

The Wilson Journal of Ornithology 125(4):840–844, 2013

First Nesting Information on the Enigmatic Black Bushbird (*Neoctantes niger*)

Santiago David^{1,4} and Gustavo A. Londoño^{2,3}

¹Department of Zoology and Biodiversity Research Centre, University of British Columbia, 6270 University Boulevard, Vancouver, BC V6T 1Z4, Canada.

²Florida Museum of Natural History, Dickinson Hall, University of Florida, Gainesville, FL 32611, USA.

³Department of Biology, 227 Bartram Hall, University of Florida, P.O. Box 118525, Gainesville, FL 32611, USA.

⁴Corresponding author; e-mail: sdavid@zoology.ubc.ca

ABSTRACT.—We present the first nesting information for the Black Bushbird (*Neoctantes niger*), an enigmatic and poorly known member of the family Thamnophilidae. A hanging bulky cup nest was found in September 2011, in the buffer zone of Manu National Park, Peru. The nest contained a single white egg with scattered dark maroon spots and light streaks and was being attended by a male. The general shape of the nest resembled the deep pouch-shaped nests of other ant-

birds (e.g., *Hypocnemis*, *Myrmotherula*) but with clear differences in overall dimensions, thickness and amount of nesting material. More information is needed on nest architecture and breeding behavior for the Black Bushbird and all of its possible close relatives. Received 24 April 2013. Accepted 23 August 2013.

Key words: Black Bushbird, egg, *Neotantes niger*, nest, nesting biology, tropical.

The Black Bushbird (*Neotantes niger*) is an enigmatic and poorly known member of the antbird family (Thamnophilidae). One of its most distinctive morphological traits is the bill shape with an upturned lower mandible, an unusual characteristic in the family that is also found only in two other species in the genus *Clytoctantes*. These two genera are known as the Bushbird group (Lanyon et al. 1990, Zimmer and Isler 2003, Whitney 2005). The current taxonomic classification treats the genus *Neotantes* as monotypic (Rensen et al. 2013), and recent phylogenetic hypotheses suggest a close relationship between *Neotantes* and antwrens in the genus *Epinecrophylla* (Irestedt et al. 2004, Brumfield et al. 2007, Gómez et al. 2010, Belmonte-Lopes et al. 2012, Bravo et al. 2012).

The Black Bushbird is rare to locally uncommon throughout its range; it is distributed mainly throughout northwestern Amazonia (south-central Colombia, eastern Ecuador, northeastern Peru and west Amazonian Brazil) with two isolated populations in southeastern Peru and eastern Amazonian Brazil (Ridgely and Tudor 1994, Zimmer and Isler 2003, Schulenberg et al. 2007). The secretive and skulking behavior of Black Bushbirds, coupled with their preference for areas of dense tangled growth around treefalls, light-gaps, and swampy forest streams, make it challenging to observe them (Zimmer and Isler 2003). All aspects of the natural history of Black Bushbirds are poorly known, and nothing has been published with regard to their breeding behavior (Zimmer and Isler 2003). Here, we provide the first nesting observations of Black Bushbirds based on an active nest found in the buffer zone of Manu National Park at Pantiacolla Lodge, Madre de Dios, Peru.

OBSERVATIONS

A nest of the Black Bushbird was found in the Pantiacolla Station, Madre de Dios, Peru (12° 38' 31.3" S, 71° 14' 21.2" W; 412 m elevation). The

station is part of the Pantiacolla Lodge, which is located in the Amazonian lowland rainforest in the buffer zone of Manu National Park, a well-known destination for birding with about 500 species recorded (Walker 2009). We traversed the trail system in the area to search for nests of Black Bushbirds. The locale is comprised mainly of floodplain, terra firme habitats, and bamboo patches (*Guadua* spp.). Elevations of the study site range from 400–900 m. Monthly average temperature is 23.1 ± 2.5 °C (min-max = 13.6 to 39.1 °C) with a rainy season from November through April and a dry season from May through August.

