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A SUMMARY OF RECOGNIZABLE SPECIES OF TONATIA, WITH DESCRIPTIONS OF TWO NEW SPECIES

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The discovery of *Tonatia bidens* in Costa Rica and *T. amblyotis* in British Honduras, both places being widely separated from the type localities, has led me to make a brief review of the material now available in American collections. This study has brought out some interesting facts and an analysis of the specimens seems of sufficient importance to be recorded.

Acknowledgment for the loan of material is due the Field Museum of Natural History, the U. S. National Museum, the Carnegie Museum and the Museum of Comparative Zoology.

GENUS TONATIA GRAY

- 1823 *Vampyrus* Spix, Sim. Vesp. Bras., p. 65 (*bidens*).
- 1827 *Tonatia* Gray, Griffith's Cuvier Animal Kingdom V, p. 71 (*Vampyrus bidens* Spix).
- 1838 *Phyllostoma* Gray, Mag. Zool. Bot. 2, p. 488 (*childreni*).
- 1847 *Lophostoma* d'Orbigny, Voy. dans l'Amerique merid, p. 11 (*sylycolum*).
- 1855 *Tylostoma* Gervais, Exped. de Castelnau (*bidens*).
- 1878 *Lophostoma* Dobson, Cat. Chiropt. Brit. Mus. p. 473.
- 1898 *Tonatia* Palmer, Proc. Biol. Soc. Wash., XII, p. 110.
- 1910 *Chrotopterus* Allen, Bull. Amer. Mus. Nat. Hist., XXVIII, p. 147 (*carrikeri*).

Type Species.—*Vampyrus bidens* Spix.

Range.—Tropical America from the Atlantic Coast in Brazil west to Bolivia and north to British Honduras.

Characters.—Dental formula:

$$\frac{-2 \ 3. \ 1. \ - \ - \ 3 \ 4 \ 5 \ 6 \ 7}{1 \ - \ - \ 1. \ - \ 2 \ 3 \ 4 \ 5 \ 6 \ 7}; \ i \ \frac{2 \ - \ 2}{1 \ - \ 1}; \ c \ \frac{1 \ - \ 1}{1 \ - \ 1}; \ pm \ \frac{2 \ - \ 2}{3 \ - \ 3}; \ m \ \frac{3 \ - \ 3}{3 \ - \ 3} = 32.$$

Tonatia is a large-eared bat with a well developed noseleaf and short tail. In general, external characters of small species are similar to *Micronycteris*. The teeth throughout are stronger than those of *Micronycteris*, but their structure is essentially the same, except that the anterior upper premolar is broader than long and the middle lower premolar is minute and crowded between the anterior and posterior teeth.

Tonatia bidens Spix

Vampyrus bidens Spix, 1823, Sim. Vesp. Bras., p. 65.

Phyllostoma childreni Gray, 1838, Mag. Zool. Bot., 2, p. 488.

Tylostoma bidens Gervais, 1855, Expéd. de Castelnau, p. 49.

Lophostoma bidens Peters, 1865, Monatsb. Akad. Berlin, p. 509; Dobson, 1878, Cat. Chiropt., p. 473; Trouessart, 1897, Cat. Mamm., p. 153; Lyon, 1901, Proc. U. S. Nat. Mus., p. 154.

Tonatia bidens Palmer, 1898, Proc. Biol. Soc. Wash., p. 111; Sanborn, 1936, Zool. Ser. Field Mus. Nat. Hist., XX, no. 13, p. 96.

Type locality.—Rio San Francisco, Bahia, Brazil.

Range.—From Bahia, Brazil, west to Peru and north, east of the Andes to the Guianas, Venezuela, and north in Central America to Costa Rica.

Characters.—Size large, ears short and broad, proximal half of forearm well haired; base of thumb and uppersides of feet hairy. Color of upperparts varying from ochraceous tawny to blackish Mummy brown, base of hairs behind ears and on neck more or less white; underparts paler and grayer than back and washed with pale buff.

Skull large and massive, rostrum broad, flat and not constricted in orbital region; braincase low and broad; superior outline evenly elevated from front of nasals and without depression in orbital region; palate narrow; toothrow only slightly converging anteriorly; sagittal crest low and fine.

