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NOTA

The White-chinned Swift *Cypseloides cryptus* (Apodiformes: Apodidae) breeding near Presidente Figueiredo, Amazonas: the first documented record for Brazil

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RESUMO: O taperuçu *Cypseloides cryptus* (Apodiformes: Apodidae) nidificando perto de Presidente Figueiredo, Amazonas: primeiro registro documentado para o Brasil. O pouco conhecido *Cypseloides cryptus* Zimmer, 1945 foi encontrado nidificando em duas cachoeiras situadas em locais diferentes perto de Presidente Figueiredo em julho de 2007. Um ninho predado foi coletado e depositado na coleção de aves do INPA e no outro ninho o filhote foi manipulado, medido e fotografado e colocado de volta em seu ninho. Estes registros estendem para o sul a distribuição conhecida cerca de 700 km a partir dos tepuis do sudeste da Venezuela e sudeste da Guiana. O nome sugerido para a espécie em português é Taperuçu-do-mento-branco.

PALAVRAS-CHAVE: Amazonas, Apodidae, Brasil, cachoeira, *Cypseloides cryptus,* nidificação, Taperuçu-do-mento-branco, nidificação, cachoeira.

KEY-WORDS: Amazonas, Apodidae, Brazil, breeding, *Cypseloides cryptus,* waterfall, White-chinned Swift.

The distribution of the White-chinned Swift *Cypseloides cryptus* Zimmer, 1945 is poorly known with scattered records from both Central and South America. In Central America records primarily originate from the Caribbean slope and lowlands of Belize, Honduras, Nicaragua, Costa Rica and Panama. In South America records are from the Andes and associated lowlands of Peru, Ecuador, Colombia and Venezuela as well as from the cordilleras of northern Venezuela, tepuis of southern Venezuela and Guyana (Chantler 1999), and more recently also from southern Suriname (Ottema 2004, 2006).

On 14 July 2007 at 17:55 we visited the Natal Waterfalls on the rio Urubu, c. 15 km upstream from the town of Presidente Figueiredo, Amazonas, Brazil. There SAW ventured behind the 'veil' of the falls and flushed out a large swift (Apodidae) assumed by AW, on the basis of size jizz and location, to be a *Cypseloides.* As we were aware that both *Cypseloides* and *Streptoprocne* swifts nest in association with waterfalls we immediately suspected that it most probably was breeding. A search behind the waterfall revealed a moss nest attached to a damp rock face, which contained one dull dirty white sub elliptical egg that was warm. As dusk was rapidly approaching we vacated the area to allow the incubating bird to return, planning our return at some later date.

AW's knowledge of the distributions of all know Brazilian *Cypseloides* suggested that this record could pertain to the poorly-known White-chinned Swift, which had not yet been documented in Brazil, although known to occur and breed further north in the Guianan Shield (Ayarzaguena 1984).

On the 28 July we revisited the nest, but found it empty, presumably predated. The nest was located 3 m above the ground, on a horizontal ledge behind the c. 4.5 m 'veil' of water. The nest site had a constant high humidity, dripping water, fine spray and dribbling water over the rock surfaces which guaranteed the nest was constantly sodden. The nest following Simon and Pacheco (2005) was a well camouflaged neatly constructed low cup/lateral. It was attached laterally to a ca 45 degree rock face below a long horizontal cleft, which had an overhang affording some protection from above. The nest was collected and deposited in the Instituto Nacional de Pesquisas da Amazônia (INPA) bird collection (INPA 58). The low cup was constructed almost entirely of live dark green mosses and liverworts (bryophytes), mixed with small amounts of mud. Woven into the rim were six bright green pieces of fern. The cup was lined with short fine dry rootlets, woven into the moss and one 30 mm by 6 mm piece of green fern. The nest weight was 160 g (damp,

however having lost some moisture), its dimensions were: 120 mm wide, 45 mm at the highest point, depth from the back to front of the rim 70 mm, the cup diameter was 60 mm by 45 mm with a shallow depth of 15 mm.

The following day, 29 July 2007 we continued our search for more nesting swifts by visiting another waterfall east of Presidente Figureido at the Fazenda Salto do Ype, at Km 58 on the road AM 240 to Balbina. Here a forest trail of c. 5 km through *terra firme* forest permitted access to the waterfall (Figure 1). Due to its rather remote location the Salto do Ype waterfall has been rarely visited. Here a forest stream (igarapé) had eroded and collapsed a cave, the roof of which had fallen to the ground, depositing several large slabs of rock in the stream bed. A line of remaining hard rock behind the old cave site now forms the waterfall. The cascade of water falls, c. 35 m onto a huge slab of rock see (Figure 1), generating much mist. Careful observation behind this large wet slab revealed six swift nests, all attached to the vertical rock face.

