

First breeding record of Black Swift *Cypseloides niger* in Cuba

Black Swift *Cypseloides niger* occurs from south-east Alaska and south-west Canada to Costa Rica, as well as on Cuba, Jamaica, Hispaniola, Puerto Rico, Montserrat, Guadeloupe, Dominica, Martinique, St. Lucia and St. Vincent^{1,3}. In Cuba, the species is known from the montane centre and east of the island⁷. According to Marín & Sánchez¹², most known Black Swift breeding sites are in the western USA and Canada, with single reports from Dominican Republic and Costa Rica, and two from Mexico. Few details are known of the species' breeding. Lowther & Collins¹¹ suggested that it is the least-known North American swift. Swifts incubate a single egg, with both incubation and chick growth occurring over an extended period^{5,11}. For Black Swift, selection parameters for breeding sites are unknown but Knorr¹⁰ listed five ecological requirements: water, inaccessibility from predators, unobstructed flyways, darkness and high relief. Lowther & Collins¹¹ documented c.80 breeding sites, mostly associated with waterfalls and cliffs. There are currently no data on the species' nesting habits in Cuba. Here, we provide the first breeding data for Black Swift in Cuba.

Materials and Methods

The Black Swift nest was found in La Batata cave, Topes de Collantes Protected Area, in the Sierra de Escambray (elevation 800 m), south-central Cuba. La Batata is 200 m long and oriented north-south. The río Vegas Grandes flows through it. The floors of the first, second and sixth chambers of the cave comprise small pools of variable depth. The nest was discovered on 21 June 2009 (Fig. 1), and subsequent visits were made on 24 and 27 June,

and 3 July 2009. Each time, we recorded the contents of the nest. The nest's height was taken using metric tape (± 1 mm). We used a 30-g (± 0.25 g) Pesola spring scale to weigh the egg and chick. The egg description follows Baicich & Harrison². The wing measurement (flattened) was made with a wing-rule, and tarsus length and exposed culmen using callipers (± 0.02 mm)⁸.

Results

On 21 June 2009, at 11h20, we found a Black Swift incubating a single smooth, non-glossy white egg in a nest of moss and lichens (Fig. 2). The nest was 6.63 m above a small pool, in a shallow hole on the cave wall. The adult remained on the nest, permitting capture by hand. The egg weighed 6.0 g and measured 2.4 × 1.8 cm. While analysing the nest, the swift remained quiet in the hand but when it was returned to the nest the bird left the chamber following the riverbed. On 24 June, the swift was still incubating. It left the nest on our approach, following the same route as the previous day and returning after 25 minutes. We observed similar behaviour on 27 June on our third visit. A naked chick with closed eyes was found on 3 July (Fig. 3). It could grasp the nest with its claws, weighed 8.5 g, and had a wing length of 11 mm, tarsus 12 mm, bill breadth 5 mm and bill length 7 mm.

Discussion

Chapman⁴ made some of the first natural history observations of Black Swift in Cuba. He observed flocks near Trinidad, and considered that it was probably common. Gundlach⁹ saw swifts over sugarcane fields in central Cuba and found the species similarly abundant. Neither author provided data concerning breeding. Today, the species is



Figure 1. Adult Black Swift *Cypseloides niger*, La Batata cave, Topes de Collantes, south-central Cuba, June 2009 (R. Montes Espín)



Figure 2. Egg of Black Swift *Cypseloides niger*, La Batata cave, Topes de Collantes, south-central Cuba, June 2009 (R. Montes Espín)



Figure 3. Chick of Black Swift *Cypseloides niger*, La Batata cave, Topes de Collantes, south-central Cuba, June 2009 (R. Montes Espín)

difficult to find in this area of the country.

La Batata cave is a roosting and breeding site for White-collared Swift *Streptoprocne zonaris* and the *C. niger* nest was discovered during searches for nests of *S. zonaris*. At the time, there were 11 active nests of *S. zonaris* with chicks, some ready to fledge, and one nest of *S. zonaris* was just 0.6 m from that of the Black

Swift. Thus, both species breed simultaneously in La Batata cave.

The nests of *C. niger* and *S. zonalis* in Batata cave were both of lichen and moss, and their shapes were similar. The nests of *S. zonalis* were larger than that of *C. niger*, reflecting the bird's overall size. *S. zonalis* collects nest materials within the near environs and we speculate that *C. niger* does so too.

The mass of the Cuban egg was greater than reported by Marín & Sánchez¹² for *C. niger* in Costa Rica, but coincided in colour and shape. During our time inside the cave on 3 July, no adult visited the chick, unlike during the incubation period, when the adult remained on the nest throughout. The adults' absence might be related to them feeding the chick near dusk⁶. Collins & Peterson⁶ observed nocturnal provisioning and related this to the twilight peak in insect numbers.

In Topes de Collantes there are various sites with suitable habitat for *C. niger* to breed, all of which are known nest sites of *S. zonalis*. Given that some of these are tourist venues, a management plan that takes account of these swifts' breeding requirements should be developed as the impact of tourism on the breeding success of these birds is unknown.

Acknowledgements

We thank Rubén Chamizo for his advice, and Charles T. Collins and Luzmari Fuentes for their suggestions. In Topes de Collantes we are grateful to Iroel Ruiz and Alexey Fernández, and the staff of Hacienda Codina: Pedro Samora, Fernando Prieto, Manuel Obregón, Froilan Soto, Jorge Luis Soto, Jorge Santos, Eddy Pacheco and Rolando Castillo. We are especially appreciative of James Wiley and Arturo Kirkconnell for refereeing the manuscript.

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Received 24 October 2009; final revision accepted 18 March 2010