

# DESCRIPTIONS OF FIVE NEW PHYLLOSTOME BATS.

BY GERRIT S. MILLER, JR.

The greater part of the material on which are based the descriptions of the following five new bats is contained in the United States National Museum, and the descriptions are published here by permission of the Secretary of the Smithsonian Institution. An important collection from Jamaica, sent by the Museum of the Institute of Jamaica to the United States Department of Agriculture, and submitted to me for determination by Dr. C. Hart Merriam, includes topotypes of the little known *Natalus micropus* Dobson, and the unique type of *Reithronycteris aphylla*. The type and only known specimen of *Glossophaga longirostris* forms part of a small collection of bats made by Mr. W. W. Brown, Jr., at Santa Marta, Colombia, and referred to me for identification by Mr. Outram Bangs. Series of specimens from each of these collections are to be presented to the National Museum.

## CHILONATALUS subgen. nov. (Natalinæ).

Type *Natalus micropus* Dobson.

*Subgeneric characters.*—Similar to typical *Natalus* Gray, but with conspicuous dermal outgrowths on chin and above nostrils. These outgrowths, as pointed out by Dobson, produce a strong resemblance to *Chilonycteris*. Males with a large glandular swelling on forehead, between and slightly in front of eyes (figure 1).

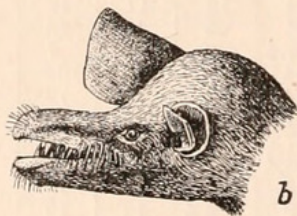
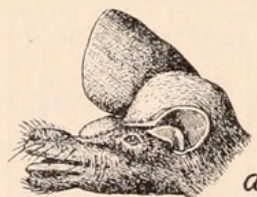


Fig. 1.—Head of *Chilonatalus* (a) and *Natalus* (b), left ear removed. (Slightly enlarged).

*General remarks.*—*Natalus micropus* and *N. brevimanus* differ so remarkably from the other members of the genus that they must be regarded as forming at least a distinct subgenus. The form of the glandular elevation above the nostrils and the apparently double lower lip, taken in connection with the other characters pointed out by Harrison Allen in which the *Natalinæ* resemble *Chilonycteris* and *Mormoops*, may indicate a closer relationship between the two groups than has heretofore been suspected.



TABLE OF MEASUREMENTS OF NATALUS MICROPUS AND N. BREVIMANUS.

