ORNITOLOGIA NEOTROPICAL 5: 121–124, 1994

ADDITIONAL NOTES ON NEST AND EGGS OF SOME ECUADORIAN BIRDS

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Key words: Nest, eggs, Streptoprocne, Phaethornis, Thripadectes, Premnoplex, Muscisaxicola, Tiaris, *Ecuador.*

This paper presents additional data (see also Kiff *et al.* 1989, Marín & Carrión 1991) on the breeding birds of Ecuador obtained primarily from 1989 to 1992. Most nests described here were found at a single locality, Las Palmeras 1900 m), near Chiriboga, prov. Pichincha, ca. 35 km west of Quito, during June 1989. The locality is in the humid montane zone and has steep slopes with narrow valleys.

Species names and sequence follows that of Meyer de Schauensee (1982). Egg shapes are those given by Preston *in* Palmer (1962). Egg mass (Pesola), when given, is for fresh or sligthly incubated and addled eggs. All specimens reported are housed at the Western Foundation of Vertebrate Zoology (WFVZ).

Species Accounts

Streptoprocne zonaris. On 6 January 1991 in the Valle de Guayllabamba area, we visited Quebrada Alchipichi, 2000 m, near La Libertad, prov. Pichincha. The Valle de Guayllabamba is an arid inter-Andean valley on the Equator. The Quebrada was a dark, humid, narrow gorge 35—40 m deep through which water flows toward the Río Guayllabamba year-round. A nest of *S. zonaris* (WFVZ 163031) was found in a natural concavity at the edge of a waterfall (Fig. 1). The nest contained two eggs measuring 36.32 x 21.72 mm and 35.49 x 22.36 mm. Both were dirty white in color and oval in shape. The nest was made with bryophytes mixed with much mud and resembled those described from Costa Rica by Marín & Stiles (1992), although the Ecuadorean nest contained hard, coarse root tips and some dry leaves as a lining material. That roots tips were used in the nests probably reflected the scarcity of vegetation on the gorge walls. However, two important requirements for nesting of this species, darkness and humidity, were present. In the same area a second completed nest was found in a cave behind a waterfall about 20 m up the river. An adult bird was collected at the site (*S. z. albicinta*; WFVZ 48638).

Lönnberg & Rendahl (1922) reported the only previous nest record for *S. zonaris* in Ecuador. They found a nest made of moss containing two naked young of *S. z. altissima.* The nest was in a small cave above Quito (prov. Pichincha, 3200 m), at the edge of the páramo; no date was given. However, Chapman (1926) mentioned the same record as found on 8 January, and it coincides with our date. Although this species is widely distributed in South America, there are few published breeding records an some are unreliable. The previously reliable breeding accounts for the species in South America include: for Argentina, Dabbene (1918), Pergolani (1944) and de la Peña (1982); for Brazil, von Ihering (1900), Ruschi (1979); for Colombia, Sclater & Salvin (1865) and Nehrkorn (1899); and for Ecuador, Lönnberg & Rendahl (1922). We are not aware of published nesting records for Bolivia, French Guiana, Guyana, Peru, Surinam, or Venezuela.

Phaethornis syrmatophorus. On 16 June 1989, we found a nest of this species at Las Palmeras in a partially disturbed area at the edge of a stream,

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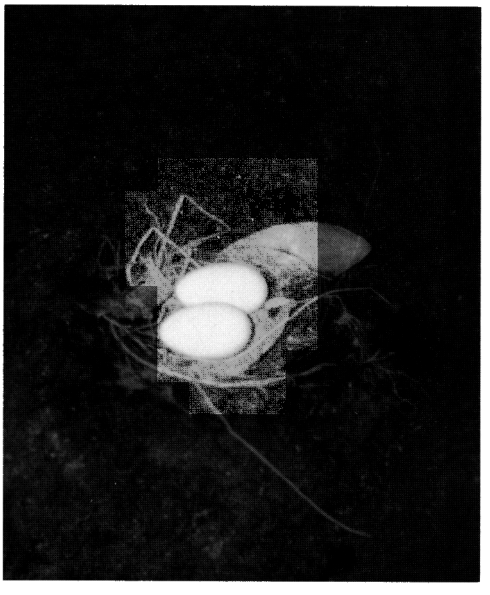

