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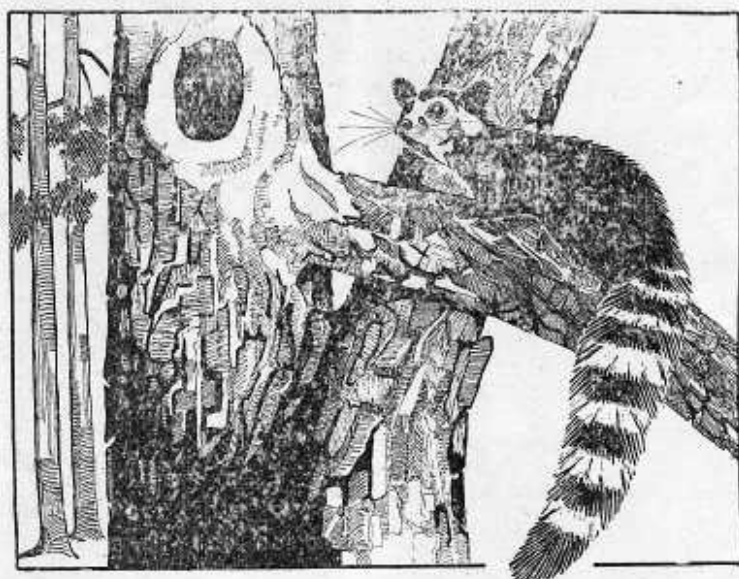


# YOSEMITE NATURE NOTES

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"LIFT UP TO READ THE TRAILSIDE"

YOSEMITE NATIONAL PARK, CALIF.

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Acting Superintendent

# YOSEMITE NATURE NOTES

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Volume VII

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## UNTIMELY END OF A GOLDEN-MANTLED GROUND SQUIRREL

By William C Gcdfrey

Among the inhabitants of the Canadian and Hudsonian life zones in Yosemite is a friendly little squirrel whose copper gold head and breast immediately attract one's attention. The two white strips, bounded above and below by a broad, black one, which extend along the sides of the chubby body, are cause for the common mistake that this is a chipmunk. However, it lacks the stripings on the side of the head which are good identification characters for all the chipmunks.

Though properly found among the wild fauna and flora of the region which it inhabits, the golden-mantled ground squirrel has come to dwell around camps and resorts, where it lives in almost semi-domestication, a real part, indeed, of the charm of the surroundings.

One very warm afternoon in the lazy month of August, when all life seemed content to rest in the stillness and heat waves shimmered up through the trees of the Mariposa Grove, my attention was drawn by the incongruous exhibition of activity on the part of two of these red-heads. They chased each other around a white fir log and scampered playfully along its top.

The stopped suddenly, one on the

loose bark of the fallen trunk and the other in the shade of a dead limb dropped from the massive frame of a giant sequoia. As though to break the monotony, the squirrel on the ground moved toward the dry creek bed near the road. He hesitated before crossing the dusty, tire-tracked path of man, then started toward the other side. That was a fateful decision. Half way across, the squirrel was suddenly set upon by a sinuous, slender-bodied assassin which apparently sprang out of nowhere very much into the middle of things. There was a brief struggle in the dust, a shrill cry from the defenseless little creature, which brought a startled playmate from the fir log in time to witness a mountain weasel's triumph, and all was still in the summer heat once more.

Dropping the lifeless body of its victim in the middle of the road, the weasel retreated towards the dry creek, where it inhabited one of the several holes in the bank.

Examination of the unlucky victim showed only one wound—teetmarks in the neck, just above the shoulder. The weasel is a deadly foe, and the golden-mantled ground squirrels which have befriended man have found a real protection from this one of their enemies.

## THE DEER LICK IN LITTLE YOSEMITE

by Donald McLean

At the muddy puddle about a quarter of a mile beyond the Little Yosemite High Sierra camp, it is not uncommon to see a large number of deer. I became interested in trying to find out why they were always there in such numbers.

