YOSEMITE NATURE NOTES

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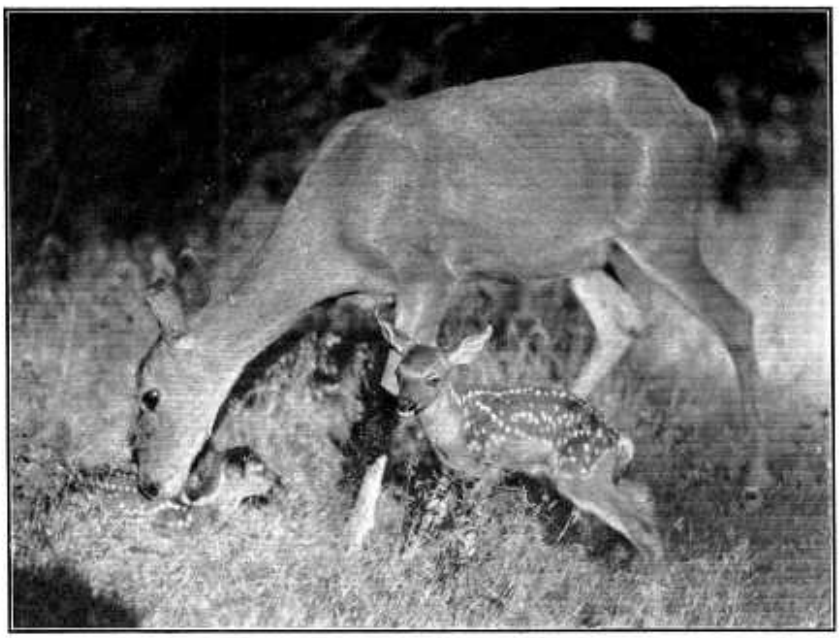

Yosemite Nature Notes

THE MONTHLY PUBLICATION OF
THE YOSEMITE NATURALIST DEPARTMENT
AND THE YOSEMITE NATURAL HISTORY ASSOCIATION

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STRANGE INCONSISTENCIES IN LIFE ZONES

By Ranger-Naturalist Enid Michael

At 4,000 feet elevation the Yosemite Valley lies in the Transition Life Zone, with the Upper Sonoran Life Zone below its western boundary and the Canadian Life Zone above the valley rim. With sheer walls rising 3,000 feet and with denizens of the upper life zone standing on the very brink, it is not surprising that an occasional individual should drop down into the valley. And then, too, there are the many streams that come tumbling into the valley from the higher life zones. Seeds carried by these streams lodge and gain roothold on the valley floor. Wind also must play a part in carrying seeds into the valley. In any event, trees that are generally considered as belonging in the Canadian Life Zone do occur on the floor of the valley. For instance, Lodgepole Pine is a pine from the upper life zones that is common on the floor of the valley both in colonies and as scattered individuals. These pines apparently do as well here as at higher elevations. The Jeffrey Pine, another pine from beyond the "rim," is common in certain sections of the valley, mostly along streams, as though the seeds had been transported by the water route. But there are also scattered individuals, grand specimens, that stand well back from any stream. The seeds that started these stray individuals may have been carried by either birds or wind. The Jeffrey Pine is considered by some botanists as a variety of Pinus ponderosa. However, these two trees grow side by side in the forests above the rim of the valley, and yet there is no apparent evidence of hybridization which would seem to indicate that they should be recognized as full species.

On the floor of the valley the Sugar Pine is represented by several grand old trees and by a number of young fellows that are just getting their start in life. At 4,000 feet in Yosemite Valley, these pines are about 1,000 feet below their natural altitude for this section of the state.

Red Firs also occur on the floor of the valley, and these trees are about 3,000 feet below the range of their best growth. A drop of 3,000 feet is apparently more than they can stand, for the Red Firs on the floor of the valley never live much be-

yond twenty-five years. For ten or fifteen years they seem to prosper, and beautiful little trees they are in their early youth.

For twenty years there was a grove of aspens on the floor of the valley, but these trees finally died off, and no new ones have come to take their place.

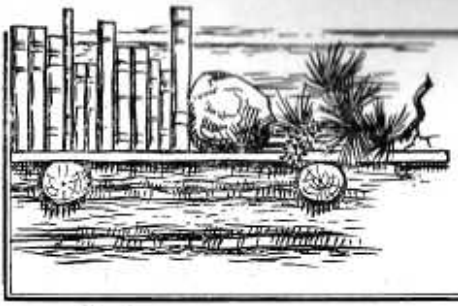
For years there were three Sierra Junipers on the floor of the valley. Two were in public camps where human associations proved too much for them—they were trampled and abused until they finally "gave up the ghost." The third juniper was off the beaten path, down the valley near the aspen grove. We had been watching this tree for a number of years, and when last seen it appeared healthy and contented. Then came the year when we went down for a visit with this juniper to find that it too was no longer there.

