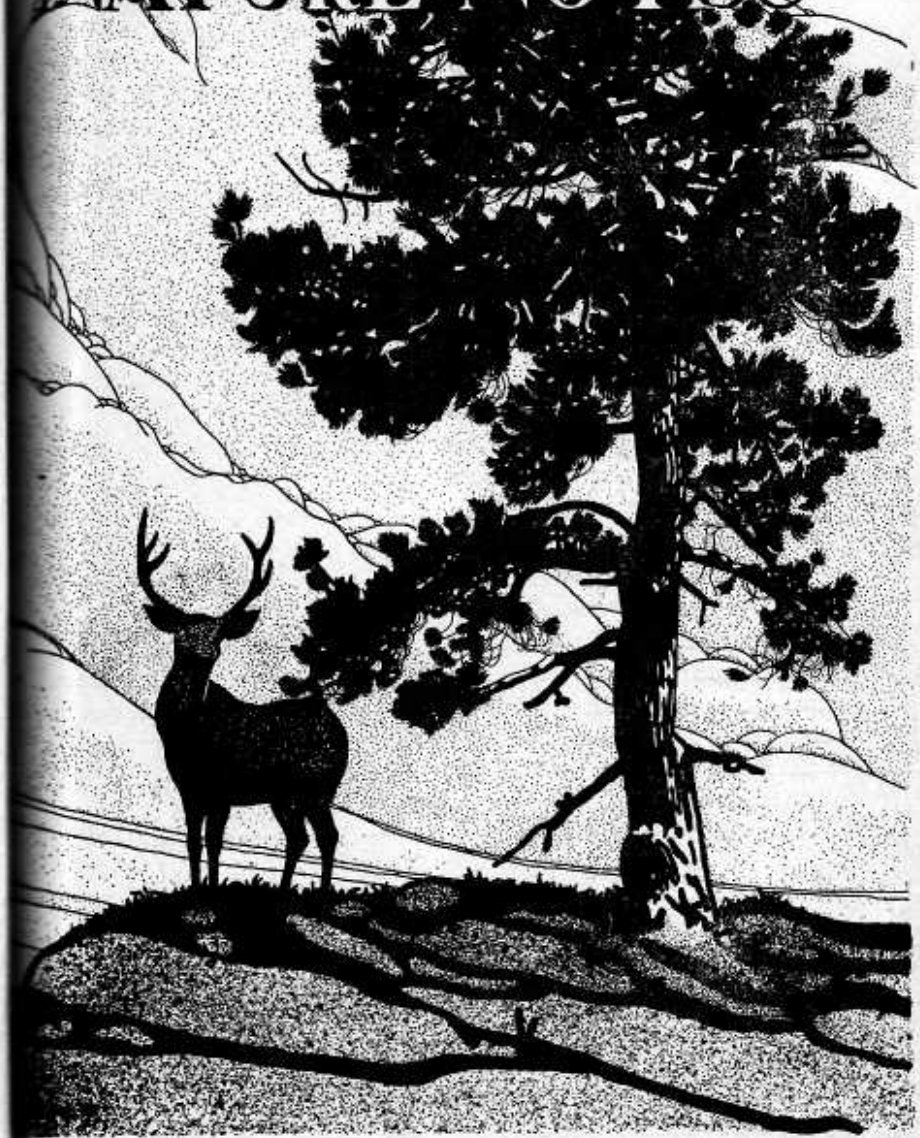
YOSEMITE NATURE NOTES



Volume IV June, 1925 Number 6

A PERSONAL INVITATION.

YOSEMITE NATIONAL PARK IS YOURS! WE OF THE NATIONAL PARK SERVICE WANT TO HELP YOU TO MAKE FRIENDS WITH YOUR PARK AND TO UNDERSTAND IT IN ITS EVERY MOOD. ALL OF THE FOLLOWING SERVICE IS OFFERED TO YOU *free* BY YOUR GOVERNMENT:

Visit the Yosemite Museum!

Here you will learn the full story of the Park — what tools were used by the great Sculptor in carving this mighty granite-walled gorge; who lived here before the white man came; how the Days of Gold led to Yosemite's discovery; how the pioneers prepared the way for you; and how the birds and mammals and trees and flowers live together in congenial communities waiting to make your acquaintance.

Plan your trail trips on the large scale models in the Geography Room.

The Yosemite Library in the museum provides references on all phases of Yosemite history and natural history.

Popular lectures on Yosemite geology and other branches of natural history are given by nature guides at scheduled times each day.

