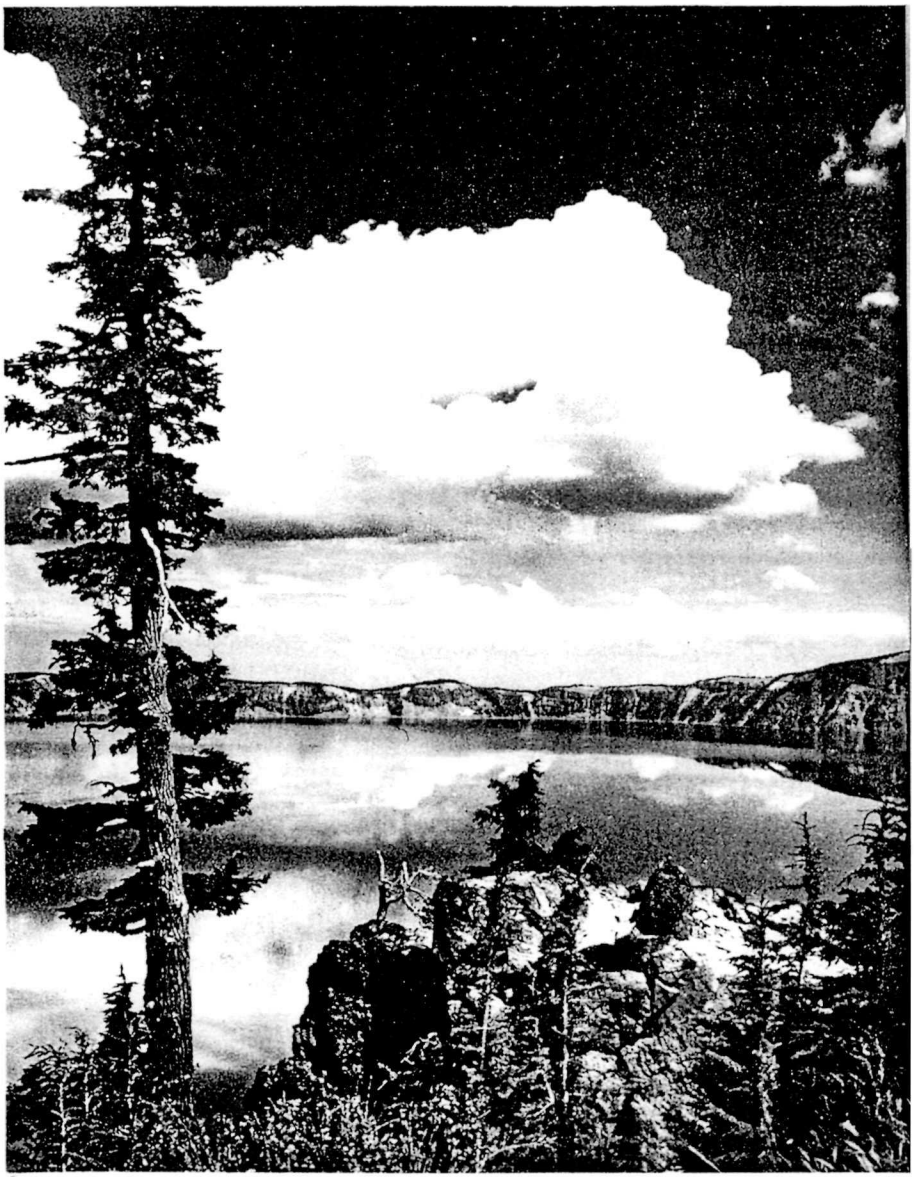
CRATER LAKE

1950

NATURE NOTES



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Salem, Oregon

CRATER LAKE
NATURE NOTES

National Park Service
Crater Lake National Park

Crater Lake Natural
History Association

Volume XVI
1950

NATURE NOTES from Crater Lake National Park are issued from time to time by the Crater Lake Natural History Association to foster an appreciation and interest in the natural history of the park. It is distributed free to members of the association. Reprinting of articles appearing in NATURE NOTES is encouraged. It is requested that acknowledgement of the source be made by giving the name of the author and of this publication.

E. P. Leavitt
Superintendent

Dr. G. C. Ruhle
Editor

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MAMMAL PUZZLES

Denis J. Illige
Ranger-Naturalist

Where did it come from?-Not infrequently an animal is recorded from a locality where it has never before been known to occur. Such was reported by several members of the staff, Crater Lake Lodge employees, and some park visitors. Various descriptions were given of a strange creature living near the lakeside porch of the lodge. Descriptions were as varied as the number of reports, but all observers agreed that the new animal was squirrel-like in appearance, gray in color, very short-eared, and with a tail rather short for the body length. Some fantastic postulations were made, such as the possibility of a mutation of the golden-mantled ground squirrel, or of a hybrid between the ground-squirrel and the arboreal chickadee!

