

## Range extension for Sooty Swift *Cypseloides fumigatus*, with notes on its nesting in central Brazil

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Received 8 June 2005; final revision accepted 19 August 2005

Cotinga 25 (2006): 74–76

São apresentadas novas áreas de ocorrência para o Andorinhão-preto-da-cascata *Cypseloides fumigatus* em duas localidades do Brasil central. Dados sobre a nidificação desta espécie também foram coletados, sendo que ninhos ativos contendo apenas um ovo ou um ninhego foram observados entre os meses de novembro e janeiro. Embora todos os ninhos registrados estivessem adjacentes a quedas d'água, eles não estavam sujeitos ao respingo destas cachoeiras. Dois ninhos, um ovo e quatro adultos foram coletados nas duas localidades. Estes são os primeiros registros do Andorinhão-preto-da-cascata na região do Cerrado. Uma vez que as localidades de registro estão localizadas entre as áreas de distribuição anteriormente conhecidas para a espécie, é possível que mais populações do Andorinhão-preto-da-cascata sejam encontradas em ambientes propícios em outras áreas do Brasil central.

Sooty Swift *Cypseloides fumigatus* ranges from eastern Bolivia through eastern Paraguay and from north-east Argentina to south-east Brazil<sup>3,4</sup> (Fig. 1). In Brazil, it is found mainly in the Atlantic Forest region, from the states of Espírito Santo to Rio Grande do Sul, being usually seen close to waterfalls<sup>3,4,9</sup> (Fig. 1). Despite its relatively wide range, there are still gaps between the areas of occurrence of the Sooty Swift and little is known of its breeding biology<sup>3–5,7</sup>. Here we present range extensions and new breeding data for the species in central Brazil.

Field work was conducted at two sites in Minas Gerais: Córrego do Baú (19°02'S 43°27'W), Conceição do Mato Dentro municipality, and Rio Preto (16°12'S 47°17'W), Unaí municipality. Both areas possess waterfalls. Córrego do Baú was visited on 27 December 1996, 7 September 1997, 12 October 1997, 24 December 1997, 1 January 1998, 24 January 1998, 29 January 1998, 8 August 1998, 22 December 1998, 3 January 2000, 1 January 2001, 21 January 2001, 10 January 2002 and 23 January 2003. Rio Preto was sampled on 29 November–4 December 2000.

At Córrego do Baú, 3–4 active nests were found during December and January of the sampled years. Nests were constructed inside rocky crevices beside a waterfall c.4 m high and contained only a single white egg or a single nestling (Figs. 2–3). Nests were not subject to waterfall spray, but were placed in very humid conditions. On many days, an adult was observed incubating or brooding in each active nest. During visits in August–October, all nests were empty and damaged, but had always been repaired by December–January. Two eggs were examined on 1 January 2001. They measured 24.9 mm × 13.1 mm and 28.6 mm × 19.0 mm, and

weighed 4.5 g and 5.0 g. On 21 January 2001, an adult male (Fig. 4) and a nest were collected from this site, and deposited in the Coleção Ornitológica do Departamento de Zoologia da Universidade Federal de Minas Gerais (DZUFMG). The adult male is numbered DZUFMG 2978, and had testes measuring 3 mm × 2 mm. The cup-shaped nest comprised fern stems (*Selaginella* sp.), fine root fragments and soil. It had a largest outside diameter of 91.6 mm, a smallest outside diameter of 71.7 mm, a largest inside diameter of 52.4 mm, a smallest inside diameter of 32.6 mm, an outside depth of 35.4 mm and an inside depth of 23.4 mm.

On 3 December 2000, three further specimens (two females and a male) were mist-netted at another waterfall, c.30 m high, at Rio Preto (Fig. 5). These specimens are deposited at the Museu de Zoologia da Universidade de São Paulo (MZUSP) and at DZUFMG. All had enlarged gonads. Females presented ovaries measuring 5 mm × 4 mm (MZUSP 75745) and 6 mm × 6 mm (DZUFMG 2967), with ova reaching 1.5 mm × 1.5 mm. The male (MZUSP 75744) had testes of 7 mm × 4 mm. In the same area, there was a typical swift nest constructed inside a crevice within a limestone outcrop beside the waterfall. The nest was c.2.5 m above ground, was not subject to waterfall spray and was completely dry. It had a half-moon shape and comprised thin fragments of roots, small tangles, monocotyledonous leaves, fern stems (*Selaginella* sp.), mosses and soil. It had a largest outside diameter of 174.0 mm, a smallest outside diameter of 39.3 mm, a largest inside diameter of 89.5 mm, a smallest inside diameter of 31.6 mm, an outside depth of 81.0 mm, and an inside depth of 15.3 mm. The nest contained a single white egg measuring 29.0 mm × 18.0 mm. The nest and the

egg were also collected and deposited at DZUFMG. During the field work, no swifts were observed at the nest. The developed gonads of the specimens suggest that the species breeds in this area. Another species, Great Dusky Swift *Cypseloides senex*, was observed breeding at the same waterfall, but its nests were always placed behind or beside the waterfall, and all of them were subject to spray.

Data on the breeding of this species in Minas Gerais generally agree with previously published reports, as all records are from the rainy season in central and south-east Brazil (in September–March). Specimens collected in October by Belton<sup>2</sup>, in Rio Grande do Sul, had developed gonads. Fichberg *et al.*<sup>5</sup> described the breeding season as September–March in Rio de Janeiro state. Pichorim *et al.*<sup>7</sup> also reported a nest, studied in November–February, in Paraná. The presence of a single egg or a nestling was also observed by those and other authors<sup>2-5,7</sup>.

Ours are the first records for Sooty Swift in the Cerrado region<sup>1,10</sup>, and extend the species' range in Brazil to the north-west. As these localities are situated in gaps between the known range for the species, the Bolivia–Paraguay region and south-east Brazil<sup>3,6,8,9</sup>, certainly other populations of Sooty Swift will be found in suitable habitats in central Brazil, especially close to waterfalls.

#### Acknowledgements

We thank IBAMA for issuing permissions in Minas Gerais state. We also thank Charles Collins and Guy M. Kirwan for critical revision of the manuscript. MFV is grateful to the Brehm Foundation, CAPES, SETE and CEMIG for financial support of his research into the geographic distributions of Brazilian birds.

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Figure 1. Map showing the known range of Sooty Swift *Cypseloides fumigatus* in South America (shaded areas) and the new records in central Brazil (stars)



Figure 4. Adult Sooty Swift *Cypseloides fumigatus* captured at Córrego do Baú (Charles Duca)



Figure 2. Nest of Sooty Swift *Cypseloides fumigatus* inside a rocky crevice at Córrego do Baú (Charles Duca)



Figure 5. Adult Sooty Swift *Cypseloides fumigatus* captured at Rio Preto (Marcelo Ferreira de Vasconcelos)



Figure 3. Nest of Sooty Swift *Cypseloides fumigatus* containing a single egg at Córrego do Baú (Charles Duca)