Name.	Locality.	Number.	Sex.	Total length.	Tail vertebre.	Tibia.	Foot.	Forearm.	Thumb.	Second finger.	Third finger.	Fourth finger.	Fifth finger.	Ear from meatus.	Ear from crown.	Tragus.
<i>N. micropus</i> .....	Jamaica.		♂	80	47	18	7	34	4	34	65	48	48	11.4	11	4
<i>N. micropus</i> .....	Jamaica.		♂	82	44	16.4	7	32	4	32	63	48	48	13	11	4.6
<i>N. micropus</i> .....	Jamaica.		♂	84	47	16.8	7	34	4.4	34	64	47	48	13	11	4.4
<i>N. micropus</i> (average).....	Jamaica.		♂	82	46	17	7	33.3	4.1	33.3	64	47.9	48	12.3	11	4.3
<i>N. brevimanus</i> .....	Old Providence.	15,803	♂	81	44	15	7	31	4	32	57	42	43	14	12	4.6
<i>N. brevimanus</i> .....	Old Providence.	15,821	♂	86	45	15	7	32	4	32	60	45	45	14	12	4.4
<i>N. brevimanus</i> .....	Old Providence.	15,823	♂	87	48	15	6.8	33	3.8	33	61	45	46	14.4	11.8	4
<i>N. brevimanus</i> .....	Old Providence.	15,824	♂	87	45	15	6	32.6	4	32.4	60	45	45	13	12	4
<i>N. brevimanus</i> .....	Old Providence.	15,825	♂	83	45	15	6.4	33.4	4	33	60	45	45	14	11	5
<i>N. brevimanus</i> .....	Old Providence.	15,832	♂	81	44	15	6	32	3.8	32.4	57	42	44	14.2	12	4.4
<i>N. brevimanus</i> .....	Old Providence.	15,835	♂	84	45	15	6.4	31.4	4	31	56	41	44	14	11.8	4.4
<i>N. brevimanus</i> .....	Old Providence.	15,844	♂	87	46	16	6	32.4	4	32	58	44	44	13	12	4.6
<i>N. brevimanus</i> .....	Old Providence.	15,854	♂	84	47	15	7	32	4	32.6	58	42	43.6	14	11.6	4.4
<i>N. brevimanus</i> .....	Old Providence.	15,855	♂	88	45	15	6.6	32	4	32.6	59	44	45	14	12	4
<i>N. brevimanus</i> .....	Old Providence.	15,810	♂	86	46	16	7	32	4	34	60	45	45	14	11	4
<i>N. brevimanus</i> .....	Old Providence.	15,811	♂	85	46	15	7	33	4	33	60	44	44	14	11	4
<i>N. brevimanus</i> .....	Old Providence.	15,814	♂	86	43	15	7	33.4	4	32	60	44	45	14	11	4.4
<i>N. brevimanus</i> .....	Old Providence.	15,826	♂	85	46	15.6	7	33	4	33	60	45	45	13.6	12	4.6
<i>N. brevimanus</i> .....	Old Providence.	15,830	♂	82	47	16	6.6	33	4	31	57	44	45	13	12.4	4.4
<i>N. brevimanus</i> .....	Old Providence.	15,838	♂	85	48	16	6.4	32.4	4	34	60	45	45	14	12.4	4.6
<i>N. brevimanus</i> .....	Old Providence.	15,846	♂	87	47	16	7	32.4	4	34	61	44	45	14.4	12.4	4
<i>N. brevimanus</i> .....	Old Providence.	15,849	♂	90	48	15.4	7	32	4	33.4	60	44	45	12.6	12	4.6
<i>N. brevimanus</i> .....	Old Providence.	15,852	♂	83	46	15	7	33	4	33	61	45	46	13.4	11.4	4
<i>N. brevimanus</i> .....	Old Providence.	15,853	♂	88	49	16	6.4	33	4	34	61	45	46	13	12	4.6
<i>N. brevimanus</i> (average).....	Old Providence.		♂	85.2	46.1	15.8	6.7	32.4	3.98	32.7	59.3	44	44.8	13.8	11.8	4.3



**Natalus (Chilonatalus) brevimanus** sp. nov.

*Natalus micropus* J. A. Allen, Bull. Am. Mus. Nat. Hist., III, p. 169, November, 14, 1890.

*Type*.—Adult ♂ (in alcohol), No. 15,835, United States National Museum, Old Providence Island, Caribbean Sea. Presented by Chas. B. Cory.

*Specific characters*.—Slightly smaller than *Natalus micropus* Dobson<sup>1</sup> from Jamaica and with relatively longer ears and shorter fingers. Color apparently paler than in *N. micropus*.

*General remarks*.—Dr. J. A. Allen recorded the occurrence of this bat on the island of Old Providence as long ago as 1890, but with only a single individual at hand, he naturally considered it the same as the Jamaican species. On comparing fifty-seven specimens from Old Providence with three from Jamaica, I find a slight but remarkably constant difference. Taking into consideration the perfect isolation of the two forms it seems best to apply to them binomial names. The characters are well brought out in the following table of measurements. The apparent lighter color of *N. brevimanus* may be due to the bleaching effect of alcohol, as I have seen no skins, and both lots of specimens have been preserved for an unknown length of time.

**Micronycteris microtis** sp. nov.

*Type*.—Adult ♂ (skin and skull) No.  $\frac{1}{2} \frac{63}{33} \frac{66}{67}$ , United States National Museum. Collected at Greytown, Nicaragua, by Dr. L. F. H. Birt.

*Specific characters*.—Smaller than *Micronycteris minutus* (Gervais); thumb, foot, calcar and membranes as in *M. megalotis* Gray; ear from meatus about half as long as forearm; middle lower premolar relatively larger than in *M. megalotis*; general color wood-brown, scarcely paler on ventral surface.

*Fur and color*.—The fur is distributed precisely as in *M. megalotis*, except that there is a slightly more extensive sprinkling of hairs on the dorsal surface of forearm. Fur on middle of back about 10 mm. in length.

Color uniform wood-brown, slightly richer on dorsal surface. Hairs on body both dorsally and ventrally, nearly white through basal third.