On 27 September 2011 during a daily routine of nest searching, SD flushed a male Black Bushbird and discovered a cup nest with one egg (Figs. 1A–1B). We measured the nest and egg to the nearest 0.1 mm with calipers and weighed the egg and dry nest materials using a FlipScale F2 (My Weigh, Phoenix, Arizona, USA) digital pocket scale with an accuracy of ± 0.05 g. A digital video camera was set 3 m from the nest and camouflaged with natural vegetation from 0845–1040 Peru Time (PET) to confirm the species. The nest was located 1 m above ground in a dense understory area with abundant stems and vine tangles and moderately open canopy (50%) in terra firme forest. The bulky cup nest was hanging from a horizontal fork of a 1.5-m small plant. The measurements (mm) of the nest were: inner diameters of the cup 82×77.1 ; outer diameters 122.6×124.5 ; wall thickness 35.3; cup depth 74.5; and overall height 140.2. The nest had three distinctive layers that weighed a total of 38.9 g; the external layer weighed 17.8 g and was made of dry tree leaves or fragments (20%), dry palm leaves (10%), and dry palm fibers (20%); these three materials were woven with dark brown rootlets of variable thickness (50%). The intermediate layer weighed 19.0 g and was a compact layer composed entirely of dry light-colored palm-like leaves. The most internal layer (cup lining) was composed of dry grass fibers (50%) and dark rootlets (50%) that weighed 1.0 g. A conspicuous amount of extra material hung asymmetrically from the outer wall and rim of the nest, and was maximally 250 mm in length (Fig. 1A).

One single egg was in the nest being incubated by the male. The egg was white with scattered dark maroon spots and light streaks mainly at the large end (Fig. 1C). It measured 23.6×16.8 mm and weighed 3.5 g. We recorded two incubation

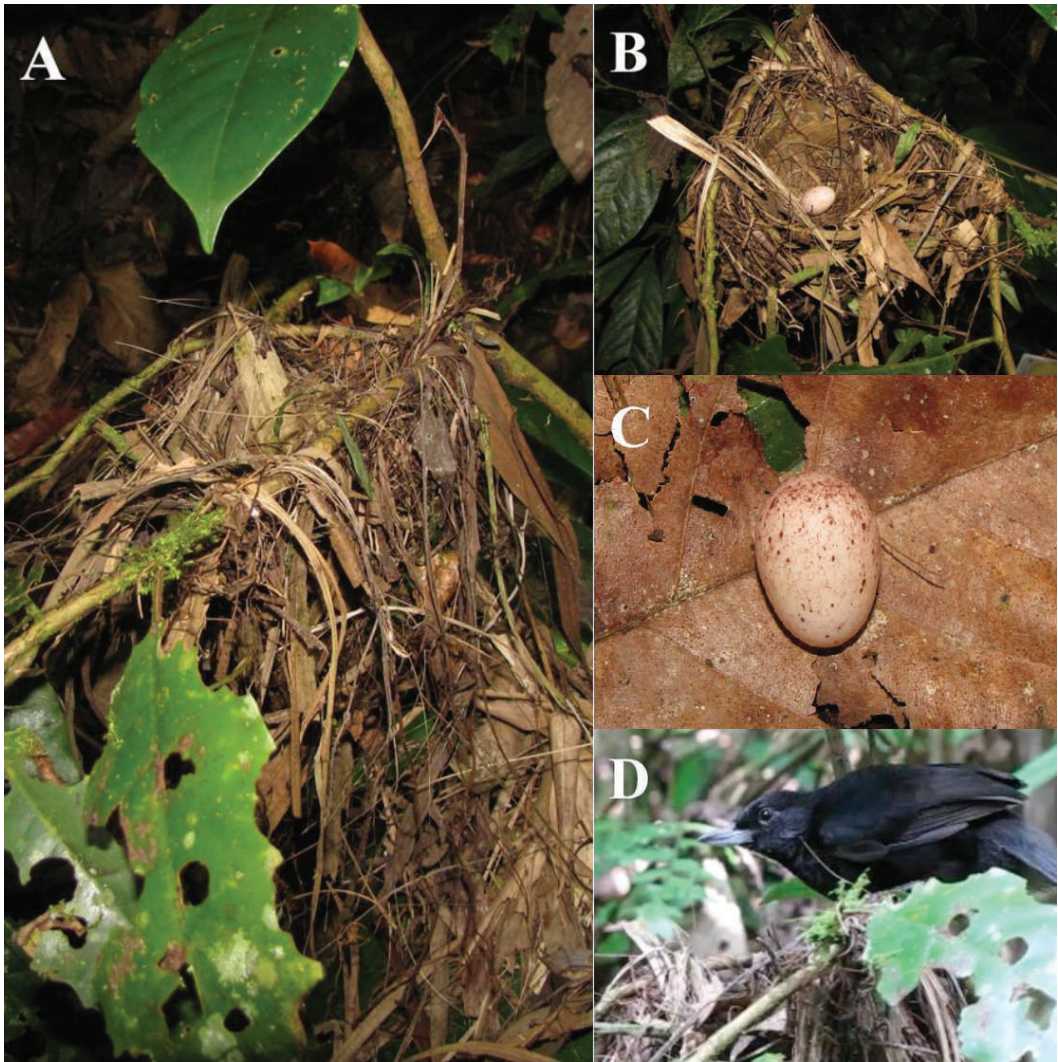


FIG. 1. Nest, egg, and adult of Black Bushbird (*Neotantes niger*) in Madre de Dios, Peru. (A) Lateral view of the bulky open cup suspended from a horizontal fork. (B) Nest with egg seen from above. (C) Lateral view of the egg. (D) Male adult in the rim of the nest.

