

Cock Roosts of Nighthawks.—Pickwell and Smith (Condor, 40, 1938:196-197), while studying the nesting habits of the Lesser Nighthawk (*Chordeiles acutipennis*) on the dry channel of the Coyote River in the Santa Clara Valley of California, frequently flushed groups of two or three adult males from an area which they called the "cock roost." In only one case was a male observed to have established a roosting location within the nesting territory of an incubating female. What relationship the separate congregation of males had with the nesting females was not determined. Subsequently, van Rossem (Condor, 47, 1945:170) related his experiences with "cock roosts" of the same species; these included the observation of an undetermined number of males roosting in a willow grove at Buena Vista Lake, California, on June 21, 1921. He revisited the same grove on June 19, 1922, at which time 12 or 15 males were present. Two males collected from the flock during his first visit were not in breeding condition, and, probably largely as a result of this circumstance, van Rossem suggested that such roosts "are composed in part at least, and possibly altogether, of unattached, non-breeding birds." Our field experiences with the Common Nighthawk (*Chordeiles minor*) indicate that gregarious roosting assemblages of males are of common occurrence and that such behavior may be normal for breeding as well as non-breeding individuals.

During the period from July 29 to August 2, 1950, the writers, accompanied by Richard B. Selander, made a trip to southwestern Idaho in an attempt to obtain examples of the recently proposed race *C. m. twomeyi* (Hawkins, Condor, 50, 1948:131-132). At 10:00 a.m. on August 1, we arrived at Walters Ferry, a small community located on the northeast side of the Snake River, at an elevation of 3000 feet, five miles southwest of Melba, Canyon County. The region is semi-desert with extensive flat areas of sagebrush (*Artemisia*) and greasewood (*Sarcobatus*) extending from the river in both directions for several miles, and a few clumps of willows (*Salix*), cottonwoods (*Populus*), and black locusts (*Robinia pseudoacacia*) scattered along the banks. Nighthawks were not flying at the time, but we recognized the area as one likely to be inhabited by these birds. We were informed by a local resident that nighthawks were indeed abundant in the area and were directed to a mixed stand of cottonwood and black locust trees about 1800 square feet in extent, located a short distance from the river. Here we found an estimated 100 nighthawks roosting on the more horizontal branches. They were perched lengthwise in typical nighthawk fashion and apparently were asleep, since they seemed undisturbed by our presence. Despite the fact that the birds were well camouflaged against the bark and foliage, we had no difficulty in obtaining 16 individuals, all of which proved to be adult males. With the discharge of our shotguns, a small flock of the birds rose in the air where they began circling over and through the trees. They seemed reluctant to leave the roosting area, and many of them that took to wing returned to perch in the trees. Others drifted out over the river and fields, where some apparently began to feed. All the birds observed up to this time were adult males. At no time did the birds utter call notes or other vocal sounds. We wished to obtain a few females in order to complete our series, but had difficulty in finding many either in the circling flock or among those birds still perched. After a careful search, however, we collected three females, all adults. Although one of these was definitely known to have been roosting in the grove, it is possible that the others were disturbed from nearby nests since they were taken while flying. In any case, the roosting flock was composed almost entirely of adult males.

The testes of the 16 adult males averaged 4 mm. in length, with extremes measuring 3 and 7 mm., respectively. Other adult males collected at Junction Reservoir, Boxelder County, Utah, on July 30, 1950, and at various localities in southwestern Idaho on July 31 of the same year had testes of approximately the same size as those from Walters Ferry, and it therefore appears that these latter males were normal as regards gonadal development. Our records show that at maximum (?) development in June the testes of this species enlarge to about 8 mm. The ovaries of the three females collected were reduced in size, with the largest ovum of each measuring 1 mm. Again, our data indicate that this is the normal size for that particular time of the year.

