

Nesting of Band-winged Nightjar *Caprimulgus l. longirostris* in eastern Brazil, including the first description of chicks

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Nós apresentamos observações sobre a nidificação do bacurau-rupestre *Caprimulgus l. longirostris*, com as primeiras descrições de sua plumagem natal. Quatro sítios de nidificação foram encontrados em áreas de campos rupestres ferruginosos do Quadrilátero Ferrífero, Minas Gerais, Brasil, entre os meses de setembro–novembro. Os ovos apresentaram grande variação na coloração (de creme-esbranquiçados com pintas e manchas amarronzadas a esbranquiçados com ou sem marcas), medindo (em mm) entre 25,7–26,8 × 18,1–20,9. Os pintinhos apresentam íris negra, dente-de-ovo branco e corpo coberto quase totalmente por plumas creme-amarronzadas de tonalidade clara, com exceção do dorso. Uma fêmea com dois filhotes simulou estar ferida diante dos observadores, demonstrando um comportamento típico de asa quebrada, abrindo a cauda e as asas. Estas são as observações mais detalhadas sobre a reprodução desta espécie.

Band-winged Nightjar *Caprimulgus longirostris* is widespread in South America, principally in montane and subtropical areas^{2,3}. The nominate form, described in 1825, was not recorded for more than a century in Brazil, until its rediscovery by H. Sick in 1941, in the highlands of the Serra do Caparaó, on the border between Minas Gerais and Espírito Santo¹². This subspecies ranges in the following Brazilian states: Piauí, Bahia, Tocantins, Goiás, Mato Grosso, Distrito Federal, Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo, Paraná, Santa Catarina and Rio Grande do Sul^{1–5,8,9,15,16,19}. It also occurs in north-east Argentina, central and north-west Paraguay, and Uruguay^{2,3}.

Behaviour of the nominate form is poorly documented in Brazil, with the exception of Sick's^{12–14} observations, studies of vocalisations¹⁷ and foraging strategy¹⁸. *C. l. longirostris* is reported to breed in September–December^{2,3,10,14}. Clutch

size is 1–2 eggs^{10,14}, described as subelliptical, ochre, spotted grey and dark brown¹⁰. Chicks are virtually undescribed^{2,3}. The only available data on breeding in the nominate race are: a report of two eggs on a house roof in Rio de Janeiro, Brazil (September 1973)¹⁴, and a record of two chicks (not described) (October 1970) and one egg (December 1977) in Santa Fé province, Argentina¹⁰. This paper presents the first detailed observations on the nesting of Band-winged Nightjar (nominate form) in eastern Brazil.

Observations were made in the southern Espinhaço range (Quadrilátero Ferrífero), Minas Gerais. Vegetation is *campos rupestres* on ironstone outcrops, regionally known as *canga*^{6,11}. Nests were found at two localities: Serra do Rola Moça State Park (SRMSP) (20°03'S 44°00'W; 1,450 m), Nova Lima municipality, and on the southern slope of the Serra do Caraça (20°09'S 43°31'W;

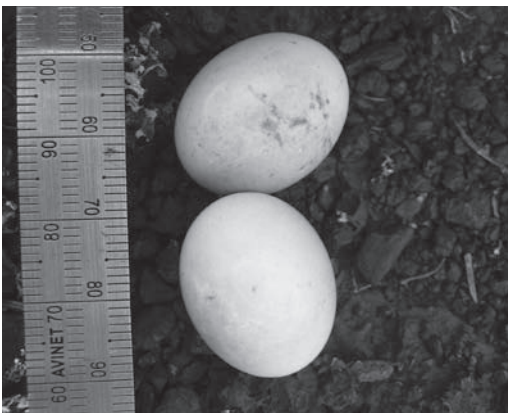


Figure 1. Eggs of Band-winged Nightjar *Caprimulgus longirostris*, Serra do Rola Moça State Park, Minas Gerais, Brazil, 7 September 2005 (Diego Hoffmann)



Figure 2. Chick of Band-winged Nightjar *Caprimulgus longirostris*, Serra do Rola Moça State Park, Minas Gerais, Brazil, 12 September 2005 (Diego Hoffmann)



Figure 3. Eggs of Band-winged Nightjar *Caprimulgus longirostris*, Serra do Rola Moça State Park, Minas Gerais, Brazil, 26 September 2005 (Diego Hoffmann)



Figure 4. Eggs of Band-winged Nightjar *Caprimulgus longirostris*, Serra do Rola Moça State Park, Minas Gerais, Brazil, 5 November 2007 (Diego Hoffmann)



Figure 5. Female Band-winged Nightjar *Caprimulgus longirostris* performing (broken-wing) distraction display, Serra do Rola Moça State Park, Minas Gerais, Brazil, 14 November 2007 (Diego Hoffmann)



Figure 6. Chicks of Band-winged Nightjar *Caprimulgus longirostris*, Serra do Rola Moça State Park, Minas Gerais, Brazil, 14 November 2007 (Diego Hoffmann)



Figure 7. Young Band-winged Nightjars *Caprimulgus longirostris*, Serra do Rola Moça State Park, Minas Gerais, Brazil, 26 November 2007 (Diego Hoffmann)



Figure 8. Chicks of Band-winged Nightjar *Caprimulgus longirostris*, Serra do Caraça, Minas Gerais, Brazil, 3 October 2009 (Ariana Dias Epifânio)

1,265 m), Mariana municipality. Nests were found fortuitously and field work in SRMSP was conducted non-systematically during a study of the biology of Grey-backed Tachuri *Polystictus superciliaris*.

