

FIRST DESCRIPTION OF THE NEST OF THE BARRED PUFFBIRD (*NYSTALUS RADIATUS*) FROM NORTH-WESTERN ECUADOR

Harold F. Greeney¹, Jeff Port^{2,3}, & Florian Werner¹

¹Yanayacu Biological Station and Center for Creative Studies, Cosanga, c/o 721 Foch y Amazonas, Quito, Ecuador.

²Department of Biological Sciences, Bethel College, St. Paul, Minnesota 55112. *E-mail:* jport@bethel.edu

Primer descripción del nido del Buco barreteado (*Nystalus radiatus*) en el noroeste del Ecuador.

Key words: Nestling provisioning, nest, Barred Puffbird, *Nystalus radiatus*, Ecuador.

The Barred Puffbird (*Nystalus radiatus*) occurs from central Panama to western Ecuador. It is locally uncommon throughout its range, and likely easily overlooked due to its propensity to sit for long periods at middle to upper levels of the forest (Hilty & Brown 1986). In Ecuador, the Barred Puffbird is frequently seen along forest borders and, though reported mostly below 1000 m a.s.l., Ridgely & Greenfield (2001) report it as occasionally being seen up to 1500 m a.s.l. in the Mindo area.

Observations were made on 28 and 29 January 2003 in the vicinity of the El Monte Biological Station. The station lies at 1750 m a.s.l. in the Mindo Valley in Ecuador's north-western Pichincha province. The surrounding terrain is extremely rugged, with vegetation characterized by heavy epiphyte loads and a canopy height ranging from 25 to 35 m. For a more detailed site description, see Kirwan *et al.* (1996).

A single nest was discovered at an elevation of approximately 1675 m while walking along the access road to the El Monte Biological Station. The nest was a narrow tunnel excavated into the side of a clay embankment adjacent to the road. The bank at this location was 3.5 m high and relatively bare of vegetation except for small grasses, sedges, and a variety of small herbs including *Lamia* (Lamiaceae), *Begonia* (Begoniaceae), *Oxalis* (Oxalidaceae), and *Pilea* (Urticaceae). Overhanging the bank, and partially shading the nest entrance, was a thick tangle of vegetation, including *Psamisia* (Ericaceae), *Schefflera* (Araliaceae), and various Urticaceae, Solanaceae, Araceae, and Ericaceae. The nest entrance was 70 cm above the ground and 7 cm in diameter (Fig. 1). It faced SW (a compass bearing of 195°), and opened perpendicular to the direction of the road, which was approximately 4 m wide at this point. The horizontal cylindrical tunnel, running parallel to the ground for a distance of 105 cm, rapidly narrowed to 6 cm in diameter, but then

³Correspondence.



FIG. 1. Photograph of entrance (circled at bottom of image) and excavated nest site of a Barred Puffbird nest near Mindo, Ecuador. Pictured in upper left are the remnants of a thoracic shield of a mantid presumed to have been supplied to nestlings as a prey item. The mantid remnants can also be seen in their original location within the nest burrow.

gradually opened to 8.5 cm at its widest just before the opening into the nest chamber (Fig. 1). The latter was roughly spherical and

16.5 cm in diameter. The chamber was 15 cm tall with roughly 5 cm of dead leaves forming a thick cup. A thick rim of fecal material was

smear around the circumference of the chamber just above the layer of leaves. Inside the nest cup, on top of the leaf litter, we found the dried out thorax of a large (approx. 10 cm long) praying mantid (*Choeradodis* sp.: Mantidae). We feel this was the remains of an old prey item and the expanded thoracic shield (Fig. 1) was simply too large to be swallowed by the nestlings.

