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Ametrida centurio.

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Ametrida Gray, 1847

Ametrida Gray, 1847:15. Type species *Ametrida centurio*.

CONTEXT AND CONTENT. Order Chiroptera, suborder Microchiroptera, family Phyllostomidae, subfamily Stenodermatinae. The genus *Ametrida* is monotypic (Koopman, 1993).

Ametrida centurio (Gray, 1847)

Little White-shouldered Bat

Ametrida centurio Gray, 1847:15. Type locality "Pará, Brazil," now Belem, Brazil.

CONTEXT AND CONTENT. Context same as for genus. One species is currently recognized (*Ametrida minor* is a junior synonym of *A. centurio*—Peterson, 1965). No subspecies (Koopman, 1993) are recognized.

DIAGNOSIS. *Ametrida* is a monotypic genus related to *Sphaeronycteris, Centurio, Pygoderma,* and the Antilles genera *Ariteus, Ardops, Phyllops,* and *Stenoderma* (Lim, 1993). Of the mainland taxa, *Ametrida* and *Pygoderma* are least modified externally, retaining a distally unattached noseleaf compared to distinct and attached noseleaf of *Sphaeronycteris* and no true noseleaf in *Centurio.* Moreover, *Sphaeronycteris* differs from *Ametrida* in presence of a hornlike structure on forehead and a chin flap (Nowak, 1994). *Centurio* differs from *Ametrida* in presence of a latticelike pattern on wings, a fold used to cover its face when sleeping, and projections on top of head (Nowak, 1994).

Ametrida centurio (Fig. 1) differs from *Sphaeronycteris* in presence of a small, but normal noseleaf; in a greater shortening of rostrum, so that flat space in front of nares is wider than distance between canines; in retraction of the anterior wall of orbit until orbital space is wider than long; and in presence of a mere bead along anterior rim of orbit (Miller, 1907). Any interpterygoid space is practically absent in *A. centurio,* with the pterygoids being directed almost perpendicularly outward and the choanae opening between them as a round vertical aperture facing backward (Miller, 1907).

Dental characteristics of *Ametrida* are similar to *Sphaeronycteris* and less similar to *Centurio.* Teeth of *Ametrida* differ from *Sphaeronycteris,* in that upper incisors are smaller and inner cusps of upper molars are better developed, although in the same position. A minute third lower molar is present in *Ametrida* and *Sphaeronycteris,* but absent in *Centurio* (Miller, 1907). Skull of *A. centurio* (Fig. 2) is most aberrant of the three genera because of the shortened rostrum (Miller, 1907). Both *Centurio* and *Sphaeronycteris* have longer rostrums and the skull of *Centurio* has a high rounded

FIG. 1. An adult specimen of *Ametrida centurio* collected from 3 km E Puerto Cabello del Caura, Bolivar, Venezuela. Photograph by Thomas E. Lee, Jr., John D. Hanson, and Burton K. Lim.

FIG. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of male *Ametrida centurio* from 3 km E Puerto Cabello del Caura, Bolivar, Venezuela (Abilene Christian University Natural History Collection 390). Greatest length of skull is 14.9 mm. Photographs by Steve Butman.