It is easy to see how trees above the "rim" might scatter on the floor of the valley. Trees standing on the brink send their seeds winging away on the wind; those standing along the streams cast their seeds upon the waters, but what about the plants from the lower life zones? How do they become established on the valley floor? Poison Oak, for example, is quite common below the lower end of the valley where the Merced Canyon begins to pitch off toward the low country. It does not occur on the floor of the valley. However, it does leap completely over the valley, and there is a prosperous colony in Tenaya Canyon a couple of miles beyond Mirror Lake.

Buckbrush Ceanothus makes a much longer jump. This shrub of the Upper Sonoran Zone, common at an elevation of 2,000 feet, leaps over the valley to occur in a dense thicket on the south facing slope of the Merced Canyon above Vernal Fall, at an elevation of more than 5,000 feet. And by the way, it is interesting to note that the wren-tit, a bird that keeps strictly to the Sonoran Zone, has followed this bit of Sonoran Zone flora on its climb of 3,000 feet into the mountains. This shrub and this bird are 3,000 feet above their natural habitat.

Another shrub of the Upper Sonoran Zone that behaves in a peculiar manner is the Syringa. Down in the district above El Portal where it belongs it grows out in the hot sunshine, but in the colonies of plants that have found their way into Yosemite Valley grow on the cool south side of the valley in the shadow of the great south wall. None occur on the north side which is the warm side.

Noting the behavior of the above mentioned trees and shrubs, I am surprised that a California Nutmeg has not strayed into the floor of Yosemite Valley. Below the Pohono Bridge on both the north and the south wall of the canyon it does occur at elevations higher than the valley floor. Foxes, coyotes and coons plant wild cherries, and bluebirds plant mistletoe. It would seem that the attractive looking fruit of the nutmeg might induce some bird or beast to plant a few of these trees in the valley.



Book Notes

A YOSEMITE POCKET BIRD BOOK

By Harry C. Parker, Junior Park Naturalist

Thousands of Yosemite visitors have purchased copies of the several editions of "Birds of Yosemite," a special number of Yosemite Nature Notes, which was revised and reprinted in March, 1942. This is a good testimonial of its value to those who desire a publication which deals solely with the birds of the park.

Perhaps others have shared the wish of the writer that the information contained in the above-mentioned pamphlet could be obtained in a form that would easily fit the pocket without folding, and therefore be somewhat more convenient for use while actually in the field. This can be attained by making your own notebook, utilizing the material already printed in the bird number of Nature Notes.

First, select the size page desired —probably three by six inches. Then get a loose-leaf notebook cover of proper size which will take up to a half-inch in thickness of paper. Next, cut out the description and picture of each bird and paste them on the sheets of paper, one species to a sheet. In some cases, it will be necessary to trim closely in order to fit the illustration on the same page with the description. Obviously, you will need to have two copies of the booklet, in order to cut out the complete text for each bird and paste it down, since it is printed on both sides of the paper. Install the sheets in the cover, and your notebook is ready for use.

In the writer's notebook, the first seven sheets are taken up with the checklist, cut into sections. The sections are too wide for the sheet, so the extra paper is folded over and the fold protected with cellophane tape. To cut down bulk, it is best to alternate the side which is folded over on each sheet. You will want to have the checklist with you in order to look up the status of a given species on the park list, or to see what the possibilities are when you have identified an individual as to family or genus.

This type of notebook has two advantages in addition to the convenient size: In most cases there is room for marginal notes about each bird

(the back of each sheet is blank for further notes); and the loose-leaf feature enables one to take into the field only material that is likely to be read: e.g., one can leave the winter bird pages at home in summer.

WOODPECKERS

By Ranger-Naturalist Enid Michael

"California Woodpeckerl a great increase in numbers during the last two years. A number of colonies on the south side of the river."

The foregoing statement is quoted from the Yosemite bird report for the month of May, 1941. At the time that was written it was thought that the California Woodpeckers were well on their way, after many years of absence, to once again establishing colonies on the south side of the valley. The many ancient "cupboard trees" to be found there indicated once prosperous times for the California Woodpeckers in that section. These trees, however, had long been deserted; to my knowledge none has been used for over twenty years. Of course one reason for this is that the California Black Oak groves are no longer what they were, as many of these trees, like our meadows, have suffered from competition with the conifers. However, there is no apparent compassion in the struggle for existence. Yet the re-establishment of the several colonies of California Woodpeckers in that section last spring, as already indicated, seemed to promise a brighter outlook for these interesting birds insofar as the south side of Yosemite Valley was concerned.

