

CRATER LAKE

NATIONAL PARK

Oregon



ACCESSIBLE ALL YEAR

CRATER LAKE

NATIONAL PARK

CRATER LAKE NATIONAL PARK, on the crest of the Cascade Range in southern Oregon, has a high place among the Nation's most scenic wonderlands. At Crater Lake visitors observe beauty in its truest sense and experience a profound inspirational appeal. Tranquillity now prevails where once relentless volcanic power was displayed.

The lake rests in the heart of a mighty mountain whose destruction resulted in the formation of a vast crater in which the waters accumulated to a depth of 1,983 feet, making it the deepest lake on the North American continent and fifth deepest in the world. It is 6 miles wide, covers an area of 20 square miles, and has a shore line of 20 miles, with multicolored cliffs rising 500 to 2,000 feet above it. Because of its great depth and the moderate winter temperatures, the lake does not freeze except for the formation of skim ice.

Trails lead to high points on the rim and to the shore of the lake. Launches and rowboats are available for scenic trips and trout fishing. Daily launch trips are scheduled around the lake and to Wizard Island. A paved road extends around the crater rim, a distance of 35 miles, presenting scores of enthralling views of the lake.

Crater Lake National Park, established May 22, 1902, embraces an area of more than 250 square miles.

Discovery and History

History says that the Klamath Indians knew of, but seldom visited, Crater Lake before its discovery by white men. The Indians regarded the lake and the mountain as the battleground of the gods. Crater Lake was discovered on June 12, 1853, by

John Wesley Hillman, a young prospector leading a party in search of the "Lost Cabin Mine." Having failed in their efforts, Hillman and his party returned to Jacksonville, a mining camp in the Rogue River Valley, and reported their discovery which they had named Deep Blue Lake.

On October 21, 1862, Chauncey Nye, leading a party of prospectors from eastern Oregon to Jacksonville, happened upon the lake. Thinking



that they had made a discovery, they named it Blue Lake. A third "discovery" was made on August 1, 1865, by two soldiers stationed at Fort Klamath, who called it Lake Majesty. In 1869 this name was changed to Crater Lake by visitors from Jacksonville.

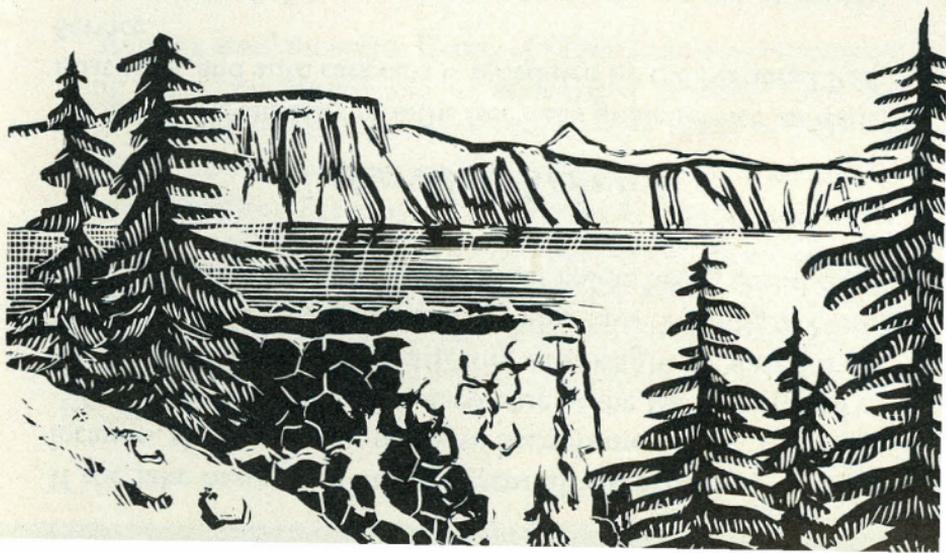
Before 1885 Crater Lake had few visitors and was not widely known. On August 15 of that year William Gladstone Steel, after 15 years of effort to get to the lake, stood for the first time on its rim. Inspired by its beauty, Judge Steel conceived the idea of preserving it as a national park. For 17 years, with much personal sacrifice, he devoted time and energy to this end. Success was realized when the park was established on May 22, 1902. Steel devoted the remainder of his life to development of the park, serving as its second superintendent and later as park commissioner, which office he held until his death in 1934.

