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SHORT-COMMUNICATION

Description of the nest of two Thamnophilidae species in Brazilian Amazon

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ABSTRACT: Many Thamnophilidae species have poorly known breeding. Here we describe the nests and eggs of two species, *Epinecrophylla ornata* from a *terra firme* forest, and *Myrmotherula assimilis* from a flooded forest in Brazil. Knowledge on the natural history of these species is important for future conservation strategies.

KEY-WORDS: *Epinecrophylla ornata*, floodplain forest, *Myrmotherula assimilis*, reproduction, *terra firme*.

Thamnophilidae is one of the most diverse bird families in the Neotropics, being restricted to this region. Recently, molecular techniques and differences in nest architectures provided insights on phylogenetic relationships and contributed to a better resolution on the organization of taxa within the family (Cadena *et al.* 2000, David & Londoño 2013, Greeney *et al.* 2013, Zimmer & Isler 2016). Despite a recent increase in information on the natural history of poorly known antbirds, breeding data are still scarce for many species (Londoño 2003, Flórez-V & Londoño 2014).

Nest site attributes (*e.g.* height above ground, proximity to water), as well as the shape of the nest (open cup, cavity) and materials (leaves, mosses or roots), are associated with differences in predation risk and may influence reproductive success (Robinson *et al.* 2005, Roper 2005, Ocampo & Londoño 2015). Because habitats are different, species developed many strategies to increase nesting success, such as nest building under leaves or inside cavities (Sick 1997, Roper 2000).

In this study we provide descriptions of the nest and eggs of the Ornate Antwren (*Epinecrophylla ornata*) from *terra firme* forest in Tapajós River region, and of the Leaden Antwren (*Myrmotherula assimilis*), in the Juruá River region, both in Brazilian Amazon.

On 3 November 2013, during the dry season, we observed a male *E. ornata* carrying small roots on its bill and finishing nest building (Figure 1), while a female was close to the nest. The individual was observed in the west bank of Jamanxin River (an affluent of the east bank of Tapajós River), municipality of Itaituba, Pará State, 69 m a.s.l. (4°49'29.82"S; 56°27'44.95"W). The nest is a deep open cup supported by a fork, inner diameter of 50 × 140 mm, and 65 mm depth. It was positioned 1.2 m above the ground, and was mainly constructed with fine roots, dry leaves and little sticks. The nest was 3 km from Jamanxim River, the upland forest had a canopy around 35 m high and closed. Some of the common tree species in the region are *Ocotea baturitensis*, *Manilkara huberi* and *Eschweilera obversa*. Next day the nest was inspected again, but the pair was not observed.

FIGURE 1. Nest of *Epynecrophylla ornata.* West bank of Jamanxin River, Itaituba, Pará, 03 November 2013. Photo: Gabriel A. Leite.

A nest of *M. assimilis* was found on 9 March 2015, during the rainy season in a floodplain forest, in the east bank of Juruá River, municipality of Carauari, Amazonas state, 93 m a.s.l. (5°46'18.19"S; 67°45'49.59"W). The open cup nest had internal diameter 60 × 55 mm and 30 mm depth. It was built with small roots and some dry leaves, and was placed 3.8 m above water, in a little fork from a small plant (Figure 2). The nest was 21 m from the nearest water body (Marari Igarapé); the floodplain forest had a closed canopy around 25 m high, and include tree species such as *Macrolobium acaciifolium*, *Calophyllum brasiliense* and *Hevea guianensis*. A female was observed incubating two eggs, which were pale brown with darker brown blotches. The nest was visited again three days later, without any alteration on nest or nest content.

FIGURE 2. Nest and eggs of *Myrmotherula assimilis*. RDS Uacari, Carauari – Amazonas, 09 March 2015. Photo: Gabriel A. Leite.

Breeding information on *E. ornata* and *M. assimilis* is scarce, and mostly limited to observations of fledglings fed by adults (Zimmer & Isler 2016). Regarding seasonality of breeding, the nest of *E. ornata* was found in the same season as three other *terra firme* forest antbird species, *Myrmoborus myiotherinus*, found in October (Londoño 2003), *Gymnopithys salvini*, found in November (Willson 2000) and *Neoctantes niger*, found in September (David & Londoño 2013) in the Peruvian Amazon. One *E. ornata* fledgling was also observed being fed by an adult in July in Peruvian Amazon (Zimmer & Isler 2016), suggesting the reproduction of the species could also occur during the dry season. While we found the nest of *M. assimilis* when water level was high on Juruá River floodplain forest (Sombroek 2001), adults were observed feeding fledglings on the dry season (October) in Anavilhanas, Rio Negro, Brazil (Zimmer & Isler 2016).

The nest of *M. assimilis* is similar in architecture to the nest of other *Myrmotherula* species, such as *M. multostriata, M. hauxwelli* and *M. axillaris* (Sick 1997, Chaparro-Herrera & Ruiz-Ovalle 2014, Zimmer & Isler 2016). Similarly, *M. surinamensis* and *M. cherriei* also build nests above water (Sick 1997, Chaparro-Herrera & Ruiz-Ovalle 2014). Regarding the *Epinecrophylla* genus, Isler *et al.* (2006) reported that species build domed or oven-shaped nests with side entrances, and the nest from *E. ornata* is an open cup nest. In the two species, both sexes were involved in parental care behavior and nest construction, which is apparently the case in most antbird species (Sick 1997, Willson 2000, Link & Ramirez 2003, Londoño 2003). Regarding environments where nests were found, it is noteworthy that *E. ornata* is a species inhabiting upland forest and transitional forests between *várzea* and *igapó*, while *M. assimilis* is a species restricted to the forests of *várzea/igapó* in Amazon (Zimmer & Isler 2016).

Detailed observations on breeding biology is important for many reasons, such as gathering information that enhance our understanding of phylogenetic relationships amongst species. Also, data on natural history is crucial for planning of conservation programs. Although *E. ornata* and *M. assimilis* are not considered threatened, all Amazonian forest species are affected by the increasing deforestation in the Amazon Basin.

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