*Ears*.—Ears densely furred on basal half externally, the fur running up along anterior border to within 5 mm. of tip. Distal half

<sup>1</sup> Proc. Zool. Soc. Lond., 1880, p. 443.



bare, with a few very fine scattered hairs. In form the ears are much like those of *M. megalotis*. Their tips, however, are more abruptly narrowed, a condition made still more apparent by their much smaller size. Inner surface of auricle with eight sharply defined cross ridges arising at posterior border and extending about half way across ear. The distance between the uppermost and lowermost ridge is about 5 mm.

*Feet*.—Foot distinctly shorter than calcar and slightly more than half as long as tibia.

*Skull*.—In the type the brain case is more elevated immediately behind the orbits, and the zygomata are less flaring than in the skulls of *M. megalotis* with which I have compared it, but these differences may prove to be individual.

*Teeth*.—When viewed from above, the crowns of the three lower premolars appear to be of approximately equal size, though the second is slightly smaller than either of the others. In *M. megalotis* the crown of the middle lower premolar is very conspicuously smaller than the first. In other respects the teeth of the two species appear to be identical.

*General remarks*.—*Micronycteris microtis* is so different from the other described species of the genus that it needs no special comparison with any. From *M. megalotis* its nearest geographical ally, its small ears and uniform wood brown color separate it at a glance. Yet it is probably most closely related to *M. megalotis* and *M. hirsuta*, since *M. behnii* and *M. minuta*, the only other known species, are distinguished by differences in the proportions of the parts of the fingers and feet, to say nothing of the peculiar attachment of the wings in *M. minuta*.

In the type of *Micronycteris microtis* the exact form of the nose leaf cannot be determined. The free, upright portion of the leaf, however, appears to be shorter and broader than in either of the races of *M. megalotis*. The whole leaf is finely pubescent.

The striation of the inner side of the ear is very different in *Micronycteris microtis* and *M. megalotis*. In the latter, instead of eight sharply defined ridges crowded into the space of 5 mm., there are thirteen ill defined striæ with a distance of nearly 10 mm. between the first and last.

*Micronycteris megalotis mexicanus* subsp. nov.

*Type*.—Adult ♀ (in alcohol) No. 52,105, United States National Museum (Biological Survey collection). Collected at Plantinar,



Jalisco, Mexico, April 4, 1892, by E. W. Nelson. Original number 2,389.

*Subspecific characters*.—About the size of typical *Micronycteris megalotis* Gray, but with longer middle finger and apparently lighter color.

*General remarks*.—While the Mexican material at hand is fairly satisfactory, lacking only skins for the accurate determination of color characters, the South American series is very deficient. Yet the nine specimens that I refer to true *megalotis* agree very closely among themselves, and differ fairly constantly from the Mexican form. The color appears to be paler in the Mexican specimens, but as all are preserved in alcohol no special weight can be attached to this fact. The real characters of the two forms are shown in the accompanying table of measurements.

Dobson's key to the species of *Micronycteris* (= 'Schizostoma') rearranged and extended to include the two new forms just described is as follows:

First phalanx of middle finger conspicuously shorter than second;  
forearm 47 . . . . . *M. behnii* (Peters).

First phalanx of middle finger approximately equal to second;  
forearm 30–40.

Wings from tibiae; metacarpal of thumb about equal to remaining parts; calcar shorter than foot . . *M. minuta* (Gervais).

Wings from tarsus or metatarsus; metacarpal of thumb much longer than remaining parts; calcar longer than foot.

Legs and forearms conspicuously hairy. *M. hirsuta* (Peters).

Legs and forearms essentially bare.

Ear from meatus about one-half forearm

*M. microtis* Miller.

Ear from meatus about two-thirds forearm.

Longest finger 60–64 . *M. megalotis megalotis* Gray.

Longest finger 68–72 . *M. megalotis mexicanus* Miller.

*Glossophaga longirostris* sp. nov.

*Type*.—Adult ♀ (skin and skull) No. 8,046, Bangs collection, Santa Marta Mountains (near Santa Marta), Colombia, February 10, 1898. Collected by W. W. Brown, Jr. Original number, 60.

*Specific characters*.—Much larger than any species hitherto described; skull large and greatly elongated, color darker than in either phase of *G. soricina*.