The mystery was deepened by the fact that the stranger appeared suddenly about the middle of August, and seemed to be quite tame. Visitors were happy over another animal which could be fed peanuts! On August 21, the little animal was brought to Park Headquarters for examination. In general appearance it was obviously a member of the ground-squirrel genus Citellus, but to what species did it belong? The body had no distinct pelage pattern; as had been described, the ears were very short, the feet quite large, and the tail short in relation to the body length.

From a careful check on descriptions of Citellus in Anthony's Field Book of North American Mammals (1928), and Bailey's Mammals and Life Zones of Oregon (1936), this specimen can apparently be only C. oregonus (Merriam), the Oregon ground-squirrel. This knowledge, however, doesn't explain how it came to occupy the vicinity of the lodge porch. This question of origin is particularly interesting in light of the fact that this is the first authentic record of this species in Crater Lake National Park.

Because the new visitor appeared suddenly, and was quite tame, it was probably brought in by a tourist. Whatever the cause of its

arrival, it now is a permanent resident of the park zoological collection, available for reference and demonstration purposes.

Why did it die?

A Rocky Mountain mule deer fawn (Odocoileus hemionus hemionus) was found in a weakened condition in the northeastern part of the park on August 22. The trail crew came across the little buck when they stopped to eat lunch. It appeared to be hungry, perhaps even starving, so they offered it some of their lunch milk, which it gulped avidly.

The crew foreman put the fawn in his pick-up and brought it to headquarters, but it died on the way. Weighed and measured at the warehouse, it was very slight for the body dimensions. It weighed 28 pounds and was 42 inches in total length. It was at least three months old according to the degree of tooth eruption. A brief field autopsy showed no obvious parasitic condition to cause death, and no easily detectable disease symptoms. The ruminant stomach was about half full of vegetable food, but seemed to be deficient in moisture content.

The dental condition also did not indicate an inability to feed on browse, as the deciduous teeth were all functional, and the last molars had just penetrated the gum line. There was no mesenteric or subcutaneous fat on the fawn, and the general appearance of the animal was of gaunt hunger. Had his mother met an untimely end? Was he not yet weaned, and the food in his stomach only a desperation attempt to survive? Why did he die in infancy, and what factors brought on his death? Here are questions one asks of nature.

What is he doing here?

On the evening of August 19, while talking to some park guests on the lakeside porch of the lodge, a cony (Ochotona princeps) was seen several times hopping across the lighted area before the open lounge doors. Since lodge porches are definitely not the habitat favored by conies, and as they are not known to relish peanuts or other park visitor squirrel-bait, what was this rock-loving cousin of the rabbit doing here? Perhaps he was curious about the activity in the lounge, as he stopped and seemed to peer inside the open doors each time he traversed the lighted area.

Mt. Mazama and Its Glaciers
from a Painting by Paul Rockwood

A RETURN OF THE ICE AGES

Franklin C. Potter
Ranger-Naturalist

In the flatlands of eastern North America continental glaciation occurred on a large scale in recent geological times. Snow fell in such quantities that summer melting failed to keep pace with winter accumulation and eventually glaciers resulted. Moving in all directions from their source in central Canada, they invaded the area of what is now the United States as far southward as the present location of the Ohio and Missouri Rivers. A time of lighter snowfall or increased temperatures resulted in a wasting away of the glaciers until they had entirely disappeared. This cycle was repeated a number of times; the last of the four continental glaciers - the Wisconsin - wasted away some 22,000 years ago.

In the higher mountains such as the Cascades local valley glaciers existed rather than the ice sheets which completely mantled the lower lands to the eastward. The evidence of glacial drift separated by layers of volcanic rock indicate, however, the same response to climatic variation. In the mountain areas where valley glaciers still exist the present trend of the glaciers is toward smaller size. Annual measurements in Glacier and Mount Rainier National Parks demonstrate that summer wastage exceeds winter accumulation so that year by year the glaciers decrease in size.

Supporting data of decreased precipitation or increased evaporation is contributed by numerous lakes in the western areas of the United States. During recent geological times a larger Great Salt Lake covered much more area than its shrunken remnant. At its maximum size, its predecessor, "Lake Bonneville," was 1000 feet deeper and overflowed its basin on the north into the Snake River: it was undoubtedly a fresh water lake. At the same time Lake Lahontan in Nevada covered a large area; its existing remnants are Walker, Pyramid, and

Humboldt Lakes. Death Valley also supported a lake in recent geological times.

Accurate weather records have been kept for such a short time that they can not reveal long time trends. Short cycles of temperature and precipitation, influenced no doubt by sun-spots, are known, but we must turn to the geological record for the longer trends. If the present trend continues, we should expect our valley glaciers to continue to decrease in size until most of them have disappeared. Likewise the semiarid and arid portions of the western United States would increase in size and aridity. How far this cycle will continue is, of course, problematical. Higher areas such as the Cascades should continue to receive more precipitation than the lowlands even though there might be some decrease of winter snowfall. At least a few of the mountain glaciers should persist. The prediction of the future is further complicated by the fact that transition from the culmination of one age to the next is not constant but has many irregular variations.