My group of hikers walked around the south end of the mudhole, and there about thirty feet from the edge of the water was located a hole about two feet deep by thirty inches wide at the top, but wider underground. This hole had been eaten out by deer in an effort to secure salts from the soil.

The deer had bitten out the clay with their lower front teeth, stripping it off in thin layers. When a strip of clay is bitten off, it is rolled about in the mouth, part of it is dropped on the ground in the form of mud and the remainder is apparently swallowed.

Wherever this peculiarly colored creamy, chalky clay is found along the edge of this meadow, the surface is invariably nibbled and scraped with their teeth.

Tests will be made of the soil in an effort to find out what kind of salts are present.

## OUR STRIPED FRIEND

by C. H. Oneal

The striped skunk is one of our best known and least appreciated wild animals. Abhorred by nearly all people and seen by but few, he has inherited such a reputation that the very mention of his name causes disgust. This is not altogether warranted. He has many admirable qualities.

A large skunk has for many months frequented the garbage pail behind a house in Camp 19. Just above the pail is an electric light burning all night. Many times late in the evening he has been met by the occupants of the house. Sometimes they have passed him as close as a few feet and he has at no time shown a tendency to display his prowess.

The back of our tent parallels the house next door at a distance of

about twenty feet. The rear of our tent has a flap up for ventilation. A few nights ago we heard the garbage pail bang. Suspecting the source of the noise, we stuck our heads out of the rear of the tent to get a glimpse of our visitor. There he was in all his glory, under the full glare of the electric light. We exclaimed in wonder at his beauty. Much larger than most domestic cats, his black coat glistening in the light, his white bordered tail held aloft, plumelike, he was a vision not easily forgotten. His disposition equaled his appearance. Giving no heed to our talking, he continued eating until the supply was exhausted. When he had finished eating, he sauntered toward us, neither afraid nor aggressive. Looking at us as he passed along the tent, he was soon lost to view.

## THE AUDUBON WARBLER

By Enid Michael

During the last eight years ten different species of warblers have been noted on the floor of Yosemite valley. Of the ten the following are regular summer visitants that nest on the floor of the valley: Calaveras, yellow, Audubon, black-

Of all these warblers the Audubon (*Dendraica auduboni*) is the only one to remain in the valley during the winter months. The others have left the valley by the middle of October, and they do not begin to appear until some time in April of the following spring. It seems strange that the Audubon should be the lone representative of the warbler tribe during the winter months. The explanation is probably to be found in the feeding habits of the Audubon, which are vastly different from all the warblers mentioned above. Our summer warblers are foliage feeders and spend most of their time searching among the leaves of tree or shrub in pursuit of insects. Each species has its own peculiar forage lanes. Some feed in the oaks, some in the willows, and some in the pines. Some feed high in the tall trees; some feed in the low-growing bushes.

During the summer months the Audubons feed in the normal warbler manner. That is, they are foliage-feeding birds, for the most part. Occasionally, however, they will practice the flycatcher art and dart into the air to take insects on the wing.

Either the Audubon warblers far outnumber all other warblers of the district or there is a concentration of migrating birds who use the Yosemite valley as a channel to lead them to the high country, where they again scatter out. In any event early in May a vast migratory wave of Audubons sweeps through the valley. The wave rolls on, a scattering of birds follows the wave



The Audubon Warbler

throated grey, hermit and Tolmie warblers. The pileolated warbler nests above the rim of the valley. The lutescent warbler, the yellow throat and the long-tailed chat only come into the valley as rare stragglers.

and a few pairs not carried on by the wave remain to nest in the valley.

