

The eggs, three or four in number, are usually plain white with a tinge of blue which seems to get darker as incubation advances. Frequently one or more of the eggs have some small brown spots scattered over their surfaces. The birds do not readily desert a nest and seem to return to the same locality year after year.

Tombstone, Arizona.

NESTING HABITS OF THE RUFIOUS-CROWNED SPARROW

By HARRIET WILLIAMS MYERS

WITH TWO PHOTOS BY THE AUTHOR

ON the afternoon of April 10 a friend stopt to tell me about a bird that she did not know which was nesting on the side hill of their property. Being anxious to see the nest I visited the place with her and found the bird to be a Rufous-crowned Sparrow (*Aimophila ruficeps*), a species which I had never before seen.

The hill where the nest was situated is an uncultivated one just outside the Los Angeles city limits, overlooking the Arroyo Seco, and is overgrown with the usual vegetation—clumps of sage brush, wild oats, clover, grasses, and many varieties of wild flowers. The nest was placed directly on the ground under a clump of grass over which white convolvulus was twining; owl clover, brodiaeas, and lupines were blooming in the same clump. The nest itself resembled in shape and size the Song Sparrow's nest, being made of brown grasses, lined with finer fibers and a few horse hairs. It contained three large pure white eggs. The noticeable thing about them was their size, they more nearly comparing with a Towhee's egg than with that of a Song Sparrow. The female was brooding and allowed me to come within three feet of her in my inspection before she flew off the nest. Then she stationed herself on a weed nearby and scolded me in a most musical way. One note that she used sounded like "dear, dear", and reminded me of one note of the Wren-tit tho it was more plaintive. This I found to be the common call note of these sparrows. But the note which exprest the greatest disapproval of my presence was a short, sharp one given as rapidly as possible. As soon as we stept back from the nest the bird was quiet and flew to a bush farther up the hill where she preened herself before returning to the nest.

The next morning I was at the nest at ten o'clock. The bird was not brooding and was nowhere in sight. At 10:23 she came to the top of a stake that stood just above the nest. From there, or a nearby bush, she gave me a vigorous scolding, using the single high-pitcht note given rapidly, varying it once or twice with the slower, more plaintive, "dear, dear, dear". In ten minutes she ceased her scolding and flew about below me until 10:49, twenty-three minutes after her coming, when she slipt thru the grass and onto the nest. Ten minutes later I saw and heard another bird of this species way up on the hillside. He did not attempt to come down to the nest, but gave the single call note which the female on the nest answered with a low "sit". In a few minutes the bird on the hillside flew away. This was the only time during incubation that I saw other than the brooding bird about.

At 11:33 the brooding bird left the nest and went to a nearby bush where she

preened herself, said "dear, dear," deliberately, and in four minutes flew directly up the hillside and out of sight. At 11:55 she returned and alighted on the pole back of the nest. My presence evidently distressed her, for she gave her call several times and flirted her tail. I moved farther away, but still in sight, when she was quiet, and in four minutes from the time of her coming went to the nest. For one hour and thirty-one minutes after the bird took the nest I sat and watched it, and when at 1:30 I left, she was still brooding.

The next day I took my camera hoping to get a picture of the brooding bird; but the presence of the camera so disturbed her that I gave up the undertaking.

Two days later, at 1:12, I found the bird brooding. For an hour and forty-six minutes she stayed on the nest, not once turning or moving. When she left the nest she did so quietly, slipping thru the grass, then onto a bush, and from there flying directly up the hillside, a route she invariably took. In twenty-nine



NEST AND EGGS OF RUFOUS-CROWNED SPARROW

minutes she returned, resting on the stalk back of the nest and calling "dear, dear" at me; I moved farther back and she took the nest. It seemed that once she had the courage to take the nest she felt safe, and my presence did not disturb her even when I was only a few feet from her; but she was always somewhat shy about going on when I was very close. She did not mind if I was at least ten feet away.

Late Thursday afternoon—the 15th—when I visited the nest the eggs were not hatched. Friday forenoon three young were found in place of the eggs. Saturday afternoon a little before six o'clock I made a trip to the nest. The orange-skinned nestlings were partially covered with tufts of black down. In ten minutes an old bird came to a nearby bush, an inch-long green worm dangling from its bill. I was about ten feet from the nest. After giving the plaintive call-note twice the bird carried the worm to the nest. From where I stood I could not see just

how this worm was fed and in my effort to get a better view the bird flew out, a small part of the worm still in the bill. The mate had almost immediately followed the first bird to the nest and when the first one flew out this other one went at once to the nest with his bill filled with a small dark-looking substance. This was fed to each nestling, not with the pumping motion of regurgitation, but rather as tho emptying the bill and mouth. The more I study newly hatcht birds the more convinced I am that the supposition that all, or nearly all, birds feed for the first few days by regurgitation, is a fallacy.

