YOSEMITE NATURE NOTES

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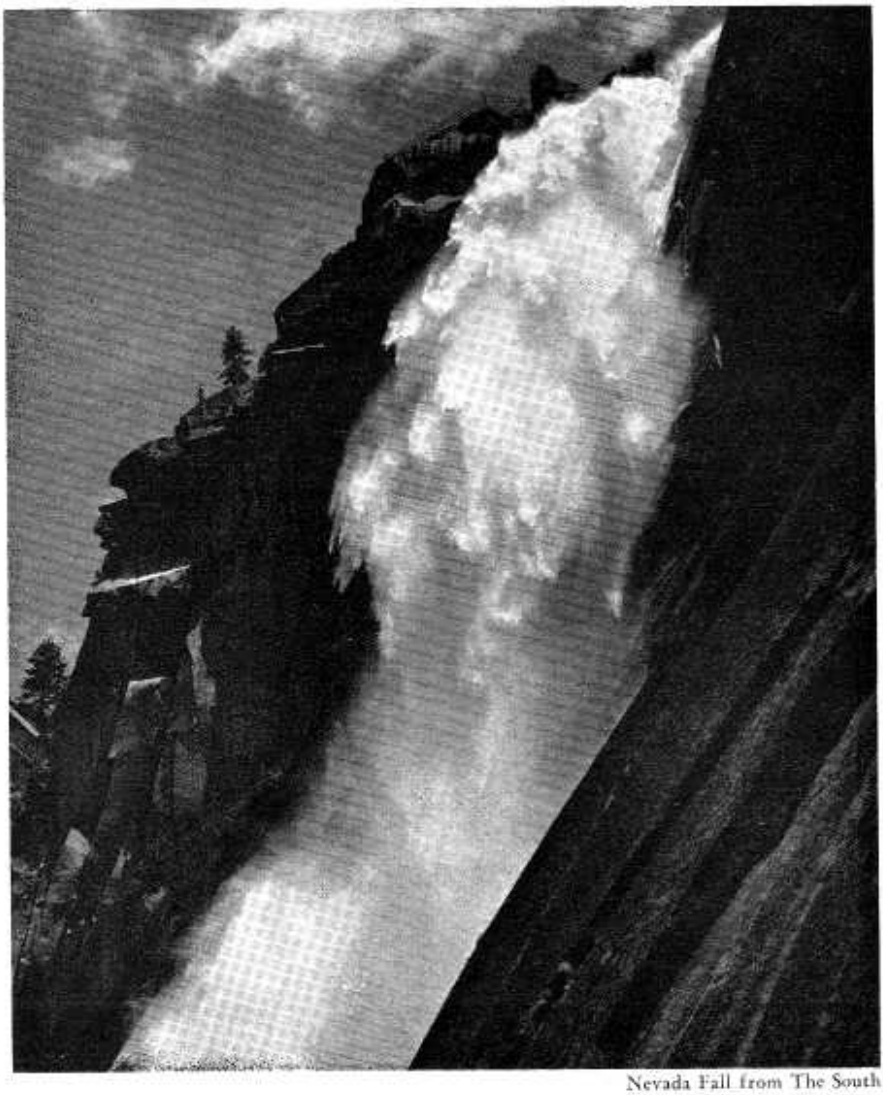

Nevada Fall from The South
—*Ansel Adams*

From "Mammals of Lake Tahoe" by Robert T. Orr. Courtesy of publisher, California Academy of Sciences

California Mountain Lion

"There are possibly 12 California mountain lions in Yosemite National Park. This need give little alarm to the visitor. Never in park history has one molested a human. Only by good fortune are you likely to see one, because they habitually avoid people. They have been seen arong the Wawona road, in Yosemite Valley, and sear Mather. Some times tracks are found near Mirror Lake."

