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Half Dome from Glacier Point

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NATURAL WHOLESALE PLANTING OF CALIFORNIA BLACK OAK IN YOSEMITE VALLEY

By Ranger-Naturalist E. A. Payne

In the fall of 1936 the California Black Oaks (Quercus kelloggii) growing on the fertile floor of Yosemite Valley produced an exceptionally large crop of acorns. These acorns of course filled the larders of the many birds and mammals whose very existence depends in part of the presence of this natural food. However, there is another and perhaps a more lasting significance to be drawn from this crop of acorns in its relation to the valley as a whole.

The autumn of acorn abundance was followed by a winter of heavy snows and a spring lush with the waters of that melting snow. The moist duff of the forest floor into which the acorns fell, accompanied by an apparently optimum temperature, together supplied ideal conditions for the wholesale germination of the seeds.

In the spring and summer of 1937 these young seedlings made their appearance by the thousands throughout the valley. Many of these sprouting acorns lay uncovered or only partially covered by loose duff. The young stem with its tender green leaves stretched out in one direction from the seed and the developing rootlet extended out in the opposite direction, working its way downward toward the more stable mineral soil below. Until that time when the young tree could depend upon its own root system for raw materials for sustenance, the cotyledons of the acorn seed remained firmly attached to the plant and supplied the necessary nourishment to the growing tree. Usually it was possible to remove the sprouting tree from its resting place with no appreciable resistance from the roots, which would indicate that the root system had not as yet penetrated into the underlying soil.

With the elapse of a year since the sprouting of the acorns, we find a great host of these seedling oaks growing most vigorously. The leaves have assumed the deep green characteristic of the tree; the stems or potential trunks are strong and tough and the roots have penetrated deeply and have embedded themselves securely and permanently in the ground. A new oak forest in the making!

We cannot but wonder at the sudden wholesale seeding of oaks. Surely heavy crops of acorns have been borne before; certainly Yosemite Valley has been visited by deep snows in other years; conditions of sunshine and shade surely could not have altered their influence so radically in one season. What then is the answer? How many of these seedlings will survive? What will cause their mortality and what affects will their presence have upon the other plant forms growing with and near them?

ENTOMOLOGY FIELD COURSE, UNIVERSITY OF CALIFORNIA CONDUCTED IN YOSEMITE NATIONAL PARK

MAY 15 TO JUNE 18, 1938

By Stanley F. Bailey
Instructor in Entomology
University of California

During a period of five weeks, May 15 to June 18, 1938 the University of California Entomology students, eighteen in number, enjoyed a most profitable stay in Yosemite. The writer was in charge of the course, assisted by R. M. Bohart. It was our good fortune to have Prof. E. O. Essig with us the first week to show us about and point out the best localities to collect insects in the valley.

The season was an unusually late one and the excess of water on the valley floor, together with the "big flood" of December made the early insects scarce and hard to find. However, as the water receded and the wildflowers appeared, the insects became much more abundant. A number of trips to El Portal, Indian Flat, Carl Inn, Harden Flat, Big Meadows, Wawona and Bass Lake added materially to the general knowledge of the insects to be found in the vicinity of the valley.

The facilities offered in the research laboratory of the Museum, which has been remodeled and furnished with new equipment, left little to be desired. Camp 19, well-known to former members of the Yosemite School of Field Natural History was our home and the nightly visits of "Minnie" (the bear) added greatly to the "local color."

Altogether, about 40,000 specimens of insects were collected and classified as far as was possible. After arranging and indexing the Museum's reference collection a large series of selected specimens was donated to round out this permanent collection. Yosemite National Park now has 18 of the 24 orders of insects represented in its collection. Included in the 104 families are about 400 specimens identified to species and many more to genera.

Among the most interesting facts observed in the course of the field studies was the greater diversity of insect life in the Upper Sonoran Life Zone, and the greater abundance of insects in the Transition Zone than in zones of higher altitude. During the middle and latter part of May, aphis and sawflies were extremely abundant. As the warmer weather developed and the ladybird beetles, the natural enemies of aphis, came

out of hibernation these plant lice largely disappeared. Of the various groups of insects collected (18 of the 24 orders known) the most abundant were bees, wasps, and flies. Beetles and butterflies were not abundant and aquatic insects were scarce on the whole.