By fall, however, the situation changed, and my optimistic outlook had to be greatly modified. Failure of the acorn crop had ruled against the woodpeckers, for the Canyon Live Oaks were absolutely barren of acorns, and the California Black Oaks were but little more productive. Among groves of the latter species a few scattered trees bore a light crop of acorns which the woodpeckers stored hastily. Because of this scarcity of food but few woodpeckers remained in Yosemite Valley during last winter, and after the middle of September none was observed on the south side of the river.

In years of plenty the California Woodpeckers willingly share their store of acorns with the Blue-fronted Jays, but last winter it was a differ-

ent story. Any food the jays got from the woodpecker "cupboard trees" had to be taken by stealth.

In many respects the California Woodpeckers are among the most resourceful of our birds. Their habit of storing food against the "rainy day" is certainly a sign of intelligence, and thrift is a habit we are taught to admire.

Moreover, the unorthodox practice of polyandry as a social custom among the California Woodpeckers seemingly rebounds to the good of the family. With two or three male birds all sharing the work of feeding the young of one female, the fledglings are assured of plenty to eat, and the work need not lie heavily on any particular parent. There is no overworked and tired mother in the California Woodpecker family! In fact the woodpeckers go about their work joyfully either when feeding young in the spring, or when gathering their store of acorns in the fall. "Many hands make light work" is the old saying, and this seems to be true in the woodpecker family. In early spring when drilling a nesting hole, I have seen male California Woodpeckers shouldering one another for the privilege of doing their share of the work.

In spite of the necessary work to keep well fed and comfortable, the woodpeckers have plenty of time to play. In the spring they go bounding through their oak orchards in games of tag, the female leading the way, followed by two, or three, or four ardent admirers. It is not only in the spring, however, that they find time to play—any sunny day in midwinter is likely to be a play day. Wet weather the California Woodpeckers do not like. On rainy days they look out from the doorways of their snug winter quarters and voice a protest to the wet world.

Now in the midst of another summer, we are hoping that the oaks will yield a beautiful harvest of acorns so that large numbers of California Woodpeckers will again be present in the valley.

OBSIDIAN ARROWHEADS

By William Bennett, 1941 Field School

"Wah-Hoo!" a member of the Yosemite Field School straightened his aching back and grinned. "Okay fellows, we can quit any time, I just found a beauty."

Four other field schoolers who had been slowly walking over a piece of ground covered with pebbles and sand walked over to examine the find. It was a small, fragile looking arrowhead, a perfect "bird point," so thin it was translucent. The exposed side had been dulled in color by years of exposure to the sun and weather, but the protected side glittered as though it had just been fashioned. The searchers went back to work, now and then picking up chips of obsidian or small pieces of charcoal. Within a few minutes other

arrowheads were found.

In the weeks that followed, the Field School found arrowheads and chips in every part of the park it visited. On some of the roads and trails chips of obsidian could be picked up every few feet. The arrowheads found in the vicinity of Swamp Lake were small and fashioned for the hunting of birds; in other localities the arrowheads were larger. The largest was found by Dr. Mason in the vicinity of Merced Peak, and was probably intended for the hunting of mountain sheep. A scraper and several drills were found.

After a two weeks trip in the high country, the members of the Field School returned to Yosemite Valley. The writer and two other members of the school visited the arrowhead exhibit at the museum to compare their findings with those on display.

Chris Brown, better known as Chief Le-mee, who participates in the daily Indian Demonstration Program during the summer season, fashions arrowheads which he sells to park visitors. We went to the Chief, and found that he was interested in our finds and willing to give us instructions. From the Chief and pictures in the museum we learned the art of chipping. It is a skill which takes only a few minutes to acquire. Seventh grade boys have been given instruction for a few minutes, and when handed obsidian soon turn out a number of arrowheads. It is an easy matter to substitute materials. If obsidian is impractical, pieces of a broken bottle may be used. In lieu of the Indian's deer skin, cardboard or leather may be used to protect the palm, and a spike will serve in place of their antler chipping tool.

After obtaining a chunk of obsidian, break off flakes by striking it with a stone or some other hard object. Select a flake approximately the right thickness and size for the arrowhead you intend to fashion. Place the flake in your left hand, and hold it firmly against your palm with the fingers of that hand. The obsidian should rest on a piece of leather which protects the palm. With a blunt instrument (the Indians use a piece of antler), press down on the edge of the flake and you will find that the obsidian is easily chipped. The chips fly off from the underside of the obsidian. After the arrowhead has been "roughed out," finishing touches can be put on by using a nail for a chipping tool. The arrowheads which require the most skill are those which are deeply nicked

along the edge at regular intervals. These serrated arrowheads were the ones which Indians used in their battles.