The Geologic Story of Crater Lake

Origin of the Mountain.—Geologists say that the slope, which visitors ascend to view the lake, and the crater wall rising 500 to 2,000 feet above the water are the remnant of a mountain, which stood more than 12,000 feet high. This ancient peak, now destroyed, is known as Mount Mazama.

In comparatively recent geologic time, numerous volcanic peaks were formed near the western edge of a vast lava plateau covering portions of Oregon, Washington, Idaho, Montana, Nevada, and California. These make up the Cascade Range, of which Mount Mazama was one of the commanding peaks. It was built by successive lava flows with some accumulation of volcanic ash. The cone thus formed was modified by streams and glaciers which carved valleys in its sides and deposited rock debris on its flanks. The layered character and different formations of the mountain are now clearly exposed in numerous places within the crater wall.

Forming of Dikes.—In addition to broad surface flows, it is common for molten lava to be squeezed into cracks, or fissures, that develop in a volcano. Such filling results in dikes, or walls,



frequently harder than the enclosing rock. At Crater Lake the destruction of the mountain and subsequent erosion have exposed numerous dikes in the wall, of which the Devil's Backbone on the west side of the crater is the outstanding example.

Action of Streams and Glaciers.—In the layers forming the crater wall there is evidence of the action of water. In some places this is shown by the cutting of valleys; in others, by the accumulation of water-carried gravel and boulders.

Glacial ice, carrying sand, pebbles, and boulders, scratches and polishes rock surfaces over which it moves. Glacial polish and thick beds of glacial debris are common around the mountain. They occur on the surface rock and between earlier layers, showing that glaciers existed at various stages in the history of the mountain.

U-shaped valleys, such as Kerr Notch, Sun Notch, and Munson Valley on the southeast slope of Mount Mazama, are evidence of glaciation. The lava flow forming Llaó Rock filled an ancient glacial notch.

Forming of the Crater.—Many geologists have concluded that the basin occupied by the lake resulted from the collapse and subsidence of the volcanic cone of Mount Mazama. This explanation was first proposed by J. S. Diller, of the Geological Survey, who considered that the support of the summit was weakened by drainage of great quantities of molten rock through subterranean cracks. The pit thus formed grew progressively larger in all directions, as is indicated by the broken edges exposed around its rim today. Extensive study by Prof. Howel Williams of the University of California, led him to practically the same conclusion.

In his delightful, popular, and scientifically accurate book, *Crater Lake, The Story of Its Origin*, Williams describes great quantities of pumice extending more than 80 miles northeast of Mount Mazama. This amounts to more than 10 cubic miles of material, thought to have been blown from the mountain in a catastrophic event and carried northeastward by the prevailing winds. Analysis shows that this is material derived from the heart of the volcano and not finely divided fragments of the original mountain walls.

Following this eruption, the crater is believed literally to have boiled over, pouring out great quantities of frothy material as a series of glowing avalanches. These avalanches must have traveled at a terrific speed down the valleys, for those to the south and west did not begin to deposit their load until they had reached a distance of 4 to 5 miles. The greater quantity flowed down the mountain to the south and southwest for distances up to 35 miles from the source.

Accompanying these eruptions, which occurred within the past 5,000 years, cracks developed in the flanks of the mountain so that the top collapsed, being engulfed in the void produced

by the ejection of the pumice and lava and the withdrawal of 10 cubic miles of molten rock into swarms of cracks that opened parallel to the axis of the Cascade Range. Thus was formed the great pit as we see it today.

By projecting the slopes of the mountain remnant upward, conforming to the slopes of similar volcanoes, it has been estimated that approximately 17 cubic miles of the upper part of ancient Mount Mazama was destroyed by the collapse.

The Growth of Wizard Island.—After the destruction of the peak, volcanic activity within the crater produced Wizard Island and perhaps other cones. These cones rise above a relatively flat

floor, the lowest part of which is almost 2,000 feet below the surface of the present lake.

Origin of the Lake.—The water of Crater Lake is derived from rainfall and snowfall. The average annual precipitation is 72 inches. The record snowfall of 1932–33 was measured as 73 feet, exceeding the average fall by 20 feet. The lake has no inlet and no outlet, except by seepage. Evaporation, seepage, and precipitation are in a state of balance which maintain an approximately constant water level. In 1946, the lake level was 6,164 feet above sea level. This is an annual variation of from 1 to 3 feet, the level being highest in spring and lowest in fall.

