

CONFIRMATION OF THE SOOTY SWIFT (*CYPSELOIDES FUMIGATUS*) IN ARGENTINA WITH NOTES ON ITS NEST PLACEMENT, SEASONALITY, AND DISTRIBUTION

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Resumen. – Confirmación del Vencejo Negruzco (*Cypseloides fumigatus*) en Argentina con notas sobre la ubicación del nido, estacionalidad y distribución. – Presentamos la primera evidencia de la presencia del Vencejo Negruzco (*Cypseloides fumigatus*) en Argentina. La especie fue hallada criando en cuatro cascadas entre pequeñas y grandes (7 a 60 m de altura), en los departamentos de Oberá y Cainguás, Misiones, noreste de Argentina. La distancia máxima entre localidades de cría fue de 60 km en un pequeño área. Encontramos ocho nidos activos entre Noviembre y Enero. Los nidos estuvieron ubicados a 2.5 (n = 2), 4, 7, 25, 35 (n = 2) y 40 m con respecto al suelo, en comparación a registros previos de alturas de 2.5 m. La mayoría de los nidos estaban expuestos al spray de las cascadas, contrariamente a registros previos. Estos datos sugieren una mayor plasticidad en la elección de sitios de anidación. Otros registros del Vencejo Negruzco en Argentina provienen de otras áreas en el norte de Misiones, y ocurrieron principalmente fuera de la época reproductiva. La ausencia total de registros confirmados en Argentina entre mediados de Marzo y comienzos de Agosto, sugiere dispersión post-reproductiva o migración austral.

Abstract. – We provide the first confirmation of the Sooty Swift (*Cypseloides fumigatus*) in Argentina. The species was found breeding at four small to large waterfalls (7 to 60 m in height) in the departments of Oberá and Cainguás, Misiones province, north eastern Argentina. Within this relatively small breeding range the maximum distance between localities was just 60 km. Eight active nests were found in the months of November through January. Nests were placed at 2.5 (n = 2), 4, 7, 25, 35 (n = 2) and 40 m from the ground, compared to all those previously documented at 2.5 m. Most were subject to spray unlike other documented nests. Our data suggests a greater plasticity in choice of nest sites. Other Argentine records of the species come from a different area in the north of Misiones province and mostly outside the breeding season. The complete lack of confirmed records in Argentina from mid March through early August suggests post-breeding dispersal or Austral migration. *Accepted 3 July 2010.*

Key words: *Cypseloides fumigatus*, Sooty Swift, nest sites, distribution, Misiones province, Argentina.

INTRODUCTION

The Sooty Swift (*Cypseloides fumigatus*, Apo-

idae) was first described from south eastern Brazil, from where most of the sparse available information for the species comes (see

Chantler 1999) and the only published breeding data (Vasconcelos *et al.* 2006, Stopiglia & Raposo 2007). Apart from a vague historical record from eastern Paraguay (Bertoni 1939), the species was not confirmed there with evidence until post-1990 field surveys (Brooks *et al.* 1992, Lowen *et al.* 1996, Guyrá Paraguay 2004).

Reports of the Sooty Swift for Argentina are ambiguous, having long been listed only for north western Argentina (e.g., Dabbene 1917), where an adult, its nest and egg were collected from the general area of “Cerros de Tucumán” (Dabbene 1918, misquoted as Reboratti 1918 *in* Chantler 2000), but presumably collected in Tafi Viejo by P. Girard (see Dabbene 1917: 7 for a cross reference). These reports undoubtedly refer to the Rothschild’s Swift (*Cypseloides rothschildi*), since the Sooty Swift does not occur in north western Argentina. Hence, the Sooty Swift has only been reported in Argentina in relatively recent times and only by a sight record from “[Gobernador] Lanusse, [Iguazú department], nw. Misiones in November 1974” (Olrog 1979: 138; Fig. 1) which lacks further detail. Additionally, Chebez (1996) mentioned the occurrence of the species in 25 de Mayo department, south-central Misiones, but without further details. These records appear to represent the only mentioned localities, or departments, for the species in Argentina, in spite of statements, such as “Not uncommon in NW Argentina” (Chantler 1999), and the mapping of all of Misiones province (Narosky & Yzurieta 1987), which lack any supporting data.

Here we provide the first confirmation of the Sooty Swift in Argentina, based on twelve recent sight records and eight nests found by the authors (three documented with photographs) in Misiones province, north east Argentina. We also discuss some aspects of the nest placement, seasonality, and distribution of this little known Neotropical swift.