The nature guide on duty will be more than willing to answer your questions on any subject.

Go Afield with a Nature Guide!

Take advantage of this free service that will help you to know your Park. A competent scientist will conduct you over Yosemite trails, and from him you may learn first hand of the native flowers, trees, birds, mammals, and geological features.

See Schedule of Nature Guide Field Trips.

Visit Glacier Point Lookout!

From there you will obtain an unexcelled view of Yosemite's High Sierra. The binocular telescope will bring Mt. Lyell to within one third of a mile from where you stand; you can recognize friends climbing trails several miles away. The Nature Guide in attendance will help you to operate it and will explain what you see.

A small library is at your command.

You will enjoy the informal nightly campfire talks given here.

Attend the Nature Guide Campfire Talks!

In addition to the museum lectures members of the educational staff give talks as a part of the evening program at Camp Curry and Yosemite Lodge. Non-technical explanations of how Yosemite came to be; what you may expect of Yosemite bears; how the local Indians lived; what birds you see about your camps; what trout you will catch in Yosemite waters; how you may best visit the wonderland of the summit region; and scores of similar subjects are given by the National Park Service Nature Guides.

ALL OF THESE OPPORTUNITIES ARE PROVIDED FREE OF CHARGE BY YOUR GOVERNMENT.

—TAKE ADVANTAGE OF THEM—

YOSEMITE NATURE NOTES

Volume IV June 1925 Number 6

Evidences of Recurrent Glaciation in the Sierra Nevada of California

BY F. E. MATTHES

Of the U. S. Geological Survey in an Address Before the Annual Meeting of the Academy of Sciences, Tuesday, April 28, 1925.

THE GLACIAL history of the Sierra Nevada has been a subject of popular as well as scientific interest ever since the early seventies of the last century when John Muir and Prof. Josiah D. Whitney engaged in their historic controversy over the origin of the Yosemite Valley. Yet it is only since 1913 that any really definite information has been at hand concerning the extent of the main glaciers on the west flank of the range, nor of the history of their successive advances. In that year a systematic and detailed survey of the moraines and other glacial features of the Yosemite region permitted for the first time a definition of the exact extent reached by the ancient Yosemite Glacier in each of two distinct glacial stages. Supplementary studies of a similar nature have been carried on in the basins of the Stanislaus, Tuolumne, Merced and San Joaquin rivers. The results may be summarized as follows:

1.—There are on the west flank of the range two distinct series of moraines, an older and a younger, that record two stages of glaciation divided by a lengthy interval of essentially non-glacial conditions. The older series itself probably will prove upon further study to embody a multiple record.

2.—The last stage of glaciation is comparable in point of recency to the Wisconsin stage of the continental ice sheet. The earlier stage, or stages, remain as yet uncorrelated.

Two Distinct Glacial Stages

3.—That the two great ice extensions recorded in the moraines took place in two distinct glacial stages and were not mere fluctuations in an otherwise continuous cycle of glaciation is abundantly attested by:

(a) The marked contrast in the degree of preservation of the two moraine series, the younger being conspicuous for its fresh, sharp-crested forms and unweathered boulders; the older being dimmed and in part destroyed by disintegration and erosion, and composed of boulders so badly decayed that many men are readily trenched with a pick;

(b) The equally marked contrast in the aspect of the rock floors that were covered by the earlier and later glaciers, respectively, the latter still retaining polish and striae over large areas, the former

being eroded into irregular forms and having completely lost their glacial facies;

(c) The considerable depth of stream erosion accomplished since the deposition of the older drift, as compared with the insignificant depth of the postglacial stream erosion, the ratio being approximately 10 to 1.

4.—The remoteness of the earlier glaciation, further, is strikingly attested by the fact that some boulders of the earlier drift are perched on rock pedestals several feet in height; also by the presence of residual rock form that stand five to fifteen feet high above the old glaciated rock surfaces.

Moraine Dome Holds Key to Glacial History of Sierra Nevada

Most clean-cut and instructive are the residual rock features situated north of the Little Yosemite valley, on the summit of Moraine Dome, which locality may be said, indeed, to hold the key to the glacial history of the Sierra Nevada. They resemble little garden walls, and are formed by dikes of aplite that disintegrate with extreme slowness as compared with the surrounding granite. Their height—seven to ten feet—affords a minimum measure of the stripping which the dome has suffered since the departure of the earlier ice, and permits an estimate to be made of the time that has since elapsed. As the same granite on the lower slopes of the dome still retains the polish of the last glaciation, which is conservatively estimated to be 10,000 to 15,000 years old, the stripping indicated by the aplite walls on the summit would indicate a lapse of time expressable in terms of hundreds of thousands of years.