Wizard Island and Llao Rock from the west rim. *Photograph by Oregon State Highway Commission.*



Natural ski run

cut by old rock slide.

If the lake basin were at a different altitude, or in a different location, the lake might not have been formed.

Color of the Lake.—The deep blue of the lake is believed to be caused chiefly by the scattering of sunlight in water of exceptional depth and clearness, the blue rays of sunlight being reflected from the water, rays of other colors being absorbed.

Naturalist Service

During the summer months free daily guide service on trails, boat trips, and auto caravans is scheduled by the National Park Service.

Schedules of the naturalist program are posted at several public places in the park. Except the boat trip, which starts at the foot of the rim trail, all regularly scheduled naturalist activities start from the Information Building.

Places of Interest

Sinnott Memorial.—This structure, with its broad terrace looking over the lake, serves as an orientation point. Pictorial displays in the exhibit room portray artists' conceptions of the varying moods of the lake. A large relief map of the region and field glasses are located on the terrace. Talks are scheduled twice daily at the memorial, which is located close to the lodge and the Rim Campground.

Information Building.—This building is on the crater rim just west of the lodge. Visitors are invited to make use of the information service and examine the exhibits.

Rim Drive.—A highway encircles the crater, affording many spectacular views from numerous observation points. Auto caravans are conducted by the naturalist staff along this road, stops being made at important scenic, scientific, and historic points. All caravan trips start from the Information Building. Time of departure is announced on bulletin boards and at lectures.

Wizard Island.—This symmetrical cinder cone, rising 780 feet above the surface of the lake, is reached by boat. A trail leads from the shore to the crater, which is approximately 90 feet deep and 350 feet in diameter.

The Phantom Ship.—This island rises 169 feet above the waters of the lake. Its shape suggests a ship under sail. The best views of the Phantom Ship are obtained from the launches and from Kerr Notch along the Rim Drive.

Garfield Peak.—With an altitude of 8,060 feet, this peak is easily reached by a 1.7-mile trail east of the lodge. From the summit there is a magnificent view of the lake and surrounding region.

The Watchman.—This peak, on the west rim, may be reached by a half-mile trail from the rim road. A rare panorama

of the park and surrounding country may be viewed from this point, 8,025 feet above sea level and 1,861 feet above the lake.

Cloudcap.—This excellent viewpoint on the east rim rises to an elevation of over 8,000 feet.

Mount Scott.—East of Cloudcap is Mount Scott, the highest point in the park, reaching an altitude of nearly 9,000 feet. Its summit, on which there is a fire lookout station, is accessible by a 2.5-mile trail from the rim road.

The Pinnacles.—In Wheeler Creek, near the east entrance to the park, are slender spires of pumice. Some of the needles are 200 feet high. In Sand Creek Canyon and Godfrey's Glen, in Annie Creek Canyon, there are other spires and fluted columns carved out of the soft volcanic material by water erosion.

Other Places of Interest in the Park and Vicinity.—Hillman Peak, 8,156 feet, is the highest point on the crater rim, rising 1,996 feet above the lake. Palisade Point, Kerr Notch, and the Wineglass are low points on the rim, being slightly more than 500 feet above the lake.

Park visitors desiring information about other interesting places in the park and vicinity are invited to inquire at park headquarters and the Information Building.

Wildlife

Mammals.—The park abounds in the smaller species that are of great interest to the visitor because of their friendly inquisitiveness. The large mammals, including black bears, are fairly common.

Most abundant among the members of the squirrel family are the golden-mantled ground squirrels. Two species of chipmunks are also numerous. The marmot stodgily makes his way among the rocks or basks on one of them in the warm sunshine. Many of these small animals are tame. It is wisest to enjoy them without actual contact, however, for some rodents have been known to carry dangerous diseases.

The pine squirrel is common, and the porcupine is frequently observed. The shrill note of the cony, or pika, may often be heard on rocky slopes. Badgers, gray squirrels, and snowshoe rabbits are numerous, but mink, flying squirrels, martens, and several species of mice are seldom seen. The wormlike tunnels of gophers may frequently be observed in the soft topsoil; a colony of beaver makes its home in the park.

Bears may be seen in many parts of the park. They are usually black individuals, but a few are of the brown color phase. Do not let bears approach too closely, as they are dangerous. Many people have been painfully clawed. In the interest of safety, it is unlawful to feed, tease, or molest the bears.

