New and Noteworthy Records from Ten Jamaican Bat Caves

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The status and distribution of Jamaican bats is poorly understood despite a handful of publications. The most recent publication is by Koenig (1974) documenting 18 species. Less information was collected extant Jamaican bats from caves. McFarlane (1970) reported results from surveys was to capture and collect selected bats in 13 caves, showing that the extant Jamaican bats were extinct in 13 caves, suggesting that the paucity of extant bats in Jamaica is composed of 24 species, including 3 species extant elsewhere: Mormops mystacinus, Tesitlea niassii, and S. rana (Koopman and Williams, 1995; Williams, 1992; Koopman, 1989).

This note presents data from two expeditions to Jamaica (28 Nov-18 Dec 2001) and 20-27 Mar 2002. We surveyed 10 caves, suggesting that the paucity of extant bats in Jamaica is composed of 24 species, including 3 species extant elsewhere: Mormops mystacinus, Tesitlea niassii, and S. rana (Koopman and Williams, 1995; Williams, 1992; Koopman, 1989).

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Little Bay elementary school, housed hundreds of Artibeus jamaicensis as a day roost (2205, 5 December 2001). This cave is large and well ventilated and its 25 m wide × 3 m tall entrance leads to a well-lit chamber approximately 75 m in diameter. The light and exposure conditions of this cave suggest that its bat community is restricted to Artibeus and other roosting genera (Silva-Taboada, 1997). Portland Cave 9 (17° 21' 17.4" 45' 12.1" N 76° 54' 00" 28.4' W, reference datum: WGS84, Portland Cottage, Claremont). This minor entrance was found while searching for entrances to Portland Caves 1 and 2 (Fincham, 1997: 254-295). Portland Cave 9 is located a 15 min hike south of entrances 1 and 2. A 3 m wide, low (1.5 m), entrance in overgrown secondary scrub marks the locality. On 9 December 2001 we captured Glossophaga soricina, Erophylla aspera, and Macrotus auritus. Fourteen female M. auritus were captured, all in late gestation, as were 13 the females captured from Portland Cave 1 on 14 December 2001. On this last date we also observed at least 10 M. auritus females with young pups inside Portland Cave 2. Silva-Taboada (1997) noted that M. auritus females did not carry pups during regular night flight. We did not capture females with pups outside Portland Cave 2, so our observations inside the cave are consistent with the behavior observed in Cuba. Two Sisters Cave (17° 54' N, 76° 54' W, reference datum: WGS84 [from ArcView 3.2], Hollidays, St. Catherine). This local attraction, located about 30 min south/southwest of Spanish Town, is depicted on Jamaican tourist maps and is equipped with observation platforms that offered exceptional views of about 20 Naozio griseus (Griseus fishing) immediately after dusk (1800, 11 December 2001). One Glossophaga soricina was also seen on Portland Caves 2/14 December 2001.) also seems secure considering the open, well-ventilated cave conditions. Since Pro- chorn's list is not supported by vouchers, and given the possibility of misidentification, his records should be interpreted with caution (if not disregarded). The distribution of Phyllonycteris and Natalus within our localities is probably restricted to St. Clair Cave. Of the remaining species, we also captured Chalinolobus (Natalus) nuchi-pus at St. Clair Cave, but not Phyllonycteris or Windor Cave (Table 1). We found decreases in the number of bats captured for the most part 1999 & 2000 at Portland Caves (Table 1). Phyllonycteris Cave 9 is located 24" 20' 34" N 76° 54' 8' W at Portland Caves 9 (Clarendon, 9 December 2001). Despite extensive work by H.E. Anthony (Koopman and Williams, 1995; Williams, 191920) and ongoing surveys (Suwan Koenig pers. comm.) at Windor Cave, and even more so at the first live record of this species at this locality, it is also the first record for the Cayo-Island Monroe area. Several cave-past specimens (AMNH 262832, 262894, see Fincham, 1989!) had been collected from Portland Ridge (Clarendon) but no live Artes had been recorded since then. After our survey, S. Konig mist-netted another individual flying close to the ground in front of the upper entrance of Windor Cave (pers. comm.). Williams (191920) proposed decrease in primary habitats as the main explanation for the absence of Artes from H.E. Anthony's 1919-1920 extensive collection. Artes were later found in banana-cocos groves in eastern Portland (Hove, 1974) and our ob- servations, in general, is today as great as ever. Ob­ service is only (unconcerned) habitat preference, is not exclusive to primary habitat. In March 2002, we revisited the Monarva locality and did not detect this species during this last trip we also placed nets in these primary habitats. We visited windor Cave but failed to capture Artes. The need for more information about the natural history and distribution of Jamaican bats, and the Jamaican fauna in general, is perhaps as great as ever. Observations cannot be established conclusively. Without southern distributional photographs, and ultrasonic recordings, as well as skins, skulls, skeletons, and preserved specimens. We urge all those conducting chiropteran surveys in Jamaica to collect as much information as possible on bats, their natural history and habitat, and to publish the results of such efforts in detail. Acknowledgments—This work was sup­ ported by the Department of Monanology at the American Museum of Natural History, the NASA under Grant No. NASA- 8543 to the Center for Biodiversity and Conservation at the American Museum of Natural History, and the Center for En­ vironmental Research and Conservation at Columbia University. Barry E. Davis and Chad and financed LMD's second visit to Jam­ aica, with Katherine Doyle as assistant. For guiding us in the field we thank Bouc, Bouc, and the (Adams), M. Bertil D. Bremner, D. Bryant, P. Ducton, D. B. Jones, and B. Williams. For invaluable in­ formation and logistical support we thank A. Donaldson and the National Environmental and Planning Agency, S. Green, A. Hynde, S. Konig, A. M. McFarlane, M. Schwartz, B. Simmons, and P. Vogel. For sharing their unpublished manuscript and commenting on earlier drafts, we thank A. Donaldson, S. Konig, B. Simmons, V. Tavares, and A. Trifonidou. This research was conducted under NEPA permit no. 1265.