5.—Systematic mapping of the two moraine series shows that the earlier glaciation was much the more extensive of the two. The earlier glaciers attained lengths of over sixty miles—they were the largest glaciers that existed in southern latitudes in the United States, and together formed a continuous system that far exceeded in extent any similar glacier system in the southern Rocky mountains. It is clear, moreover, that the bulk of the glacial excavating in the Yosemite valley as well as in the other Sierra canyons, was performed by the earlier glaciers.

Glaciers Never Extended Near Foothills

6.—At no time was the Sierra Nevada completely domed over; its highest peaks and crests always stood well above the ice. Neither did the glacial mantle extend more than half way down the west flank. Even the trunk glaciers did not reach within thirty miles of the foothills, and the inter-canyon divides remained uncovered up to altitudes ranging from 5000 to 7000 feet.

7.—The variations in the extent of the glacial mantle of the Sierra Nevada, from north to south, reflect the intercepting effect of different parts of the coast ranges on the water vapor borne landward by the winds from the Pacific Ocean. Within certain geographic limits this intercepting effect was a stronger factor in determining the distribution of the ice on the Sierra Nevada than either latitude or altitude.

8.—The ice lines of the two glacial stages, though 3000 feet apart in altitude in the Yosemite region, rapidly approach each other in the High Sierra and practically coincide in the summit cirques. These cirques, which were the ultimate sources of the glaciers, evidently were filled to no great depth in the earlier than in the later glaciation. This circumstance, taken together with the fact that the lowest level of glacier generation was about the same in either stage, would show that the climatic conditions in the two glacial stages were closely similar. The greater extent and volume of the earlier glaciers is to be attributed, therefore, largely to the greater duration of the period of snow accumulation in the earlier stage.

NOTICE TO MEMBERS!

Beginning with July, Yosemite Nature Notes will appear weekly until the end of September when it will resume the monthly schedule.

YOSEMITE'S DISCOVERERS IMMORTALIZED

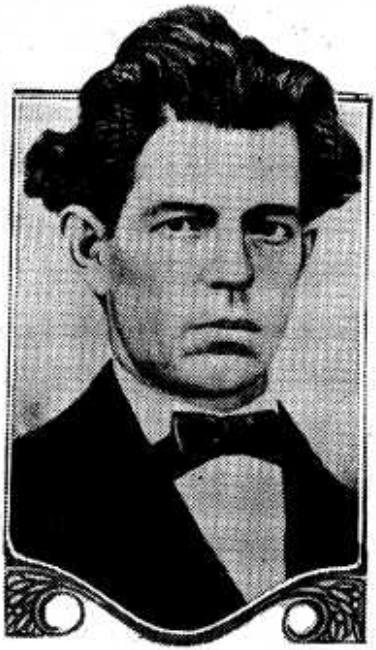
By C. P. Russell, Park Naturalist

Before the distraught Indians of the region had committed the depredations that precipitated upon them the wrath of organized miners, Bunnell had gazed upon El Capitan from afar. In the winter of 1849-50, while climbing the old Bear Valley trail from Ridley's ferry (now called Bagby), he was attracted by the stupendous peaks of the Sierras, and especially was his wonder aroused by an "immense cliff that loomed apparently, to the summit of the mountains." The business of seeking gold held in check his desire to penetrate the mountains for a closer view of the peculiarly prominent rock mass, but the impressions of the scene were firmly fixed in memory.

When the miners' activities in the foothills were interfered with by the plundering bands of local Indians a trader, James D. Savage, made it known that tribes were uniting to drive the white men from the mountains. A party of local miners, without official authority, collected and prepared to disperse the gathering Indians of their locality. Savage, Bolling, Buykendall and Chandler were leaders in this impromptu warfare and they were successful in disrupting the plans of the 500 Indian warriors involved. Governor McDougal then called for volunteers, and on January 24, 1851, the Mariposa battalion of 200 mounted men was mustered into service, with James D. Savage in command.