At 09:00 h (EST) on 28 January 2003, the nest was found to contain at least two well grown nestlings which appeared to already bear adult plumage. The two nestlings were crowded into the opening from the nest chamber and stayed motionless as we shone a light into the nest. Upon our return at 10:15 h, we observed an adult approach the nest carrying a single 10 cm long skink (Scincidae). The adult flew to a perch approximately 5 m above the ground, and directly across the road from the nest opening. The adult appeared agitated by our presence 10 m away and did not approach the nest. It looked around frequently and made a repeated, single or double noted, low pitched “werr” call. Occasionally it gave a “werr werr woo” call. The adult remained on this perch for 15 min until we left, at which point it flew to a second perch 5–6 m away. When we returned at 11:00 h, the adult was still on the second perch holding the skink and we immediately left the area. We returned the following day at 13:50 h, at which time the nest was empty but appeared otherwise undisturbed, and we presume the nestlings to have fledged. The nest was excavated and photographed at this time (Fig. 1).

Popular field guides generally give an elevational range of up to around 1000 m for the Barred Puffbird (Hilty & Brown 1986, Ridgely & Greenfield 2001), and Ridgely & Greenfield (2001) mention that it strays up to 1500 m in the study area. Our record of nesting at 1675 m confirms that, at least in some areas, the Barred Puffbird occurs at higher elevations and may even be a perma-

nent resident there. The skink observed being brought to nestlings here is an inhabitant of leaf litter on the forest floor (M. Read pers. com.). Its use as nestling provisions confirms the assertion by Hilty & Brown (1986) that the Barred Puffbird occasionally forages on the ground. Del Hoyo *et al.* (2002) report other *Nystalus* species foraging on beetles (Coleoptera), caterpillars (Lepidoptera), millipedes (Diplopoda), and small lizards, including *Anolis* spp.

While in the past, *Nystalus* has been merged with *Notharchus* (A.O.U. 1983), most authors (e.g., Hilty & Brown 1986, Ridgely & Greenfield 2001, Sibley & Monroe 1990) maintain it as distinct. The terrestrial nest seen here is similar to those described for congeners White-eared Puffbird (*N. chacuri*), Striolated Puffbird (*N. striolatus*), and Spot-bellied Puffbird (*N. maculatus*) (del Hoyo *et al.* 2002), and unlike the termitaria nests of *Notharchus* (Skutch 1948, Willis & Eisenmann 1979, Hilty & Brown 1986). Thus, the difference in nest placement supports the separation into two genera.

ACKNOWLEDGMENTS

We thank Don Miguel Falaero and Doña Esperanza Falaero for generously allowing us access to their private reserve. For continued support of studies in the area and for logistical assistance and company, we thank Mariella Tenorio and Tom Quiesinberry and the staff of El Monte Lodge. Our visit was coordinated and supported by Lori and Juan Miguel Espinoza of the Andean Studies Program. The PBNHS continues to aid and inspire all of our natural history work. This is publication number 18 of the Yanayacu Natural History Research Group.

REFERENCES

A.O.U. 1983. Check-list of North American birds.

- 6th ed. American Ornithologists Union, Washington, DC.
- del Hoyo, J., A. Elliott, & J. Sargatal. 2002. Handbook of the birds of the World. Volume 7: Jacamars to woodpeckers. Lynx Edicions, Barcelona, Spain.
- Hilty, S., & W. Brown. 1986. Birds of Colombia. Princeton Univ. Press. Princeton, New Jersey.
- Kirwan, G. M., T. Marlow, & P. Coopmans. 1996. A review of avifaunal records from Mindo, Pichincha province, north-western Ecuador. *Cotinga* 6: 47–57.
- Ridgely, R., & P. Greenfield. 2001. Birds of Ecuador. Cornell Univ. Press, Ithaca, New York.
- Sibley, C., & B. Monroe, Jr. 1990. Distribution and taxonomy of birds of the World. Yale Univ. Press, New Haven, Connecticut.
- Skutch, A. F. 1948. Life history notes on puffbirds. *Wilson Bull.* 60: 81–97.
- Willis, E. O., & E. Eisenmann 1979. A revised list of birds from Barro Colorado Island Panama. *Smithson. Contrib. Zool.* 291: 1–31.

Accepted 3 January 2004.