Crater Lake
National Park
Oregon
Crater Lake National Park
OREGON
ACCESSIBLE ALL YEAR

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Events of Historical Importance

1853 John Wesley Hillman and a group of prospectors discovered the lake and named it Deep Blue Lake.
1862 Chauncey Nye and party of prospectors, unaware of the previous discovery, accidentally visited the lake, naming it Blue Lake.
1865 Soldiers from Fort Klamath, without knowledge of previous discoveries, visited the lake and named it Lake Majesty.
1869 J. M. Sutton, accompanied by David Linn and family, of Jacksonville, visited the lake and named it Crater Lake.
1873 First photograph, a daguerreotype, taken of Crater Lake by Peter Britt, southern Oregon pioneer.
1883 J. S. Diller, geologist, and Everett Hayden, of the United States Geological Survey, visited the lake.
1885 William Gladstone Steel, with Prof. Joseph Le Conte, Capt. Clarence E. Dutton, J. M. Breck, Jr., and others, visited Crater Lake. Mr. Steel suggested that a national park be established and a petition was sent to President Cleveland.
1886 The President issued a proclamation withdrawing 10 townships, including Crater Lake. Lake surveyed and sounded by the United States Geological Survey.
1888 First fish planted in Crater Lake by William Gladstone Steel.

UNITED STATES DEPARTMENT OF THE
INTERIOR - - - Harold L. Ickes, Secretary
NATIONAL PARK SERVICE
Arno B. Cammerer, Director

1896 Mazamas visited Crater Lake and christened the ancestral mountain, of which only the caldera and lower slopes remain, Mount Mazama.
1902 Crater Lake National Park, created by congressional action, approved by President Theodore Roosevelt. First superintendent, W. F. Arant, appointed.
1907 First automobile driven to the rim of Crater Lake by Charles True, from Medford, Oreg. The Wacu, the first boat used in rendering a launch service to visitors, placed on the lake.
1912 Crater Lake Lodge, the oldest structure now existing in the rim area, was built.
1931 Sinnott Memorial dedicated.
1932 The Watchman Observation Station built.
1935 Park approach roads and highway-to-rim open for first time throughout winter.
Located in southern Oregon, on the crest of the lofty Cascade Range, Crater Lake National Park has a high place among the Nation's most scenic wonderlands. It is a gem of rare excellence, an unsurpassed blend of scenic and scientific values. At Crater Lake visitors observe beauty in its truest sense and experience a profound inspirational appeal. Pervaded by an air of mystery, tranquility now prevails where once unfathomable volcanic power was displayed.

The lake rests in the very heart of a mighty mountain whose destruction resulted in the formation of a vast crater in which the waters accumulated. It is 6 miles wide, 2,000 feet deep, covers an area of 20 square miles, and has a circular shore line of 26 miles, with multi-colored lava cliffs rising 500 to 2,000 feet above the lake.

 Trails lead to the summits of high points about the rim and down a thousand feet to the shores of the lake. At the water's edge motorboats and rowboats are available for those who wish to see more of the lake or try their hand at trout fishing. Daily boat trips are scheduled around the lake shore line and to Wizard Island, a perfect little crater rising out of blue depths to a height of 763 feet. A motor drive extends around the crater rim for a distance of 35 miles, presenting scores of enthralling views of the scenic wonder. The constantly changing color and the contrast of lava cliffs and blue water are beautiful beyond description.

Crater Lake National Park embraces an area of 250.52 square miles and was established by act of Congress on May 22, 1902.

Discovery and History

Legend says that the Klamath Indians believed Crater Lake was once a
weird, ghostly amphitheater where the gods were forever embroiled in conflict, sporting in its blue waters and dwelling on its rocky heights and in its unknown depths.

Pioneers came slowly to southern Oregon, its sparse population in the early fifties living in constant dread of Indian wars. Miles of mountain region had never been explored when a party of California prospectors came to the village of Jacksonville. This was the only settlement in the region and owed its existence to the discovery of gold nearby. The Californians while preparing a journey into the mountains remained secretive regarding their mission. The purpose of their trip, however, was betrayed by a member of the party to a group of Oregon miners who learned that the Californians into the wilds, despite persistent efforts of the latter to evade them. Later, when the food supplies of both parties were running low, John Wesley Hillman, leader of the Oregon party, succeeded in uniting the two forces, and the search for the mine was postponed to hunt for game.

Thus it was on June 12, 1853, that Hillman, riding some distance ahead of the hunting party, discovered the lake. Letting his mule pick its way up a steep slope, he kept peering through the woods for game. Then suddenly the animal stopped, halting at the very rim of a deep blue lake. As the rider looked down he beheld a scene of unsurpassed beauty. Other members of the party soon joined their leader, and they agreed to call the body of water Deep Blue Lake.

In the excitement of gold discoveries and Indian wars, Crater Lake was forgotten for several years. There were no more visits by white men until 1862 when a party of six unsuspecting miners, led by Chauncey Nye, happened upon the place while en route to Jacksonville after a summer’s mining in the John Day region of eastern Oregon. They believed they had made a new discovery, only to learn afterward of Hillman’s visit. Nye and his party named their “discovery” Blue Lake. A third “discovery” was made in 1865 by a party of soldiers from Fort Klamath. They called the body of water Lake Majesty. This name was changed to Crater Lake in 1869 by visitors from Jacksonville.

Some years later, in 1872, William Gladstone Steel came to Oregon. The story is told that when Steel was a schoolboy in Kansas he had heard of the lake and had made a resolution that he would sometime see the western wonder. He spent 7 years in Oregon before he could find anyone who had heard of Crater Lake; two more passed before he found a person who had actually seen it. It was not until 1885 that he was able to visit the place which he found to be even more beautiful than he had anticipated.

The result was that Judge Steel conceived the idea of setting aside the lake and the region theretabout as a national park. He began an immediate agitation for this. Though the task was not an easy one, Steel undaunted by rebuffs, continued his efforts unselfishly and with personal sacrifice over a period of 17 years. Success crowned his work when the park was established by an act of Congress, approved May 22, 1902. Judge Steel thereafter devoted his life to the development of the park and became one of its first superintendents. Later he became park commissioner, holding this office until his death in 1934.

