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Ducks are Rare in Yosemite

By C. C. PRESNALL, Junior Park Naturalist

Duck hunters who complain of the scarcity of wild fowl on their favorite shooting ponds should consider the case of the Yosemite Valley, where not over 50 ducks have been seen in any one year and many years have passed with less than two dozen reported seen. The sportsman might reply, "Well, what of it?" since no hunting is allowed, but the antics of one pair of unfrightened mallards in Yosemite can furnish just as much pleasure to park visitors as a whole raft of canvasbacks on the San Francisco bay can give to those who hunt them. The very fact that ducks are scarce in the valley enhances the interest in them — one duck becomes an item of news and a source of much pleasant gossip.

A DOZEN VARIETIES

Only 12 kinds of ducks have been recorded here since Grinnell and Storer, in 1914, first started their investigations resulting in the publication of "Animal Life in Yosemite." They listed but three kinds — mallard, shoveler and harlequin — as occurring within the park. Those occurrences and the nine other species observed since then will be briefly noted in the "Birds of

Yosemite National Park," a special number of Nature Notes, to be published this spring. Only two species have ever nested in the valley, the mallard and the harlequin, and they but a few times. All the others, except the cinnamon teal, are winter stragglers that drop into the valley more by accident than anything else, although some individual ducks seem to develop the "Yosemite habit" just as many tourists return year after year. For example, a flock of ring-necked ducks appear on open pools of the Merced river each winter, and since ring-necks are so very scarce here, we infer that this is the same flock each year. Another case is that of a solitary male lesser scaup that was seen in Steamboat bay pool in March of 1932; a similar bird again appeared in the same pool in February of this year. It is hard to believe that such a recurrence is entirely accidental.

COMPOSED OF STRAYS

But in spite of those pretty theories almost the entire duck population of Yosemite must be classed as "casual" or "accidental" since it is largely made up of birds that happen to stray from the regular

migration routes and winter feeding grounds on both sides of the park. On the east, Mono lake and other large lakes of the Great Basin offer attractive stopping places for the thousands of wild fowl that use the inland migration route from Canada to Mexico, while on the west, the fertile fields and marshes of the San Joaquin valley are quite satisfactory sources of winter food for the many ducks and geese that winter there. Lying between these two areas, the high Sierra offers little inducement to either migrants or winter visitants and the few species of ducks that usually nest at such high altitudes are by nature sparsely distributed.



Hence it is that ducks are rare in Yosemite and residents or visitors in the valley take more interest in only one lonely bluebill than the average hunter would display over an entire flight of teal. Ducks outside of such sanctuaries as Yosemite National Park seem fated to serve mankind by feeding his stomach, but in Yosemite they feed his soul with beauty. Both are necessary, hence it is even more neces-

sary that hunters and nature lovers should work together to prevent a scarcity of ducks everywhere.

SNOW PATROLS

By C. A. HARWELL

Park Naturalist

Nine of our rangers are waxing their skis, repairing their snow shoes, checking over their pack equipment and necessary materials and supplies, getting ready with some eagerness for the first annual snow measuring patrol, scheduled for the end of January each year. They will be assisted by three snow gaugers employed by the State Department of Natural Resources. These three men, Jerry Merwin, Sam King and George Proctor, are experienced summer-time rangers of Yosemite with previous experience in these snow patrols, so that the entire force of 12 men know every part of the mountain trails they are to cover, know where shelters and food and cabins are located, just how best to reach each snow course and exactly what work is to be covered and what sort of snow and weather conditions to expect.

WHERE THEY MEASURE

They go out from headquarters on the floor of the valley in twos and threes at the end of each month, January, February, March and April, making snow measurements and water tests at 15 different stations: Gin Flat, 7,000 feet elevation; Merced Lake, 7,000; Tenaya Lake, 8,150; Crescent Lake, 8,500; Peregoy Meadows, 7,000; Johnson Lake, 8,500; Moraine Meadows, 8,700; Snow Flat, two courses, 8,700; Fletcher Lake, 10,300; Tuolumne Meadows, 8,600; Lyell Fork,

8,900; White Wolf, 8,000; Bee Hive, north of Hetch Hetchy, 6,500.

