

BALCONIES TRAIL GUIDE



Pinnacles National Monument



Welcome to Pinnacles National Monument.

This guide will lead you along the Balconies Trail, a fascinating 2.4 mile round trip hike, where you will become immersed in a world of spectacular geology and a diversity of plants and animals.

Explore this trail with all your senses. During your journey, you will climb approximately 200 feet on a moderate grade and traverse through the boulder-strewn canyon known as the Balconies Cave.

It is important, especially on hot days, that you carry and drink plenty of water. Flashlights are required in the cave and can be purchased at the Chaparral Ranger Station.

I The unique rock formations you see began as a stratovolcano approximately 8000 ft. high and 25 miles long. With the passage of time, the molten rock, ash and gases of the eruptions were exhausted and the volcano began to deteriorate through the forces of weathering and erosion.



2 Notice the differences between the plants to the left (south facing slope) and right (north facing slope). They are all part of the chaparral association. The exposed south slopes are dominated by chamise, a needle-leaved shrub in the rose family. The northern slope is exposed to less direct sunlight and so is cooler and moister. This allows the broader leafed shrub, ceanothus, to dominate. Most chaparral plants have waxy leaves that help to reduce water loss. These plants thrive on little moisture and periodic fire.



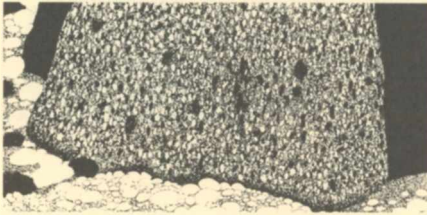
3 23 million years ago, earthquakes shattered this peaceful environment.

Massive eruptions of lava and plumes of ash were thrown skyward leaving behind the framework for the landscape before you.



Major faults in the Earth formed and split the volcano in two and carried the portion you see 195 miles north. This is only part of the original volcano.

4 Notice the green, yellow, and orange hues you see on the rock faces. These are lichens, which are symbiotic combinations of algae and fungi. They are



chemically bonding with the rock and breaking it down, creating soil. This allows small plants and eventually bushes and trees to grow. The plant roots help the rocks

crack apart and break off—thus forming the talus by your feet. Talus can be larger rocks. The huge boulder behind you fell from a cliff and is also talus.

5 Do you feel the cool, moist air? This indicates you're on the **canyon floor**. Why do you think the plant life here is greener and lusher? The walls of the canyon screen the harsh, drying rays of the sun and so provide a favorable environment for many plants and animals.



- 6 The **California buckeye** thrives in this moist, shady area. Bright green in the spring, it bears spikes of showy cream-white flowers on during May and June. As the summer heat intensifies, its leaves wither and die, conserving moisture. By fall, its branches are bare, except for the pear-shaped pods, which enlarge and split open to release large chestnut-like seeds. *(These seeds are poisonous.)*



- 7 This large evergreen with the shiny, dark green, prickly-edged leaves is a **coast live oak**. Its tapered, slender acorns were an important food source and continue to be a popular snack for Mutsun, Salinan and other California coastal Indians. After grinding the acorns into flour and leaching the bitterness out with water, they are made into tortilla-like cakes or soup. These trees are usually found near streams or a permanent source of water.



- 8 At this fork, continue up and along the base of the **Balconies Cliffs**. This section of trail offers some of the most spectacular vistas in the monument.

- 9 Towering on your left and right, respectively, are the **Balconies Cliffs** and the west face of **Machete Ridge**. Originally, these formations were not separate, but faulting and millennia of stream erosion cut them apart.



IO As you pass along this area you might hear the “kak-kak-kak” of the **prairie falcon**. The cliffs above you are a primary nesting area for this magnificent bird. These cliffs are also home to Golden Eagles, American Kestrels and California Condors.

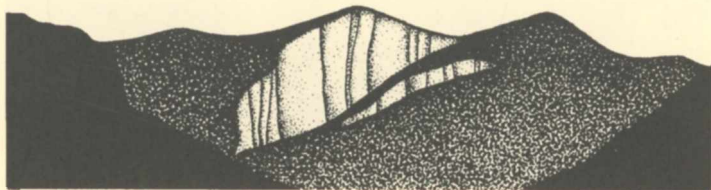


II Pause and examine the variations in this exposed outcrop of rock. This rock is called **breccia**.

Fragmented angular rocks are embedded in a matrix of lava and ash and give breccia the appearance of pink concrete. The fragmentation of the rock attests to a violent volcanic upheaval during the ancient past. The embedded pieces resembling petrified wood are flow-banded rhyolite. Beginning as molten rock, small crystals formed as it cooled and stretched or bent. This process created the banded effect.



I2 Notice the large cream-colored area resembling a dam or quarry to the northeast. It is actually a **landslide** or slump that began thousands of years ago. Heavy rains still strip the loose gravel that forms its face. The sandstone on the ridgeline is a softer sedimentary rock than the volcanic rock that you are standing on. Between you and this landslide runs the Chalone Creek Fault, which is still active and is thought to be the ancestral trace of the San Andreas Fault.



13 This is the view of **Machete Ridge** that gives it its name. An old wagon road wound through the canyon below you, making this an accessible vacation spot for early visitors. The large trees on the canyon walls are gray pines, the only type of pine at Pinnacles.

14 The cliffs above you are also home to the **western mastiff bat**, one of sixteen species of bat found at Pinnacles. It is one of the few bats that have echolocation calls (bat sonar) within human hearing range. Crevices high in the cliffs provide roosting sites and the altitude needed for these large bats to launch into flight. Bats are part of Pinnacles “night shift” and sleep during the day.

15 As you view the rock formation creating the **opening to the cave**, feel the cool air coming from its interior. Besides being unique geological formations, the caves of Pinnacles are steeped in legend. There are numerous stories of Tiburcio Vasquez and other bandits of a century ago eluding posses by hiding out in these caves. Have your flashlight ready and be careful in the cave. Rocks may be slippery and there are places with low ceilings.



16 Stop a moment and look above and below you at the **layering of the boulders**. Above is a vaulted ceiling and below an intermittent stream feeds into the rooms you recently visited. How did these huge boulders get here?

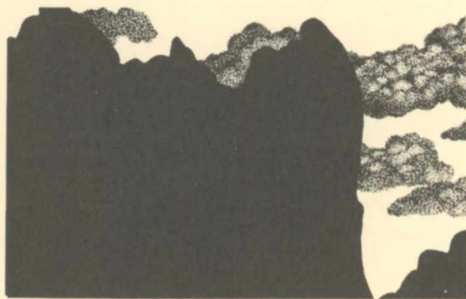
17 Loosened by weathering, erosion and earthquakes, huge rocks fell or slid into the canyon forming this **talus cave**. Talus caves are quite unlike caves formed in limestone or as lava tubes.

18 The large undercut alcove in the wall before you is the result of **fracturing and faulting** within the rock layers. Over a period of time, cracks between the soft and hard portions were expanded by water seeping into the crevices. Eventually, the lower portion of softer rock broke away. Many of the unusual formations and balanced rocks at Pinnacles are the result of this action.

END OF GUIDE

You have reached the end of the guided portion of the Balconies Trail. Continue on this trail to the junction, and then turn left to return to the Chaparral Ranger Station. Park Rangers there will be happy to answer your questions.

We hope you have enjoyed your hike.



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