FIG. 1. Nest and eggs of *Streptoproczne zonaris albicinta.* Bits of dry material, such as leaves, grasses, and leaf steams, are often found often as part of the lining material in cypseloidine swifts. However, this nest has an unusual amount of dry material.

but within the forest. It was attached with silk to a young palm leaf about 1.2 m above the ground (Fig. 2). The nest was elongated, cone-shaped, and made with dry leaves, long vegetable fibers, and large amounts of fern scales, all surrounded with silk. It was lined with fern scales and contained two fesh eggs (WFVZ 159226). The eggs measured 13.99 x 9.57 mm and 14.19 x 9.49 mm, both had the same mass, 0.7 g, and were pure white, not glossy, and subelliptical in shape. The nest and eggs of this species were previously undescribed; however, they are similar in shape and manner of construction to nest and eggs of other large *Phaethornis* species.

Thripadectes virgaticeps. On 13 June 1989, we found a nest of this species at forest edge at Las Palmeras in a burrow in an embankment, with the entrance about 1.2 m from the bottom. The burrow was ca. 60 cm deep with a chamber of 15 cm in diameter and about 10 cm high. The adult bird (WFVZ 47042) was collected at the nest. The nest (WFVZ 159221) was a very shallow, almost a flat platform, made completely of rootlets. It contained one recently hatched young and an addled egg, dull white in color and short oval in shape, that measured 30.78 x 22.93 mm (7.15 g). The nest and eggs of this species were previously undescribed. However, there is one reports on nesting for *T. virgaticeps*, but no mention of nest or eggs; five burrows found in forested road banks, Apr.-Aug. in Hilty & Brown (1986). Our record coincides with the breeding dates estimated by Hilty & Brown (1986).

There is no clear difference between the burrow-nesting species of *Thripadectes* and *Automolus* in terms of placement (enbankments) and shape (shallow platforms). There are also no consistent differences in nest material. For example, in the WFVZ collections there are three other nests of *Thripadectes* species. Two nests of *T. rufobrunneus* from Panama both were made of rootlets; one nest of *T. melanorhynchus* from eastern Ecuador was made of leafstems; and the present nest from western Ecuador was made of rootlets. For *Automolus* species there are: one nest of *A. rubiginosus* from Mexico and one from western Ecuador, both made of rootlets, and two of *A. ochrolaemus* from Costa Rica, both made of leafstems. Thus, species in both genera select for eit-

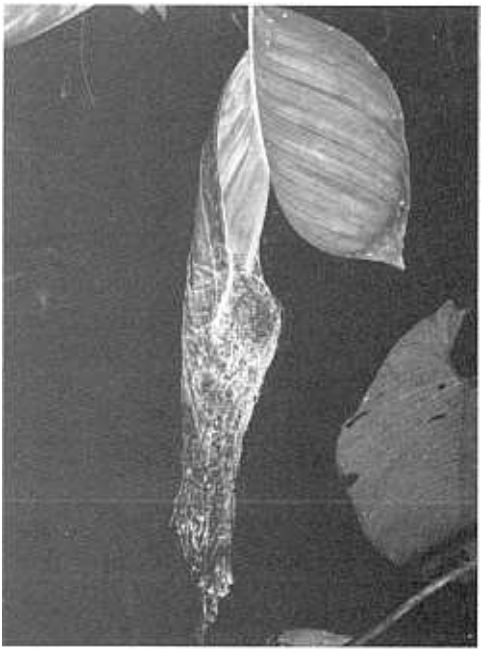

FIG. 2. Nest of *Phaethornis syrmatophorus.*

her leafstems or rootlets (see also Kiff *et al.* 1989, and Marín & Carrión 1991).

