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SHORT COMMUNICATION

Rediscovery of the critically endangered Nelson's small-eared shrew (*Cryptotis nelsoni*), endemic to Volcán San Martín, Eastern México

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A series of 12 shrews was collected in May 1894 by Edward W. Nelson and Edward A. Goldman on Volcán San Martín Tuxtla, Veracruz, México, at 4,800 feet. A year later, C. Hart Merriam described these specimens as a new species, *Blarina nelsoni* (Merriam 1895). The holotype (skin and skull, USNM 65437), a subadult female, was deposited along with the entire series at the National Museum of Natural History in Washington, D.C. Merriam (1895) reported that this shrew was known only from the isolated volcano of Tuxtla, and that was common in the forest on the mountain ranging up to the extreme summit at 5,400 feet.

This species was later transferred to the genus *Cryptotis* as *C. nelsoni* by Miller (1912); Choate (1970) treated it as a distinctive subspecies of *C. mexicana-C. mexicana nelsoni* and named the type locality as "Volcán San Martín". Recently, Woodman and Timm (1999) recognized Nelson's small-eared shrew as a distinctive species, *C. nelsoni,* after examination of the 12 known museum specimens, and Carraway (2007) concurred with this taxonomic status. Choate (1970) after extensive review of all specimens of Middle American *Cryptotis* in the world's collections stated that no specimens of *C. m. nelsoni* had been obtained since the original series collected by Nelson and Goldman in 1894. Since 1895, all subsequent publications discussing this shrew, other than recopilations or list of species, always cite the original description by Merriam (1895). The biology of this shrew is essentially unknown, and it was even thought that it might be extinct.

Recently, our field party from the Instituto de Biología, UNAM (Universidad Nacional Autónoma de México) working on inventories of mammals in the tropical region of Los Tuxtlas, in eastern Veracruz, México, actively searched for and rediscovered *C. nelsoni* in 2003. Thus, 109 years after the first published record we can reconfirm that Nelson's small-eared shrew continues to occur in the same forested region where the species was first discovered. We were fortunate to obtain *C. nelsoni* at three localities in the vicinity of the type locality reported by Merriam (1895). They are: Volcán San Martín Tuxtla, Ejido Campeche, 11-11.5 km N San Andrés Tuxtla, Municipio San Andrés Tuxtla, Veracruz, México, 1,300, 1395, and 1,500 m above sea level, 18°32′52″ N, 95°11′30″ W, 18°33′15″ N, 95°11′30″ W, and 18°33′04″ N, 95°11′43″ W, respectively (Fig. 1). These localities lie on the south face of the volcano and just to the northwest of the nearby Lago Catemaco (Catemaco Lake).

We used 1-liter capacity pitfall traps to catch shrews over four nights during three trips between November 2003 and March 2004; we set 100 traps a night,

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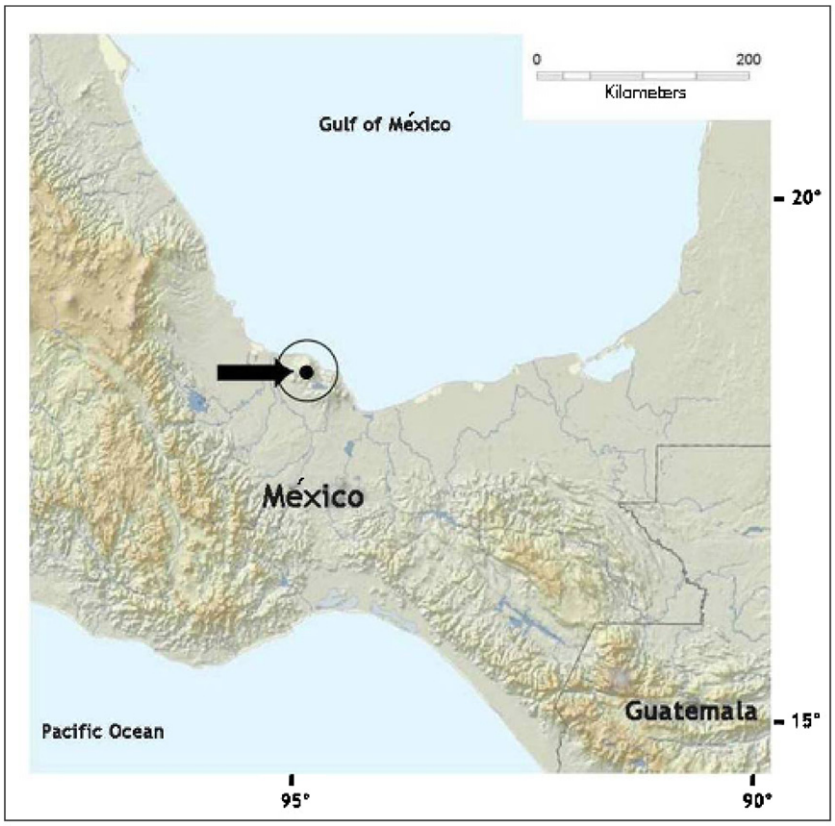

