First nest description for Spot-backed Antwren Herpsilochmus dorsimaculatus

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First nest description for Spot-backed Antwren *Herpsilochmus dorsimaculatus*

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The genus *Herpsilochmus* comprises 17 species, of which 12 occur in Brazil (Zimmer & Isler 2003), where in recent years two new species have been described from Amazonia (Cohn-Haft & Bravo 2013, Whitney *et al*. 2013). There are few data concerning the breeding biology of any species in the genus. Basic information on reproductive period is available for Yellow-breasted Antwren *H. axillaris*, Ash-throated Antwren *H. parkeri*, Ancient Antwren *H. gentryi*, Black-capped Antwren *H. atricapillus* and Spot-tailed Antwren *H. sticturus* (Zimmer & Isler 2003). The nests of just three species have been described: Large-billed Antwren *H. longirostris* (Straube *et al*. 1992, Marini *et al*. 1997), Pectoral Antwren *H. pectoralis* and Caatinga Antwren *H. sellowi* (Silva *et al*. 2008). For another, Dugand's Antwren *H. dugandi*, nesting materials used and nest site alone are described (Zimmer & Isler 2003). Recent descriptions (e.g. David & Londoño 2013, Greeney *et al*. 2013, Chaparro-Herrera *et al*. 2014, Flórez & Londoño 2014, Leite *et al*. 2016, Willians 2016) have contributed to our knowledge of breeding in several species of Amazonian antbirds, although this aspect of natural history is still poorly known in many Neotropical species.

Spot-backed Antwren *Herpsilochmus dorsimaculatus* occurs in southern Venezuela, eastern Colombia and the north-western Brazilian Amazon, in the states of Roraima, Amazonas and Pará (Zimmer & Isler 2003). It inhabits the canopy and subcanopy of *terra-firme* forests and white-sand vegetation (*campinarana*). In Venezuela, it has also been found in seasonally flooded forests (Zimmer & Isler 2003). We present the first breeding data and describe a nest presumed to belong to this species.

The nest was found at the Adolpho Ducke Forest Reserve (10°01′03.2″S, 68°12′03.2″W), north of Manaus, Amazonas, Brazil. The reserve is a 10,000-ha forest fragment containing primary *terra firme* forest. Local climate is tropical humid, with relative humidity of 75–86% and annual rainfall of 1,750–2,500 mm. The rainy season is November–May, with highest precipitation in March and April. Mean annual temperature is 26°C (Baccaro *et al*. 2008).

On 21 August 2016, an alarm call drew our attention to a pair of *H. dorsimaculatus* just 1.5 m above ground, behaviour unusual for the species, which typically inhabits the canopy. Shortly thereafter, we found a nest, 3.5 m above ground in the fork of a short (4 m tall) tree of the genus *Lacunaria* (Ochnaceae). The tree had fallen due to the collapse of a larger tree against its trunk, and the nest was turned sideways at a 60° angle, with the inside facing vertically. The nest tree was *c*.5 m from one of the reserve's trails. One of the pair was carrying food in its bill and adopting an agitated posture, emitting a low call, and we soon spotted a chick perched *c*.1 m above ground and *c*.2 m from the nest. The chick, already fully fledged, had plumage similar in pattern to that of the adult male, albeit with a shorter tail and bill. After feeding the chick, the adult departed and gave several calls, being followed by the fledgling, which performed short flights between perches, until all three birds were lost from view.

Another hypothesis is that the nest belonged to another species and it was coincidence that the chick was so close to it, but we have strong reasons to attribute the nest to this species. Although the nest was found in dry season, the night prior to our visit there

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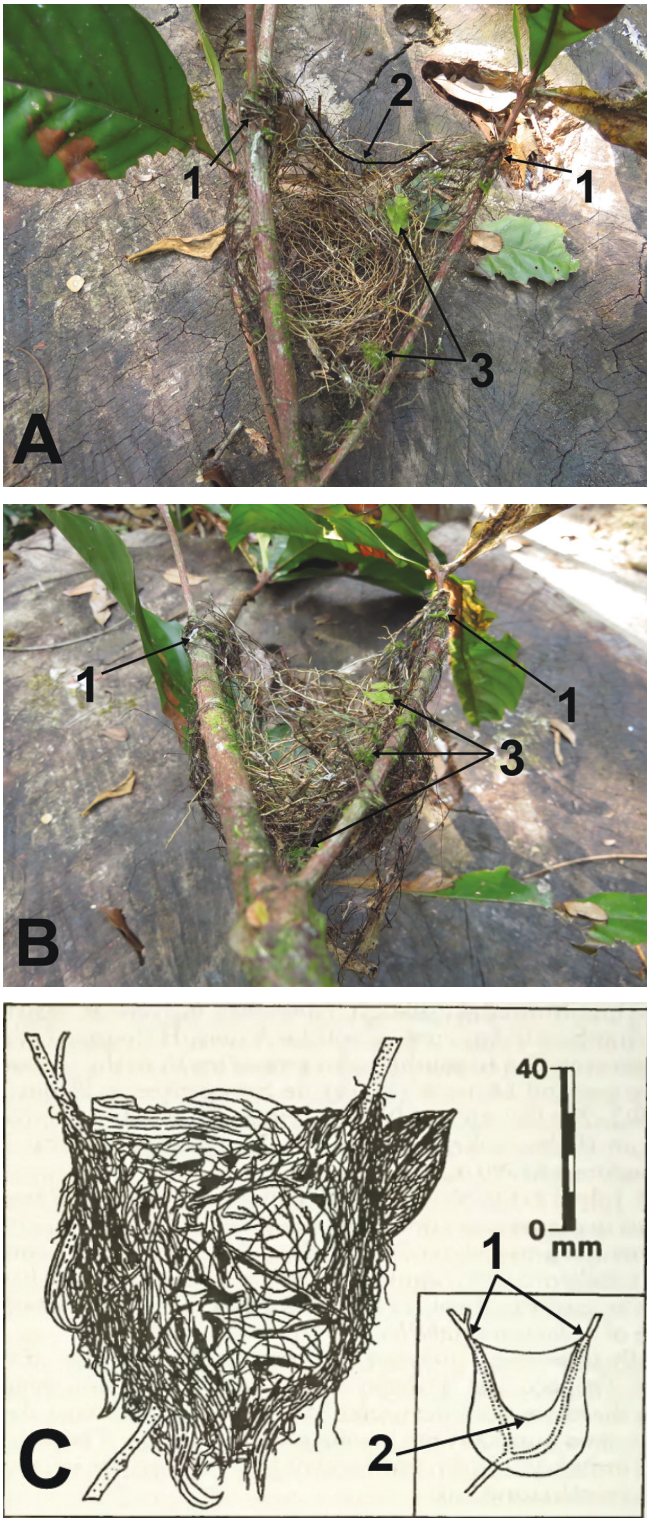