TABLE OF MEASUREMENTS OF THREE FORMS OF *MICRONYCTERIS*.

Name.	Locality.	Number.	Sex.	Total length.	Head and body.	Tail.	Tibia.	Foot.	Forearm.	Thumb.	Longest finger.	metacarpal.	1st phalanx.	2d phalanx.	Ear from meatus.	Ear from crown.	Width of ear.	Tragus.	Height of nose leaf.	Width of nose leaf.
<i>M. microtis</i> .....	Greytown, Nicaragua.	16,366*	♂	—	—	—	12.6	8	31	8.8	58	26	12.6	14	16	12	9	5.8	3.8	4
<i>M. megalotis megalotis</i> .	Trinidad.	21,027	♂	55	40	13	15	8	32	9	60	24	13	13	21	16.4	13	6	6.4	4
<i>M. megalotis megalotis</i> .	Margarita Island.	63,214	♂	—	—	—	15	9	33.4	10	63	28	13	14.6	21	17.6	15	6.4	5.4	4
<i>M. megalotis megalotis</i> .	Margarita Island.	63,215	♂	—	—	—	15	8.8	33	10	60	27	13	13.8	21	17	14	6	6	4
<i>M. megalotis megalotis</i> .	Santa Marta, Colombia.	8,047†	♂	—	—	—	14	9	34	9	62	27	14	13.6	—	—	—	—	—	—
<i>M. megalotis megalotis</i> .	Santa Marta, Colombia.	8,048†	♂	—	—	—	15	10	33.6	10	62	26	13.6	13.6	—	—	—	—	—	—
<i>M. megalotis megalotis</i> .	Santa Marta, Colombia.	8,055†	♂	60	42	13	14	8.4	34.6	9	65	27	13	13.4	22	17	14	6.6	6	5
<i>M. megalotis megalotis</i> .	Santa Marta, Colombia.	8,056†	♂	60	46	13.4	15	9	—	9	64	28	13	14	23	18	—	7	6	5
(average).....	Santa Marta, Colombia.			58	44	13.2	14.5	8.8	33.4	9.3	62	27	13.2	13.5	21.6	17.2	14	6.4	5.9	4.4
<i>M. megalotis megalotis</i> .	Patuca, Honduras.	21,014	♂	57	43	12	14	7	33	6	64	27	12.6	14	20	16	14	7	6	4
<i>M. megalotis megalotis</i> .	Patuca, Honduras.	21,015	♀	56	44	13	13	7	32	8	61	26	13	13	20	15	14	6.8	6	4
<i>M. megalotis mexicana</i> .	Manzanillo, Colima.	51,638	♀	64	46	17	16	9	36	10	71	30	14	14.4	21	16	15	6.8	6	4.2
<i>M. megalotis mexicana</i> .	Manzanillo, Colima.	51,639	♂	60	43	15	—	8.8	—	8	67	28	13	13	21	16	14	6	6.2	4
<i>M. megalotis mexicana</i> .	Colima, Colima.	51,641	♂	59	44	15.6	15	9	35	9.6	70	30	14	14	22	17	15	6.6	7	4.4
<i>M. megalotis mexicana</i> .	Colima, Colima.	51,642	♂	61	46	12	13.4	9	35	9	68	30	13	14	21.4	17	14	6.4	6.4	4.8
<i>M. megalotis mexicana</i> .	Colima, Colima.	51,643	♂	57	45	12.4	14	9	36.4	9	68	30	13	14.4	21.4	17	14	7	6	4
<i>M. megalotis mexicana</i> .	Colima, Colima.	51,644	♂	58	45	14	15	9	35	10	67	28	13	14	22	18	15	6.6	7	4
<i>M. megalotis mexicana</i> .	Colima, Colima.	51,645	♂	—	42	—	15.6	8	35	9	69	29	13.6	14	23	18	15	7.6	6	4.6
<i>M. megalotis mexicana</i> .	Plantinar, Jalisco.	52,094	♂	—	43	—	15.4	8	36	8	71	30	13	14	22	17	15	6.8	6	4.6
<i>M. megalotis mexicana</i> .	Plantinar, Jalisco.	52,103	♂	—	43	14	15	9	35.6	9	71	30	13.4	14	22	17	16	7	6.4	4.4
<i>M. megalotis mexicana</i> .	Plantinar, Jalisco.	52,104	♂	—	43	13	16	10	34.6	8.6	69	30	13	14	21.6	16.4	14.6	6.6	6	4
<i>M. megalotis mexicana</i> .	Plantinar, Jalisco.	52,105*	♂	57	44	15	16	10	36	9	72	29	14.8	15	21.4	16	14	7	7	4.4
<i>M. megalotis mexicana</i> .	Plantinar, Jalisco.	52,106	♂	57	40	13.6	15	8.4	36	10.4	70	29	13.8	14.4	21.4	17	15	7.2	6	4.4
<i>M. megalotis mexicana</i> .	Sto. Domingo, Oaxaca.	8,119	♀	65	48	13	16.4	10	37	10	72	31	15	16	22	18	15	7	—	—
(average).....				60	44	14.9	15.2	9	35.6	9.2	69.7	29	13.6	14.2	2.7	17	14.7	6.8	6.3	4.3

