

YOSEMITE NATURE NOTES



Vol. XV

September 1936

No. 9

Yosemite Nature Notes

THE PUBLICATION OF
THE YOSEMITE NATURALIST DEPARTMENT
AND THE YOSEMITE NATURAL HISTORY ASSOCIATION
Published Monthly

Volume xv

September 1936

Number 9

The Question of Avian Albinism

EDMUND D. GODWIN Ranger-Naturalist

The existence of an aberrant form of one of our most common birds here in Yosemite Valley has recently come to my attention. The individual in question is a Blue-fronted Jay (*Cyanocitta stelleri frontalis*, Ridgway), and has been reported by Mrs. Bartlett, resident in the valley near Yosemite Lodge, as having foraged daily for two weeks, beginning about July 15, 1936, in the immediate vicinity of her home.

The normal color of these birds, both male and female is described by Joseph Grinnell* as: "Head (including crest) and forepart of body, blackish; wings, tail, and hinder part of body, chiefly deep blue. Young more blackish; less blue, especially on lower surface, and plumage more fluffy."

The color of the individual herein concerned, as ascertained by close (six feet with six power glasses) observation by the writer is as fol-

lows: the head, including the bill, forehead, crest, crown, occiput, nape, chin and throat, and auricular regions; the body, including the breast, belly, flank, and back; and the wings, including the greater and lesser coverts, speculum, and secondaries; were all of a uniform color resembling very closely rich cream in shade and intensity. The lateral borders of the primaries, as well as the middle tail feathers, showed a very light shade of the blue color of the normal bird, but was not, however, evident in flight. In short, the contour and down feathers were of abnormal color, showing a complete change, while the flight feathers showed a marked but not entire transition of normal hues. The eye, compared with several normal jays, appeared unchanged; the iris is of an amber shade, deep set, surrounding a jet pupil. The gums and feet showed

a flesh color. The bird is evidently in its juvenal plumage.

The presence of this bird has given rise to some interest in those who have watched it, and the question of its being an albinistic individual has been raised. The medical dictionary definition of albinism is: "congenital leucoderma or absence of pigment in the skin and its appendages; it may be partial or complete."

Before we can apply this definition to a consideration of the particular jay, a brief consideration of bird coloration must be made. The color of bird feathers, is produced by one of two factors; the structure of the feather itself, which produces, by light refraction, reflection, and absorption, the blues, violets, lavenders, greens, etc.; and the pigment produced inside the structure of the forming feather, which gives various shades of yellow (the lipochrome), black or brown (eumelanin), and reddish brown or dull yellow (Phaeomelania). ** The non-feathered portions of the bird, e.g., bill, feet, and iris, naturally are colored by pigments.

In light of these considerations, the abnormal color of the jay is shown to be a result of a disturbance of both of these factors. The normally blue feathers of the body and forehead, as well as those of the flight feathers, to a lesser extent, must, upon histological examination, be capable of revealing some type of structural variation,

although opportunity to make this examination has not presented itself. The absence of melanin substances in the feathers of the head, crest, etc., (normally black or brownish black), as well as the feet and bill, however, points to a partial true albinism. The fact that the iris is still of unchanged color would indicate that the albinistic state had not been entirely attained.



Blue-fronted Jay

Whatever may be the frequency of the albinotic in a species, it is certain, since the condition behaves as a Mendelian recessive, that there are more carriers than affected individuals in any race in which albinos occur. Although originally the condition made its appearance as a mutation, it has since reappeared as a result of shifting hereditary factors in their transmission from generation to generation, and of the matings of apparently normal individuals who, however, are heterozygous for this particular char-

acter, not showing the taint, but carrying it and transmitting it to their progeny.

Literature cited:

* Grinnell and Storer, *ANIMAL LIFE IN THE YOSEMITE*, University of California, Press, 1924.

** Allen, Glover M., *BIRDS AND THEIR ATTRIBUTES*, Marshall Jones Co., 1928.

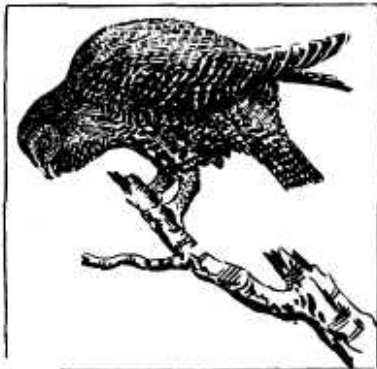
CALIFORNIA SPOTTED OWL

ERNEST A. PAYNE

Ranger-Naturalist

The thrill of the unexpected and the anticipation of the discovery of the new are some of the rewards of a tramp through the woods. The inward joy and feeling of accomplishment that accompany the first observation of a thing of which we have heard or read add lure to the trail which is irresistible.