Figure 1. Nest of Spot-backed Antwren *Herpsilochmus dorsimaculatus* (A) from above, (B) from side; and (C) nest of Large-billed Antwren *H. longirostris* described by Straube *et al*. (1992). The numbers indicate important characteristics: (1) main attachment of the nest to the broadest portion of the fork, (2) lower depression in the wall on one side of the nest, and (3) live moss, i.e. the same material gathered by an adult *H. dorsimaculatus* observed by M. Cohn-Haft north of Manaus (Tomaz Nascimento de Melo)

was heavy rain, which possibly caused the tree to fall. Although the trunk of the *Lacunaria* had broken, the leaves were green and fresh, and the nest was in perfect condition, and clearly very recent. The presence of the chick beside the nest reinforces the idea that the tree fell after the nest was built, and the chick was forced to leave.

Although few nests of *Herpsilochmus* are known, the characteristics of this one correspond to others constructed by the genus. Among the principal features are the main attachment to the broadest portion of the fork and a depression on one side of the nest wall (Fig. 1), possibly to accommodate the tail when the bird is incubating or brooding (see Straube *et al*. 1992, Marini *et al*. 1997, Silva *et al*. 2008). The nest of *H. dorsimaculatus* has the same general cup shape as that of other antbird genera like *Thamnophilus* or some *Myrmotherula* (Leite *et al*. 2016, Zyskowski *et al*. 2008), but seems to have more shallow incubation chamber, like *H. sellowi* (R. Bessa; www.

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TABLE 1
Measurements and materials used on the construction of the known nests of the genus *Herpsilochmus*.

Species	External diameter	Internal diameter	Depth	Nest height	Materials used	Source
H. dorsimaculatus	86 × 70 mm	59 × 50 mm	49 mm	58 mm	Fibres of roots and palms, green mosses, thin branches and pieces of dry leaves	Present study
H. longirostris	80 × 50 mm		60 mm	60 mm	Leaves (especially of the bamboo *Guadua spinosissimum*), spadices of grasses, filaments of fungi (*Marasmius* sp.) and roots	Straube *et al*. (1992)
H. longirostris	65 mm	50 mm		55 mm	Not detailed, only the similarity to the nest found by Straube *et al*. (1992) was mentioned	Marini *et al*. (1997)
H. pectoralis	71 × 67 mm	51 × 50 mm	45 mm	60 mm	Grasses and roots, passion fruit tendrils, leaves of various sizes and branches of lianas	Silva *et al*. (2008)
H. sellowi	56 × 50 mm	46 × 44 mm	30 mm	40 mm	Fungal hyphae (*Marasmius* sp.), sheathes and leaves of grasses, tendrils, pieces of leaves, and webs	Silva *et al*. (2008)

wikiaves.com/183754). Therefore, the available evidence leads us to attribute the nest to *H. dorsimaculatus*.

The nest, which has been deposited in the collection of Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil (INPA), was of the low cup type attached to a fork (following the classification of Simon & Pacheco 2005) and was constructed of thin pale-colored roots and dark fibres, probably from palm trunks. This material, when interlaced, forms narrow walls, enabling one to see through them into the nest's interior. The nest was decorated internally and externally with a few small green mosses, thin branches and small pieces of dry leaves. Throughout, the cup was attached by roots to the fork (Fig. 1). Although the measurements of the few described nests of *Herpsilochmus* vary, even in the same species (Table 1), the general cup shape is common to all species. Except for one *H. longirostris* nest, attached to two parallel branches of a fern (Marini *et al*. 1997), nests are usually constructed in forks of thin horizontal (Silva *et al*. 2008) or vertical (Straube *et al*. 1992) branches. Despite that *Herpsilochmus* are predominantly canopy-dwellers (Zimmer & Isler 2003), the genus seems to commonly nest just 1–3.6 m above the ground (Straube *et al*. 1992, Marini *et al*. 1997, Zimmer & Isler 2003, Silva *et al*. 2008). The only known exception was a *H. dugandi* nest sited 35 m above ground. The material appears to vary according to the environment, but use of delicate and interlaced fibres forming thin walls seems to be a generic pattern, although the nest of *H. dorsimaculatus* has less material than in other species of the genus (Straube *et al*. 1992, Marini *et al*. 1997, Zimmer & Isler 2003, Silva *et al*. 2008). One adult was observed north of Manaus gathering live moss from a tree trunk, 1 m above ground, also in the dry season (M. Cohn-Haft pers. comm.). Interestingly, this material was found in our nest too (Fig. 1). The species' breeding period corresponds to that for many bird species in central Amazonia, with the peak at the start of the dry season (Stouffer *et al*. 2013).

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