

A NEW SPECIES OF *SIPHONORHIS* FROM
QUATERNARY CAVE DEPOSITS IN
CUBA (AVES: CAPRIMULGIDAE)

Storrs L. Olson

Abstract.—A new species of nightjar, *Siphonorhis daiquiri*, is described from Quaternary cave deposits in eastern and central Cuba. It is intermediate in size between the other two species in the genus, *S. americana* of Jamaica, and *S. brewsteri* of Hispaniola. Because these elusive nocturnal birds are difficult to detect, it is possible that this species is still extant in the ornithologically poorly explored arid regions of eastern Cuba.

The distinctive nightjars of the genus *Siphonorhis* are among the lesser known elements of the Antillean avifauna. The Jamaican species, *S. americana*, is perhaps the rarest of caprimulgids, being known only from four recent specimens (Olson and Steadman 1977) and now presumed extinct. Nevertheless, *S. americana* has been recognized practically from the inception of scientific ornithology. It is the *Caprimulgus americanus* of Linnaeus (1758), the name being intended to compare with *C. europaeus*, the only other species of *Caprimulgus* then recognized. Linnaeus based his name on Sir Hans Sloane's description of the "small wood-owle," first published by Ray (1678) from Sloane's notes, and later by Sloane (1707) himself, along with an illustration.

Such a bird was unknown to Gosse (1847), the next chronicler of Jamaica's birdlife, and it was later questioned whether Sloane's bird had actually come from that island. Cassin (1851) reviewed the whole question in detail, concluding that a caprimulgid, which he referred to the genus *Nyctidromus*, indeed inhabited Jamaica. It was not until 1859, however, when the collector Osburn succeeded in obtaining two specimens, that the true nature of the species was revealed. With these specimens at hand, Sclater (1861) determined that *C. americanus* was quite distinct from other caprimulgids and he therefore proposed a new genus, *Siphonorhis*, for it. Sclater, followed by a number of other authors, used the spelling *Siphonorhis americanus*, but the generic name is feminine in gender, so the specific name must be rendered *americana*. Because of the long, bare tarsus, Sclater, too, considered *Siphonorhis* to be closely related to the mainland genus *Nyctidromus*.

In 1917, at Túbano, in the Dominican Republic, Rollo Beck obtained a single specimen of a new species of caprimulgid with obvious affinities to *Siphonorhis*. This was described in a new genus by Chapman (1917) as *Microsiphonorhis brewsteri*. The species is now known to be fairly widely distributed on Hispaniola (Bond 1928a; Wetmore and Swales 1931; Dod 1979). Bond (1928b) regarded Chapman's characters for *Microsiphonorhis* to be inconsistent and he placed *brewsteri* in *Siphonorhis*. Wetmore (Wetmore and Swales 1931) concurred in this and the genus *Microsiphonorhis* has since seldom been considered valid. Peters (1940) listed *brewsteri* as a subspecies of *S. americana*, but this unsupported view is not tenable (Olson and Steadman 1977).



Fig. 1. Distal half of right tarsometatarsus, holotype of *Siphonorhis daiquiri*, new species (USNM 336506). A, Anterior view; B, Posterior view. 6× natural size.

The absence of the genus *Siphonorhis* in Cuba has not drawn comment from ornithologists, possibly because several other birds have a similar pattern of distribution, being found in Hispaniola and Jamaica but not in Cuba, viz: cuckoos of the genus *Hyetornis*, the potoo *Nyctibeus griseus*, and the swallow *Kalochelidon euchrysea*. Whatever the cause may be for the distributional patterns of those species, the pattern of *Siphonorhis* is the result of its having been overlooked in Cuba, for fossil remains from two cave deposits now prove the existence of a hitherto unrecognized species of *Siphonorhis* on that island.