Although 22,000 years seems a long time, in the geological story it is but a moment. The climate seems to be becoming warmer and drier, but may not there be a reversal toward colder and wetter conditions again sometime in the future? Each of the intervals between the ice sheets of the Ice Age was greatly longer than the 22,000 years that have elapsed since the Wisconsin sheet withdrew. From interglacial deposits in the Don River valley near Toronto fossils of both plants and animals that now are found no farther north than Missouri and Kentucky have been found. The climate of the northern United States and southern Canada may well continue to ameliorate for thousands of years to come.

Before we postulate a possible continuance of the Ice Age with the formation of another continental glacier in the East and numerous valley glaciers in the mountains, it is well to inquire into the causes of Ice Ages. Each of the times of extensive glaciation in the geological past has coincided with a time of great mountain building although the exact mechanics and the explanation of the four separate ice advances of the Pleistocene Ice Age are unknown.

One of the great mountain-making epochs of the earth is the present. Perhaps the lands of the earth still are high enough for another reoccurrence of glaciation on a large scale. If so, however, our climate undoubtedly will continue to get warmer, and in some areas drier, for some tens of thousands of years before a reversal of conditions occurs. And even if a fifth stage does occur, the Crater Lake National Park area and Mount Mazama will not be affected as much as they were in the past. Mount Mazama was high enough to support glaciers comparable to those of Mount Rainier of today. But now Mount Mazama has lost its higher elevations and the return of glacial conditions could produce no more than a few small glaciers. Mount Scott supported a large enough glacier to excavate the northern segment of

the mountain and with a return of extensive glaciation it undoubtedly would support another. The only other possibilities seem to be for small, isolated glaciers that would occupy very limited areas since most regions in the Cascades with elevations no higher than those in the park did not support glaciers in the past and there is no reason to suppose that they would in the future.

ADDITIONS TO THE FLORA OF CRATER LAKE NATIONAL PARK

William H. Baker
Ranger-Naturalist

During the seasons of 1949 and 1950, while doing extensive work on the plants of Crater Lake National Park, Klamath County, Oregon, a considerable number were collected which proved to be new records. Other collections were made which helped to substantiate reports of plants previously listed as growing here but for which no study material was available. Several species appeared to be adventive since the last publication on the flora.

The plants discussed in this report are either not mentioned in "Plants of Crater Lake National Park" by E. I. Applegate (1939) or have proved to be of sufficient interest to warrant additional discussion. All were the writer's own collections except as indicated in the text. Specimens are deposited in the Herbarium at Headquarters, Crater Lake National Park.

Bromus tectorum L. Downy Brome - Grass. Dry ground, near the south entrance. No. 6896. Very abundant throughout eastern Oregon. Introduced from Europe.

Glyceria pauciflora Presl. Few-Flowered Manna-Grass. Along Red Blanket Creek in the southwest section of the park, at the boundary marker below Red Blanket Creek Spring. No. 6422. This plant is widely distributed in swampy ground from California to Alaska, and eastward to the Rocky Mountains.

Deschampsia danthonioides (Trin.) Munro. Annual Hair-Grass. Moist ground, lower Annie Creek Canyon near the south entrance to the park. No. 6914. Grows throughout western region, at lower elevations, from Alaska to Mexico.

Carex campylocarpa Holm. Crater Lake Sedge. Munson Meadow just below the park headquarters. No. 6441. Crater Lake is the type locality for this interesting species. Some authors include it with C. gymnoclada Holm, the Sierra Alpine Sedge. It appears to be

sufficiently different, however, to maintain it as a separate entity. The species is commonly found on alpine stream banks in the Cascade and Wallowa Mountains of Oregon and in the mountains of Washington.

Carex epapillosa Mack. Smooth-fruited Sedge. Along a small stream on the east slope below the crater rim, south of Kerr Notch. No. 6270. This plant is recorded from mountain meadows in the high Cascades of Oregon and Washington, the Rocky Mountains, and the Sierra Nevada.

Eriogonum compositum Dougl. Heart-Leaved Eriogonum. Collected by Elmer I. Applegate on Crescent Ridge just north of National Creek. No. 11338. A common species of the arid regions of eastern Oregon. It has been found in the Calapooya Mountains a little farther to the northwest by the writer. The Crescent Ridge collection represents an interesting occurrence of the plant on the west slope of the Cascades. In the park it has been confused with E. elatum Dougl., Tall Eriogonum, which is found around Klamath Falls in the park region.

Polygonum cascadense W. H. Baker. Cascade Knotweed. North wall of Red Blanket Canyon, southwest corner of the park. No. 6995. The type was collected on the south slope of Fairview Mountain in the Calapooya Range, Oregon. The known range is from the McKenzie Pass to Crater Lake National Park in the Cascades and in the Calapooya Mountains. Previous collections of this plant in the park have been confused with other species of Polygonum.

Trifolium hybridum L. Alsike Clover. Along the highway at Polebridge Creek. No. 7185. Introduced; a common cultivated plant.