THE GEOLOGIC STORY OF CRATER LAKE

Origin of the mountain.—Visitors to Crater Lake find they must ascend extensive slopes to view the lake resting in a crater—approximately 6 miles in diameter, with walls from 500 to 2,000 feet high. Geologists tell us this rim is the remnant of an ancient mountain which stood more than 14,000 feet high. This mountain was named Mount Mazama in 1896 by the Mazama Club, a mountain-climbing group of Portland, Oreg.

In comparatively recent geologic time enormous flows of molten rock poured out over an area of more than 100,000 square miles, extending into Oregon, Washington, Montana, Idaho, Nevada, and California. These masses of lava came to the surface largely through great cracks or fissures in the earth’s surface. A typical example of such extensive flows may be seen in the lava beds forming the Columbia River Gorge.

Numerous volcanoes were formed at vents near the western edge of this lava region during the relatively late outpourings of molten rock through small openings. The mass of these volcanoes which make up the Cascade Range represents only an extremely small volume in proportion to the total mass of lava. Mount Mazama at Crater Lake is one of these volcanoes.

The mountain in which Crater Lake rests was built principally by lava flows, poured out layer upon layer, and to a lesser degree by the piling up of volcanic ash, soil, and the deposits of streams and glaciers. At Dutton Cliff there is an example of successive layers of lava and volcanic ash. Near Discovery Point, in addition to layers of lava and volcanic ash, one may also see examples of glacial deposits and glacial striae or scratches.

One can understand Crater Lake in its relation to the volcano only when the mountain is considered as the result of a building process extending over long periods in which many changes took place. The following is an explanation of some of the processes.

Lava outpourings through splitting of the mountain.—In addition to spilling out as broad flows of melted rock, it is common for the tremendous mass of molten lava in a volcano to break through the mountain side. The lava...
U-shaped notches in East Rim tell story of glaciation of ancient Mount Mazama

filling of such a crack or fissure is known as a dike. After it cools the material filling these fissures is often harder than the surrounding rock. Subsequent wash of water may cut away the softer bordering material, leaving the hard filling of the fissure as a sharp ridge. Devils Backbone, on the west side of Crater Lake, is an illustration of such a lava dike.

Action of streams and glaciers on the mountain in the course of its building.—In the section of layers forming the crater walls there is evidence of wash by water. In some places this is shown by the cutting of valleys; at others, by the accumulation of water-carried ash, gravel, and boulders.

Glacier ice carrying sand, pebbles, and boulders scratches or polishes the rock surface as it moves slowly over it. Glacial polish and thick beds of material carried by glaciers are common around the mountain. They are present on the surface rock and seem also to appear between earlier layers, showing that glaciers were present at various stages in the history of the mountain.

Broad U-shaped valleys cut at various points around the crater are also characteristic of glacial action. Kerr Notch is such an evidence of glacial erosion. It was through a similar ancient glacial notch that the lava forming Llao Rock flowed.

Forming of the crater.—The broken edges of rock layers seen on the crater wall indicate widening of the crater in all directions. The edges of these rock layers are clearly exposed because they have been sharply broken around the entire inner rim region. This fracturing occurred in the course of widening the crater. Increase in size of the opening at the summit of the mountain, which eventually formed the present crater, is thought to have been due to explosive activity followed by the collapse of the peak.

If the activity of a volcano diminishes slowly, growth of the mountain may result in forming a symmetrical cone. If activity continues by spasmodic outbursts, explosions may blow away a considerable part of the peak. Other conditions may bring about undermining of the walls in such manner as to produce a wide cauldronlike crater, but without tremendous explosions.

Recent investigations by Howel Williams, under a grant from the National Academy of Sciences, have led to the conclusion that the crater owes its origin principally to collapse or engulfment of the mountain peak.

Formation of the crater by collapse was first proposed by J. S. Diller of the United States Geological Survey. Diller’s explanation differs from that of Williams principally in the method by which the void beneath the crest of Mount Mazama was formed. Diller thought that great quantities of molten rock were drained away through subterranean passages, thus weakening the support of the mountain peak and causing ultimate collapse.

In a report to be published by Williams, he describes great quantities of volcanic ash or pumice extending for a distance of more than 80 miles northeast of Mount Mazama. This ash is equivalent to more than 20 cubic miles of material and is thought to have been blown from the mountain in a catastrophic event and carried northeastward by the prevailing winds. Analysis of this ash shows that it is new material derived from the magma within the volcano and not finely divided fragments of the original mountain walls.

Following this explosion the mountain is thought to have literally boiled over, pouring out great quantities of frothy magma which flowed down the sides of the mountain and overflowed the lowlands below. The greater quantity extended to the south and southwest for distances up to 35 miles. This material poured out from the crater as a series of avalanches which must have flowed at a terrific speed, for those on the south and west sides of the mountain did not begin to deposit their load until they reached a distance of 4 or 5 miles from the crater.

Accompanying these explosions and the outpouring of this lava material,
cracks developed in the flanks of the mountain and eventually the top collapsed and was engulfed within the void produced by the outpourings of ash and molten rock, thus forming the crater as we see it today.

By projecting the present slopes of the crater rim upward and making adjustments to conform to the slopes of similar volcanoes, it has been estimated that approximately 17 cubic miles of old lava has been removed, which formed the upper part of ancient Mount Mazama.

Towards the close of the activity forming the crater, minor eruptions produced Wizard Island and possibly other cones. If the lake were removed, the crater would be seen as a relatively flat-floored cavity extending as a maximum about 2,000 feet below the present lake surface. In this great depression Wizard Island would appear as one of perhaps several volcanic cones produced by pouring out of lava and cinders in the last period of volcanic activity. Forming of the present floor probably involved many stages, during some of which the cauldronlike crater may have been occupied by wide stretches of molten lava.

Origin of the lake.—The water of Crater Lake is derived from rainfall and snowfall over the crater, together with snow blown into the depression. The lake is not known to have an outlet except by seepage. The conditions of evaporation, seepage, and precipitation are in a state of balance which makes possible this accumulation of water and maintenance of approximately this water level. If the region were at a different altitude, or in a different location, the lake might not have been formed.

