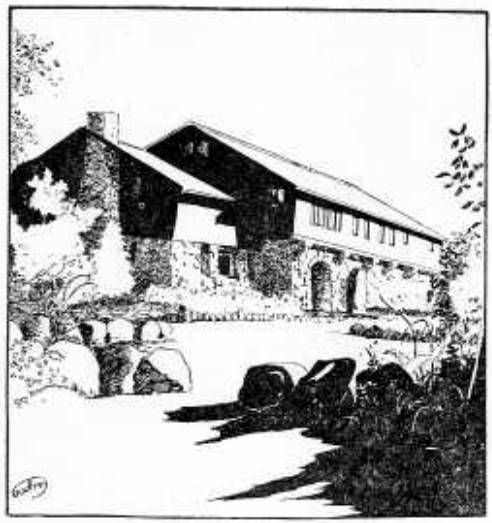
YOSEMITE NATURE NOTES



The Yosemite Museum

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YOSEMITE NATURE NOTES

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A RARE MUIR ENTRY FOUND IN YOSEMITE

By C. A. Harwell

John Muir made his first trip to the Yosemite in 1868. From that year the valley became his mountain home and the Sierras the object of his greatest interest. He explored their every corner. His travels afoot through steep canyons, to the summits of the master peaks of the range, and the intimate experiences of these long and varied tramps are well known through Mr. Muir's own published accounts of them. He was a thorough scientist. The geological story of the formation of the range and the mighty erosive forces which had carved out lake basins, broad valleys, steep-walled canyons and rounded domes fascinated him. On his every trip he gathered new evidence and new data to support his theory that mighty glaciers of the ice age were responsible not only for the deep carving of the Yosemite canyons, but for the rounding and polishing of the many wonderful granite domes of the region. He believed a glacier deep enough to extend several thousand feet above the top of Half Dome covered the region.

On one of his trips, September 29, 1873, he stopped at La Casa Nevada built in 1870 on Table Rock, just below Nevada Falls, and operated by Mr. and Mrs. F. A. Snow. His signature occurs several times in a valuable old register now on exhibit in the history room of our Yosemite Museum, which shows the registration of guests at "Snows' House" from April 28, 1870, to June 9, 1875. On this particular visit a full two-page entry in his own very distinct handwriting was made. This, not previously published, follows:

"September 29, 1873.

"Mrs. A. G. Black, Yosemite.

"John Muir, Oakland, Calif.

"A. G. Black, Guide, Yosemite.

"Made delightful trip around from Glacier Point across the valley of Illiouette and down through Little Yosemite to the main valley via Nevada and Vernal Falls.

"Glacier Point commands a noble and instructing view of the Tenaya Canyon, down whose ample channel descended the great Tenaya Glacier which played so important

a part in the excavation of Yosemite Valley. The less regular, crooked and dome-blocked channel of the South Lyell Glacier is also well seen from here, as well as those of Yosemite Creek, Hoffman, and Illilouette Glaciers. These five principal Yosemite glaciers, now feebly represented by the streams of the same name, united in the upper end of the great valley as a focal point, concentrating their erosive energy and flowing down and out of the valley as one grand glacier.

"From Sentinel Dome a still more comprehensive view of the channels and foundations of these old ice rivers is obtained. The knotty domes and ridge waves of Yosemite creek—the steep descending groove-shaped valleys of the Hoffman, the bold, simple furrow of the Tenaya, the broad, irregular pathway of the Nevada or South Lyell, interrupted with domes as a water stream is by boulders, and the wide flash-shaped basin of Illilouette ridged with moraines and manifesting its noble ice-wombs in sublime simplicity among the bounding peaks of the so-called 'Merced Group.'

"While we lingered upon Sentinel Dome a fine storm was observed in progress among the black, jagged summits of the Lyell Group. Long, bent tresses of rain descended from the base of a dense, bluish-black cloud in which some of the peaks were outlined dimly, while others were wholly obscured down to their shoulders. Above the dark rain cloud a series of fine-grained, light-colored cirri were laid in exquisite combinations and these, again, were surmounted by white, bossy sun-filled cumuli glowing upon the tranquil azure. We watched the motions of the storm as it swept leisurely northward, bathing the grateful mountains in its path, settling down upon each in turn with a fondling gentleness of gesture that is utterly indescribable. Nor was there wanting the majestic tones of the lightning falling in deep, rumbling explosions and reverberating from peak to peak with greater and greater faintness.