From *Mammals of Yosemite*
by Harry C. Parker

Yosemite Nature Notes

THE MONTHLY PUBLICATION OF
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PREDATORY ANIMALS IN A NATIONAL PARK

By S. W. Elkins, Ranger Naturalist

A national park has many values. Certainly among the foremost is the opportunity for us to watch nature at work undisturbed. Here, within the limitations of the pressures exerted by the presence of the visitors themselves, we can watch the plants and the wildlife exist in their truly natural state. Here all things are protected, not only the deer and the grouse, but the mountain lion, the coyote, and the weasel as well. We have here an opportunity to observe nature, to see how she works more or less without the "help" of man.

Park visitors frequently ask why we do not take measures against coyotes, bobcats, or mountain lions, as is done in so many places. Their reasoning is that predatory animals that feed upon other animals are somehow undesirable. That there might be more deer without the mountain lion,or more birds without the bobcat, and that would be a desirable thing. These people hold their opinion honestly. They may have formulated these ideas from limited personal observation, or through unsupported views of an "old timer" toward these "vermin". Recent extensive studies, however, have thrown new light on the position of the predator in the wilderness.

To understand the role of the predator it will be necessary for us to establish a rather basic biological fact. This fact is that living things, whether they be plant or animal, overproduce. As a result there is a tremendous struggle going on among living things—a struggle in which the winner wins a place in the sun, the loser the oblivion of the forest floor.

Look closely at a meadow. There is only room for so many plants. Thousands and even millions of seeds are produced annually, but there is only light, water, food, and space for a few plants. Some sprout and are eaten by animals, some die out in winter, some of disease and so on so that only the most hardy remain.

Though it is not so easily seen the same thing is going on in the animal kingdom. There are many more "seedlings" than can possibly survive. More young birds—more mice—more deer than there is cover for. Proof of the overproduction of animals can be seen on all sides of us. Consider the deer in the meadow; if each doe of breeding age

A Glacier Point Pine Marten
—Photo by Anderson

had only one fawn a year, and if these fawns all lived the deer would double in number in two years, or increase by 50 times in ten years. If a quail were to lay the rather modest number of 14 eggs every year and if all survived there would be over 3400 lineaal descendents of the original pair in 5 years. Mice, of course, are chanmpions at this. According to Vernon Baily, if you give one healthy pair of mice all the food and shelter they needed, they and their offspring would number 2,000,000 at the end of one year!

Obviously the deer have not multiplied themselves by 50 since 1945, nor have the quail or mice increased up to their astronomical potentialities. The surprising thing is that the more we study population levels of animals in the wilderness the more obvious it becomes that there seems to be a rather definite "optimum number" of animals that can occupy a given area, and that this optimum is seldom, if ever, surpassed whether predators are present or not!

The question then arises as to what are the controls. What sets this "optimum number" for a given area for a given year. Here we get into some of the most complex relationships found in nature. The factors which tip the scales in one direction or another are subtle, and not easily uncovered. The common belief used to be that the principal factor in the thinning of animal population was the predator. Modern studies by Errington, Taverner, and others tend to show the importance of other factors. According to these experts, the key to the population of animals in a given situation is found in the following: The total supply and availability of food; the amount and availability of shelter; presence or absence of diseases and animal plagues; and direct elimination by fighting among the animals themselves. Direct action by predatory animals upon otherwise healthy, well-housed and well-fed animals is rated as a poor last. The action and interaction of these factors is summed up by Traverner when he calls our attention to the fact that all animals produce more than could possibly be expected to survive, and then goes on to say:

"The surplus must be weeded out, if not by one cause, then by another. If one control is reduced, another takes its place; if none other is effective, predation assumes major proportions. When all normal contro

fail disease is almost certain to step in. When a species is scarce, predation is ordinarily a passive factor; when the species becomes common predation increases. When through reduction of other factors the species becomes overabundant, predation may assume major proportions."

Statements such as this strike at the heart of some of the beliefs that have been held by biologists and game managers for years. These findings should cause many to stop and reconsider their actions. As Hamilton says: "'Vermin' have been destroyed for many years under the impression that it will witness a revival of game populations. Alluring bounties, encouragement of vermin campaigns, and the indiscriminate slaughter of predators has continued for years, yet there is little evidence that such wanton killings have increased our game species."