THE VITALITY OF BEETLES

By Karl D. Snyder
University of California
Entomology Field Course

While collecting insects at Big Meadows May 25, I came upon some large scarab beetles under a log. These insects had evidently been attacked by Argentine ants while hibernating since their insides were entirely eaten out and only the chitinous shells remained. However, in spite of the fact that practically nothing remained of their internal organs the beetles were still alive. They continued to move their legs and antennae for nine or ten hours before they finally died. Evidently, the ants had left sufficient portions of the nervous systems of the beetles and some of the muscles intact and they continued to function until the local stores of energy-producing materials were exhausted.

THE SIERRA CREEPER GOES TO BED

By Ranger-Naturalist Enid Michael

At seven o'clock in the evening of May 28 under a dark and overcast sky a Sierra Creeper was seen threading its way up the trunk of a huge yellow pine at the edge of the Merced River. I thought that the bird must be feeding young to be out foraging for food so late in the day and so hoping that I might be shown the nest I kept my eye on it. As the creeper worked up the tree trunk it explored several deep fissures in the bark and finally finding a snug fitting crack it tucked itself away for the night.

Often I have seen droppings on pine or cedar that would indicate a creeper's roosting niche, but this was the first time I had actually seen a bird snuggle into such a niche. So closely in color did the creeper match the bark that when it stopped it simply faded from view. Even in broad daylight a motionless creeper would likely escape the notice of the keenest pair of eyes. That white throat patch that serves as a reflector to throw light into dark crannies is the flash that catches one's eye. I know of no bird whose protective coloration more nicely matches its usual forage lanes. And I supose that white throat, the one conspicuous marking, more than compensates for its conspicuousness by aiding the bird in its search for food.

NATURE NOTELETS

By Ranger Frank Givens

It is getting to be a familiar sight to see a grouse sitting alongside the Glacier Point road. The grouse sitting on the snow makes an unusual scene. It is sometimes possible to drive past, within 15 feet, and not have it fly away.

GROSBEAKS FEED ON APHIDS

By Ranger Naturalist Adams

On the morning of May 13, Black-headed Grosbeaks (**Hedymeles melanocephalus melanocephalus** Swainson) were heard in the oak trees about Government Center. These were the first Grosbeaks that I had seen or heard since coming to the valley two days before. But on that morning the oaks of the vicinity were alive with them. All through the day and again the next day, the Grosbeak population increased. The reason for this sudden interest in the oaks were soon apparent. As I stood one evening under one of these trees I noticed a number of l e a v e s or pieces of leaves flutter to the ground. This was the work of two Grosbeaks. They were rapidly hopping or flying from twig to twig, tearing off bits of leaves, holding them in their beaks for two or three seconds and then dropping them. While the leaf particles were in their beaks the Grosbeaks appeared to manipulate them with a continuous, quick series of movements. These movements were made either with the tongue or the beak—it was impossible to see which. On examining the leaves that had been dropped by the birds I found that they were heavily infested with aphids—evidently the cause of all the Grosbeaks activity. Further investigation of the trees revealed infestation of practically every leaf. These aphids have been identified by Professor E. O. Essig as belonging to the genus **Myzocallis californicus** Baker. At the present writing it is professor Essig's opinion that two species are represented.

The aphids are apparently rather unusual articles of diet for the Grosbeaks. The structure of these birds does not seem to be adapted to foraging on leaves. Their weight, for instance, is too great to permit them to perch with any degree of comfort on the small peripheral twigs which bear the leaves. Often they were seen momentarily to lose their unstable perches. Also their huge beak is incapable of picking up the individual insects. Instead the entire leaf segment which bears the aphids is plucked away as described above. Even by this method only a few insects are gleaned from the many present. The rest are discarded, unharmed, with the leaf.

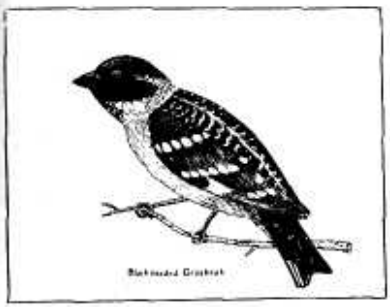
The Black-headed Grosbeaks are not the only birds that are profiting by the big aphid crop. A Chipping Sparrow was seen gleaning his bit from an oak tree in the Museum Garden. Many other species have been seen or heard in the oaks, such as California Evening Grosbeaks, Thurber Juncos, Western Tanagers, Western Warbling Vireos, Audubon Warblers and probably many more. The California Woodpeckers, however, seem to be entirely disinterested in the rich food supply—perhaps due to an inability to forage on leaves. Also, so far as I have been able to observe, none of the mammals has joined the feast.

