

## A FIRST EXPERIENCE IN BIRD BANDING

By JOSEPH MAILLIARD

ALTHOUGH sundry urges from the United States Bureau of Biological Survey and from the much esteemed editor of the Bird Banding Department of THE CONDOR have been expended upon me in the hope of inducing me to take up the work of bird banding, conditions under which I have been carrying on my field work did not seem to permit of this being done. In the California Academy of Sciences itself curatorial and other work takes up so much of my time that it is impossible to attend to the trapping of birds in Golden Gate Park, or even close by around the Academy building there.

In September, 1924, while I was doing some field work in Surprise Valley, Modoc County, California, such numbers of the Gambel Sparrow (*Zonotrichia leucophrys gambelii*) appeared that it struck me as a great pity that no preparation had been made to band this species under such favorable conditions. But traps and bands were wanting and there was other work to be done. At the time of my arrival, September 3, many of these sparrows were already present and they rapidly increased in numbers until there was a good sized flock every hundred yards or so along the county road wherever there was a sage-brush border. There were also many other flocks in suitable places away from the road. The year 1924 had been a year of severe drouth following two years of partial drouth, but there was yet some water in Surprise Valley and a better crop of grass and grain than in most places in northern California. Of this the sparrows were taking advantage and there were more of them in this valley than I had ever before seen anywhere.

The year 1925 was practically a normal one in Modoc County as regards rainfall, and I revisited Surprise Valley in the fall to find out what took place there in an ordinary season. It turned out that bird life, according to residents, had been abnormally abundant in the dry year of 1924 but was the opposite in the normal year of 1925; so much feed had been produced in the latter year that the birds were widely distributed along the general line of migration and were in no hurry to be on their way south. This year but few migrants were seen in the valley at the date of my arrival, September 8, and there were no Gambel Sparrows noted for several days thereafter. In fact it was not until September 23 that there seemed to be enough present in any one place to make it worth while to begin the work of banding, for which I had this time come to some extent prepared.

Not knowing whether there would be enough sparrows migrating through Surprise Valley in a normal year, I had not sent for any extra supply of bird bands of the proper size for the genus *Zonotrichia* and had with me only seventy-five that would do for these sparrows, having believed from the past year's experience that there would be plenty of time to send for more if conditions would warrant so doing. The lateness of arrival of the migrants in 1925 was disappointing but not fatal to this plan.

Of traps, I had with me three of the regular double-enders and two 3 by 4 foot funnel-door traps of wire screening, somewhat modified from those described by Mr. G. D. Sprot in the Canadian Field-Naturalist (vol. 38, September, 1924, p. 136). The modification consisted in just cutting the trap to the pattern, transporting it flat, bending the sides into shape only as used, and then fastening the corners with string

or fine wire. At first the funnel-door traps did not seem to meet with favor on the part of the birds and, not being able to buy in Surprise Valley the proper sort of wire screen for traps, I cut off part of one of these and made with the wire two more double-enders. As, however, about the time these two were made the birds had gotten over their fear of the funnel-door idea and were freely entering the trap left in the field, I managed to cobble the remainder of the mutilated trap into a smaller one and again put it into commission. It was made with a floor and one side of wood and was never as popular with the birds as the larger trap that had no bottom. Also it was so small that some birds found their way out of the small end of the funnel and escaped. Later on, another of these traps was contrived from the rusty remains of an old woven wire mattress. It had a wooden frame but no floor and worked very well. Finding on a ranch enough screen, I made two more double-end traps, which brought the total number of traps up to nine. This was about all that I could attend to on busy days.

A half mile north of Eagleville there was a narrow fenced-in lane leading from the main road back to a brushy foothill pasture and to the mountain trail in the mouth of Raider Canyon. This lane was about one-third of a mile long, and it had a wagon track running through it, with heavy sagebrush between the track and the barbed wire side fences. Beyond these fences the fields had long ago been cleared and in them was no cover for birds. In 1924 this lane was alive with Gambel Sparrows and I had picked it out as an ideal place for banding birds, but in 1925 the sparrow population was at first a very small one and there were no other flocks within half a mile, to work in conjunction with it.

My first idea was to scatter traps all along the length of the lane, but I found that it was best to concentrate them in the central part. The sparrows had a way of just flying a little way ahead, from bush to bush, as the traps were examined and the contents attended to, so that when the end of the trap line was reached, in either direction, there was still along the lane a lot of undisturbed cover in which most of the birds quietly remained. After resetting the last trap all I had to do was to walk a little way out into the open field at right angles to the lane, then parallel to it until the end was reached, return to the lane and simply herd the birds back over the traps again, alternating ends and making it a continuous performance. It was what is colloquially termed a "snap". In order to allow the birds to settle down a bit, after being disturbed, ten or fifteen minutes between turns were devoted to writing up the record cards for the numbers used in banding, so no time was lost.

At first, banding was done only in the mornings, but even then the seventy-five bands were used up on the fourth day. As soon as it was seen that there were enough sparrows coming in to make it worth while, a wire was sent to Mr. W. C. Henderson, Acting Chief of the Bureau of Biological Survey, requesting him to send 300 bands by quickest way. Mr. Henderson kindly acted with the utmost promptness and the bands arrived on September 30, leaving me only four days without any. Meanwhile the ground had been given a daily baiting and banding was resumed on October 1, the work being carried on up to 11 A. M., and from 2 to 5 P. M.