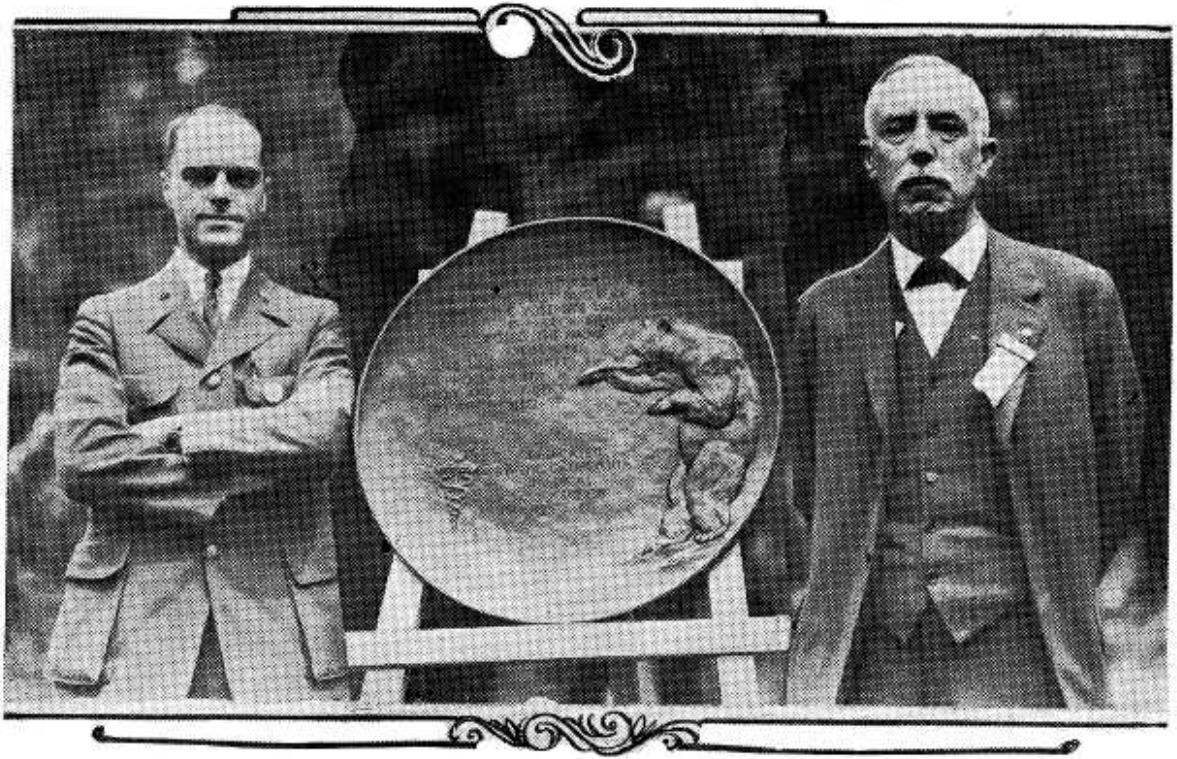
The Treaties with Indians

U. S. Indian commissioners joined the party, and first activities were limited to making treaties with all tribes who could be induced to talk with the commissioners. The How-och-ees, Chook-cha-nees, Chow-chil-lies, Po-ho-nee-chees and Nook-choos, all of the Yosemite region, signed an agreement whereby they wholly quite claim to lands or soil in the region formerly held by them and acknowledged themselves to be under the exclusive jurisdiction of the United States. In return the Indian commissioners agreed that a tract of land bounded by the Chowchilla, San Joaquin and Kings rivers was to be ceded to the above tribes for their sole use and occupancy forever. Five hundred head of beef cattle and 28,000 pounds of flour was promised them during each of the years 1851 and 1852. Each man and boy was to have two pairs pantaloons and two red flannel shirts; each woman and girl was promised one linsey gown. "Thirteen thousand yards calico, 3000 yards brown sheeting, 30 pounds Scotch thread, 6 dozen pairs scissors, 1 gross thimbles, 5000 needles and one blanket for each adult" were to be distributed in 1851 and a like provision made for 1852. "Three thousand pounds iron, 500 pounds steel, 75 brood mares, 3 stallions, 150 milch cows, 3 bulls, 12 yoke work cattle with yokes, chains, etc., 12 work mules, 30 plows, 30 sets of harness, seeds of all proper kinds, 100 axes, 100 hatchets, 30 picks, 300 hoes, 100 spades, 15 grindstones and 3 United States flags" were guaranteed as their joint property for their permanent use. The treaty stated that "when the Yosemite



CAPT. JOHN BOLLING
(Member of Yosemite Discovery Party)

Captain Bolling was a brother-in-law of Mrs. Ada Barnett and an uncle of Hal A., Sydney and Donald Barnett of Stockton. Picture kindly loaned by Hal A. Barnett.



