

Pinnacles

National Monument
California
National Park Service
U.S. Department of the Interior

Official Map and Guide



Cover photo by Frank S. Balthis

The difference is immediately apparent. You know at once why this park is called Pinnacles. Here you face spires and crags that bear no resemblance to the surrounding smooth, round hills. Abruptly, the pinnacle rock formations dominate the scene.

These rocks are the remains of an ancient volcano. Or rather they are part of the remains, for the rest of this volcano lies 195 miles to the southeast. Sound intriguing? It is all part of the story of the San Andreas Rift Zone, which runs just east of the park, and of the geological forces that have shaped the face of the landscape in this part of California for millions of years. It is the story of heat, frost, water, and wind wearing at the rock.

Pinnacles was set aside as a national monument on January 16, 1908, to preserve for their scientific interest these distinct pinnacle rocks and caves. Initial development of the monument was undertaken by the Civilian Conservation Corps from 1933 through 1942. Examples of the Corps' work can be found throughout the park. In 1976, the majority of Pinnacles' land was afforded additional protection as a congressionally legislated wilderness.

The monument protects remnant native plant and animal communities, class I air quality, cultural and historic features, diverse and accessible recreational opportunities, open space in an increasingly urban setting, and scenic views.

Pinnacles is a place for rejuvenation and enjoyment. People come to appreciate the unspoiled wilderness, hike the many trails, climb the sheer rock walls, enjoy the natural dark and quiet of the caves, and picnic in the shade of ancient oaks. Visit for a day and return to discover the many faces of Pinnacles.

A Land in Transition

The San Andreas Rift Zone, a series of faults, lies just east of the park. It was created when the Pacific plate collided with and wrenched off a portion of the North American Plate (see diagram at right). Geologists know that rift zones are likely places for volcanoes to occur, for here the

earth's crust is broken, allowing the magma from beneath the surface to well up. The Pinnacles are the result of these two factors at work—an ancient volcano and movement along a rift zone.

The story begins more than 23 million years ago when molten rock

poured over the surface of the land through fissures that opened as the two plates ground past one another. As the eruptions grew in intensity the cone being built by the volcanic activity grew until a high steep-sided volcano had been formed. Geologists theorize that this volcanic mountain once stood nearly a mile higher than North Chalone Peak, the highest point in the park today. Yet even as this vol-

cano was being formed, its own destruction was at hand, for the Pacific plate upon which it was located began moving off to the northwest. In time the portion of the volcano whose eroded remnants we now know as the Pinnacles reached its present location, 195 miles beyond its point of origin. All the while, too, erosion was at work carving and breaking down the once mighty peak to about a third of its original height, sculpting the spires and crags you see today. Nor is the geologic process at an end. Millions of years from now what little will be left of this ancient volcano will have moved off to the northwest.