These regular patrols bring back significant data. The State is interested in them because the depth and water content of the winter snow pack in our Sierras determines water supply for drinking, irrigation and power development. The park has additional interest in winter conditions existing over the 1173 square miles within our boundaries. Data on the number, location and status of animal and bird life encountered are compiled. Members of the naturalist staff assist in one or more of these patrols each winter.

WILD LIFE NOTELETS

By Junior Park Naturalist C. C. Presnall.

Predatory birds are more noticeable in winter than in summer, perhaps because other birds are less numerous. Sharp-shinned hawks appear frequently among the oaks on the floor of Yosemite Valley, and

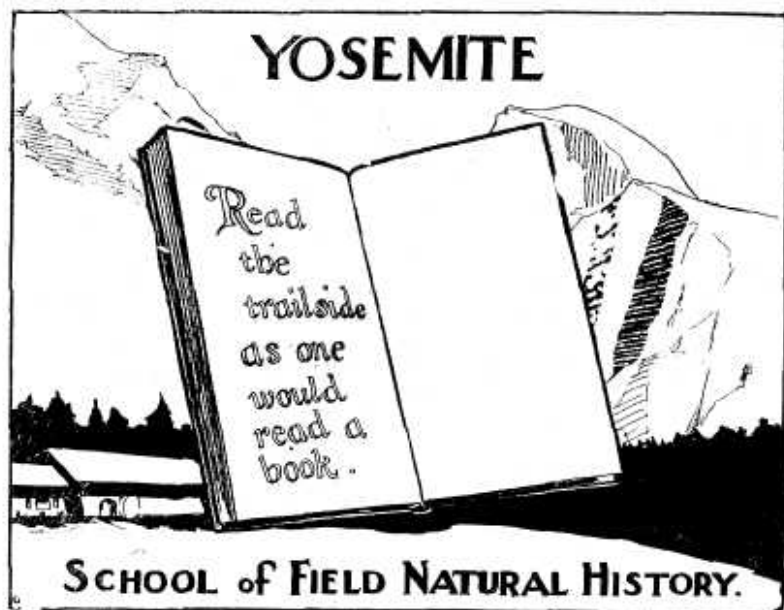


red-tailed hawks circle low over the warm ledges of the north wall. A sparrow hawk has patronized a

feeding table at Foley's Studio for two winters, and is now so tame that observers may stand 20 feet away while it gulps down the meat scraps that are nailed to the table.

A wildcat was seen on the valley floor, January 13. Mr. Van Housen, who saw it, stated that it trotted across the road ahead of his car and then stood quietly on some rocks nearby, watching him with no apparent fear. The incident occurred near the Le Conte Memorial. Wildcats are commonly seen in the valley in winter, but seldom act so tame as this one.

There is a decided and unexplained scarcity of winter birds in Yosemite this year, a condition which, judging by reports, seems to exist in other parts of the State also. At the Yosemite Museum we usually have 25 to 50 juncos patronizing our feeding station; this year there have been none at all for days at a time. Several other common winter visitants are noticeable by their absence: Slender-billed and pigmy nuthatches are missing, the nuttall woodpecker has not been seen, and there has been only one report, by Mr. D. A. Miller, of the plain titmouse. Even the ducks have almost deserted us. On previous winters we have had from five to eight rink-necked ducks on the river. This winter there is one male ring-neck and a pair of mallards. One ruddy duck has been reported with the mallards. The most noticeable scarcity of all is that of golden-crowned kinglets. They are usually the most numerous winter bird, but this year none were seen until recently, when Charles Michael reported a very small flock.



Field Nature School Plans Told

By C. A. Harwell, Park Naturalist

National Park Service announces the ninth session of the Yosemite School of Field Natural History which will be conducted in Yosemite from June 26 to August 11 this year and for which applications are now being received.

This school is definitely set up to train for naturalist work in our national parks. Its training will be found extremely valuable to those interested in the fields of nature guiding, nature counselling, conservation or in field methods in natural science teaching.

WHAT COURSE COMPRISES

The museum on the floor of the valley is headquarters for this school as it is for all naturalist work in the park. Its lecture rooms, laboratories, library, exhibits and research collections make it an ideal center for such a project while

the entire park, embracing five life zones rich in faunal, floral and geologic forms and materials, furnishes the greater laboratory for the work of the school. Field work predominates. Daily excursions are conducted for the close study of birds, flowers, trees, mammals and other forms of living nature on the valley floor. Longer hikes and overnight field trips are made each week-end to some point above the rim of the valley. The climax of the course is reached when the class leaves the valley to spend the last week of the course in covering the circuit of high Sierra camps and to make side trips for study above timberline and climbs of Mount Lyell, 13,090 feet elevation, and Mount Dana, 13,050 feet.

