinders of it are blown into the air. These fragmented cinders fall a short distance from the opening, thus creating the cone.

Famous Examples

- Paricutín in Mexico
- Lava Butte
- Sunset Crater

SHIELD VOLCANO

OVER MULTIPLE ERUPTIONS, LONG, FLUID LAVA FLOWS FORM BROAD LAYERS, WHICH ACCUMULATE INTO SOME OF THE WORLD'S LARGEST VOLCANOES.



Shield Volcanoes

Another type of volcano is the shield volcano. Unlike cinder cones, shield volcanoes can be very, very big in size. However, they are not as dangerous as that size might make it seem. This is because the eruption of lava out of shield volcanoes is not accompanied by pyroclastic material (bursts of gas and particles).

Shield volcanoes may be tall but tend to be very broad, with less steep slopes than other volcanoes.

Shield volcanoes can be huge because of their ample supply of magma. For example, Mauna Loa is a shield volcano that rises more than 30,000 feet above its base on the bottom of the ocean.

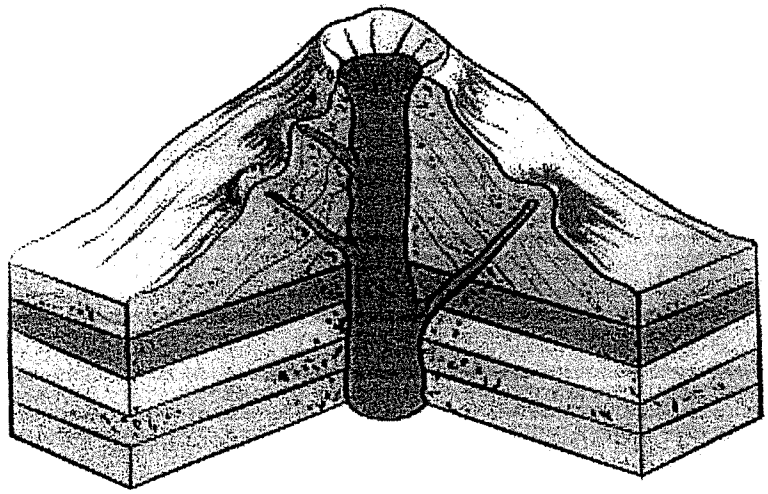
Famous Examples

- Hualalai
- Mauna Loa
- Kohala Volcano

Did You Know?

There are three states of volcanoes:
• Extinct: Will never erupt again.
• Dormant: Have been asleep for a long time—at least 2,000 years. However, they are not extinct, and therefore could erupt at any time.
• Active: Are considered immediate threats. They are at risk of erupting lava and gases or showing seismic activities.

COMPOSITE VOLCANO (AKA STRATO)



OVER MULTIPLE ERUPTIONS, THE ACCUMULATION OF BOTH EXPLOSIVE ACTIVITY AND LAVA FLOWS FORM THE STEEP, SWEEPING SIDES OF THIS VOLCANO. AS IT AGES, MULTIPLE CHANNELS TO THE SURFACE CAN SPLINTER OFF OF THE CENTRAL VENT, INFLUENCING ITS SHAPE.

Composite (AKA Strato) Volcanoes

Composite volcanoes are also known as strato volcanoes. Composite volcanoes are reasonably big and can rise up 8,000-10,000 feet. Moreover, they can range anywhere from 1-10 km in diameter. Their eruptions are dangerous and explosive in nature, with many layers of lava and pyroclastic materials, the current of rock and gas that can reach 1,800°F and 450 mph, killing any living organism in its path immediately. The citizens of Pompeii were killed by a composite volcano's pyroclastic flow.

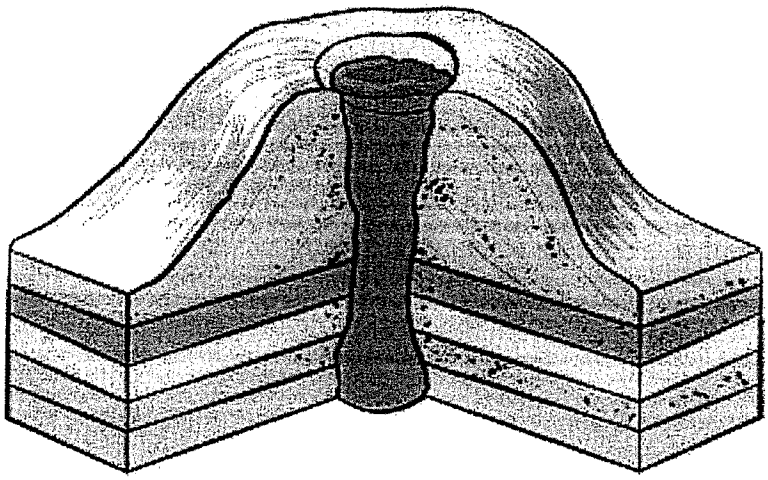
The general structure of composite volcanoes is tall and symmetrical and with steep sides. Commonly, composite volcanoes erupt hot gases, ash, lava, and pumice as well as stiff, slow-moving lava. Moreover, deadly mudflows—also commonly known as 'lahars'—can also accompany the eruption.

Composite volcanoes are believed to kill the most people because of their deadly nature and high numbers. Apart from their dangerous side, composite volcanoes are also famous because they comprise some of the most beautiful mountains on planet Earth. For example, Mount Fuji of Japan and Mount Shasta in California are two famous composite volcanoes.

Famous Examples

- Mount Fuji
- Mount Shasta
- Mount St. Helens
- Mount Rainier

LAVA DOME VOLCANO



FORMS WHEN THICK, EXTREMELY VISCOUS LAVA ERUPTS, HARDENING IN A DOME SHAPE. THESE EMERGE IN ONE ACTIVE PERIOD; AFTERWARD, THEY ARE USUALLY EXTINCT, BUT THEY MAY OCCUR ON THE SIDE OF A LARGER VOLCANO.

Lava Domes

Lava domes are the fourth type of volcano that we are going to discuss. Unlike composite and shield volcanoes, lava domes are of significantly smaller stature. They are formed when the lava is too viscous to flow to a great distance. As the lava dome slowly grows, the outer surface cools and hardens as the lava continues to pile within. Eventually, the internal pressure can shatter the outer surface, causing loose fragments to spill down its sides. Generally, such lava domes are found on the flanks of larger composite volcanoes.

Famous Examples

- There are lava domes within the crater of Mount St. Helens
- Chaitén lava dome
- Lassen Peak

Summary

So, the bottom line is that there are four different types of volcanoes, each with a different set of characteristics and structure. Some are more dangerous and catastrophic than others. Having this knowledge keeps you informed about the different types of volcanoes.