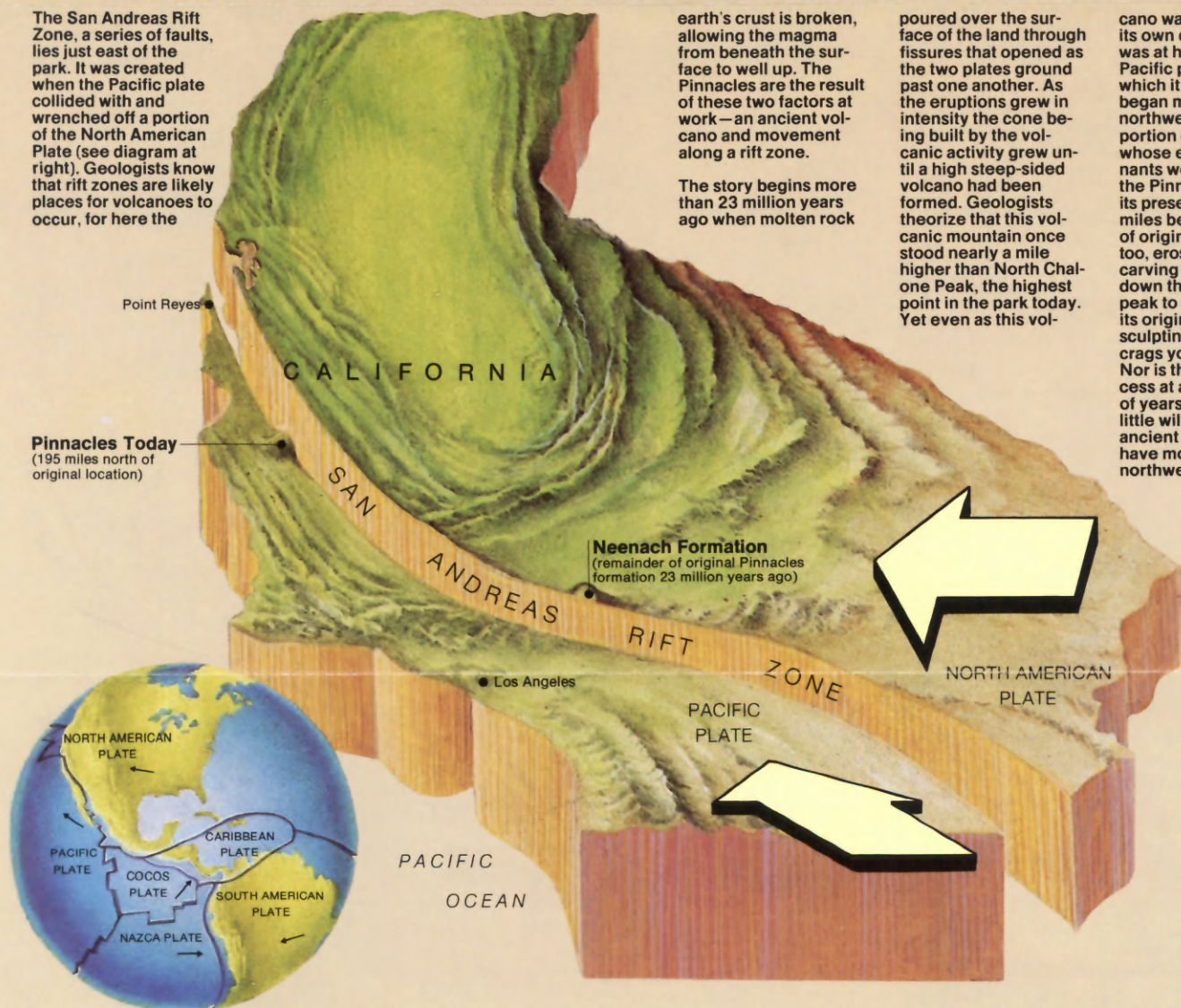


Plate Tectonics

Geologists have for many years tried to explain why it looks like the eastern coast of South America would neatly fit into the coast of West Africa and why

rocks on different continents were the same. Recently the theory of plate tectonics, sometimes called continental drift, has emerged. Basically it says that

the Earth's skin is not one single covering as we might expect but is made up of a series of plates (diagram above left). Imagine for a minute that the Earth is

like a basketball: the grooves on the ball are like the junctions of the plates. Both Earth and basketball appear to be composed of a single covering. But unlike the

basketball, which is one continuous piece, the lighter plates of the Earth's surface float over the heavier interior. Pressures from the interior sometimes force

one plate to bump into, pull away from, or move alongside another. Scientists believe that this is what has caused the Pinnacles to make its northward journey.

Illustration by Robert Hynes

Plant and Animal Communities

At first glance the slopes of Pinnacles appear covered with dense, uniform brush. A closer look reveals a more complex association of plant communities. Along the watercourses live-oaks, buckeyes, and sycamores grow. Blue oak woodlands and grasslands occur on the deepest soils. Elsewhere, expanses of

olive green chamise, buckbrush, and manzanita are broken here and there by patches of low California buckwheat. This is the chaparral. And in the continuation and rejuvenation of this plant community, fire is an important factor. When the dense shrub cover burns, light, nutrients, and water begin working on all the seeds

that have laid buried. For some seeds the hard outer protective coats are cracked by the heat and begin germinating even before the soil has completely cooled. Some plants resprout from roots that can survive the heat of fire and appear amid a carpet of wildflowers. As the brush grows it shades out the smaller plants,

