

Notes on the breeding biology of Ladder-tailed Nightjar *Hydropsalis climacocerca* in Bolivia

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Hydropsalis climacocerca es bastante común a lo largo del centro de Sudamérica, pero poco se conoce sobre sus períodos de reproducción. Presentamos notas sobre la biología reproductiva de *H. climacocerca* de Cochabamba, Bolivia, en septiembre y octubre de 1999 y 2001, incluyendo la primera descripción del polluelo y describimos los despliegues acústicos. También describimos un despliegue visual único, no reportado para el género *Hydropsalis*.

The Ladder-tailed Nightjar *Hydropsalis climacocerca* is found throughout central South America, from southern Venezuela and the Guianas south to Bolivia, and south-east Colombia and eastern Ecuador east to central Brazil¹. Throughout its range the species inhabits forest, open woodlands with grassland and especially sandy riverbanks, from sea level to 500 m^{1,3}. Despite being widespread and reasonably common in suitable habitat, the breeding biology of *H. climacocerca* is poorly known. Its breeding season is thought to be late July–August in Colombia¹, and June–September² and December–February in Brazil¹. Here we present notes on the courtship behaviour, vocalisations and nesting period of *H. climacocerca* in Parque Nacional Carrasco (PNC), Cochabamba, Bolivia, and describe the downy young.

Courtship behaviour

During August 1999, courtship-display flights by male *H. climacocerca* were observed at the confluence of the río Rico and the río San Mateo (17°25'S 64°15'W, 350 m). The locality consists of a small tributary (the río Rico), c.5 m wide, entering the main river (the río San Mateo), which is c.20 m wide and bordered by primary and disturbed humid forest. As water levels were low, large stretches of flat sandbanks and rocks lay exposed, with relatively few vegetated areas, these being dominated by stands of *Gynerium sagittatum*. During daylight, adult *H. climacocerca* were regularly flushed from these sand and rock banks. Between 18h00 and 19h30 on 7–8 September, up to seven individuals were observed in flight over the río Rico or on its banks. Perched birds often gave a distinctive sucking *sipp* call (see Vocalisations). On several occasions, males performed low courtship flights over the water. The courtship flights began with 1–2 males pursuing a single female in flight. The male(s) flew erratically behind and above a female, normally at a distance >1 m, occasionally emitting an excited *skeet*. The male(s) displayed by lowering and fanning their tails while performing quick half-flaps of their raised wings (see Fig. 1). This wing display produced a whistling/humming noise and caused the males

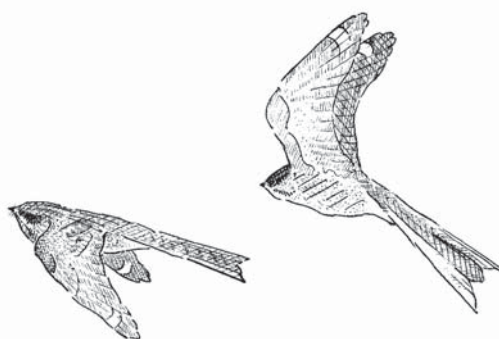
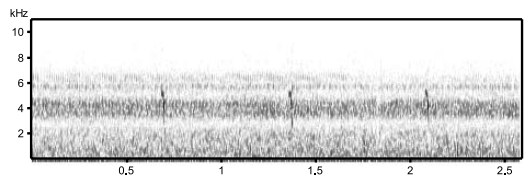


Figure 1. Male and female Ladder-tailed Nightjar *Hydropsalis climacocerca* in flight (Aidan Maccormick)

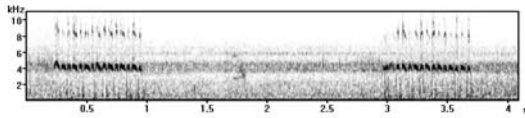
to hover briefly. The male(s) sometimes immediately re-approached the female, repeating both wing display and calls. These displays were observed after a period of heavy rain and in strong moonlight. Both the *skeet* calls and courtship-display wing noises were heard on 4 October 2001 at Valle del Luna (17°17'S 64°03'W, 450 m). However, courtship-displays were not observed at this site. The courtship-display described above differs from that of Scissor-tailed Nightjar *Hydropsalis brasiliiana*, the only other member of the genus *Hydropsalis*¹.