If we can remove or even partly remove the predator from the category of a forest villian, we can gear our minds to different values. As Olson says, "The extermination of predators is no longer an economic problem, for other factors have entered in, factors of scientific, recreational, and aesthetic value." Predators have many positive values. We know that a major part of the diet of predators is made up of animals which are vegetarians. Since man's crops are mostly vegetable, these vegetable consumers include most of the creatures regarded as pests, and any animal preying on them is to a degree a friend of man.

Strangely enough the predator is in some ways an ally of the animals on which he feeds. He eliminates the weak and malformed, thus preventing their breeding to pass on their deformity. He eliminates the sick, thus helping to allay incipient plagues, and over the ages he has played an important role in the improvement of the race as a whole. As has often been said, without the wolf at his heels the horse would not have developed his fleetness, and without the hawk, the partridge would not have developed his camouflage.

In a national park esthetic values are high and we have an opportunity to observe and enjoy many kinds of predatory animals. We may hear the coyote on a nearby slope or watch a bear, skunk, or badger at work. If we are fortunate we may see a golden eagle high on a mountain craig, or see the tracks of a mountain lion left as he made his way along a stream bank. These things have great value—values that are hard to appraise, but values that are part of a national park.

In a national park things live undisturbed, the hunter and the hunted, large and small. All living together as they were intended to live, in harmony with themselves and with the balance of the living world.

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HIGHWAY FUND WAS SHORT IN 1919, TOO

Editor's Note: The following facet of Yosemite transportation history was prepared by the staff of *California Highways and Public Works* and appeared in their issue for March-April 1953. We are indebted to them for permission to reprint it.

With the California Legislature wrestling with the problems of how to provide additional millions to overcome deficiencies on the State Highway System, James R. Wilson, former Sacramento postmaster, and other old-time good roads enthusiasts recall a campaign launched by the Yosemite Valley Highway Association on May 22, 1919, to raise $1,000,000 which, with $700,000 of state and federal money would provide for construction of a paved highway from Merced to Yosemite Valley via El Portal.

The association composed of commercial organizations, civic bodies, and automobile dealers of the State, sponsored a campaign to sell 200,000 certificates at $5 each. Under the plan each motorist in the State (the auto registration in 1919 was 477,450) was asked to subscribe $5, receiving in return from the National Park Service a permit to Yosemite Park, the permit "to be good for any one of the suceeding seasons."

Governor William D. Stephens bought the first of the 200,000 certificates offered and issued a statement calling on public spirited citizens to give their support to the campaign.

