

Description of the nest, egg and nestling of Watkins's Antpitta *Grallaria watkinsi*

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Describimos el nido, huevos y pichón de la Gralaria de Watkins *Grallaria watkinsi* en base a observaciones hechas cerca de Celica, Loja, Ecuador, a principios de marzo de 2000. El nido, único entre los previamente descritos para gralarías, estaba localizado relativamente alto en un árbol, apoyado en ramas pequeñas, y estaba compuesto principalmente de palitos. El huevo era azul verdoso pálido y sin marcas, similar a los huevos conocidos de otras especies de *Grallaria*. Como ya fuera mencionado para otros pichones del género, la *G. watkinsi* de 1–2 días de edad tenía el pico, comisura e interior de la boca anaranjado brillantes, pero resultó única en tener también la cloaca de ese color.

Watkins's Antpitta *Grallaria watkinsi* is a poorly known species largely restricted to the Tumbesian region of south-west Ecuador and north-west Peru⁸, where it inhabits tropical deciduous forest at 600–2,000 m^{1,6}. Although *G. watkinsi* was formerly considered a subspecies of Chestnut-crowned Antpitta *G. ruficapilla*, the two are vocally distinct^{5,6} and largely segregated by habitat and elevation⁸. *G. watkinsi* favours dense and relatively lush vegetation within narrow shaded ravines in deciduous forest^{1,6}, while *G. ruficapilla* occurs in secondary woodland and borders of humid forest, mostly above 2,000 m⁸. In south-west Ecuador, the two overlap at 1,600–2,000 m¹. From a degraded transition zone, between deciduous forest and humid evergreen forest at 1,900 m elevation, we present the first description of the nest, egg and nestling of *G. watkinsi*.

Nest description

The nest was located in a patch of roadside trees 6.5 km east of Celica (04°07'S 79°58'W), Loja province, Ecuador. At approximately 14h30 on 5 March 2000, we discovered the nest while an adult was incubating one egg and brooding a young hatchling. Constructed upon interior branches of a thorny tree (*Acacia* sp., Leguminosae), the nest was 3.0–3.5 m above ground and 0.5–1.0 m below a canopy formed by the nest tree and adjacent trees of similar size. The nest was supported by 2–3 relatively small branches (2–5 cm diameter) and 2–3 hanging live green vines (<0.5 cm diameter). The nest was a bulky and unkempt-looking cup (see Fig. 1). The majority of the nest's base and exterior consisted of woody material (i.e., sticks, vine twigs), but it also included a few damp dead leaves. The little moss present in the nesting material was apparently used incidentally, as remnants that once grew on the sticks that comprised most of the nest. The nest was lined solely with narrow black rootlets.

The outer diameter of the nest was 23 x 22 cm (measured at perpendicular angles). The inner diameter (i.e. the cup) measured 10.0 x 10.5 cm. The

cup depth was 5 cm and the external nest height (i.e. bottom of the nest proper to the rim of the cup) was 10 cm, with an additional 7 cm of woody material hanging below.

Egg description

The unhatched egg measured 30.09 x 25.33 mm and had a short subelliptical shape. Its mass was 7.886 g, but note that at that stage it had probably already lost water. The egg was a uniform turquoise or pale greenish-blue colour with no flecking or spotting.

Nestling description

The nestling appeared to be 1–2 days old, based on comparison with Scaled Antpitta *G. guatemalensis* nestlings³. The nestling was mostly naked and had dark pinkish skin. Sparse blackish down was present on most, if not all, feather tracts, and pin feathers were just starting to break the skin of the wing. The eyes were closed. Except for a black nail to the tip of the upper mandible, the entire bill, gape and mouth lining were bright orange, much like nestling *G. guatemalensis*³, Variegated Antpitta *G. varia*^{4,7}, and Pale-billed Antpitta *G. carrikeri*¹². Apparently absent or unnoticed in previously described nestling *Grallaria*, and definitely absent in *G. guatemalensis*³, the cloaca of the *G. watkinsi* nestling was also bright orange, identical to the colour of the bill, gape and mouth lining. The significance of the cloacal coloration is unknown, but a possible hypothesis is that it functions as a signal for parents to cue in on emerging faecal material or peck at the cloaca to stimulate nestling defecation. Adult *G. guatemalensis* frequently remove faecal sacs directly from nestlings' cloacas after provisioning them with food, although in that species the cloaca is dark³.