Arrowhead enthusiasts range from junior high students to college professors. They reproduce skilfully the works of primitive craftsmen.

THE ICE CAVE OF TENAYA CANYON

By Ranger-Naturalist Willis A. Evans

On the roughing hikes up Tenaya Canyon during a part of last summer, parties were fortunate in being able to explore an ice cave. Although we nearly always think of such features as being limited to the high country snow fields, it so happened that during the winter of 1940, a large snow avalanche occurred in Tenaya Canyon approximately three miles above the mouth of Snow Creek. This icy mass, which was lodged firmly at the base of the canyon wall, down which it tumbled, was a miniature of the massive snowbanks found so commonly in the high glacial cirques.

From a distance this avalanche ice blended with its surroundings, as the surface was covered with debris consisting of fallen rocks, pieces of wood and gravel. Upon approaching closer, however, it was evident that the center of the ice had been cut by a huge cave some 35 ft. in diameter. This had been formed by the action of a small stream running beneath the ice and melting it, leaving a huge cavern.

Stepping inside the entrance of the cave, the temperature dropped considerably until it felt as if one had entered a huge refrigerator. The inner walls were not smooth, but pitted with many depressions, due to the irregular melting of the ice, and imbedded in the ceiling and side walls were boulders of various sizes as well as bits of logs, all engulfed by the avalanche as it slid downward.

On one occasion our group was especially intrigued by a large rock weighing perhaps 50 pounds which projected out of the ceiling. It did not appear to be firmly imbedded in the ice. We soon were to find our supposition correct, for in less than half an hour the rock fell with a crash to the floor of the cave.

Near the mouth of the cave the ceiling ice was quite thin and sunlight was perceptible through it. This gave a clue to the changes which occurred in the appearance of this ice cave later in the summer. With further melting, the roof caved in, leaving but two large icy masses to mark the site of this interesting cave.

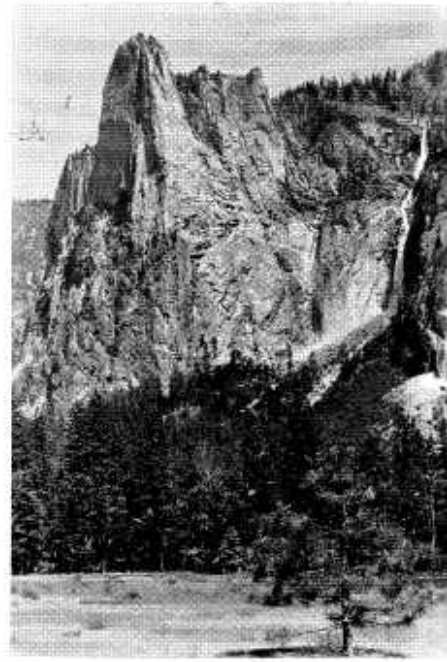
DOWN THE POHONO TRAIL

By Ranger-Naturalist Willis A. Evans

One of the most fascinating trail trips that can be easily made from Yosemite Valley is the Pohono Trail. Starting at Glacier Point and terminating at Inspiration Point, 17 miles away, this trail affords innumerable features.

Leaving Glacier Point, one follows the well-marked path for 2 miles to Sentinel Dome. Here is an opportunity to see that famous gnarled and wind-blown Jeffrey Pine located at the summit. The trail continues beyond the dome following the Glacier Point Road for a short distance until it cuts off to the Fissures by Taft Point. The Fissures consist of the serrated edge of the cliff face where a vertical drop of several hundred feet is visible directly below you. By contouring along the slopes, one finally crosses the upper reaches of Bridalveil Creek. This makes an ideal halfway point to eat lunch. In the spring of the year, flowers abound along the trailside: Snow Plants, in the shade of gigantic Red Firs, Red Columbines and Yellow Mimulus on the stream borders, with Queen Anne's Lace and Monkshood in the meadows. In many places the trail follows the tiny rivulets varied now and then by a short expanse traversing dense fir forest stands.

At intervals one leaves the forest cover to find himself on a ridge or point projecting outward high above the valley. Dewey Point, Crocker Point, and Stanford Point all furnish magnificent views out over their respective sections of the valley.



Sentinel Rock & Sentinel Creek Fall

One might say that the climax of the trip is the reaching of Inspiration Point. Here a view of the entire lower valley unfolds itself that is beyond equal. Such a variety of scenic pleasure does this trail offer that it might well be christened the valley rim's most scenic trail.