

Clue 1.

The ocean around this national monument and San Diego Bay keeps air temperatures mild year-round, which allows heat-loving cactus to grow next to evergreen shrubs and salamanders to walk past sunning desert snakes.

Clue 2.

Rainfall is concentrated in the winter, but the amount can drastically change year to year, from 3.4 inches to 19.4 inches. This variability in rainfall causes certain types of plants to thrive one year and barely survive another in this southern most of California's national park sites.

Clue 3.

The monument contains 160 acres at the tip of the Point Loma peninsula. It is bordered to the west by the Pacific Ocean, on the east and south by San Diego Bay, and on the north by an urban environment. Cold air from the ocean meets balmy air from the land to form dense fogs, which adds moisture to allow species requiring more water to coexist with desert plants and animals.

Clue 4.

Climbing out of his boat and onto shore in 1542, Juan Rodriguez Cabrillo stepped into history as the first European to set foot here on what is now the West Coast of the United States.

Answer: A

Clue 1.

The significance of this area stems from the islands' remote, isolated position at the confluence of two major ocean currents, a region of persistent oceanic upwelling, and the border of two tectonic plates.

Clue 2.

A biological diversity representative of nearly 1,000 miles of the West Coast of North America is found in this park. The cool, nutrient-rich oceanic waters mix with warm coastal waters to accelerate the growth of sea life from microscopic plankton to blue whales around the islands.

Clue 3.

Archeological evidence records nearly 13,000 years of continuous human occupation and a Pleistocene fauna that included pygmy mammoth, an owl, a flightless goose, a puffin, and a vampire bat, and two species of giant mouse.

Clue 4.

The marine influence around these islands in the results in a climate of mild summers, higher humidity and 'channels' more frequent nocturnal fog compared to the mainland.

Answer: B



Clue 1.

Large marshes and lakes were relatively plentiful in this park as recently as 15,000 years ago.

Clue 2.

This park is home to our nation's driest, hottest, and lowest place, but also sporting mountains over 11,000 feet high that experience below-zero weather and snow. Summer temperatures often top 120°F (49°C) in the shade and average rainfall is less than 2 inches (5cm)- a fraction of what most deserts receive. From 1931 through 1934, only 0.64 inches of rain fell.

Clue 3.

Occasional thunderstorms, especially in late summer, can cause flashfloods. Water carries rocks, gravel, sand and silt down from surrounding hills and deposits them on the valley floor. Beneath Badwater lies more than 11,000 feet of accumulated sediment and salts.

Clue 4.

A prospector named Scotty shared his nickname with this park and told everyone that he built a castle in this valley with money from his "secret" gold mine. That was not quite the truth, but a Chicago millionaire and his wife did build "Scotty's Castle" in the cool of Grapevine Canyon.

Answer: C

Clue 1.

This National Monument used to be part of Yosemite National Park. In 1905, the namesake formation, Rainbow Falls and the Minarets were removed from Yosemite's boundaries due to pressure from mining interests.

Clue 2.

Thanks to its unique location just west of the Sierra Nevada crest at 7,560' above sea level, this national monument receives over 400 inches of snow each year and commonly experiences afternoon thunderstorms in July and August.

Clue 3.

The San Joaquin River flows through this area and over the spectacular Rainbow Falls the near the southern end of the monument, as it flows down to the San Joaquin Valley.

Clue 4.

The monument's namesake columns were formed from the eruption and uniform cooling of basalt lava. They tower as a sheer wall of polygonal basalt columns of unusual symmetry up to 60 feet high and rank as one of the world's finest examples of columnar basalt in the world.

Answer: D



Clue 1.

The local climate is Mediterranean, characterized by cool wet winters and dry hot summers, but here the Mediterranean climate is locally moderated by our world famous fog, which creates a cool dry summer. The average daily high temperature here varies by less than 20 degrees Fahrenheit throughout the year.

Clue 2.

This National Recreation Area chronicles over two hundred years of history- from Native American culture and the Spanish Empire frontier to the California Gold Rush and the growth of a well-known city.

Clue 3.

This area is named for this only opening on the Pacific Coast to the interior of the state for nearly 1,000 miles of coastline. The Sacramento and San Joaquin Rivers drain nearly 40% of the watersheds in California.

Clue 4.

This area includes a Presidio, notorious island prison and a world famous bridge.

Answer: *E*

Clue 1.