The presence of an unhatched egg and the developmental stage of the nestling suggest that hatching commenced on 4 or 5 March. Thus, it appears that hatching coincided with the middle of the rainy season, which, along with high breeding activity among many other forest birds, occurs in

January–April in this region².

Adult behaviour

While on the nest, the adult was still as we observed it from a distance of c.5 m for 20–30 minutes. In contrast to incubating or brooding *G. guatemalensis*³ and *G. varia*⁷ (PRM pers. obs.), which often raise their bills to a c.70° angle to reveal streaking in the throat and neck plumage when a potential predator is close, the brooding *G. watkinsi* looked straight out from the nest with its bill held very slightly upwards (Fig. 1). We eventually flushed the bird in order to examine the contents of the nest. It flew into the understorey, where it sang from dense vegetation. Immediately, another *G. watkinsi*—presumably the flushed individual's mate—began singing from c.20 m away. The two sang continually for the brief remainder of our presence at the nest and were tape-recorded.

Discussion

The bulky, unkempt and mostly stick cup nest of *G. watkinsi* appeared quite different from most previ-

ously described *Grallaria* nests, which tend to be more compact, composed of more humus material, and placed less than 3 m above ground^{3,4,7,11,12}. Also, most previously described *Grallaria* nests have been located against the main trunk of a tree or stump^{3,7,11}, or on a fallen or partially fallen trunk¹². The *G. watkinsi* nest's location among the narrow canopy branches of a tree (i.e., not against a main trunk), its height above ground and the considerable use of long (e.g., 15 cm) sticks as nesting material made it more reminiscent of a jay (e.g. *Cyanocorax*) nest rather than a *Grallaria* nest. While there is no direct evidence to suggest that the *G. watkinsi* nest was built by another species, the nest-building behaviour of antpittas, including their propensity to use old nests, is virtually unknown. Given that Streak-chested Antpitta *Hylopezus perspicillatus* has been documented using an old nest of a different species¹⁰, this possibility must be recognised. Note, however, that the one known nest of *G. ruficapilla*, which is more closely related to *G. watkinsi* than any other congener⁵, was also 'some height' above the ground⁹.



Figure 1. Adult Watkins's Antpitta *Grallaria watkinsi* at its nest, sitting on an egg and a newly hatched nestling. Painting by P. R. Martin, from a photograph of the nest and field notes. Plumage details of the adult were confirmed by inspection of specimens housed at the Louisiana State University Museum of Natural Science (Baton Rouge).

The *G. watkinsi* egg was similar in size and coloration to previously described *Grallaria* eggs^{3,4,11,12}, including those of the sister taxon *G. ruficapilla*⁹. Note that Wiedenfeld's¹² second-hand report of *G. ruficapilla* having 'buffy eggs with rufous blotches' conflicts with T. K. Salmon's direct observation⁹ of 'greenish-blue' *G. ruficapilla* eggs, which were further described as 'rather round' and measured 31.2 x 26.4 mm. Although comparison of nestling appearance with *G. ruficapilla* (undescribed) is not possible, the *G. watkinsi* nestling was largely similar to other described *Grallaria* nestlings^{3,4,7,12}. A distinct nestling cloacal coloration is described for *G. watkinsi*; its uniqueness within the genus is unclear and its adaptive significance, if any, is speculative. As is often the case with the ground antbirds, new observations serve largely to emphasise what remains unknown of their basic natural history.

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