

# **Yosemite Nature Notes**





Photo by Anderson

Ranger Naturalist serving the public at Yosemite Museum information desk.

**Cover Photo: Cathedral Rocks, autumn tree, Yosemite Valley.** By Ansel Adams from "Yosemite and the Sierra Nevada," text by John Muir, 64 photographs by Ansel Adams. Reproduction by kind permission of Houghton Mifflin Company.

# Yosemite Nature Notes

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## **A MOONLIGHT HIKE TO HALF DOME**

**By Kathleen Barnes, Field School 1949**

Somehow a hike made by moonlight, even though the trail may be familiar by daylight, takes on the qualities of a new experience. Therefore it was with keen expectations that I anticipated a proposed moonlight hike to Half Dome. Ranger Naturalist Harold Perry, Supervisor of the Yosemite School of Field Natural History, led the Field School group on the hike.

The party consisting of Mr. Perry, 12 Field School members and 5 guests left Happy Isles at 11:30 p.m. Friday night July 15. The night was quite warm, and although nearly everyone wore a sweater as we started up the trail it soon became quite apparent that it was unnecessary. The moon had not risen as we began the hike, and had not yet appeared when we reached the Vernal Falls bridge; as the trail was quite dark, the group thought it best not to attempt the steps of the Mist Trail, but went by way of the horse trail, which although one-half mile farther is not as difficult a climb.

By day the trail seems comparatively smooth and wide, but by moonlight, edges of large rocks imbedded in the trail leap up to strike unsuspecting toes, and trees which seem far off the trail by sunlight, seem definitely to have shifted position to the center of the trail.

In spite of the obstructions in the path, most of the hiking was done without the aid of flashlights, and by 12:30 a.m. the moon had risen,

making the use of a light unnecessary except in the more densely forested parts of the trail.

Just past the Vernal Falls bridge we first saw the lights from the Glacier Point Hotel high above. Farther on, just below Panorama Cliffs a rustling of bushes at the side of the trail, brought all of the flashlights in the crowd to play on the spot from which the sound came. There, caught in the beams of light stood a mule deer doe. When the lights were turned off she raced away through the underbrush.

The rest of the trail up to Nevada Falls was uneventful and somewhat tiring, and by the time we had reached the falls everyone was ready for a rest and a drink of cold water.

After we reasted at Nevada Falls for a few minutes, we climbed up and over the Little Yosemite terminal moraine, and dropped down into Little Yosemite Valley. Here the trail passes through dense lodgepole pine forest; however, as the trail is very smooth and level we made excellent time for about 2 miles until the trail began to climb again by way of a series of switch-backs, near the old High Sierra Camp on Sunrise Creek.

From here on to the top of Half Dome, except for a brief level portion, the trail climbs steadily, and it was now that the tiring aspects of such a trip began to be felt.

We climbed without stopping until we reached the place where the next to the last water is located. Here we stopped and rested for the last time until we reached the base of Half Dome.

As we began the last portion of our climb, we saw that the stars were beginning to fade, and that a faint pink glow was appearing in the east. Since one of the objects of the trip was to see the shadow of Half Dome on Glacier Point, visible just at sunrise, we pushed on without further stops.

The trail up and over the Subsidary Dome, which consists chiefly of flights of stone steps, is probably the most fatiguing part of the trail. Here a rope anchored to a gnarled Jeffrey Pine aids those who need the help.

At the base of Half Dome we made our last rest stop at about 4:15 a. m. Saturday morning. Here we ate some of the lunch that we had prepared. The sky was definitely becoming lighter, and the mountains to the east were no longer silhouettes, but were beginning to show real form. As it was getting rather late we again started on, beginning the last and most treacherous part of the hike, the climb between the cables up the side of Half Dome.

This is of course the most spectacular part of the entire trip. The last 900 feet is made over a polished granite surface which rises at an angle of about 45 degrees. For this part of the climb one relies not only on the legs and feet to aid in the ascent, but also on arms and hands to help pull one up the smooth surface by holding on to the cables. By stopping frequently for short periods, we made the top of the Dome by 4:45 a. m.