Measurements, five females and one male from Amazon basin, one male from Venezuela and six females and two males from Costa Rica: Forearm, 55-59 mm; third metacarpal 46-48.5, first phalanx, 18.7-21, second phalanx, 21.7-23.6, fourth digit metacarpal, 46.5-50, first phalanx 14.5-18, second phalanx 15.6-15.7; fifth digit metacarpal, 47.5-51, first phalanx, 15.3-18.8, second phalanx, 13.7-14; ear, 24.7-25.4; hind foot in dry skin, 15-17.5. Skull measurements (Amazon basin, Venezuela, and Costa Rica, respectively): Greatest length, 27-28.5, 28.8, 27.7-29.5; condylobasal length, 24-24.5, 25, 24.5-25; zygomatic width, 13.5-14, 14.4, 14.2-15; postorbital width, 5.3-5.5, 5.8, 5.3-6; width of braincase, 10-10.9, 10.5, 10-10.8; width across upper canines, 5.5-6, 5.7, 5.6-6; width across $m^2 - m^2$, 8.3-8.6, 8.8, 7.9-8.5; length of upper toothrow, 9.3-9.8, 10, 9.8-10.2.

Tonatia bidens varies little in size and character throughout most of its range in South America. One old male from the Rio Tocuyo, Venezuela, however is a large bodied individual with thick pelage, very broad ears, extensively hairy forearm and feet. Externally it is strikingly different from the rest of the South American specimens. The skull is also larger than the average but cranial characters and the size of the teeth are about the same as in typical *bidens*.

A series of eight specimens from Costa Rica are the maximum in size of the available material, but, with this exception, they are no different from eastern Brazilian specimens.

Specimens examined.—**Costa Rica**: Palmar (Pacific, 8 A.M.N.H. **Peru**: Alto Ucayali Lagarto, 4 A.M.N.H. **Venezuela**: Rio Tocuyo, 1 A.M.N.H. **British Guiana**: Kartabo, 1 A.M.N.H. **Brazil**: Rio Tocantins, Ilna do Taiuna, 5 A.M.N.H.; Rio Tapajoz, Sanatarem, 1 A.M.N.H.; Matto Grosso, Urucum de Corumba, 4 Field Mus. (3 in spirits).

Tonatia nicaraguae new species

Type.—No. 41184, Amer. Mus. Nat. Hist.; female adult, in spirits; Kanawa Creek, near Cukra, north of Bluefields, Nicaragua, altitude 100 feet; collected by Halter and Mannhardt, August 7, 1916. The type is the only known specimen.

Characters.—A small, dark-colored *Tonatia* with large ears connected by a low band across forehead; lower lip with a naked V broken into wart-like protuberances; noseleaf, broad and attenuated to a sharp point and not extended below nostrils as a separate leaf; forearm finely haired on basal half. Tail, short and apparently not perforating the very broad interfemoral membrane; forearm, about 32 mm. General color of upperparts mummy brown, the hairs broadly white at base; underparts, light drab. Skull: small; rostrum relatively broad, parallel-sided and not constricted in orbital region; braincase low, rounded and without sagittal crest, superior outline evenly elevated from nasals and without depression in orbital region; palate narrow and not perceptibly converging anteriorly; posterior border of palate ending on a line across front of last molar; middle lower premolar minute but completely separating anterior and posterior teeth.

Measurements.—Head and body, 42.5 mm; tail, 6; hind foot, 10; ear, from notch, 17.5; forearm, 32; third digit metacarpal, 24.8: first phalanx, 10.5; second phalanx, 12.3; fourth digit metacarpal, 24.8: first phalanx, 10.5; second phalanx, 9.2; fifth digit metacarpal, 27.5: first phalanx, 11.5, second phalanx, 9.5. Skull: greatest length, 17.9; interorbital width, 3.4; width of braincase, 7.8; width across canines, 3.4; $pm^1 - pm^2$, 3.3; $m^2 - m^2$, 5.4; length of upper tooththrow, 6.5; length of lower tooththrow, 7.2.

Remarks.—*Tonatia nicaraguae* is about the size of *Micronycteris megalotis mexicana* and specimens in spirits may be confused with the latter. It can be distinguished, however, by the wart-like outgrowths on the lower lip instead of a simple V and by the undeveloped lower portion of the noseleaf. *T. nicaraguae* is smaller than *T. minuta*, with smaller teeth, relatively longer palate, broader interorbital region, lower and more rounded braincase, and no sagittal crest, which is well developed in the latter.

Tonatia minuta new species

Type.—No. 71619, Amer. Mus. Nat. Hist.; adult ♂, skin and skull in good condition; Boca Curaray Ecuador; collector, Olalla Brothers; December 4, 1926.