The existence of Crater Lake was made possible by the building of a mountain, in the elevated summit of which there could be formed a wide and deep cavity having no outlet, except by seepage, and no inlet. The conditions required for the accumulation of a body of water with the peculiar beauty of this lake are furnished in a crater produced by a combination of those tremendous forces found in the power and heat of a volcano.

Color an outstanding character of Crater Lake.—The color of Crater Lake is generally recognized as the most attractive feature of this region. Among spectacular lakes of the world there are none in which the depth of color and brilliance of blue are more striking. The blue of the deeper water is brought out in contrast with the green of shallow areas along the margin.

The deep blue of the lake is believed to be caused chiefly by the scattering of light in water of exceptional depth and clearness. The color is thought to be due to the same cause that produces the blue of the sky where light passes through deep atmosphere.

The extraordinary beauty of the lake arises in part from its great depth, the clearness of the water, and of the atmosphere above it, and from favorable conditions presented in viewing it from the high crater rim.
Information building.—This building is on the crater rim just west of the lodge. Park visitors are invited to make use of the information service available and to examine the historical and botanical exhibits.

Rim Drive.—An interesting highway encircles the lake. Visitors are invited to use this highway and enjoy the many views of the lake from numerous observation points along the road. A daily auto caravan is conducted by the naturalist staff along a portion of the rim road. Visitors taking the caravan have an opportunity to see a number of scenic points as well as to become familiar with certain phases of the botany, geology, and history of the park. The objective of the caravan is the Watchman observation and lookout station on the summit of the Watchman Peak on the west rim of the crater. Arriving at that station, the visitors have an opportunity to become familiar with the very important work of forest protection. All caravan trips start from the information building. The time of departure is announced on the bulletin boards and at lectures.

Wizard Island.—This is a symmetrical cinder cone rising 763 feet above the surface of the lake. The island may be reached by boat. A trail leads from the shore to the crater, which is approximately 80 feet deep and 300 feet in diameter.

The Phantom Ship.—Across the lake from Wizard Island is another island called the Phantom Ship. It rises from the waters of the lake, a twisted and strangely formed mass of lava. Its shape strongly suggests a ship under sail. The illusion at dusk or in the moonlight is impressive. In certain lights the phantom ship seems suddenly to disappear. The best views of the Phantom Ship are obtained from the launches on the lake, and Kerr Notch along the Rim Drive.

Garfield Peak.—With an altitude of 8,060 feet, this peak is easily reached by trail from the lodge. From the summit there is a magnificent view of the lake and surrounding region.

The Watchman.—On the rim, directly west of Wizard Island, is The Watchman. This peak, deriving its name from its use as one of the observation points during the sounding of the lake in 1886, is of interest not only because of its height, but because of the fire lookout and observation station on its summit. They may be reached after a 20-minute walk over a new trail from the rim road. A rare panorama of the park and surrounding country may be viewed from this point, which is 8,025 feet above the level of the sea and 2,000 feet above the lake.

Cloud-cap.—Possibly the most comprehensive view of the lake may be obtained from Cloud-cap, on the east rim. Its summit rises over 8,000 feet above the level of the sea and 2,000 feet above the lake. To the east is Mount Scott and to the north and west wide vistas of the summit of the
range. On a clear day the shining surface of Klamath Lake may be seen far to the south, bordered with vast marshlands and the dark timber at the foot of the range, while farther south is the crown of beautiful Mount Shasta. The coloring of Crater Lake is well observed from Cloud-cap.

Mount Scott.—East of Cloud-cap is Mount Scott, easily climbed and affording fine unobstructed views. The peak is the highest point within the park, reaching an altitude of nearly 9,000 feet. A fire lookout is located on the summit.

The Pinnacles.—Located in Wheeler Creek, rear the east entrance of the park, are slender spires of pumice. Some of the needles are 200 feet in height. In Sand Creek Canyon and Godfrey's Glen in Annie Creek Canyon there are additional spires and fluted columns carved out of the soft volcanic material by the erosion of water. As erosion continues the Pinnacles grow in height and new ones are slowly being formed.

Castle Crest wild flower garden.—Ideal for the study and viewing of Crater Lake flora, this garden is near park headquarters, 3 miles from the rim area. A half-mile trail winds through this area, alive with blooms throughout the summer season.

Other places of interest in the park and vicinity.—Park visitors desiring information about other interesting places in the park that are not easily accessible, as well as interesting places in the vicinity of the park, are invited to inquire at park headquarters and the information building.

WILD ANIMALS

The park abounds with the smaller game species that are of great interest to the visitor because of their friendly inquisitiveness. Members of the squirrel family have learned that they will not be harmed and so are numerous along roads and trails and at anyplace where people congregate, knowing that in such surroundings they will find a wealth of tidbits.

With the possible exception of the bear, the larger mammals are fairly well represented but not numerous. Of the three deer species, the Columbia blacktail is most common. Also reported is the larger Rocky Mountain mule deer, and infrequently a band of whitetail deer may be discovered in one of the grassy, watered meadows. Elk have been noted along the eastern side of the park.

Bears, while they may be seen by the keen observer in many parts of the park, are most numerous around park headquarters and may be seen at almost any hour of the day. Excepting a few brown individuals, they are the well-known black variety.

Sometimes as many as three cubs, attended by their mother, make their appearance. Visitors never tire of watching the antics of these little balls of fur as they frolic and play. An occasional disciplinary cuff administered by a watchful mother always causes much merriment among the spectators.

In the interest of safety, it is prohibited to feed, tease, or molest the bears. Many persons have been painfully clawed doing so. It is well not to get between the mother and her cubs.

Others of the larger animals extant in the park, but seldom seen by the casual observer, are the cougar or mountain lion, the wolf, the coyote, and the red fox.

Most common and approachable are the friendly little golden-mantled ground squirrels. They stuff their cheeks with peanuts from the hands of visitors until they can hold no more, then scurry away, hurriedly cache the supply for future use, and come back for more. Numerous also, but not quite so trusting, are two species of chipmunks, easily distinguished from the golden-mantled squirrel. These little fellows seem charged with electric energy, darting to and fro, seemingly never quiet.