We were in time. The sun had

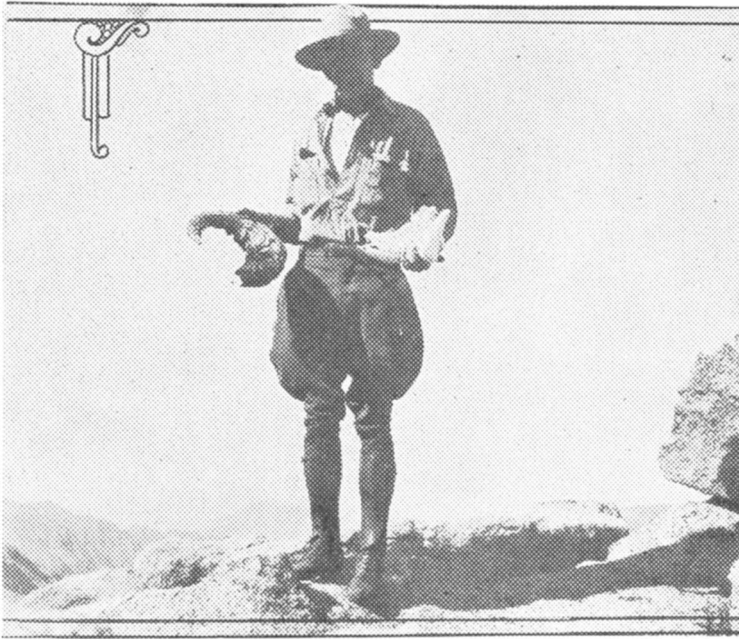
not yet appeared over the eastern mountains, but in a few short minutes the first bright rays appeared, and a few minutes later the sun shone brightly on the tops of the peaks.

By 5:00 a. m. the shadow of Half Dome stood out clearly on Glacier Point, and the photographers in the group were able to get the pictures for which we had climbed 8 long dark miles.

We then ate breakfast while viewing some of the most beautiful scenery in California. The view of the valley laid out below you is quite spectacular and thrilling. However, to me the most thrilling sight was the view of the High Sierra to the east.

After everyone had eaten the last of the breakfast which he had brought, several of the group explored the top of the dome. Although from the Valley the dome appears to be a smooth half sphere, in reality there are about 13 acres of comparatively level granite on the summit. Although some of the party were energetic enough to walk around, most of the group felt that now would be a fine time to catch up on lost sleep. A new arrival would have thought it very strange to see 12 or more bodies stretched out on the cold granite fast asleep. At 6:15 a.m. the party started down the face of Half Dome slowly to hike their way home again. After climbing Half Dome the trip down to Happy Isles by the same route seemed somewhat anticlimatic, and very hot as we had climbed up in the cool of the night.

We arrived at Happy Isles at 10:30 a.m. tired, hot, dusty and ready to consume several popcicles apiece. It had taken us 11 hours to complete the trip, which although tiring is one of the most satisfying that I have ever made.



C. P. Russell Photo

Ranger "Billy" Nelson, now retired holding big horn relics found on one of Yosemite's peaks.

### MOUNTAIN SHEEP INCIDENT

By C. E. Crabtree, Ranger Naturalist 1947

Upon viewing the display of the Mt. Lyell Mountain Sheep in the Yosemite Museum discovered by Park Naturalists Ed Beatty and Bert Harwell, I began to wonder about the Sierra bighorn. In going through the files, I found that it is a distinctive species (*Ovis canadensis sierrae*) and that there are a few specimens left in the high Sierra.

I wondered about the near extinction of the Sierra bighorn. My grandfather, William Newton Crabtree and his brothers in the 1860's and 1870's after the summer work was done and after equinoctial storms in the Mt. Whitney area, would go to a beautiful meadow at the base of Mt. Whitney and establish headquarters for their bighorn hunting expedition. This meadow located on the present Muir Trail became known as Crabtree Meadows to the hunters who later followed the

Crabtree brothers to this hunting region.

Grandfather found that the flesh of the Mountain Sheep was sweet and tender and the men relished it. The largest number that his party ever killed was eighteen. Yet he reported many bands with as many as 50 or 60 sheep in each.

The last sheep were killed in and about Crabtree Meadows in 1889. This information is attested to by the son of William N. Crabtree, A. P. O. Crabtree, father of the writer. The United States Geological Survey has placed on its maps the name Crabtree Meadows.

One relic which dates from those early days is a muzzle loading rifle which William Newton Crabtree made and which still shoots accurately. It is in the possession of M. L. Crabtree of Lindsay, California.

**LIGHTNING STRIKES A TREE****By Ranger Naturalist Allen W. Waldo**

In June, 1949, the writer accompanied Mr. and Mrs. and Mrs. A. W. Hood on a trip to observe some glacial deposits. We went to the summit of the ridge nearly due south of Sentinel Dome and overlooking Illilouette Creek. Here the writer observed a large, rather isolated Jeffrey pine which obviously had very recently acted as a lightning rod.

The evidence of this consisted of a white streak extending from the

top to the base of the tree. This streak had been formed by the complete removal of all bark through the cambium layer. The bark had been blown from the tree in a band almost uniformly five inches wide but varying an inch or two either way at a few places. Big chunks of bark had been blown to distances of 25 or 30 feet from the tree.