Characters.—Smallest of the known species of *Tonatia*; forearm about 34 mm, finely haired from proximal end for about half its length. General color of upperparts mummy brown, becoming darker on cheeks and around face, fur buffy white from base for about half its length. Underparts snuff brown, the hairs lightly tipped with pale buff.

Skull small, braincase relatively narrow and high, elevated above rostrum but not so abruptly as in *venezuelae*; interorbital region constricted; palate short and ending in front of a line drawn across the border of the second upper molars.

Measurements, type and two females in parentheses (after dampening): Forearm, 34 mm (— —); third digit metacarpal, 27.3 (27.4, 27), first phalanx, 12.4 (12, 12), second phalanx, 14 (13.5, 14.5); fourth digit metacarpal, 28.5 (28.5, 28), first phalanx, 12.5 (12.6, 12.5), second phalanx, 11.5 (11.5, 10.5); fifth digit metacarpal, 30.5 (30.5, 29.2), first phalanx, 12.8 (13, 12.5), second phalanx, 11 (10.6, 9.6); ear from notch, 19.2 (20, 18.5); foot from back of calcar to end of claws, 11 (11, 11). Skull: Greatest length, 18.7 (18.6, 19); condylobasal length, 16.2 (16, 16.2); median palatal length, 8.4 (8, 8.2); interorbital width, 3 (3, 3); zygomatic width, 9 (8.8, 9); mastoid width, 8.9 (8.7, 9); width of braincase, 7.7 (7.5, 8.2); greatest width across canines, 4 (3.8, 3.6); width across $pm^1 - pm^1$, 3.6 (3.7, 3.5); width across $m^2 - m^2$, 6.1 (6, 5.8); length of upper tooththrow, 6.9 (6.7, 6.6); length of lower tooththrow, 7.5 (7.5, 7.4).

Tonatia minuta needs no comparison with *venezuelae*. It is smaller than *brasiliense*, with smaller ears, narrower and higher braincase, longer palate and more slender rostrum.

Specimens examined.—Ecuador: Boca Curaray 6 (including type).

Tonatia brasiliense Peters

Tylostoma brasiliense Gray MS.

Lophostoma brasiliense Peters, 1866, MB. Akad. Berlin, p. 674; Dobson, 1878, Cat. Chiropt., p. 474; Lyon, 1902, Proc. U. S. Nat. Mus., XXIV, p. 154.

Type locality.—Bahia, Brazil.

Range.—Eastern Brazil, limits of range unknown.

Characters (Based on two specimens from the Rio Tapajoz).—Size small, forearm 36 to

38 mm; smaller than *venezuelae* and slightly larger than *minuta*. General color Prout's brown, grading to Mummy brown around face, base of fur creamy white, underparts paler than back and lightly washed with pale buff.

Skull small, short; braincase relatively low and rounded; sagittal crest finely developed; rostrum broad but constricted in postorbital region; palate short.

Measurements of an adult male and female from the Rio Tapajoz (after dampening), Peters measurements of the type in parentheses: Forearm 36.2 mm, 37.2 (38); third digit metacarpal, 28.5, 28.5 (29), first phalanx, 13.5, 13 (12.8), second phalanx, 14.2, 14.5 (14); fourth digit metacarpal, 30, 29.5 (29.3), first phalanx, 13.5, 12.5 (12.3), second phalanx, 12.5, 11.7 (11.5); fifth digit metacarpal, 31, 30.5 (31.8), first phalanx, 13.5, 13.2 (12), second phalanx, 11.5, 10.8 (10.9); foot, 11.5, 11.5 (11.5); ear from notch, 20, 21 (21.5). Skull: Greatest length, 19.5, 19.5; condylobasal length, 16.8, 17; palatal length, 8.1, 8.2; interorbital breadth, 3.1, 3.1; zygomatic breadth, 9.3, 9.5; mastoid width, 9.1, 9.4; breadth of braincase, 8.1, 8; width across upper canines (at middle of shaft), 3.6, 3.5 (3.5); width across $pm^1 - pm^1$, 3.7, 3.7; width across $m^2 - m^2$, 6.3, 6.2; length of upper tooththrow, 7, 6.9; length of lower tooththrow, 7.5, 7.5.

Tonatia brasiliense is apparently related to *T. minuta* but differs in larger size, relatively broader skull, lower and more rounded braincase, and shorter palate. Two specimens from the Rio Tapajoz are here provisionally considered typical until a better description of the type can be obtained. They agree closely with the measurements given in Peters description.

Specimens examined.—Brazil: Rio Tapajoz, Igarape, Amarin, 2 A.M.N.H.