\* Type.

† Bangs collection.



*Fur and color.*—In quality and distribution the fur resembles that of *G. soricina*. It is 7 mm. in length on middle of back, slightly longer on throat and shorter on belly.

Color above dark hair brown, slightly tinged with Prout's brown, the hairs everywhere very pale hair brown through basal two-thirds or three-fourths. Belly light broccoli brown, becoming much darker on chest and throat.

*Ears.*—As nearly as can be determined from the dried specimen the ears are essentially as in *G. soricina*, though considerably larger and apparently with broader tragus.

*Skull.*—Aside from its conspicuously larger size the skull of *Glossophaga longirostris* differs from that of *G. soricina* in its relatively longer rostrum, the sides of which are more nearly parallel, less strongly arched brain-case, and in the narrowness of the backward prolongation of the bony palate behind the plain of the last molar. In *G. soricina* the width of the bony palate at the constriction immediately behind the last molar is contained only twice in the distance from the latter point to the tip of the hamular. In *G. longirostris* it is contained nearly two and one-half times.

*Teeth.*—In the only known specimen of *Glossophaga longirostris*—an adult, though by no means aged individual—the incisors have all been shed. Distinct traces of the alveoli can still be seen in the mandible, but these are nearly obliterated in the upper jaw. Whether this condition is normal, as in the genus *Lichonycteris*,<sup>2</sup> it is, of course, impossible to say. In much older individuals of *G. soricina* and *G. truei*<sup>3</sup> the incisors are invariably present, so far as my observation has gone. In relative size the premolars and molars are essentially as in *G. soricina*. All, however, are very distinctly narrower. Or, in other words, the teeth have shared in the general elongation of the jaws without undergoing any proportional increase in width. In the lower premolars where the characters are most strongly marked, the width of each tooth is appreciably less than in *G. soricina*, while the longitudinal extent of the three together exceeds the same measurement in *G. soricina* by nearly one millimetre.

*Measurements.*—Total length, 80;<sup>4</sup> tail, 18;<sup>4</sup> tibia, 16; foot, 10;<sup>4</sup> thumb, 9; forearm, 39; longest finger, 80; ear, 14.<sup>4</sup> Skull: total

<sup>2</sup> Thomas, Ann. & Mag. Nat. Hist., ser. 6, XVI, p. 55, July, 1895.

<sup>3</sup> H. Allen, Science, N. S., V, No. 108, p. 153, January 22, 1897.

<sup>4</sup> Collector's measurement.



length, 23.4 (19.8);<sup>5</sup> basilar length, 19.8 (16.2); zygomatic breadth, 10.8 (9.6); last molar to tip of hamular, 7 (5.6); last width of bony palate behind molars, 2.4 (2.2); mandible, 15.8 (13); maxillary tooth row, 8.2 (6.8); mandibular tooth row, 8.6 (7).

*General remarks.*—*Glossophaga longirostris* needs no close comparison with other members of its genus. Should the early deciduous incisors prove to be a constant character, the animal will probably require at least subgeneric separation from the forms related to *G. soricina*.

**REITHRONYCTERIS** gen. nov. (Glossophaginæ.)

Type *Reithronycteris aphylla* sp. nov.