The beautifully carved bronze plaque presented by the California Medical Association to Yosemite National Park in memory of Dr. Lafayette Houghton Bunnell, member of the Savage Expedition which entered Yosemite in 1851. The plaque was placed on a boulder at their first camp-site opposite El Capitan. (Right) Dr. James H. Parkinson, who presented the plaque; (Left) Park

tribe come in they shall in like manner be associated with the tribes or bands" above provided for. It may be added here that the treaties were but empty promises, as they were never ratified. The Indians were virtually robbed.

Yosemite Tribe Remains Entrenched

But the Yosemite tribe, who resided within the wonderful valley, did not elect to so "relinquish and forever quit to the United States all interest they ever had" in California lands. According to Russio of the Tuolumne, one of the Indians who talked with the commissioners, "The Indians in the deep rocky valley on the Merced river (Yosemite) do not wish for peace, and will not come in to see the chiefs sent by the great father to make treaties. They think the white men cannot find their hiding places, and therefore they cannot be driven out." Vou-ches-ter, another Indian, disposed to believe in the sincerity of the whites, added: "In this deep valley spoken of by Russio, one Indian is more than ten white men. The hiding places are many. They will throw rocks down on the white men if any should come near them. The other tribes dare not make war upon them for they are lawless, like the grizzlies, and as strong. We are afraid to go to this valley for there are many witches there."

Chief Tenaya Submits

It was then that the Mariposa Battalion was called upon. Major Savage, with the companies of Captains Bolling and Dill, made his way to the south fork of the Merced (present Wawona) and there surprised a village of Nook-choosr (or Noot-chu). These Indians submitted without a struggle and proceeded at once to comply with the order to go to the reservation. A band of Po-ho-nee-chee encamped on the sunny side of the Merced divide, not far from Wawona, were reached by runners and readily responded to the order to descend to the reservation. Even Tenaya, chief of the Yosemites, when approached by a special messenger, responded to the call. But he came alone. Major Savage deemed it advisable that his armed force enter the Yosemite's stronghold, and with that determination they set out upon the snow-covered Indian trail with Chief Tenaya as guide.

Bunnell's First View of Yosemite

When the troop had wallowed about half way to the Yosemite valley, they met seventy-two Yosemite Indians slowly making their way to the rendezvous at Wawona. Although old Tenaya insisted that this group represented his entire tribe, Major Savage was suspicious and decided to move on to the valley. Tenaya was permitted to return to Wawona, and one of his young men served as guide for the mounted white men. Bunnell, in writing of the journey, states that it seemed but a short time after meeting the Indians before they suddenly came in full view of the magnificence of Yosemite. "The immensity of rock I had seen in my vision on the old Bear Valley trail from Ridley's Ferry was here presented to my astonished gaze—my awe was increased by this nearer view. That stupendous cliff is now known as "El Capitan," and the plateau from which we had our first view of the valley, as "Mount Beatitude." (Old Inspiration Point).

Others of the first party to enter Yosemite were less impressed with the beauty of the surroundings than was Bunnell, and they hurried down the slippery trail to the valley floor while he lingered above, lost in revery before the sublimity of this new wonderland. Major Savage, bringing up the rear of the column, roused him with: "You had better wake up from that dream, Doc, or you may lose your hair; I have no faith in Tenaya's statement that there are no Indians about here."

Their first camp was made near the foot of the trail from Old Inspiration Point. Bridal Veil Meadow is, no doubt, the meadow upon which "the light-hearted boys indulged their tired horses with the abundant grass, but lightly covered with snow." Major Savage, Captain Bolling and Captain Dill went to the nearby banks of the Merced and discovered a ford, used by the Indians, not far down stream from their camp. In all probability this was the ford at what we know as "Valley View. It was here in the shade of ancient Black Oaks that the California Medical Association paid homage to Lafayette Houghton Bunnell, M. D., and his companions in the discovery of Yosemite.

TALES A TREE TELLS

By Roland Case Ross
of the Yosemite Nature Guide Service

A NATURE guided party was examining the many scars and healed-over places on an ancient California black oak. Many wasted away limbs had been perfectly healed; some were decayed too deeply for sealing over, and others incompletely decayed were healing tightly about the remaining stub. Great swellings or knurls elbowed out in places, some from wounds, others from disease, and a few from stubbed remains of limbs.