Basking on a warm rock or stodgily making his way among them, one will frequently see the marmot, whose kind is plentiful along all the roads and trails.

The hiker is constantly having his way challenged by the alert and exceedingly saucy little pine squirrel, who may be recognized by his very audacity. The porcupine is frequently observed as he waddles clumsily in search for food, which consists chiefly of succulent bark from young pine trees.

The shrill note of the cony or pika may often be heard on rocky slopes, but, unless he moves, it is almost impossible to discover him because of his wonderful protective coloration. These tiny animals may be seen at the foot of the Crater Wall Trail or along slopes of Garfield Peak.

Badgers, gray squirrels, and snowshoe rabbits are often seen. Other furry little denizens not so frequently seen are the mink, flying squirrel, marten, and several species of mice. Gopher workings are common.

In only one place in the park, and that far off the beaten paths, lives a colony of beaver. These particular animals live in a bank burrow and have not built the big lodge familiarly associated with the name.

Due to the general elevation of the area, there are few reptiles. Salamanders are common on the lake shore and frogs and toads along the creeks.

BIRD LIFE

Great numbers of birds of many species have discovered that Crater Lake National Park is a sanctuary for them. There are more than 112 species in the park.

The Eagle Crags have furnished nesting places for the golden eagle and
the southern bald eagle; Llao Rock is the home of falcons. Ospreys have been seen, and the dusky horned owl forages nightly. California gulls visit the park and Farallon cormorants are known to have nested and raised their young on the lake. There are ravens and half a dozen species of hawks. The Sierra grouse inhabits the timber lands. Clark's crow and crested jays and gray jays make their presence known on the trails and around the campgrounds.

Smaller birds frequently seen are the mountain bluebird, Townsend’s solitaire, Sierra junco, pine siskin, Sierra creeper, red breasted nuthatch, mountain chickadee, and western evening grosbeak. There are golden and ruby-crowned kinglets, robins, wrens, wood and green-tailed towhees, purple and rosy finches, chipping and other sparrows, two varieties of thrushes, and five varieties of warblers. Occasionally a humming bird is seen.

The most noticeable of the small birds of the park is the western tanager, a brilliant streak of gold as he darts and flits in the dark foliage, and equally remarkable in coloring when he rests on twig or branch, where his red head, yellow body, and black wings with yellow bars are unmistakable. The sweetest singer in the park is the Sierra hermit thrush—shy, difficult to locate, but making his presence known by his beautiful song.

FISHING

Angling amid scenes of towering, multicolored cliffs in heavily trout-stocked waters of deepest blue is an experience long to be remembered. Trout bite readily in Crater Lake and are caught in goodly numbers. These trout are not small nor do they submit easily after they are hooked. Trout as long as 36 inches have been caught; the average is around 2 pounds each and the length 16 inches.

The crystal-clear waters of the lake provide good fly fishing. Experienced fly casters have reported success many times, using a wide assortment of lures. During certain hours of the day fish jump lustily along the shore line, and here flies are placed to effective use. Trolling, however, is the popular method, with results satisfactory in most sections of the lake. Spoons or spinners are principally used, although plugs are occasionally a part of the tackle.

The limit of a day’s catch is 12 per person. No fishing license is necessary.

Although today Crater Lake literally teems with rainbow and silverside trout, in addition to a lesser number of steelhead, German brown and speckled trout, some 50 years ago the lake was devoid of piscatorial life of any kind.

The first fish were planted September 1, 1888, by Judge William Gladstone Steel. A few years later a California minister succeeded in planting 200 fingerlings, but after that plantings were rare for many years. Since the park was established in 1902, fish have been systematically planted, especially during the past decade. So well has this work been done that the lake is now abundantly stocked and care is being taken not to overstock this body of water.

WINTER SPORTS

The 12 months accessibility of Crater Lake National Park has made possible the enjoyment of winter sports in rare settings of wintry splendor. Steep and gradual slopes, according to speeds desired, are numerous in the park and are ideal for skiing and tobogganing, the source of many thrills for winter recreationists.

Professional snow meets in the park are not encouraged, but special attention is paid to amateur sports, making it possible for entire families to enjoy a day in the snow. Snow plows keep the south and west approach roads effectively cleared for comfortable motor travel between banks from 10 to 20 feet high in midwinter. Rangers are on constant duty during the winter season to render service to visitors. Lodging accommodations are within 20 miles of either side of the park. During the winter months meals may be obtained at park headquarters.

In addition to snow sports, visitors have the opportunity of viewing Crater Lake in a raiment of white, accentuating the beauty of its unbelievably blue waters and its encircling, towering cliffs of multitudinous colors in close harmony with the pristine appeal of the mountain wonder. Crater Lake does not freeze over.
Inspiring to behold in the greenery of summer, Crater Lake robed in the white silences of winter is a magic scene of color, vastness, and mystery never to be forgotten.

THE FORESTS

Untouched by the hand of man, except for insect and tree disease control, and carefully guarded against the ravages of fire, the forests of Crater Lake form one of the park's principal attractions. This is true not only from a scenic standpoint and a never-failing interest for tree lovers, but also because of the vast acres of magnificent stands.

Of the considerable number of trees within the park, the majority are cone bearers. Some of these extend down the western slope well outside the boundary. The lower species meet and mingle with such broad-leaved trees as oak, maple, and madrone. Entering the lowest part of the park in the southwest corner via the deep canyon of Redblanket Creek are several trees not generally known to occur within the area. These include Brewer oak, western hemlock, madrone, Pacific yew, golden chinquapin, bigleaf maple, and Pacific dogwood.

The mountain hemlock is characteristic of the Crater Lake region, its stately trunks, drooping limbs, and feathery foliage providing woodland beauty that is never forgotten. It is common on the wall of the crater and seeks high altitudes on mountain peaks, where its growth is stunted and its limbs beaten down by storms. An imposing stand greets the visitor at Annie Spring, continuing on both sides of the highway to the rim, its large trunks suggestive of the hundreds of years these trees have been growing undisturbed in their mountain fastness. Here, indeed, is the forest in all of its pristine glory. It occurs in heavy stands along the road around the lake, enhancing the beauty of the Rim Drive.

