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Short Note

Noteworthy records of margay, *Leopardus wiedii* and ocelot, *Leopardus pardalis* in the state of Guanajuato, Mexico

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The margay *Leopardus wiedii* (Schinz, 1821) is a rare and endangered small felid with a body mass ranging from 3 to 6 kg, occurring in the Neotropical region, and usually found in tropical rainforest, tropical deciduous forest, mangroves and cloud forest, from northern México to northern Argentina (Oliveira 1998, Aranda, 2005b). Its altitudinal range expands from sea level to 3000 m (Oliveira 1998, Aranda 2005b, Botello et al. 2006a). In México, margays are confined to the Neotropical region (Figure 1) (see Hall 1981, Patterson et al. 2003). This felid is predominantly nocturnal, showing arboreal habits and preying mostly on vertebrates as small mammals, birds and their eggs, frogs, iguanas, lizards, and other animals and plants, such as arthropods and fruits (Oliveira 1998, Aranda 2005b). No previous records of margay are known in the state of Guanajuato.

The ocelot *Leopardus pardalis* (Linnaeus, 1758) is the largest small spotted felid with a body mass ranging from 6.0 to 16.0 kg, occurring in tropical and subtropical habitats in Texas, México, and Central America to Ecuador and northern Argentina (Redford and Eisenberg 1992, Murray and Gardner 1997, Aranda 2005a, Janečka et al. 2007). In México, ocelots are usually confined to the Neotropical region, including areas located along the coast of the Gulf of Mexico, the Pacific and the Yucatan Peninsula (Hall 1981). Ocelots prefer habitats commonly associated with closed habitat, areas of dense vegetation and forest cover, such as tropical deciduous forest, mangrove and dense chaparral (Murray and Gardner 1997, Harveson et al. 2004, Haines et al. 2006). Food habits include predominantly small mammals, such as forest-dwelling rodents, paca and squirrels, and other vertebrates, such as birds, reptiles and fish (Murray and Gardner 1997). The first record of ocelot in the state of Guanajuato was by Alfredo Dugès in 1895 (Dugès 1895). The Natural History Museum Alfredo Dugès, at the University of Guanajuato, holds a female specimen (Catalogue No. MADUG-MA 101), which was referred to in unedited notes by Dugès (note p. 423 written in the last decade of the 19th century from Province of Yuriria, in the state of Guanajuato). Here, we report the first record for margay and a noteworthy record of the ocelot at the Sierra Gorda Biosphere reserve located in the state of Guanajuato, Mexico. Both felid species are listed as endangered in the Mexican Species Red List (SEMARNAT 2002).

The study site is located at El Platanal, municipio of Xichú, at the northwest boundary of the Sierra Gorda biosphere reserve in the state of Guanajuato. This reserve has an extent of 236,882 ha, and was established in February 2007 (Diario Oficial de la Federación 2007). It is adjacent to the states of Queretaro and San Luis Potosi (Figure 1). Vegetation is dominated by tropical deciduous forest, submontane scrubs and oak-pine forest (Carranza 2005).

On November 2007, we placed a plot of 7×7 km with 49 sub-plots of 1 km^2 (21°27′30″ N, 99°53′00″ W and 21°24′00″ N, 99°49′30″ W). A total of 7 camera traps (Stealth-Cam TM analog 35 mm) were placed in 7 plots for 50 consecutive days, totaling 350 trap-nights (Botello et al. 2006a). The local vegetation is oak-pine forest dominated by *Pinus michoacana*, *Juniperus flaccida*, *Quercus laurina*, and *Quercus rugosa*, and tropical deciduous forest dominated by *Bursera morelensis*, *Fouquierria splendes*, and *Stenocereus queretaroensis* (Diario Oficial de la Federación 2007).

The margay was recorded at 984 m in tropical deciduous forest (21°26′18.9″ N, 99°52′12.0″ W; Colección de Fotocolectas Biológicas, Catalogue No. CFB-1068; see Botello et al. 2006b, 2007a). The large size of the eyes and ears in proportion to the overall size of the head, in addition to the pattern of lines and spots on the face, are distinctive features that were used for the margay identification in the photo (R. Nuñez, O. Polaco, O. Rosas, O. Sanchez, personal communication, May 8, 2007). This is the first record of margay in the state of Guanajuato expanding its known distribution by 69 km to the west, and it is the most central record in this latitude in Mexico

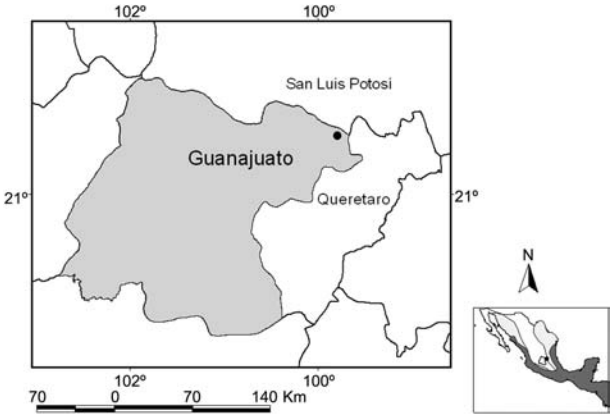

Figure 1 The known distribution of the margay *L. wiedii* (dark gray) and the ocelot *L. pardalis* (light gray) occurring in central Mexico (Patterson et al. 2003); the black dot shows the locality where both species were recorded in this study.

(Figure 1); the closest record of a margay in the region was from 4 km E Santa Inés, Municipio Landa de Matamoros, in the state of Querétaro (León-Paniagua et al. 1990). Further, an ocelot was recorded at 20:23 h at 2001 m in an oak-pine forest (21°25′30.3″ N, 99°52′00.6″ W; Colección de Fotocolectas Biológicas, Catalogue No.CFB-1077). This is the first documented reference of an ocelot in the state of Guanajuato for over a century, and falls within the distribution proposed by Patterson et al. (2003) (Figures 1 and 2).

Recently, an increasing number of noteworthy records for a variety of mammals have been recorded using camera traps, suggesting that this method proves to be efficient for documenting the presence of mammals that are cryptic or elusive to trap (Botello et al. 2005, 2006a, 2007b, Fernández et al. 2007). Moreover, photo records can serve as complementary information for traditional museum specimen records of species that are currently threatened, endangered or at risk of extinction. Camera traps appear as an ideal alternative for documenting the presence of medium- and large-sized mammals in other regions within their potential distribution, or in localities where known records were taken many years ago, as is the case for ocelot in the state of Guanajuato (Botello et al. 2005, 2006a, 2007b, this study).

Figure 2 A margay (*L. wiedii*) recorded in tropical deciduous forest (A), and an ocelot (*L. pardalis)* recorded in oak-pine forest (B), in Xichú, Guanajuato, Mexico.

The Sierrra Gorda Biosphere reserve has been recently established and few faunistic studies exist for this region. Our work is the first study to explicitly monitor medium and large mammals in this reserve (see Botello et al. 2005, 2006a, 2007b, Fernández et al. 2007). Both felids are known to be highly sensitive to human-induced habitat transformation, showing strict carnivorous food habits and large home ranges, ranging from 1.56 to 17.7 km^2 (Caso 1995, Murray and Gardner 1997, Oliveira 1998, Aranda 2005a,b, Haines et al. 2006). Thus, their presence is usually correlated with untransformed and high quality habitats, suggesting that this reserve holds an adequate conservation status of these vegetation types (Murray and Gardner 1997, Oliveira 1998). These noteworthy records confirm the urgency for conducting extensive biological surveys in this reserve.

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