LITERATURE CITED


Hilton-Taylor, C. 2000. The species in early secondary stands outside the Monroe Cave entrance (Westmorland, 3 December 2001). In primary forest near the upper entrance, of Windor Cave (Trelawny, 2 and 3 December 2001), and in late secondary stands around Portland Caves 9 (Clarendon, 9 December 2001). Despite extensive work by H.E. Anthony (Koopman and Williams, 1995; Williams, 191920) and ongoing surveys (Suwan Koenig pers. comm.) at Windor Cave and even more so at the first live record of this species at this locality, it is also the first record for the Cayo-Island Monroe area. Several cave-past specimens (AMNH 262832, 262894, see Fincham, 1989!) had been collected from Portland Ridge (Clarendon) but no live Artes had been recorded since then. After our survey, S. Konig mist-netted another individual flying close to the ground in front of the upper entrance of Windor Cave (pers. comm.).

In 2001 we also documented three new localities for the poorly known and threat­ ened, Jamaican endemic Artibeus fluoroscentes (Hilton-Taylor, 2000). We found the species in early secondary stands outside the Monroe Cave entrance (Westmorland, 3 December 2001), in primary forest near the upper entrance, of Windor Cave (Trelawny, 2 and 3 December 2001), and in late secondary stands around Portland Caves 9 (Clarendon, 9 December 2001). Despite extensive work by H.E. Anthony (Koopman and Williams, 1995; Williams, 191920) and ongoing surveys (Suwan Koenig pers. comm.) at Windor Cave and even more so at the first live record of this species at this locality, it is also the first record for the Cayo-Island Monroe area. Several cave-past specimens (AMNH 262832, 262894, see Fincham, 1989!) had been collected from Portland Ridge (Clarendon) but no live Artes had been recorded since then. After our survey, S. Konig mist-netted another individual flying close to the ground in front of the upper entrance of Windor Cave (pers. comm.).

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