DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YOSEMITE NATIONAL PARK

YOSEMITE NATURE NOTES

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Yosemite Nature Guide Service C. P. Russell, Park Naturalist

This is one of a series of bulletins issued from time to time for the information of those interested in the natural history and scientific features of the park and the educational opportunities the park affords for the study of these subjects.

Utilization of these bulletins by those receiving them to the end that the information contained therein might be as extensively distributed as possible will be appreciated.

W. B. Lewis, Superintendent.

YOSEMITE'S TRAIL SCHOOL

On the first day of June, 1924 the Yosemite Nature Guide Service will begin its fifth year. Since the beginning of the service in 1920 by Dr. H. C. Bryant, an ever-growing number of park visitors have learned to know and enjoy the opportunities it offers, yet there are many prospective Yosemite visitors who will wonder what a nature guide service may be.

A nature guide is a very human sort of an individual who can "read the trail side as a book". In the Yosemite they are chosen scientists who are not only intimately acquainted with the Sierra wild life but who are enthusiastic in aiding others to know it as well. The annual exodus of the American public to the out-of-doors has created a genuine demand for such a service. The national parks have, of course, become great centers for the hundreds of thousands who migrate to summer play grounds, and it is natural that the Government should provide the educational service that aids in spreading the message of the parks.

Experience has shown that the average Yosemite visitor is in a receptive mood - more than that he feels a lack of knowledge of the abundance of wild life about him. As a camper he finds himself a part of the community of Nature and strikes up a friendship with the wild-life members of the community, and thus it becomes possible for the nature guideservice to link education with recreation.

This season thousands of Yosemite visitors will go afield with nature guides. They will be escorted to moss covered stream sides where they may observe that most interesting of birds, the water ouzel, feed its young; they will learn first hand of the great variety of bird songs and the bird musicians; the magnificent trees of the Sierra will be made familiar; a wealth of wild flowers, rare and common alike, may be classed as intimate acquaintances by many; every plant and animal of the trail side will occasion a story - the very cliffs will disclose a romance to those who read.

Daily trips will be made about the floor of the valley, and on Saturdays full-day trips are made to points on the "rim". When the string of Hikers' Camps open, the high country will be accessible to all, and it is planned that nature guides shall escort parties frequently to the wonderland of the summit region. An exhibit of wild flowers will be maintained at the Yosemite Museum where visitors may identify their new friends of the Sierra flora. Four evenings a week lectures will be given by nature guides as a part of the programs at Camp Curry and Yosemite Lodge. Twice daily geology lectures will be given at the Yosemite Museum. This is the nature guide work of Yosemite, and it is an educational service provided without charge by the National Park Service.

NASAL PARASITES IN DEER

On April 17 a mule-tail fawn about ten months old was found dead in a corner of the elk paddock. The little buck had collided with the heavy wire fence with sufficient force to break his neck. He had been dead but a short time, and the carcass was brought to the Yosemite Museum that a specimen might be preserved. When the head was skinned out and the skull cleaned, both of the animal's nostrils were found to be gorged with huge squirming larvae of a bot fly, perhaps Gastrophilos viasalis. Twenty of these grubs, ranging from a half inch to an inch and a half in length, were found.

These and other "bots" found under the skin of various animals are better known than the bumble-bee-like flies from whose eggs they hatch. In most cases the flies deposit their eggs on the hairs of the host animal. They are then taken into the mouth of the host, swallowed, and thus introduced to the stomach , to the walls of which the larvae attach themselves or through which they burrow out into the body tissues, finally coming to rest underneath the skin. The fly that produces the nasal "bots" lays eggs directly into the nostrils. Here the parasitic larvae remain through fall and winter and late in the spring release their hold, fall upon the ground, and burrow into it to pupate.

Cases of craziness in deer, due to the presence of nasal bots, have been recorded. There is a possibility that the great irritation caused this young buck to race blindly into the fence. However, the fact that he was within the elk corral and that the elk are known to give chase to the deer presents a more plausible explanation.

AUDUBON WARBLER SINGS TOLMIE SONG

Three years ago this spring a pair of Audubon Warblers chose to nest and rear their young in a grove of trees near our camp. About two weeks after the Audubons had established their headquarters, a pair of Tolmie Warblers moved into the neighborhood. The male Tolmie chose a singing tree not far from the Audubons.

The song of the Tolmie is a vigorous trill with a decisive emphasis on the last notte. The trill of the Audubon is somewhat similar but less vigorous, and without the pronounced emphasis on the last note.

Now, evidently the Audubon recognized a difference between his song and the song of his neighbor. In any event, he was impressed by the song of the Tolmie and soon learned to imitate it. For three successsive years now the Audubon withthe Tolmie song has appeared each spring in the same locality. During the non-singing season he does not forget the Tolmie trill, as evidenced by the fact that he sings this song from the first day he arrives, which is from two to three weeks ahead of the arriving timeof the Tolmie Warblers.

Enid Michael

BOBCAT KILLED IN VALLEY

Occasionally wild cats venture into the haunts of men and make themselves at home among his accoutrements. A cat of such disposition took up his abode among the tent platforms of a Yosemite resort recently. Telephone calls from employees brought a ranger to the scene, and the predator was dispatched. The mounted skin will soon form part of a group at the Yosemite Museum. The stomach of the animal was found to contain the remains of a chickaree or pine squirrel.

