

# The nest of Crescent-faced Antpitta *Grallaricula lineifrons* in north-east Ecuador

by Harold F. Greeney & Marcello Jipa

Received 27 March 2012

The genus *Grallaricula* includes nine of the 51 species of antpittas (Grallariidae) and comprises small, semi-terrestrial species (Krabbe & Schulenberg 2003, Remsen *et al.* 2012). Thirty years ago Wiedenfeld (1982) reviewed published information on the nesting of antpittas, at which time the nest of only one species had been described (Schwartz 1957). Despite a recent flush of publications on their taxonomy, distribution, conservation and natural history (Andrade & Lozano 1997, Holley *et al.* 2001, Delgado-V. 2002, Greeney *et al.* 2004, Vereza 2004, Greeney & Sornoza 2005, Donegan 2008, Niklison *et al.* 2008, Freile *et al.* 2010), the nests of fewer than half of the described species are known, and the breeding biology of most species is poorly documented (Greeney *et al.* 2008).

Crescent-faced Antpitta *G. lineifrons* is one of the most strikingly plumaged members of the genus and is considered Near Threatened (BirdLife International 2012). The type specimen was collected in 1923 (Chapman 1924) and remained unique for 49 years. In fact, Crescent-faced Antpitta was not reported in life until 1971 (Lehman *et al.* 1977) and even 70 years after being described its distribution and behaviour were virtually unknown (Fjeldså & Krabbe 1990, Robbins *et al.* 1994). Today it is known to be more widespread than was previously thought, in humid *Polylepis* woodlands and other treeline and elfin forests, often with small patches of bamboo, at elevations of 2,900–3,400 m, in the Central Andes of Colombia and the Eastern Andes of Ecuador south to northern prov. Loja (Ridgely & Tudor 1994, Ridgely & Greenfield 2001, Krabbe & Schulenberg 2003). Apart from a young bird collected in mid March in prov. Carchi, northern Ecuador (Robbins *et al.* 1994), nothing has been published on the species' reproduction. Here we provide the first description of the nest and brief observations on the nestling and parental care from north-east Ecuador.

## Methods and Results

On 10 February 2012, we found a nest of Crescent-faced Antpitta just above the town of Papallacta, prov. Napo (00°19'S, 78°12'W), at c.3,300 m. At the time of discovery, it contained a single nestling, estimated to be no more than five days from fledging based on the experience of HFG with other species of *Grallaricula*. We photographed both adults arriving at the nest to provision the young (Fig. 1), but were unable to examine the nest and nestling more closely due to its precarious position (see below). Based on direct observation and from pictures taken on 10 February, the nestling was covered in a dense coat of rusty-brown downy plumage, and primary feathers were at least halfway emerged from their sheaths. The mouth lining was bright crimson-orange, mandible dusky orange, maxilla dark grey and rictal flanges yellow-white. We returned on 6 March, at which time the nest was empty but undisturbed, and we collected it for closer examination.

The open-cup nest was 3.6 m above ground and constructed within a loose tangle of three thin (c.1 cm diameter) vines hanging from a 10-cm diameter branch. The three vines hung c.1 m below the branch before becoming tangled, creating a loose 'basket' into which the nest was built. This 'basket' of vines was filled with a loose mixture of green moss, short sticks and leaf petioles creating a 10.5 cm-tall platform onto which the nest itself was built. This base was 13.5 cm in diameter at the narrowest point and 15 cm at the widest.



The uniform mixture of sticks and moss, as well as the loose composition of the base strongly suggest that the material was brought there by the antpittas. The outer portion of the nest comprised similar materials to those used for the base, but the moss was more tightly packed, permitting the nest itself to be easily separated from the supporting base. This portion of the nest was symmetrical and measured 11 cm in diameter by 5.5 cm tall externally. The internal egg cup was neatly lined with a c.0.5-cm thick layer of crisscrossed dark rootlets and fibers, intermixed with only a few paler grass stems and flexible fibres. Internally, the egg cup was 6.5 cm wide and 3.5 cm deep. Additional photographs of the nest and nestling are available on the Colaboraciones Americanas Sobre Aves project website (<http://avesamericanas.lifedesks.org/pages/69356>).

Habitat in the vicinity of the nest was typical of this elevation in northern Ecuador, with a 6–10 m-high canopied forest, dominated by *Polylepis* trees with a patchily vegetated understorey varying from dense *Chusquea* bamboo thickets to fairly open areas with only sparse vegetation. Most areas, however, were well covered in a dense layer of moss and epiphytes. The nest was at the edge of an area with little understorey vegetation, c.10 m from the edge of low, dense vegetation covering an old landslide. While we waited near the nest to take photographs, the adults foraged 15–30 m from the nest in the more open areas. On several occasions they visited areas disturbed by our passage, catching small arthropods by probing into displaced moss and soil, providing nominal support for the hypothesis that many antpittas facultatively follow large mammals while foraging (Greeney in press a).