"After dark, looking back towards the head of Little Yosemite, a belt of cloud appeared drawn across from wall to wall that shimmered with lightning in every pore.

"The autumn tints of the rubus, maple and wild cherry were most enchanting, the latter covering the banks of Illilouette with a mist of yellow. We reached Snows' weary with delight and the Nevada sang us asleep."

Some of the Invertebrates of Yosemite

VIRGINIA WEIGEL

This study of fresh water biology restricted to invertebrates was made from life forms found in the swamps of Sentinel Meadows on the floor of the valley on July 22, 1929.

The classification of these, as nearly as could be determined, is as follows:

1. Phylum—Protozoan.
   Class—Infusoria.
   Sub-class—Ciliata.
   Order—Halotricha.
   Genus—Paramecium.
   Species—Candatum.
2. Mesozoan (Given various classi-

fications by different scientists).

Class—Rotifera.

3. Platyhelminthes.

Class—Turbellaria.

Genus—Planaria.

4. Phylum—Annelida.

Class—Herudenea.

Genus and species not known (two kinds found).

5. Phylum—Mollusca.

Class—Gastriopoda.

Sub-class—Euthyneura.

Order—Pulmonata.

Genus—Ancylis.

Planoibis.

Class—Pelecypoda.

6. Phylum—Arthropoda.

Class—Crustacean.

Genus—Ceredaphnia.

Cyclops.

Daphnia.

Eurycerous.

Macrothrix.

A Nauplius.

Simocephalus.

Sub-class—Brachniopods.

Phyllopoda (Brine Shrimps).

These brine shrimps were found in Evelyn Lake creek en route to Tuolumne Meadows.

Class—Arachnidis.

Water mites.

Paramecium Candatum

Paramecia are unicellular animals visible to the naked eye if the proper background is provided. They are found in fresh water and also in stagnant water.

The Paramecium is the well known cigar shaped animal with a depression extending from the forward end obliquely backward, ending just posterior to the middle of the body. This animal, being thus unsymmetrical, is able to swim in a straight course through a medium which allows deviations to right or left and up and down. Through rotation the forward movement and the swerving to one side are combined to produce a spiral course The organism has various reactions to stimuli which may be summed up as follows: "Whether a given change shall produce reaction or not often depends on the completeness or incompleteness of the performance of the metabolic processes of the organism under the existing conditions. This makes the behavior fundamentally regulatory.

Rotifers

A number of rotifers of various types were collected. Some of the rotifers are of the fresh water inhabitant type and some are marine, while a few are parasites. Ciliata, whose cilia cover the entire body, but are larger and stronger about the mouth opening than elsewhere, are numerous among these. The adoral ciliated spiral consists of rows of cilia fused into membranelles and lead into the mouth.

Platyhelminthes

No Planarians were found in Sentinel Meadows but on stones in some fresh water as Sentinel creek, one finds many and this type of Platyhelminthes has a free living habit. Its body is bilaterally symmetrical and dorso-ventrally flattened. This type is also characterized by being rather blunt at the anterior end and the posterior end more pointed. It nas peculiar dark ened eye spots at the broader end.

An extraordinary feature of Planaria is the power of regeneration. If an individual is cut in two, the anterior end will regenerate a new tail while the posterior part develops a new head. A cross-piece will regenerate both a head at the anterior end and new tail at the posterior end. The head alone of a planarian will grow into an entire animal. Pieces cut from various parts of the body will also regener-

ate completely. No difficulty is experienced in grafting pieces from one animal to another.

Annelida

Several types of leeches were found. One type about three inches in length was collected from the meadows as we returned from Eagle Peak. The type obtained from Sentinel Meadow were much smaller. The former were swimming in an open pool of water containing only a few logs and stumps while the latter were found on the under surface and also inside dead lily pond leaves that were floating along the surface.