Of the deer species, the Columbian blacktail is most common. Rocky Mountain mule deer are seen in the grassy, watered meadows along the roads to the east and south entrances. Elk



The Phantom Ship. *Photograph by Oregon State Highway Commission.*

have been noted along the eastern side of the park. Other animals are the cougar, or mountain lion, the coyote, and the red fox. About 60 species of mammals are found in the park.

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

Birds.—More than 120 species of birds have been seen in the park. Eagle Crags have furnished nesting places for the golden eagle and the southern bald eagle; Liao Rock is the home of falcons. Ospreys have been seen, and the dusky horned owl forages nightly. California gulls visit the park; Farallon cormo-

rants perch on the "masts" of the Phantom Ship. There are ravens and half a dozen species of hawks. The Sierra grouse inhabits the timberlands; Clark's nutcrackers and crested and gray jays are among the most noticeable birds upon the rim.

Smaller birds frequently seen are the mountain bluebirds, solitaires, juncos, siskins, creepers, red-breasted nuthatches, chickadees, and the evening grosbeaks. There are golden and ruby-crowned kinglets, robins, wrens, western tangers, spotted and green-tailed towhees, purple and rosy finches, chipping and other sparrows, two varieties of thrushes, and six varieties of warblers. Occasionally a hummingbird is seen.



Forests and Wild Flowers

The virgin forests and wild flower meadows mantling the slopes, which one ascends to view Crater Lake, are outstanding attractions enhancing the scenic value of the lake. Scattered through the forests of predominantly cone-bearing trees are a few broadleaved species. Around numerous springs forming the sources of many creeks on the outer slope of the mountain, the forests give way to colorful meadows of alpine wild flowers.

Plants characteristic of four zones of vegetation are found within the park, yielding over 570 species of ferns and flowering plants. Patches of Douglas firs, typical of the humid division of the upper Transition Zone, occur in the region of the park lying on the western slope of the Cascade Range. The semihumid division of the zone, characterized by the ponderosa pines, may be found at the south entrance of the park. Associated with it are sugar pines, white firs, and western white pines, the latter furnishing the largest individual tree in the park. Above the Transition is the Canadian Zone in which occur lodgepole pines, Shasta red firs, alpine firs, and mountain hemlocks.

In the rim area around Crater Lake, Hudsonian Zone species are found. These include mountain hemlocks, the most predominant tree in the park, alpine firs, Shasta red firs, and white-bark pines.

Stunted whitebark pines predominate on the slopes of Mount Scott, the summit being in the Alpine-Arctic Zone.

During July and August visitors find nature's colorful displays of alpine wild flowers on the road between the park headquarters and the Rim Village and along the trails on the crater rim. These displays change with each week of the short flowering season.

Castle Crest Garden, located at park headquarters, is one of the most attractive and ideal places for viewing and studying Crater Lake flora.

Throughout the summer months visitors may study the exhibits of fresh and pressed flowers displayed at the Information Building in the Rim Village.

Fishing

Angling amid the scenic beauty of Crater Lake is an experience long to be remembered. No fish were native to Crater Lake, the first planting of rainbow trout having been made in 1888. In recent years only rainbow trout and silverside salmon have been planted. Trolling has proved to be the most successful method of catching the daily limit of 12 fish per person. From July 1 to September 5, rowboats are available. Shore fishing may usually be enjoyed from the latter part of June until late September, depending on weather conditions. No license is needed to fish in Crater Lake.

Camping

There are four free public campgrounds within the park.

The Rim Campground, located in the Rim Village, is equipped with stoves, water and sanitary conveniences, including hot and cold showers and laundry trays. This campground is in close proximity to all Rim Village facilities and services. Naturalists conduct evening campfire programs in the Community House on the edge of the campground.

Three campgrounds are located along entrance roads: Lost Creek, 3½ miles inside the east entrance; Cold Springs, 7 miles inside the south entrance; and Annie Spring at the junction of the south and west entrance roads. Camping is limited to 30 days.

Winter Sports

The park is open the year around. Visitors may now enjoy the scenic values of Crater Lake in winter and participate in winter sports amid a fantasy of snowy splendor. Steep and gradual slopes, according to speeds desired, are numerous in the park and are ideal for skiing. Professional ski meets are not encouraged, but special attention is given to amateur sports.

The west and south entrance roads to the Rim Village area are open to motor travel. Chains, tow rope, and shovel are necessary accessories for motorists. Meals and overnight accommodations are not provided in the park during the winter months, but warming room facilities are available at the Rim Village. Rangers are on duty to render service to visitors.