Adults were silent while we were near the nest, except an occasional, soft, downslurred whistle as described for the species (Robbins *et al.* 1994), which is similar to that made by Ochre-breasted *G. flavirostris* and Peruvian Antpittas *G. peruviana* (Robbins & Ridgely 1990, Greeney *et al.* 2004). We also occasionally heard adults make this noise while foraging for food to bring to the nest, but during c.2 hours in the vicinity we did not hear any other

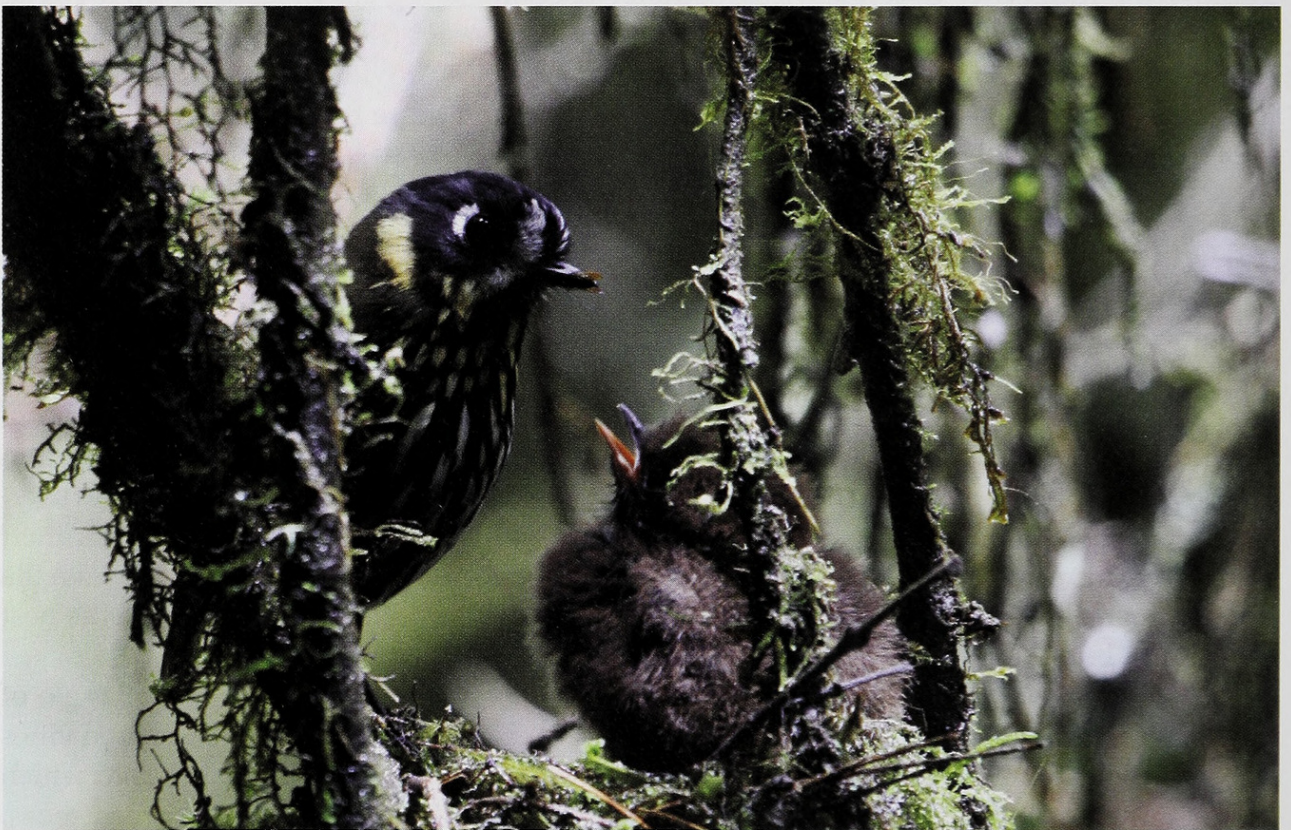


Figure 1. Adult Crescent-faced Antpitta *Grallaricula lineifrons* feeding nestling, Papallacta, prov. Napo, north-east Ecuador, 10 February 2012 (Harold F. Greeney)



vocalisations by this pair. One member of a different pair, c.40 m from the nest, gave the more typical song of the species, a series of slightly ascending, closely spaced notes (Robbins *et al.* 1994, Ridgely & Greenfield 2001). This pair was seen carrying small pieces of moss and sticks, indicating they were in the process of nest construction, but we were unable to locate a nest.