Leeches being Annelida are definitely segmented. They too are flattened dorso-ventrally but differ extremely from flat-worms.

The larger leeches had been in the museum in a large jar for several days when we found a frog and put it in the jar to study results. Some extremely interesting features were first of all the sudden reaction of the frog and the many useless attempts to evade the leeches. When one of the leeches became attached for the first time the frog gave a desperate lunge to get away. After a while the frog showed great signs of being very sensitive to touch. We noticed this particularly since there was a piece of paper in the jar and from the many quick movements of the frog and leeches the paper moved about in the water. Frequently the paper would glide through the water and the instance the paper touched the frog the frog jumped.

Time limit made it impossible to make desirable study and find out how long a leech would or could stay attached, if the frog was injured at all by the sucking disc, etc. Other interesting factors were that most times the leech attached itself to the toe of the frog. Why? Is it because there is a greater blood supply or one most accessible, or was it b cause the foot of the frog was the part with which the leech came in contact more frequently. After a leech nad become attached to the foot of the frog the frog made violent struggle to get away. In most cases the frog was able to throw off the leech but as time was short this could not be studied properly.

Mollusca

There were many small clams, a type of which get about one-fourth inch at the longest. These were found attached to stems and undersurface of floating leaves and many on the bottom. These clams are very numerous. They are very small but active.

The snails were found attached to leaves and stems in the water. Ancylus has a flattened shell or covering which forms an apex at the uppermost part.

The Planarbis has its shell coiled in one place like a watch spring. It lives in brooks and ponds and feeds on vegetable matter. In dry weather many snails have the power of secreting a mucous epigram over the mouth of the shell so as to prevent the evaporation of moisture from their bodies.

Arthropods

Many microscopic forms of Crustacean were found. Their names have been listed but they have similar habits. These crustacean live in fresh water, salty water, on land, or as parasites on other animals. The enormous numbers of these little creatures may be ascertained by counting the specimens that are captured if a fine gauze net is drawn through the waters of lakes or streams.

These small crustacean are of little if any economic importance to man, but indirectly they are of considerable value, since they form the chief food of many edible fish.

Animal Friends at Glacier Point

By C. H. Oneal

The confidence and trustfulness engendered in wild animals by prolonged kindness and feeding is remarkable. As they learn you are their friend the wild stare of fear leaves their eyes and they no longer are startled by the slightest sound or quick motion. They become your companions. The kindly attitude toward all animals at Glacier Point for many years has shown them to have characteristics and traits just as distinctive and individual as found in people. During seven weeks spent at this point as ranger-naturalist of the National Park Service this past summer I noticed a few individuals that especially endeared themselves to all comers by their friendliness.

"Bill," a handsome five-point buck, was beloved by all. Almost any day while the other bucks were hiding out in the brush he might be seen about the hotel begging for food. His method was watchful waiting rather than forceful aggression. His great, gentle, soulful eyes pleaded so eloquently that one could seldom resist sharing peanuts, chocolates, raisins or sandwiches. He was particularly fond of having the base of his ears scratched, and he would stand patiently for the process as long as the endurance of the scratcher lasted. One of the most distinctive habits of "Bill" was the licking of hands extended toward him. Possibly he liked the taste of the salt found in perspiration. Big, powerful, handsome, and withal gentle and kindly, he was the most popular male at Glacier Point.

"Annie," the sister of "Bill," is one of the most beautiful does in Yosemite National Park. Her summer coat is very light in color and quite glossy. She is softly rounded and plump due to all the goodies continually fed her by visitors at Glacier Point, and her eyes are the largest and gentlest I have ever seen in a deer. Evidently no one has ever betrayed her trust in man. One can take her head between his hands and hug her. She seems to be bringing up each year's offspring to have the same confidence. She is one of the few mothers who bring their fawns into camp when they are but a few weeks old.

One day last summer as I sat at the table of our outdor dining room by our camp at Glacier Point writing Nature Notes on the deer of the region, "Fanny," the mother of many of the deer at this place, watched patiently for choice morsels. A bullet-clipped ear indicated that the lust for blood by man had almost cost her life. Her interest was vividly manifested in the process of spreading bread with jam. Her anticipation caused the flow of saliva. She licked her nose in order to better smell the dainty and her eyes fairly sparkled in appreciation of the offering. Who would not be glad to share his best food with such loving friends?

