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FIRST DESCRIPTION OF THE NEST, EGGS AND NESTLINGS OF THE WHITE-SHOULDERED ANTBIRD (*MYRMECIZA MELANOCEPS*)

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Primera descripción del nido del Hormiguero Hombriblanco (*Myrmeciza melanoceps*).

Key words: Nest, Eggs, Nestlings, White-shouldered Antbird, *Myrmeciza melanoceps*, Colombia.

The nests of many species of antbirds (Thamnophilidae and Formicariidae) are still undescribed or remain poorly known (Skutch 1996, Wilkinson & Smith 1997). In the genus *Myrmeciza*, there is information on the nests of less than half of the 19 species recognized by Monroe & Sibley (1993). Based on observations made in a tropical rain forest in eastern Colombia, we present the first description of the nest, eggs and nestlings of the White-shouldered Antbird (*Myrmeciza melanoceps*), and compare our data on the nest structure, egg size and hatchling periods with information reported for other species within the same genus.

The White-shouldered Antbird is common at the Centro de Investigaciones Ecológicas Macarena (hereafter called CIEM) in the understory of seasonally flooded forest. It can also be occasionally found outside the borders of this area in habitats similar to what has been recorded by Hilty & Brown (1986), Ridgely & Tudor (1994) and Skutch (1996). The species is usually found in pairs or moving alone along thin stems up to 3 m above the ground, where it sings mostly in the early morning and late afternoon hours.

On 1 October 2001, we found a nest of The White-shouldered Antbird in the seasonally flooded forest near the border of a walking trail, at the CIEM, in the northwestern Amazon region, between the eastern Andes and the Serranía de la Macarena, in the Departamento de Meta, Colombia. The CIEM is part of Parque Nacional Natural Tinigua and it is located on the right margin of Río Duda about 13 km before it reaches the Río Guayabero (02°40'N, 74°10'W, 350–400 m a.s.l.). Mean annual temperature is around 26°C and precipitation is highly seasonal (average 2700 mm/year) with a dry season between December and March, and the rainy season between April and November. There are five basic vegetation types in the CIEM surroundings: mature terra firme forest, open canopy terra firme forest, lowland seasonally flooded forest, secondary forest and riparian forest. Detailed information on CIEM vegetation is found in Stevenson *et al.*

FIG. 1. Nest of the White-shouldered Antbird (*Myrmeciza melanoceps*) built on a young *Oenocarpus bataua* palm (Photographs by Andrés Link).

(1999). To date, 441 bird species have been reported in the CIEM, and 51 of them are antbirds: 47 Thamnophilidae & 4 Formicariidae (Cadena *et. al.* 2000a). The White-shouldered Antbird and the Black-throated Antbird (*M. atrothorax*) are the only species of *Myrmeciza* at CIEM, with the latter being much less abundant.

The nest was evidenced when the female flushed away as we passed close to it. We observed the nest at least once daily for several minutes and checked the presence of eggs or nestlings, and the development of the latter. We also observed if either of the parents were in the nest or in the vegetation nearby, and any particular behavior that called our attention. We measured the eggs with a hand caliper to the nearest 0.1 mm, and the nest dimensions were measured with a ruler to the nearest cm.

The nest of the White-shouldered Antbird was built between the leaf rachises of a young milpeso palm (*Oenocarpus bataua*), about 90 cm above the ground (Fig. 1). This nest had the form of a deep cup, but its entrance was partially covered by a thin layer of dead leaves in its top, as that of the Ferruginous-backed Antbird (*M. ferruginea*) (Tostain *et al.* 1992). The view of the nest interior was thus obstructed. As a consequence, the chamber appeared spherical and was similar to that of the Sooty Antbird's (*M. fortis*) nest (see Wilkinson & Smith 1997). The leaves covering the nest's entrance formed a sloped lateral entrance (see Fig. 2). The nest's entrance had an internal diameter of 9 cm and a depth of 10 cm (measured from the entrance to the deepest part of the nest). The nest was made of firmly woven palm fibers, decomposing leaves and dead plant material which made it