Lathyrus nuttalii S. Wats. Nuttall's Pea. Open woods at Copeland Creek Crossing. No. 7206. Occurs usually west of the Cascades in Oregon but it is recorded locally in Klamath County. Found from Vancouver Island and western Washington south to northern California. It differs from L. nevadensis Wats., Nevada Pea, in having thin leaves with inconspicuous veining and pubescent pods.

Lathyrus bijugatus White var. Sandbergii White. Pine-Woods Pea. Open woods and hillsides in the vicinity of Copeland Creek Meadows. No. 7205. A plant of the open woods growing along the eastern base of the Cascades from Klamath County northward to Washington and Idaho. It is distinguished from other species of Lathyrus in the park by its very narrow linear or linear-lanceolate leaves.

Lomatium nudicaule (Pursh) C. & R. Naked Desert Parsley. North wall of Red Blanket Canyon, southwest corner of the park. No. 7006. It is easily recognized by the naked stem and because the peduncles are strongly dilated at the summit. Recorded as growing in dry sterile ground from Oregon, Washington, and California, eastward to Idaho.

Phyllodoce empetriformis (Smith) G. Don. Red Mountain Heath. Woods near the rim on the east slope just south of Kerr Notch. No. 6276. Along a stream below the crater rim south of Kerr Notch. No. 7146. Wooded ridge south of Kerr Notch. No. 7137. Applegate lists

this in his publication but states that he did not collect it within the park. It is recorded by Wynd, No. 2390, from Llao Rock. The plant appears to be fairly common on the east slope below the crater rim.

Collomia heterophylla Hook. Varied-leaved Collomia. North wall of Red Blanket Canyon, southwest corner of the park. No. 6992. Widely distributed in open woods and thickets from Vancouver Island to California.

Rudbeckia occidentalis Nutt. Western Cone-Flower. Niggerhead. Wet marshy ground at Copeland Creek Crossing. No. 6327. The ray flowers are absent in this species. It presents a rather unusual appearance and is sometimes known as niggerhead. The plant has been confused in the park with a related species, R. californica Gray, California Cone-Flower, which has rays present and grows commonly farther south. Abundant is the Siskiyou and Blue Mountains, but is present locally in the southern Cascades of Oregon as well.

Agoseris heterophylla (Nutt.) Greene. Annual Agoseris. Lower Annie Creek Canyon near the south entrance to the park. No. 6915. It is widely distributed on dry open ground from British Columbia to California and east to Utah.

Eupatorium occidentale Hook. Western Boneset. This plant is not recorded by Applegate, "Plants of Crater Lake National Park," although he had apparently collected it in the park, No. 10044 from Wineglass and No. 9215 from the lava flow on the west side of Wizard Island. It was collected by the writer on Wizard Island among the lava rocks on the south shore near the boat landings: No. 6358. Wizard Island along the west shore at the base of large lava boulders on the west flow: No. 6364. It is also present on the Phantom Ship and on the Lake and Garfield Peak Trails.

Beaver Dam

BEAVER AND THEIR WORKS

Bruce Brandell
Ranger-Naturalist

Wild animal life is a feature in all our national parks that every visitor enjoys observing and wants to learn more about. Whether it be a little golden-mantled ground squirrel begging for peanuts, a mama bear and her cubs parading through the campground, or a deer gracefully hurdling an obstruction by the roadside, we are tremendously absorbed and interested. Some of our most common animals are usually active at night and not ordinarily seen by man, so that their habits can only be learned through long and patient observations at unconventional hours. These animals are the more interesting once they are understood. Among these is the beaver whose life history and accomplishments present a truly amazing story. He builds dams, lodges, and canals with a skill that sometimes resembles that of man, he can fell trees three feet in diameter, and can swim a half-mile under water; and his pelt is closely woven into the fabric of the early history of our country.

The beaver belongs to the same order of gnawing mammals as the ground squirrels, marmots, and mice. It is, except for the capabara of Central America, the largest rodent in the world. An individual is three to four feet long and weighs forty pounds on an average, although the exceptional individual may weigh more than seventy-five pounds.

Protruding in front of the lips are long sharp chisel-like incisors, which a beaver must have to build his home and secure his food. A single beaver can rend a four-inch sapling within a few minutes using his incisors to gouge and pry out long shavings. The incisors grow

throughout the life time of the animal, but the functional ends are worn by use as rapidly as they grow from the gum. If by some accident an incisor should be knocked out of place so that if failed to balance the opposite one, the latter can become so long that the animal is unable to open his mouth wide enough to eat, and would die of starvation.

Beaver are adapted for a life spent largely in the water. The thick muscular tail is the most conspicuous organ, and the most distinguishing part about him. It occupies about a foot of his total length, is half that wide and shaped like a paddle. Actually, the tail is used as a rudder while swimming rather than as a propelling implement. When alarmed it is used as a signal by slapping the water during the process of diving. The tail is also used for balancing, when the animal stands on its hind legs to fell trees. The hind feet are well adapted for movement in the water. They are broad and webbed like those of a duck. The reference to old timers from Oregon, the beaver state, as "web-footed" has this fact as its origin.

