### Further observations of nesting Slaty Becard Pachyramphus spodiurus

Slaty Becard Pachyramphus spodiurus is the least studied of the 17 Pachyramphus becards, and little has been published about its nest, parental care, food or foraging behaviour. A threatened species endemic to the lowlands and foothills of western Ecuador and extreme north-west Peru. it is considered rare to uncommon in deciduous and semi-humid forests<sup>1,2,4,12</sup>. We found a nest of Slaty Becard with two nestlings on 8 April 2006, in deciduous forest at the Jorupe Reserve of Fundación Jocotoco, near Macará, south-west Ecuador (04°23'S 79°57'W; 600 m). We placed a video camera 25 m from the nest and recorded a total of 21 hours and 18 minutes, on four different days (10, 12, 16 and

## Cotinga 31

22 April). After fledging, we collected and measured the nest. As well as analysing video footage, we made observations on adult behaviour near and away from the nest.

The nest was suspended 2 m from the outer reaches of a threeforked branch, 15 m above ground in a 20m-tall Ceiba trichistrandra (Bombacaceae). The nest tree was in a steep ravine within older growth deciduous forest, with a 20m canopy, dominated by Bombacaceae and a dense understorey of tangled scrub. The top of the bulky nest was woven into the fork of three branches (1-2 cm thick) that each terminated in multiple, leafy twigs. A broadleaf bromeliad grew from one of the supporting branches and emerged from the bottom of the nest. The nest was elliptical (34 cm long; 24 cm deep; 22 cm wide) and generally appeared as a natural, unkempt, mass of epiphytes (Fig. 1), although within was a neat, spherical, tightly woven ball, c.16 cm in diameter. Eighty percent of the outer mass, and the inner ball, comprised slender (1 mm diameter), live strands of Tillandsia sp. (Bromeliaceae) of varying lengths (7-15 cm). The remaining c.20% was composed of

sturdy, 10–20 cm, dark brown, horsehair-like, rhizomorph filaments, which bound the Tillandsia strands and fastened the outer shell to the inner chamber. Spider egg sacs (n=15)were embedded into the outer layer, and probably also helped structural integrity. The oblong nest chamber (8.5 cm ceiling to floor; 13 cm deep; 10 cm wide) was entirely lined with strips of pale brown tree bark (6-10 mm wide, 10-20 cm long; chamber wall thickness 1 cm). The round, 4.5 cm-diameter, side entrance was centrally placed, c.4 cm long, and opened directly into the inner chamber.

All of our observations at the nest were during the nestling stage. On the day of discovery, and throughout filming of the nest, we could discern two nestlings when the adults arrived (Fig. 1). On 22 April, however, the last day of observation, only one chick remained. The fate of the other chick, whether it fledged or was predated, is unknown.

Both adults fed the nestlings from a perch outside the nest, either reaching down from supporting branches or the 'roof', or landing upright just below the nest entrance. On landing, adults generally bobbed their head



Figure I. Adult male Slaty Becard *Pachyramphus spodiurus*, Jorupe Reserve, southwest Ecuador, 12 April 2006; the two nestlings are clearly visible at the nest entrance (Murray Cooper)

rapidly up and down, alternating between an erect posture and a near-horizontal position. In the latter position, the tail was held splayed out and down, rather than in line with the head and body. After initial bobbing, prey delivery was swift, lasting 0.5-1.0 second. With two nestlings, the female fed the nestling 105 times and the male fed them just 49 times for a combined parental effort of 18.2 feeds per hour. Prey items were generally small and delivered singly. We were able to identify only one item, which was a small, hairless, green caterpillar (Lepidoptera). During the early nestling stage (10 April), the female brooded the nestlings by day and after nightfall. Late in the nestling stage, on 22 April, when only one chick remained, the female fed 102 times, whilst the male made only ten trips to the nest (combined effort 10.1 feeds per hour). Whilst the reasons for this marked decrease in male visits is unclear, we suspect that he was spending more time away from the nest feeding the fledgling.

While brooding, the female left for short periods, possibly to rest and forage. Singing near the nest was frequent, especially by the female. Through all 20 hours of video, only once did we confirm that the male sang near the nest (and only weakly), whilst the female regularly sang a short, slurred trill as previously described<sup>2,8,12</sup>. We observed her vocalise, usually just once or twice, occasionally upon arrival and sometimes just after feeding the chicks.