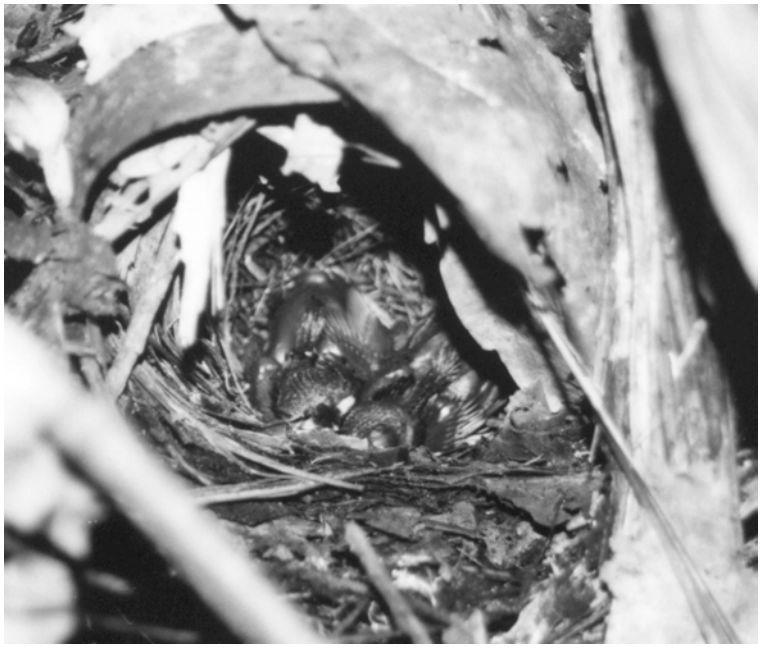

FIG. 2. Four-day olk nestlings of the White-shouldered Antbird (*Myrmeciza melanoceps*) (Photographs by Andrés Link).

very inconspicuous, especially because the structure was placed among numerous palm fibers located from the ground to the nest, all around the palm leaves and the emerging trunk (Fig. 1).

When found, the nest contained two white eggs with irregular purple spots more concentrated on the blunt end. The eggs measured 26.1 x 19.2 mm and 26.4 x 18.9 mm. During the next 3 days, both male and female were seen incubating and the nest was usually not found unattended. On 6 October (day 1), we found two completely naked hatchlings with pinkish-gray skin, thick yellow bill commissures and eyes closed. Both parents were usually near the nest and after noting our presence, they vocalized making short high-pitched calls, very different from their usual vocalizations (Hilty & Brown 1986; A. Link pers. observ.) while they moved away from the nest. During the day, the hatchlings were usually seen alone inside the nest. Four days after hatching, feather sheaths were evident in the nestlings' wings and back (Fig. 2). By day 7, they were almost completely feathered and, by day 8, their plumage was very similar to that of the female, but they still had their thick yellow bill commissures. On this day, when we approached the nest one of the hatchlings opened its mouth widely and emitted a strong noise. On day 9, they had their eyes partially opened and tried to hide inside the nest as soon as they felt the presence of an intruder. On day 10, we found the female taking an earthworm to the nest, but she was disturbed by our presence and emitted loud calls away from the nest. The hatchlings had their eyes completely open and moved slightly in the nest (Fig. 3). On day 11, at 06:00, the nest was empty and intact. We observed the male and another bird (either the female or a juvenile) near the nest, and the male was giving alarm

FIG. 3. Ten-day old nestlings of the White-shouldered Antbird (*Myrmeciza melanoceps*) (Photographs by Andrés Link).

calls, very different from its regular vocalization. The next day, we mist-netted the adult female and one of the juveniles near the nest, confirming that at least one of them had fledged successfully. The juvenile had growing feathers in the wings, and short and very soft feathers in its head. The rest of the body was completely feathered. Its commissures were still yellow, but turning orange toward the interior of the mouth. The ocular bare skin was still black and the plumage was similar to that of the adult female, but with a darker cinnamon back, with some black feathers (Fig. 4).

The nest contained two eggs for six days between its discovery and hatching, which is very short compared to the 14–16 days incubation periods of most thamnophilid antbirds (Skutch 1996); so the eggs must have been laid some time before we found the nest. We observed a nestling period of 11 days which is quite similar to that of Sooty (*M. fortis*) and Chestnut-backed (*M. exsul*) antbirds (9–10 days; Wilkinson & Smith 1997, Skutch 1969), and within the range (9–15 days) of other antbirds in general (Skutch 1996).