The fact that the lightning seems to have followed along the cambium layer is shown by the phenomenon that through the length of this gouge all bark was removed, but almost no wood of the inner tree was shattered. There was some shredding of the wood of the inner trunk into a few long, slender fibers, but never to a depth of over one-half inch. A few of these shreds hung out from the trunk.

The path of the lightning down the trunk was also of interest. It came down from the top in a very slow spiral, turning toward the right of the observer, and continuing for a distance of about twenty feet. Then it started spiralling slowly in exactly the opposite direction until it reached the ground. There was no evidence of any melting of the mineral soil at the base of the tree. Whenever the lightning streak came directly above a branch, as it did several times, it bent around each such branch and continued its path downward directly below the branch. The branches were never shattered or broken in any way.

It is quite clear that an injury of this kind need not be fatal to the tree, since there is a relatively narrow strip which needs to be healed. Most of the tree is still in a perfectly healthy condition.



NPS Photo by Anderson  
Jeffrey Pines

Another interesting observation concerning the action of lightning was made by a group of four fishermen who were along the Gaylor Lakes on the afternoon of July 13, 1949. They had fished down from Middle to Lower Gaylor when it became evident that a storm was nearly upon them.

The four men stopped fishing and came together near a group of large boulders in the open meadow. One of the men went to the other side of a large boulder and washed his feet in a small stream before joining the rest of the group. He had barely seated himself with the others when lightning struck in the meadow just the other side of the boulder from the group and where the fourth man had previously been seated while washing his feet. This was within 25 or 30 feet of the group.

According to the men there was no visible flash. There was a tremendous roaring noise with the strike. The ground was dug out in a group of furrows spreading out in all directions, like crooked spokes, from the point of impact. A line of holes like those of a ground squirrel were

dug. Stones six inches to a foot in diameter were thrown for considerable distances, and dirt, soil and smaller rocks were thrown forty feet or more into the air. One man, who was standing, was knocked to the ground and rolled over. The others, who were seated in wet clothes and who wore rubber soled shoes, noticed a tingling in their heels for a considerable time following the strike. They felt nothing else. There was almost instantly a strong odor described as smelling like sulfur dioxide and followed immediately by an odor which smelled like a powder blast. The latter was probably ozone, but the writer does not understand any reason for the first odor.

All four men barely missed a direct strike, and one had just moved in the nick of time. There seems to be no evidence to show why the lightning should have struck at this particular place in the open meadow. The men do not believe that the large boulders stood enough above the general level to attract the electric discharge. The boulders were none of them struck, and no melting of the soil was observed.

## FALLEN MONARCHS OF 1949

By James W. McFarland, Ranger Naturalist

Two more giant sequoias fell in the spring of 1949. However, one of these great trees was already dead. It had been killed by a bolt of lightning which topped it just a hundred feet above its base.<sup>1</sup> For perhaps 50 years it had stood there, propped up by another giant, injured, but not killed by the same bolt of lightning.

Finally, on April 19, the pull of gravity forced them down, tearing up their great roots. The dead tree

fell underneath, while the still living larger one broke over its fallen partner, exposing a jagged cross section of red wood. This wood, bright pink when newly broken, will turn to a velvety red and finally to black, a result of oxidation, on exposure to the air of the red gum which impregnates the heartwood. Located across the road from the Telescope Tree, they are an interesting exhibit to visitors.

1. Death of a Giant Sequoia, *Yosemite Nature Notes*, January 1949, Vol. 28, No. 1, pp 2-4.

**ANIMAL SIGNS**

**By Ranger Naturalist George C. Turner, Jr.**

The natural inquisitiveness of the general public toward the numerous animals which they may encounter while in our National Parks has led to the publication of many articles on how to recognize these creatures when they are seen. Unfortunately, most animals will have eluded their observer before identification is made possible. Thus, the need of supplementing sight recognition with that of sign recognition has prompted this article.

Tracks, scats, hair, homes, and tooth and claw marks are some of the more obvious "calling cards" left by animals. Although published studies in each of these categories are available it is far more gratifying for the would-be naturalist to make his own observations.

A superabundance of patience, time and ability to observe are the first ingredients necessary for such a study. A faculty to detect excellently camouflaged dens or perceive minute movements which may give away an animal's presence, all go into the requirements of the observer. Thus, the best information is obtained if the animal can be observed in the process of making these signs. Preliminary information on habits and habitats of the various creatures one is apt to meet should be thoroughly investigated.

A method of procedure in this new adventure may commence with observations on the activities of a common mammal such as the California Gray Squirrel (*Sciurus griseus*). This chubby little fellow may be seen hopping about the limbs of a nearby oak or pine tree on the floor of Yosemite Valley, or perhaps twenty feet away on the ground munching on some tidbit.