The area encompassed by this park has been shaped by strong winds, unpredictable torrents of rain, and climatic extremes, but humans have occupied this area for at least 5,000 years.

Clue 2.

Clouds can build up during the dry summer to produce spectacular thunderstorms and fires are allowed to burn in the wilderness areas if weather conditions allow. Native Americans used fire to maintain the health of meadows and oaks in the great valley in this park.

Clue 3.

This park includes three of California's ecological regions: The Colorado Desert, a western extension of the vast Sonoran Desert; the southern boundary of the Mojave Desert and the Little San Bernardino Mountains.

Clue 4.

Stands of California juniper and pinyon pine, spike-like ocotillo plants and "jumping" cholla cactus are found here as well as the park's namesake plant- *Yucca brevifolia*- a member of the Agave family that is commonly known as a Joshua tree.

Answer: *F*



Clue 1.

Nowhere else in the Cascade Range can such an array of hydrothermal (hot water) features be seen- Boiling mud pots, steaming ground, roaring fumaroles and sulfurous gases.

Clue 2.

All four types of volcanoes found in the world are represented in this park: Shield, Cinder Cone, Composite and Plug Dome. Snow generally begins to fall on the peaks in October, doesn't melt in most places until July, and can remain in isolated areas in this park year round.

Clue 3.

This namesake volcano of this park is the southernmost active volcano in the Cascade Range. It explosively erupted on May 22, 1915, devastating nearby areas and rained volcanic ash as far away as 200 miles to the east.

Clue 4.

The peak and a northern California county are named for a Gold Rush pioneer, who was murdered in Nevada's Black Rock Desert.

Answer: *G*

Clue 1.

Over the last half-million years, volcanic eruptions on the Medicine Lake shield volcano have created a rugged landscape dotted with diverse volcanic features in this National Monument.

Clue 2.

Elevations in this National Monument range from 4,000 to 5,700 feet. Summers are generally sunny and warm while winters are cold with below-freezing nights and occasional snow. Cold weather is possible any time of year, and snow has been recorded in all months.

Clue 3.

More than 700 lava tube caves are found within this area and many contain "micro-climates" very different from the outside world, that sustain fascinating organisms such as bats, ferns, and sparkling bacteria. One could say these 'lave cribs' of life give the park its name.

Clue 4.

A small band of Modoc Indians- under the leadership of Kintpuash (Captain Jack)- used an intimate knowledge of this terrain to hold off US Army forces ten times their number for five months, during the Modoc War of 1872-1873.

Answer: *H*



The Great Eruption of Lassen Peak - May 22, 1915
Taken at Anderson, 60 miles away
by Myers & Loomis
B-264



Clue 1.

This National Historic site is in the Owens Valley at 4,000' elevation, at the western side of the Great Basin, the northern edge of the Mojave Desert, and the eastern slope of the Sierra Nevada Mountains. The area receives little precipitation but does have four distinct seasons.

Clue 2.

Native tribes began utilizing the valley almost 10,000 years ago. About 1,500 years ago the Owens Valley Paiute hunted, fished, collected pine nuts, and practiced a form of irrigated agriculture to establish settlements here.

Clue 3.

The name of this site is the Spanish word for “apple orchard”—developed as an agricultural settlement beginning in 1910. Farmers grew apples, pears, peaches, potatoes, and alfalfa on several thousand acres surrounding the town.

Clue 4.

Over 10,000 people were interned here behind barbed wire with no due process of law. Some internees found it ironic that the nearest town is named Independence.

Answer: I

Clue 1.

Annual precipitation in this area ranges from 3.5 inches at low elevations to nearly ten inches in the mountains. At least 25 percent of precipitation falls in localized summer monsoon thunderstorms.

Clue 2.

Temperatures above 100 degrees (F) typically begin in May and can last into October, with winter temperatures reaching lows in the teens. A large percentage of animals living here are nocturnal, allowing them to evade temperature extremes and predators.