Our principal purpose is to train students in methods of interpreting

living nature. Ample opportunity is given for observation of and participation in our regular ranger-naturalist program. The work is practical and all our former students say their summer here was among the most profitable ever spent. Nineteen graduates of the school have served in the educational work of our national parks or monuments with either temporary or permanent appointments.

SIZE OF CLASS LIMITED

Because of limited facilities it is necessary to restrict the class each summer to a group of 20. For this year 12 men and eight women will be selected on basis of qualifications set forth in written applications and references furnished. Three years' college work or the equivalent, with background in sciences, are required. This is the only field school conducted by National Park Service and we like to have as many states represented as possible.

The regular naturalist staff of Yosemite National Park will be assisted by a number of visiting scientists during the session. Dr. Harold C. Bryant, assistant director National Park Service in

charge branch of education and research, will work several days with the group. Joseph Dixon, field naturalist N. P. S. engaged in a survey of wild life conditions in all national parks, will direct work in mammal survey. Dr. Ralph Chaney, professor of paleontology at the University of California and associated with the Carnegie Institution of Washington, D. C., will assist with geology and the story of the earth. An opportunity will be afforded the group to meet many visiting geologists when under the direction of Dr. Francois E. Matthes of the United States Geological Survey and Dr. Eliot Blackwelder of Stanford the world congress of geologists, meeting this summer in Washington, D. C., will be conducted through Yosemite.

NO TUITION FEE

No tuition is charged the students of this National Park Service school. A special camp site is reserved for the group where personal tents may be put up or equipment rented at nominal rates. Students do their own cooking, usually in groups. An equipment fee of \$5 is charged each student for use of materials furnished.





A DAY ON SNOWSHOES

By C. C. Presnall, Junior Park
Naturalist

The naturalists of Yosemite National Park, who have initiated thousands of people into the joys of summertime nature hikes, find that winter field trips are even more interesting, as is shown by observations recorded on a typical snow shoe trip recently made to Big Meadows by Assistant Park Naturalist M. E. Beatty and the writer. The total distance, not over six miles round trip, makes this one of the easiest winter trips out of Yosemite Valley, either on snow shoes or sk's. Since the chief purpose of our trip was to study animal tracks we used snow shoes to permit following the tracks wherever they might lead through thick brush or rocky terrain. Conditions for tracking were ideal. During the previous night an inch of fresh snow had fallen, and the temperature during the forenoon remained cool enough to accurately preserve every track.

WHERE DEER BROWSE

Deer tracks were most numerous, being especially abundant on the warm north canyon wall. The animals seemed to be frequenting that section because of the good supply of browse available in the chaparral. Only one coyote track and two fox tracks were seen, presumably gray foxes at this elevation (3000 to 5000 feet). Among the boulders that

cover the canyon walls we saw two wildcat tracks and were reminded that a wildcat had been recently heard in this vicinity by Homer Crider, one of the power house operators at Cascade. Perhaps the foxes were hunting the numerous mice and chickaree squirrels whose tracks zigzagged across all other trails.

A mink track was the most surprising event of the day, especially because we found it two-tenths of a mile from the river. There was no doubt about the identity of the track, no other Yosemite animal makes a track of that particular size and pattern. I might have doubted the evidence of a mink so far from water, had I not actually seen one that far from a stream on a previous occasion. The tracks indicated that the animal had come up the canyon side to the road, circled and returned to the river, traveling at a slow run.

We expected to find many mouse tracks around the old ranch buildings in Big Meadows, but there were none. The dainty tracks of a ring-tailed cat offered a clue to the scarcity of mice.

AN UNEXPECTED BIRD

The second surprise of the day was caused by the discovery of a bird seldom seen in the transition zone—a Williamson sapsucker. This

species seldom occurs below 7000 feet elevation, although occasionally in winter it wanders down to locations similar to Big Meadows. Ten other species of birds were recorded during the trip, but all were the usual winter birds of this region.

Any summer hike would have yielded more birds, but not nearly so much information about animals.

