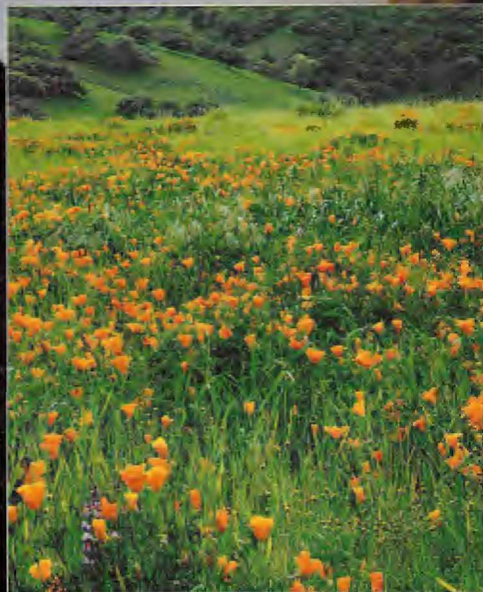




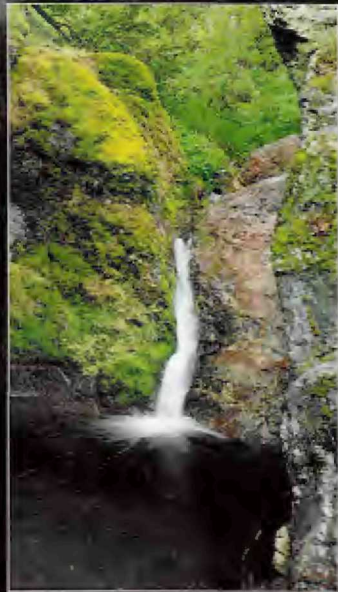
Poppies in oak woodland
© DAVID MUECH



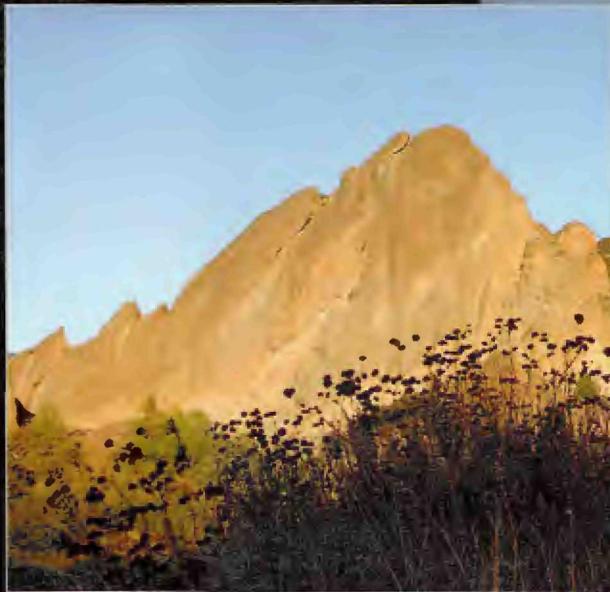
High Peaks in autumn
© PAUL G. JOHNSON



Balconies
© LARRY UELICH



Green grotto
© JOHN DITZ



California buckwheat set against Machete Ridge in winter
© PAUL G. JOHNSON



Indian warrior and manzanita
© LARRY UELICH

A Beautiful Place

The difference is immediately apparent. Rock spires, ramparts, and crags that bear no resemblance to the nearby foothills dominate the landscape. Massive monoliths, sheer-walled canyons, and boulder-covered caves define millions of years of erosion, faulting, and tectonic plate movement.

Rising out of the chaparral-covered Gabilan Mountains, east of central California's Salinas Valley, are the spectacular remains of part of an ancient volcanic field. One third of this field lies 195 miles to the southeast. Does this seem impossible? It is part of the story of the San Andreas Fault Zone, which runs just east of the park, and of the

geological forces that have shaped this landscape for millions of years. It is the story of heat, frost, water, and wind wearing away rock. Fault action and earthquakes also account for Pinnacles' talus caves, formed when boulders fell into deep, narrow gorges and lodged between the rock walls. These boulders form ceilings and areas of darkness, enticing visitors and many species of bats. Pinnacles' topography is not all spires and crags. Elevations range from 824 feet along Chalone Creek to 3,304 feet atop North Chalone Peak, and much of the park consists of rolling hills. To safeguard its rock formations and caves, Pinnacles was proclaimed a national monument in 1908. A national park since

2013, it now encompasses over 26,000 acres, with 16,000 acres designated as wilderness. The park protects natural and cultural features, recreational opportunities, and open space in an increasingly urban setting.