Comparative material examined.—The fossil specimens were compared with Antillean genera of Caprimulgidae and most genera of the Neotropical mainland. No skeletons exist for *Caprimulgus cubanensis*, which is endemic to Cuba and Hispaniola, but this species is much larger than the fossil form under consideration here. Likewise, there are no entire skeletal specimens of either *Siphonorhis americana* or *S. brewsteri*, a lack I was able to make up for in part with bones removed from a skin of *S. brewsteri* (USNM 354527, Gonave Island, Haiti), including a

nearly intact skull and mandible, tibiotarsus, tarsometatarsus, distal end of humerus, and proximal end of ulna. These were augmented by a humerus of *S. brewsteri* from a cave deposit in Haiti and humeri of *S. americana* from cave deposits in Jamaica (see Olson and Steadman 1977), as well as a previously unreported distal end of a tarsometatarsus of *S. americana* (UF 68055) from a cave deposit near Wallingford, St. Elizabeth Parish, Jamaica. Other taxa used in the comparisons were *Chordeiles minor*, *Caprimulgus noctitherus*, *C. carolinensis*, *Nyctidromus albicollis*, *Phalaenoptilus nuttallii*, and *Nyctiphrynus ocellatus*.

Order Caprimulgiformes Ridgway
Family Caprimulgidae Vigors
Genus *Siphonorhis* Sclater, 1861

The following characters refer the Cuban fossils to the genus *Siphonorhis*: tarsometatarsus very long and slender, with trochleae splayed far apart and the intertrochlear spaces consequently very wide and deep; humerus with bicapital crest somewhat reduced, with distal margin very straight, presenting a squared appearance, with head more pointed and distinctly set off from ventral tubercle, and brachial depression deep.

Most authors have not departed from the opinions of Cassin and Sclater that *Siphonorhis* is closely related to *Nyctidromus*. However, because *Siphonorhis* is so distinctive in bill morphology, I previously suggested that the long tarsus shared by these two genera was probably an insufficient indication of close relationship, and that *Siphonorhis* may represent an ancient relict of an earlier caprimulgid stock that has been isolated in the West Indies (Olson 1978). The structure and proportions of the tarsometatarsus of *Siphonorhis* are now seen to be quite different from those in *Nyctidromus* (Fig. 2). Furthermore, the skull is also very distinctive in *Siphonorhis*, with the rostrum being much broader, reflecting its external appearance, and the anterior portions of the pterygoids lacking the distinctive expansion seen in *Nyctidromus*. I find no reason to consider *Siphonorhis* and *Nyctidromus* to be closely allied.

Siphonorhis daiquiri, new species
Figs. 1–3

Holotype.—Distal half of right tarsometatarsus, collections of the Department of Paleobiology, National Museum of Natural History, Smithsonian Institution, USNM 336506 (Figs. 1, 2b). Collected 31 Oct 1980 by Storrs L. Olson and others.

Locality.—"Cueva de Los Indios" (see Anthony 1919), on a hillside overlooking the roadstead of the former port of Daiquirí, on the southern coast of what is now the province of Santiago de Cuba (formerly part of Oriente Province), about 22 km ESE of the city of Santiago de Cuba (19°54.8'N, 75°38.6'W).

Chronology.—Quaternary, probably Holocene.

Measurements of holotype.—Length of specimen as preserved, 16.4 mm; shaft width above scar for hallux, 1.4 (1.2 in *S. brewsteri*; 1.9 in *S. americana*); distal width, 3.9 (3.4 in *S. brewsteri*).

Paratypes.—Topotypes collected by Olson and party in 1980 consist of a left coracoid (USNM 336507), proximal ends of right (USNM 336508) and left (USNM