Late in the fall, when all other warblers are well on the way to winter haunts, the Audubons again become common in the Yosemite. Presumably, these are birds that passed through the valley in spring and are now on their way out of the high mountains. Through the fall months there is a scattering number of Audubons present in the valley. Then toward the end of October or early in November, suddenly some morning Audubons are everywhere. This is the outgoing wave that carries the last of the warblers out of the high mountains before the winter storms set in. And usually stormy weather follows close behind the outgoing throng. A few pairs of Audubons are left behind to spend the winter in the warm pocket about the mouth of Indian canyon.

During their sojourn in the high mountains, it would seem that the Audubons develop new tastes and acquire new feeding habits. On their return to the valley, their for-

age lanes no longer lead through the conifers, for now their hunting is confined to the broad-leaved trees and to the open meadows. Before going to the mountains, they were insectivorous birds; on their return to the valley they are omnivorous feeders, and their diet consists of berries and weed seeds, as well as insects. It is an odd sight to see a warbler swinging on a weed stalk and picking off seeds in the manner of a goldfinch. Through the fall and winter months certain individuals among the Audubons consort with the western bluebirds and each little band of bluebirds will be accompanied by one or two warblers.

In all the years that we maintained a feeding table for birds, the Audubon was the only warbler to take advantage of our offerings—a fact which might seem to prove that he is a more versatile feeder than his relatives. This versatility may be the attribute that makes it possible for him to winter through in a country that is deserted by all other species of warblers.

## SOCIAL FISH?

By L. J. Henrich

Visitors at the fish hatchery are often intrigued by the way in which the young fish congregate in great numbers in certain favored spots of the troughs. Water in the remaining parts of the trough may be relatively clear of fish. Being asked, as a nature guide assigned to duty there, for an explanation, I set myself the task of trying to solve it.

My first thought was oxygenation. Some recent experiments with humans seem to show that carbon dioxide under pressure is helpful for certain types of diseases. I had noted the ill and ailing fish at the

lower end of the trough whereas the "peppy" ones seemed unable to get close enough to the oxygen found beneath the falls and spent most of their time in practicing the high jump preparatory to the big jumps they would take in later life.

I soon discontinued this line of thought. I observed that the fish kept in the troughs outside the building where the water flows into the troughs from the opposite end (the east) congregated on the west end of the pool in the morning and not close to the falls as the oxygen theory would demand.

The probable solution came to me one dark afternoon when I saw what happened inside the building when the lights were turned off at 4 o'clock. The fish turned around, swam with the current and then re-distributed themselves closer to the windows. It was light apparently that caused the phenomena of grouping.

The light theory was further sub-

stantiated by the attendant, who told me that at night the fish did not congregate but distributed themselves more or less evenly throughout the troughs. One wonders if many another "gragariousness" found in nature might not be due to some such simple environmental factor as light, heat, food, etc.

## AGAIN THE PILEATED WOODPECKERS

By Enid Michael

In the Stockton Record of September 1, 1928, under the heading of Yosemite Nature Notes, there appeared an item carrying this heading: "Has Yosemite's Pileated Woodpecker Found a Companion?" The last sentence of this article reads as follows: "Whether the old-timer (the old-timer being the pileated Woodpecker who has wandered alone about the valley for these several years past), has found a companion or whether there has been an invasion of two strangers is yet to be determined, but there is a strong suspicion that the former explanation is correct."

Now the question is, why the strong suspicion that the pileated woodpecker who traveled so many years alone has found a companion? In the fact that two pileated woodpeckers were seen there is nothing to indicate that one of these was the "old-timer." In the old days when there was a pair of these birds in the valley the birds of the pair were constant companions. They had a regular beat and day after day they might be seen together. In the morning they would wander down the valley, stopping on the way to explore all likely looking prospects in search of food.

In the evening they would be seen flying high and headed up the valley. The point is that the pileated woodpeckers traveled consistently as a pair. Now if it is the habit of pileated woodpeckers to travel as a pair is it not more reasonable to suppose that a pair moved into Yosemite, rather than that a lone bird somehow discovered another lone bird?

