

Summer Observations in the Southern Sierras.

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ON June 26 I started on a long trip which included a wagon drive from Pasadena, Cal., via Saugus, Antelope Valley, Ft. Tejon, Bakersfield, Visalia and thence up the North Fork of the Kaweah where the wagon was left. The journey was then continued with pack animals to the Giant Forest, then along the western divide to King's River canyon, Bubb's Creek and the system of alpine lakes near Mt. Brewer and Kearsarge Pass.

Intense heat was encountered in the valleys, the thermometer ranging as high as 115° at Rose's station. At Bullfrog Lake at an elevation of 11,000 feet, the other extreme was met with, when ice formed on the meadows at night. This wide range of conditions included a vast faunal region which at best could be examined only in a superficial way, but over one hundred varieties of birds were identified, besides many doubtful species seen but not recorded.

In the cultivated section about Pasadena the common birds include the mockers, house finches, Brewers black birds, Bullock's and Arizona hooded orioles, etc., but the change is sudden when the San Fernando valley is reached where the cactus wren, thrashers, Bells sparrows and birds of the dry wash region predominate.

At the Newhall cut a sprightly pair of dotted canyon wrens worked down a dry run in the hard pan not ten feet from where we toiled up the stiff grade, the male stopping the whole expedition by running down the scale in clear loud notes. To my mind the song of this bird is the most captivating of all the southern songsters.

The Antelope Valley presents another area entirely different, for it has reverted from its former grain growing condition to that of an arm of the Mohave desert. Thousands of Mexican horned larks (*Otocoris alpestris*

chrysolæma) were seen in flocks of twenty to fifty. There is little protection for them from the sun and we found them standing in rows in the shade of fence posts and milk weed, with mouths wide open when the thermometer marked 108° on June 27. Full-fledged young were in the flocks on that date.

At the upper end of the valley several hundred ravens had congregated and all were feeding on grasshoppers which were constantly flying ahead of them whenever the birds moved. Many attempted the flycatcher habit of taking them on the wing, but such attempts, judging from their awkward antics must have often failed. Several dozen Swainson's hawks were also engaged in the same occupation, but these made no attempt to catch the grasshoppers on the wing.

Unlike the horned larks which were very tame, the ravens and hawks kept a long rifle shot away. When we returned through this section July 30, the grasshoppers were more than ever in evidence, but it being late in the afternoon, after feeding time, the ravens were having a rollicking time on the smooth surface of a large hill on one side of the valley. Unlike the crows under similar conditions they were quite silent.

Between the head of the Antelope and the San Joaquin valleys is a rough country, but it contains a stretch of valley covered with magnificent oaks, one said to be the largest in the state being nearly 33 feet in circumference. This spot is of particular interest to bird students for here is the site of old Fort Tejon, the objective point of many of the earlier government expeditions and from which much exploration was done. Here in the '50's John Xantus made extensive collections, and to this locality we first owe such birds as the spotted owl, Hammond's flycatcher,

Cassin's Vireo and others.

A magnificent specimen of the California vulture was seen at the outlet of this canyon where it broadens into the head of the San Joaquin valley. He came down the canyon some 600 feet in the air, the white of his outstretched wings shining like silver. Making a couple of circles for our benefit he rounded the eastern spur and disappeared. The vaqueros on this ranch of forty miles square say that at times they see numbers of them about dead cattle. With food plentiful and shooting absolutely prohibited, as it is on this ranch, it is hoped that this may prove to be a vast preserve for the perpetuation of this our grandest species.

We encountered Mexican horned larks again in numbers about the head of the San Joaquin valley, but they disappeared as we entered the irrigation district about Bakersfield, where for twenty-five to forty miles the semi-desert country has been made to bloom. This transformation has, of course, changed the whole fauna as well. Noisy Arkansas king-birds are on every fence and cottonwood, song sparrows and valley partridges about every clump.

In driving at night to avoid the heat, we were often greeted with strange voices and notes. Killdeer would fly from roadside puddles, barn owls from the fences, and herons flash in the moonlight as we rumbled across bridges over the irrigation ditches. We are fairly familiar with the day habits of our common birds but how little we know of the interesting period between sunset and sunrise.

Leaving the valley beyond Visalia we strike right up the North Fork of the Kaweah river, crossing the Marble Fork of that stream and enter the Giant Forest in the Sequoia National Park. One could hardly imagine a greater change in flora and fauna than here exists.

Guns are not allowed in the park, but the military officers in charge ex-

tend every courtesy to bonafide students and scientists. We were given a letter by the commanding officer to all guards and patrols to extend to us every possible courtesy, and permission to carry our guns unsealed through the parks, but not to be used for game shooting. Our whole stay was marked by extreme courtesy and helpfulness on the part of officers and patrols.

Many of the sequoia are perforated for woodpecker's nests, the holes however not reaching through the bark, and in nearly every instance being located on the north or shady side of the tree. Along the ridges on the slopes of the western divide we met with half grown sooty grouse, the old birds flying into the trees, followed by the young. At about the same elevation, 8000 to 9000 feet, I saw broods in the canyons along the edges of meadows. They were very tame allowing me to stand under the tree when they were standing rigidly upon a limb fifteen feet above.

On Bubb's Creek an old hen and half a dozen one-third grown chicks hung about the meadow all one Sunday and we took much interest in her motherly solicitude. That evening a couple of young fellows out of supplies came down the canyon and we gave them of our store and they left. A few minutes later we heard the report of a gun and one of them returned and offered us the mother bird, in gratitude for our treatment, but none of us had the heart to accept it. What became of the brood of chicks I know not for we broke camp next morning at daylight. Incidents of this kind show that much damage is done by thoughtless persons.

At Lake Reflection and Bullfrog Lake Clarke's nutcrackers, in pairs, showed much distress, although we could find no nests or young about. The gray-crowned leucostictes were common in both localities and very tame, and had the habit noted at Mt. Whitney of gleaning numbed insects

from the snow banks. At Horse Coral Meadow, on the way out July 21, I found the nest of a Thurber's junco. It was situated at the edge of the meadow, almost completely hidden in a clump of coarse grass. It was composed of coarse grasses, lined with finer grass,

and short hairs from mule and burro, such as might fall along the trail from clipped manes. The nest contained three downy young. The trip covered some 650 miles of wagon travel and about 200 with pack animals on mountain trails.



TYPICAL NEST OF CASSIN VIREO.

(From an enlargement of a photograph taken by R. H. Beck.)

Vireo Traits.

The above illustration typifies the nature of Cassin Vireo (*Vireo solitarius cassini*) during its nesting season—, a confiding bird with a generous streak of curiosity running through its disposition. In June 1896 Mr. R. H. Beck found the nest represented in the illustration built in a black oak tree on the edge of a clearing, the nest being suspended only about three feet from the ground. The bird seemed not greatly disturbed by the setting up of the camera and a successful photograph resulted.

Four eggs constitutes the usual set, although I have twice found five young in a nest and one set of five eggs advanced in incubation. The nests are compactly woven and lined with light colored grasses, while the eggs are larger than those of either *Vireo huttoni* or *Vireo gilvus*. Cassin Vireo seems to possess but little fear of man and will approach very closely to the observer if he remains motionless; when the nest is disturbed the birds will alternately utter a harsh note of remonstrance and then launch into song. The location of the nest here shown was Fyffe, El Dorado Co., Cal.

C. BARLOW.