## Discussion

Although we are unable to offer a detailed description of the older nestling of Crescent-faced Antpitta, it is clearly similar to the older nestlings of other *Grallaricula*, all described as having dense, rusty-brown down and striking, orange mouth linings (Greeney *et al.* 2004, Greeney & Miller 2008, Niklison *et al.* 2008, Greeney *et al.* in press). It is now clear that in *Grallaricula* this downy coating is not natal down (which develops predominantly or entirely pre-hatching), but rather is formed by an early appearing semi-plume portion of the incoming juvenile plumage (Collins 2010). Thus, in all likelihood, nestling Crescent-faced Antpittas are naked at hatching and develop this downy plumage c.1 week after hatching (Greeney in press b).

The nest described here, being a relatively shallow, open-cup nest lined with dark fibres, matches descriptions of other *Grallaricula* nests. The predominance of moss in the external portion agrees with nests of Peruvian (Greeney *et al.* 2004) and Ochre-breasted Antpittas (Holley *et al.* 2001, Maillard & Vogel 2003, Greeney *et al.* in press), in contrast to the leaf, stick and petiole exterior to nests of Slate-crowned Antpitta *G. nana* (Greeney & Sornoza 2005, Greeney & Miller 2008, Greeney *et al.* 2010) and Rusty-breasted Antpitta *G. ferrugineipectus* (Schwartz 1957, Niklison *et al.* 2008). The large amount of extra material placed below the nest described here appears unusual for the genus, but is not inconsistent with the nest architecture of other species, all of which create a platform upon which to construct their nest cups (Greeney *et al.* 2008, in press). Few nests are known for most *Grallaricula* spp., but in general they are built below 2 m (but see Holley *et al.* 2001), making the nest described here unusually high. It remains to be seen if the placement and voluminous platform witnessed here are typical for Crescent-faced Antpitta. Our observation of one pair with an older nestling and one pair nest building in mid February suggest that the species' breeding season in this area may be at least January–April. This is the wetter season in the area, and contrasts with the dry-season nesting peak for most other species (Greeney *et al.* 2011).

## Acknowledgements

Field work by HFG and the purchase of equipment used in this study were supported by Matt Kaplan, John V. Moore, the Population Biology Foundation, Maryland Ornithological Society and Field Guides, Inc. HFG was supported by a Rubenstein Fellowship in 2011 and 2012. We thank Niels Krabbe and Kevin Zimmer for critical comments which improved this manuscript.

## References

- Andrade, G. I. & Lozano, I. E. 1997. Ocurrencia del Hormiguero de Corona Pizarra *Grallaricula nana* en la Reserva Biológica Capanta, macizo de Chingaza, Cordillera Oriental Colombiana. *Cotinga* 7: 37–38.
- BirdLife International. 2012. Species factsheet: *Grallaricula lineifrons*. [www.birdlife.org/datazone/species/index.html](http://www.birdlife.org/datazone/species/index.html) (accessed 25 March 2012).
- Chapman, F. M. 1924. Descriptions of new genera and species of Tracheophonae from Panama, Ecuador, Peru, and Bolivia. *Amer. Mus. Novit.* 123: 1–9.
- Collins, C. T. 2010. A review of natal pterylosis in passerines: useful information or avian marginalia? *Bull. Brit. Orn. Cl.* 130: 96–101.
- Delgado-V., C. A. 2002. Observations of the Ochre-breasted (*Grallaricula flavirostris*) and Slate-crowned (*G. nana*) Antpittas in Colombia. *Orn. Neotrop.* 13: 423–425.