An outstanding tree of the park is the whitebark pine, often short and stunted and grotesquely twisted, fringing the rim and crowning the highest crests. It illustrates best among trees the stern struggle for existence. The lodgepole pine, most prolific of the park's conifers, covers thousands of acres of dense stand and extends down the cool canyons to and beyond the park boundaries. The Shasta red fir, a stately tree with its regularly meshed branches, is scattered throughout the hemlock forest.

The western white pine, while usually a middle-sized tree, furnishes the largest individual in the park, having a diameter of approximately 8 feet. More abundant along water courses and about wet meadows can be seen the slender spires of the alpine fir. In some places this tree continues over the rim to the inner wall of the crater. Engelmann spruce is usually confined to the bottoms of deep canyons. Other trees include the white fir, Douglas fir, and sugar pine, all companions of the western yellow pine.
Another species in the park is the incense cedar. While this tree is not common, it is not hard to find. Several of the specimens are as large as 4½ feet in diameter.

Further enhancing the beauty of the park woodlands are a few broad-leaved trees and a large variety of attractive shrubs and undergrowth. No less than nine willows, two alders, and a maple are among the more abundant and conspicuous shrubs which fringe the streams and clothe the meadows. The timid aspens grow beside the larger trees of the cone-bearing species, their small roundish leaves trembling in mountain breezes. The black cottonwoods also mingle with the evergreen trees in the deep canyons.

**WILD FLOWERS**

With a list of over 570 flowering plants and ferns, Crater Lake's richness in species and individuals compares favorably with other national parks. This is not at first apparent to the visitor. If he enters by the usual gateways and travels the beaten paths, he may even be disappointed in the flowers. Over much of the region, all of which is volcanic, the soil is made up chiefly of fine pumice sand, and for most of the growing season is lacking in moisture. So perforce the plant life must be limited to those forms whose peculiar structure adapt them to such environment. To many, however, this situation only lends variety and adds peculiar interest. Pleasing to the eye are the massed color effects in the open spaces and the drier forest areas. Wherever the highway enters the regions of the streams, these massed effects increase, and one is gladdened by the transformation due to water's magic touch. If the visitor travels the many byroads and winding trails to the mountain meadows beside the singing brooks, or by boat along the rocky shore of the lake, he will find gardens of transcendent beauty. No more enchanting ones can be found than Castle Crest Gardens at park headquarters.

Soon after entering the park, the attention is caught by bright flashes of the scarlet trumpets of the mountain gilia, the pineland paintbrush, and the abundant white sprays of the snowbrush. Responding to the influence of the diversity of topography and soil and moisture conditions, various types of flowers are abundantly represented around park headquarters. Near at hand on the first bare spots among the snowdrifts, cheerful harbingers of spring, come the lovely windflowers with cups of white, and the strikingly beautiful yellow lamb's tongue. Stone crop covers the rock ledges, and finest of the rock-loving plants, the pink gentstemon drapes the rock walls in company with the lace fern. Delicate bog orchids, elephant heads, masses of yellow and pink monkey-flowers, banks of daisy-like fleabane, giant ragwort, and a host of others fill the wet meadows and line the streams. On the talus slopes are long strips of Arnica. In openings in the hemlock forest the ever abundant narrow-leaved aster presents a field of purple with intermingled pink fireweed and the tall corn lily, while the surrounding forest floor is carpeted with the grasslike turf of the smooth woodrush, the most abundant herbaceous plant of the upper forests. In the open pumice fields of the rim area, Douglas phlox, sulphur flower, and the low desert lupine contribute to the varied color scheme, later transformed into red and gold by the autumnal foliage of Newberry's knottweed.

Over the crater's rim, down the trail to the lake, one is attracted to the trailing raspberry, clothing the steep banks, and the spiny currant, prostrate on the rock walls. Abundant on the lower part of the trail and rocky shore of the lake, the large rose-pink flowers of Lewis' monkeyflower are the most conspicuous and striking features of the vegetation.

Across the blue water, even in the more forbidding lavas of Wizard Island, one is greeted at the boat landing by many fine clumps of bleeding heart. A little distance along the trail leading up the island cone, the parrot's beak is seen under the spreading hemlocks. At the summit, crowning the rim of the miniature crater, emulating the volcanic fires of old, grow the flaming paintbrushes, mainly restricted to the Crater Lake region.

**HOW TO REACH THE PARK**

**By railroad.**—The Southern Pacific Railroad serves Crater Lake National Park. The company runs its finest trains over the Cascade route passing through Klamath Falls and also operates regular service over the Siskiyou route passing through Medford. Connections with Crater Lake automobile stages are made daily at Medford and Klamath Falls from July 1 to September 20.

**By automobile.**—The automobile approaches to the park are exceptionally fine. Motorists on the Pacific Highway, going north, have the choice of turning off at Weed in northern California, proceeding to Klamath Falls and then to Crater Lake over The Dalles-California Highway, or proceeding on to Medford over the Pacific Highway and then to Crater Lake, 80 miles distant. Southbound visitors on the Pacific Highway turn off at Medford, as well as motorists arriving from California by way of the Redwoods Highway, which has its junction with the Pacific Highway at Grants Pass.

Travelers to the park from Medford arrive by way of the west entrance and from Klamath Falls by way of the south entrance. Those from Bend, Oreg., 106 miles from Crater Lake, use the well-improved approach via the north entrance, bringing motorists near Diamond Lake while en route to the park. This route is rapidly growing in importance. The east entrance
also provides for travel from Bend and The Dalles-California Highway and is usually open earlier in the season due to less snowfall.

Through the use of powerful snow plows Crater Lake National Park has been made accessible throughout the year over the Klamath and Medford approach roads. This is possible through the cooperation of the State highway commission. Even during midwinter, when snow attains a depth of 12 to 15 feet on the level, motorists can drive to the very rim of the lake.

Park highways are now continuously open, barring the exception of excessively heavy storms; however, the north and east entrances are open only from spring until late fall.

By airplane.—High-speed, de luxe airplane service from all points in the United States to Medford is now available through the United Air Lines. Connections at Medford with Crater Lake automobile stages are made daily from July 1 to September 20.