The nests were placed singly, the closest being 1.7 m apart. We suspect that the special nesting requirements for *C. cryptus* (Marín and Stiles 1992) resulted in this concentration of nests in such a small area. These nests were located from 1.7 m up to 3.5 m and five were within 4 m of each other, behind the large fallen slab and all were damp. The fifth nest was above the slab and directly

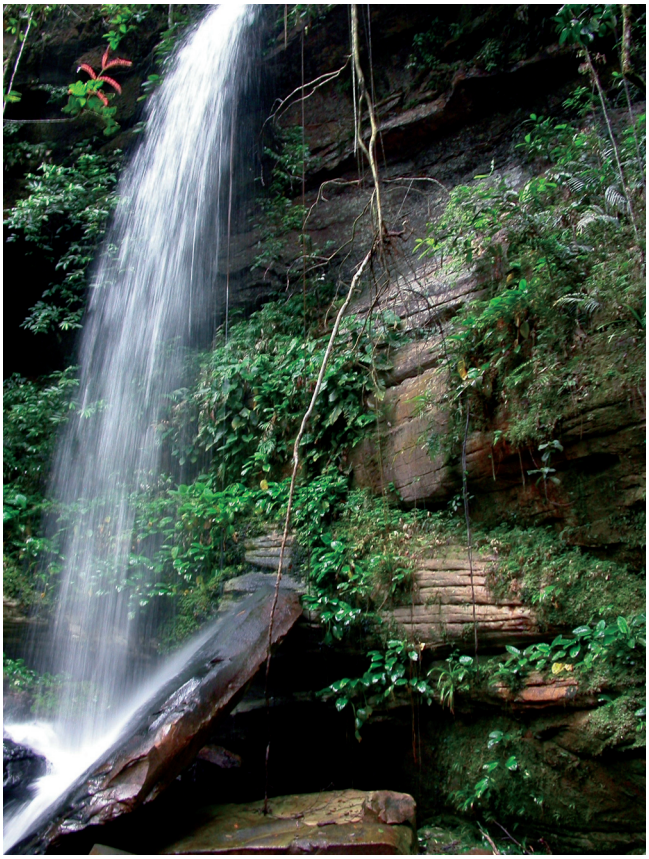

FIGURE 1: Nesting site of *Cypseloides cryptus* at Salto do Ype, Presidente Figueiredo, Amazonas Brazil. Photograph by Andrew Whittaker.

FIGURE 2: Nestling *Cypseloides cryptus* in nest on 29 July 2007 at Salto do Ype, Presidente Figueiredo, Amazonas Brazil. Photograph by Andrew Whittaker.

FIGURE 3: *Cypseloides cryptus* nestling on 29 July 2007 Salto do Ype, Presidente Figueiredo, Amazonas Brazil. Photograph by Andrew Whittaker.

FIGURE 4: Diagnostic underpart pattern of *Cypseloides cryptus* nestling on 29 July 2007 Salto do Ype, Presidente Figueiredo, Amazonas Brazil. Photograph by Steven Araújo Whittaker.

behind the falling water in an area of constant mist and had more vegetation surrounding it. One nest at 1.6 m contained a fully feathered nestling (Figure 2). The other nests looked fairly fresh, being still green to dirty green. On close approach the nestling remained motionless and even when AW slowly picked it off the nest the bird never tried to escape, only clinging (with its strong legs and claws) to some of the nest lining. We removed the nestling (Figure 3) for identification and processing after which it was returned to its nest. Biometrics were; weight 31 g; wing 87 mm (not fully grown); a proportionately short tail (not measured); total length 95 mm and tarsus 15 mm. The nestling was overall sooty-black with pale fringes to the crown feathers and slightly paler forehead, brown eyes and a black bill. The upperparts had thin pale white fringes to all the back feathers, rump and wings, with noticeably bolder white fringes on the wing-coverts, tertial edgings and tips of the primaries and secondaries. The underparts were sooty-black boldly white-tipped from the mid breast to the crissum, forming a distinctive diagnostic white patch on the lower belly (Figure 4). During the processing period the nestling remained silent and mostly calm and still, only raising its wings when turned onto its back.

Following Marín and Stiles (1992) we calculate that our nestling was 40 + days old. Basing our calculations on a 40 + day old nestling on 29 July with a fledging period of 55-58 days (Marin and Stiles 1992), we would estimate this nestlings fledging date to be around mid August. Based on an (estimated) incubation of 30 days (Marin and Stiles 1992) the nestling would have hatched in mid June, with egg laying around mid May. However based on the nest on 14 July, (if we speculate the egg to have hatched at the earliest the following day) the fledging period would have been later on in the season, presumably from early to mid September, egg laying was probably in early to late June. We therefore roughly calculate the breeding calendar of *C. cryptus* in Amazonas, Brazil, as follows; egg laying between mid May to mid or late June, hatching mid June until mid or late July with fledging from mid August until early to mid September. Information from locals visiting the Salto do Ype waterfall in early June 2007 confirmed that two nests contained single eggs (incubating birds flushed) and one nest a nestling (Gabriel Vereas *pers. comm.*). These observations fit well into our breeding chronogram.

To the left of the main waterfall at the Salto do Ype we observed much staining from bird droppings on a vertical face, some 20 m away from the nests at ca 25 m height. We suspect that this had resulted from adult swifts roost/resting there. Despite staying at the nesting site for a total of nine hours during two days, no adult swifts were seen; we did not stay into the late afternoon, which seems to be the preferred time for feeding the nestlings or at dusk when birds could come into roost.