- Donegan, T. M. 2008. Geographical variation in Slate-crowned Antpitta *Grallaricula nana*, with two new subspecies, from Colombia and Venezuela. *Bull. Brit. Orn. Cl.* 128: 150–178.
- Fjeldså, J. & Krabbe, N. 1990. *The birds of the high Andes*. Zool. Mus., Univ. of Copenhagen & Apollo Books, Svendborg.
- Freile, J. F., Parra, J. L. & Graham, C. 2010. Distribution and conservation of *Grallaria* and *Grallaricula antpittas* (Grallariidae) in Ecuador. *Bird Conserv. Intern.* 20: 410–431.
- Greeney, H. F. in press a. Antpittas and worm-feeders: a match made by evolution? Evidence for possible commensal foraging relationships between antpittas (Grallariidae) and mammals. *Neotrop. Biol. & Conserv.* 7.
- Greeney, H. F. in press b. The natal plumages of antpittas. *Orn. Colombiana* 12.
- Greeney, H. F. & Miller, E. T. 2008. The nestling and parental care of the Slate-crowned Antpitta (*Grallaricula nana*) in northeastern Ecuador. *Orn. Neotrop.* 19: 457–461.
- Greeney, H. F. & Sornoza, F. 2005. The nest and egg of the Slate-crowned Antpitta (*Grallaricula nana*), with observations on incubation behavior in southern Ecuador. *Orn. Neotrop.* 16: 137–140.
- Greeney, H. F., Hannelly, E. C. & Lysinger, M. 2004. First description of the nest and vocalisations of the Peruvian Antpitta *Grallaricula peruviana* with a northward range extension. *Cotinga* 21: 14–17.
- Greeney, H. F., Dobbs, R. C., Martin, P. R. & Gelis, R. A. 2008. The breeding biology of *Grallaria* and *Grallaricula antpittas*. *J. Field Orn.* 79: 113–129.
- Greeney, H. F., Juiña-J., M. E., Harris, J. B. C., Wickens, M. T., Winger, B., Gelis, R. A., Miller, E. T. & Solano-Ugalde, A. 2010. Observations on the breeding biology of birds in south-east Ecuador. *Bull. Brit. Orn. Cl.* 130: 61–68.
- Greeney, H. F., Martin, P. R., Gelis, R. A., Solano-Ugalde, A., Bonier, F., Freeman, B. & Miller, E. T. 2011. Notes on the breeding of high-Andean birds in northern Ecuador. *Bull. Brit. Orn. Cl.* 131: 24–31.
- Greeney, H. F., Solano-Ugalde, A., Juiña-J., M. E. & Gelis, R. A. in press. Observations on the breeding of Ochre-breasted Antpitta (*Grallaricula flavirostris*) in Ecuador. *Orn. Colombiana* 12.
- Holley, D. R., Lindell, C. A., Roberts, M. A. & Biancucci, L. 2001. First description of the nest, nest site, and eggs of the Ochre-breasted Antpitta. *Wilson Bull.* 113: 435–438.
- Krabbe, N. & Schulenberg, T. S. 2003. Family Formicariidae (ground-antbirds). Pp. 682–731 in del Hoyo, J., Elliott, A. & Christie, D. A. (eds.) *Handbook of the birds of the world*, vol. 8. Lynx Edicions, Barcelona.
- Lehmann V., C., Silliman, J. R. & Eisenmann, E. 1977. Rediscovery of the Crescent-faced Antpitta in Colombia. *Condor* 79: 387–388.
- Maillard Z., O. & Vogel, C. J. 2003. First description of nest and eggs of the Ochre-breasted Antpitta (*Grallaricula flavirostris*). *Orn. Neotrop.* 14: 129–131.
- Niklison, A. M., Areta, J. I., Ruggera, R. A., Decker, K. L., Bosque, C. & Martin, T. E. 2008. Natural history and breeding biology of the Rusty-breasted Antpitta (*Grallaricula ferrugineipectus*). *Wilson J. Orn.* 120: 345–352.
- Remsen, J. V., Cadena, C. D., Jaramillo, A., Nores, M., Pacheco, J. F., Robbins, M. B., Schulenberg, T. S., Stiles, F. G., Stotz, D. F. & Zimmer, K. J. 2012. A classification of the bird species of South America. [www.museum.lsu.edu/~Remsen/SACCBaseline.html](http://www.museum.lsu.edu/~Remsen/SACCBaseline.html) (accessed 20 March 2012).
- Ridgely, R. S. & Greenfield, P. J. 2001 *The birds of Ecuador*. Cornell Univ. Press, Ithaca, NY.
- Ridgely, R. S. & Tudor, G. 1994. *The birds of South America*, vol. 2. Univ. of Texas Press, Austin.
- Robbins, M. B., Krabbe, N. K., Ridgely, R. S. & Molina, F. S. 1994. Notes on the natural history of the Crescent-faced Antpitta. *Wilson Bull.* 106: 169–173.
- Schwartz, P. 1957. Observaciones sobre *Grallaricula ferrugineipectus*. *Bol. Soc. Ven. Cient. Nat.* 18: 42–62.
- Verea, C. 2004. Contribución al conocimiento del Ponchito Pechiescamado (*Grallaricula loricata*) (Formicariidae) de los bosques nublados del Parque Nacional Henri Pittier, norte de Venezuela. *Orn. Neotrop.* 15: 225–235.
- Wiedenfeld, D. A. 1982. A nest of the Pale-billed Antpitta (*Grallaria carrikeri*) with comparative remarks on antpitta nests. *Wilson Bull.* 94: 580–582.

Address: Yanayacu Biological Station & Center for Creative Studies, c/o Foch 721 y Amazonas, Quito, Ecuador, e-mail: revmmoss@yahoo.com



Greeney, Harold F and Jipa, Marcello. 2012. "The nest of crescent-faced antpitta *Grallaricula lineifrons* in north-east Ecuador." *Bulletin of the British Ornithologists' Club* 132(3), 217–220.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/229127>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/272440>

**Holding Institution**

Natural History Museum Library, London

**Sponsored by**

Natural History Museum Library, London

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: British Ornithologists' Club

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.