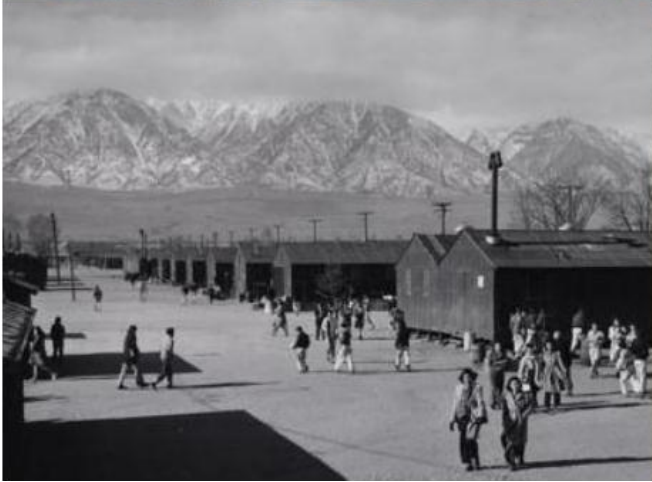
Clue 3.

Beneath this National Preserve is a vast system of groundwater stored in aquifers. Springs and seeps are located along the southwest–northeast trending spine of mountains that includes the Granite, Providence, New York and Castle mountains.

Clue 4.

Eleven thousand years ago, this area was covered with a chain of lakes. Today, three of the four major North American deserts are found in the preserve: the Mojave, Great Basin and Sonoran.

Answer: J



Clue 1.

Water and gravity scour deep pools around fallen redwood logs, forming new habitat along the banks for developing fish in this National Monument. The cold, deep pools help endangered Coho and threatened steelhead salmon ride out the warmer, drier months of summer.

Clue 2.

The giant redwoods depend on fog as an important source of water during the typically dry summer months. The park is cool, shaded and moist year round.

Clue 3.

Broken snags left behind by fallen redwoods make good refuge for bats and owls. Black-tailed deer, Sonoma chipmunk, fox, squirrel, bat, heron, duck, rodent, and owl are drawn to the cool shade of the creek.

Clue 4.

On Jan. 9, 1908, Pres. Theodore Roosevelt signed legislation establishing this National Monument. Upon learning of its dedication, John Muir declared, "This is the best tree-lovers monument that could possibly be found in all the forests of the world."

Answer: *K*

Clue 1.

The area is at the edge of intersecting ecosystem zones, resulting in diverse vegetation and an intricate mix of habitats supporting a rich fauna of birds, reptiles and bees. The 400 bee species found here represent the highest bee diversity per unit area of any place on earth!

Clue 2.

Although only 40 miles from the Pacific Ocean, the Santa Lucia Mountains to the west block the ocean influence on this area. Summer temperatures on the coast can be a fairly steady 60 (F), while here the temperature can swing from 50 (F) at night to 100 (F) in the day.

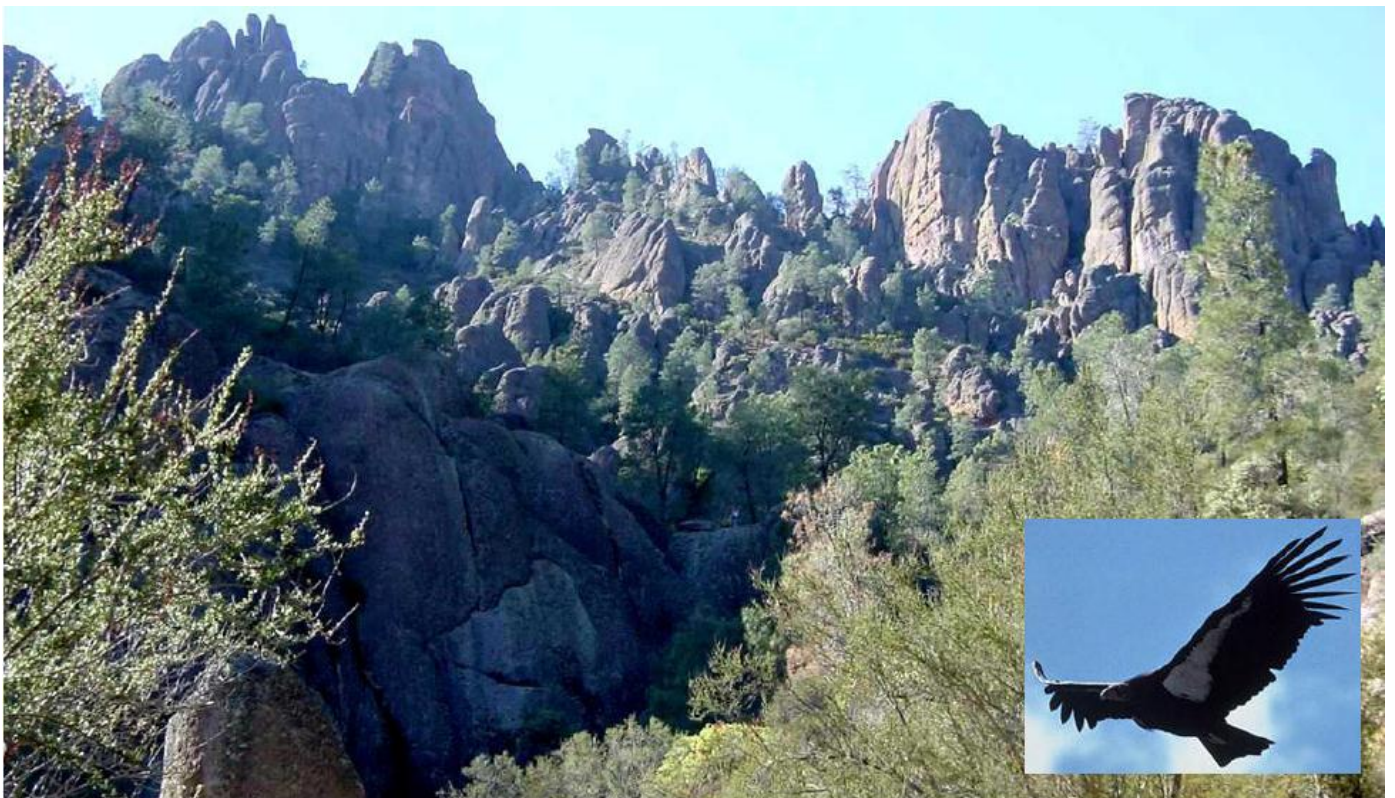
Clue 3.

