

To describe all factors of a bird sound in the field requires some training and practise, just as the description of subspecies requires training in color and methods of measurement. One with a reasonably good musical ear may train himself to recognize pitches, to recognize instantly the difference between a tone and a half-tone, a third and a fifth. Dealing with such high pitched voices as most birds have, however, he cannot do it without practise. The sounds and voices of many of our commonest birds have never been adequately described. There is a big field here for active ornithological work. Nearly all observers probably know many facts about bird sounds that have never been put into print.

Roosevelt Wild Life Forest Experiment Station, Syracuse, New York, August 16, 1924.

SOME NEW RECORDS FOR NORTHEASTERN CALIFORNIA

By JOSEPH MAILLIARD

(Contribution from the California Academy of Sciences)

SO FAR as the study of geographical distribution of bird life was concerned, the results of our field work in northeastern California in the spring of 1923 were rather disappointing, as but little of interest in this regard was discovered. Observations carried on in Modoc County from May 8 to June 14, however, were indicative of more promising results, provided that a good locality from an observer's standpoint could be found, and it was decided to make this County the scene of spring operations in 1924.

In the case of birds, the most interesting distributional record we made in 1923 was the confirmation of the presence of the Ferruginous Rough-leg (*Archibuteo ferrugineus*) in Modoc County. The only previous mention of the occurrence of this species in northeastern California is that made by Mr. H. W. Henshaw in the Report of the Chief of Engineers for 1879, Part III, p. 2293, where, under the head of *A. ferrugineus* (Licht.), he says, "A hawk was seen in Northeastern California which I believed to be of this species."

On May 10, 1923, while we were encamped at the Deep Creek Forest Service Station in a cañon on the east side of the Warner Mountains, my assistant, Robert J. Woods, went up to the top of the range. On his return to camp, he reported having seen several large hawks which acted as if they were nesting in the vicinity. Two of these, he said, were different from the others, and from his description, it seemed as though they must be the Ferruginous Rough-leg. After the differences between this species and other hawks that he might find there were explained to him, he was sent back, on May 15, with orders to bring in a specimen of the Ferruginous Rough-leg if possible. But the nest of the pair of hawks, apparently of this species, was on a high cliff (inaccessible to one unaided), and a strong gale was blowing that day. Woods got a shot at one of the birds but failed to secure it; he returned, however, convinced that he was right in his identification of it as *Archibuteo ferrugineus*.

On June 11, this species was also noted at Jess Valley (Modoc County), where, at the west end of the valley in the Pit River cañon, a pair of the birds had a nest. This nest was in plain view in a pine tree on a hillside on the south side of the river. There was too much water in the river to allow us to cross it except at a long distance above the nest, but the birds came near enough to us to be easily identified, and this

identification was corroborated on June 15, when the pair circled over our heads just out of gunshot range, but sufficiently close to be intimately studied through field glasses, or even without such aid. While I was sorry not to secure a specimen, I was so positive of proper identification, as I had taken several in other localities, that I did not quite realize the importance in this instance of having the skin to clinch the record. Every effort *should* have been made to reach the nest, but it was hoped that there might be an opportunity to secure one of these birds without it being necessary to make the long detour to reach their nesting site. We left Jess Valley, however, without such an opportunity presenting itself.

The only other particularly interesting occurrence in the 1923 campaign in Modoc County was that of the Golden-crowned Sparrow (*Zonotrichia coronata*). On May 9 and 10, a few individuals of that species were seen in the brush on the south side of the Deep Creek Cañon, near Cedarville, at an elevation of from 5500 to 6000 feet. One of the birds was secured on May 9, but it was taken at very close range and was so badly shattered that it was not saved, as it seemed as if it would be easy to get others. The next day a couple were seen, but they were so wild that none was obtained.

I did not at that time appreciate the fact that apparently there was no authentic published record of the occurrence of the Golden-crowned Sparrow in spring east of the Sierras in northern California. In an article in *THE CONDOR* (xxiii, 1921, p. 136) A. van Rossem states that this species is "a common migrant along the eastern Sierras," and I had accepted this as including the *eastern slope* of the Sierras, else I would have saved the above-mentioned specimen in spite of its dilapidated condition. After returning from the Modoc County trip, I began to wonder what really was meant by the above-quoted statement. A letter of inquiry to Mr. van Rossem elicited the reply that he meant to say that these birds migrated along the *western slopes* of the eastern ranges, but not *east* of the Sierras. Hence, unless some note has escaped my attention, the Deep Creek bird is the first specimen of this species to be recorded as taken in spring in northeastern California. Happily, as later detailed, this spring record was verified in 1924, by the taking of a specimen only a few miles south of the place where these sparrows were seen in the previous spring. Reference has been made in Grinnell's *Distributional List of the Birds of California* to the presence in the Mailliard Collection of Golden-crowned Sparrows taken in the fall at Eagle Lake, Lassen County, California, this constituting the only autumn record for east of the Sierras in this part of the State.