*Generic characters.*—Dental formula (as in *Phyllonycteris*),  $i, \frac{2-2}{2-2}$ ;  $c, \frac{1-1}{1-1}$ ;  $pm, \frac{2-2}{2-2}$ ;  $m, \frac{3-3}{3-3}=32$ ; zygomatic arches incomplete (as in *Hemiderma*); floor of brain-case from basisphenoid forward elevated out of its usual position, so that the roof of the posterior nares is formed by two longitudinal folds, given off by the pterygoids and nearly meeting in the median line in the region usually occupied by the basisphenoid and presphenoid (figures 3 and 4); calcar absent; nostrils perforating a disc-shaped elevation which lacks a true "leaf" or free, pointed process above (the conditions are exactly reproduced in *Brachyphylla*); ears small and separate; tongue broader than in *Phyllonycteris* and more abruptly narrowed at tip, the papillæ short and stiff; tail about as long as femur.

*General remarks.*—*Reithronycteris* is a very aberrant member of the subfamily *Glossophaginæ*. Its broad teeth, heavy rostrum, massive lower jaw and broad tongue with short papillæ remove it widely from extreme forms such as *Chæronycteris* and *Lichonycteris*. In its reduced nose leaf and in the form of the mandible and of the mandibular teeth it resembles *Brachyphylla*. Whether these characters indicate any real affinities with the *Stenodermata* is, however, very questionable.<sup>6</sup> In addition to these less important characters, *Reithronycteris* differs from all other bats with which I am acquainted in the structure of the interpterygoid region.

<sup>5</sup>Measurements in parenthesis are those of an adult female, *Glossophaga soricina*, from Cuernavaco, Morelos, Mexico (No. 36,017, U. S. Nat. Mus.).

<sup>6</sup>Since this paper has been in type I have received the late Dr. Harrison Allen's monograph of the *Glossophaginæ* (Trans. Am. Philos. Soc., N. S., XIX, pt. II, pp. 237-266, June, 1898). Here *Brachyphylla* is united with *Phyllonycteris* to form the group 'Brachyphyllina,' placed at that end of the glossophagine series nearest the *Stenodermatinae*.



*Reithronycteris aphylla* sp. nov.

*Type*.—Adult ♂ (in alcohol) No. 9, Museum of the Institute of Jamaica. Collected in Jamaica. No further history.

*Specific characters*.—External appearance much as in *Phyllonycteris sezekorni* Peters,<sup>7</sup> but muzzle conspicuously broader and terminating in a disc-shaped rudimentary nose leaf like that of *Brachyphylla cavernarum*. Feet relatively larger than in *Phyllonycteris sezekorni*, and interfemoral membrane much less developed. Skull broader and more heavily built than that of *P. sezekorni* and lacking the slender, but complete zygomatic arches often present in the latter.<sup>8</sup> Teeth conspicuously shorter and broader than in *Phyllonycteris sezekorni*; front lower molar very slightly larger than succeeding ones, not greatly elongated as in *P. sezekorni*. Color, of specimen preserved in alcohol for an unknown period, light yellowish brown.

*Fur and color*.—The fur is short, about 6 mm. in length on middle of back, 4 mm. on belly; it is very closely confined to the body, barely reaching the membranes. Color both above and below light yellowish brown. Ears and membranes light brown.

*Ears*.—The ears are short; when laid forward they reach just beyond inner canthus of eye. Anterior border strongly convex from base to a little above middle, then nearly straight to narrowly rounded off tip. Posterior border slightly concave below tip, then convex (the curve about the same as that of anterior border) to base. Posterior base in line with upper lip, the distance from corner of mouth a little less than from the latter point to chin. A wart (concealed by the hair) about as large as eye midway between corner of mouth and posterior base of ear. Inner surface of ear with seven ill defined cross ridges.

Tragus a little less than half height of ear. Anterior border gently and evenly convex from base to acicular tip. Posterior border with four deep scallops, subtending as many prominent tooth like projections, of which the basal is less developed than the others (it does not show in the view from which figure was taken).

*Feet*.—Foot very large, fully three-fourths as long as tibia, the toes deeply cleft and provided with large claws. No trace of calcar.

<sup>7</sup> This comparison is made with specimens from Nassau, Bahamas. These may prove to be different from the typical Cuban form.