Tonatia venezuelae Lyon

Lophostoma venezuelae Lyon, 1902, Proc. U. S. Nat. Mus., XXIV, p. 154.

Type locality.—Macuto, Venezuela.

Range.—Known from Macuto and San Estaban, Venezuela; Aripo, Trinidad.

Characters.—Size small; forearm 38 to 40 mm; pelage moderately long, about Isabella color, base of fur whitish; underparts paler than back. Skull rather small, constricted in postorbital region, braincase high and elevated behind rostrum; sagittal crest well developed; palate moderately short.

Measurements of an adult male from Macuto and a female from San Estaban (spirit specimens): Forearm, 40.5, 38.5; third digit metacarpal, 31.8, 30.5, first phalanx, 14.2, 13.8, second phalanx, 16.7, 15.7; fourth digit metacarpal, 32.5, 30.5, first phalanx, 15, 13.5, second phalanx, 13.8, 12; fifth digit metacarpal, 33.8, 32.3, first phalanx, 15.5, 14.3, second phalanx, 13, 12.4; ear, 21.5, 20.2; foot from back of calcar, 11.6, 11.5. Skull (type in parentheses): Greatest length, 21.6, 21.1 (21.2); condylobasal length, 18.5, 17.5 (—); palatal length, 9.5, 9.5 (9); interorbital width, 3.3, 3.1 (3.2); zygomatic width, 10.5, 10.4 (10.4); mastoid width, 10.4, 10 (—); width of braincase, 8.3, 8.4 (8.4); width across upper canines, 4.6, 4.2 (—); width across $pm^1 - pm^1$, 4.4, 4.1 (4.4); width across $m^2 - m^2$, 6.7, 6.6 (6.8); length of upper tooththrow, 7.7, 7.4 (7.4); length of lower tooththrow, 8.5, 8.2 (8.4).

Tonatia venezuelae is readily recognized by its small size, high braincase and narrow interorbital constriction; it is appreciably larger than *minuta* and *brasiliense*.

Specimens examined.—Venezuela: Macuto 3 (in spirits) U.S.N.M.; San Estaban 1 (in spirits) U.S.N.M.

Tonatia carrikeri Allen

Chrotopterus carrikeri Allen, 1910, Bull. Amer. Mus. Nat. Hist., XXVIII, art. 12, p. 147.

Type locality.—Rio Mocho, Venezuela.

Range.—Known only from the type locality.

Characters.—Size medium, forearm 46 to 47 mm. General color of upperparts Mummy brown, the hairs finely tipped with pale buff, extreme base of fur white; underparts pure white to roots of hair except on chin and sides of abdomen. Skull, medium in size, constricted in postorbital region, palate short and ending on a line across middle of second molars,

sagittal crest barely indicated, superior outline of skull evenly elevated from nasals and only slightly concave in orbital region; second lower premolars relatively large and separating the first and third premolars.

Measurements of an adult male and female from Rio Mocho (after dampening): Forearm, 47, 47.5 mm; third digit metacarpal, 39.5, 39.2, first phalanx, 16.3, 16, second phalanx, 19.2, 19; fourth digit metacarpal, 41, 40.5, first phalanx, 15, 15.3, second phalanx, 14.6, 14.6; fifth digit metacarpal, 43.3, 42.8, first phalanx, 16.4, 16.2, second phalanx, 12.7, 12.4; ear from notch, 25.5, 22.5; hind foot, from back of calcar to end of claws, 14.7, 14.5. Skull: Greatest length, 25.9, 24.9; condylo-incisive length, 22.2, 21; palatal length, 10.5, 10; zygomatic width, 3.7, 3.5; postorbital width, 3.7, 3.5; mastoid width, 12.8, 11.3; width of braincase, 9.8, 9.5; width across upper canines, 5.2, 4.5; width across pm^1 - pm^1 4.7, 4.2; width across m^2 - m^2 8.1, 7.5; length of upper tooththrow 8.7, 8.3.

Tonatia carrikeri is readily recognized by its medium size, short palate and its unique coloration. While carrying the specializations of the small species to extreme it has retained certain characteristics of both *bidens* and *amblyotis*.

Specimens examined.—Venezuela: Rio Mocho, 7 A.M.N.H.

Tonatia amblyotis Wagner

Phyllostoma amblyotis (Natt., MS.) Wagner, 1843, Arch. Naturg. p. 365.

Lophostoma sylvicolum, d'Orbigny, 1847; Voy. dans l'Amerique mérid., p. 11; Gervais, 1855, Expéd du Comte de Castelnau, Zoologie, p. 48, pl. X, fig. 6.