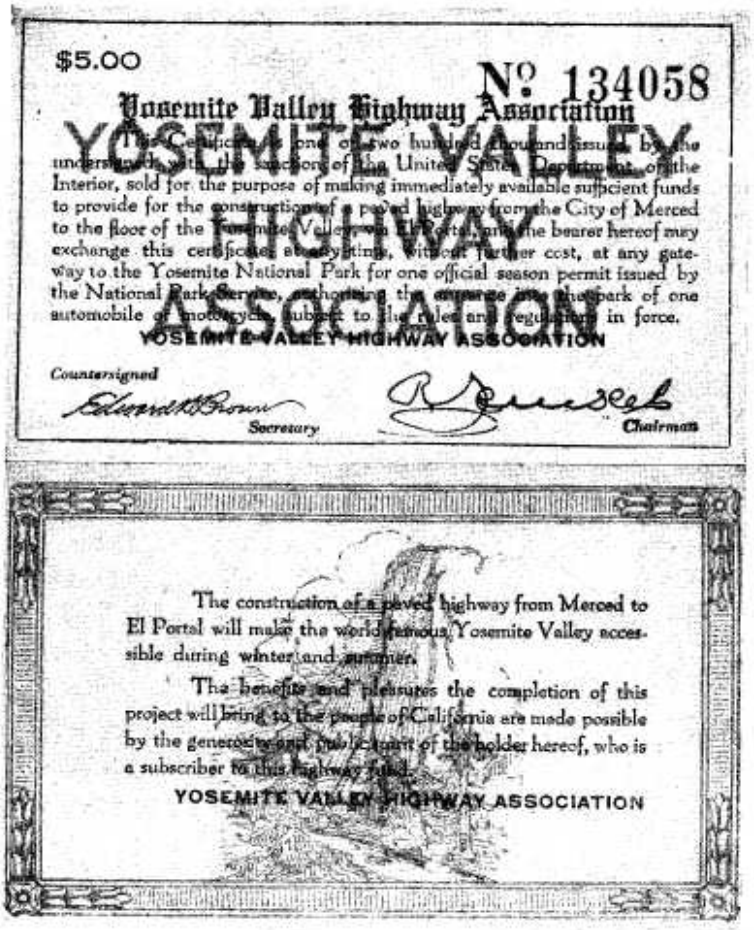
In his book "California Highways," Ben Blow noted that in July 1926, "about $112,000 are being held in trust in San Francisco to finance paving of the Merced to Yosemite Highway. The money was raised in 1919 by automobile clubs and civic organizations by the sale of automobile permits to enter Yosemite Park, under an agreement with the Secretary of the Interior that the money would be held until the State completed the grading. It is proposed to use this fund next spring to defray the cost of placing an oil macadam surfacing on the Merced Canyon section."

About 1,000,000 cubic yards of earth and rock were moved on the Briceburg unit of the project. In addition a crushed rock surfacing, 1 inches thick and 20 feet wide, was applied. Five bridges were necessary across Bear Creek, Slate Gulch, Sweetwater Creek, South Fork and Merced River. The grading, surfacing, and the bridges represented an expenditure of about $1,200,000.

The Chairman of the Yosemite Valley Highway Association was Rudolph Spreckels. He appointed a committee of 28, consisting of H. K. Basford, President of the California State Automobile Association; Frederick J. Koster, John S. Mitchell, Richard Prosser, Robert Newton Lynch, Baldwin Vale, Edward H. Brown and Percy Towne of San Francisco; Joseph E. Caine and Robert W. Martland, Oakland; Watt L. Moreland, W. H. Keller, H. D. Darlington, P. H. Greer, Fred L. Baker, and Louis A. Handley, of Los Angeles; Wm. Tompkins and Melville Klauber, San Diego; L. A. Nares and Mayor W. F. Toomey, Fresno; George Wright, Santa Barbara; Dudley

Zeltzer, Redding; John R. Graham, Merced; W. G. Scott, Bishop; C. A. Barlow, Bakersfield, and Frank Miller, Riverside.

Phillip T. Prather, automobile dealer of San Francisco, was chairman of the central coast counties section of the association in the campaign.



NOTES FROM MY TUOLUMNE JOURNAL

By William L. Neely, Ranger Naturalist

I discover a growing distance to what the newspapers call "pressing affairs." They are only pressing in that they flatten one. A camper left us several daily papers and magazines and I learn that since June, when I last saw the news, that I have missed little and gained much. My affairs have been "as two or three, and not a hundred or a thousand." The Daily Press is too much a weight upon the chest, already weighted with the press of yesterday's seven thousand years. I await the next glacial age which will wipe the slate clean and the ink stains too. Long ago I subscribed to the "Tuolumne Millenial News" and await the next edition, which is printed in stone and distributed by the ice.

Today I noticed how quietly Autumn has invaded the meadows. They are all brown now, sedge and grass alike. The little bilberries bravely show our only fall brilliancy, for seen against the sun (and you must lie on your stomach to see this) their little mouse ear leaves are reddened with the frost, while the Brewer's calamagrostis has spread its misty purple cloak, so that the meadows wear a "coat of many colors."