<sup>8</sup> Dobson, basing his description on Jamaican material, states that in *Phyllonycteris* the zygomatic arches are incomplete. This is not true of the Bahaman specimens. There is little reason, however, to believe that the Jamaican *Phyllonycteris* with pointed nose leaf is the same as that found in the Bahamas, and no certainty that either is true *sezekorni*.



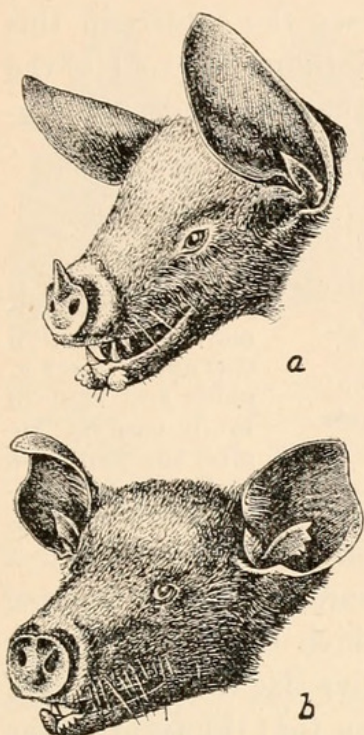


Fig. 2.—Head of *Phyllonycteris sezekorni* (a) and *Reithronycteris aphylla* (b). (Slightly enlarged).

*Membranes.*—Wings full and ample, attached at middle of tibia. Uropatagium reduced to a narrow frill scarcely wider than the fleshy part of the thigh, and reaching not quite to middle of tibia. Tail included to middle in membrane.

*Tongue.*—The tongue (figure 5) while distinctly of the glossophagine type is considerably broader in proportion to its length than in any of the other members of the group that I have examined. At the tip it narrows very abruptly to an unusually acute point. The terminal area of elongated stiff papillæ has much the same general shape as in *Phyllonycteris sezekorni*, allowance being made for the difference arising from the greater breadth of the tongue, but the individual papillæ are shorter and of more uniform length, so that the median groove is less conspicuous (this difference is very difficult to represent in the drawing).

*Skull.*—The skull (figure 3) is larger and more massively built

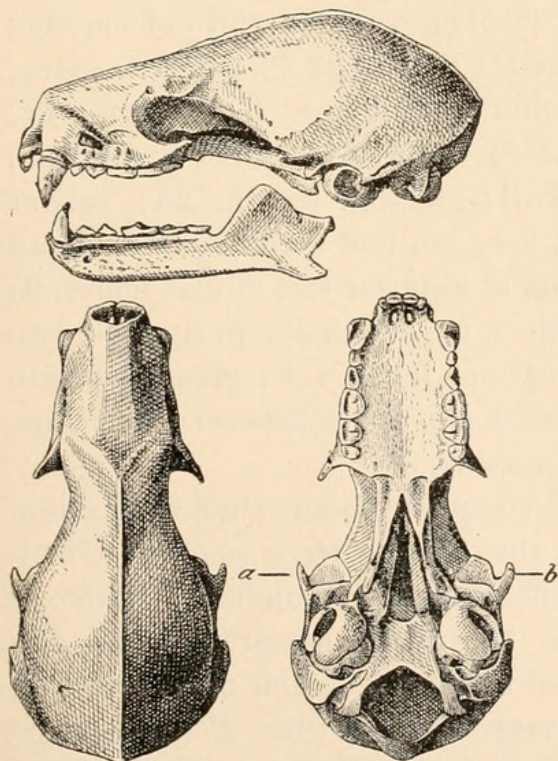


Fig. 3.—Skull of *Reithronycteris aphylla*. (About  $1\frac{1}{2}$  times natural size).

than that of *Phyllonycteris* or any other glassophagine genus with which I am acquainted. The rostrum is especially broad and deep. Face line straight from nostril to middle of brain case; a well developed sagittal crest and lambdoid crest; bony palate behind molars narrower than in *Phyllonycteris sezekorni*. The hamular processes are very broad and strongly concave internally, the resulting form quite different from that in *Phyllonycteris* or *Glossophaga*. The structure of the floor of the brain case has already been referred to. Unfortunately



the type is so old that it is impossible to trace the sutures in this part of the skull, but the longitudinal folds forming the roof of the posterior nares are apparently given off by the pterygoids. In figure 4 is shown a diagrammatic cross section just in front of the hamulars.

