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Yosemite Nature Guide Service

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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

 IMPRESSIONS

There are two kinds of impressions, as related to Yosemite visitors. One is the impression made on the visitor, and the other is the impression left on the Valley. This note refers to the impressions left by the visitors.

Most visitors come in an automobile. The machine stirs up a cloud of dust and is gone. The dust settles in a new place, and the record is soon rewritten by another machine. A hundred thousand tourists may leave no greater impression than this.

There is the Mariposa Battalion, which came up here in 1851 - the first white men to visit the region. This was only about seventy-five years ago, yet any record of their visit is a curiosity and is on exhibition at the Yosemite Museum.

And the Yosemite Indians! What of them? The only evidences written in the Valley are the mortar holes where they used to grind acorns for meal. Here and there one may find a chip of obsidian that flaked off when they were fashioning arrow heads. The rest is handed down in myth and story.

May it not be said of Yosemite, "What is man that Thou art mindful of him?"

The visitor which made the greatest impression came some 20,000 years ago. It appeared silently without the sound of a trumpet or the glare of steel. There was a snow storm up on the summit of Mt. Lyell. Then there was another snow storm, and they kept adding to the accumulation until a great snow field covered Lyell, Clark, Hoffman, and the others. It became nearly a thousand feet thick and so massive that it moved down the mountain sides to the valleys. This huge ice sheet picked up the loose granite debris from these summits and quarried the sides of Tenaya and Little Yosemite. It polished Liberty Cap and Mount Broderick and hewed out granite rock basins for Emerald Pool, Merced, and Boothe, and other summit lakes. All markings on the granite were erased, and, when the great glacier retreated, the walls were as new.

The first post glacial visitors were descendants of the old inhabitants. They marched into the valley in single file. At the head of the oak column came the huckleberry oak because it was more congenial for it to live nearest the glacier. Then up out of the dry country came the Golden Cup Oak and, when the talus formed, it took a stand near the cliffs. The Kellogg Black Oak came about the same time and stood sentinel-like on the open plain of the old lake bottom. The march of the oaks was up hill work and was accomplished with the assistance of squirrels who buried the acorns.

The pines came by the wind express usually on the afternoon up-valley schedule - each seed being a monoplane. The foremost in rank of the pine battalion was the white bark pine. Then came the mountain pine, with the Jeffrey close on its heels. The sugar, lodge pole, and yellow were later arrivals. The conifers are only now beginning to etch their record upon the granite cliffs and domes. With the acid secretion of their roots they make sketches upon the rocky walls and with the expansion of growth they flake off new pages. The story that they are writing is one of plant succession and today is but the first chapter of their impressions.

The glacier coaxed some plants, like the Alpine willow and the sorrel, up into the high spots and then went off and left them. The weather is still congenial to these cold-seeking plants, and they live in islands, so to speak, way up in the high Sierras. They do not visit and mingle back and forth because the valleys are too warm for cross roads. When the refrigeration was more general, these plants may have paved the valleys. Now they are marooned mountain high - stranded as it were - on a stern and rock bound coast.

And we must not go on with our description of plant impressions unmindful of the lichens and mosses. Their work goes back to the time of the first Yosemite plants, curious growths that crept upon the rocks for a long time before man appeared. The lichens may have remained like magic when only the top of Half Dome and a few others broke the ice waves. It must have been a cheerless period of cold, yet these tiny plants may have carried on during the age of the ice and rock giants, and their wee writings are still going on preparing the way for less hardy followers.

The latest arrivals have only lately ventured onto the valley floor. They take up the coarse soil, live their span of life, and then die. They add a little bit of humus and thereby are slowly darkening the top layer. The common locust and the elm are such and were brought by the colonist. The curly dock, sorrel, and knotweed of the yards stole in with the garden seeds. So came the common plantain and red clover. And there are others like the white daisy, chickory, and bouncing

bet that have not reached here. Some like the burdock, beggars tick, and cocklebur are always hooking rides. They have not yet stolen into the Yosemite. Let it be hoped that they will not be allowed within the park limits. May Yosemite be one place where the native granites may be written upon by native plants in a native tongue. For herein may visitors come and see history being written in the American way - as it was before America was known to Europe.