Lightning may have rent the trunk from top to base, for gray streaks ran full length, showing by the tender newness of the bark that healing had taken place. Again streaks were found running part way down the trunk and originating at the base of a heavy limb. The limb, though mighty and ancient, was but a relic, for within three feet it became a jagged, fractured stub. It had been the victim of a twisting wind; the stub only was left. In the struggle with the storm the sturdy limb had lost its life, its living branches, but it kept hold of the parent tree and rent it to the core. Now after reconstruction the branches were healed and showed but the grayness of new growing oak bark.

How the Healing Process Works

Along one side a slab of bark was being sloughed off; underneath the new growth was steadily enveloping the exposed heart wood and as surely lifting up the dead bark. The slab showed no sign of insect depredation but gave indication of a sun scald. Sometimes the sun struck this surface of the trunk with especial vigor—perhaps surrounding undergrowth or neighboring trees had been removed, exposing bark that was unused to direct sunshine, and it quickly blistered in the heat. This injury, hardly visible to onlookers, the tree set about to repair with new bark. The creeping, spreading growth crowded off the slab and marked the past event for us.

In time injuries are usually buried away by the swelling covering growth of the tree. The living tissue just beneath the outer bark makes constantly, during the active season, two new layers—of cork for bark, the other of wood upon the heart or case already built, making ring upon ring as the seasons go by. A scar is effaced by new bark or wood; a wound is filled up, and intruding bodies like nails, wire, stones, bullets, etc., are buried.

Later on the tree will tell its story as the ax and saw open it to the heart and expose the evidences of its struggles and victories. The bullet is found to have entered the trunk at a ring now twenty years in from that of this present year. A fire scorched the butt some ten years ago—the charred wood is there buried under ten rings of growth. Nails from which campers hung utensils are there; some carry a fragment of wire or other attachment. Stones are encountered occasionally, much to the misfortune of saw or blade. Some of these may have been inserted by woodpeckers in their acorn storage holes; others have been hurled into the wood by the force of the avalanche; and still others may have been placed by humans in tight-fitting crotches and in time ingrown.

A Stone Engulfed in a Tree

One such instance came recently to hand. A lady trail student on seeing the evidences of a tree's engulfing habits told of an English oak log imported to the family sawmill. When attempting to convert this log to lumber the saw was broken. There was found to have been deeply imbedded within the heart wood a large stone three times the size of a man's head. It was a great puzzle to the sawyers for the stone was firmly lodged at some period against the growing bark and overgrown. At first the slow-creeping bark gripped only the outline; later it held it fast; finally it buried the stone completely.

Longfellow said: "I shot an arrow in the air; it fell to earth I know not where—Long, long afterward in the heart of an oak I found the arrow still unbroke."

Those who enjoy delving into such forms of past history will be fascinated by Enos Mills' small volume, "The Tale of a Thousand Year Pine."

AFIELD WITH THE NATURE GUIDES

HIPPODAMIA CONVERGENS

Indian Canyon is the winter haunt of many wild creatures. One of the least in size of the winter denizens of the warm canyon, as well as one of the most numerous, is the lady-bird beetle hippodamia convergens. Late in the year millions of these spotted, red beetles creep under the ground cover of pine needles and go to sleep. They do not sleep alone, but a pile of a thousand or more couch together. When the sun comes out warm in winter, as it frequently does, the snow soon disappears from Indian Canyon. Then the Ladybird beetles awake and come out into the delightful sunshine for a little exercise. Crawling this way and that over the interlacing needles, they often collect into social groups or a couple here or a couple there make love. The chill of evening drives them in, and during severe storms they may sleep for many weeks.

The Ladybird beetles left the canyon on the 12th of June. All that afternoon a continuous swarm flew from the canyon. In different parts of the valley the air was rosy with great companies of dancing hippodamia. Today these beetles have scattered near and far in search of the aphis, their favorite food. Many may be seen in the apple orchards of the valley devouring the wooley aphis on the trees.—Enid Michael

* * *

NATURE GUIDE PARTY CLIMBS EAGLE PEAK

A party of forty-four followed nature guides to the top of Yosemite Falls and on up to Eagle Peak on June 6. The group was cosmopolitan, as usual, but it is not often that three artists are to be found on one excursion. In this instance one hailed from Switzerland and the other two from San Francisco. Thirty varieties of birds were noted and they varied in size from the Calliope hummingbird, the smallest bird in the United States, to Golden eagle, one of the largest of land birds. The songs of two birds stand out in the memory of all who made the trip—that of the Canyon wren and that of the Townsend solitaire, the one with the rollicking whistle of a schoolboy, the other with the sweet voice of the ballad singer. Many heard the songs of the two kinglets for the first time. Right over the trail on the limb of an oak the nest of a Calliope hummingbird was discovered, the sitting female unmoved by the crowd which passed below. Quaking aspens and red fire captured the interest of tree lovers. With snow still on the ground, few flowers were found in the high country, but plenty of opportunity for flower study was afforded at the lower altitudes.—H. C. Bryant.