FLYCATCHING GROSBEAKS

Ranger-Naturalist Ernest A. Payne

In observing birds over a period of time we learn to expect certain orthodox, conventional mannerisms to be exhibited by the typical groups. These mannerisms often aid in their identification. The woodpeckers are usually seen banging away on the trunks or limbs of trees; swifts and swallows are expected to be zooming recklessly through the air; hawks and eagles spend much of their time soaring high over head on set wings; sparrows, finches and grosbeaks frequent the ground, low trees and bushes where seed and berries are to be found.

When a bird suddenly digresses from the pattern of action we have learned to associate with it, we become interested at once.



On two occasions between June 14 and June 20, 1938 I observed male Black-headed Grosbeaks suddenly dive from a branch and crudely emulate the flycatcher in pursuing winged insects in mid-air. In both instances, after considerable effort, the heavy-bodied aerolist was successful in capturing his prey.

Perhaps there were nestlings at home and the press of obtaining sufficient food made necessary the utilization of every possible source of vitamins, regardless of the technique of capture.

ROBINS HAVE COLD FEET

By Ranger Lon Garrison

Spring snows in Yosemite often have the odd effect of covering the ground completely, but the snow falling on the paved roads melts as fast as it falls, leaving the roads completely bare. This is due to the absorption and retention of solar heat by the black road surface, and leaves rather a weird picture. But that it has other possibilities besides color contrasts was indicated to me recently. Monday, April 4, 1938 was a clear, warm, sunny day, but by midnight it was snowing hard in the valley. By morning the snow on the ground was two inches deep, but the snow on the roads melted as it fell, leaving the roads uncovered. Shortly after daylight, as I drove past the apple orchard near Camp Curry, on patrol, I saw nearly fifty robins standing in the road. There was nothing for them to eat there, and when disturbed, they flew a short distance and then returned to alight in the road, rather than stopping in the snow decked trees or meadows. So I decided that the comparative warmth of the pavement must be the attraction. They were all standing there keeping their feet warm.

I wonder if they were all lady robins?

OUR CLIFF SWALLOWS HOME

By District Ranger G. M. Eastman

With the work of raising the Hetch Hetchy Dam, the colony of Cliff Swallows that have made their nests on the cliff and under the bridge at the north end of the Dam and under the eves of the old powerhouse tower, have had a hard time the past three seasons. This spring, just after they returned in early April, the tower was torn down in the cleanup of the project, and later the filling the reservoir to new high water mark, 85.5 feet above the old, has submerged the old bridge and driven them from there, so just where they will nest, is of interest.

On Sunday, May 15, a few days after the water covered the bridge, a battle royal was in progress as they started building under a projecting cliff, where the Violet-green Swallows and White-throated Swifts are nesting in crevices, and apparently the latter won as no nests were finished and when last seen, at the end of the month of May they were flying around other buildings and cliffs on the south side of the reservoir.

Seven of the old nests under the bridge were occupied early this year. The tower was being torn down when they arrived.

These birds have been here for years, but for some reason no record has been made, apparently each observer thinking their presence was known. My first notice of them was June 20, 1925 when on my way to a fire above Lake Eleanor we stopped just across the bridge to tighten packs. Other Rangers and care-takers of the Dam say swallows have been under the bridge as long as they can remember.

Workmen who "scaled" the canyon walls for the new addition to the dam, say a great many mud nests were seen when they were drilling for the first blasting of the cliff face, so apparently a large colony once nested there. Now that the construction work is over, these Cliff Swallows may return to their old haunts, or may seek new locations, a matter we will watch with keen interest.

THE TENAYA CREEK OUZEL IS AGAIN ON THE JOB

By Ranger-Naturalist Enid Michael

In the spring of 1920 Mr. Bourne, who was then the Camp Curry Nature Guide, discovered the nest of a pair of Water Ouzels on a narrow ledge of the great boulder that splits Tenaya Creek a hundred yards or so above the Iron Spring on the road that leads to Mirror Lake. In those days when less people came to Yosemite Valley and more people walked, we often used to see Mr. Bourne leading a party of fifty or more people on a hike to Mirror Lake and always a stop was made for a visit with the ouzels.