Premnoplex brunnescens. On 18 June 1988 at Maquipucuna (1500 m) we found a nest (WFVZ 157401) of this species that contained two eggs with medium-sized embryos. The nest was in a dark and humid section of a stream, near a waterfall, and ca. 3 m above the water level. The nest was built and woven at the terminus of an entangle hanging vines, globular in shape, and made of mosses, rootlets and some ferns, giving it a bulky appearance and heavy texture. The nest entrance was near the bottom, and the internal chamber was lined with fine rootlets and vegetable fibers. On 17 June 1989 at Las Palmeras we collected another set of two fresh eggs (WFVZ 159225; 3.4 g and 3.3 g) (Fig. 3). The nest, attached to the underside of a fallen log about 2.5 m above water level, was a massive ball made of mud, mosses, other bryophytes, and vegetable fibers. The entrance was near the bottom, and the chamber was lined with fine vegetable fibers. A third set of eggs was collected by JMC at Las Palmeras on 10 March 1990. The nest (WFVZ 162250) contained two eggs, was found under a fallen log near the previous nest, and was built inside a hollow log about 50 cm above water level. All nests had a clutch size of two eggs, and the mean dimensions of six eggs was 21.52 x 16.89 mm, all immaculate white. Five eggs were short subelliptical, and one was short oval in shape. Two other nests (WFVZ 162895-6) were collected on the same locality by JMC on 3 April 1991. The first was an old one placed in the same manner as WFVZ 159225. The second contained two young and was similar to the other nests in construction and materials; however, it was placed inside a hollow fallen log about 50 cm above water level.

During June and July 1989 and subsequent visits to the streams at Las Palmeras, nearly 100 empty nests were found, all built of similar material. Although nest placement varied greatly, all nests shared several traits: all were built near water, in dark areas of the stream, all were made of mud, mosses, and liverworts. The only previous detailed description to the nest of this species (Skutch 1967) indicated that it was similar in construction materials and shape to the Ecuadorean nests. All our nests are within the estimated breeding dates, from birds in breeding condition, given by Hilty & Brown (1986) for Colombia (Mar.—Aug.)

FIG. 3. Nest of *Premnoplex brunnescens.*

Muscisaxicola maculirostris. On 19 August 1989, MMA and J. Schmitt found a nest of this species at Cotocollao (3150 m). The site was located in the transitional zone between the arid and humid zones on the road to Nono northwest of Quito. The nest was about 1.5 m from the ground in a small cavity formed by protruding roots and mud clusters on a road embankment. It was cup-shaped and made with a base of small rootlets and vegetables fibers intermixed with some grasses. The center of the cup was lined with fine grasses, feathers, and other soft vegetables matter. The nest contained three large young, and both adult birds were observed several times feeding the nestlings with Lepidoptera, Orthoptera, and some beetle (Tenebrionidae?) larve.

Although this is the most widespread species in the genus (Vuilleumier 1971), there are no accounts of breeding for this species outside Argentina or Chile; however, Smith (1971) mentioned "breeding" for Ecuador without details, but his dates coincide with ours.

Tiaris olivacea. On 12 July 1988 at Maquipucuna, we encountered a nest of this species in an embankment covered with grasses and small shrubs at the forest edge and placed among protruding roots and grass at about 2 m from the bottom. The nest (WFVZ 157419) was cylindrical in shape with a side entrance at about 3/4 of the nest height. It was made of long and soft grass steams, and the chamber was lined with soft grass. The two eggs (17.58 x 12.80 mm and 17.78 x 12.82 mm, well-incubated) were bluish-white with brownish spots and blotches forming a wreath on the larger end. The incubating female was collected (WFVZ 45137).

The species was previously reported in Ecuador only from a few (sight?) records from northern Ecuador, prov. Pichincha (Ridgely & Tudor 1989), and it seems to have spread recently to the south. Apparently our specimen is only the second from Ecuador and the first breeding record for the country. The spread of this species to the south is probably being favored by the clearing of forest. These grassquits were common at the patchy pastures and forest edge at Maquipucuna. The nest and nest site were similar to a previous report from Colombia (Miller 1963) as well as several nests collected in Costa Rica by MMA (deposited at the WFVZ).

ACKNOWLEDGEMENTS

P. Beals, R. Corado, D. Gardner, M. Holmgren, K. Molina, J. Schmitt and F. Sornoza provided valuable help in the field. We thank Dr. Sergio Figueroa, Ministerio de Agricultura y Ganaderia, and Ing. Miguel Moreno, Director of the Museo Ecuatoriano de Ciencias Naturales, Quito, for their generous assistance in obtaining permits to conduct research in Ecuador. We also thank L. F. Kiff and J. V. Remsen for comments on the manuscript. The field work was supported by the Western Foundation of Vertebrate Zoology, and the Museo Ecuatoriano de Ciencias Naturales.

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Accepted 26 November 1994.