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SHORT-COMMUNICATION

First description of the nest of White-browed Antpitta *Hylopezus ochroleucus*

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ABSTRACT: The reproductive biology of White-browed Antpitta (*Hylopezus ochroleucus*) is completely unknown. We describe a nest and nestlings found at the *Parque Natural Municipal do Distrito de Brejinho*, Araripe, Ceará. Brazil. The nest was a loose, shallow, open cup of sticks built into a tangle of branches and vines 0.5 m above the ground. The two nestlings were first seen on 5 April 2015, with closed eyes, bright orange bills and mouth linings, and dark grayish-pink skin, devoid of natal down, with contour feather tracts beginning development (under the skin). Six days later they had a dense coating of red-brown, wool-like down, their eyes were beginning to open, and secondary feathers were emerging. We compare our findings to related species and other members of the family Grallariidae.

KEY-WORDS: breeding biology, caatinga, Grallariidae, nestling, reproduction.

Following the recent description of the Alta Floresta Antpitta (*Hylopezus whittakeri*) and splitting of Snethlage's Antpitta (*H. paraensis*) from Spotted Antpitta (*H. macularius*) (Carneiro *et al.* 2012), there are currently 10 recognized species of *Hylopezus* antpittas (Remsen-Jr. *et al.* 2015). Unlike the more montane *Grallaricula* and *Grallaria* antpittas, whose reproductive biology has received a good deal of recent attention (see Greeney *et al.* 2008, Greeney 2012a, Greeney & Jipa 2012), the breeding of lowland *Hylopezus* antpittas is relatively poorly known (Krabbe & Schulenberg 2003). Nests are properly described for only three of the ten species: Streak-chested Antpitta (*H. perspicillatus*; Skutch 1969, Pollock 2013); Spotted Antpitta (Tostain 1986); Masked Antpitta (*H. auricularis*; Maillard-Z. 2012, Greeney 2014a). Kirwan (2009) made brief observations of an inactive nest, apparently of Speckle-breasted Antpitta (*H. nattereri*), but the reproductive biology of White-browed Antpitta (*H. ochroleucus*) is completely unknown (Greeney 2014b).

White-browed Antpitta was, for many years, treated as conspecific with Speckle-breasted Antpitta, despite striking differences in voice, plumage, habitat and distribution (Whitney *et al.* 1995). Recent molecular studies, however, suggest that Speckle-breasted Antpitta is more closely related to Masked Antpitta, while White-browed Antpitta is most likely sister to the Spotted Antpitta "species group" (Carneiro & Aleixo 2012). White-browed Antpitta is a Brazilian endemic, inhabiting the semi-deciduous and Caatinga woodlands of northeast Brazil, from Ceará southward to Minas Gerais states. As it is known from few areas that are formally protected (Anjos 2002, Dornelas *et al.* 2012), it is currently considered "Near Threatened" by BirdLife International (2015). Here we provide the first information on the reproductive biology of White-browed Antpitta, based on a nest found in the Parque Natural Municipal do Distrito de Brejinho, Araripe, Ceará (7°13'28"S; 39°59'36"W, 690 m a.s.l.).

On 25 March 2015, at 10:45 h, JLGL and TT received a response from a White-browed Antpitta after playing a recording of its vocalization. When the responding individual continued to vocalize, giving its full song ("*whu-whú, whu- whú-whu-whu-wheú-wheú-wheú-wheú-wheú-wheú-wheú-wheú*" following Ridgely & Tudor 2009), they left the trail and discovered that the adult was responding while seated on a nest only 10 m from the trail (Figure 1). After taking several pictures from a distance, they left the area without flushing the adult. On 5 April, at 10:30 h, JLGL flushed an adult from the nest as he approached, revealing the presence of two young nestlings (Figure 2). The adult dropped from the nest and disappeared silently into the undergrowth. The young had their eyes still closed and were completely

devoid of natal down. Their skin was dark grayish-pink and their bills were bright orange. Contour feather tracts were visible under the skin. Although there are no concrete data available for other *Hylopezus*, based on direct experience with the nestlings of *Grallaricula* (HFG, pers. observ.), which also lack natal down (Greeney 2012b), we estimate that the young were no more than one day old. On 11 April, at 08:20 h, JLGL again flushed a brooding adult from the nest. The adult's response, however, was very different than on the previous visit. This time, after dropping to the ground below the nest, the adult dropped its wings to the ground and ran back and forth in small semi-circles, dragging its wings through the leaf litter. It remained within 1 m of JLGL and continued to feign injury during the brief period he remained at the nest. This time, the nestlings were well-covered in dense, wool-like down feathers. The feathers of the capital and spinal tracts were dark rufescent brown, those of the humeral tracts were slightly paler, and the feathers of the femoral, pelvic spinal, and ventral abdominal tracts were pale rusty-buff. Flight feather pins were emerged through the skin roughly 1.5–2 cm, with the primary feather sheaths unbroken and those of the secondaries with 1–3 mm of bright ochraceous-buff feather vanes exposed at their tips. The nestlings' eyes were just beginning to open, their bills were still bright orange, but with the inflated rictal flanges slightly paler, more yellow-orange. We did not visit the nest again.

