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Ariteus flavescens.

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Ariteus Gray, 1838

Istiophorus: Gray, 1831:37. Part, not *Istiophorus* Gray, 1825, which is preoccupied by *Istiophorus* Lacépède, 1802, a fish.
Ariteus Gray, 1838:491. Type species *Istiophorus flavescens* Gray, 1831, by monotypy.
Artibeus: Gosse, 1851:271, 272. Part, not *Artibeus* Leach, 1821.
Peltorhinus Peters, 1876:433. Type species *Artibeus achradophilus* Gosse, 1851.

CONTEXT AND CONTENT. Order Chiroptera, suborder Microchiroptera, family Phyllostomidae, subfamily Stenodermatinae, genus *Ariteus*. The genus *Ariteus* is monotypic.

Ariteus flavescens (Gray, 1831)

Jamaican Fig-eating Bat

Istiophorus flavescens Gray, 1831:37. Type locality "Jamaica;" fixed as "Orange Valley, St. Ann Parish, Jamaica" by Genoways (2001:5).
Ariteus flavescens: Gray, 1838:491. First use of current name combination.
Artibeus jamaicensis: Gosse, 1851:270. Not *Artibeus jamaicensis* Leach, 1821:75; type locality "Content," Jamaica.
Artibeus achradophilus Gosse, 1851:271. Type locality "Content," Jamaica; "3 miles east of Bluefin, Westmoreland Parish" (Genoways 2001:3).
Artibeus sulphureus Gosse, 1851:272. Type locality "Content," Jamaica (Peters 1876:434).
Peltorhinus achradophilus: Peters, 1876:433. Name combination.

CONTEXT AND CONTENT. Context as above. *A. flavescens* is monotypic.

DIAGNOSIS. *Ariteus flavescens* can be distinguished from other phyllostomids with prominent nose leaves by the unique twist of its nose leaf (Fig. 1). *A. flavescens* most closely resembles the tree bat (*Ardops nichollsi*), but is smaller for all standard measurements (length of head and body for *A. flavescens*, 50–67 mm) and has different dental characters than *A. nichollsi*; *A. flavescens* lacks M3 and has a metaconid on m1 (Fig. 2; Genoways 2001; Nowak 1999).

GENERAL CHARACTERS. *Ariteus flavescens* is a medium-sized bat with relatively short, broad wings and without a noticeable tail. Pelage is reddish brown dorsally and paler ventrally. Hairs grade from pelage color at tip to noticeably paler along shaft near root. *A. flavescens* has a small white patch on each shoulder, but lacks facial striping and dorsal lines.

Neotype measurements (in mm) are: total length, 69; length of hind foot, 12; length of ear, 18; length of forearm, 42.7; greatest length of skull, 20.7; condylobasal length, 17.1; zygomatic breadth, 14.2; breadth of interorbital constriction, 5.2; breadth of postorbital constriction, 4.9; mastoid breadth, 11.9; palatal length, 4; length of maxillary toothrow, 6; and breadth across upper molars, 9.1 (Texas Tech Universtiy [TTU] 21721—Genoways 2001). Average and range (in parentheses) of measurements (in mm) of 2 females and 2 males, respectively, from a collection by Howe (1974) near Williams Field River and Hector's River (Jamaica) are: total length, 65 (63–67), 59 (58–60); tail is absent in both sexes; length of right hind foot, 13 (13), 12 (11–13); length of ear from notch, 15.5 (15–16), 14.5 (13–16); length of forearm, 44 (44), 40 (40); length of tragus, 7.5 (7.0–8.0), 6.0 (6.0); and mass (in g), 12.8 (12.4–13.1), 11.1 (9.2–12.9).

