

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YOSEMITE NATIONAL PARKY O S E M I T E N A T U R E N O T E S

Volume III

June 21, 1924

Number 8

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.

VISIT LITTLE YOSEMITE AND MERCED LAKE

Tuesday, June 24 a Nature Guide will take a party to Little Yosemite Valley. The start will be made from Happy Isles at 8:00 AM. This will be the first nature guide party to make use of the recently opened High Country Camps.

Were you aware of the fact that you may visit the wild summit country without expending a few hundred dollars for pack outfit and guide?

Hikers' Camps open the most delightful parts of your national park to everyone who has strength to hike ten miles a day. You may start with no thought of preparation and with the assurance that a hot dinner and a comfortable bed awaits you at the end of each day's travel.

The cost? Surprisingly low! Meals may be had at 75¢ each, and sleeping accommodations for 75¢ a night.

The camps are so located that one may arrange to spend a few days on the trip, or the entire summer may be devoted to visiting the wonder spots accessible from them.

Guides are not essential, as the trails are well marked, and the most inexperienced hikers will have no difficulty in visiting the wildest sections of Yosemite. Should you wish to make the trip with a scientist who knows Sierra wild life, you should consult the schedule of Nature Guided High Country Hikes at the Yosemite Museum. The June 24th trip will include Little Yosemite Valley, where the first night will be spent, and beautiful Merced Lake. The night of the 25th will be spent at Merced Lake Hikers' Camp, and on the 26th the return trip to the Valley will be made. On July 7 starts a five-day nature guide trip to other high country camps.

MAKE RESERVATION BEFORE STARTING ANY TRIP.

- - -

A NEW NESTING RECORD FOR YOSEMITE VALLEY

On the morning of June 12, 1924, a pair of Rough-winged swallows (*Stelgidopteryx serripennis*) were noted flying over the Merced River a short distance below the Stoneman Bridge. The birds were fearless and flew back and forth quite close to us, often coming within twelve feet of us. By their dull colors, their squarish tails, and by the white flashings in the tail of the male bird they were at once recognized. While we were watching, the birds came to a perch on a great snag that rose above the waters of the river. The male bird uttered a series of soft twittering notes, and soon the female dropped to the ground. The female searched about on the ground and, picking up a small twig about four inches long, she flew directly into a hole in the earth bank. The nest hole was located in a sheer bank, about eight feet above the water and four feet below the level of the bank where we stood. The male waited on his perch, and after a minute or so the female left the nest hole and again began her search for suitable nesting material.

There has been only one previous record of Rough-winged swallows in the Yosemite, and it is not likely that they have been suspected of nesting here. If this pair of swallows go through with their nesting desires and successfully rear a family, it will establish a new nesting record.

THE FLYING SQUIRREL

Those who follow the nature guides in Yosemite nearly always get a thrill, for something of unusual interest is sure to put in an appearance. The attendants on the field trip last Wednesday morning had a fine look at a Sierra Flying Squirrel in broad daylight. The group was investigating the former home of a Hairy Woodpecker in an old cottonwood stub alongside of the river when the nature guide tapped the tree to see if anyone were at home. Out popped a flying squirrel. Almost blinded by the bright light, he stayed motionless in plain sight for several minutes, then scurried back to the hole.

Although three years ago flying squirrels came regularly each evening to a place where they were fed, in past years they have been seen only occasionally by campers. To have a good look at one in broad daylight is unusual enough to give a real thrill. This animal, of course, cannot actually fly but by using the surface furnished by skin stretching between fore and hind legs, the animal can glide from a point on one tree to a lower point on another tree. This squirrel is largely a vegetarian and forages at night,

as might be expected at sight of the eyes, which are much larger in proportion than those of other squirrels.

BIRDS' NESTS STUDIED

The field excursions led by the nature guides in Yosemite furnish abundant opportunity for the study of nidology. No reader need be alarmed at this word used by the scientist, for it simply means the study of birds' nests. Everyone who studies nests must be impressed with the workmanship in spite of such crude tools as bill, wings, and breast, and with the artistry displayed in the decorations.

Of particular beauty are the semi-pendant, cup-shaped nests of the Warbling and Cassin Vireos. Made of plant fibers and plant down, with spider webbing often used for binding the materials together, each species decorates the outside of the nest in a distinctive way. The Warbling Vireo utilizes thin papery pieces of bark or pieces of paper to camouflage the nest, whereas the Cassin Vireo utilizes roundish white, spider egg-cases. The solid nest of the Robin built of brick, shall we say because mud and straw are utilized, is well known. The Blue-fronted Jay is also wise enough to utilize mud. In the White-throated Swift we find a bird that perches so seldom that it must break off twigs in flight with which to build the platform which supports the eggs inside of a crevice in the rock, cementing the structure together with a salivary secretion as is the habit with practically all swifts. A nest of the Canyon Wren found several years ago was constructed entirely of animal hair. The variety of materials and of workmanship found in birds' nests is sufficient to merit special study with a technical name attached.