Subsequently, Guy Kirwan who was visiting Presidente Figueiredo and had been informed of our discovery, was very specifically watching for *C. cryptus.* On 15 December c. 07:00, over the Reserva Ecologica Lajes, he observed for 10 minutes between five and ten *C. cryptus* (GMK, *pers. comm.*) in very good, not yet harsh, light against a blue sky, at c. 30-40 m range. They were not mixed with other swifts, although Neotropical Palm Swifts *Tachornis squamata,* Short-tailed Swift *Chaetura brachyura* and Band-rumped Swifts *Chaetura spinicaudus* were all present in the same area, permitting reasonably straightforward size and structural comparisons. The *C. cryptus* were somewhat longer bodied than the two *Chaetura* species and with distinctly more rakish wings (like other *Cypseloides* and were, therefore, 'big' swifts in 'disguise'). They appeared completely charcoal black with a marginally paler, greyer forehead (highly restricted) and perhaps chin. The tails appeared to lack any notch or fork.

DISCUSSION

Neotropical swifts are notoriously difficult to identify in the field (Hilty and Brown 1986, Ridgely and Greenfield 2001, Hilty 2003, Restall *et al.* 2006, Schulenberg *et al.* 2007). However, a distinctive white patch on the lower belly immature birds only combined with the measurements are diagnostic characteristics (Marín and Stiles 1992) confirming a positive identification of the nestling as *C. cryptus.* Comparison of a photograph of a well-feathered nestling *C. cryptus* (Marín and Stiles 1992) from Costa Rica also confirmed our identification.

These records represent the first confirmed Brazilian records for *C. cryptus,* which we have documented to be a resident breeder north of Manaus in the Presidente Figueiredo region of Amazonas. Previously *Cypseloides cryptus* had been included by the CBRO on the secondary list of Brazilian birds from the following unconfirmed field observations of *Cypseloides* sp probably pertaining to *C. cryptus* from Palmari Lodge, Rio Javari, Amazonas; 20 birds seen well by B. M. Whitney, feeding low in good light, over the rio Javarí at the entrance to Zacambuzinho on the 3 Aug 2000; Dave Steiskal and BMW observed at least four on 5 August 2002 in the same area; finally BMW saw 10 + in August 2005 (B. M. Whitney pers. comm). We suggest Taperuçu-do-mento-branco as the Brazilian name for *C. cryptus.* These records extends its known distribution within the Guianan shield ca. 750 km south west from Tafelberg Tepui, central Suriname (Ottema 2004) the closest known breeding grounds.

In Costa Rica, Marín and Stiles (1992), recorded *C. cryptus* egg-laying from early May to early June and the fledging period to be early August to early September. Interestingly our estimated dates almost exactly match

those for Costa Rica. However more detailed breeding data from Amazonas are required for a more detailed comparison. Certainly the nesting site criteria, nest construction and types of materials used to make the nests in Costa Rica (Marín and Stiles 1992) were almost identical to those in Amazonas, Brazil. However, unlike Costa Rica the timing of breeding in Brazil did not coincide with the wet season's heavier rains: in Amazonas egg-laying begins in the late wet season, with the nestling-fledging period running into the start of the distinctly drier summer season. Perhaps the less prolonged and more localized summer rainfalls in Amazonas influence the timing of maximum aerial insect food abundance and thus the timing of breeding of these swifts.

We encourage any ornithologists carrying out field work in Amazonas, Roraima, Pará (north of the Amazon) and possibly northern Amapá in areas with any forested waterfalls, both in the lowlands or in areas of relief to critically search for *C. cryptus* breeding behind such waterfalls. Field records of a small feeding flock of 16 *C. cryptus* on 4 July 1994 observed close to Santa Elena de Uairén, Bolívar (Hilty 2003) within a few km north of the Brazilian boarder in Roraima support this possibility.

Large feeding flocks of unidentified all dark *Cypseloides* sp possibly *C. cryptus* have been observed in western Amazonia from around Tefé, Amazonas (J. F. Pacheco pers comm.), and 50 + were seen by AW and Alex Lees on the 14 December 2007 on the front of a large cyclone on the middle rio Juruá at Fortuna, (south of Carauari), Amazonas. However field observations were insufficient to eliminate the possibility of Black Swift *Cypseloides niger,* which could migrate to Brazil. Wintering range of race *borealis* now known to winter somewhere in South America, with records from Cauca, southern Colombia, in late September early October (Chantler 1999).

Presidente Figueiredo and its vicinity have been visited by many competent field ornithologists during the past 30 years during which time the occurrence of *C. cryptus* as a breeding resident has been overlooked. This region of *terra firme* north of Manaus is one of the best ornithologicaly covered areas of the entire Amazon (Willis 1977, Willis and Oniki 1988, Stotz and Bierregaard Jr. 1989, Cohn-Haft *et al.* 1997). We therefore predict that other Brazilian populations of this easily overlooked swift are still waiting discovery by acute field workers.

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