We make such plans for Autumn, even to flee it and return to summer by going lower, but down below summer only shrivels and estivation is but an alternative to hibernation. Somehow I must slip in between these two sleeps, dodging one or the other to stay awake, upsetting my neighbors below from their siesta or rousing the bear and squirrel upon my return to the mountain.

The campground has thinned out a bit with this colder weather and conditions are returning to normal that is to say, to their normal wildness. The grass blades bent over by passing feet now can slowly bend back erect again, the trout venture out from the rocks shadows in the pools, and the bear, after a diet of campers' food supplies, rediscover the flavor of gooseberries, elderberries and tadpoles.

I spent the inestimable worth of a Tuolumne day at my desk writing while outside the mountains glittered in the sun, the river flowed and the meadows basked in peace. I feel I have not made the most of this day. My pile of unanswered correspondence is diminished, but so has the day diminished to evening. But, to be sure, there are a number of things I have not done but let alone—"for a man is rich in proportion to the number of things which he can afford to let alone" says my sage and mentor.

Thus I sit at the end of another Tuolumne day, smoking my old pipe, bouncing Dana on my knee and watching Christian play with his wooden choo-choo train, while outside the peaks take on an Alpen glow of autumn red.

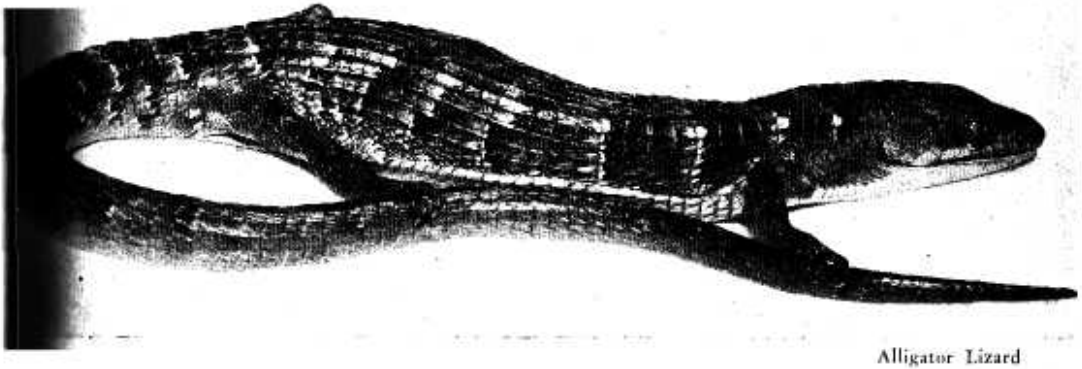
A SWIMMING LIZARD

By Henry G. Weston, Jr., Ranger Naturalist

In the Yosemite region the nine varieties of lizards present are normally terrestrial and inhabit rather dry areas. With this thought in mind, the writer and another naturalist made a rather surprising observation while on a recent visit to Black Spring in Yosemite Valley: As we approached the spring we had a glimpse of what appeared to be a snake slipping into the water. There it rapidly disappeared under the submerged roots of an incense cedar where the spring welled up from under ground. On closer inspection we could see, under the water, the outer few inches of a tail. When we reached in and pulled it out, not a snake but an adult Sierra alligator lizard appeared. Neither of us in the field observation had ever seen this species of lizard in water. Our curiousity was aroused so we placed it a few yards downstream in full view and watched it swim rapidly back up and out of sight again among the submerged roots. It swam upstream by holding the limbs back against the body, undulating the tail and body back and forth.

The alligator lizards are the largest lizards in the Yosemite region, sometimes attaining a foot or more in length. Their resemblance to an alligator, both in appearance and supposed temperament, apparently is responsible for the common name.

Normally ground-dwellers, alligator lizards seldom go far from protective cover. As they move they usually progress rather slowly, although when necessary they can move with some speed. Recorded methods[1] of self-protection include climbing trees or bushes, crouching motionless, hiding in holes or among dry leaves, or exceptionally, in the water. Here was seen an alligator lizard resorting to a rather extreme type of protective cover. All the more reason perhaps for calling it by this common name since the true alligator resorts to water for cover.