Vocalisations

Both members of the genus *Hydropsalis* give a characteristic 'song' of repeated *tsip* or *chit* notes¹. This type of vocalisation for *H. climacocerca* was



Sonogram 1. *Sipp* call or song of Ladder-tailed Nightjar *Hydropsalis climacocerca*, río Leche, Parque Nacional Carrasco, Cochabamba, Bolivia, 7 October 2001. Recorded by Aidan Maccormick using a Sharp MD-SR75 recorder and Sennheiser ME80 microphone, and analysed using Avisoft SASLab Light.



Sonogram 2. Courtship-display wing noise of Ladder-tailed Nightjar *Hydopsalis climacocerca*, río Rico, Parque Nacional Carrasco, Cochabamba, Bolivia, 8 September 1999. Recorded by Aidan Maccormick using a Sony TCM5000 recorder and Sennheiser ME80 microphone, and analysed using Avisoft SASLab Light.

recorded within PNC from 25 July until 19 September 1999, and as late as 7 October, in 2001. The repeated *sipp* is given from a ground perch in open sandy or rocky areas. The notes are repeated every 0.8–1.5 seconds for a duration of several seconds to over a minute, as shown in sonogram 1. Sonogram 2 presents two mechanical wing sounds and a single *skeet* call (see Courtship behaviour).



Figure 2. Nest of Ladder-tailed Nightjar *Hydopsalis climacocerca* with eggs, río Leche, Parque Nacional Carrasco, Cochabamba, Bolivia, 7 October 2001 (Aidan Maccormick)



Figure 3. Incubating female Ladder-tailed Nightjar *Hydopsalis climacocerca*, río Leche, Parque Nacional Carrasco, Cochabamba, Bolivia, 7 October 2001 (Aidan Maccormick)



Figure 4. Newly hatched nestlings of Ladder-tailed Nightjar *Hydopsalis climacocerca*, río Rico, Parque Nacional Carrasco, Cochabamba, Bolivia, 20 September 1999 (Ross MacLeod)



Figure 5. Older nestling Ladder-tailed Nightjar *Hydopsalis climacocerca*, río Leche, Parque Nacional Carrasco, Cochabamba, Bolivia, 7 October 2001 (Aidan Maccormick)

Nesting

During field work in 1999 and 2001 within PNC a total of four nests was found, two containing eggs and two with nestlings. All were situated on exposed rocky riverbanks, the actual nest sites being shallow depressions or scrapes in sand or fine gravel (see Fig. 2). In all cases a small fern or other plant was present within 20 cm of the nest. On 8 September 1999, beside the río Ichoa (17°25'S 64°15'W, 350 m), an incubating female was disturbed from a nest containing two cream-coloured eggs marked with brown scrawls. This nest was found abandoned on 18 September following heavy rains. Another female was found incubating two eggs on 4–7 October 2001 at Valle del Luna (Fig. 3). Newly hatched nestlings covered in pale grey down speckled dark grey and brown, and still damp, with the egg shells nearby, were located on 20 September 1999 at Estero Glasgow (17°25'S 64°21'W, 400 m) (Fig. 4). An older nestling was observed at Valle del Luna on 5 and 7 October 2001 (Fig. 5).

Concluding remarks

Although *H. climacocerca* is both relatively widespread and not uncommon, these records extend our knowledge of breeding periods within South America and provide the first published details of breeding seasons within Bolivia. The aerial courtship display we witnessed had not been previously reported for the genus *Hydropsalis*. Likewise, we provide the first description of the downy chicks.

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