events with the digital video camera that lasted 50 and 39 mins, respectively, and a foraging trip of 23 mins; the male approached and landed on the nest rim quietly (no vocalizations could be heard on the camera), turned once on the rim, and made a conspicuous upward and downward tail motion before hopping into the nest and starting incubation (Fig. 1D). A video of the nest is available at www.zoology.ubc.ca/~jankowsk/Manu_Videos.html. The nest was found empty the next day at 0730; the structure was moderately twisted to one side and eggshell fragments were found on the

ground. We could not determine if predation or natural damage by heavy rain in the previous night were the cause of the failure.

DISCUSSION

The nest described here represents the first breeding information for the Black Bushbird. Recent molecular data suggest that *Neotantes* is closely related to the “Checker-throated” group of antwrens, *Epinecrophylla* (Irestedt et al. 2004, Brumfield et al. 2007, Gómez et al. 2010, Belmonte-Lopes et al. 2012, Bravo et al. 2012).

However, none of these molecular analyses included the two species in the genus *Clytoctantes*, Rondonia Bushbird (*C. atrogularis*) and Recurve-billed Bushbird (*C. alixii*), that are suggested to be closely related to the Black Bushbird based on morphological, vocal, and behavioral similarities (Lanyon et al. 1990, Whitney 2005). However, Black Bushbirds have similar vocalizations to Rondonia Bushbirds (Whitney 2005) but differ from Recurve-billed Bushbirds, which suggest that the latter might not be as closely related to the other species as previously proposed (Laverde-R and Stiles 2007).

The nest architecture of Black Bushbirds is quite different from the supposed oven-shaped nest architecture with side entrances constructed by *Epinecrophylla* antwrens (Isler et al. 2006). However, Skutch (1969) described the nest of the Checker-throated Antwren (*Epinecrophylla fulviventris*) as a deep pensile pouch attached to a fork rather than as an oven-shaped nest, and this description resembles the general shape of a nest of a Black Bushbird. Unfortunately there are no nest descriptions for the Rondonia Bushbird or the Recurve-billed Bushbird, and thus it is impossible to make comparisons among these and the nest of the Black Bushbird.

The general shape of the Black Bushbird's nest, a bulky open cup suspended from a horizontal fork, resembles the deep pouch-shaped nests constructed with dry leaves and dark rootlets of other antbirds. These include Yellow-breasted Warbling-Antbird (*Hypocnemis subflava*: David and Londoño 2013), Amazonian Streaked-Antwren (*Myrmotherula multostriata*: Cadena et al. 2000) and Checker-throated Antwren (Skutch 1969). However, the Black Bushbird's nest was larger in all dimensions, thickness, material compactness, and amount of extra material pending from the nest, compared to the nests of these species. These differences could be related to the differences in body size between these species.

Two eggs comprise the typical clutch size of antbirds (Zimmer and Isler 2003), but incubation of one egg in the nest reported here suggests that this could be the clutch size of Black Bushbirds; however, it is also possible that one egg was already depredated on the nest. Incubation by the male during the day is also widely reported for antbird species (Zimmer and Isler 2003). Detailed information on nest architecture and breeding behavior for almost all species possibly related to the Black Bushbird is lacking and may be useful

for understanding the evolutionary history and relationships of this enigmatic species.

ACKNOWLEDGMENTS

We are grateful to Pantiacolla Tours for logistical support and allowing us to work at Pantiacolla Lodge. We thank C. E. Tarwater, S. K. Robinson, M. Bomberger Brown, and two anonymous referees for helpful comments on the manuscript. Financial support was provided by the Pamela and Alexander F. Skutch Research Award (Association of Field Ornithologists), Louis Agassiz Fuertes Award (Wilson Ornithological Society), and Alexander Wetmore Award (American Ornithologists' Union).