With a small party of nature hikers on the afternoon of June 21, we



discovered a California Spotted Owl (*Strix occidentalis occidentalis*) sit-

ting contentedly on a dead branch close to the trunk of an Incense Cedar near the Snow Creek Falls trail.

The bird did not give us the satisfaction of being perturbed by our presence but stared at us rather passively through leaden eyes. As though conscious of his avian importance he faced us for a few minutes then turned one side then the other toward us. This exhibition done, the bird seemed to make a deliberate about face to expose his back. His posing over, the owl, apparently bored by the show, left his perch and disappeared noiselessly through the trees.

For several in the group this was the first observation of a real live owl and I am sure it contributed materially to the pleasure of their Yosemite visit.

NOTES ON THE BEHAVIOR OF THE SIERRA GROUSE

M. D. BRYANT, Ranger-Naturalist

While walking along the Pohono Trail a short distance above Inspiration Point on June 14, I heard the drumming of a male Sierra Grouse. Hoping that I might be fortunate enough to see this master in the art of concealment, I moved slowly toward the tree from whence the sound seemed to come. Suddenly a hen and three chicks appeared in a shady ravine near the trail. The hen moved slowly up the

slope, clucking and making no effort to escape observation, seemingly trying to lead me away from the chicks. The little fellows were lost to view and, although I had noted the exact spot of their hiding, could not be found. The hen walked some seventy-five yards away and flew well up into a tree. The male ceased his drumming and was heard no more.

Some two hours later I again passed through the ravine in which the grouse family was discovered but at a point about one-fourth mile farther down. While strolling across a small grassy clearing a movement in the grass attracted my attention. Close investigation brought three young chicks to view. Two were quietly nestled in clumps of brown grass that blended perfectly with the drab coats of the birds. The third took refuge at the base of a tree under some dried leaves. The chicks made no other effort to escape or no noise even when I picked one up and held it in my hand for closer observation. When I tossed this one lightly into the air it fluttered to the ground a few feet away and immediately hid beneath dried leaves. As I went away the clucking of the hen could be heard in the distance.

The sagacity of the hen in leaving the chicks and leading the intruder astray and the dependence of the chicks in their perfect protective coloration rather than flight is impressive. I wonder whether

the two groups of chicks were the same? If so, the movement of the very small grouse chicks in two hours is worthy of note.

WINTER NEST OF A GOPHER

C. A. HARWELL, Park Naturalist

District Ranger Otto Brown, while taking measurements of snow at Beehive Meadow near Hetch Hetchy April 1936, found the winter nest of a Pocket Gopher. The nest had melted out of the snow and the occupant was gone. It consisted of a spherical hole eighteen inches across with the bottom twenty-two inches from the surface of the meadow. The living quarters was lined to about half its depth with soft dry meadow grass; to one side was another chamber about eight inches away filled with excrement in the form of pellets about five-eighths of an inch long and a quarter in diameter. Leading from the main nest were two passages to storage "bins" the same diameter above the meadow. One of these was eight feet away and two feet in diameter; the other six feet away and somewhat smaller. The larger still contained about a quart of various roots and bulbs, all appearing to have been carefully scrubbed. The smaller had about a cupful left.

This indicates what careful preparation a rodent must make to live through a severe mountain winter.



New Book on Redwoods

A review of James Clifford Shirley's "Redwoods of Coast and Sierra" by Joseph Henry Jackson, in the Bookman's Notebook of the San Francisco Chronicle, July 29, 1936.

Probably some tens of thousands of Californians—not to mention visitors to the State—have promised themselves that one of these days when they got around to it they would certainly get some sort of handbook to California's chief glory—her redwood trees.

The trouble, of course, is that one never does get around to things like that until and unless he is reminded at the proper moment. I am hoping, therefore, that this mention of Professor Shirley's little book is precisely the thing for which readers have been looking. And it deserves a wide reading, if only for the reason given by C. G. Thomson, superintendent of Yosemite National Park, in his brief introduction, who writes. "A fuller knowledge of these survivors of another epoch will lead to a deep

feeling for their beauty and their significance, and, in addition, a serious realization of the necessity of their preservation for the pleasure and inspiration of our children's children."