Males of *A. flavescens* are significantly smaller than females and exhibit greater variability in measurements. Although 5 localities varied for some characters, geographic variation was insufficient to discern subpopulations (Genoways 2001). Morphological measurements from ca. 40 *A. flavescens* from the western portion of Jamaica had the following mean and range (in mm; *n* in parentheses) for females and males respectively: length of forearm, 42.1, 39.8–43.8 (19), 38.5, 36.5–39.9 (15); greatest length of skull, 20.6, 20.0–21.3 (25), 18.8, 17.5–19.5 (15); condylobasal length, 17.2, 16.3–17.8 (25), 15.5, 14.8–16.2 (15); zygomatic breadth, 14.1, 13.4–14.7 (24), 13.1, 12.1–13.6 (15); interorbital constriction, 5.2, 4.7–5.7 (25), 4.7, 4.1–5.1 (15); postorbital constriction, 4.9, 4.7–5.1 (19), 4.7, 4.3–5.0 (15); mastoid breadth, 11.7, 11.1–12.2 (25), 11.0, 10.0–11.6 (14); length of palate, 3.9, 3.5–4.3 (25), 3.4, 3.2–3.6 (15); length of maxillary toothrow, 5.9, 5.7–6.2 (25), 5.3, 5.1–5.5 (15); and breadth across upper molars, 9.0, 8.6–9.3 (25), 8.2, 7.9–8.5 (15—Genoways 2001).

DISTRIBUTION. *Ariteus flavescens* is endemic to the island of Jamaica in the Greater Antilles (Fig. 3; Jones and Carter 1976). Although captured at only a few localities, *A. flavescens* potentially occupies all of Jamaica (Dávalos 2004).

FOSSIL RECORD. Numerous fossils were reported by Williams (1952) in cave systems in St. Andrew, St. Ann, St. Elizabeth, and St. James parishes. He commented that, ". . . there is abundant evidence in subsurface collections from a number of mainland (Jamaica) caves that *Ariteus* was at one time a very common bat" (Williams 1952:177). The oldest fossils of *Ariteus* occur in deposits considered to be late Pleistocene in age (McKenna and Bell 1997; Williams 1952).

FORM AND FUNCTION. Dental formula is i 2/2, c 1/1, p 2/2, m 2/3, total 30 (Hall 1981). Morphometric measurements from 88 specimens of *A. flavescens* revealed a low coefficient of variation (Genoways 2001).

Spermatozoa of *A. flavescens* have a triangular head with a broad concave base (Forman and Genoways 1979). Head of *A. flavescens* sperm most closely resembles that of *A. nichollsi* (Forman and Genoways 1979). Acrosome is extremely pointed at apex and can be symmetrical or asymmetrical and shorter than nucleus. Sperm measurements (in mm; $n = 2$) are given as mean ± *SE* followed by range in parentheses: length of head, 4.60 ± 0.16 (4.37–4.84); width of head, 3.49 ± 0.14 (3.26–3.63); length of

Fig. 1. Photograph of an adult *Ariteus flavescens* from northwestern Jamaica, Trelawney Parish, near portal of Windsor Great Cave. Used with permission of the photographer Liliana M. Dávalos. Inset shows side view of *A. flavescens* with distinctive nose leaf. Inset used with permission of the photographer R. J. Baker.

Fig. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of an adult male *Ariteus flavescens* from Jamaica, St. Ann Parish, Orange Valley (Texas Tech University [TTU] 21714). Greatest length of cranium is 19.05 mm. Photographs by William L. Gannon.