Beaver usually select a wide slow-moving stream or pond in which to build their homes. If such a situation is not available they create it artificially by building a dam across a stream. Alternately layers of sticks, laid parallel to the stream current, and mud are gradually made water tight as silt is added by the stream. Long dams take several seasons to build.

The most nearly typical beaver home is a house in the middle of a pond backed up by a dam. An island of mud and rock is made in the pond and a roughly circular pile of branches and mud heaped on it. The beaver then burrows up from the bottom of the island. He starts the burrow far enough below the surface of the water to be beneath the ice in the winter. The single room is then excavated and fashioned by gnawing away the interior of the stick and mud pile until the cavity is of the desired size. The interior of a house is large enough to accommodate a household of six to eight beaver. John Colter, the first white man to see the area of Yellowstone National Park, is said to have escaped from Indians by diving into a beaver house. Beaver likewise are secure from enemies in their houses isolated by water. In Crater Lake National Park beaver solve their housing problem by making burrows in stream banks.

Beaver are located on Copeland and Bybee Creeks and the lower part of Annie Creek within the park. The most immediate indication of their presence is evidence of their workings. A tree may be left standing by only the smallest splinter, completely girdled by a V-shaped cut. When the trunk is completely severed the ends of the stump and tree are cone-shaped - a sure sign that beaver are at work. Also the bases of standing trees and the whole of dead prone trees are stripped of bark. The inner layer of bark, the cambium, is the mainstay of a beaver's diet. Lodgepole pines and Douglas firs are common food in the park, although willows, alders, and aspens are taken when available.

A stand of trees close at hand and suitable for eating is as important as a pond for beaver. The supply of edible trees is the chief factor determining the length of time a home site will be occupied. Once downed, a tree is cut into lengths for transport to the pond. This may be done in canals built for the purpose, or if the distance is short the section is dragged to the water. The logs may be sunk in the mud bottom of the pond and stored for food, or used for building. Once the bark has been eaten the remainder of a log can conveniently be added to the house or dam.

The family life of beaver is a model one. They are monogamous and mate for life. A household usually consists of the two parents, baby beaver born that year, and yearlings or kits. The young are born in April, and stay with the household until the second spring when they are forced by the parents to leave and start on their own. Occasionally the young will build a new house in the same pond and gradually a colony comes into being. Numbers offer protection against enemies. Thus, the river otter will attack a single beaver, but wisely refrains from molesting a whole colony. At the time the mother beaver is giving birth to her pups the father leaves the house for several weeks and leads a solitary life in a bank burrow until all the trouble is over.

The beaver has been of great value to man for his pelt and meat. Beaver pelts stimulated early exploration of North America, and were the basis for the founding of the Hudson's Bay Co. In the early days beaver pelts were a medium of exchange or barter when money was scarce or lacking. Many towns and villages in various parts of the country have the word beaver in their names, reminiscent of the part beaver played in their history. Beaver, once abounding in the streams of the north and west of North America, were trapped so extensively that many states, including Oregon, made it unlawful to trap them at any season until they once again became more abundant.

In areas in which they build numerous dams, beaver are valuable in holding the water table at a higher level, in preventing excessive erosion, and retarding runoff. After a pond has been abandoned, it fills with fine stream silt and becomes a fertile meadow excellent for farming or grazing for many years.

All of our wild animals have a fascinating life story. Many of their habits and actions seem quite logical even to our practical, opinionated minds. All our forest creatures belong to a wildlife community in which each unconsciously contributes to its stability and maintenance.

Bedded Sands

ACTIVE ROCK SLIDES

Henry E. Kane
Ranger-Naturalist

"Oh, look at the rocks tumbling down!" is a frequent comment of park visitors as they observe the rocks of the ancient Mazama rolling and bouncing down the caldera wall to a resting place in the waters of the lake.

There are many places along the inside wall of the volcanic caldera where active rocksliding constantly occurs. Near Chaski Bay and along the west section of the caldera by Wizard Island are some of the many places where large fan-shaped deposits consisting of various sized debris can be seen. The large gully-like depression immediately east of the Sinnott Memorial offers an excellent example of this process which is destroying the lake wall, making a very strong factor in its ultimate disappearance.

The walls of Mazama consist of volcanic fragmental and glacial debris, interbedded with well-fractured lava flows. The individual components, particularly of the first two members, are poorly held together and their unsupported ends incline at an angle of fifty or more degrees on the inside of the caldera.

Many factors contribute to the downward movement of the rock debris. Most important is melt-water derived from snow that accumulates to great thicknesses on the rock walls. This gives lubricating and hydraulic action for the removal of fine rock particles that support larger debris. Once a slide is started, more material of all sizes is dislodged along the paths. These tumble and bounce from one rock ledge to another, breaking off the edges, filling crevices crossed enroute, cutting their way through snow fields, and only stopping far below. Winds blowing against the walls also loosen fine particles which are supporting more massive material and help to start rock movement. Scurrying movements of small animals and tremblors caused by the rumbles of vehicles passing on the road, by thunder, or by distant slides are other contributing factors.

