NOTES ON THE RED RAIL (*LATERALLUS RUBER*)

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THE Red Rail (*Laterallus ruber*) has been mentioned in nearly every major regional list of birds compiled from an area within its range, Mexico to Nicaragua. It is probably the most abundant species of its family over much of its range in Mexico, and probably elsewhere, and in the past 10 years has become well represented by specimens in ornithological collections. However, as recently as 1941 Friedmann (*in* Ridgway and Friedmann, 1941) could find no specimens in the downy or juvenal plumages and still more recently Paynter (1955) considered the species to be known from very few specimens. During the course of this study, I have examined about 100 specimens with complete data without searching for every available individual. It is interesting to note that well over half of these specimens were collected during the period since 1955.

A number of authors have contributed to our knowledge of the species. Brodkorb (1943:34) gave the colors of the soft-parts of a "good-sized" young, the first known downy chick, but he did not describe the down. The bill in the dried specimen was black except for the extreme tips of the mandibles which were whitish. Land (1963) mentioned, apparently for the first time, the juvenal plumage, but only that it was "gray-brown." Dickey and van Rossem (1938:162) described in detail a nest of the species as open at the top, and noted in the field that the eggs, collected but later lost, were similar to those of the Clapper Rail (*Rallus longirostris*) in color and shape although smaller in size. Smithe (1966) presented descriptions of the nest and eggs made by Alexander Skutch.

FIELD NOTES

On the Atlantic Coastal Lowlands of Mexico, one can hardly drive through the marsh regions of Veracruz and Tabasco without hearing, from the moving car, the explosive downward trill of the Red Rail. During the spring of the year (April) the species is most vociferous, although individuals are regularly to be heard calling at any time of the year. Red Rails are in my opinion more diurnal than other small rails in their calling activity and it is not uncommon to hear them calling into mid-day in the spring season.

I have repeatedly found the species to be abundant, and the experience of other collectors has confirmed this. In Chiapas, four birds were collected by Warren Rook with a single shot. Allan R. Phillips and I have stood without moving in a tall saw-grass swale 43 miles south of Acayucan, Veracruz, barely 8 feet from one another, and by "squeaking" collected 5

FIG. 1. The nest and eggs (inset) of the Red Rail.

Red Rails. At Ingenio San Cristobal, Veracruz, with a field assistant, I collected nine of the species within a few feet of the railroad track running through the edge of the marsh. At the latter locality in April 1962, rails were calling constantly throughout the morning. At that time males were collected with gonads measuring, in millimeters, 5.5 × 2 and 3 × 2; 1 × 4.5 and 3 × 5.5; 5 × 5 and 9 × 5; and 2 × 7 and 3 × 2.5.

On 30 July 1967, in a small cattail marsh 3.3 miles southeast of Choloma, Cortez Province, Honduras, I flushed a Red Rail from a nest containing four eggs. I returned on 3 August, photographed the nest (Fig. 1), and collected the eggs. An adult male was collected a few feet from the nest, but I was unable to collect its mate, although it called almost constantly, at times within a few feet of me. Once it gave a "churring," wren-like scolding note.

The nest was a relatively tightly woven, globular one, with a side entrance,

much like a very large, loosely woven nest of a Long-billed Marsh Wren (*Telmatodytes palustris*). It was made entirely of dried leaves of grasses and cattail, and was placed with its entrance about ten inches above the water level. The base of the nest was moist and contained a nest of ants of the genus *Anochetus* (subfamily Ponerinae). The ants were kindly identified by D. H. Janzen. The eggs were cream-colored with reddish-brown fleckings at the larger end (inset, Fig. 1). They measured 29.9 × 23.4, 29.5 × 23.1, 28.8 × 23.6 and 28.5 × 23.7 mm.

Through the cooperation of Eugene Ostmark, of the United Fruit Company at La Lima, Honduras, the eggs were placed in a cell culture incubator in the company's research laboratories. On 8 August two of the eggs were pipped, but one of the chicks was dead. It was preserved in formalin. The following day the second egg was opened slightly to assist the young in hatching. On the morning of the 10th the chick was out of the egg but was dead. The other two eggs contained fully developed but dead embryos. The soft part colors of the two chicks were similar, and differed from the description presented by Brodkorb (op. cit.), in that the entire bills were pink, slightly paler along the culmen, and slightly darker basally. The egg teeth were white. The tarsi and toes were medium gray. The down was a flat black with virtually no irridescence.

MOLTS AND PLUMAGES

The juvenal plumage is essentially a dark "gray-brown" as mentioned by Land (1963). I have examined a number of juvenile Red Rails ranging in age from birds still retaining some down on the head to others in all stages of the first prebasic molt. The youngest of these, taken at Putla, Oaxaca on 21 October 1965, are sooty gray, nearly black on the rump, crown and tail, with a brownish cast in the interscapular region, and richer about the shoulders. Ventrally they are dark gray on the flanks and across the breast. The throat is whitish, and the mid-belly area is near pale gray to cream, with a pinkish cast in some individuals, uniform gray in others. The prebasic molt apparently starts in the mid-ventral region giving a strong pink appearance to this area even as the wing feathers are barely breaking from their sheaths! The thighs and lower abdomen are medium gray; undertail coverts are dark gray with a slightly brown cast. The coloration of the soft parts of two juveniles collected 18 July 1962 by William J. Schaldach 3 mi E of Sarabia, Oaxaca, and recorded by him in the field were: "iris grayish-white, bill pinkish to dusky horn basally, dusky distally. Bare orbital skin grayish with faint greenish tones. Tarsi greenish gray, dusky at elbows, feet same but soles duller in tone." The first basic plumage is an "adult-type" plumage, gained directly by molt from the juvenal plumage. The first

basic differs from the definitive plumage in averaging somewhat paler on the belly and possibly the breast and in lacking sexual dimorphism. Specimens in all stages of the first prebasic molt show no indication of molt in the wings, and I believe the juvenal remiges are retained through this molt. Two males from Putla, Oaxaca still largely in the gray juvenal plumage have wings measuring 82 and 83 mm, near the upper limit of this measurement. In spite of the large size of the series examined, no specimens have been seen in any stage of a later molt.

