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A NEW BAT OF THE GENUS *ARTIBEUS* FROM THE LESSER ANTILLEAN ISLAND OF ST. VINCENT

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The presence on the Island of St. Vincent of large fruit-eating bats of the genus *Artibeus* long has been known (Andersen, 1908, and Allen, 1911, for example). There has been some controversy, however, as to which of the species *A. jamaicensis* and *A. lituratus* actually occur there. As late as a decade ago, Koopman (1968), who correctly recognized that *lituratus* apparently extends no farther northward in the Lesser Antillean chain than St. Vincent as opposed to the claim of Hershkovitz (1949), did not believe that *jamaicensis* occurred on the island. Koopman's (p. 6) discussion of the distribution of *Artibeus* in the region terminated as follows: "Thus in the Lesser Antilles, we have *A. j. jamaicensis* moving southward and reaching Barbados, *A. j. trinitatis* moving northward and reaching Grenada, but neither subspecies reaching St. Vincent, which is occupied only by the related *A. lituratus*."

In August of 1967, Carleton J. Phillips and I collected a series of *Artibeus* on St. Vincent (Jones and Phillips, 1970) consisting mostly of *jamaicensis*, but in which *A. lituratus* evidently also is represented, confirming for the first time that the two occur together on that island as they do on Grenada, Trinidad, and on much of the tropical American mainland. Recent field work in the Lesser Antilles also supports the contention that *lituratus* does not inhabit islands to the north of St. Vincent.

Over much, if not all, of the sympatric distribution of the species *jamaicensis* and *lituratus*, the former is the smaller of the two.

This is not the case on St. Vincent, however, in that most specimens of *jamacensis* are as large as, or larger than, *lituratus*, a situation that has resulted, I suspect, in the identification in museum collections as *lituratus* of some bats from St. Vincent that actually represent *jamaicensis*. In any event, St. Vincent specimens of the latter are conspicuous by their large external and cranial dimensions and represent a distinctive population of the species, which is named and described below.

Artibeus jamaicensis schwartzi, new subspecies

Holotype.—Adult male, skin and skull, no. 110176 Museum of Natural History, The University of Kansas; obtained at Mesopotamia, 350 ft., Charlotte Parish, St. Vincent, on 24 August 1967 by J. Knox Jones, Jr., original no. 5392.

Distribution.—Known only from St. Vincent, Lesser Antilles.

Description.—Size large, both externally and cranially (see measurements and Table 1); coloration much as in other Antillean populations of *A. jamaicensis*, varying dorsally overall from dark brownish to grayish brown, hairs over shoulders white or pale based resulting in a "collar" on most specimens that is paler to the eye than the pelage of the head or that farther back on the dorsum; facial stripes grayish white, indistinct; venter dark brownish, washed with gray (individual hairs pale basally, dark subterminally, and with whitish or grayish tips); wings brownish, paler at the tip.

Skull large and massive, lacking distinct supraorbital shield typical of *A. lituratus*; third upper molar absent in all but a few specimens.

Measurements.—Measurements (in millimeters) of the holotype are as follows: length of head and body, 90; length of hind foot, 21; length of ear, 23; length of forearm, 62.8; greatest length of skull (including incisors), 31.3; condylobasal length, 27.1; zygomatic breadth, 19.8; postorbital constriction, 7.2; mastoid breadth, 16.3; length of maxillary toothrow, 11.0; breadth across upper molars, 15.0. See also Table 1.

Remarks.—The new subspecies, which clearly represents *jamaicensis* among currently recognized species of *Artibeus*, differs from *A. j. trinitatis* from Grenada and Trinidad to the south in being much larger and in typically lacking the third upper molar. It differs from *A. j. jamaicensis*, which occurs throughout much of the Antilles south to St. Lucia and Barbados, in averaging considerably larger (see Table 1); actually the smallest adult specimens

TABLE 1.—Morphometrics of three subspecies of *Artibeus jamaicensis* from the southern Lesser Antilles and Trinidad. Sample sizes in parentheses.

Measurement	<i>jamaicensis</i>			<i>schwartzii</i>		<i>trinitatis</i>	
	Barbados	St. Lucia	St. Vincent	Grenada	Trinidad		
Length of forearm	58.9 (55.6-62.1) (7)	60.1 (56.5-64.0) (11)	63.4 (60.2-67.4) (29)	58.1 (55.8-60.5) (23)	56.9 (53.5-61.1) (35)		
Condylobasal length	25.3 (24.9-26.1) (7)	26.1 (25.4-26.7) (15)	27.3 (26.2-28.6) (36)	25.0 (24.7-25.8) (15)	24.4 (23.9-25.2) (20)		
Zygomatic breadth	17.6 (17.2-17.9) (7)	17.7 (17.1-18.1) (15)	19.4 (17.9-20.6) (36)	17.5 (17.1-18.2) (15)	17.2 (16.5-18.5) (20)		
Mastoid breadth	14.9 (14.3-15.2) (7)	15.3 (14.6-15.9) (15)	16.2 (15.2-17.8) (36)	15.0 (14.4-15.8) (15)	14.9 (14.3-15.8) (15)		
Postorbital constriction	7.2 (6.9- 7.5) (7)	7.2 (6.8- 7.5) (15)	7.3 (6.9- 7.6) (36)	7.1 (6.8- 7.4) (15)	6.8 (6.5- 7.2) (15)		
Length of maxillary tooththrow (C-M2)	10.1 (10.0-10.3) (7)	10.4 (9.9-11.0) (15)	10.9 (10.1-11.5) (36)	10.0 (9.8-10.3) (15)	9.7 (9.4-10.1) (15)		
Per cent M3 present	0(7)	0(17)	10(39)*	94(18)	100(40)*		