It so happened that I too heard the report that two pileated woodpeckers had been seen in Camp 8 and being much interested in these grand woodpeckers I made several trips into the district about Camp 8 in hope of seeing the pair. Luck was against me and I failed to find them. On three occasions subsequent to the report, however, I did see the lonely old male, and on each occasion he was still quite alone. Should I perhaps have a strong suspicion that the "old-timer" was so set in his habits that he could not get along with his new found companion?

If I were given to strong suspicions I might suspect that someone had been seeing double. However, I do not doubt the two woodpeckers for I see no reason why a pair should not move into the valley.

## CIRCUMSTANTIAL EVIDENCE

By J. B. Herschler

The Field School students had just located in their allotted part of Camp 7. The opening session of school was held in the afternoon of June 25, and in that period had received instruction from Dr. Bryant on how to study Nature. The following morning he was going to give them the "low down" on it by the method of actual contact, administered in the form of a field trip.

Just to prove that his efforts were not in vain and that power of student observation had been stimulated, a bird nest was discovered June 27 in an azalea bush just at the edge of camp. The nest was approximately 36 inches above the ground and situated in a crotch formed by four branches growing from a single support. It was composed of dry grass, weed stems, cord and thread and lined with horsehair.

Of course, at the time of discovery no one could truthfully say what kind of bird had built it. The mother was quite close, to be sure, and kept uttering her call note, which had a sort of familiar sound, a sound which took the student minds back to the field trip of the morning before. Also they could hear Dr. Bryant saying, "Hear that call note; get it. Listen now—wheet, wheet, wheet-p'-teer, wheet-p'-teer. Did you get it then?"

Evidently they did not get it, and for quite some time stood in bewilderment, wondering what kind of bird it could be. Finally an especially active mind, remembering that notebooks had been carried

on the day before, made a sudden break for camp to reappear shortly, scanning the pages of the previous day. In a few moments there was an exclamation of "I have it, I have it! It's a trail flycatcher!" and sure enough it was, for there in the notebook was written a description of this very bird and its call notes.

At the time the nest was found it contained four eggs, which is the usual number. Not knowing how long incubation had been in progress, close watch was kept by many of the students, and on the morning of July 4 two young birds declared their independence by doing away with their eggshell covering, and by night a third was hatched. Next morning the nest still contained one unhatched egg, but by 5 p. m. there were four tiny, fuzzy babies snuggling in the bottom of this well-made home.

Every day the babies had several student callers, who would stop while on their way to and from the museum to see how they were being cared for. They must have been well fed, for they certainly did grow fast, and in a little over a week the nest looked as though it would have to be enlarged.

Preparation had been made for an all-day field trip with an early start, and in order to visit the birds that day a call was made about 6 a. m. To the visitor's surprise and sorrow, he had the experience of watching five baby weasels and their parents romp and play through the branches of the bush and over the ground underneath,



the place our beloved birds were being cared for.

Upon return that evening, another visit was made to find the birds all snug and safe in their little home. However, an early morning call a few days later revealed that

the worst had happened. The nest was torn apart and no trace of birds could be found. It was the fact that no feathers could be found that saved the weasels from a conviction of circumstantial evidence and placed the crime on the long list of Nature's mysteries.

## FISH HATCHERY HAS ADDITIONS

By Robert P. Hays

Some fine new additions have recently been built at the Yosemite fish hatchery. Through the summer, a force of men has been at work completing the aquaria in the exhibit room and the out-of-door retaining pond. These new installations should add perceptibly to the value of the hatchery as a place for disseminating knowledge pertaining to the trout found in the park and to the method of propagation.

Four splendid aquaria are now to be found in the exhibit room, with specimens of Rainbow, Eastern Brook, Loch Leven and Golden trout. These are being viewed daily by the many visitors who go to Happy Isles to see the hatchery.