PYGMY OWL FEEDS HIS WIFE

A pair of Yosemite's smallest owls, the California Pygmy owl, have chosen an oak tree beside the Le Conte Memorial lodge for their nesting site.

On June 10 the birds were under observation for a period of about three hours. During that time the male came three times to the nest-hole, which is that of one of the woodpecker family, with food for the setting female. Apparently while the female performs the work of incubation the male does all the hunting.

At the fourth trip the female refused to come to the mouth of the hole to receive the offering of the male. The male kept up an incessant calling that, in spite of its low tone, could be heard for some fifty or sixty yards.

After waiting about five minutes the bird flew from the nest hole to a perch in a pine about thirty feet away. The tit-bit, which in this case was a small snake about a foot in length, was carried in the bird's talons to the new position.

About this time the owl was discovered by a Modoc Hairy woodpecker. Immediately this bird approached the little owl, which ruffled up his feathers much like his cousin, the great horned owl, is wont to do. Apparently this had the desired effect, for the woodpecker promptly flew to another part of the tree.

Left alone, the owl began to tear the snake to bits, holding it in the meanwhile with its talons while it tore the flesh with its beak. Without finishing eating the animal, it suddenly flew off towards the rim of the valley, leaving the half-devoured body of the snake hanging on the limb of the pine.—L. W. Wilson.

* * *

SQUIRREL MOVES HER BABIES

A California ground squirrel in Camp 19 was seen carrying mouthfuls of some soft material, apparently nesting material. Five such trips were made and then when the squirrel was suddenly frightened the round fluffy bundle was dropped and it proved to be a baby ground squirrel, eyes open and able to feed by itself, as it has proved in captivity at the museum. The mother made two more trips carrying a baby squirrel, and then three trips to be sure that she had them all. Thus a brood of eight was accounted for. The hole from which she carried them was at the base of a big pine tree next to a driveway used by automobiles. The hole to which she carried them was on a hillside 170 feet away. The mother carried the little ones by the nap

of the neck, the baby squirrel curling itself in to a compact bundle about as big as one's fist. The mother kept to cover as much as possible, first running through ferns, then across the open, under an automobile, then across an open space at full speed, then under a tent floor and then up the hillside to the new home. Even with the weight she carried in her mouth the mother did not appear to have difficulty in carrying her young, for she scurried across the open places with speed and yet with little real effort.—H. C. Bryant.

* * *

A Clear Stick of Timber

Competition seems a wholesome element in bringing to the front the best energies and abilities of man, beast and plant. In the forest thick growth of trees produce the tallest straighest timber. These tapering shafts are of greater usefulness to mankind than growth of more stolid and squatty nature. Of such competition is produced towering masts and poles, far-reaching beams, and extensive pieces of lumber.

The crowded forest has but one way to grow-upward. Expansion and most development must be in the direction of free sunlight and moving air, and in this type of forest it is ever upward. On every side are close-ranked trees all in need of air and sunlight; only the sky above is unclaimed and into this they climb. As surely as this takes place slower and lower growth are eliminated. The overtopping arms of successful trees shade out the weaker ones and displace them. Thus stockier trunks may be formed.

In attaining this supremacy over others the tree has superceded itself. By its very success death comes to its own lower branches which are now shaded out and killed. Thus the upward climb is at the expense of its own good limbs; it seems a sort of stepping stone effect, each stage sending up its best strength to force the upward climb, and then, having accomplished its end, perishing from its effort. But even such a struggle has its good. This pruning process moving slowly upward shears off clean the trunks and leaves them solid unbranched shafts of the highest type of timber. The branches, being shaded out when young and small, fall off after a short time leaving scars of so slight extent that they are quickly overgrown and lost to sight. When the mature trunk is sawn these pruning scars are revealed—but having years of overlapping growth laid upon them they are of slight effect in so great a log. Such sticks are free of knots, for the little knot scars formed in early years are found only in the small core or very heart of the stem. For the last forty years or a hundred or even more the tall trunk has set out no branch; scarcely a twig fluttered from its clean-shaven surface, and the woodsman calls it perfect, a good stick. This came of competition.—Roland Case Ross.