Fig. 1. Geographical distribution of the Nelson's small-eared shrew (*Cryptotis nelsoni*) in the forested midlands of Volcán San Martín Tuxtla, Municipio San Andrés Tuxtla, Veracruz, México (modified from Woodman et al. 2008). The arrow points to the Volcán San Martín Tuxtla, in eastern México.

therefore, making a total of 400 a trip. Specimens obtained in the pitfall traps were preserved as conventional museum specimens-skin, skeleton, and tissue samples. No other small mammal species was caught in the pitfall traps, nor were any other shrew species discovered in the same habitat as *C. nelsoni*.

The taxonomic identity was confirmed as *Cryptotis nelsoni* using several literature sources (Choate 1970; Hall 1981; Carraway 2007; Woodman and Timm 1999) and direct comparison with other shrew species. All specimens are catalogued in the Mexican National Collection of Mammals [Colección Nacional de Mamíferos (CNMA), Instituto de Biología] of Universidad Nacional Autónoma de México, in México City. To determine the age of the specimens, we examined teeth and cranial sutures following Choate (1970).

The specimens include one adult male, one male juvenile, and one female adult (♂ CNMA 41982, ♂ CNMA 42000, ♀ CNMA 41975). Their body measurements (mm), total length, vertebral tail length, right hindfoot length, ear length, and weigh (g) (respectively) are: 97, 29, 12, 3, 9; 95, 28, 12, 3, 7; 92, 23, 13, 2, 8; their cranial measurements are, respectively: condylobasal length, 19.1, ?, 19.4; palatal length, 7.9, 7.8, 7.9; maxillary breadth, 6.8, 6.6, 6.7; interorbital breadth, 5.0, 4.9, 5.0; length of maxillary toothrow, 7.3, 7.3, 81 6.9; cranial breadth, 10.3, ?, 10.6; length of M2, 1.6, 1.5, 1.5. These measurements are similar to the values (mm) reported for the holotype (total length, 110; length of tail, 31; length of hind foot, 14; condylobasal length 19.8; palatal length, 8.4; maxillary breadth, 6.8, interorbital breadth, 5.3; length of maxillary toothrow, 7.4; cranial breadth, 10.7; length of M2, 1.6), and are larger than those for *C. mexicana* (Choate 1970).

The specimens also display characters of *C. nelsoni* reported previously (Merriam 1895; Choate 1970). The pelage is uniform sooty brown (Fig. 2), resulting in a slightly darker pelage than *C. mexicana*. The skull of *C. nelsoni* is larger and heavier than that of *C. mexicana*. Similarly, the braincase is larger and flatter, and their interpterygoid fossa broader than those of *C. mexicana* (Fig. 3).

The habitat reported by Merriam (1895) for the holotype and paratypes was evergreen tropical forest, represented by well-conserved vegetation that consisted of areas covered by layers of volcanic sand and ashes and trees of large size (Choate 1970; Goldman 1951). The vegetation where our specimens were obtained was cloud forest. In one of the three localities sampled (elevation 1,500 m), the trees of the canopy were