

BULLETIN
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NORTHEASTERN BIRD-BANDING ASSOCIATION

A NIGHTHAWK STUDY

BY ALFRED O. GROSS

THE Nighthawk (*Chordeiles v. virginianus*) because of its piercing calls, its striking courtship performances and the extraordinary evolutions of its flight, especially during the twilight hours, attracts many observers, even persons who ordinarily pay no special attention to birds. A bird so striking is destined to play an important role in our experiences with nature, and few birds offer more interesting material for life history study and such unusual opportunities for photography and bird banding.

On June 9, 1921 a nest of the Nighthawk was discovered by one of the members of the Junior Audubon Society when he climbed to the roof of the Brunswick High School to recover a lost ball. This nest was so convenient that it served as an object of intensive study for the remainder of that summer. At first the bird was shy and invariably left the nest when we approached within a few yards of her, but after a few days of intimate association she became accustomed to our presence and in less than a week she allowed us to touch her plumage without exhibiting the least fear or resistance. With the assistance of the members of the Bowdoin College ornithology class, this bird was kept under almost continuous observation, and on certain days, throughout the day and night. We soon found, however, that the most interesting period of the day was the time preceding sunrise and the twilight hours following sunset. It was at these times that the birds were most active. The marvelous performances of the male, his attentions to his mate and her response, as well as the innumerable details which made up the home life of this pair of birds, are among my most memorable ornithological experiences. The cover picture on this number of the Bulletin shows the female as she sat on her eggs on the gravelled roof.

During the first summer the female assumed all of the arduous duties of incubation and care of the young, while the indifferent male made himself comfortable on a large horizontal limb, in the cool shade of a giant elm tree which stands

near the school-house. Though Maine is well known for its cool climate, there were certain hot days when the heat on the gravel roof was very severe. At such times the female panted as if nearly exhausted, but she always remained true and faithful to her task. On June 24th she was rewarded by a little downy chick which hatched late in the afternoon, and on the following morning she was the proud mother of two. From this time on our interest in the domestic life of these birds was more than doubled, and hours passed like minutes as we watched the little family from our concealed position inside the ventilator shaft. All went well until July 5th when Brunswick experienced one of the hottest days of the year. The temperature was slightly less than 100 in the shade, but on the gravel roof where all of the heat was absorbed, the mercury rose to 140° F. The heat was so great that the tar melted and oozed out between the pebbles. It was too much for one of the little birds, which I found lying dead on the hot pebbles near the center of the roof. The mother was resting on the gravel in the shadow of the roof wall, but she was not brooding the other young. For a few minutes I was very anxious, but a careful search revealed that the fellow had crawled into a narrow space between a soil pipe and the brick wall. I at once soaked a large school sponge with cold water and placed it near the gasping youngster. A shower came during the night, and the following days were comparatively cool. The remaining chick completely revived and became one of my most intimate companions. I became a part of his life, which I believe was second only to that of the parent birds. Indeed sometimes I felt my part almost equal to that of the mother. After the youngster had grown to be nearly as large as the adult bird, the mother had great difficulties in brooding him. One evening when it was rather cool, the youngster uttered plaintive chirps of discomfort when the mother left the nest to secure food. I covered and brooded him with a heavy woolen felt bag in which I carried my note-books. He seemed to like this attention very much, but as soon as the mother appeared on the roof he responded to her call for supper. The mother then seemed to attempt to brood him, but to her apparent surprise the little fellow returned to the woolen bag, which to him was more practicable than the inadequate wing of his mother. As he grew older, he soon learned to capture insects for himself. One evening he was having a joyful time capturing white moths which were flying about a roof drain. He was actively darting about, and every now and then was successful in his

attempts to get one of the insects. As I sat enjoying this performance, I chanced to pull a handkerchief from my pocket. This excited the inexperienced youngster very much, and he flew toward my hand, evidently in an effort to secure what seemed to be a giant moth.

At the end of four weeks, the young bird was making flights from the roof, and I thought every day would be the last one. The mother bird also encouraged his leaving, as was evident in the way she lured him with tempting food. Just as she seemed about to deliver a tempting morsel, she would back off or fly a short distance, and after several repetitions would fly away with the little fellow following closely after her. But invariably he returned, and often, if I was standing on the roof, he would alight on me or on the shoulders of my little boy if he chanced to be with me. We were there so continuously that we were a part of the environment and the bird's daily experience. He exhibited no more fear of us than he did of the roof chimney. This young bird continued to return to the roof until it was 55 days old. At this age it had assumed its full growth and the curves which were plotted from the daily measurements became straight lines after about the 42nd day. On the evening of August 18th, there was a great commotion among the Nighthawks of Brunswick. My little Nighthawk also seemed very excited, as he frequently left the roof to join the forty or more birds which were calling loudly and flying about in aimless confusion.

The next day all were gone, even my little friend whose life I had so closely followed for fifty-five days. It was evident that the Nighthawks had left for the southland. Our only consolation was the hope that they would return the next year. The two adults birds and the youngster took with them the aluminum bands of identification (adult ♀, 17691; adult ♂ 17716, young 17696).

On May 15th of the following year (1922), when the Nighthawks returned, we were all tense with anticipation. Was our Nighthawk among those flying high over the village? We watched the details of the courtship performance, and on June 3rd the first egg was laid on the same High School roof. On the following day there were two eggs, and incubation was started at once. We then ventured to approach the nesting bird, and much to our surprise the female bird brooding the eggs permitted us to touch her and to examine her eggs without the long preliminary introduction required the year before. The aluminum band, Number 17,691, indicated to us at once

that it was our old friend. Later in the season the male was trapped, but he was without a band. It is of course possible the band had been lost, but after an intimate study we were convinced it was another individual. The male of the first summer, as already intimated, took no part in the tasks of raising the young, and never as far as we could determine did he offer to feed them. But the first food delivered to the young of the second summer was brought by the male, and he continued to give the young great attention. If this episode had taken place in human life, we would be prone to think that the wife had good reason to divorce her first husband.

The same female Nighthawk returned in 1923 and again in 1924, making a record of nesting for four seasons on the same roof. It is interesting to speculate of the long journeys this bird made to her winter home in South America, a hazardous flight of thousands of miles, and then returning to the same little Maine Village to nest on the same roof for four, and possibly several years before I began to make records of her nesting. I have never recovered any of the other banded birds because since the first summer the time spent in Brunswick was not sufficient to trap the other adults. Last year on June 14 (1925), I trapped a female which had nested on the roof of the High School, but it was an unbanded bird. My bird may have gone elsewhere to nest, but I am inclined to believe that she has been lost somewhere on that long journey to or from her winter home.

To those who have the opportunity, Nighthawks offer excellent material for banding operations, and the author hopes that his experience may be repeated and enlarged by others. A more comprehensive article, including all of the details of the life history study of the Nighthawk, is to be published in another journal.

TREE SPARROW MIGRATION: A COMPARISON

BY RICHARD E. HORSEY

A REMARKABLE parallel is to be seen between the experience of Mr. Wendell P. Smith at Wells River, Vermont, with the Tree Sparrow (*Spizella m. monticola*) and mine at Rochester, New York, with the same species. This parallelism surely tends to uphold his contention that his "migration records