METHODS

While most of our Sooty Swift sight and nest records from Misiones province were found by chance, specific searches were conducted at Parque Provincial (hereafter PP) Salto Encantado, where nesting had been previously reported (verbally) by park wardens, and at Salto Golondrina, where we suspected the presence of *Cypseloides* swifts based on the name of the waterfall (golondrina means swallow in Spanish). We also conducted direct searches for Sooty Swift specimens from Argentina at the American Museum of Natural History (AMNH, New York), The Natural History Museum (BMNH, Tring), Fundación Miguel Lillo (FML, Tucumán), Museo Argentino de Ciencias Naturales (MACN, Buenos Aires), Museo de La Plata (MLP, La Plata), and Yale Peabody Museum (YPM, New Haven). We searched for Sooty Swifts sound recordings from Argentina in the sound collections of the Macaulay Library of Natural Sounds (www.macaulaylibrary.org), and Xeno-Canto (www.xeno-canto.org).

RESULTS

We were unable to locate any Sooty Swift specimens from Argentina in museum collections where we would have expected the species, while literature and sound collection searches revealed that there are no published photographs or sound recordings from Argentina.

We obtained twelve sight records of Sooty Swift in Misiones, Argentina (Table 1, Fig. 1), and found eight nests of Sooty Swift at three localities in Misiones province (Fig. 1), which are detailed below.

Nest 1. IR and Leif Gabrielsen found a nest with a sitting bird on 1 December 2004 c. 10 m above the ground and no more than 3 m

TABLE 1. Details of Sooty Swift (*Cypseloides fumigatus*) sight records from Argentina. ¹Letters in square brackets refer to localities shown in Fig. 1.

Number of birds and their behavior	Locality ¹ , coordinates, altitude and department	Dates	Observer/s
4 circling	PP Cruce Caballero [d] (26°31'S, 53°58'W, 600 m a.s.l.), San Pedro	12 Mar 1997	AB and G. Bodrati
2 in flight	Seccional 101 [b] (25°48'S, 54°00'W, 400 m a.s.l.), PP Urugua-í, General Belgrano	16 Apr 2001	MP and G. Pugnali
4 in flight	PP de la Araucaria [e] (26°38'S, 53°52'W, 578 m a.s.l.), San Pedro	23 Jan 2002	MP
5+ perched	PP Salto Encantado [f] (27°07'S, 54°55'W, c. 300 m a.s.l.), Caingúas	25–26 Jan 2002	MP, IR, and A. Chiappe
2 perched	PP Salto Encantado [f]	8 Nov 2003	MP and tour group
8 perched	PP Salto Encantado [f]	27 Oct 2004	MP and tour group
5+ perched, one photo-graphed	PP Salto Encantado [f]	1 Dec 2004	IR and L. Gabrielsen
8 in flight, chasing insects ahead of a low wind storm	PP de la Araucaria [e]	12 Sep 2006	JIA
5 in flight	Parque Nacional Iguazú [a] (25°41'S, 54°26'W, 200 m a.s.l.), Iguazú	12 Aug 2007	JIA
Several together with <i>C. meridionalis</i> , <i>C. cinereiventris</i> , and two adult <i>S. biscutata</i> , after two rainy weeks	San Pedro [e] (26°38'S, 53°52'W, 578 m a.s.l.), San Pedro	17 Oct 2008	AB
2–4 in flight with <i>C. senex</i> , after rains	San Pedro [e]	25–26 Oct 2008	AB
2–6, after storms chasing Ephemeroptera and Homoptera	PP Cruce Caballero [d]	Oct–Nov 2006– 2008	AB

from the main waterfall at PP Salto Encantado. Another active nest with a sitting bird, in the same vicinity, could not be confirmed as belonging to Sooty Swift because of its obscured position.

Nest 2. Discovered by JIA at Salto Krysiuk (c. 27°32'S, 55°10'W), Oberá department (Fig. 2) on 11 January 2005, this nest was built 2.5 m

up on a rocky ledge located 25 m from the waterfall. An adult was incubating a single large, rounded whitish egg in an advanced state of incubation.

Nest 3. Found by JIA and H. Povedano on 13 January 2005, built 2.5 m up (as nest 2) but situated behind a 7 m high waterfall in Reserva Natural Privada Valle de Cuña Pirú



FIG. 1. Distribution and localities of Sooty Swift (*Cypseloides fumigatus*) in Argentina. Letters refer to sight records, numbers to breeding records. Nest records with evidence are denoted by black circles. a) Parque Nacional Iguazú, b) Seccional 101, PP Urugua-í, c) Gobernador Lanusse, d) PP Cruce Caballero, e) PP de la Araucaria and San Pedro, f) and 1) PP Salto Encantado, 2) Reserva Natural Privada Valle de Cuña Pirú, 3) Salto Krysiuk, 4) Salto Golondrina. See Results and Table 1 for records and geographical coordinates.

(27°11'S, 54°57'W), Cainguaés department. A bird flushed from the nest which was inaccessible for examination.

