

# The natal plumages of antpittas (Grallariidae)

## Los plumajes natales de los tororois (Grallariidae)

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### Abstract

In a recent paper, Collins (2010) reviewed the current state of knowledge on passerine natal plumages and discussed their significance and usefulness in phylogenetic reconstructions. Included in this paper was an assessment of the natal plumages of antpittas (Grallariidae). With this brief note I clarify and expand upon Collins's assessment and conclusively demonstrate that *Grallaricula* antpittas hatch with no natal down and that *Grallaria* antpittas hatch with a sparse covering of long down plumes.

**Key words:** *Grallaria*, *Grallaricula*, Grallariidae, hatching, natal down, nestling, pterylosis

### Resumen

En un artículo reciente, Collins (2010) revisó el estado actual del conocimiento sobre los plumajes natales de las aves paserinas y discutió su significancia y utilidad en reconstrucciones filogenéticas. Como parte de ese artículo se incluyó una evaluación de los plumajes natales de los tororois (Grallariidae). En esta nota aclaro y extiendo la evaluación de Collins, y demuestro concluyentemente que las especies del género *Grallaricula* eclosionan sin plumón natal y que las del género *Grallaria* lo hacen con una cobertura poco densa de plumones largos.

**Palabras clave:** *Grallaria*, *Grallaricula*, Grallariidae, eclosión, plumaje natal, pterilosis

In a recent survey of natal pterylosis in passerines, Collins (1910) reached three broad conclusions: natal down patterns show some, but limited, phylogenetic signal; broad geographic patterns of early plumage development need re-evaluation with greater sample sizes; the reported natal plumages in some groups may need re-evaluation. Using the *Grallaria* and *Grallaricula* antpittas (Grallariidae) as examples, Collins pointed to the need for more detailed and accurate descriptions of natal plumages (those present at hatching). He accurately cited the vagueness of wording used in nestling descriptions for seven species of *Grallaria*.

Based on his assessment of earlier authors' descriptions, Collins came to the conclusion that the "covering of downy feathers in both *Grallaria* and *Grallaricula* antpittas is clearly not natal down." The described nestlings of four species of *Grallaricula* completely lack plumage at hatching, and it is clear that Collins was correct with regards to this genus. Conversely, my own fieldwork on antpitta



**Figure 1.** Nestling *Grallaricula* antpittas photographed in Ecuador on the day of hatching (A) *Grallaricula flavirostris*, 10 December 2002, Pacto Sumaco, Napo; (B) *Grallaricula peruviana*, 15 May 2003, Cosanga, Napo.



**Figure 2** Nestling *Grallaricula antpittas* photographed in Ecuador: (A) ca. 12-day-old *Grallaricula lineifrons*, 10 February 2012, Papallacta, Napo; (B) 13-day-old *Grallaricula peruviana*, 28 May 2003, Cosanga, Napo; (C) ca. 12-day-old *Grallaricula nana*, 17 November 2006, Cosanga, Napo; (D) ca. 10-day-old *Grallaricula flavirostris*, 10 December 2002, Pacto Sumaco, Napo.

life histories has shown that *Grallaria antpittas* do indeed hatch with natal down, contrary to Collins's assessment. With this brief note, therefore, I feel it is my duty to defend the unalienable right of *Grallaria antpittas* to bear plumes.

*GRALLARICULA*. – Figure 1 shows the newly hatched nestlings of two species of *Grallaricula*, clearly confirming their lack of natal down and agreeing with Collins's assessment. Figure 2 shows the nestlings of four species of *Grallaricula*, each individual more than one week after hatching, and illustrates the dense covering of downy feathers described for older *Grallaricula* nestlings by various authors.

*GRALLARIA*. – Figures 3a-3c show the nestlings of three species of *Grallaria*, only hours after hatching, just long enough for their natal down to dry. To erase any further doubt, Figure 3d shows a nestling *Grallaria ruficapilla* removed from the broken halves of its eggshell while in the process of hatching. This figure clearly illustrates that, contrary to Collins's (2010) assessment, antpittas in the genus *Grallaria* bear natal down plumes at hatching. Figure 4 shows the nestlings of four species of *Grallaria*, each individual more than one week after hatching, and illustrates how their plumage is qualitatively similar to that of older *Grallaricula* nestlings (Fig. 2). For both genera, it



**Figure 3.** Nestling *Grallaria antpittas* photographed in Ecuador on the day of hatching: (A) *Grallaria quitensis*, 24 October 2004, Papallacta, Napo; (B) *Grallaria ridgelyi*, 5 March 2010, Tapichalaca, Zamora-Chinchipec; (C) *Grallaria ruficapilla*, 29 September 2004, Cosanga, Napo; (D) *Grallaria ruficapilla*, 13 March 2005, Yungilla, Azuay.

remains to be seen if these downy coverings, which appear after hatching and thus are not considered natal (Wetherbee 1957), are an early-appearing semiplume portion of the incoming juvenal plumage as proposed by Collins (2010). A closer examination of these down-like feathers would confirm them as semiplumes if they grow from separate follicles and are attached to the tips of incoming juvenal contour feathers.

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#### Literature Cited

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**Figure 4.** Older nestlings of *Grallaria antpittas* in Ecuador: (A) ca. 7-day-old *Grallaria flavotincta*, 14 February 2009, Mindo, Pichincha, Ecuador; (B) ca. 9-day-old *Grallaria hypoleuca*, 9 December 2011, Cosanga, Napo, Ecuador; (C) 13-day-old *Grallaria ridgelyi*, 18 March 2010, Tapichalaca, Zamora-Chinchipe (E. Lichter-Marck); (D) 10-day-old *Grallaria ruficapilla*, 29 September 2008, Cosanga, Napo, Ecuador (J. Simbaña); (E) ca. 10-day-old *Grallaria nuchalis*, 17 November 2006, Tapichalaca, Zamora-Chinchipe, Ecuador (M. Juiña); (F) ca. 16-day-old *Grallaria alleni*, 14 February 2007, Mindo, Pichincha, Ecuador.

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