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FIRST NEST RECORD OF THE WHITE-THROATED ANTBIRD (*GYMNOPITHYS SALVINI*) AND DETAILED NEST RECORDS OF THE HAIRY-CRESTED ANTBIRD (*RHEGMATORHINA MELANOSTICTA*)

Susan K. Willson

105 Tucker Hall, Div. of Biological Sciences, University of Missouri,
Columbia, MO 65211, USA.

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INTRODUCTION

Some fourteen species of the large neotropical family Thamnophilidae regularly follow army ant swarms, where they forage on leaf litter insects that attempt to escape the oncoming ants (Willis & Oniki 1978). Here, I describe the previously unrecorded nest and eggs of the White-throated Antbird (*Gymnopithys salvini*), and two nests for the Hairy-crested Antbird (*Rhegmatorhina melanosticta*), which differ somewhat from the only previous record (Hilty & Brown 1986). I include nestling measurements with the latter species account.

NEST DESCRIPTIONS

Nests were located in primary undisturbed rain forest at Cocha Cashu Biological Station, Manu National Park, Dept. of Madre de Dios, Peru (elevation c. 400 m). The area is described by Gentry (1990). 1998 nests were located by following radio transmitters, glued to the backs of mist-netted females with false eyelash cement, while the 1999 nest was located when an adult flushed from it. Nests were checked every second day.

Hairy-crested Antbird. The first nest was discovered on 11 November 1998. The female flushed from the nest when I was less than 2 m off, and remained nearby during the nest inspection. The nest was in the natural cavity of a palm frond sheath, along the lower trunk of a live 4.75 m *Scheelea* sp. tree (dbh 42 cm). *Scheelea* characteristically retains the bases of leaves, which are eventually shed as the tree grows, causing many vertically-oriented cavities to protrude from the stem. The leaf-sheath cavity was 63 cm above ground at the lowest part of the lip, and 69.7 cm at the highest point of the lip. The cavity itself was 10.1 cm deep, and 10.4 x 6.1 cm wide at the lowest lip. The shallow cup nest was constructed entirely of narrow strips of dry palm frond leaflets.

The single oval egg, measuring 21.8 mm x 18.0 mm, had a smooth matte surface, light pink with longitudinal dark maroon streaks,

FIG. 1. Nest and eggs of the Hairy-crested Antbird (*Rhegmatorhina melanosticta*) within a *Scheelea* sp. tree petiole sheath, in lowland tropical rainforest, SW Peru.

TABLE 1. Morphological measurements (mm) and weight (g) of a 13-day old Hairy-crested Antbird nestling (*Rhegmatorhina melanosticta*) compared with adult measurements.

	Nestling	Adult (n = 26)
Weight	21.7	31.9
Wing chord	55	77.4
Tarsus	27.2	28.6
Culmen	6.7	11.7
Bill width	3.7	4.7
Bill depth	3.9	5.2
Tail length	9.0	no data

interspersed with maroon speckling. There was less color at each end of the egg. On 13 and 15 November the female was not in the area, and a small leaf half-covered the egg, which was cold and probably abandoned. The radio transmitter that had been attached to the female was on the ground at the base of the nest tree.

The second nest was found in the late afternoon of 17 September 1999, and contained two eggs (Fig. 1). It was similarly placed in a palm frond sheath of a live 4.25 m *Scheelea* tree (dbh 34 cm), 100 cm above ground at the lip. The cavity was 10.7 cm deep and 5.6 x 8.0 cm wide, and contained a shallow bed of dry palm frond leaflets. The eggs measured 22.9 x 17.7 mm and 23.5 x 17.9 mm (Fig. 1). Eggs hatched on 26 September and, on the morning of 27 September,

FIG. 2. Nest and eggs of the White-throated Antbird (*Gymnopithys salvini*) within an 18.2 cm palm stump in lowland tropical rainforest, SW Peru.

two naked chicks with visible feather tracts were in the nest. On 30 September (day 5), pinfeathers were visible on their backs and wings and, by 1 October, the heads were fully feathered. By 5 October, the nestlings were fully feathered. On 7 October (day 12), only one nestling was in the nest. Its eyes were open and alert, and its back was scalloped like that of an adult female. On 8 October, the nestling was weighed, measured and banded (Table 1). All bill measurements were taken at the anterior edge of the nares. Both the tail and wing feathers remained in sheaths, the crown was dark brown, and the eyeskin was dark grey.