A NEW VERTEBRATE FOR YOSEMITE

Yosemite nature guides experienced quite a thrill of excitement recently when the park naturalist brought to light a salamander new to the park and apparently new to science. The first specimen found was very young and immature. A satisfactory diagnosis of the species is difficult to make from this undeveloped individual and the nature guide staff is scouring the region about Fern Spring in an attempt to locate an adult of the species.—C. P. Russell.

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YOSEMITE NATURE NOTES

Published weekly in summer and monthly in winter by the National Park Service in cooperation with the Yosemite Natural History Association, in Yosemite Valley.

Communications should be addressed to C.P.Russell, Park Naturalist, Yosemite National Park.

THE YOSEMITE NATURAL HISTORY ASSOCIATION
ITS PURPOSES

1. *To gather and disseminate information on the wild-life of the Sierras.*
2. *To develop and enlarge the Yosemite Museum (in co-operation with the National Park Service) and to establish subsidiary units, such as the Glacier Point lookout and branches of similar nature.*
3. *To promote the educational work of the Yosemite Nature Guide Service.*
4. *To publish (in co-operation with the U. S. National Park Service) "Yosemite Nature Notes".*
5. *To study living conditions, past and present, of the Indians of the Yosemite region.*
6. *To maintain in Yosemite Valley a library of historical, scientific, and popular interest.*
7. *To further scientific investigation along lines of greatest popular interest and to publish, from time to time, bulletins of non-technical nature.*
8. *To strictly limit the activities of the association to purposes which shall be scientific and educational, in order that the organization shall not be operated for profit.*

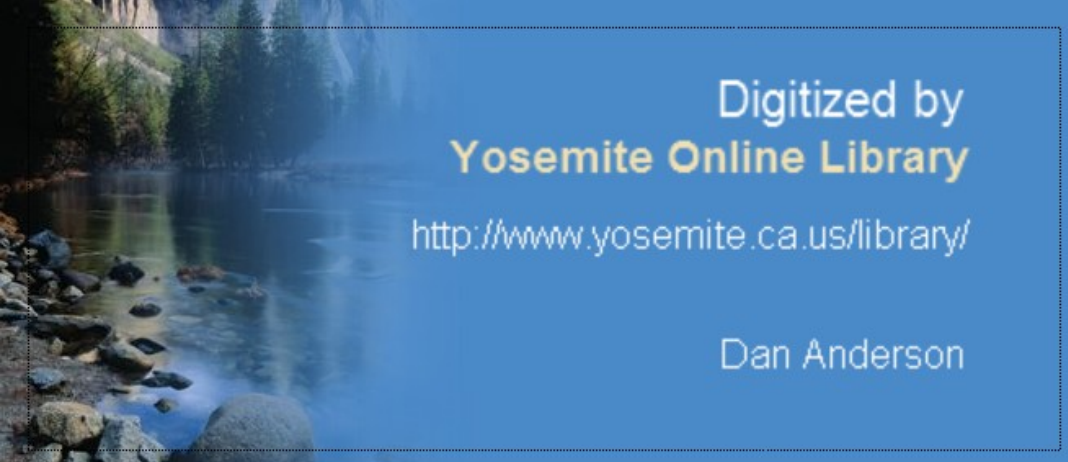
MAY WE SEND YOU EACH ISSUE OF YOSEMITE NATURE NOTES?

Your check for $2.00 sent to the Park Naturalist, Yosemite National Park, will help to pay the cost of its publication for one year and make you a member of the Yosemite Natural History Association for the same period.

FROM THE NATIONAL CONFERENCE ON OUT-DOOR RECREATION

Called by PRESIDENT COOLIDGE

"THAT THE CONFERENCE ENDORSE NATURE STUDY IN SCHOOLS AND THE EXTENSION OF THE NATURE STUDY IDEA TO EVERY AMERICAN SCHOOL AND FAMILY; . . . . . THAT THE ESTABLISHMENT OF MUSEUMS OF NATURAL HISTORY IN NATIONAL PARKS WILL INCREASE THE EDUCATIONAL RECREATIONAL VALUE OF THE PARKS".—*Resolution of the Conference.*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