Pinnacles is a place for rejuvenation. People come to appreciate the unspoiled wilderness, hike the trails, climb rock walls, explore quiet caves, stargaze in clear night skies, and picnic or camp in the shade of ancient oaks. Please help us continue the work of previous generations and preserve Pinnacles National Park for future visitors.

Critical Habitat for California Critters



Varied topography and weather, as well as the National Park System, help protect Pinnacles' many habitats for plant and animal species. Chaparral (a plant community characterized by a variety of evergreen drought-resistant shrubs) and other vegetation provide shelter and food for birds, mammals, reptiles, and insects. With 400 species of bees, the park protects the largest diversity of bees in a single place in North America.

Several bat species find refuge in Pinnacles' caves, cliffs, and trees. Balconies Cave attracts solitary males that roost in tiny cracks, away from human disturbance. Bear Gulch Cave hosts a maternal colony of Townsend's big-eared bats (above), unusual because they stay in the park year-round. They breed and raise pups in spring and summer and hibernate in winter.

The California red-legged frog (right), largest native frog in the

western United States and once endangered, is re-establishing here. You may see this nocturnal frog around Bear Gulch Reservoir.

Stewardship in Action Pinnacles National Park is a nesting area for the California condor (above) and one of a few release sites in the United States and Mexico. Loss of habitat, shootings, and poisoning from lead bullets—in gut piles or lodged in animal carcasses that the bird feeds on—led to its listing as an endangered species in 1967. An aggressive captive breeding program in the 1980s and '90s increased its chances for survival. One of the largest birds in North America, the condor weighs about 20 pounds and has a wingspan of 9½ feet. It soars on thermal updrafts at speeds of 55 miles per hour and altitudes of 15,000 feet. You may see condors flying over the high peaks at Pinnacles.



FORBES WILLIAM R. HEWITT,
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Faults, Volcanoes, and Erosion

The Earth's crust consists of plates that fit together like pieces of a puzzle. These plates are always moving, some diving under others (subduction), others grinding past each other along fault zones.

Our Pinnacles story began millions of years ago when the central part of the Farallon plate subducted under the southwestern part of the North American plate, creating California's Coast Range and spawning volcanic

activity. (Today, the Juan de Fuca plate, an active remnant of the Farallon plate, is diving under the northern part of the North American plate.) After the central Farallon plate's subduction, the Pacific plate collided with and wrenched off a chunk of the North American plate, creating the San Andreas Fault Zone. Molten rock poured through fissures that opened as plates ground against each other.

