

GLEANINGS FROM RECENT BIRD BANDING

By JOSEPH MAILLIARD

After having for some time had in mind the idea of trying banding work with the Nuttall Sparrows (*Zonotrichia leucophrys nuttalli*) in Golden Gate Park, San Francisco, California, a commencement was made in 1928 on January 26, and work was carried on, with short interruptions until February 27. The traps were set out again on March 16, 17 and 21, but by the last date the springtime changes in the birds were beginning, the presence of numerous insects turned their appetites away from the cereal bait that had heretofore proved so attractive, and the sparrows refused longer to enter the traps.

The locality selected for the banding work was in the immediate vicinity of the California Academy of Sciences and the Steinhart Aquarium buildings, this being the only place discovered in the park where conditions were such as to permit of profitable work in this line. In a city park the necessary conditions for this kind of work are: Presence of birds in sufficient numbers to warrant operations; good bird cover where traps can at least partially be hidden from the passing public, particularly from the eye of the ubiquitous small boy, and trapping ground sufficiently near to headquarters as not to take up too much time in setting out and retrieving traps as occasion may require.

Eight or nine Potter type traps, some two and some four compartment, were in operation for the last five days of January and for 13 days in February, with the three unprofitable days in March above mentioned. The traps were set in groups in three places. Group A was behind a thick hedge of bushes and under some low-branched cypress trees about 150 feet east of the main entrance of the California Academy of Sciences building, B was under the edge of another bushy growth just south of the Aquarium building, while group C was among a lot of rather thin bushes about 175 feet southwest of the Academy building. These places furnished good cover for this genus of sparrow and all were rather out of the way of the public in general and even of the small boy.

The first group mentioned was close behind some long benches on which people often took their lunch and where at any and all times of day children dropped crumbs. The traps were fairly well hidden from view by intervening bushes and it often was with a strange feeling that the writer would be taking birds out of the traps and banding them only a few feet behind the backs of rows of men, women and children, who would have burst through the slight bush barrier in a wild desire to see what was going on had some sharp-eyed youngster caught sight of the banding operations!

The Aquarium people daily scattered grain close to where the B group was set out, but group C had only natural attractions, yet, at that time, was almost as good a trapping ground as were the other two. Later, the park authorities had the bushes at group A thinned out and the trash on the ground cleaned up, much to the detriment of the spot as a trapping ground, and group C was temporarily, perhaps permanently, ruined by removing many of the bushes and turning the place into a Shakesperian Garden, thus greatly altering the character of the shrubbery.

Cats, cottontail rabbits, rats, the (introduced) red squirrels, and semi-domesticated California Quail persistently did their best to add to the bird bander's troubles in this park work. It was out of the question to erect any upright barriers against these pests, as that would have at once attracted people's attention so much so as to interfere with the banding work; but a fairly effective solution of the problem

was the making of a chicken fence wire cover for each trap, with the mesh large enough to allow the entrance of a bird as large as a towhee but too small for all of the other pests except the rats. These latter trouble-makers were handled by fastening some wire cloth to the bottoms of the traps so that no rat could dig out when captured.

The distance from the first trap group to the second, measured around the corner of the Aquarium building, was about 450 feet. From group B to group C, measured around the base of a small knoll, was about 275 feet. The Aquarium building, quite a low one, was between A and B; there was practically nothing between B and C, except a few bushes; and the Academy building, also a low one, was between A and C.

These details are fully gone into in order to emphasize a rather singular circumstance that was here found to exist; this is, that in spite of the short distance between the different groups of traps—a mere trifle for a sparrow to cover—out of the 120 Nuttall Sparrows banded here in January, February and March, and 69 more banded in the fall, 1928, with some 270 recaptures, there were only nine instances of one of these sparrows being taken in another trap group than that in which it was originally caught and banded! Of these nine instances only one occurred in winter, when an individual, banded in group C on February 10, was taken fifteen days later in A, but it repeated February 27 and March 16 in C. Two instances were of fall visits from C to B, only 90 yards distant, of winter banded birds. Three fall visits were made by winter banded birds from A to C. The other cases were of three young of the year making fall visits from C to B.

The constant return of the great majority of the Nuttall Sparrows to the spot in which they were banded, some individuals doing so over twenty times, seems to prove beyond doubt that each flock or association of individuals occupies an area from which it seldom strays, and that the range of each flock is only in certain directions from its roosting place. For instance, the birds in group A range across the court, from the cypress trees opposite the main entrance to the Academy west to the very door of the building, and also across the two driveways north to the southern edge of the Music Concourse, all within a radius of 60 or 70 yards from the cypress trees. Group B ranged a little to the eastward along the southern edge of group A, but did not range far in any direction. Except that a few individuals were sometimes noted in the flower beds against the Academy building, group C ranged almost entirely westward to a small green and possibly beyond this to a path where children were present daily.

This banding in Golden Gate Park was undertaken with the idea of devoting to it two or three days at a time, twice or three times a month through the fall and winter, in the hope of attaining some information in regard to the movements, or non-movements, of the Nuttall Sparrow population in a limited area, such as is this park. As it happened, however, a trip east in November, followed by a severe and lasting attack of influenza upon the return of the writer to California, prevented all work of any kind from being indulged in from November 11, 1928, to February 22, 1929, and greatly reduced the value of what otherwise was accomplished.