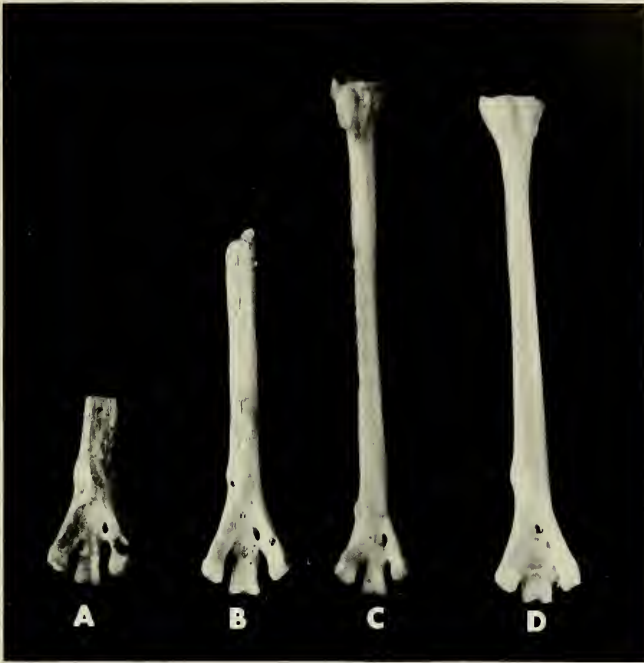


Fig. 2. Right tarsometatarsi in posterior view. A, *Siphonorhis americana* (UF 68055); B, *S. daiquiri*, new species (holotype, USNM 336506); C, *S. brewsteri* (USNM 354527); D, *Nyctidromus albicollis* (USNM 344130). 3× natural size.

336509) humeri, and the proximal end of a left carpometacarpus (USNM 336510). Topotypes collected by H. E. Anthony in 1917 include two right humeri (AMNH 21905, 21906), a right humerus lacking the distal end (AMNH 21907), the proximal end of a right humerus (AMNH 21908), a left humerus lacking the proximal end (AMNH 21909), and a right carpometacarpus lacking the minor metacarpal (AMNH 21904).

Measurements of paratypes.—Humerus: length, 27.4 mm (24.8 in *S. brewsteri*; 31.5 in *S. americana*); shaft width at midpoint 2.0, 2.1, 2.1 (2.1 in *S. brewsteri*; 2.5 in *S. americana*); distal width 5.2, 5.6 (5.0 in *S. brewsteri*; 6.3–6.7 in *S. americana*). Carpometacarpus: length, 15.6; proximal depth, 4.4, 4.9. Length of coracoid, approximately 15.5.

Additional locality and specimens.—In April 1982, E. N. Kurochkin (Paleontological Institute, USSR Academy of Sciences, Moscow) showed me the distal end of a humerus and the proximal end of a tarsometatarsus of this species that he collected in “Cueva de Los Fósiles,” 28.5 km NE of Camagüey, Camagüey Province, Cuba. These were not at hand when the present description was written. The site is approximately 280 km NW of the type-locality.

Etymology.—Named for the former port of Daiquirí, at the type-locality. This was the terminus of a railroad from an iron mine that was still operational at the time of H. E. Anthony’s visit in 1917 (Anthony 1919), but has since been abandoned, there being scarcely a trace of the settlement left. Its name lives on,

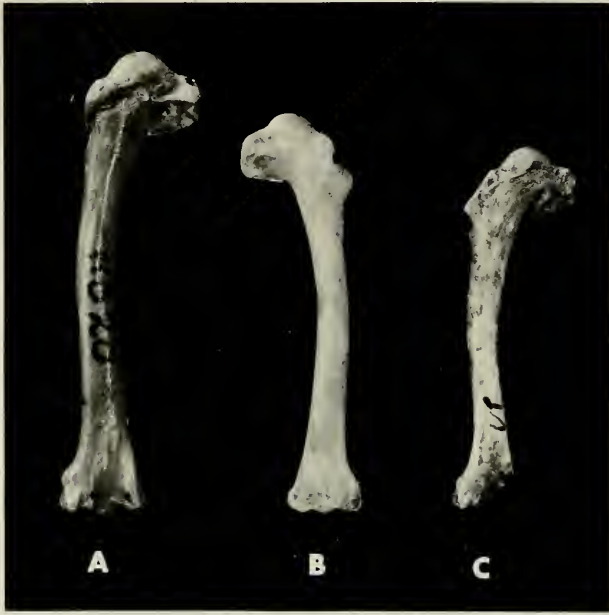


Fig. 3. Humeri in anconal view. A, *Siphonorhis americana* (AMNH 11020); B, *S. daiquiri*, new species (AMNH 21905); C, *S. brewsteri* (USNM 336511). 2× natural size.

however, as a popular rum drink reputed to have been invented by a cyceonologist (Greek, *kykeon*, a mixed drink), who named it after his home town. In the present usage it is a noun in apposition.