Alligator Lizard

From Van Denburgh's The Reptiles of Western North America.
Courtesy of the California Academy of Sciences

CIRCUMSTANTIAL EVIDENCE

By Woodrow W. Smith, Ranger Naturalist

Stories of nocturnal depredations of bears are popular topics of conversation between campers and ranger-naturalists. The camper will often be able to speak from first-hand experience—a fleeting glimpse of the marauder lumbering away from a garbage can or a scene of devastation in the vicinity of the camper's larder. From those of the passing multitudes who have only a few hours to spend in the park and who have little opportunity to gain the camper's experience come the daily, and constant, queries, "Where can we see the bears?" It is difficult to satisfy the curiosity of the casual visitant to the natural scene with the offhand answer, "Oh, they will be around at night to visit your garbage can." Yet there isn't much more one can say to the person who has but a glancing interest.

For the observant person who can "read" animal signs in the forest, the following bits of evidence may tell a story:

The Sentinel Dome trail ascends the hill above the Glacier Point hotel and forks to the right from the Illilouette trail after a climb of about 50 yards. As the hiker begins to traverse the west slope and enters a grove of white fir (*Abies concolor*), his roving eye may notice a tree favored over those surrounding it as an apartment house for woodpeckers. From eye level up to 30 feet one can count 8 skillfully chiseled "perfect circle" entrances to next cavities. For two weeks during the summer of 1953 I passed the tree on my way to and from my daily duties at the Point.

It was obvious that at least one of the "apartments" was occupied from the activities of parent red-breasted sapsuckers flying from the tree when disturbed by passing intruders. Intermittent soft rapping and warning "churr" calls were messaged from nearby as one stood close to the lowest nest hole to listen to the rustling and faint peeping noises inside. The young sapsuckers evidently resented the interruption of their feeding. In spite of the daily disturbance, by the end of June the job of raising the young was completed, and the family had moved on.

Again in June 1954 the lowest hole in the tree, just six feet up, was occupied. In spite of the usual parental warning, a disobedient fledgling thrust himself part of the way out of the hole to witness the intrusion that was upsetting his feeding schedule. His dull red head, neck, and breast feathers and large size—nearly the size of a robin, indicated that he was

Sierra yellow-bellied sapsucker (*Sphyrapicus varius daggetti*).

Resolving to attempt a photo of e feeding activities, I continued on y way. The morning sun would be ist right about 9 the following morn- g.

But at 9 a.m. when the would-be notographer came with tripod and amera, there was no parental larm from the neighboring tree, no fant bird peeping or scratching. At e base of the tree was part of the ody of a young bird, some of the ing and tail feathers and the head. lready the carpenter ants were eaning up the scene. A litter of soft y-rotted chunks and splinters of in- rior wood was scattered around at e base of the tree. Where the next le had been located was a uged-out area 8 inches wide and foot-and-a-half long. Barkscratches either side of the tree ascended the cavity.

Though there were no witnesses the drama which had been thus ncluded at trailside, the evidence ints an accusing finger at a bear r the culprit. A notorious young arauder, 1½-year-old "Little Joe," uld very well have been guilty. t it is just circumstantial evidence pick on the "juvenile delinquent" the area. A mother bear and two bs frequented the pathways in the rly morning hours as often as ittle Joe," whose schedule for gar- ge collection is much earlier in evening.

For the bear there was really no me involved; in fact the raid on sapsucker nest was a much more normal act than garbage feeding. In his search for food a bear will pull rotted stumps apart for grubs and scale the bark from downed snags. Old logs are ripped open in search of ants, so what would be more normal than the investigation of the perilously low bird nest? The rotted nest areas of the white fir were easy for a climbing bear to tear out. Perhaps for the parent birds it was a lesson learned the hard way. On the bear's side of the story, it is an indication of wide variation in his choice of food, and a record that he will kill for food, though many of the animals he eats have actually been killed by others.

Tree With 8x16 inch Bear Gouged Hole