## YOJEMITE NATURE NOTES

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#### Yosemite Nature Notes

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#### HOW YOSEMITE SQUIRRELS SPEND THE WINTER By Ranger Naturalist George A. Petrides

The squirrels of the Yosemite region fall into three natural groups: ground squirrels, chipmunks, and tree squirrels. Not only do these groups differ from each other in appearance and structure, but also in their habits of surviving the critical winter period. Despite the fact that all of these groups belong to the same animal family (Sciuridae), their mode of life during the winter months varies from the death-like torpor of hibernation in some species to the vivacity of extreme activity in others.

The ground squirrels, including the marmot, become excessively fat during the late summer and fall months, and with the advent of freezing temperatures enter their underground burrows to commence a sound winter sleep. During the entire period that snow covers the around and unfavorable temperatures prevail, this group of squirrels remains snug in subterranean retreats, sleeping a sleep resembling death itself. Body temperatures of hibernating ground squirrels approach that of their surroundings, and have been recorded as low as the freezing point. The respiratory rate may be so reduced that inspirations occur at intervals of from four to six minutes; whereas, one hundred eighty-seven inspirations per minute are normal for active individuals. The rate of heart-beat decreases from 100-200 beats per minute in a normally active individual to as low as five pulsations per minute during hibernation.

Much remains to be learned reaarding the duration of hibernation of local ground squirrel species. Most ground squirrels disappear by late September or early October, not to again be seen above ground until March, April, or May, depending principally upon the altitude. weather, age, and tood supply. Those individuals which have been unable to store a sufficient amount of fat about their bodies usually retire late in the fall. In some parts of the country certain ground squirrel species are known to enter a state of aestivation early in the summer. This is similar to and often continuous with hibernation. However, no evidence of this summer sleep has been recorded for Yosemite ground squirrels.

Chipmunks, in contrast, are not considered by most scientists to enter a state of true hibernation. While they are occasionally found in a dormant condition during the winter months, they do not store fat about their bodies in preparation for a winter-long fast. Instead, stores of food are accumulated which are presumably eaten during the winter months. In some instances, however, Western Chipmunks have been found in a condition of evident hibernation with no stored food available. Our knowledge is thus incomplete regarding the wintering condition of chipmunks, but in all probability stages varying from complete dormancy in some individuals to intermittent activity in others occur.



In contrast to the ground squirrels and chipmunks which are rarely seen above ground during the winter months, the tree squirrels are active throughout the year. Although food has been cached in the ground or in stumps against the coming winter, an active search for fruits and seeds continues despite snow and cold weather. The vivacious Sierra Chickarees, or red squirrels, burrow among the snowdrifts in order to reach food upon the ground and to have warm chambers in which to eat food materials procured from trees or shrubs overhead. Under ground burrows and hollow tree dens near the food stores form their habitations during the winter.



Although the large gray squirrel is not known to burrow extensively through the snow, its tracks are frequently encountered upon the surface of drifts, giving evidence of its industry in searching for food throughout the winter.

The leafy nests constructed by tree squirrels are not used extensively in winter. Dens in hollow trees are preferred habitations of the gray and flying squirrels at least. Stores hidden within the trees and food found above the snow form the principal source of food for these two species during the critical winter period.

Within the single family of squir-

rels, then, provision for surviving the severe winter of the Sierra is accomplished in three different ways by the three primary types of squirrels. Storage of food varies from the accumulation of body fat in ground squirrels to the large underground and arboreal stores of chipmunks and tree squirrels. The state of activity during the winter fluctuates in a corresponding manner from complete dormancy in ground squirrels,

to the intermittent sleep of chipmunks, and on to complete activity in the tree squirrels.

While our knowledge of the winter activities of many of the common squirrel species in this region is apparently incomplete, it is to be hoped that further investigation will reveal more exactly the extent and character of dormancy and food storage in Yosemite squirrels.



## MUSEUM NOTES

A Park Naturalist Conference was held by the National Park Service at Grand Canyon National Park November 13 to 17, inclusive. Most every national park was represented and many problems relating to the educational program in the national parks were discussed.

Acting Park Naturalist M. E. Beatty represented Yosemite, and delivered a paper on "The Place of Museums and Exhibits in the Interpretive Program." A Kodachrome contest was held with twenty-one areas participating. Yosemite was honored by receiving first place for the best group collection and for the best individual slide.

YOSEMITE NATURE NOTES, with this issue, enters its twentieth year of continuous publication.

A new exhibit featuring the insects of the Yosemite region has recently been completed and installed on the landing of the staircase leading to the upper floor of the museum. The three cases comprising the exhibit feature the butterflies, moths, and miscellaneous insects. The exhibits make use of fluorescent lighting. which not only furnishes cold light but brings out the beauty and luster of the butterfly and moth wings. Most of the work of arranging and labeling the specimens was carried out by Mr. Darwin Tiemann, entomologist, who resides in Yosemite.