In 1924, circumstances made it seem advisable for us to return to Modoc County, and, with the aid of the knowledge of that territory already gained, to work over the ground more thoroughly. From the previous year's experience, Eagleville, in Surprise Valley, about 18 miles south of Cedarville, appeared to be a good place in which to establish ourselves. I had not actually been at Eagleville in 1923, but had been near it, and it looked promising from a distance. Both Eagleville and Cedarville are on the west, and better watered, side of Surprise Valley, which extends from Fort Bidwell southward some 60 miles along the eastern base of the Warner Mountains. In the center of the valley lie Upper, Middle, and Lower Alkali lakes, separating the fertile, irrigated meadows on the western side from the sage-brush, sand, and lava-strewn desert on the eastern side. These lakes are shallow sheets of water in the winter and early spring, but mostly level expanses of alkali dust in summertime, and this year (1924) they were entirely dry except for a small laguna at the south end of Middle Lake. The valley is narrowest at Eagleville, and consequently the desert

on the Nevada (eastern) side was most easily reached from that place, especially as a very fair road led over a causeway just below the south end of Middle Lake, obviating the crossing of the dry sand of the lake beds which would have been necessary elsewhere.

On account of unforeseen delays the field party of 1924, consisting of Mr. Frank Tose, habitat group artist and chief taxidermist of the Academy, Mr. Jack Malloch, chauffeur and general assistant, and myself, did not reach Surprise Valley until the rather late date of May 20.

It had been my desire to intercept some of the northern migrants, especially the Golden-crowned Sparrow, for the purpose of establishing the record made the previous year. It seemed as though we were too late for that, but in this case, good fortune was with us, for Mr. Tose obtained a belated migrant of this species on May 24, and thus the record was nailed down and clinched.

At this date we were encamped in the cañon of Raider Creek, at a point about $1\frac{1}{2}$ miles northwest of Eagleville. This spot not being easy of access and not especially favorable for our work, we obtained the use of an old cabin on the main road about half a mile from town, from which it was easy for us to radiate in various directions in pursuit of knowledge concerning the bird life of the vicinity.

The choice of Eagleville as an observation and collecting station proved to be a good one, and several surprises resulted from the selection. There was more bird life in this small, but quite old, settlement than in any other spot we visited in Modoc County. Most of the birds were of species common to a great part of the state, and it was rather hard at times to realize that we were in northeastern California at an altitude of nearly 5000 feet and not in the low foothills of the San Joaquin Valley, as the notes of such species as the Western Robin, Bullock Oriole, Western Meadowlark, Lazuli Bunting, and Western House Wren made a constant chorus during the early part of our stay. A pair of Valley Quail had a nest not far away, and the male bird delighted in repeating his monosyllabic springtime call at intervals throughout the day from the roof of our low, one-story cottage. This was a bit startling at times when his rather piercing call broke out suddenly within six feet of one's head, even if there *was* a thin roof between. A Western Meadowlark also took up his abode close to us and all day long kept repeating a refrain that sounded to me to be "*Oui! It's a bea-utí-ful d-a-ý!*"

An event of great interest occurred on May 27, when Mr. Tose returned from a morning tramp and reported that he had come across a colony of the Bobolink (*Dolichonyx oryzivorus*) in a meadow a mile or so away, and brought back two specimens as proof of his statement. In the hope of finding a nest, we visited this field on several occasions, but without success. The males, apparently about a dozen in number, were constantly carrying on their aerial evolutions in good style, filling the air with their cheerful, but rapidly uttered, jumble of notes. Females seemed to be scarce. Every time that a female arose from the grass she was pursued by from one to three males, which made it appear as if the sexes were very unequally represented in this small colony. When a female left the ground during our search for nests, one of our party would examine the place from which she rose, but no trace of nests was found.

It is true that the nests of this species are very hard to discover, as the female sneaks a long way through the grass before rising, if she rises at all when disturbed; and there may have been several nests in the field without our having found any. Again, although the three of us covered quite an area in our search, it is possible

that these birds may have nested in some other part of the extensive meadow rather than in that portion they were frequenting when we found them. A few males were noted elsewhere in this part of Surprise Valley, but no females.

On account of the apparent scarcity of females, only one was taken (on June 7) for the record. Evidently this individual was not nearly ready to lay, as examination showed that the ova were about the size of no. 6 shot, or nearly three millimeters in diameter. The skin of the abdomen was very soft, but did not show the absence of feather-covering usual in sitting birds.

While I would have liked to continue the search for nests of the Bobolink later in the season, the grass in the meadows grew so tall that the wrath of the land owner would have been poured on our heads had we done so, as this grass was to be cut for hay—a very scarce and valuable article in this season of unusual drought. Inquiry among the older residents of Eagleville brought out the fact that the presence of Bobolinks in Surprise Valley in the spring and summer had been a common occurrence for many years back.