According to Mr. Dale Bradley, who had lived at or near Walters Ferry for a number of years, nighthawks arrive in that region in the latter part of May and are seldom seen after September. Rust (Condor, 49, 1947:184, 187) noted that, over a 36-year period, nighthawks generally arrived in the Coeur d'Alene region of northern Idaho during the first two weeks of June and usually began fall migrational movements during the last week of August or the first part of September. Mr. Bradley also informed us that this particular group of trees was used as a roosting place throughout the summer months, and that, to the best of his knowledge, the size of the flock remained fairly constant

during that time. He mentioned that he had observed a similar concentration of nighthawks near a ranch at Reynolds Creek, 14 miles southwest of Walters Ferry, at an elevation of approximately 4000 feet.

During the time of our stay in Idaho, the females must have been brooding the young since no immature birds were seen. During feeding flights observed at Glens Ferry, Hagerman, and Mountain Home, females began flying late in the evening after the males had been feeding for some time. Late flying is seemingly a characteristic behavior of incubating and brooding females (Higgins, unpublished Master's Thesis, Univ. Utah, 1948:21; Rust, *op. cit.*: 185).

Another "cock roost" was found on July 31 at Buhl, Twin Falls County, Idaho, where a group of about 50 males was roosting in a large pile of dead trees. We were first attracted to this roost by seeing a few birds flying over the area at 1:00 p.m. In this case also, the birds were silent and seemed reluctant to leave the roost when disturbed. Six males collected had testes averaging 5 mm. in length.

Selander observed a group of 10 to 15 nighthawks (sex not noted) roosting in a cottonwood tree near Utah Lake, Utah County, Utah, on June 26, 1944, and again on August 11 of the same year. During the past few years, we have seen numerous small groups of these birds perched on telephone poles and fences in various parts of northern Utah.

In desert areas where trees or other such roosting sites are not available, it has been our experience that the birds do not congregate in large roosting flocks. In such regions, nighthawks generally feed in small groups and at sunset have been observed to fly low over the ground and scatter before alighting to roost for the night.

Our information suggests that, at least for western interior populations of *Chordeiles minor*, the establishment of "cock roosts" is a normal behavior pattern. In areas of dense nighthawk populations where a minimum of elevated roosting locations is available, large concentrations occur, but even in thickly wooded places the males sometimes exhibit a propensity for gregarious roosting.

Unfortunately, we were unable to remain at Walters Ferry or Buhl and thus definitely determine the relationship of the roosting males with the nesting females. The presence of females in one of the flocks indicates that birds of that sex not occupied with nesting activities may join the male aggregations. As shown above, the males collected were in breeding condition. There is the possibility that the flocks were composed largely of birds which had failed to find mates earlier in the year. Rust (*op. cit.*: 177-178) mentioned males which apparently were unable to find mates in the spring and continued mating behavior until mid-summer. He observed that, after mating, "the female invariably selects the nesting area . . ." and ". . . the male selects a roost in a near-by tree." However, in view of the large numbers of males comprising the flocks we have observed, we are inclined to believe that "cock roosts" are, in the main, composed of attached, breeding birds, although non-breeding individuals of both sexes may be present in these gatherings.—ROBERT K. SELANDER, *Department of Biology, University of Utah*, and SHERMAN J. PREECE, JR., *Department of Botany, State College of Washington, February 23, 1951*.

A Fatal Meal for a Young Robin.—During the spring of 1950 a pair of Robins (*Turdus migratorius*) nested on a brace under the cornice of my home in Portland, Oregon. A brood of four young left the nest on May 19. While working in my garden the next morning I was attracted by a weak and muffled call of a young bird in nearby thick vegetation. Investigation soon resulted in finding a young Robin. Protruding from its bill was about five inches of thick cotton cord. A quantity of fresh blood was on its bill and extended about two inches down the cord. I tried gently to remove the cord from the bird's mouth and throat but found it so firmly lodged that I gave up the effort. Placing the bird in a sheltered spot I awaited developments. In about two hours I found the bird dead. A post mortem examination was performed in which the cord was found to be 22 inches in length. The walls of the stomach were much extended and showed two ruptures and the body cavity held a quantity of blood. Due to moisture in the throat and stomach the cord had swollen to nearly twice its size as shown after being washed and dried.

I have seen adult Robins kill and carry off garter snakes eight or ten inches in length. Did this young Robin think the 22 inches of cord was a giant angle worm or a snake?—STANLEY G. JEWETT, *Portland, Oregon, January 8, 1951*.