The nest of Slaty Becard, a bulky, globular nest is superficially similar to those described for congeners<sup>2</sup>. Few nests have been described in sufficient detail to make robust comparisons. Recent studies of Barred Becard P. versicolor and Grev-collared Becard P. major, however, suggest that the nest of Slaty Becard is similar in having a loose outer shell of material surrounding a tightly woven inner shell around the nest chamber<sup>3,5</sup>. Like other species of Pachyramphus for which data are available<sup>3,5,9,10,13,14</sup>, both

sexes of Slaty Becard care for the nestlings. The nest, supported by multiple, small branches, is likewise typical of

Pachyramphus<sup>2,3,6–8,9,13</sup>. Using a c.35-day nesting cycle similar to other Pachyramphus<sup>2</sup>, and given fledging around 23 April, we estimate that this clutch was laid c.20 March.

Most recently, a preliminary description of a nest of Slaty Becard<sup>11</sup> in Peru has much in common with the present study, e.g., time of nesting (rainy season), the globular nest, and propensity of adults to vocalise near the nest. The nest location, 15 m high in a large tree (*Ceiba* sp.), is likewise identical to that found in northwest Peru.

Like many birds in the Neotropics, Slaty Becard remains little studied. We hope this contribution encourages others to publish their findings.

#### Acknowledgements

We are grateful to Fundación Jocotoco, in particular Francisco Sornoza and Robert Ridgely, for making our stay at Jorupe possible. Thanks to Pedro, Giovany and Leonidas, park guards at Jorupe, for their companionship in the field and continued efforts in protecting Ecuador's most endangered birds. Our studies were funded in part by John V. Moore and Matt Kaplan through the Population Biology Foundation. Funding was provided to HFG during the writing of this manuscript by BirdLife International, the Maryland Ornithological Society and Field Guides Inc. This is publication no. 170 of the Yanayacu Natural History Research Group.

## References

- BirdLife International (2004) Threatened birds of the world 2004. CD-ROM. Cambridge, UK: BirdLife International.
- Fitzpatrick, J. W. (2004) Family Tyrannidae (tyrantflycatchers). In: del Hoyo, J., Elliott, A. & Christie, D. A. (eds.) Handbook of the birds of the world, 9. Barcelona: Lynx Edicions.

- Gelis, R. A. & Martínez, F. (2000) Nest and nestling description of Grey-collared Becard Pachyramphus major in the highlands of Michoacán, Mexico. Cotinga 14: 47–48.
- Granizo, T., Guerrero, M., Pacheco, C., Ribadeneira, M. B. & Suárez, L. (eds.) (2002) *Libro rojo de las aves del Ecuador*. Quito: SIMBIOE, Conservation International, UICN, Ministerio del Medio Ambiente & EcoCiencia.
- Greeney, H. F. & Gelis, R. A. (2008) Nest architecture and breeding activity of the Barred Becard (*Pachyramphus versicolor*) in northeastern Ecuador. *Bol. Soc. Antioqueña Orn.* 18: 20–25.
- Greeney, H. F., Gelis, R. A. & White, R. (2004) Notes on breeding birds from an Ecuadorian lowland forest. Bull. Brit. Orn. Club 124: 28–37.
- Haverschmidt, F. (1968) Birds of Surinam. London, UK: Oliver & Boyd.
- Hilty, S. L. & Brown, W. L. (1986) A guide to the birds of Colombia. Princeton, NJ: Princeton University Press.
- de la Peña, M. R. (1987) Nidos y huevos de aves de Argentina. Santa Fe: privately published.
- Pulgarín, P. C. (2002) Notas sobre el nido, el comportamiento, y la dieta de los pichones del Cabezón Canelo (Pachyramphus cinnamomeus). Bol. Soc. Antioqueña Orn. 13: 41–45.
- Rheindt, F. E. (2008) Descripción preliminar del nido de Pachyramphus spodiurus, especie amenazada. Cotinga 29: 162–163.
- Ridgely, R. S. & Greenfield, P. J. (2001) The birds of Ecuador. Ithaca, NY: Cornell University Press.
- Skutch, A. F. (1967) Life histories of Central American highland birds. Publ. Nuttall Orn. Club 7. Cambridge, MA: Nuttall Orn. Club.

# Short Communications

 Skutch, A. F. (1969) Life histories of Central American birds, 3. Pacific Coast Avifauna 35. Berkeley, CA: Cooper Orn. Soc.

#### Rudy A. Gelis, Harold F. Greeney and Eliot T. Miller

Yanayacu Biological Station & Center for Creative Studies, Cosanga, Napo, Ecuador; c/o Foch 721 y Amazonas, Quito, Ecuador. E-mail: rudygelis@yahoo.com.

Received 26 March 2008; final revision accepted 23 June 2008 (published online 4 March 2009)