On 9 October (day 14), the nestling fledged and was not seen again until 6 November, when it was repeatedly fed by it's mother at an army ant swarm (*Eciton burchelli*). Since the banded parents had been seen regularly with this ant colony throughout October, it is likely that 6 November was the first day the fledgling left cover and approached the antswarm. The adult female aggressively displaced her mate four times in one hour when she approached the fledgling. The female was seen feeding the fledgling at ant swarms on 10, 11 and 12 November. On 5 December, I discovered two Hairy-crested Antbird eggs in the nest used by the pair in September, and an adult agitatedly called nearby. Unfortunately, I was unable to identify the nesting adults, and can only speculate that it was the same pair.

White-throated Antbird. The White-throated Antbird nest was located on 7 November 1998 in a 18.2 cm hollow palm stump, raised a further 26.3 cm above the forest floor by the dead root mass (Fig. 2). The stump was

9.7 cm in diameter. From the cavity floor, the tallest lip of the stump was 15.5 cm, and the lowest point was 10.3 cm. At the lip, the hollow measured 7.2 x 6.8 cm across. Like the Hairy-crested Antbird nests, the nest was a shallow cup constructed entirely of narrow strips of dry palm frond leaflets. The tree stump was in a small patch of Heliconia/ Marantaceae plants (herbaceous dicots approx. 1.5 m tall).

When discovered at 16:00 h, the female was sitting on the nest. She did not flush when I stood one meter away to look down into the nest cavity. On 9 November, the nest contained two oval eggs. One egg measured 23.7 x 16.5 mm. The eggs had smooth, light pink, matte surfaces and were covered with maroon speckling, concentrated at the blunt end. The nest contained two eggs until at least 19 November. On 21 November, the eggs were gone, and one side of the stump had been torn down. The female's feathers were scattered in and around the nest, and I did not see her subsequently.

DISCUSSION

Radiotelemetry data from the White-throated Antbird female suggest that she may have laid eggs about 7 November. On three nights (30 October, 2 November, and 6 November), she roosted in different locations within 150 meters of the nest. According to Skutch (1996), antbirds generally wait two days before laying the second egg.

The only published nest record for the Hairy-crested Antbird describes an "almost unlined cup nest 0.5 m up in hollow top of stump...two pinkish eggs spotted reddish brown" (Hilty & Brown 1986). Willis (1967) and Skutch (1996) found the Bicolored Antbird (*Gymnopithys leucaspis*) nesting in low stumps and fallen vertical palm sheaths on the forest floor, as well as more rarely in cavities formed by the still-attached petiole of a palm frond, as that described above. A nest of the congeneric Rufous-throated Antbird (*Gymnopithys rufigula*) was in a woody vertical stump 0.4 m tall (Oniki 1971). The only published account of the related Black-spotted Bare-eye (*Phlegopsis nigromaculata*) is for two nests found in SE Peru, in low cavities of stumps less than one meter tall (Hilty & Brown 1986). I have observed one similarly placed nest of this species in the same geographic area. The palm sheath cavity used by the Hairy-crested Antbird described here was a vertical cavity similar to that found in a woody stump, and perhaps the use of this type of cavity is widespread where *Scheelea* and similar palms exist.

The phylogenetic history of the obligate ant-following antbirds and related facultative antbirds is not well understood. Nest site placement and construction may be valuable characters for taxonomic studies (Mobley & Prum 1995, Prum & Lanyon 1989, but see Lee *et al.* 1996), especially if combined with an independent molecular phylogeny. Within the obligate ant-following antbirds (excluding *Myrmeciza* and *Pyriglena*), only one species has been documented as not nesting in low vertical stumps or cavities. Willis (1972) and Ingels (1980) describe two nests of the White-plumed Antbird (*Pithys albifrons*) as open cups, sunk in a mass of dead leaves and stalks in the crowns of low palms, less than 50 cm from the ground. The additional data on obligate ant-following antbird nests provided above can ultimately contribute to our understanding of the evolution of nest building behavior in this group.

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