Nests 4, 5, 6, and 7. Three active nests were

located by MP at PP Salto Encantado on vertical cliffs c. 5–7 m from the main waterfall on 13 November 2007, and another on 2 November 2009. It was impossible to examine the nests without climbing equipment



FIG. 2. A nesting Sooty Swift (*Cypseloides fumigatus*) at Salto Krysiuk, Guaraní department, Misiones, 11 January 2005. Note the paler brown forehead without the "frosted" effect visible in Great Dusky Swift. Photo: J. I. Areta.

although they were calculated to be positioned at heights of c. 25, 35 ($n = 2$), and 40 m from the ground. Each nest was occupied by a bird suggesting incubation or brooding. Three photographs of one of these nests are deposited in the Aves Argentinas/A.O.P. photographic library but were not of sufficient quality to publish.

Nest 8. Discovered by JIA at Salto Golondrina ($27^{\circ}08'S$, $54^{\circ}29'W$), Guaraní department on 19 November 2008. The nest, occupied by an

incubating or brooding bird (photographed), was built in a hole in the vertical wall, 4 m from the 8 m high waterfall, and 4 m from the water level. A few *Cypseloides* feathers were collected from the surface of the waterfall pool.

DISCUSSION

Distribution. The data herein presented confirms the presence of Sooty Swift in Argentina, and thus the current distribution should

encompass north eastern Argentina, eastern Paraguay, and eastern Brazil. Although the sight records (including our own) from Misiones province were made by observers familiar with Sooty Swifts in Paraguay and/or Brazil, we are forced to treat most (except those of perched birds) with caution because of possible confusion with the Great Dusky Swift (*C. senex*). The Great Dusky Swift is considerably larger, shows a frosty white fore-crown (generally not visible in flight), often splay its tail into a rounded spatule during some flight manoeuvres (unlike Sooty Swift), and can often be distinguished by its distinctive dry trills vs metallic twittering in Sooty Swift (our recordings). However, under certain light conditions the two species can be difficult or even impossible to distinguish, especially in presence of high flying, non-vocalizing birds. Additionally, another species, Rothschild's Swift which inhabits the Yungas forest of southern Bolivia and northwestern Argentina, has been recorded in lowland Chaco habitats far from the Yungas (Nores & Salvador 1985, Nores *et al.* 1996, Moschione 2005) and as close as 620 km to our confirmed Misiones records. Rothschild's Swift is indistinguishable from Sooty Swift in the field (at present), although the Sooty Swift shows tiny protruding bare rectrix shafts in the hand which are lacking in Rothschild's Swift (MACN specimens).

The Sooty Swift has also been mentioned and mapped for Santa Cruz department in eastern Bolivia in the mainstream literature (e.g., Chantler 1999, 2000). However, Hennessey *et al.* (2003) listed only Rothschild's Swift for Bolivia, in the same department. The first confirmation of Rothschild's Swift for Bolivia was a specimen from Tarija (USNM 264931) originally reported as *Cypseloides major* (Friedmann 1945). The original source for the Sooty Swift in Bolivia can be traced to a sight record from the Andes of Santa Cruz (Nores & Yzurieta 1984) which is presumed to relate

to Rothschild's Swift (J. Tobias pers. com.; see also Results). Furthermore, there are no specimens of Sooty or Rothschild's Swift in the Museo de Historia Natural Noel Kempff Mercado, Santa Cruz, Bolivia (M. A. Aponte Justiniano pers. com.), and there is no evidence of the presence of the Sooty Swift in Bolivia.

Seasonality. Argentine photographic records and sight records of perched birds (this paper) were obtained between late October and late January, while other (unconfirmed) sight records were made in mid March, mid April, mid August, and mid September. There are no reports from Argentina in February, May, June, or July which may indicate Austral migration or post-breeding dispersal; the lack of confirmed fall and winter records from mid March to early August seems to be very noteworthy. The seasonal status of Sooty Swifts in Rio Grande do Sul, southeast Brazil, might be complex, since it was considered as "Probably [a] summer resident, registered between September 11 and March 31, except for one record each for May and June from Novo Hamburgo" (Belton 1984: 564), whilst Bencke (2001) and M. Repenning (*in litt.*) consider it a year-round resident in this Brazilian state. Despite the winter records of Voss reported in Belton (1984), a review of the distribution and status of Sooty Swifts in Brazil stated that there are no sight records or specimens from anywhere in Brazil during the "winter" months of April through July (Stopiglia & Raposo 2007).

