

## A small Collection of Bats from Selangor, Malaya

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THE CHICAGO NATURAL HISTORY MUSEUM recently received, as a gift from J. L. Harrison<sup>1</sup> of Kuala Lumpur, a small collection of bats in spirit. The collection numbers sixty-three specimens, representing six species of the genera *Rhinolophus* and *Hipposideros*, from several localities, all in the vicinity of Kuala Lumpur, Selangor. These are among the commonest of Malayan bats, but two of the forms represented by large series in the present collection have never been adequately described.

Hair colors are described from specimens temporarily dried by working fine saw-dust through the hair and then blowing a stream of compressed air through it. Skulls of several specimens were removed and cleaned. In species represented by large series, skulls were removed from individuals of both sexes and representing the size range of the series.

### *Rhinolophus sedulus edax* Andersen

*Rhinolophus edax* Andersen, 1918, *Ann. Mag. Nat. Hist.*, (9) 2: 378—Singapore.

*Rhinolophus sedulus edax* Chasen, 1940, *Bull. Raffles Mus.*, 15: 40.

General color dark brown above and below, nose leaf heavily pigmented. Forearm 38; skull, front of canine to condyle 16.6, zygomatic breadth 9.5, canine to rear of last upper molar, 7.0.

This specimen, an adult male, is considerably smaller than the measurements given by Andersen (forearm 48.5–50, canine to last upper molar 8.4–8.5), but agrees with *sedulus* in all other respects. Dimensions are closer to those of *R. s. sedulus* of Borneo than to *edax*.

*Specimens examined*.—Bukit Lagong Forest Reserve, Selangor (1).

### *Rhinolophus trifolius trifolius* Temminck

*Rhinolophus trifolius* Temminck, 1834, *Tijdschr. Nat. Geschied. Physiol.*, 1: 24—Java.

*Rhinolophus trifolius trifolius* Chasen and Kloss, 1931, *Bull. Raffles Mus.*, 6: 47.

Both specimens are adult males. The coloration lacks the 'drab' or 'dirty buff' character usually described for this species. One specimen is buffy brown above, paler on the head, and buff washed with pale brown below; lips and chin buff. The second individual is paler, almost golden brown above, and buff below. Hairs slightly paler at base in both specimens. Nose leaf unpigmented.

Forearm 50.5, 50.8; canine to condyle 19.0, 20.2; zygomatic breadth 11.2, 11.6; canine to rear of last upper molar 8.5, 8.6.

*Specimens examined*.—Kepong Forest Reserve, Selangor (2).

### *Hipposideros armiger debilis* Andersen

*Hipposideros armiger debilis* Andersen, 1906, *Ann. Mag. Nat. Hist.*, (7) 17: 37—Province Wellesley (= mainland opposite the Island of Penang) Malayan Federation.

<sup>1</sup> Dr. J. L. Harrison, formerly Zoologist at the Institute of Medical Research, Kuala Lumpur (1948–58).

This form is sufficiently characterized by its large size, which exceeds that of any other Malayan species of *Hipposideros*. The single specimen exhibits all the characters of the species and subspecies as given by Andersen. Color reddish brown above and below, the hairs darkest at the tips. Nose leaf agreeing with Andersen's description, slightly pigmented.

The skull is badly damaged but exhibits the characters described by Andersen: nasals not inflated, a foramen in center of nasofrontal region, infraorbital foramen wider than in *H. diadema*. The middle of the zygomatic arch is broader vertically than in *H. diadema*.

Foreman 95.5, tail 54, tibia 42.5.

*Specimens examined*.—Batu Cave, near Kuala Lumpur, Selangor, one adult male in alcohol.

#### ***Hipposideros diadema vicarius* Andersen**

*Hipposideros diadema vicarius* Andersen, 1905. *Ann. Mag. Nat. Hist.* (7) 16: 499.—Niah Cave, Sarawak.

Forearm 81, tail 47, tibia 35.5. Skull, canine to condyle length 28.5, zygomatic breadth 18, front of canine to rear of last molar 13.2.

*Specimens examined*.—Kepong Forest Reserve, one adult male.

#### ***Hipposideros gentilis atrox* Andersen**

*Hipposideros gentilis atrox* Andersen, 1918. *Ann. Mag. Nat. Hist.*, (9) 2: 380—Semangko Pass, Selangor-Pahang Boundary, Malayan Federation.

The species *gentilis*, along with several subspecies including *atrox*, was proposed by Andersen in a key. Evidently this preliminary diagnosis was intended to be followed later by more detailed descriptions. These descriptions never appeared, and the forms of *gentilis* are still very inadequately known. The present series of *atrox* was taken not far from the type locality, and may be considered essentially topotypic.

Color of upper parts brown, but with buff undercoloring showing through in irregular patches; individual hairs buff through most of their length, with brown tips. Under parts buff washed with brown. Face buffy brown, chin buff. Nose leaf small and slightly pigmented, without lateral leaflets, its upper part divided into four cells by three vertical ridges.

Mean and extreme length of forearm in nineteen adult males 43.7 (42.5–45.5), in nine adult females 44.1 (43.3–45.3). These measurements are entirely within the range given by Andersen. Five skulls (4 males, 1 female) measure: condyle to front of canine 16.1 (15.9–16.2), zygomatic breadth 9.6 (9.6–9.7), front of canine to rear of last upper molar 6.7 (6.6–6.9). First upper premolar minute, displaced from toothrow, canine and second premolar in contact. First lower premolar large, more than half the height of second premolar, cuspidate.

*Specimens examined*.—Total 37. Kepong Forest Reserve (23), Bukit Lagong Forest Reserve (13), Ulu Langat Forest Reserve (1).

#### ***Hipposideros galeritus galeritus* Cantor**

*Hipposideros galeritus* Cantor, 1846, *Jour. Asiatic Soc. Bengal*, 1846: 183—Penang.

The species *galeritus* is immediately distinguishable from other Malayan species of *Hipposideros* by the presence of a median spine on the posterior edge of the bony palate.

General color of upper parts dark brown, with buff basal portions of hairs showing through. The anterior half of the body is distinctly paler than the posterior half, the colors of the two regions sharply separated. Under parts buffy washed with brown, the hairs buffy terminally and brown at base. Face brown, chin buff, without tubercles. Nose leaf small, unpigmented, with two small secondary leaflets, its upper part divided into four cells by three vertical ridges.

Mean and extreme length of forearm in nine adult males 49.4 (48.4–50.5), in eight adult females 49.9 (49.0–51.0). Five skulls (3 males, 2 females) measure: condyle to front of canine 16.2 (16.0–16.3), zygomatic breadth 10.2 (10.0–10.3), front of canine to rear of last upper molar 6.7 (6.6–6.8). First upper premolar minute, displaced from toothrow, canine and second premolar in contact. First lower premolar large, more than half the height of second premolar, cuspidate. One skull, an adult female, has two upper incisors on each side.

*Specimens examined.*—Total 21. Kepong Forest Reserve (16), Bukit Lagong Forest Reserve (4), Ulu Langat Forest Reserve (1).