The namesake rocks are believed to be part of the Neenach Volcano that existed 23 million years ago near present-day Lancaster, California, some 195 miles (314 km) southeast. The San Andreas Fault split the volcano and the Pacific Plate crept north, carrying these rocks north.

Clue 4.

The work of water and wind on these erodible volcanic rocks has formed the sharp 'pin-like' rock spires, crags and talus caves that rise out of the chaparral-covered Gabilan Mountains.

Answer: *L*



Clue 1.

The namesake point of this national seashore is the windiest place on the Pacific Coast and the second foggiest place on the North American continent. Weeks of fog, especially during the summer months, frequently reduce visibility to hundreds of feet, but one can still hear the roar of ocean breakers crashing against the rocky headlands.

Clue 2.

The San Andreas Fault bisects the peninsula from the rest of the California mainland. The rocks of this craggy coast match Tehachapi Mountains rocks more than 310 miles to the south!

Clue 3.

Rainfall averages about 12 inches per year out on the Point, but the rainfall a few miles inland is much greater- averaging about 36 inches a year at Bear Valley- resulting in a mixture of open grasslands, brushy hillsides and forested ridges.

Clue 4.

Sir Francis Drake is reported to have dropped anchor in the bay that bears his name and claimed the area for Queen Elizabeth I in 1579, but the Miwok have been living in this area for over 5,000 years.

Answer: *M*

Clue 1.

The rainy season usually stretches from October through April, dumping the majority 60-80 inches of annual rain over the region.

Clue 2.

Banana slugs, gray whales, elk, black bears, and sea anemones live within the prairies, estuaries and temperate rainforest preserved within this park.

Clue 3.

Named for explorer Jedediah Smith, California's last major free-flowing river arises in the Siskiyou Mountains and flows through this park.

Clue 4.

Relatives of the park's namesake trees- which may grow to a height of 367 feet (122 m) and have a width of 22 feet (7 m) at their base- lived in the Jurassic Era 160 million years ago. cool, moist air created by the Pacific Ocean keeps the trees continually damp, even during summer droughts.

Answer: *N*



Clue 1.

These mountains are home to some of the most unique natural ecosystems in the United States including: coastal salt marsh, coastal sage scrub, chaparral, coast live oak woodland, riparian woodland, valley oak savanna, freshwater ponds/lakes and rock outcrops.

Clue 2.

Over 1,000 plant species provide habitat for approximately 500 mammal, bird, reptile, and amphibian species in this area, which is especially impressive considering the proximity to one of the largest urban areas in the United States.

Clue 3.

The land that is now this national recreation area was born from the collision and sliding of the Earth's crustal plates and is part of the Transverse Ranges that stretch from the Mojave Desert to the Channel Islands, curving around Santa Monica Bay for some 46 miles.

Clue 4.