WORK OF THE WILLOW WOODPECKER

Under the bark of the willow branches, snugly tucked away in the cambium layer, are often found the larvae of a certain insect. Now the Willow Woodpecker is a clever fellow and by tapping along the bark he is able to locate the branches that harbor larvae. When one of these branches is located, he cuts with his chisel-like bill a ring through the bark above the nesting larvae. Then clinging to the limb, he strikes the bark at an angle. With his bill wedged behind the bark he forces it loose from the sapwood. When once the bark is started, he works quickly, ripping off long strips. When a foot or more of branch has been stripped of its bark, he proceeds to dig out the larvae. One by one the grubs are removed, and, when the work is completed, each cell that once encased a larva is empty, and the bare branch has a filagreed appearance. --Enid Michael

INCREASE IN THE YOSEMITE ELK HERD

The first baby elk of the season arrived early in the morning of April 23. The fact that fresh snow covered the ground had no effect in dampening his spirits, andit was but a short time before he gambled clumsily on his long legs.

The mother's instinct to conceal her offspring manifested itself at once, and the youngster disappeared not to be seen again until April 28, when it was very much in evidence following the mother about on legs grown stronger. Shortly after noon April 29 another female elk introduced to the herd her awkward infant.

As is the habit among deer and elk, the fawns are concealed for the first few days. The mother feeds a short distance from the fawn returning to it at intervals to nurse it. Instinctively the baby lies perfectly motionless. It is possible to pass within a few feet of such a "cache" and not see it. It has been demonstrated that fawns have little or no body odor at birth; consequently it is not easy for predatory animals to search them out. The presence of spots on fawns is another protective adaptation. The pattern of light and dark blends more perfectly with surroundings than would a coat of solid color.

WHAT BECOMES OF OUR MOUNTAIN MEADOWS?

Not infrequently mountaineers returning to the Yosemite after an absence of many years espress surprise and perhaps dismay at finding their one time favorite high country meadows grown up to thickets and devoid of horse feed. Those who know may also remark the great change which is taking place upon the valley floor. Even Yosemite literature contains at least one lament upon the passing of our mountain meadows. Harold C. Bradley, in the Sierra Club Bulletin, Vol. VIII, No. 1 went so far as to advise the grazing again of the park by sheep. In his words, "the sheep browse close, and year after year nip off the seedling pines".

Sierra meadows are found along the courses of ancient glaciers. The ice in its irresistible push toward the lower levels gouged out basins in the granite over which it moved. At the close of the glacial period the rock basins filled with water and became beautiful rock-rimmed lakes. Hundreds of these shining gems still exist and contribute munificently to the beauty of the back-country. Many others, perhaps because of their relation to the adjacent water shed, have through the years received the great burden of sand and sediment carried by their feeding streams and at last been glutted by the accumulation. At first these filled in lakes were reedy swamps. With the continued growth of vegetation came more evaporation and more filling in until the swamp became moist peat, overgrown with rich succulent grasses. Like the lakes, these little meadows contribute notably to the beauty and attraction of the mountain wilderness; seen from afar their warm greens break the expanses of bare, gray granite and dark belts of timber. Upon close approach they charm the mountaineer with their exuberance of flowers. They provide abundant feed for the animals and make for the comfort of the camper. But they are short lived, comparatively.

Evaporation continues and finally the moist meadow becomes dry enough to encourage the growth of pines. The ever-present lodgepole pine belt that borders the meadow begins the invasion. In a remarkably short time the thicket expands, and there begins the struggle for light among the trees. The soil is

further dessicated, and the grass is killed. Some of the trees will outgrow and kill the others, and in time the former meadow becomes a "tamarack flat".

To be sure, the former meadow is more to be desired than the dry timber covered flat, but so drastic a measure as the grazing of the Yosemite by sheep is not to be considered as a remedy. As the editors of the Sierra Club publication pointed out, the mountain meadows existed before sheep had been introduced to the Sierras.

In connection with this discussion of the disappearance of meadows, it is interesting to consider a large map of Yosemite Valley, displayed in the Historical Room of the Yosemite Museum. The map is the result of a survey made by Charles F. Hoffman in the early seventies at the order of the park commissioners. Plotted in contrasting green the meadow lands stand out clearly as the greater part of the valley floor. In fact, the engineers who did the work tabulated the acreage of meadow and showed a total of 745.63 acres. Fifty-four years ago, about 64% of Yosemite Valley's floor was open grass land. If now we study the 1922 Yosemite Valley sheet, the latest map made by Messrs. Marshall and Matthes of the U.S. Geological Survey, we find about 430 acres or 37% of meadow.

At this attitude it is not the lodgepole or tamarack pine that encroaches. Incense cedars, western yellow pines, black oaks, and black cottonwoods all vie for the opportunity to start colonies. Had no map been made fifty years ago, the careful observer could yet read of the past events. Here and there among splendid, even stands of pine and incense cedar stand patriarchal yellow pines that rear their fractured tops a hundred feet above the hosts of close-growing, strong, young trees at their bases. If these scattered trees of the older generation be carefully observed, it will be found that their lowest limbs are near the ground and enormous in girth. The rising generation has in most cases enveloped these lowest branches, robbed them of light and they have as a result died. Their bulky butts yet hold to the ancient trunk that nourished them, and they tell volubly of many decades of growth in an open meadow when no neighbors interfered with lateral expansion. When Mr. Hoffman was surveying Yosemite's meadows, these trees were outposts far from the forest's flanks. As beautiful Lake Yosemite once yielded to the gradual intrusion of sands, Yosemite meadows now relinquish to encroaching forests.