

**Noteworthy Records of *Eptesicus chiriquinus* and *Eptesicus andinus* (Vespertilionidae) from Bolivia**

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Currently, only two species of *Eptesicus* are recognized as occurring in Bolivia, *E. furinalis* and *E. andinus* (Aguirre et al., 2003; Salazar-Bravo et al., 2003). Simmons (2005), however, considered the existence of *E. andinus* to be provisional, pending re-examination of known specimens in light of revised diagnoses of *E. andinus* and *E. chiriquinus* (Simmons and Voss, 1998). Herein, I report the first records of *E. chiriquinus* from Bolivia and validate the presence of *E. andinus* with one specimen collected and several captured individuals. Specimens were prepared as skins and skulls and are currently in the mammal collection of the Museo de Historia Natural Alcide d'Orbigny, Cochabamba, Bolivia (MHNC-M).

On 14 February 2007, in a rural community called Zurima (18°46'40''S, 65°07'40''W) in the department of Chuquisaca, I caught an adult female *E. chiriquinus* (MHNC-M 154) in a mist net that was set next to a light post along the road between the cities of Sucre and Cochabamba. The netting site was 33 km NNE of Sucre, at an elevation of 1,800 m. A second specimen, an adult male (MHNC-M 162), was captured on 23 March 2007, in Camp Humajalanta (18°06'52''S, 65°48'37''W) of the Parque Nacional Torotoro in the department of Potosí. The site was 87 km SE from Cochabamba, at an elevation of 2,830 m. The vegetation at both sites is classified as Dry Inter-Andean Forest, a highly heterogeneous and fragmented ecoregion that is characterized by

advanced degradation due to human use (Ibisch et al., 2003).

External and cranial measurements of both specimens are generally within the range presented by Simmons and Voss (1998) for *E. chiriquinus*, although some measurements are slightly greater (Table 1). Similarly, the external and cranial morphology also conforms to the revised diagnosis by Simmons and Voss (1998). For example, dorsal hairs of the two Bolivian specimens are long (8–11 mm), and in life, the fur appears oily. Color of the dorsal hair is dark brown in one specimen and brown in the other. In addition, both skulls have well-developed sagittal and nuchal crests.

*Eptesicus chiriquinus* has been reported mainly from lowland forests in Costa Rica, Panama, Colombia, Ecuador, Peru, Venezuela, Guyana, French Guiana, and Amazonian Brazil (Simmons, 2005; Simmons and Voss, 1998). Therefore, the specimens from Bolivia are the southernmost records for the species. It is also noteworthy that the Bolivian sites are at high altitudes and in dry habitats, in contrast to most previous observations.

Previous reports indicated that the geographic range of *Eptesicus andinus* included Guyana, Venezuela, Colombia, Ecuador, Peru, Amazonian Brazil, and possibly Bolivia (Simmons, 2005). Anderson (1997) reported only one specimen from Bolivia that was identified as *E. andinus*. However, several other specimens were identified as *E. furinalis montosus*, a taxon

**Table 1.** Measurements of *Eptesicus andinus* and *Eptesicus chiriquinus* collected in Bolivia.

	<i>Eptesicus chiriquinus</i>		<i>Eptesicus andinus</i>	
	MHNC-M 154	MHNC-M 162	MHNC- M 140	Captured <sup>b</sup>
Sex	female	male	female	3 females, 1 male
Weight	14	16	9	10.75 (8–13 <sup>a</sup> ) 4
Total length	114	117 <sup>a</sup>	85	93.25 (89–98) 4
Tail length	46	50	35	37.5 (32–44 <sup>a</sup> ) 4
Hind foot length	12	10	9	8.5 (8–9) 4
Ear length	18 <sup>a</sup>	17	10	11.3 (9–15) 3
Forearm length	47.1	46.98	41.52	42.3 (41.06–42.82 <sup>a</sup> ) 4
Greatest length of skull	17.98 <sup>a</sup>	17.76 <sup>a</sup>	14.74	
Condylolincisive length	17.34	16.84	14.5	
Postorbital breadth	3.92	4.12	4.24	
Zygomatic breadth	12.12	12.06	10.2	
Braincase breadth	7.84	7.82	7.16	
Mastoid breadth	8.84	9.72 <sup>a</sup>	8.24	
Maxillary toothrow length	7.1	6.7	5.9	
Breadth across molars	7.54	7.9 <sup>a</sup>	6.78	

<sup>a</sup> Measurements slightly larger than those presented by Simmons and Voss (1998).

<sup>b</sup> Summary statistics (mean, observed range, and sample size) of measurements for captured *E. andinus*.

that currently is believed to be included in *E. andinus* (Simmons and Voss, 1998), although these specimens have not been re-examined to determine their correct identification (Simmons, 2005).

On 19 January 2005, I captured three *E. andinus*, and one of these, a juvenile female, was preserved. The bats were mist-netted in Campos de Pinos (21°54'52''S, 64°31'34''W), in Reserva Tariquía, 47 km SE of Tarija, at an elevation of 1,780 m. Barquez et al. (1999) and Barquez and Díaz (2001) did not report *E. andinus* in Argentina; therefore, these records constitute the southernmost for the species. On 19 November 2005, I also captured two lactating *E. andinus* in Serranía Los Volcanes (18°06'42''S, 63°36'08''W), 57 km NW of Santa Cruz, at an elevation of 990 m. The vegetation at both sites is Tucuman-Bolivian forest (Ibisch et al., 2003). Although this is a naturally fragmented ecoregion, human activity is promoting conversion and additional fragmentation of the forest, making

this one of the most threatened ecoregions in Bolivia (Ibisch et al., 2003).

Standard measurements and morphology of the collected specimen and other captured individuals of *E. andinus* (Table 1) are comparable to those presented by Simmons and Voss (1998) for this species. The new records that are reported herein, together with additional records presented by Terán (2004) and Vargas et al. (2005) for the Yungas ecoregion, confirm the presence of *E. andinus* in Bolivia.

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