Mandible very heavy and massive, especially in the region of the symphysis. It is quite unlike that of any other member of the *Glossophaginae*, and closely resembles that of *Brachyphylla*, allowance being made for its much smaller size.

*Teeth*.—In number and arrangement the teeth agree with those of *Phyllonycteris sezekorni*, but in form they are even less typically glossophagine, than is especially the case with the mandibular teeth, which strongly resemble those of *Brachyphylla cavernarum*. In relative size the teeth agree with those of *Phyllonycteris sezekorni* except that the front upper premolar is larger, the second upper premolar smaller, and the front lower molar much shorter. The lower premolars are less crowded than in *P. sezekorni*.

*Measurements*.—Total length, 88; head, 28; greatest breadth of muzzle in front of eyes, 10; eye to eye, 8; eye to tip of muzzle, 10.4; ear from meatus, 16; ear from crown, 13; width of ear, 12; tragus, 8; tail, 12; free part of tail, 6; tibia, 22.8; foot, 17; claws, 5; width of uropatagium at middle of femur, 6; forearm, 48; thumb, 14; second finger, 37; third finger, 84; fourth finger, 66; fifth finger, 64; penis, 10. Skull: greatest length, 26; basilar length, 20; interorbital breadth, 5.4; mastoid breadth, 12.4; depth of brain case, 9; depth of rostrum at anterior end of first molar, 6; width of palate between last molars, 5; last molar to tip of hamular, 7.8; upper tooth row exclusive of incisors, 8; greatest length of mandible, 16.6; depth of mandible at space between premolars, 3; lower tooth row exclusive of incisors, 9.

*General remarks*.—*Reithronycteris aphylla* needs close comparison with only one described species, the *Phyllonycteris poeyi* of Gundlach.<sup>8</sup> This bat, from the "Kaffeepflanzung Fundator," Cuba, is still wholly unknown except for the rather meagre original description. In size, color, general structure of the nose leaf, and absence of calcar, it agrees very closely with *Reithronycteris*

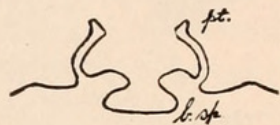


Fig. 4. — Diagrammatic cross section through pterygoids and floor of brain case at region marked a-b in fig. 3; pt.=pterygoid, b. sp.=basisphenoid.

<sup>8</sup> Monatsber. K. Akad. Wissensch., Berlin, 1860, p. 817.



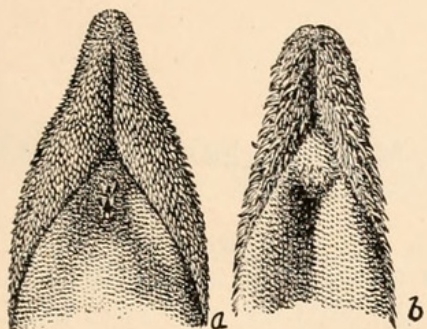


Fig. 5.—Tip of tongue (dorsal surface) of *Reithronycteris aphylla* (a) and *Phyllonycteris sezekorni* (b). (About 5 times natural size).

tions of one and the same species,<sup>9</sup> make it appear more reasonable to apply a new specific name to the Jamaican bat.

*aphylla*, but the ear is longer and narrower (18.5x11 instead of 16x12), the rudimentary nose leaf quite different in form (5.75x4.5 instead of 4x6), the tail is shorter, especially in its free portion, and the forearm and fingers are slightly shorter. These differences coupled with the seeming impossibility that anyone should consider animals so widely different in aspect as *Phyllonycteris sezekorni* and *Reithronycteris aphylla* as possibly individual varia-

<sup>9</sup> Gundlach says (under *Phyllonycteris sezekorni*): "Die Vergleichung einer grösseren Anzahl von Exemplaren wird übrigens entscheiden müssen, ob diess eine selbständige Art ist oder ob sie mit der vorhergehenden zu vereinigen sein wird."





Miller, Gerrit S. 1898. "Descriptions of Five New Phyllostome Bats."  
*Proceedings of the Academy of Natural Sciences of Philadelphia* 50, 326–337.

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