Most of these trout on exhibit were captured on a special fishing expedition for that purpose by Governor Young, Chief Ranger Townsley and some members of the ranger force, who accompanied the Governor over the route of the High Sierra camps. They brought back several hundred trout, which are now found at the fish hatchery.

Perhaps the exhibit which excites the most comment and yields the largest share of interest is the tank nearest the rearing troughs, holding

the Golden trout. About sixteen of these fish, generally considered the most beautiful of all trout, due to their bright golden and red color, are to be seen actively swimming about. They range in size from eight to fourteen inches in length, the larger ones being somewhat over the average length of those taken from their native streams.

This species was found originally only in the headwaters of the Kern river in the vicinity of Mount Whitney in two small isolated streams, namely, Volcano and Coyote creeks. Since their discovery, the Golden trout have created no little interest and comment and are now being reared in the Whitney and Shasta hatcheries to be planted in many of the higher Sierra streams and lakes.

These particular specimens were taken from Fletcher and Townsley lakes, where they were planted six years ago. Up until this August, both of these lakes and Fletcher creek have been closed to fishermen, while the trout had a chance to become established. Apparently, these waters will be visited by a large number of fishermen next season after they see the size of the trout taken out for exhibit purposes.

The other three aquaria hold Eastern Brook trout obtained from Washburn lake, and Rainbow trout from Merced lake, the Merced river and Lake Eleanor. The latest arrivals are Loch Leven, taken from the Merced river and from Mirror lake. Altogether, there are now on exhibit four representative species of trout caught in Yosemite waters. In time, no doubt, all ten varieties now found within the boundaries of the park can be shown.

The out-of-door display pond, which will make a great improvement in the general surroundings

of the hatchery, is a fairly large sized, kidney-shaped concrete and granite structure with a rock fountain supplying the water from the center. This will be used for a brood pond, holding trout throughout the winter months, and should afford the visitors a good opportunity to see large trout which have been reared in the hatchery. Since so many have asked to see trout older than the ones reared for stocking the streams and lakes, there will soon be available a place where all sizes and perhaps many species can be seen.

## FLATWORMS AND ROUNDWORMS

By Dorothy C. Barber

One day while the Yosemite School of Field Natural History was investigating a pond in Sentinel Meadow, a member cried out suddenly, "I've found a flatworm." Great numbers of these actively wriggling, flattened, dark brown worms were found in the mud at the edge of the pool. Evidently they disliked light, for, as soon as they were exposed, they bored hastily down into the mud again.

Now was this form a true flatworm? Most of us were accustomed to finding true flatworms in cold, fresh running streams, under rocks; this pool was without inlet or outlet and was, consequently, stagnant. The next point to be decided was whether this form was segmented or not, since one of the distinctions between flatworms and segmented worms is the fact that the segmented worms show transverse grooves indicating that the whole body is divided into units; that is, the body is segmented. Even with the naked eye the so-called "flatworm" showed this segmentation. With a hand lens this

feature was still more apparent.

When the worm was held on the palm of the hand, it seemed to fasten itself down by one end and to explore, in undulating waves, with the other. This sucker-like device reminded us of the leeches, and that is what it proved to be—a fresh water leech. On further examination we found the leech to possess not only the posterior sucker for attachment, but a small anterior sucker and mouth combined, through which it could get food from the decaying animal and vegetable matter in the mud, or could suck liquid food from living animals if it should come in contact with them.

On a later field trip, true flatworms or planarians were found. These worms were only one-fourth of an inch long when fully extended, showed no segmentation, moved by gliding slowly over the substratus, instead of looping along by means of sucker, and showed very plainly that they belong to an entirely different group from that of the flatworms.

# YOSEMITE NATURAL HISTORY ASSOCIATION

YOSEMITE NATIONAL PARK  
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YOSEMITE NATURAL HISTORY ASSOCIATION

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Cordially yours,

C. P. Russell  
Park Naturalist



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Dan Anderson