These facts may be immediately detected: He is both a tree and a ground dweller, and an eater of plant food.

Upon finishing the snack it may be observed that his departure was composed of a combination of a few alternate steps and a number of paired bounds. The tracks thus left show us that this animal displays both the tree dweller habit of pairing the fore and hind feet in a series of bounds, and the ground dweller characteristic of alternating fore and hind feet while walking.

Closer inspection of the individual footprints would show us that each of the forefeet leave only four toe marks while those of the hind feet display five distinct marks.

If the item on which he was gnawing is recovered we may notice that the tooth marks indicate a needle-sharp set of incisors. These finely pointed teeth leave scratch-like marks on the foodstuffs, i.e. acorns, pine-nuts, conifer bud clippings, etc. These marks differ from the beaver-like results which mice leave on seedlings, or the neatly cut stubs left by rabbits (Pearce).

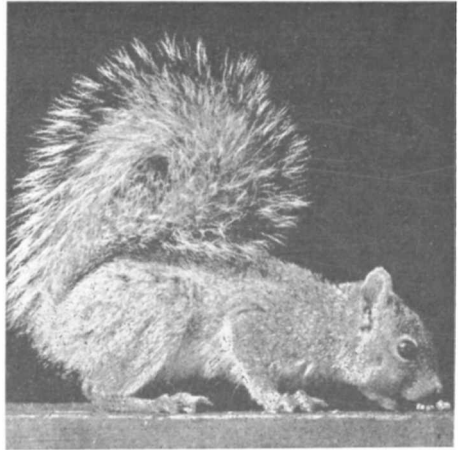
Then perhaps if the particular point of ascent on a tree is noticed we may be fortunate in recovering a few hairs from his fur left on the rough bark. A general observation of these hairs would indicate their grayish coloration and general length. If a more absolute identification is desired the collector is referred to various detailed microscopic studies (Mathias and Bachrach).

If your eyes are sharp a close scrutiny of the immediate vicinity

may disclose a number of closely grouped pellets or scats. These small, slightly tear-shaped fecal outputs ( $\frac{1}{2} \times \frac{1}{4}$  inches) are sometimes the only evidence available as to the relative abundance of this animal in an area. Next to tracks, scats are by far the most abundant evidence in the field of any resident or transient animal. Unfortunately, few studies are available on this particular phase of animal identification (Seton).

Constant vigilance may reward the observer by disclosing the well camouflaged home of our subject. The nest is usually situated high in the uppermost branches of a tree. Its general appearance is that of a large, leaf-covered bird's nest with the addition of a roof (Storer).

Thus we see the application of these various studies as they may be related to one animal. The vast field which lies ahead for the interested observer is unlimited in its



Anderson Photo

scope. The article submitted here has been necessarily short due to the very nature of this publication. It is hoped, however, that some stimulation has been effected in those readers who desire adventure into a relatively undeveloped field of natural history.

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## THE OYSTER SHELL EPIDEMIC

By Richard G. Lillard, Ranger Naturalist

Oyster shell scale (*Lepidosaphes ulmi*) remains a major force in the destruction of shrubs and trees in Yosemite National Park. This Asiatic pest, now world wide in distribution, entered New England in 1794; reached the Mississippi River by 1860; got into Yosemite sometime later, and was described in 1928 by E. O. Essig of the University of California, after it had caused conspicuous damage to many species including willows and the black cottonwood (*Populus trichocarpa*) on the Valley floor. For two decades ghost groves of cottonwood snags have been a feature of the Valley and of the Mirror Lake delta.

The dead trees are beginning to fall down. Scattered survivors bear dead tops and limbs and also patches of lush seasonal growth. Only in new areas of disturbance, like the Wildflower Garden, or in isolated instances such as far back in Camp 19 or in alcoves on Sunnyside Bench, are there thriving individuals free from dead limbs.

The scale continues locally to infest bigleaf maple (*Acer macrophyllum*), alder (*Alnus rhombifolia*), and other woody plants. The red-buds (*Cercis occidentalis*) near the Yosemite Museum doors were first reported in 1945 as subject to attack. They are newly infested but show no signs yet of ill effect. Old clumps of lilac (*Syringa vulgaris*) west of the church



Photo by Anderson

in the Old Village have been partly killed back.

The insect is killing willows in other watersheds of the park, as at Wawona Meadows, where the field school of 1948 observed the dams of the golden beaver (*Castor canadensis subaurotus*). Emil Ernst, park forester, reports the killing of willows in Empire Meadows. Frank Patty, forester for the Bureau of Entomology and Plant Quarantine, reports that the scale is killing Ceanothus along the Chowchilla Peak road just outside the park.





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ASSOCIATION

Yosemite National Park, California

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