so that fewer appear each year, but seeds remain dormant in the soil, awaiting the next fire. As these plants have adapted to survive fire, so have they developed ways to survive the long summer drought in these steep, coarse, erodible soils that do not hold water. Plants take advantage of the winter rains, grow rapidly in the

spring months, and then lie dormant during the hottest part of the year. Changes in the plant community bring corresponding changes to the animal and bird populations. New growth provides forage for blacktail deer. Rabbits and rodents consume seeds and herbs. Gray fox, bobcats, mountain lions, owls, hawks,

snakes, and other predators prey on the smaller animals and birds drawn to the new food supply. Animal populations also run in cycles. When any species becomes too plentiful for its food supply, a period of readjustment sets in, the numbers decline, and the cycle begins again.

California poppy



Meadow in bloom



Owl's clover



Fire in the chaparral



Exploring Pinnacles



Picnickers listen to a ranger.



Steps lead down into a cave.



Hikers can enjoy the view.



Students hike near the reservoir.

All photos NPS

HIKING TRAILS

Pinnacles offers great hiking trails for people with a range of experience. Mileage figures are one-way, except for loop trails. Visitors with disabilities please contact the visitor center for information.

Bench Easy; access to park facilities from Pinnacles Campground, Inc., along Chalone Creek; 1.9 miles.

Old Pinnacles Easy; access at Chalone Creek picnic area; shaded walk along canyon bottom; 2.3 miles.

Moses Spring/Bear Gulch Caves Moderate; leads from visitor center to reservoir, passing over caves or through caves; self-guiding; 1.2 miles.

Bear Gulch Moderate; connects visitor center and Chalone Creek; shaded walk along canyon bottom; 1 mile.

Rim Moderate; trail winds through chaparral plant community and overlooks Bear Gulch; 0.4 mile.

Balconies Moderate; access at Chaparral ranger station; 0.6 mile; connects with Balconies Caves and Balconies Cliffs trails in a 1.2-mile loop; good examples of park features; self-guiding.

Juniper Canyon Strenuous; access from Chaparral ranger station to High Peaks via Tunnel Trail to Scout Peak or Hawkins Peak; excellent views; 1.8 miles.

Tunnel Strenuous; excellent views; 0.6 mile; with High Peaks segment creates a 1.9-mile loop through the peaks.

High Peaks Strenuous; steep trail with excellent views; begins at visitor center, ends at Chalone Creek picnic area; 5.6 miles.

Condor Gulch Strenuous; begins at visitor center; good views of pinnacles; 1.7 miles; connects with High Peaks Trail for a 5.3-mile loop through the peaks.

Chalone Peak Strenuous; long climb from reservoir to the highest point in the park; vistas from peak; for hardy climbers; 3.3 miles.

North Wilderness Very strenuous; connects Chaparral ranger station with North Fork of Chalone Creek; for experienced hikers only; 7.0 miles.

South Wilderness Moderate; follows Chalone Creek past stately oaks and dense woods in the lushest area of the park; 2.9 miles.

ROCK CLIMBING

Raptors and bats rear young in many rock formations. Please do not climb or hike in these areas during critical seasons. Check at the visitor center or ask a ranger about restrictions. Technical rock climbing is only for the well-trained and properly equipped.

SAFETY AND REGULATIONS

For a safe visit observe these regulations. •Stay on established trails. Switchbacking causes erosion. Stay out of areas closed for rehabilitation. Slips or falls can result from poor footing; wear shoes with non-slip soles. •Bicycles are not permitted on any trails. •Caves have low ceilings and slippery rocks. Use flashlights. Caves may be closed by flooding or to protect sensitive species. •Dogs are permitted only in picnic areas and parking lots; they must be on a leash. •Be alert for poison oak. •Hunting is prohibited. •Do not feed or harm wildlife and stay a safe distance away. Even rattlesnakes are harmless when given room and left alone. •Drive with an eye for both pedestrians and wildlife. •Carry two quarts of water per person when hiking.

MORE INFORMATION

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