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Monophyllus plethodon.

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Monophyllus plethodon Miller, 1900
Lesser Antillean Long-tongued Bat

Monophyllus plethodon Miller, 1900:35. Type locality St. Michaels Parish, Barbados.

Monophyllus luciae Miller, 1902:411. Type locality St. Lucia.

Monophyllus frater Anthony, 1917:565. Type locality Cueva Catedral, near Morovis, Puerto Rico (known only as a fossil).

CONTEXT AND CONTENT. Order Chiroptera, Family Phyllostomatidae, Subfamily Glossophaginae. The genus *Monophyllus* includes two species, *M. redmani* and *M. plethodon*. Three subspecies of the latter currently are recognized (Schwartz and Jones, 1967):

M. p. plethodon Miller, 1900:35, see above.

M. p. luciae Miller, 1902:411, see above.

M. p. frater Anthony, 1917:565, see above, known only as a fossil.

DIAGNOSIS. Size large for genus, both externally and cranially; upper premolars relatively crowded, separated by diastema less than half of length of first premolar (see key and figure 1 in Mammalian Species no. 57); pelage brownish to pale buffy tan. The dental formula for the genus is i 2/2, c 1/1, p 2/3, m 3/3, total 34. The skull and lower jaw of *M. plethodon* are illustrated in Figure 1, and a photograph of a living individual is reproduced in Figure 2.

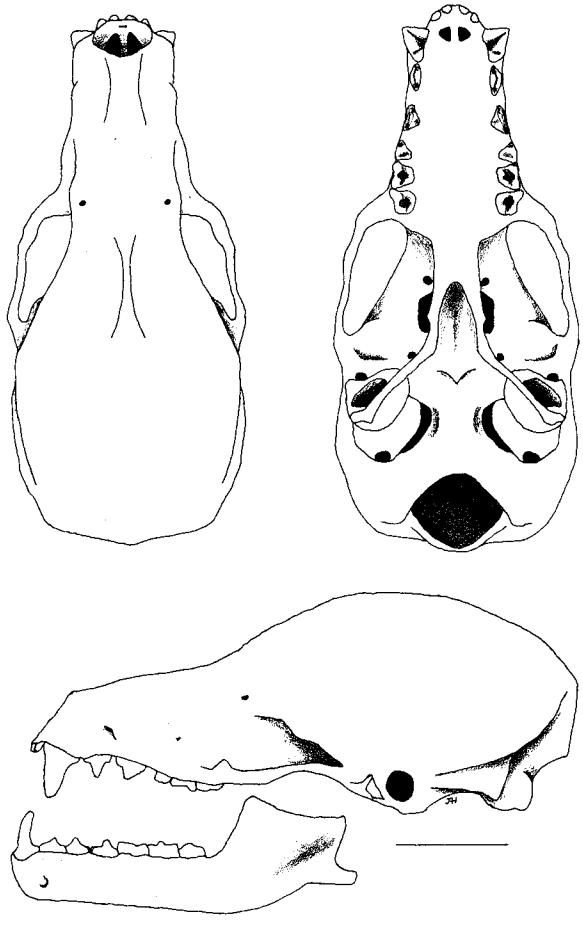

FIGURE 1. Dorsal, ventral, and lateral views of skull, and lateral view of lower jaw of *Monophyllus plethodon luciae*, male, TTU 9337, from Clarke Hall Estate, Dominica. Scale at lower right represents 5 mm. Illustration by J. A. Homan.

GENERAL CHARACTERS. Ranges in external and cranial measurements (in millimeters) of Lesser Antillean representatives are as follows (after Schwartz and Jones, 1967:8–9): total length, 67 to 84; length of tail, 8 to 16; length of hind foot, 12 to 15; length of forearm, 38.8 to 45.7; greatest length of skull, 21.4 to 24.2; condylobasal length, 19.5 to 22.6; zygomatic breadth, 9.8 to 11.0; postorbital constriction, 4.5 to 5.0; mastoid breadth, 9.4 to 10.5; length of maxillary toothrow, 7.2 to 8.5. The fossil *M. p. frater* evidently was slightly larger than are Recent representatives of the species (see selected measurements in Choate and Birney, 1968:406).

Weights of males from Dominica ranged from 13.8 to 17.2 g, those of females (some gravid) from 12.5 to 17.0.

DISTRIBUTION. This long-tongued bat is recorded from Puerto Rico (*M. p. frater*, a fossil) and the Lesser Antilles (see figure 3). *M. p. plethodon* is known to occur only on Barbados, whereas *M. p. luciae* has been reported from the islands of Anguilla, Barbuda, Antigua, Dominica, St. Lucia, and St. Vincent (Jones and Phillips, 1970). Known altitudinal distribution on Dominica is from sea level to 550 m (Schwartz and Jones, 1967).

FOSSIL RECORD. As noted above, *M. p. frater* is known only from fossil cave deposits on Puerto Rico (Anthony, 1917, 1925; Choate and Birney, 1968).