On the morning of the nineteenth when the young were three days old, at 9:27, I found a bird brooding. The morning was cloudy, with cool wind. The brooding bird lookt browner and I thought had more stripes on its back than the bird that had brooded the eggs. The dark stripe leading from eye was also more pronounced and led me to wonder if this bird was not the male. One marking both birds had which I did not find mentioned in the description of them: On



ADULT RUFOUS-CROWNED SPARROW AT NEST JUST AFTER FEEDING YOUNG

each side of the rufous crown-patch, starting from the bill, was a light stripe; from the center of the patch-starting, from the bill was a third stripe which, however, did not continue over the head and was scarcely more than a spot. As the brooding bird lookt out from the darkened nest and down on me, she seemed to have a striped crown because of this central light spot.

At 10:15 I heard the note of a Rufous-crowned Sparrow up the hillside. At 10:23—fifty-six minutes after my arrival—the brooding bird left the nest, slipping thru the grass and making his way to a weed stalk where he preened himself and gave a sharp note, a sort of "sit" that I have heard given by a number of species nesting near the ground.

When the bird had left I set up the camera about two feet from the nest, covering it with a large green cloth over which I put sprays of sage. With a fifteen-foot tube attachment I could stand, or sit, far enough away so as to be partially screened by the bushes.

In twelve minutes this bird flew up the hillside. Twenty-two minutes later I

heard a bird call on the hillside and soon one appeared with something in its mouth. Tho the two birds were so much alike that it was hard to tell them apart, one was much more shy than the other and I believe the shy one was the female. This bird would not go to the nest while the camera was there but flew about giving the call note. When at 11:25 the other bird, which I believe was the male, came, the first bird swallowed the food she carried and flew away. This last arrival carried a long green worm in his bill. This he took to the nest and fed to one young bird. I could see the green sticking up in the youngster's throat as he still kept his mouth open, evidently not fully appreciating that anything had been deposited there. Finally he gave a little swallow, the worm disappeared and he closed his mouth, satisfied. The old bird rested on the edge of the nest about three minutes and I took a bulb exposure. After that he flew up the hillside. Fifteen minutes later both birds came with worms. One went to the nest and fed, but one, as before, would not go to the nest while the camera was there.

Thirty-five minutes later, 12:25, the bird which I took to be the male appeared with an immense wasplike fly dangling from his bill, the body down and head held in mouth. This was fed to more than one young. When the bird had fed this time, I crawled under the camera and green cloth in an effort to get a better view of the bird at the nest. At 12:53 I heard a bird call on the hillside. At 1:06 and 1:10 he called from nearby and gave the scolding note. Evidently I was discovered. At 1:25, however, he came to the nest and fed to one young. As I peekt thru a small hole I saw him resting on the edge of the nest and prest the bulb. As the camera clickt he raised his eyes as if to see whence came the noise, but otherwise was motionless. As before, I gave a bulb exposure and the bird did not stir until it was over, when he flew up over the camera.

At this time the young birds were still quite naked—the only indication that they would ever be otherwise being that the wing quills were just pricking thru.

It was four days before I was again able to visit the nest. Before I reacht the nesting site I was told that the nest was empty. The night before, the family had heard a great commotion among the birds; but not realizing that they might be in distress they paid no attention to it. The next morning, the 23rd, they found the nest empty and the old birds nowhere in sight. The young would have been one week old, but did not leave the nest of their own accord I am sure. I doubt not that they were the victims of a skulking feline. So many of our birds are destroyed in this way that I sometimes wonder that any of them ever grow up. Not until our cats are licensed, or some way provided whereby the surplus strays can be disposed of, will our birds receive the protection that should rightfully be theirs.

Los Angeles, California.

NOTES ON THE BIRDS OF LOS CORONADOS ISLANDS LOWER CALIFORNIA

By PINGREE I. OSBURN

WITH ONE PHOTO BY THE AUTHOR

DURING the spring of 1908, it was my privilege to make two trips to the Coronado Islands, a group lying twenty miles due south of San Diego, California, and ten miles from the Mexican coast.

South Island, the largest, is two and a half miles long by one mile wide, and