It has been said that a nature lover is judged by his ability to read the trailside as if it were a book. Nowhere is there greater opportunity to use and develop this ability than on a winter trail covered with good tracking snow, and such a trail gives the vigorous person an ideal outlet for his exuberant energy.

Fire Studies in the Mariposa Grove

By C. C. PRESNALL Junior Park Naturalist

The Mariposa Grove has long been recognized as worthy of preservation, but how best to preserve it from destructive agencies, particularly fire, has been a subject of continual debate. After the fire of 1889, which threatened the grove, a brush-cutting campaign reduced much of the fire hazard, but the policy was not vigorously continued because of many sincere objections to such interference with nature. During the following years sporadic attempts were made to solve the fire problem, but nothing very definite was done until the last few years, when two improvements were initiated: removal of all dead logs and limbs from the grove and installation of a system of fire hydrants. The last summer witnessed a return to "let nature take its course" with the decision to allow fallen limbs to accumulate undisturbed.

Fire control policies in general may be said to be still in the experimental stage, and progress is slow, primarily because trees themselves grow slowly. The following notes on Big Trees in relation to forest fires are offered for what they may be worth toward increasing our knowledge of how best to

combat the fire menace in the Big Tree Grove.

FEW SEQUOIAS ESCAPE

It is an accepted and proven fact that big trees are unusually resistant to forest fires, yet nearly every sequoia in the Mariposa Grove has been severely scarred by fire. This apparent anomaly has often been explained by saying that the scars were caused by a fire that completely destroyed all other species, leaving the sequoias as sole survivors. Such an assumption carries with it the inference that all the pines, firs and cedars in the grove have grown up since the fire, but a recent study of fire scars in the grove has shown otherwise.

The construction of the new Big Trees Lodge necessitated the removal of several pines and firs, and a careful examination of the stumps of these trees showed an unexpected feature. On living Big Trees very nearby were large fire scars made in 1862, 1803 and 1742 and scars of one or more of these fires were plainly though lightly marked on all but two of the stumps. These two were over 200 years old and showed not a single fire scar. It did not seem possible that fires severe enough to burn

huge cavities in the sequoias should have failed to kill all the surrounding trees that had less fire resistance; hence I made further observations in other parts of the grove. Near Wawona Point I found that a fire in 1809 had severely burned a number of the Big Trees, and had left relatively light fire scars on adjacent sugar pines and cedars. Near the Grizzly Giant the same condition existed except for one incense cedar. This cedar was the only tree I found (outside of the sequoias) that showed a scar of the great fire of 1710, which had apparently done the most severe and widespread damage to the sequoias. In fact, it was the only tree old enough to show such a scar.

SIFTING THE EVIDENCE

Even though these facts might indicate that all the cedars, pines and firs had grown up after the damaging fire of 1710 (and I believe we need still further evidence) yet it is hard to understand how they survived the later fires that apparently did so much damage to the Big Trees. An analysis of the evidence, however, shows how it might have happened.

Close examination of burns on Big Trees shows that fire damages inflicted in 1862, 1803, 1742, etc., were not always severe, although appearing so. The huge cavities in the Haverford, the Stable Tree, and others were not the result of recent fires, but of fires occurring in 1710, 1630, 1652 or earlier, and the recent fires had only charred

the edges of the old wounds, in most cases hardly burning away the new growth. Thus the recent scars on the Sequoias pines and cedars were all apparently caused by light ground fires. This theory seemed plausible until I found a Sequoia with a severe recent scar, and not a trace of an earlier fire in the same scar. There are several such trees in the Grove, notable the one from which a section was sawed for exhibition in front of the Yosemite Museum. This tree shows a bad burn in 1809, yet other species around it show comparatively light scars in that year. I can find but one satisfactory explanation for this: A Big Tree accumulates much more litter around its base than do the other species, and this litter causes a light ground fire to burn fiercely around its base for a long time after the fire has gone out elsewhere. Judging by the size of some scars I believe the fires must have burned for weeks, or even all summer.

A Big Tree, although so resistant to fire, might cause itself to be more severely burned than its less resistant neighbors simply by the habit of accumulating much debris around its base. Such an accumulation of debris is not so apt to prove as disastrous as in former years, owing to the present system of fire hydrants throughout the Upper Grove, but in spite of this added protection it would seem that the regular removal of dead branches should receive very careful consideration.





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Dan Anderson