These mountains represent one of the largest protected areas of the Mediterranean-type ecosystem of southern California, identified as one of the world's "hot spots" for biodiversity.

Answer: *O*

Clue 1.

Located in the southern Sierra Nevada range, the parks' elevations extend from 1,300 feet (418m) in the foothills to 14,491 feet (4,417m) at the summit of Mount Whitney, the highest mountain in the contiguous 48 states.

Clue 2.

This area includes approximately 3200 lakes and ponds and 2600 miles of rivers and streams. Three major rivers originate in these parks --Kings, Kaweah and Kern. These rivers provide valuable irrigation water to the rich agricultural lands in Fresno, Kern and Tulare counties.

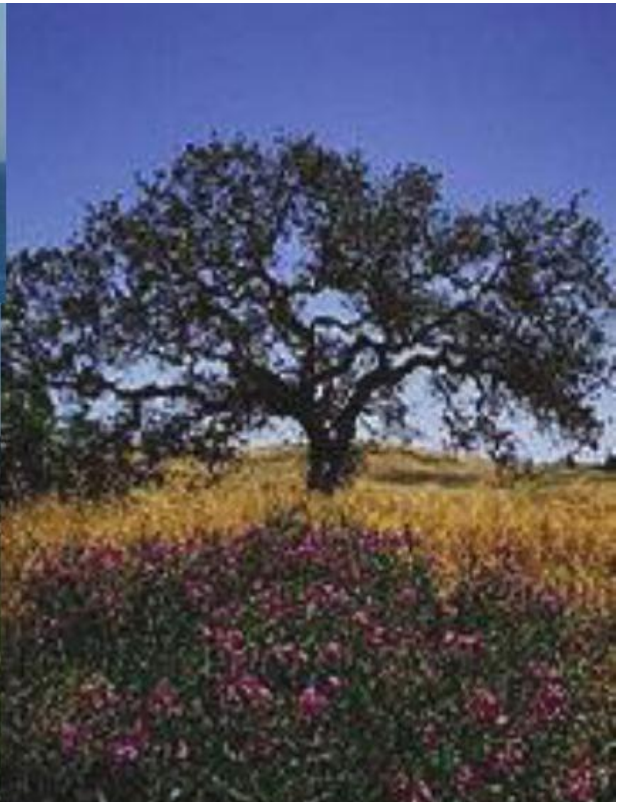
Clue 3.

This topographic diversity in this area supports over 1,200 species plants, which make up dozens of unique plant communities including the renowned groves of giant sequoia, vast tracts of mixed conifer forests, spectacular alpine habitats, oak woodlands and chaparral.

Clue 4.

These two parks are named for a wide glacial valley and massive trees that survived countless fires, long periods of drought as civilizations have come and gone over the past 2700 years.

Answer: *P*



Clue 1.

This National Recreation Area is geographically situated at the juncture of the Klamath Mountain Range and the northern edge of the Central Valley, making it home to a diverse collection of animal and plant life.

Clue 2.

Summers are hot and dry, with daytime temperatures often over 100 degrees. Winters are wet, the park receives over 55 inches of rain with snow at the higher elevations.

Clue 3.

The area is filled with historic sections of the park and Gold Rush Era buildings, mines and miner's ditches that once carried water for mining operations can still be seen.

Clue 4.

The name sake Lake was formed as part of the Central Valley Water Project, providing water for agriculture and was dedicated by President John F. Kennedy in 1963. Although local creeks such as Brandy Creek flow into the lake, most of the water in the lake comes from the Trinity River.

Answer: *Q*

Clue 1.

The 'stars' of this park were polished by glaciers best known for its waterfalls, but within its nearly 1,200 square miles, you can find deep valleys, grand meadows, ancient giant sequoias and a vast wilderness area,

Clue 2.

Clouds can build up during the dry summer to produce spectacular thunderstorms and fires are allowed to burn in the wilderness areas if weather conditions allow. Native Americans used fire to maintain the health of meadows and oaks in the great valley in this park.

Clue 3.

The South Fork Merced River provides habitat for a rare plant, the Sierra sweet bay (*Myrica hartwegii*). It is only found in five Sierra Nevada counties and occurs exclusively in this park on sand bars and river banks downstream from Wawona and on Big Creek.

Clue 4.

President Abraham Lincoln signed an 1864 bill granting the namesake valley and the Mariposa Grove to the State of California. John Muir helped spark the creation of this park in 1890.

Answer: *R*