For fifteen out of the last eighteen years a pair of ouzels nested on this very same rock and through the years they have been visited by

thousands of tourists. Usually during the nesting season the nest is protected from marauders by the dancing white waters of Tenaya Creek that bounce along below the nest-site. However, it is quite possible to approach to within fifteen feet of the nest even in the period of spring floods and as the birds go boldly in and out of the nest while a large gathering of people are congregated on the bank of the stream an ideal situation is offered to those who wish to study at first hand the habits of the ouzel.

I do not suppose that any pair of birds ever had so many people prying into their domestic affairs as do this pair of ouzels. Of course one could hardly believe that it has been the same pair of ouzels year after year and yet the ouzels of this particular rock have become so accustomed to an audience that they go right along with their housekeeping duties as though they were employed like the Indians to entertain the tourists.

It has been my observation that ouzels are rather more successful in rearing their young than most birds. Strange though that while food is plentiful and competition absent along their unique lanes there is never any apparent increase in the number of ouzels from year to year. From El Portal to Happy Isles a distance of about twenty miles along the Merced River there are always to be found about the same number of nesting pairs. What is the answer to the riddle? Why should the ouzel population remain so nearly constant through the years?

I HAVE SEEN YOSEMITE

Dr. Carl D. Duncan

Men wonder that my soul's at peace
Within itself; that I,
Amidst an angry, troubled world,
Should happiness embrace,
And sing within my heart
For very joy of living.

But I have seen Yosemite—
And naught else matters now,
to me.

I have gazed spellbound while her
waters clear
Plunged headlong in their dizzy leap
To rockbound chasm far below
the canyon's rim.
I've felt her cooling mists upon
my face,
Her might of thundering power
beneath my feet.
I've stared wide-eyed into
her mystery
That knows no naming.

Yes, I have seen Yosemite—
And naught else matters now,
to me.

THE SEVEN DAY HIKE

By Harold E. Perry, Ranger-Naturalist

A marked social transformation takes place in a group of Yosemite Seven Day Hikers during the course of their outing together. Starting their trip on a Monday morning, it may be that no three of the members comprising such a group have ever seen each other before, and yet at the scene of the last evening campfire, Lake Tenaya, the bonds of friendship and group loyalty have grown so strong that a distinct feeling of regret accompanies the realization that the dream is nearly over.

Many factors contribute to the achievement of this social miracle, —an alluring trail, a roguish stream, friendly birds, unfrequented gardens of brilliant hue, bountiful supplies of tasty food, untamed appetites, campfire programs, laughter, adventure, romance, — true "mountain top" experiences. It would be difficult to name the most important of these influences. Suffice it to say, the change is quietly but surely wrought and Saturday night at Tenaya Lake may easily become memorable.

Such was the occasion of which the following word picture is descriptive.

Lake Tenaya Nocturn

I

Fading sunset . . .
Spectral granite cliffs . . .
Day winds at rest . . .
Two planets in a heavenly
setting . . .
Youthful moon descending
the western sky . .
A tranquil scene . . .

II

Blazing campfire . . .
Up-drifting sparks . . .
Soft fringe of firelight . . .
Dancing shadows . . .
Circle of friendship . . .
Care-free laughter . . .
Rollicking poetry . . .
Sketch of Indian background . . .
Thoughtful fire-gazing . . .
Moon nearing the horizon . . .
A luminous pathway
across the lake . .

III

Drifting in a Sierran gondola . . .
Romantic atmosphere . . .
Murmuring wavelets . . .
Dripping oars . . .
Light-hearted singing . . .
Distant voices . . .
Symphony of stars . . .
Moon suspended above
the water's edge . . .
Golden melody of night . . .

IV

Drowsy campfire . . .
Lagging conversation . . .
Bed-ward thoughts . . .
Sleepy "Goodnights" . . .
Silent departures . . .
An empty circle . . .
A lazy spark or two . . .
Tree silhouettes against
a starlit sky . . .
Moonless interlude . . .
All is still . . .

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Dan Anderson