Of the 120 Nuttall Sparrows banded in groups A, B and C between January 25 and March 22, 1928, 40 were not again seen; 34 repeated during this period but were not taken in the following fall; 4 were picked up dead near the Academy building and 42 were retaken in the fall between September 5 and November 10, 1928. Of these latter birds it is impossible to know which were residents of the park and which were migrants from the north; yet certain it is that many of the

Nuttall Sparrows noted around the Academy building through the summer were wearing bands, but, as they would not enter the traps while the nesting season was on, there was no way of identifying them or even of knowing how many individuals were in the vicinity, as they scatter somewhat at that time.

Some of the band wearers were assiduous repeaters all through the winter while others repeated but once or twice and then only immediately after having been banded. Some of those retaken in the fall had not repeated in the previous winter and it seems reasonable to suppose that they were probably migrants, possibly only local ones. It also seems reasonable to suppose that the constant repeaters were the birds that staid around all the time and were used to picking up crumbs and other tid-bits from among the visitors' feet, as daily can be seen in the park, and which did not have to range far for quantity or variety of food. Unfortunately the small amount of banding that was accomplished in the fall—five days in September, three in October and three in November, 1928, when 69 Nuttall Sparrows, mostly young of the year, were banded in the 11 days mentioned—was not enough to add much to our stock of information upon the matter of migration in regard to this species. However, it is the hope of the writer that no interruptions will prevent continuous work this coming fall and winter.

Having in mind former conditions relating to the abundance of the Nuttall and Golden-crowned sparrows (*Zonotrichia l. nuttalli* and *Z. coronata*) at what is now called Woodacre, Marin County, California, the writer decided to undertake some bird banding work at that place also, alternating with the work in Golden Gate Park, San Francisco. Visits were made to Woodacre at intervals in September, 1928, in order to find out when the sparrows arrived. It was not until toward the end of the month that they commenced to straggle along. Some traps were set out, but the first attempts at capture were failures for the reason that the sparrows did not seem to appreciate the "baby chick feed" that had been proving so attractive to the Nuttall Sparrows in Golden Gate Park. This necessitated a search for something more alluring to zonotrichian sense of taste, which was found in what is called by the trade "wild canary seed", apparently a volunteer crop from a previous year's planted crop of canary grass "birdseed" (*Phalaris canariensis*), as there were weed seeds and small grains mixed in with the birdseed. This proved to be just what the birds were looking for and finally led them to learn to eat chick feed and bread crumbs mixed in, though the canary seed was ever the favored attraction.

Many years ago, while living at Woodacre Lodge, the writer had recorded the presence of many of the above two species of sparrows throughout the fall and winter period. In order to find out what are the present conditions in this regard it was decided to make about three visits per month for a while; but this plan was sadly disarranged by the interruptions that so interfered with the park work, above mentioned.

Work was started on October 2, and during the visits made in that month 357 Golden-crowned and 34 Nuttall sparrows were banded, October 8, 9 and 10 being the banner days for both species, when 108 of the former and 19 of the latter were captured, though none of the latter was taken on October 8. Altogether 412 Golden-crowned and 36 Nuttall sparrows were banded. There were about 650 recaptures of Golden-crowned Sparrows from 186 individuals. Of the 357 individuals of that species banded in the fall, 185 were not seen again, about 52%; but of the 55 banded in February and March, 47, or about 85%, visited the traps again

from one to 17 times, the only ones that did not do so being eight individuals banded in March or April. The birds banded earliest made up the majority of those not again heard from. It will be a matter of much interest to watch for these early birds next fall. The 95 individuals that repeated only once usually did so within a short time after being banded, which makes it seem as if they did not tarry long, at least in the immediate vicinity of the trapping ground. Of the Nuttall Sparrow only 36 were banded altogether—34 in the fall and two in the spring—and of these only 13 revisited the traps, with 19 visits. The Nuttall situation was very surprising, as that species was formerly very common at this place all through the winter, though never so abundant as the Golden-crown. Possibly the change brought about by the terrible fire that swept over this territory in the fall of 1923 may have had something to do with this, but these figures are all from a station situated in the bottom of a valley of which the fire only scorched the edge. Considerable settlement has taken place there of recent years, however, and, although much of the old shrubbery is still in place, the trees and bushes have grown higher and changed their physical character to a considerable extent, which may partly account for the changes in winter visitors.

The figures given above of the captures and recaptures in winter of the Golden-crowned Sparrows show that about fifty individuals composed the band that staid at this station, wandering around among the gardens and shrubbery within a radius of, say, 200 yards, while the Nuttall Sparrows did not stay at all; and, at least in the past spring, the fall migrants evidently of both species chose some other route for their return to their northern breeding grounds.

The two star boarders, with 21 and 26 repeats, respectively, were taken on October 8 and 9, 1928, and their last visit to the traps was on April 22, 1929, almost the last date upon which traps were operated. One Golden-crowned Sparrow, banded at Woodacre on October 10, 1928, was picked up dead near Oakland, California, on January 5, 1929, and the band sent to the Biological Survey.

Toward the end of March the sparrows at Woodacre had daily been growing scarcer, though a few remained until the end of April. Several Golden-crowns were banded in March and a very few in April, the last being on April 22. The traps were set on April 27, 28 and 29, but no new birds came in and but five individuals repeated, one of them once on each of the three days, and none was noted thereafter in the vicinity.

Several casualties occurred among the banded birds, as the remains of several were discovered, a cat having been accountable for one or two deaths, a hawk for another, probably wires for one or two, etc.; and evidences of injuries were noticed on several of the captured birds, legs broken and healed over being the most common. One bird had but one foot, yet seemed to move about fairly well. Another was discovered caught by one leg, which it had broken in trying to disengage itself. The fracture was a compound, comminuted one and the only thing to do seemed to be to amputate the leg. This was done and the bird was recaptured, apparently in good shape, a week later, hopping around on one foot with considerable agility.

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