BIRD BATHS

The Black-throated gray warbler is one of the common summer visitants to the Yosemite Valley. It is a bird of the oaks, particularly of the *Chrysolepis* oaks, and therefore it is most likely to be seen on the oak-covered talus slopes. During the latter half of August, 1924, however, it was often found in the willow thickets along the river. Perhaps the explanation of the unusual behavior of the Black-throated gray is to be found in the excessive dryness of the season. Like most birds, these warblers love their bath. The small streams that tumble or trickle down the cliffs in normal years are this year absolutely dry, and the birds of the brush-covered walls are forced to come to the main river to drink and to bathe.

The Black-throated gray warbler, like many other kinds of birds, chooses a shallow pool at the edge of the stream in which to bathe. He squats low, dipping and flapping his wings to thoroughly beat the water through his feathers. Recently a nature class had the pleasure of watching a Hairy Woodpecker take a bath. This bird did not choose a shallow pool but worked down a branch of a fallen and partly submerged tree that overhung the river. When the woodpecker reached the water, he dipped under and still clinging to the branch he beat the water with his wings, taking a plunge rather than a shower bath.

The swallows, swifts, and some of the flycatchers have still a different system of taking a bath. The swallows and swifts skim low over the water, dipping now and then to break the surface and scatter spray; they take their bath on the wing, as it were. When satisfied with their wetting, the swallows come to a perch to preen, but the swifts must preen on the wing as they are never seen to come to perch. The flycatchers hover over the surface of the water and very cautiously take their dip. They go to a perch on a dead twig to do their preening but often it may take several of these cautious little dips to quite satisfy them that they have had a bath.

YOSEMITE'S VANISHED MOUNTAIN SHEEP

Fifty years ago, only a comparatively few prospectors, sheep men, and that devotee of High Sierra worship, John Muir, ever penetrated the Yosemite wilds that then harbored the most splendid of Sierra animals, "Big Horn" or Mountain Sheep (*Ovis canadensis sierrae*). Yet the rifles of those few hungry miners and mutton fed sheep herders in an incredibly short time wiped the native Yosemite sheep out of existence. In spite of the fact that Mountain Sheep frequented only the highest, most desolate, and inaccessible crests, they rapidly became extinct so far as Yosemite was concerned. Probably early day sportsmen accounted for a few of the animals, but the extinction of the race can reasonably be charged against the miners who rushed to Tioga and Mammoth in 1857 and again in the seventies. Later when domestic sheep invaded the high passes, the

herders did their bit in the "mopping up". Now the Yosemite visitor must be content with climbing into the former strongholds of the animals and hoping for the thrill of finding a bleached skull.

A number of such relics have come to light in Yosemite. The Yosemite Museum possesses a skull with horns in a fair state of preservation, found in 1915 on Mount Dana by Chief Ranger Townsley. Dr. Grinnell, while making his extensive Yosemite studies, came upon weathered portions of Big Horn skulls on Parsons Peak and Warren Mountain. Ranger Adair reports the finding of a skull with horns at the headwaters of Spiller Creek. This specimen was left where found. On August 23, 1924, the park naturalist came upon a broken up Mountain Sheep skeleton in a cirque at Helen Lake (north slopes of Kuna Crest). The skull yet contained some teeth, but the horns had slipped from the bony cores that supported them. Leg bones and vertebrae were strewn about and with the skull were gathered up and brought to the Yosemite Museum. These specimens were at the end of a small residual glacier. Probably it has been many years since the snows have melted sufficiently to reveal them. Undoubtedly, the remainder of the skeleton is held within the ice mass.

Probably the last record of Mountain Sheep in Yosemite was made by John Muir when he wrote of a band of three "discovered snow-bound in Bloody Canyon" (at east boundary of Yosemite) a few years previously to 1874 and "killed with an axe by mountaineers, who chanced to be crossing the range in winter". Reports and evidence of their former existence in the Sierras as far north as Mt. Shasta are available. Perhaps the most northerly records of their present occurrence is that made by Mr. E. H. Ober in 1921, who found small bands on Mt. Gillette and on Mount Tom, north of Sequoia National Park and by Dr. Grinnell, who reports living sheep at Mammoth Pass.

Will Sierra Nevada Mountain Sheep again inhabit Yosemite? We may hope that eventually individuals from the south may invade the park and again take the prominent part that so large and interesting an animal should have in the natural history of the region.



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