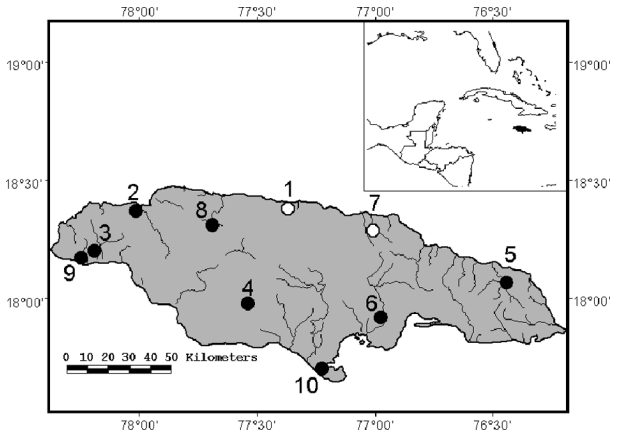

Fig. 3. Geographic distribution of *Ariteus flavescens* endemic to the island of Jamaica. Circles represent localities where *A. flavescens* has been found (Dávalos and Erikson 2003; Genoways 2001). The type (site 1) and neotype (site 7) are shown as open circles; other localities as solid circles. In the following list of sites, sample sizes (if known) are in parentheses, 1: Orange Valley, St. Ann Parish (34), Queenhythe, St. Ann Parish (3), and 4 mi E Runaway Bay, St. Ann Bay (neotype, 1); 2: Flint River, 1 mi E Sandy Bay, Hanover Parish (12); 3: Bluefields, Westmoreland Parish (17); 4: Combines Mandeville, Manchester Parish (1) and 0.2 mi E Watermount, St. Catherine Parish (6); 5: Combines 0.8 mi W Drapers, Portland Parish (5), Hector's River, Portland Parish (4), and Whitfield Hall, Penlyne, St. Thomas Parish (1); 6: Kingston, St. Catherine Parish (2); 7: Content, St. Mary Parish; 8: Windsor Cave, Trelawny Parish and Duanvale, Trelawny Parish (2); 9: Monarva Cave, Westmoreland Parish; 10: Portland Cave 9, Claredon Parish.

acrosome, 2.83 ± 0.23 (2.60–3.16); and length of nucleus, 3.27 ± 0.21 (2.88–3.53).

ONTOGENY AND REPRODUCTION. Females (n = 2) netted in December were not reproductive (Howe 1974).

ECOLOGY AND BEHAVIOR. *Ariteus flavescens* occupies primary, secondary, and late successional stands of forest in western Jamaica (Dávalos and Erikson 2003; Howe 1974). *A. flavescens* also was captured in damp banana–coconut groves, dry agricultural pastures, and heavily disturbed habitats with few indigenous plants (Howe 1974). Although skeletal material has been found in caves, *A. flavescens* is not considered a caverniculous species (Fincham 1997; Williams 1952).

Ariteus flavescens begins to fly and feed shortly before sunset and feeds on fruits, such as naseberry (*Achras sapota*) and rose apple (*Eugenia jambos*), and insects (Howe 1974). Owls prey on *A. flavescens*; owl pellets consistently contained remains of this species (Williams 1952). Owls may hunt for these bats in the vicinity of caves, such as the Monarva Cave, Portland Cave 9, and Windsor Great Cave (Dávalos and Erikson 2003).

Changes in flora and consequent changes in food resources through increasing urbanization and conversion of native flora to agriculture on Jamaica during the last century are cited as explanations for the extreme rarity of *A. flavescens* (Allen 1942; Williams 1952). However, individuals have been captured in heavily disturbed areas (Howe 1974), suggesting that habitat tolerance is broader than supposed. *A. flavescens* is currently listed as vulnerable (facing a high risk of extinction in the wild in the medium-term future) because of a decline in natural habitat (International Union for the Conservation of Nature and Natural Resources 2003).

GENETICS. *Ariteus flavescens* has 2n = 30 chromosomes and a fundamental number of 56. The 14 pairs of autosomes consist mostly of large to medium-sized metacentrics and submetacentrics. The X chromosome is a medium-sized metacentric and the Y chromosome is either a small metacentric or is acrocentric (Baker 1979; Greenbaum et al. 1975). No subpopulations exist (Genoways 2001).

REMARKS. The name *Ariteus* (Greek) means "warlike, pugnacious," and *flavescens* (Latin) means "tending toward yellow." Other common names include yellow *Ariteus* and pale pit-nose bat (Genoways 2001). *A. flavescens* has a complicated taxonomic history (Genoways 2001). Because of vagueness or incomplete records during the initial description of this species in the 1820s, Genoways (2001) designated a neotype from specimens collected in the 1960s and 1970s presumed to be from near the original type locality (Fig. 3). Known specimens of *A. flavescens* are currently housed at Carnegie Museum of Natural History (Pittsburgh, Pennsylvania), Joseph Moor Museum (Richmond, Indiana), Florida Museum of Natural History (Coral Gables, Florida), Smithsonian Institution (Washington, D.C.), Texas Tech University (Lubbock, Texas), and Harrison Zoological Museum (Kent, United Kingdom).

We thank Robert J. Baker (Texas Tech University) for providing inset photograph for Fig. 1 and for loan of specimen TTU 21714 used in preparation of Fig. 2. Liliana Dávalos graciously provided the photograph in Fig. 1 of a live *A. flavescens* from Jamaica. Gabor R. Racz went the extra mile to assist in imaging the skull of *Ariteus* (Fig. 2) and in providing the map of Jamaica (Fig. 3). Young Gannons, Ben and Luke, provided a diversion for Natalie so we could

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