In the Red Rail, there is a generally unrecognized yet distinct sexual dimorphism in the extent of chestnut on the upperparts, especially the rump. Although Hellmayr and Conover (1942:380) described this based on four specimens from Putla, Oaxaca, subsequent authors have failed to take it into account in their discussions of the species. Males generally have the lower back and rump brownish to dusky, whereas in adult females the lower back, rump and upper tail coverts are considerably richer, more chestnut in coloration. Immature females have a dusky rump as do males. Apparently this dimorphism led Miller and Griscom (1921) astray in characterizing the subspecies *L. r. ruberrimus* as having a chestnut rump. The type of *ruberrimus* is of course a female. Dickey and van Rossem (1938) in discussing a mated pair of Red Rails wrote "The female is typical *ruberrimus* in color while the male is only slightly redder than *ruber*." They apparently did not realize the significance of the observed differences. There is some individual variation in this character. Five of 48 *supposed* males examined for this character had a chestnut rump. Two of these are probably males as indicated by their longer bills, two have equivocal measurements, and one is probably missexed. Seven immature females all had dark rumps, while 21 out of 24 females whose age was not obviously immature had chestnut colored rumps. There is a slight sexual dimorphism in size with males averaging larger than females, especially in the length of the culmen.

SYSTEMATICS

Three subspecies have been described for the Red Rail. The two in addition to the nominate form (type locality: Verapaz, Guatemala) are:

L. r. ruberrimus (Miller and Griscom)—bill shorter and stouter than *ruber*, and with chestnut of upperparts extending over the entire upperparts including the wing coverts. Type locality: Jinotega, Nicaragua.

L. r. tamaulipensis (Nelson)—bill longer and heavier, chestnut reduced to a collar which is paler and less rufous than in *ruber*. Type locality: Alta Mira, Tamaulipas.

It is evident from the extent of sexual dimorphism described above that the color characters used in the descriptions of both forms were based

largely or entirely on this variation. The types are of the sexes that one would predict based on the characters used to separate the two forms. There are no color characters that are of value in distinguishing subspecies in the Red Rail.

This leaves the mensural character of the bill as the only possible means of maintaining the named forms. Mean culmen lengths (from anterior edge of nostril) of males are as follows: Tamaulipas, Veracruz, and the Atlantic slope of Oaxaca 11.1–12.6 (ave. 12.0, n = 10); southern Mexico, Yucatan, British Honduras, and Guatemala 10.7–12.4 (ave. 11.5, n = 26); Nicaragua and Honduras 11.4–12.2 (ave. 11.7, n = 5). Measurements for females from these same respective areas are: 10.6–11.4 (ave. 11.0, n = 9); 9.2–11.3 (ave. 10.7, n = 19) and 9.9–11.1 (ave. 10.5, n = 4).

It is clear that there are no significant differences between these populations, and I fully endorse the views of Brodkorb (1943) and Paynter (1955) that neither of the named forms should be recognized and the Red Rail should be considered monotypic.

In Mexico the Red Rail is widely distributed on the Atlantic coastal lowlands north to Alta Mira in Tamaulipas, being abundant from at least central Veracruz southward. It is more restricted on the Pacific slopes, reaching at least as far north as Laguna Tres Palos, just south of Acapulco, Guerrero, and being locally abundant at Putla, Oaxaca. It is locally common in the interior of Chiapas and apparently relatively so, where suitable habitats exist, in Yucatan and on Isla Cozumel, Quintana Roo.

Specimens examined: *Mexico*: Total: 63 (Tamaulipas 2; Veracruz 17; Tabasco 2; Guerrero 1; Oaxaca 16; Campeche 1; Yucatan 10; Quintana Roo 2; Chiapas 12); *British Honduras*: 13; *Guatemala*: 10; *Honduras*: 14; *Nicaragua*: 1.

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LITERATURE CITED

BRODKORB, P.
1943 Birds from the Gulf Lowlands of southern Mexico. *Misc. Publ. Mus. Zool. Univ. Michigan*, 55:1–88.

DICKEY, D. R., AND A. J. VAN ROSSEM
1938 The birds of El Salvador. *Chicago Field Mus. Nat. Hist. Zool. Ser.*, 23(406): 1–609.

GRISCOM, L.
1932 The distribution of the bird-life in Guatemala. *Bull. Amer. Mus. Nat. Hist.*, 64:1–425.

HELLMAYR, C. E., AND B. CONOVER
1942 Catalog of Birds of the Americas and adjacent islands. *Chicago Field Mus. Nat. Hist. Zool. Ser.*, 13(1):1–636.

LAND, H. C.
1963 A collection of birds from the Caribbean lowlands of Guatemala. *Condor*, 65:49–65.

MILLER, W. DEW., AND L. GRISCOM
1921 Descriptions of proposed new birds from Central America. *Amer. Mus. Novitates*, 25:2.

PAYNTER, R. A., JR.
1955 The ornithogeography of the Yucatan Peninsula. *Bull. Peabody Mus. Nat. Hist.*, 9:1–347.

RIDGWAY, R., AND H. FRIEDMANN
1941 Birds of North and Middle America. *U. S. Natl. Mus. Bull.*, Part IX, 50:1–254.

SMITHE, F. B.
1966 The birds of Tikal. Natural Hist. Press, New York.

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