For the travel year ending September 30, 1940, a total of 154,587 automobiles and 506,761 visitors entered Yosemite National Park.

#### HARRY C. PARKER JOINS MUSEUM STAFF By Acting Park Naturalist M. E. Beatty

On November 7, 1940, Harry C. Parker entered on duty in Yosemite as Junior Park Naturalist (Museum Preparator), filling the position vacated September 9 by the transfer of James E. Cole to become Superintendent of Joshua Tree National Monument. Mr. Parker was transferred from Olympic National Park where he was employed since February, 1940, as a Park Ranger. In this capacity he planned, inaugurated, and supervised an interpretive program for the benefit of park visitors during the summer of 1940, at the same time carrying on his regular ranger assignments.



We in Yosemite were fortunate in knowing of Mr. Parker's experience and ability in the museum field through his having attended the 1936 session of the Yosemite School of Field Natural History, where his record was outstanding. He is a graduate of the University of Kansas, class of 1930, receiving an A. B. degree in zoology. While attending the university, he served for three years as a student assistant on the staff of the Museum of Birds and Mammals, and during his senior year acted as curator of mammals. In this connection he was a member of three field parties for the museum, spending three summers collecting specimens of vertebrates in southwest Kansas and in New Mexico, including the Carlsbad Caverns region.

After graduating from the university, Mr. Parker became Director of the Museum of Natural History in Worcester, Massachusetts, servinin this capacity for nine and one-hall years. During this period he completely rejuvenated the old museum. installing fresh exhibits, instituting an educational program and library system with the result that the usefulness and attendance of the museum was an increase over five times what it was before. Through extra work in the Graduate School of Geography, Clark University of Worcester, Massachusetts, he obtained his M. A. in June, 1938, his thesis being "The Mammalian Geography of Worcester County, Massachusetts"

While Mr. Parker's major interest has been in birds and mammals, he has worked on all phases of natural history. In 1934, he secured leave in order to visit England, where he studied birds and museums. He has loctured widely, produced several series of radio programs, and has written a great number of articles for both popular and scientific consumption.

We are happy to welcome Mr. Parker to Yosemite, where his experience in the museum field can be put to good use. We hope that our readers upon their next journey to Yosemite will visit the museum, and become personally acquainted with our new Museum Preparator.

#### New Ostrander Lake Ski Hut

For the benefit of our readers we are reprinting below a press release giving information about the new Ostrander Lake Ski Hut:

"The new ski hut at Ostrander Lake and several ski touring trails will be ready for use by skiers in Yosemite National Park during the coming winter, according to announcement made by Lawrence C. Merriam, Park Superintendent.

"The ski hut is located on the chore of Ostrander Lake, which nestles at the foot of scenic Horse Ridge. The elevation of the lake is 8,600 feet and ordinarily many feet of snow can be expected to cover the ground there during the winter season.

"The ski hut may be reached by following two new ski touring trails. One of these trails, which is known as the Merced Crest Touring Trail, starts at Ski Top above the Badger Pass Ski Center. This trail is nine miles long. The other trail which leads to the ski hut is known as the Horizon Ridge Touring Trail. It takes off from the Glacier Point Road a little over one mile above Bridalveil Creek. The total skiing distance via the Horizon Ridge Touring Trail is six miles.

"These touring trails have been designed for experienced skiers only, and persons who use them must register with the ranger at Badger Pass before starting.

"Skiers who stay at Ostrander Lake will also enjoy the branch of the Merced Crest Touring Trail which crosses over Horse Ridge and dead-ends in a saddle one-half way between Horse Ridge and Buena Vista Peak. This branch trail starts one mile from the ski hut and continues for three miles over the top of Horse Ridge.

"In addition, the new Dewey Point Touring Trail, which starts three-quarters of a mile up the Glacier Point Road from the Badger Pass Ski Center, leads to a magnificent view overlooking the lower part of Yosemite Valley. This trail is approximately three miles long, one way, making a six-mile round trip.

"All of these touring trails are well marked with orange-yellow triangular ski signs.

"All persons who desire to use the ski hut at Ostrander Lake will be required to register in advance with the ranger at Badger Pass. This should be done in order to assure the availability of a bunk upon arrival at the ski hut. It is anticipated that official communication between the Badger Pass Ranger Station and the ski hut will be maintained by radio during the winter.