The nesting of the Sandhill Crane (*Grus mexicana*) and the Long-billed Curlew (*Numenius americanus*) in this valley was another matter of ornithological interest. In the summertime, the only water in Middle Lake is to be found at the southern end, in a small laguna surrounded by a few acres of tules. Near these tules we ran across a pair of Sandhill Cranes on May 27. From the actions of these birds it seemed as though they must be nesting. A search of the most logical spot in the vicinity resulted in the discovery of the nest, but the contents consisted only of bits of egg-shells, and the lining membrane of one of the eggs. As the water had disappeared from this tule patch some time previously, the nest must have finally been totally unprotected from predatory animals, and my first impression was that it had been robbed just before incubation was completed, otherwise the lining membrane would have been pushed out of the nest by the young, or, having been retained inside the nest, would have been flattened out, which was not the case. However, the sight of a half-grown crane, walking with its parents in a nearby field one evening, cast a doubt upon the hypothesis of robbery, although the nest may have belonged to yet another pair of birds which had been seen not far away.

The young crane was seen only on this one occasion, in spite of later search for it. The parents had been anything but wild when first encountered with the young, but after that evening they were impossible to approach. There is every probability that the young one fell prey to one of the coyotes infesting the locality, an attractive foraging ground having been provided by the drying up of this nesting ground of various ducks and other water-loving fowl.

Another pair of cranes, with a young one, was reported to us as inhabiting a meadow some 12 miles off, at the south end of Surprise Valley; but when we went to look for them, we found the parents but no young. The parents proved to be extremely wary—just the reverse of what they had been when our informant had seen them with their young a few days previous to our visit. According to statements of old residents, several pairs of cranes have been breeding regularly in Surprise Valley for many years, as also have the Long-billed Curlew.

There were quite a few pairs of Long-billed Curlews in various meadows we visited, and at the south end of Lower Lake we saw a few Western Willets (*Catoptrophorus semipalmatus inornatus*). Both species had hatched out their young before we came across them, and so well hidden were the youngsters that we did not find any. The curlews and willets came flying at us *from somewhere* when we were

perhaps a half a mile away, and it was impossible to say where they kept their families. A ditch tender by the name of Reeder, who was among these birds a great deal of the time and was more or less interested in watching them, told us that he had never seen a young curlew, but that he had found a nest containing four eggs about three weeks before we met him, making the date of discovery somewhere between the 20th and 25th of May. The eggs had hatched by the time we reached this place.

In 1924, I was again unfortunate in not securing a specimen of the Ferruginous Rough-leg. None was positively identified in Surprise Valley, although, on one occasion, we passed a hawk that I am fairly certain was of this species, perched on a fence by the roadside close to Eagleville. On June 17, a visit was made to Jess Valley to see if the pair of the previous year had returned to their nest, but we found no sign of the birds. Either the nest had not been occupied this year, or the young had already left the vicinity. The only absolutely positive identification of the Ferruginous Rough-leg in northeastern California this season was made on our return trip, on June 20, when one of these birds arose from the deep gorge of the Pit River as we were rounding the point at the top of the grade from that river up to the Fall River mesa. This hawk soared over our car almost within gunshot range. We stopped and watched it in the hope that it would misjudge the distance. As it circled slowly above us, the distinguishing characters were plainly discernible even with the unaided eye, and good field glasses made assurance doubly sure.

Further details of the field work accomplished on this trip will appear in due course in the Proceedings of the California Academy of Sciences.

San Francisco, August 6, 1924.

A SURVEY OF THE SONG SPARROWS OF THE SANTA BARBARA ISLANDS

WITH TWO FIGURES

By A. J. VAN ROSSEM

THE PRESENT arrangement of the races of song sparrow (*Melospiza melodia*) which inhabit the Santa Barbara Islands (these being here considered as including Los Coronados Islands) is one which reveals several apparent inconsistencies when viewed from a distributional standpoint. Under the grouping until now in vogue, *clementae* occupies the northern and southern extremes, with *graminea* occupying two intermediate stations. In other words, *clementae* has been assigned to Los Coronados, San Clemente, Santa Rosa, and San Miguel islands, and *graminea* to Santa Barbara and Santa Cruz islands. No song sparrows are known to occur on San Nicolas and Santa Catalina islands. In the latter case this condition is difficult to account for. Santa Catalina would appear to offer a favorable habitat, and one much better suited to melospizan requirements than some of the other islands such as San Clemente and Santa Barbara where the birds are plentiful.

No survey of the song sparrows of the islands is comprehensive without consideration of those of the adjacent mainland, particularly those individuals which inhabit the littoral association of Ventura County. Birds from this area show a closer approach to the insular forms than do birds from elsewhere within the California range of *cooperi*; and one is tempted to suppose that the original island stocks (exclusive of *coronatorum*) were derived from here. These Ventura County birds are distinct from any island race in that they possess a darker and browner dorsal