As rock slides and other forms of erosion transport material from the caldera wall to the bottom of the lake the caldera wall becomes lower and less steep; rock slides become increasingly less important. At the same time the accumulation of rock debris at the bottom of the caldera tends to fill the depression. Eventually, many thousand of years in the future, the lake will disappear by their combined action. Before the lake entirely disappears, the gradual reduction of the steepness of the caldera wall should result in the cessation of rock sliding as the more usual methods of erosion assume predominance.

Taken from Crater Lake

HOW FISH CAME TO CRATER LAKE

R. S. Robinson
Ranger-Naturalist

"Were fish present in Crater Lake when it was discovered in 1853," is a question frequently asked by visitors to the park, but apparently it is a query that will never be answered to the satisfaction of everyone.

John Wesley Hillman, discoverer of the lake, did not descend to the water, and thus made no observations concerning the existence of life within it. However, in 1865 a group of soldiers from Fort Klamath on

a hunting expedition reportedly saw on the shores of the lake a hawk-like bird clutching a fish in its talons. Subsequent visitors to the lake between the years 1866 and 1888 failed to find any evidence that fish were present; so the belief has grown that Crater Lake was barren until rainbow trout were planted by Judge William G. Steel in 1888.

Nevertheless, it is interesting to speculate concerning the possible means by which fish might have gotten to Crater Lake providing we choose to accept the report as given by the soldiers that fish were present in the lake in 1865.

First, trout and allied species have been carried short distances by ospreys and other predacious birds. The author has seen a cutthroat trout survive such a forced trip of one-quarter mile in Yellowstone Park. However, distances from streams on the slopes of Mt. Mazama over the rim of the crater and down to the lake are so great that it is quite unlikely that such a transfer occurred.

It has also been proved that aquatic birds, such as gulls and pelicans, have occasionally carried fertilized fish eggs on their feet from one waterway to another; but in the case of Crater Lake such a transfer of trout eggs is only a remote possibility because the eggs of this group of fish are usually buried by the female several inches in the sand and gravel in the preparation of the redds or nests.

A third possibility is the presence of underground channels through which fish could have made their way from the headwaters of adjacent streams into the lake. It is possible that such direct channels do exist, but the likelihood of trout traversing such a waterway is very doubtful.

If fish were able to migrate through such underwater channels, it is likely that there would have been an interchange of fish between Emerald Lake, a small body of water on Wizard Island, and Crater Lake; for only a short distance separates the two lakes. The fact that the chemical composition and the water levels are identical and the fact that the rocks which separate the two bodies of water are large and piled in a haphazard fashion indicates that an exchange of water exists.

Throughout the world aborigines have frequently transferred fish to water situations which were more convenient for their angling activities. Indians certainly were present in the vicinity of Crater Lake for many years before the first white explorers and settlers came into the area, but it has never been proved that the Indians of Western North America ever engaged in the transplanting of fishes.

In addition to those methods enumerated there are several other ways by which fish have been carried from one waterway to another, such as waterspouts, tidal waves, etc., but the chances of such a transfer in the case of Crater Lake are again extremely remote.

On the other hand, we can choose to believe the more likely supposition that fish were absent in Crater Lake until artificially placed

there by man in 1888. Because this transplant was made under unusual circumstances, conditions which illustrate the endurance and perseverance of the western pioneers, the facts will bear repeating.

Believing that fish life would add to the attractiveness of Crater Lake, Judge Steel persuaded a friend who lived on the Rogue River, forty-five miles from Crater Lake, to supply him with fingerling rainbow trout. Several hundred were placed into a large bucket, covered with cloth, and stowed in a wagon. It eventually became necessary for the Judge to carry the bucket the forty-odd miles to the lake, for the rough road caused the water to slosh out of the pail. At creeks enroute he refilled the container with fresh water and during the night was very careful to protect the fish from harm.

Upon arriving at the crater rim Judge Steel was greatly disappointed to find that most of the small trout were dead. In an effort to save the remainder which showed signs of life, the Judge carried the bucket down the precipitous slope of the crater wall and released 37 trout into the lake. These fish apparently prospered, for tourists who came to the lake during the following years reported that rainbow trout were present in the lake, trout which they believed were the same offspring of the individuals Judge Steel had planted.

Since 1888 over a million have been planted in Crater Lake. Very few of these have been taken, but they and their progeny have added pleasure to many fishermen who have visited the park.

Nutcrackers and Camprobbers

ORNITHOLOGICAL NOTES OF INTEREST–1950

Donald S. Farner
Ranger-Naturalist

The summer of 1950 has produced an unusually rich array of observations which contribute to a more thorough understanding of the avifauna of Crater Lake National Park.