FORM AND FUNCTION. The only information on form in this species is that provided by Phillips (1971) in his detailed study of teeth of glossophagine bats. Among other things, he noted an instance of anodontia in a female from St. Lucia (second lower incisors lacking) and partial duplication of the third lower premolar in the same specimen. Phillips also

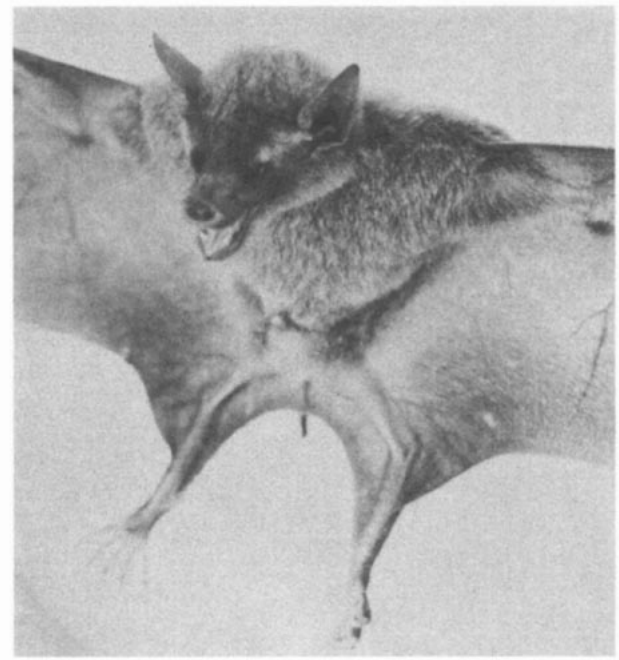

FIGURE 2. Photograph of living *Monophyllus plethodon*, courtesy of R. J. Baker.

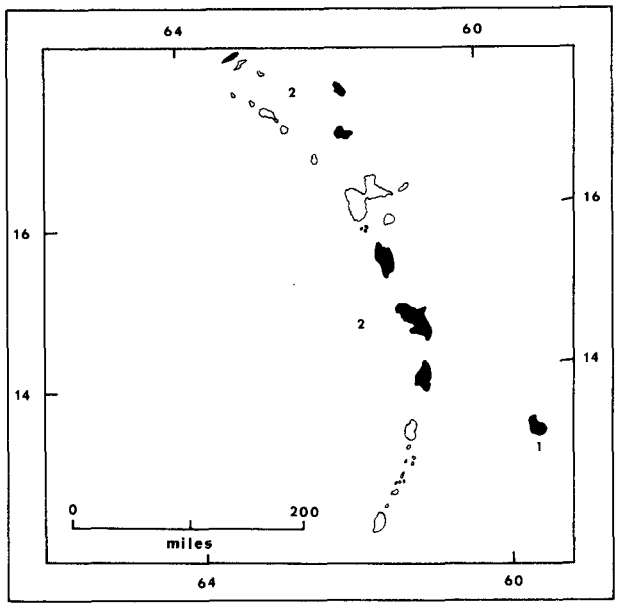

FIGURE 3. Distribution in the Antillean region of subspecies of *Monophyllus plethodon*: 1, *M. p. plethodon*; 2, *M. p. luciae*. *M. p. frater* is known only as a fossil in Puerto Rico and its distribution is not mapped.

found that "individual teeth in this species are lost [in life] more frequently" than is the case in *Monophyllus redmani*.

An individual held overnight in a cloth sack on Dominica by Jones had a rectal temperature of 30.5°C when quiescent in the morning, but the temperature rose to 35.2°C after five minutes of non-flight activity.

ECOLOGY. Specimens have been collected in a variety of situations on the islands in the Lesser Antilles (see Schwartz and Jones, 1967). A specimen was taken along with *Artibeus jamaicensis* in a mist net stretched between buttresses under a bridge in a large gully on Barbados; the area was described as a steep and wooded ravine near sugar cane fields. One was found dead at the mouth of a cave situated at the bottom of a wooded sink on Barbuda and four were netted in a cave located in a xeric area near English Harbor, Antigua.

On the island of Dominica, specimens were trapped in nets set in banana groves, across a trail that separated woodlands from a *Theobroma* grove, over part of the Layou River, and in a net stretched across a montane stream in dense rain forest; one specimen was found dead near the entrance to a small cave along the coast near Mahaut (Schwartz and Jones, 1967:14–15). Other bats taken in mist nets with *M. plethodon* on Dominica were *Artibeus jamaicensis*, *Brachyphylla cavernarum*, *Sturnira angeli*, *Myotis dominicensis*, and *Ardops nichollsi*. Howes (1930) also reported taking one individual in a cave on the island.

Females taken on Dominica between 24 March and 22 April were gravid. Crown-rump length of fetuses varied from 17 to 24 mm, the larger fetuses on the later dates. Males taken at the same time had testes 4.0 to 4.5 mm long. Only one young at a time is born to a female (Schwartz and Jones, 1967:15).

A specimen taken on St. Vincent in 1967 harbored as yet unreported mites of the families Spinturnicidae and Spelaeorhynchidae and an undescribed species of bat fly of the genus *Trichobius*. Mites and bat flies also were collected by Jones from *M. plethodon* on Dominica in 1966.

REMARKS. *M. plethodon* undoubtedly will be found on at least the larger of the Lesser Antillean islands from which it is not as yet known. It is closely related to *M. redmani* of the Greater Antilles as discussed in the preceding account of that species.

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