Nest 1 was found in SRMSP on 5 September 2005, at 08h40, when an adult was flushed from two eggs on an ironstone outcrop. The eggs were subelliptical and whitish cream with a few brownish spots and blotches (Fig. 1). They measured (mm): 26.2×19.8 and 26.8×19.3 . These eggs were observed on the following two days. On 9 September, eggshells were found but no chick was observed. Hatching occurred via the larger end, as revealed by study of the eggshells. On the morning of 12 September, two chicks (one dead and another alive) were found c.1 m from the original nest site, on the outcrop. The live chick kept motionless with its eyes semi-open. It had blackish irides, a whitish egg tooth and was covered in buff down, except the back (Fig. 2). When touched, it remained motionless, but gave several low-pitched calls (*fuil*). Next day, no birds were observed in the area.

Nest 2 was also found in SRMSP, on 23 September 2005, at 12h48, when an adult female was flushed from the same outcrop c.500 m from nest 1. A single whitish egg with a clear brownish blotch was present. On the morning of 26 September, the female was observed again, this time brooding two eggs. The second egg was whitish with many small clear greyish spots (Fig. 3). Egg measurements (mm) were: 25.7×18.1 and 25.7×18.2 . The female was observed incubating on the mornings of 27, 29 and 30 September and 3 October. After 5 October, no adult was observed at the nest site. The eggs were cold. This situation persisted until 20 October, when we considered the eggs abandoned.

Nest 3 was found in SRMSP, on the morning of 5 November 2007, when a female was flushed from a nest with two eggs. These were subelliptical and whitish with very clear, almost imperceptible, spots and blotches (Fig. 4). Their measurements (mm) were: 26.0×19.9 and 26.7×20.9 . In the morning of 14 November, the female was observed brooding on the ironstone outcrop beside a clump of grass. Its eyes were semi-open and the lateral feathers of the breast were fluffed out. Eggshells lay in front of the bird, whose pattern also suggested that hatching had occurred by the larger end. On flushing, the female performed a distraction display (broken-wing), opening its wings and tail and flattening the body (Fig. 5). Two chicks were observed. They were very similar to that found at nest 1 (Fig. 6). The same behaviour by the female was observed in the morning of 16 November. On 26 November, the female was observed c.4 m from the original nest site. On flushing, it performed the broken-wing display and the two young were observed to have more-developed plumage. The barbs of several

contour feathers were emerging from their sheaths. These feathers had cream or rufous apices and dark-brown bases (Fig. 7).

Nest 4 was found on the southern slope of the Serra do Caraça, on 1 October 2009, at 10h40, when an adult (sex unknown) was observed brooding two chicks very similar to those found in SRMSP. This adult was beside two white eggshells that also showed that the eggs had hatched via their larger ends. When handled, the chicks vocalised similar to the chick at nest 1; they also opened their eyes and tried to escape. On 3 October, at c.09h00, the adult was observed brooding the chicks at the same site. After the adult was flushed, the chicks were observed. They were more developed, with feather sheaths on the wings. The apices of the barbs emerging from these sheaths were rufous (Fig. 8). Both chicks still had whitish egg teeth (Fig. 8). Their body masses (g) were: 12.5 and 14.6. These chicks were collected, prepared as study skins and deposited in the ornithological collection of the Department of Zoology, Universidade Federal de Minas Gerais, Belo Horizonte (DZUFMG 6574–75).

These are the first detailed observations on the nesting of the nominate race of Band-winged Nightjar in Brazil, and the first description of chicks^{2,3}. Breeding season was coincident to that reported for the nominate race^{2,3,10,14}. Nesting on rocky substrate and the wide variation in egg coloration has been reported previously for the species^{2,3,7}. Egg measurements (in mm) in this study are within the range mentioned in the literature ($25.0\text{--}32.8 \times 18.2\text{--}22.0$)², but slightly smaller than those presented by Kiff *et al.*⁷ and de la Peña¹⁰: 28.5×20.2 and 27.0×19.5 , respectively. Finally, we stress that additional data on the breeding biology of this widespread species are still needed from other areas of South America, to assess any differences between the eight known subspecies^{2,4}.

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