"Mickey" is a beautiful golden-mantled ground squirrel. Almost any day he could be seen sitting in front of the hotel. Perched on his haunches, his front feet folded in a prayerful attitude, he eagerly scanned the guests, hopeful that they would throw him salted peanuts. After his appetite had been sharpened by a few kernels he

would stand on his hind legs and motion with his right front paw as if thereby to hurry the process. When the supply was withheld he might be coaxed to ascend a tall boulder to the porch. Then, if deliberate, a person might entice "Mickey" to his lap, where he would sit until his stomach and interior cheek pouches were filled almost to bursting. Then he would scamper to his nest, eject the store from his cheeks and return for another supply. He became so tame that he would take peanuts from a person's lips. If one held a kernel with his teeth "Mickey" would place his paws against one's face and pull with his teeth until the peanut was secured. He was the ruler of his kind. If another one approached too close a sharp metallic squeak warned him of his encroachment. Round and round they would go until the invader had vanished. "Mickey" was so fat that after such a chase he had to seek the shade of a rock where he flattened himself out until he had regained his composure sufficiently to again seek food.

The Tahoe chipmunk, next to the golden-mantled ground squirrel, most interested the Glacier Point guests. They are keen, alert, nervous and almost continually on the move. The least quick motion will send them scampering. The alternate white and dark red stripes coming almost to a point at the nose heightens the appearance of sensitivity. Their gait is largely a springy gallop. When frightened they often climb trees with the agility of a Douglas squirrel. To get one to eat from your hand requires a great amount of patience. After many overtures one was induced to enter the Curio Store where it found a pile of peanuts in a corner. Each day thereafter it came. One day the supply of food was exhausted and the chipmunk voiced his disappointment in loud scoldings, almost resembling that of a bird. His feelings were finally soothed by a generous supply of other morsels.

The Sierra grouse is quiet, patient, friendly and lacking in nervousness. "Fool hens," they have been called by hunters. However, I am inclined to believe this lack of fear is born of trust rather than of stupidity. One came to our tent each morning during the past summer for breakfast. She was so tame that she would readily eat from our hands. One morning her breakfast was delayed by writing of some nature notes. As a suggestion to me of the lateness of the hour she flew upon the table at my arm and looked at me as if to say, "Where is my breakfast?" One Sunday morning we failed to arise at the accustomed hour. As we lay dozing something heavy alighted on our tent. It was our pet grouse. Sliding, scratching, and beating her wings she made so much noise we were immediately aroused and gave her some breakfast. Were these incidents the result of stupidity or accident or was it premeditation born of inteligence?

The blue-fronted jays seldom fail to attract attention because of their wonderful coloring. However, their aggressiveness and harsh metallic voice divert from their attractiveness. A Mason jar contained some small bits of beef at our Glacier Point camp this past summer. Yellow jackets entered the jar and were devouring the contents. These insects in the jar were seen by a jay. Up he came and tried to pick at one. Again he struck the glass

a resounding blow. Seemingly somewhat stunned at his inability to reach the insects he eyed them carefully and once more endeavored to capture one. For several minutes the activity was repeated. Then evidenly disgusted but still mystified he gave up the attempts.

The closer a person comes in contact with wild animals the greater becomes his enjoyment. They then are no longer prey to be killed at the first opportunity in order to satisfy a primitive hunting instinct, but become individuals capable of inducing much interesting study. To know and understand their characteristics and habits gives much more enjoyment than is found in their slaughter. They readily put their trust in man and he is not worthy of friends who betrays that faith.