It has been presumed that the important factor determining the numbers of Farallon cormorants, Phalacrocorax auritus albociliatus Ridgway, on the lake is the status of the fish population. Cormorants reached their greatest abundance during 1939 when as many as 50 were seen at one time on the Phantom Ship. During that summer large numbers of salmon were infested with a fungus, Saprolegnia, and were easily caught by the cormorants. There were abundant populations of small salmon in the 1940 and 1941 seasons and cormorants were common. From 1946 through 1949 the fish population was relatively low and few cormorants were seen. During the summer of 1950 rather extensive schools of small salmon could be observed. On the other hand, up to the 25th of August only a single cormorant had been observed. That was on July 25, near Wizard Island. The explanation of the failure of cormorants to appear in numbers in response to the increased fish population may lie in the apparently reduced numbers of cormorants on Upper Klamath Lake since it seems very likely that Crater Lake cormorants are actually visitors from Upper Klamath Lake.

This may be an equally important factor in determining the number of cormorants on Crater Lake.

Several other interesting observations have been made on the lake. On August 16, Duane S. Fitzgerald, pilot of the launch, observed a great blue heron, Ardea herodias treganzai Court, on the shore of Chaski Bay. This is the second record for Crater Lake, the only previous record being that of the author of one on Wizard Island on August 26, 1949. On August 16 Fitzgerald observed 10 mallards, Anas platyrhynchos platyrhynchos Linnaeus, in Chaski Bay; the flock included several green-headed males. Only two previous records for the lake are known to the author: C. H. Merriam collected two on Wizard Island in August-September, 1896, and the author saw four in Eagle Cove on August 3, 1946. The summer of 1950 also produced the first definite records of the lesser scaup Aythya affinis (Eaton), on the lake. Two were seen by Denis J. Illige on Fumarole Bay on August 9; two were seen by Rollow S. Robinson and Duane S. Fitzgerald in Chaski Bay on August 12 and 13. Spotted sandpipers, Actitis macularia Linnaeus, have again been observed on the shores of Fumarole and Cloudcap bays. California gulls, Larus californicus Lawrence, have again appeared in substantial numbers. The author's first observation was two on July 2. Throughout August, from 25 to 40 have been observed perched on the rocks on the west side of Skell Channel. On August 13, Rollo S. Robinson saw a water ouzel, Cinclus mexicanus unicolor Bonaparte, at the Boat Landing. The appearance of water ouzels during the last part of July or the first part of August along the south shore of the lake occurs practically every year and perhaps may be best interpreted as an extension of the upward movement of water ouzels that begins in July.

A pair of nesting duck hawks, Falco peregrinus anatum Bonaparte, was discovered on Llao Rock by Denis J. Illige and the author on July 21. On July 23 young could be heard calling on the northeast face of the rock. Because of the inaccessibility of the site they could not be seen.

On July 29 Dr. William H. Baker and the author flushed a female and covey of plumed quail, Oreortyx picta picta (Douglas), in the rather dense forest of sugar pine, Douglas fir, and white fir on the north wall of Red Blanket Canyon. There were at least 11 chicks some of which could fly and some of which could not. This is the first definite record of breeding by this species in the park. This species is common at lower elevations in the Rogue River Valley but is rare in the park.

Field work in June in the southern part of the park produced some interesting results. In the ponderosa forest with intermingled clumps of chaparral, mostly Ceanothus velutinus Douglas, in the "Panhandle" and along the South Boundary between Sun and Annie creeks, substantial numbers of territorial males of the Calaveras warbler, Vermivora ruficapilla ridgway X van Rossem; Warner Mountains fox sparrow,

Passerella iliaca fulva Swarth; and Wright's flycatcher, Empidonax wrightii Baird, were observed, establishing these as common breeding species in these areas.

Perhaps the most important ornithological development was the discovery of a breeding group of horned larks, Eremophila alpestris Linnaeus, on the northwest slope of Llao Rock near the summit. On July 21, Denis J. Illige and I saw about ten including a juvenal bird scarcely able to fly and being fed by an adult. On July 23 only a single bird was seen and none could be found on July 27. This record is somewhat remarkable because of its elevation (7700 ft.). However the habitat, other than the 40° slope involved, was a reasonably normal one for horned-larks. Most of the area is open with a predominant cover of sedge, mostly Carex brewerii Boott. There are some areas in which sedge is absent and the principal species present are flowering plants such as Lupinus lyallii Gray, Phacelia leucophylla Torrey, Agoseris glauca Nuttall, and Polygonum newberryi Small. This area should be investigated in subsequent years beginning earlier in the season.

Nuthatch

Black-eyed pigmy nuthatches, Sitta pygmaea melanotis van Rossem, were unusually common in the park this summer. During June flocks containing as many as 20 were observed in the ponderosa pine in the "Panhandle." Later, smaller numbers were observed in many parts of the park, including a single bird in the clump of white-bark pines on the summit of Llao Rock.