Administration

Crater Lake National Park is administered by the National Park Service of the Department of the Interior and is a part of the National Park System which includes many scenic, scientific, and historic areas. The superintendent is in immediate charge of the park, with offices in the administrative center, 3 miles from the Rim Village.

Rim Village

Rim Village, which is 7,100 feet above sea level and 950 feet above the lake, includes the lodge, sleeping cabins, cafeteria, campground, Community House, Information Building, and Sinnott Memorial. The lake is accessible by trail from the Rim Village.

Accommodations

The Crater Lake National Park Co. offers accommodations for park visitors from about June 15 to September 19. Information regarding rates may be secured from that company by

writing them at 603 Wilcox Building, Portland, Oreg., in the winter and at Crater Lake, Oreg., in the summer. The sleeping facilities include single and double rooms at the lodge and cabins with or without bedding. The dining room at the lodge offers a complete menu of excellent food, while the cafeteria serves simpler food to those desiring it.

Motor Transportation.—Daily automobile service from Grants Pass and Klamath Falls to Crater Lake Lodge is maintained by the Crater Lake National Park Co. from about June 15 to September 19. Only round-trip tickets may be purchased for this transportation. A visitor may enter by way of Grants Pass and leave by way of Klamath Falls. The trip requires 2½ hours from Klamath Falls and 3 hours from Grants Pass.

Launches and Rowboats.—Scheduled trips are made daily by launch from the boat landing at the foot of the lake trail to Wizard Island and the Phantom Ship. Hourly trips are made to Wizard Island. Rowboats are available for hire at the boat landing. Private boats may not be used on the lake. Fishing tackle may be rented or purchased at the boat landing.

One of the popular attractions is the 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.

How to Reach the Park

By Common Carrier.—The Southern Pacific Railroad and several motor coach lines serve Klamath Falls and Grants Pass, Oreg., to connect with stages of the Crater Lake National Park Co. daily from July 1 to September 19.

Overnight, as well as scenic daylight, airplane service from practically all parts of the United States to Crater Lake are now possible, and those interested in air travel to Crater Lake should get in touch with the park operator, travel agent, or the airline serving their city.

By Automobile.—Paved State highways connect with the highway system of the park at all entrances. Highway 62 to the west entrance of the park connects, through Medford, with United States Highways Nos. 101, 199, and 99. It also connects U S 97 with the park highway system at the south entrance. Connections with U S 97 are also made by State Highway 232 to the east entrance, or by 230 and 209 to the north entrance. The roads through the west and south entrances to the rim are maintained as all-year roads, the others being closed to traffic during the winter months.

Miscellaneous Information

The post office and long distance telephone and telegraph services are located in the administration building at park headquarters.

The post office address is Crater Lake, Oreg. Guests or employees of Crater Lake National Park Co. should have mail addressed in care of Crater Lake Lodge to insure prompt delivery.

A gasoline station is maintained on the highway near park headquarters. No storage or repair facilities, however, are available within the park. In case of accident or mechanical failure, towing service must be obtained from outside the park.

Rules and Regulations

(Briefed)

The Park Regulations are designed for the protection of the natural features and for the comfort and convenience of visitors. The following synopsis is for the guidance of visitors.

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. One spark may start a forest fire, destroy the beauty of the park, and endanger many lives.

Camps.—Use designated campgrounds. Keep the campgrounds clean. Combustible rubbish shall be burned on camp fires, and other refuse of all kinds shall be placed in garbage cans or pits provided for the purpose. Only down material may be used as firewood.

Trash.—Do not throw paper, lunch refuse, 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, disturbance, or removal in any way of the trees, flowers, birds, or animals is prohibited in order that every visitor may enjoy them.

Noises.—Be quiet in camp after 10 p. m. Many people come to the park for rest.

Automobiles.—Careful driving is required at all times. The maximum speed allowed in the park is 35 miles per hour. Slower speeds are indicated where road and traffic conditions justify. The fee for automobile permits is \$1; housetrailer \$1 additional.

Dogs.—Dogs are not permitted between the road and the rim at any time. When not in an automobile, dogs must be on leash at all times. Camping facilities for parties with dogs are provided only at Annie Spring Campground.

Warning About Bears.—Do not feed, touch, 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.—The limit is 12 fish per day for each person fishing. No fishing license is necessary.

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

Complete rules and regulations are available at park headquarters.