YOSEMITE ANIMAL REPORT FOR DECEMBER

By C. A. Harwell, Park Naturalist

Bears — Six bears, three cubs and three adults, were seen by the park naturalist at the feeding platforms December 8. None of them were feeding. Candy, which they were eager for a month before, was refused by them. A cub sunning himself on a log ran away when I approached him holding out a fine chocolate bar. I laid it on the log for him, but never saw him return for it. Two cubs were 20 feet up in a large incense cedar. Their mother was eight feet below them. They seemed to want to respond to my invitation to come down and their mouths very noticeably watered when I rattled the candy bag and held large brown bars toward them. But when they finally got their feet set against the trunk to come down, the mother chased them to the very top of the tree in a flash. I concluded their hibernation had really started in that they were refusing food, although they had not yet sought out their winter's dens. A bear entered the kitchen at the lodge the evening of the eighth, but took no food. Two large bears were seen by Ranger Eastman near the lodge garbage cans the night of December 23. They were not seen to take food. Ranger Herschler saw a large black bear at the feeding platform December 24.

Deer—This month marks the height of the mating season of deer. Antlers are at their hardest and sharpest stage and are finding the use for which they were grown —fighting. Each buck is intent on the possession of one or more does so there are frequent sharp clashes.

Though the weather for the month has been mild, no snow whatever on the valley floor, the deer above the rim have moved down to lower and warmer ridges. The last deer seen at Glacier Point was December 12. Ranger Reymann on a trip to camp 11 counted 107 deer from his machine along the road December 23, all but 12 of them beyond Chinquapin.

Elk—A count of the herd of dwarf elk (cervus nannodes) by the park naturalist December 8, showed 22 animals—10 bulls, 9 cows and 3 calves—all in good condition. They are now being fed alfalfa hay daily, as feed in the paddock is insufficient.

Birds—A Pacific loon, (gavia

pacifica, was observed in the Merced river above the power dam on December 6 to 10. This is the first record of this bird for Yosemite. The clear water of the pools gave fine opportunity for observing the swimming and diving habits of this sea bird.

A golden eagle was seen soaring above the north wall of the canyon below El Capitan, December 27. One has been seen on several occasions above the Arch Rock checking station.

Coyotes — Coyotes have been rather commonly heard at night at the Glacier Point Hotel this month. One was seen by the roadside near Bridal Veil Falls by the park naturalist and a party of Eagle Scouts, December 29.

California Wildcat—A young male "bob-cat" was struck by an automobile on the highway near El Capitan, December 22. He is in the process of being mounted for our museum, by Chief Townsley and the park naturalist.

Flying Squirrel — December 15, during a storm, lightning struck two large yellow pines at Camp Curry. I picked up a dead flying squirrel from the chips of bark and splinters beneath one of them.

IMPRESSIONS OF A HIGH COUNTRY HIKE WITH A NATURE GUIDE

We have climbed above the falls, we have tramped in the heat of dust and in the cool of woods, we have trudged with pack upon our backs, we have eaten together beside Maclure glacier, we have swum in mountain streams, we have sung upon the lakes, we have glowed with ruddy fires. We have known one another.

We have heard contentment songs of trees, we have smelled the cool damp cleanness of the earth, we have tasted the offering of streams, we have seen Conness mountain, holy in twilight, and the sky overturned into Boothe lake at night-time; we have felt the baptism of the spray and the benediction of cool winds. We have known God.—Alice Atwood, Yosemite School of Field Natural History, 1929.

EARLY TROUT PLANTINGS IN YOSEMITE

Probably the first plant of fish in Yosemite National Park took place in the fall of 1892. W. H. Shebley, at present superintendent of fish culture for the California Fish and Game Commission, started from the old Sisson hatchery with a shipment of black spotted, Eastern brook and rainbow trout. Earlier attempts had met with failure because of the long trip and the time necessary.

On this first successful planting the shipment arrived at Raymond, from whence it was sent in stages furnished by Washburn Brothers of Wawona. Here the fish were held over night in the stream and the following morning were transported by means of government ambulance to Mono Meadows, then transported by pack trains delivering them to Ostrander and Merced lakes, to Bridal Veil creek and several other lakes and streams.—H. C. Bryant, Director Yosemite School of Field Natural History

This is the official publication of the Educational Department of Yosemite National Park It is published each month by the National Park Service with the co-operation of the Yosemite Natural History Association, and its purpose is to supply authoritative information on the natural history and scientific features of Yosemite National Park. The articles published herein are not copyrighted as it is intended that they shall be freely used by the press. Correspondence should be addressed to C. A. Harwell, Park Naturalist, Yosemite National Park, California.

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