Diagnosis.—Larger than *Siphonorhis brewsteri* and smaller than *S. americana*. Scar for hallux more elevated than in the other species of *Siphonorhis* and shaft of tarsometatarsus proportionately more slender than in *S. americana*, being more like that in *S. brewsteri*.

Discussion.—The cave deposits at the type-locality were first discovered and excavated in 1917 by H. E. Anthony, who reported on the mammalian remains (Anthony 1919). I visited the site briefly on 31 October 1980 as part of a joint expedition of the Smithsonian Institution and the Instituto de Zoología, Academia de Ciencias de Cuba. At that time I excavated a small test pit near one wall of the cave, in sediments that proved to be richly fossiliferous.

The abundant bird material in the American Museum collections that Anthony obtained was long neglected and for years had been mislabelled as having come from Puerto Rico, a fact wholly incompatible with the species composition of the sample and unequivocally controverted by the discovery of slips of paper amongst the specimens bearing the notation "Daiquiri." The fossil avifauna as a whole from the Daiquirí cave will be treated elsewhere (Olson and W. Hilgartner, MS.).

As with most fossils from West Indian cave deposits, no firm dates were associated with the specimens of *S. daiquiri*. Both the mammalian (Anthony 1919) and avian (Olson and Hilgartner, MS.) faunas at Daiquirí consist mainly of extant species, with the more notable of the large extinct vertebrates of Cuba (e.g., ground sloths, giant owls, flightless cranes, condors) being absent. The species represented are all of a size compatible with their having been prey of the extant barn owl

Tyto alba, individuals of which still roost in the cave. The fossils are not heavily mineralized. Although some extinct rodents, the extinct insectivores of the genus *Nesophontes*, and even some extinct species of bats (Anthony 1919; Wołoszyn and Silva 1977) are present in the deposits, their disappearance could have taken place during the Holocene, as known for vertebrates in the Lesser Antilles (Steadman et al. 1984). At this point, the deposits can only be assigned to the Quaternary, but I consider it likely that they are post-Pleistocene in age.

Despite the fact that *Siphonorhis daiquiri* is known only from fossil remains, it would be premature to regard it as extinct. Being nocturnal and secretive, caprimulgids are often difficult to detect in life, and the species of *Siphonorhis* may be particularly recondite. As mentioned, Gosse (1847) never met with *S. americana* on Jamaica, although the species still existed in his time. On the ornithologically well-explored island of Hispaniola, *S. brewsteri* was not discovered until 1917. It eluded Wetmore and most subsequent collectors and was considered rare everywhere except Gonave Island, where Bond obtained a series in 1928 (Wetmore and Swales 1931). Since then, however, it has been shown to be fairly generally distributed in the Dominican Republic (Dod 1979). On Jamaica, *S. americana* is presumed to be extinct, and it is unlikely to have survived the plague of mongooses (*Herpestes*) on that island. Mongooses were also introduced to Hispaniola and Cuba but have not achieved the population densities apparent on Jamaica. *Siphonorhis brewsteri* has persisted on Hispaniola, so there is no good reason why *S. daiquiri* should be extinct on Cuba.

The very arid regions of Cuba east of Daiquirí have been relatively little explored ornithologically. Only in 1959 was a distinctive, isolated population of the sparrow *Torreornis inexpectata* discovered in the desert-like area near Baitiquirí (Spence and Smith 1961), and it is doubtful that collectors have spent much time in this region at night to hear any nightjars that might be calling. The rugged, arid landscape in this area is reminiscent of that in parts of the American southwest and in the unfrequented reaches away from the coast *Siphonorhis daiquiri* may still exist.