The author, James Clifford Shirley, is exceptionally well qualified to present this particular sort of information.

For five years he had been a member of the Yosemite ranger-naturalist organization, and during four of these summers he has been assigned to the Mariposa Grove of big trees. He has studied them long and thoroughly and has supplemented those studies with information about other groves by reading pertinent literature and discussing his favorite subject with many of the men and women who are exceptionally well up on the subject. As professor of botany at Phillips University in Oklahoma, his background is naturally ideal, and his gift for conducting his narrative simply, in spite of the wealth of scientific fact contained in it, is worth noting.

the grooved trunk. Up and up it sped, six feet, eight feet, ten feet, until it reached a wide-mouthed crevice in the crisp bark at least twelve feet above the ground. Again it paused, tested the air with dilating nostrils, flipped its tail backwards, and poised motionless for a brief second on the brink of the opening. Then, with a flash of rusty gold and gray-white, it zipped within the confines of the crack and vanished for several moments.



Appearing later in full view, it began to shake its fur and ruffle each hair, to endeavor to wipe something from its pelage. Tiny paws cleaned the long whiskers. It

completed its brief toilet, glanced up, and spring on up the trunk at full speed to a small projecting ledge a few feet above. There it proceeded to plunge bodily onto the small depression on the ledge and to actually roll over and over, shaking and twitching as it did so. A half minute of this and it lost interest, so it skimmed head-first downward and scampered off.

When investigated, the crevice proved to lead to a large sub-bark cavity. Its inner recesses were inaccessible without damaging the exterior of the tree. The ledge, however, with some difficulty, was reached and found to be filled with an accumulation of finely-pulverized Sequoia dust. It was evident that what the chipmunk had been doing was taking a dust bath.

With this clue, a survey of the immediate ground surface was hastily made. Everywhere in the near vicinity there was a profusion of litter and duff. Nowhere could even an isolated bit of dry silt dust be located.

Birds and many animals habitually take dust baths to relieve the attacks of Mallophaga. But what does an animal do in defense of these annoying little insects if it chances to dwell where there is no dust conveniently near enough to roll in?

The absence of any evident silt dust and the absolute directiveness with which the chipmunk approached the ledge, would seem to

indicate that this small rodent has successfully found an equally efficient substitute. Whether this was an individualized case or a generalized habit among the smaller mammals of the region in the Grove is not known.

SENTINEL MEADOW

(Panzer-Naturalist Enid Michael)

It has been years since the Sentinel Meadow has been so beautiful, as this last summer. At the end of July the meadow was for the most part freshly green; there were a few tawny patches here and there where velvet grass or blue grass had gone to seed. Occasional patches of red-top grass still in flower added a touch of warm color. Freshly green for most part, but in greens of many shades—a patch-work rug of blended shades of green formed by different species of grasses, sedges and rushes. When wind sweeps across the meadow and the grasses ripple there were new shades of green and a new beauty.

All this was the general view; walking out into the meadow for the intimate view one became impressed by the number and variety of wild flowers. In one section there was a great colony of Black-eyed Susan, making perhaps the most showy splash of color in all the meadow. Helonium, commonly known in Yosemite Valley as Pop-eyed Susan, did its best in the low

swales to rival Brown-eyes. Queen Ann's Lace lifts a white veil above the meadow grasses in many places. Lupinus torreyi, a blue lupine and an early bloomer, was still blooming and still beautiful. This is one of the few flowering plants that has been steadily gaining ground in the Sentinel Meadow over the past ten years. It was odd and unusual to have the early blooming lupine and the late blooming goldenrod blooming side by side. Another torreyi!—also a member of the Pea Family—is Lotus torreyi, bloomed in moist sections of the meadow.

The other plant that showed a great gain in territory this year was Brodiaea grandiflora, the Harvest Brodiaea. Nowhere does this brodiaea bloom a more sparkling blue than in Yosemite. Most often it is found flowering among dry grasses, but this year it was happy, seemingly especially happy to be flowering among fresh green grasses. Hypericum was blooming profusely in many sections of the meadow. In the little pond near the center of the meadow the Indian Pond Lily still lifted its lovely yellow blossoms above the dark water. For those who looked closely there were small flowers, blue violets and white violets, speedwell and the tiny creeping hypericum.

Late rains keep the grass green, but fail to hold back the brodiaeas and that is why we had the lovely grandiflora blooming amid the green grasses.



Digitized by
Yosemite Online Library

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

Dan Anderson