Lophostoma amblyotis, Peters, 1865 MB. Akad. Berlin, p. 509; Dobson, 1878, Cat. Chiropt. p. 475.

Tonatia amblyotis Thomas, 1902, Ann. Mag. Nat. Hist., (7), X, p. 54.

Chrotopterus colombianus Anthony, 1920, Jour. Mamm., I, no. 2, p. 84.

Tonatia amblyotis Sanborn, 1936, Zool. Ser. Field Mus. Nat. Hist. XX, no. 13, p. 96.

Type locality.—Matto Grosso, Brazil.

Range.—From Matto Grosso, Brazil, west and north through Bolivia, Peru, Ecuador, Colombia, Panama and north to British Honduras.

Characters.—Size large, forearm 50 to 54 mm. General color varying from Mars brown to Mummy brown, the hairs lightly tipped with pale buff, base of hairs broadly white behind ears and back of neck; underparts grayer than back with a white area or collar on throat and underside of neck well developed in most specimens, but grayish and not very different from rest of underparts in some individuals. Skull narrow with a high braincase, superior outline elevated in interorbital region; rostrum relatively long and notably constricted in postorbital region; posterior border of palate on a line across front of third molars; sagittal crest moderately developed.

Measurements.—Forearm 50-55 mm; third digit metacarpal, 39.3-46.1, first phalanx, 18-18.6, second phalanx, 19-19.8; fourth digit metacarpal, 42.4-48.4, first phalanx, 16.5-17, second phalanx, 17.8-18.1; fifth digit metacarpal, 44-51.1, first phalanx, 16.6-17.6, second phalanx, 14.5-15.1; hind foot, 15.5, 16.6; ear from notch, 28-31. Skull (British Honduras specimen in parentheses): Greatest length, ♂, 26.8-28 (25.1), ♀, 25.2-26.5; condylobasal length, ♂, 23.2-24.1 (21), ♀, 21.6-22.8; palatal length, ♂, 12.5-12.8 (11.5), ♀, 11.2-12; postorbital width, ♂, 3-5 (3.8), ♀, 4-5; zygomatic width, ♂, 13.2-14.2 (12.2), ♀, 12.3-13; mastoid width, ♂, 13.6-14.1 (12.2), ♀, 12-13.1; width of braincase, ♂, 10-10.5 (9.5), ♀, 10-10.8; width across upper canines, ♂, 5.8-6.5 (5.6), ♀, 5.3-5.8; width across pm^1 - pm^1 5.4-6.5 (5), ♀, 5.2-5.5; width across m^2 - m^2 , ♂, 8.5-9.1 (7.5), ♀, 8.5-8.8; length of upper tooththrow, ♂, 9.8-10 (8.7), ♀, 9.5-9.7.

Tonatia amblyotis varies little in size and cranial characters throughout its known range in South America; individual variation in large series is not unusual, especially in color. Central and northern Columbian specimens are average in size but the light collar that is more or less pure white in most Oriente specimens is dull grayish and not much different from the rest of the underparts. One individual from British Honduras is relatively small in size but there are no other characters separating it from typical *amblyotis*. Topotypes

from Matto Grosso are not available in American collections. Specimens from Buena Vista, Bolivia are probably typical. This, however, is near the type locality for *L. sylvicolum* d'Orbigny which is in the foothills of the Bolivian Andes in the county of Juracares between the headwaters of the Secure and Isibara. Thomas recognized *sylvicum* as having shorter ears (25x21 mm) and larger feet (20–21 mm from base of calcar to end of claws) than *loephotis* and *amblyotis*. Four Bolivian specimens examined have normal ears (31 x 21 mm after dampening) and the average foot length for typical *amblyotis*. D'Orbigny's unusual foot measurements correspond closely with the length of the calcar and the figure of the skull shows all the characters referable to *amblyotis*.