FIGURE 1. Adult White-browed Antpitta *Hylopezus ochroleucus* at its nest, 25 March 2015, Araripe, Ceará, Brazil. Photo: Thiago Tolêdo.

The nest itself was a rather frail-looking, shallow cup built of loosely-woven sticks, leaf petioles, and thin vines (Figure 2), falling into the "low cup/base" category of Simon & Pacheco (2005) and overall rather similar to the nests of most Columbidae. It did not have a well-defined inner cup lining, but thinner, more flexible leaf petioles appeared to be more abundant within the internal portions. It was built 0.5 m above the ground and supported from below by 5–6 thin, overlapping lianas and branches which were partially held up by a dead, 3–4 cm-diameter stick angled at roughly 45° below the tangle. The nest was fairly exposed above, with only sparse vegetation more than 1 m above the nest providing shade. The surrounding forest was typical deciduous Caatinga habitat with a relatively dense understory of small dicots and tangled vines. It was in arid, uneven, hilly terrain, more than 500 m from the nearest riparian area. In order to minimize disturbance to the nest, we did not measure it directly. Instead, using a total adult length of approximately 13 cm (Greeney 2014b), we estimate that the nest was 12–15 cm in diameter externally, with some of the longer twigs extending beyond the bulk of the nest an additional 4–5 cm. We estimate that the total external height (thickness) of the nest was 5–7 cm, the internal diameter was 6–7 cm, and the internal depth was 3–4 cm.

FIGURE 2. Unfeathered nestlings in the nest of White-browed Antpitta *Hylopezus ochroleucus*, 5 April 2015, Araripe, Ceará, Brazil. Photo: Jefferson Luis Gonçalves de Lima.

The nest of White-browed Antpitta, in being a broad, rather shallow cup somewhat poorly supported from below by overlapping small supports, is similar in placement and general shape to those described for other *Hylopezus* (Krabbe & Schulenberg 2003). Compositionally, our nest of White-browed Antpitta appears nearly identical to that of the single described nest of Spotted Antpitta, described by Tostain (1986) as being very sparsely-built of thin twigs, having little or no inner lining, and bearing resemblance to the nests of columbids. Nests of the other two species of *Hylopezus* with published information appear to differ in including more material (especially humid, decaying leaves) and by having at least a rudimentary lining of the inner cup (flexible rootlets or thin petioles) (Skutch 1969, 1981, Robinson *et al.* 2000, Maillard-Z. 2012). It appears that the nest of *H. nattereri* (Kirwan 2009, A. Bodrati, pers. comm.) may be most similar to that of *H. ochroleucus*, but show some characters resembling the nests of *H. perspicillatus* and *H. macularius*.

Streak-chested Antpitta, the only *Hylopezus* with a previously published description of its nestling, apparently hatches completely devoid of natal down (Skutch 1969, 1981). There is no published description of the older nestlings for any *Hylopezus* species, but the nestlings of Streak-chested Antpitta pictured in Pollock (2013) appear nearly identical to the nestlings observed here, in their covering of wool-like, reddish-brown down and bright orange bills. Interestingly, the lack of natal down and subsequent development of dense reddish-brown down is a character that, so far as is known, *Hylopezus* shares with *Grallaricula* (Greeney *et al.* 2004, Greeney & Miller 2008, Niklison *et al.* 2008, Greeney & Jipa 2012, Greeney *et al.* 2012). Thrush-like Antpitta (*Myrmothera campanisona*) also hatches with a bright orange bill and without down (Gustavo Londoño, pers. comm.) and, though currently undescribed, should *Myrmothera* nestlings later develop a similar coating of reddish down, then nestling appearance and development would appear to be fairly conserved between these three genera. These shared ontogenetic characters provide strong support for the hypothesis that *Hylopezus*, *Grallaricula*, and *Myrmothera* form a sister clade to the remaining antpitta genus, *Grallaria* (Rice 2005). Unlike members of this clade, the nestlings of *Grallaria* hatch with natal down and their secondary coating of nestling down is somewhat variable in color between species (Greeney *et al.* 2008, Greeney 2012b). Finally, the shallow, saucer-like form of the nest of White-browed Antpitta provides further evidence that *Hylopezus* also build nests similar to *Grallaricula* (Greeney *et al.* 2008) and *Myrmothera* (Tostain & Dujardin 1988, Barber & Robbins 2003, Greeney *et al.* 2005), but unlike the deep, bulk cup nests of *Grallaria* (Greeney *et al.* 2008).

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