This lane, called the Minto Lane for convenience sake, because it bordered the Robert Minto place, was worked until the evening of October 3, when there were so few new birds taken and so many repeats that it was decided to move the traps to the McCully Ranch, a mile farther north. Here they were placed in an enclosure free from stock and cats. Part of this was used this year as a potato patch which was bounded on three sides by a very heavy hedge of wild rose that had grown up over

the old wire fence. This hedge was some ten or twelve feet high and about twenty feet wide, making an ideal refuge for birds. Six traps were placed under the edge of the hedge inside the potato patch and three outside. They were baited that evening but not set. Early next morning they were rebaited and the triggers set.

The birds were very wary on that day and only eighteen were taken, but by October 5 they had lost their shyness and sixty-seven Gambel Sparrows, with one Modoc Song Sparrow, were banded. The song sparrow was in a dark place early in the morning and I inadvertently slipped on the band and closed it before noticing that the bird was not an immature Gambel Sparrow. October 6 it rained hard all day, but stopped in the evening. The next day was very cloudy and but few birds came to the traps in the early morning, doing well later on. Also two Golden-crowned Sparrows (*Zonotrichia coronata*) and one Warner Mountain Fox Sparrow (*Passerella iliaca fulva*) were secured. The latter was not banded. In the afternoon of that day, however, there were so many repeats that the traps were moved back to the Minto Lane, to see what was going on there and whether any new birds had come in. The result of the next day's work, October 8, showed that most of the birds had moved on after the rain storm; for only twenty were banded and five repeats taken. One of these was a bird banded on September 27, but the others were of recent take. The catch was poor here, and there being no other flocks within four or five miles, on land free from disturbance by live stock or cats, the traps were moved that evening back to the McCully place. On October 9 there were banded twenty-four Gambel and two Golden-crowned sparrows, but toward the end of the day the repeats were so constant that the traps were transferred to the orchard by the McCully house, where a number of sparrows had been seen, and placed in spots favored by the birds.

On October 10 there were a good many sparrows in this orchard, but the heavy rain had sprouted so many weed seeds that the birds preferred scratching for these rather than accepting the bait that was offered them. They would fly down from an apple tree and light on the ground all around a trap, but would work away from it in place of gathering the bait scattered before the doors. On this day only eleven Gambel Sparrows and one Golden-crowned Sparrow were taken, with a few repeats. One of the latter was a bird banded in the Minto Lane, a mile south, being the only case noted of other than very local wandering. On October 11 a rain commenced, mingled with snow, that lasted for two or three days, leaving quite a fall of snow on the higher elevations, after which so few sparrows remained in the vicinity that banding was given up.

This banding work was well worth while if only for the taking of the Golden-crowned Sparrow in migration, which proved conclusively that the previous meetings with this species in Modoc County (Mailliard, Condor, xxvi, 1924, p. 214) were not merely incidental. It was singular that so few birds other than the Gambel Sparrow entered my traps. Besides the three species already mentioned the only others caught were four or five Nevada Towhees (*Pipilo maculatus curtatus*) and one Green-tailed Towhee (*Oberholseria chlorura*). It is true that there were not many other species present of a sort that might go into the traps after grain food, but there were a good many song sparrows at the McCully Ranch, of which only three or four were taken, and quite a number of the Nevada Towhees were present in both the localities where the trapping was carried on. Following is a list of the birds banded.

IN MINTO LANE					
	Adult	Immature	No. banded	Repeats	Total takes
Sept. 23	2	3	5	....	5
Sept. 24	2	9	11	1	12
Sept. 25	3	7	10	4	14
Sept. 26	18	13	31	7	38
Sept. 27	13	5	18	....	18
Oct. 1	21	18	39	12	51
	1 (age?)	....	1	....	1
Oct. 2	22	27	49	8	57
Oct. 3	15	11	26	14	40
Oct. 8	3	17	20	5	25
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	100	110	210	51	261
McCULLY RANCH					
Oct. 4	11	7	18	....	18
Oct. 5	41	27	68	4	72
Oct. 7	37	18	55	35	90
Oct. 9	12	12	24	33	57
Oct. 10	5	7	12	1	13
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	106	71	177	73	250

Percentages of adult and immature birds: Adult, 54.5; immature, 45.5. The band numbers used were: 115156-115205, 81236-81260, 169701-170000, 171001-171012; total, 387. Included in this total are: Modoc Song Sparrow, 169854, banded October 5; Golden-crowned Sparrows, 169937 and 169951, banded October 7, 169978 and 169987, October 9, and 171001, October 10. The remainder are all Gambel Sparrows.

The bait used was a mixture of broken wheat screenings and refuse screenings from the local mill. The broken wheat screenings consisted largely of grain, but the refuse screenings were mostly weed seeds and trash and would be bad to use on clean ground. Bread crumbs were at first added to the bait but did not seem to add to its attractiveness and so were finally discarded.

*California Academy of Sciences, San Francisco, November 16, 1925.*