By motor coach.—Medford, Oreg., the southwestern gateway to the park, is served by Pacific Greyhound Lines. Fort Klamath and Klamath Falls, the eastern gateways, are reached from the south via Pacific Greyhound Lines and via the Mount Hood Stages from Bend and The Dalles, Oreg., and Boise, Idaho. Service from these gateways to and through the park is provided by the Crater Lake National Park Co.

ADMINISTRATION

The park is administered by the National Park Service of the Department of the Interior, with a superintendent, E. P. Leavitt, in immediate charge. A force of rangers and ranger-naturalists assists this official.

Also under the jurisdiction of Crater Lake National Park administrative offices are the Oregon Caves National Monument, 50 miles from Grants Pass in southern Oregon, and the Lava Beds National Monument in northern California, 45 miles south of Klamath Falls, Oreg. Both of these areas are popular attractions for visitors.

COMMUNICATION SERVICE

At Crater Lake long-distance telephone and telegraph services are available at the lodge, at park headquarters, and at various ranger stations.

RIM VILLAGE

A large majority of visitors first reach the rim of the lake at the Rim Village. This is the focal point of park activities. Here are the Rim Campground, lodge, post office, cafeteria, general store, Sinnott Memorial, information building, a rental cabin group, auto service, emergency mechanical service, and information bureau. From the Rim Village a number of the most important trails in the park take off, including the spectacular trail down the crater wall to the lake shore, where launches and rowboats are available for pleasure trips and fishing excursions. This fine trail is 6 feet wide and on a holding grade of 12 percent, permitting use by people unaccustomed to much physical effort. Its length of 1½ miles can be covered on the down trip in 30 minutes, while the return trip requires approximately 45 minutes.

CAMPING

There are four campgrounds within Crater Lake National Park, all of them free to the public.

The Rim Campground is located in close proximity to the rim at the terminus of the highway. The camp is on a slight elevation in the shelter of a fine stand of mountain hemlock, reminding the visitor that the altitude is over 7,000 feet. Eagle Crags, the jagged pinnacles of Garfield Peak, and Castle Crest tower above to the east. The designation of camp sites by logs, with a table, stove, and fireplace at each site, makes camping possible in a natural setting without detracting from the general beauty. Firewood is available at the camp. The water is pure, and there are sanitary conveniences, including hot water and hot and cold showers.

Located near the Rim Campground is the community house, with its great stone fireplace, where campers and visitors gather at night for recreation. It is open at all times for the pleasure and convenience of the public.
Programs of an entertaining and instructive character are provided here every evening during the summer season.

The post office is at the lodge, and mail addressed to Crater Lake will reach its destination during the park season. Rental cabins may be secured at the housekeeping-accommodation office. A cafeteria and general store are maintained convenient to the camp.

A campground is situated near the Annie Spring checking station on the highway 7 miles south of the Rim Camp. This is a beautiful well-sheltered, shaded site, and at a considerably lower altitude than the grounds near the rim. The camp has modern sanitation, with running water and wood available.

A camping place is located at Lost Creek, 3½ miles inside the east entrance of the park, at the junction of the highway entering the park and the Rim Road, not far from Wheeler Creek. These campgrounds are located 11 miles from the Rim Village, the road skirting the great heights south of the lake, and 3 miles from Kerr Notch, offering a spectacular view of Crater Lake from the east rim.

For those visitors coming to the park by the south entrance there is Cold Spring Camp, 3 miles south of the Annie Spring checking station, 7 miles north of the entrance, and 10 miles from the lake rim. The camp is near the scenic Annie Creek Canyon, and is one of the earliest regular camping places used by explorers of the Crater Lake region. Godfrey's Glen, with its colonnades and beautiful scenery, is located deep in the mysterious canyon not far from Cold Spring.

The Crater Lake National Park Co. offers accommodations for visitors in the park. Rooms may be obtained at the Crater Lake Lodge, a large hotel on the rim of the lake, under American and European plans. Under the latter plan rates range from $3 for two in a room to $5.50 for one person. Twin beds, with bath, on the European plan are available at $7.50 for two persons; the American plan is $3 per person higher. Children under 8 years receive half rates. Housekeeping cabins in the Rim Village rent for $2 per night, without bedding, and $2.75 with bedding. A large stone building, containing the cafeteria, store, novelties, pictures, and photographic supplies, is nearby.

Motor transportation.—Daily automobile service from Medford and Klamath Falls to Crater Lake Lodge is maintained by the Crater Lake National Park Co. from July 1 to September 20. The round-trip cost is $8 per person and only round-trip tickets are sold. A visitor may enter by way of Medford and leave by way of Klamath Falls. The trip requires 2½ hours from the latter place and 3 hours from the former.

Launches and rowboats.—Rowboats may be hired for 50 cents per hour for one person and 25 cents for each additional person. Regularly scheduled trips are made daily by launch to the Phantom Ship and Wizard Island, about 15 miles, at a cost of $2 per person. Hourly trips are made to Wizard Island for $1 per person. Fishing tackle may be rented at the boat landing.

One of the popular attractions is a launch trip around the lake, leaving the boat landing at 9 o'clock each morning during the travel season. A ranger-naturalist describes to the launch passengers the points of scenic and scientific interest. The trip has been carefully planned and is available at the cost of $2 per person.

This booklet is issued once a year and the rates mentioned herein may have changed slightly since issuance, but the latest rates approved by the Secretary of the Interior are on file with the superintendent and park operator.

Publications

Numerous books, pamphlets, and maps describing the scenic and scientific features of Crater Lake National Park have been published. A number of the publications are for sale or are available for reference at the information building in the Rim Village area. Park visitors are invited to inquire regarding publications describing the features of Crater Lake National Park as well as publications covering other areas administered by the National Park Service. Inquiries by mail should be addressed to the Superintendent, Crater Lake National Park, Crater Lake, Oreg., or to the Director, National Park Service, Washington, D. C.
OREGON CAVES
NATIONAL MONUMENT
OREGON

Located 160 miles southwest of Crater Lake, the Oregon Caves National Monument in Josephine County, administered by the superintendent of the Crater Lake National Park, is a popular scenic attraction of Oregon. The caves, occurring at an elevation of 4,000 feet in the Siskiyou Mountains, are easily reached over hard-surfaced highways.