Nests and nest placement. Nests found during our studies conform in appearance with those found in Brazil (Vasconcelos *et al.* 2006), being a cup or half-moon shaped structure made of fern stems, rootlets, moss, leaves, soil, and mud (Fig. 2). We do not know how they were attached to the rock substrate,

although seven of the eight nests were built on tiny natural ledges; *Cypseloides* swifts (Cypseloidinae) do not use saliva in nest-building (Collins 1980, Marín & Stiles 1992). Nest height frequently differed radically from those previously described with five nests built at c. 10, 25, 35, 35, and 40 m above the ground at the 60 m high Salto Encantado waterfall, compared to nests built 2.5 m up on a 30 m high waterfall in Minas Gerais, Brazil (Vasconcelos *et al.* 2006). The Salto Krysiuk and Cuña Pirú nests were also built 2.5 m up, close to and behind 9 and 7 m high waterfalls, respectively, which together with Brazilian records may indicate a minimum height for nests.

It is noteworthy that Salto Encantado is also a very important roosting and nesting site for the White-collared Swift (*Streptoprocne zonaris*) and the Great Dusky Swift, both of which roost in large numbers at the lip of the same waterfall. There may be competition for nest sites, for example, 10 active Great Dusky Swift nests with brooding birds were observed 10 m higher than nest 1 on the same date in Salto Encantado, and four active Great Dusky Swift nests were found simultaneously with the nest of Salto Golondrina. Our observations of roosting and nesting Sooty Swifts at Salto Encantado (see above) indicate that there is spatial segregation when more than one species (in this case three) occupy the same waterfall, and where Sooty Swifts seemingly always roost and nest at a lower height than Great Dusky and White-collared swifts.

It has been suggested that the Sooty Swift always nests away from waterfall spray (Vasconcelos *et al.* 2006) on the basis of two nests in Brazil. Three of the five nests found at Salto Encantado were positioned behind a curtain of fine falling water, and from c.5-7 m from denser falling water. Without direct access it was not possible to determine whether these nest sites were dry or wet,

although a photograph of one nest indicates that the surrounding substrate was affected by spray (Aves Argentinas/A.O.P. library). The other nest was c. 3 m from the waterfall and was completely wet. Nest 3 at Cuña Pirú was also behind falling water and in permanent contact with water spray from the cascade, whereas nest 8 was dry when found although very close to a wet rock face. Nest 2 was located 25 m away from the nearest waterfall and was dry. Although all the nests found in Misiones were located at waterfalls, it is noteworthy that several nests in Brazil have also been found inside caves with small waterfalls (see Stopiglia & Raposo 2007). Our data indicate a much greater plasticity towards nest placement in this species than was previously known and correspond to that described for other *Cypseloides* swifts (Marín & Stiles 1992, 1993, Marín 1997).

In agreement with other nest records (e.g., Vasconcelos *et al.* 2006), the Sooty Swift has a single egg clutch. It seems important to mention that the nests found in Misiones were isolated and not colonial, even though synchronized nesting can occur at the same site (this study). In contrast, there is one report of colonial nesting in Brazil (see Stopiglia & Raposo 2007) which recalls the colonial nesting of other large swifts in Misiones, Argentina, and southeastern Brazil, White-collared, Biscutate (*S. biscutata*), and Great Dusky Swifts (De la Peña 1987, Pichorim 2002, Stopiglia & Raposo 2007).

Dates of active nests in Misiones in November, December, and January occur within available Brazilian dates which extend from September to March (see Stopiglia & Raposo 2007). In Brazil, birds reportedly abandoned their active nests during the day (see Stopiglia & Raposo 2007), whereas all of the Misiones nests were found during the day due to the presence or flushing of sitting birds.

Conclusions. Virtually no previous information is available on the abundance or distribution of the Sooty Swift in Argentina except for a single published sight record (Olrog 1979). However, some maps and published comments suggest that it is widespread and “not uncommon” (Narosky & Yzurieta 1987, Chantler 1999). Our data suggest that the Sooty Swift is a local breeding species in Misiones province, with breeding records from four proximal localities (greatest distance = 60 km) in the south-central departments of Guaraní and Cainguás (Fig. 1). All other provincial records were made north of the breeding sites and include two cases from Iguazú department in the north west of the province, one from General M. Belgrano department, and three from San Pedro department in the north east of the province (Fig. 1). None of the latter records are confirmed with evidence, although their seasonal pattern seems noteworthy since most occur prior to or after the known breeding period in Misiones (i.e., mid August, mid September and late January, mid March and mid April, respectively).

The study of the ecology, distribution, and seasonality of swifts is exceedingly complex (e.g., Stiles & Negret 1994) and better documented data are required to fully elucidate the distribution, abundance, and seasonality of the Sooty Swift in Argentina. There are numerous waterfalls in Misiones province, in particular along the mountainous Sierra Central in the central departments, which require specific searches for possible breeding and roosting activity of Sooty Swifts, especially during the Austral spring and summer.

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