TELLING YOSEMITE'S STORY

No. 4. Glaciers of the Sierra

When stream systems had denuded and deeply furrowed the forming mountain range, the entire Sierra region experienced a change in climate. The snows of winter failed to melt in summer. Snow masses, more than 1000 feet thick, accumulated in the summit region. The snow compacted to form ice, and the ice became active. The weight of the enormous mass resulted in a slow, flowing movement which made the ice field resemble a great quantity of tar, inasmuch as it was viscous.

Great tongues pushed down from the main ice mass and occupied the canyons cut by the streams. More and more snow, accumulating on the summits, pushed these slow moving rivers of ice far down the slopes until they protruded far below the zone of perpetual snow; in fact, they extended to within 2000 feet or less of sea level. They at last reached a point where the melting equaled the forward movement, and here great moraines of materials carried by the ice were built. It was these glacial moraines which gave Mr. F. E. Matthes of the U. S. Geological Survey a key to the story of Yosemite's origin.

The years of careful study of Mr. Matthes and his assistants have revealed that the Merced River had cut its gorge to a depth of 2000 feet in the vicinity of Yosemite Valley before the ice invasion took place. The Merced Glacier originated on the south side of the Mount Lyell group and was augmented by many powerful ice tongues that pushed down from the crests of the enormous basin drained by the Merced system. This accumulated flow produced a great river of ice which, in the vicinity of Yosemite Valley, practically filled the gorge to its rim. From the north side of Mount Lyell and its neighbors pushed another ice mass which flowed into the Tuolumne system. So great was the Tuolumne Glacier that the southern rim of the basin containing it failed to hold it. In its irresistible push toward lower levels it impinged upon the great bulk of Mount Hoffman and split, giving off a branch which flowed south through Tenaya Canyon. This branch of the Tuolumne Glacier united with the Merced Glacier at the head of Yosemite Valley. The combined forces of these ice masses, plowing through the V-shaped canyon, resulted in a great change. All loose rock and gravel in the gorge was scraped before the ice, and blocks from the solid granite were plucked out and carried along. By such excavating the glacier transformed the original V-shaped canyon to a vertical walled U-shaped one. Concisely stated, the action of the ice was to widen the stream-out gorge and to deepen it by 1000 feet or more in the vicinity of Yosemite Valley.

SOAP ROOT

(*Chlorogalum pomeridianum*)

Of the numerous Yosemite plants that the Indian inhabitants found useful, the "Soap Plant", "Soap-root" or Pa-la-we of the Yosemite is among the most interesting. It is a member of the lily family and produces long, grass-like leaves that rest flat upon the ground. In the Yosemite, in May and June, a slender stalk grows up from the rosette of leaves. By June 15 many of these stalks have attained a height of two feet or more, and numerous flower buds and scattered blossoms appear on them. If we investigate the part of the plant below the surface, we find a bulb one to four inches in diameter and covered with ragged brown fibers. It is this bulb which the Indians put to good use.

Dr. Gifford of the California Museum of Anthropology found the Miwok, of which the Yosemitees were a part, roasting these bulbs, dipping them in water, and rubbing the soapy mass into the weave of burden baskets so that very fine seeds might be gathered in the baskets thus made tight. Dr. Gifford also reports the Miwok using roasted soap-root bulbs for applying a water-proof coating to the dried deer sinew with which they strengthened their bows.

Galen Clark describes a startling method of using the bulb which was in practice among the Yosemitees in the early seventies and even later. The plant does not grow abundantly in Yosemite Valley but at lower altitudes it is to be found in plenty. The bulbs were gathered and transported to the camps of Ahwahnee. During the period of low water parties of Indians would proceed to the river with quantities of pulverized bulbs, rub the stuff by the handful against rocks under water, and await results. The soap-root caused a frothing and discoloration in the water and actually stupified all fish in the stream for a mile or more below the point of introduction. Indians stationed along the river with baskets would scoop up the fish as they floated to the surface. This was the Yosemitees' most dependable means of fishing.

Growing soap plants may be seen on the Yosemite Falls Trail near the foot of the upper falls. A specimen is on display at the Wild Flower Show at the Yosemite Museum.



Digitized by
Yosemite Online Library

<http://www.yosemite.ca.us/library/>

Dan Anderson