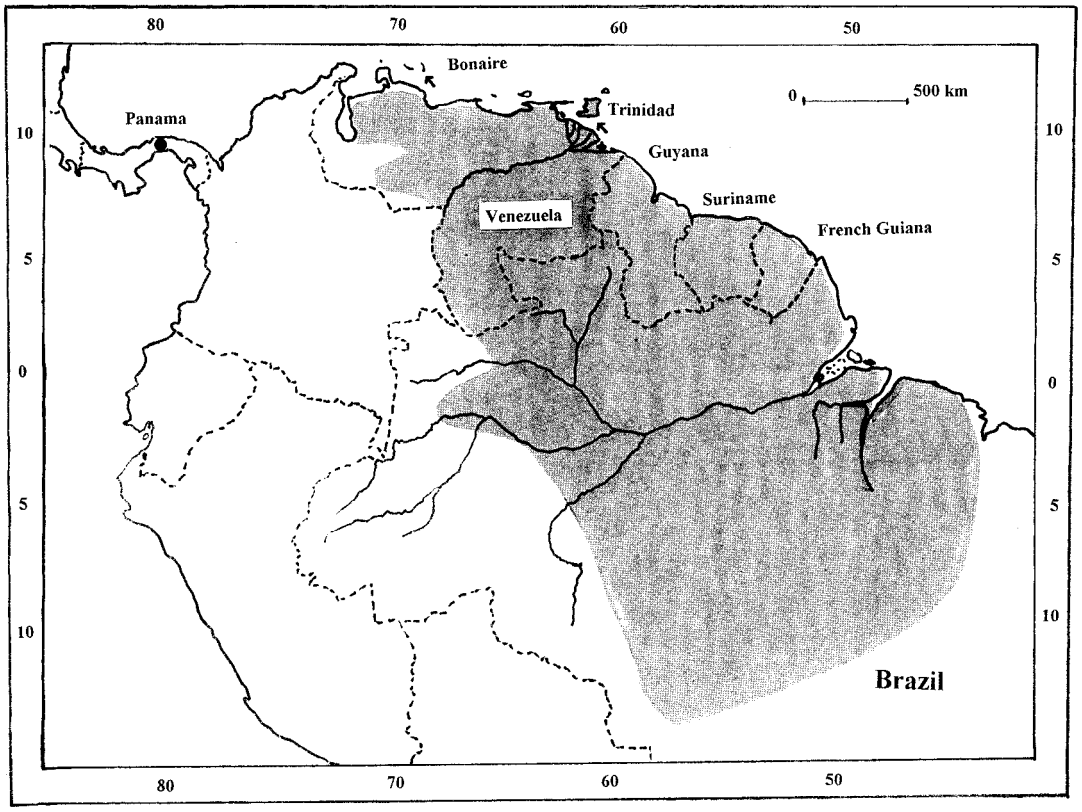

FIG. 3. Geographic distribution of *Ametrida centurio* (modified from Emmons and Feer, 1997). Arrows indicate island localities were specimens of *A. centurio* were collected.

brain case with a prominent sagittal crest (Nowak, 1994). *Pygoderma* differs from *A. centurio* in that the posterior edge of the hard palate is straight across with no palatal emargination. Palate of *A. centurio* has a thin translucent bony covering over a palatal emargination (Lim, 1993). A phenetic analysis of morphological characters indicated that *Ametrida*, *Sphaeronycteris*, and *Centurio* form a loose group (Owen, 1988). However, a cladistic analysis of morphology and chromosomes showed a closer relationship between the three taxa (Lim, 1993).

GENERAL CHARACTERS. *Ametrida centurio* is a small, fruit-eating bat with a short broad rostrum and a wide mouth. Muzzle is naked and lips are fringed inside with papillae. Noseleaf has the appearance of a short broad spear flattened back against the face. Eyes are large and bulging, with a yellowish iris (Reid, 1997). Males have a swollen pad below each eye. Ears are small, triangular, broad at the base, and have a brown color with a yellow base, and tragus. Uropatagium is short, hairy, U or V shaped, with a hairy fringe (Emmons and Feer, 1997). *A. centurio* has no external tail (Peterson, 1965). Pelage is pale brown underneath and individual hairs are tricolored with a brown base, gray middle, and brown at the distal end. Males are more dusky with grayer tints that females; forequarters are paler than hindquarters. On the shoulder of both sexes is a pure white spot with a fainter spot on neck below ears. Membranes of wings and uropatagium are brown (Emmons and Feer, 1997).

Sexual dimorphism is pronounced in *A. centurio* with females, on average, 17% larger than males (Ralls, 1976). In a study of 110 mammalian species, *A. centurio* had the largest female to male size dimorphism (Ralls, 1976). This dimorphism led to the smaller males being given the junior synonym *A. minor* (Peterson, 1965). Average measurements (in mm) and range (in parentheses) of 12 males and 16 females, respectively, are (Peterson, 1965): length of head and body, 40 (35–46), 46.6, (40–53); ear from notch, 13 (11–15), 13.7 (11.5–15); length of calcar, 4.8 (4.3–5.1), 4.8 (3.5–5.5); length of forearm, 25.4 (24.6–26.5), 32.1 (29.8–33.2); length of tibia, 14.7 (13.0–15.8), 15.4 (14–17.6); digit III, metacarpal, 25.3 (23.0–26.9), 31.9 (30.5–33.4); digit III, phalanx I, 8.7 (8–9.4), 10.7 (10–11.5); digit III, phalanx II, 13.6 (13–14.1), 17.7 (16–18.6); digit IV, metacarpal, 22.3 (21.3–23.5), 27.7 (26.5–29.1); digit IV, phalanx I, 9.7 (9.5–10), 12.3 (11.5–13); digit IV, phalanx II, 14.1 (13–15.3), 17.1 (16.4–18.3); digit V, metacarpal, 23.3 (22.5–24.5), 28.9 (27.5–30.5); digit V, phalanx I, 9.4 (9.3–9.5), 11.6 (10.5–12.9); and digit V, phalanx II, 12.0 (10.5–12.5), 13.9 (13–14.8).