"Twenty-three bunks will be available at the ski hut, which has been constructed by the National Park Service through the cooperation of the CCC. No charge will be made for the use of the bunks by skiers who bring their own bedding. Likewise, a small community kitchen containing a stove is available for use without charge by skiers who desire to take their own food and cooking utensils, and prepare their

own meals. In addition, the Yosemite Park and Curry Company will have an employee at the hut to furnish bedding to skiers who desire to rent bedding rather than pack their own. Bedding for one person will be furnished at the rate of \$1.00 per night. The Company employee will also furnish meals to those who desire to procure them. The rates for such meals will be \$1.00 each. which is the same as charged in the High Sierra Camps operated in the park during the summer months. is emphasized that skiers who wish to use the hut must register in advance with the ranger at Badger Pass"

### A KILLER SHARP-SHIN COMES INTO CAMP By Ranger Naturalist Enid Michael

A predator came into camp. The California Woodpecker shouted a warning call and all the birds at the feeding tray dived for cover, I was rather surprised that the Woodpecker was the first to shout a warning for usually it is the ever watchful Blue-fronted lay who gives warning of danger. The jay has an evil reputation among the smaller birds; they don't like to have him about during the nesting season. However, through the seasons the jay probably saves more lives than it destroys by warning the other birds of the approach of an enemy.

In silence, without a single peep from any bird, six minutes passed away, and then in safety from its hideaway in the rock slide behind the camp the little Canyon Wren began to scold. More minutes passed away and then a jay ventured forth. In midair the jay uttered a shriek of terror, side-slipped and dived wildly into the azalea thicket in a mad plunge to escape the killer. A little male Sharp-skinned Hawk had barely missed his kill The hawk did not follow the jay into the thicket but swerved upward to perch on a limb above the feeding tray. After surveying the situation for a minute or so the hawk took wing and flew off toward the river. Now that danger was past, from the tall pine a jay spoke up and a low chatter of conversational notes came from the azalea thicket.

After a few minutes contented birds were again feeding in the open.

### YELLOW-JACKETS By Ranger Naturalist Enid Michael

In the Yosemite district yellowackets usually build their nests in the ground, in old squirrel holes, or natural crevices amona the Occasionally, however, a rocks. beautiful paper nest the size and shape of a football may be hung from the branches of a tree. Once a swarm of vellow-jackets built a nest in the corner of the workroom of the Yosemite Post Office. The building was just a shack, and as the postmaster said, "a cat could be thrown through the cracks." Such cracks gave easy access to both flies and yellow-jackets, and as the yellow-jackets caught and ate flies, it was decided to let them remain as the lesser of two evils. The house flies were great pests, while yellow-jackets were quite content to go quietly about their business

In the woods above Mirror Lake a nest uniquely situated was discovered during July, 1940. This nest was placed at the top of a dead willow stump about five feet above the ground. The nest was not hung from the stub, but was moulded on in such a manner so as to appear as part of the stump. The gray paper covering of the nest was beautifully camoullaged, and it blended perfectly with the gray color of the barkless stump. When the nest was

first seen yellow-jackets were pouring in and out of the entrance hole
at the bottom, and it was this activity that attracted my attention to the
nest. I moved within six feet of the
nest, and as the yellow-jackets did
not misconstrue my intentions all
went well. As I studied the nest and
looked on the scene of humming
activity, I could not help but think
that here was a subject for a motion
picture shot, but not having the camera with me I planned to come back
amother day.

I did not get the picture of the vellow-jackets' nest for when I visited the site the following week the scene of activity had greatly changed. I had arrived at just the right moment to witness a most intresting sight. A big black bear, standing on his hind legs, was ripping into the nest and munching honey comb. "Bees in his bonnet." this bear did not seem to mind but some of the stinging insects got him where his hair was short, and he would pause now and then to wipe them from his nose. This move on the part of the bear reminded me of a fisherman cleaning fish at some mountain lake who pauses now and then to try to wipe mosquitoes from his face with his elbows a rather futile gesture, as you well know, if vou have ever tried it.



#### NEW PUBLICATIONS

"Illustrated Guide to Yosemite Valley" by Virginia and Ansel Adams; published by H. S. Crocker Co. Inc., San Francisco, 1940. This authentic and attractive, pocket-size book fills a long-felt need for accurate information as a road and trail guide together with information about the administration, geology, flora, fauna, and early human history of the park. The book has a heavy blue paper cover with white plastic binding, and contains one hundred thirty pages with forty-five beautiful, photographic illustrations by Ansel Adams together with twelve colored diagrammatic maps featuring park roads, trails, and points of interest.

This guide is recommended for any visitor to Yosemite, or for anyone wishing a compact, complete description of all the features of Yosemite National Park. It is priced at \$1 a copy, and may be purchased from the Yosemite Natural History Association, Yosemite, California.

"Ski Runs and Touring Trail Map of Yosemite National Park."-As an aid to the skier using the Badger Pass Ski Center this map shows all of the regular ski runs together with the newly developed touring trails to the Ostrander Lake Ski Hut. A portion of the regular U.S. Geological Survey Map of Yosemite National Park has been enlarged and printed by the photo offset process. This means that all topographic features such as contour lines, creeks, roads, peaks, ranger stations, etc., are included, which will furnish valuable information for the skier. The maps are convenient in size, being 16 in. x 21 in., and are on the scale of one mile to the inch. The material for the maps was prepared by the National Park Service, and the printing handled by the Yosemite Natural History Association. Copies may be obtained from the Yosemite Natural History Association at the price of 10 cents each, plus mailing charges.