Generally, *Myrmeciza* antbirds lay one or two eggs, the latter being the most common clutch size (Skutch 1996). The eggs of White-shouldered Antbirds are similar to others in the genus, but slightly bigger, i.e., 26 x 19 mm, compared to 23 x 17 mm for the Swainson's Antcatcher (*M. longipes*) and the Chestnut-backed Antbird (Skutch 1969, Wetmore 1972, Willis & Oniki 1972), but this could be attributed to the bigger size of the White-shouldered Antbird (see Hilty & Brown 1986).

Nests of different species of *Myrmeciza* vary in shape and placement. Detailed information on nests is available only for Swain-

FIG. 4. One fledging of the White-shouldered Antbird (*Myrmeciza melanoceps*) after leaving the nest (Photographs by Andrés Link).

son's Antcatchers, and Chestnut-backed (*M. exsul*), Ferruginous-backed, and Sooty antbirds. For Goeldi's (*M. goeldii),* Scalloped (*M. ruficauda),* Squamate (*M. squamosa*), White-bibbed (*M. loricata*) and Dull-mantled (*M. laemosticta*) antbirds, only brief nesting data are available:

Although there is some variation in size and compactness, the many described nests of the Chestnut-backed Antbird are quite similar: they are cup-shaped and placed over low vegetation, dead palm leaves or debris near the ground (Skutch 1969, Wetmore 1972, Willis & Oniki 1972). The nests of the Swainson's Antcatcher are described as "open, shallow saucers" built at 1.2 m and 1.8 m, over branches supporting them (C. Belcher *in* Wetmore 1972). The nest of the White-bibbed Antbird is "placed on fallen branches and leaves, in the form of a very badly made bowl of plant stems and fibers without connections between them" (Euler 1900). The nest of the Dull-mantled Antbird is a "thin cup, low in *Piper* sprout on steep gorge" (Willis 1988). Open-cup nests located on the ground have been described for Goeldi's (Robbins *in* Wilkinson & Smith 1997), Squamate (Höfling *et al.* 1986) and Scalloped antbirds, although the latter nest structure is not described (Studer *in* Collar *et al.* 1992). The nest of the Ferruginous Antbird has a cup-shape form "partially sheltered by a large dead leaf cap" constructed on the ground (Tostain *et al.* 1992, Haverschmidt & Mees 1994). The only nests with different form are the spherical chamber nests of the Sooty Antbird build on litter mounds in the forest ground (Wilkinson & Smith 1997; G. Londoño unpubl.).

Nests from phylogenetically related spe-

cies tend to be similar to each other and share a basic theme (Sheldon & Winkler 1999). In general, the nest of the White-shouldered Antbird is similar to those of other *Myrmeciza* species. However, it differs in that it is deeper than the open-cup nests of most *Myrmeciza*; is partially domed with the leaves it has on top, and it is placed almost 1 m above ground. This makes it very similar in form to the nest of the Ferruginous Antbird, but placed over vegetation and not in the ground, although the palm structure where the nest was built could act as a natural litter mound (Fig. 1), because the palm fibers and dead leaves around the palm where it was constructed supported the nest. Its construction is in between that of an open cup and that of a spherical chamber, due to the fact that its entrance is partially covered with dead leaves.

The phylogenetic relationships of antbirds are not well established, and different analytic approaches are being used to try to resolve taxonomic uncertainties. These include analyses of vocalizations (Isler *et al.* 1998,1999) behavior (de Queiroz & Wimberger 1993), and nest characteristics (Zyskowski & Prum 1999). Additional information on nests and breeding biology iis needed in *Myrmeciza* and antbirds in general to further understand their natural history and phylogenetic relationships (see Cadena *et al.* 2000b). Specifically, more information is needed to determine which nest characters are relatively constant or variable within a particular species to further understand its natural history and its phylogenetic relationships.

Ecological and anatomical approaches to resolve taxonomic uncertainties must be back-upped with biogeographic and molecular information, which are being widely used to understand the phylogenetic relationships of many animal and plant groups, and represent one effective approach towards the solution of taxonomic uncertainties.

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