LITERATURE CITED

- BELMONTE-LOPES, R., G. A. BRAVO, M. R. BORNSCHEIN, G. N. MAURÍCIO, M. R. PIE, AND R. T. BRUMFIELD. 2012. Genetic and morphological data support the placement of *Myrmotherula gularis* (Spix) in the monotypic genus *Rhopias* Canabís and Heine (Aves: Passeriformes: Thamnophilidae). *Zootaxa* 3451:1–16.
- BRAVO, G. A., R. T. CHESSER, AND R. T. BRUMFIELD. 2012. *Iseria*, a new genus of antwren (Aves: Passeriformes: Thamnophilidae). *Zootaxa* 3195:61–67.
- BRUMFIELD, R. T., J. G. TELLO, Z. A. CHEVIRON, M. D. CARLING, N. CROCHET, AND K. V. ROSENBERG. 2007. Phylogenetic conservatism and antiquity of a tropical specialization: army-ant-following in the typical antbirds (Thamnophilidae). *Molecular Phylogenetics and Evolution* 45:1–13.
- CADENA, C. D., G. A. LONDOÑO, AND J. L. PARRA. 2000. Nesting records of five antbird species from the Colombian Amazon. *Wilson Bulletin* 112:313–317.
- DAVID, S. AND G. A. LONDOÑO. 2013. Nesting of the Yellow-breasted Warbling-Antbird (*Hypocnemis subflava*) with notes on the nesting biology of the *Hypocnemis cantator* complex. *Wilson Journal of Ornithology* 125:268–274.
- GÓMEZ, J. P., G. A. BRAVO, R. T. BRUMFIELD, J. G. TELLO, AND C. D. CADENA. 2010. A phylogenetic approach to disentangling the role of competition and habitat filtering in community assembly of Neotropical forest birds. *Journal of Animal Ecology* 79:1181–1192.
- IRESTEDT, M., J. FJELDSÅ, J. A. A. NYLANDER, AND P. G. P. ERICSON. 2004. Phylogenetic relationships of typical antbirds (Thamnophilidae) and test of incongruence based on Bayes factors. *BioMed Central Evolutionary Biology* 4:23.
- ISLER, M. L., D. R. LACERDA, P. R. ISLER, S. J. HACKETT, K. V. ROSENBERG, AND R. T. BRUMFIELD. 2006. *Epinecrophylla*, a new genus of antwrens (Aves: Passeriformes: Thamnophilidae). *Proceedings of the Biological Society of Washington* 119:522–527.
- LANYON, S. M., D. F. STOTZ, AND D. E. WILLARD. 1990. *Clytoctantes atrogularis*, a new species of antbird from Western Brazil. *Wilson Bulletin* 102:571–580.
- LAVERDE-R., O. AND F. G. STILES. 2007. Apuntes sobre el hormiguero pico de hacha (Thamnophilidae: *Clytoctantes alixii*) y su relación con un bambú en un bosque

- secundario de Colombia. *Ornitología Colombiana* 5:83–90.
- REMSEN JR, J. V., C. D. CADENA, A. JARAMILLO, M. NORES, J. F. PACHECO, J. PÉREZ-EMÁN, M. B. ROBBINS, F. G. STILES, D. F. STOTZ, AND K. J. ZIMMER. 2013. A classification of the bird species of South America. American Ornithologists' Union. www.museum.lsu.edu/~Remsen/SACCBaseline.html (accessed 9 Jul 2013).
- RIDGELY, R. S. AND G. TUDOR. 1994. The birds of South America. Volume II. The suboscine passerines. University of Texas Press, Austin, USA.
- SCHULENBERG, T. S., D. F. STOTZ, D. F. LANE, J. P. O'NEILL, AND T. A. PARKER III. 2007. Birds of Peru. Princeton University Press, Princeton, New Jersey, USA.
- SKUTCH, A. F. 1969. Life histories of Central American Birds. Part III. Families Cotingidae, Pipridae, Formicariidae, Furnariidae, Dendrocolaptidae, and Picidae. *Pacific Coast Avifauna* 35:1–580.
- WALKER, B. 2009. Birding the Manu Biosphere Reserve, Peru. *Neotropical Birding* 5:49–58.
- WHITNEY, B. M. 2005. *Clytoctantes (atrogularis?)* in Amazonas, Brazil, and its relationship to *Neoctantes niger* (Thamnophilidae). *Bulletin of the British Ornithologists' Club* 125:108–113.
- ZIMMER, K. J. AND M. L. ISLER. 2003. Family Thamnophilidae (typical antbirds). Pages 448–681 in *Handbook of the birds of the world. Volume 8. Broadbills to tapaculos* (J. del Hoyo, A. Elliott, and D. A. Christie, Editors). Lynx Edicions, Barcelona, Spain.