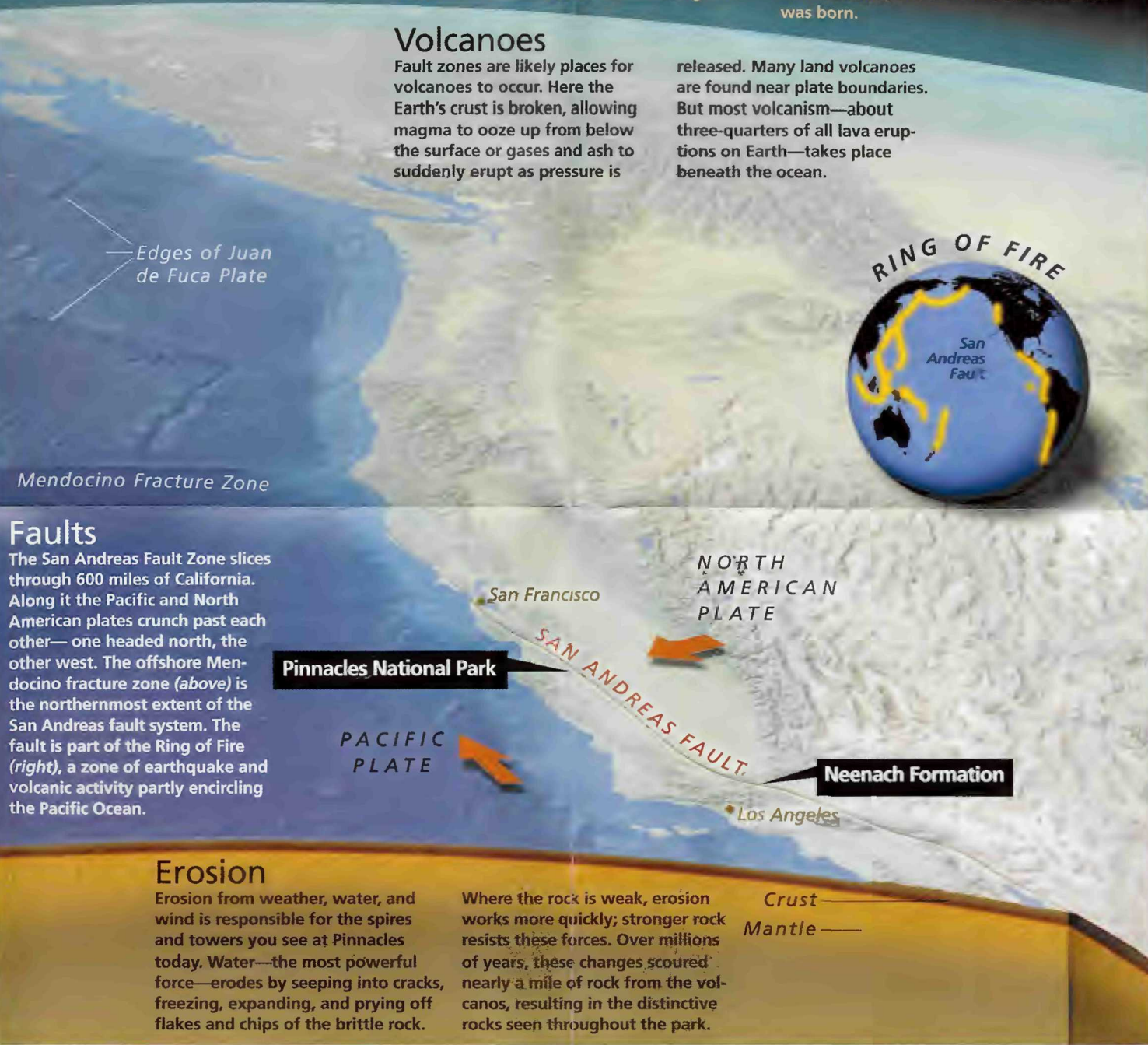
By 23 million years ago the Pinnacles volcano was born—believed to be 15 miles long and

8,000 feet high. The volcanos were not where the Pinnacles are now but 195 miles to the southeast (see *Neenach Formation on map below*). How did these fantastic rocks get here? As the Pacific plate crept north, it split the volcanic field and carried two-thirds of the Pinnacles' volcanics with it, leaving behind the Neenach Formation. On the Pinnacles' slow journey, the mass sank beneath the surface. In time, the power of wind, rain, and ice exposed the old volcanic field, eroded the rubble, and the Pinnacles formation was born.

Volcanoes

Fault zones are likely places for volcanoes to occur. Here the Earth's crust is broken, allowing magma to ooze up from below the surface or gases and ash to suddenly erupt as pressure is

released. Many land volcanoes are found near plate boundaries. But most volcanism—about three-quarters of all lava eruptions on Earth—takes place beneath the ocean.



Faults

The San Andreas Fault Zone slices through 600 miles of California. Along it the Pacific and North American plates crunch past each other—one headed north, the other west. The offshore Mendocino fracture zone (above) is the northernmost extent of the San Andreas fault system. The fault is part of the Ring of Fire (right), a zone of earthquake and volcanic activity partly encircling the Pacific Ocean.

Erosion

Erosion from weather, water, and wind is responsible for the spires and towers you see at Pinnacles today. Water—the most powerful force—erodes by seeping into cracks, freezing, expanding, and prying off flakes and chips of the brittle rock.

Where the rock is weak, erosion works more quickly; stronger rock resists these forces. Over millions of years, these changes scoured nearly a mile of rock from the volcanos, resulting in the distinctive rocks seen throughout the park.

Grassroots Movement The People's Park



People have lived nearby for hundreds of years, but we still know little about them. Chalone and Mutsun Indians were hunter-gatherers who seasonally harvested the area's resources. In the 1700s Spanish missionaries introduced a new religion and lifestyle but unwittingly brought diseases that almost decimated Pinnacles' Native Americans.

Emigrants arrived next. Pinnacles soon became a destination for picnics, festivities, camping, and exploration.

Homesteader Schuyler Hain, who led tours of the caves for years, began a grassroots preservation campaign. Stanford University president David Starr Jordan, US Forest Service chief Gifford Pinchot, and local families joined in. Their efforts paid off in 1908 when President Theodore Roosevelt proclaimed these geological formations a national monument. In the 1930s the Civilian Conservation Corps (CCC) built trails, tunnels, and the Bear Gulch Dam and Day Use area. Today's visitors join a long tradition of treasuring and preserving this beautiful national park.