Specimens examined.—**Bolivia**: Rio Dolores, Prov. del Sara, 1 Carnegie Mus., 1 Field Mus.; Ruena Vista, 1 Carnegie Mus.; Rio Surutu, Santa Cruz, 2 Carnegie Mus. **Peru**: Huanaco, Tingo Maria, 1 Field Mus.; Vitoc Valley, Prov. Tarma, Dept. Junin, 3 (in spirits) Field Mus.; Lagarto Alto Ucayali, 4 A.M.N.H.; Sarayacu R. Ucayali, 1 A.M.N.H.; Apayacu, 1 A.M.N.H.; Pto. Indiana, R. Amazonas, 3 A.M.N.H.; Orosa R. Amazonas, 3 A.M.N.H.; Mouth of Santiago River, 2 A.M.N.H.; Pto. Melendez, 2 A.M.N.H. **Ecuador**: Rio Bobonazo, 4 Field Mus., 1 U.S.N.M.; Oriente Rio Capihuari, 3 Field Mus., 1 U.S.N.M.; Rio Suno, 1 Field Mus.; Oriente Rio Pindo Yaco, 2 Field Mus.; Oriente Rio Pastaza, 3 Field Mus.; Boca R. Curaray, 18 A.M.N.H. **Colombia**: Rio Waupes Frente a Tãhuopunto, 8 A.M.N.H.; Espinal, 1 Field Mus.; Bonda, 1 A.M.N.H.; Guaicaramo, 1 U.S.N.M.; Purificacion, 1 A.M.N.H.; Rio Quatequia, near Bogota, 1 A.M.N.H.; Guaicaramo, 1 M.C.Z.; Natagaima, 1 M.C.Z. **Panama**: Bogava Chiriqui, 1 Brit. Mus., Rio Esnapa, 1 (in spirits) M.C.Z. **British Honduras**: Freetown Sittee River, 1 (in spirits) Carnegie Mus.

Tonatia loephotis Thomas

Tonatia loephotis Thomas, 1910, Ann. Mag. Nat. Hist., (8), VI, p. 184.

Type locality.—River Supinaan, tributary of the lower Essequibo, British Guiana.

Range.—Coast region of the Guianas and the Lower Amazon Basin in Brazil.

Characters.—Largest of the known species of the long-eared *Tonatia*; forearm 53 to 59 mm, similar in general characters to *amblyotis* but larger with larger skull, more massive teeth and accentuated sagittal crest. General color in fresh pelage dark Mummy brown to base of hairs over most of back, finely washed with pale buff; base of hairs on back of neck and behind ears white but more or less concealed by the broad dark tips of hairs; underside of neck white, this color extending over most of underparts in some individuals and almost imperceptible in others; rest of underparts paler and grayer than back.

Measurements, adult female and male, lower Amazon basin (dry skins): Forearm 53, 59; third digit metacarpal, 43, 49.5, first phalanx, 20.5, 19.5, second phalanx, 21.6, 24.5; fourth digit metacarpal, 44.5, 50.5, first phalanx, 17.5, 19.5, second phalanx, 17, 18.4; fifth digit metacarpal, 46.5, 53.8, first phalanx, 18.3, 19, second phalanx, 15.5, 17; hind foot, 17, 18.5; ear from notch (dampened), 29, 31.5. Skull (16 specimens): Greatest length, ♂, 27.5–29.5, ♀, 27.1–27.9; condylobasal length, ♂, 24.2–24.9, ♀, 23.3–24; palatal length, ♂, 12.8–13.4, ♀, 12.3–12.7; zygomatic breadth, ♂, 13.5–14.7, ♀, 13–14; postorbital constriction, ♂, 4–4.5, ♀, 4–4.3; width across canines, ♂, 6–6.6, ♀, 5.5–6; width across pm¹–pm¹, ♂, 5.6–6.1, ♀, 5.2–6.1; width across m³–m³, ♂, 9–9.2, ♀, 8.5–8.9; mastoid width, ♂, 14–14.8, ♀, 13.2–13.5; width of braincase, ♂, 10.6–11, ♀, 10.3–11; length of upper toothrow, ♂, 9.7–10.6, ♀, 9.5–10.2.

Tonatia loephotis is a separable species, characterized by its large size, massive teeth and accentuated sagittal crest. It belongs in the *amblyotis* group, having the interorbital region constricted and the crown elevated above rostrum; palate normal.

Specimens examined.—**Brazil**: Rio Zingu, Porto de Moz, 1 A.M.N.H.; Rio Tapajoz, Limontuba, 11 A.M.N.H.; Ynajalubu, 9 A.M.N.H.; Limoal, 5 A.M.N.H.; Igarape Amorin, 1 A.M.N.H.; Tauary, 1 A.M.N.H.; Boim, 5 M.C.Z. Rio Majary: Recreio, 1 A.M.N.H. Rio Tocantins: Ilha do Taiune, 42 A.M.N.H.; Baião, 5 A.M.N.H.; Mocajuba, 3 A.M.N.H.; Cameta, 2 A.M.N.H., 4 M.C.Z.