*Two specimens each from St. Vincent and Trinidad possess M3 on one side only.

of *schwartzi* overlap in size the largest *jamaicensis* I have examined from Lesser Antillean islands to the north of St. Vincent, but average size clearly separates *schwartzi* from *jamaicensis*, and the largest specimens of *schwartzi* are among the largest reported for the genus *Artibeus*.

Magnitude of extremes in external and cranial measurements in the available series of *schwartzi* exceed somewhat those in other Antillean samples of the species (Fig. 1 and Table 1), but nonetheless are not especially great. Measurements from all specimens form continuous series, individually or when plotted against some other measurement, and no morphologic features suggest that more than a single taxon is represented among the bats here identified as belonging to the species *jamaicensis*.

A. j. schwartzi differs most notably from *A. lituratus* in lacking a well-developed orbital shield, in the absence of a conspicuous fringe of hairs at the median point along the posterior border of the uropatagium, and in having indistinct facial stripes and a grayish wash on the belly (see especially Davis, 1970). In this instance, comparisons were made with specimens of *A. l. palmarum* from Trinidad and one skull identified as representing that race from St. Vincent among specimens collected in 1967. As an aside, museum curators long have recognized that a large percentage of adults of the *jamaicensis-lituratus* group in their collections can be identified on the basis of whether their skulls fit easily into a standard vial of 21 to 22 millimeters in diameter (*jamaicensis*) or whether they fit into such vials with some difficulty or not at all (*lituratus*). Of the 39 skulls examined of *A. j. schwartzi*, as an indication of its size, only 12 can be stored in the standard small vial, including three that are less than fully adult.

Two skulls examined have a small third upper molar on each side and two more have that tooth on one side. Because *A. j. trinitatis* typically possesses the M3 (Table 1) and this tooth is almost invariably lacking in populations of *A. j. jamaicensis*, Jones and Phillips (1970) thought the presence of M3 in some individuals of *schwartzi* possibly indicated "at least some genetic influence from the south." In all other respects, however, *schwartzi* would seem to be most closely related to Antillean populations to the north of St. Vincent. A third molar is lacking on one side in the lower jaw of one specimen.

Bats collected in August 1967 were trapped in mist nets set in banana groves, near fruit trees in a residential area, and in clearings

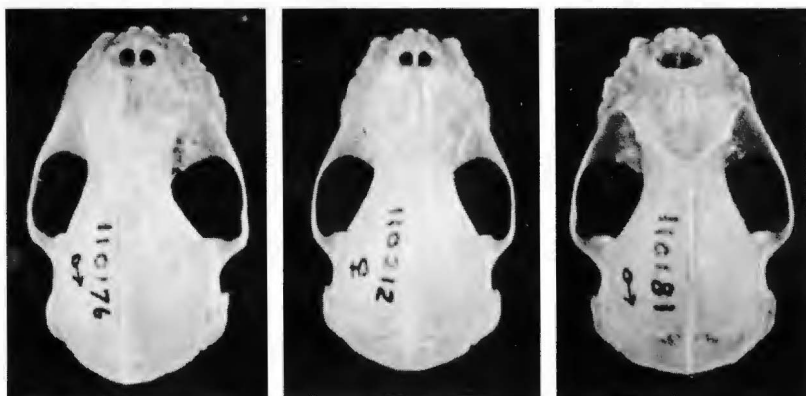


FIG. 1.—Dorsal view, from left to right, of skulls of: the holotype (KU 110176 ♂) of *Artibeus jamaicensis schwartzi*, which is among the larger specimens, but not the largest, in the sample representing the new subspecies; a smaller individual (KU 110212 ♀), but not the smallest in the same sample; and the one *Artibeus lituratus palmarum* (KU 110181 ♂) taken on St. Vincent in 1967 (note the well-developed orbital shield). Greatest length of skull of the holotype is 31.3 millimeters.

near trees or banana plants. No females taken (late August) evinced reproductive activity. However, one juvenile and two subadult animals were collected. Testes of adult males ranged in length from 8.5 to 11 millimeters.

I take pleasure in naming the new subspecies for my colleague, Albert Schwartz, in recognition of his many contributions to Antillean biology. I am grateful to coworkers Robert J. Baker and Dilford C. Carter, who independently concurred in the identification of specimens from St. Vincent.

Specimens examined (48, all from St. Vincent).—Clifton Hill, 400 ft., St. George Parish, 25 (KU 110178-80, 110182-203); Kingstown, 150 ft., St. George Parish, 11 (KU 110204-14); Mesopotamia, 350 ft., Charlotte Parish, 2 (KU 110176-77); Ratho Mill, St. George Parish, 10 (KU 112005, A. Schwartz coll. 5310, 5320-24, 5326-27, 5329).

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