The monument is 20 miles distant from the famous Redwood Highway, between Crescent City, Calif., and Grants Pass, Oreg. Motorists to the monument turn off at Caves Junction, a small settlement at the junction of the Redwood and Caves Highways.

The monument, covering 480 acres, was established by proclamation of President Taft on July 12, 1909. During recent years numerous improvements, such as new trails, steel ladders, illumination, and removal of obstructions, have been completed to make the caves more accessible and visits more enjoyable.

The caverns, also known as the “Marble Halls of Oregon,” were discovered by a pioneer bear hunter, Elijah Davidson, in 1874 when a bruin he was following sought refuge in their darkness.

There are several miles of winding passageways, large rooms, and scores of fantastic formations weird in their eerie beauty. A limestone, long ago altered to marble, is the soluble rock in which the passageways were formed. The caves offer outstanding underground beauty along a route which brings visitors past their most attractive formations, the result of constant water action for many thousands of years. These formations assume odd, grotesque, and fantastic shapes, resembling draperies, flowers, fruits, palaces, and gargoyles.

Here and there in sparkling beauty are exquisite miniatures of Niagaras, Gardens of Eden, cotton blossoms, forests, and castles. Paradise Lost is the most beautiful exhibit of the caves with its flowerlike stalactitic pendants adorning the walls of a room 60 feet high.

Countless stalagmites and stalactites telling the story of the patience of the ages are seen by visitors during the 2-hour guided trips through the caves. Especially is this true of one of the columns, which is a foot in diameter and was formed by the joining of a stalagmite and stalactite.

Monument visitors are offered hotel accommodations at the Oregon Caves Chateau near the cave’s entrance. Lodging and dining-room service is provided. From the floor of a canyon, the bark-covered six stories of the chateau attain complete harmony with the deep forests and moss-covered rock ledges of the surrounding country.

Cottages are available at the caves, as well as a store where novelties and pictures can be procured. Picnic grounds are maintained in the monument. During the summer months from June 15 to September 1, frequent guided trips are offered. Guide service on more flexible schedules is available throughout the year. This service is furnished by the operator.

During the summer season, evening campfire programs are offered in the open air near the chateau. Park rangers give short talks on the monument in conjunction with musical programs.
LAVA BEDS
NATIONAL MONUMENT
CALIFORNIA

Located in northern California, 105 miles south of Crater Lake, the Lava Beds National Monument, administered by the Crater Lake National Park staff since 1933, covers an area of 45,967 acres, noteworthy for volcanic, historical, and archeological features of distinctive importance.

The monument is open to travel the entire year, although winter storms are liable to make dirt roads in and approaching the area difficult to travel. The Lava Beds are 70 miles from Alturas, Calif., and 45 miles from Klamath Falls, Oreg., with the last few miles of each route served by passable dirt roads. It can also be reached over unimproved roads from Bieber, Calif., on the Redding-Alturas Highway, and Bartle via Medicine Lake.

A vast field for geologic study is included in this area where at intervals over a period of thousands of years volcanic activity seethed in lava rivers issuing forth from fissures scattered over the entire section. Geologically, the region is considered young, the age of the last lava flows and the last cinder cones being estimated at 500 years or less. While volcanic activity has continued until modern times, the oldest formations are believed to date back some 20,000 to 60,000 years. Erosion and weathering have caused only slight change even in the oldest features.

Viewed from a distance, the monument appears as a fairly level terrain, with a northeastly slope interspersed with symmetrical cinder cones. The lava rocks of the area are so porous and broken with shrinkage cracks that water from scant rainfall passes immediately underground, hence causing no erosion and leaving the monument features in the same condition as they were when first constructed. While volcanic activity has continued until modern times, the oldest formations are believed to date back some 20,000 to 60,000 years.

Except in the southern third of the monument where cindery pumice covers the surface, the visitor walks on solid lava. The recent flows of billowy lava, or the pahoehoe type, have spread out like thick molasses or tar. It is in this type of lava that the caves and tunnels of the monument are found. These were formed by the hardening of the surface and sides of lava flows, becoming tubes when the molten lava core drained out. They range from a few feet to several miles in length and from 10 to 75 feet in height. Collapsed portions form long serpentlike trenches of

Crater Lake National Park. Oregon

broken rock 20 to 100 feet deep and from 50 to 250 feet wide, while narrow unbroken roof strips serve as natural bridges.

The caves being of volcanic origin, lava stalactites are in evidence in some of them. Ice formations, the result of constantly freezing temperatures and presence of moisture, are found in others. Over 300 caves have been located in the monument. A small number of the more interesting caves are open to the public. In exploring these caverns, visitors are given free guide service.

Two types of symbolic Indian writings are found in the monument, suggesting the presence of ancient aborigines. One type is made up of paintings (pictographs) on the walls of a number of the caves and sides of natural bridges. The other type is composed of carvings (petroglyphs) confined entirely to rocky bluffs where the material was sufficiently soft to be cut out by crude tools. The petroglyphs, located in an isolated portion of the monument, are deeply carved and have successfully withstood the ravages of time.

Historical features of the monument recall the only major Indian war ever fought on California soil and one of the most costly of its kind in United States history. In 1872-73 a small band of Modoc Indians under the leadership of Keintpoos, commonly known as Captain Jack, clashed with a body of United States cavalry just north of the California line following a rampage during which several settlers were killed. A short time later, the Modocs established themselves in a natural lava fortress in the northern part of the monument where they withstood a superior force of soldiers for 5 months.

During this time several peace negotiations were attempted, reaching their climax in an ill-fated peace parley a short distance from the Indian stronghold. A number of Indians, including Captain Jack, gathered with a peace commission, headed by General E. R. S. Canby, commander of the besieging soldiers. During the truce parley, the Indians without warning killed General Canby and one other member of the commission, after which the Modocs fled to their stronghold.

It was not long after the killings that the Indians were subdued, marking the end of Indian warfare in this section. The stronghold today is much as it was over 60 years ago. Points of interest are plainly marked.