Acknowledgments

For assistance in the field I am grateful to my fellow expedition members from the Smithsonian, James F. Lynch and Eugene S. Morton. Our success was due to the support we received from the Instituto de Zoología, Academia de Ciencias de Cuba, especially from Fernando Gonzales, Hiram Gonzales, Noel Gonzales, and Nicasio Viña. I am grateful to Charlotte Holton, American Museum of Natural History (AMNH), and S. David Webb, Florida State Museum (UF), for lending fossil specimens of *Siphonorhis*, to William B. Hilgartner for aid in sorting and identifying material from Daiquirí, and to Evgeny N. Kurochkin for permitting me to examine and report on the fossils he collected. J. P. Angle expertly removed the bones from a study skin of *S. brewsteri*. The photographs are by Victor E. Krantz.

Literature Cited

- Anthony, H. E. 1919. Mammals collected in eastern Cuba in 1917. With description of two new species.—Bulletin of the American Museum of Natural History 41(20):625–643, pl. 35–37.
 Bond, J. 1928a. A remarkable West Indian goatsucker.—Auk 45:471–474.

- . 1928b. The distribution and habits of the birds of the Republic of Haiti.—Proceedings of the Academy of Natural Sciences of Philadelphia 80:483–521.
- Cassin, J. 1851. Notes of an examination of the birds composing the family Caprimulgidae, in the collection of the Academy of Natural Sciences of Philadelphia.—Proceedings of the Academy of Natural Sciences of Philadelphia 5:175–190.
- Chapman, F. M. 1917. Descriptions of new birds from Santo Domingo and remarks on others in the Brewster-Sanford collection.—Bulletin of the American Museum of Natural History 37: 327–334.
- Dod, A. S. 1979. The Least Pauraque in the Dominican Republic.—American Birds 33:826–827.
- Gosse, P. H. 1847. The birds of Jamaica. London, John van Voorst. 447 pp.
- Linnaeus, C. 1758. Systema naturae. 10th edition. Volume 1. Stockholm, Laurentius Salvius. 824 pp.
- Olson, S. L. 1978. A paleontological perspective of West Indian birds and mammals. In Frank B. Gill, ed., Zoogeography in the Caribbean. The 1975 Leidy Medal Symposium.—Academy of Natural Sciences of Philadelphia Special Publication 13: iii + 128 pp., pp. 99–117.
- , and D. W. Steadman. 1977. A new genus of flightless ibis (Threskiornithidae) and other fossil birds from cave deposits in Jamaica.—Proceedings of the Biological Society of Washington 90(2):447–457.
- Peters, J. L. 1940. Check-list of birds of the world. Volume 4. Cambridge, Massachusetts, Harvard University Press. 291 pp.
- Ray, J. 1678. The ornithology of Francis Willughby. London, John Martyn. 441 pp.
- Sclater, P. L. 1861. List of a collection of birds made by the late Mr. W. Osburn in Jamaica, with notes.—Proceedings of the Zoological Society of London 1861:69–82, plate 14.
- Sloane, H. 1707. A voyage to the islands Madera, Barbados, Nieves, S. Christophers and Jamaica, with the natural history of the herbs and trees, four-footed beasts, fishes, birds, insects, reptiles, &c. of the last of those islands; to which is prefix'd an introduction, wherein is an account of the inhabitants, air, waters, diseases, trade, &c of that place, with some relations concerning the neighbouring continent, and islands of America. 2 volumes. London, printed for the author. 9 + 274 pp.
- Spence, M. J., and B. L. Smith. 1961. A subspecies of *Torreornis inexpectata* from Cuba.—Auk 78: 95–97.
- Steadman, D. W., G. K. Pregill, and S. L. Olson. 1984. Fossil vertebrates from Antigua: evidence for late Holocene human-caused extinctions in the West Indies.—Proceedings of the National Academy of Sciences U.S.A. 81:4448–4451.
- Wetmore, A., and B. H. Swales. 1931. The birds of Haiti and the Dominican Republic.—United States National Museum Bulletin 155, 483 pp.
- Wołoszyn, B. W., and G. Silva Taboada. 1977. Nueva especie fósil de *Artibeus* (Mammalia: Chiroptera) de Cuba, y tipificación preliminar de los depósitos fosilíferos Cubanos contentivos de mamíferos terrestres.—Poeyana 161:17 pages, 5 figures.

Department of Vertebrate Zoology, National Museum of Natural History,
Smithsonian Institution, Washington, D.C. 20560.