

## FROM FIELD AND STUDY

**The Voice and Habitat of the Rufous Nightjar in the Panamá Canal Zone.**—The Rufous Nightjar (*Caprimulgus rufus*) closely resembles the Chuck-will's-widow (*C. carolinensis*) in pattern and color, but is ruddier, smaller (about 10 inches long), and lacks lateral filaments to the rectal bristles. It occurs through most of tropical South America, extending north into Central America as far as Costa Rica. The Panamá population has been described as the subspecies *minimus*.

The Rufous Nightjar is a common bird in the vicinity of Fort Clayton, near the Pacific terminus of the Panamá Canal. In this area it is always found in fairly open country where there are trees and brush along a watercourse or the edge of a lake or pond, and where there are high grasses and weeds nearby. All the birds found at Fort Clayton, with a single exception, were along the course of the Cardenas River, a small stream flowing through the open, hilly part of the reservation. The exception was a bird which was heard calling on three successive nights in April, 1955, from a low tree on the lawn of the Fort Clayton Hospital, which is on a hill about a half mile from the stream. It is perhaps noteworthy that thirty yards from this bird's perch was a large aeration pool on the hospital grounds.

Other areas near Fort Clayton were checked in March and April at the height of the calling season and Rufous Nightjars were found to be common along the upper arms of Miraflores Lake and at several locations on the Canal near the Miraflores Locks. In every instance the birds were found near water in low trees, with open treeless areas and high grass close by. In March several were heard along the Chagres River upstream from the Canal, and one of two birds seen during daylight hours was perched ten feet up on the lower limb of a tree overhanging the edge of a reedy, grassy area about a mile above Gamboa on the Chagres River.

The Rufous Nightjar has a rather toneless but far-carrying call of five notes, the last two from a distance sounding like a single note. The call takes slightly over one second to complete. At close range it is a distinct: *Chook! Wick-wick-weé-oh*. All notes are approximately of the same low pitch except the last, which drops off slightly. From farther off the call sounds like a whispered: *Chuck. Wick-wid-will*. The call is similar in pitch but less musical than that of either the Whip-poor-will (*C. vociferus*) or the Chuck-will's-widow, and it also differs from the latter in that the initial "chuck" is separated from the remainder of the call by a more definite pause. This initial note is delivered with as much volume as the other notes and is always heard.

In the Panamá Canal Zone the Rufous Nightjar calls mostly during the dry season, which here usually lasts from January to April or early May; it is almost never heard during the rainy season. In 1953 and 1954 no specific effort was made to record the calling habits of this bird, although my notes indicate that I first heard the call in 1953 on February 19 and in 1954 on February 23. In 1955, however, an accurate record was kept of its calling habits at Fort Clayton. The first call was noted on the early evening of February 3, one bird calling intermittently for a period of 45 minutes. From that date on they were heard almost every night until the middle of May when the rains started again. Calling was at its height during the month of April, which that year was very dry in Panamá, with trade winds blowing during the days and the nights usually being calm and clear. During that period from my house at Fort Clayton I could usually hear three to six birds calling, starting shortly after sundown and continuing throughout the night. The earliest calls would commence at 7:00 p.m. and the latest morning call noted was at 5:30 a.m., shortly before dawn. I have never heard the Rufous Nightjar call during daylight hours.

In 1955 the first rains of the season at Fort Clayton fell on May 9. For a week thereafter the weather was overcast, very hot, and humid, although the regular rainy season pattern of almost daily downpours did not set in until May 20. On May 8, as for the month preceding, several Rufous Nightjars were heard calling throughout the night. On May 9, after the first heavy rain, no birds were heard until 9:45 p.m., when a single bird called for three minutes and then stopped. The following night a bird called for 20 minutes starting at 10:30 p.m., then stopped for an hour when it resumed calling and continued intermittently until midnight. Single birds were heard for a few minutes at a time on the nights of May 11, 12, and 13, and then none until June 7, when one bird was heard calling a few times about one-half hour before dawn. No calls were heard after that date.

It was noted that on different nights and even at different times of the same night the rate of calling varied considerably for individual birds. On some nights all birds heard were calling faster than usual. The slowest individual heard called at a rate of 16 repetitions per minute and the fastest at a rate of 41 per minute. Of all the birds timed, the average rate of calling was 28 per minute.

The following table gives the calling rates of four Rufous Nightjars for a ten-day period in April, 1955. Slight differences in their calls, as well as the fact that individuals habitually used the same tree for a calling perch, made it fairly easy to distinguish these four birds, even when all were calling at the same time. Their perches were spaced about 200 yards apart along the course of the Cardenas River near my house. They were timed for periods of five minutes or more beginning at each of the hours indicated. On the two evenings when the very fast rates are recorded my notes show that the weather was extremely hot and humid, much more so than usual.

Calling Rates of Rufous Nightjars

Date in April, 1955	Hour	Number of calls per minute			
		Bird A	Bird B	Bird C	Bird D
18	12:01 a.m.	29	24	20	....
18	4:00 a.m.	30	26	20	24
19	12:00 mid.	29	24	19	23
23	3:45 a.m.	25	18	18	20
24	9:00 p.m.	29	24	24	20
24	12:00 mid.	30	26	24	23
25	7:30 p.m.	28	24	22	....
26	1:00 a.m.	29	24	19	24
26	9:00 p.m.	30	24	26	....
28	7:45 p.m.	41	30	32	25
28	10:15 p.m.	32	28	26	....
30	7:30 p.m.	40	39	30	....
30	11:00 p.m.	29	25	22	24

During the month of April, when calling was at its height, individuals would call continuously for periods of five minutes to an hour or more. Often one would stop for a few minutes only to resume calling, keeping this up for several hours. On April 19, 1955, I recorded a remarkable series of calls for one Rufous Nightjar whose perch was a low tree on the river bank about 300 yards from my house at Fort Clayton (Bird A of the table). This individual had been heard at intervals earlier in the evening, but at fifteen minutes past midnight it began a session of continuous calling that went on without a break until 4:27 a.m., a total of 252 minutes! The rate of calling was nearly constant; I checked it at intervals of about fifteen minutes and it varied but little from a steady 29 calls per minute. It is believed that this record of over 7000 consecutive calls is the longest ever noted for a goatsucker. Sprunt (Florida Bird Life, 1954:258) mentions a count of 834 consecutive calls for the Chuck-will's-widow and Cleaves reports over a thousand consecutive calls for the Whip-poor-will (Mulaik, Lee, and Stillwell, Auk, 70, 1953:368).

Several birds were observed while calling. The beam of a powerful flashlight did not seem to disturb them a great deal and it was possible to approach to within a few yards before they would stop calling and fly off. Every bird seen calling was perched crosswise on a bare limb, usually on the end, under a canopy of overhanging branches. When calling the mouth is opened widely and the whole body vibrates with the effort of the call. Two birds observed during the day were perched lengthwise on limbs, in the manner of other goatsuckers. No birds were ever seen on the ground, although the Pauraque (*Nyctidromus albicollis*), which in this area frequents the same habitat as the Rufous Nightjar, was always found on the ground.—F. O. CHAPELLE, *Medical Field Service School, Fort Sam Houston, Texas, September 24, 1955.*

**Scissor-tailed Flycatcher in Idaho.**—While vacationing along the Wood River, Idaho, fifteen miles from Sun Valley and at 6800 feet elevation, my husband and I saw a Scissor-tailed Flycatcher (*Muscivora forficata*). It was observed on August 6, 7 and 16. It was a female or immature, since the