DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YOSEMITE NATIONAL PARK

YOSEMITE NATURE NOTES

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This is one of a series of bulletins issued from time to time for the information of those interested in the natural history and scientific features of the park and the educational opportunities the park affords for the study of these subjects.

Utilization of these bulletins by those receiving them to the end that the information contained therein might be as extensively distributed as possible will be appreciated.

W. B. Lewis, Superintendent.

EDUCATIONAL WORK IN YOSEMITE

The fourth year of Yosemite Nature Guide Service has seen a continued growth of the service and a very satisfactory reaction on the part of the public. National Park visitors seek a knowledge of the natural history of the region preserved for them, and this demand is satisfied through the Nature Guide Service. This year during the months of June, July, and August the following activities in educational work aided in teaching the need of conservation and in bettering public appreciation of our native wild life.

	Attendance
69 Lectures and Camp Fire Talks	49,195
226 Personally conducted field trips	3,566
Yosemite Museum - June, July, August	47,282
Total number of park visitors served, 1923.	100,043

In addition to the above activities Mrs. Enid Michael has maintained two wild flower shows, which have stimulated interest in the Yosemite flora, at the same time pointing out the need for the "Save the wild flowers" regulation.

"Yosemite Nature Notes"has been published weekly through the summer. During the winter it will be published monthly.

CHIEF NATURALIST IN EUROPE

Chief Naturalist Ansel F. Hall, National Park Service, is now in Europe where he will study educational problems in the parks and public recreational preserves of European countries. Mr. Hall will return in June, 1924.

GRAY SQUIRRELS OBSERVED IN YOSEMITE

For some time past it has been the hope of the Yosemite Nature Guide Service that gray squirrels might again be recorded from the Park. It was with genuine joy that the Park Naturalist on September 6 saw a very healthy individual near Alder Creek Ranger Station. Within a few miles a second squirrel was observed near the road.

POT HOLES IN THE GRANITE

Invariably when a nature guide party visits a high point on the valley rim, such as Glacier Point, Sentinel Dome, or Eagle Peak, some member of the party becomes concerned with the conspicuous round deep holes to be seen in the outstanding granite. Questions always follow, and conjectures develop as to how these smooth, bowl-like depressions were formed. They are not unlike the pot holes worn in the rocky gorges of the Tuolumne and Merced rivers, but it is clear that they cannot be river worn, for how could there be a river on the top of a dome? In years past, geologists have suggested that they were formed by streams flowing under the great ice sheet that once covered even the high places. However, we now know that Sentinel Dome protruded above the glacier; therefore, streams could not have cut the basin-like hollows on this summit. Mr. F. E. Matthes of the U. S. Geological Survey decides that they are merely the result of rapid disintegration of the rock in particularly vulnerable spots.

"FREEZING"

Have you ever hurried along a Yosemite trail and caught a glimpse of what looked like a rocking-chair sticking up in the brush? Not infrequently the deer of the Yosemite "back country" will depend upon their natural camouflage for protection and stand immobile close to a trail while you pass. Perhaps if the deer be a buck, only his antlers will project above the chaparral and there they will stay until you have passed well beyond your observer. Not so with the deer of the valley floor. So accustomed are they to passers-by that they make no attempt to remain unseen by "freezing." Recently the writer had an interesting experience in observing this habit of animals. He was riding a mule. The mule had the night before received a good bear scare. The time was

nightfall and the place a trail along a rock ledge above a back-country lakelet. The mule's ears were a sure index of his thoughts, and at this particular instant it was apparent that he was perturbed with something not seen, heard, or smelled by his rider. When the rider peered into the gloom about him, he discerned a graven buck beautifully silhouetted against the mirror-like surface of the lake fifteen feet below. Out of curiosity as to the result, the mule was reined in and brought to a sudden stop. Instantly the buck became alive and with one mighty bound cleared a dozen feet of lake shore and disappeared. This was too much for the mule's shattered nerves, and he attempted to jump an equal distance in the opposite direction. Apparently the mule had detected the presence of the other animal through the sense of smell but had failed to see it until the buck moved. Had the mule and rider continued down the trail, the deer would have kept his pose, secure in the belief that he had been unobserved.

YOSEMITE'S FLAT FLOOR

Have you been caused to wonder why the turbulent Merced River may pause to meander aimlessly through six miles of level plain after it cataracts into the Yosemite? Is it not here like a stream of Nebraska's prairies rather than a carver of Sierra canyons?

The key to the explanation of Yosemite's flat floor was detected by Mr. F. E. Matthes of the U. S. Geological Survey. It is nothing more than the ridge of glacial debris, stretching across the narrowest part of the Valley just below the El Capitan Bridge. The ridge is a terminal moraine, and as the ice of the glacier melted, the ridge became a dam, above which the water backed up and formed the ancient Lake Yosemite. Back to the head of the valley this lake extended, a distance of about six miles. Can you picture the towering cliffs reflected in its lovely mirror?

But the remaining glaciers in the gorge of Tenaya Creek and Merced Canyon were still active in grinding the granite to dust. The swollen streams pouring into Lake Yosemite brought tons and tons of this glacier product into the lake where it rapidly built a great delta just as Tenaya Creek is now building a delta in Mirror Lake. This filling in continued until the once lovely lake disappeared. Rapidly vegetation invaded the sands, and Yosemite came to look as it does today.

SIERRA NEVADA ROSY FINCH

The high, bleak passes and mountain tops are inhabited by numerous birds, mammals, and insects that are strange to the average Yosemite visitors. One of these citizens of the high places, whose acquaintance is readily made by the mountain climber, is the Leucosticte or Rosy Finch. If the mountaineer who crosses the Donohue Pass will leave the trail to enter the glacial basin excavated by the Lyell Glacier, he is certain to be met by bands of these hardy little birds. There among the glacier sculptured rocks they flit about in search of wind-blown seeds and insects, all the time keeping up a cheerful twittering among themselves. This is their chosen habitat. Seldom are they observed below timberline.

On September 18, 1923, the writer found a Water Ouzel in company with several Rosy Finches, along a streamlet flowing from the Lyell Glacier. The altitude was 11,000. In all probability there was no mutual attraction between the two species. When they were frightened into flight, the Water Ouzel hurried down the basin toward timberline, and the Rosy Finches flew upward toward the ice.

BOOKS ON CALIFORNIA NATURAL HISTORY

The nature guide service has received a number of requests recently asking for lists of books pertaining to western natural history. A splendid list of such books has been compiled by the University of California Museum of Vertebrate Zoology, Berkeley, California. Those interested should write that institution.