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New species of *Histiotus* (Chiroptera: Vespertilionidae) from northeastern Brazil

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Abstract

Histiotus are vespertilionid bats endemic to South America, easily recognized by its very long ears. During a twelve-month bat inventory in northeastern Brazil, eleven specimens of *Histiotus* were collected with a unique combination of characters that did not match those of any known species. In this paper, we describe these specimens as a new species. *Histiotus* sp. nov is distinguished from its congeners by its pale transparent wings and translucent ears, a triangular-shaped ear with a prominent lobe in the inner border connected by a band (~4 mm) across the forehead; its general golden-brownish body color and well-marked bicolor dorsal hairs. Its geographic distribution is unique among vespertilionids, arranged in a northeast-southwest diagonal across South America, includes the Caatinga and Cerrado of Brazil and Chaco of Bolivia. The available data suggest a seasonal reproductive pattern, with births occurring in the mid to late rainy season.

Key words: *Histiotus*, Big-eared Bat, taxonomy, Caatinga, Cerrado, Chaco

Introduction

Histiotus are vespertilionid bats endemic to South America, easily recognized by its very long ears extending well beyond muzzle (Handley & Gardner 2008). This genus is distributed mainly in forests ranging from Venezuela to southern Argentina (Handley & Gardner 2008), and most species have been associated with montane climates (Emmons & Feer 1997), at altitudes of up to 4200 m a.s.l. The genus is also known to occur in the coastal Atlantic Forest of eastern Brazil, and the semi-arid regions of Argentina and Brazil (Barquez *et al*. 1999; Handley & Gardner 2008).

In a comprehensive phylogenic study of vespertilionid genera, based on mitochondrial DNA, Hoofer and Van Den Busshe (2003) found that the New World *Eptesicus* species are most closely related to *Histiotus*, rather than those of the Old World, which would make *Eptesicus* paraphyletic. To avoid this paraphyly, the authors classified *Histiotus* as a subgenus of *Eptesicus*, although most subsequent authors continue to consider *Histiotus* as genus (Simmons 2005; Handley & Gardner 2008; Nogueira *et al.* 2014).

Histiotus species have very similar skulls (Thomas 1916; Barquez *et al.* 1999) and their diagnosis have been historically relying mainly on the body color, the size and shape of the ears, and cranial measurements (Thomas 1916; Barquez *et al.* 1999; Handley & Gardner 2008). In addition, very few specimens are available in collections, hampering detailed comparisons and studies of geographical variation within the genus (Cabrera 1958; Anderson 1997; Barquez *et al.* 1999; Acosta & Venegas 2006), and resulting in much disagreement on the taxonomic history and the status of the genus (Anderson 1997).

Simmons (2005) recognized seven species of *Histiotus—H. velatus* (I. Geoffroy St. Hilaire, 1824), *H. humboldti* Handley, 1996, *H. macrotus* (Poeppig, 1835), *H. montanus* (Philippi & Landbeck, 1861), *H. magellanicus* (Philippi, 1866), *H. alienus* Thomas, 1916, and *H. laephotis* Thomas, 1916. Handley & Gardner (2008) recognized only four: *H. velatus*, *H. humboldti*, *H. macrotus* and *H. montanus*; and treated *H. magellanicus,*

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