During June large flocks of Western evening grosbeaks, Hesperiphona vespertina brooksi Grinnell, and red crossbills, Loxia curvirostra Linnaeus, were observed in the "Panhandle" and along the South Boundary between Annie and Sun Creeks. Both species were feeding on ponderosa seeds. Later in the summer crossbills were observed occasionally at various places in the park, but rarely with more than five or six in a group.

Among the species whose population and distribution in the park fluctuate markedly from year to year is the lazuli bunting, Passerina amoena (Say). The summer of 1940 was a season of maximum population and maximum distribution; singing males were quite common at Park Headquarters, on Castle Crest, and in Munson Meadow, as well as in the more suitable habitats at lower elevations. During 1946 the author was unable to obtain a single record anywhere in the park; a few were observed during 1948. During the summer of 1950 a few singing males were noted at the headwaters of the East Fork of Annie Creek, and a few in Wheeler Creek Canyon near the East Entrance.

My ten-acre study plot in upper Munson Meadow had five pairs of Lincoln sparrows, Melospiza lincolnii alticola Miller and McCabe, during the summer of 1950 compared to six during the summer of 1948. The approximate areas of the 1950 territories in acres were 1.2, 0.5, 0.25, 1.1, and 1.5. Because of the heavy snowfall the breeding season was late. Territorial defense did not develop until the first and second weeks of July, for the area was under snow until the first week of July. The lateness of the breeding season is best illustrated by citing Aldrich's observation of juvenal Lincoln sparrows in the same area on July 12, 1937.

On August 11, 1950 the author observed a single western bluebird, Sialia mexicana occidentalis Townsend, at 7800 feet on Dutton Ridge. It was in a feeding flock of mountain bluebirds, Sialia currucoides (Bechstein). Doubtless this is another example of upward movement by this species as observed by Dixon in 1944 and 1945.

Although Cassin finches, Carpodacus cassinii Baird, appeared to be somewhat less common than usual, what appears to be our first definite observation of a nest was recorded. The author found this nest in a Shasta fir at Kerr Notch on July 28. At that time one young had left the nest and was being fed by the male. There were at least four more young in the nest.

THE PRODIGAL'S PRAYER

Hugh Peyton, Park Ranger

Take me back, O Mountains,
Let your gods be mine again,
I've felt the fangs of doubt
In the muddled creeds of men.
I've seen their spires spring
From cities steeped in sin,
And trodden pulseless pavements,
And mingled with the din.
I've gazed on grand cathedrals
That man has built to God,
With aisles colored crimson
Where feet of War have trod.
I've felt mad oceans roll,
Watched them curl and foam,
Now I'm wander-weary -
O Mountains, take me home.

O, let your lone trails lure me
From the fevered call of men;
Blend me with your mysteries;
Make me one with you again.
Lead me through sylvan stillness
To my cabin by the stream,
Let me dream again at twilight
When the golden embers gleam.
Let your vastness be my temple,
And your ermine peaks the shrines,
All wrapped in wordless worship,
And plumed with frosted pines.
And let me ride your ranges' rim
Whose moonlit marvels rise,
Works of God there is no doubting,
Etched against the skies.

Let me hear your winds at twilight,
With their vesper voice sublime,
As they brush the chords of space
To the velvet dance of time.
Let the sunsets tip my shrines,
With a glowing glaze of gold;
Robe my soul in silken silence,
Let me worship as of old.
Take me back, O Mountains,
Till my earthly trail is done,
Then shroud me in the shadows
Of the crimson setting sun.
Encoffin me in hush eternal,
Bury me deep in sylvan gloom,
Let a summit be my headstone,
Let a canyon be my tomb.

During the past two summer seasons, Protestant church services were held each Sunday in the Community House on the rim. On several occasions "The Prodigal's Prayer" by Hugh Peyton, Superintendent, Millerton Lake National Recreational Area, Friant, California, was read to the audience. There were numerous requests for copies of the poem.

Mr. Peyton was in the U.S. Army during World War I and went through the thick of it in France. He wrote the poem upon his return to the mountains of Montana that he loves so dearly. He served as Park Ranger and Chief Ranger of Glacier National Park before taking over similar duties in Yellowstone National Park. "The Prodigal's Prayer" was published in Glacial Drift, Notes From Glacier National Park, Volume 4, Page 89, 1931.

THE CRATER LAKE NATURAL HISTORY ASSOCIATION

This organization was founded in 1942 to promote and assist the ranger-naturalist program, to further the investigation of subjects of popular interest and importance and to aid in the distribution of information on all subjects pertaining to the park. Toward this end it sponsors NATURE NOTES and makes the following publications available for purchase:

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Your Western National Parks, Dorr Yeager.	3.50
1948 Crater Lake Nature Notes	.15
1949 Crater Lake Nature Notes	.15
1950 Crater Lake Nature Notes	.20

Topographic Map of Crater Lake National Park, (U.S.G.P.I.)
With geological sketch by Francois T. Matthes

Your membership in the association would greatly aid the furtherance of these worthwhile purposes as well as bring you NATURE NOTES without charge. A liberal discount is given to members on all except government publications. The annual membership fee is $2.00.