Skull of *Ametrida* is distinctive and has a short rostrum and a rounded cranium. Cranial measurements from across the range (in mm—Peterson, 1965) for 12 males and 13 females, respectively, average (range in parentheses): greatest length of skull, 15.0 (14.5–15.7), 16.2 (15.6–17.1); condylobasal length, 12.0 (11.8–12.7), 13.5 (13.2–13.6); zygomatic width, 10.4 (10.1–10.8), 11.3 (10.8–11.7); width of brain case, 8.3 (8.1–8.5), 8.7 (8.0–9.1); mastoid width, 8.9 (8.8–9.2), 9.7 (9.2–10.1); interorbital constriction, 3.3 (3.2–3.5), 4.2 (3.8–4.5); M1–M1 breadth of palate, 7.2 (7.1–7.4), 7.8 (7.6–8.3); and C–M3 length, 4.3 (4.2–4.4), 4.7 (4.5–5.2). Measurements (in mm) of cranial characters for four males and four females, respectively, of *A. centurio* from Trinidad average: greatest length of skull, 15.07, 16.40; condylobasal length, 11.82, 13.65; zygomatic breadth, 10.50, 11.20; postorbital constriction, 4.07, 4.22; breadth of braincase, 8.42, 8.50; length of maxillary toothrow, 4.07, 4.82; and breadth across molars 7.19, 7.95 (Swanepoel and Genoways, 1979). Additional measurements are available (Dobson, 1878; Goodwin and Greenhall, 1961; Husson, 1960; Peters, 1866).

DISTRIBUTION. *Ametrida centurio* occurs from central Panama to Amazonian Brazil (Fig. 3). The species is present throughout Venezuela, Guyana, Suriname, French Guiana, and Trinidad (Brosset and Charles-Dominique, 1990; Corbet and Hill, 1986; Eisenberg, 1989; Genoways and Williams, 1979; Husson, 1962, 1978; Peterson, 1965; Simmons and Voss, 1998). Moreover, specimens of *A. centurio* have been recorded on Bonaire Island (Jones and Carter, 1976). One individual was taken from Barro Colorado Island, Canal Zone, Panama (Reid, 1997). Most specimens occur below 1,500 m and east of the Andes (Handley, 1976). No fossil specimens of *A. centurio* are known.

FORM AND FUNCTION. Dental formula is i 2/2, c 1/1, p 2/2, m 3/3, total 32 (Peterson, 1965). Secretions of salivary glands in *A. centurio* aid in gastric cytoprotection (Phillips et al., 1987).

Brain of *A. centurio* has a simple cerebellum with a low crest and a smooth compressed cerebrum with almost no trace of the major sulci. Pseudotemporal lobes are shallow, angular, and project ventrally (McDaniel, 1976). Compared with other stenodermines, *A. centurio* has a very small brain (Baron et al., 1996). Moreover, the mesencephalon as well as the limbic and olfactory regions are especially small.

REPRODUCTION AND ONTOGENY. Little is known about reproduction of little white-shouldered bats, but pregnant females (each with a single embryo) were collected in Trinidad in July and August (Carter et al., 1981).

ECOLOGY. *Ametrida centurio* is uncommon or rare throughout its range. It usually occurs in lowland, evergreen forests near streams, moist areas, and swamps occasionally in clearings, second growth, and deciduous forest (Reid, 1997; Simmons and Voss, 1998). One locality from which these bats were taken (the Kanuku Mountains, Guyana) was described as an isolated forested mountain surrounded by savannah (Peterson, 1965). Specimens have been taken at elevations up to 2,150 m, but most are lowland inhabitants. Problems with thermoregulation due to their small size may limit *A. centurio* to lowland tropics (McNab, 1982). *A. centurio* is active from the forest floor to the forest canopy and use of canopy nets has increased collection of these rare bats (Simmons and Voss, 1998). For example two specimens were captured 34–37 m above a tree fall clearing in a well-drained primary forest of the Paracou forest in French Guiana (Simmons and Voss, 1998). Moreover, *A. centurio* has been reported close to blossoming Mimosaceae in the forest canopy of Les Nouragues, French Guiana (Brosset and Charles-Dominique, 1990).

GENETICS. *Ametrida centurio* has 2n = 30–31 chromosomes with a fundamental number of 56 (Baker et al., 1979). The X chromosome is subtelocentric and the Y is either metacentric or submetacentric. Karyotypes of *A. centurio* represented a X/Y1,Y2 system (Hsu et al., 1968). An allozyme analysis showed that *A. centurio* was divergent from other phyllostomid bats (Straney et al., 1979). Restriction-site analysis of ribosomal DNA in New World leaf-nosed bats revealed that *Centurio* and *Ardops* were sister taxa to *Ametrida* (Van Den Bussche, 1992).

REMARKS. *Ametrida* in Greek means 'reaper' or 'destroyer' (Palmer, 1904). In Latin, *cent* means 'one hundred,' which refers to the old look of the face of *A. centurio*.

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