Interesting to monument visitors also is the presence of wildlife. During winter and spring seasons, mule deer can be seen in large numbers, with 20 to 30 individual herds remaining in the area until the arrival of warmer summer weather. Hundreds of birds are observed, particularly valley quail and an abundance of raptors. Large numbers of small mammals are seen throughout the year.
Administrative headquarters of the monument are maintained at Indian Well, where a park ranger is in charge. A small museum of old war relics and volcanic specimens is maintained here. A campground is nearby. No gasoline, food, or other accommodations are available in the monument, but these can be procured within 20 miles of the area at Merrill, Oreg., or Tule Lake, Calif.

NATIONAL PARKS IN BRIEF

ABRAHAM LINCOLN, KY.—Birthplace of Abraham Lincoln. Established 1916; 0.17 square mile.

ACADIA, MAINE.—Combination of mountain and seacoast scenery. Established 1919; 26.01 square miles.

BRYCE CANYON, UTAH.—Canyons filled with exquisitely colored pinnacles. Established 1928; 56.23 square miles.

CARLSBAD Caverns, N. MEX.—Beautifully decorated limestone caverns. Established 1930; 15.75 square miles.

CRATER LAKE, OREG.—Beautiful lake in crater of extinct volcano. Established 1902; 250.52 square miles.

FORT McHENRY, MD.—Its defense in 1814 inspired writing of Star Spangled Banner. Established 1925; 0.07 square mile.

GENERAL GRANT, CALIF.—General Grant Tree and grove of Big Trees. Established 1890; 3.98 square miles.

GLACIER, MONT.—Unsurpassed alpine scenery; 200 lakes; 60 glaciers. Established 1910; 1,537.98 square miles.

GRAND CANYON, ARIZ.—World's greatest example of erosion. Established 1919; 1,008 square miles.

GRAND TETON, WYO.—Most spectacular portion of Teton Mountains. Established 1929; 150 square miles.

GREAT SMOKY MOUNTAINS, N. C.-TENN.—Massive mountain uplift; magnificent forests. Established for protection 1930; 683.75 square miles.

HAWAII: ISLANDS OF HAWAII AND MAUI.—Interesting volcanic areas. Established 1916; 248.34 square miles.

HOT SPRINGS, ARK.—Forty-seven hot springs reserved by the Federal Government in 1852 to prevent exploitation of waters. Made national park in 1921; 1.54 square miles.

LASSEN VOLCANIC, CALIF.—Only recently active volcano in United States proper. Established 1916; 163.48 square miles.

MAMMOTH CAVE, KY.—Interesting caverns, including spectacular onyx cave formation. Established for protection 1936; 60.2 square miles.

MESA VERDE, COLO.—Most notable cliff dwellings in United States. Established 1906; 80.21 square miles.

MOUNT McKinley, ALASKA.—Highest mountain in North America. Established 1917; 3,030.46 square miles.

MOUNT RAINIER, WASH.—Largest accessible single-peak glacier system. Established 1899; 377.78 square miles.

OLYMPIC, WASH.—Forests of unusual density; rare Roosevelt elk. Established 1938; 1,012.5 square miles.

PLATT, OKLA.—Mineral springs. Established 1906; 1.32 square miles.

ROCKY MOUNTAIN, COLO.—Peaks from 11,000 to 14,255 feet in heart of Rockies. Established 1915; 405.33 square miles.

SEQUOIA, CALIF.—Outstanding groves of Sequoia gigantea. Established 1890; 604 square miles.


WIND CAVE, S. DAK.—Beautiful cavern of peculiar formations. Established 1903; 15.75 square miles.

YELLOWSTONE, WYO.-MONT.-IDAHO.—World's greatest geyser area; an outstanding game preserve. Established 1872; 3,471.51 square miles.

YOSEMITE, CALIF.—Valley of world-famous beauty; spectacular waterfalls; magnificent High Sierra country. Established 1890; 1,176.41 square miles.

ZION, UTAH.—Zion Canyon 1,500 to 2,500 feet deep. Spectacular coloring. Established 1919; 138.04 square miles.
RULES AND REGULATIONS
[Briefed]

The Park Regulations are designed for the protection of the natural features and scenery as well as for the comfort and convenience of visitors. The following synopsis is for the general guidance of visitors, who are requested to assist the administration by observing the rules. Full regulations may be seen at the office of the superintendent and ranger station.

Fires.—Light carefully and only in designated campgrounds. Extinguish completely before leaving camp, even for temporary absence. Do not guess your fire is out—know it.

Camps.—Use designated campgrounds. Keep the campgrounds clean. Combustible rubbish shall be burned on camp fires, and all other garbage and refuse of all kinds shall be placed in garbage cans or pits provided for the purpose. Firewood is provided free of charge. Camping is restricted to 30 days.

Trash.—Do not throw paper, lunch refuse, film cartons, chewing gum paper, or other trash over the rim, on walks, trails, roads, or elsewhere. Carry until you can burn in camp or place in receptacle.

Trees, Flowers, and Animals.—The destruction, injury, or disturbance in any way of the trees, flowers, birds, or animals is prohibited.

Noises.—Be quiet in camp after others have gone to bed. Many people come here for rest.

Automobiles.—Careful driving is required at all times for protection of yourself and other visitors. Your car must be equipped with good brakes, horn, and lights. Passing on curves is prohibited. Obey traffic rules. A gasoline and oil station is maintained on the main highway at park headquarters. No other gasoline station is in the park. The fee for automobile permit is $1.

Dogs.—Dogs are prohibited in the park overnight and are not permitted in the rim concentration area. When not in an automobile, dogs must be on a leash at all times.

Warning About Bears.—Do not feed, tease, or molest the bears. Bears will enter or break into automobiles if food that they can smell is left inside. They will also rob your camp of unprotected food supplies.

Fishing.—A limit of 12 fish per person per day has been set for lake angling. A catch of 20 fish is permitted in park streams. No fishing license is necessary.

Park Staff.—The staff is here to help and advise you. When in doubt ask a man in uniform. Men in uniform at the Information Bureau, park headquarters, and the several stations will be glad to help you plan your activity while in Crater Lake and to explain the regulations.

Complete rules and regulations are available at park headquarters.